Investing for Successful Retirement

UD Osher – OLLI

Fall 2026

- Rajeev A. Vaidya
- Ron Materniak

Your instructors

Instructors this semester

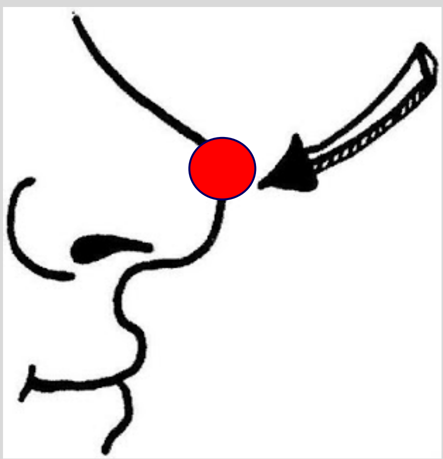
- Rajeev Vaidya
- Ron Materniak

Advisor

- Guy Werner

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.

Class processes - RECORDING

- UD has a restricted policy on recording and sharing
  - Only if <u>all</u> participants agree
  - Only to be shared with REGISTERED class participants on an <u>exception</u> basis as needed.
  - To request a link to a class recording, send an email to ron.materniak@verizon.net

- WE WILL START RECORDING THIS FIRST CLASS NOW
  - Unless anyone does not agree.
  - Please speak up if you do NOT want to be recorded.

First Class – Sept. 9th

- Class Introduction
- Market Update
- This Week's Topic
  - What's different in investing in retirement?

Class Composition

- 93 people registered
- 70% were in the Spring 2026 Class
- 11% have attended other prior classes
- 19% potentially new to the course

Spring 2026 – Class Feedback

OLLI - Investing for Successful Retirement - Spring 2026

Course Evaluation Survey

Stock Analysis Course	Strongly Agree	Agree	Neither agree or Disagree	Disagree	Strongly Disagree	Not applicable
	5	4	3	2	1	
Course is well organized	96%	4%				
Website materials are effective	85%	15%				
Instructor/s are knowledgeable	98%	2%				
Course objectives were clear	83%	17%				
Course objectives were achieved	83%	17%				
Course met my expectations	87%	11%	2%			

	Yes	No
Did the learnings from the class have a positive impact on your investing?	100%	

Course Content

- Typical Class
  - Market updates (15-20 min)
  - Weekly Topic (45 min) generally focused on:
    - Protecting capital and producing income and returns
    - Investing ideas that are currently relevant
  - Time for Questions (10 min)
- New content of current relevance to the investor
  - Dynamic asset allocation – work in progress
  - AI (Artificial Intelligence) – Investing opportunity & tool.
  - Will not bring in content on Crypto currencies and tokens
  - Your input / suggestions are welcome – Subjects we don’t cover = annuities, taxes

More class participant interaction

Goal – Learnings from the class have a positive impact on your investing as a retiree.

Class processes / plans

- 13 week class – 9/9 through 12/9
  - Draft Schedule for first three classes is posted on the class website.
    - Dr. Robert Fry will speak on 9/16 – State of the US economy
  - I will be in India from 11/14 through 11/25
  - Plan to manage in my absence
    - 11/18 – Ron Materniak will lead the class on a relevant topic
    - 11/25 – No class – Thanksgiving
- **Class website**
  - https://udel.edu/~diyinvst
  - Class documents are posted each week before class. Stay on the website till the end of the semester. Do not share with people outside the class.
- Rajeev Vaidya – diyinvst@udel.edu
- Ron Materniak – ron.materniak@gmail.com

Class processes / plans

- olli-online mailed a class Zoom link to all registered participants – on
- The Link is for a repeating meeting
  - Same link works for 13 weeks
- Password was mailed to you in the welcome note from olli-online
  - Password does not change .. Same for the whole semester

- Please put your name (vs "computer") in Zoom so we know who you are when asking questions.
  - Use the Zoom app on your PC with the meeting number in the link this gives you more options and better control.

Class Emails

- Generally, Rajeev will send ONE email per week to class participants.
- The email will be sent a day or two before class, letting you know that charts have been posted to the website.
- If you do NOT want to receive these emails, please send an email to diyinvst@udel.edu and we will remove you from the distribution list.

First Class – Sept. 9th

- Class Introduction
- Market Update
- This Week's Topic
  - What's different in investing in retirement?

Conference Board – 8/20/2026

LEI – grew in July 2026 .. 4th increase in 6 months
CEI – grew in November after 3 monthly declines

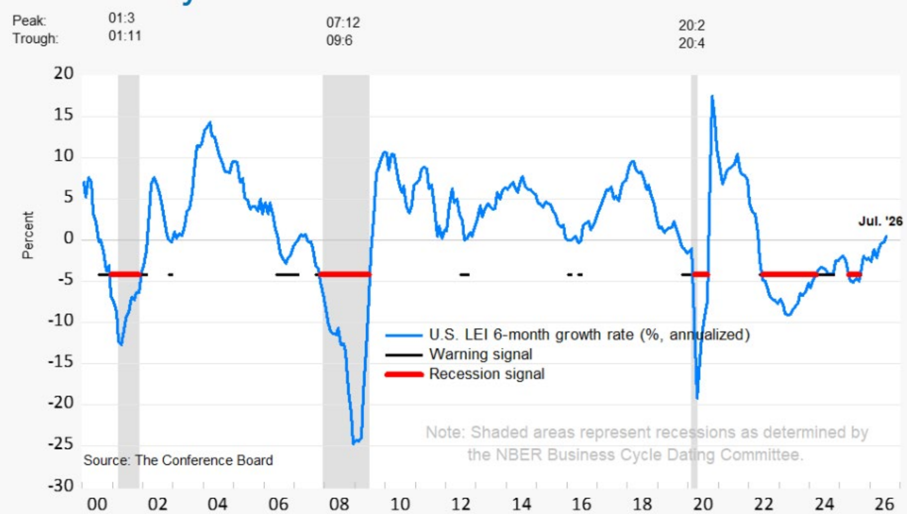
Consumer expectations remained weak, but the drag was more than offset by positive contribiutons from jobless claims and building permits

The Conference Board Leading Economic Index® and Component Contributions (Percent)

	Jul. '26	6 months ending in Jul. '26
Financial Components		
Leading Credit Index™*	0.05	0.22
S&P 500® Stock Index	0.02	0.33
Interest Rate Spread, 10-year T-bonds less Fed Funds	0.11	0.52
Non-Financial Components		
Avg. Consumer Expectations for Business Conditions	-0.19	-1.26
ISM® New Orders Index	0.03	0.02
Building Permits, Private Housing	0.15	0.11
Average Weekly Hours, Mfg.	0.00	0.18
Manufacturers' New Orders, Nondefense Capital Goods excl. aircraft	-0.03	0.30
Manufacturers' New Orders, Consumer Goods & Materials**	0.01	0.05
Average Weekly Initial Claims, Unemp. Insurance*	0.16	0.10

Source: The Conference Board
* Inverted series; a negative change in this component makes a positive contribution.
** Statistical Imputation
LEI change might not equal sum of its contribiutins due to application of trend adjustment factor

The LEI's six-month growth rate turned postive for the first time in over four years



NOTE: The chart illustrates the so-called ***3Ds—duration, depth, and diffusion****—for interpreting a downward movement in the LEI.* ***Duration*** *refers to how long the decline has lasted.* ***Depth*** *denotes the size of decline. Duration and depth are measured by the rate of change of the index over the most recent six months at an annualized rate.* ***Diffusion*** *is a measure of how widespread the decline is among the LEI's component indicators—on a scale of 0 to 100, a* ***diffusion index*** *reading below 50 indicates most components are weakening.*

The ***3Ds rule*** *signals an impending recession when: 1) the six-month diffusion index lies at or below 50, shown by the black warning signal lines in the chart; and 2) the LEI's six-month growth rate (annualized) falls below the threshold of −4.1%. The* ***red recession signal lines*** *indicate months when both criteria are met simultaneously—and thus that a recession is likely imminent or underway.*

Overall CB's outlook - GDP growth 1.9% in 2026 and 1.9% again in 2027.

