



Money Talks WASBO Webinar Series

January 27, 2023



Brian Brewer
Baird Public Finance
Managing Director
414-298-7030
bbrewer@rwbaird.com

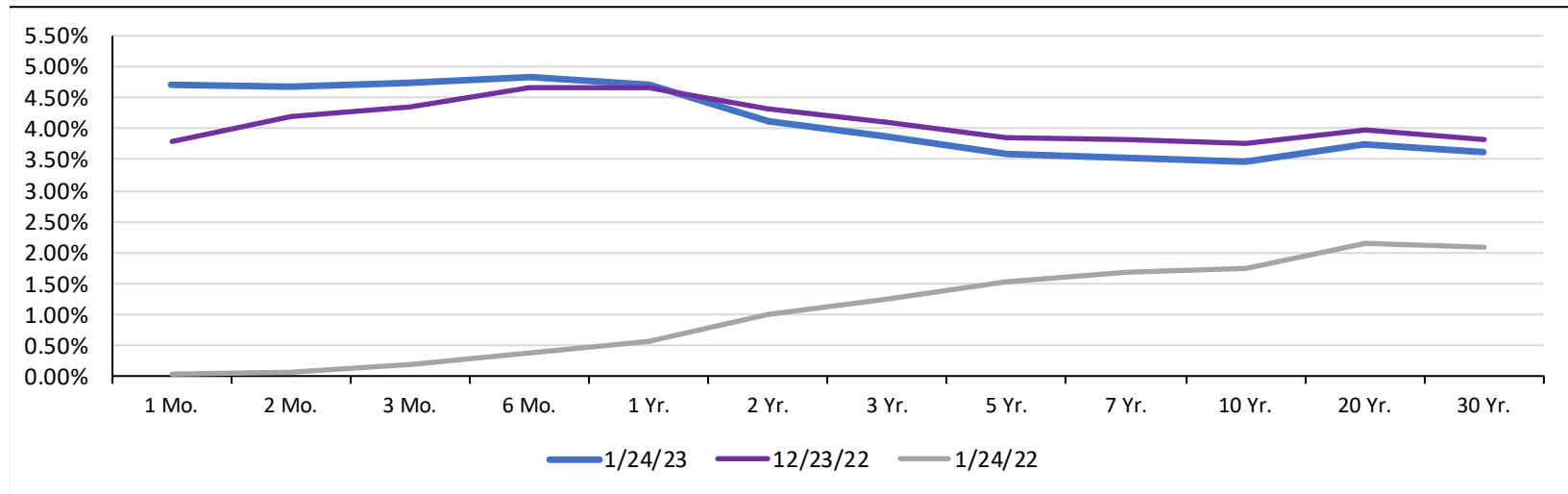
Jordan Masnica
Baird Public Finance
Vice President
414-298-7501
jmasnica@rwbaird.com

