

Investing for Successful Retirement

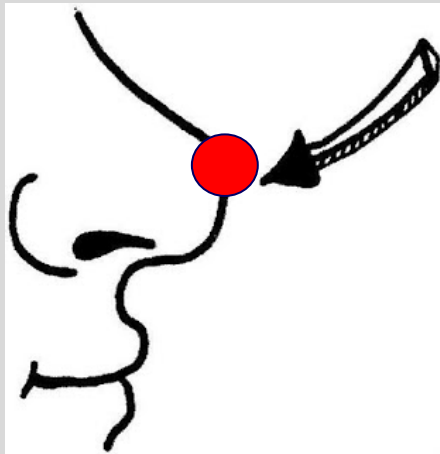
UD Osher – OLLI

Fall 2024

- **Rajeev A. Vaidya**
- **Ron Materniak**
- **Jane Roe-Fox**

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, Jane and I are not a financial advisors.

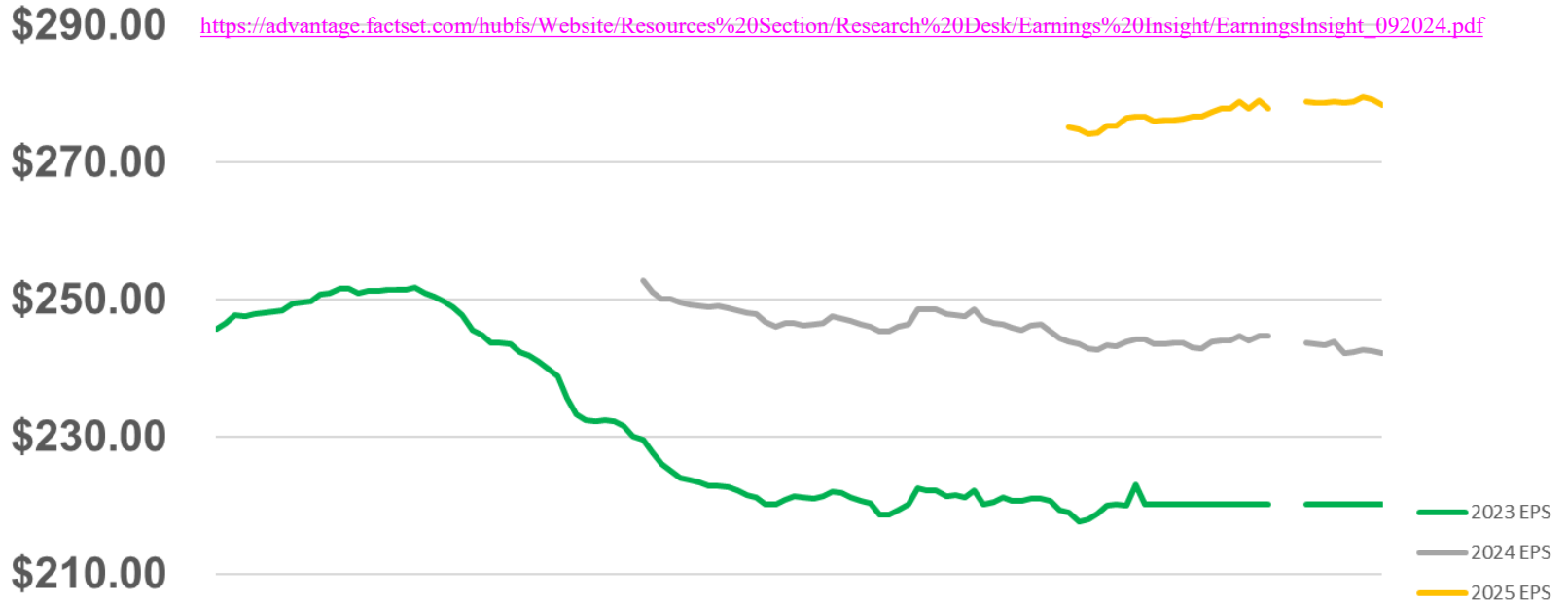
This course is for educational purposes only.

Form your own opinion, make your own investment decisions.

Fourth Class – Sept. 25th

- Market Update – Rajeev
- Bonds
 - What are they?
 - Why do they offer an interesting investment opportunity now?
- Homework
 - Go to perplexity.ai
 - Ask questions about bonds
 - Use that information to take our class discussion up a notch

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



Factset Earnings Estimates 9/20/2024

- Q324 S&P 500 EPS estimate 4.6% YOY growth
 - Drop of 0.3% from last week
 - Was 7.8% on June 30th
- EPS for 2024 **\$242.21, 40c lower** than last week. EPS for 2025 - **\$278.41, 85c lower** than last week
- Fwd. looking P/E = **21.4**, was 20.9 last week
- 12 month target for the S&P 500 **6280, flat vs week**
- CFRA data on 9/20 - EPS for 2024 **\$240.38 down 43c** from last week, for 2025 **\$275.66, down 92c**
- CFRA calculated P/E = 24.8 based on next 4 quarters. 20.7 based 2025 EPS.

