

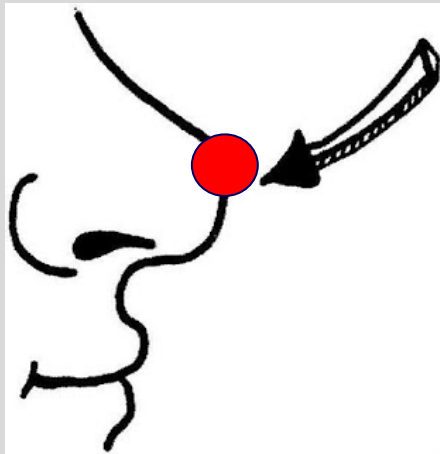
Investing for Successful Retirement

UD Osher – OLLI
Fall 2025

- **Rajeev A. Vaidya**
- **Ron Materniak**

Disclaimer in plain language

Disclaimer – in plain language:



Opinions are like noses, everyone has one !

You are going to see mine in this course !!

We are simply sharing our perspective.

This is not investment advice or recommendation.

Ron, and I are not a financial advisors.

This course is for educational purposes only.

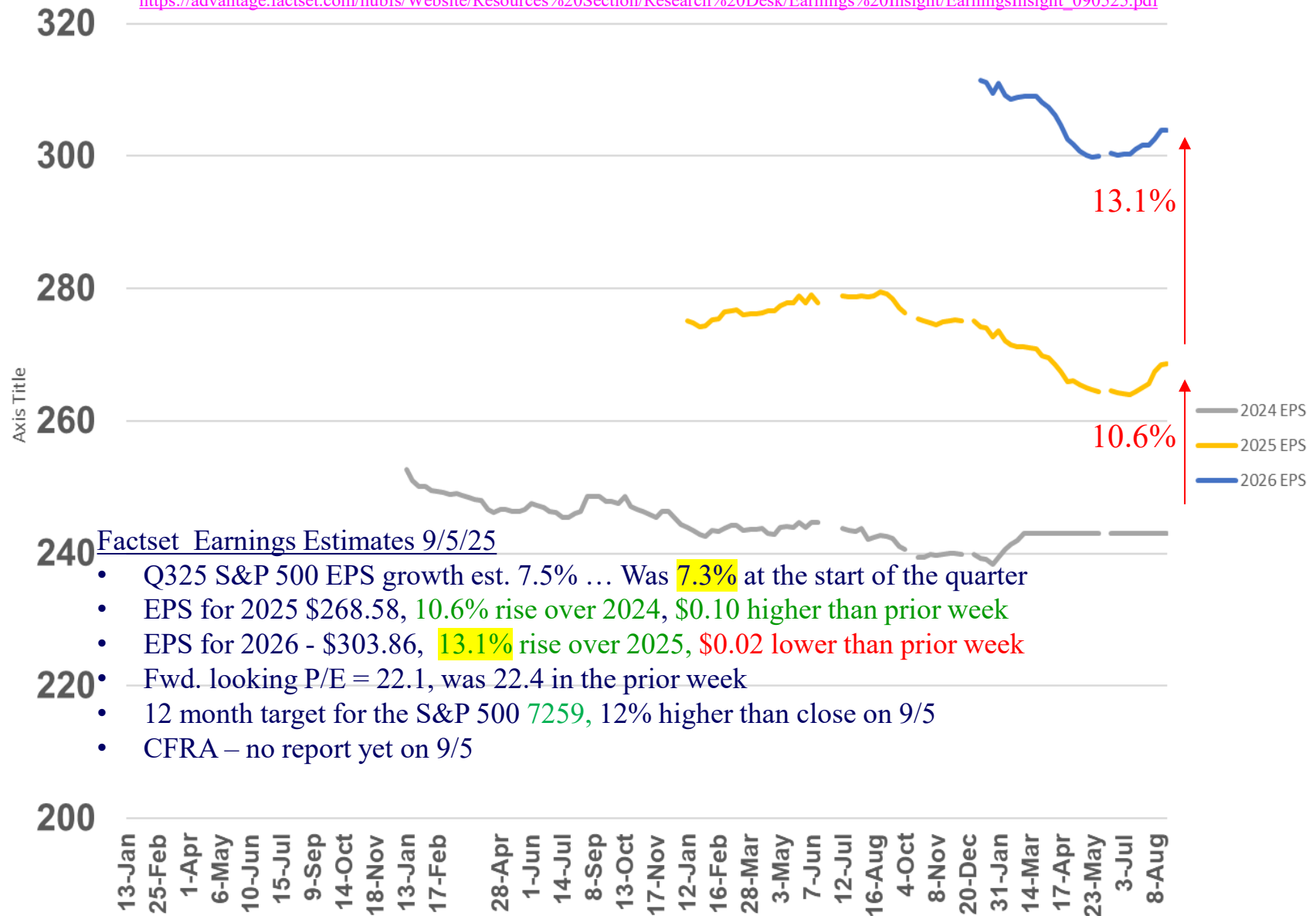
Form your own opinion, make your own investment decisions.

Second Class – Sep. 10th

- Market Update
- Macro Review
 - Deep Dive into the JP Morgan Monthly Market review
 - Technical analysis
- Questions

Factset(R) - S&P 500 Calendar year earnings forecast

https://advantage.factset.com/hubfs/Website/Resources%20Section/Research%20Desk/Earnings%20Insight/EarningsInsight_090525.pdf



Weekly Market direction

COLUMNS C,D AND E ARE FROM IBD AND PROVIDED BY DAVE (IN THE NORTH) SMITH			DISTRIBUTION DAYS		S&P 500 AVERAGE						S&P 500 TRIPLE SCREEN						NASDAQ TRIPLE SCREEN					
	DATE	MARKET PULSE (IBD)	S&P 500	NASDAQ	8-20 EMA	MACD	RSI	CLOSING	Δ	%CHANGE	8-20 EMA	MACD	RSI	CLOSING	Δ	%CHANGE	8-20 EMA	MACD	RSI	CLOSING	Δ	%CHANGE
SAT	08/23/25	FOR THE WEEK						685	1.52%					17	0.26%					-126	-0.58%	
SUN	08/24/25	YTD						3,087	7.26%					585	9.95%					2,186	11.32%	
MON	08/25/25	CONFIRMED UP (80% -100%)	6	5	P	P	P	45,282	-349	-0.76%	P	F	P	6,439	-27	-0.42%	P	F	P	21,449	-47	-0.22%
TUE	08/26/25	CONFIRMED UP (80% -100%)	6	5	P	P	P	45,418	136	0.30%	P	F	P	6,465	26	0.40%	P	F	P	21,544	95	0.44%
WED	08/27/25	CONFIRMED UP (80% -100%)	6	5	P	P	P	45,565	147	0.32%	P	F	P	6,481	16	0.25%	P	F	P	21,590	46	0.21%
THUR	08/28/25	CONFIRMED UP (80% -100%)	6	5	P	P	P	45,636	71	0.16%	P	0	P	6,501	20	0.31%	P	F	P	21,705	115	0.53%
FRI	08/29/25	CONFIRMED UP (80% -100%)	6	5	P	P	P	45,544	-92	-0.20%	P	0	P	6,460	-41	-0.63%	P	F	P	21,455	-250	-1.15%
SAT	08/30/25	FOR THE WEEK						-87	-0.19%					-6	-0.09%					-41	-0.19%	
SUN	08/31/25	YTD						3,000	7.05%					579	9.85%					2,145	11.11%	
MON	09/01/25	LABOR DAY MARKET CLOSED			P	P	P	45,544	0	0.00%	P	0	P	6,460	0	0.00%	P	F	P	21,455	0	0.00%
TUE	09/02/25	CONFIRMED UP (80% -100%)	7	6	P	P	P	45,295	-249	-0.55%	P	F	P	6,415	-45	-0.70%	P	F	0	21,279	-176	-0.82%
WED	09/03/25	CONFIRMED UP (80% -100%)	6	6	P	0	P	45,271	-24	-0.05%	P	F	P	6,448	33	0.51%	P	F	P	21,497	218	1.02%
THUR	09/04/25	CONFIRMED UP (80% -100%)	6	6	P	0	P	45,621	350	0.77%	P	F	P	6,502	54	0.84%	P	F	P	21,707	210	0.98%
FRI	09/05/25	CONFIRMED UP (80% -100%)	6	6	P	0	P	45,400	-221	-0.48%	P	F	P	6,491	-11	-0.17%	P	F	P	21,700	-7	-0.03%
SAT	09/06/25	FOR THE WEEK						-144	-0.32%					31	0.48%					245	1.14%	
SUN	09/07/25	YTD						2,856	6.71%					610	10.37%					2,300	12.38%	
MON	09/08/25	CONFIRMED UP (80% -100%)	6	6	P	0	P	45,514	114	0.25%	P	F	P	6,495	4	0.06%	P	F	P	21,798	98	0.45%
TUE	09/09/25	CONFIRMED UP (80% -100%)	6	6	P	0	P	45,711	197	0.43%	P	F	P	6,512	17	0.26%	P	F	P	21,879	81	0.37%

https://drive.google.com/drive/folders/0B6Qc_gipshXMclzQ245d2R1eTQ?resourcekey=0-5pWglNqaJPJ12L2qYurMWg

Market Summary – Stockcharts®

Stockcharts.com → Main Screen → Market Analysis

New feature – Market Summary

KELLER MARKET MODELS			
MACRO MODEL STOCKS MODEL			
	ST	MT	LT
Stocks (SPY)	↑	↑	↑
Bonds (TLT)	↑	↑	↓
Commodities (DBC)	↑	↑	↑
US Dollar (\$USD)	↓	↓	↓

KELLER MARKET MODELS			
MACRO MODEL STOCKS MODEL			
	ST	MT	LT
S&P 500 (SPY)	↑	↑	↑
S&P 400 (MDY)	↑	↑	↑
Russell 2000 (IWM)	↑	↑	↑
NASDAQ 100 (QQQ)	↑	↑	↑

JPM Monthly Guide to the Markets

- JP Morgan Monthly Guide to the markets

<https://am.jpmorgan.com/us/en/asset-management/adv/insights/market-insights/guide-to-the-markets/>

- Published every month

- Over 70 pages
- Most of the charts are on the same topic every month. That gives you a great source to monitor changes over time. Changes over time are most relevant to market movements.
- We will cover less than a dozen pages today. My view of the most important charts. If you have questions about other charts, please ask them.
- Verbal commentary by David Kelly every quarter.

- 1-page weekly report by David Kelly – Weekly Market recap

<https://am.jpmorgan.com/us/en/asset-management/adv/insights/market-insights/market-updates/weekly-market-recap/>



Economic growth and the composition of GDP

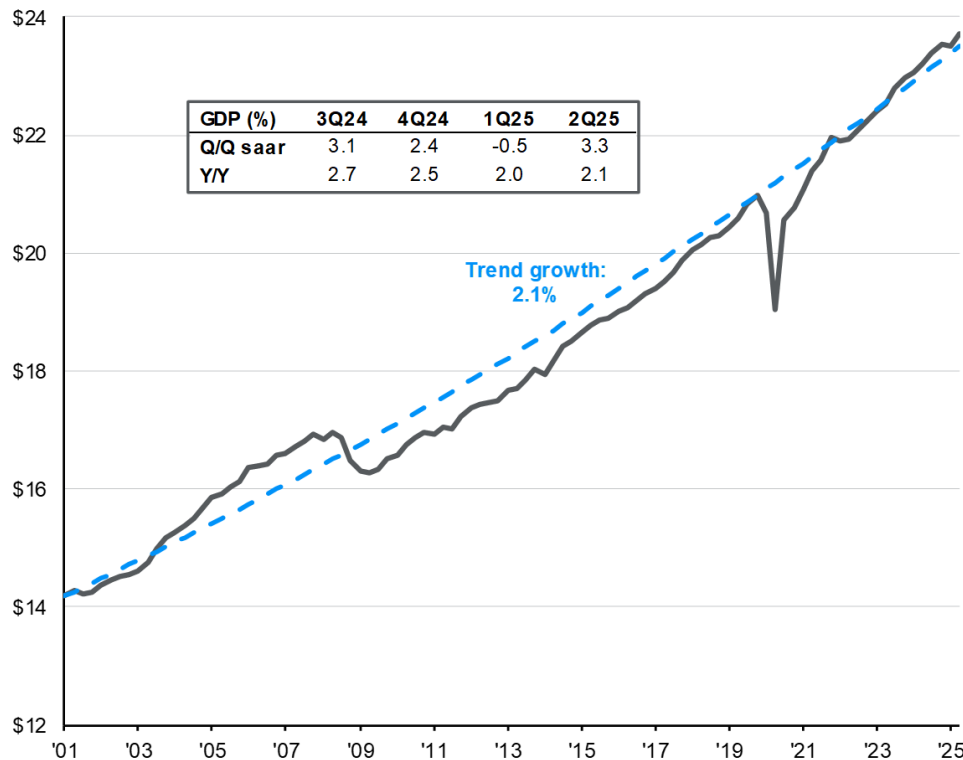
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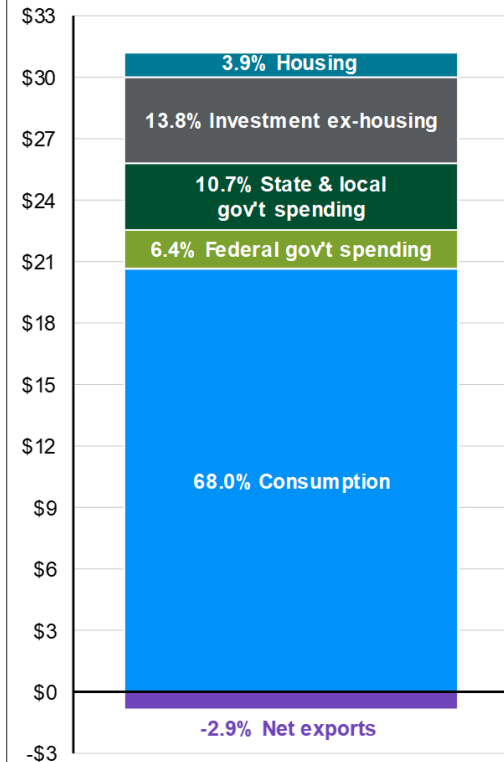
Real GDP

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



Components of GDP

2Q25 nominal GDP, USD trillions

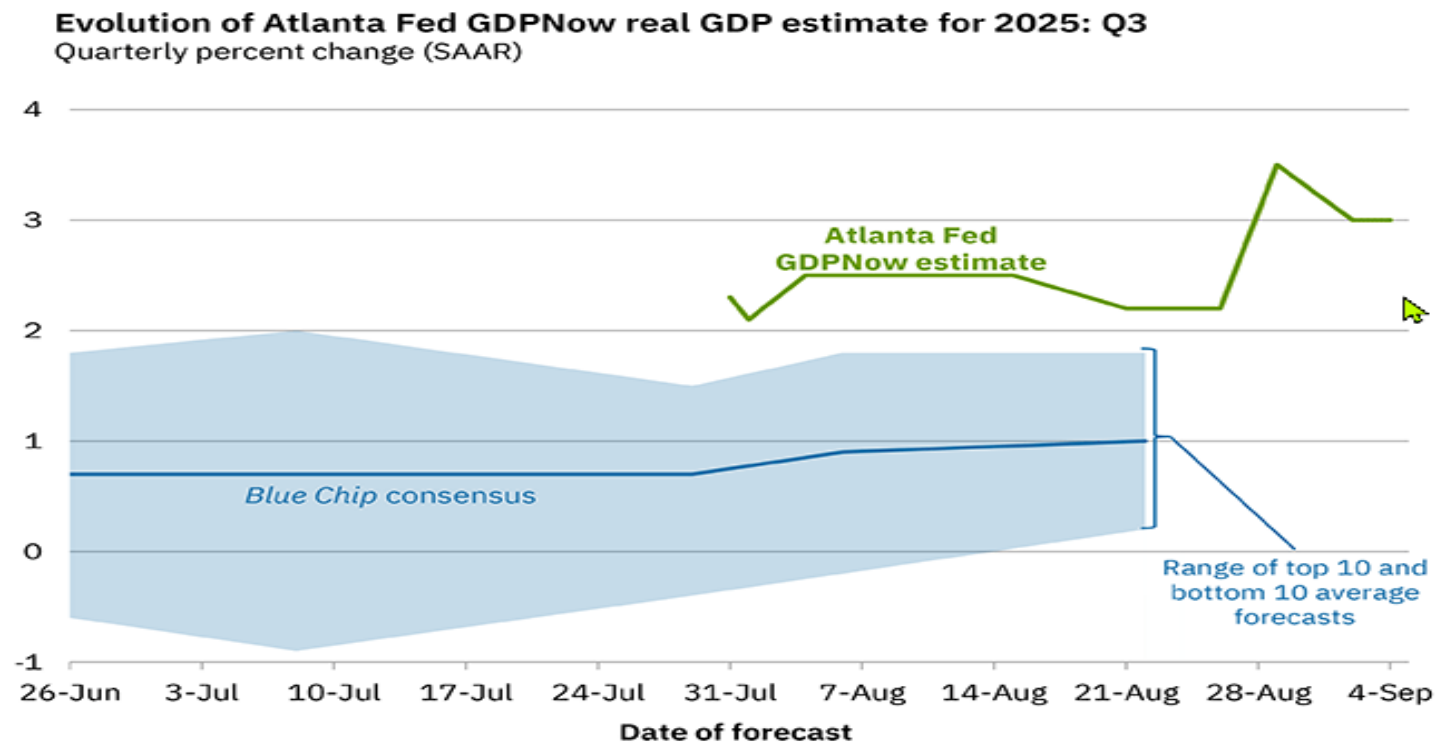


Source: BEA, FactSet, J.P. Morgan Asset Management. Values may not sum to 100% due to rounding. Trend growth is measured as the average annual growth rate from business cycle peak 1Q01 to business cycle peak 4Q19.
Guide to the Markets – U.S. Data are as of August 31, 2025.

