



# Guide to the Markets<sup>®</sup>

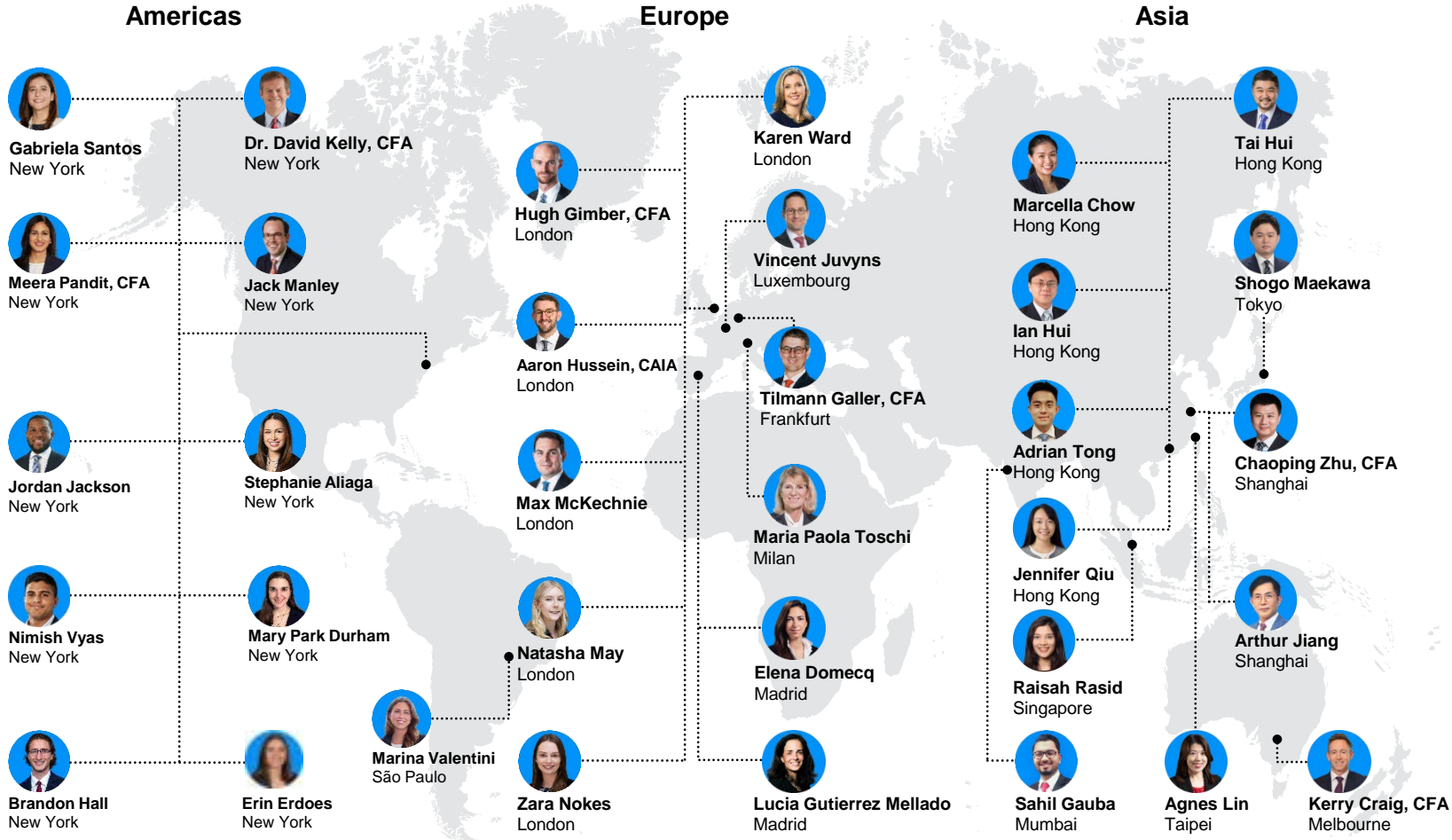


U.S. | 2Q 2024

As of March 31, 2024



# Global Market Insights Strategy team





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GTM

U.S.

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# 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.

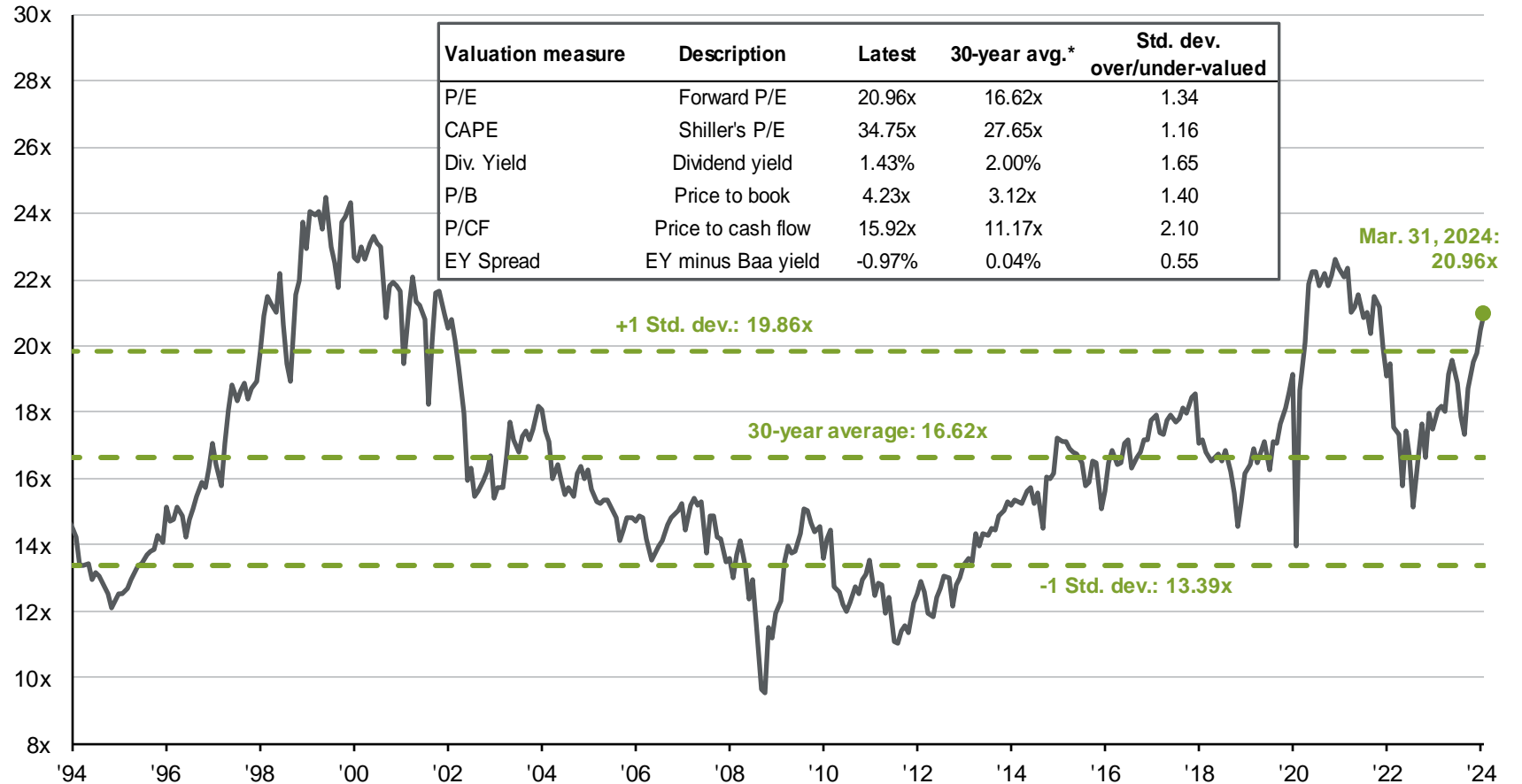
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# S&P 500 valuation measures

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 February 1994 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 March 31, 2024.

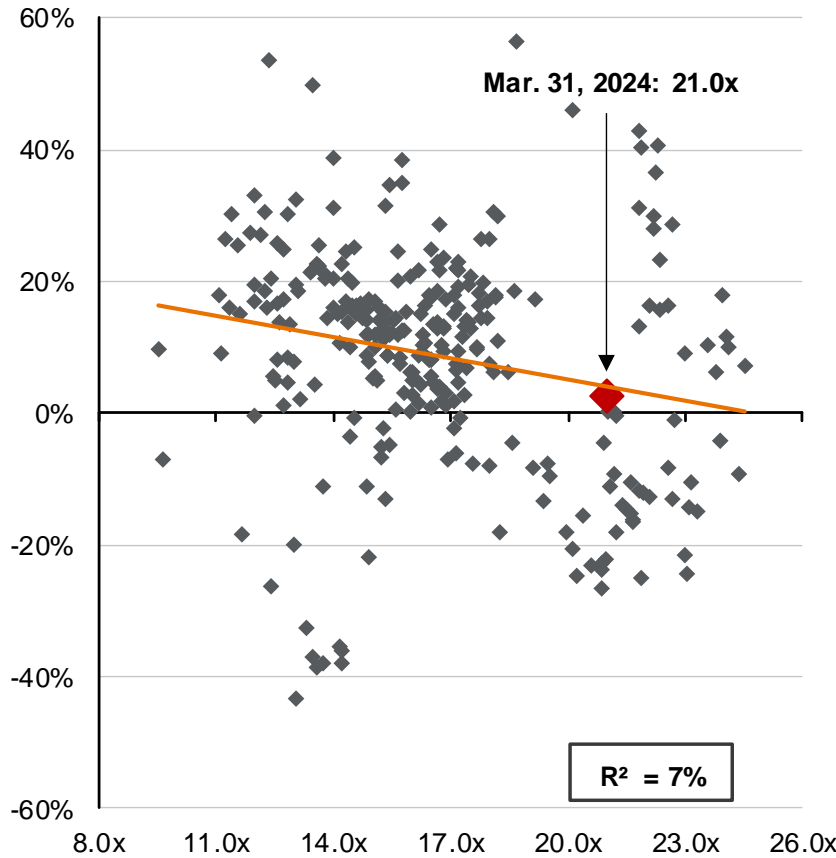


# P/E ratios and equity returns

Equities

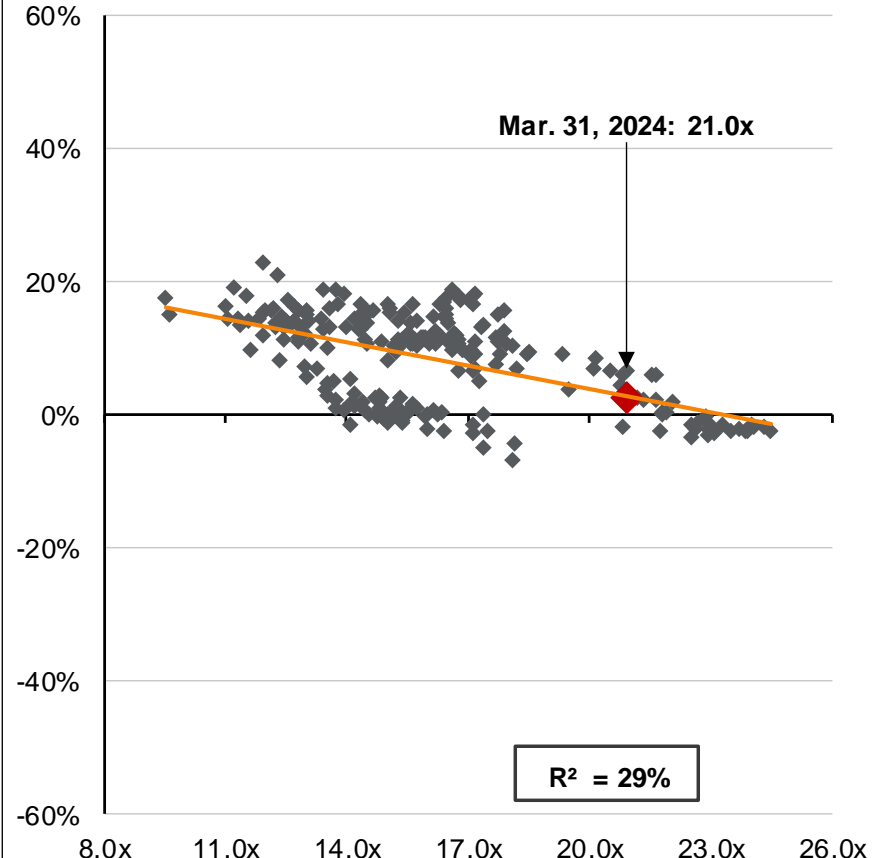
## Forward P/E and subsequent 1-yr. returns

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 1/31/1999.  $R^2$  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. *Guide to the Markets – U.S.* Data are as of March 31, 2024.

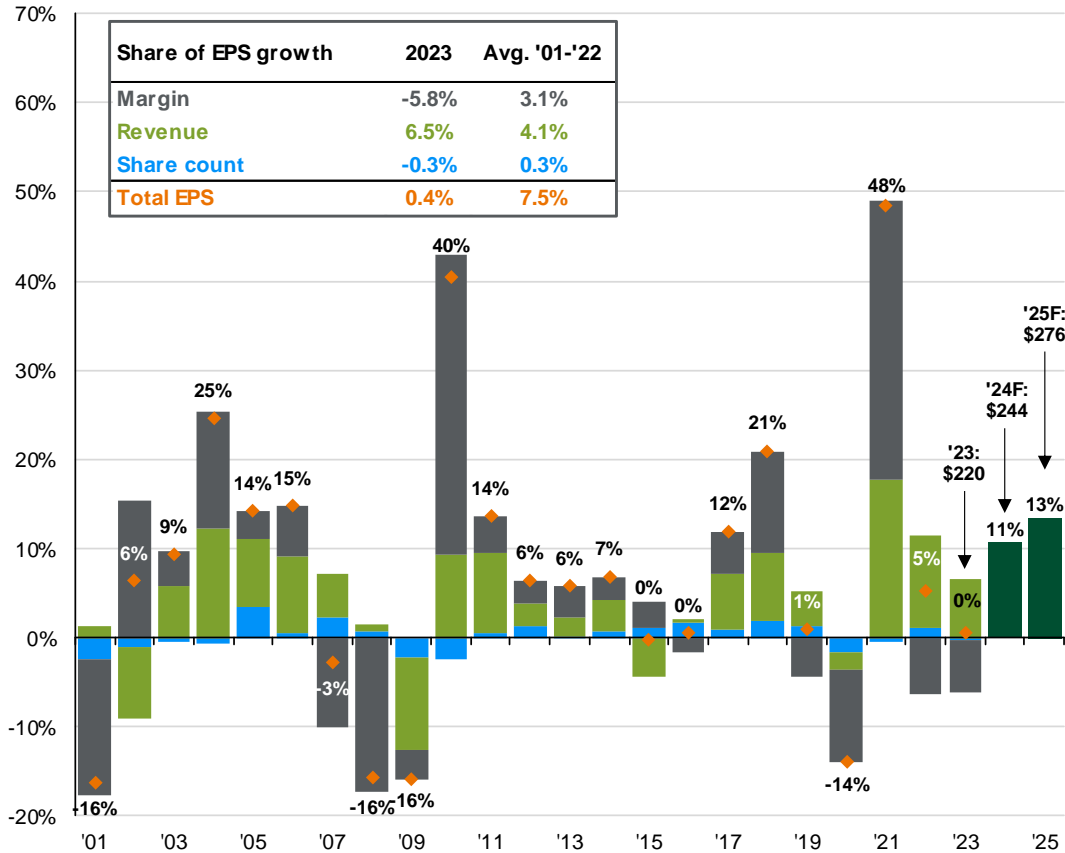


# Sources of earnings growth and profit margins

Equities

## S&P 500 year-over-year pro-forma EPS growth

Annual growth broken into changes in revenue, profit margin and share count



## S&P 500 profit margins

Quarterly earnings/sales



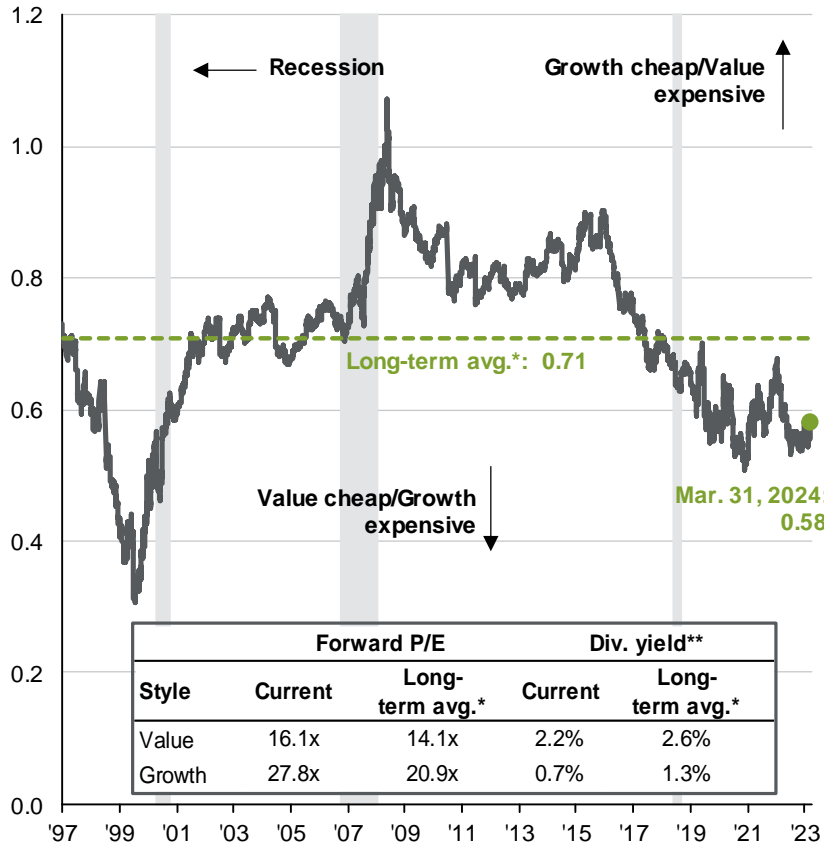
Source: Compustat, FactSet, Standard & Poor's, J.P. Morgan Asset Management.  
 Historical EPS levels are based on annual pro-forma earnings per share. \*2024 and 2025 EPS growth are based on consensus analyst estimates for each calendar year. Past performance is not indicative of future returns.  
 Guide to the Markets – U.S. Data are as of March 31, 2024.



# Value vs. Growth: Valuations and interest rates

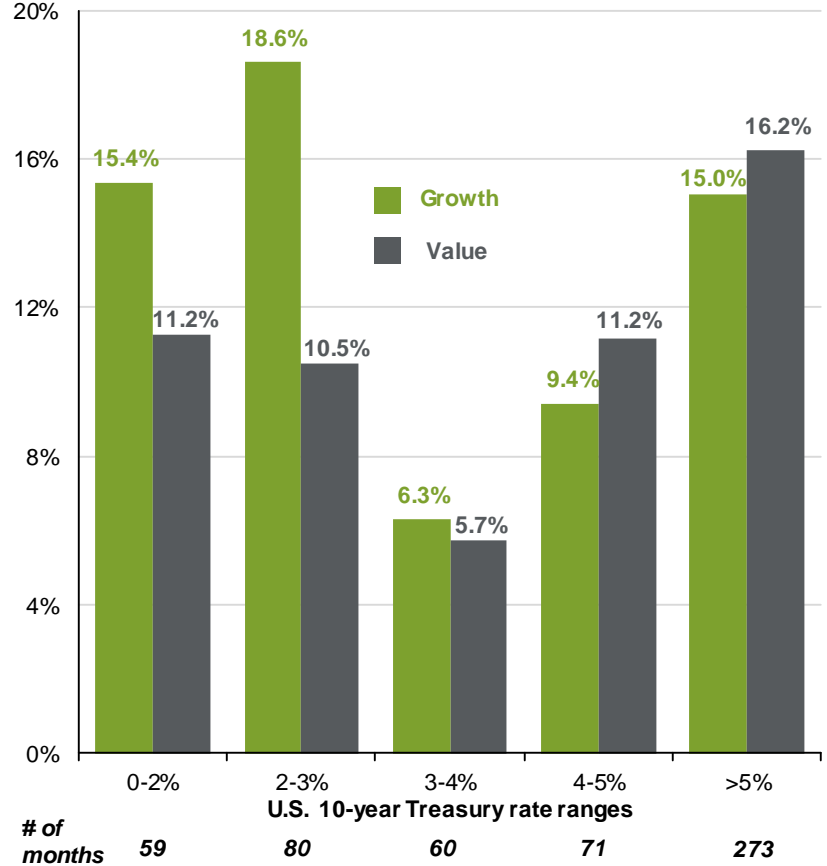
## Value vs. Growth relative valuations

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



## Value vs. Growth in different interest rate environments

Annualized total return by 10-year Treasury rate ranges, 1979 - 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. Guide to the Markets – U.S. Data are as of March 31, 2024.



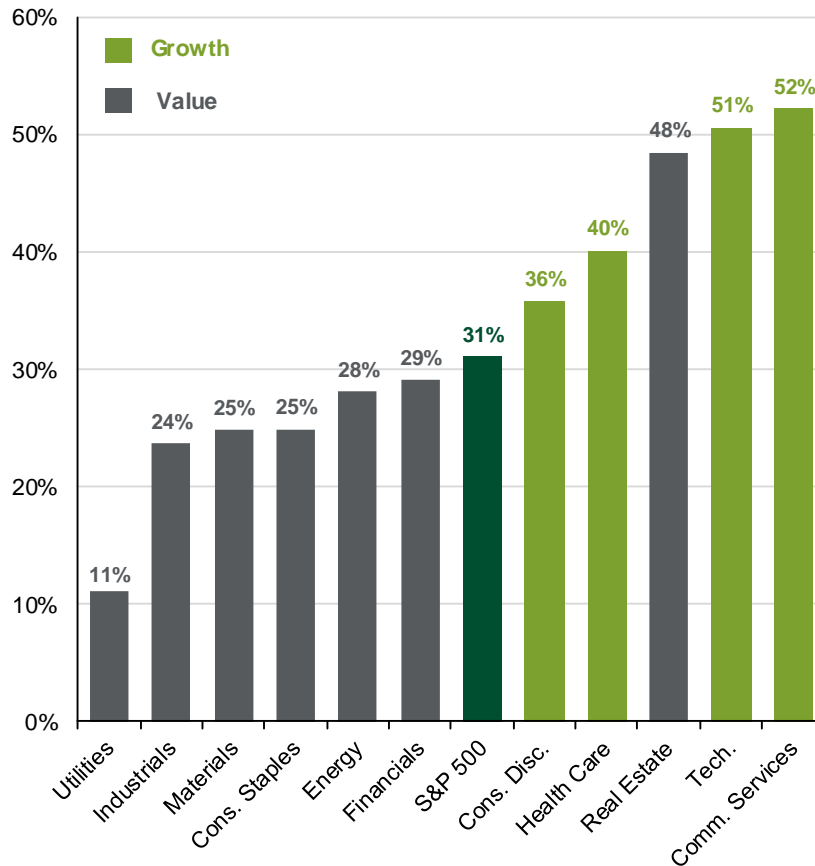


# Value vs. Growth: Cash, R&D and capex

Equities

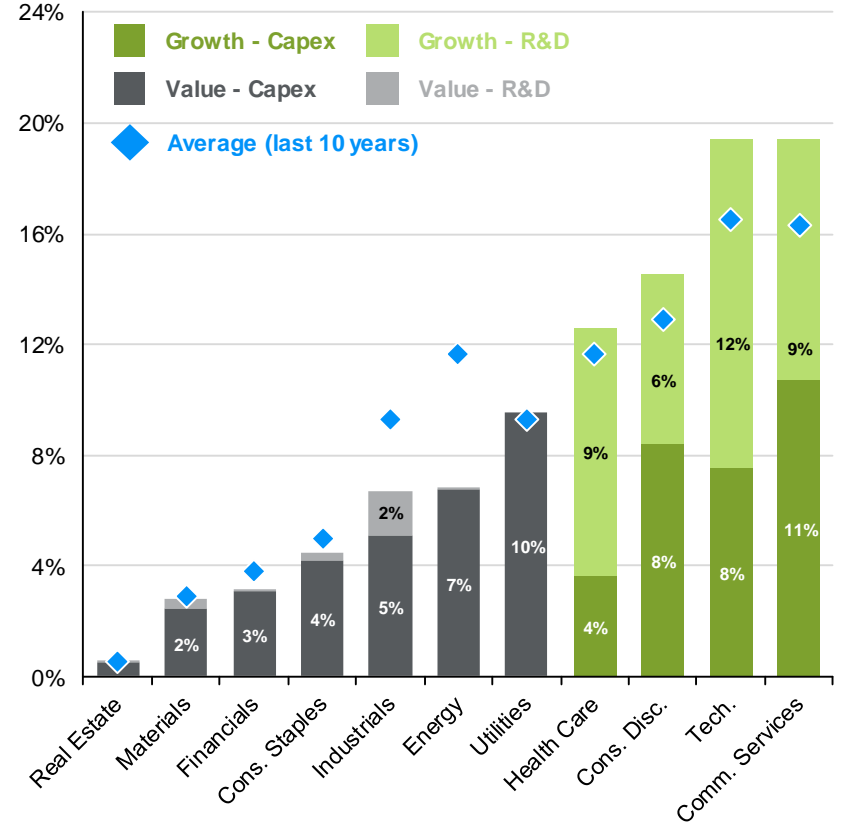
## Corporate cash as a % of current assets by sector

Quarterly



## Research & development and capex by sector

Share of total S&P 500 R&D and capex by sector, current vs. average



Source: Compustat, FactSet, J.P. Morgan Asset Management. (Left) Corporate cash and current assets data are based on the latest available quarterly data. Current assets are assets that can be converted into cash within a 12-month time frame. Current assets includes items such as cash and cash equivalents, marketable securities, accounts receivable, inventory and other short-term investments. (Right) Research and development (R&D) and capital expenditure (capex) data are year-to-date through 3Q23. *Guide to the Markets – U.S.* Data are as of March 31, 2024.



# S&P 500: Index concentration, valuations and earnings

## P/E ratio of the top 10 and remaining stocks in the S&P 500

Next 12 months, 1996 - present



## 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.

The top 10 S&P 500 companies are based on the 10 largest index constituents at the beginning of each month. As of 3/31/2024, the top 10 companies in the index were MSFT (7.2%), AAPL (5.6%), NVDA (5.1%), AMZN (3.7%), META (2.4%), GOOGL (2.0%), BRK.B (1.7%), GOOG (1.7%), LLY (1.4%), AVGO (1.3%) and JPM (1.3%). The remaining stocks represent the rest of the 490 companies in the S&P 500.

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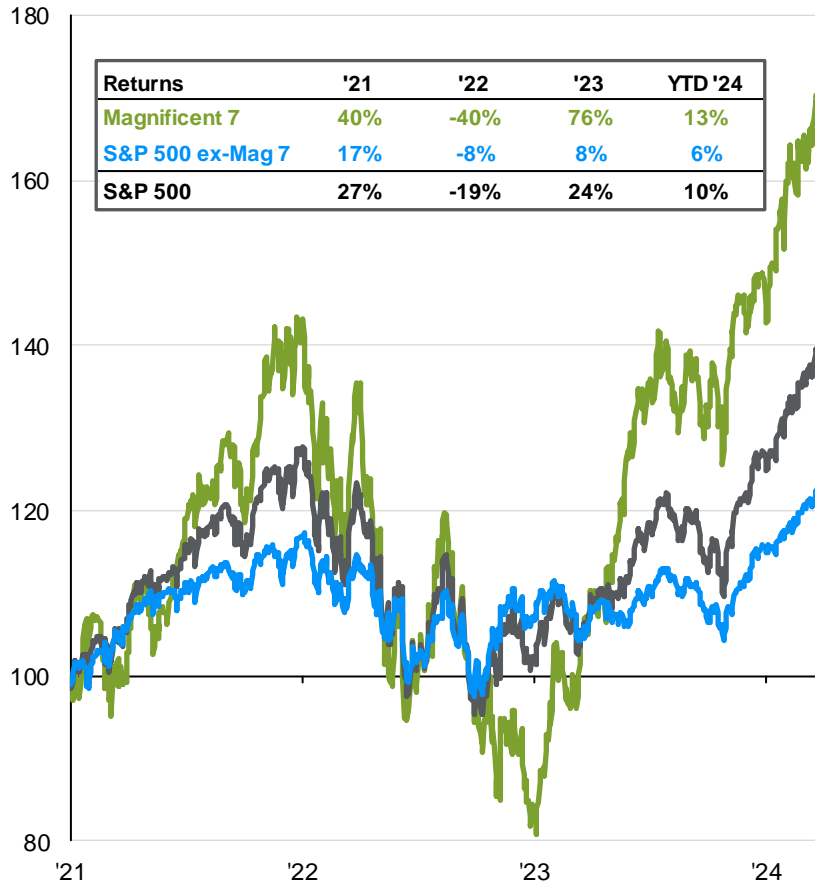


# Magnificent 7 performance and earnings dynamics

Equities

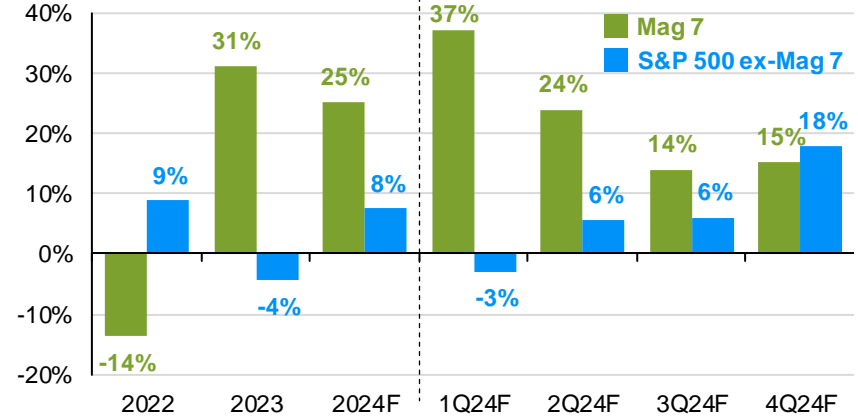
## Performance of “Magnificent 7” stocks in S&P 500\*

Indexed to 100 on 1/1/2021, price return



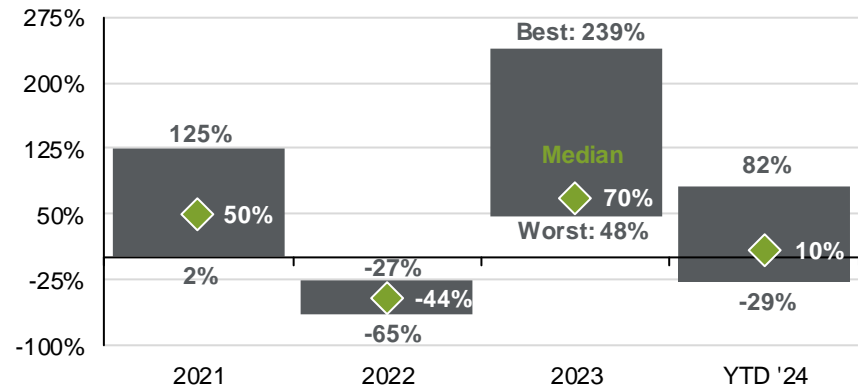
## Earnings growth

Pro-forma EPS, y/y



## Magnificent 7 performance dispersion

Price returns, best, median and worst performing Mag 7 stock by year



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

\*Magnificent 7 includes AAPL, AMZN, GOOG, GOOGL, META, MSFT, NVDA and TSLA. Earnings estimates for 2024 are forecasts based on consensus analyst expectations.

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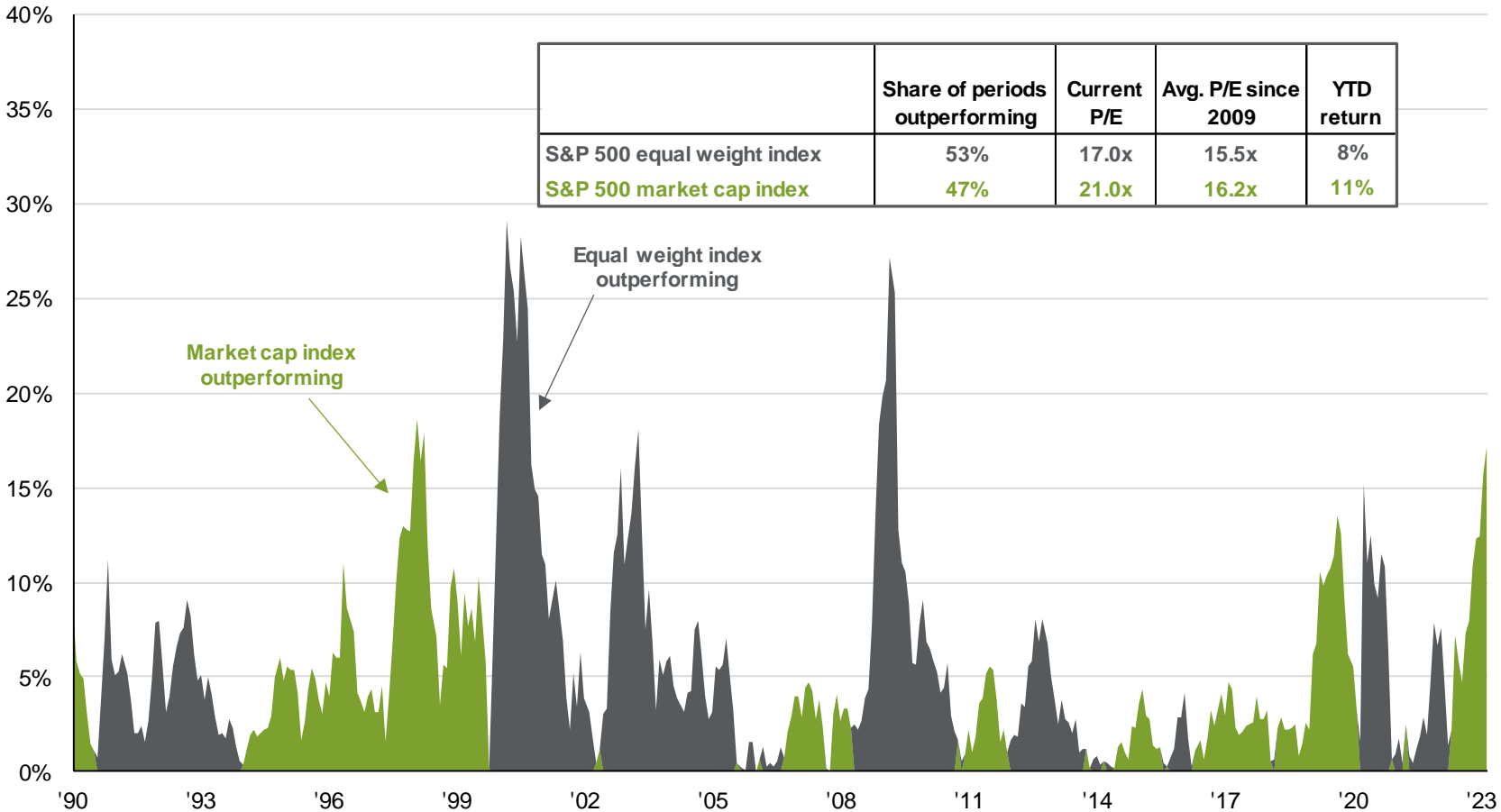


# S&P 500 market cap vs. equal weight performance

Equities

## S&P 500 market cap and equal weight relative performance

Rolling monthly y/y total returns, outperformance = high - low



Source: FactSet, J.P. Morgan Asset Management. Guide to the Markets – U.S. Data are as of March 31, 2024.