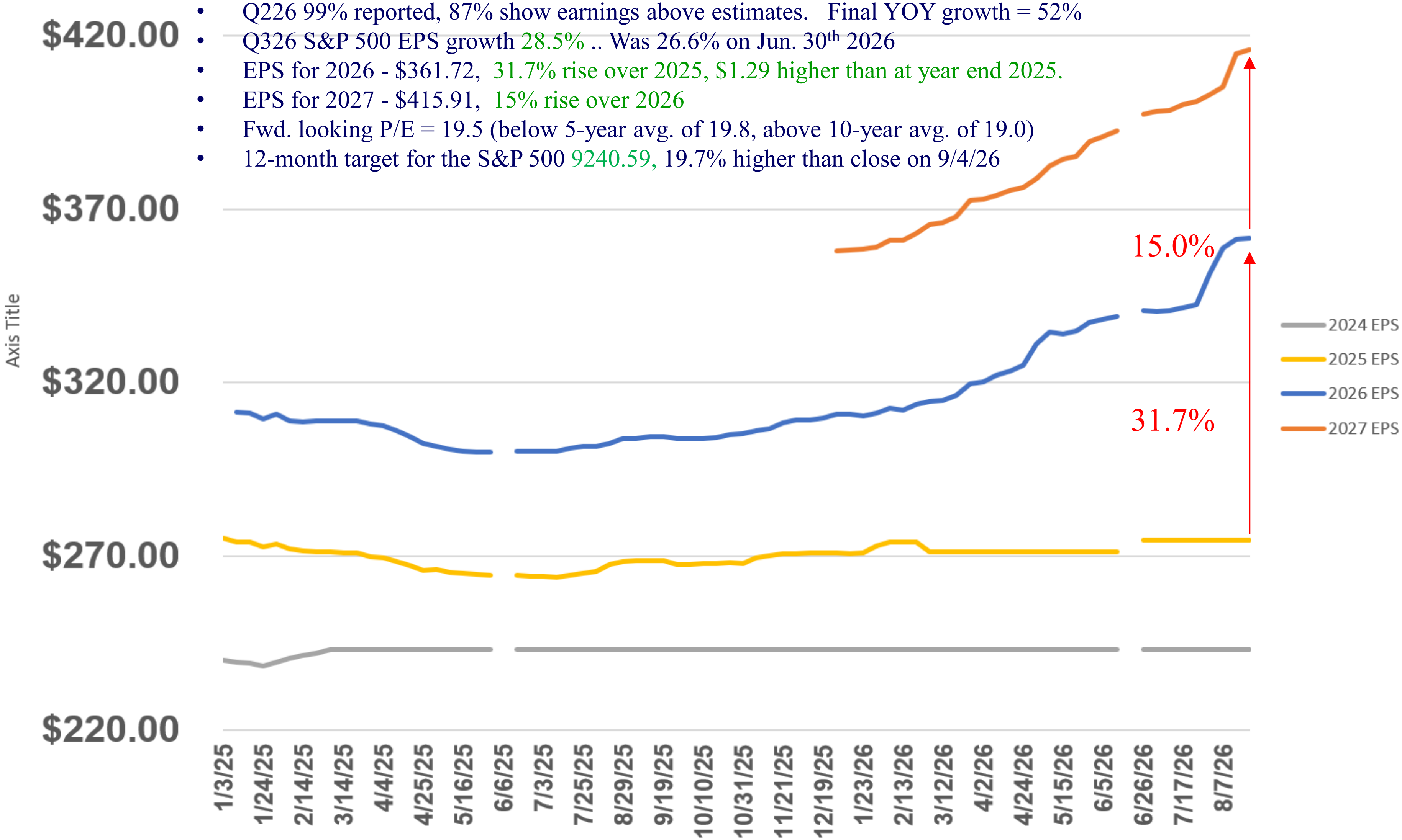
https://www.conference-board.org/topics/us-leading-indicators

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

https://advantage.factset.com/hubfs/Website/Resources%20Section/Research%20Desk/Earnings%20Insight/EarningsInsight_090426.pdf

Factset Earnings Estimates 9/4/26

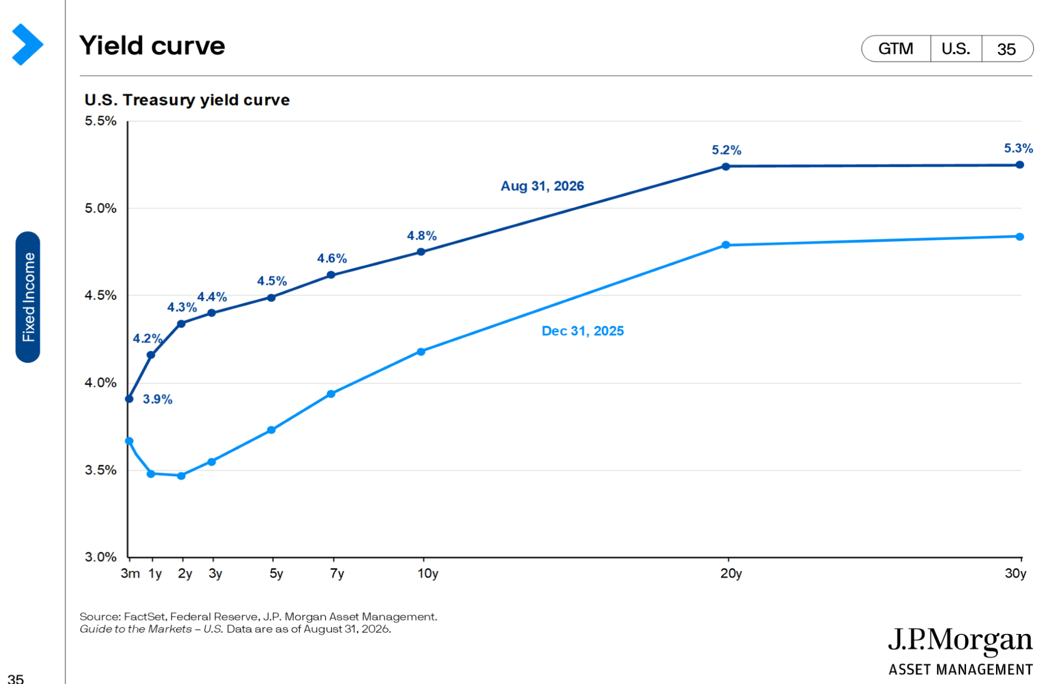
- Q226 99% reported, 87% show earnings above estimates. Final YOY growth = 52%
- Q326 S&P 500 EPS growth 28.5% .. Was 26.6% on Jun. 30th 2026
- EPS for 2026 - $361.72, 31.7% rise over 2025, $1.29 higher than at year end 2025.
- EPS for 2027 - $415.91, 15% rise over 2026
- Fwd. looking P/E = 19.5 (below 5-year avg. of 19.8, above 10-year avg. of 19.0)
- 12-month target for the S&P 500 9240.59, 19.7% higher than close on 9/4/26



https://home.treasury.gov/resource-center/data-chart-center/interest-rates/TextView?type=daily_treasury_yield_curve&field_tdr_date_value_month=202401

Treasury Yield Rates

Date	1 Mo	1.5 Month	2 Mo	3 Mo	4 Mo	6 Mo	1 Yr	2 Yr	3 Yr	5 Yr	7 Yr	10 Yr	20 Yr	30 Yr
9/4/2026	3.79	3.83	3.9	3.91	4	3.98	4.13	4.37	4.45	4.54	4.65	4.78	5.25	5.24
9/3/2026	3.83	3.82	3.91	3.89	3.99	3.95	4.11	4.34	4.41	4.52	4.63	4.77	5.25	5.25
9/2/2026	3.83	3.87	3.89	3.92	4.02	4	4.16	4.39	4.45	4.54	4.66	4.79	5.27	5.27
9/1/2026	3.85	3.88	3.89	3.92	3.97	4	4.18	4.39	4.46	4.55	4.66	4.79	5.27	5.27