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Atlanta Fed GdpNow model

<https://www.atlantafed.org/cqer/research/gdpnow>

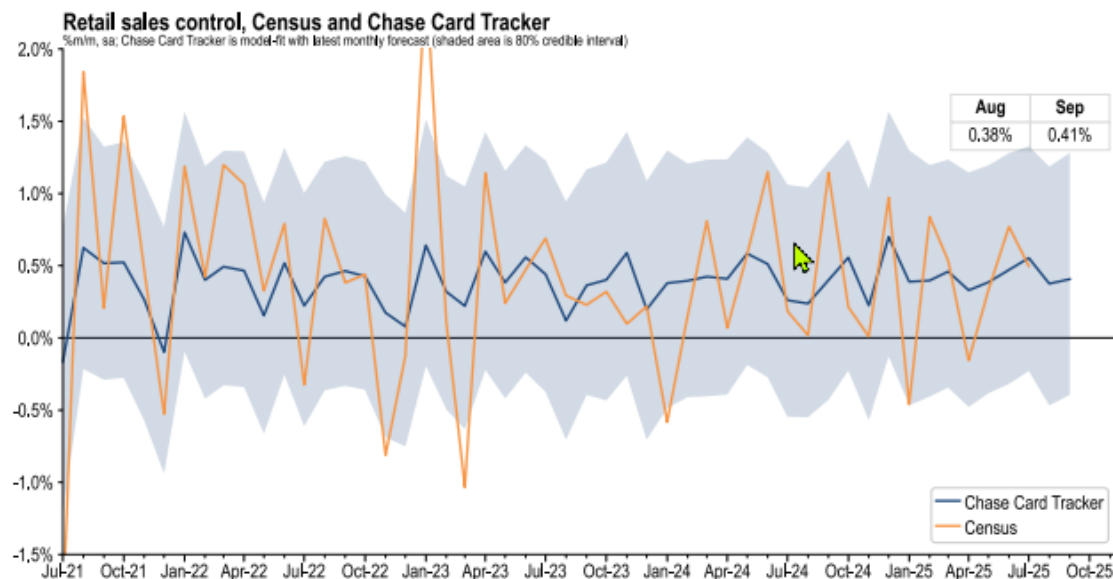


Sources: Blue Chip Economic Indicators and Blue Chip Financial Forecasts

Note: The top (bottom) 10 average forecast is an average of the highest (lowest) 10 forecasts in the Blue Chip survey.

Daily consumer spending tracker

- As of 02 Sep 2025, our Chase Consumer Card spending data (unadjusted) was 5.9% above the same day last year.
- Based on the Chase Consumer Card data through 02 Sep 2025, our estimate of the US Census August control measure of retail sales m/m is 0.38%.



Retail sales, Census and Chase Card Tracker

m/m, sa	May	Jun	Jul	Aug
Total Retail Sales & Food Services				
Census	-0.79	0.90	0.51	
Chase Card Tracker	0.18	0.45	0.57	0.27
Retail Control				
Census	0.33	0.77	0.50	
Chase Card Tracker	0.39	0.47	0.55	0.38
Gasoline Stations				
Census	-0.68	0.55	0.67	
Chase Card Tracker	-0.54	-0.88	-0.71	1.56
Food Services & Drinking Places				
Census	-0.21	0.64	-0.39	
Chase Card Tracker	0.89	1.05	0.19	0.51

For months with Census data, Chase Card Tracker reflects in-sample fit. Card data through 2025-09-02.

These reports leverage transactions sourced from select Chase consumer credit and debit cards, and are not representative of Chase's overall credit and debit cardholder population. The data may differ from total US consumer spending for many reasons, including differences between cash and card spending patterns, geographic and demographic differences between the panel of customers and the overall US population. In this report, Millennial and Gen Z cardholders are defined as those with birth years in 1981 or later, Gen X as birth years from 1965 to 1980, and Baby Boomers as birth years in 1964 or earlier. Card-not-present transactions are a proxy for online, telephone or mail-order spending. This report uses rigorous security protocols for selected data sourced from credit and debit card transactions to ensure all information is kept confidential and secure. The data used to generate these reports is highly aggregated and all unique identifiable information—including names, account numbers, addresses, dates of birth, and Social Security Numbers—was removed from the data before use for the analysis. We make this report available to the public every business day, Tuesday through Friday, at www.jpmorgan.com/global/research.

Published: September 09, 2025.

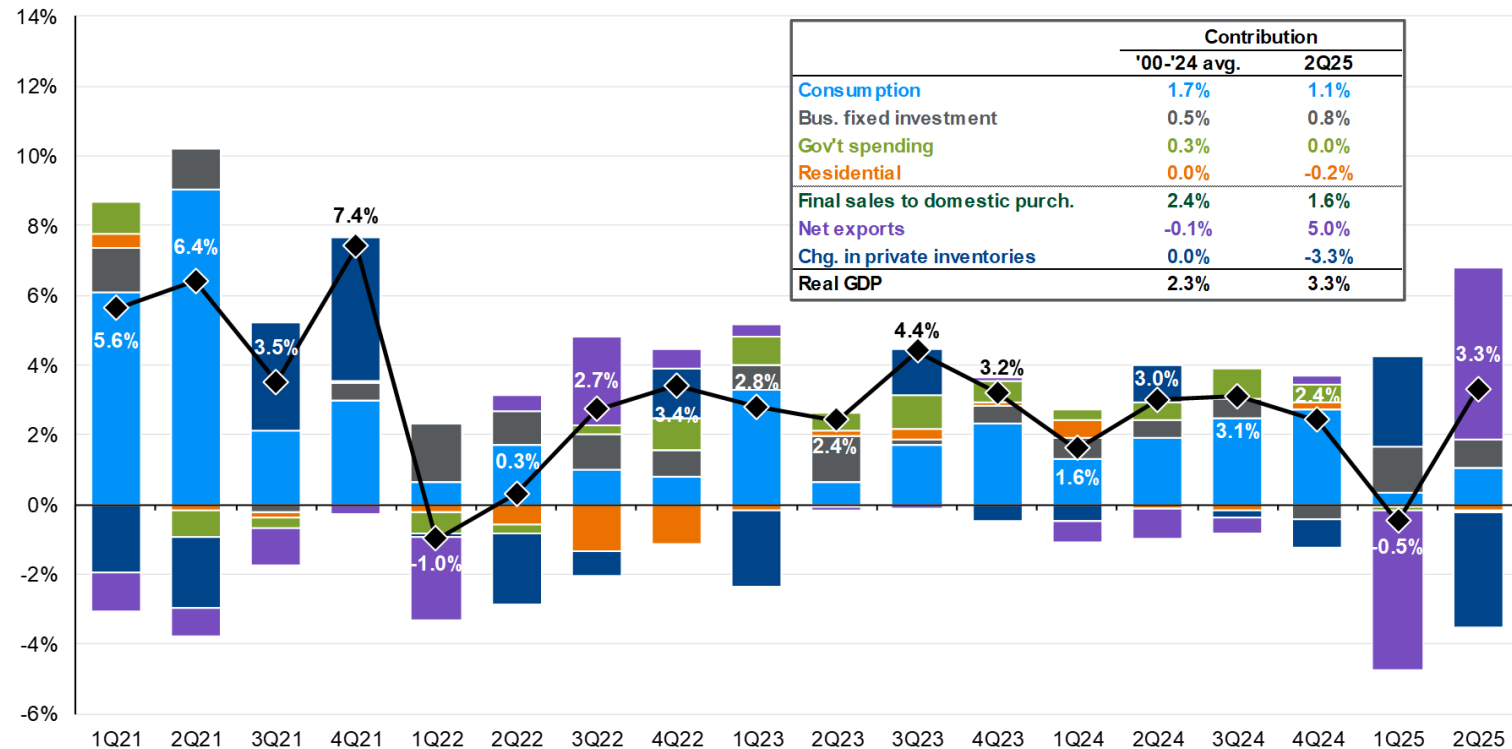


Components of GDP growth

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Contributors to real GDP growth

Quarter-over-quarter, seasonally adjusted annualized rate



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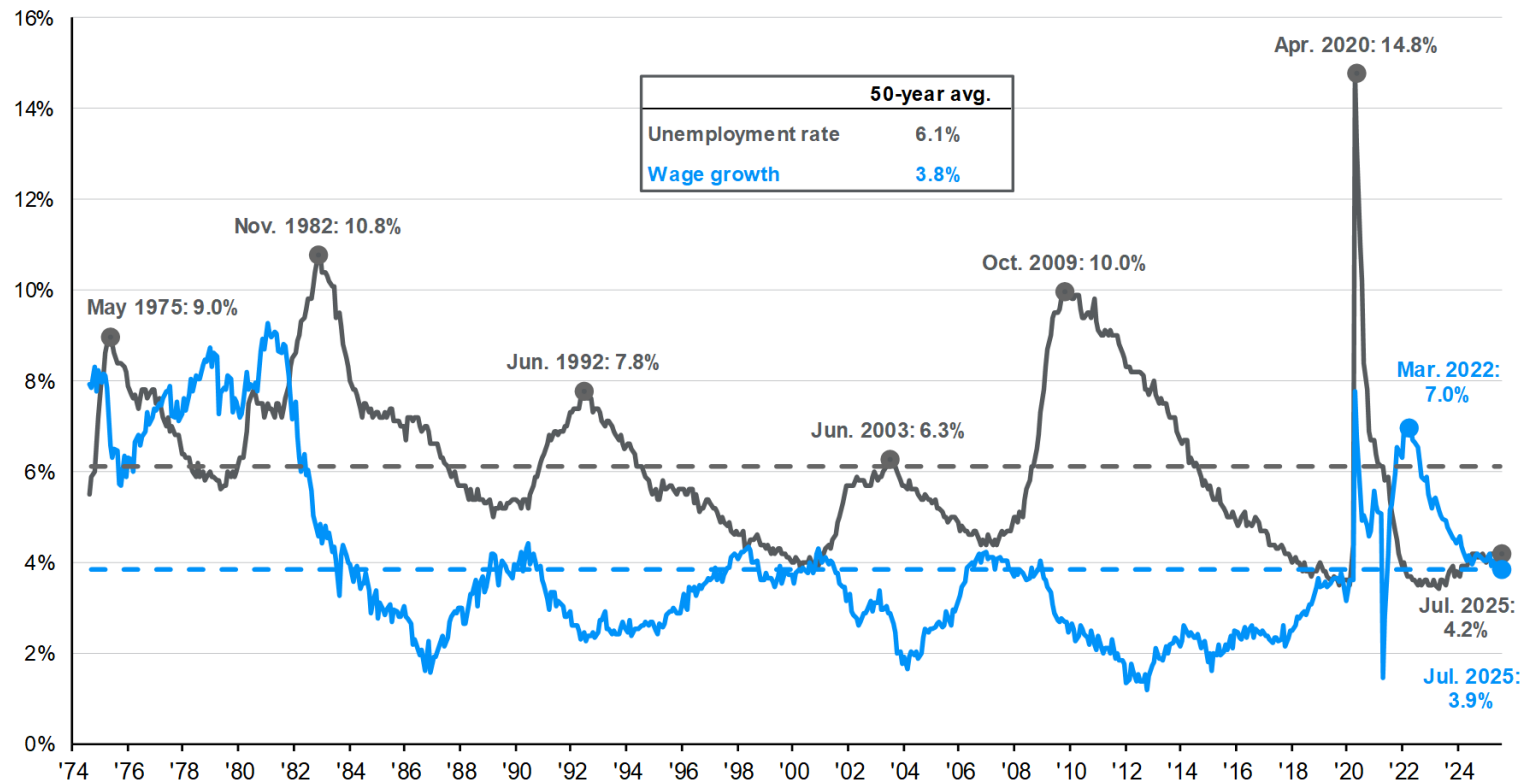


Unemployment and wages

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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.
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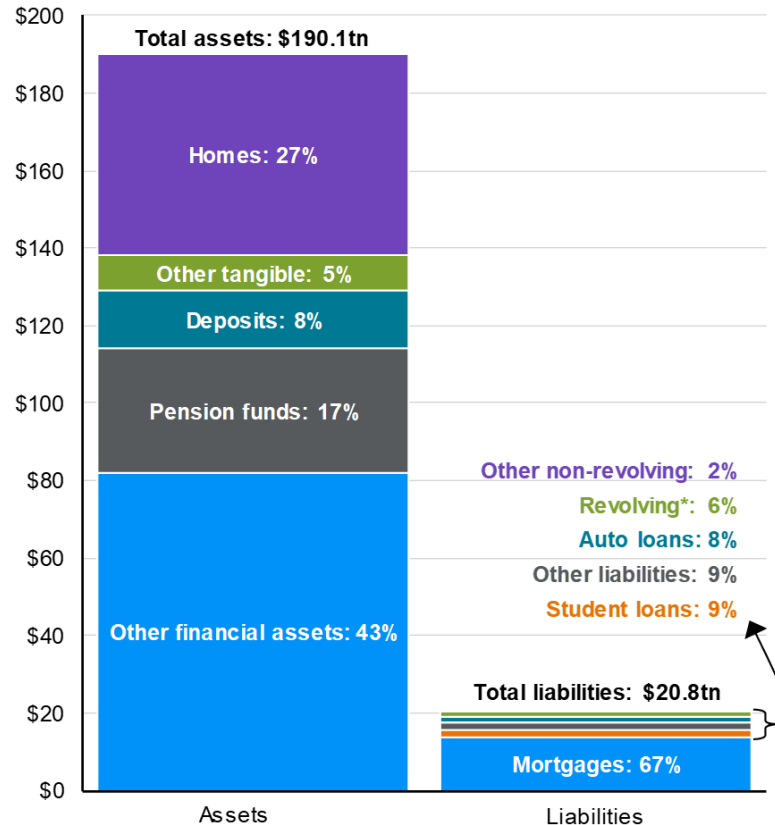
Consumer finances

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Economy

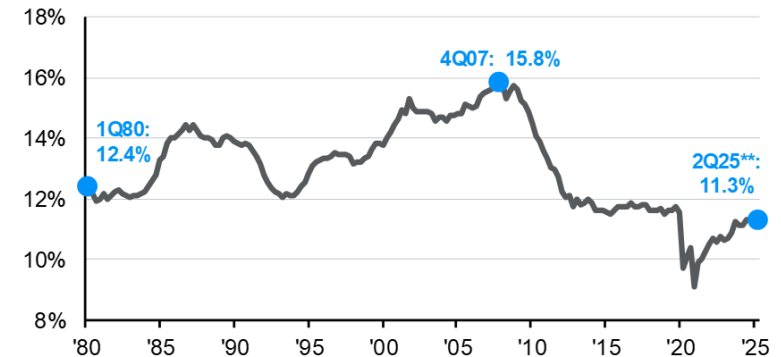
Consumer balance sheet

1Q25, USD trillions, not seasonally adjusted



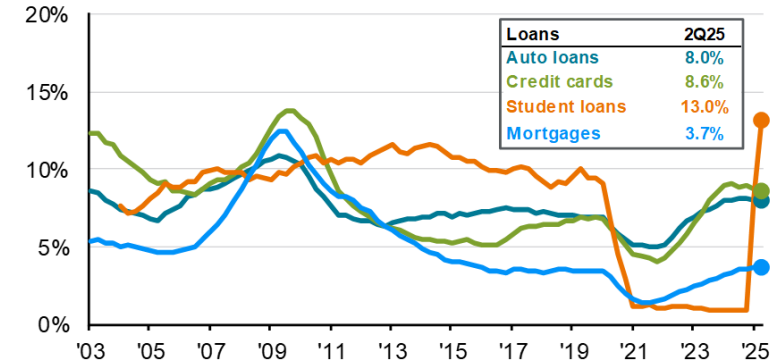
Household debt service ratio

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.

