

August 10, 2023

SALE DAY REPORT FOR:

City of West Allis, Wisconsin

**\$5,170,000 General Obligation Promissory Notes,
Series 2023A**



Prepared by:

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BUILDING COMMUNITIES. IT'S WHAT WE DO.

Competitive Sale Results

PURPOSE: For public purposes, including paying the cost of street improvement projects and street lighting projects (collectively, the "Project").

RATING: Moody's Investor's Service "Aa2"

NUMBER OF BIDS: 9

LOW BIDDER: Huntington Securities, Inc, Chicago, Illinois

COMPARISON FROM LOWEST TO HIGHEST BID: (TIC as bid)

LOW BID:* 3.2486%

HIGH BID: 3.4337%

Summary of Sale Results:	
Principal Amount*:	\$5,170,000
Underwriter's Discount:	\$27,143
Reoffering Premium:	\$341,406
True Interest Cost:	3.2561%
Costs of Issuance:	\$64,592
Yield:	2.86%-3.50%
Total Net P&I	\$6,336,611

NOTES: Bond Trust Services Corporation, Roseville, Minnesota will serve as Paying Agent on the Notes.

The Notes maturing April 1, 2031 and thereafter are callable April 1, 2030 or any date thereafter.

* Subsequent to bid opening, the issue size was decreased from \$5,220,000.

CLOSING DATE: August 24, 2023

DESIGNATED OFFICIAL ACTION: Award the sale of \$5,170,000 General Obligation Promissory Notes, Series 2023A.

SUPPLEMENTARY ATTACHMENTS

- Bid Tabulation
- Sources and Uses of Funds (Table 1)
- Updated Issue Allocation (Table 2)
- Updated Debt Service/Tax Impact Schedule (Table 3)
- Rating Report
- BBI Graph

BID TABULATION

\$5,220,000* General Obligation Promissory Notes, Series 2023A

City of West Allis, Wisconsin

SALE: August 10, 2023

AWARD: HUNTINGTON SECURITIES, INC

Rating: Moody's Investor's Service "Aa2"

Tax Exempt - Bank Qualified

NAME OF BIDDER	MATURITY (April 1)	RATE	REOFFERING YIELD	PRICE	NET INTEREST COST	TRUE INTEREST RATE
HUNTINGTON SECURITIES, INC Chicago, Illinois	2024	5.000%	3.500%	\$5,554,750.05	\$904,765.64	3.2486%
	2025	5.000%	3.320%			
	2026	5.000%	3.140%			
	2027	5.000%	3.010%			
	2028	5.000%	2.970%			
	2029	5.000%	2.920%			
	2030	5.000%	2.880%			
	2031	5.000%	2.860%			
	2032	4.000%	3.150%			
	2033	4.000%	3.200%			
JANNEY MONTGOMERY SCOTT LLC Philadelphia, Pennsylvania						3.2593%
BAIRD Milwaukee, Wisconsin						3.3141%
PIPER SANDLER & CO. Minneapolis, Minnesota						3.3281%
NORTHLAND SECURITIES, INC. Minneapolis, Minnesota						3.3820%
TD SECURITIES (USA) LLC New York, New York						3.3874%

* Subsequent to bid opening the issue size was decreased to \$5,170,000.

Adjusted Price - \$5,484,263.90

Adjusted Net Interest Cost - \$852,346.93

Adjusted TIC - 3.2561%

NAME OF BIDDER	MATURITY (April 1)	RATE	REOFFERING YIELD	PRICE	NET INTEREST COST	TRUE INTEREST RATE
BOK FINANCIAL SECURITIES, INC. Milwaukee, Wisconsin						3.4083%
KEYBANC CAPITAL MARKETS INCORPORATED Cleveland, Ohio						3.4179%
RAYMOND JAMES & ASSOCIATES, INC. Old Memphis, Tennessee						3.4337%