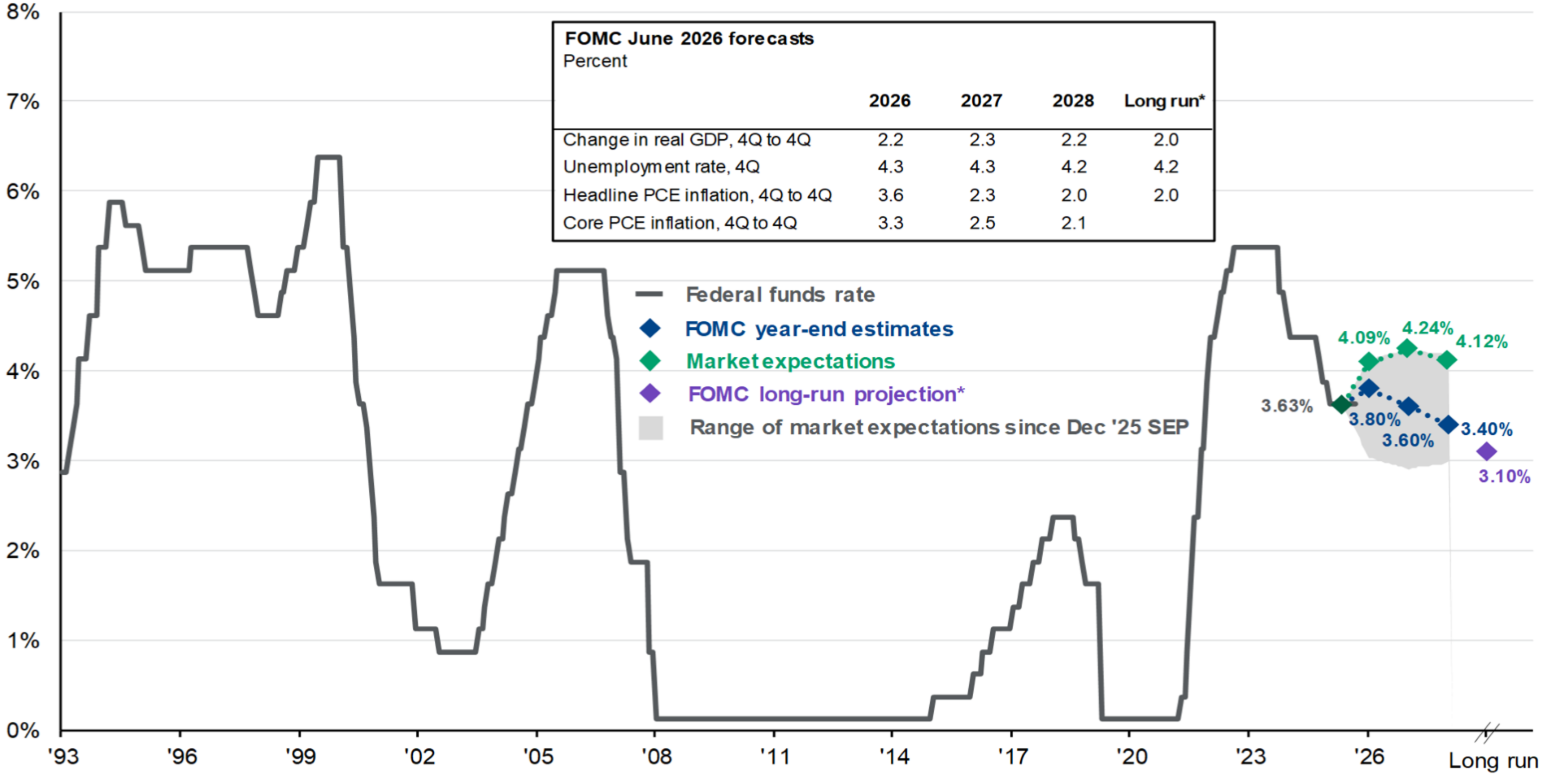


The Fed and interest rates

Fixed Income

Federal funds rate expectations

FOMC and market expectations for the federal funds rate



FOMC June 2026 forecasts
Percent

	2026	2027	2028	Long run*
Change in real GDP, 4Q to 4Q	2.2	2.3	2.2	2.0
Unemployment rate, 4Q	4.3	4.3	4.2	4.2
Headline PCE inflation, 4Q to 4Q	3.6	2.3	2.0	2.0
Core PCE inflation, 4Q to 4Q	3.3	2.5	2.1	

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.
Guide to the Markets – U.S. Data are as of August 31, 2026.

J.P.Morgan
ASSET MANAGEMENT

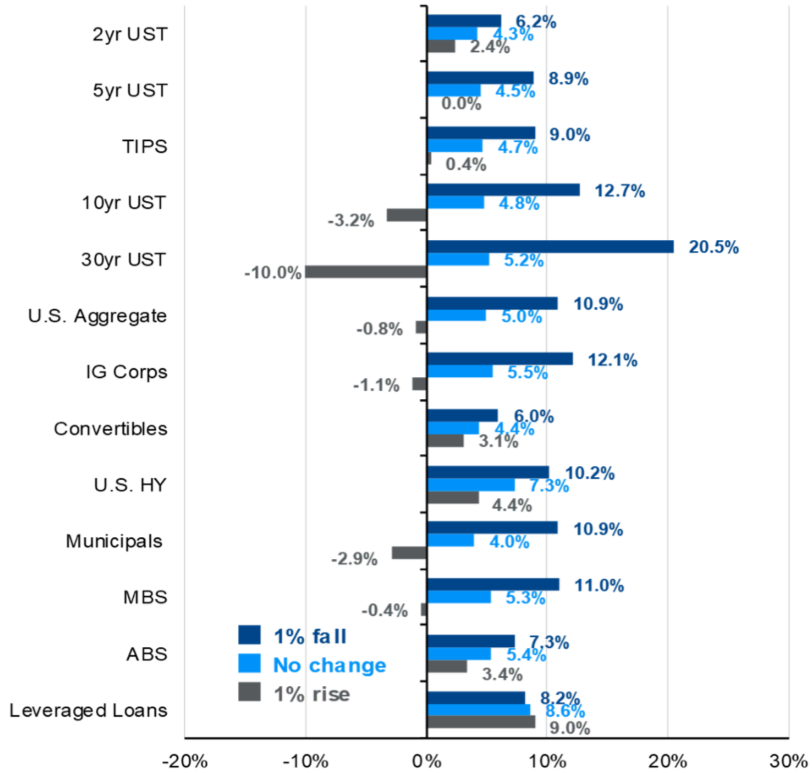
https://am.jpmorgan.com/us/en/asset-management/adv/insights/market-insights/guide-to-the-markets/

Fixed income market dynamics

U.S. Treasuries	Yield 8/31/2026	Yield 12/31/2025	Return 2026	Avg. Maturity	Correlation to 10-year	Correlation to S&P 500
2-Year	4.34%	3.47%	0.89%	2 years	0.75	0.04
5-Year	4.49%	3.73%	-0.82%	5	0.94	0.06
TIPS	2.29%	1.69%	0.51%	7.2	0.76	0.40
10-Year	4.75%	4.18%	-1.69%	10	1.00	0.03
30-Year	5.25%	4.84%	-3.07%	30	0.93	-0.02
Sector						
U.S. Aggregate	5.01%	4.32%	-0.31%	8.2	0.92	0.31
IG Corps	5.49%	4.81%	-0.40%	10.3	0.72	0.51
Convertibles	4.38%	6.13%	16.17%	-	0.06	0.85
U.S. HY	7.27%	6.53%	2.69%	4.7	0.17	0.78
Municipals	3.98%	3.60%	0.20%	13.3	0.73	0.34
MBS	5.29%	4.63%	0.07%	7.6	0.84	0.31
ABS	5.37%	4.69%	2.13%	2.2	0.37	0.33
Leveraged Loans	8.59%	8.10%	3.26%	4.7	-0.16	0.60

Fixed income returns in different interest rate scenarios

Total return, assumes a parallel shift in the yield curve



Source: Bloomberg, FactSet, Federal Reserve Bank of Cleveland, 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. TIPS returns consider the impact that inflation could have on returns by assuming the Cleveland Fed's 1-year inflation expectation forecasts are realized. Sector yields reflect yield to worst. Leveraged loan yields reflect the yield to 3-year 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 no guarantee of future results.
Guide to the Markets – U.S. Data are as of August 31, 2026.