Economic Update

U.S. Treasury Rates

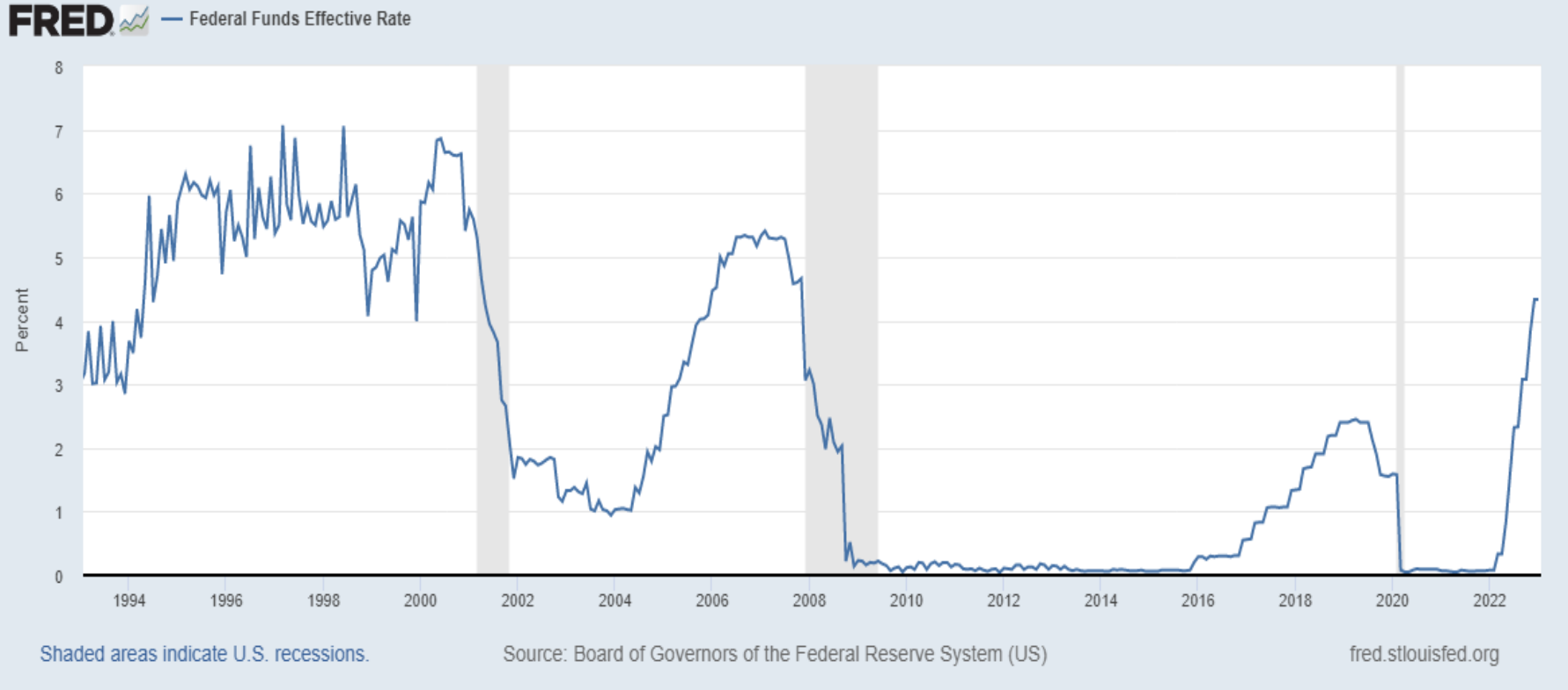


| Treasury Rates | | | | | |
|----------------|---------|----------|--------|---------|-------|
| | 1/24/23 | 12/23/22 | MoM Δ | 1/24/22 | YoY Δ |
| 1 Mo. | 4.70% | 3.80% | 0.90% | 0.05% | 4.65% |
| 2 Mo. | 4.67% | 4.20% | 0.47% | 0.09% | 4.58% |
| 3 Mo. | 4.72% | 4.34% | 0.38% | 0.19% | 4.53% |
| 6 Mo. | 4.84% | 4.67% | 0.17% | 0.39% | 4.45% |
| 1 Yr. | 4.70% | 4.66% | 0.04% | 0.58% | 4.12% |
| 2 Yr. | 4.12% | 4.31% | -0.19% | 0.99% | 3.13% |
| 3 Yr. | 3.86% | 4.09% | -0.23% | 1.25% | 2.61% |
| 5 Yr. | 3.58% | 3.86% | -0.28% | 1.53% | 2.05% |
| 7 Yr. | 3.52% | 3.83% | -0.31% | 1.69% | 1.83% |
| 10 Yr. | 3.46% | 3.75% | -0.29% | 1.75% | 1.71% |
| 20 Yr. | 3.73% | 3.99% | -0.26% | 2.15% | 1.58% |
| 30 Yr. | 3.62% | 3.82% | -0.20% | 2.10% | 1.52% |

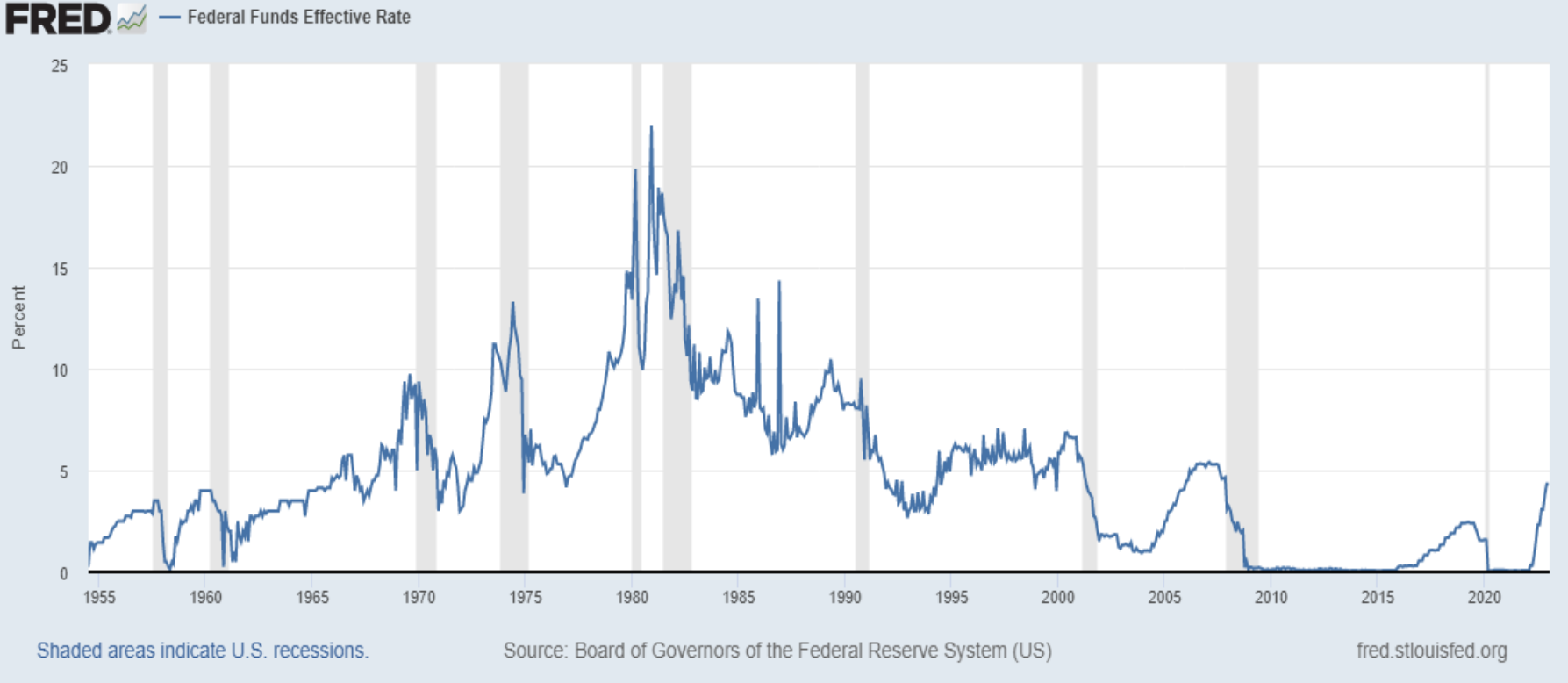


Source: U.S. Department of the Treasury

Federal Funds Effective Rate – Past 30 Years



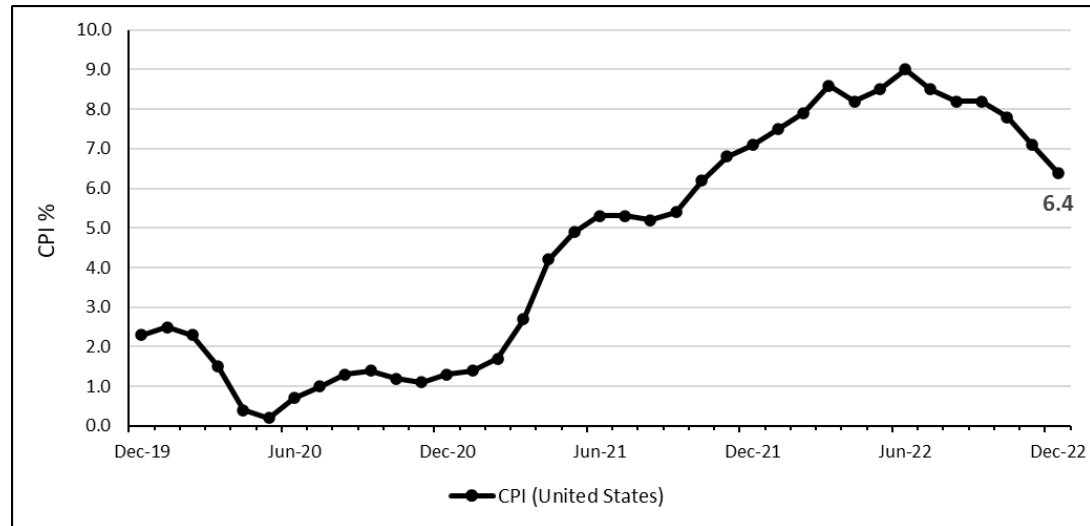
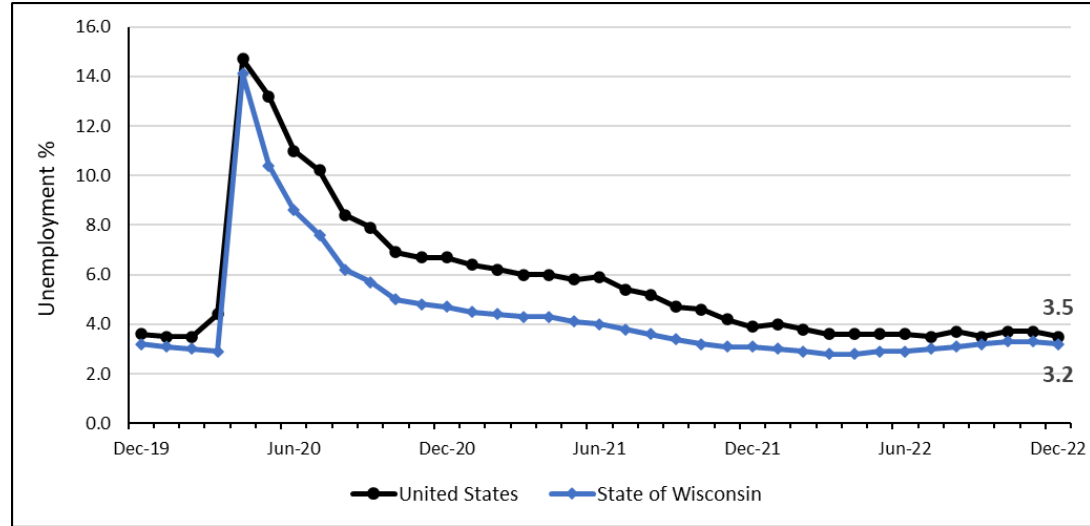
Federal Funds Effective Rate – Full History



