

Investing for Successful Retirement

UD Osher – OLLI

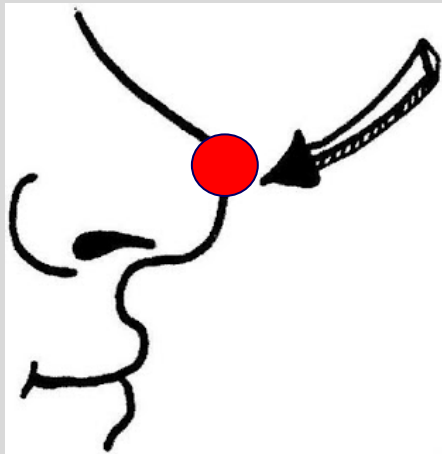
Spring 2025

□ **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.

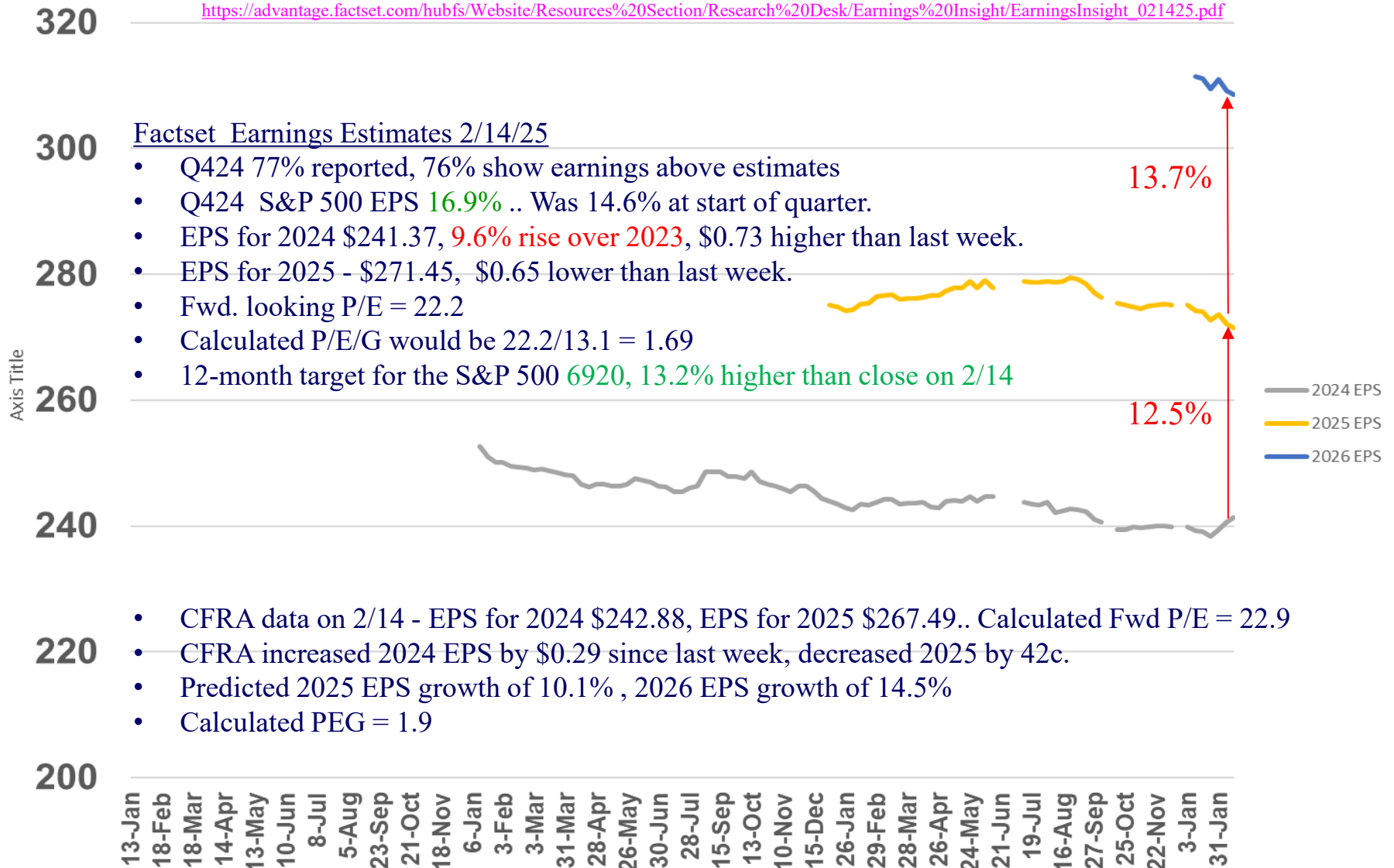
Form your own opinion, make your own investment decisions.

Third Class – Feb. 19th

- Market Update
- Bonds
 - The basics – What is a bond and how does it work?
 - The yield curve
 - Equity Risk Premium
- Questions

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

https://advantage.factset.com/hubfs/Website/Resources%20Section/Research%20Desk/Earnings%20Insight/EarningsInsight_021425.pdf