J.P.Morgan ASSET MANAGEMENT

Fixed Income

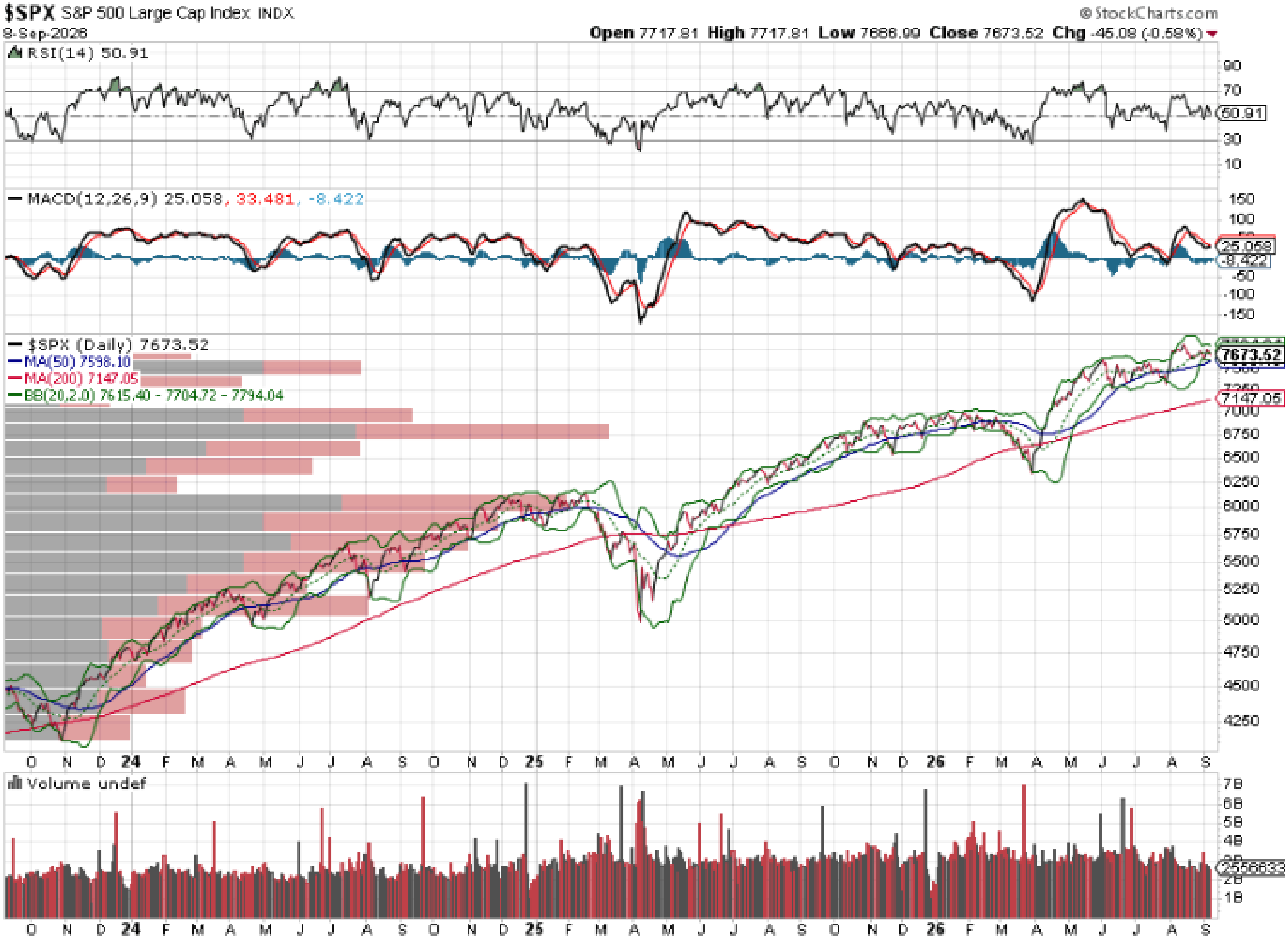
Treasury Yield Rates History

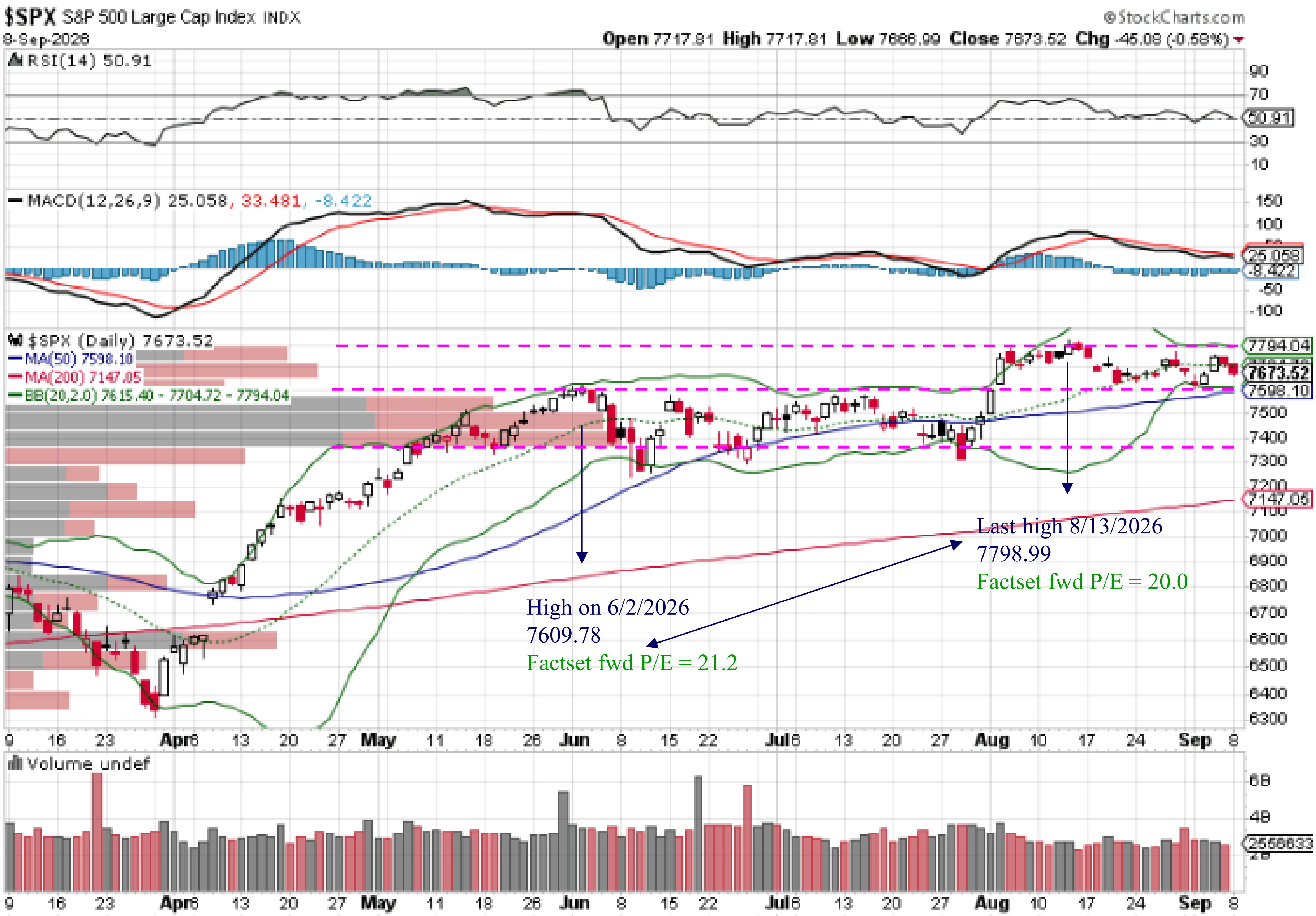
- The US holds about $40t in total debt.
- Expected borrowing - 3Q26 = $739b (data from treasury.gov)
- The August 2026 30-year bond auction cleared at a yield of 5.216 (25 year high). The bid to cover ratio was 2.39x (below 12-month average).
- The treasury has doubled its buy-back program
- The Federal reserve has ended its multi year QT program and is buying short term debt.

Summary of current status

- Factset is forecasting a 51.2% EPS increase for 2027 over 2025
  - This has only happened in 3 recoveries from downturns – Post Korean war, post financial crisis, post COVID
  - This has never happened in a late or mid cycle expansion.
- The economy is running hot in the second half of 2026. At the beginning of the year every institution was forecasting a slower economy in 2nd half 2026.
  - The CB LEI six-month change is positive for the first time in 4 years
- The Fed is signaling QE. Every prior QE cycle has inflated financial asset prices
  - The FED does not normally go into an easing cycle that expands liquidity when the economy is strong.
  - This is supposed to be a boost when the economy is not.
- The NVDA acquisition of HF at a 12+B valuation is a yellow flag of exuberance
  - At best justified as a creation of a strategic moat. HF is not a revenue / earnings growth engine. HF does not operate in the space where most of the revenue driving returns on AI investments will come from.
- Analyst forecasts are the most off-mark near major market tops
  - Happened in 1987, 2000, 2007 and 2018 (mini cycle)
- Prof. Ed Yardeni is signaling a late cycle market melt up (ala 1998 - 1999).