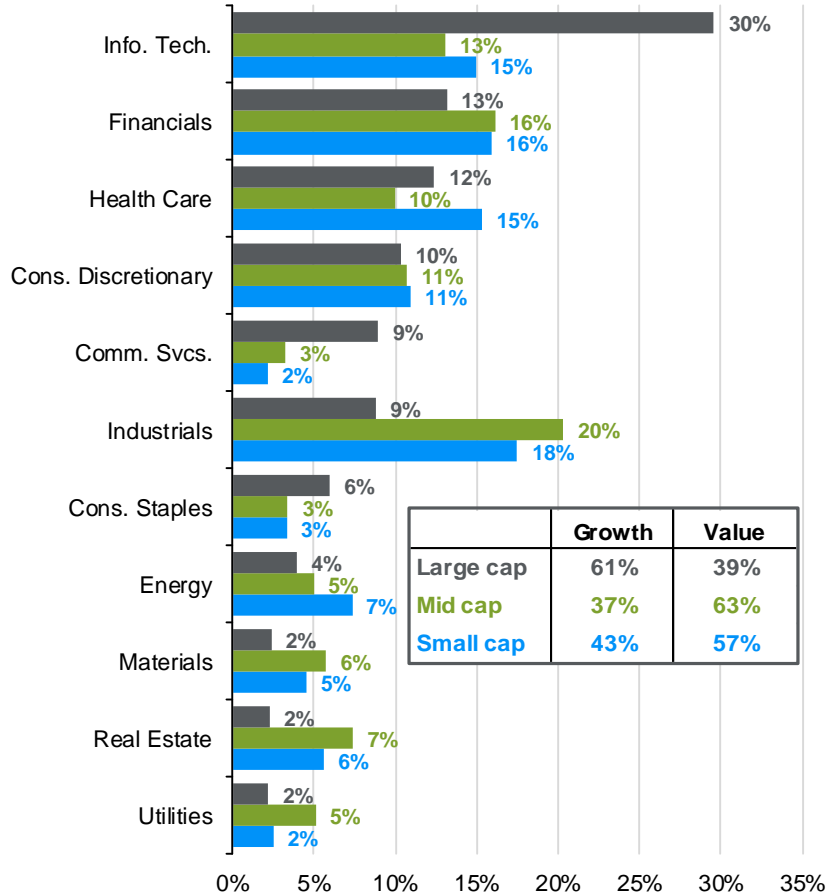


# Small caps, mid caps and large caps

Equities

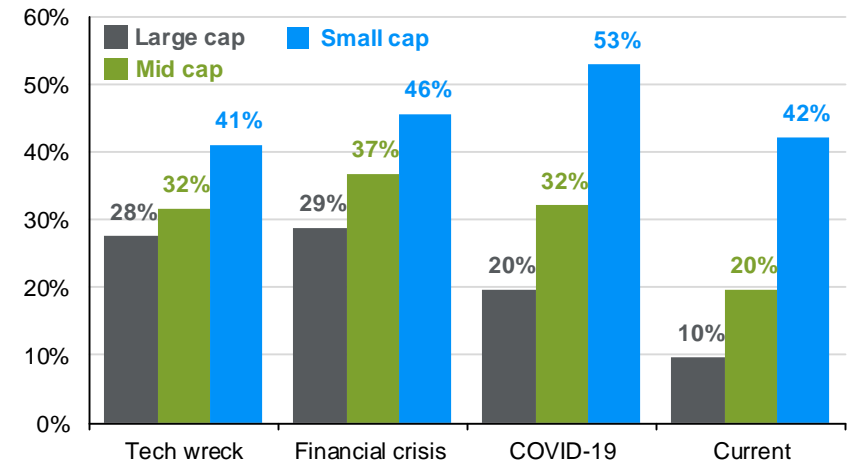
## Sector composition

% of index market capitalization



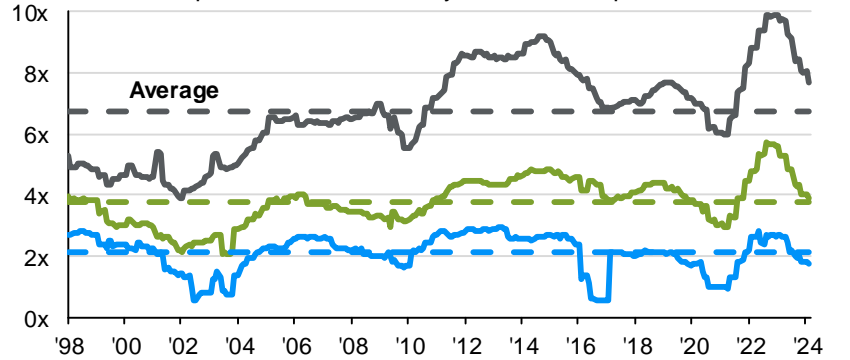
## Percent of unprofitable companies

Pro-forma EPS



## Interest rate coverage ratios

EBIT/interest expense on debt, monthly, LTM, 1998 - present



Source: Compustat, FactSet, FTSE Russell, NBER, J.P. Morgan Asset Management. The S&P 500 is used for large cap. The Russell Mid Cap is used for mid cap. The Russell 2000 is used for small cap. Data for the percent of unprofitable companies in each index are from the following quarters: Tech bubble = 4Q01, Financial crisis = 4Q08, COVID-19 = 1Q20 and current = 4Q23.

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## Returns and valuations by style

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U.S.

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## 10-year annualized

	Value	Blend	Growth
Large	9.1%	13.0%	16.1%
Mid	8.7%	10.1%	11.5%
Small	7.0%	7.8%	8.1%

## YTD

	Value	Blend	Growth
Large	9.0%	10.6%	11.4%
Mid	8.2%	8.6%	9.5%
Small	2.9%	5.2%	7.6%

## Since market peak (February 2020)

	Value	Blend	Growth
Large	42.8%	65.8%	82.2%
Mid	42.1%	45.5%	44.3%
Small	38.3%	32.7%	23.8%

## Since market low (March 2020)

	Value	Blend	Growth
Large	130.9%	150.4%	165.8%
Mid	151.2%	143.7%	124.4%
Small	143.2%	123.6%	101.2%

## Current P/E vs. 20-year avg. P/E

	Value	Blend	Growth
Large	16.1 / 13.7	21.0 / 15.6	27.8 / 18.9
Mid	16.0 / 14.5	18.2 / 16.4	27.8 / 20.6
Small	17.3 / 16.7	23.6 / 21.3	37.0 / 27.1

## Current P/E as % of 20-year avg. PE

	Value	Blend	Growth
Large	117.4%	134.2%	146.9%
Mid	110.3%	111.4%	135.1%
Small	103.4%	110.5%	136.6%

Source: FactSet, Refinitiv Datastream, Russell Investment Group, Standard & Poor's, J.P. Morgan Asset Management. All calculations are cumulative total return, including dividends reinvested for the stated period. Since market peak represents period from 2/19/2020 to 3/31/2024. Since market low represents period from 3/23/2020 to 3/31/2024. Returns are cumulative returns, not annualized. For all time periods, total return is based on Russell style indices except for the large blend category, which is based on the S&P 500 Index. Past performance is not indicative of future returns. The price-to-earnings is a bottom-up calculation based on the most recent index price, divided by consensus estimates for earnings in the next 12 months (NTM) and is provided by FactSet Market Aggregates and J.P. Morgan Asset Management. *Guide to the Markets – U.S.* Data are as of March 31, 2024.



# Returns and valuations by sector

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Equities

	Energy	Materials	Financials	Industrials	Cons. Disc.	Tech.	Comm. Services*	Real Estate	Health Care	Cons. Staples	Utilities	S&P 500 Index	
<b>S&amp;P weight</b>	<b>3.9%</b>	<b>2.4%</b>	<b>13.2%</b>	<b>8.8%</b>	<b>10.3%</b>	<b>29.6%</b>	<b>9.0%</b>	<b>2.3%</b>	<b>12.4%</b>	<b>6.0%</b>	<b>2.2%</b>	<b>100.0%</b>	<b>Weight</b>
Russell Growth weight	0.5%	0.7%	6.4%	5.8%	14.9%	44.0%	12.0%	0.8%	10.6%	4.1%	0.1%	100.0%	
Russell Value weight	8.1%	4.8%	22.7%	14.3%	5.0%	9.4%	4.6%	4.6%	14.2%	7.7%	4.7%	100.0%	
Russell 2000 weight	7.3%	4.5%	15.9%	17.6%	10.8%	15.0%	2.1%	5.6%	15.3%	3.3%	2.5%	100.0%	
<b>1Q24</b>	13.7	8.9	12.5	11.0	5.0	12.7	15.8	-1.1	8.8	7.5	4.6	10.6	<b>Return (%)</b>
<b>YTD</b>	13.7	8.9	12.5	11.0	5.0	12.7	15.8	-1.1	8.8	7.5	4.6	10.6	
<b>Since market peak</b> (February 2020)	109.3	67.8	48.1	61.4	46.8	120.6	53.1	10.0	52.6	37.6	7.5	65.8	
<b>Since market low</b> (March 2020)	374.9	162.6	159.5	176.9	115.0	220.4	114.3	76.6	111.7	81.1	66.9	150.4	
<b>Beta to S&amp;P 500</b>	1.2	1.1	1.1	1.1	1.2	1.1	1.0*	0.8	0.7	0.6	0.5	1.0	<b>β</b>
<b>Correl. to Treas. yields</b>	-0.2	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	-0.8	-0.6	-0.5	-0.7	-0.7	<b>ρ</b>
<b>Foreign % of sales</b>	36.8	50.5	28.8	32.5	33.1	57.0	48.1	17.3	34.4	39.7	1.2	41.0	<b>%</b>
NTM earnings growth	-2.6%	1.9%	11.4%	9.7%	11.1%	17.6%	16.4%	2.5%	14.3%	5.7%	8.7%	11.3%	<b>EPS</b>
<b>20-yr avg.</b>	<b>100.3%</b>	<b>13.7%</b>	<b>20.6%</b>	<b>13.9%</b>	<b>16.9%</b>	<b>12.3%</b>	<b>11.1%*</b>	<b>6.9%</b>	<b>7.9%</b>	<b>7.6%</b>	<b>4.7%</b>	<b>10.9%</b>	
Forward P/E ratio	13.0x	21.5x	16.0x	21.6x	25.6x	28.4x	19.0x	16.9x	19.1x	20.2x	16.1x	21.0x	<b>P/E</b>
<b>20-yr avg.</b>	<b>13.5x</b>	<b>14.9x</b>	<b>12.5x</b>	<b>16.3x</b>	<b>19.6x</b>	<b>17.9x</b>	<b>18.6x*</b>	<b>17.0x</b>	<b>15.0x</b>	<b>17.5x</b>	<b>15.6x</b>	<b>15.6x</b>	
Buyback yield	4.3%	1.3%	2.2%	1.9%	1.5%	1.4%	3.4%	-1.6%	1.0%	0.7%	-0.7%	1.7%	<b>Bbk</b>
<b>20-yr avg.</b>	<b>1.8%</b>	<b>1.0%</b>	<b>0.5%</b>	<b>2.3%</b>	<b>2.5%</b>	<b>3.0%</b>	<b>1.8%</b>	<b>-1.4%</b>	<b>1.9%</b>	<b>1.8%</b>	<b>-0.7%</b>	<b>1.8%</b>	
Dividend yield	3.1%	1.8%	1.7%	1.5%	0.8%	0.7%	0.8%	3.8%	1.6%	2.8%	3.6%	1.4%	<b>Div</b>
<b>20-yr avg.</b>	<b>2.8%</b>	<b>2.4%</b>	<b>2.3%</b>	<b>2.2%</b>	<b>1.4%</b>	<b>1.2%</b>	<b>1.2%</b>	<b>3.8%</b>	<b>1.9%</b>	<b>2.8%</b>	<b>3.8%</b>	<b>2.1%</b>	

Source: FactSet, Refinitiv Datastream, Russell Investment Group, Standard & Poor's, J.P. Morgan Asset Management. All calculations are cumulative total return, not annualized, including dividends for the stated period. Since market peak represents period from 2/19/2020 to 3/31/2024. Since market low represents period from 3/23/2020 to 3/31/2024. Correlation to Treasury yields are trailing 2-year monthly correlations between S&P 500 sector price returns and 10-year Treasury yield movements. Next 12 months (NTM) earnings growth is the percent change in next 12-months earnings estimates compared to last 12-months earnings provided by brokers. Forward P/E ratio is a bottom-up calculation based on the most recent S&P 500 Index price, divided by consensus estimates for earnings in the next 12 months (NTM), and is provided by FactSet Market Aggregates and J.P. Morgan Asset Management. Buyback yield is net of share issuance and is calculated as last 12-months net buybacks divided by market cap. Dividend yield is calculated as the next 12-months consensus dividend divided by most recent price. Beta calculations are based on 10-years of monthly price returns for the S&P 500 and its sub-indices. \*Communication Services (formerly Telecom) averages and beta are based on 5-years of backtested data by JPMAM. Past performance is not indicative of future returns.  
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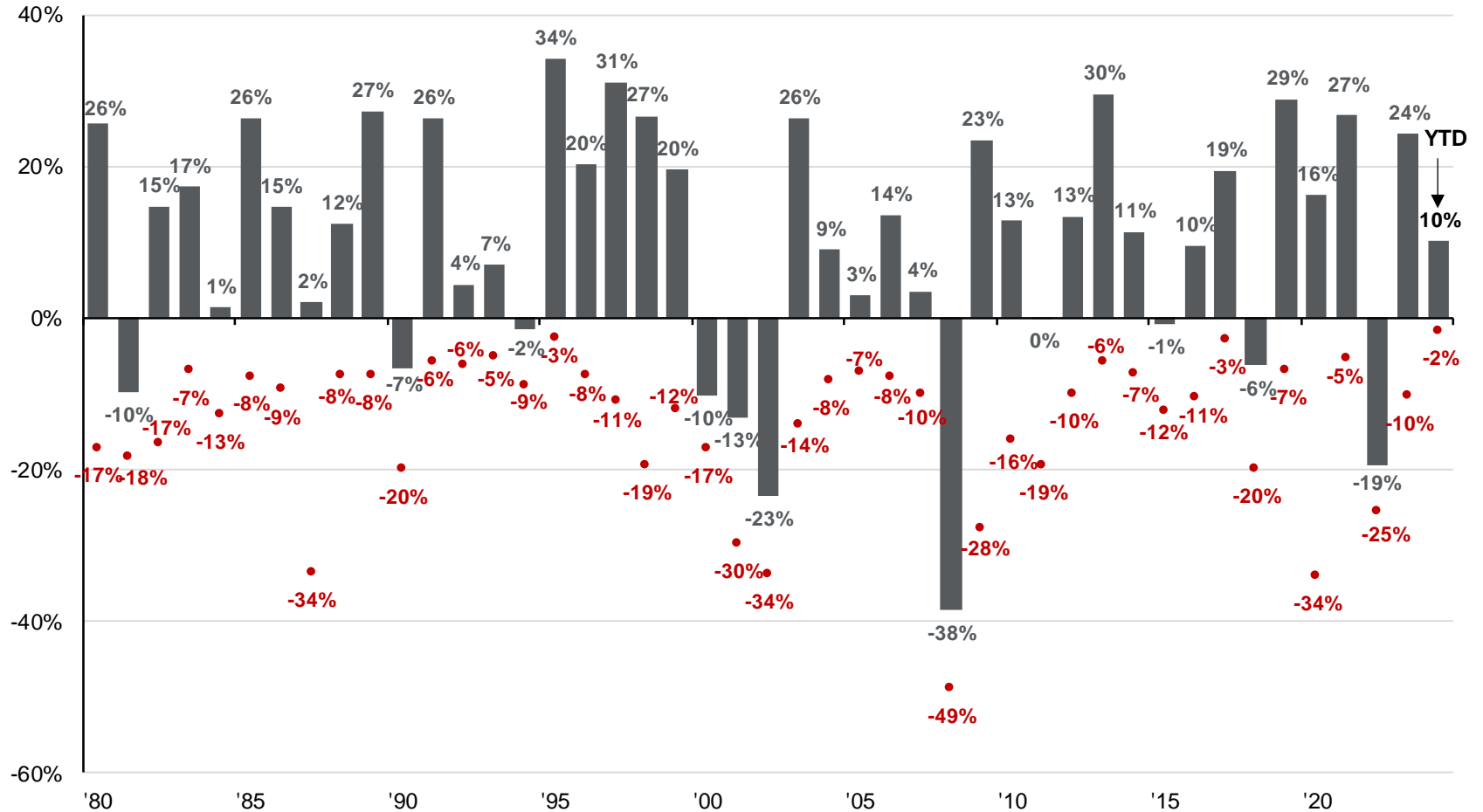


# Annual returns and intra-year declines

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 10.3%.

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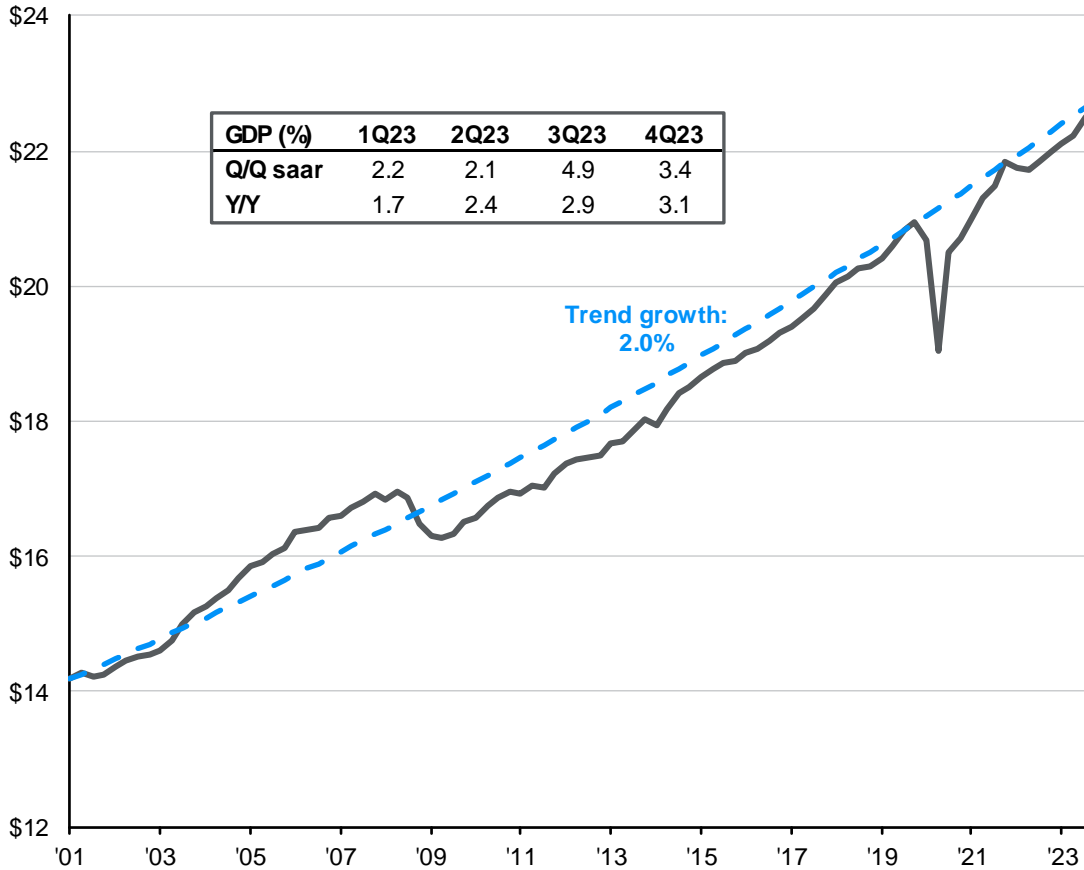




# Economic growth and the composition of GDP

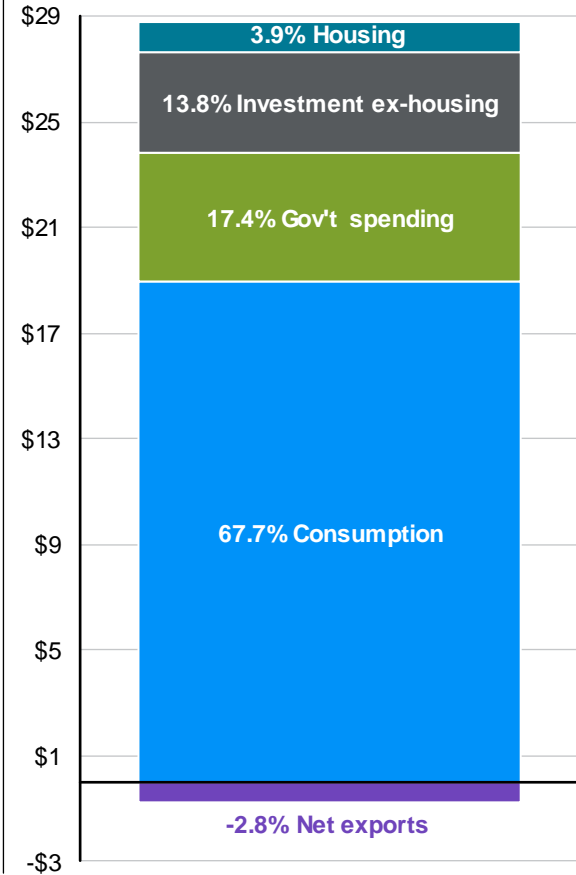
## Real GDP

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



## Components of GDP

4Q23 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 March 31, 2024.

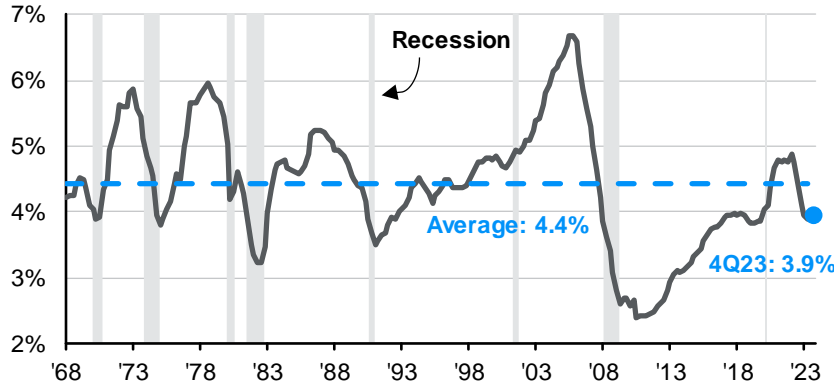


# Cyclical sectors

Economy

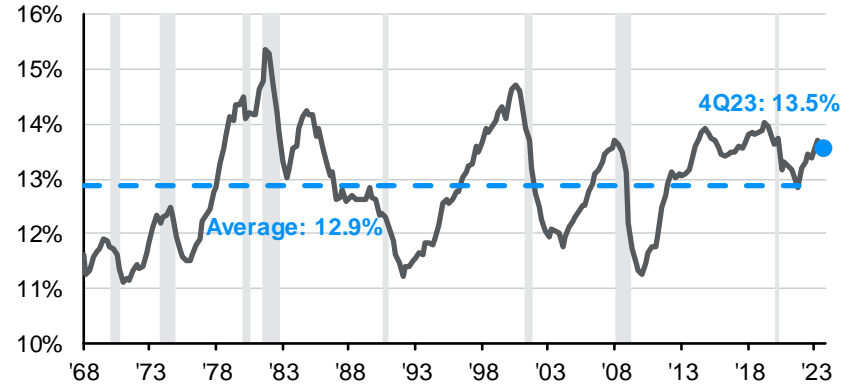
## Residential investment as a % of GDP

Quarterly, seasonally adjusted



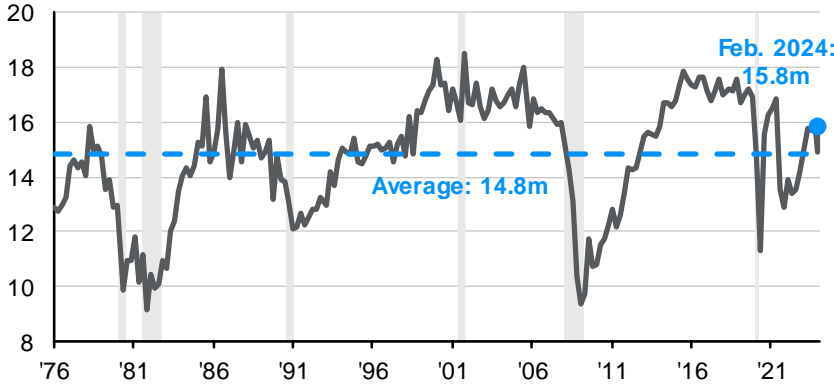
## Business fixed investment as a % of GDP

Quarterly, seasonally adjusted



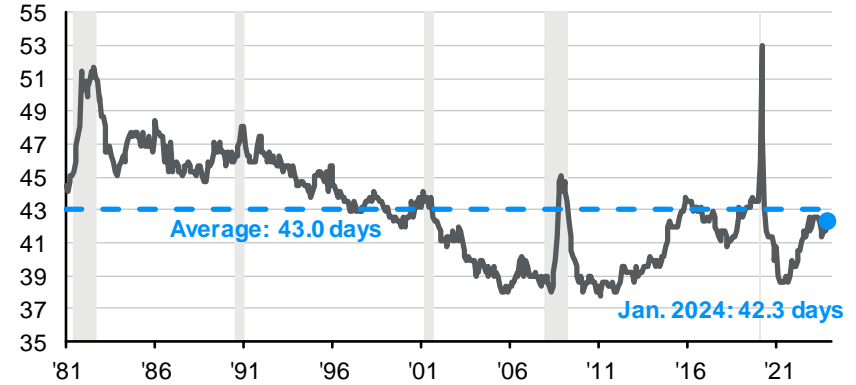
## Light vehicle sales

Mil vehicles, seasonally adjusted ann. rate



## Total business inventory/sales ratio

Days of sales, monthly, seasonally adjusted



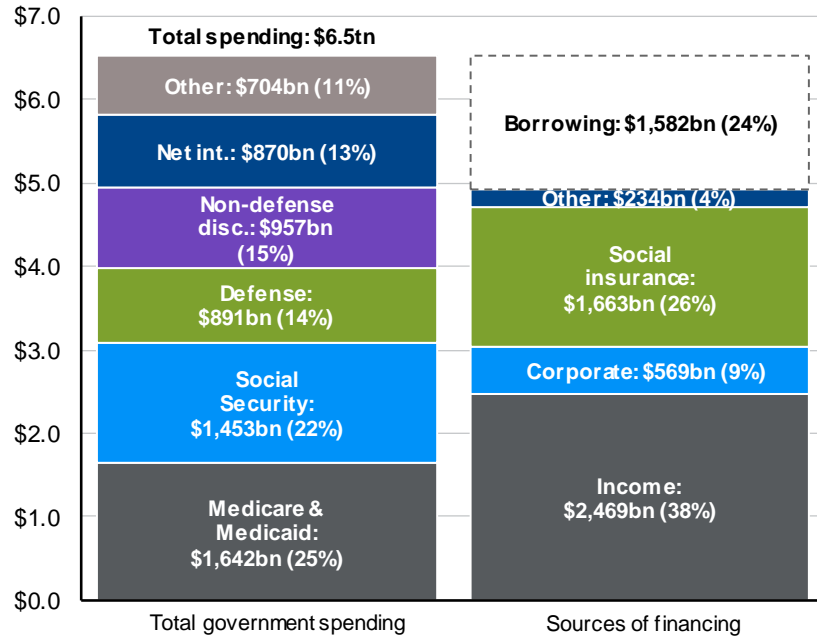
Source: BEA, Census Bureau, FactSet, J.P. Morgan Asset Management. Data for light vehicle sales is quarterly apart from the latest monthly data point.  
Guide to the Markets – U.S. Data are as of March 31, 2024.



# Federal finances

## The 2024 federal budget

USD trillions

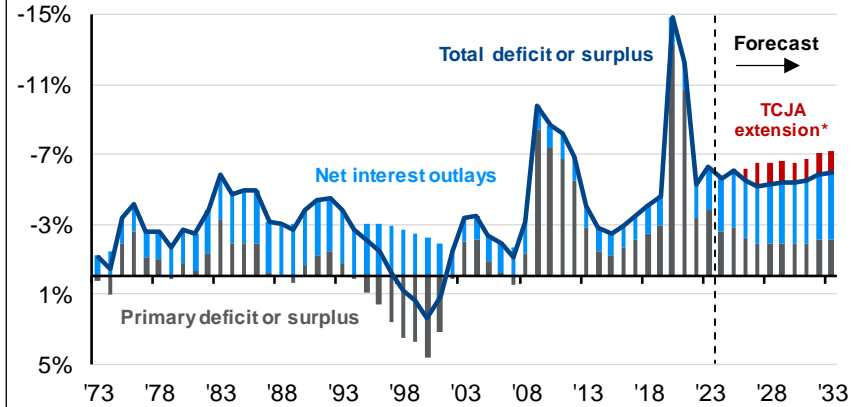


### CBO's Baseline economic assumptions

	2024	'25-'26	'27-'28	'29-'34
Real GDP growth	1.8%	2.1%	2.1%	1.9%
10-year Treasury	4.6%	4.3%	3.8%	4.1%
Headline inflation (CPI)	2.6%	2.4%	2.2%	2.2%
Unemployment	4.2%	4.4%	4.4%	4.5%

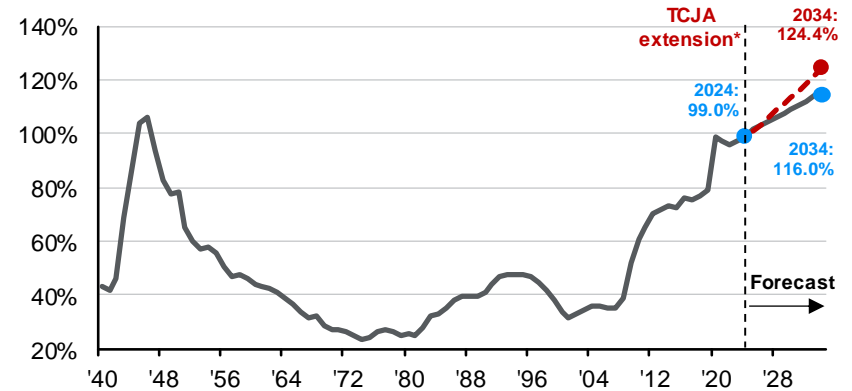
## Federal deficit and net interest outlays

% of GDP, 1973-2034, CBO Baseline Forecast



## Federal net debt (accumulated deficits)

% of GDP, 1940-2034, CBO Baseline Forecast, end of fiscal year



Source: CBO, J.P. Morgan Asset Management; (Top and bottom right) BEA, Treasury Department. Estimates are from the Congressional Budget Office (CBO) February 2024 An Update to the Budget Outlook: 2024 to 2034. "Other" spending includes, but is not limited to, health insurance subsidies, income security and federal civilian and military retirement. Years shown are fiscal years. \*Adjusted by JPMAM to include estimates from the CBO May 2023 report "Budgetary Outcomes Under Alternative Assumptions About Spending and Revenues" on the extension of TCJA provisions. 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 March 31, 2024.

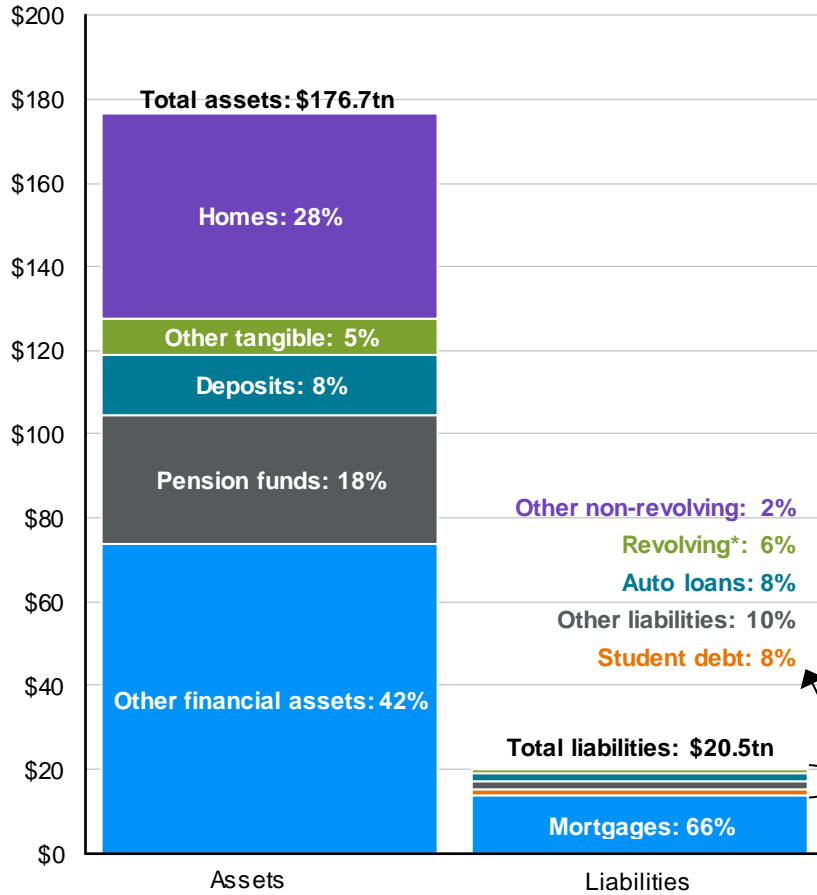


# Consumer finances

Economy

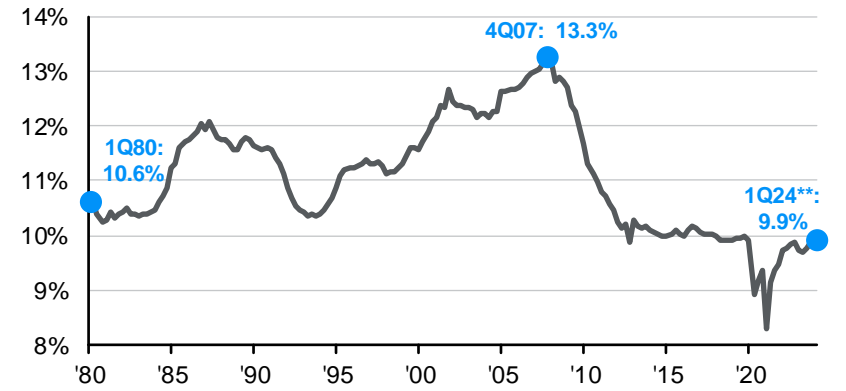
## Consumer balance sheet

4Q23, USD trillions, not seasonally adjusted



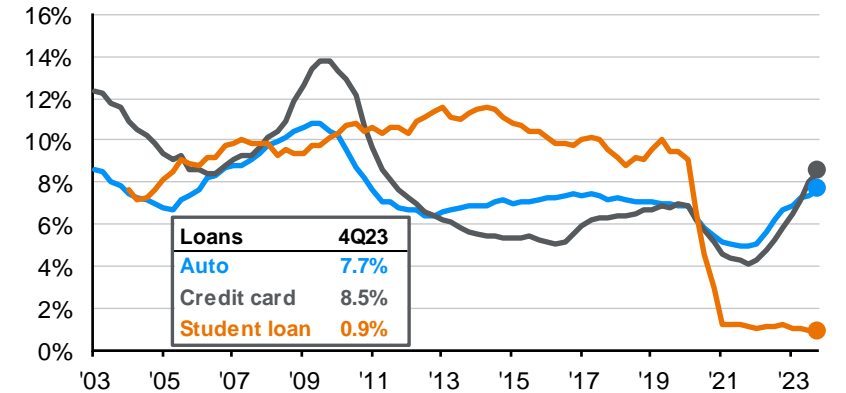
## Household debt service ratio

Debt payments as % of disposable personal income, SA



## Flows into early delinquencies

% of balance delinquent 30+ days



Source: FactSet, FRB, J.P. Morgan Asset Management; (Top and bottom right) BEA. Data include households and nonprofit organizations. SA – seasonally adjusted. \*Revolving includes credit cards. Values may not sum to 100% due to rounding. \*\*4Q23 and 1Q24 figures for debt service ratio are J.P. Morgan Asset Management estimates. Guide to the Markets – U.S. Data are as of March 31, 2024.