**2Q25 figures for debt service ratio are J.P. Morgan Asset Management estimates. Household debt service ratio data from 1Q80 to 4Q04 are J.P. Morgan Asset Management estimates. Due to the moratorium on delinquent student loan payments being reported to credit bureaus, missed federal student loan payments were not reported until 4Q24.

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Federal finances

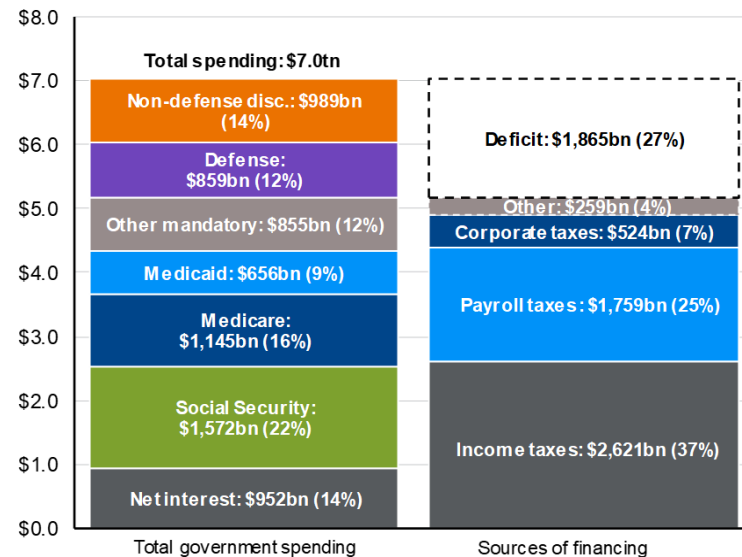
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The 2025 federal budget

USD trillions



CBO's Baseline economic assumptions

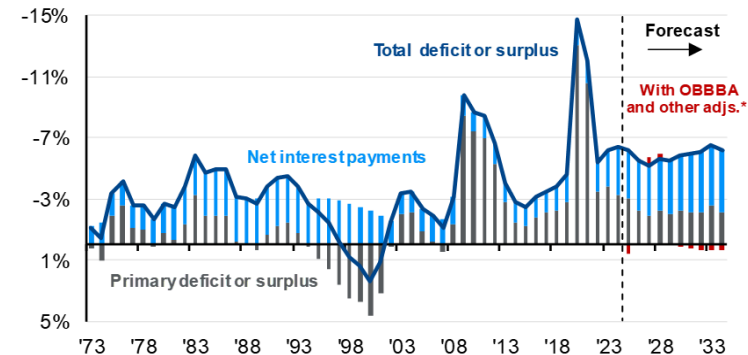
	2025	'26-'27	'28-'29	'30-'35
Real GDP growth	2.2%	1.8%	1.8%	1.8%
10-year Treasury	4.1%	3.9%	3.9%	3.8%
Headline inflation (CPI)	2.3%	2.4%	2.3%	2.2%
Unemployment	4.2%	4.4%	4.4%	4.4%

Source: CBO, J.P. Morgan Asset Management; (Left) Numbers may not sum to 100% due to rounding; (Top and bottom right) BEA, Treasury Department. Estimates are from the Congressional Budget Office (CBO) January 2025 An Update to the Budget Outlook: 2025 to 2035. "Other" spending includes, but is not limited to, health insurance subsidies, income security and federal civilian and military retirement. Years shown are fiscal years. OBBB refers to the "One Big Beautiful Bill Act." *Adjusted by JPMAM to include estimates from the CBO July 2025 report "Estimated Budgetary Effects of Public Law 119-21, to Provide for Reconciliation Pursuant to Title II of H. Con. Res. 14, Relative to CBO's January 2025 Baseline." Figures are also adjusted to include JPMAM estimates of tariff revenues and the estimated cost of extending expiring tax cuts beyond 2028, based on CBO August 2025 report "Effects on Deficits and the Debt of Public Law 119-21 and of Making Certain Tax Policies in the Act Permanent." Forecasts are not a reliable indicator of future performance. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated.

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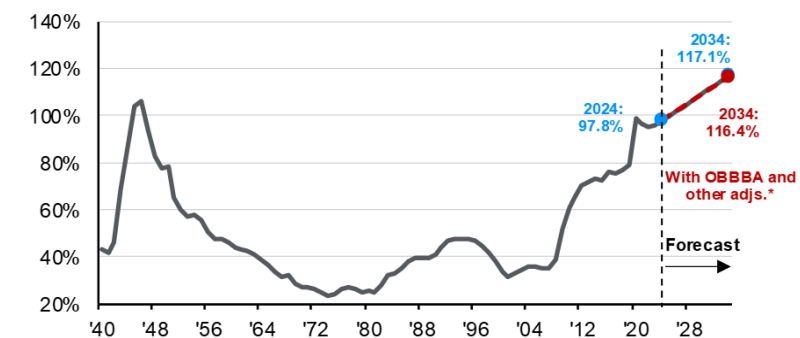
Federal deficit and net interest payments

% of GDP, 1973-2034, CBO Baseline Forecast



Federal net debt (accumulated deficits)

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



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Inflation components

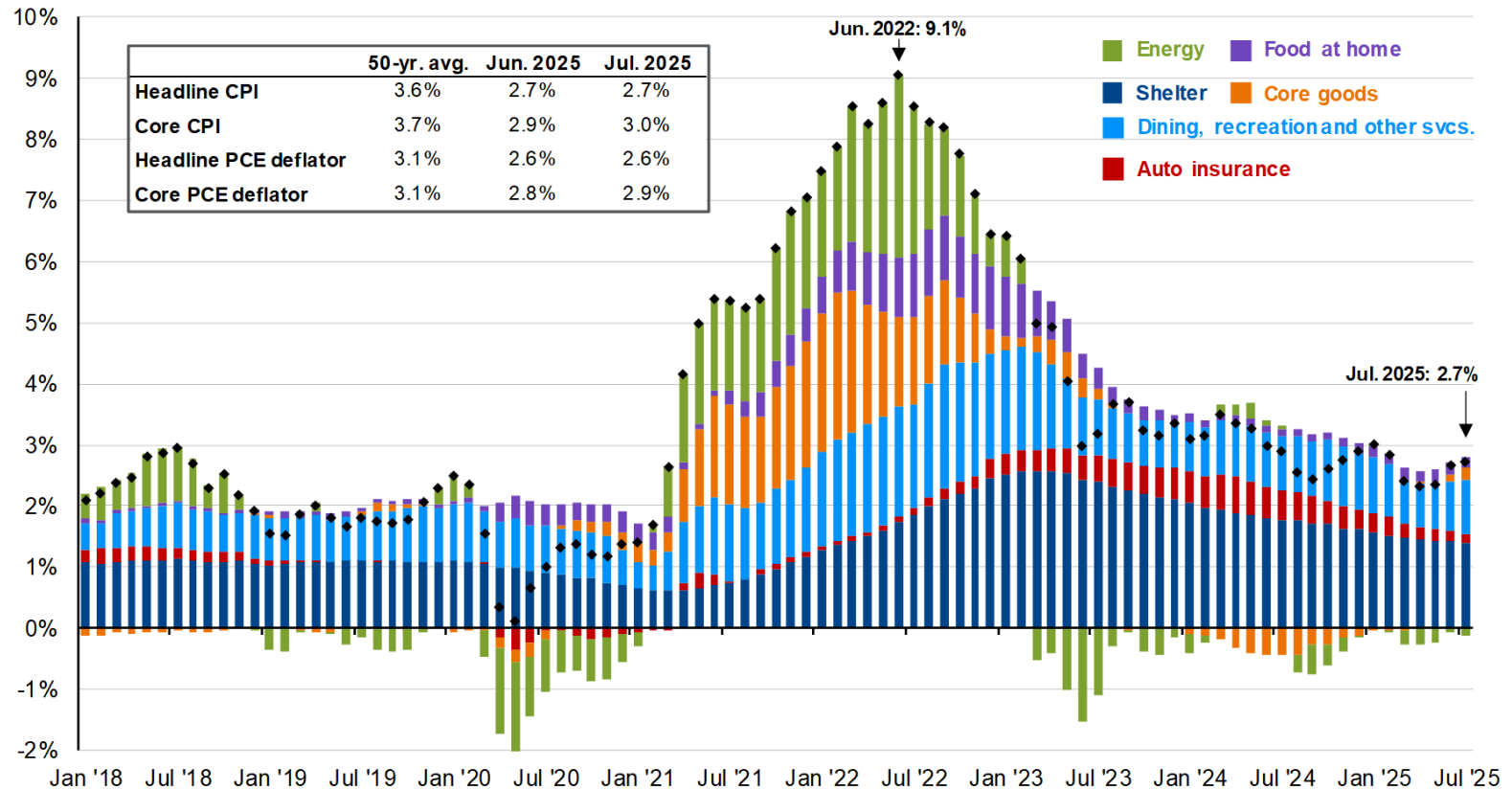
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Contributors to headline CPI inflation

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



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. "Shelter" includes owners' equivalent rent, rent of primary residence and home insurance. "Food at home" includes alcoholic beverages.

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Tariffs on U.S. imports

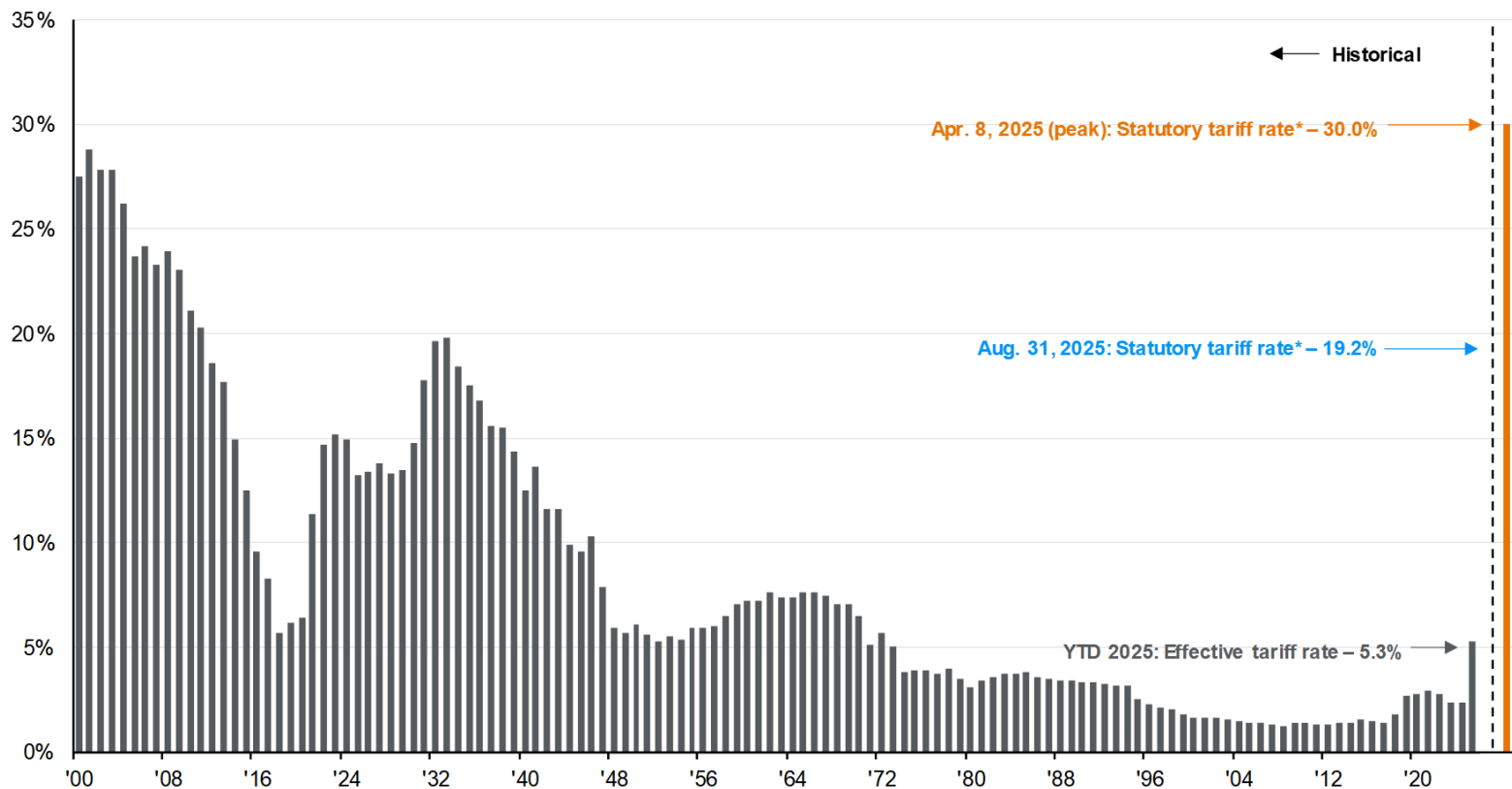
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Average tariff rate on U.S. goods imports for consumption