This is not a forecast or investment advice


$SPX S&P 500 Large Cap Index INDX
@StockCharts.com
8-Sep-2026
Open 7717.81 High 7717.81 Low 7666.99 Close 7673.52 Chg -45.08 (-0.58%)
RSI(14) 50.91
MACD(12,26,9) 25.058, 33.481, -8.422
$SPX (Daily) 7673.52
MA(50) 7598.10
MA(200) 7147.05
BB(20,2.0) 7615.40 - 7704.72 - 7794.04
Volume undef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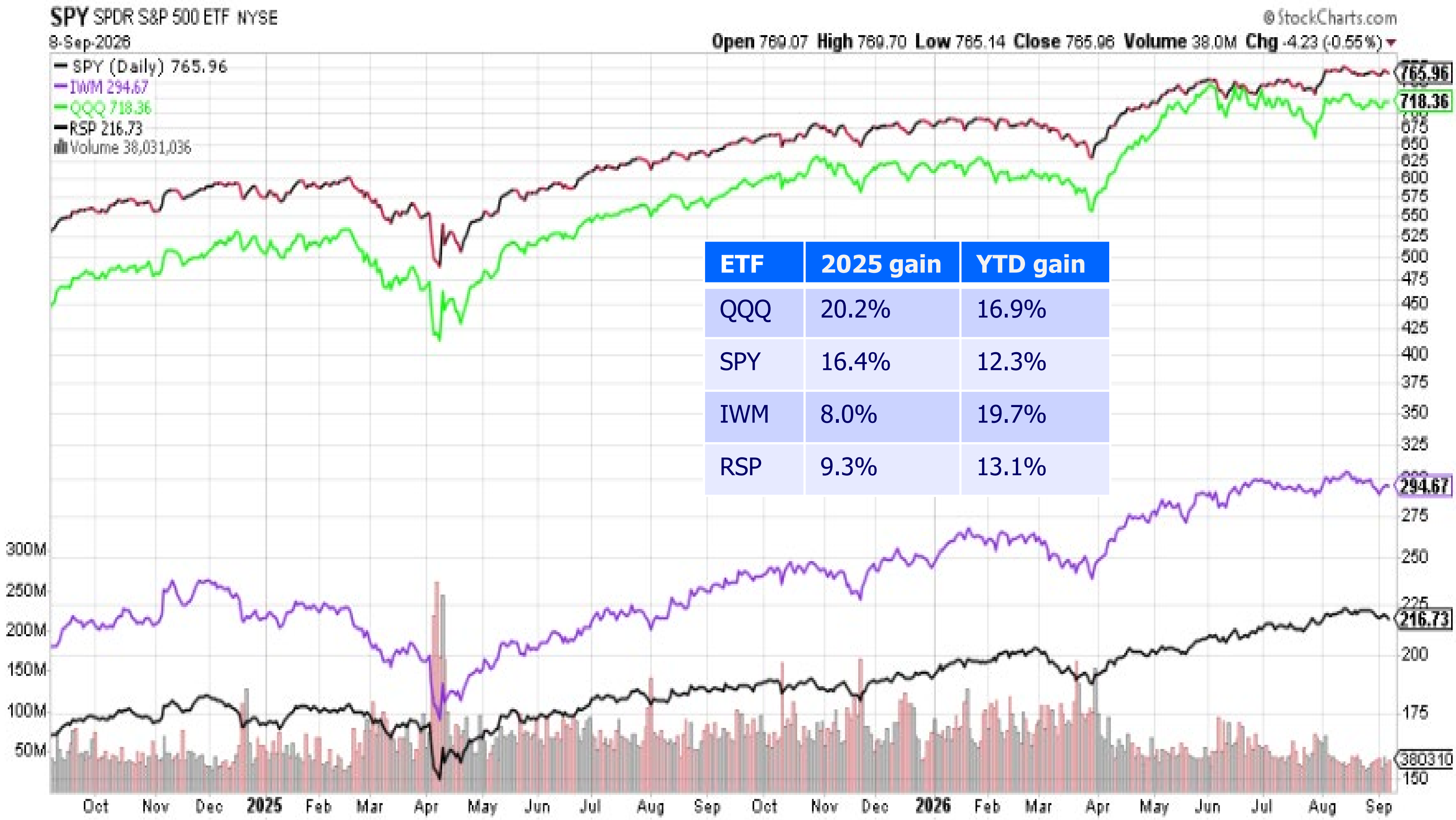
BB(20,2.0) 7615.40 - 7704.72 - 7794.04
Volume undef
High on 6/2/2026
7609.78
Factset fwd P/E = 21.2
Last high 8/13/2026
7798.99
Factset fwd P/E = 20.0

Market Breadth – another way



ETF	2025 gain	YTD gain
QQQ	20.2%	16.9%
SPY	16.4%	12.3%
IWM	8.0%	19.7%
RSP	9.3%	13.1%

A/D line on SPY, Russell 2000, NASDAQ and NASDAQ – 100 – no longer in the charts each week

https://www.marketinout.com/chart/market.php?breadth=advance-decline-line

Weekly Market direction

guywerner@verizon.net

COLUMNS C,D,E BY DAVE (IN THE NORTH) SMITH			DIST DAYS		DOW AVERAGE						S&P 500 TRIPLE SCREEN						NASDAQ TRIPLE SCREEN						$TNX YIELD	
	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	YIELD BP	Δ % DAY
SAT	08/22/26	FOR THE WEEK							-455	-0.85%					-111	-1.43%					-549	-2.05%		
SUN	08/23/26	YTD							5,214	10.85%					829	12.11%					2,939	12.65%		
MON	08/24/26	STILL WAGGING THE DOG AGAIN UNDER PRESSURE (40% - 60%)	2	3	P	F	P	53,417	140	0.26%	P	0	P	7,652	-22	-0.29%	P	F	F	25,980	-200	-0.76%	47.04	-0.72%
TUE	08/25/26	STILL WAGGING THE DOG AGAIN UNDER PRESSURE (40% - 60%)	2	3	P	F	P	53,577	160	0.30%	P	F	P	7,677	25	0.33%	P	F	0	26,151	171	0.66%	46.39	-1.40%
WED	08/26/26	STILL WAGGING THE DOG AGAIN UNDER PRESSURE (40% - 60%)	2	3	P	F	P	53,464	-113	-0.21%	P	F	P	7,675	-2	-0.03%	P	F	0	26,130	-21	-0.08%	46.64	0.54%
THUR	08/27/26	STILL WAGGING THE DOG AGAIN (60% - 80%)	2	3	P	F	P	53,569	105	0.20%	P	F	P	7,730	55	0.72%	P	F	P	26,541	411	1.57%	46.72	0.17%
FRI	08/28/26	STILL WAGGING THE DOG AGAIN (60% - 80%)	2	4	P	F	P	53,559	-10	-0.02%	P	F	P	7,711	-19	-0.25%	P	F	P	26,402	-139	-0.52%	47.20	1.02%
SAT	08/29/26	FOR THE WEEK							282	0.53%					37	0.48%					222	0.85%		-0.38%
SUN	08/30/26	YTD							5,496	11.43%					866	12.65%					3,161	13.60%		13.38%
MON	08/31/26	STILL WAGGING THE DOG AGAIN (60% - 80%)	3	4	P	F	F	53,186	-373	-0.70%	P	F	P	7,686	-25	-0.32%	P	0	P	26,370	-32	-0.12%	47.58	0.80%
TUE	09/01/26	STILL WAGGING THE DOG AGAIN UNDER PRESSURE (40% - 60%)	3	4	F	F	F	52,767	-419	-0.79%	P	F	F	7,631	-55	-0.72%	P	0	P	26,099	-271	-1.03%	47.96	0.79%
WED	09/02/26	STILL WAGGING THE DOG AGAIN UNDER PRESSURE (40% - 60%)	3	4	F	F	F	53,061	294	0.56%	P	F	P	7,666	35	0.46%	P	0	P	26,217	118	0.45%	47.96	0.00%
THUR	09/03/26	STILL WAGGING THE DOG AGAIN (60% - 80%)	3	4	P	F	P	53,685	624	1.18%	P	F	P	7,747	81	1.06%	P	0	P	26,584	367	1.40%	47.62	-0.71%
FRI	09/04/26	STILL WAGGING THE DOG AGAIN (60% - 80%)	3	4	P	F	P	53,414	-271	-0.50%	P	F	P	7,718	-29	-0.37%	P	0	P	26,506	-78	-0.29%	47.84	0.46%
SAT	09/05/26	FOR THE WEEK							-145	-0.27%					7	0.09%					104	0.39%		1.36%
SUN	09/06/26	YTD							5,351	11.13%					873	12.75%					3,265	14.05%		14.92%
MON	09/07/26	MARKET CLOSED			P	F	P	53,414	0	0.00%	P	F	P	7,718	0	0.00%	P	0	P	26,506	0	0.00%	47.84	0.00%
TUE	09/08/26				F	F	F	52,786	-628	-1.18%	P	F	0	7,673	-45	-0.58%	P	0	P	26,421	-85	-0.32%	48.06	0.46%

Market Summary – Stockcharts®

Stockcharts.com → Main Screen → Market Analysis
New feature – Market Summary

U.S. Dollar

9% depreciation in the US dollar in 2025
0.3% drop YTD 2026
Next support is 5 to 8% lower.