13-Jan
18-Feb
18-Mar
14-Apr
13-May
10-Jun
8-Jul
5-Aug
23-Sep
21-Oct
18-Nov
6-Jan
3-Feb
3-Mar
31-Mar
28-Apr
26-May
30-Jun
28-Jul
15-Sep
13-Oct
10-Nov
15-Dec
26-Jan
29-Feb
28-Mar
26-Apr
24-May
21-Jun
19-Jul
16-Aug

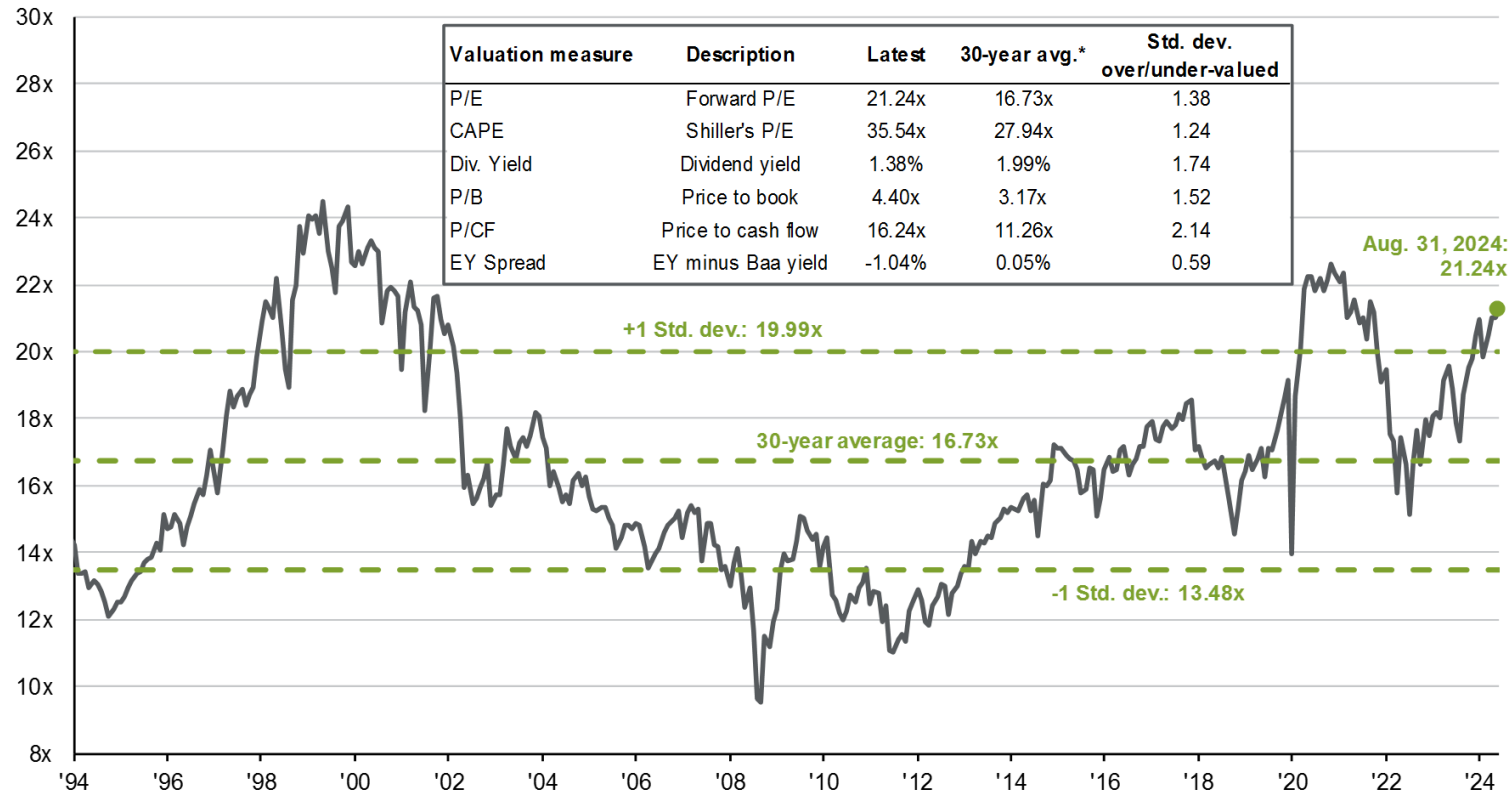


S&P 500 valuation measures

GTM | U.S. | 5

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 March 1994 and by FactSet since January 2022. 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 August 31, 2024.