Unemployment & Inflation



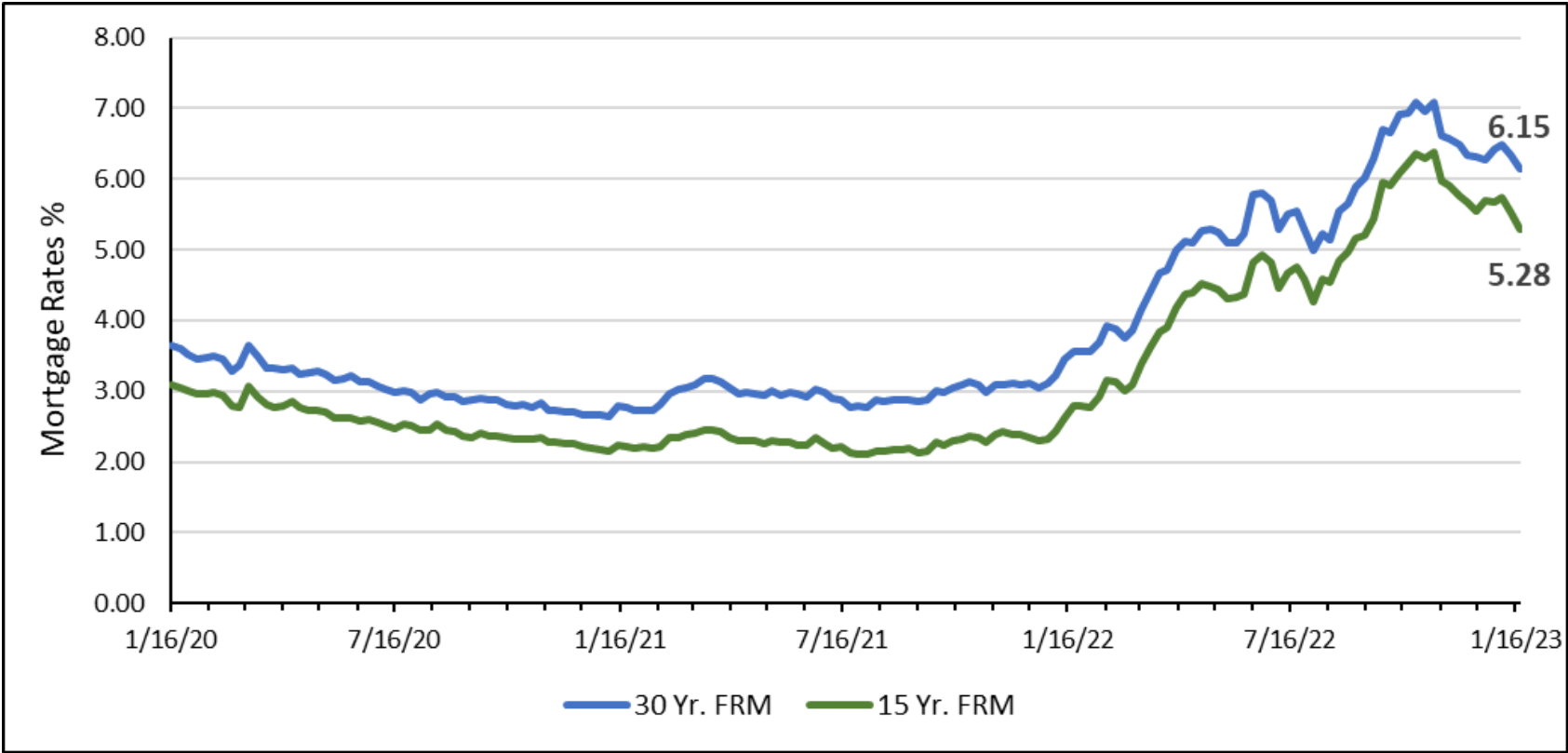
| | Unemployment | | CPI |
|----------------|---------------------|---------------|---------------|
| | State of Wisconsin | United States | United States |
| 2022 December | 3.2 | 3.5 | 6.4 |
| 2022 November | 3.3 | 3.7 | 7.1 |
| 2022 October | 3.3 | 3.7 | 7.8 |
| 2022 September | 3.2 | 3.5 | 8.2 |
| 2022 August | 3.1 | 3.7 | 8.2 |
| 2022 July | 3.0 | 3.5 | 8.5 |
| 2022 June | 2.9 | 3.6 | 9.0 |
| 2022 May | 2.9 | 3.6 | 8.5 |
| 2022 April | 2.8 | 3.6 | 8.2 |
| 2022 March | 2.8 | 3.6 | 8.6 |
| 2022 February | 2.9 | 3.8 | 7.9 |
| 2022 January | 3.0 | 4.0 | 7.5 |
| 2021 December | 3.1 | 3.9 | 7.1 |