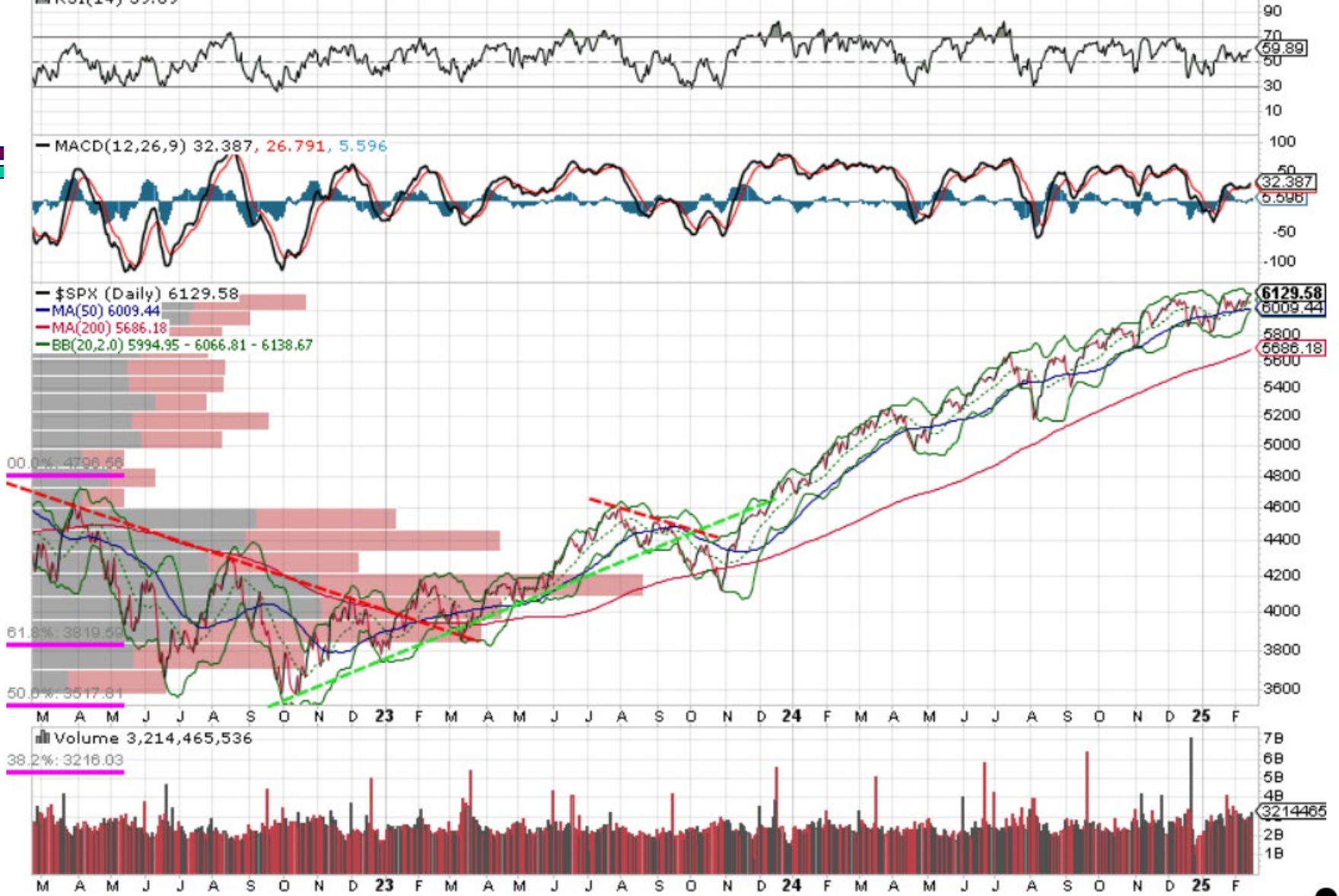
\$SPX S&P 500 Large Cap Index INDX

18-Feb-2025

© StockCharts.com

Open 6121.60 High 6129.63 Low 6099.51 Close 6129.58 Volume 3.2B Chg +14.95 (+0.24%) ▲