J.P.Morgan
ASSET MANAGEMENT

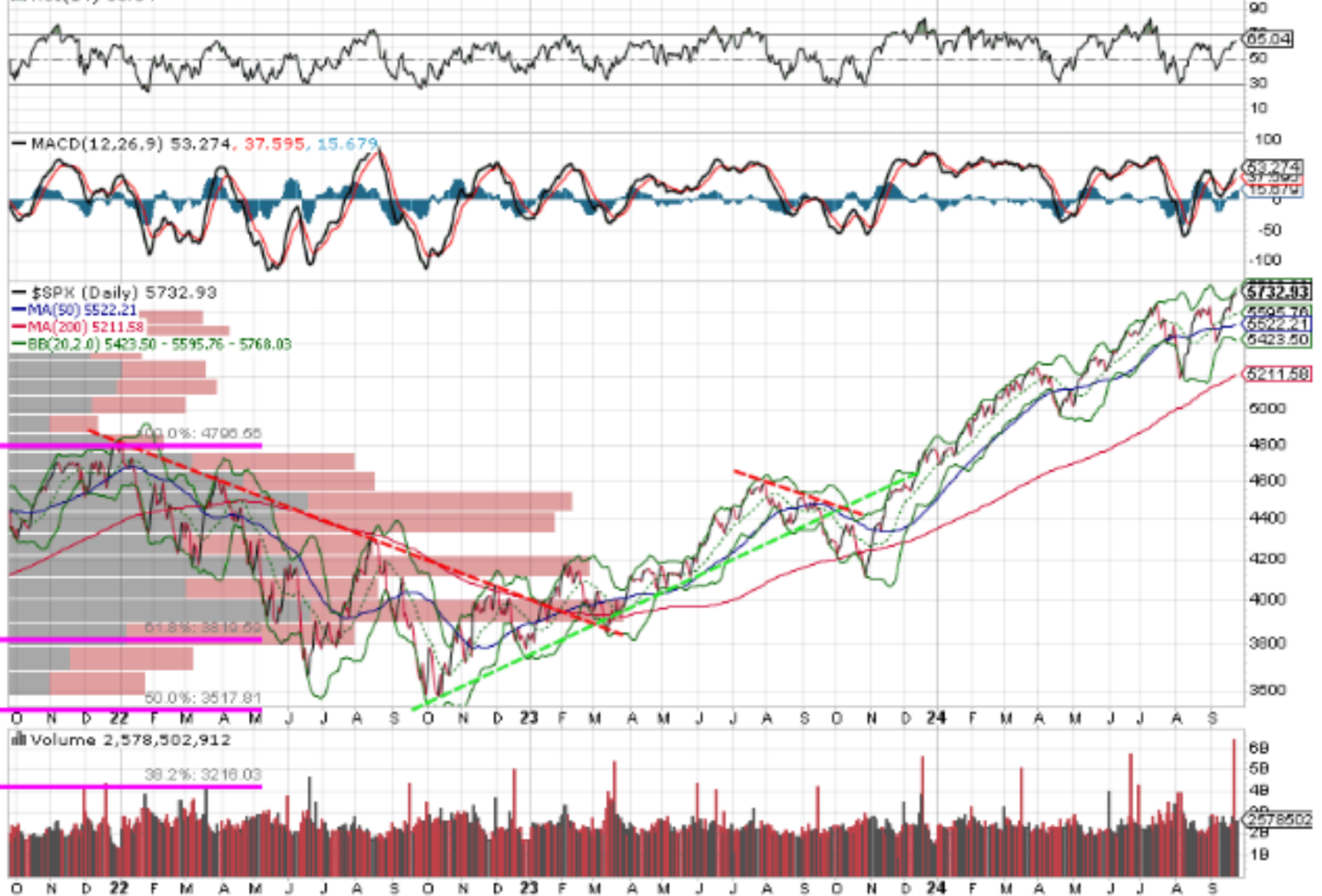
\$SPX S&P 500 Large Cap Index INDX

© StockCharts.com

24 Sep 2024

Open 5727.86 High 5735.32 Low 5698.99 Close 5732.93 Volume 2.6B Chg +14.96 (+0.25%) ▲

▲ RSI(14) 65.04



24 Sep 2024

Open 5727.86 High 5735.32 Low 5698.99 Close 5732.93 Volume 2.6B Chg +14.38 (+0.25%) ▲