Table 1

Capital Improvements Financing Plan

City of West Allis, WI

	Preliminary	FINAL	Levy - Street Projects Portion	Levy - Street Lighting Projects Portion
	2023	2023		
	G.O. Notes	G.O. Notes		
CIP Projects¹				
Street Projects	3,600,000	3,600,000	3,600,000	
Street Lighting Projects	1,600,000	1,600,000		1,600,000
Subtotal Project Costs	5,200,000	5,200,000	3,600,000	1,600,000
CIP Projects¹	5,200,000	5,200,000	3,600,000	1,600,000
Premium				
Underwriter's Premium (built into rates)	0	(341,406)	(236,537)	(104,869)
Premium Dep. To Debt Service	0	314,264	217,742	96,522
Net Premium	0	(27,143)	(18,795)	(8,348)
Estimated Issuance Expenses	52,200	27,143	18,795	8,348
Municipal Advisor (Ehlers)	24,800	24,800	17,173	7,627
Bond Counsel	20,000	19,600	13,572	6,028
Rating Fee	19,500	19,500	13,503	5,997
Maximum Underwriter's Discount	52,200	27,143	18,795	8,348
Paying Agent	850	692	479	213
Issuance costs paid by City	(65,150)	(64,592)	(44,727)	(19,865)
Subtotal Issuance Expenses	52,200	27,143	18,795	8,348
TOTAL TO BE FINANCED	5,252,200	5,200,000	3,600,000	1,600,000
Estimated Interest Earnings	(32,967)	(32,967)	(22,828)	(10,139)
Rounding	767	2,967	2,828	139
NET BOND SIZE	5,220,000	5,170,000	3,580,000	1,590,000

Notes:

1) Project Total Estimates

Table 2
Allocation of Debt Service - 2023 G.O. Notes
 City of West Allis, WI

Year Ending	Levy - Street Projects					Levy - Street Lighting Projects				
	Principal	Rates	Interest	Pre. Dep. To D.S.	Total	Principal	Rates	Interest	Pre. Dep. To D.S.	Total
2024	540,000	5.00%	176,398	(176,398)	540,000	240,000	5.00%	78,363	(78,363)	240,000
2025	335,000	5.00%	136,825	(41,344)	430,481	150,000	5.00%	60,750	(18,159)	192,591
2026	335,000	5.00%	120,075		455,075	150,000	5.00%	53,250		203,250
2027	335,000	5.00%	103,325		438,325	150,000	5.00%	45,750		195,750
2028	335,000	5.00%	86,575		421,575	150,000	5.00%	38,250		188,250
2029	340,000	5.00%	69,700		409,700	150,000	5.00%	30,750		180,750
2030	340,000	5.00%	52,700		392,700	150,000	5.00%	23,250		173,250
2031	340,000	5.00%	35,700		375,700	150,000	5.00%	15,750		165,750
2032	340,000	4.00%	20,400		360,400	150,000	4.00%	9,000		159,000
2033	340,000	4.00%	6,800		346,800	150,000	4.00%	3,000		153,000
Total	3,580,000		808,498	(217,742)	4,170,756	1,590,000		358,113	(96,522)	1,851,591

Year Ending	Totals			
	Principal (4/1)	Interest	Pre. Dep. To D.S.	Total
2024	780,000	254,761	(254,761)	780,000
2025	485,000	197,575	(59,503)	623,072
2026	485,000	173,325	0	658,325
2027	485,000	149,075	0	634,075
2028	485,000	124,825	0	609,825
2029	490,000	100,450	0	590,450
2030	490,000	75,950	0	565,950
2031	490,000	51,450	0	541,450
2032	490,000	29,400	0	519,400
2033	490,000	9,800	0	499,800
Total	5,170,000	1,166,611	(314,264)	6,022,347

Notes:

Preliminary	5,220,000	924,826	0	6,144,826
Difference	(50,000)	241,785	(314,264)	(122,479)