▲ RSI(14) 59.89

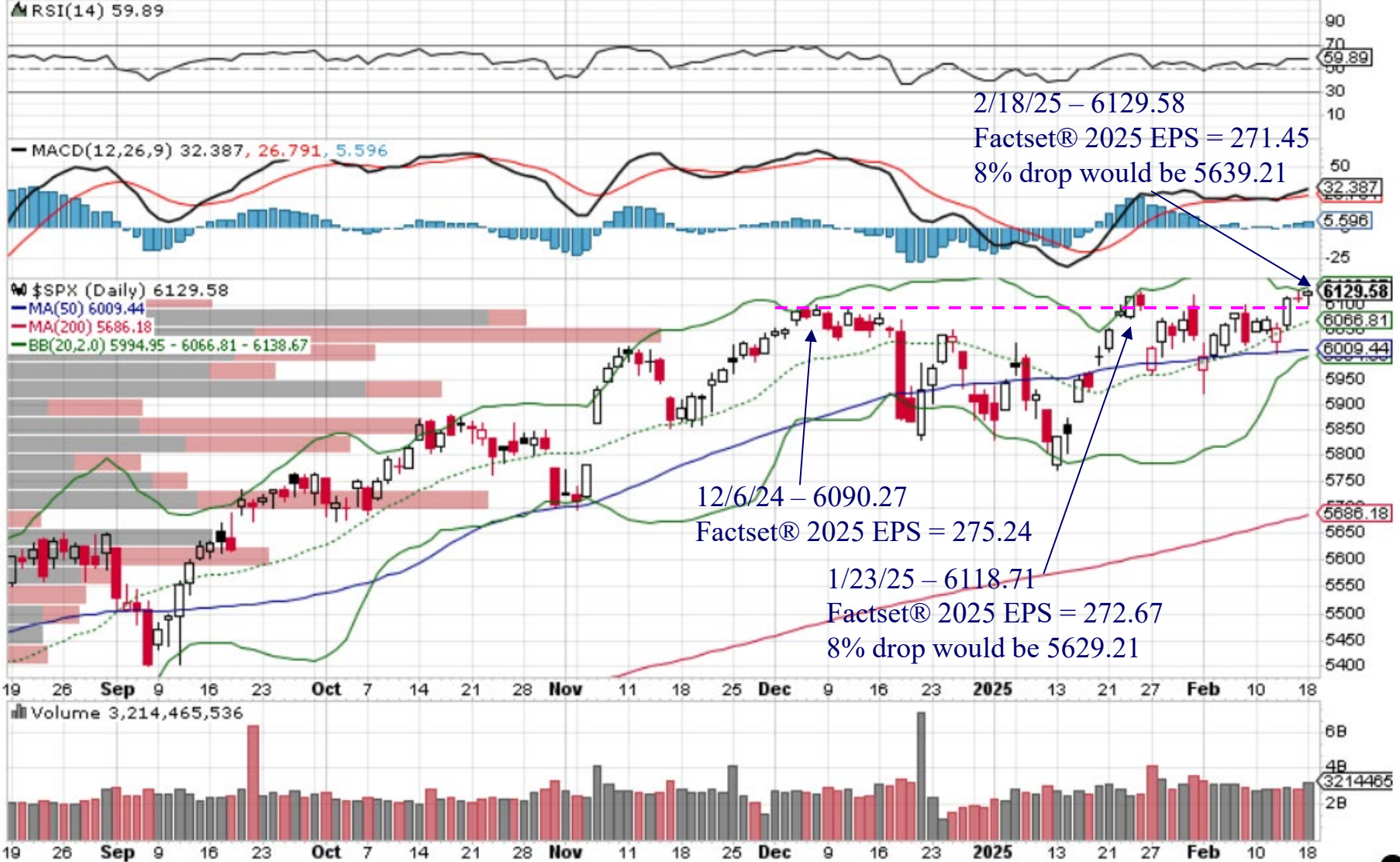


\$SPX S&P 500 Large Cap Index INDX

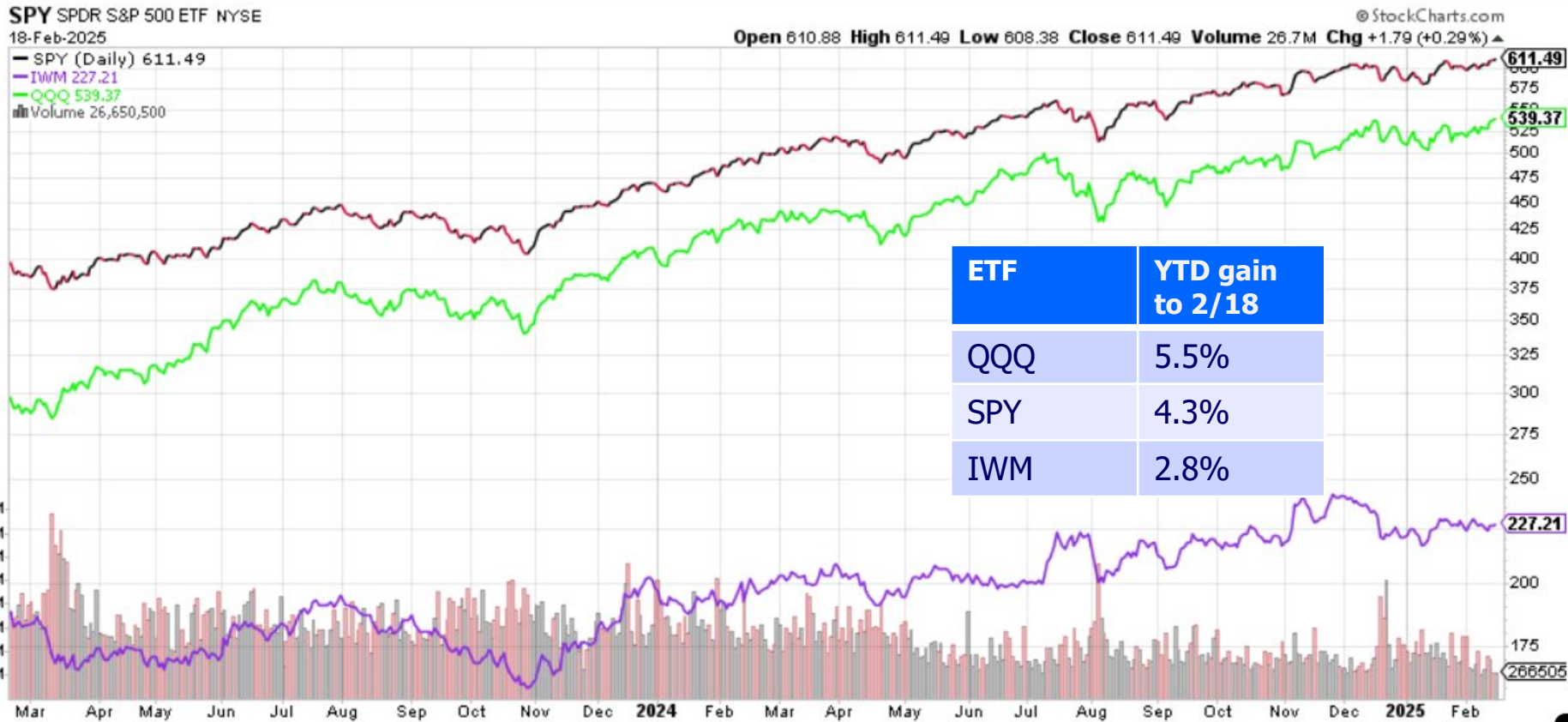
18-Feb-2025

Open 6121.80 High 6129.63 Low 6099.51 Close 6129.58 Volume 3.2B Chg +14.95 (+0.24%) ▲

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Market Breadth – another way



\$NYAD NYSE - Advance-Decline Issues INDX

18-Feb-2025

Open 56584.00 High 56584.00 Low 56584.00 Close 56584.00 Chg +485.00 (+0.86%) ▲

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This is NOT investment advice

Weekly market direction

Prof. Guy Werner

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COLUMNS CD&E ARE FROM IBD AND ARE PROVIDED BY DAVE (IN THE NORTH) SMITH

COLUMNS C,D AND E ARE FROM IBD AND PROVIDED BY DAVE (IN THE NORTH) SMITH			DISTRIBUTION DAYS		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
SAT	02/01/25	FOR THE WEEK							-61	-1.00%					-327	-1.64%
SUN	02/02/25	YTD							159	2.70%					317	1.64%
MON	02/03/25	CONFIRMED UP (60% -80%) YES TARIFF	5	8	P	P	F	5,994	-46	-0.76%	0	F	F	19,391	-236	-1.20%
TUE	02/04/25	CONFIRMED UP (60% -80%) NO TARIFF	5	8	P	P	P	6,037	43	0.72%	0	F	P	19,654	263	1.36%
WED	02/05/25	CONFIRMED UP (60% -80%)	4	7	P	P	P	6,061	24	0.40%	P	F	P	19,692	38	0.19%
THUR	02/06/25	CONFIRMED UP (60% -80%)	3	6	P	P	P	6,083	22	0.36%	P	P	P	19,791	99	0.50%
FRI	02/07/25	CONFIRMED UP (60% -80%)	3	6	P	0	P	6,025	-58	-0.95%	0	0	F	19,523	-268	-1.35%
SAT	02/08/25	FOR THE WEEK							-15	-0.25%					-104	-0.53%
SUN	02/09/25	YTD							144	2.45%					213	1.10%
MON	02/10/25	CONFIRMED UP (60% -80%)	2	6	P	0	P	6,066	41	0.68%	P	0	P	19,714	191	0.98%
TUE	02/11/25	CONFIRMED UP (60% -80%)	2	6	P	P	P	6,068	2	0.03%	P	0	P	19,643	-71	-0.36%
WED	02/12/25	CONFIRMED UP (60% -80%)	3	6	P	0	P	6,051	-17	-0.28%	P	0	P	19,649	6	0.03%
THUR	02/13/25	CONFIRMED UP (80% -100%)	3	5	P	P	P	6,115	64	1.06%	P	P	P	19,945	296	1.51%
FRI	02/14/25	CONFIRMED UP (80% -100%)	3	5	P	P	P	6,114	-1	-0.02%	P	P	P	20,026	81	0.41%
SAT	02/15/25	FOR THE WEEK							89	1.48%					503	2.58%
SUN	02/16/25	YTD							233	3.96%					716	3.71%
MON	02/17/25	PRESIDENTS DAY (NOT FOR FOTUS)			P	P	P	6,114	0	0.00%	P	P	P	20,026	0	0.00%
TUE	02/18/25	CONFIRMED UP (80% -100%)	3	5	P	P	P	6,129	15	0.25%	P	P	P	20,041	15	0.07%