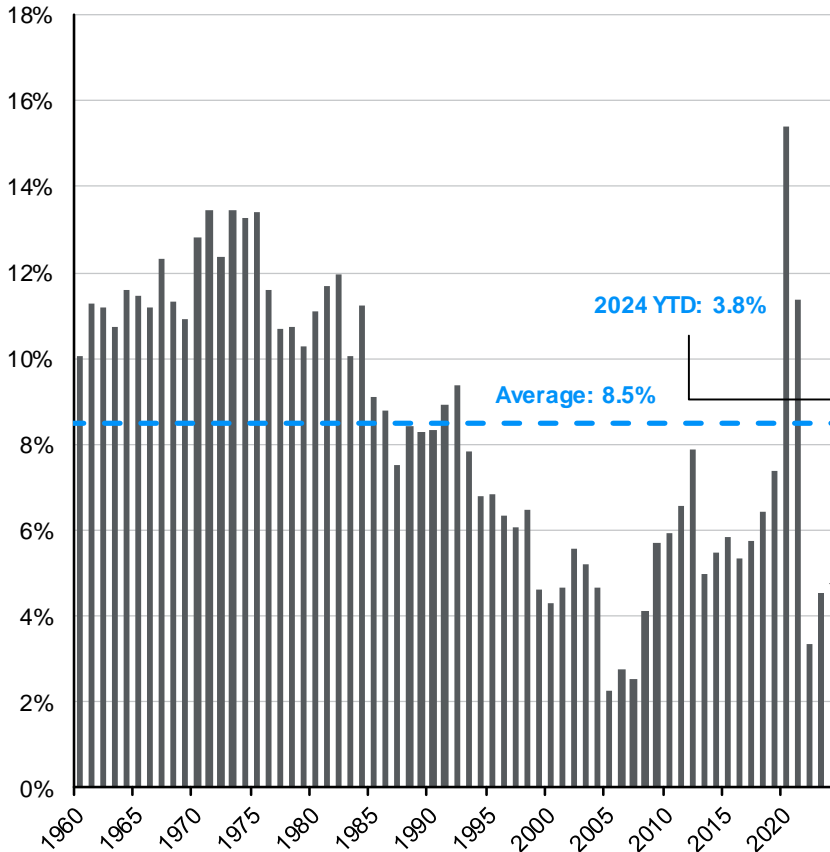


# Consumer saving

Economy

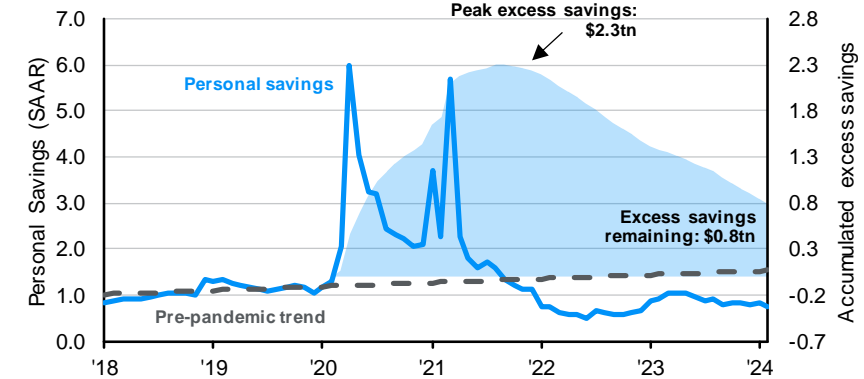
## Personal saving rate

Personal savings as a % of disposable personal income, annual



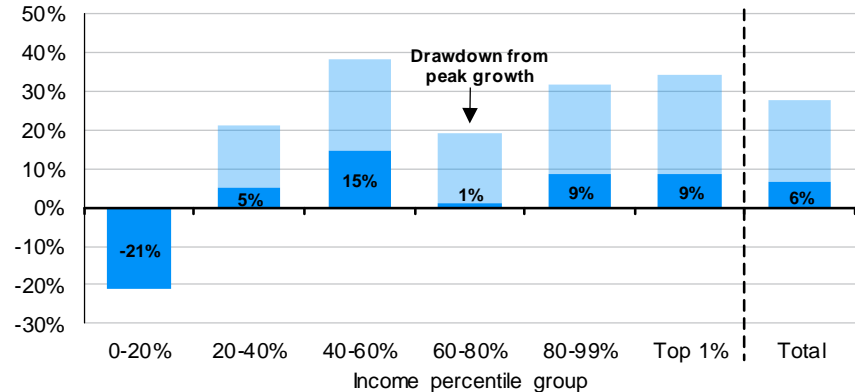
## Household excess savings

Trillions of USD



## Inflation-adjusted growth in deposits by income percentiles

Checking and savings account balances, % ch 4Q19-4Q23

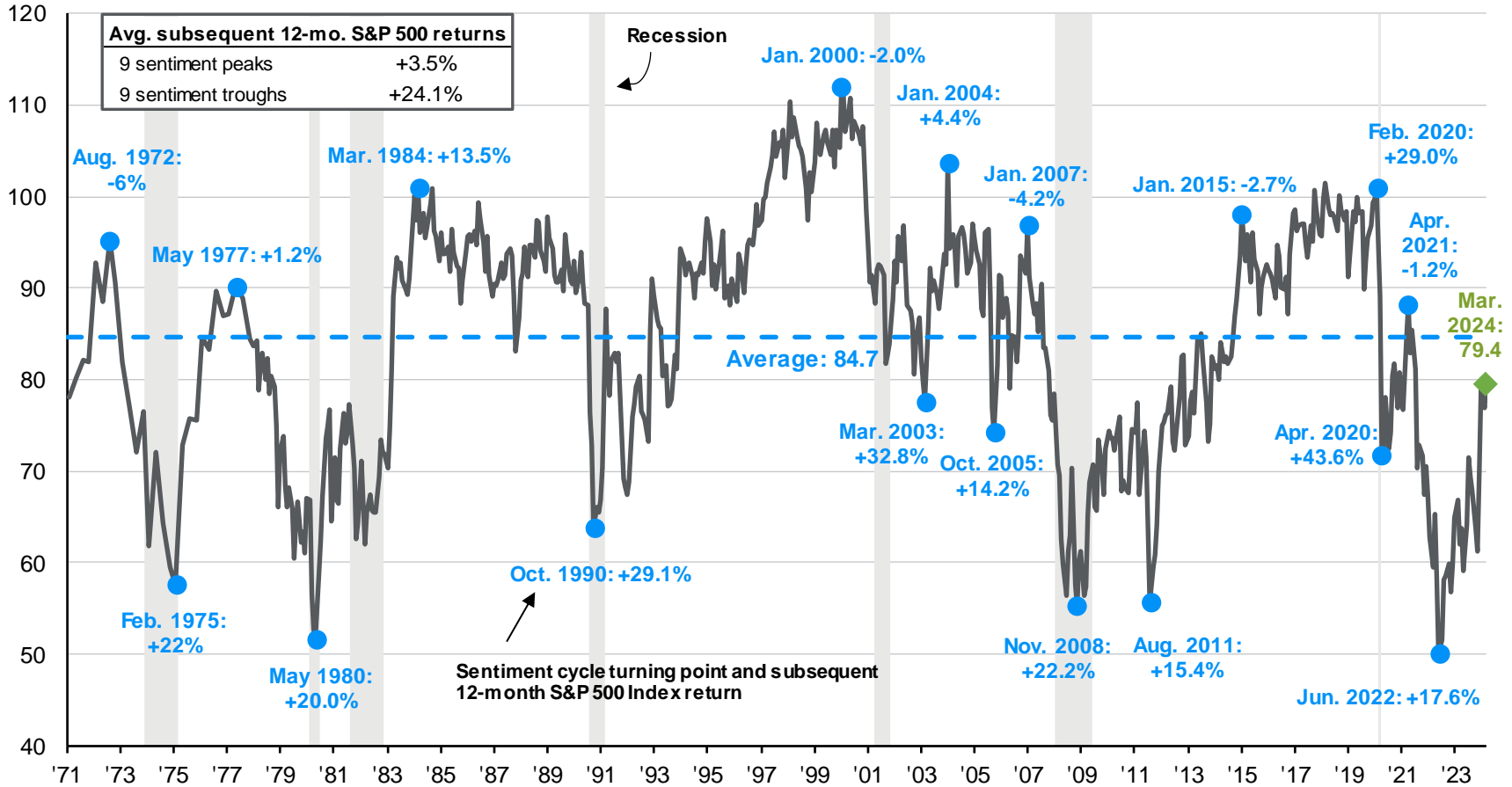


Source: BEA, Federal Reserve, J.P. Morgan Asset Management. (Top right) From March 2020 to August 2021, consumers amassed a peak \$2.3 trillion in excess savings relative to the pre-pandemic trend. Since August 2021, consumers have drawn down on those excess savings, with the remaining reflected in the chart annotation. (Bottom right) Deposits include money in checking accounts, savings accounts, CDs and money market deposit accounts. It does not include direct holdings of money market shares. The light blue area reflects the peak growth in inflation-adjusted savings achieved during the period and the dark blue area reflects current levels. *Guide to the Markets - U.S.* Data are as of March 31, 2024.



# Consumer confidence and the stock market

### Consumer Sentiment Index and subsequent 12-month S&P 500 returns



Source: FactSet, Standard & Poor's, University of Michigan, J.P. Morgan Asset Management.  
 Peak is defined as the highest index value before a series of lower lows, while a trough is defined as the lowest index value before a series of higher highs. Subsequent 12-month S&P 500 returns are price returns only starting from the end of the month and excluding dividends. Past performance is not a reliable indicator of current and future results.  
 Guide to the Markets – U.S. Data are as of March 31, 2024.

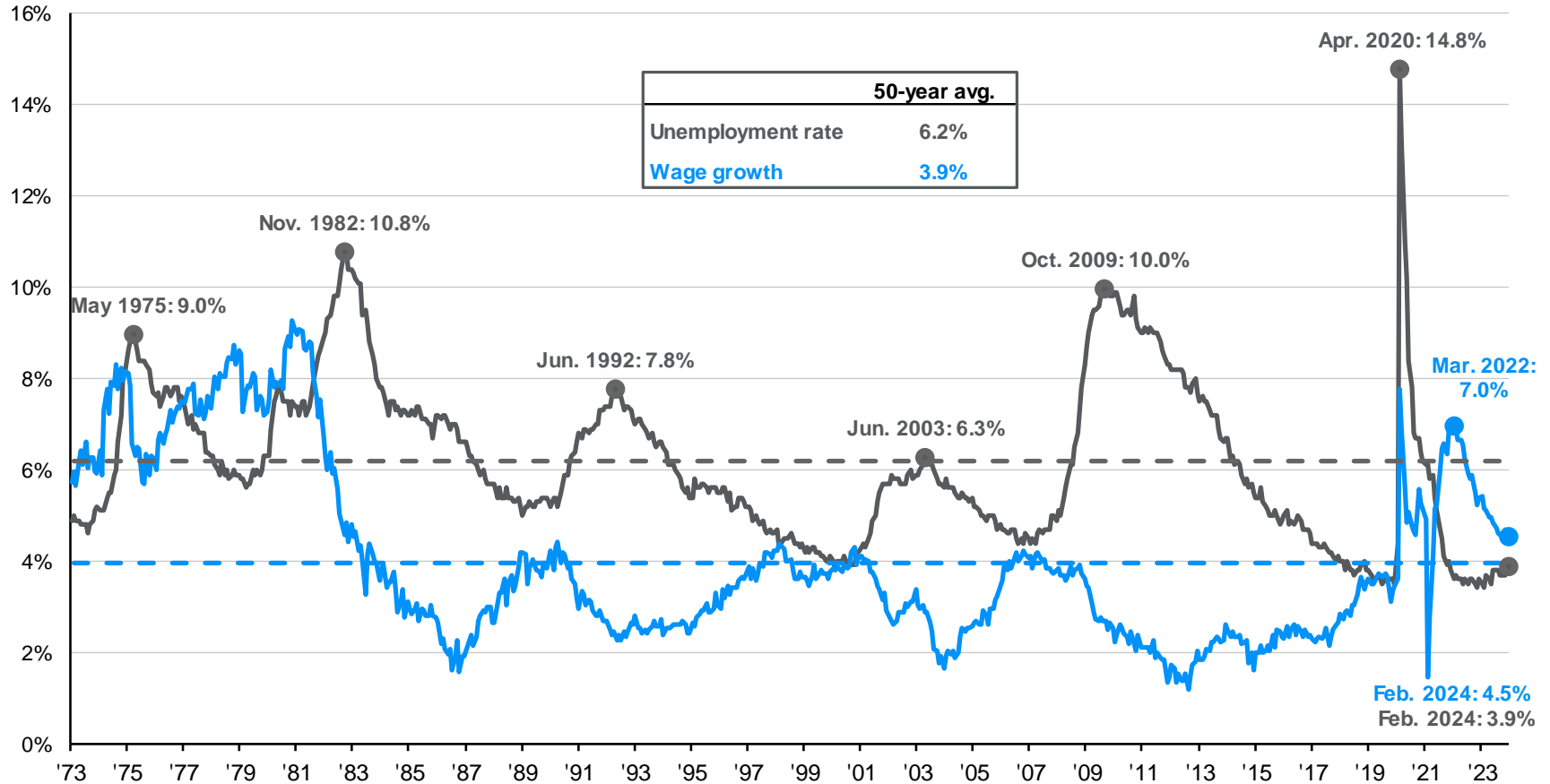


# Unemployment and wages

Economy

## Civilian unemployment rate and year-over-year wage growth

Private production and non-supervisory workers, seasonally adjusted, percent



Source: BLS, FactSet, J.P. Morgan Asset Management. Private production and non-supervisory jobs represent just over 80% of total private nonfarm jobs.

Guide to the Markets – U.S. Data are as of March 31, 2024.



# Labor demand

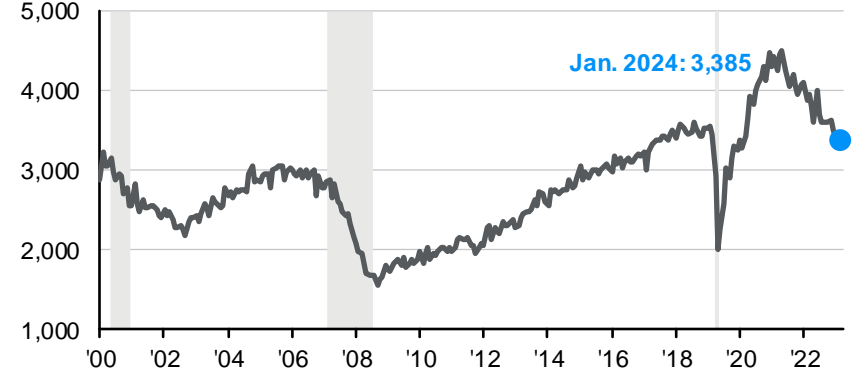
## JOLTS job openings\*

Total job openings, thousands, seasonally adjusted



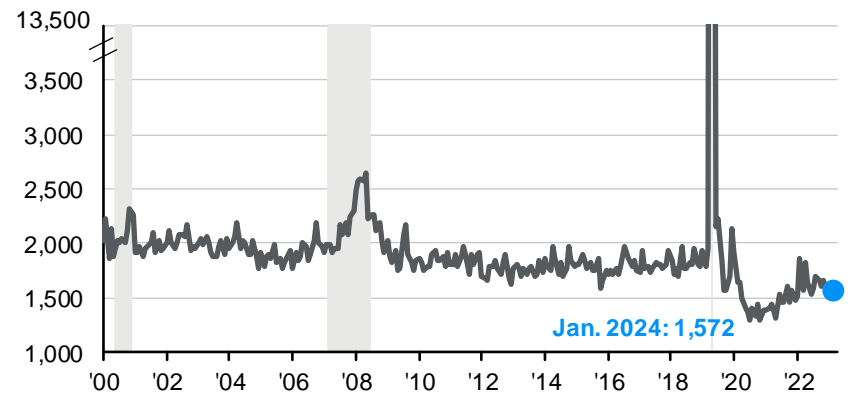
## JOLTS quits

Total nonfarm quits, thousands, seasonally adjusted



## JOLTS layoffs

Total nonfarm layoffs, thousands, seasonally adjusted



Source: U.S. Department of Labor, J.P. Morgan Asset Management. \*JOLTS job openings from February 1974 to November 2000 are J.P. Morgan Asset Management estimates. Guide to the Markets – U.S. Data are as of March 31, 2024.



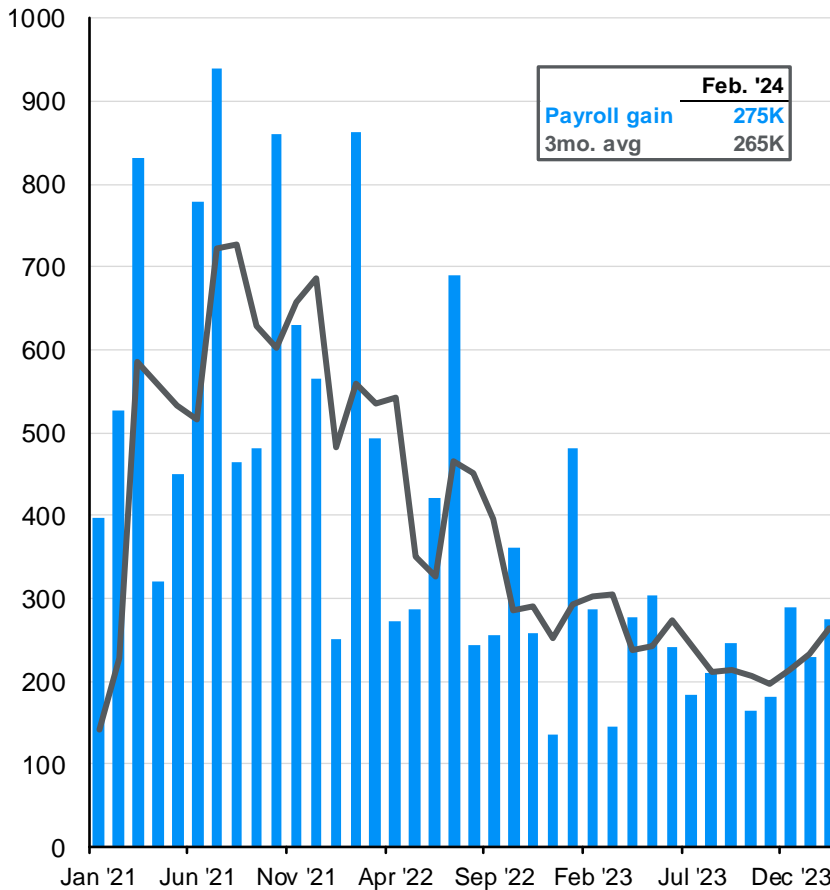


# Labor supply

Economy

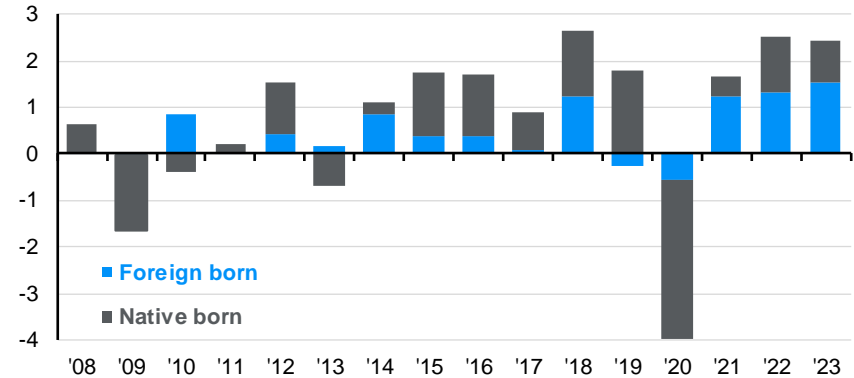
## Nonfarm payroll gains

Month-over-month change and 3mo. moving average, SA



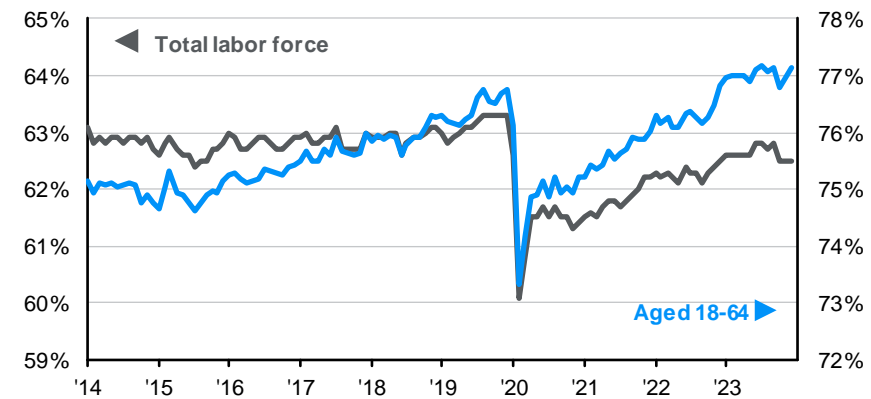
## Labor force growth, native and immigrant contribution

Year-over-year difference, end of year, aged 16+, millions



## Labor force participation

% of civilian noninstitutional population, SA



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

Labor force data are sourced from the Current Population Survey, also known as the household survey, conducted by the BLS. This survey does not ask respondents about immigration status and may include undocumented workers, although it likely undercounts the undocumented population.

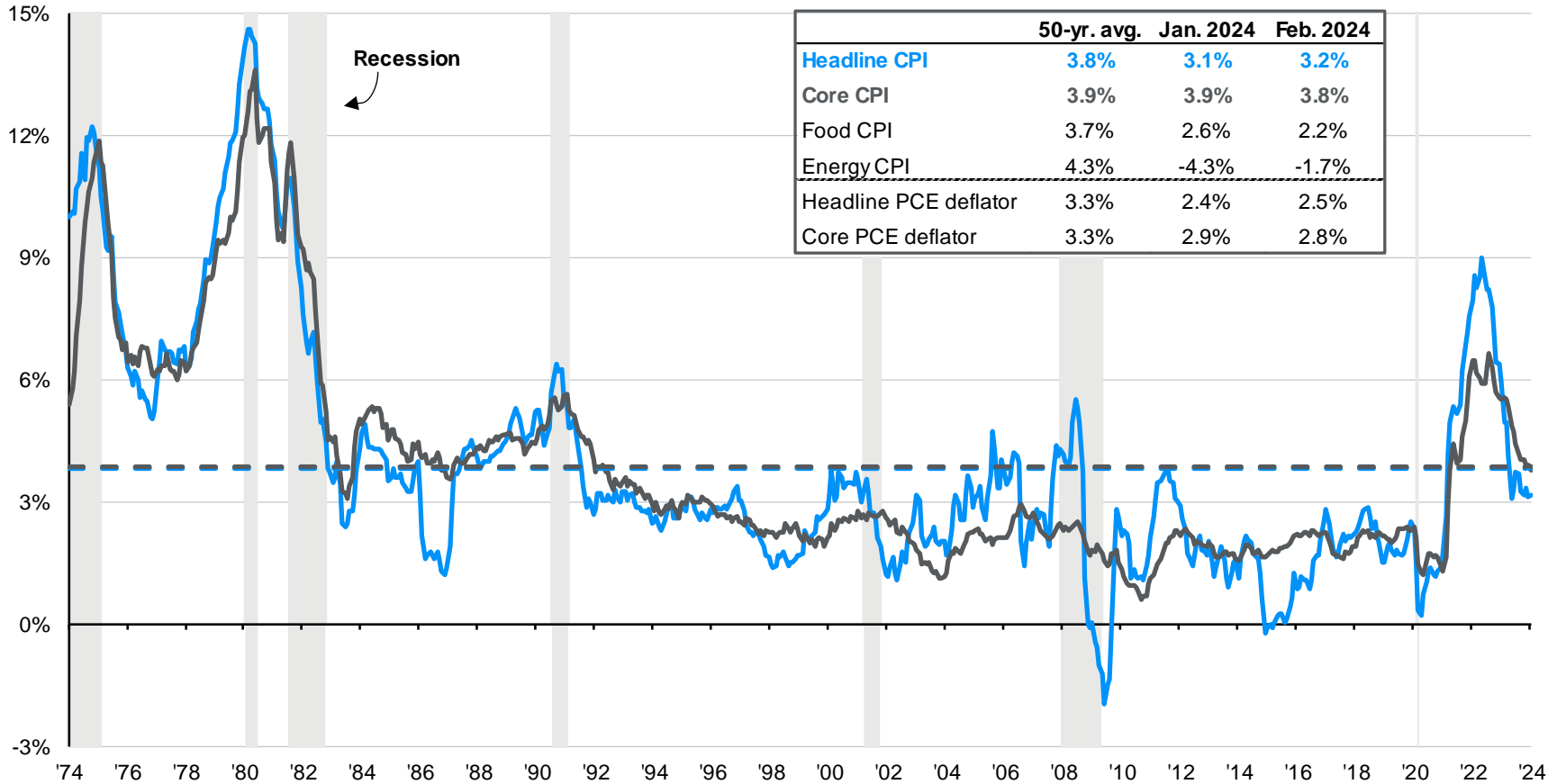
Guide to the Markets – U.S. Data are as of March 31, 2024.



# Inflation

## CPI and core CPI

% change vs. prior year, seasonally adjusted



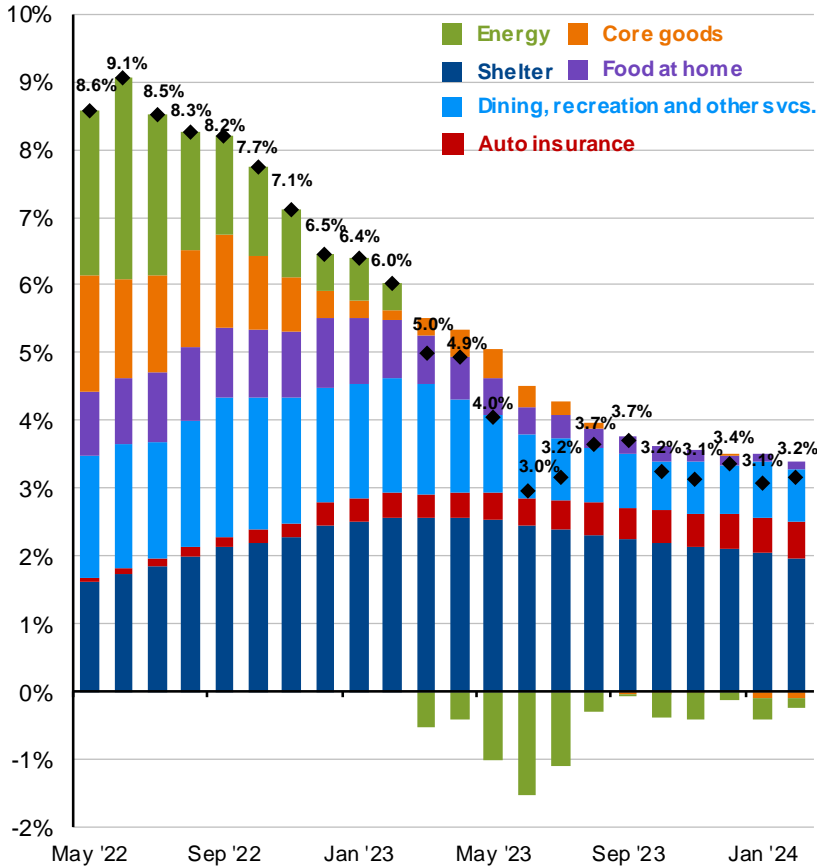
Source: BLS, FactSet, J.P. Morgan Asset Management. CPI used is CPI-U and values shown are % change vs. one year ago. Core CPI is defined as CPI excluding food and energy prices. The Personal Consumption Expenditure (PCE) deflator employs an evolving chain-weighted basket of consumer expenditures instead of the fixed-weight basket used in CPI calculations. *Guide to the Markets – U.S.* Data are as of March 31, 2024.



# Inflation components

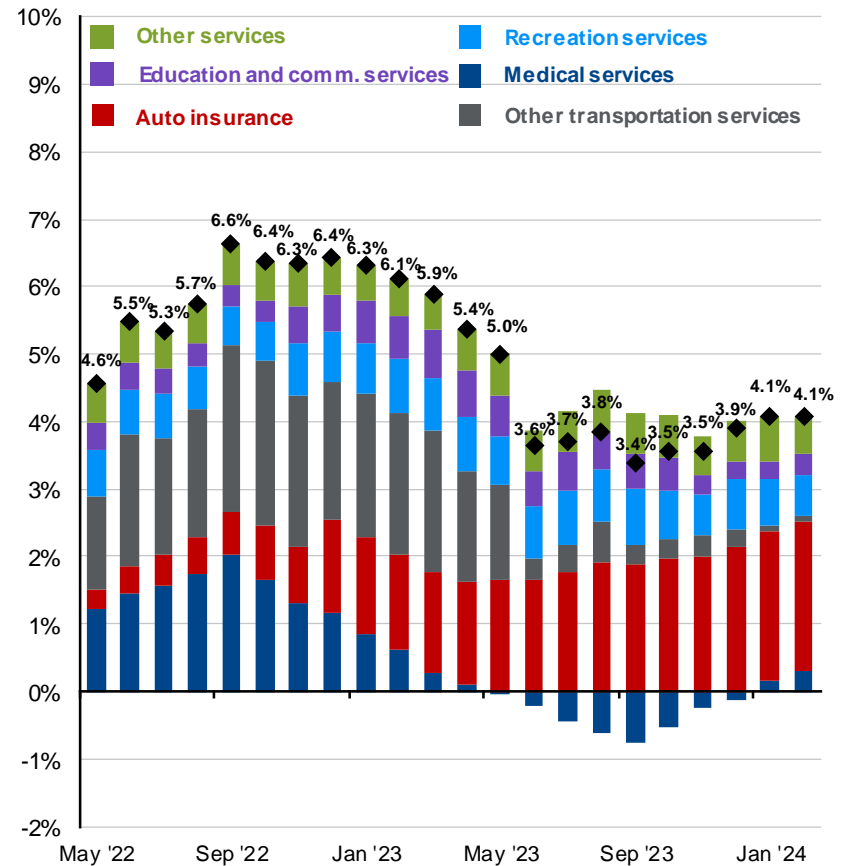
## Contributors to headline CPI inflation

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, rent of primary residence and home insurance. Guide to the Markets – U.S. Data are as of March 31, 2024.



# Oil markets

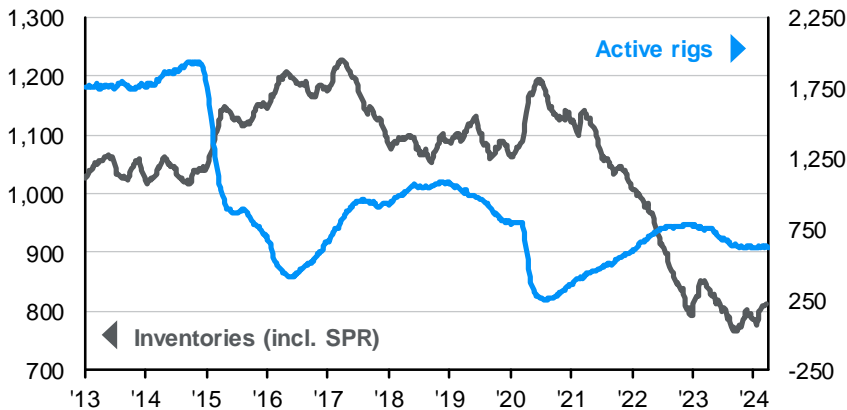
## Change in production and consumption of liquid fuels

Production, consumption and inventories, millions of barrels per day

Production	2019	2020	2021	2022	2023*	2024*	2019-2024
U.S.	19.5	18.6	19.0	20.3	21.9	22.3	14.3%
OPEC	33.1	29.4	30.5	32.9	32.2	31.9	-3.7%
Russia	11.5	10.5	10.8	11.0	10.8	10.4	-9.3%
<b>Global</b>	<b>100.3</b>	<b>93.9</b>	<b>95.7</b>	<b>100.0</b>	<b>101.8</b>	<b>102.2</b>	<b>1.9%</b>
Consumption							
U.S.	20.5	18.2	19.9	20.0	20.3	20.4	-0.7%
China	14.0	14.4	15.3	15.2	15.9	16.3	16.1%
India	4.9	4.5	4.7	5.0	5.3	5.6	13.6%
<b>Global</b>	<b>100.9</b>	<b>91.6</b>	<b>97.1</b>	<b>99.2</b>	<b>101.0</b>	<b>102.4</b>	<b>1.5%</b>
Inventory Change	2019	2020	2021	2022	2023*	2024*	
	-0.6	2.3	-1.4	0.8	0.8	-0.3	

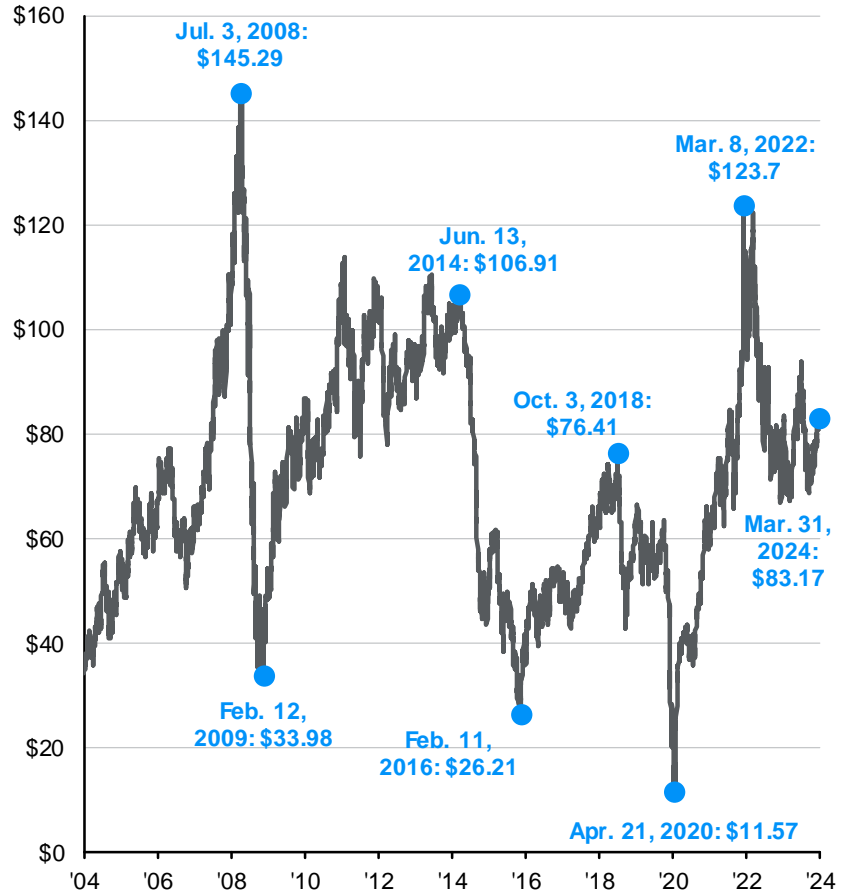
## U.S. crude oil inventories and rig count\*\*

Million barrels, number of active rigs



## Price of oil

WTI crude, nominal prices, USD/barrel



Source: J.P. Morgan Asset Management; (Top and bottom left) EIA; (Right) FactSet; (Bottom left) Baker Hughes.

\*Forecasts are from the March 2024 EIA Short-Term Energy Outlook and start in 2023. \*\*U.S. crude oil inventories include the Strategic Petroleum Reserve (SPR). Liquid fuels include crude oil, natural gas, biodiesel and fuel ethanol. Active rig count includes both natural gas and oil rigs. WTI crude prices are continuous contract NYM prices in USD. Guide to the Markets – U.S. Data are as of March 31, 2024.

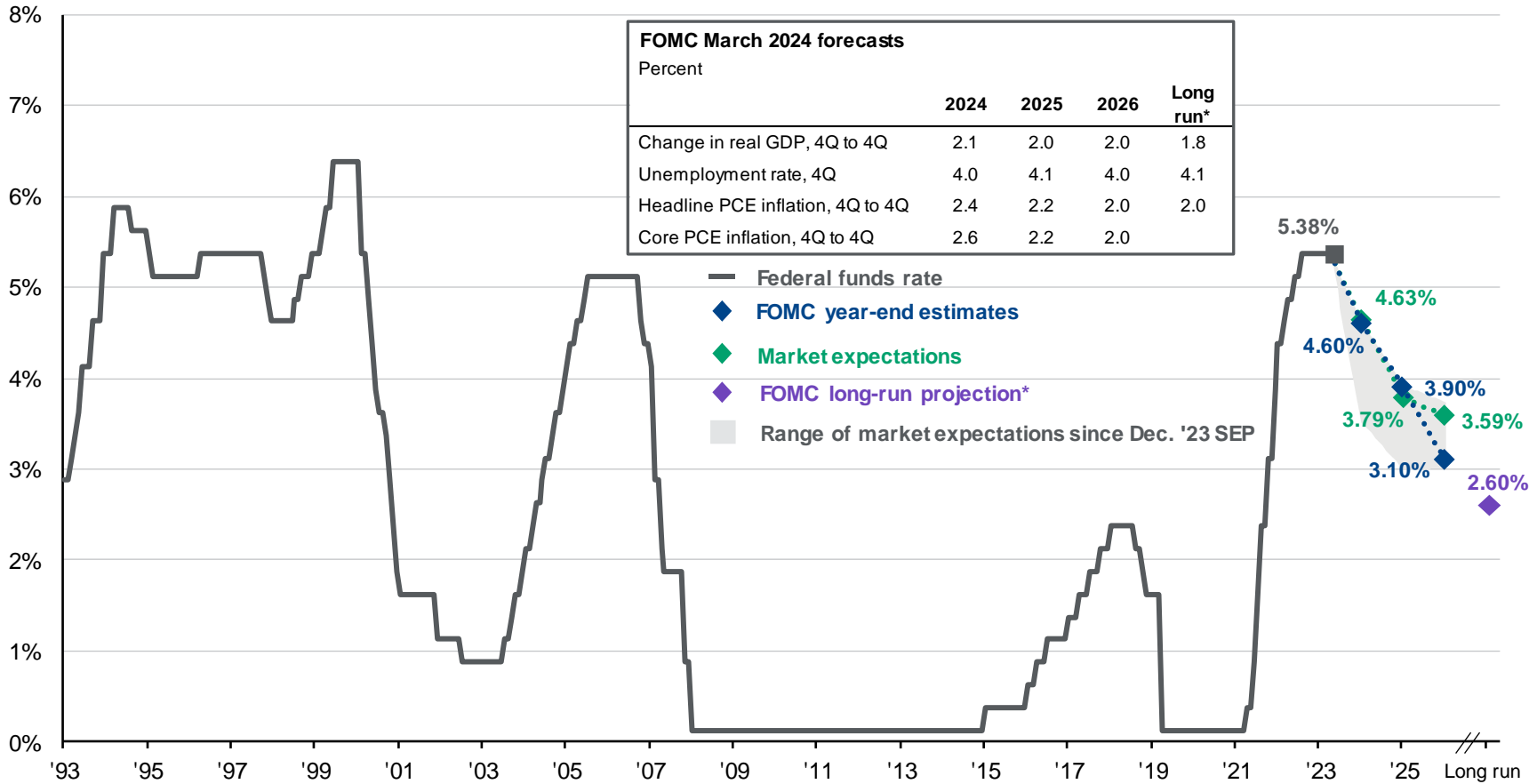


# The Fed and interest rates

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.