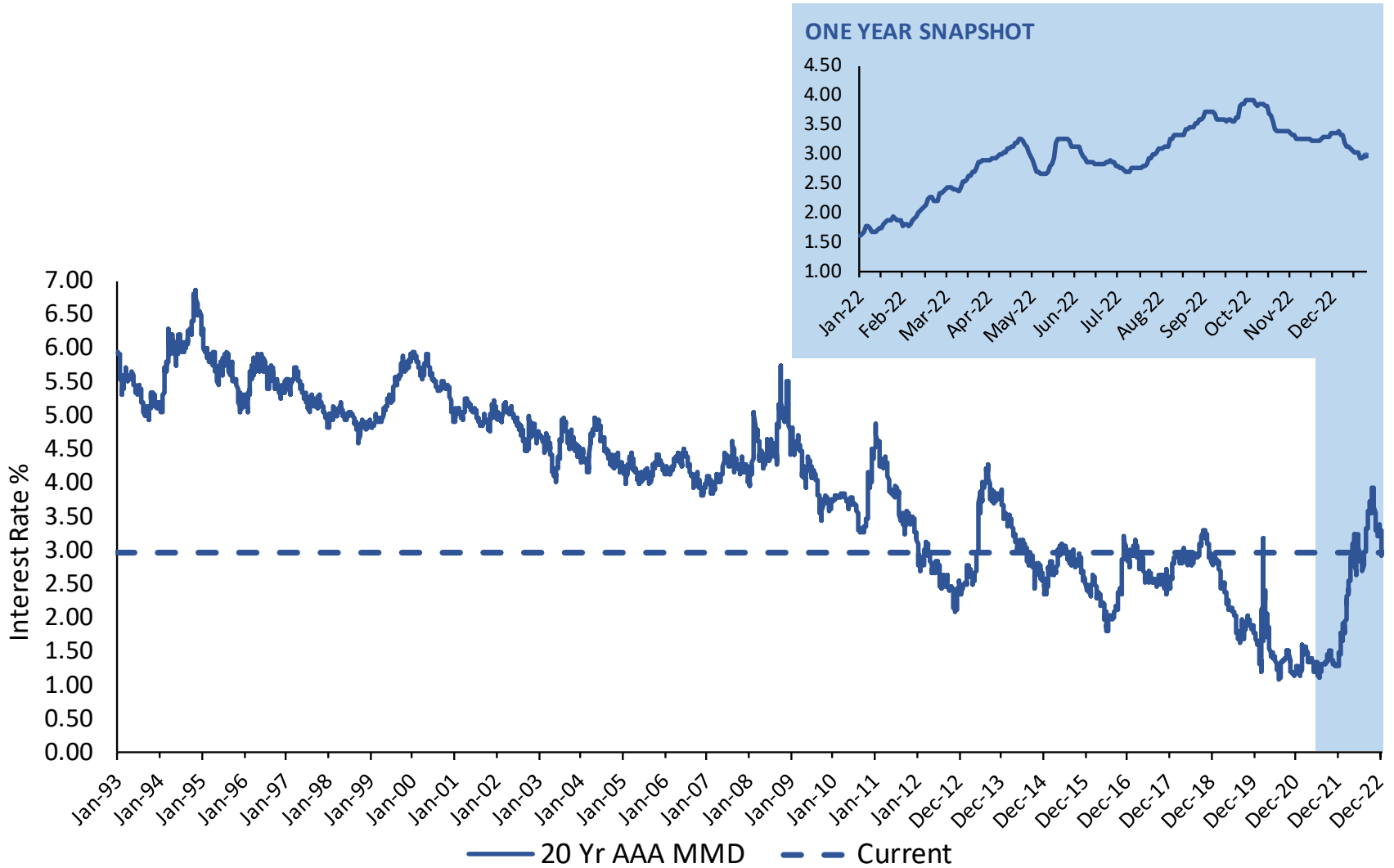
Unemployment Data Source: Wisconsin Department of Workforce Development. Data is seasonally adjusted.

CPI Data Source: U.S. Bureau of Labor Statistics. Data is seasonally adjusted.

Mortgage Rates



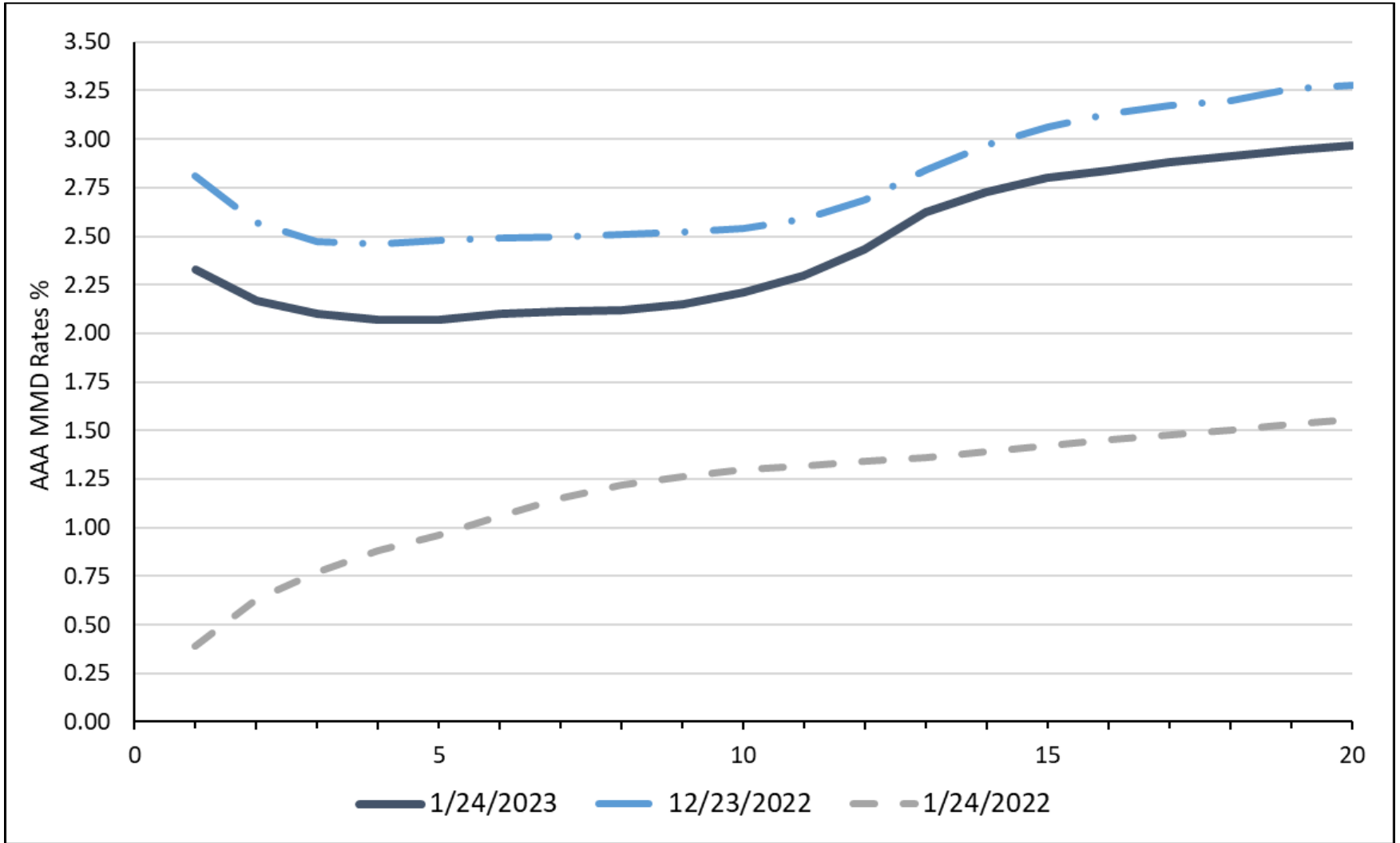
Tax-Exempt Interest Rates – Past 30 Years