<u>A drop in the dollar</u>

- Positive for Big tech
- Negative for reducing inflation from commodities
- Headwind for foreign investors in US equities
- Tailwind for US investors to invest abroad.

First Class – Sept. 9th

- Class Introduction
- Market Update
- This Week's Topic
  - What's different in investing in retirement?

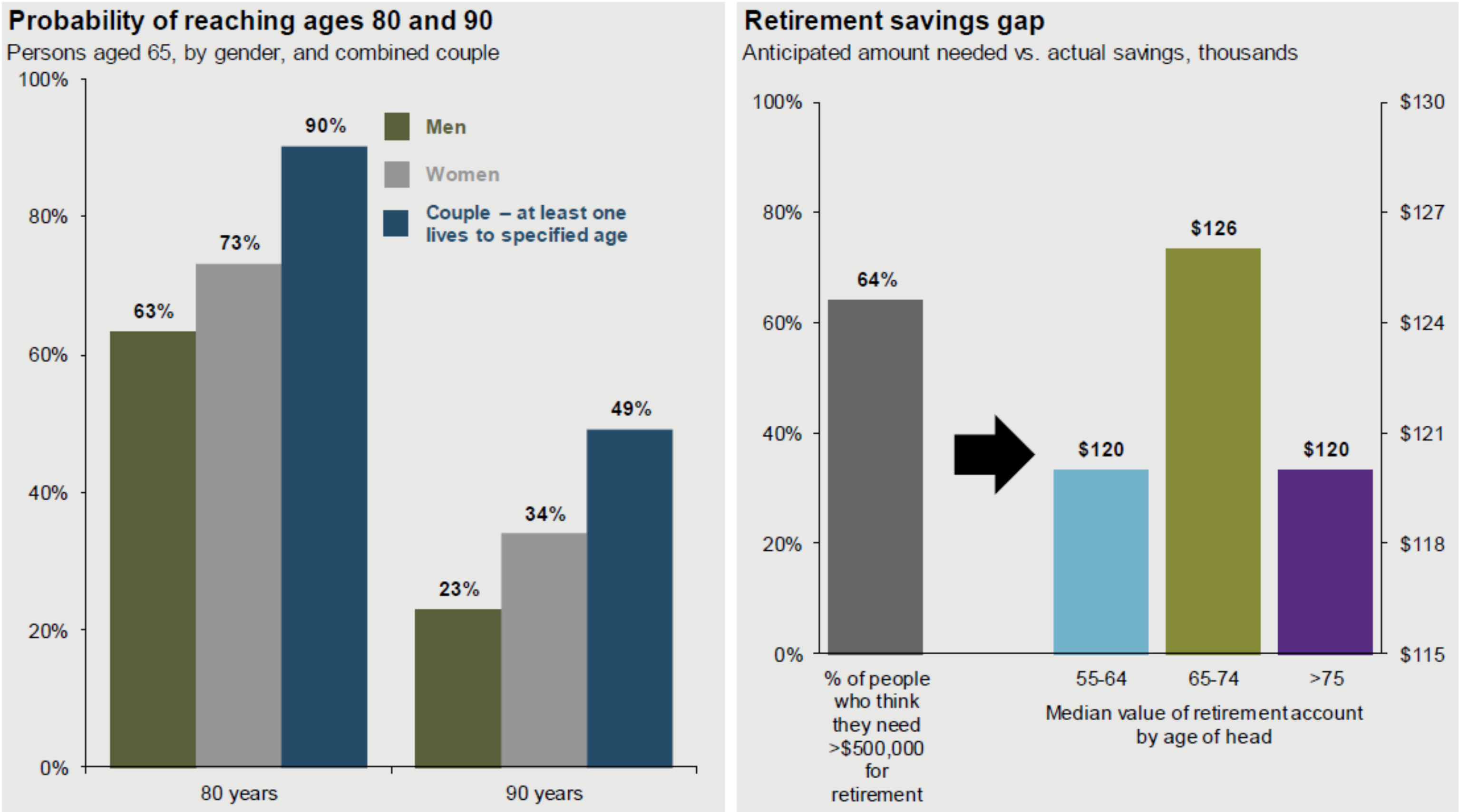
Investing in Retirement

- Prior to retirement – Accumulation phase
- After retirement
  - Protect and grow the investment portfolio
  - Use the portfolio to produce income for current expenses
  - Draw down the principal as needed and in a way that does not exhaust it prematurely.
- 3 unknowns
  - How long will we live?
  - How much will we need to spend? – *Controlling spending is important*
  - What return will your portfolio earn at the risk you are willing to take?

Producing income from your investment portfolio is relevant
Sequence of return risk is relevant

Life expectancy and retirement

Investing principles



Source: J.P. Morgan Asset Management; (Left) SSA 2016 Life Tables; (Right) 2017 Retirement Confidence Survey, Employee Benefit Research Institute and Greenwald & Associates; 2016 Survey of Consumer Finances, Federal Reserve.
EBRI survey was conducted from January 6, 2017 to January 13, 2017 through online interviews with 1,671 individuals (1,082 workers and 589 retirees) ages 25 and older in the United States.
Guide to the Markets – U.S. Data are as of August 31, 2019.

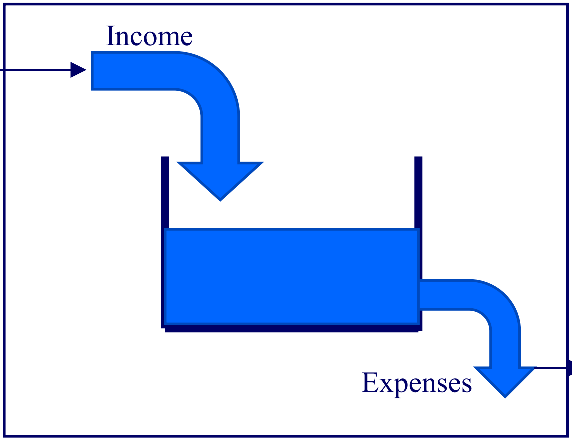
J.P.Morgan Asset Management

62 Social Security 2025 Trustees Report https://www.ssa.gov/oact/STATS/table4c6.html
American Academy of Actuaries – Longevity Illustrator https://www.longevityillustrator.org/

If you retire at 65 expect at least one spouse to need money from your nest egg for 25 to 30 years

Does your income cover expenses ?

- Pensions
- Social Sec.
- Salaries
- Income and capital gains from taxable accounts



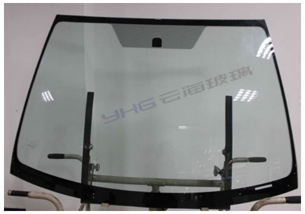
Essential Fixed Expenses
- Rent / Mortgage
- Medical Insurance
- Debt payments – Auto etc.

