

Fixed Income Market Update

Raymond James Public Finance and Underwriting

October 12th, 2023

Section 1	Current Market Picture
Section 2	Tax-Exempt Volume and Fund Flows
Section 3	Where do we go from here?

SECTION 1

Current Market Picture

- At the September Federal Open Market Committee (FOMC) meeting, the Fed indicated that interest rates will remain higher for longer than original expected. Markets have finally taken this guidance to heart.
- Since the September FOMC meeting, the yield on the 10-year Treasury has skyrocketed and hit a high of 4.85% on October 6, 2023.
- This surge in long-term yields is going to put further upward pressure on mortgage rates and is probably going to weaken the housing market again.
- So far, higher interest rates have done little to slow down economic activity, but it is difficult to know if the reason for this is that interest rates are not high enough or if the normal lag with which monetary policy works is such that the Fed has to wait until those increases in rates affect economic activity.
- The economy has remained strong and inflation continues to weaken without the need for the economy to slow down.
- The Fed has to choose between two paths: increase rates further or hold rates where they are.
 - The first option would likely prevent interest rates from decreasing, but weaken the economy further.
 - The second option might bring less strain on the economy but turn out to be counterproductive and ultimately risk pushing rates lower.
- We suspect the Fed will probably wait until the end of the year to have more certainty on what its next steps will be.



Source: FactSet, RJ Economics

Key Interest Rates and Prices

	This Week 10/6/2023	Last Week 9/29/2023	Last Month 9/6/2023	Last Year 10/6/2022
Federal Funds Rate	5.50	5.50	5.50	3.25
Prime Rate	8.50	8.50	8.50	6.25
Treasury - 2 yr	5.08	5.04	5.02	4.26
Treasury - 10 yr	4.80	4.57	4.28	3.82
LIBOR (1 month)	5.46	5.43	5.44	3.30
LIBOR (3 month)	5.67	5.66	5.66	3.83
SIFMA	3.36	3.98	3.41	2.45
SIFMA/1 M LIBOR %	61.6	73.2	62.7	74.2
B.B. 20 Bond Index ¹	4.12	4.09	3.81	3.86
B.B. Rev. Index ²	4.40	4.37	4.09	4.14
30-Day Visible Supply ³	8.3 B	11.6 B	11.8 B	9.5 B
10-Year AAA MMD ⁴	3.56	3.45	2.96	3.18
10-Year AAA MMD Ratio to Treasury %	74.2	75.5	69.2	83.2
30-Year Treasury	4.97	4.70	4.35	3.78
30-Year AAA MMD ⁴	4.45	4.34	3.92	3.74

¹ Represents an estimation of the yield on a portfolio of 20 general obligation bonds that matures in 20 years with a composite AA rating.

² Represents an estimation of the yield that would be offered on 30-yr revenue bonds. The index is comprised of 25 issuers that cover a broad range of type of issues and vary in ratings.

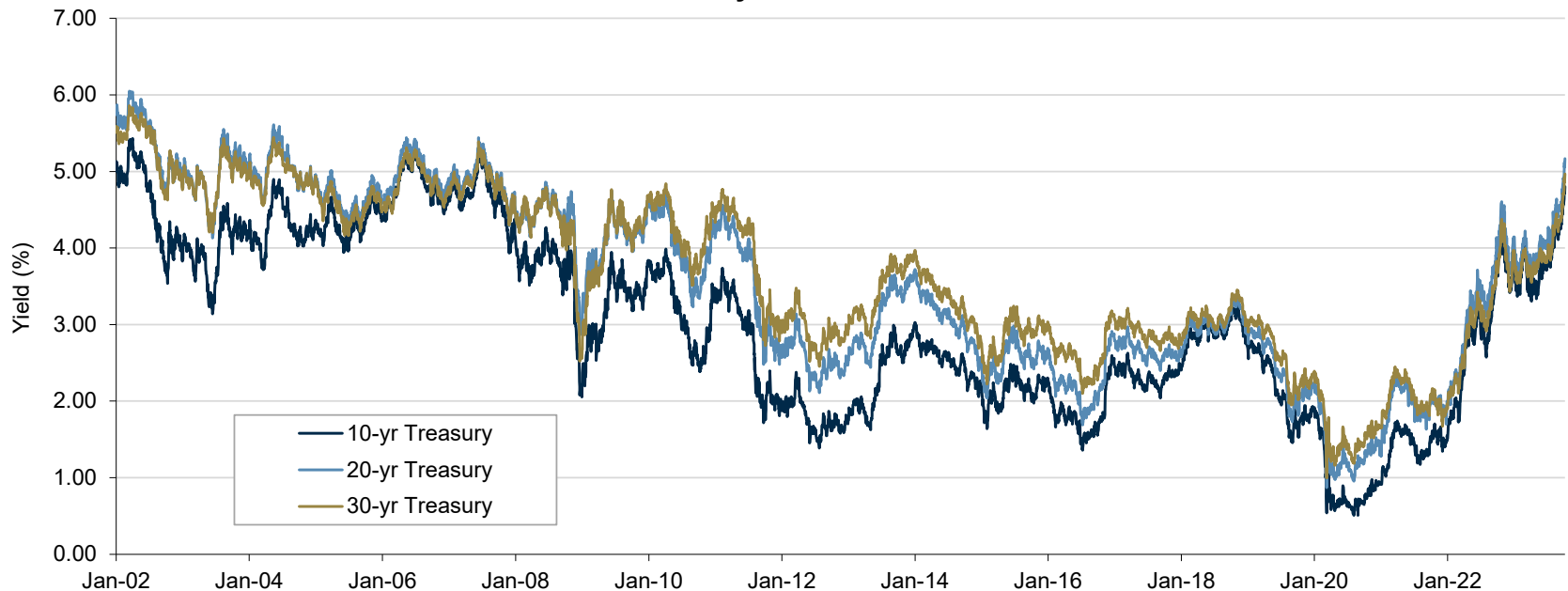
³ The total dollar volume of municipal securities expected to be offered over the next 30 days.

⁴ Represents the benchmark yield for high grade municipal issues, based on a natural "AAA" rated general obligation bond issue. "AAA" MMD is the benchmark for pricing of all tax-exempt municipal issues.

Source: Bloomberg and Thomson Reuters

- Yields for the 10-Year, 20-Year and 30-Year maturities of U.S. Treasury Bonds stayed within a tight band between mid-2005 and late 2008, when the credit crisis caused rates to spread out between maturities.
- Rates fell in June 2016 subsequent to Brexit but rose significantly in the wake of the 2016 Presidential Election. Since the beginning of 2020, rates have been very volatile both up and down due to the Covid-19 virus.
- Rates increased throughout 2022 and 2023 YTD from the Fed raising rates due to high CPI levels. Inflation levels continue to be the key driver to increasing rates going forward this year.