Source: Refinitiv as of January 24, 2023

Recent Wisconsin Bond Issuance Activity

Municipal Market Data (MMD) – Yield Curve



Municipal Market Data (MMD) – Credit Difference



| Year | "AA" | "A" | Difference |
|------|-----------|-----------|------------|
| | 1/24/2023 | 1/24/2023 | |
| 1 | 2.38 | 2.49 | 0.11 |
| 2 | 2.23 | 2.37 | 0.14 |
| 3 | 2.17 | 2.31 | 0.14 |
| 4 | 2.15 | 2.30 | 0.15 |
| 5 | 2.17 | 2.31 | 0.14 |
| 6 | 2.22 | 2.40 | 0.18 |
| 7 | 2.25 | 2.44 | 0.19 |
| 8 | 2.28 | 2.46 | 0.18 |
| 9 | 2.32 | 2.54 | 0.22 |
| 10 | 2.39 | 2.59 | 0.20 |
| 11 | 2.50 | 2.73 | 0.23 |
| 12 | 2.65 | 2.87 | 0.22 |
| 13 | 2.86 | 3.09 | 0.23 |
| 14 | 3.00 | 3.22 | 0.22 |
| 15 | 3.10 | 3.31 | 0.21 |
| 16 | 3.14 | 3.35 | 0.21 |
| 17 | 3.18 | 3.39 | 0.21 |
| 18 | 3.21 | 3.42 | 0.21 |
| 19 | 3.26 | 3.47 | 0.21 |
| 20 | 3.31 | 3.52 | 0.21 |

Recent WI General Obligation Bond Issuance



| Sale Date | Entity | Par Amount | Tax Status | First Maturity | Final Maturity | Rating | Interest Rate Range |
|-----------|-------------------|---------------|------------------|----------------|----------------|-----------------|---------------------|
| 1/5/2023 | School District | \$9,995,000 | Tax Exempt - BQ | 2033 | 2043 | Aa2 | 3.25% - 4.06% |
| 1/9/2023 | School District | \$99,000,000 | Tax Exempt - NBQ | 2024 | 2028 | AA- | 2.65% - 2.90% |
| 1/10/2023 | School District | \$23,530,000 | Tax Exempt - NBQ | 2024 | 2043 | A+/AA Insured | 2.70% - 4.03% |
| 1/10/2023 | State | \$199,165,000 | Tax Exempt - NBQ | 2033 | 2043 | Aa1/AA+ | 2.57% - 3.88% |
| 1/10/2023 | Municipality | \$1,465,000 | Taxable | 2029 | 2039 | A1 | 4.20% - 5.00% |
| 1/11/2023 | School District | \$33,250,000 | Tax Exempt - NBQ | 2024 | 2043 | A+/AA Insured | 2.70% - 4.03% |
| 1/12/2023 | School District | \$33,370,000 | Tax Exempt - NBQ | 2031 | 2043 | Aa3 | 2.90% - 4.02% |
| 1/17/2023 | Technical College | \$1,500,000 | Tax Exempt - NBQ | 2025 | 2030 | Aaa | 2.55% - 2.62% |
| 1/17/2023 | School District | \$36,830,000 | Tax Exempt - NBQ | 2024 | 2043 | A+/AA Insured | 2.58% - 4.04% |
| 1/17/2023 | Technical College | \$7,000,000 | Tax Exempt - NBQ | 2025 | 2030 | AAA | 2.46% - 2.57% |
| 1/17/2023 | Municipality | \$1,705,000 | Tax Exempt - BQ | 2024 | 2033 | Aa3 | 2.70% - 3.08% |
| 1/18/2023 | School District | \$91,595,000 | Tax Exempt - NBQ | 2024 | 2042 | AA | 2.45% - 3.90% |
| 1/18/2023 | School District | \$27,855,000 | Tax Exempt - NBQ | 2025 | 2043 | A1/AA Insured | 2.50% - 4.04% |
| 1/18/2023 | Technical College | \$4,000,000 | Tax Exempt - NBQ | 2024 | 2032 | Aaa | 2.45% - 2.76% |
| 1/19/2023 | School District | \$4,015,000 | Tax Exempt - BQ | 2024 | 2043 | A+/AA Insured | 2.65% - 3.93% |
| 1/19/2023 | School District | \$34,430,000 | Tax Exempt - NBQ | 2024 | 2043 | AA- | 2.50% - 4.00% |
| 1/23/2023 | School District | \$70,750,000 | Tax Exempt - NBQ | 2024 | 2043 | Aa1 | 2.35% - 3.93% |
| 1/23/2023 | School District | \$9,700,000 | Tax Exempt - BQ | 2036 | 2043 | A2/AA Insured | 3.61% - 4.03% |
| 1/23/2023 | School District | \$6,455,000 | Tax Exempt - NBQ | 2024 | 2033 | Aa2 | 2.50% - 3.30% |
| 1/23/2023 | School District | \$90,000,000 | Tax Exempt - NBQ | 2024 | 2042 | A+/AA Insured | 2.50% - 3.95% |
| 1/23/2023 | School District | \$14,900,000 | Tax Exempt - NBQ | 2024 | 2035 | AA- | 2.46% - 3.41% |
| 1/23/2023 | School District | \$35,000,000 | Tax Exempt - NBQ | 2030 | 2042 | Aa2 | 2.30% - 3.95% |
| 1/23/2023 | School District | \$15,000,000 | Taxable | 2024 | 2029 | Aa2 | 4.55% - 4.05% |
| 1/24/2023 | Technical College | \$1,500,000 | Tax Exempt - NBQ | 2024 | 2027 | Aa1 | 3.00% - 3.00% |
| 1/24/2023 | School District | \$8,550,000 | Tax Exempt - BQ | 2038 | 2043 | A1/AA Insured | 3.78% - 4.00% |
| 1/24/2023 | School District | \$64,555,000 | Tax Exempt - NBQ | 2025 | 2043 | Aa2 | 2.34% - 4.00% |
| 1/24/2023 | Municipality | \$62,000,000 | Taxable | 2028 | 2028 | A-/A/AA Insured | 4.60% - 4.60% |
| 1/25/2023 | School District | \$20,500,000 | Tax Exempt - NBQ | 2025 | 2043 | A+/AA Insured | 2.51% - 4.00% |
| 1/25/2023 | School District | \$7,430,000 | Tax Exempt - BQ | 2024 | 2033 | A-/AA Insured | 2.75% - 3.37% |