Duties collected / value of total goods imports for consumption



Source: Goldman Sachs Investment Research, United States International Trade Commission, J.P. Morgan Asset Management. For illustrative purposes only. The estimated weighted average U.S. tariff rate includes the latest tariff announcements. Estimates about which goods are USMCA compliant come from Goldman Sachs Investment Research. Imports for consumption: goods brought into a country for direct use or sale in the domestic market. The estimate does not consider non-tariff barriers, such as value-added taxes. *Figures are based on 2024 import levels and assume no change in demand due to tariff increases. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated.
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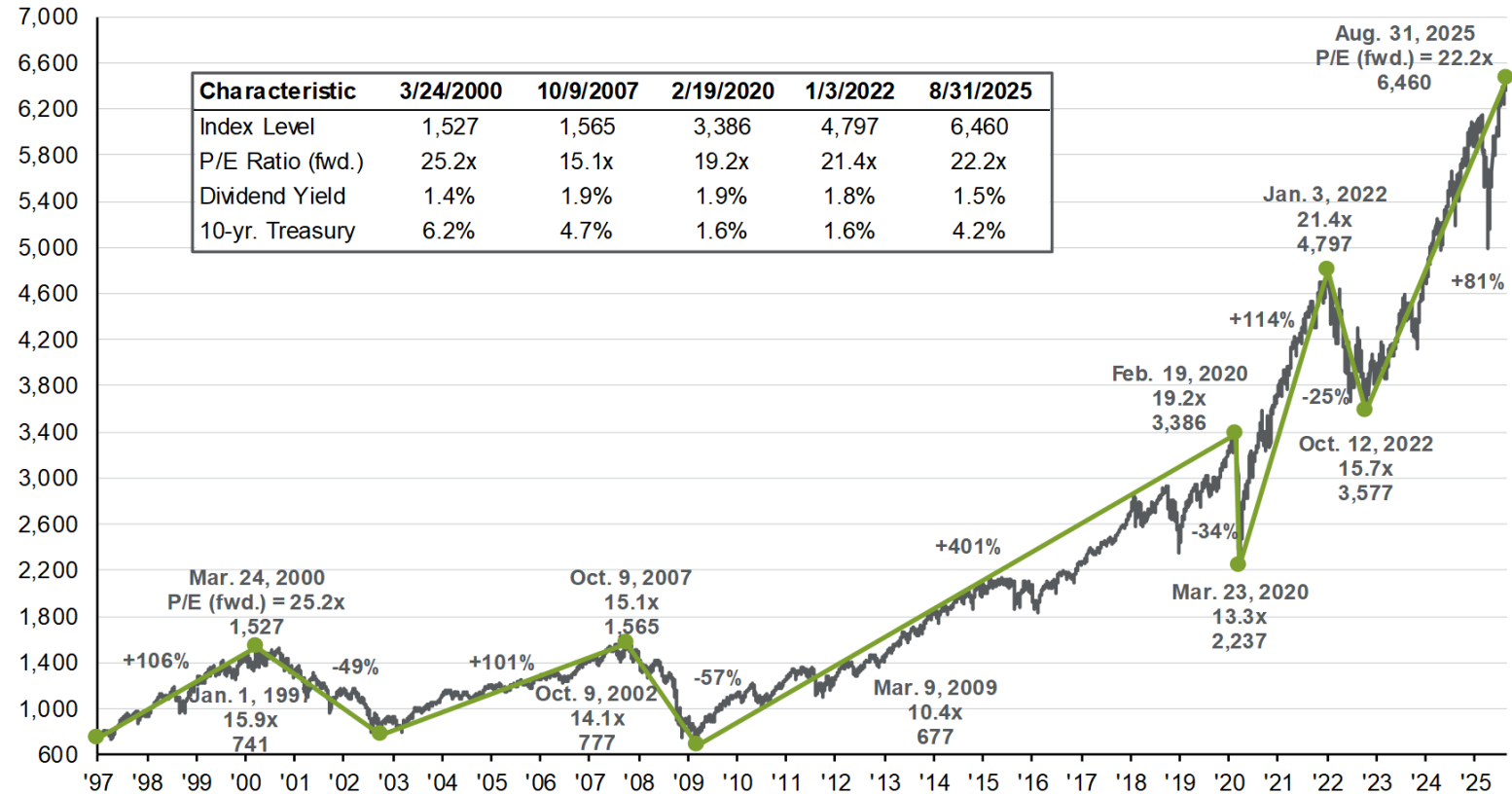
S&P 500 index at inflection points

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S&P 500 Price Index



Source: FactSet, Federal Reserve, Refinitiv Datastream, Standard & Poor's, J.P. Morgan Asset Management.

Dividend yield is calculated as consensus analyst estimates of dividends in the next 12 months, provided by FactSet, divided by the most recent S&P 500 index price. Forward P/E ratio is the most recent S&P 500 index price divided by consensus estimates for earnings in the next 12 months, provided by IBES since January 1997 and FactSet since January 2022. Returns are cumulative and do not include the reinvestment of dividends. Past performance is not indicative of future returns.

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S&P 500: Index concentration

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Equities

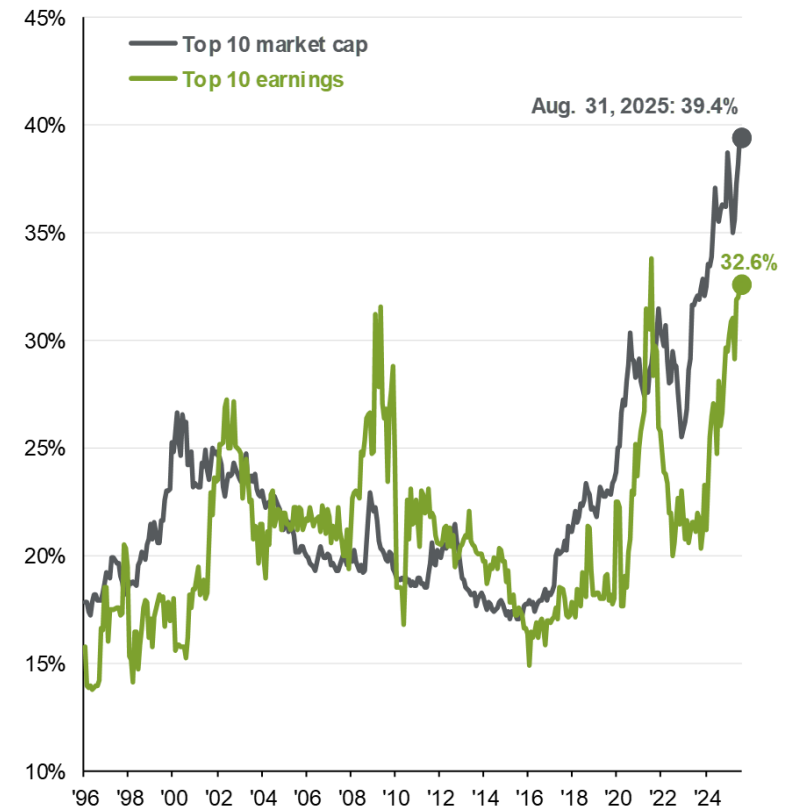
P/E of the top 10 and remaining stocks in the S&P 500

Next 12 months, 1996 - present



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

% of market capitalization, % of last 12 months' earnings



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

The 10 largest S&P 500 companies are based on the beginning of each month. As of 8/31/2025, the top 10 companies in the index were NVDA (7.8%), MSFT (6.9%), AAPL (6.3%), GOOGL/GOOG (4.1%), AMZN (4.0%), META (2.9%), AVGO (2.6%), TSLA (1.7%), BRK.B (1.7%) and JPM (1.5%). The remaining stocks represent the rest of the 490 companies in the S&P 500.

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Returns and valuations by style

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10-year annualized				YTD			
	Value	Blend	Growth		Value	Blend	Growth
Large	10.2%	14.6%	17.9%	Large	10.0%	10.8%	11.3%
Mid	9.5%	10.9%	13.0%	Mid	8.1%	9.4%	13.1%
Small	8.6%	8.9%	8.7%	Small	6.9%	7.1%	7.2%
Since market peak (January 2022)				Since market low (October 2022)			
	Value	Blend	Growth		Value	Blend	Growth
Large	29.2%	42.3%	49.0%	Large	56.5%	88.5%	118.5%
Mid	21.2%	22.8%	28.7%	Mid	50.9%	60.7%	85.8%
Small	11.8%	9.8%	6.6%	Small	40.7%	46.3%	51.3%

Forward P/E vs. 20-year avg. P/E			
	Value	Blend	Growth
Large	17.2 / 13.9	22.2 / 16.1	30.1 / 19.6
Mid	16.0 / 14.5	18.0 / 16.4	29.5 / 21.1
Small	18.3 / 16.9	24.4 / 23.1	35.6 / 31.5

Forward P/E as % of 20-year avg. PE			
	Value	Blend	Growth
Large	123.6%	138.2%	153.3%
Mid	110.0%	109.6%	139.6%
Small	108.2%	105.8%	113.0%

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

All calculations are cumulative total return, including dividends reinvested for the stated period. Returns are not annualized. Since market peak represents the period from January 3, 2022, to August 31, 2025. Since market low represents the period from October 12, 2022, to August 31, 2025. 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. Forward P/E ratio is the most recent S&P 500 index price divided by consensus analyst estimates for earnings in the next 12 months, provided by FactSet. Past performance is not indicative of future returns. *Guide to the Markets* – U.S. Data are as of August 31, 2025.

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S&P 500 valuation measures

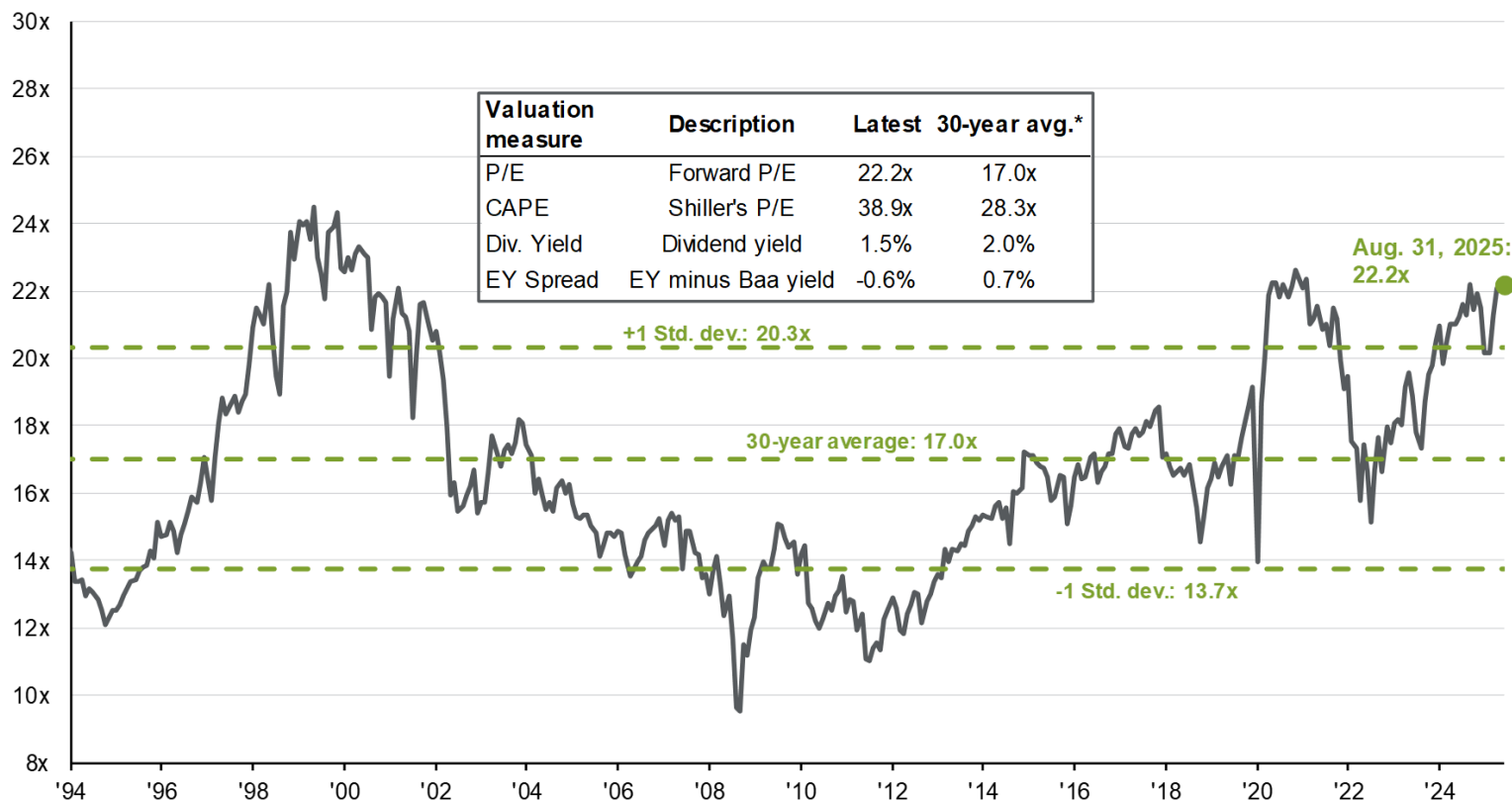
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Equities

S&P 500 Index: Forward P/E ratio



Source: Bloomberg, FactSet, Moody's, Refinitiv Datastream, Robert Shiller, Standard & Poor's, J.P. Morgan Asset Management.

Forward P/E ratio is the most recent S&P 500 index price divided by consensus analyst estimates for earnings in the next 12 months, provided by IBES since March 1994 and FactSet since January 2022. Shiller's P/E uses trailing 10-years of inflation-adjusted earnings as reported by companies. Dividend yield is calculated as consensus estimates of dividends in the next 12 months, provided by FactSet, divided by the most recent S&P 500 index price. EY minus Baa yield is the forward earnings yield (the inverse of the forward P/E ratio) minus the Bloomberg U.S. corporate Baa yield since December 2008 and interpolated using the Moody's Baa seasoned corporate bond yield for values beforehand. *Average for dividend yield is since August 1995 due to data availability.

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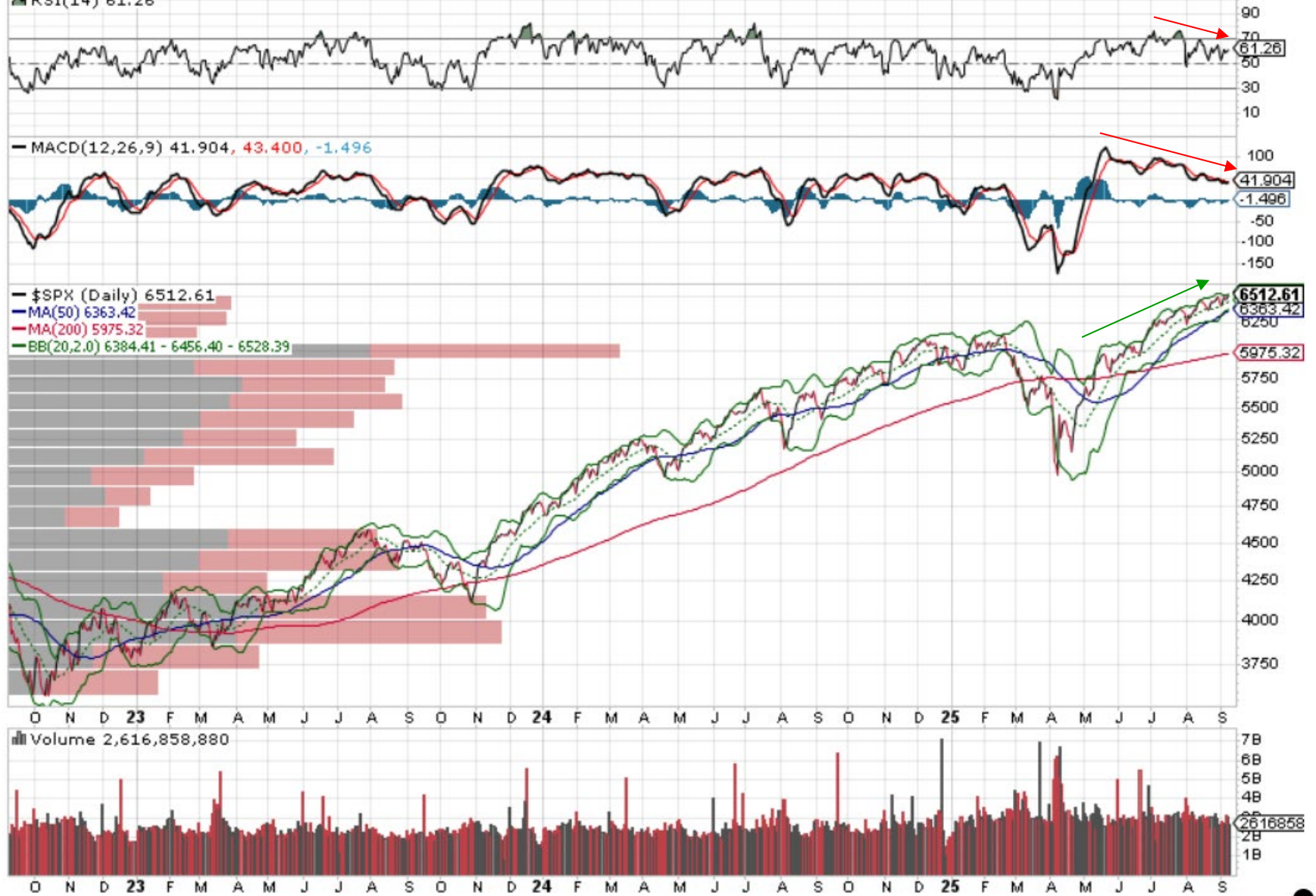
\$SPX S&P 500 Large Cap Index INDX