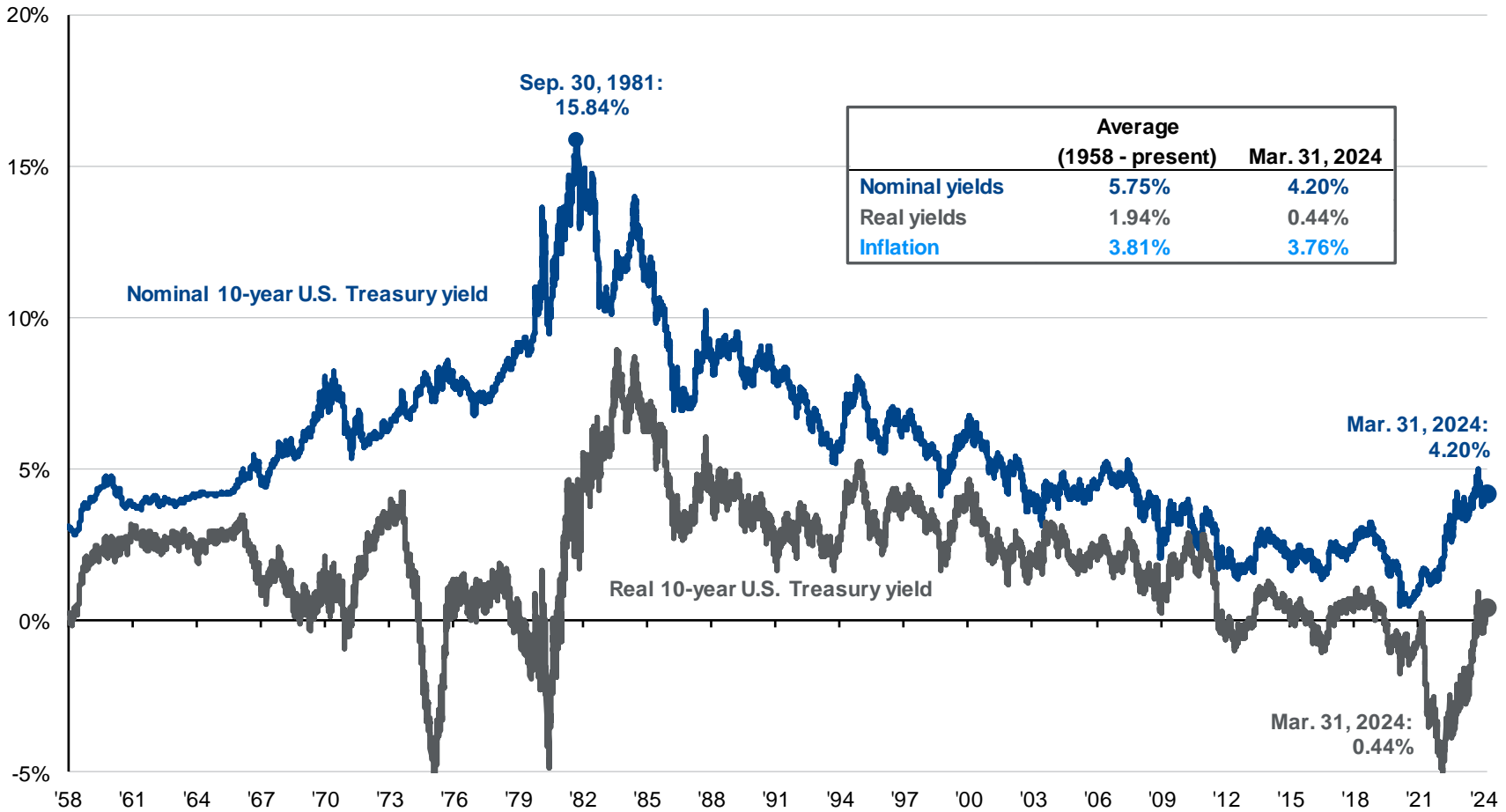
Market expectations are based off of USD Overnight Index Swaps. \*Long-run projections are the rates of growth, unemployment and inflation to which a policymaker expects the economy to converge over the next five to six years in absence of further shocks and under appropriate monetary policy. Forecasts 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 March 31, 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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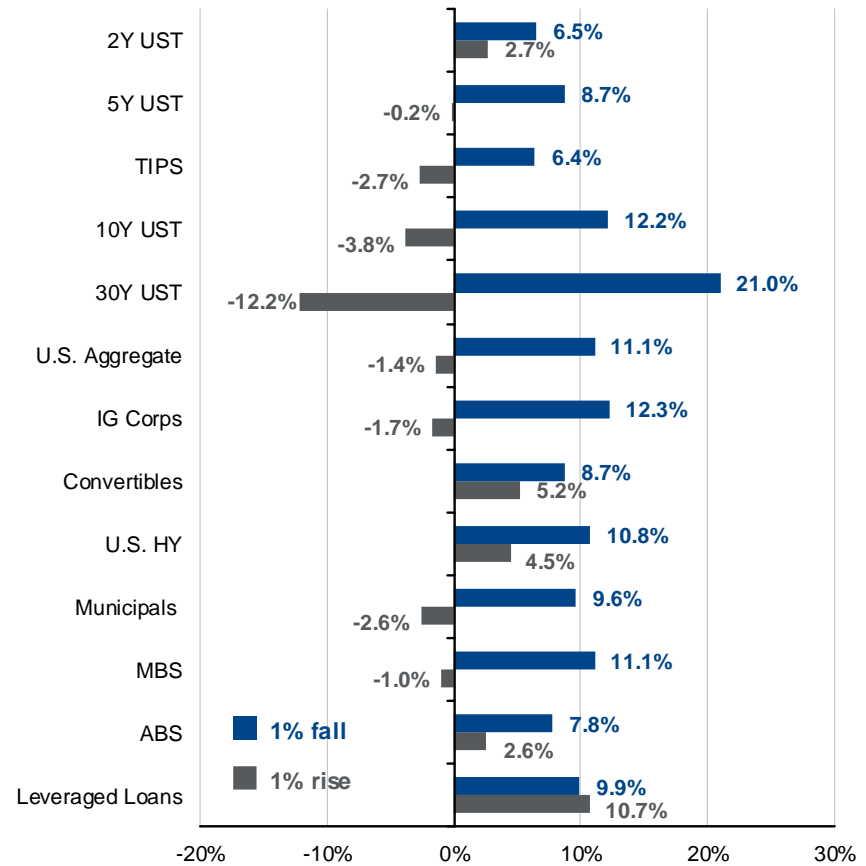


# Fixed income market dynamics

U.S. Treasuries	Yield		Return			
	3/31/2024	12/31/2023	2024 YTD	Avg. Maturity	Correlation to 10-year	Correlation to S&P 500
<b>2-Year</b>	4.59%	4.23%	0.24%	2 years	0.75	-0.02
<b>5-Year</b>	4.21%	3.84%	-0.78%	5	0.94	-0.07
<b>TIPS</b>	1.85%	1.72%	-0.08%	7.3	0.71	0.30
<b>10-Year</b>	4.20%	3.88%	-1.67%	10	1.00	-0.13
<b>30-Year</b>	4.34%	4.03%	-4.06%	30	0.93	-0.16
<b>Sector</b>						
<b>U.S. Aggregate</b>	4.85%	4.53%	-0.78%	8.4	0.87	0.24
<b>IG Corps</b>	5.30%	5.06%	-0.40%	10.8	0.60	0.48
<b>Convertibles</b>	6.64%	7.26%	2.09%	-	-0.10	0.87
<b>U.S. HY</b>	7.66%	7.59%	1.47%	4.9	-0.02	0.76
<b>Municipals</b>	3.49%	3.22%	-0.39%	13.3	0.68	0.27
<b>MBS</b>	5.04%	4.68%	-1.04%	7.5	0.79	0.24
<b>ABS</b>	5.76%	5.65%	1.59%	3.6	0.24	0.22
<b>Leveraged Loans</b>	10.26%	10.59%	2.65%	4.4	-0.28	0.60

## Impact of a 1% rise or fall in interest rates

Total return, assumes a parallel shift in the yield curve



Source: Bloomberg, FactSet, Standard & Poor's, U.S. Treasury, J.P. Morgan Asset Management. Sectors shown above are provided by Bloomberg unless otherwise noted and are represented by – U.S. Aggregate; MBS: U.S. Aggregate Securitized – MBS; ABS: J.P. Morgan ABS Index; IG Corporates: U.S. Corporates; Municipals: Muni Bond; High Yield: Corporate High Yield; Leveraged Loans: J.P. Morgan Leveraged Loan Index; TIPS: Treasury Inflation-Protected Securities; Convertibles: U.S. Convertibles Composite. Convertibles yield is as of most recent month-end and is based on U.S. portion of Bloomberg Global Convertibles Index. Yield and return information based on bellwethers for Treasury securities. Yields shown for TIPS are real yields. Sector yields reflect yield-to-worst. Leveraged loan yields reflect the yield to 3Y takeout. Correlations are based on 15-years of monthly returns for all sectors. ABS returns prior to June 2012 are sourced from Bloomberg. Past performance is not indicative of future results.

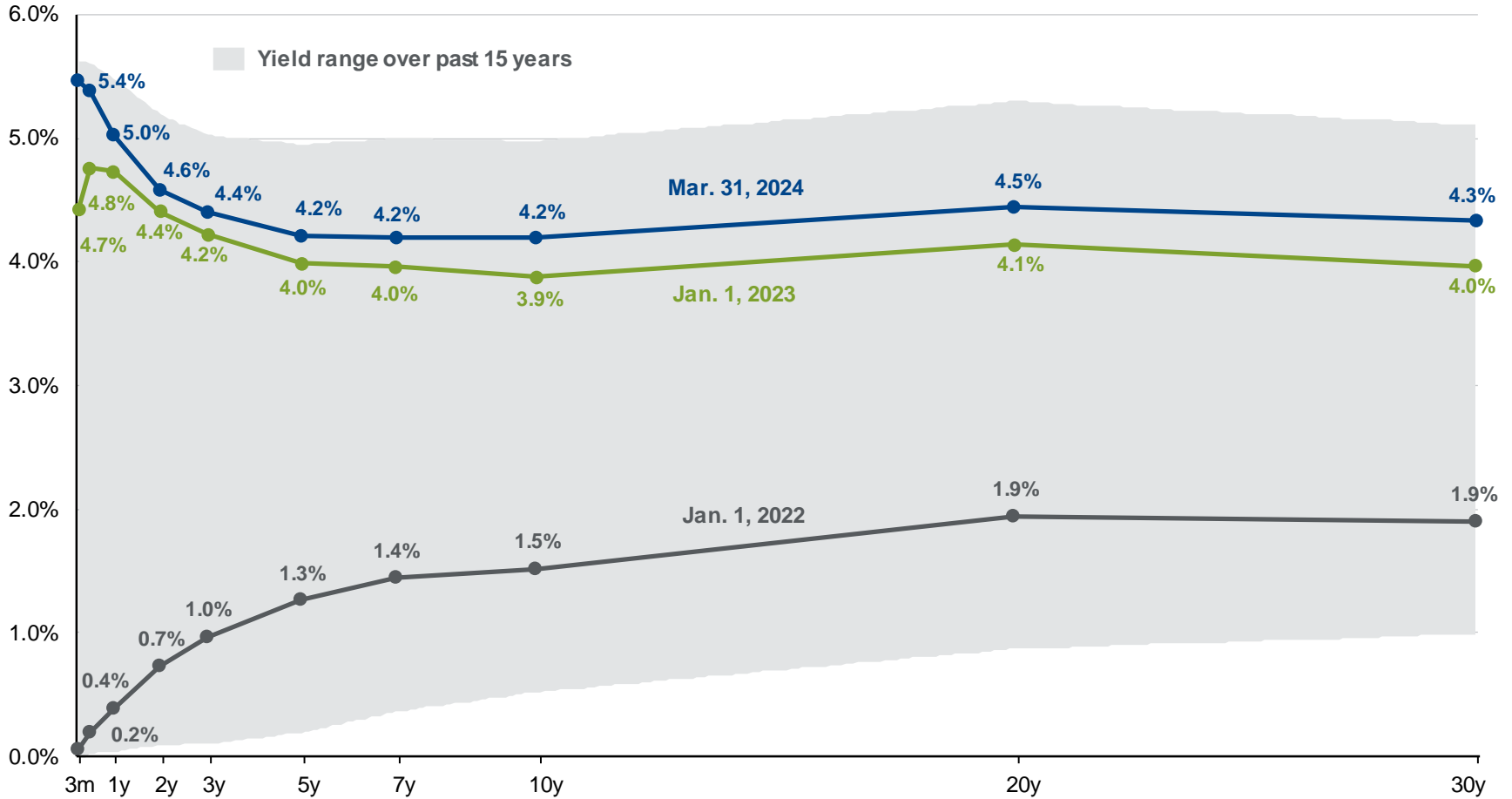
Guide to the Markets – U.S. Data as of March 31, 2024.



# Yield curve

Fixed Income

## U.S. Treasury yield curve



Source: FactSet, Federal Reserve, J.P. Morgan Asset Management. Guide to the Markets – U.S. Data are as of March 31, 2024.





# High yield bonds

Fixed Income

## Default rate and spread-to-worst

Percent



Source: J.P. Morgan Global Economic Research, J.P. Morgan Asset Management.

Long-run average is based on monthly historical data beginning in January 1990. Default rates are defined as the par value percentage of the total market trading at or below 50% of par value and include any Chapter 11 filing, prepackaged filing or missed interest payments. The default rate is a LTM figure (last 12 months) and tracks the % of defaults over the period. Recovery rates are based on the price of the defaulted bonds or loans 30 days post the default date. Default and recovery rates are as of most recent month-end. Spread-to-worst indicated are the difference between the yield-to-worst of a bond and yield-to-worst of a U.S. Treasury security with a similar duration. High yield is represented by the J.P. Morgan Domestic High Yield Index.

Guide to the Markets – U.S. Data are as of March 31, 2024.

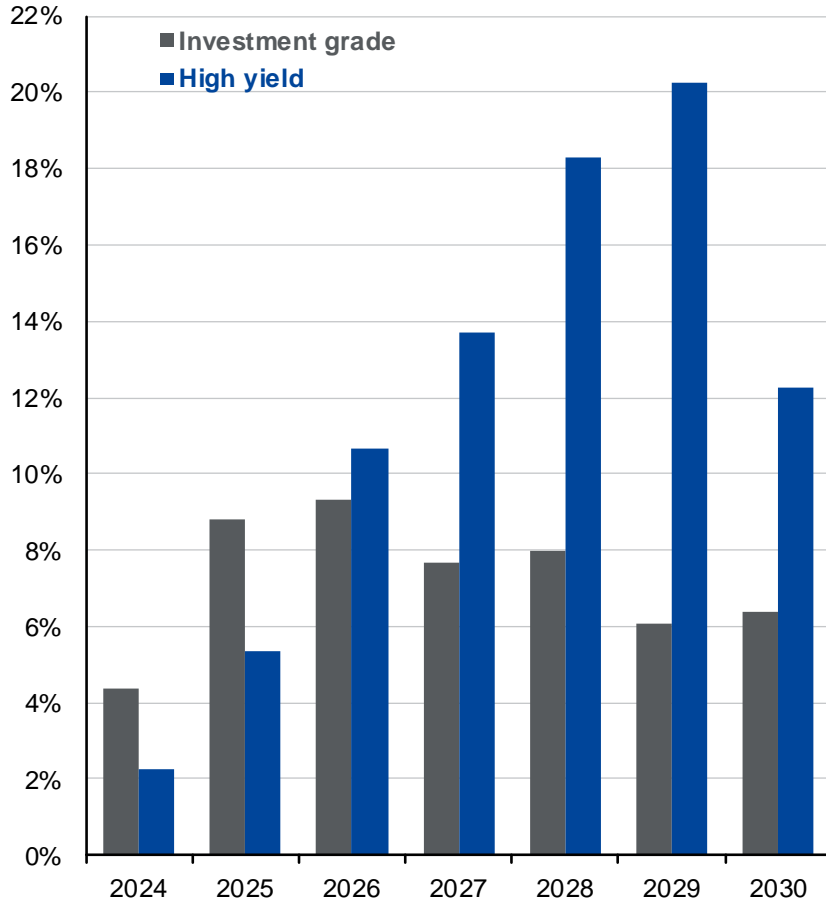


# Credit maturity and default risks

Fixed Income

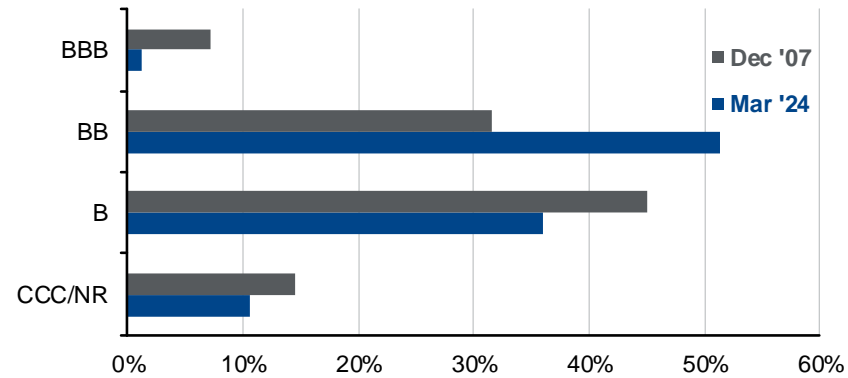
## U.S. credit maturity schedule

% of bond index maturing in each year



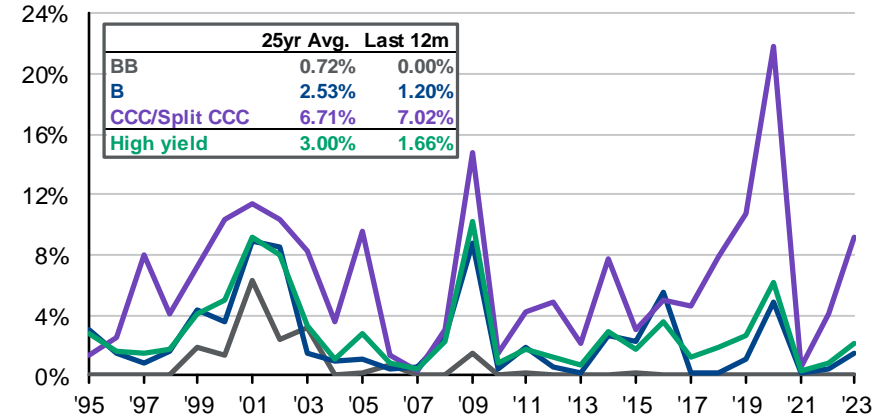
## Index weighting by credit rating

%, J.P. Morgan Domestic High Yield Index



## U.S. high yield default rates

By credit rating



Source: Bloomberg, J.P. Morgan Research, J.P. Morgan Asset Management.  
 U.S. Investment Grade: Bloomberg U.S. Corporate Bond Index, Bloomberg U.S. Corporate Bond 0-1 Year Index; U.S. High Yield: Bloomberg U.S. High Yield Bond Index, Bloomberg U.S. Corporate High Yield Bond 0-1 Year Index. The Bloomberg U.S. Corporate and High Yield Bond 0-1 Year Bond Indices are used to capture bonds that mature in less than one year and are not captured in the broader index due to maturity guidelines. Past performance is not a reliable indicator of current and future results. Last 12-month default rates are as of most recent month for which data are available. Default rates shown do not include distressed exchanges and are grouped by rating 12 months prior to default. Bond ratings include split ratings. "NR" stands for not rated.  
 Guide to the Markets - U.S. Data are as of March 31, 2024.

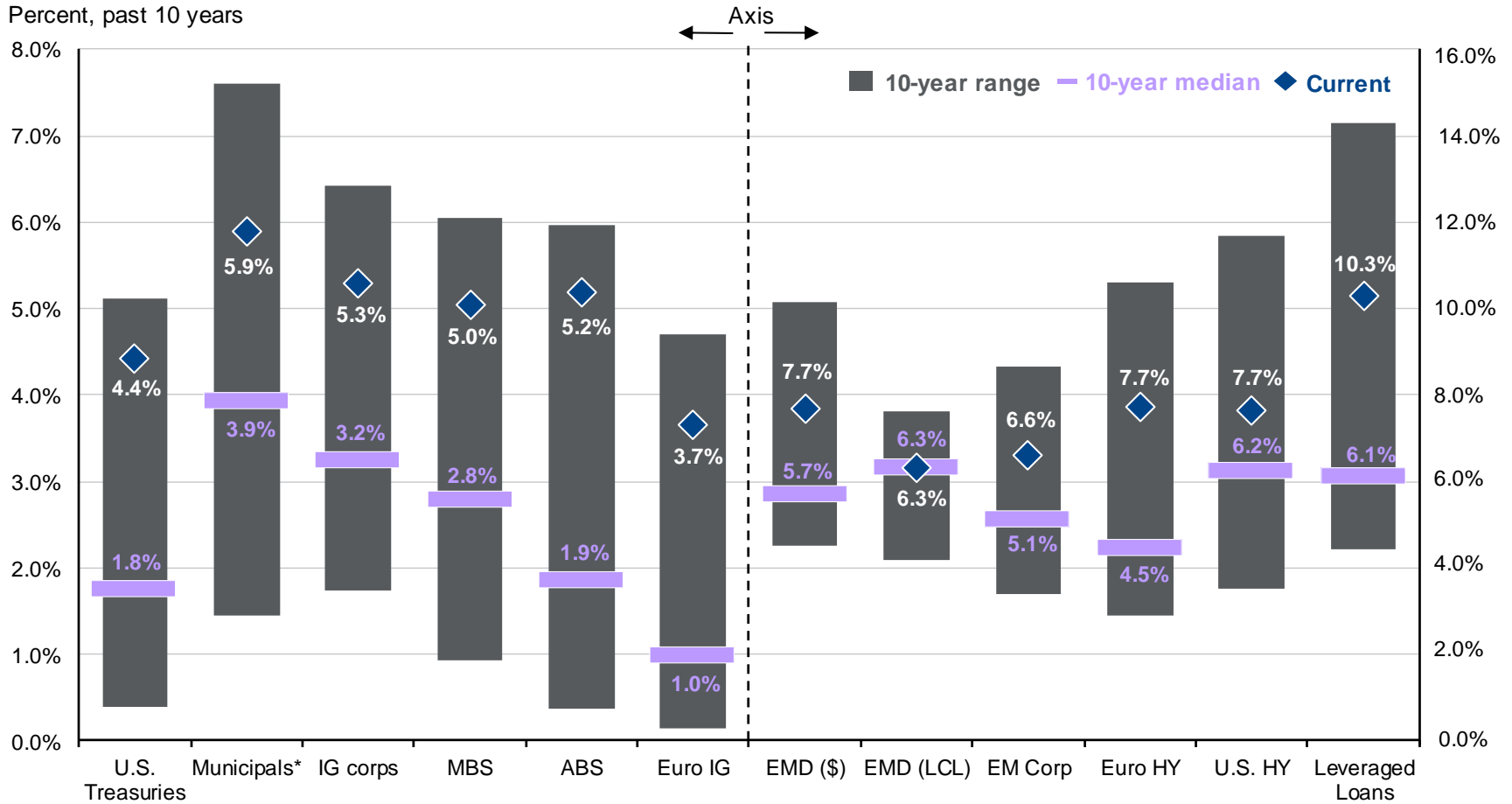


# Fixed income valuations

Fixed Income

## Yield-to-worst across fixed income sectors

Percent, past 10 years



Source: Bloomberg, FactSet, J.P. Morgan Credit Research, J.P. Morgan Asset Management

Indices used are Bloomberg except for emerging market debt and leveraged loans: EMD (USD): J.P. Morgan EMIGLOBAL Diversified Index; EMD (LCL): J.P. Morgan GBI-EM Global Diversified Index; EM Corp.: J.P. Morgan CEMBI Broad Diversified; Leveraged Loans: JPM Leveraged Loan Index; Euro IG: Bloomberg Euro Aggregate Corporate Index; Euro HY: Bloomberg Pan-European High Yield Index. Yield-to-worst is the lowest possible yield that can be received on a bond apart from the company defaulting and considers factors like call provisions, prepayments and other features that may affect the bonds cash flows. \*All sectors shown are yield-to-worst except for Municipals, which is based on the tax-equivalent yield-to-worst assuming a top-income tax bracket rate of 37% plus a Medicare tax rate of 3.8%.

Guide to the Markets – U.S. Data are as of March 31, 2024.

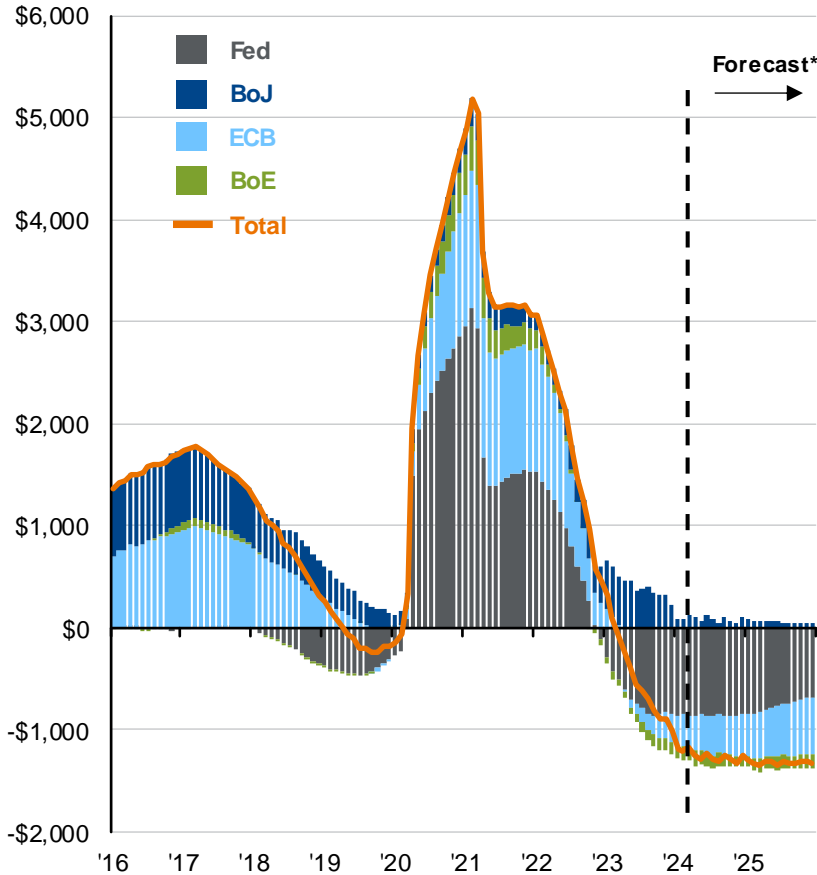


# Developed market monetary policy

Fixed Income

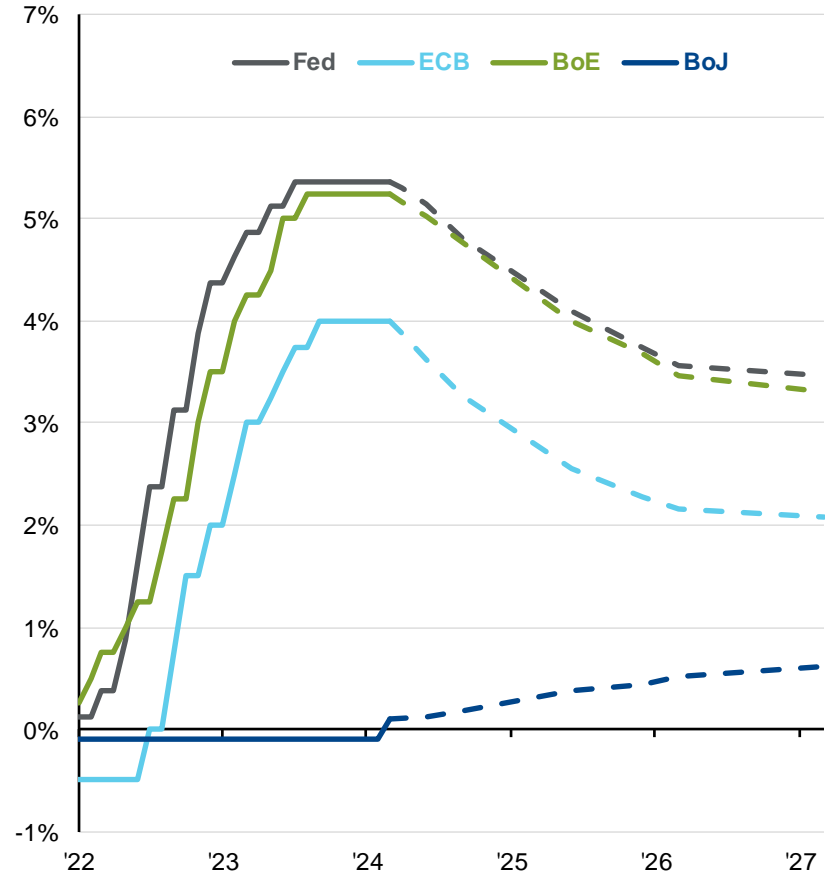
## Developed market central bank bond purchases

USD billions, 12-month rolling flow



## Historical policy rates and forward curves

Target policy rates and market implied forward rates



Source: BIS, Bloomberg, FactSet, J.P. Morgan Asset Management; (Left) Bank of England (BoE), Bank of Japan (BoJ), European Central Bank (ECB), Federal Reserve System (Fed), J.P. Morgan Global Economic Research. \*DM bond purchase forecasts are internal assumptions based on government bond purchases as outlined in the most recent monetary policy announcements from the BoE, BoJ, ECB and Federal Reserve through December 2025. Implied policy rates are sourced from Bloomberg and are derived from Overnight Index Swaps. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and are not a reliable indicator of future performance. 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 March 31, 2024.



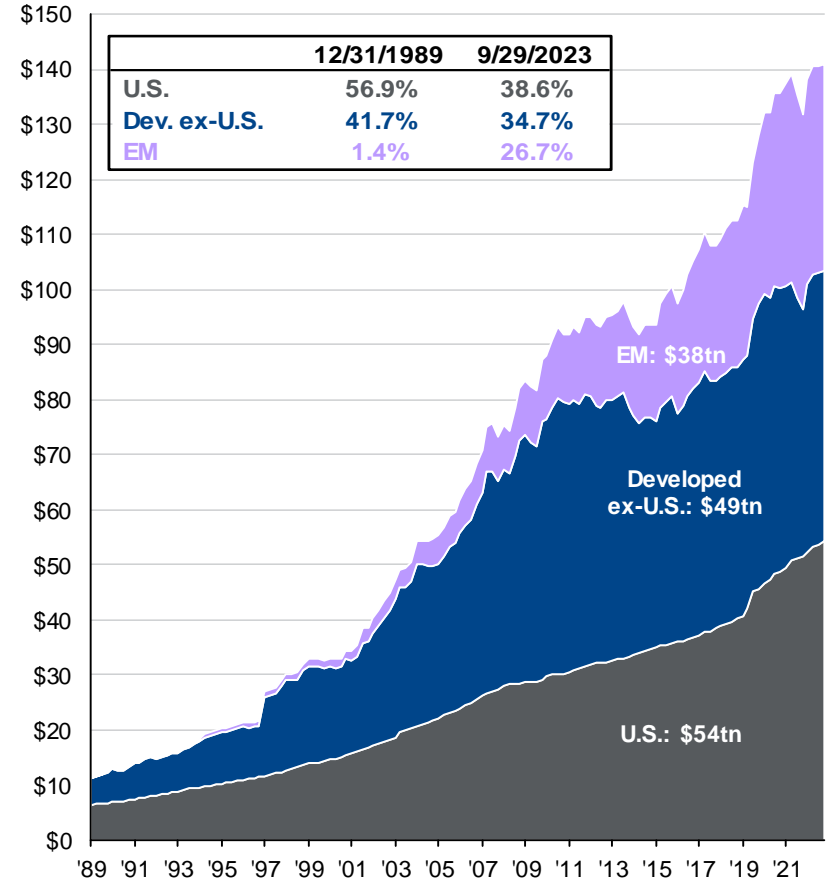
# Global fixed income

Fixed Income

Aggregates	Yield		2024 Return		Duration	Correlation to U.S. 10yr
	3/31/2024	12/31/2023	Local	USD		
<b>U.S.</b>	4.85%	4.53%	-0.78%	-0.78%	6.2 years	0.92
<b>Gbl. ex-U.S.</b>	3.03%	2.87%	-	-2.88%	7.0	0.63
<b>Japan</b>	0.87%	0.76%	-0.06%	-6.90%	9.2	0.64
<b>Germany</b>	3.01%	2.73%	-0.54%	-2.76%	6.3	0.56
<b>UK</b>	4.39%	4.10%	-1.10%	-2.00%	8.1	0.55
<b>Italy</b>	3.52%	3.40%	0.88%	-1.38%	6.2	0.43
<b>China</b>	2.40%	2.62%	2.03%	0.12%	6.0	0.56
<b>Sector</b>						
<b>Euro Corp.</b>	3.66%	3.56%	0.47%	-1.78%	4.4 years	0.45
<b>Euro HY</b>	7.72%	7.35%	1.81%	-0.46%	3.0	0.05
<b>EMD (USD)</b>	7.74%	7.84%	-	2.04%	6.1	0.37
<b>EMD (LCL)</b>	6.27%	6.19%	0.70%	-2.12%	5.0	0.25
<b>EM Corp.</b>	6.65%	6.81%	-	2.32%	5.0	0.27

## Global bond market

USD trillions



Source: J.P. Morgan Asset Management; (Left) Bloomberg, FactSet; (Right) BIS.

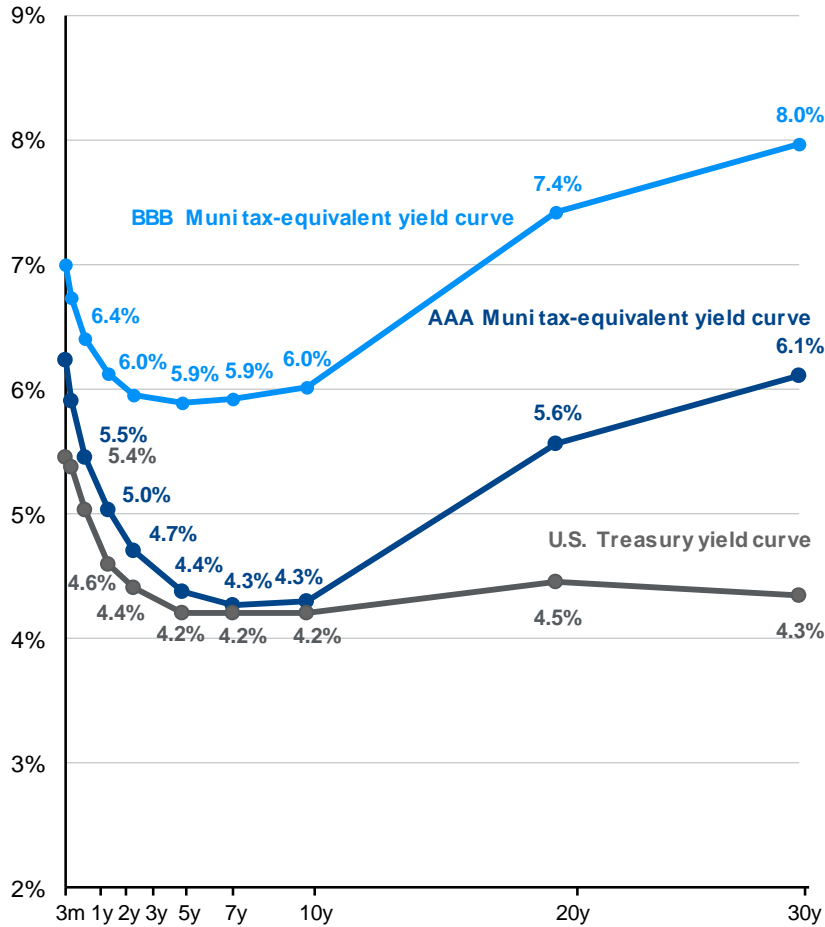
Fixed income sectors shown above are provided by Bloomberg and are represented by the global aggregate for each country except where noted. EMD sectors are represented by the J.P. Morgan EMBIG Diversified Index (USD), the J.P. Morgan GBI EM Global Diversified Index (LCL) and the J.P. Morgan CEMBI Broad Diversified Index (Corp). European Corporates are represented by the Bloomberg Euro Aggregate Corporate Index and the Bloomberg Pan-European High Yield Index. Sector yields reflect yield-to-worst. Correlations are based on 10-years of monthly returns for all sectors. Past performance is not indicative of future results. Countries included in the emerging market debt calculation are those represented in the J.P. Morgan EMB Index suite for which the BIS has data. Global bond market regional breakdown may not sum to 100% due to rounding. *Guide to the Markets* – U.S. Data are as of March 31, 2024.



# Municipal finance

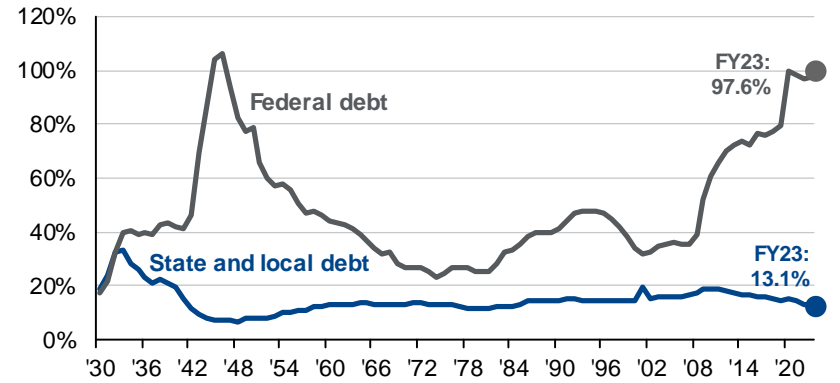
Fixed Income

## Muni tax-equivalent and Treasury yield curves



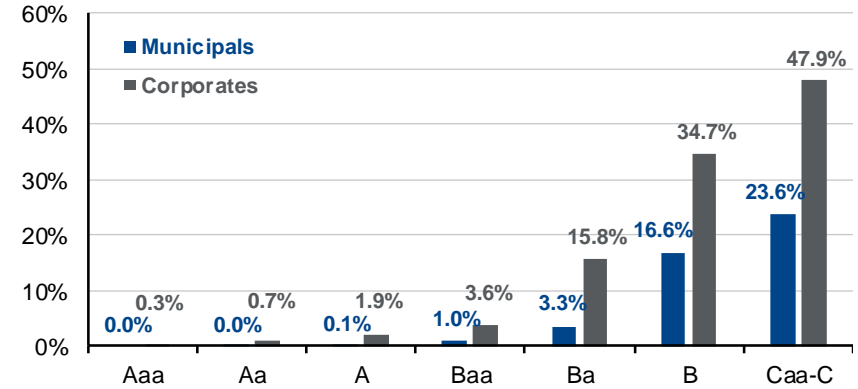
## State and local and federal net debt

% of GDP, 1930-2023, end of fiscal year



## Muni and corporate default rates

% of issuers defaulting within 10 years, 1970-2022



Source: J.P. Morgan Asset Management; (Left) Bloomberg, FactSet, Federal Reserve, S&P Global; (Top right) Census Bureau, Congressional Budget Office (CBO); (Bottom right) Moody's U.S. Public Finance: U.S. municipal bond defaults and recoveries, 1970 to 2022. Municipal tax-equivalent yields are calculated based on municipal bond curves for each credit rating according to S&P Global and assume a top-income tax bracket rate of 37% plus a Medicare tax rate of 3.8% for a total tax rate of 40.8%. State and local debt are based on the Census Bureau's Annual Survey of State and Local Government Finances. Municipal and corporate default rates are the average cumulative default rate over a 10-year horizon as calculated by Moody's using data from issuances through 2013. *Guide to the Markets* – U.S. Data are as of March 31, 2024.