Investment Rates

Investment Rates



Fixed Rates

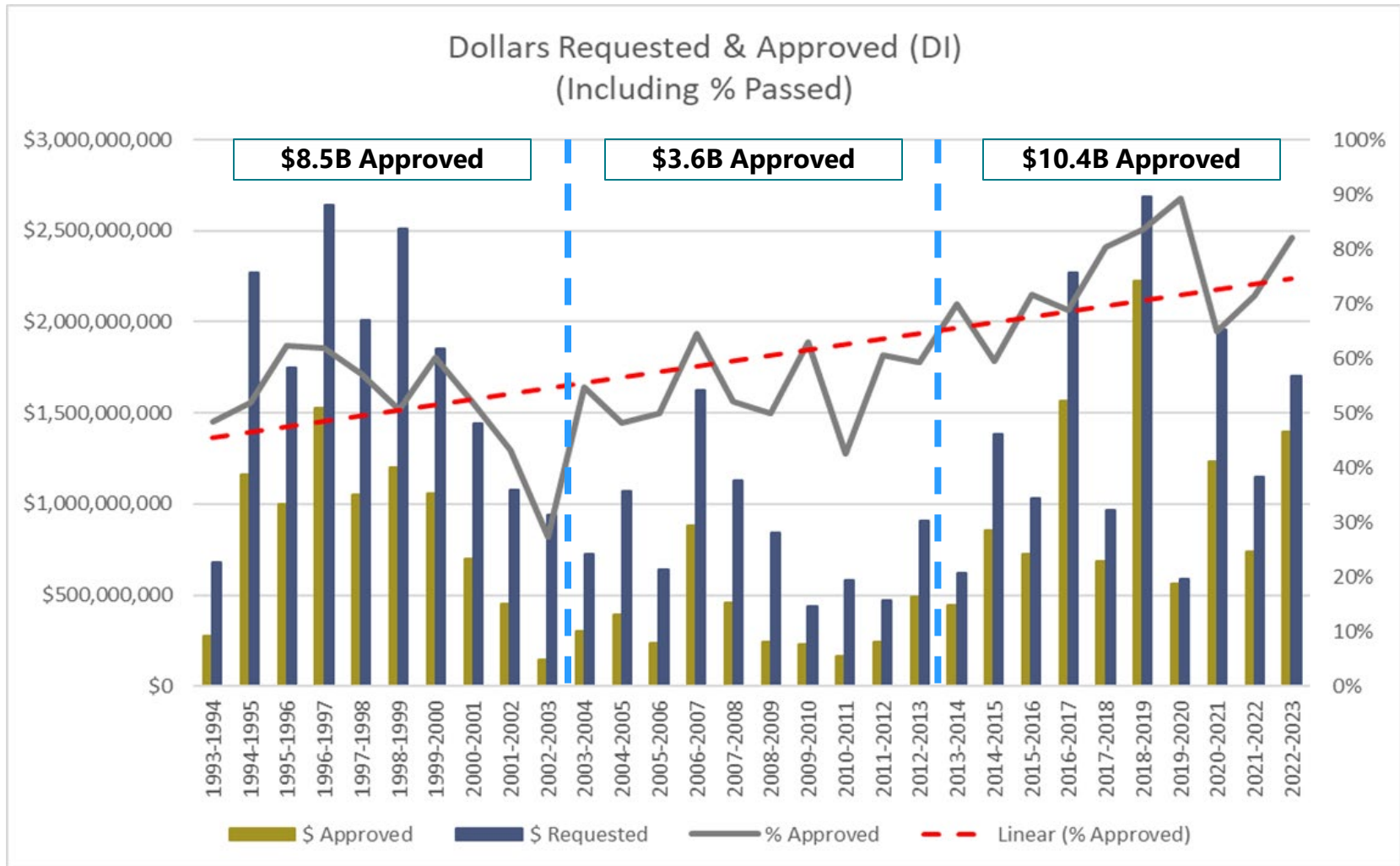
| | <i>Treasuries</i> | | | <i>CDs</i> | | |
|-------|-------------------|----------|--------|------------|----------|--------|
| | 1/24/23 | 12/23/22 | MoM Δ | 1/24/23 | 12/21/22 | MoM Δ |
| 1 Mo. | 4.70% | 3.80% | 0.90% | 4.00% | 4.25% | -0.25% |
| 2 Mo. | 4.67% | 4.20% | 0.47% | 4.25% | 4.15% | 0.10% |
| 3 Mo. | 4.72% | 4.34% | 0.38% | 4.45% | 4.40% | 0.05% |
| 6 Mo. | 4.84% | 4.67% | 0.17% | 4.60% | 4.55% | 0.05% |
| 1 Yr. | 4.70% | 4.66% | 0.04% | 4.75% | 5.00% | -0.25% |
| 2 Yr. | 4.12% | 4.31% | -0.19% | 4.90% | 4.55% | 0.35% |
| 3 Yr. | 3.86% | 4.09% | -0.23% | 4.60% | 4.70% | -0.10% |

Liquid Rates

| | January | December | MoM Δ |
|-----------|---------|----------|-------|
| LGIP Pool | 4.05% | 3.72% | 0.33% |
| WISC IS | 4.34% | 4.16% | 0.18% |
| AMMA | 4.01% | 3.67% | 0.34% |

Timely Topic

Debt Referendum History since 1993-94 (Inflation Adjusted)



Data and Visual Provided by:
 Rob Demeuse, School Perceptions
 Inflation adjusted using BLS Inflation calculator 10/2022
 Data Source: DPI Website



Debt Referendum Summary – Since Great Recession (2008-09)

Summary of Debt Authorization totals since 2008-09 (Actual amounts, not inflation adjusted):