9-Sep-2025

Open 6503.33 High 6518.23 Low 6483.08 Close 6512.61 Volume 2.6B Chg +17.46 (+0.27%)

© StockCharts.com

▲ RSI(14) 61.26



10 September 2025

Rajeev Vaidya

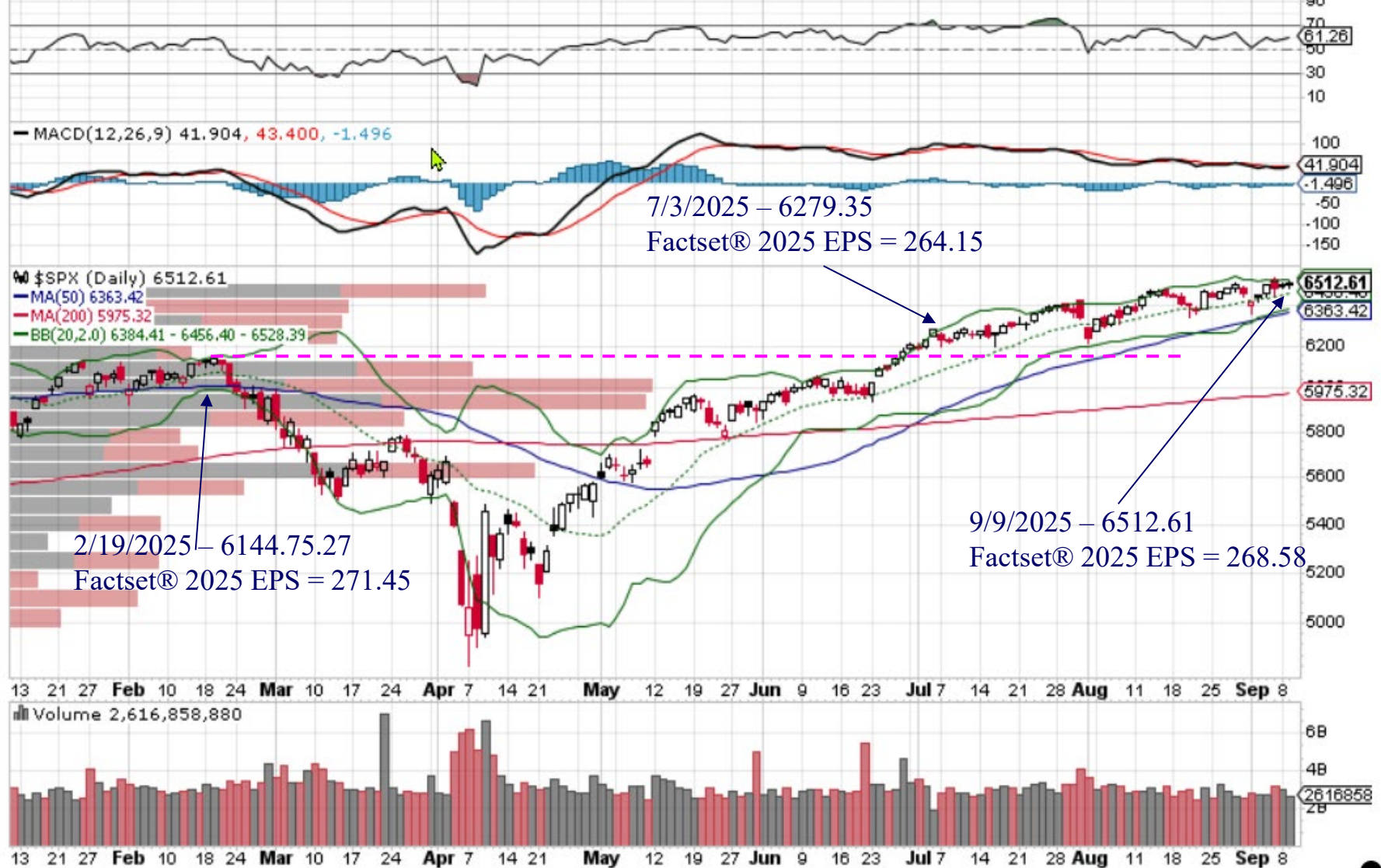
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\$SPX S&P 500 Large Cap Index INDXX

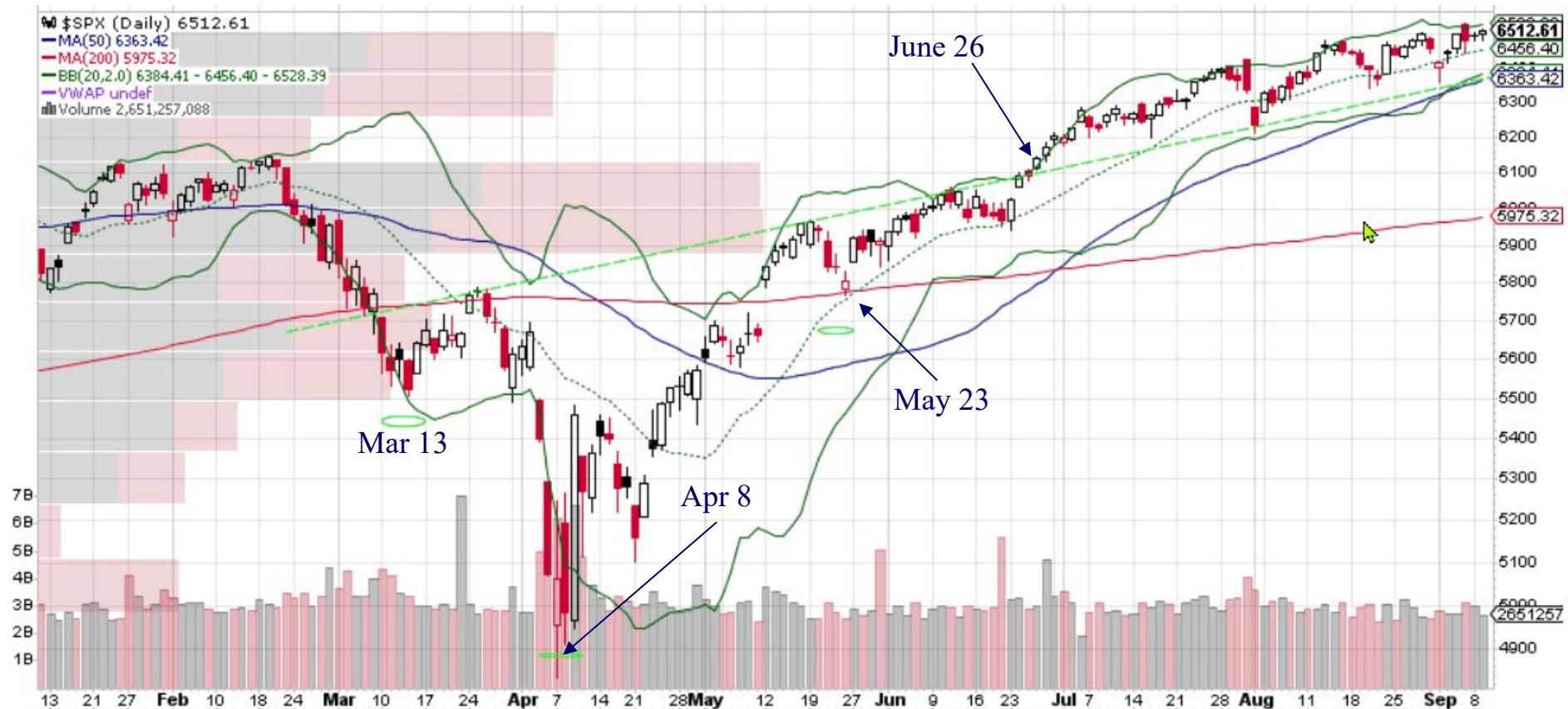
9-Sep-2025

Open 6503.33 High 6518.23 Low 6483.08 Close 6512.61 Volume 2.6B Chg +17.46 (+0.27%) ▲

▲ RSI(14) 61.26



S&P 500 – Inverse Head & Shoulders



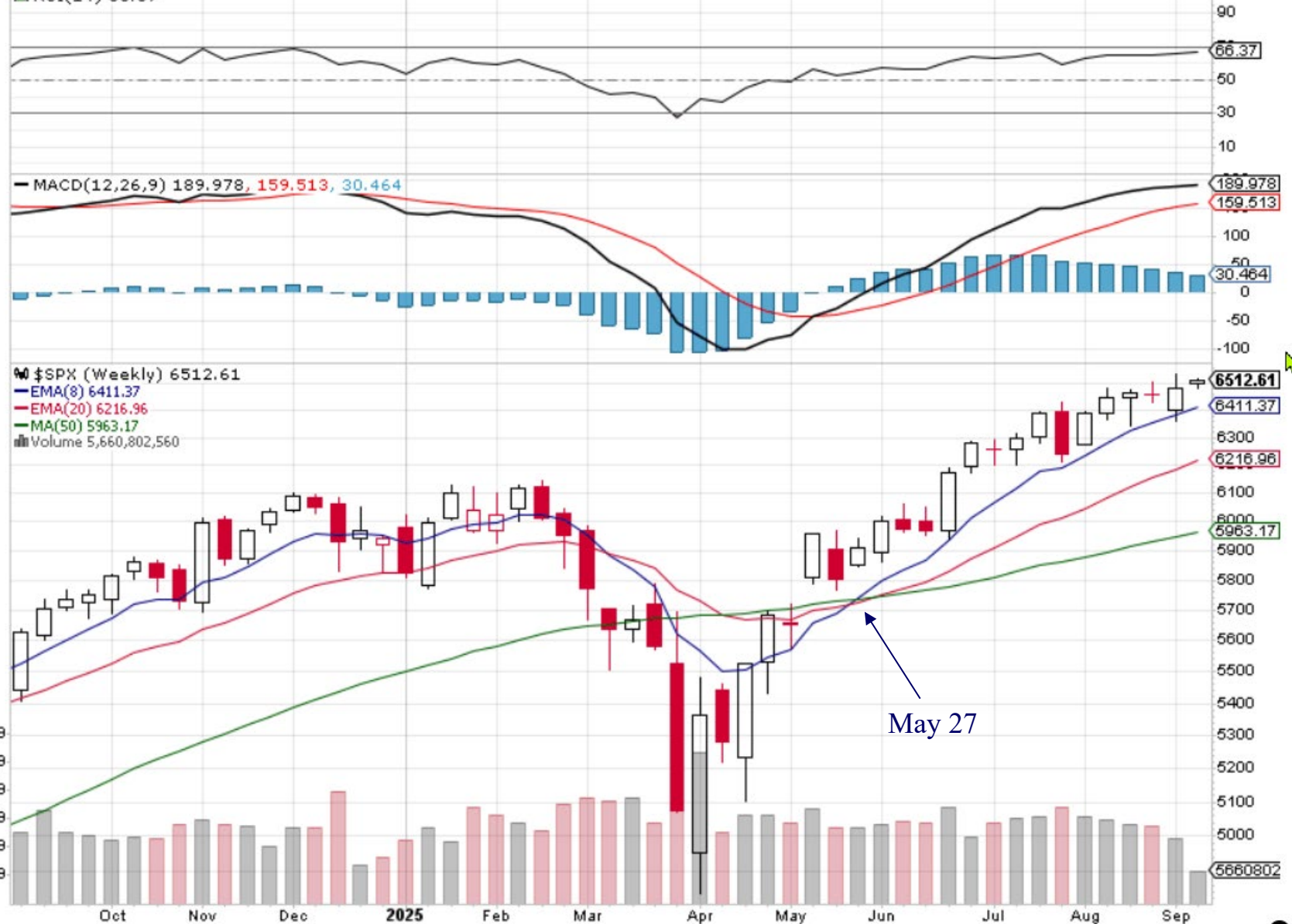
\$SPX S&P 500 Large Cap Index INDX

9-Sep-2025

Open 6498.09 High 6518.23 Low 6483.08 Close 6512.61 Volume 5.7B Chg +31.11 (+0.48%)

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▲ RSI(14) 66.37



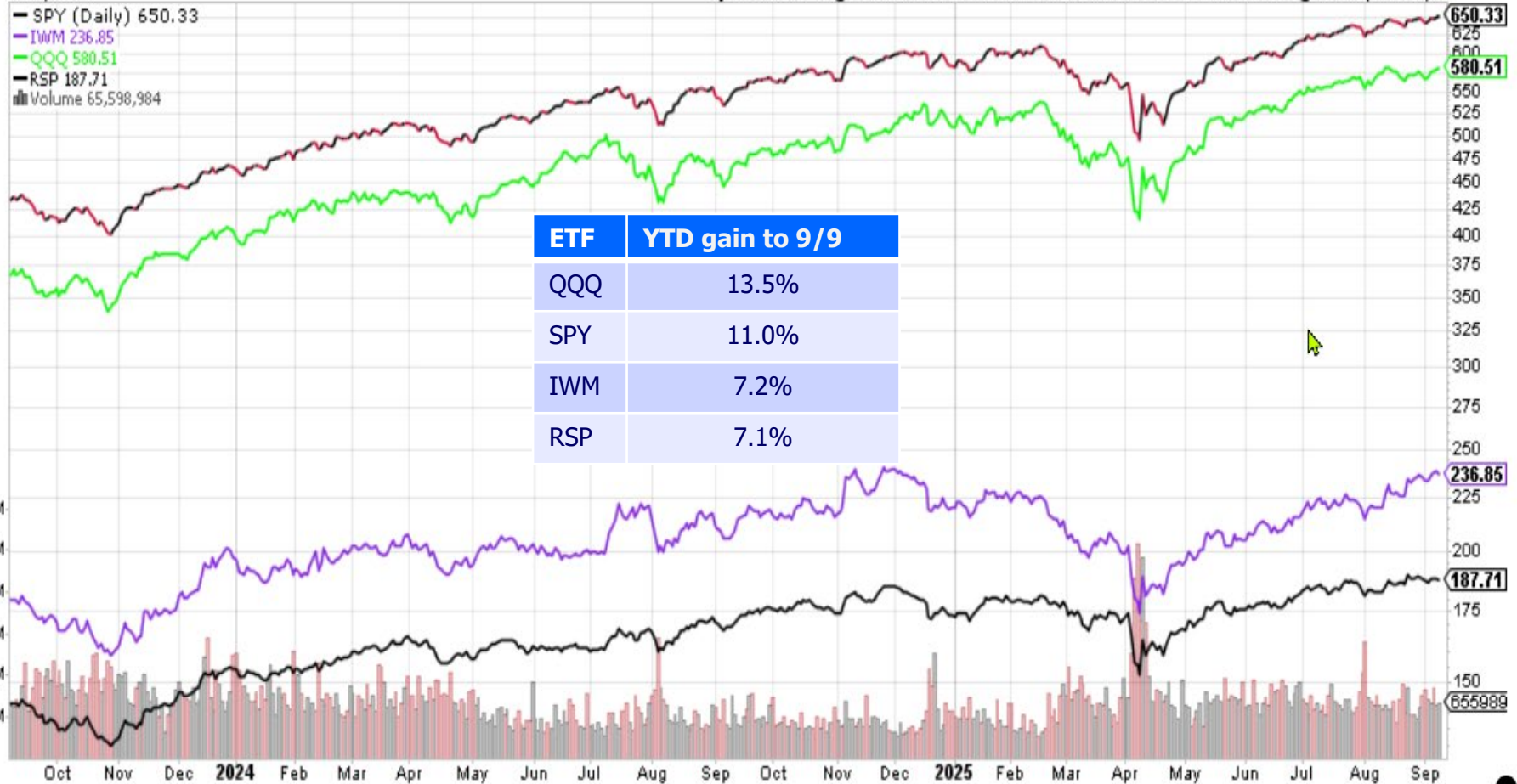
Market Breadth – another way

SPY SPDR S&P 500 ETF NYSE

9-Sep-2025

Open 648.97 High 650.86 Low 647.22 Close 650.33 Volume 65.6M Chg +1.50 (+0.23%) ▲