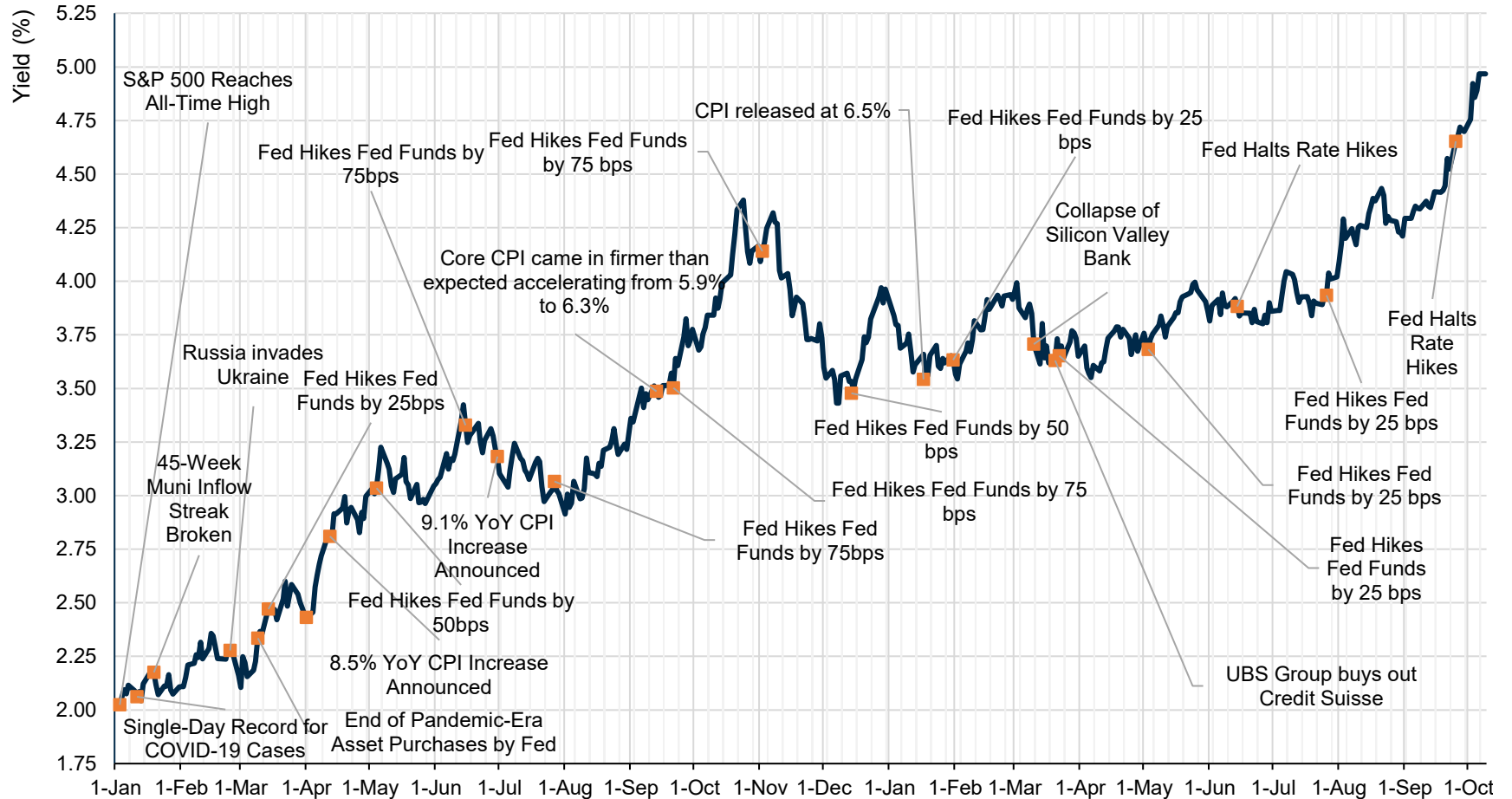
**10-Year, 20-Year and 30-Year Treasury
January 2002 to Current**



Note: 20-Year Treasury rates prior to May 21, 2020 are from Treasury.gov website. 20-Year Treasury rates after May 21, 2020 are from Bloomberg.

- This year, the US Treasury Market has faced continued pressure from inflationary data and rate hikes from the Fed.
- The treasury yield curve is currently inverted.

30-Year UST in 2022 and 2023

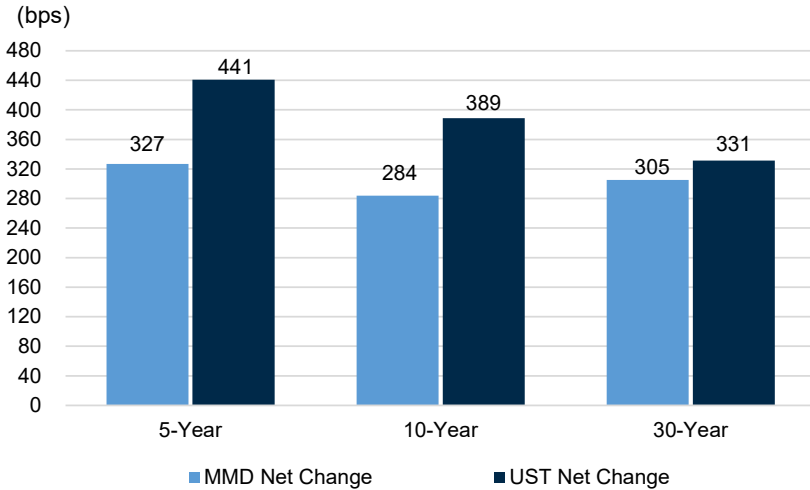


RATE MOVEMENT FOR TAX-EXEMPT AND TAXABLE SINCE START OF TIGHTENING CYCLE

- Rates have moved sharply higher across the curve
- Short end of the curve has seen the largest correction