▲ RSI(14) 65.04

— MACD(12,26,9) 53.274, 37.595, 15.679

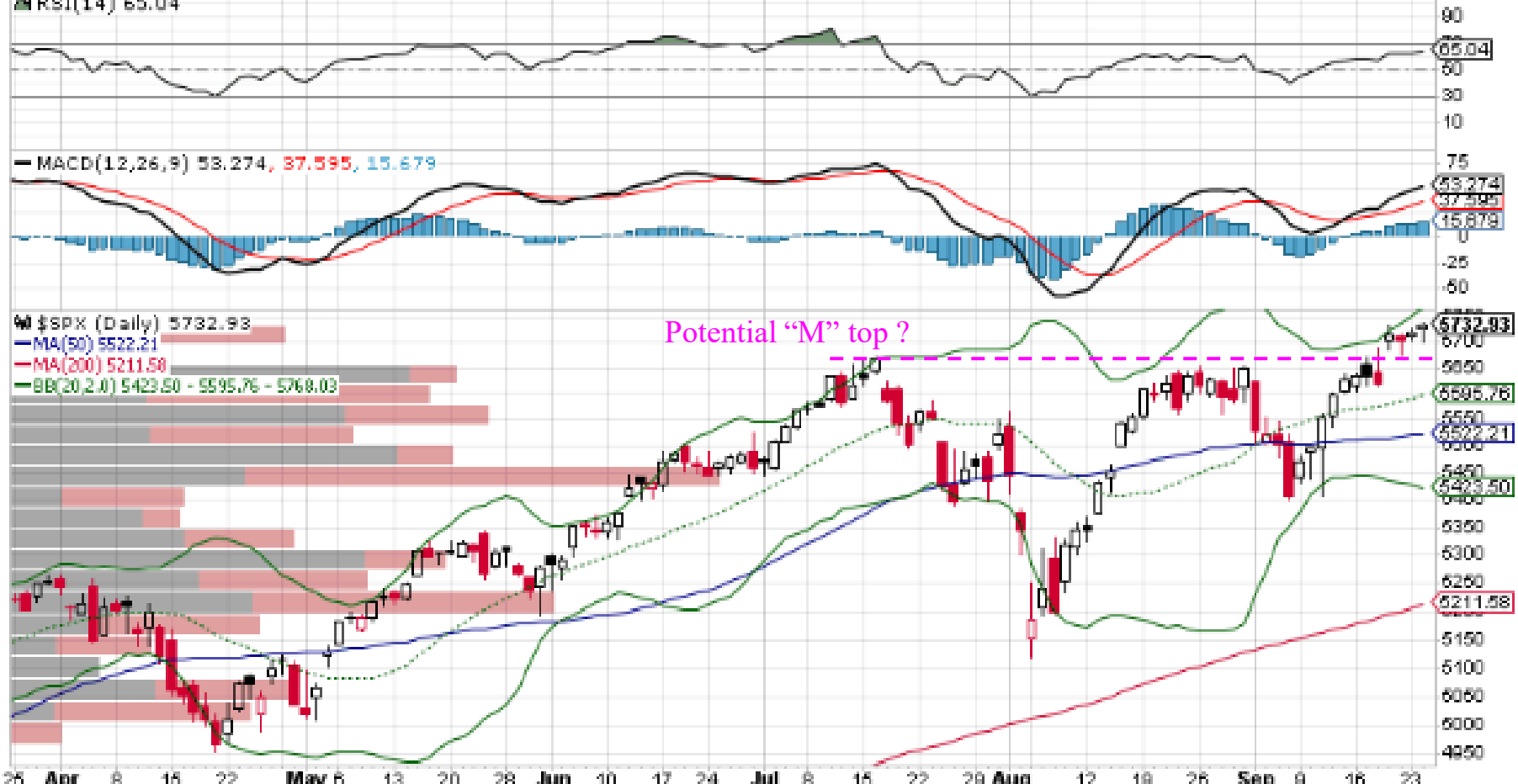
📊 \$SPX (Daily) 5732.93

— MA(50) 5522.21

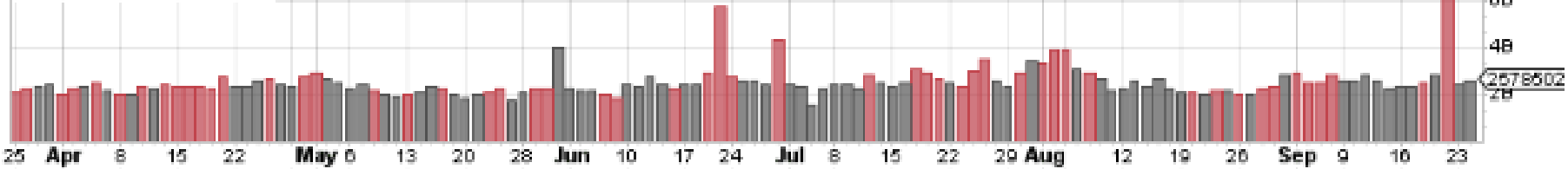
— MA(200) 5211.58

— BB(20,2.0) 5423.50 - 5595.76 - 5768.03

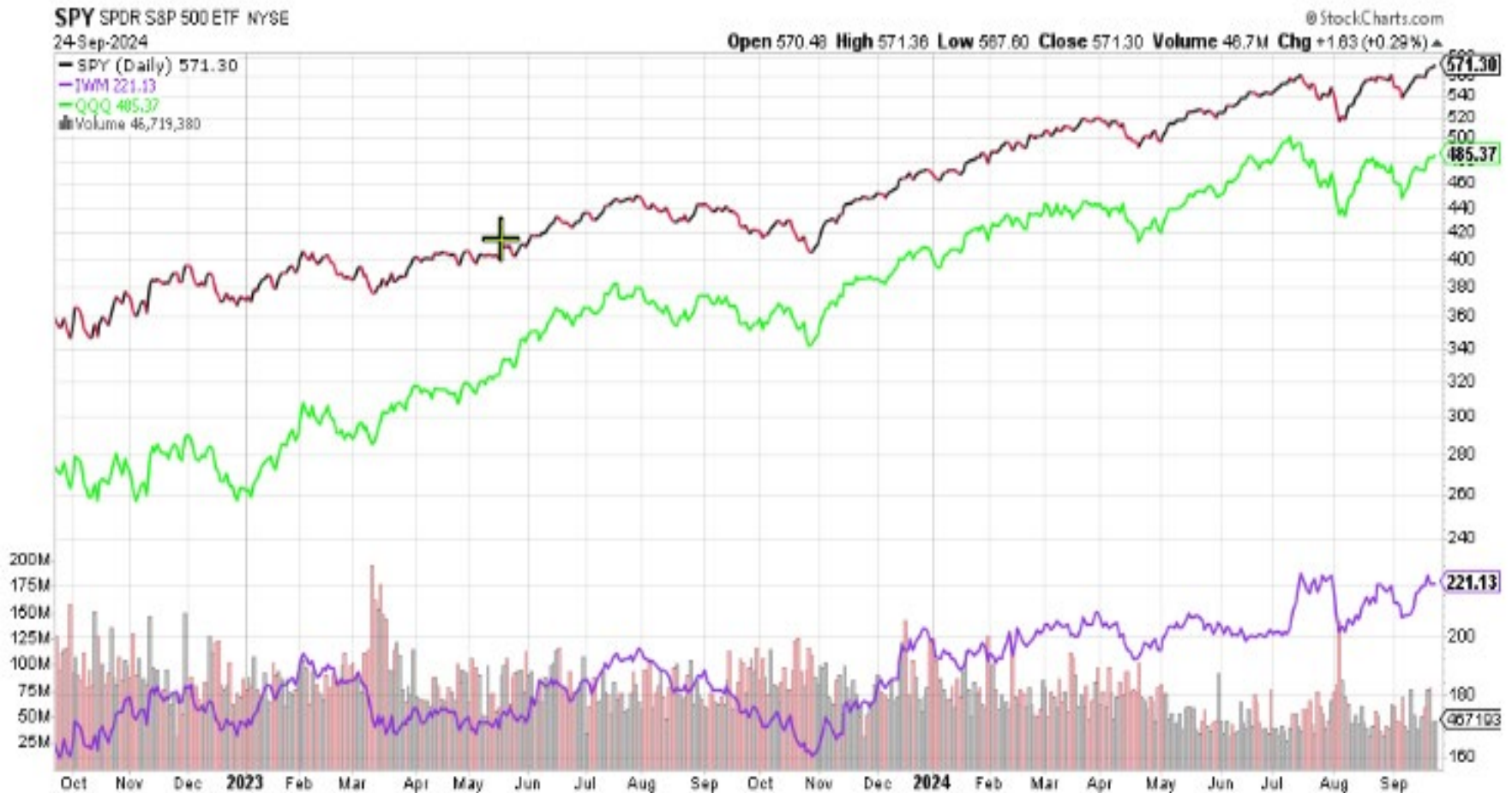
Potential "M" top ?



Volume 2.578,502,912



Market Breadth – another way



\$NYAD NYSE - Advance-Delay Issues INDX

24-Sep-2024

© StockCharts.com

Open 36680.00 High 36680.00 Low 36680.00 Close 36680.00 Chg +629.00 (+1.74%) ▲



-\$SPX 5732.93



This is NOT investment advice

Weekly market direction

Prof. Guy Werner

Guy.werner@verizon.net

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

		ANIL PARIKH's TRIPLE SCREEN 52 W DAILY HIGH SHOWN IN GREEN 52 W LOW SHOWN IN RED												
		DISTRIBUTION DAYS		SAP 500 TRIPLE SCREEN						NASDAQ TRIPLE SCI				