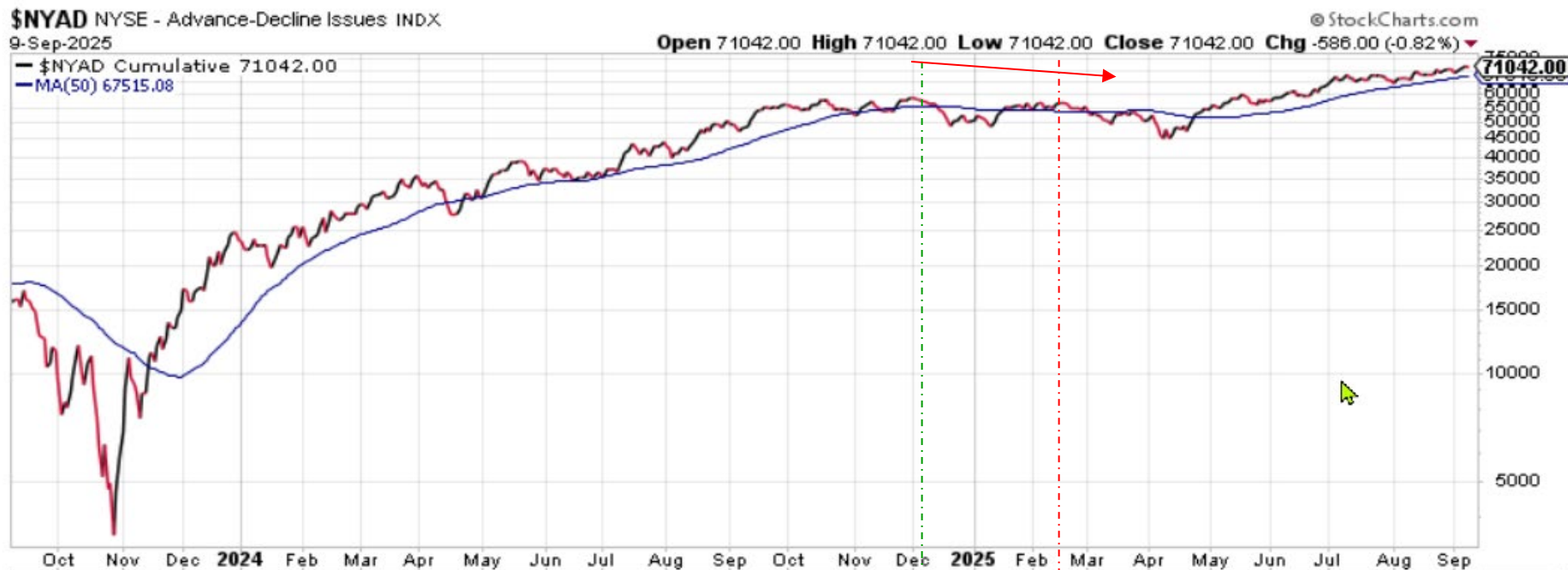
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\$NYAD NYSE - Advance-Decline Issues INDEX

9-Sep-2025

— \$NYAD Cumulative 71042.00
— MA(50) 67515.08



— \$SPX 6512.61









The Fed and interest rates

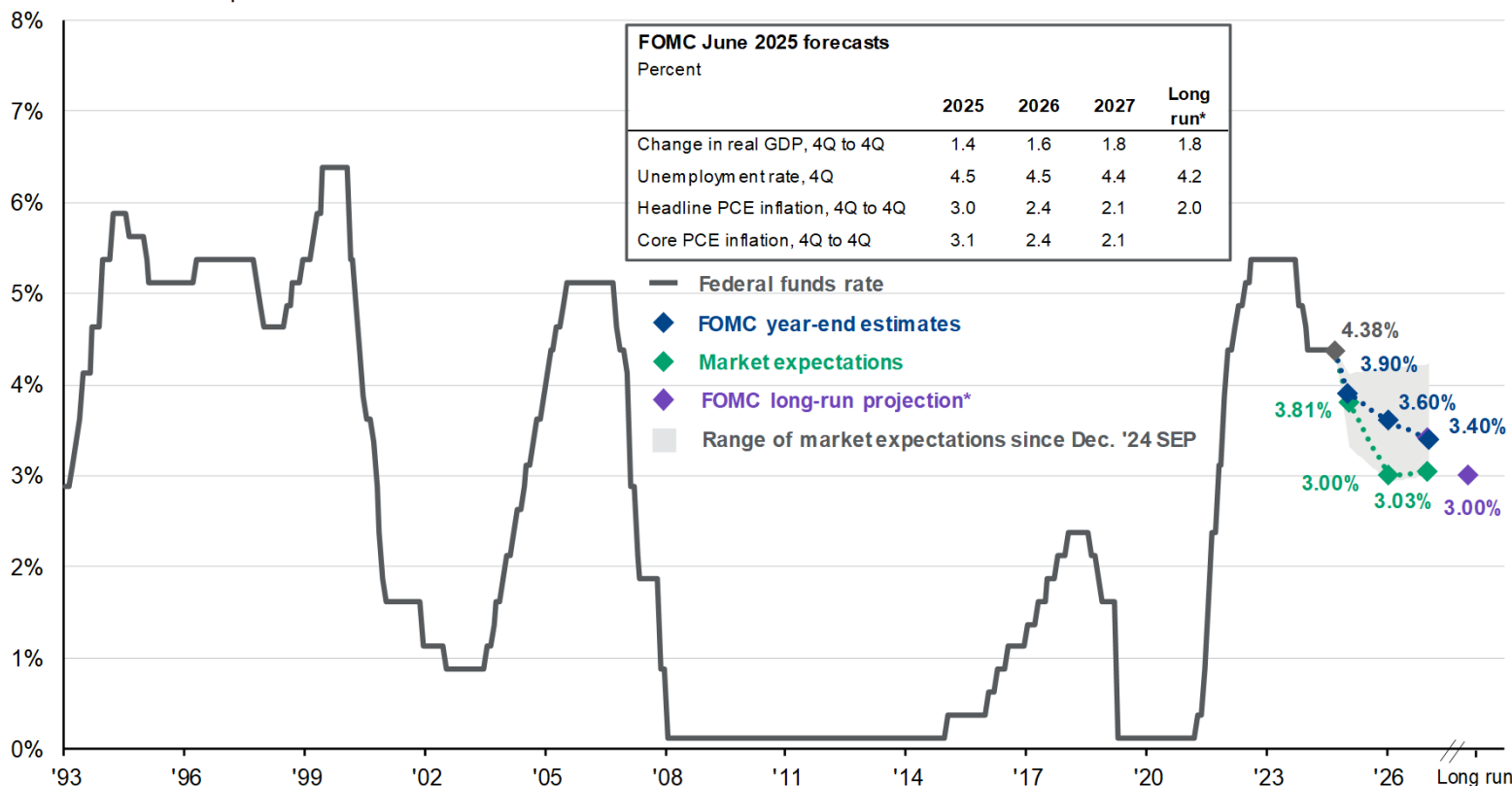
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Federal funds rate expectations

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, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated.

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Fixed income yields and forward returns

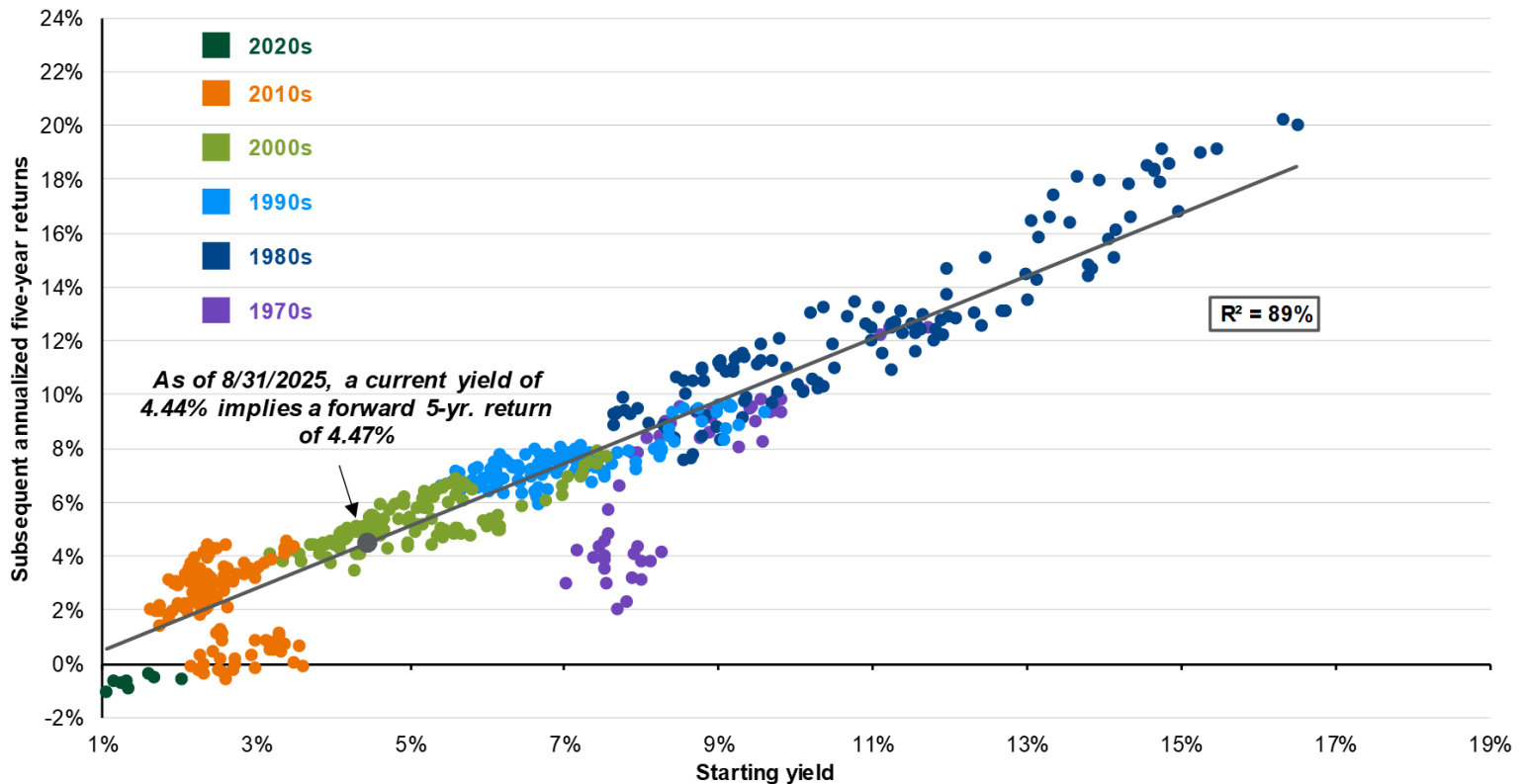
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Yield-to-worst and subsequent 5-year annualized returns

Bloomberg U.S. Aggregate Total Return Index



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

Returns are 60-month annualized total returns, measured monthly, beginning 1/31/1976. R^2 represents the percent of total variation in total returns that can be explained by yields at the start of each period.

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US govt bonds – TLT & SGOV



U.S. Dollar





Dollar drivers

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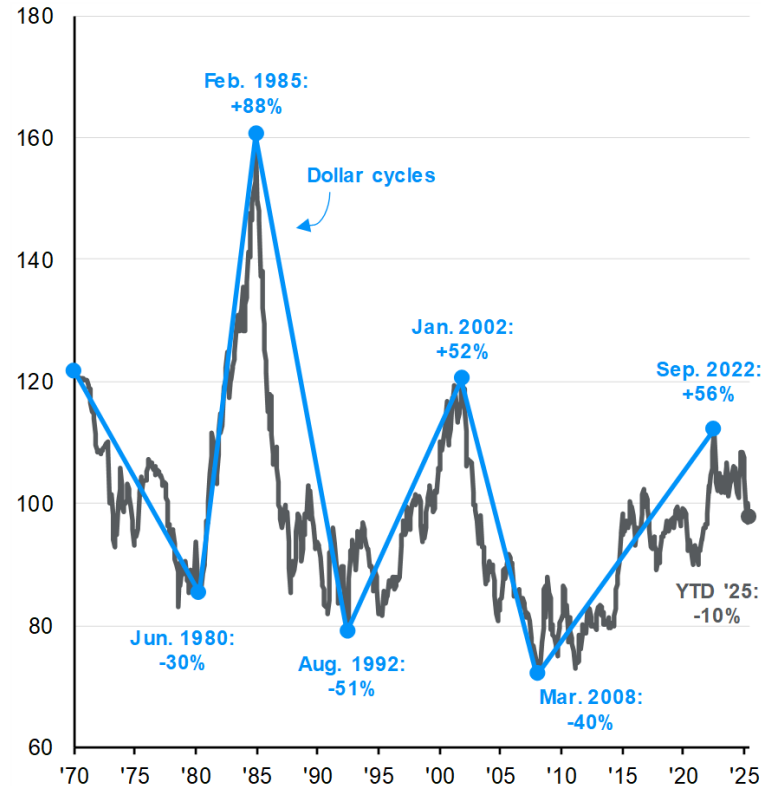
U.S.