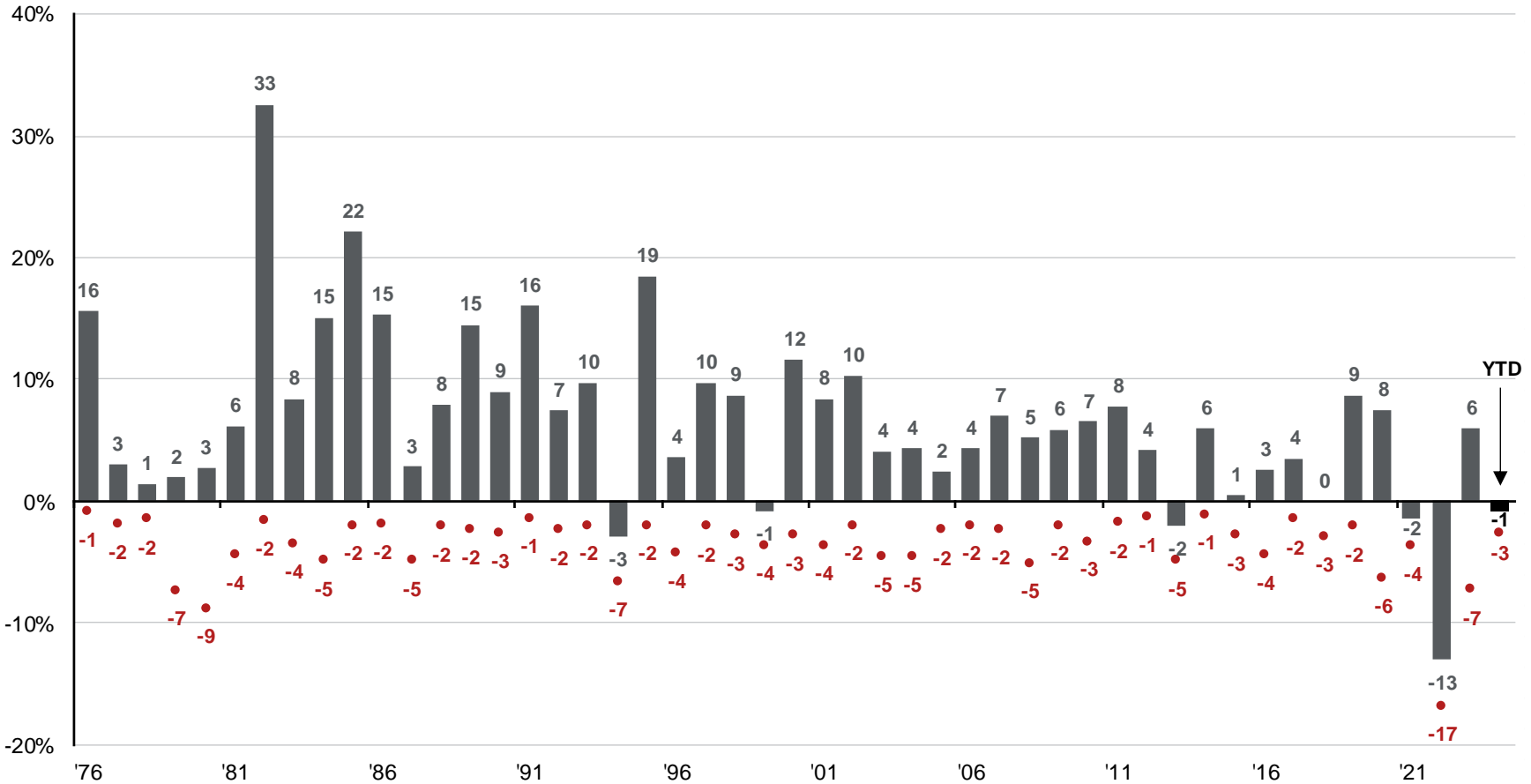


# Bloomberg U.S. Agg. annual returns and intra-year declines

Fixed Income

## Bloomberg U.S. Aggregate intra-year declines vs. calendar year returns

Despite average intra-year drops of 3.5%, annual returns were positive in 43 of 48 years



Source: Bloomberg, FactSet, J.P. Morgan Asset Management. Returns are based on total return. Intra-year drops refers to the largest market drop from a peak to a trough during the year. For illustrative purposes only. Returns shown are calendar year returns from 1976 to 2023, over which time period the average annual return was 6.6%. Returns from 1976 to 1989 are calculated on a monthly basis; daily data are used afterward. *Guide to the Markets – U.S.* Data are as of March 31, 2024.

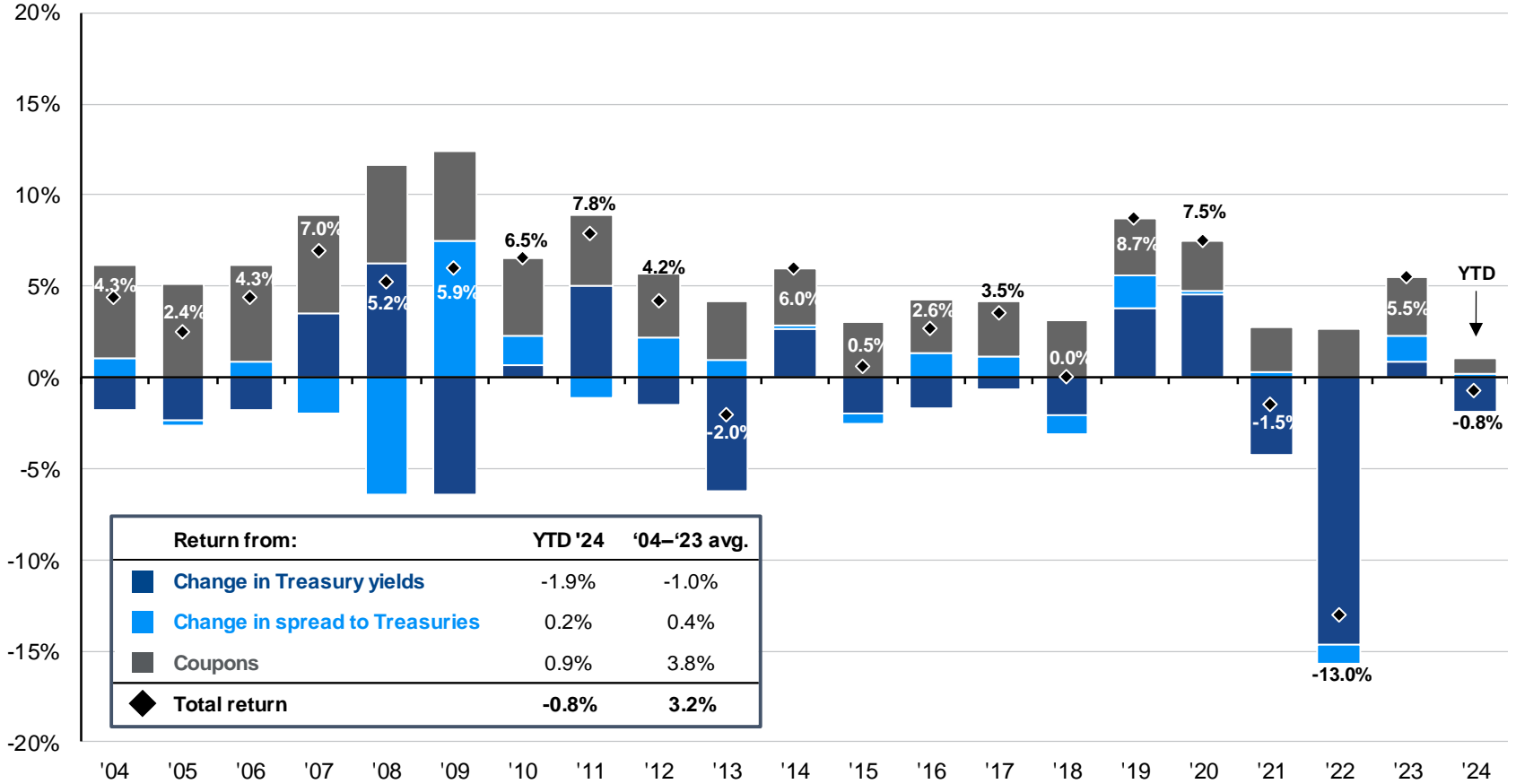


# Sources of bond total return

Fixed Income

## Bloomberg U.S. Aggregate annual total return

Total return broken into change in Treasury yields, change in bond spreads over Treasuries and coupon



Source: Bloomberg, FactSet, J.P. Morgan Asset Management. Guide to the Markets – U.S. Data are as of March 31, 2024.



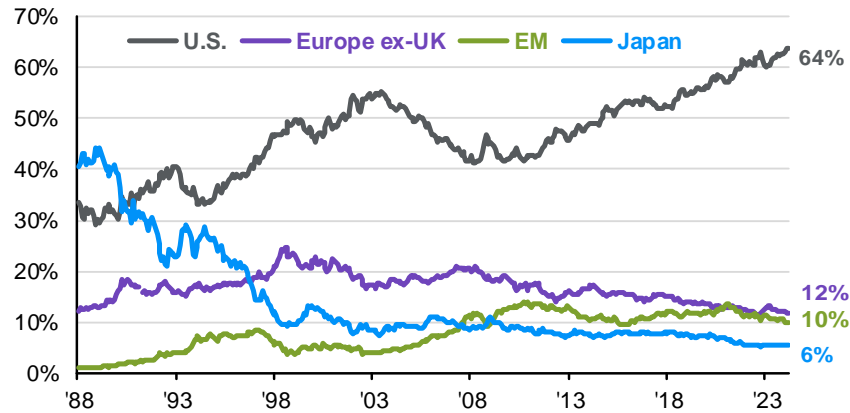


# Global equity markets

Returns	YTD 2024		2023		15-years	
	Local	USD	Local	USD	Ann.	Beta
<b>Regions</b>						
U.S. (S&P 500)	-	10.6	-	26.3	15.6	0.9
AC World ex-U.S.	8.3	4.8	14.7	16.2	8.4	1.0
EAFE	10.1	5.9	16.8	18.9	8.9	1.0
Europe ex-UK	9.7	6.1	17.3	22.7	9.7	1.2
Emerging markets	4.6	2.4	10.3	10.3	7.0	1.1
<b>Selected Countries</b>						
Japan	19.3	11.2	29.0	20.8	8.2	0.7
United Kingdom	4.1	3.1	7.7	14.1	7.9	1.0
France	8.4	5.9	18.1	22.3	9.8	1.2
Canada	6.9	4.2	13.3	16.4	8.9	1.1
Germany	9.6	7.1	19.8	24.0	8.6	1.3
China	-1.7	-2.2	-10.6	-11.0	4.4	0.9
Taiwan	17.3	12.5	31.1	31.3	14.4	1.1
India	6.4	6.1	22.0	21.3	11.7	1.0
Brazil	-4.5	-7.3	22.7	33.4	4.1	1.4

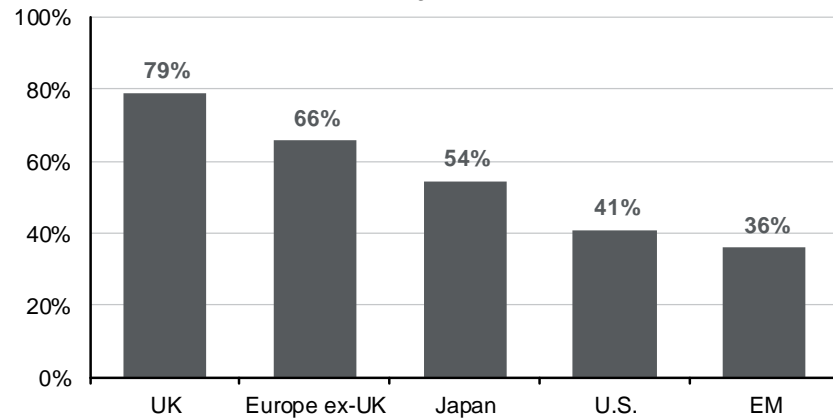
## Share of global market capitalization

% weight in the MSCI All Country World Index, USD, monthly



## Revenue exposure vs. country of listing

% of total revenue derived from foreign countries



Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management. (Left) All return values are MSCI Total Return Index (Gross) data. 15-year history based on USD returns. 15-year return and beta figures are calculated using a rolling 12-month time period ending with the previous month-end. Beta is for monthly returns relative to the MSCI All Country World Index. Annualized volatility is calculated as the standard deviation of quarterly returns multiplied by the square root of four. Chart is for illustrative purposes only. Please see disclosure page for index definitions. Past performance is not a reliable indicator of current and future results. (Bottom right) Revenue exposure data are as of the previous quarter-end. *Guide to the Markets – U.S.* Data are as of March 31, 2024.

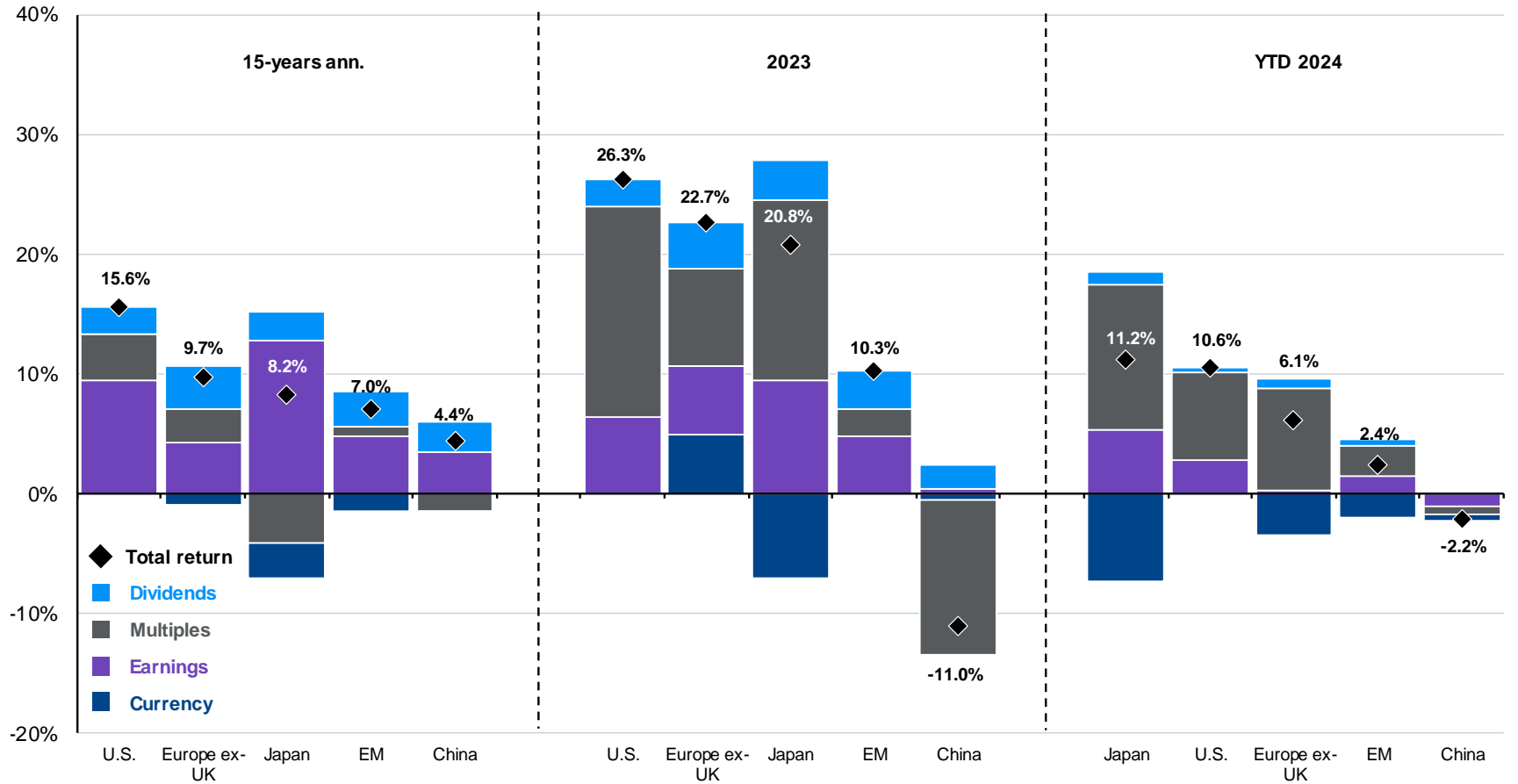


# Global equity return composition

## Sources of global equity returns\*

Total return, USD

International



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

15-years ann. is showing a rolling 15-year history ending with the previous month-end. All return values are MSCI Gross Index (official) data, except the U.S., which is the S&P 500. \*Multiple expansion is based on the forward P/E ratio and EPS growth outlook is based on NTMA earnings estimates. Chart is for illustrative purposes only. Past performance is not indicative of future results.

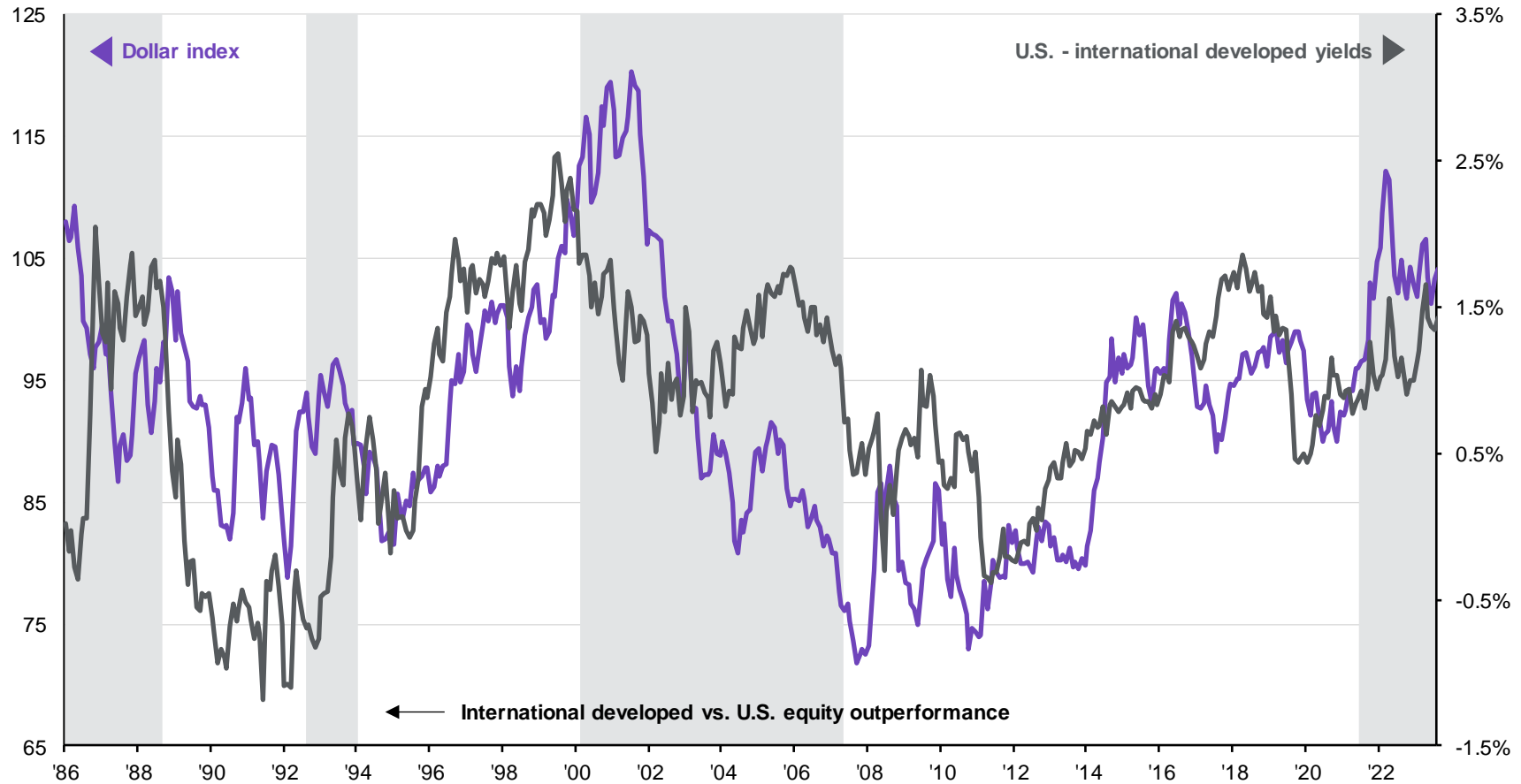
Guide to the Markets – U.S. Data are as of March 31, 2024.



# U.S. dollar cycles

## U.S. dollar and interest rate differentials

Monthly



International

Source: Bank of Canada, FactSet, Federal Reserve Economic Data (FRED), Ministry of Finance of Japan, MSCI, OECD, Standard & Poor's, J.P. Morgan Asset Management. The dollar index (DXY Index) is a nominal trade-weighted index of major trading partners' currencies. Major currencies are the British pound, Canadian dollar, euro, Japanese yen, Swedish kroner and Swiss franc. DM is developed markets, and the yield is calculated as a GDP-weighted average of the 10-year government bond yields of Australia, Canada, France, Germany, Italy, Japan, Switzerland and the UK. International developed = MSCI EAFE Index, U.S. = S&P 500 Index. Past performance is not a reliable indicator of current and future results.

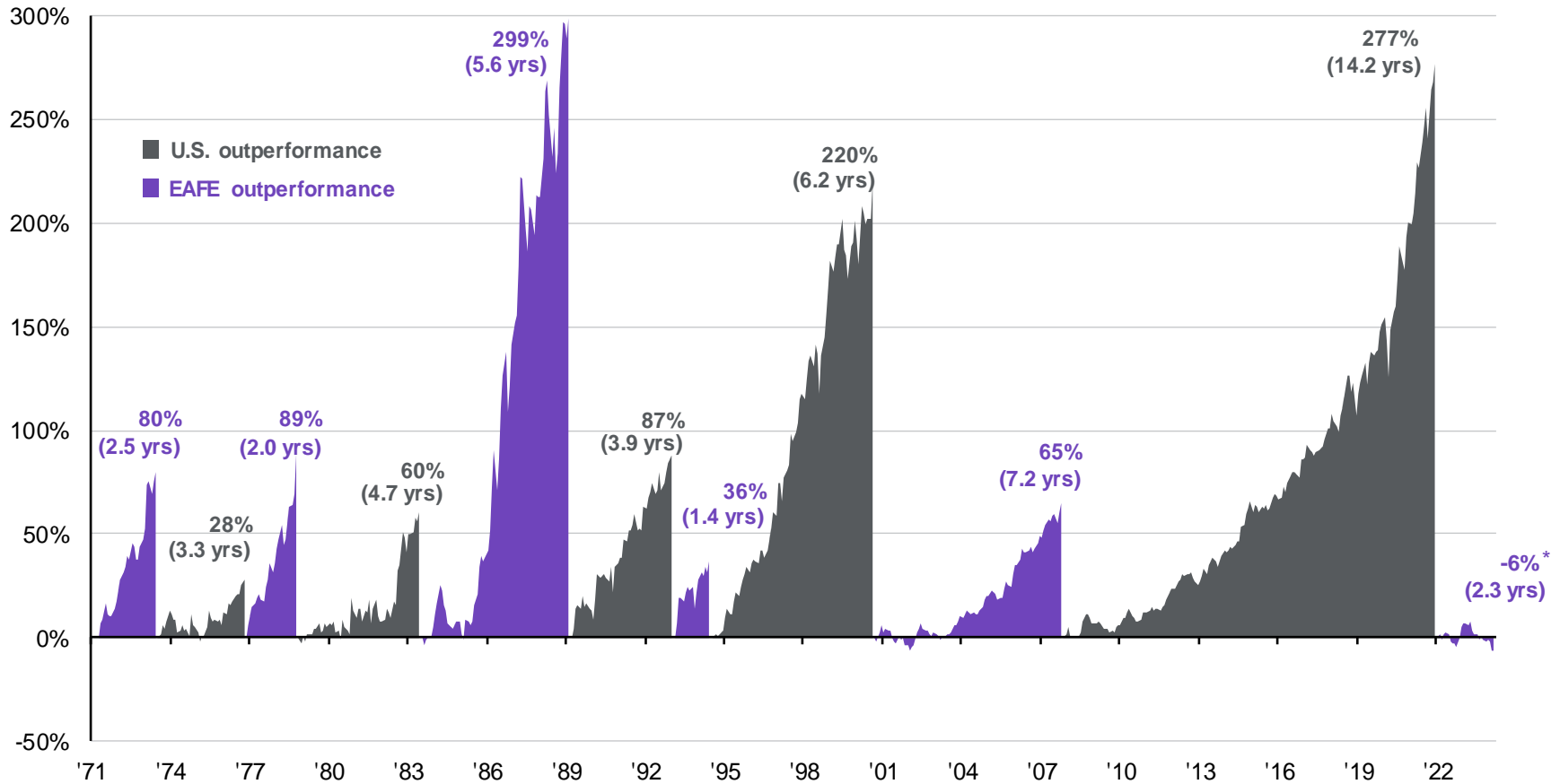
Guide to the Markets – U.S. Data are as of March 31, 2024.



# 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.  
 Guide to the Markets – U.S. Data are as of March 31, 2024.

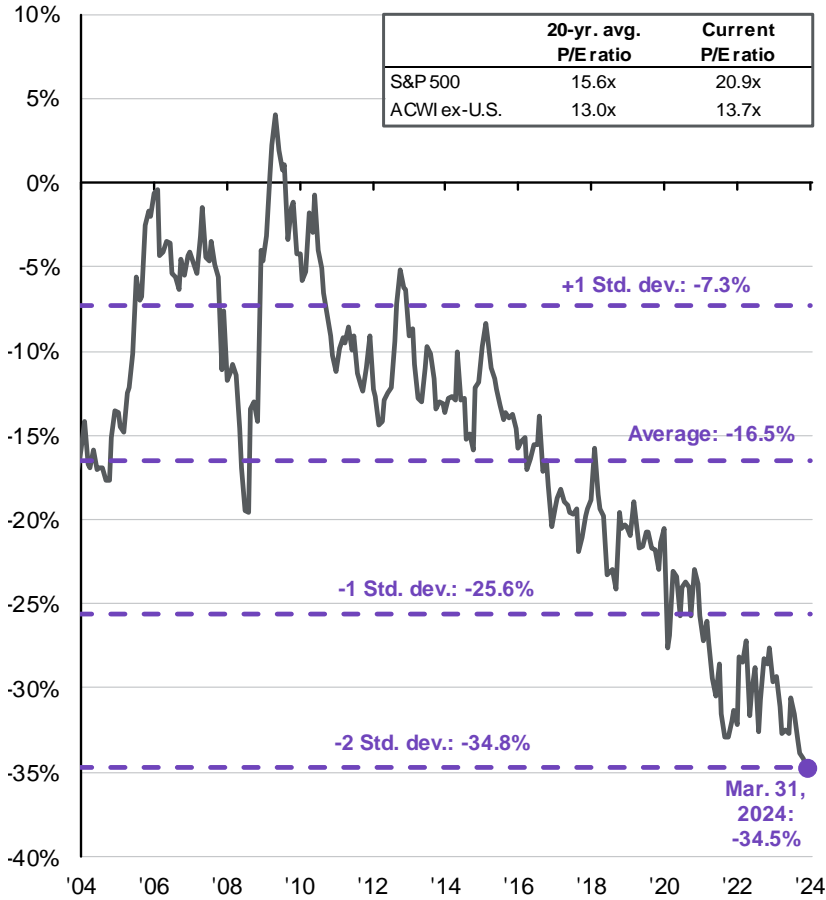


# International valuations and dividend yields

International

### 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 March 31, 2024.

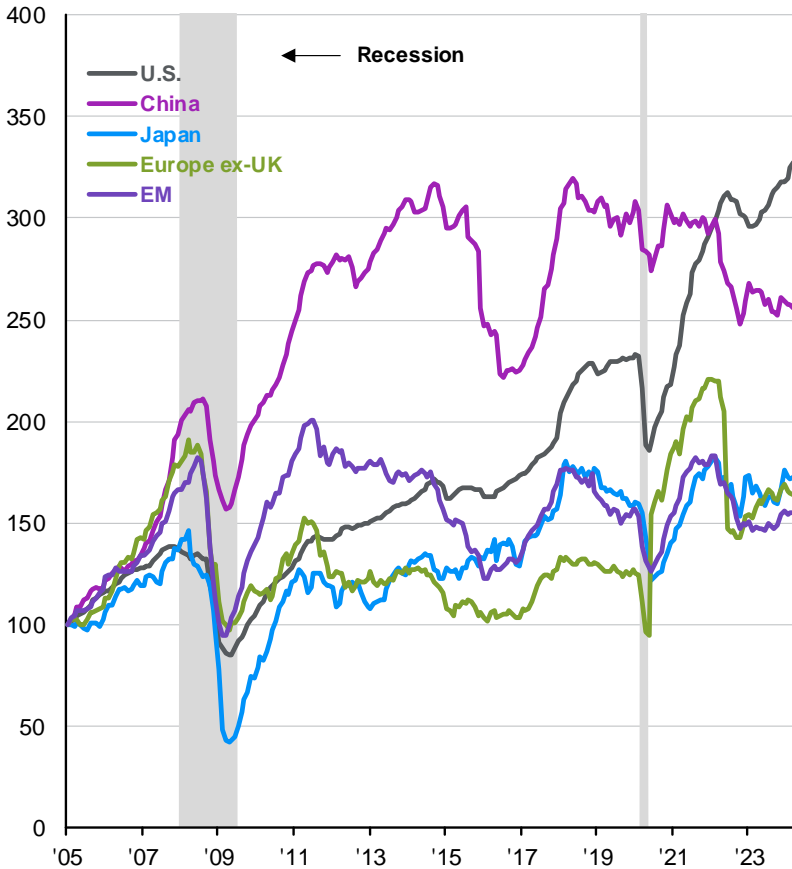


# International equity earnings and valuations

International

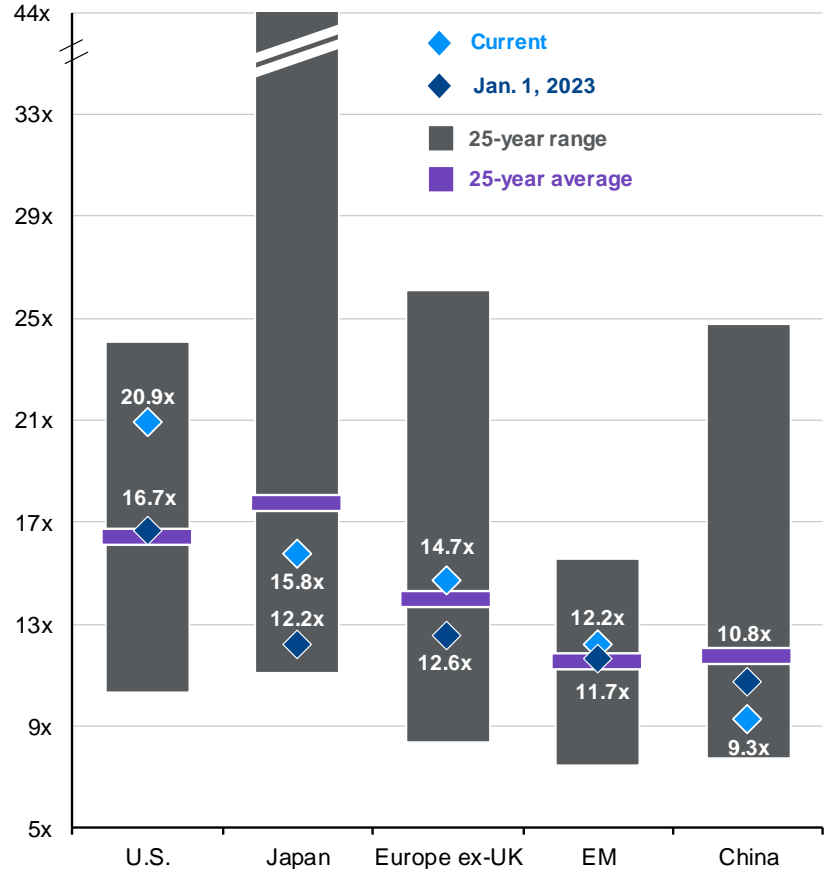
## Global earnings estimates

Jan. 2005 = 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. 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 March 31, 2024.

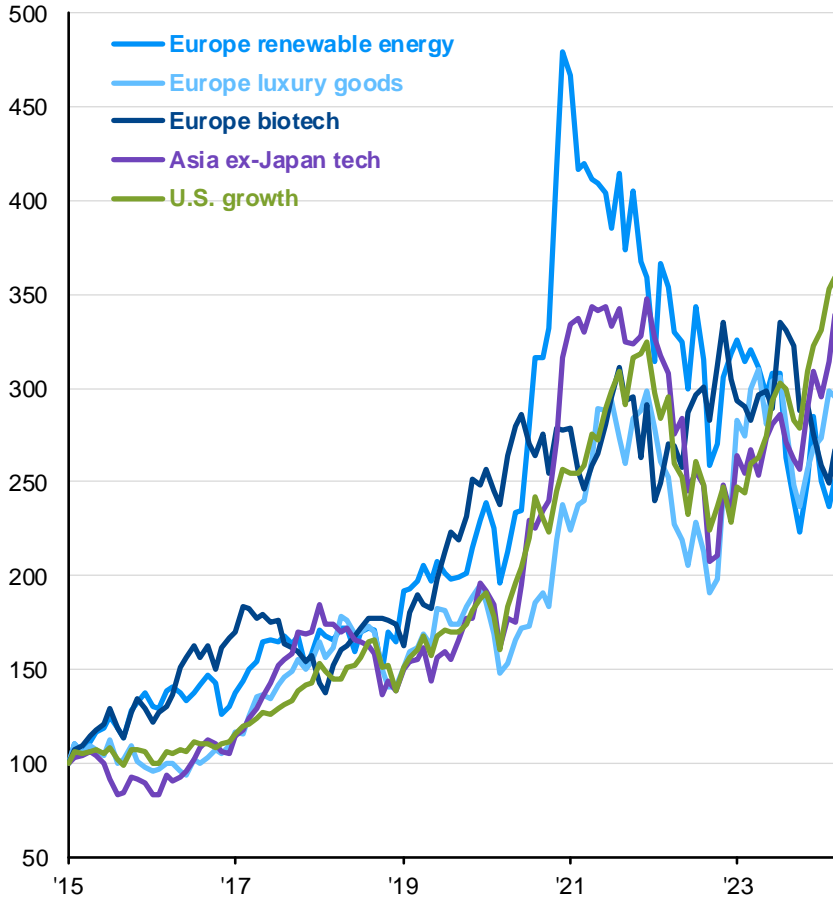


# Secular international trends

International

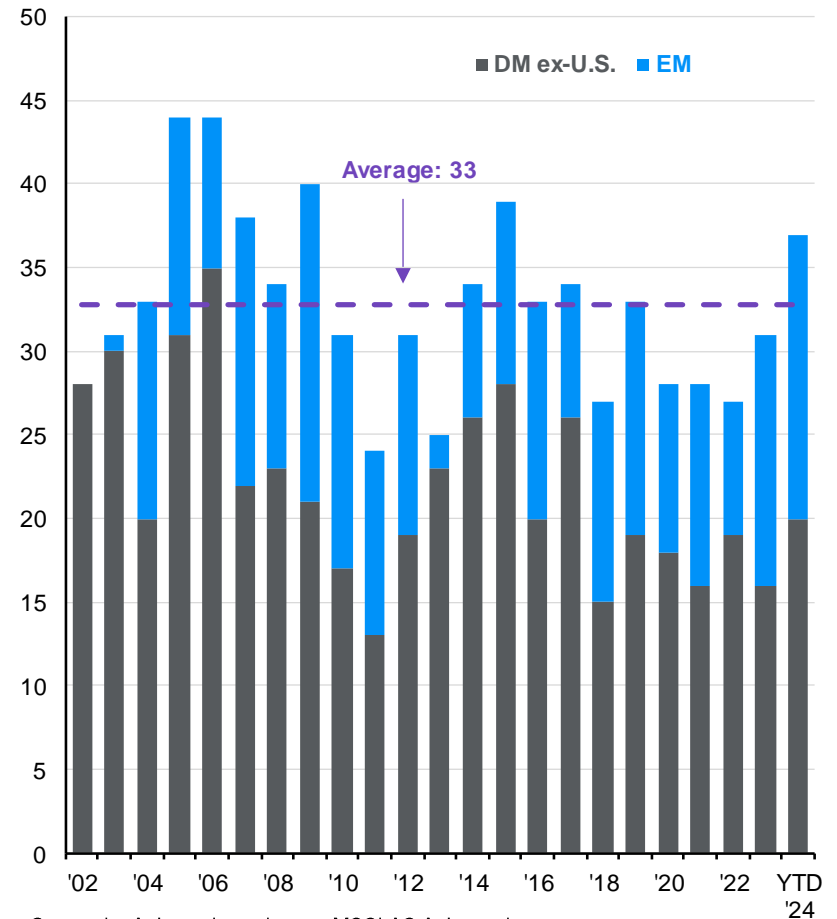
## International growth sectors vs. U.S. growth

Jan. 2015 = 100, total return, U.S. dollars



## Top 50 performing companies globally

# of companies listed internationally, MSCI All Country World Index



Source: FactSet, MSCI, J.P. Morgan Asset Management. (Left) Bloomberg, Russell, Societe Generale. Asia tech ex-Japan: MSCI AC Asia ex-Japan Information Technology Index, European Luxury Goods: MSCI Europe Textiles Apparel and Luxury Goods Index, U.S. Growth: Russell 1000 Growth Index, European renewables: Societe Generale European Renewable Energy Index, Europe biotech: MSCI Europe Biotechnology Index. (Right) Graph was made by ranking all the companies in the MSCI All Country World Index by performance on a yearly basis and determining the top 50 performers using their total return in USD. Companies are listed in no particular order. Excluded companies whose market capitalization does not make up at least 0.01% of the MSCI All Country World Index in the year listed. *Guide to the Markets – U.S.* Data are as of March 31, 2024.