https://drive.google.com/drive/folders/0B6Qc_gipshXMelkzQ245d2R1eTQ?resourcekey=0-5pWglNqaJPJ12L2qYurMWg

TLT – 20+ yr U.S. Treasury ETF

TLT iShares 20+ Year Treasury Bond ETF Nasdaq GM

18-Feb-2025

© StockCharts.com

Open 88.54 High 88.84 Low 88.04 Close 88.10 Volume 29.4M Chg -1.05 (-1.18%)

TLT (Daily) 88.10
Volume 29,407,440



U.S. Dollar

\$USD US Dollar - Cash Settle FOREX

19-Feb-2025 1:23am

\$USD (Weekly) 107.03

MA(40) 104.84

Volume undef

Open 106.70 High 107.09 Low 106.70 Last 107.03 Chg +0.46 (+0.43%)

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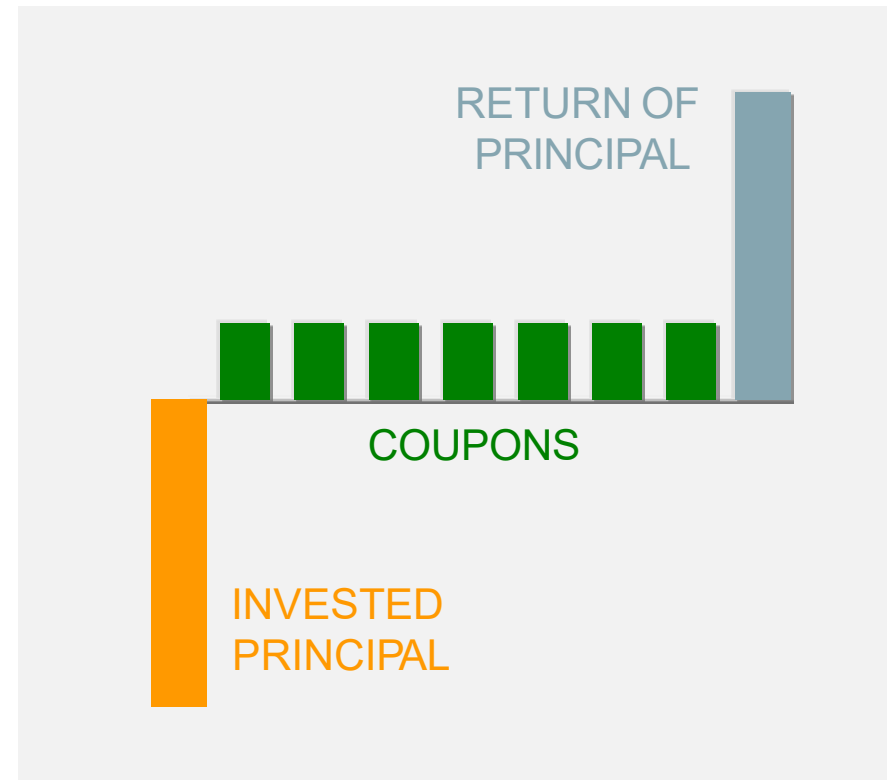


Third Class – Feb. 19th

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 - The basics – What is a bond and how does it work?
 - The yield curve
 - Equity Risk Premium
- Questions

What is a CD or a Bond?

- Investor loans money to an issuer under a contract.
 - Defined interest rate
 - Defined duration.
- Issuer pays contracted interest to the investor periodically.
- Issuer pays back the invested principal to the investor upon maturity.



For illustrative purposes only

Bond Definitions - resource

□ U.S. Treasury Bond

□ <https://www.investopedia.com/terms/t/treasurybond.asp>

□ Corporate Bond

□ <https://www.investopedia.com/terms/c/corporatebond.asp>

□ Municipal Bond

□ <https://www.investopedia.com/terms/m/municipalbond.asp>

□ General Obligation Bond

□ <https://www.investopedia.com/terms/g/generalobligationbond.asp>

□ Revenue Bond

□ <https://www.investopedia.com/terms/r/revenuebond.asp>

Why do most people buy Bonds ?

- They want Relative Safety (vs. stocks for example)
- They want less Volatility
- They want “Fixed Income” (regular income)
- They want tax-efficiency
- They want to preserve capital
- They want to minimize big losses
- They want better annualized yields than savings accounts

Risks in a Bond

- **Prepayment risk** - The possibility that a bond issue will be paid off earlier than expected is known as prepayment risk. This often occurs through a call provision.
 - Reinvestment Risk – Low in a rising rate environment.
 - Loss of planned return over call/issue price
- **Default Risk** - The possibility that a bond issuer will not be able to make interest or principal payments when they are due.
- **Interest Rate risk** - Interest rate risk is the possibility that interest rates will be different than the investor expected over the life of the bond. If interest rates decline significantly, you face the possibility of prepayment as firms exercise call features. If interest rates rise, you risk holding a bond with below-market rates that may lose value.