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Economy

The U.S. dollar

DXY Index, level



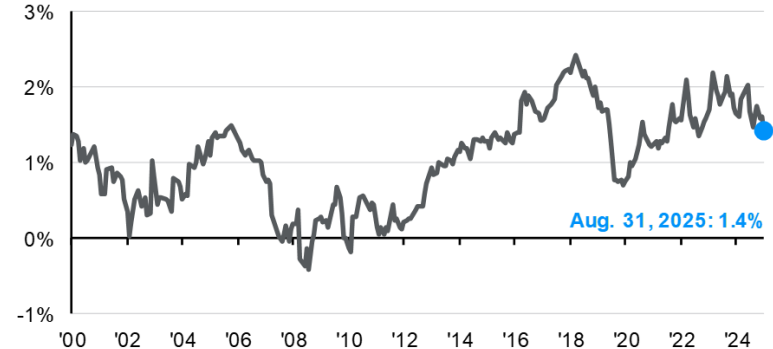
The U.S. trade balance

Current account balance, % of GDP



Developed markets interest rate differentials

Difference between U.S. and international 10-year yields*



Source: Bloomberg, FactSet, J.P. Morgan Asset Management; (Left) ICE; (Top right) BEA; (Bottom right) BIS. Currencies in the DXY Index are: British pound, Canadian dollar, euro, Japanese yen, Swedish krona and Swiss franc. *Interest rate differential is the difference between the 10-year U.S. Treasury yield and a basket of the 10-year yields of each major trading partner (Australia, Canada, eurozone, Japan, Sweden, Switzerland and UK). Weights in the basket are calculated using the 10-year average of total government bonds outstanding in each region.
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Global equity performance and the U.S. dollar

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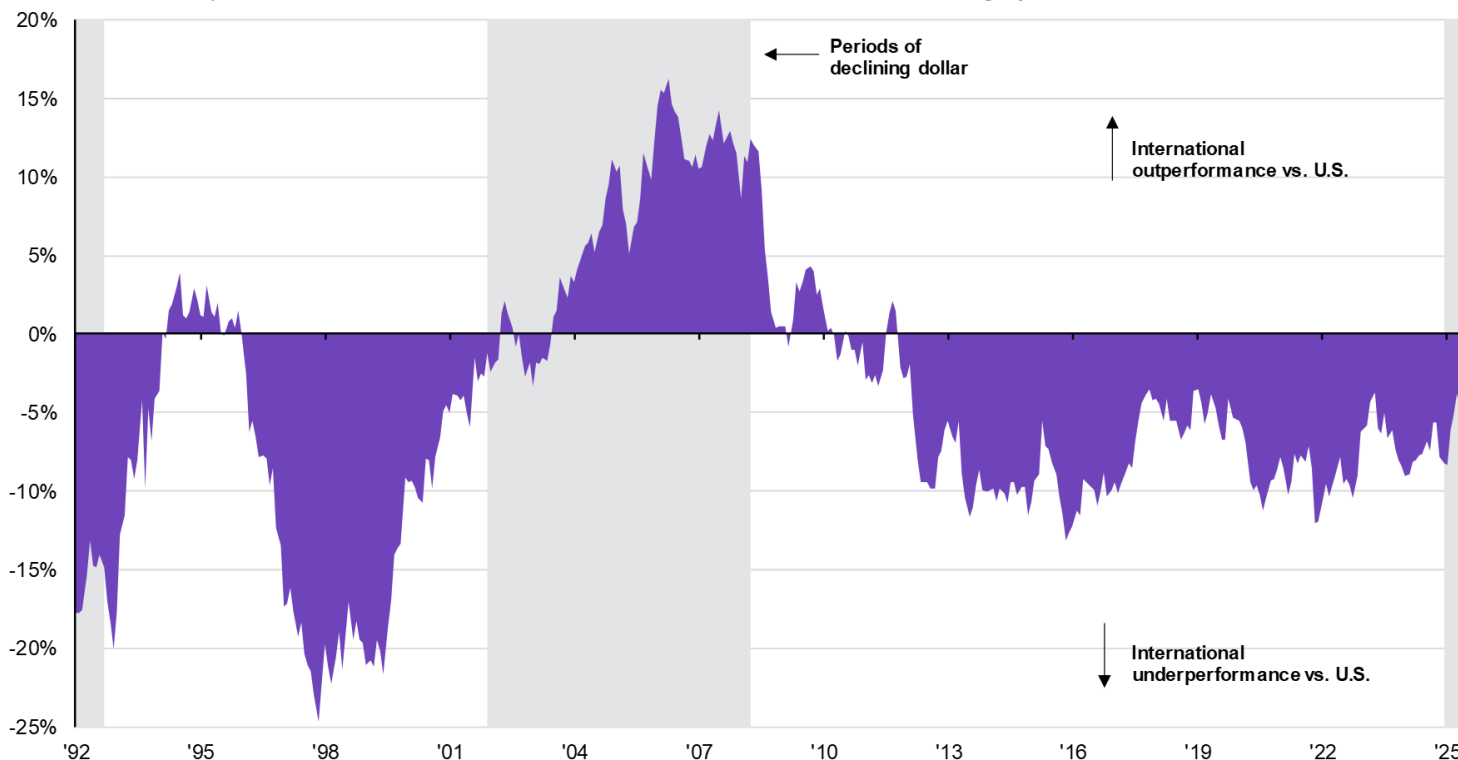
U.S.

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Cycles of international outperformance and the U.S. dollar

International out/underperformance versus U.S., MSCI AC World ex-U.S., S&P 500, total return, USD, rolling 3-yrs. ann.

International



Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management. Past performance is not a reliable indicator of current and future results.
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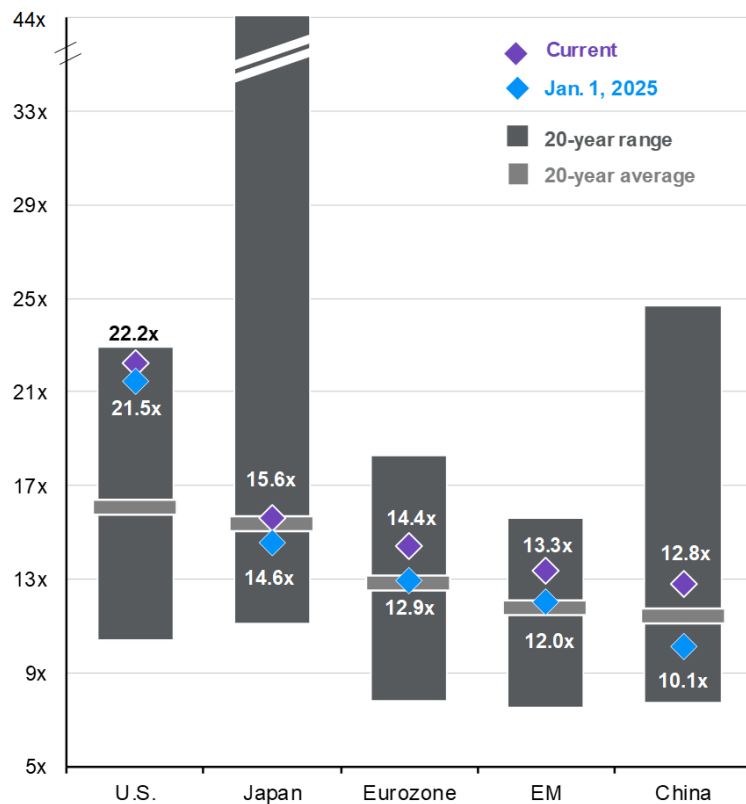
Global equity valuations

GTM U.S. 49

International

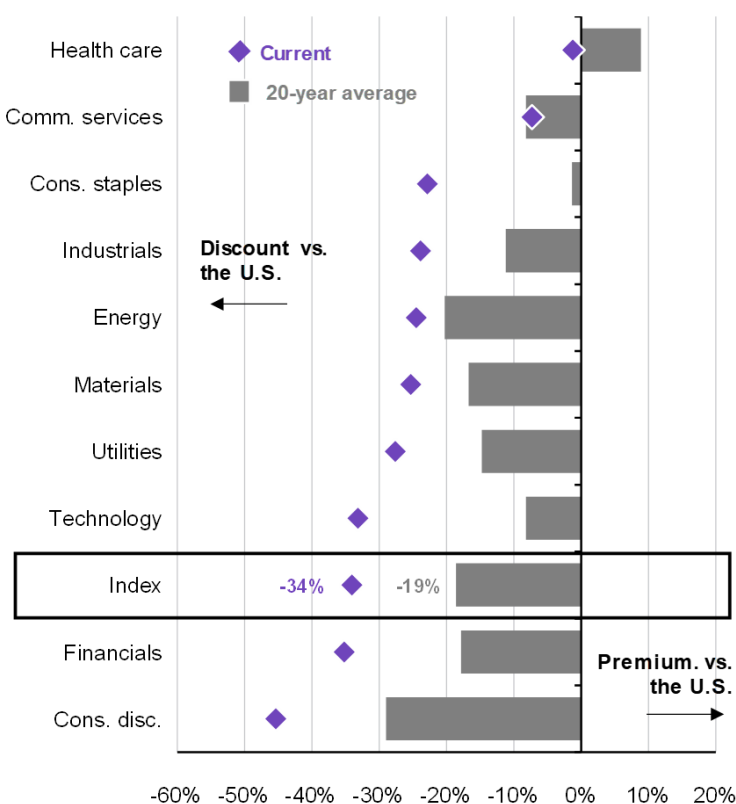
Valuations by region/country

Price-to-earnings, next 12 months



Relative valuations by sector

Price-to-earnings, next 12 months, MSCI ACWI ex-U.S. divided by S&P 500



Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management. Countries are represented by their respective MSCI country index except for the U.S., which is represented by the S&P 500.
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Alternatives: Correlations, returns and yields

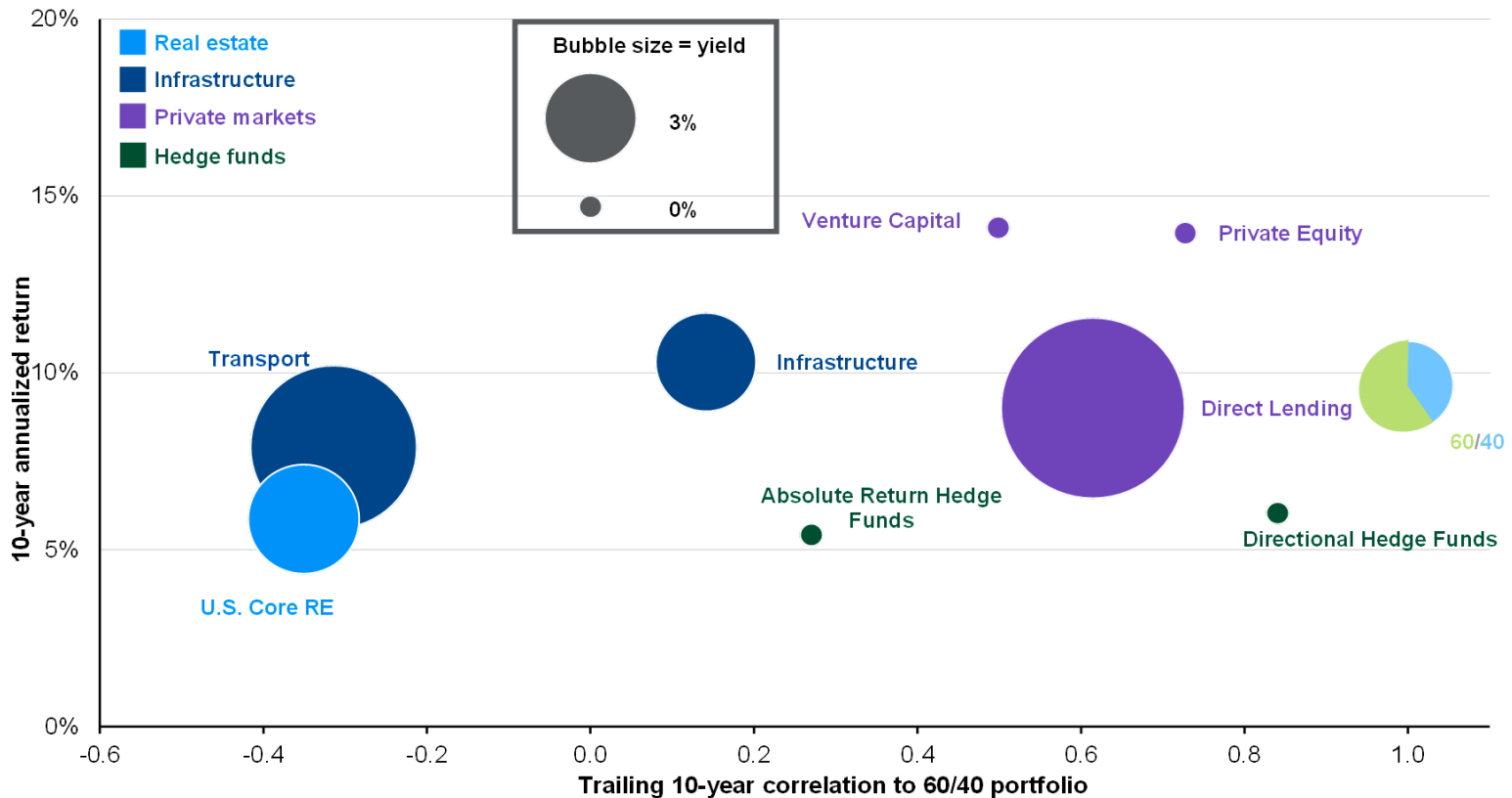
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Correlations, returns and yields

10-year correlations and 10-year annualized total returns, 1Q15 – 4Q24



Source: Burgiss, Clarkson, Cliffwater, Drewry Maritime Consultants, FactSet, MSCI, NCREIF, PivotalPath, J.P. Morgan Asset Management. Correlations are based on quarterly returns over the time period indicated. 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 based on the time period indicated. "Absolute Return Hedge Funds" represent asset-weighted returns from the PivotalPath Global Macro and Relative Value indices. "Directional Hedge Funds" represent asset-weighted returns from the PivotalPath Credit, Equity Diversified and Event Driven indices. Direct Lending uses yields from the Cliffwater Direct Lending Index. All other indices and data used for alternative asset class returns and yields are as described on pages 12 and 16 of the *Guide to Alternatives*. Yields are based on latest available data as described on page 12 of the *Guide to Alternatives*. Transportation returns are shown on an unlevered basis and returns can be enhanced by adding leverage. Past performance is not a reliable indicator of current and future results.

This slide comes from our *Guide to Alternatives*.
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Time, diversification and the volatility of returns

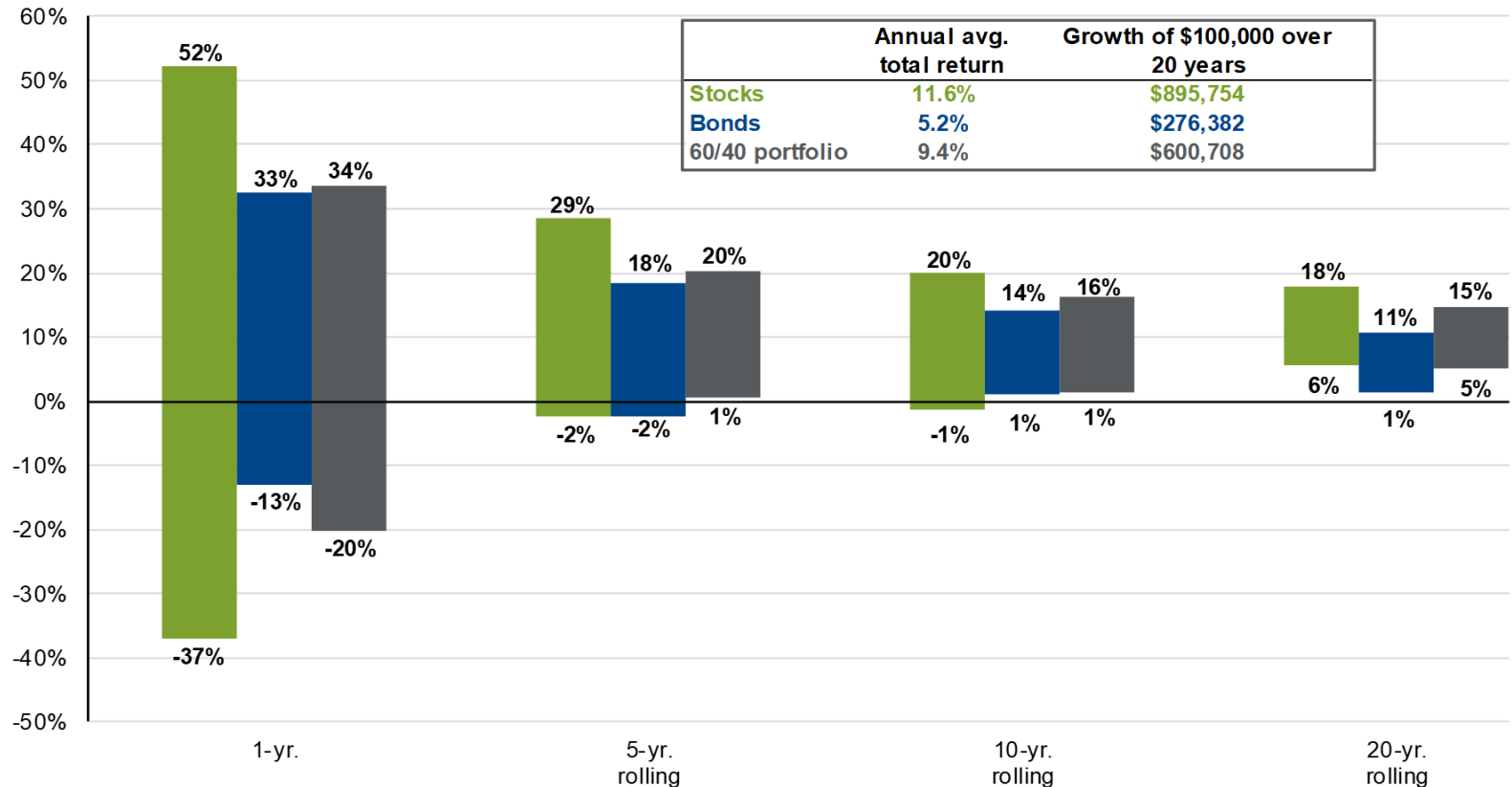
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Range of stock, bond and blended total returns

Annual total returns, 1950–2024



Source: Bloomberg, FactSet, Federal Reserve, Standard & Poor's, Strategas/Ibbotson, J.P. Morgan Asset Management.