Essential Variable Expenses
- Taxes
- Food
- Transportation
- Out of Pocket Medical Expenses
- Household needs
- Communications – Phone, cable, web

Discretionary Expenses
- Fun money
    - zero is not real / sustainable

Savings

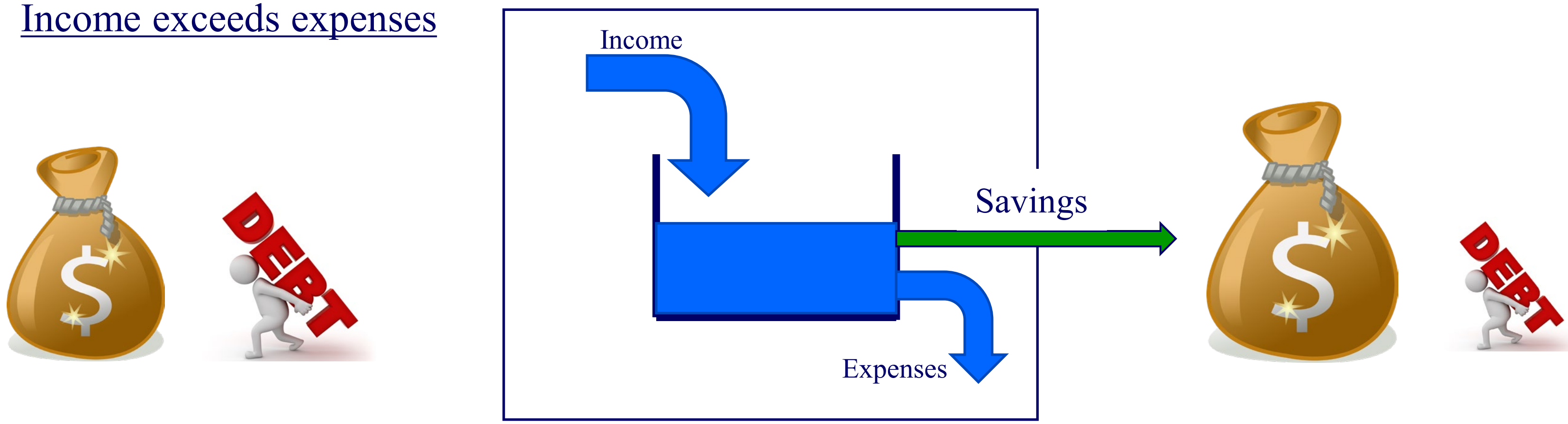
Yesterday & Today



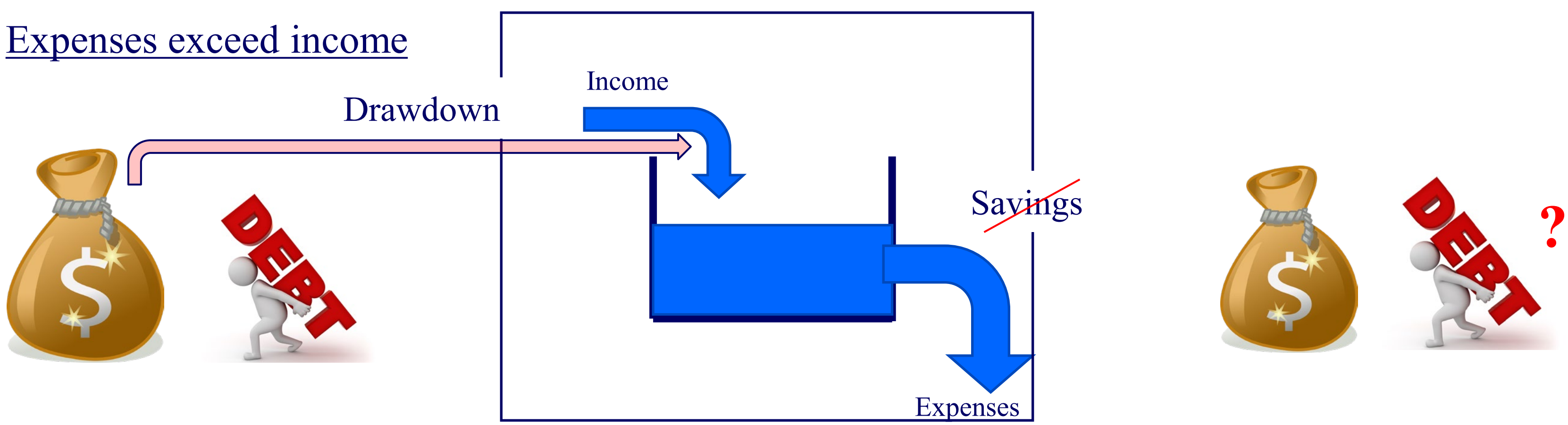
Near Future

Adding to or drawing from assets ?

Income exceeds expenses



Expenses exceed income



Why is income relevant

- Typical Portfolio drawdown recommendations – 4% per year.
  - 4% - based on prior YE balance (variable) – begins to break down if your portfolio must last more than 25 years
  - Depends on your specific situation and the expected market returns
- If your portfolio produces income, you need to draw down less of the principal to meet your needs
  - Helps in a down market – you are forced to sell less.
  - Helps in a up market – you have more money growing.

Sequence of Return Risk?

Year	Return	$500,000
2000	-9.0%	$454,841
2001	-11.8%	$400,943
2002	-22.0%	$312,872
2003	28.4%	$401,589
2004	10.7%	$444,731
2005	4.8%	$466,232
2006	15.6%	$539,022
2007	5.5%	$568,586
2008	-36.6%	$360,755
2009	25.9%	$454,317
2010	14.8%	$521,652
2011	2.1%	$532,598
2012	15.9%	$617,231
2013	32.1%	$815,641
2014	13.5%	$925,951
2015	1.4%	$938,719
2016	11.8%	$1,049,235
2017	21.6%	$1,276,302

Return Reversed	$500,000
21.6%	$608,206
11.8%	$679,810
1.4%	$689,184
13.5%	$782,392
32.1%	$1,033,893
15.9%	$1,198,185
2.1%	$1,223,327
14.8%	$1,404,638
25.9%	$1,768,934
-36.6%	$1,122,347
5.5%	$1,183,905
15.6%	$1,368,743
4.8%	$1,434,914
10.7%	$1,589,064
28.4%	$2,039,656
-22.0%	$1,591,624
-11.8%	$1,403,020
-9.0%	$1,276,302

Sequence of Return Risk

This Time...

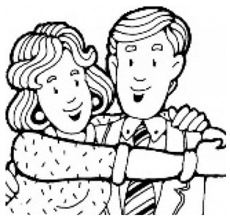
Assume $20,000 Withdrawals Each Year

Year	Return	$500,000
2000	-9.0%	$434,841
2001	-11.8%	$363,313
2002	-22.0%	$263,508
2003	28.4%	$318,227
2004	10.7%	$332,414
2005	4.8%	$328,484
2006	15.6%	$359,769
2007	5.5%	$359,502
2008	-36.6%	$208,095
2009	25.9%	$242,065
2010	14.8%	$257,942
2011	2.1%	$243,355
2012	15.9%	$262,025
2013	32.1%	$326,253
2014	13.5%	$350,377
2015	1.4%	$335,209
2016	11.8%	$354,673
2017	21.6%	$411,428

Return Reversed	$500,000
21.6%	$588,206
11.8%	$637,456
1.4%	$626,246
13.5%	$690,942
32.1%	$893,046
15.9%	$1,014,956
2.1%	$1,016,253
14.8%	$1,146,873
25.9%	$1,424,317
-36.6%	$883,696
5.5%	$912,164
15.6%	$1,034,577
4.8%	$1,064,593
10.7%	$1,158,960
28.4%	$1,467,592
-22.0%	$1,125,220
-11.8%	$971,884
-9.0%	$864,105

Story of two couples

Mr. & Mrs. Blue **Mr. & Mrs. Green**



- Each couple retires at 65 with a life expectancy of one surviving to 90
- Each has an IRA with $500,000 invested in the S&P 500
- Each couple withdraws $20,000 (4%) per year to help with expenses
- Mr. & Mrs. Green retire in 1990
- Mr. & Mrs. Blue retire in 2000

Two Very Different Retirements

Mr. & Mrs. Green

Year	Return	$500,000
1990	-3.1%	$464,700
1991	30.2%	$585,179
1992	7.5%	$609,009
1993	10.0%	$649,727
1994	1.3%	$638,368
1995	37.2%	$855,841
1996	22.7%	$1,029,946
1997	33.1%	$1,350,858
1998	28.3%	$1,713,691
1999	20.9%	$2,051,681