	DATE	MARKET PULSE (IBD)	SAP 500	NASDAQ	8-20 EMA	MACD	RSI	CLOSING	Δ	%CHANGE	8-20 EMA	MACD	RSI	CLOSING
SAT	09/14/24	FOR THE WEEK							218	4.03%				
SUN	09/15/24	YTD							857	17.97%				
MON	09/16/24	CONFIRMED UP (60% -80%)	3	4	P	P	P	5,633	7	0.12%	P	P	P	17,592
TUE	09/17/24	CONFIRMED UP (60% -80%)	4	5	P	P	P	5,634	1	0.02%	P	P	P	17,628
WED	09/18/24	CONFIRMED UP (60% -80%) FED SPEAK	4	6	P	P	P	5,618	-16	-0.28%	P	P	P	17,573
THUR	09/19/24	CONFIRMED UP (80% -100%)	4	5	P	P	P	5,713	95	1.69%	P	P	P	18,013
FRI	09/20/24	CONFIRMED UP (80% -100%)	4	6	P	P	P	5,702	-11	-0.19%	P	P	P	17,848
SAT	09/21/24	FOR THE WEEK							76	1.35%				
SUN	09/22/24	YTD							933	19.56%				
MON	09/23/24	CONFIRMED UP (80% -100%)	4	6	P	P	P	5,718	16	0.28%	P	P	P	17,974
TUE	09/24/24	CONFIRMED UP (80% -100%)	4	6	P	P	P	5,732	14	0.24%	P	P	P	18,074

https://drive.google.com/drive/folders/0B6Qc_gipshXMelkzQ245d2R1eTQ?resourcekey=0-5pWgINqaJPJ12L2qYurMWg