Returns shown are based on calendar year returns from 1950 to 2024. Stocks: S&P 500; Bonds: 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 2024.

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60/40 portfolio drift

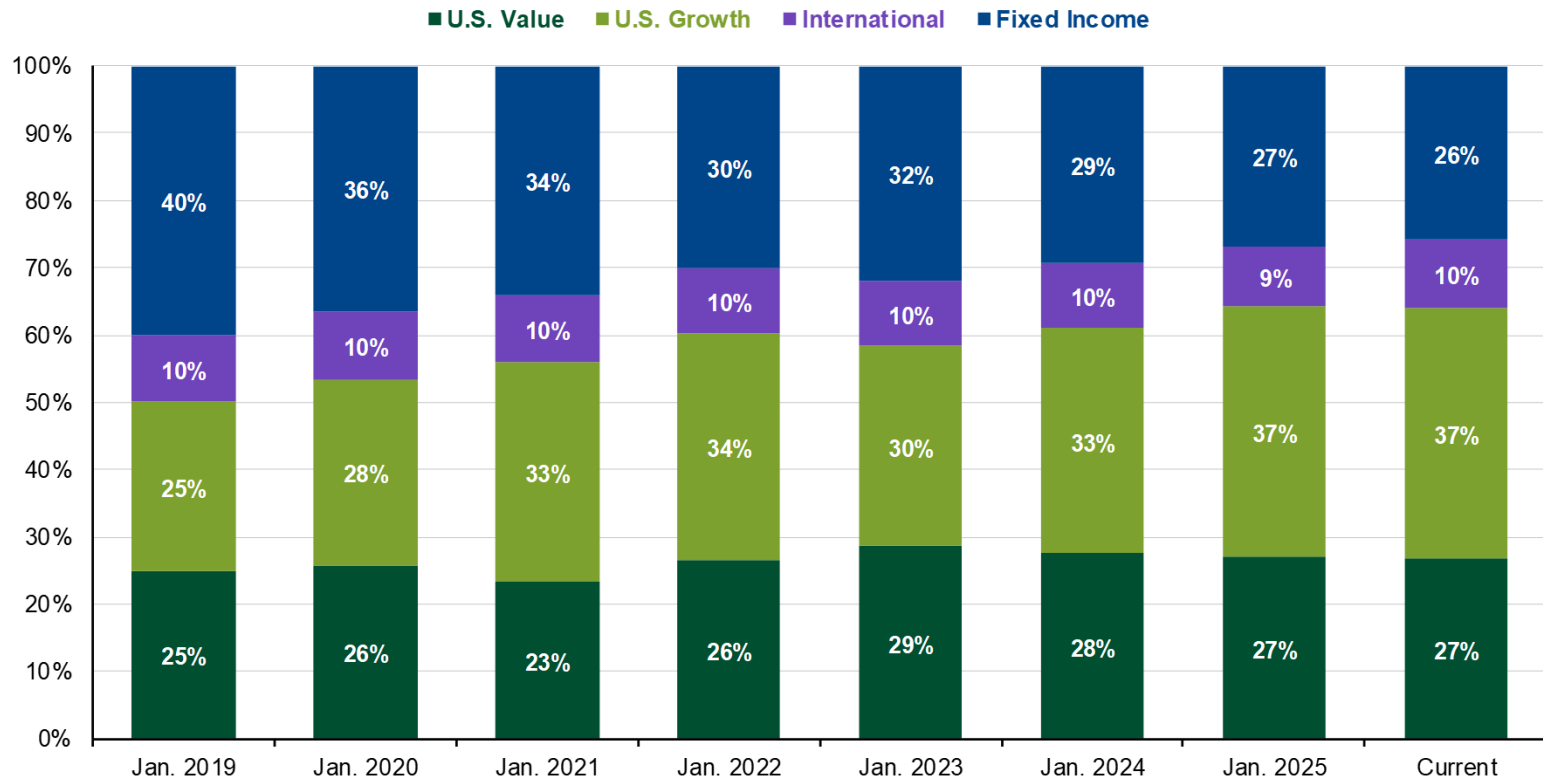
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60/40 portfolio composition by asset class

Start of 2019 to current, no rebalancing



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

Standard asset allocation at the start of 2019 assumes 60% weight to global equities and 40% to U.S. fixed Income. U.S. Value: Equal-weighted Russell 1000 Value and Russell 2000 Value, U.S. Growth: Equal-weighted Russell 1000 Growth and Russell 2000 Growth, International: MSCI ACWI ex-US, Fixed Income: 10% Bloomberg Global HY Index and 30% Bloomberg U.S. Aggregate. Past performance is not indicative of future returns.

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Cash versus a 60/40 portfolio

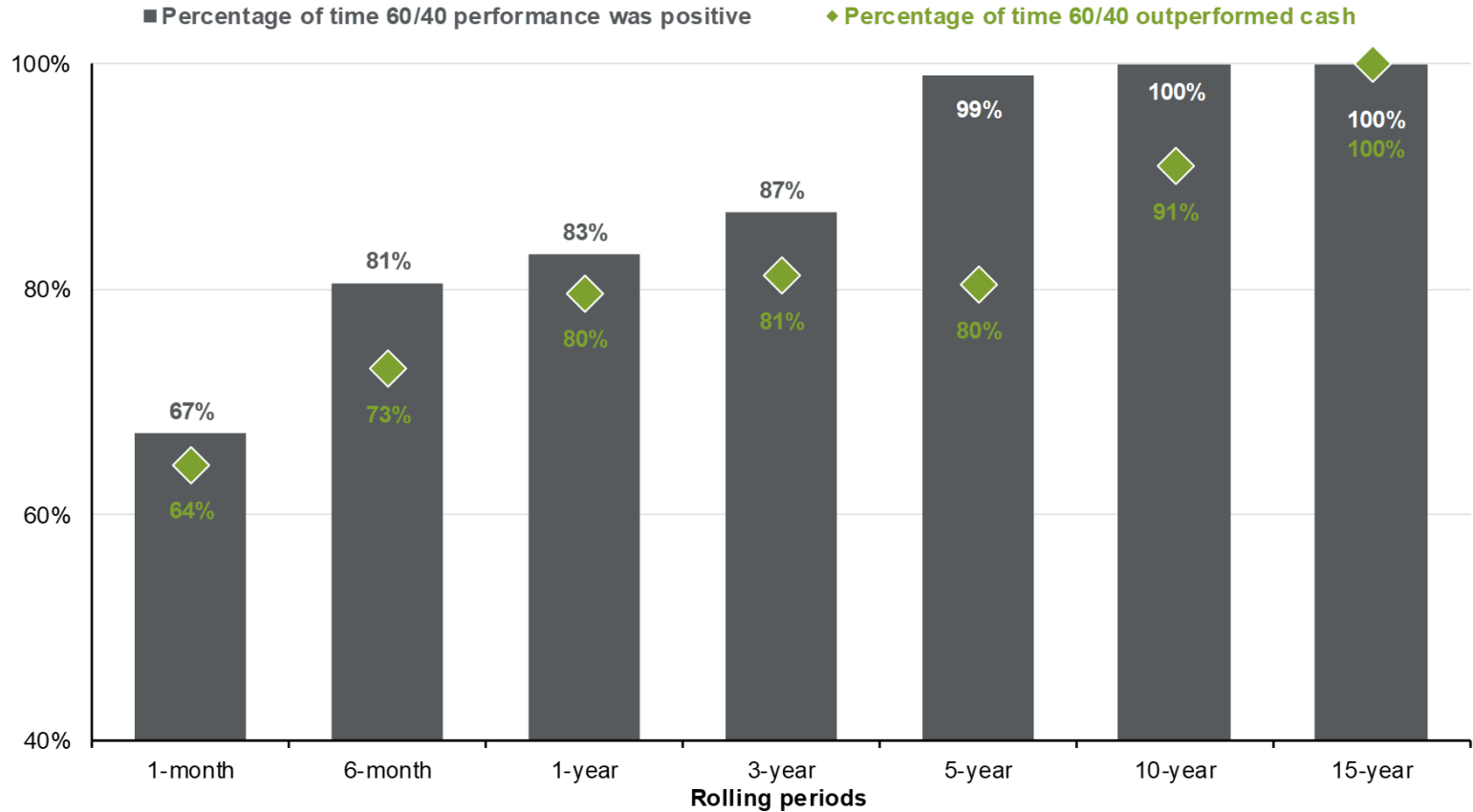
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Percentage of time 60/40 returns were positive or outperformed cash

Rolling monthly basis, 1995-2024



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

A 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. Cash is the Bloomberg U.S. 30-day Treasury Bill index.

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Asset class returns

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2010–2024		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	YTD
Ann.	Vol.																
Large Cap	Small Cap	REITs	REITs	REITs	Small Cap	REITs	REITs	Small Cap	EM Equity	Cash	Large Cap	Small Cap	REITs	Com dty.	Large Cap	Large Cap	DM Equity
13.9%	20.6%	27.9%	8.3%	19.7%	38.8%	28.0%	2.8%	21.3%	37.8%	1.8%	31.5%	20.0%	41.3%	16.1%	26.3%	25.0%	23.3%
Small Cap	EM Equity	Small Cap	Fixed Income	High Yield	Large Cap	Large Cap	Large Cap	High Yield	DM Equity	Fixed Income	REITs	EM Equity	Large Cap	Cash	DM Equity	Small Cap	EM Equity
10.3%	17.9%	26.9%	7.8%	19.6%	32.4%	13.7%	1.4%	14.3%	25.6%	0.0%	28.7%	18.7%	28.7%	1.5%	18.9%	11.5%	19.6%
REITs	REITs	EM Equity	High Yield	EM Equity	DM Equity	Fixed Income	Fixed Income	Large Cap	Large Cap	REITs	Small Cap	Large Cap	Com dty.	High Yield	Small Cap	Asset Alloc.	Large Cap
9.4%	16.8%	19.2%	3.1%	18.6%	23.3%	6.0%	0.5%	12.0%	21.8%	-4.0%	25.5%	18.4%	27.1%	-12.7%	16.9%	10.0%	10.8%
Asset Alloc.	DM Equity	Com dty.	Large Cap	DM Equity	Asset Alloc.	Asset Alloc.	Cash	Com dty.	Small Cap	High Yield	DM Equity	Asset Alloc.	Small Cap	Fixed Income	Asset Alloc.	High Yield	Asset Alloc.
7.2%	16.5%	16.8%	2.1%	17.9%	14.9%	5.2%	0.0%	11.8%	14.6%	-4.1%	22.7%	10.6%	14.8%	-13.0%	14.1%	9.2%	10.3%
High Yield	Com dty.	Large Cap	Cash	Small Cap	High Yield	Small Cap	DM Equity	EM Equity	Asset Alloc.	Large Cap	Asset Alloc.	DM Equity	Asset Alloc.	Asset Alloc.	High Yield	EM Equity	High Yield
5.9%	16.1%	15.1%	0.1%	16.3%	7.3%	4.9%	-0.4%	11.6%	14.6%	-4.4%	19.5%	8.3%	13.5%	-13.9%	14.0%	8.1%	8.9%
DM Equity	Large Cap	High Yield	Asset Alloc.	Large Cap	REITs	Cash	Asset Alloc.	REITs	High Yield	Asset Alloc.	EM Equity	Fixed Income	DM Equity	DM Equity	REITs	Com dty.	Com dty.
5.7%	15.1%	14.8%	-0.7%	16.0%	2.9%	0.0%	-2.0%	8.6%	10.4%	-5.8%	18.9%	7.5%	11.8%	-14.0%	11.4%	5.4%	7.1%
EM Equity	Asset Alloc.	Asset Alloc.	Small Cap	Asset Alloc.	Cash	High Yield	High Yield	Asset Alloc.	REITs	Small Cap	High Yield	High Yield	High Yield	Large Cap	EM Equity	Cash	Small Cap
3.4%	10.4%	13.3%	-4.2%	12.2%	0.0%	0.0%	-2.7%	8.3%	8.7%	-11.0%	12.6%	7.0%	1.0%	-18.1%	10.3%	5.3%	7.1%
Fixed Income	High Yield	DM Equity	DM Equity	Fixed Income	Fixed Income	EM Equity	Small Cap	Fixed Income	Fixed Income	Com dty.	Fixed Income	Cash	Cash	EM Equity	Fixed Income	REITs	Fixed Income
2.4%	9.4%	8.2%	-11.7%	4.2%	-2.0%	-1.8%	-4.4%	2.6%	3.5%	-11.2%	8.7%	0.5%	0.0%	-19.7%	5.5%	4.9%	5.0%
Cash	Fixed Income	Fixed Income	Com dty.	Cash	EM Equity	DM Equity	EM Equity	DM Equity	Com dty.	DM Equity	Com dty.	Com dty.	Fixed Income	Small Cap	Cash	DM Equity	REITs
1.2%	4.7%	6.5%	-13.3%	0.1%	-2.3%	-4.5%	-14.6%	1.5%	1.7%	-13.4%	7.7%	-3.1%	-1.5%	-20.4%	5.1%	4.3%	4.1%
Com dty.	Cash	Cash	EM Equity	Com dty.	Com dty.	Com dty.	Com dty.	Cash	Cash	EM Equity	Cash	REITs	EM Equity	REITs	Com dty.	Fixed Income	Cash
-1.0%	0.9%	0.1%	-18.2%	-1.1%	-9.5%	-17.0%	-24.7%	0.3%	0.8%	-14.2%	2.2%	-5.1%	-2.2%	-24.9%	-7.9%	1.3%	2.9%

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 U.S. Aggregate, REITs: NAREIT Equity REIT Index, Cash: Bloomberg 1-3m Treasury. The "Asset Allocation" portfolio is for illustrative purposes only and assumes annual rebalancing with 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 U.S. 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. Annualized (Ann.) return and volatility (Vol.) represents the period from 12/31/2009 to 12/31/2024. Please see the disclosure page at the end for index definitions. All data represent total return for stated period. Past performance is not indicative of future returns.

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Second Class – Sep. 10th

- Market Update
- Macro Review
 - Deep Dive into the JP Morgan Monthly Market review
 - Technical analysis
- Questions

Third Class – Sep. 17th

- Market Update
- Bonds
 - The basics
 - The yield curve
 - Bond Ladders
- Questions

Thanks !!

- Happy Investing !!

- **My EMail**

 - diyinvst@udel.edu

- **Class website**

 - <http://udel.edu/~diyinvst>