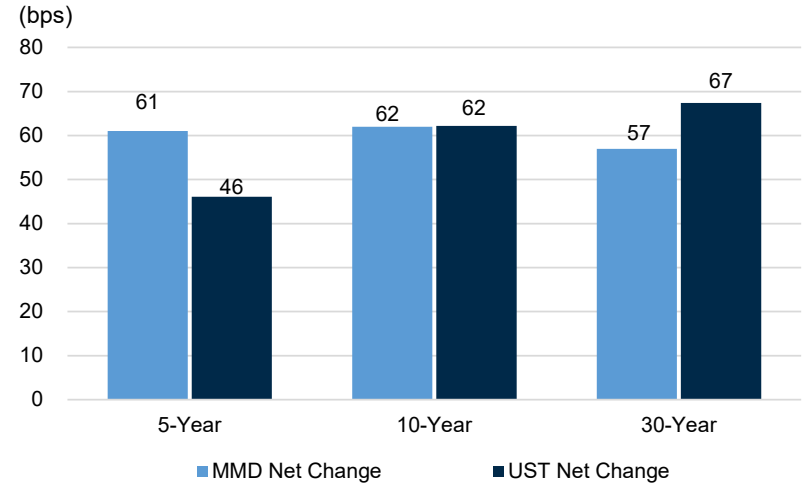
MMD and UST Movement 2021-2023 YTD

January 4, 2021 – October 6, 2023



MMD and UST Movement Over the Past Month

September, 4 2023 – October 6, 2023

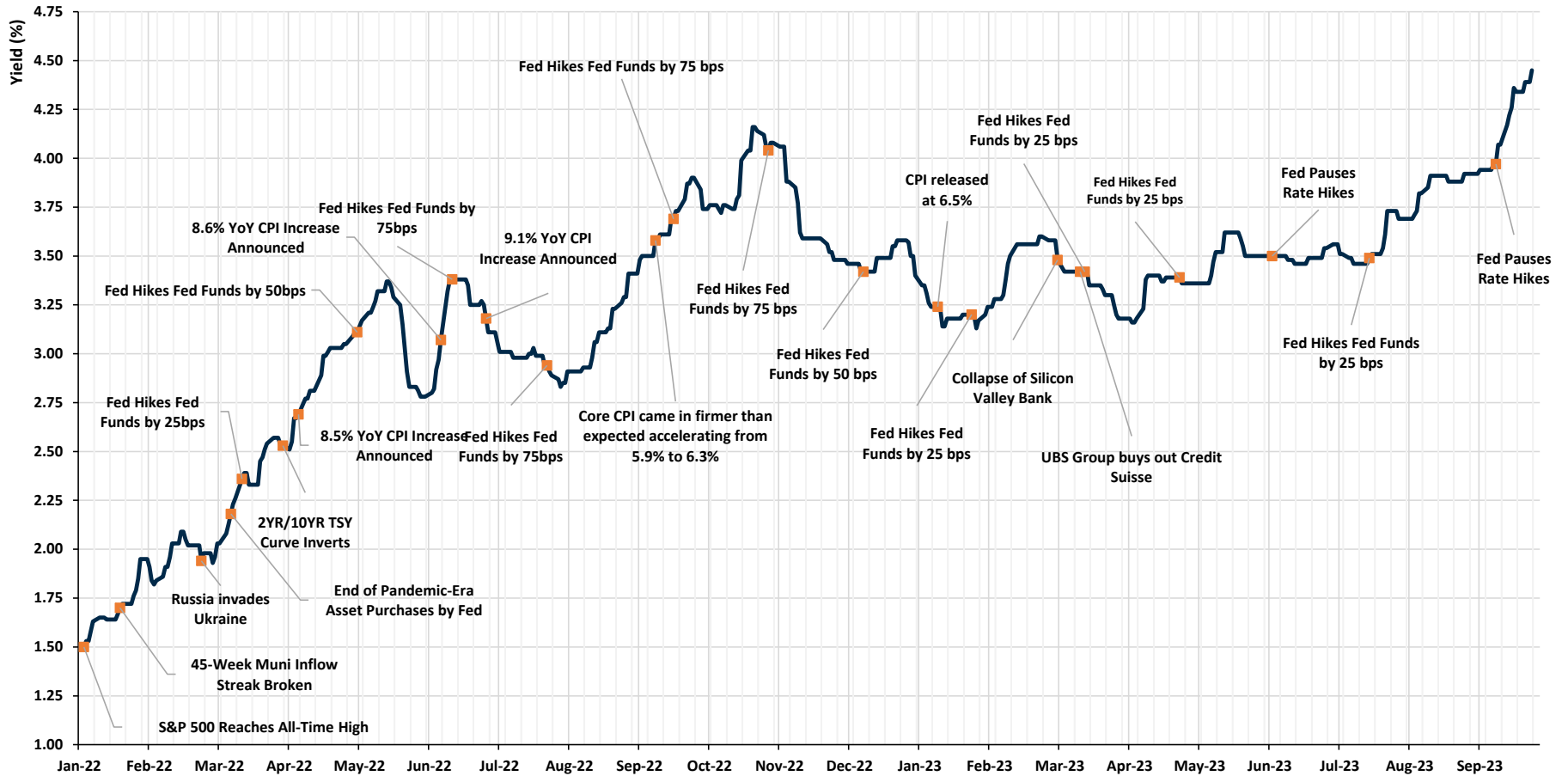


MMD	5Y	10Y	30Y	UST	5Y	10Y	30Y	MMD/UST Ratios	5Y	10Y	30Y
Current	3.49%	3.56%	4.45%	Current	4.76%	4.8%	4.97%	Current	73.37%	74.15%	89.58%
2021-2023 YTD Low:	0.2%	0.69%	1.32%	2021-2023 YTD Low:	0.35%	0.91%	1.66%	2021-2023 YTD Low:	38.35%	54.03%	63.70%
2021-2023 YTD High:	3.49%	3.56%	4.45%	2021-2023 YTD High:	4.8%	4.8%	4.97%	2021-2023 YTD High:	91.28%	105.39%	110.18%
10Y Low:	0.16%	0.58%	1.27%	10Y Low:	0.19%	0.51%	1.00%	10Y Low:	38.35%	54.03%	63.70%

Source: Bloomberg

- This year, the Municipal Market has been battered by a combination of tumultuous world affairs, large fund outflows, and rate hikes from the Fed.

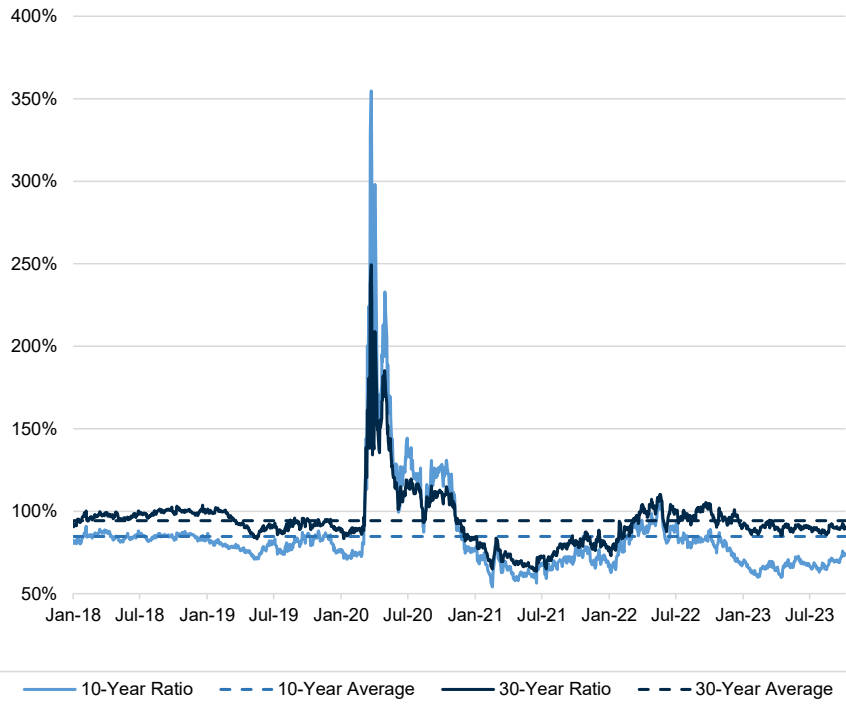
30-Year MMD 2022-2023 YTD



- As of October 6, 2023, the 10 and 30 year ratios are 74.15% and 89.58%, respectively.