TLT – 20 yr U.S. Treasury ETF



U.S. Dollar



Fourth Class – Sept. 25th

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Fourth Class - Bonds

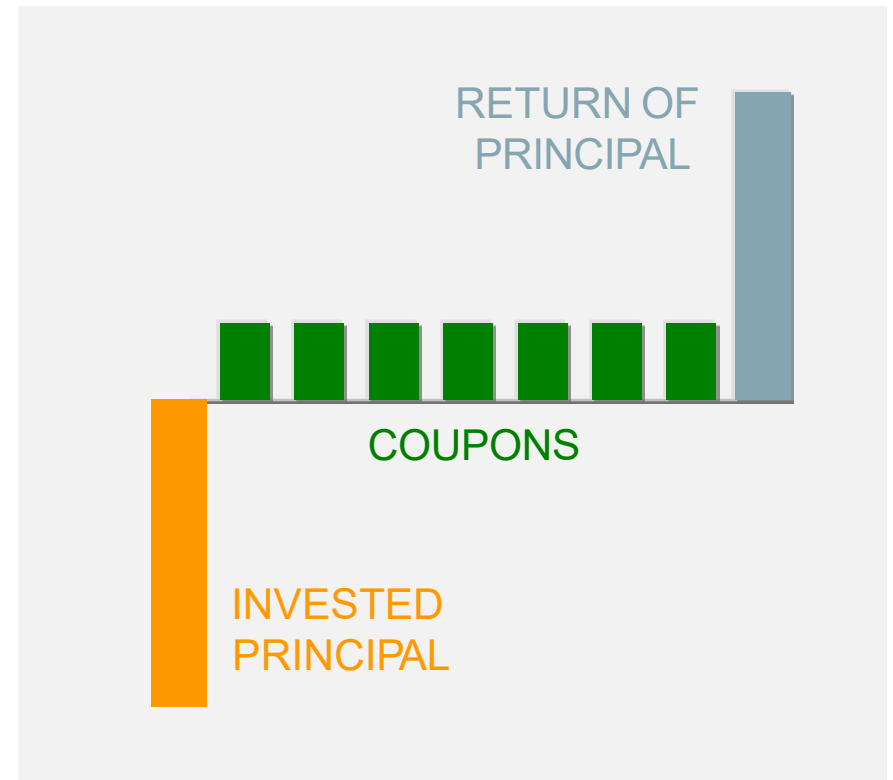
□ Investing in Bonds

□ Bonds

- What are Bonds?
- Types of Bonds – Treasury, Corporate, Municipal
- Why buy bonds?
- Risks associated with investing in bonds
- Forms of “returns” on bonds – Interest (coupon) , Capital gains or losses
- Current rates of return available
- How to buy Bonds
 - Individual Bonds
 - Bond Funds (Mutual Funds or ETF)

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 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.

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

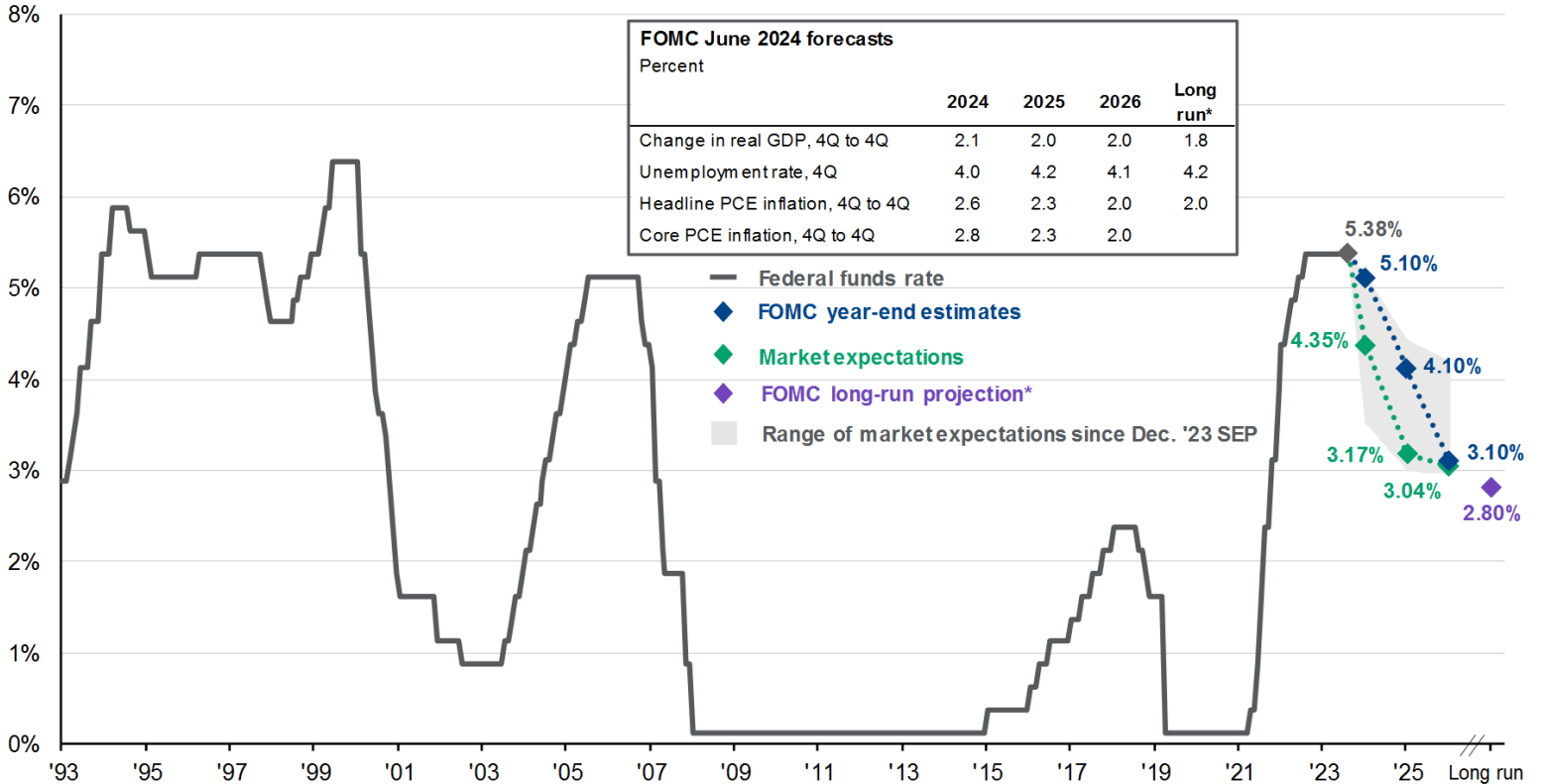
- All interest is taxed federally
 - Tax free in most states including DE, PA and NY
- Muni bond interest is tax free federally and in the state the muni lies in
- Corporate bond income is taxed both federally and in states