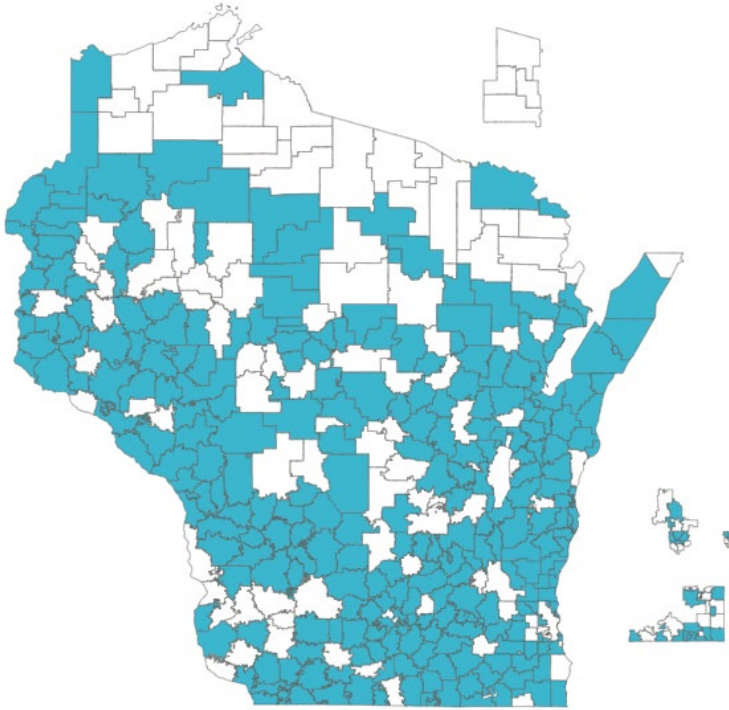
- 471 approved question since 2008-09
 - Over \$10 billion Authorized in the **past 15 years**
 - This period encompassed two major economic disruptions and many policy changes
 - Provided historically low interest rate environment which allowed rapid debt payoff
 - To begin 2023:
 - \$6.9 BN principal outstanding
 - \$1.9 BN interest outstanding
- Distribution of referendum debt authority varies widely across the state
 - 123 districts (29%) do not have referendum approved debt in 2022-23
 - Table below displays a referendum distribution summary

| Range of Borrowing Authority | Total Amount | % of Total | District Count in range | % of Total Count |
|------------------------------|--------------|------------|-------------------------|------------------|
| Over \$300 million | \$ 317MM | 3% | 1 | .21% |
| \$100MM-\$200MM | \$1,362MM | 14% | 10 | 2.12% |
| \$ 80MM-\$100MM | \$ 834MM | 8% | 9 | 1.91% |
| \$ 50MM-\$ 80MM | \$1,775MM | 18% | 28 | 5.94% |
| \$ 20MM-\$ 50MM | \$3,346MM | 33% | 109 | 23.14% |
| Under \$20 million | \$2,382MM | 24% | 314 | 66.67% |

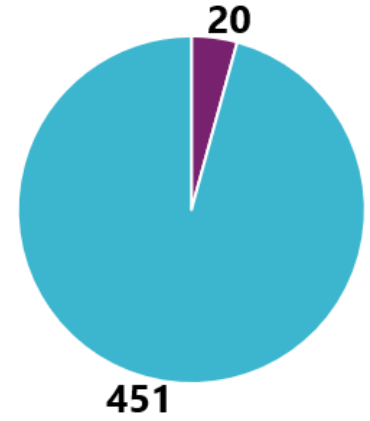
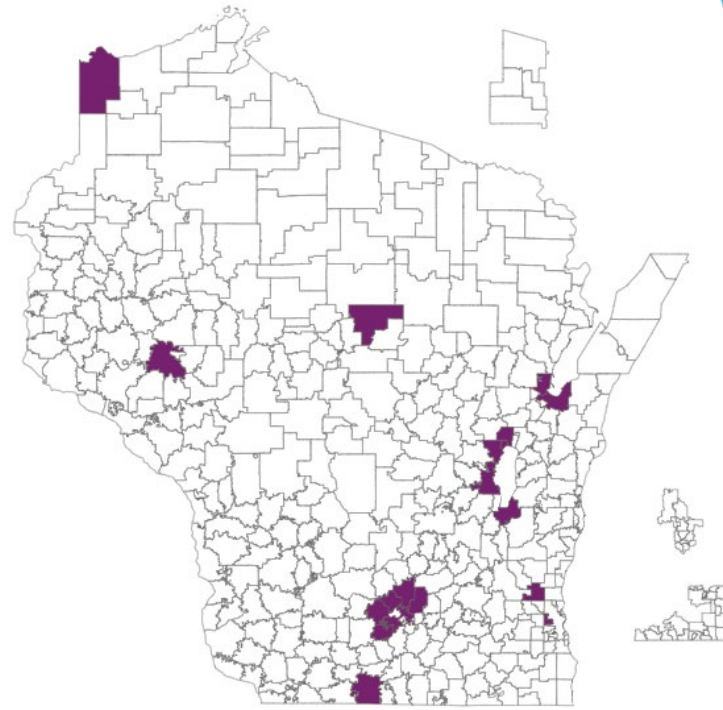
Debt Referendum Summary – Since Great Recession (2008-09)