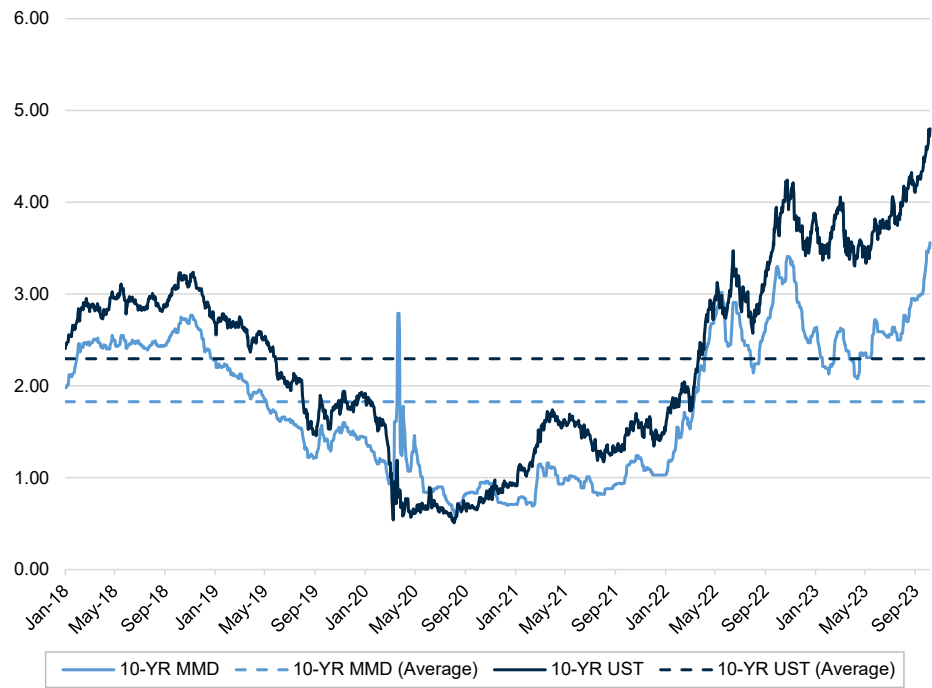
MMD and UST Ratios Since 2018

January 1, 2018 – October 6, 2023



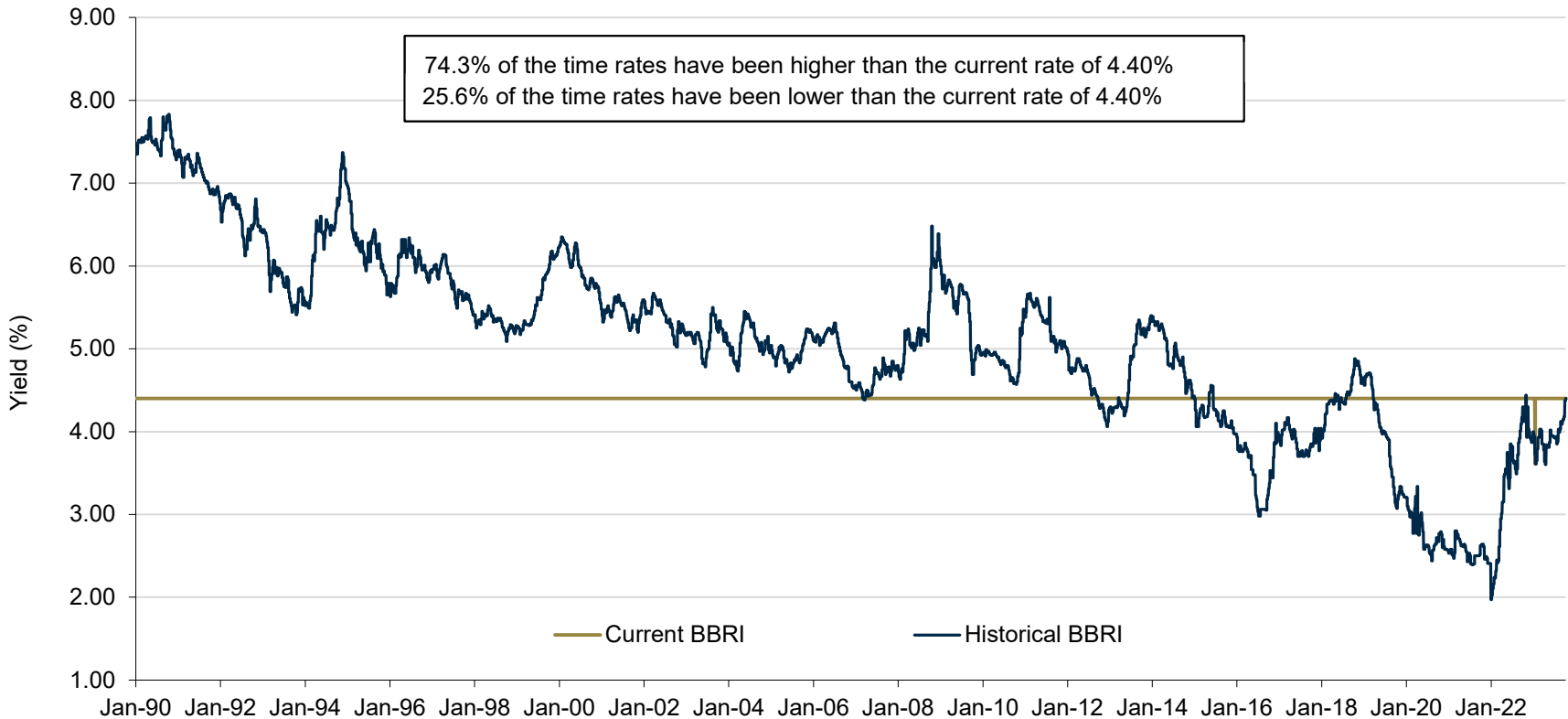
MMD and UST Movement Since 2018

January 1, 2018 – October 6, 2023

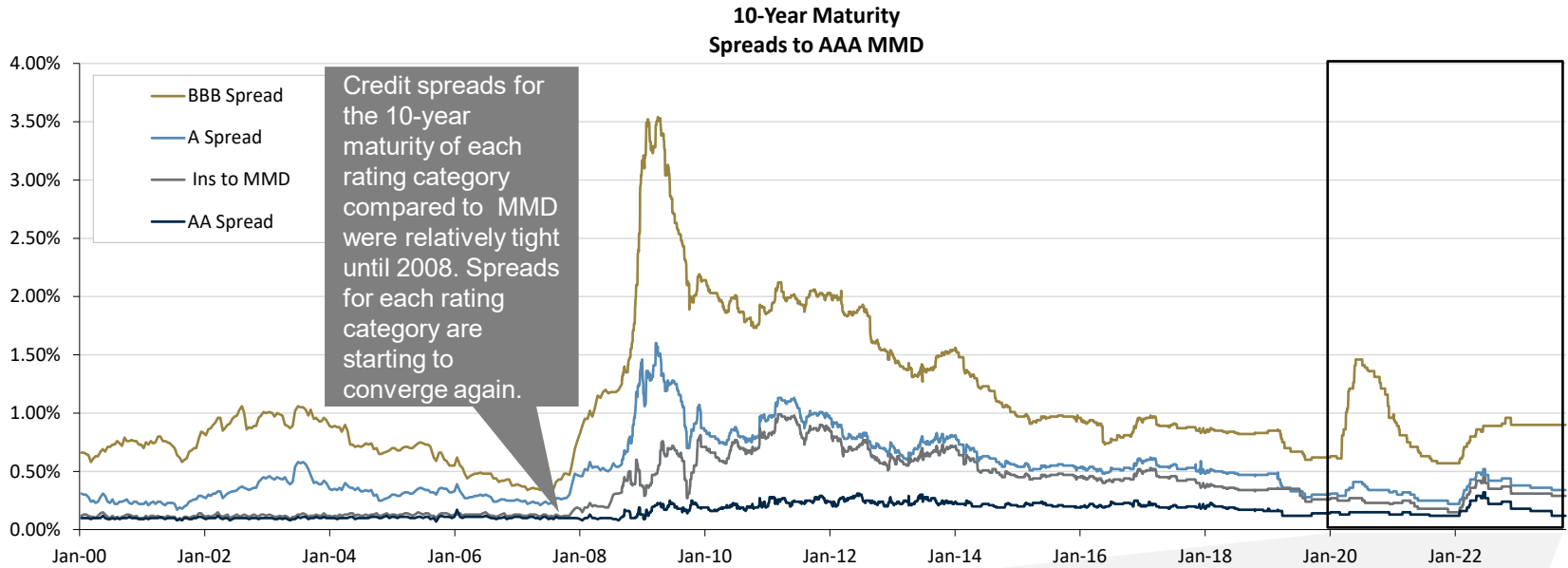


Bond Buyer Indices are indicators published by *The Bond Buyer* showing the price levels for various groups of municipal securities. One of these indicators is the Bond Buyer Revenue Bond Index (“BBRI”) which represents a theoretical yield that would be offered on a 30-year revenue bond. The BBRI is comprised of 25 issues that mature in 30 years with an average rating roughly equivalent to Moody’s “A1” and S&P’s “A+”.

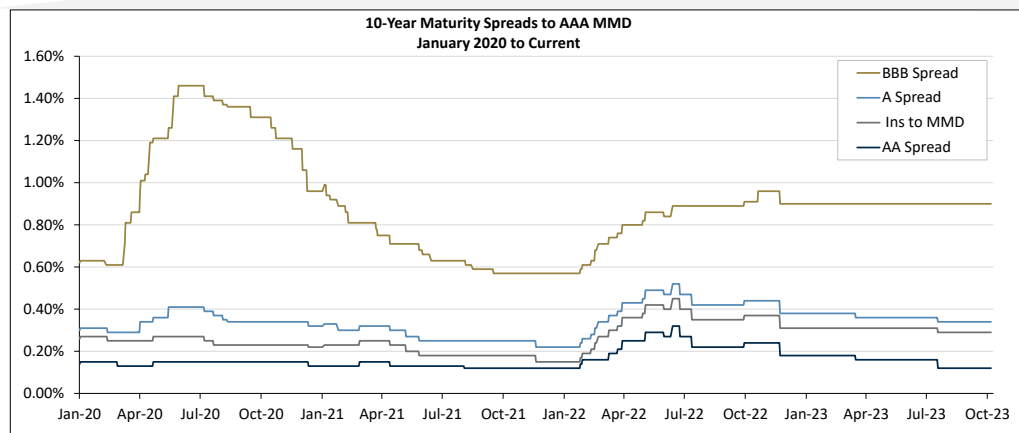
Historical BBRI vs. Current BBRI



Total percentage of time may not equal 100% due to rounding and percentage of time where past rate equals current rate.



Due to the COVID-19 pandemic, and uncertainty throughout the markets, spreads began to rise in March of 2020, especially for BBB credits. However, BBB credits have been flattening out as COVID -19 becomes less prevalent.



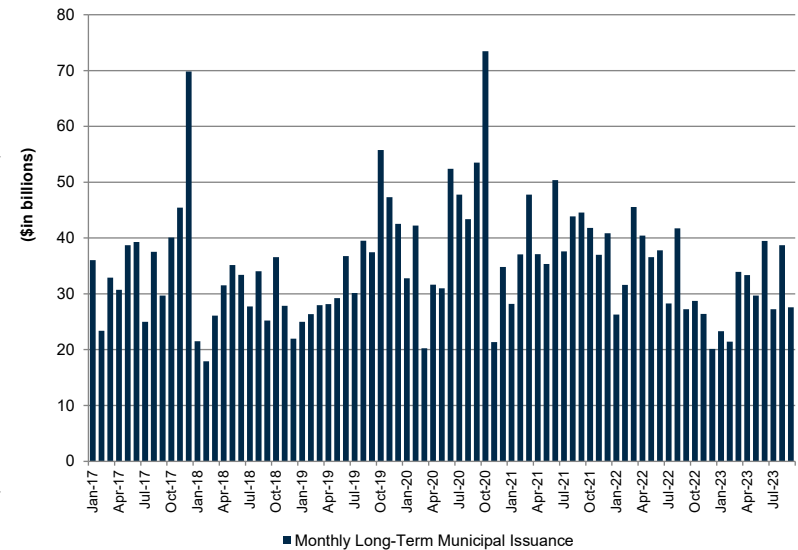
SECTION 2

Tax-Exempt Primary Volume and Fund Flows

- Long-term municipal new issue volume is down 13% in 2023 YTD vs. 2022 (January – September).
- Long-term municipal new issue volume was down 20% in 2022 vs. 2021.
- Long term municipal new issuance was down 0.7% in 2021 vs. 2020.
- Long-term municipal new issue volume was up 13.7% in 2020 vs. 2019. Issuance in 2019 was up 26% compared to 2018 and Issuance in 2018 was down 24% compared to 2017.