The Fed and interest rates

Federal funds rate expectations

FOMC and market expectations for the federal funds rate



Fixed Income

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 August 31, 2024.



Fixed income market dynamics

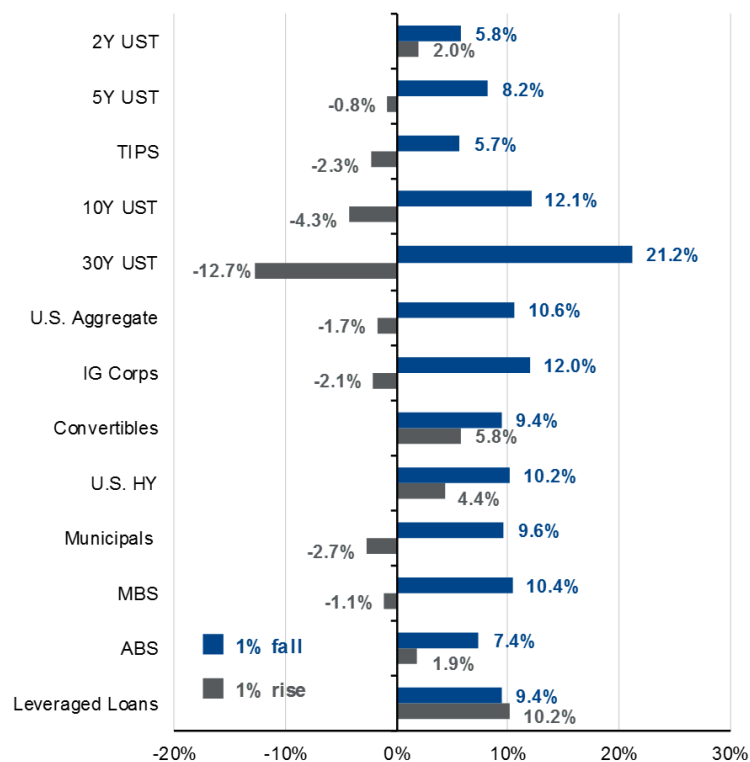
GTM U.S. 33

Fixed Income

U.S. Treasuries	Yield		Return			
	8/31/2024	12/31/2023	2024 YTD	Avg. Maturity	Correlation to 10-year	Correlation to S&P 500
2-Year	3.91%	4.23%	3.19%	2 years	0.76	0.00
5-Year	3.71%	3.84%	2.95%	5	0.94	-0.03
TIPS	1.72%	1.72%	3.30%	7.4	0.73	0.33
10-Year	3.91%	3.88%	2.19%	10	1.00	-0.08
30-Year	4.20%	4.03%	-0.49%	30	0.93	-0.12
Sector						
U.S. Aggregate	4.42%	4.53%	3.07%	8.4	0.89	0.24
IG Corps	4.94%	5.06%	3.49%	10.8	0.68	0.46
Convertibles	7.28%	7.26%	5.29%	-	-0.06	0.86
U.S. HY	7.30%	7.59%	6.29%	4.8	0.07	0.77
Municipals	3.45%	3.22%	1.30%	13.6	0.71	0.26
MBS	4.67%	4.68%	3.27%	7.2	0.81	0.25
ABS	5.16%	5.65%	5.24%	3.8	0.40	0.21
Leveraged Loans	9.83%	10.59%	6.02%	4.6	-0.23	0.61

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 August 31, 2024.