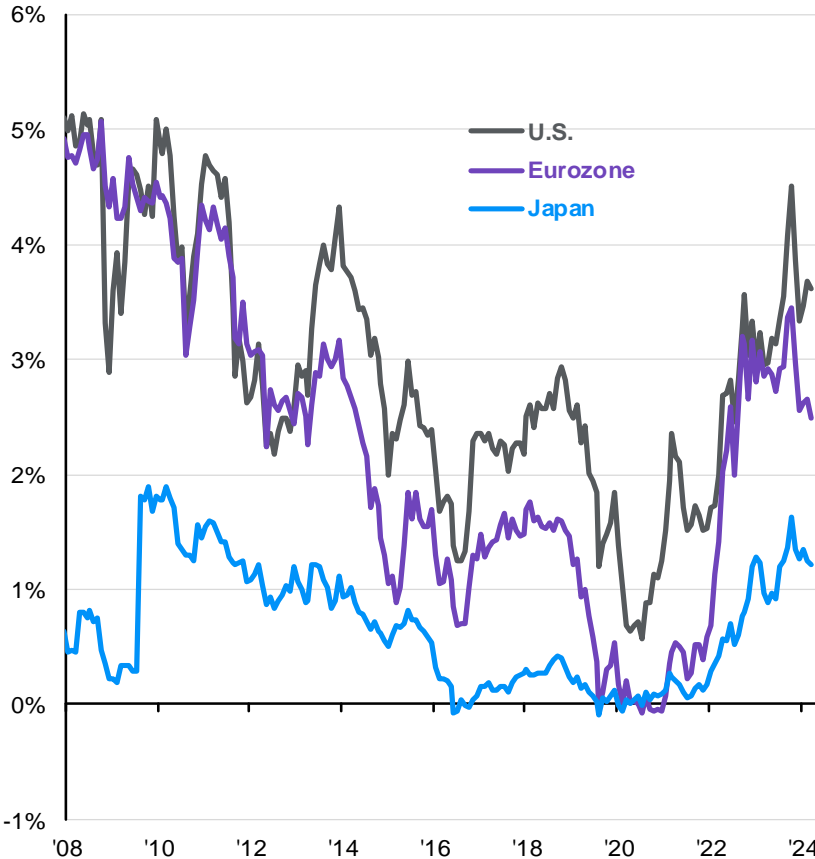


# Interest rates and international developed markets

International

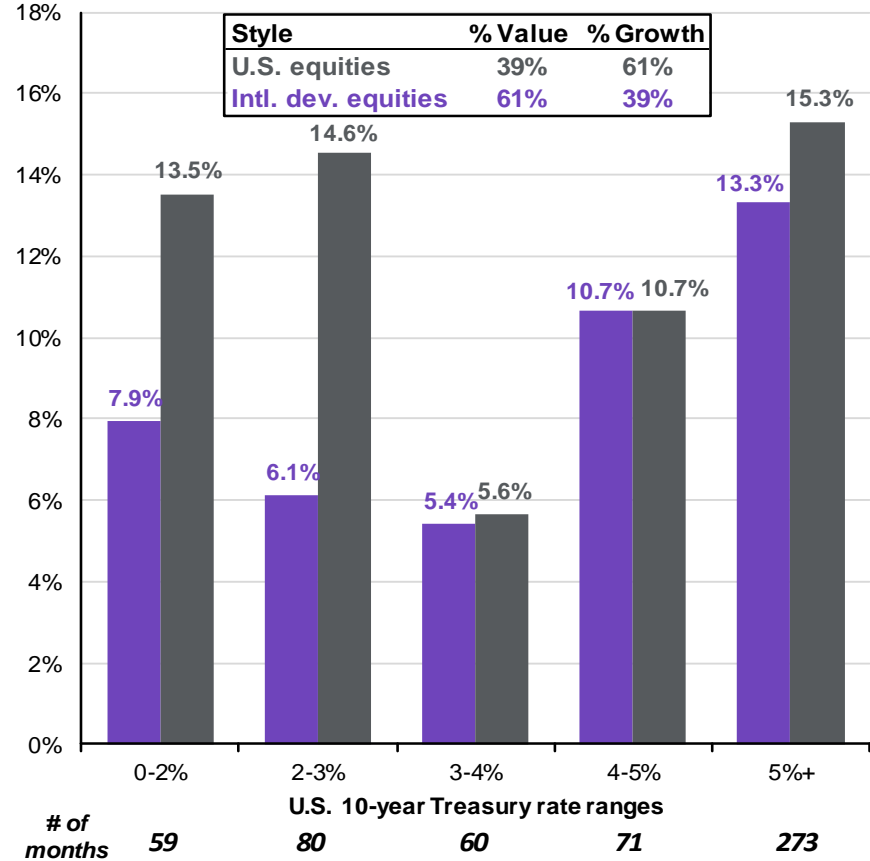
## Interest rate expectations

Based on 5y5y swaps



## Equity performance in different interest rate environments

U.S. 10-year Treasury ranges, ann. avg. total equity return in USD, 1979-present



Style	% Value	% Growth
U.S. equities	39%	61%
Intl. dev. equities	61%	39%

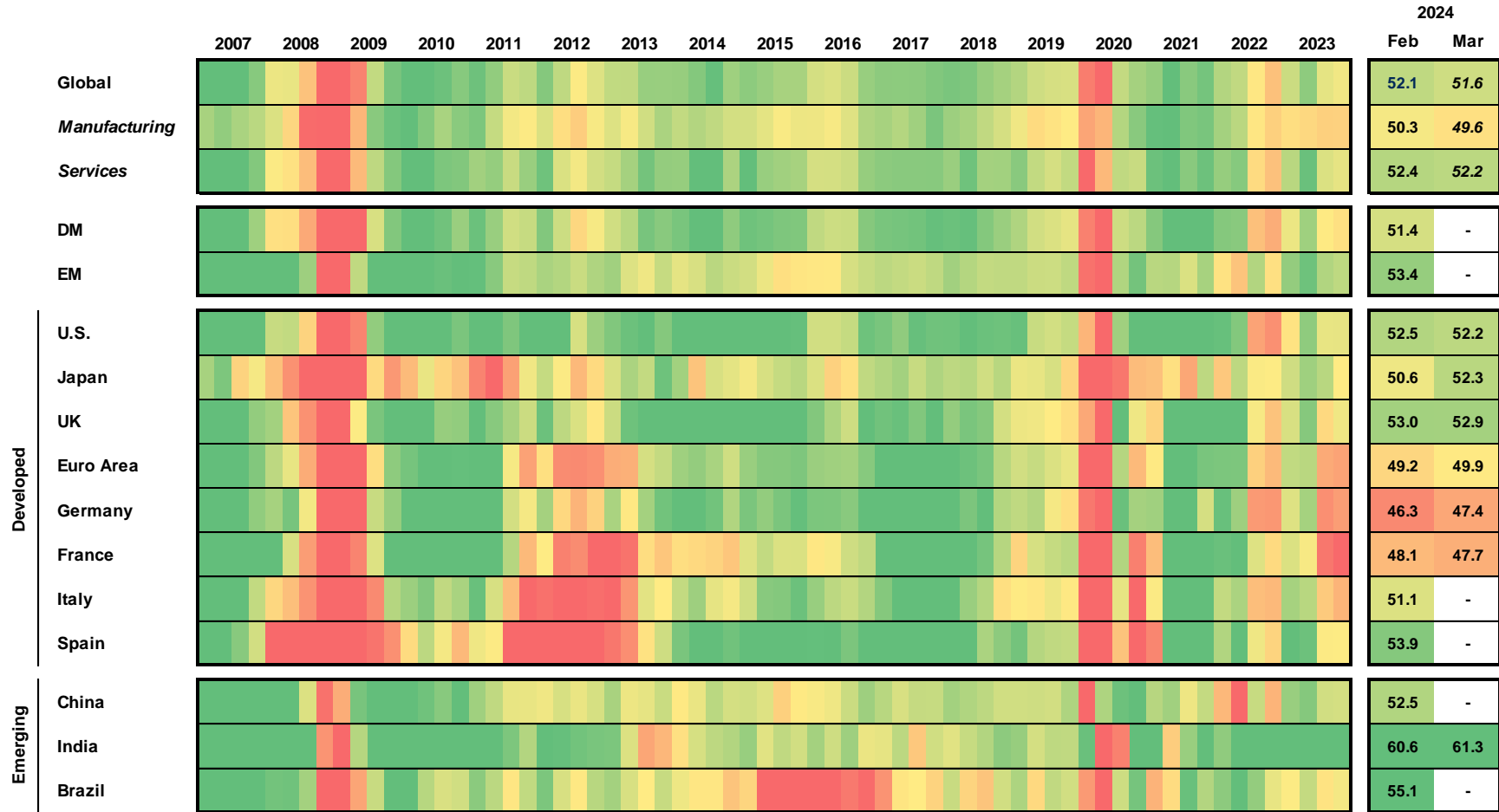
Source: J.P. Morgan Asset Management. (Left) Bloomberg. These series represent measures of expected inflation and interest rates (on average) over the five-year period that begins five years from today. (Right) FactSet, MSCI, Standard & Poor's. U.S. = S&P 500 Index, intl. dev. = MSCI EAFE Index. Growth includes Communication Services, Health Care, Information Technology and Consumer Discretionary. Value includes Financials, Industrials, Materials, Real Estate, Utilities, Energy, and Consumer Staples. *Guide to the Markets – U.S.* Data are as of March 31, 2024.





# Global economic activity momentum

### Global Composite (manufacturing & services combined) Purchasing Managers' Index, quarterly



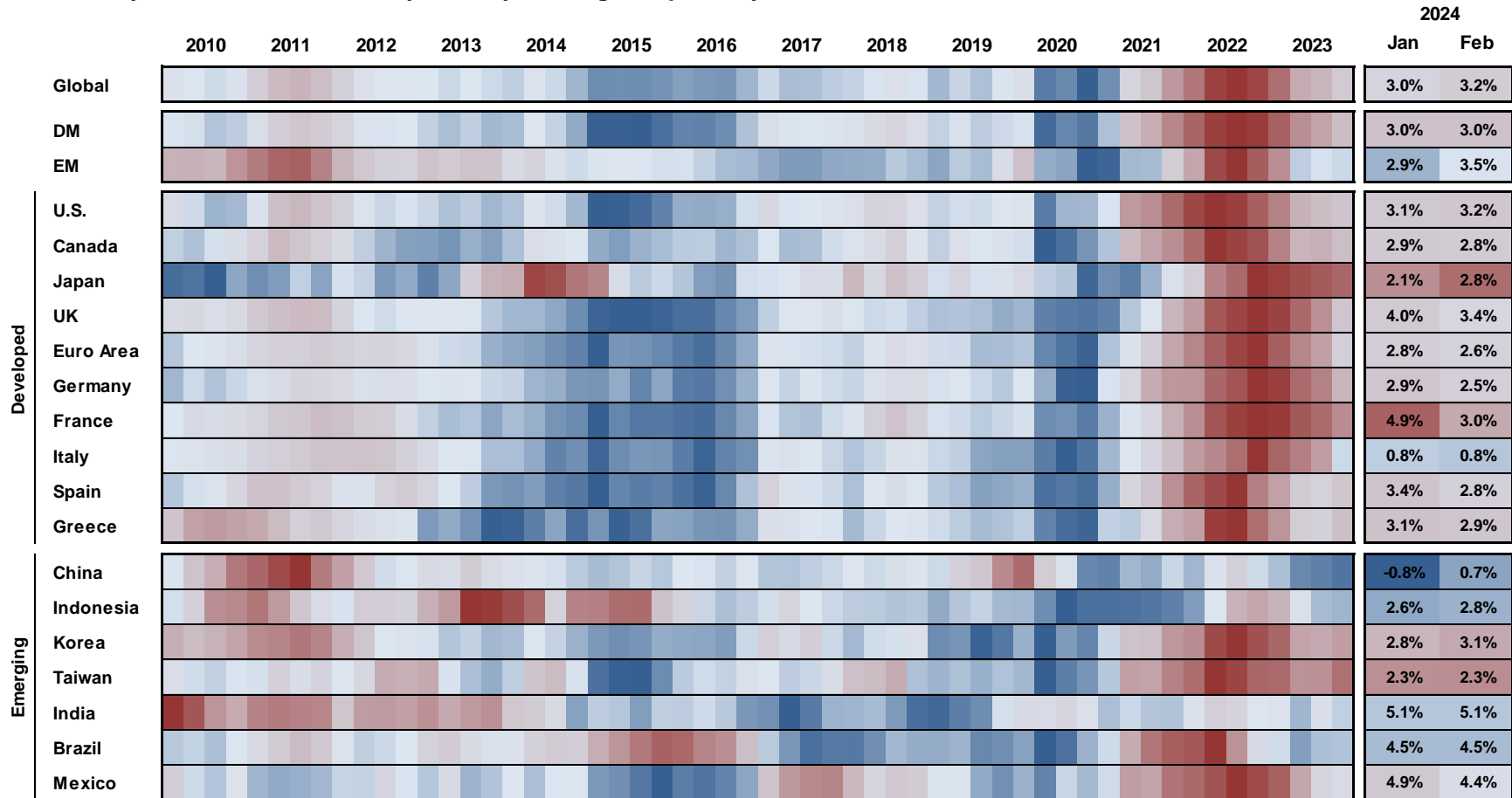
International

Source: J.P. Morgan Economic Research, Standard & Poor's, J.P. Morgan Asset Management.  
 Italicized figures are estimates by J.P. Morgan Asset Management. The Composite PMI includes both manufacturing and services sub-indices. Heatmap colors are based on PMI relative to the 50 level, which indicates acceleration or deceleration of the sector, for the time period shown. Heatmap is based on quarterly averages, except for the two most recent figures, which are single month readings. Data for the U.S. are back-tested and filled in for 2007-2009. Data for Japan are back-tested and filled in for the first two quarters of 2007. DM and EM represent developed markets and emerging markets, respectively.  
 Guide to the Markets – U.S. Data are as of March 31, 2024.



# Global inflation

### Year-over-year headline inflation by country and region, quarterly



International

Source: Bank of Mexico, Central Bank of Brazil, DGBAS, Eurostat, FactSet, Federal Reserve, IBGE, India Ministry of Statistics & Programme Implementation, Japan Ministry of Internal Affairs & Communications, J.P. Morgan Economic Research, Korean National Statistical Office, National Bureau of Statistics China, Statistics Canada, Statistics Indonesia, UK Office for National Statistics (ONS), J.P. Morgan Asset Management. Heatmap is based on quarterly averages, with the exception of the two most recent figures, which are single month readings. Colors determined by percentiles of inflation values over the time period shown. Deep blue = lowest value, light blue = median, deep red = highest value. DM and EM represent developed markets and emerging markets, respectively. Guide to the Markets – U.S. Data are as of March 31, 2024.

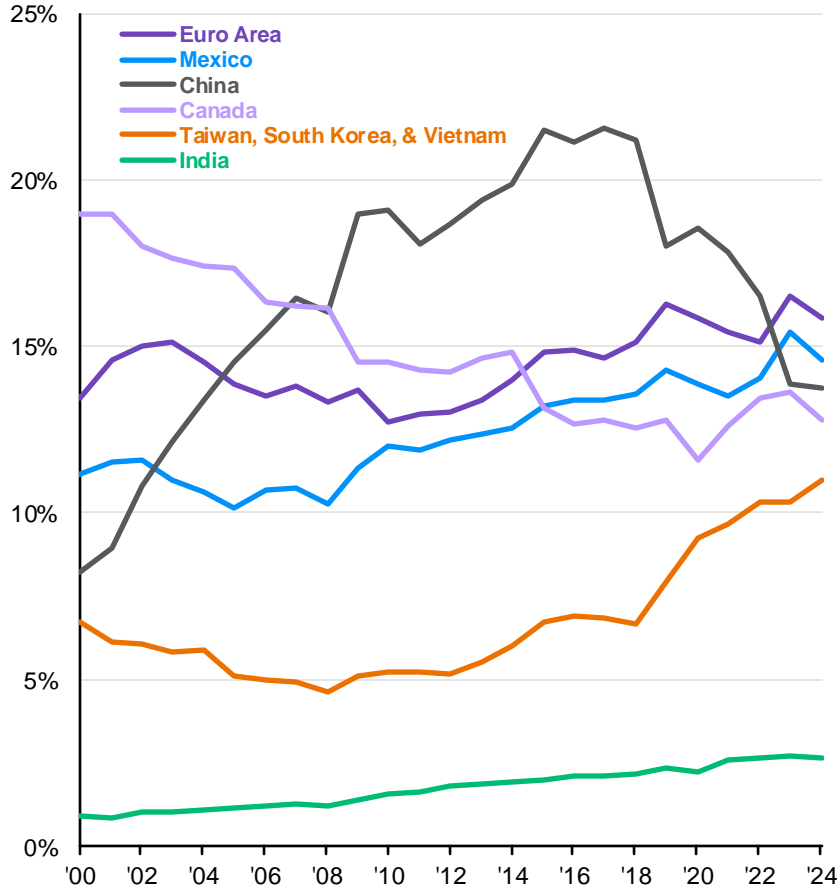


# Global trade patterns and bottlenecks monitor

International

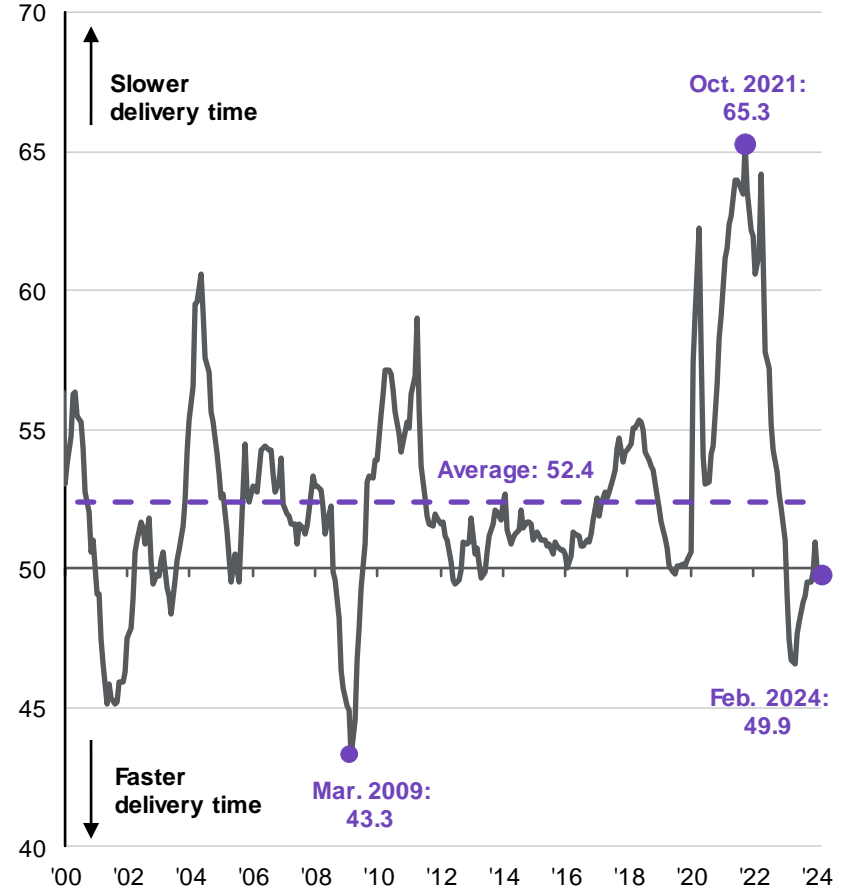
## U.S. goods imports by country

% of total U.S. goods imports, annual and YTD 2024



## Global PMI suppliers' delivery times index\*

Figure shown is 100 - Global PMI suppliers' delivery times index



Source: J.P. Morgan Asset Management. (Left) U.S. Census Bureau, FactSet. (Right) J.P. Morgan Economic Research, S&P Global. \*Participants in Standard & Poor's PMI business surveys, conducted in 44 countries, are asked: "Are your suppliers' delivery times slower, faster or unchanged on average than one month ago?". Index includes the manufacturing and construction sectors. PMI score reflected above is 100 - PMI report by Standard & Poor's. A reading of 50 = no change, <50 = faster delivery time, >50 = slower delivery time. Guide to the Markets - U.S. Data are as of March 31, 2024.

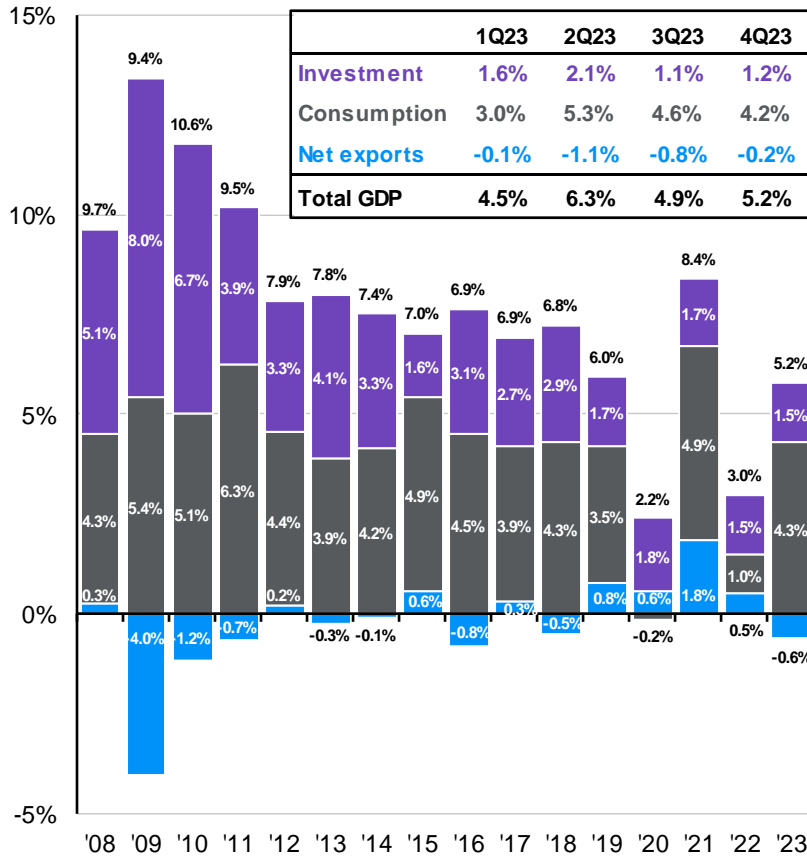


# China: Economy

International

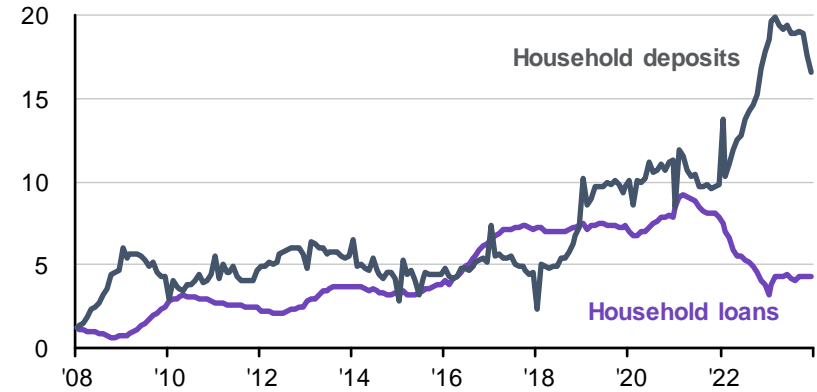
## China real GDP contribution

Year-over-year % change, contribution by component



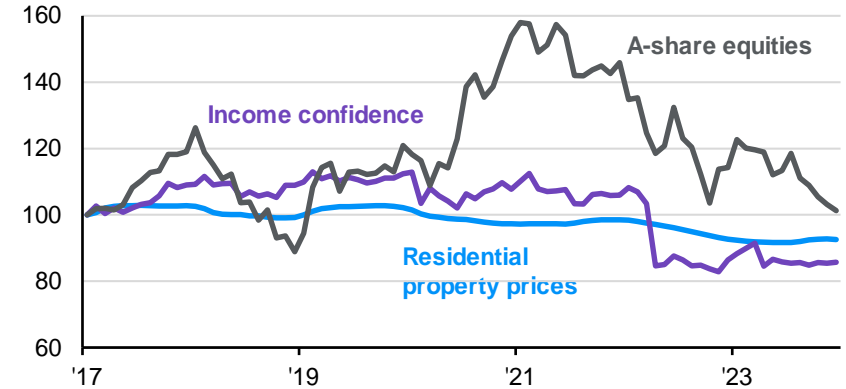
## Household deposits and loans

CNY trillion, rolling 12 months



## Consumer income and wealth effect

Jan. 2017 = 100



Source: J.P. Morgan Asset Management; (Left) CEIC. (Top right) People's Bank of China, Wind; (Bottom right) CEIC, National Bureau Statistics of China, People's Bank of China. "A-share equities" are represented by the CSI 300 Index. "Residential property prices" are represented by an index that tracks secondary market residential property prices. "Income confidence" is represented by a diffusion index reflecting respondents' confidence in future income. The two right graphs come from our [Guide to China](#).  
 Guide to the Markets – U.S. Data are as of March 31, 2024.

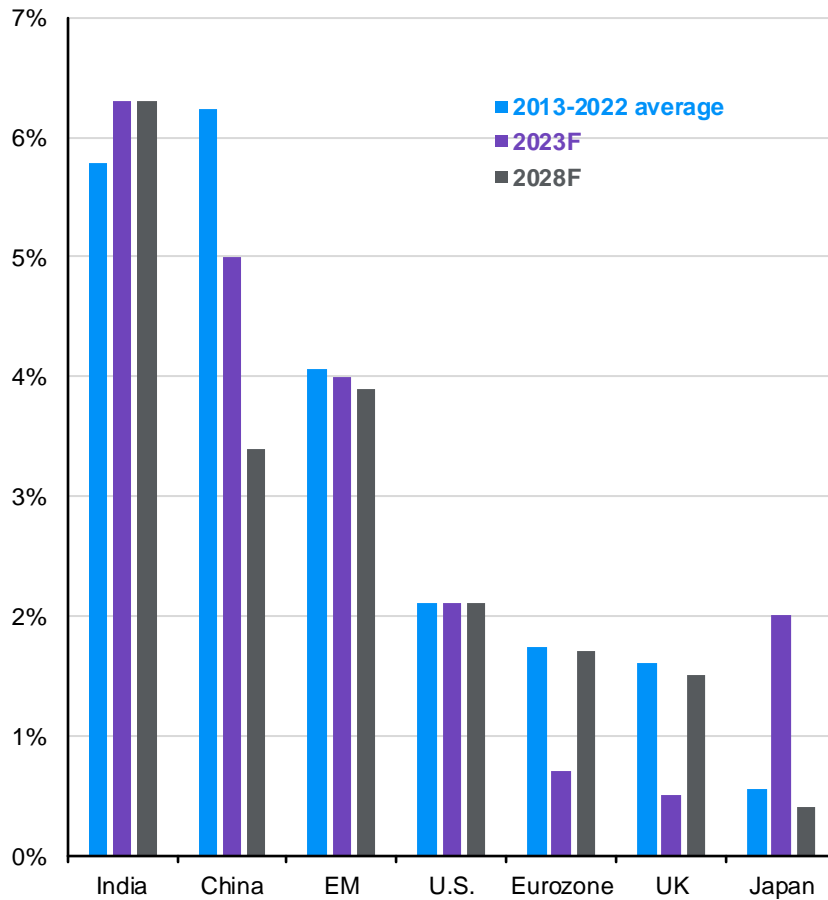


# India: Economy

International

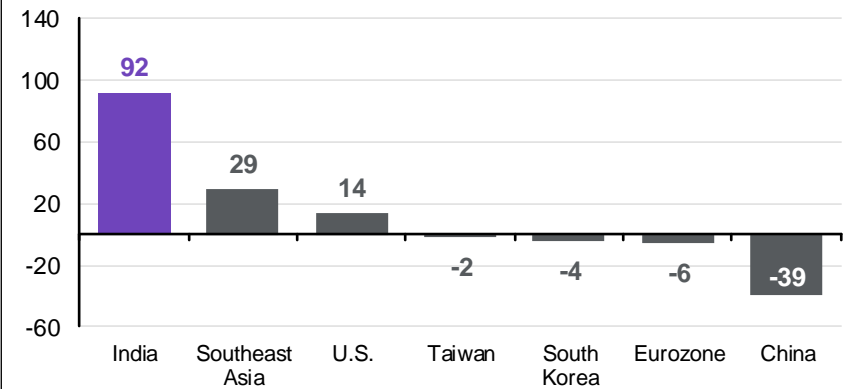
## Real GDP growth by country

Year-over-year



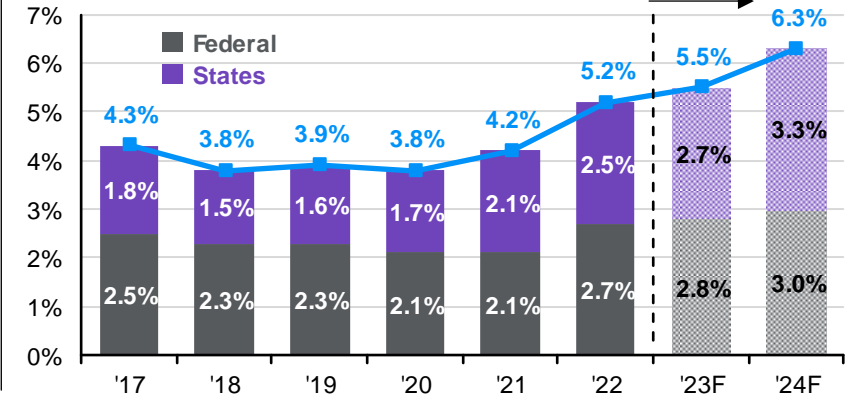
## Working age population growth

Estimated change between 2023 and 2033\*, millions of people



## Government capital spending

% of GDP, current prices



Source: J.P. Morgan Asset Management. (Left) International Monetary Fund. (IMF), World Economic Outlook (WEO) – October 2023. Forecasts are provided by the IMF. (Top right) \*Estimates are provided by Oxford Economics. Working age population is defined as those aged 15-64. Southeast Asia includes Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam. (Bottom right) Ministry of Finance India. Shows capital spending by fiscal year. The fiscal year in India runs from April to March. \*\*Forecast is by the Ministry of Finance for FY 2023 and FY 2024. Guide to the Markets – U.S. Data are as of March 31, 2024.



# Correlations and volatility

Alternatives

	U.S. Large Cap	EAFE	EME	Bonds	Corp. HY	Munis	Currency.	EMD	Cmdty.	REITs	Hedge funds	Private equity	Gold	Ann. Volatility
U.S. Large Cap	1.00	0.90	0.80	0.32	0.86	0.41	-0.47	0.75	0.39	0.78	0.82	0.81	0.23	15%
EAFE		1.00	0.90	0.33	0.86	0.47	-0.62	0.80	0.42	0.66	0.80	0.79	0.31	16%
EME			1.00	0.31	0.83	0.42	-0.69	0.80	0.45	0.55	0.77	0.77	0.39	18%
Bonds				1.00	0.42	0.89	-0.42	0.68	-0.28	0.51	-0.03	0.16	0.60	5%
Corp. HY					1.00	0.48	-0.52	0.88	0.45	0.71	0.77	0.75	0.35	9%
Munis						1.00	-0.46	0.75	-0.23	0.62	0.10	0.29	0.49	5%
Currencies							1.00	-0.62	-0.35	-0.31	-0.30	-0.56	-0.61	7%
EMD								1.00	0.19	0.68	0.55	0.62	0.53	8%
Commodities									1.00	0.26	0.64	0.58	0.20	17%
REITs										1.00	0.58	0.63	0.26	17%
Hedge funds											1.00	0.80	0.07	5%
Private equity												1.00	0.12	8%
Gold													1.00	13%

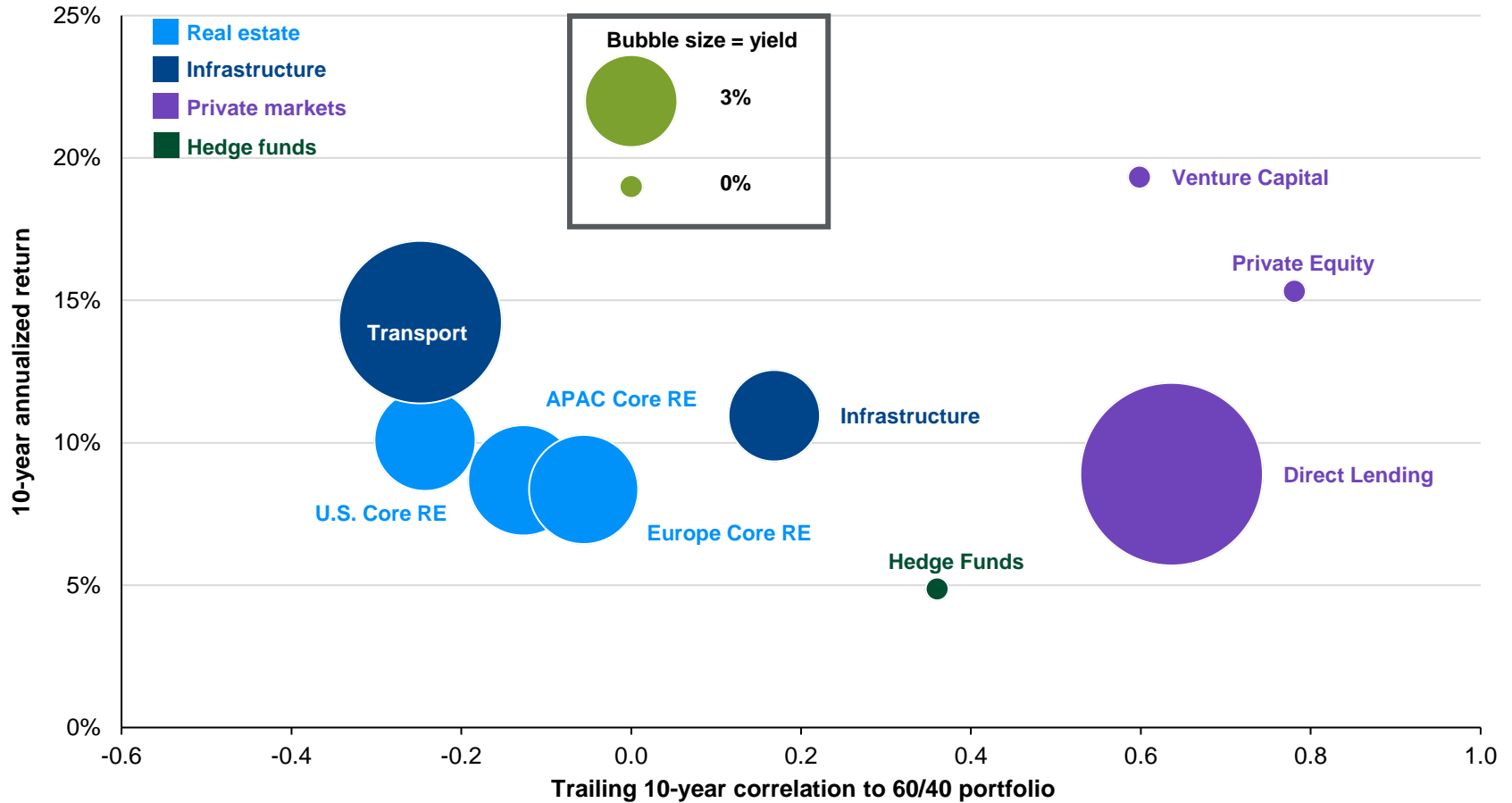
Source: Bloomberg, Burgiss, Credit Suisse/Tremont, FactSet, Federal Reserve, MSCI, Standard & Poor's, J.P. Morgan Asset Management. Indices used – Large Cap: S&P 500 Index; Currencies: Federal Reserve Trade-Weighted Dollar; EAFE: MSCI EAFE; EME: MSCI Emerging Markets; Bonds: Bloomberg Aggregate; Corp HY: Bloomberg Corporate High Yield; EMD: Bloomberg Emerging Market; Cmdty.: Bloomberg Commodity Index; REITs: NAREIT All Equity Index; Hedge funds: CS/Tremont Hedge Fund Index; Private equity: Time weighted returns from Burgiss; Gold: Gold continuous contract (\$/oz). Private equity data are reported on a one- to two-quarter lag. All correlation coefficients and annualized volatility are calculated based on quarterly total return data for period from 3/31/2014 to 3/31/2024, except for Private equity, which is based on the period from 9/30/2013 to 9/30/2023. This chart is for illustrative purposes only. Guide to the Markets – U.S. Data are as of March 31, 2024.