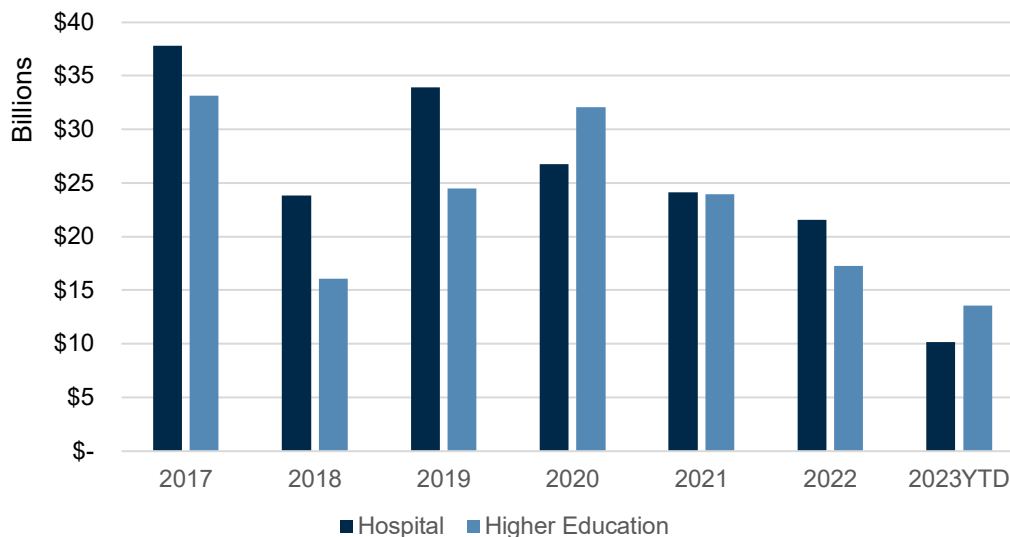
Municipal Long-Term Issuance								
\$ in billions	2017	2018	2019	2020	2021	2022	2023	YoY %
January	\$36.048	\$21.506	\$24.968	\$32.793	\$28.182	\$26.293	\$23.288	-11%
February	23.385	17.895	26.375	42.229	37.052	31.602	21.444	-32%
March	32.894	26.084	27.949	20.262	47.763	45.555	33.917	-26%
April	30.711	31.516	28.154	31.650	37.105	40.423	33.365	-17%
May	38.710	35.147	29.212	30.991	35.342	36.583	29.684	-19%
June	39.301	33.388	36.747	52.390	50.364	37.775	39.476	5%
July	24.973	27.740	30.158	47.782	37.601	28.258	27.246	-4%
August	37.541	34.042	39.522	43.362	43.885	41.716	38.697	-7%
September	29.696	25.220	37.435	53.513	44.563	27.251	27.585	1%
October	40.099	36.585	55.775	73.448	41.811	28.724		
November	45.430	27.846	47.312	21.359	37.000	26.415		
December	69.827	21.965	42.517	34.822	40.840	20.121		
Total	\$448.614	\$338.933	\$426.123	\$484.601	\$481.508	\$390.715	\$274.701	-13%

Source: The Bond Buyer



NOT-FOR-PROFIT HIGHER EDUCATIONAL AND HOSPITAL LONG TERM ISSUANCE TREND

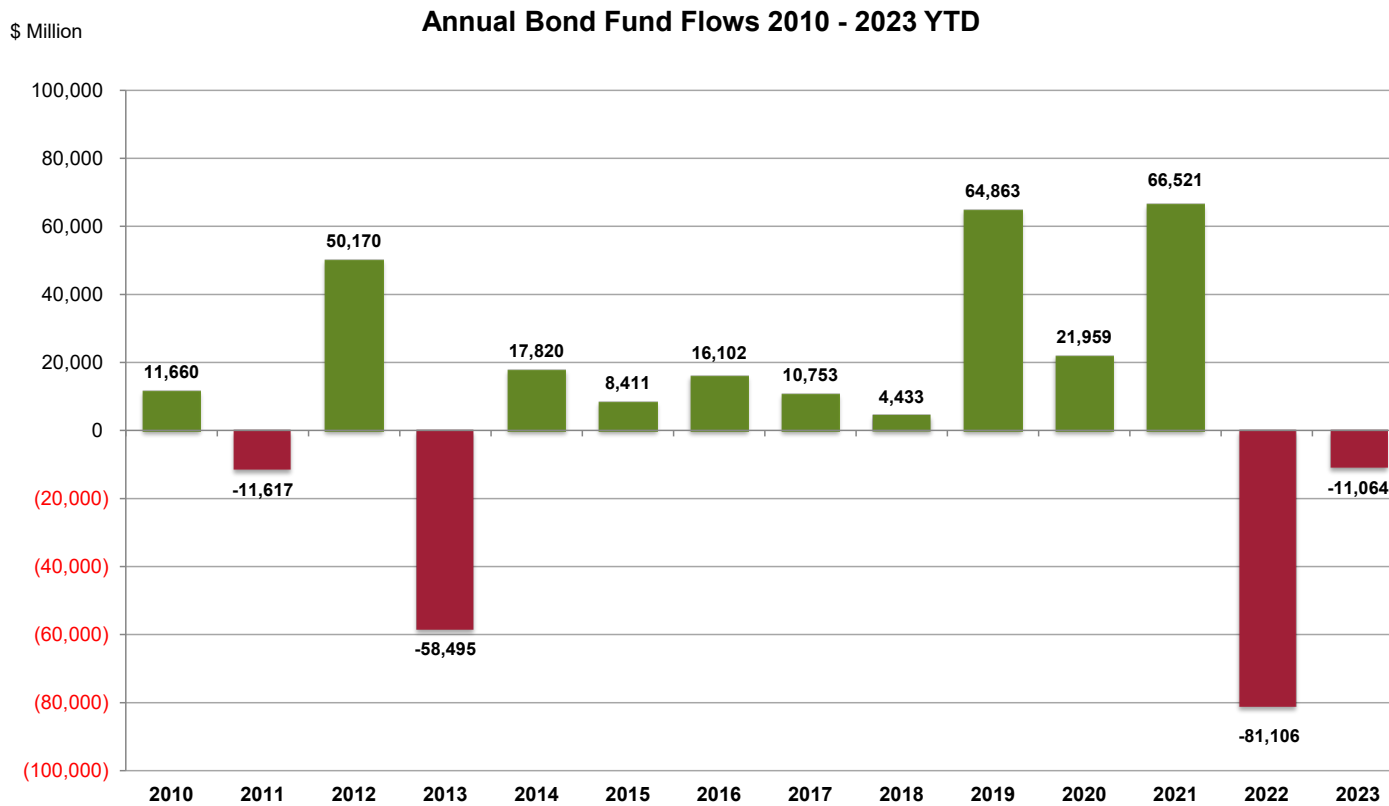
- Long-term municipal new issue hospital volume is down 37.12% in 2023 YTD vs. 2022 (January – End of September).
- Long-term municipal new issue higher education volume is up 4.6% in 2023YTD vs 2022 (January – End of September).



Not-For-Profit Higher Educational and Hospital Long Term Issuance Trend								
\$ in billions	2017	2018	2019	2020	2021	2022	2023YTD	YoY%
Hospital	\$37.811	\$23.837	\$33.902	\$26.733	\$24.159	\$21.537	\$10.156	-37%
Higher Education	\$33.158	\$16.070	\$24.497	\$32.097	\$23.968	\$17.262	\$13.549	5%
Total	\$70.969	\$39.908	\$58.399	\$58.830	\$48.127	\$38.799	\$23.704	-16.26%