Bond Credit Ratings – three major agencies

Moody's		S&P		Fitch		Rating description		
Long-term	Short-term	Long-term	Short-term	Long-term	Short-term			
Aaa	P-1	AAA	A-1+	AAA	F1+	Prime	Investment-grade	
Aa1		AA+		AA+		High grade		
Aa2		AA		AA		Upper medium grade		
Aa3		AA-		AA-				
A1	A+	A-1	A+	F1				
A2	A	A-2	A	F2				
A3	A-		A-					
Baa1	P-2	BBB+	A-3	BBB+	F3	Lower medium grade		
Baa2	P-3	BBB		BBB				
Baa3		BBB-		BBB-				
Ba1	Not prime	BB+	B	BB+	B	Non-investment grade speculative		
Ba2		BB		BB				
Ba3		BB-		BB-				
B1		B+		B+		Highly speculative		
B2		B		B				
B3		B-		B-				
Caa1		Not prime	CCC+	C	CCC	C	Substantial risks	Non-investment grade AKA high-yield bonds AKA junk bonds
Caa2			CCC				Extremely speculative	
Caa3			CCC-				Default imminent with little prospect for recovery	
Ca			CC					
C	C							
/	D	/	DDD	/	In default			
/			DD	/				
/			D	/				

Increasing Effort needed to manage risk

Increasing Risk

Credit Rating Descriptions

Moody's	S&P	Fitch	Credit worthiness ^{[7][8]}
Aaa	AAA	AAA	An obligor has extremely strong capacity to meet its financial commitments.
Aa1	AA+	AA+	An obligor has very strong capacity to meet its financial commitments. It differs from the highest-rated obligors only to a small degree.
Aa2	AA	AA	
Aa3	AA-	AA-	
A1	A+	A+	An obligor has strong capacity to meet its financial commitments but is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligors in higher-rated categories.
A2	A	A	
A3	A-	A-	
Baa1	BBB+	BBB+	An obligor has adequate capacity to meet its financial commitments. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitments.
Baa2	BBB	BBB	
Baa3	BBB-	BBB-	
Ba1	BB+	BB+	An obligor is less vulnerable in the near term than other lower-rated obligors. However, it faces major ongoing uncertainties and exposure to adverse business, financial, or economic conditions which could lead to the obligor's inadequate capacity to meet its financial commitments.
Ba2	BB	BB	
Ba3	BB-	BB-	
B1	B+	B+	An obligor is more vulnerable than the obligors rated 'BB', but the obligor currently has the capacity to meet its financial commitments. Adverse business, financial, or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitments.
B2	B	B	
B3	B-	B-	
Caa	CCC	CCC	An obligor is currently vulnerable , and is dependent upon favourable business, financial, and economic conditions to meet its financial commitments.
Ca	CC	CC	An obligor is currently highly vulnerable .
	C	C	The obligor is currently highly vulnerable to nonpayment. May be used where a bankruptcy petition has been filed.
C	D	D	An obligor has failed to pay one or more of its financial obligations (rated or unrated) when it became due.

US Treasuries

- Bills – short term one year or less
 - Zero coupon Bonds
- Notes – medium term 2 to 10 years
 - Interest paid semiannually
- Bonds – long term 10+ years
 - Interest paid semiannually

- All interest is taxed federally
 - Tax free in most states including DE, PA and NY
- Muni bond interest is tax free federally and in the state the muni lies in
- Corporate bond income is taxed both federally and in states