# Alternative asset correlations, returns and yields

## Correlations, returns and yields

10-year correlations and 10-year annualized total returns, quarterly, 2013-2022



Alternatives

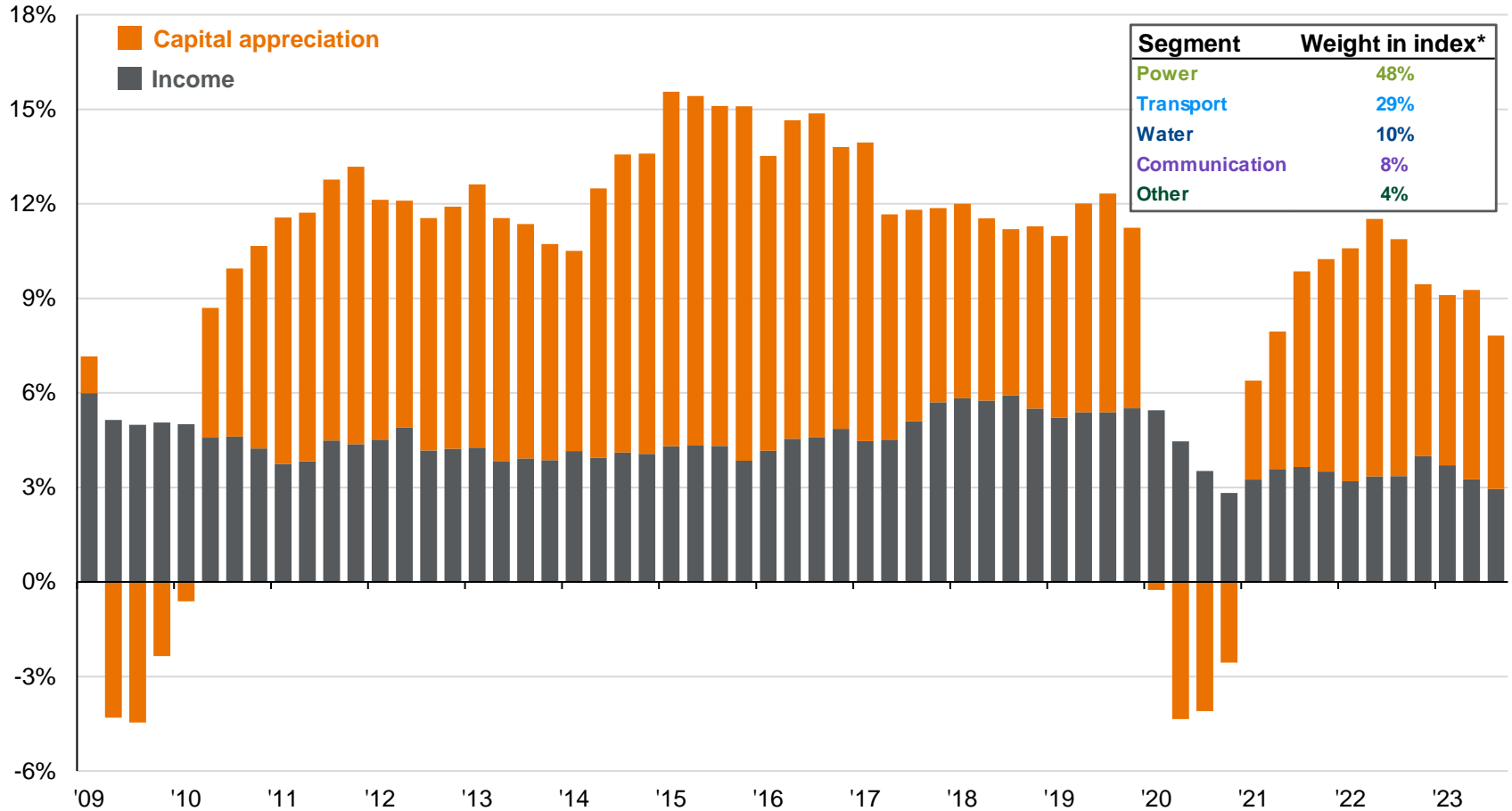
Source: Burgiss, Cliffwater, FactSet, Gilberto-Levy, HFRI, MSCI, NCREIF, J.P. Morgan Asset Management. Correlations are based on quarterly returns over the past 10 years through 2022. A 60/40 portfolio is comprised of 60% stocks and 40% bonds. Stocks are represented by the S&P 500 Total Return Index. Bonds are represented by the Bloomberg U.S. Aggregate Total Return Index. 10-year annualized returns are calculated from 2013 to 2022. Indices and data used for alternative asset class returns and yields are as described on pages 8,9 and 11 of the *Guide to Alternatives*. Yields are based on latest available data as described on page 8 of the *Guide to Alternatives*. This slide comes from our [Guide to Alternatives](#). *Guide to the Markets – U.S.* Data are as of March 31, 2024.



# Sources of global infrastructure returns

## Global core infrastructure returns

Rolling 4-quarter returns from income and capital appreciation



Alternatives

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

Infrastructure returns represented by the MSCI Global Quarterly Infrastructure Asset Index. Data show rolling one-year returns from income and capital growth. The chart shows the full index history, beginning in 1Q09, and ending in 3Q23. Past performance is not indicative of future results. Alternative investments carry more risk than traditional investments and are recommended only for long-term investment. Some alternative investments may be highly leveraged and rely on speculative investments that can magnify the potential for loss or gain. Diversification does not guarantee investment returns or eliminate the risk of loss. \*Weights are based on enterprise value. This slide comes from our [Guide to Alternatives](#). *Guide to the Markets – U.S.* Data are as of March 31, 2024.

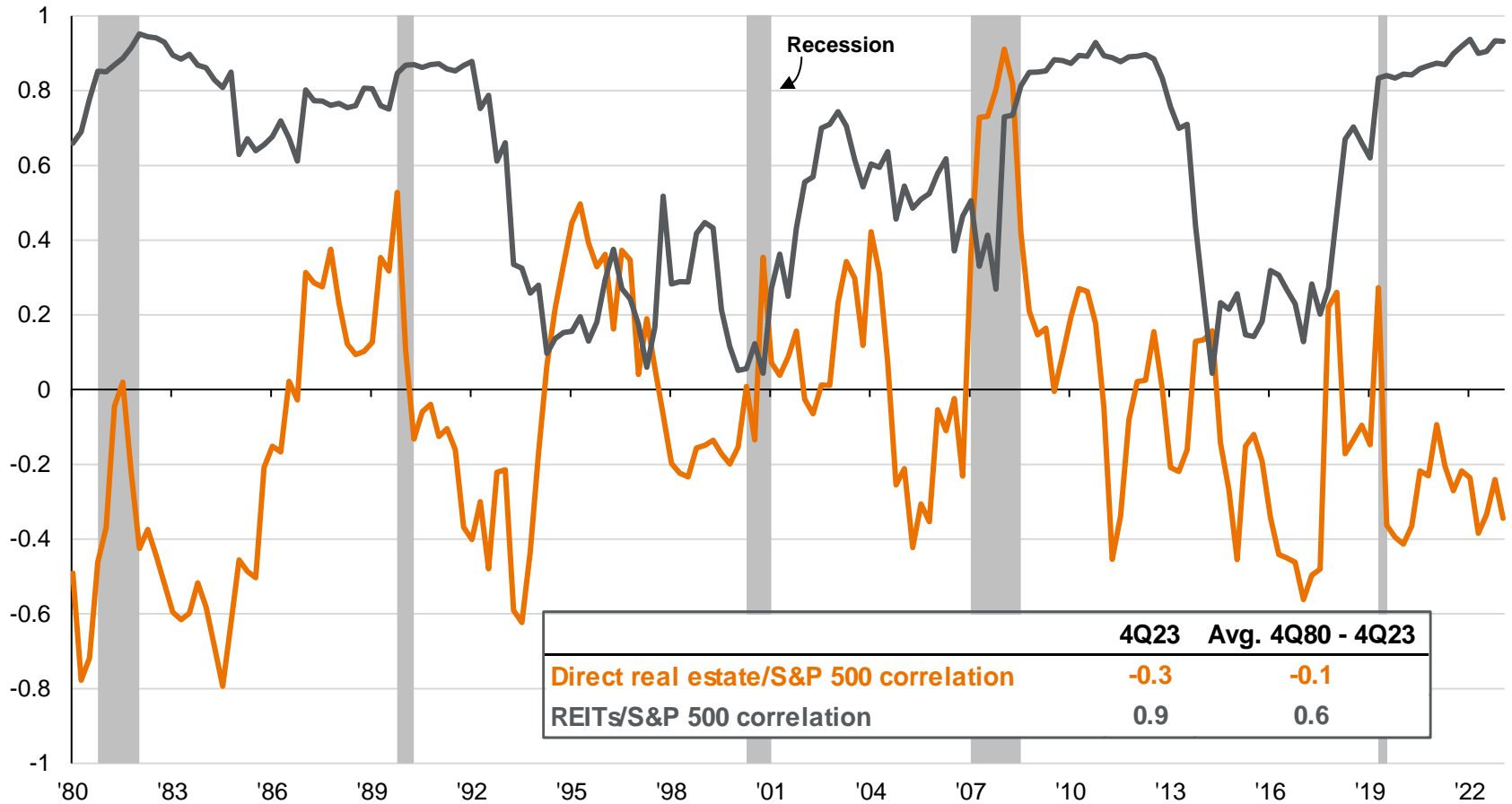




# U.S. REITs and direct real estate

## U.S. REITs, direct real estate and equities

12-quarter rolling correlations, total return



Alternatives

Source: FactSet, NAREIT, NCREIF, Standard & Poor's, J.P. Morgan Asset Management. Real estate investment trusts (REITs). Indices do not include fees or operating expenses and are not available for actual investment. Past performance is not necessarily a reliable indicator for current and future performance. This slide comes from our [Guide to Alternatives](#). *Guide to the Markets – U.S.* Data are as of March 31, 2024.

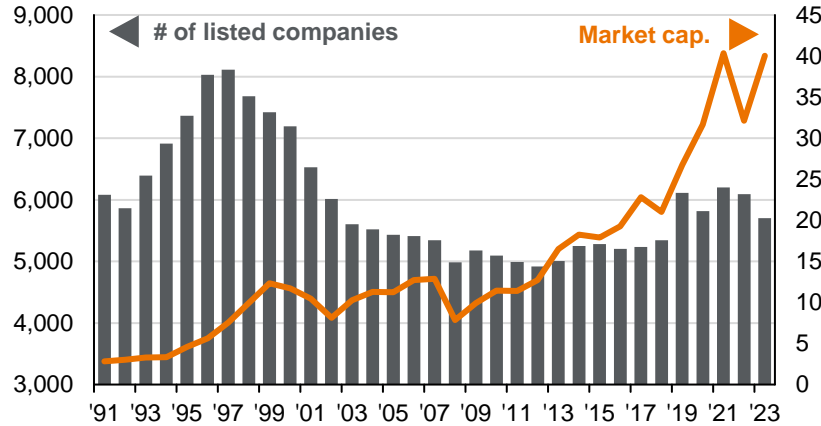


# U.S. public vs. private equity

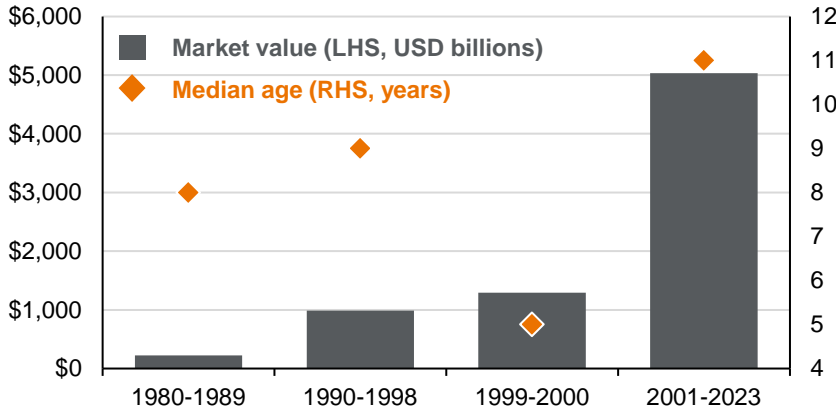
Alternatives

### Number of listed U.S. companies\* and market cap.

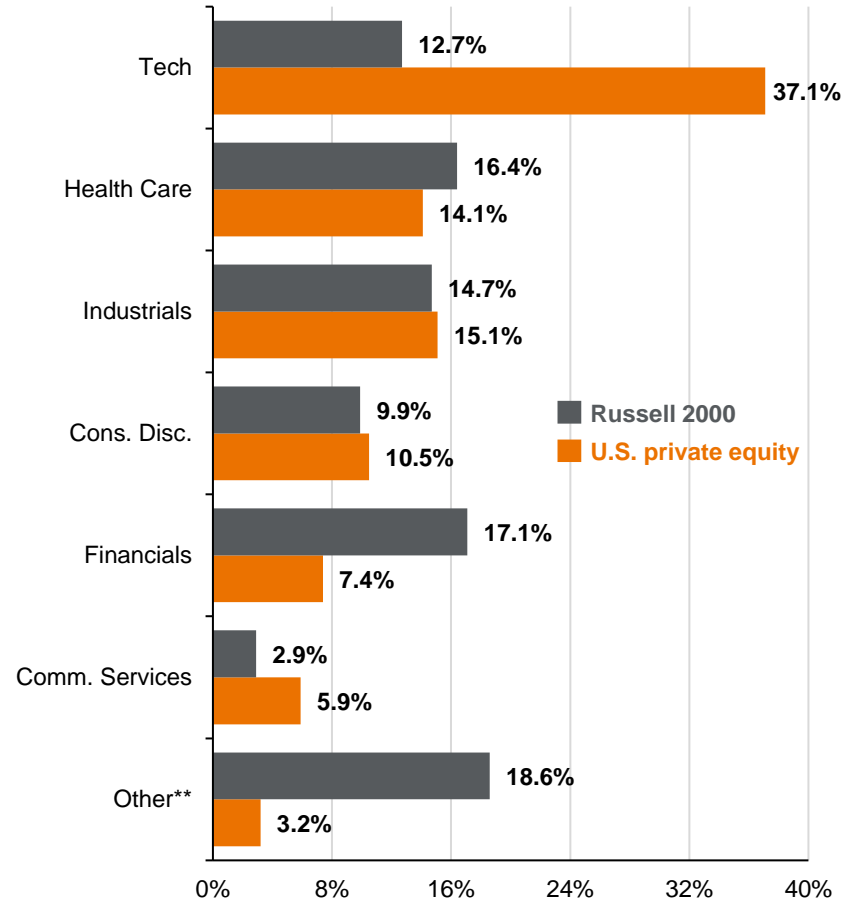
Number, S&P 500 market capitalization in USD trillions



### Average market value and median age at IPO



### Private vs. public equity sector weights



Sources: Cambridge Associates, Jay Ritter, University of Florida, World Federation of Exchanges, J.P. Morgan Asset Management.  
 (Top left) \*Number of listed U.S. companies is represented by the sum of number of companies listed on the NYSE and the NASDAQ. (Bottom left) Market value is calculated at first closing price. The sample is IPOs with an offer price of at least \$5, excluding ADRs, unit offers, closed-end funds, REITs, natural resource limited partnerships, small best efforts offers, banks and S&Ls and stocks not listed on CRSP (CRSP includes Amex, NYSE and NASDAQ stocks). Average IPO size is defined as the aggregate IPO proceeds during the period shown, divided by the number of IPOs. (Right) \*\*Other includes real estate, utilities and energy. Percentages may not sum due to rounding. Sector weights are as of 6/30/2022. This slide comes from our [Guide to Alternatives](#).  
 Guide to the Markets – U.S. Data are as of March 31, 2024.

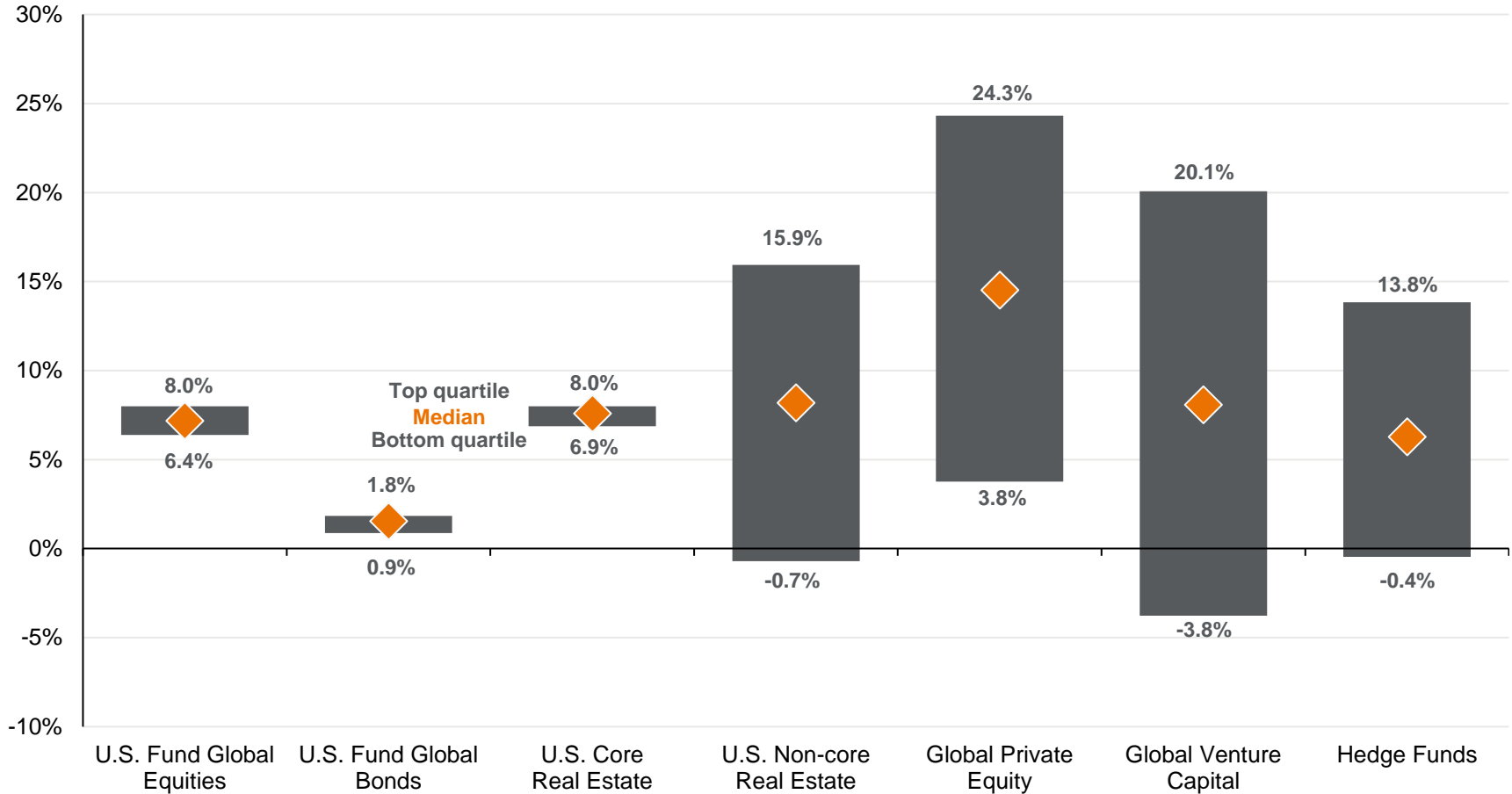


# Alternatives and manager selection

Alternatives

## Public and private manager dispersion

Based on returns over a 10-year window\*



Source: Burgiss, Morningstar, NCREIF, PivotalPath, J.P. Morgan Asset Management.

Global equities (large cap) and global bonds dispersion are based on the world large stock and world bond categories, respectively. \*Manager dispersion is based on the annual returns for U.S. Fund Global Equities, U.S. Fund Global Bonds, Hedge Funds and U.S. Core Real Estate are over a 10-year period ending 3Q23. Non-core Real Estate, Global Private Equity and Global Venture Capital are represented by the 10-year horizon internal rate of return (IRR) ending 2Q23. U.S. Fund Global Equities and Bonds are comprised of U.S.-domiciled mutual funds and ETFs. This slide comes from our [Guide to Alternatives](#).  
Guide to the Markets – U.S. Data are as of March 31, 2024.



# Asset class returns

GTM U.S. 60

2009-2023		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD
Ann. 14.0%	Vol. 21.9%	EM Equity 79.0%	REITs 27.9%	REITs 8.3%	REITs 19.7%	Small Cap 38.8%	REITs 28.0%	REITs 2.8%	Small Cap 21.3%	EM Equity 37.8%	Cash 1.8%	Large Cap 31.5%	Small Cap 20.0%	REITs 41.3%	Comdty. 16.1%	Large Cap 26.3%	Large Cap 10.6%
Small Cap 11.3%	REITs 21.2%	High Yield 59.4%	Small Cap 26.9%	Fixed Income 7.8%	High Yield 19.6%	Large Cap 32.4%	Large Cap 13.7%	Large Cap 1.4%	High Yield 14.3%	DM Equity 25.6%	Fixed Income 0.0%	REITs 28.7%	EM Equity 18.7%	Large Cap 28.7%	Cash 1.5%	DM Equity 18.9%	DM Equity 5.8%
REITs 10.9%	EM Equity 20.3%	DM Equity 32.5%	EM Equity 19.2%	High Yield 3.1%	EM Equity 18.6%	DM Equity 23.3%	Fixed Income 6.0%	Fixed Income 0.5%	Large Cap 12.0%	Large Cap 21.8%	REITs -4.0%	Small Cap 25.5%	Large Cap 18.4%	Comdty. 27.1%	High Yield -12.7%	Small Cap 16.9%	Small Cap 5.2%
High Yield 8.6%	DM Equity 18.4%	REITs 28.0%	Comdty. 16.8%	Large Cap 2.1%	DM Equity 17.9%	Asset Alloc. 14.9%	Asset Alloc. 5.2%	Cash 0.0%	Comdty. 11.8%	Small Cap 14.6%	High Yield -4.1%	DM Equity 22.7%	Asset Alloc. 10.6%	Small Cap 14.8%	Fixed Income -13.0%	Asset Alloc. 14.1%	Asset Alloc. 4.2%
Asset Alloc. 8.1%	Comdty. 16.6%	Small Cap 27.2%	Large Cap 15.1%	Cash 0.1%	Small Cap 16.3%	High Yield 7.3%	Small Cap 4.9%	DM Equity -0.4%	EM Equity 11.6%	Asset Alloc. 14.6%	Large Cap -4.4%	Asset Alloc. 19.5%	DM Equity 8.3%	Asset Alloc. 13.5%	Asset Alloc. -13.9%	High Yield 14.0%	Comdty. 2.2%
DM Equity 7.4%	Large Cap 16.1%	Large Cap 26.5%	High Yield 14.8%	Asset Alloc. -0.7%	Large Cap 16.0%	REITs 2.9%	Cash 0.0%	Asset Alloc. -2.0%	REITs 8.6%	High Yield 10.4%	Asset Alloc. -5.8%	EM Equity 18.9%	Fixed Income 7.5%	DM Equity 11.8%	DM Equity -14.0%	REITs 11.4%	EM Equity 2.2%
EM Equity 6.9%	High Yield 11.5%	Asset Alloc. 25.0%	Asset Alloc. 13.3%	Small Cap -4.2%	Asset Alloc. 12.2%	Cash 0.0%	High Yield 0.0%	High Yield -2.7%	Asset Alloc. 8.3%	REITs 8.7%	Small Cap -11.0%	High Yield 12.6%	High Yield 7.0%	High Yield 1.0%	Large Cap -18.1%	EM Equity 10.3%	High Yield 2.1%
Fixed Income 2.7%	Asset Alloc. 11.5%	Comdty. 18.9%	DM Equity 8.2%	DM Equity -11.7%	Fixed Income 4.2%	Fixed Income -2.0%	EM Equity -1.8%	Small Cap -4.4%	Fixed Income 2.6%	Fixed Income 3.5%	Comdty. -11.2%	Fixed Income 8.7%	Cash 0.5%	Cash 0.0%	EM Equity -19.7%	Fixed Income 5.5%	Cash 1.3%
Cash 0.8%	Fixed Income 4.5%	Fixed Income 5.9%	Fixed Income 6.5%	Comdty. -13.3%	Cash 0.1%	EM Equity -2.3%	DM Equity -4.5%	EM Equity -14.6%	DM Equity 1.5%	Comdty. 1.7%	DM Equity -13.4%	Comdty. 7.7%	Comdty. -3.1%	Fixed Income -1.5%	Small Cap -20.4%	Cash 5.1%	Fixed Income -0.8%
Comdty. -0.2%	Cash 0.7%	Cash 0.1%	Cash 0.1%	EM Equity -18.2%	Comdty. -1.1%	Comdty. -9.5%	Comdty. -17.0%	Comdty. -24.7%	Cash 0.3%	Cash 0.8%	EM Equity -14.2%	Cash 2.2%	REITs -5.1%	EM Equity -2.2%	REITs -24.9%	Comdty. -7.9%	REITs -1.3%

Investing Principles

Source: Bloomberg, FactSet, MSCI, NAREIT, Russell, Standard & Poor's, J.P. Morgan Asset Management. Large cap: S&P 500, Small cap: Russell 2000, EM Equity: MSCI EME, DM Equity: MSCI EAFE, Comdty: Bloomberg Commodity Index, High Yield: Bloomberg Global HY Index, Fixed Income: Bloomberg US Aggregate, REITs: NAREIT Equity REIT Index, Cash: Bloomberg 1-3m Treasury. The "Asset Allocation" portfolio assumes the following weights: 25% in the S&P 500, 10% in the Russell 2000, 15% in the MSCI EAFE, 5% in the MSCI EME, 25% in the Bloomberg US Aggregate, 5% in the Bloomberg 1-3m Treasury, 5% in the Bloomberg Global High Yield Index, 5% in the Bloomberg Commodity Index and 5% in the NAREIT Equity REIT Index. Balanced portfolio assumes annual rebalancing. Annualized (Ann.) return and volatility (Vol.) represents period from 12/31/2009 to 12/31/2023. Please see disclosure page at end for index definitions. All data represents total return for stated period. The "Asset Allocation" portfolio is for illustrative purposes only. Past performance is not indicative of future returns.

Guide to the Markets - U.S. Data are as of March 31, 2024.

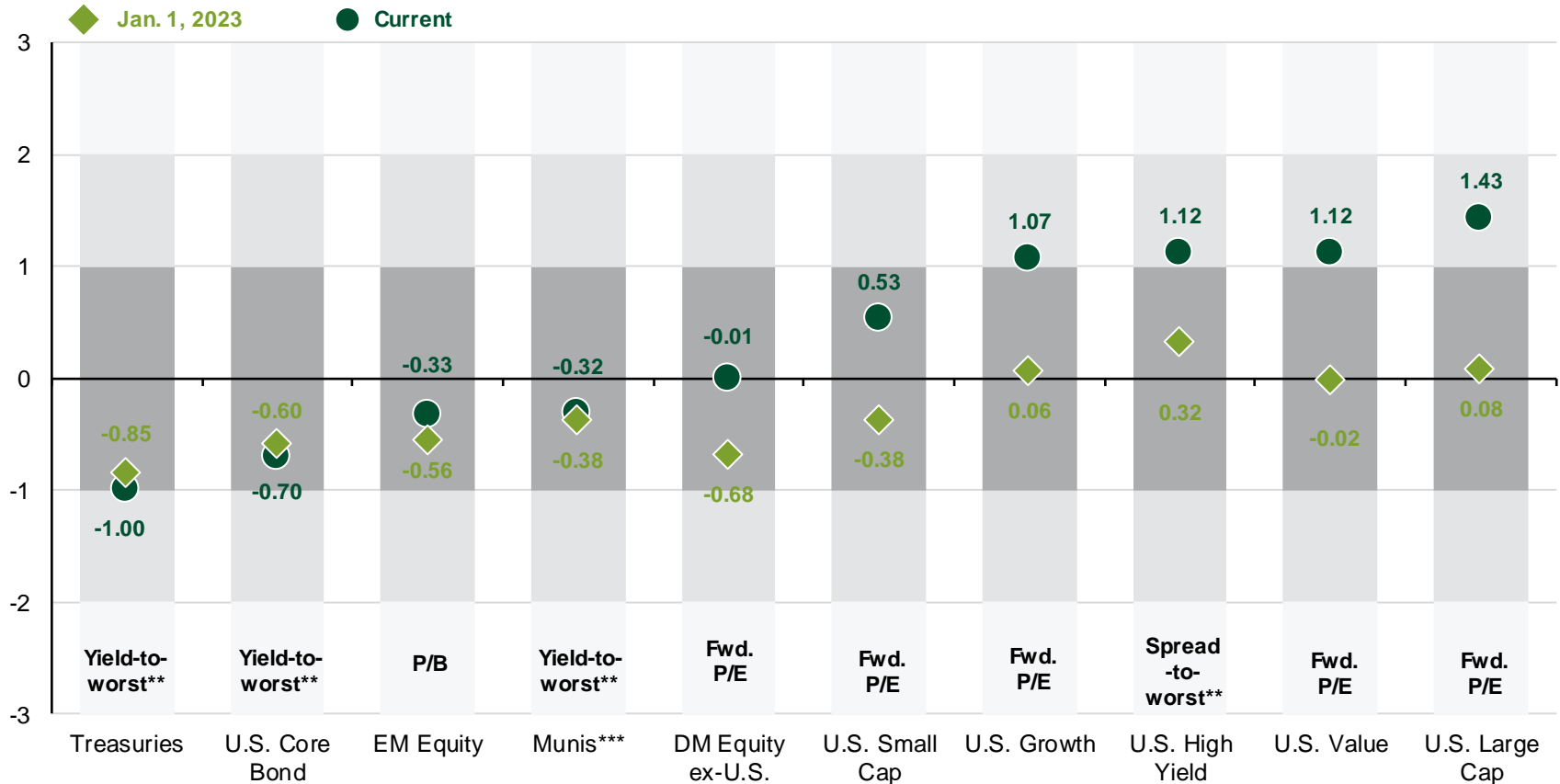
**J.P.Morgan**  
ASSET MANAGEMENT



# Valuations monitor

## Asset class valuations

Z-scores based on 25-year average valuation measures\*



Investing Principles

Source: Bloomberg, BLS, CME, FactSet, MSCI, Russell, Standard & Poor's, J.P. Morgan Asset Management.  
 U.S. Large Cap: S&P 500, U.S. Small Cap: Russell 2000, EM Equity: MSCI EME, DM Equity: MSCI EAFE, U.S. Value: Russell 1000 Value, U.S. Growth: Russell 1000 Growth, U.S. High Yield: J.P. Morgan Domestic High Yield Index, U.S. Core Bond: Bloomberg US Aggregate, Treasuries: Bloomberg U.S. Government – Treasury, Munis: Bloomberg Municipal Bond. \*Averages for U.S. High Yield and U.S. Small Cap are since January 1999 and November 1998, respectively, due to limited data availability. \*\*Yield-to-worst and spread-to-worst are inversely related to fixed income prices. \*\*\*Munis yield-to-worst is based on the tax-equivalent yield-to-worst assuming a top-income tax bracket rate of 37% plus a Medicare tax rate of 3.8%.

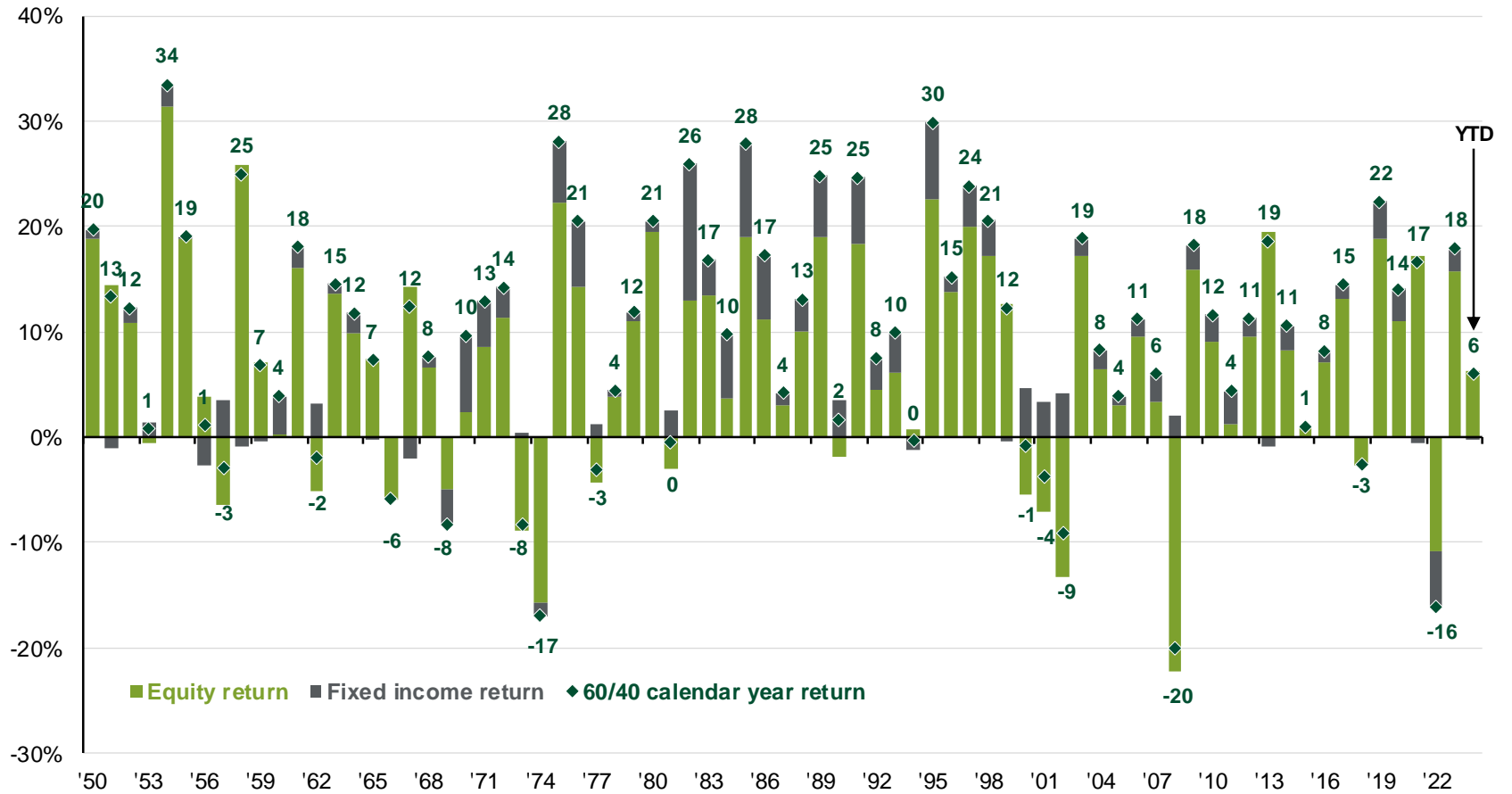
Guide to the Markets – U.S. Data are as of March 31, 2024.



# 60/40 annual returns

## 60/40 annual return decomposition

Total returns in percent, 1950-present



Investing Principles

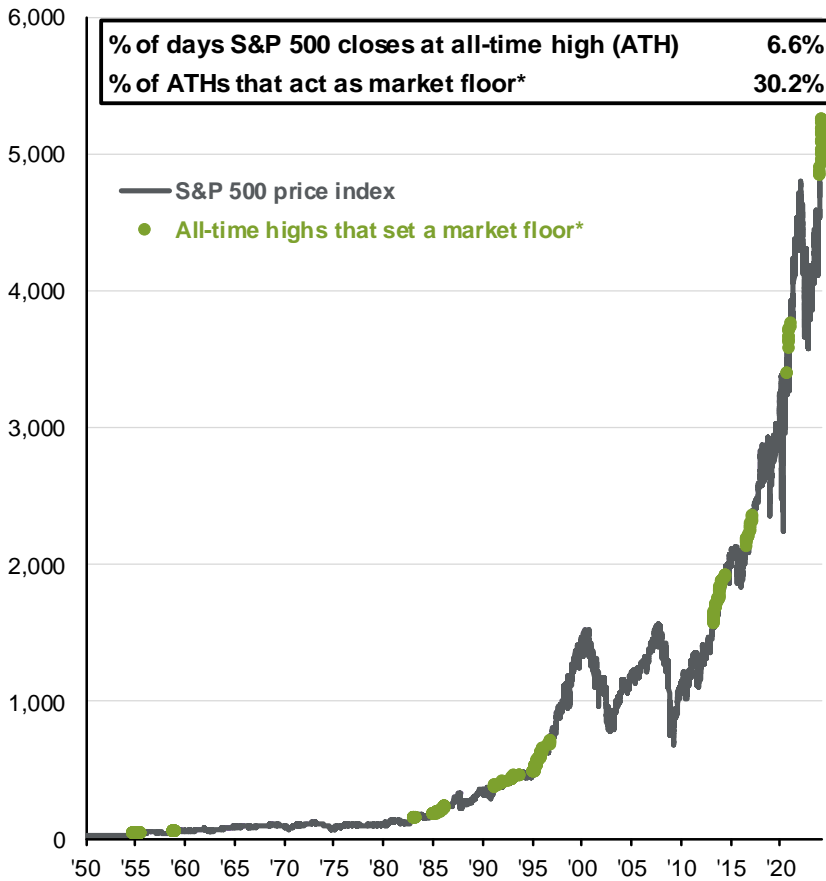
Source: Bloomberg, FactSet, Ibbotson/Strategas, Standard & Poor's, J.P. Morgan Asset Management.  
 The 60/40 portfolio is 60% invested in the S&P 500 Total Return Index and 40% invested in the Bloomberg U.S. Aggregate Total Return Index. U.S. fixed income total returns from 1950 to 1975 are estimated using data from Strategas/Ibbotson. The portfolio is rebalanced annually.  
 Guide to the Markets – U.S. Data are as of March 31, 2024.