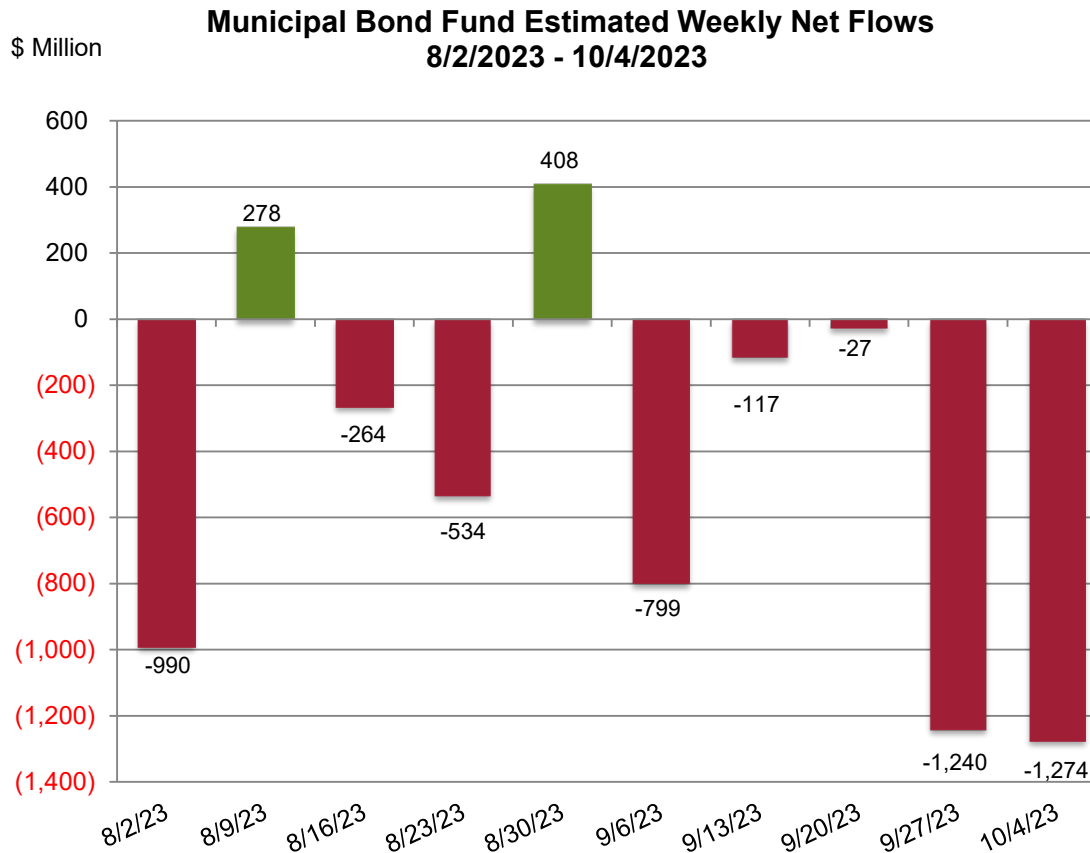
Source: Bloomberg

- With the exception of 2011 and 2013, municipal bond funds experienced inflows from 2008-2021. The significant rise in rates that began in May of 2013 contributed to the net outflows for 2013. Municipal bond funds experienced outflows in late 2016, early 2017, and again in 2022 with the significant rise in rates.
- In addition to the significant rise in rates that began in May of 2013, headline risk from troubled issuers like Detroit and Puerto Rico, as well as unfunded pension obligations, contributed to the net outflows for 2013.
- In 2022, there was a sharp increase in bond outflows due to the Fed implementing aggressive rate increases to combat inflation.



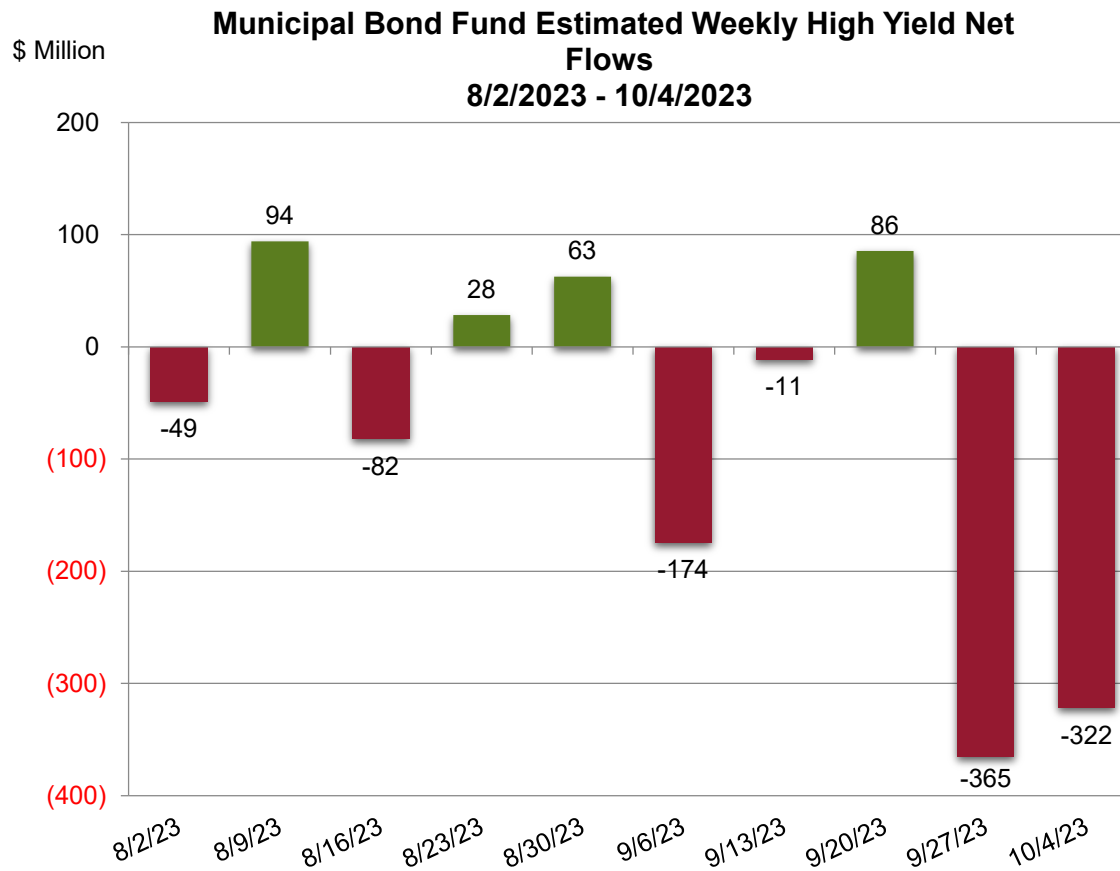
Source: Lipper

- Municipal bond funds had estimated outflows of \$1.27 billion for the week ended Wednesday, October 4th, 2023.
- Municipal bond funds gained \$4.4 billion for 2018, \$64.9 billion in 2019, \$21.96 billion in 2020, and \$66.5 billion in 2021.
- In 2022, municipal bond funds lost a total of \$81.11 billion in outflows.
- In 2023 so far, municipal bond funds have lost a total of \$11.06 billion in outflows.



*Source: Lipper as of 10/4/2023

- High yield municipal bond funds had estimated outflows of \$322 million for the week ended Wednesday, October 4th, 2023.
- High yield municipal bond funds gained \$2.7 billion for 2018, \$18.4 billion in 2019, and \$23.1 billion in 2021, while losing \$4.2 billion in 2020 and \$19.1 billion in 2022.
- In 2023 so far, high yield municipal bond funds have gained a total \$523 million in inflows.



*Source: Lipper as of 10/4/2023

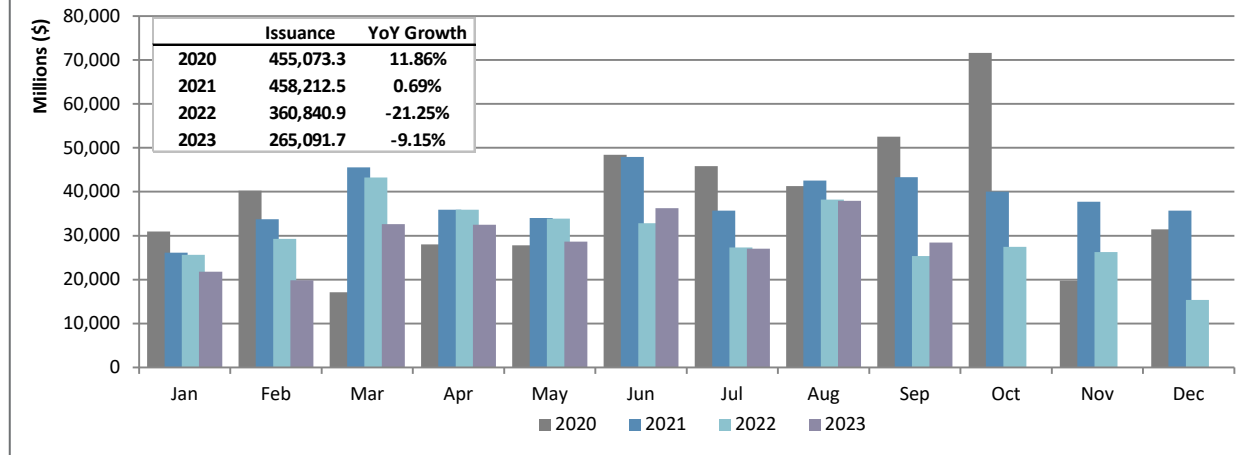
SECTION 3

Where do we go from here?