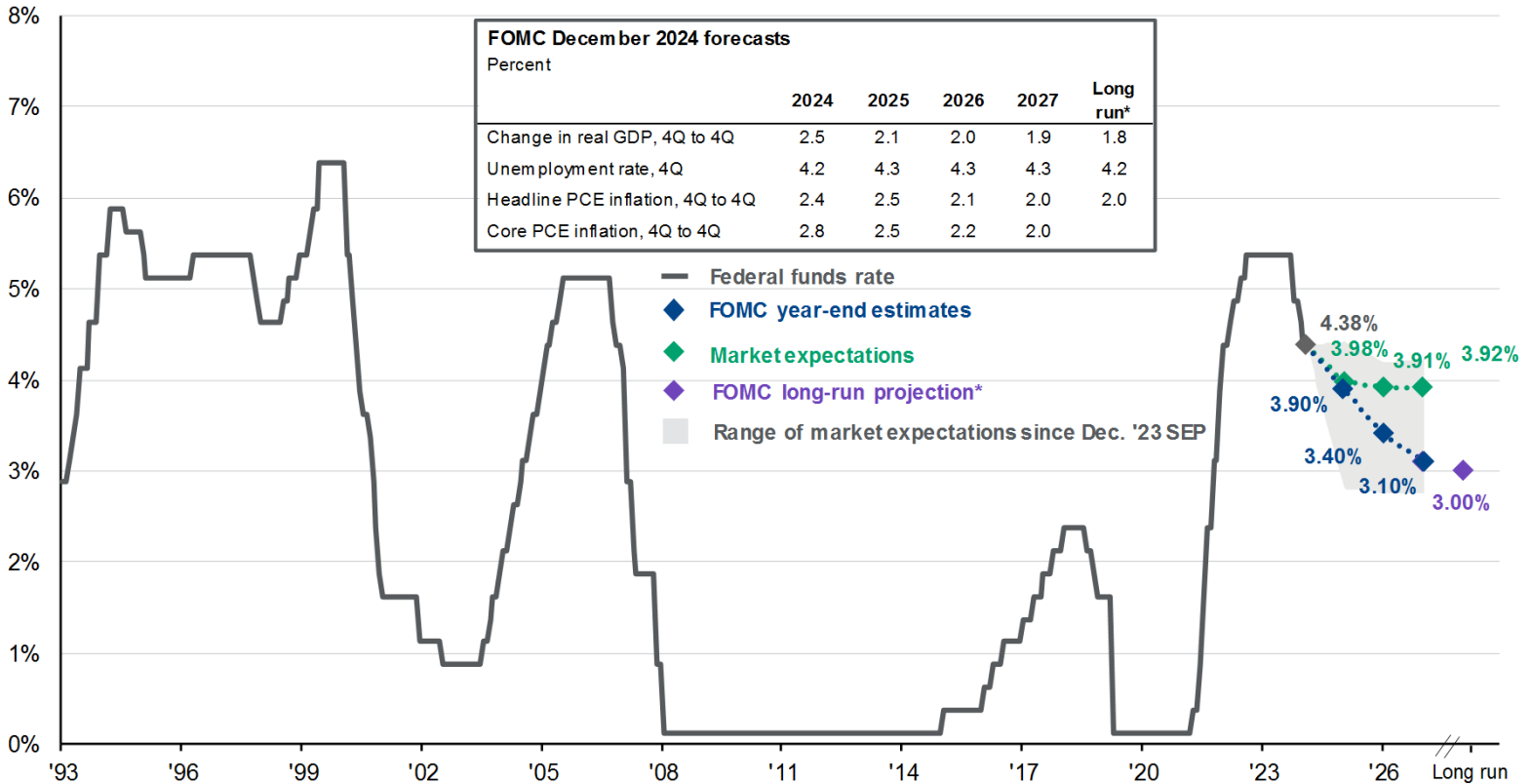


The Fed and interest rates

Fixed Income

Federal funds rate expectations

FOMC and market expectations for the federal funds rate



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

Market expectations are based off of USD Overnight Index Swaps. *Long-run projections are the rates of growth, unemployment and inflation to which a policymaker expects the economy to converge over the next five to six years in absence of further shocks and under appropriate monetary policy. Forecasts are not a reliable indicator of future performance. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated. *Guide to the Markets – U.S.* Data are as of January 31, 2025.

Bond values & Interest Rates

- Suppose you bought a bond last year with a coupon rate of 5%, when market rate of interest was also 5%, and you paid \$1,000 per bond.
- Next year, market rate of interest has risen to 6%.

Obviously, a buyer would not pay \$1,000 for a bond yielding 5% when the buyer could buy new \$1,000 bonds with current coupon rates of 6%. The buyer would expect to get at least 6%, which means that this bond will sell at a discount (less than \$1,000) in order to be competitive with current bonds.
- Conversely, if market rates of interest fall to 4%.

Obviously, a seller would not sell the bond for \$1,000 for a bond yielding 5% when the buyer would have to pay \$1000 to buy new bonds with current coupon rates of 4%. The seller would expect to get at least 5%, which means that this bond will sell at a premium (more than \$1,000) in order to be competitive with current bonds.
- This is relevant if you buy and sell a bond. It is not relevant if you buy a bond at issue and hold it to maturity.
 - If you buy after issue – Premium / Discount and YTM are relevant.



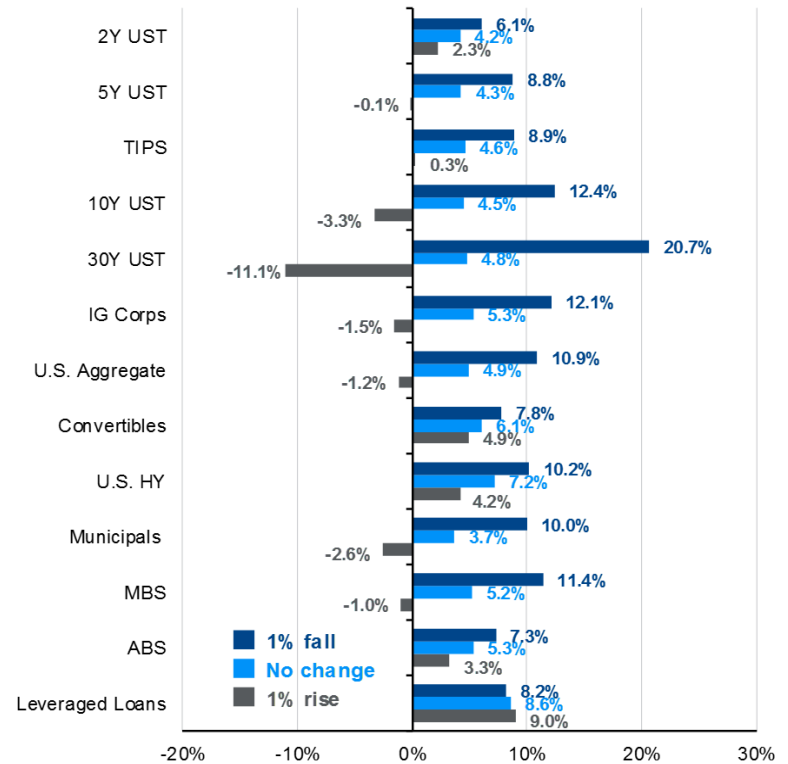
Fixed income market dynamics

Fixed Income

U.S. Treasuries	Yield		Return	Avg. Maturity	Correlation to 10-year	Correlation to S&P 500
	1/31/2025	12/31/2024	2025			
2-Year	4.22%	4.25%	0.43%	2 years	0.74	0.01
5-Year	4.36%	4.38%	0.63%	5	0.94	-0.01
TIPS	2.01%	2.13%	1.29%	7.3	0.73	0.34
10-Year	4.58%	4.58%	0.64%	10	1.00	-0.07
30-Year	4.83%	4.78%	0.16%	30	0.93	-0.11
Sector						
U.S. Aggregate	4.86%	4.91%	0.53%	8.4	0.90	0.26
IG Corps	5.30%	5.33%	0.55%	10.5	0.69	0.48
Convertibles	6.13%	6.13%	2.80%	-	-0.03	0.86
U.S. HY	7.20%	7.49%	1.37%	4.7	0.09	0.79
Municipals	3.68%	3.74%	0.50%	13.5	0.74	0.26
MBS	5.19%	5.27%	0.51%	8.1	0.81	0.27
ABS	5.34%	5.38%	0.51%	2.3	0.41	0.24
Leveraged Loans	8.61%	8.68%	0.66%	4.6	-0.22	0.63

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 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 are as of January 31, 2025.