PASSED - UNDER \$80MM



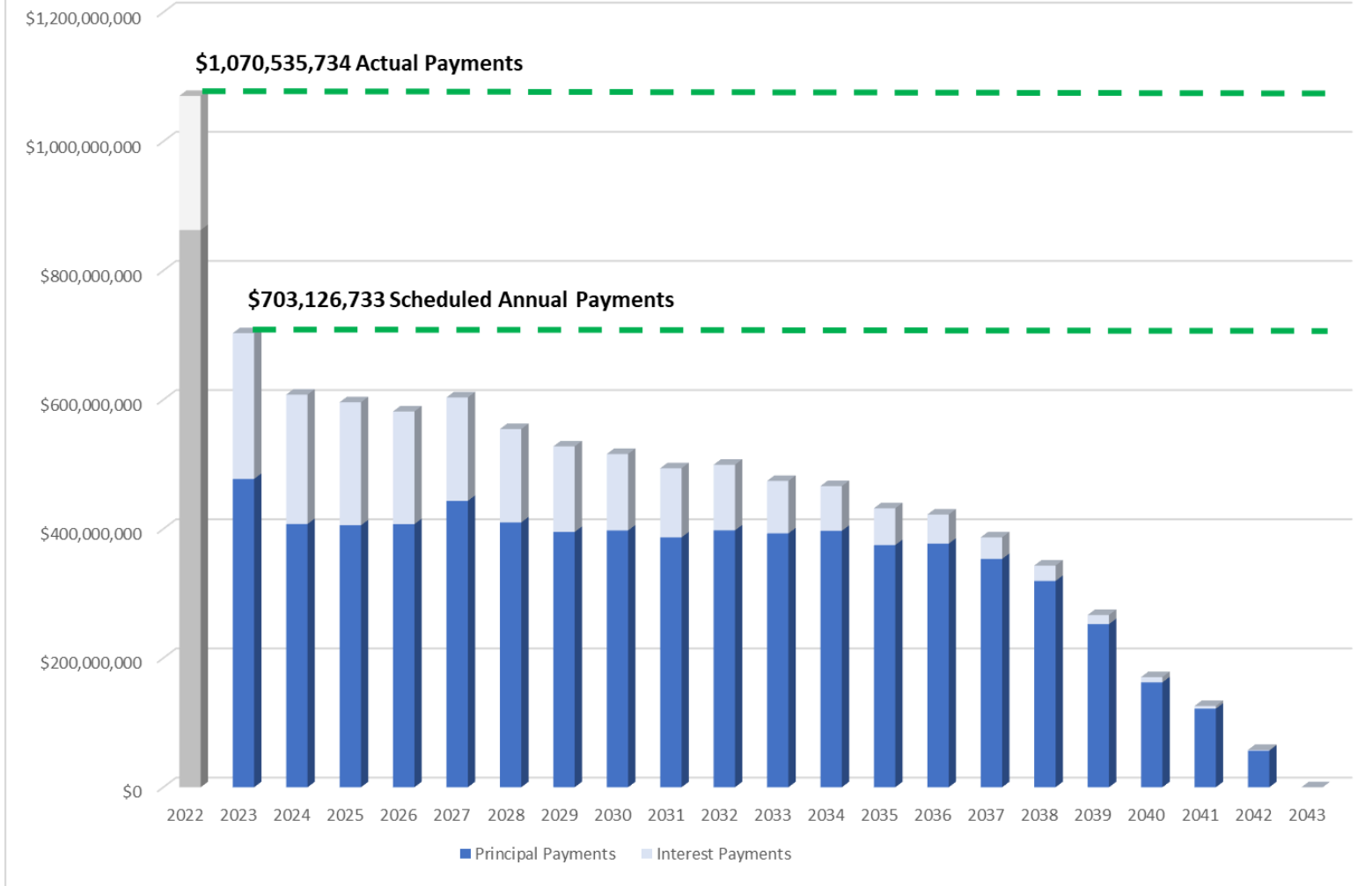
PASSED – OVER \$80MM



Referendum Debt Service - Statewide



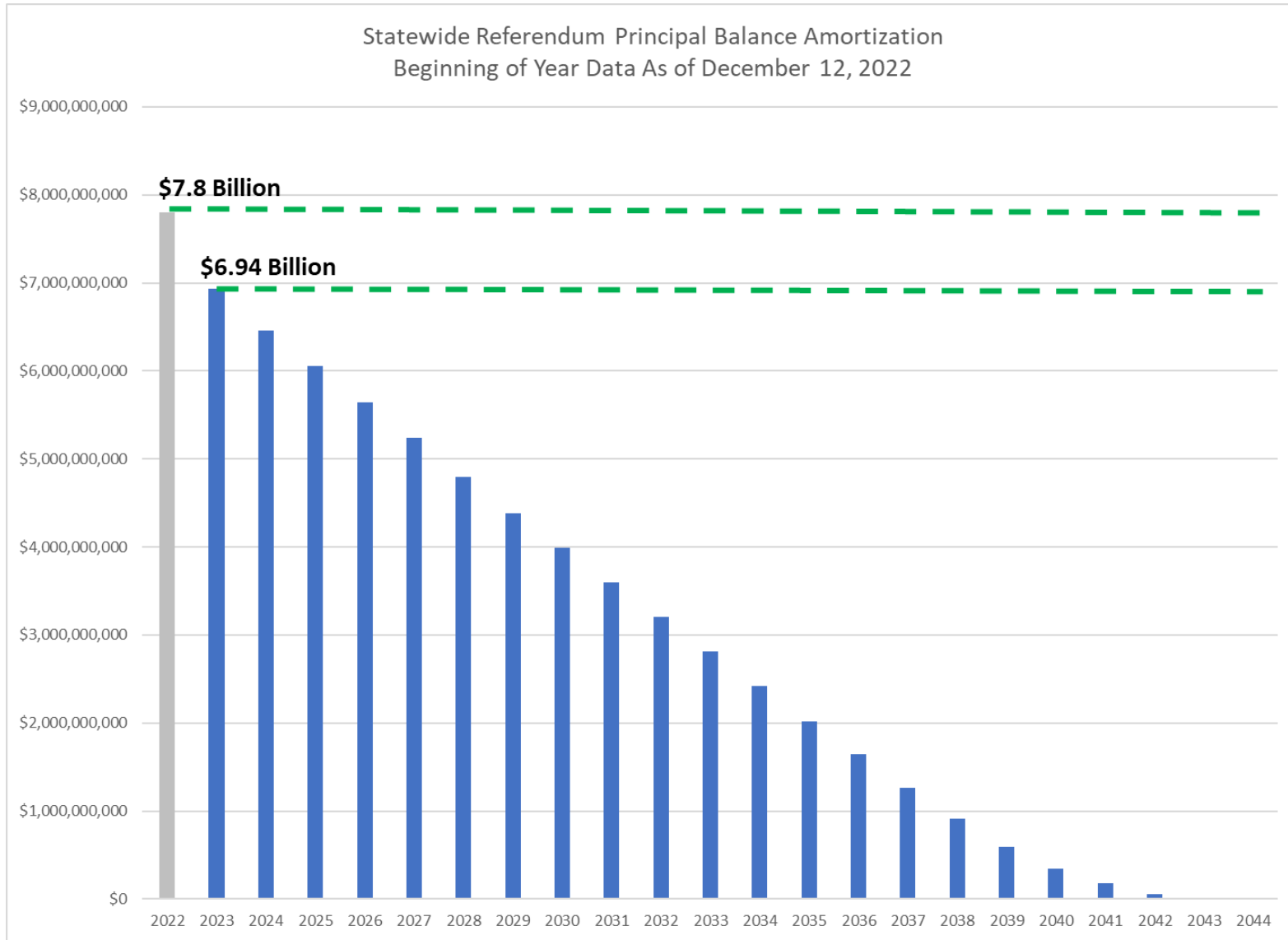
Statewide Annual Referendum Debt Payments (Fund 39)
Data as of December 12, 2022



Data from DPI Website as of 12/12/2022



Referendum Principal Amortization - Statewide



Data from DPI Website as of 12/12/2022

Important Disclosures



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