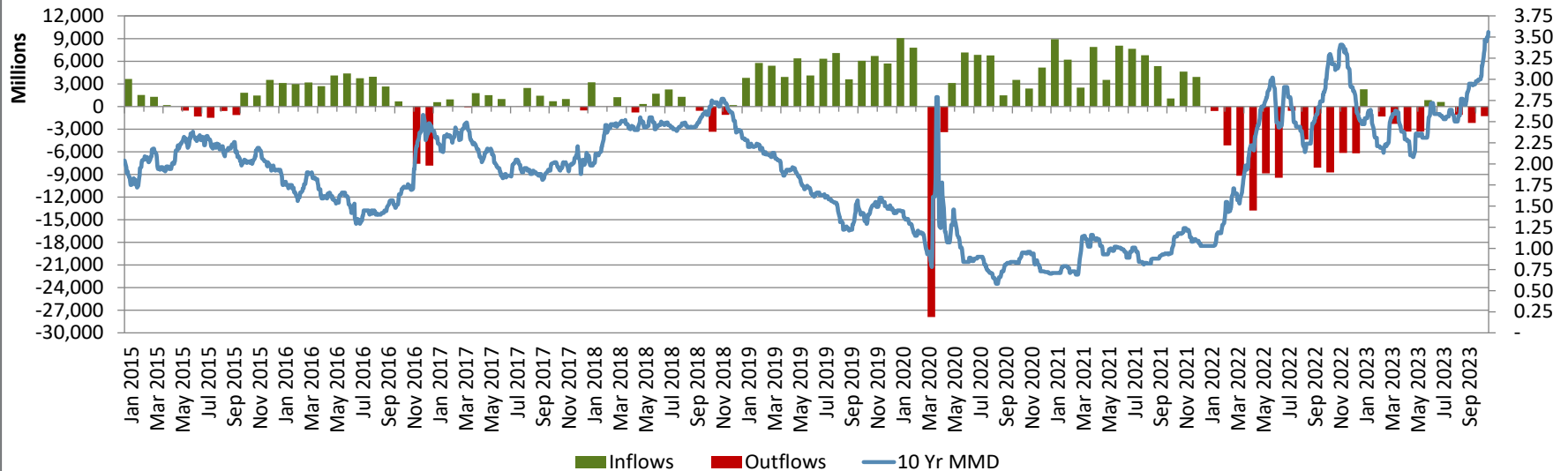
Current Market Themes

- Interest Rates remain under pressure due to resilient labor markets and strong economic conditions
- FED is data dependent and in a “higher for longer” view on rates until more data points become available
- This week the markets will be closely watching the CPI and PPI numbers
- Geopolitical unrest globally with Israel and Ukraine will add to volatility in the markets
- Issuers will be forced to issue long term debt given the uncertainty around long term rates, waiting has not paid off