# Investing at all-time highs

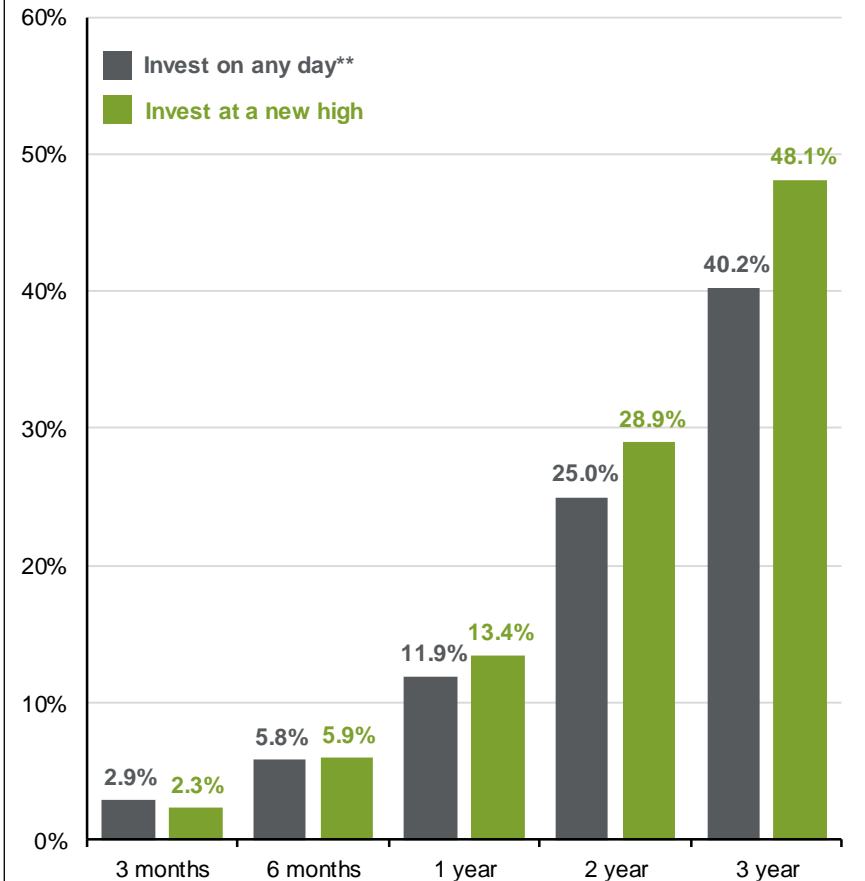
## All-time highs and market floors

S&P 500 price index, daily, 1950 - today



## Average cumulative S&P 500 total returns

Jan. 1, 1988 - Dec. 31, 2023



Investing Principles

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

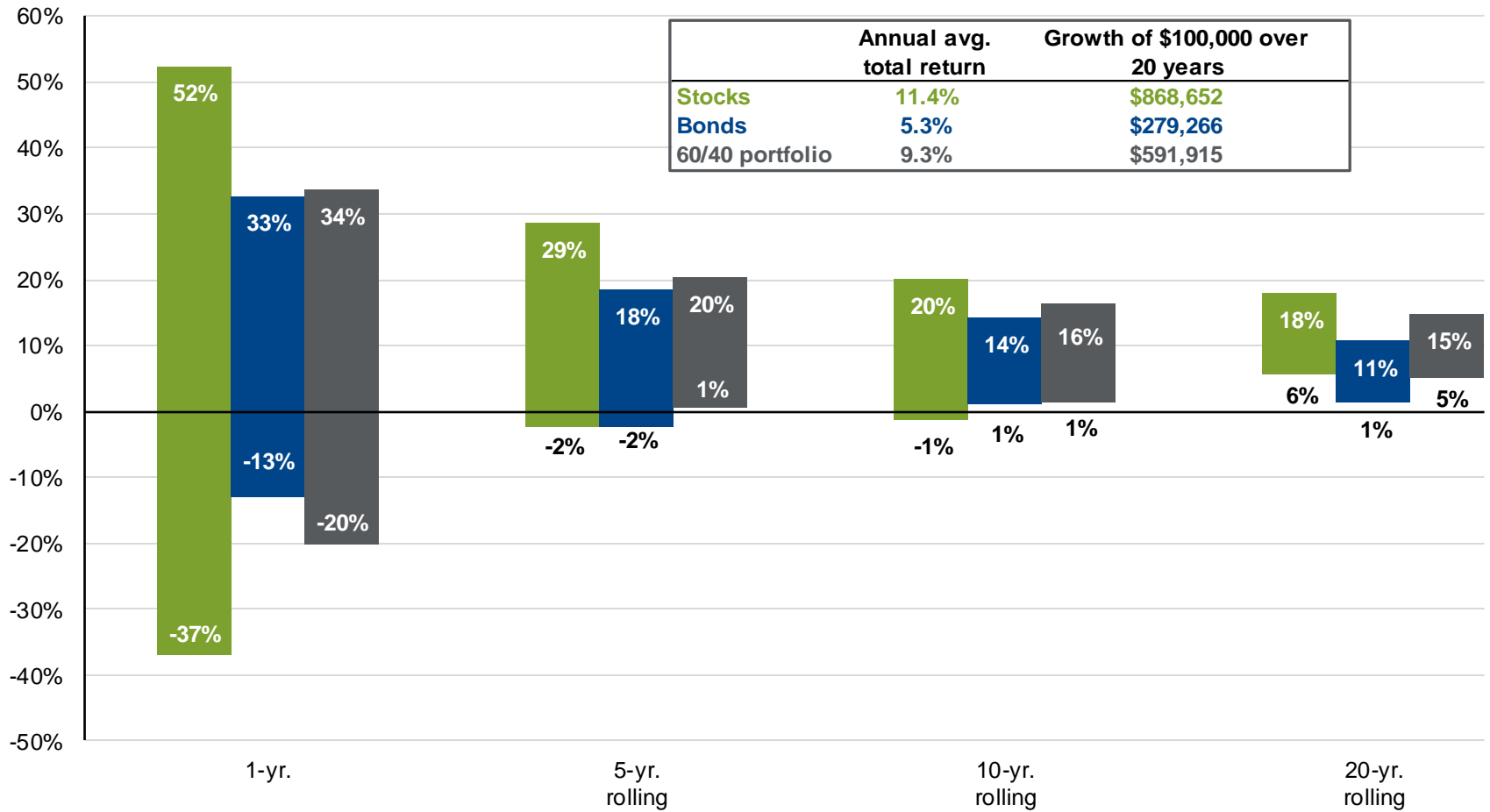
(Left) \*Market floor is defined as an all-time high from which the market never fell more than 5%. (Right) \*\*\*"Invest on any day" represents average of forward returns for the entire time period whereas "Invest at a new high" represents average of rolling forward returns calculated from each new S&P 500 high for the subsequent 3-months, 6-months, 1-year, 2-year and 3-year intervals, with data starting 1/1/1988 through 12/31/2023. Guide to the Markets – U.S. Data are as of March 31, 2024.



# Time, diversification and the volatility of returns

## Range of stock, bond and blended total returns

Annual total returns, 1950-2023



Source: Bloomberg, FactSet, Federal Reserve, Robert Shiller, Standard and Poor's, Strategas/Ibbotson, J.P. Morgan Asset Management. Returns shown are based on calendar year returns from 1950 to 2023. Stocks represent the S&P 500 Shiller Composite for periods prior to 1936 and the S&P 500 thereafter. Bonds represent Strategas/Ibbotson for periods prior to 1976 and the Bloomberg Aggregate thereafter. Growth of \$100,000 is based on annual average total returns from 1950 to 2023. *Guide to the Markets – U.S.* Data are as of March 31, 2024.

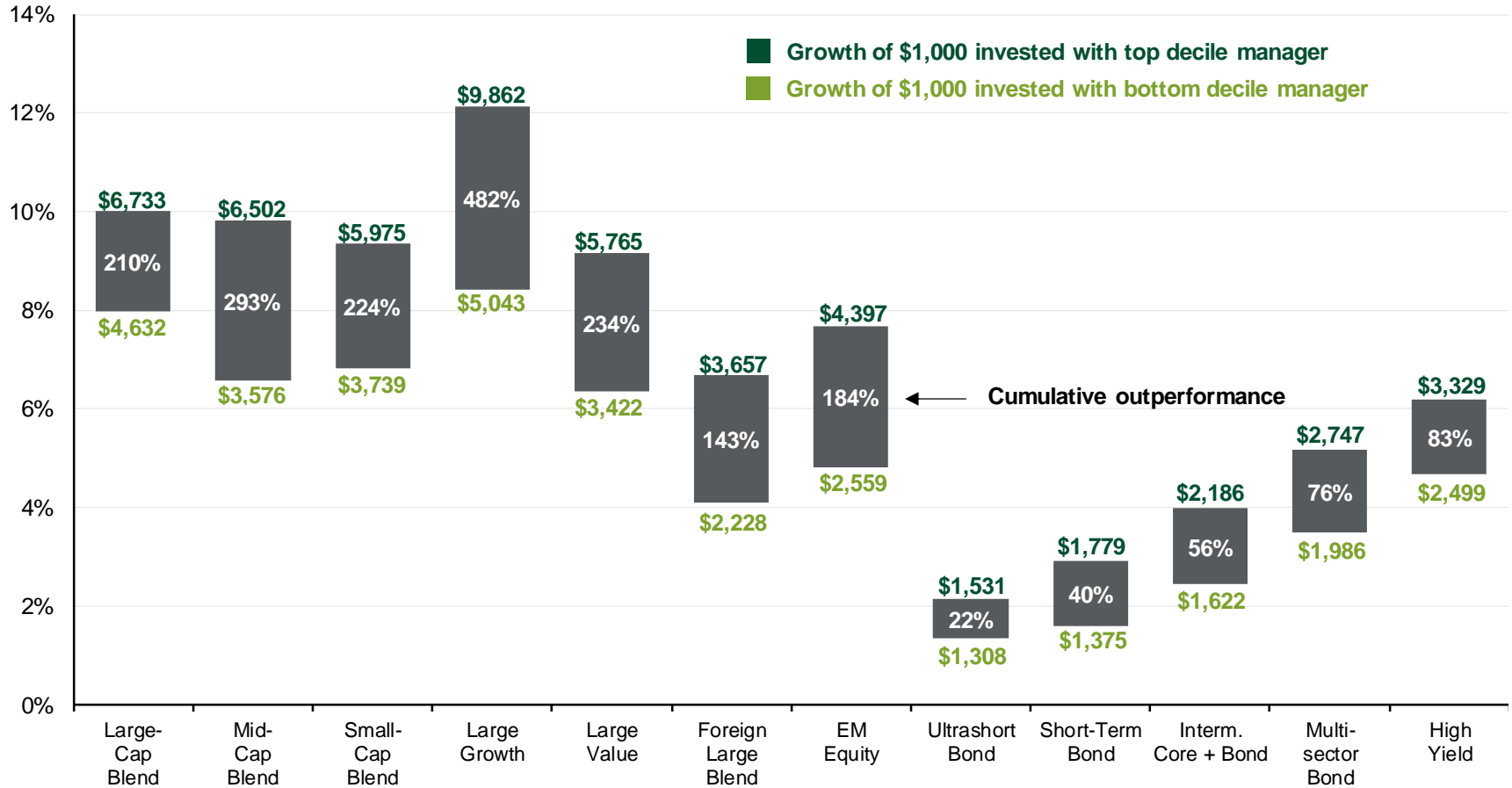




# Manager dispersion

## 20-year manager return dispersion and growth of capital

By asset type, annualized total returns, growth of \$1,000 invested 20 years ago\*



Investing Principles

Source: Morningstar, J.P. Morgan Asset Management.

\*Represents average annual portfolio return dispersion between the 10<sup>th</sup> and 90<sup>th</sup> percentile over a 20-year period for each Morningstar Category, including mutual funds and ETFs. Returns are updated monthly and reflect data through 2/29/2024. This information is for illustrative purposes only, does not reflect actual investment results, is not a guarantee of future results and is not a recommendation.

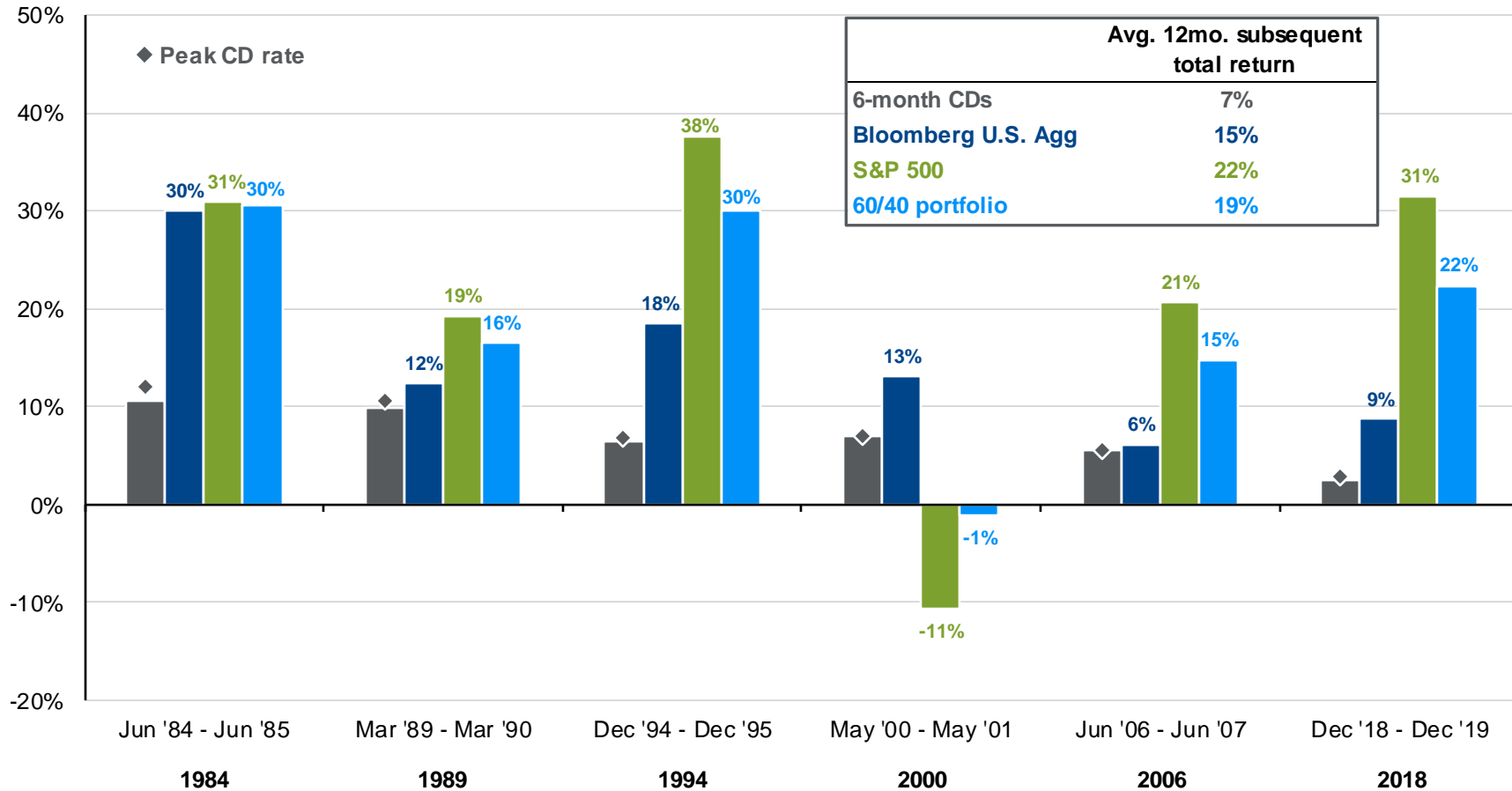
Guide to the Markets – U.S. Data are as of March 31, 2024.



# CD rates and other investment opportunities

## Investment opportunities outside of CDs

Peak 6-month certificate of deposit (CD) rate during previous rate hiking cycles and subsequent 12-month total returns



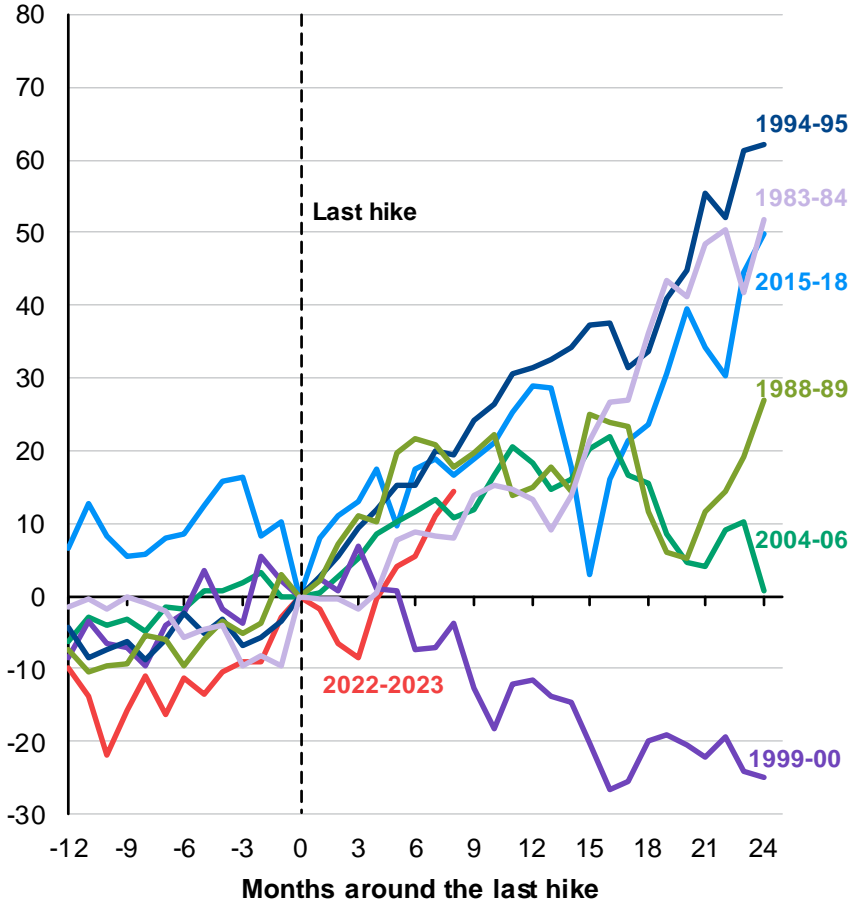
Source: Bloomberg, FactSet, Federal Reserve, Standard and Poor's, J.P. Morgan Asset Management. The 60/40 portfolio is 60% invested in S&P 500 Total Return Index and 40% invested in Bloomberg U.S. Aggregate Total Return Index. The analysis references the month in which the month-end 6-month CD rate peaked during previous rate hiking cycles. CD rate data prior to 2013 are sourced from the Federal Reserve, whereas data from 2013 to 2023 are sourced from Bloomberg. CD subsequent 12-month return calculation assumes reinvestment at the prevailing 6-month rate when the initial CD matures. *Guide to the Markets - U.S.* Data are as of March 31, 2024.



# Market returns around the end of a Fed hiking cycle

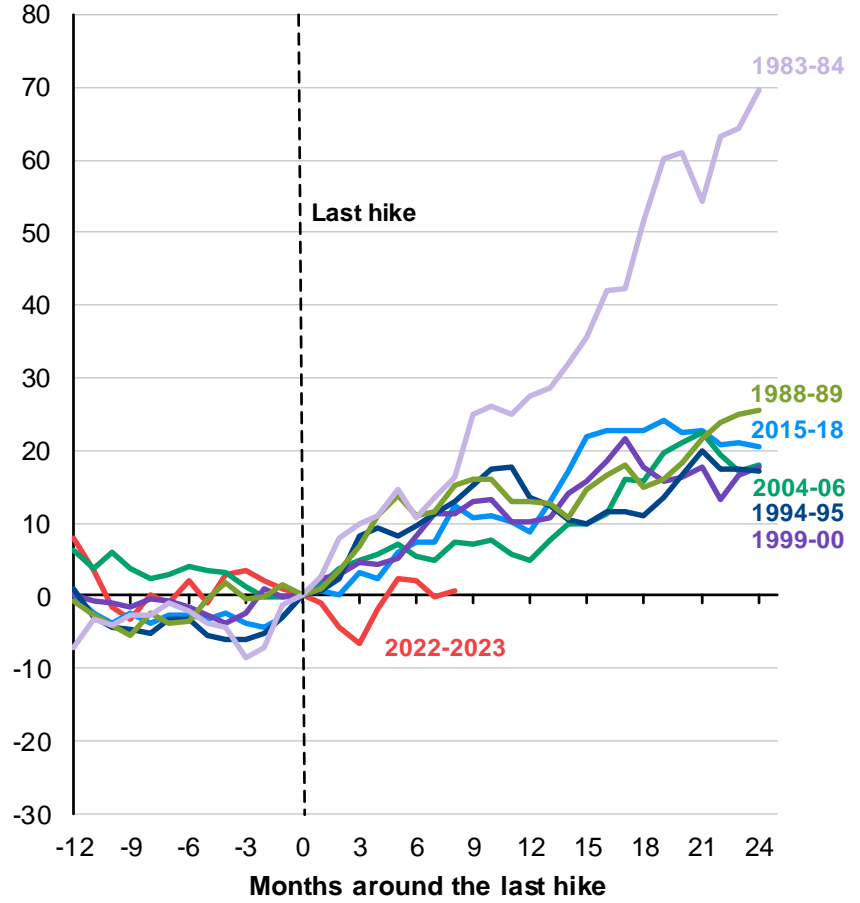
## S&P 500 returns around the end of a Fed hiking cycle

%, price return, indexed to zero at the last hike



## U.S. 10-yr returns around the end of a Fed hiking cycle

%, total return, indexed to zero at the last hike



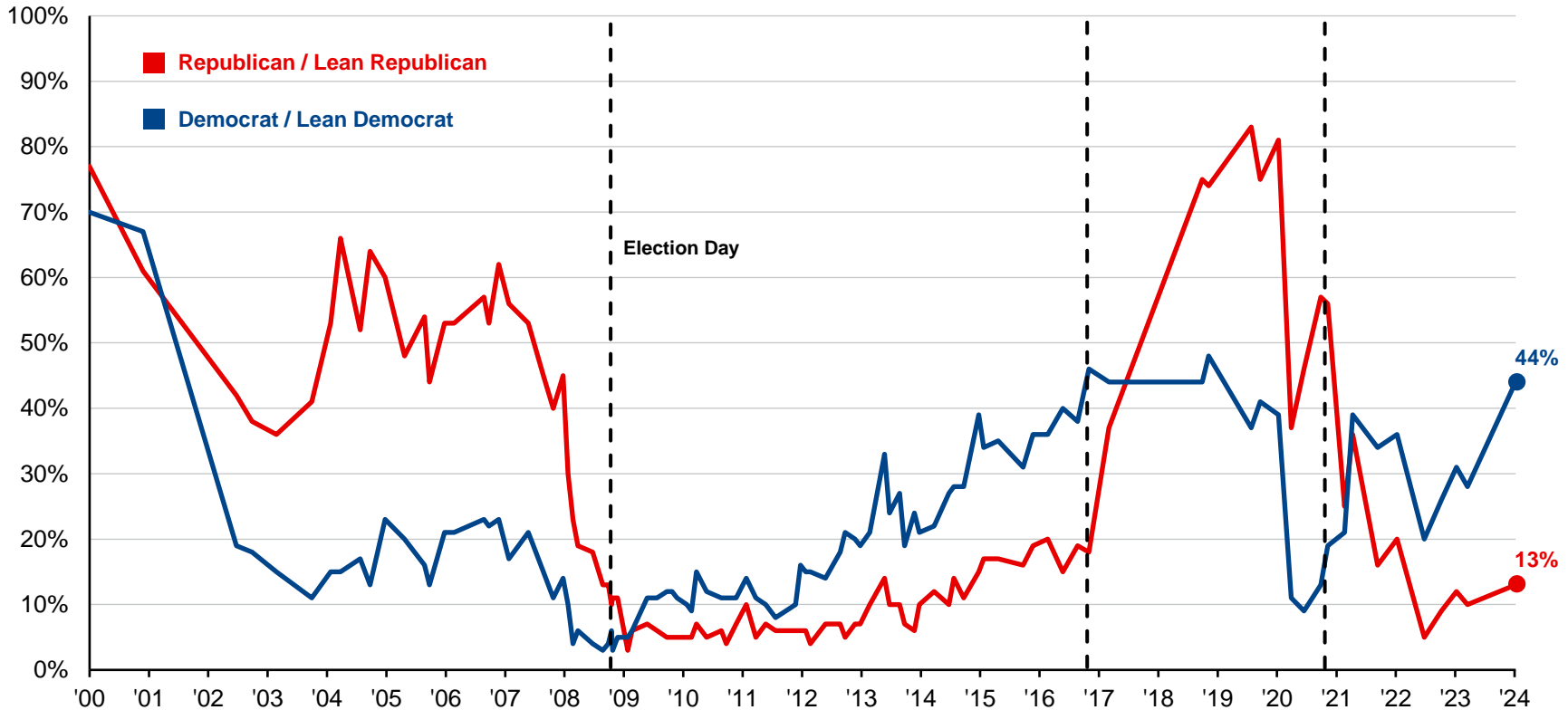
Investing Principles

Source: FactSet, Federal Reserve, LSEG Datastream, S&P Global, J.P. Morgan Asset Management. The 2022-2023 cycle assumes that the last hike of the cycle was in July 2023. Past performance is not a reliable indicator of current and future results. Guide to the Markets – U.S. Data are as of March 31, 2024.



# Consumer confidence by political affiliation

### Percentage of Republicans and Democrats who rate current economic conditions as excellent or good



Administration	Bush	Obama	Trump	Biden
Dates in office	Jan '01 – Jan '09	Jan '09 – Jan '17	Jan '17 – Jan '21	Jan '21 – Today
S&P 500 return	-4.5%	16.3%	16.0%	12.0%
Real GDP growth	1.9%	2.2%	1.8%	2.9%

Source: Pew Research Center, J.P. Morgan Asset Management. The survey was last conducted in January 2024, "Americans More Upbeat on the Economy; Biden's Job Rating Remains Very Low." Pew Research Center asks the question: "Thinking about the nation's economy, How would you rate economic conditions in this country today... as excellent, good, only fair, or poor?". S&P 500 returns are average annualized total returns between presidential inauguration dates and are updated monthly. Real GDP growth are average annualized GDP growth rates. *Guide to the Markets – U.S.* Data are as of March 31, 2024.



# J.P. Morgan Asset Management – Index definitions

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All indexes are unmanaged and an individual cannot invest directly in an index. Index returns do not include fees or expenses.

## Equities:

The **Dow Jones Industrial Average** is a price-weighted average of 30 actively traded blue-chip U.S. stocks.

The **MSCI ACWI (All Country World Index)** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets.

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

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

The **MSCI Europe Index** is a free float-adjusted market capitalization index that is designed to measure developed market equity performance in Europe.

The **MSCI Pacific Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the Pacific region.

The **Russell 1000 Index**® measures the performance of the 1,000 largest companies in the Russell 3000.

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

The **Russell 2000 Growth Index**® measures the performance of those Russell 2000 companies with higher price-to-book ratios and higher forecasted growth values.

The **Russell 2000 Value Index**® measures the performance of those Russell 2000 companies with lower price-to-book ratios and lower forecasted growth values.

The **Russell 3000 Index**® measures the performance of the 3,000 largest U.S. companies based on total market capitalization.

The **Russell Midcap Index**® measures the performance of the 800 smallest companies in the Russell 1000 Index.

The **Russell Midcap Growth Index**® measures the performance of those Russell Midcap companies with higher price-to-book ratios and higher forecasted growth values. The stocks are also members of the Russell 1000 Growth index.

The **Russell Midcap Value Index**® measures the performance of those Russell Midcap companies with lower price-to-book ratios and lower forecasted growth values. The stocks are also members of the Russell 1000 Value index.

The **S&P 500 Index** is widely regarded as the best single gauge of the U.S. equities market. The index includes a representative sample of 500 leading companies in leading industries of the U.S. economy. The **S&P 500 Index** focuses on the large-cap segment of the market; however, since it includes a significant portion of the total value of the market, it also represents the market.

## Fixed income:

The **Bloomberg 1-3 Month U.S. Treasury Bill Index** includes all publicly issued zero-coupon US Treasury Bills that have a remaining maturity of less than 3 months and more than 1 month, are rated investment grade, and have \$250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed rate and non convertible.

The **Bloomberg Global High Yield Index** is a multi-currency flagship measure of the global high yield debt market. The index represents the union of the US High Yield, the Pan-European High Yield, and Emerging Markets (EM) Hard Currency High Yield Indices. The high yield and emerging markets sub-components are mutually exclusive. Until January 1, 2011, the index also included CMBS high yield securities.

The **Bloomberg Municipal Index**: consists of a broad selection of investment-grade general obligation and revenue bonds of maturities ranging from one year to 30 years. It is an unmanaged index representative of the tax-exempt bond market.

The **Bloomberg US Dollar Floating Rate Note (FRN) Index** provides a measure of the U.S. dollar denominated floating rate note market.

The **Bloomberg US Corporate Investment Grade Index** is an unmanaged index consisting of publicly issued US Corporate and specified foreign debentures and secured notes that are rated investment grade (Baa3/BBB or higher) by at least two ratings agencies, have at least one year to final maturity and have at least \$250 million par amount outstanding. To qualify, bonds must be SEC-registered.

The **Bloomberg US High Yield Index** covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB-/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.

The **Bloomberg US Mortgage Backed Securities Index** is an unmanaged index that measures the performance of investment grade fixed-rate mortgage backed pass-through securities of GNMA, FNMA and FHLMC.

The **Bloomberg US TIPS Index** consists of Inflation-Protection securities issued by the U.S. Treasury.

The **J.P. Morgan Emerging Market Bond Global Index (EMBI)** includes U.S. dollar denominated Brady bonds, Eurobonds, traded loans and local market debt instruments issued by sovereign and quasi-sovereign entities.

The **J.P. Morgan Domestic High Yield Index** is designed to mirror the investable universe of the U.S. dollar domestic high yield corporate debt market.

The **J.P. Morgan Corporate Emerging Markets Bond Index Broad Diversified (CEMBI Broad Diversified)** is an expansion of the **J.P. Morgan Corporate Emerging Markets Bond Index (CEMBI)**. The CEMBI is a market capitalization weighted index consisting of U.S. dollar denominated emerging market corporate bonds.

The **J.P. Morgan Emerging Markets Bond Index Global Diversified (EMBI Global Diversified)** tracks total returns for U.S. dollar-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, Eurobonds. The index limits the exposure of some of the larger countries.

The **J.P. Morgan GBI EM Global Diversified** tracks the performance of local currency debt issued by emerging market governments, whose debt is accessible by most of the international investor base.

The **U.S. Treasury Index** is a component of the U.S. Government index.



# J.P. Morgan Asset Management – Definitions

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## *Other asset classes:*

The **Alerian MLP Index** is a composite of the 50 most prominent energy Master Limited Partnerships (MLPs) that provides investors with an unbiased, comprehensive benchmark for the asset class.

The **Bloomberg Commodity Index** and related sub-indices are composed of futures contracts on physical commodities and represents twenty two separate commodities traded on U.S. exchanges, with the exception of aluminum, nickel, and zinc

The **Cambridge Associates U.S. Global Buyout and Growth Index®** is based on data compiled from 1,768 global (U.S. & ex-U.S.) buyout and growth equity funds, including fully liquidated partnerships, formed between 1986 and 2013.

The **CS/Tremont Hedge Fund Index** is compiled by Credit Suisse Tremont Index, LLC. It is an asset-weighted hedge fund index and includes only funds, as opposed to separate accounts. The Index uses the Credit Suisse/Tremont database, which tracks over 4500 funds, and consists only of funds with a minimum of US\$50 million under management, a 12-month track record, and audited financial statements. It is calculated and rebalanced on a monthly basis, and shown net of all performance fees and expenses. It is the exclusive property of Credit Suisse Tremont Index, LLC.

The **HFRI Monthly Indices (HFRI)** are equally weighted performance indexes, utilized by numerous hedge fund managers as a benchmark for their own hedge funds. The HFRI are broken down into 4 main strategies, each with multiple sub strategies. All single-manager HFRI Index constituents are included in the HFRI Fund Weighted Composite, which accounts for over 2200 funds listed on the internal HFR Database.

The **NAREIT EQUITY REIT Index** is designed to provide the most comprehensive assessment of overall industry performance, and includes all tax-qualified real estate investment trusts (REITs) that are listed on the NYSE, the American Stock Exchange or the NASDAQ National Market List.

The **NFI-ODCE**, short for NCREIF Fund Index -Open End Diversified Core Equity, is an index of investment returns reporting on both a historical and current basis the results of 33 open-end commingled funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s. The NFI-ODCE Index is capitalization-weighted and is reported gross of fees. Measurement is time-weighted.

## *Definitions:*

Investing in **alternative assets** involves higher risks than traditional investments and is suitable only for sophisticated investors. Alternative investments involve greater risks than traditional investments and should not be deemed a complete investment program. They are not tax efficient and an investor should consult with his/her tax advisor prior to investing. Alternative investments have higher fees than traditional investments and they may also be highly leveraged and engage in speculative investment techniques, which can magnify the potential for investment loss or gain. The value of the investment may fall as well as rise and investors may get back less than they invested.

**Bonds** are subject to interest rate risks. Bond prices generally fall when interest rates rise.

Investments in **commodities** may have greater volatility than investments in traditional securities, particularly if the instruments involve leverage. The value of commodity-linked derivative instruments may be affected by changes in overall market movements, commodity index volatility, changes in interest rates, or factors affecting a particular industry or commodity, such as drought, floods, weather, livestock disease, embargoes, tariffs and international economic, political and regulatory developments. Use of leveraged commodity-linked derivatives creates an opportunity for increased return but, at the same time, creates the possibility for greater loss.

**Derivatives** may be riskier than other types of investments because they may be more sensitive to changes in economic or market conditions than other types of investments and could result in losses that significantly exceed the original investment. The use of derivatives may not be successful, resulting in investment losses, and the cost of such strategies may reduce investment returns.

**Distressed Restructuring Strategies** employ an investment process focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings.

Investments in **emerging markets** can be more volatile. The normal risks of investing in foreign countries are heightened when investing in emerging markets. In addition, the small size of securities markets and the low trading volume may lead to a lack of liquidity, which leads to increased volatility. Also, emerging markets may not provide adequate legal protection for private or foreign investment or private property.

The price of **equity securities** may rise, or fall because of changes in the broad market or changes in a company's financial condition, sometimes rapidly or unpredictably. These price movements may result from factors affecting individual companies, sectors or industries, or the securities market as a whole, such as changes in economic or political conditions. Equity securities are subject to "stock market risk" meaning that stock prices in general may decline over short or extended periods of time.

**Equity market neutral strategies** employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities, select securities for purchase and sale. Equity Market Neutral Strategies typically maintain characteristic net equity market exposure no greater than 10% long or short.

**Global macro strategies** trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets.

**International investing** involves a greater degree of risk and increased volatility. Changes in currency exchange rates and differences in accounting and taxation policies outside the U.S. can raise or lower returns. Some overseas markets may not be as politically and economically stable as the United States and other nations.

There is no guarantee that the use of **long and short positions** will succeed in limiting an investor's exposure to domestic stock market movements, capitalization, sector swings or other risk factors. Using long and short selling strategies may have higher portfolio turnover rates. Short selling involves certain risks, including additional costs associated with covering short positions and a possibility of unlimited loss on certain short sale positions.

**Merger arbitrage strategies** which employ an investment process primarily focused on opportunities in equity and equity related instruments of companies which are currently engaged in a corporate transaction.

**Mid-capitalization investing** typically carries more risk than investing in well-established "blue-chip" companies. Historically, mid-cap companies' stock has experienced a greater degree of market volatility than the average stock.

**Price to forward earnings** is a measure of the price-to-earnings ratio (P/E) using forecasted earnings. **Price to book value** compares a stock's market value to its book value. **Price to cash flow** is a measure of the market's expectations of a firm's future financial health. **Price to dividends** is the ratio of the price of a share on a stock exchange to the dividends per share paid in the previous year, used as a measure of a company's potential as an investment.

**Real estate** investments may be subject to a higher degree of market risk because of concentration in a specific industry, sector or geographical sector. Real estate investments may be subject to risks including, but not limited to, declines in the value of real estate, risks related to general and economic conditions, changes in the value of the underlying property owned by the trust and defaults by borrower.

**Relative Value Strategies** maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities.

**Small-capitalization investing** typically carries more risk than investing in well-established "blue-chip" companies since smaller companies generally have a higher risk of failure. Historically, smaller companies' stock has experienced a greater degree of market volatility than the average stock.



# J.P. Morgan Asset Management – Risks & disclosures

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Unless otherwise stated, all Data are as of March 31, 2024 or most recently available.

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