Mr. & Mrs. Blue

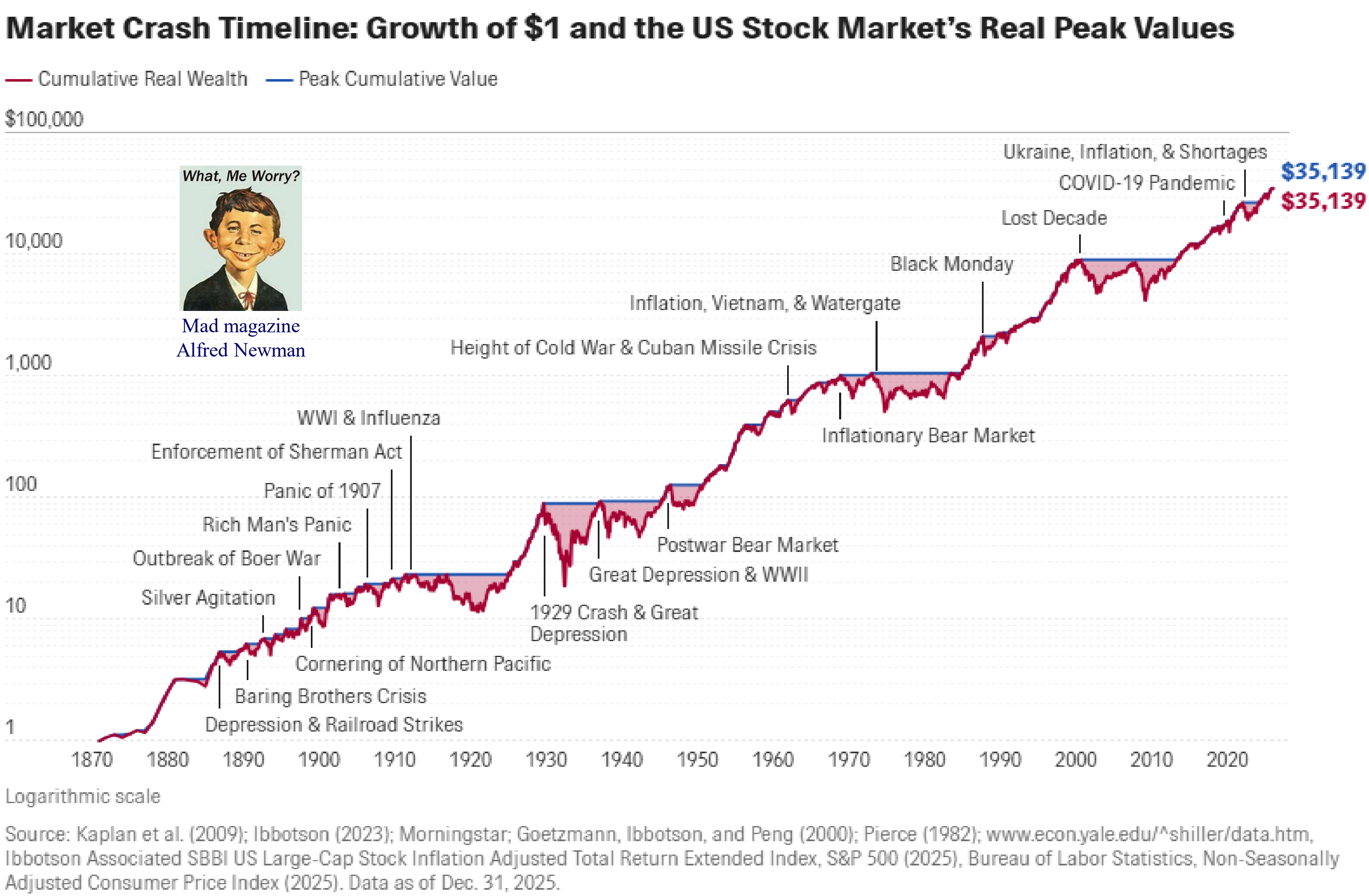
Year	Return	$500,000
2000	-9.0%	$434,850
2001	-11.9%	$363,320
2002	-22.0%	$263,499
2003	28.4%	$318,227
2004	10.7%	$332,405
2005	4.8%	$328,460
2006	15.6%	$359,732
2007	5.5%	$359,446
2008	-36.6%	$208,068
2009	25.9%	$242,041

Portfolio drops to half in the first 3 years

- Sequence of return (SRR)
- Drawdown in down markets.
- Controlling withdrawals helps manage SRR

Both couples have 10-15 more years of retired life

The big picture



Source – Morningstar article – Emelia Fredrick – 1/21/2026 https://www.morningstar.com/economy/what-weve-learned-150-years-stock-market-crashes

Asset class returns

2011 - 2025																	
Ann.	Vol.	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	YTD
Large Cap 14.1%	Small Cap 20.3%	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 25.0%	EM Equity 34.4%	Comdty. 32.1%
Small Cap 9.5%	EM Equity 17.5%	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%	Small Cap 11.5%	DM Equity 31.9%	EM Equity 24.4%
REITs 7.8%	REITs 16.4%	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%	Asset Alloc. 10.0%	Large Cap 17.9%	Small Cap 20.0%
Asset Alloc. 7.3%	DM Equity 15.7%	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%	High Yield 9.2%	Asset Alloc. 15.8%	REITs 14.5%
DM Equity 7.1%	Comdty. 15.4%	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%	EM Equity 8.1%	Comdty. 15.8%	DM Equity 14.2%
High Yield 5.7%	Large Cap 14.7%	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%	Comdty. 5.4%	Small Cap 12.8%	Large Cap 13.1%
EM Equity 4.2%	Asset Alloc. 10.1%	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%	Cash 5.3%	High Yield 12.1%	Asset Alloc. 11.2%
Fixed Income 2.4%	High Yield 9.1%	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%	REITs 4.9%	Fixed Income 7.3%	High Yield 2.9%
Cash 1.5%	Fixed Income 4.6%	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%	DM Equity 4.3%	Cash 4.3%	Cash 2.4%
Comdty. -1.1%	Cash 0.9%	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%	Fixed Income 1.3%	REITs 2.3%	Fixed Income -0.3%

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.) represent the period from 12/31/2010 to 12/31/2025. Please see the disclosure page at the end for index definitions. All data represent total return for stated period. Past performance is no guarantee of future results.
Guide to the Markets – U.S. Data are as of August 31, 2026.

J.P.Morgan
ASSET MANAGEMENT

Investing Principles

The dirty dozen – 12 worst recent downturns

#	Start Date	S&P 500 Value at top	Low Date	S&P 500 Value at bottom	Days down	Total Loss	Recovery back to start Date	Days to recover
1	7/17/1998	1186.75	8/31/1998	957.28	45	-19.3%	11/23/1998	84
2	4/29/2011	1363.61	10/3/2011	1099.23	157	-19.4%	2/23/2012	143
3	9/20/2018	2930.75	12/24/2018	2351.10	95	-19.8%	4/26/2019	123
4	7/16/1990	368.95	10/11/1990	295.46	87	-19.9%	2/13/1991	125
5	1/4/2022	4793.54	10/12/2022	3577.03	281	-25.4%	1/19/2024	464
6	11/28/1980	140.52	8/12/1982	102.42	622	-27.1%	11/3/1982	83
7	8/25/1987	336.77	12/4/1987	223.92	101	-33.5%	7/25/1989	599
8	2/19/2020	3386.15	3/23/2020	2237.40	33	-33.9%	8/18/2020	148
9	11/29/1968	108.37	5/26/1970	69.29	543	-36.1%	3/6/1972	650
10	1/11/1973	120.24	10/3/1974	62.28	630	-48.2%	7/15/1980	2112
11	3/24/2000	1527.46	10/9/2002	776.76	929	-49.1%	5/30/2007	1694
12	10/9/2007	1565.15	3/9/2009	676.53	517	-56.8%	3/28/2013	1480

Second Class – Sept. 16th

- Market Update
- Macro Review
  - Dr. Robert Fry shares his take on the US economy
- Questions

BI Webinar – Sept. 16th

- Free webinar – 9/16/26, 7.30 to 9pm, on-line
  - You do not have to be a BI member.
- What can you teach young adults about – How Money Works, How Wealth is Created, and Where the traps are

Description

- This webinar is designed to equip you with material that can
- be shared with young adults to educate them on basic Financial Literacy. It
- shows practical real-world knowledge about personal finance, and tools to
- make informed decisions. It also shows where the traps are in the digital
- world and why and how to avoid them. The material is targeted to
- educate teenagers - high school juniors and seniors but also applies to
- young adults in college and beyond.

- To register

https://attendee.gotowebinar.com/register/1110333478307928671

Thanks !!

- Happy Investing !!

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Please use this email address only for all class related matters

- **Class website**
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