U.S. Municipal Long-Term Issuance Trends

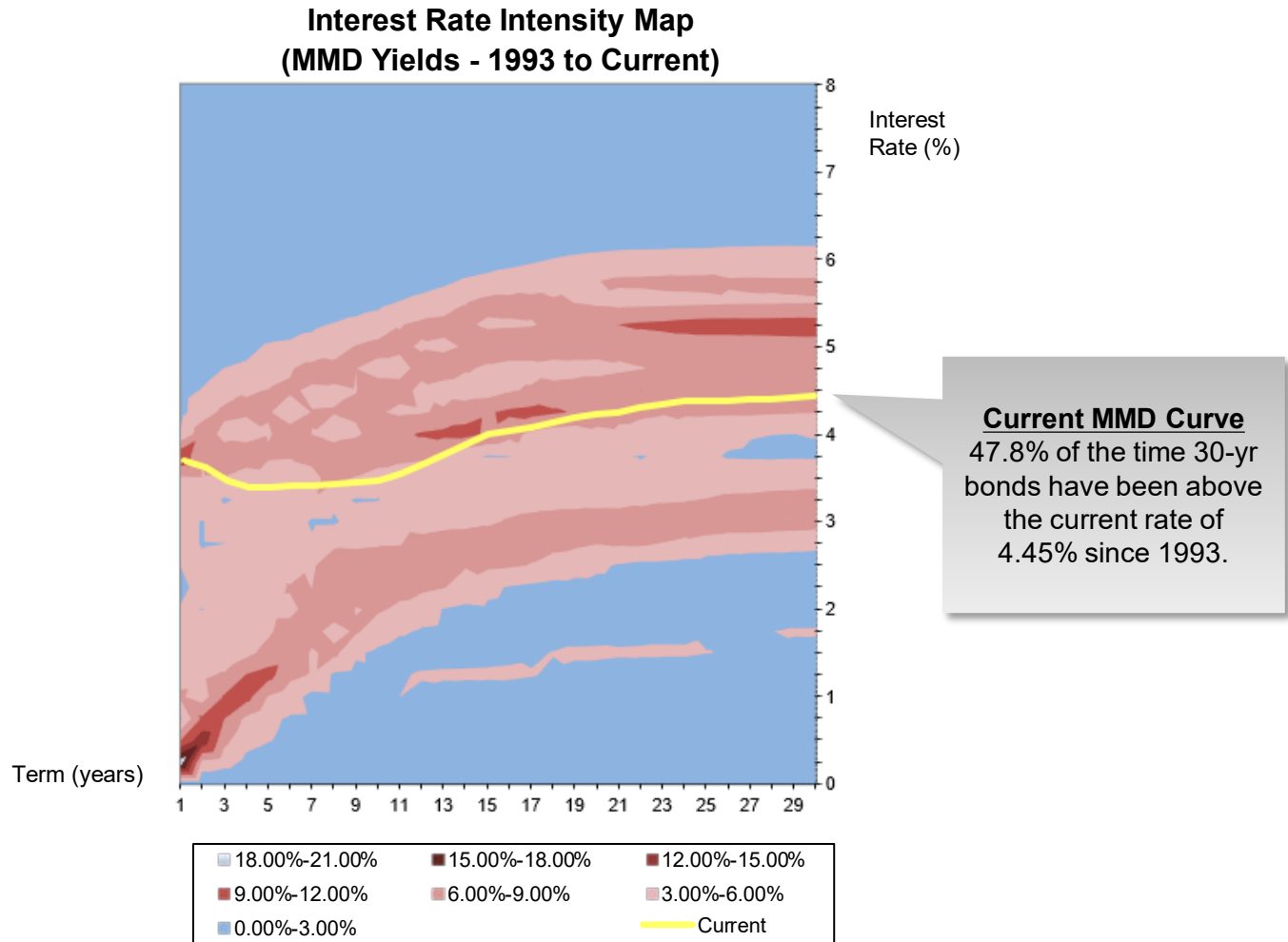


Municipal Fund Flows and 10-Year MMD

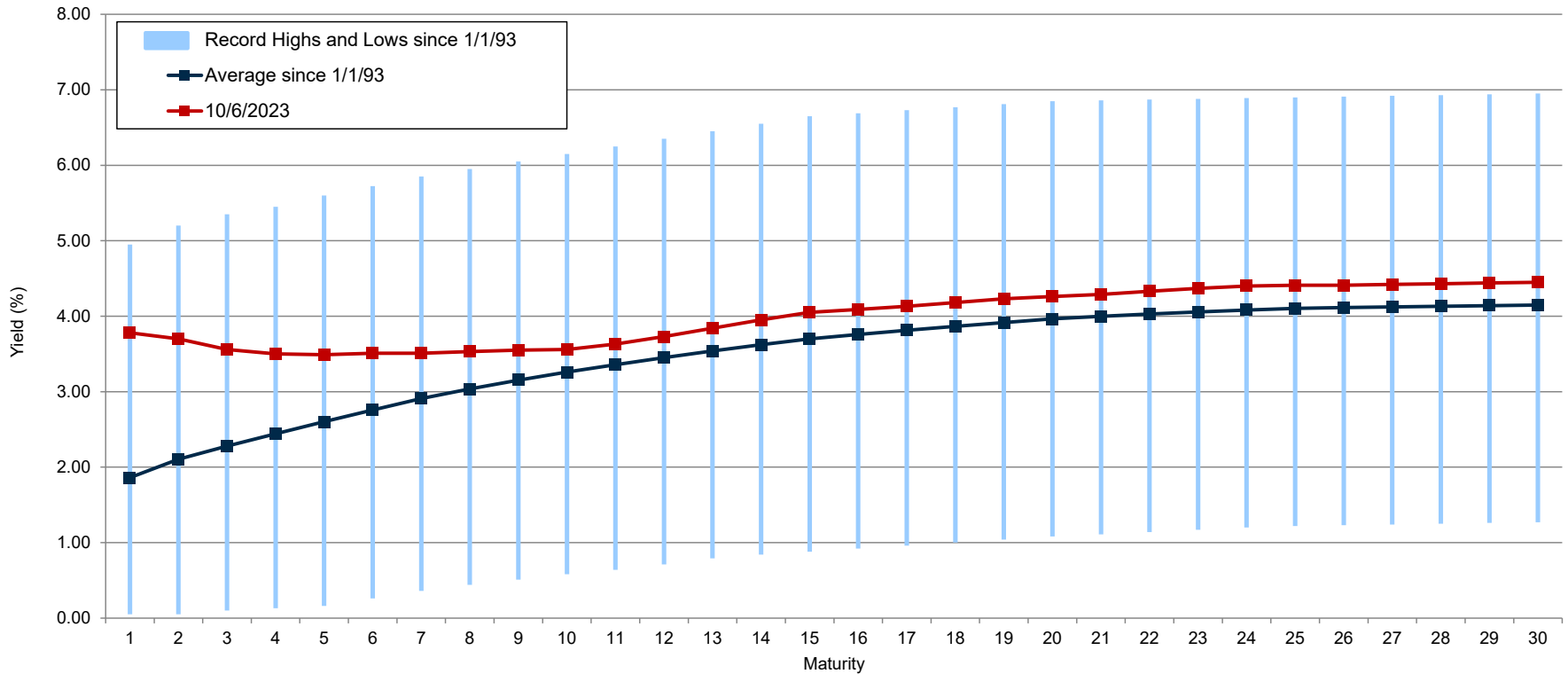


*Issuance data as of 10/9/2023
Source: Bloomberg

The chart shows the frequency of the AAA-Rated Municipal Market Data (“MMD”) rates at each 1 to 30 year point on the MMD yield curve since 1993. The more intense the color, the more often interest rates are at the given level, moving in intensity from light red to dark red.

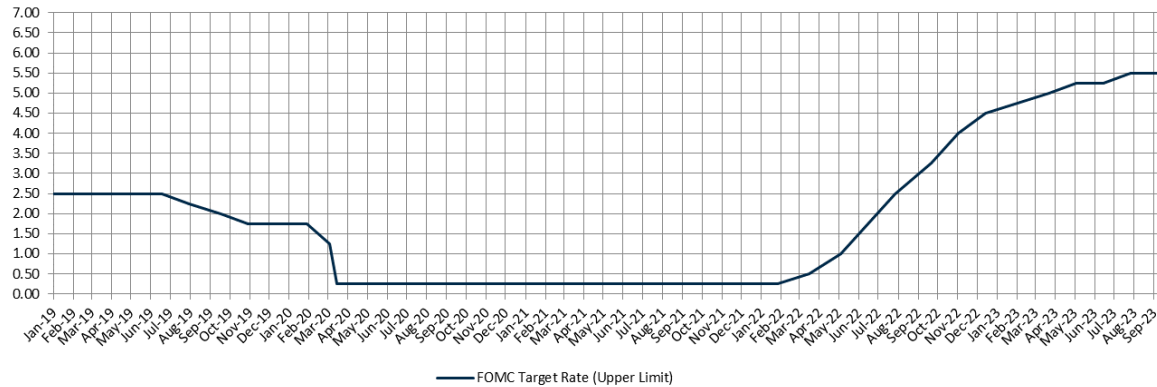


- The graph below shows the range between the record highs and lows of AAA MMD at each maturity since 1993, along with average rates over this time frame and the current rates.

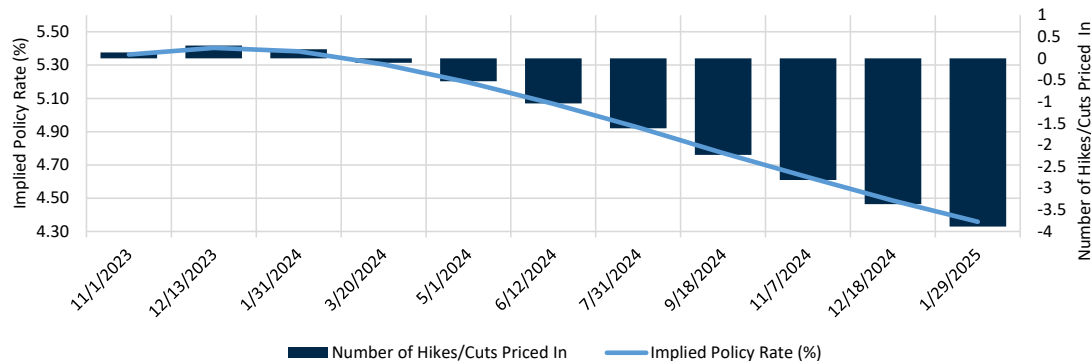


	1	5	10	15	20	25	30
Record Low since 1/1/93	0.05	0.16	0.58	0.88	1.08	1.22	1.27
Record High since 1/1/93	4.95	5.60	6.15	6.65	6.85	6.90	6.95
Average since 1/1/93	1.87	2.60	3.26	3.70	3.96	4.10	4.15
Current (10/06/23)	3.78	3.49	3.56	4.05	4.26	4.41	4.45

- In 2022, the Fed announced a 50 bp rate hike in their May 4, 2022 meeting followed by 75 bp hikes on June 15, 2022, July 27th, September 21st, and November 2nd. On December 14th, the Fed increased the fed funds rate by 50 bps.
- On February 1st, 2023, March 22nd, 2023, and May 3rd the Fed increased the fed funds rate by 25 bps. This was not followed on June 14th as the Fed paused the consecutive rate hikes, but picked back up on July 26th with a 25 bp hike. Last year's four separate 75 bp increases in the Fed Funds rate by the FOMC have been the largest increases since 1994.
- The June FOMC meeting halted 10 consecutive rate hikes since the beginning of 2022. However, in July the Fed increased Fed Funds rate by 25 basis points. The September FOMC meeting paused rate hikes.



Implied Overnight Rate & Number of Rate Hikes/Cuts



Source: Bloomberg as of October 9th, 2023.

- The Bloomberg consensus of economists predicts that rates will fall over the next year.

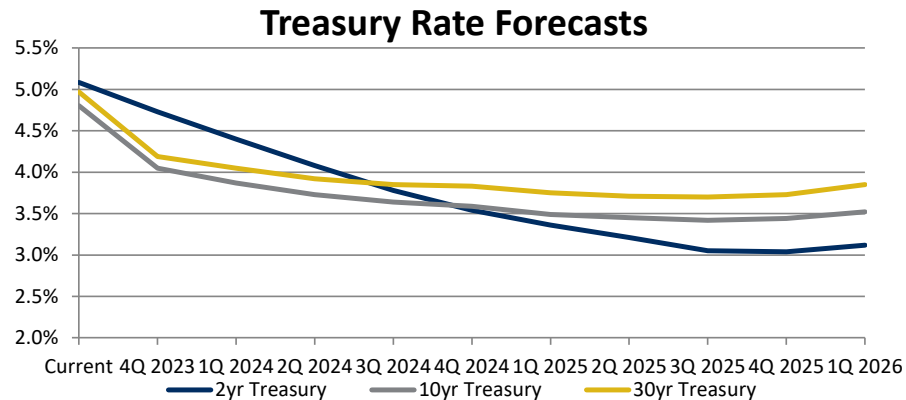
US Treasury	Current Rate	2023	2024				2025				2026	Change from Current Rate to 2026Q1
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	
2 Year	5.08%	4.73%	4.40%	4.08%	3.78%	3.54%	3.36%	3.21%	3.05%	3.04%	3.12%	-1.96%
Economists Surveyed		45	44	44	42	38	28	26	22	22	16	
10 Year	4.80%	4.05%	3.87%	3.73%	3.64%	3.59%	3.49%	3.45%	3.42%	3.44%	3.52%	-1.28%
Economists Surveyed		50	49	49	47	43	31	29	25	25	19	
30 Year	4.97%	4.19%	4.05%	3.92%	3.85%	3.83%	3.75%	3.71%	3.70%	3.73%	3.85%	-1.12%
Economists Surveyed		38	38	38	37	34	26	24	20	20	15	

*Source: Bloomberg as of October 9, 2023.

Bloomberg Consensus

	Current Rate	2023	2024				2025	Change from Current Rate to 2025 Q1
		Q4	Q1	Q2	Q3	Q4	Q1	
Real GDP	2.10%	0.50%	0.20%	0.60%	1.40%	1.80%	2.00%	-0.10%
Consumer Price Index	3.70%	3.30%	2.90%	2.75%	2.55%	2.40%	2.40%	-1.30%
Unemployment	3.80%	3.90%	4.10%	4.20%	4.40%	4.40%	4.30%	0.50%
Fed Funds Target	5.50%	5.55%	5.45%	5.10%	4.70%	4.25%	3.90%	-1.60%
3-month LIBOR	5.67%	5.40%	5.24%	4.99%	4.65%	4.26%	3.99%	-1.68%

*Source: Bloomberg as of October 9, 2023.



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