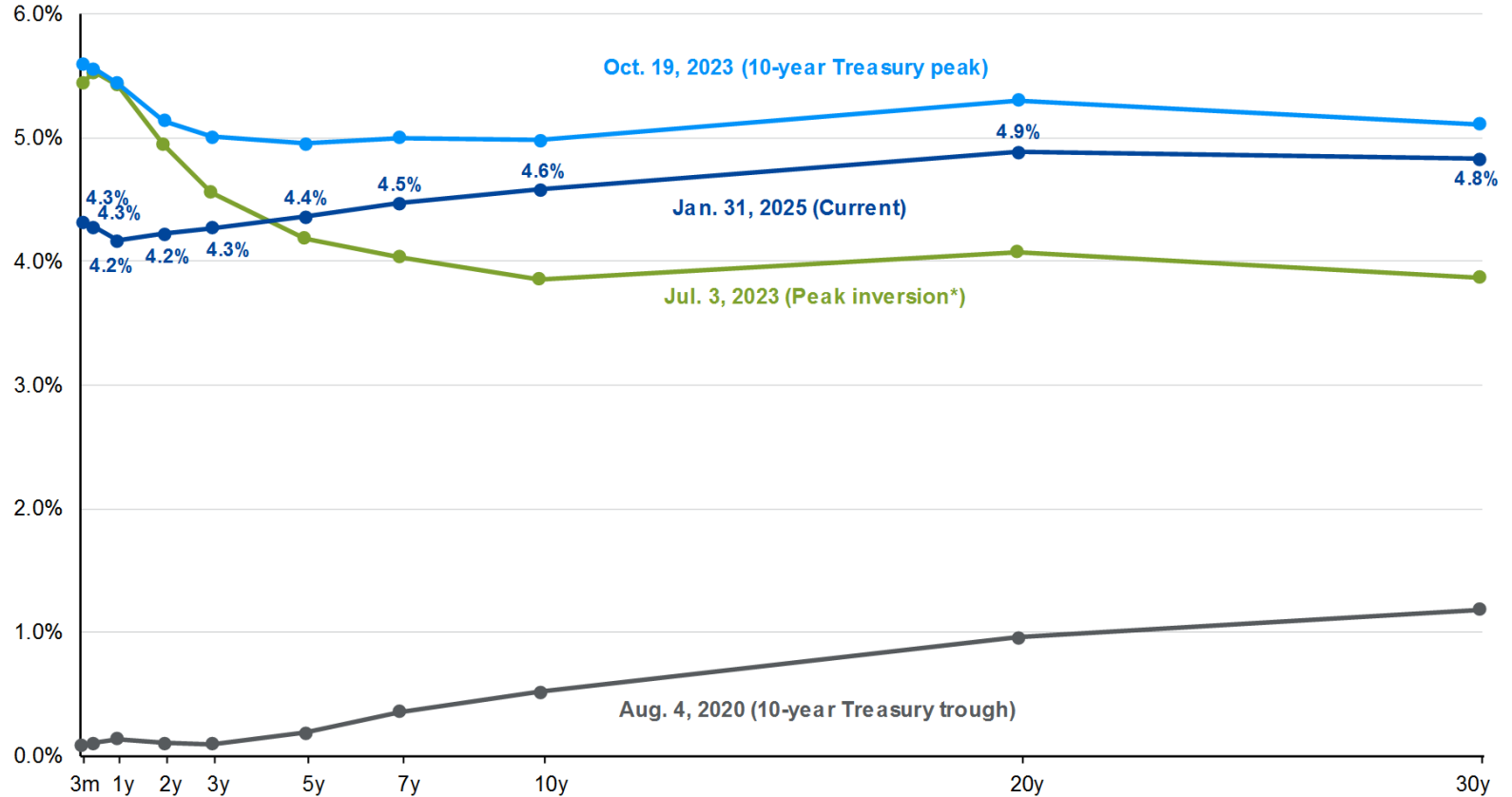


Yield curve

GTM U.S. 36

Fixed Income

U.S. Treasury yield curve



Source: FactSet, Federal Reserve, J.P. Morgan Asset Management. Analysis references data back to 2020. *Peak inversion is measured by the spread between the yield on a 10-year Treasury and 2-year Treasury.
 Guide to the Markets - U.S. Data are as of January 31, 2025.

J.P.Morgan
 ASSET MANAGEMENT

Current Fixed Income Yields – 2/16/2025

Schwab website data

S&P 500 dividend yield on 2/14 = 1.22%
from GuruFocus

	3MO	6MO	9MO	1YR	18MO	2YR	3YR	4YR	5YR	10YR	20YR	30YR+
CDs	4.37	4.34	4.32	4.55	4.25	4.35	4.55	4.50	4.60	5.10	--	--
Bonds												
U.S. Treasuries	4.34	4.37	4.31	4.29	4.27	4.26	4.27	4.31	4.35	4.47	4.78	4.71
U.S. Treasury Zeros	3.56	3.90	3.99	4.13	4.20	4.23	4.32	4.36	4.42	4.62	4.91	4.57
Government Agencies	3.90	4.14	4.17	4.30	4.27	4.32	4.24	4.71	4.93	5.48	5.65	5.84
Corporates (AAA)	--	3.83	3.98	3.95	4.17	4.17	4.22	--	4.55	--	5.03	5.47
Corporates (AA)	3.82	4.03	4.20	4.18	4.24	4.25	4.33	4.36	4.77	4.96	5.41	5.70
Corporates (A)	3.97	4.10	4.27	4.70	4.64	4.53	4.68	4.87	5.45	5.80	6.10	5.97
Municipals (AAA)	2.58	2.67	2.63	2.75	2.95	2.83	2.84	3.01	2.93	4.18	4.52	4.59
Municipals (AA)	3.18	2.82	2.83	2.87	3.17	2.93	3.65	3.73	3.62	4.19	4.84	4.74
Municipals (A)	3.18	2.82	2.98	2.89	3.21	3.03	3.65	3.73	3.62	4.53	4.84	4.74

Bond - Investment Return

- Interest (Quarterly, Semi-Ann, Annual etc.)
- Capital Gain or Loss (at sale or maturity)

- The sum of both cash flows, over time =
total annualized Yield

Understanding Yields

- Coupon Rate – set at initial offering
- Your Yield depends on what price you buy the bond at, if you buy it in the secondary market after issue and how long you hold it.
 - Price of the bond
 - Your cost includes accrued interest
- Yield to Maturity
- Yield to Worst
- Yield to Call
 - Depends on the terms of the call

<https://www.investopedia.com/articles/investing/022516/understanding-different-types-bond-yields.asp>