J.P.Morgan
ASSET MANAGEMENT

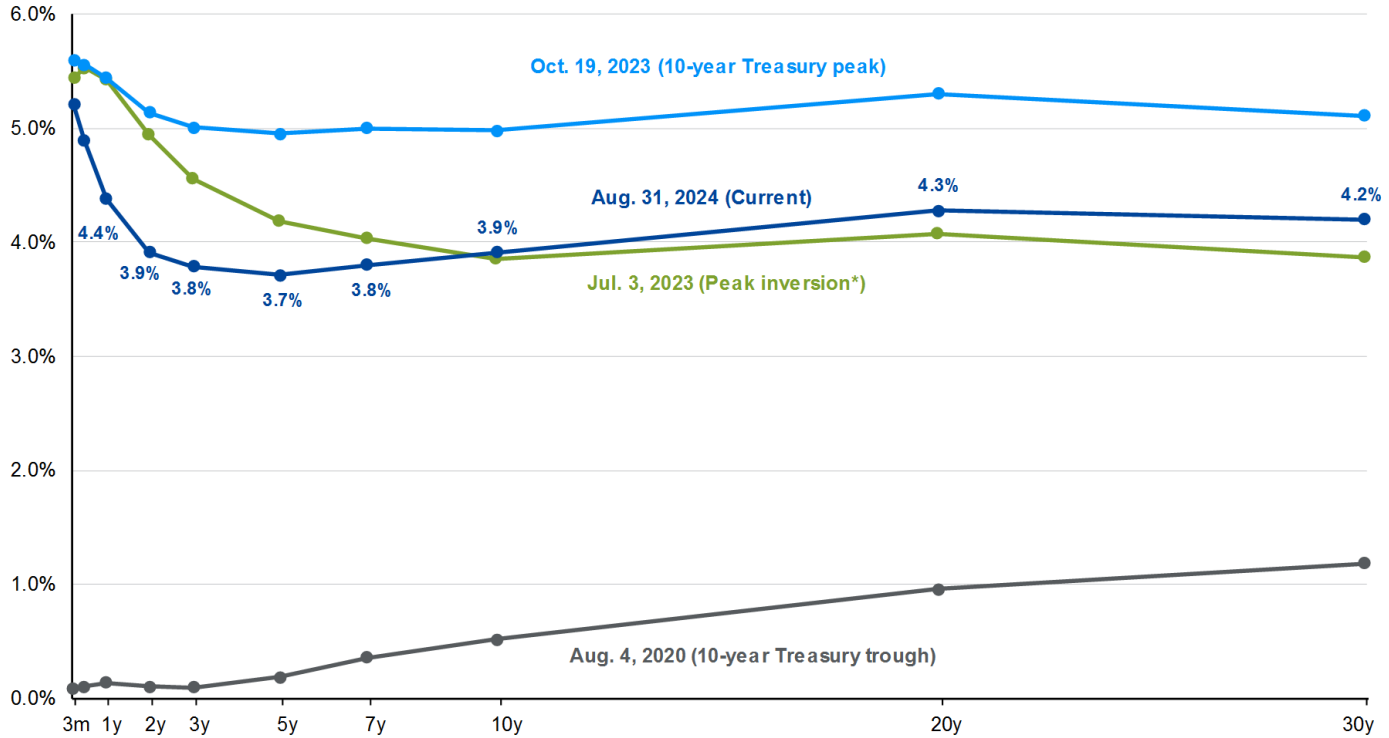


Yield curve

GTM U.S. 34

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 August 31, 2024.

Current Fixed Income Yields – 9/20/24

Schwab website data

S&P 500 dividend yield on 9/20 = 1.32%

	3MO	6MO	9MO	1YR	18MO	2YR	3YR	4YR	5YR	10YR	20YR	30YR+
CDs	4.83	4.55	4.37	4.40	4.00	4.10	4.40	3.60	4.00	4.30	--	--
Bonds												
U.S. Treasuries	4.70	4.48	4.14	3.99	3.76	3.61	3.50	3.51	3.53	3.72	4.16	4.06
U.S. Treasury Zeros	--	--	--	3.67	3.64	3.49	3.49	3.54	3.59	3.90	4.37	3.96
Government Agencies	4.34	4.12	4.13	4.10	4.31	4.36	4.37	3.74	5.01	4.80	5.58	4.73
Corporates (AAA)	--	--	--	3.87	3.70	3.65	3.50	--	3.47	4.18	4.31	4.84
Corporates (AA)	4.25	--	4.20	3.87	3.76	3.65	3.67	3.60	3.83	4.30	4.59	5.14
Corporates (A)	4.25	4.44	4.31	4.09	4.03	3.92	4.10	4.12	4.65	5.42	5.38	5.40
Municipals (AAA)	2.99	2.67	2.78	2.91	2.93	2.73	2.99	3.00	3.00	3.71	3.96	4.31
Municipals (AA)	2.99	2.97	3.09	3.26	3.30	3.10	3.36	3.12	3.50	3.95	4.24	4.49
Municipals (A)	2.99	3.05	3.24	3.27	3.30	3.10	3.36	3.15	3.50	3.95	4.42	4.49

Powered by BondSource™ | Ratings by Standard & Poor's

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

High Yield Corp bond examples

Very different COUPON
(annual interest paid)

Similar Yield to Maturity

Description	Coupon	Maturity	Quantity	Price	Min	Max	YTM	Accrued Interest	Estimated Total
US Treasury 4.625% 09/30/2030, 91282CHZ7	4.625	9/30/2030	25	105.615	1	5000	3.58	556.01	26,959.76
US Treasury 0.875% 11/15/2030, 91282CAV3	0.875	11/15/2030	25	85.269	1	8000	3.566	77.87	21,395.12

↑
CUSIP

↖
Very different prices

WHY? In the top bond, annual yield is mostly from interest with capital loss at maturity.

In the bottom bond, annual yield from interest is small, but a large portion of yield comes from capital gain at maturity.

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)
- 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.

Fifth Class – Oct. 2nd

- Market Update – Rajeev – 20 minutes
- Five Steps of Disciplined buying
 - Why buy stocks?
 - How to buy in a disciplined way.

Thanks !!

□ Happy Investing !!

□ **My EMail**

□ diyinvst@udel.edu

□ **Class website**

□ <http://udel.edu/~diyinvst>