Bond Yields

US Treasury examples – similar maturities 2034 - 2035

Different COUPON
(annual interest paid)

Similar Yield to Maturity

Description	Coupon	Maturity	Quantity	Price	Min	Max	YTM	YTW1	Accrued Ir	Estimated Total
US Treasury 4.375% 05/15/2034, 91282CKQ3	4.375	5/15/2034	250	99.3125	250	90000	4.466	--	2,900.55	251,181.80
US Treasury TIP 1.875% 07/15/2034, 91282CLE9	1.875	7/15/2034	150	99.17	150	7000	1.972	--	273.47	149,873.40
US Treasury 3.875% 08/15/2034, 91282CLF6	3.875	8/15/2034	250	95.406	250	9000	4.474	--	107.04	238,622.04
US Treasury 4.25% 11/15/2034, 91282CLW9	4.25	11/15/2034	25	98.20313	10	490	4.479	--	281.77	24,832.55
US Treasury TIP 2.125% 01/15/2035, 91282CML2	2.125	1/15/2035	150	100.857	150	8000	2.029	--	308.16	151,583.07
US Treasury 4.625% 02/15/2035, 91282CMM0, Recently Issued	4.625	2/15/2035	250	101.1875	250	124500	4.476	--	127.76	253,096.51
US Treasury 4.5% 02/15/2036, 912810FT0	4.5	2/15/2036	200	101.106	200	9000	4.372	--	99.45	202,311.45

CUSIP

Different prices

WHY? In the bottom yellow highlighted bond, annual yield is mostly from interest capital loss at maturity.

In the upper bond, annual yield from interest is smaller, but a portion of yield comes from capital gain at maturity.

US 5-year TIPS

- Principal is adjusted by CPI rate annually.
- Earn coupon on higher principal value.
- Phantom tax – best in IRAs
- Less liquid than normal treasuries
- Do not have the same \$10K per year limit as I-bonds
- Great sources for information on tips
 - Investopedia
 - Treasurydirect.gov
 - TIPSladder.com
 - Your brokers website?

5 Year TIPS Yield 1.728 -0.076 (-0.0760%)



How can you buy bonds?

Buy Individual Bonds

- US Treasury bonds can be bought through a Treasury Direct account ([treasurydirect.gov](https://www.treasurydirect.gov)) that you set up.
- All bonds (Treasury, Corporate, Municipal etc) can be bought through a broker investment account or an IRA or Roth IRA
- All bonds (Treasury, Corporate, Municipal etc) can be bought through a managed broker investment account for a fee. (usually less than 0.5%)

Buy Bond Funds (Mutual Funds or ETFs)

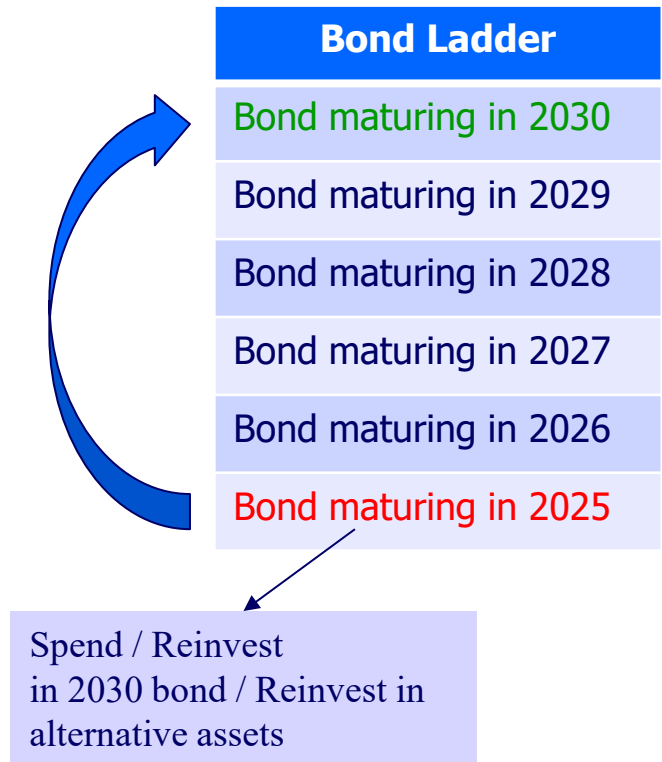
- Very important to understand the prospectus/strategy of the fund
- Both broad-market index or managed ETFs exist. (FBND, VGLT, MINT)
- Active bond funds do better in volatile markets with changing interest rates
- Fixed maturity year – Invesco “Bullet shares”
- Hard to assess the premium or discount to par value of the portfolio
- You can not control how other investors in the fund act. They may sell before maturity for example

Buying bonds

- Stocks are identified with a ticker symbol ... Bonds with a CUSIP
- Fidelity, TD Ameritrade and other brokers have tools to select bonds.
- Work with a bond expert on the fixed income desk at your broker.
- Understand that there are commissions and bid/ask spreads. Buying bonds at best prices needs some work to understand what options you have with the broker you use.
- Diversify
 - Not too much in any one bond.
 - Across bond types and industry groups within corporates.
 - Across maturity horizons ... short to long ... in ladders.
 - Buying high quality with the intent to hold to maturity minimizes variables / unknowns.

Bond Ladders

- ❑ Ladders can be built with various types of bonds – treasuries, TIPS, corporate bonds, target maturity bond ETFs
- ❑ Requires you to hold bonds to maturity
- ❑ Lowers interest rate risk
- ❑ Timeframe and amount invested
 - ❑ Your investment horizon
 - ❑ Your portfolio diversification needs
 - ❑ Your liquidity / income needs
- ❑ Taxable income in a brokerage account
- ❑ Tax deferred in an IRA
- ❑ Most brokers websites have a laddering tool
 - ❑ Investopedia
 - ❑ Perplexity.ai



Fourth Class – Feb. 26th

First External Speaker

- Outlook for the US Economy
 - Dr. Robert Fry

- I will not be there
 - Ron will introduce Dr. Fry and manage the class

Thanks !!

□ Happy Investing !!

□ **My EMail**

□ diyinvst@udel.edu

□ **Class website**

□ <http://udel.edu/~diyinvst>