Table 3 Financing Plan Tax Impact

City of West Allis, WI

Year Ending	Existing Debt					Proposed Debt						Year Ending
	Net Debt Service Levy	Change From Prior Year Levy	Equalized Value (TID OUT)	Tax Rate Per \$1,000	Annual Taxes \$300,000 Home	2023 G.O. Notes 5,170,000 Dated: 8/24/2023 Total Principal and Interest	Debt Service Levy		Taxes			
							Total Net Debt Service Levy	Levy Change from Prior Year	Total Tax Rate for Debt Service	Annual Taxes \$300,000 Home	Annual Taxes Difference From Existing	
2023	4,451,831	117,912	5,191,417,900	\$0.86	\$257.26	0	4,451,831	117,912	\$0.86	\$257	\$0.00	2023
2024	3,432,737	(1,019,094)	5,191,417,900	\$0.66	\$198.37	780,000	4,212,737	(239,094)	\$0.81	\$243	\$45	2024
2025	3,191,732	(241,005)	5,191,417,900	\$0.61	\$184.44	623,072	3,814,804	(397,933)	\$0.73	\$220	\$36	2025
2026	2,872,595	(319,137)	5,191,417,900	\$0.55	\$166.00	658,325	3,530,920	(283,884)	\$0.68	\$204	\$38	2026
2027	2,542,432	(330,163)	5,191,417,900	\$0.49	\$146.92	634,075	3,176,507	(354,413)	\$0.61	\$184	\$37	2027
2028	2,235,570	(306,862)	5,191,417,900	\$0.43	\$129.19	609,825	2,845,395	(331,112)	\$0.55	\$164	\$35	2028
2029	1,879,595	(355,975)	5,191,417,900	\$0.36	\$108.62	590,450	2,470,045	(375,350)	\$0.48	\$143	\$34	2029
2030	1,552,670	(326,925)	5,191,417,900	\$0.30	\$89.73	565,950	2,118,620	(351,425)	\$0.41	\$122	\$33	2030
2031	1,024,061	(528,609)	5,191,417,900	\$0.20	\$59.18	541,450	1,565,511	(553,109)	\$0.30	\$90	\$31	2031
2032	618,501	(405,560)	5,191,417,900	\$0.12	\$35.74	519,400	1,137,901	(427,610)	\$0.22	\$66	\$30	2032
2033	0	(618,501)	5,191,417,900	\$0.00	\$0.00	499,800	499,800	(638,101)	\$0.10	\$29	\$29	2033
2034	0	0	5,191,417,900	\$0.00	\$0.00	0	0	(499,800)	\$0.00	\$0	\$0	2034
Total	23,801,726					6,022,347					348	Total

Notes:

CREDIT OPINION

7 August 2023



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City of West Allis, WI

Update to credit analysis

Summary

[West Allis](#) (Aa2) is favorably located within the [Milwaukee](#) (A3 negative) metropolitan area. Its continued economic development will support tax base growth and, by extension, property tax revenue. The city's overall financial profile is healthy with solid reserves driven by prudent budgetary management despite strict levy limits. These strengths are balanced against the city's limited revenue-raising flexibility and somewhat elevated leverage.

Credit strengths

- » Growing tax base located within the Milwaukee metropolitan area
- » Solid financial operations supported by healthy reserves

Credit challenges

- » Elevated long-term liabilities
- » Limited revenue raising flexibility due to state imposed levy limits

Rating outlook

Moody's does not typically assign outlooks to local governments with this amount of debt.

Factors that could lead to an upgrade

- » Significant moderation of the city's long-term leverage and fixed-costs ratios
- » Improved resident wealth and income

Factors that could lead to a downgrade

- » Material narrowing of operating reserves
- » Significant increase in city's leverage

Key indicators

Exhibit 1

West Allis (City of) WI

	2019	2020	2021	2022	Aa Medians
Economy					
Resident income ratio (%)	85.3%	86.1%	89.0%	N/A	115.0%
Full Value (\$000)	\$4,010,377	\$4,324,119	\$4,780,305	\$5,518,411	\$2,649,338
Population	60,025	59,861	60,220	N/A	22,694
Full value per capita (\$)	\$66,812	\$72,236	\$79,381	N/A	\$108,666
Economic growth metric (%)	N/A	-1.3%	-1.2%	N/A	-0.5%
Financial Performance					
Revenue (\$000)	\$109,244	\$113,175	\$121,254	\$124,685	\$48,404
Available fund balance (\$000)	\$62,418	\$71,465	\$85,517	\$88,598	\$24,069
Net unrestricted cash (\$000)	\$131,035	\$106,557	\$149,194	\$157,418	\$32,092
Available fund balance ratio (%)	57.1%	63.1%	70.5%	71.1%	51.0%
Liquidity ratio (%)	119.9%	94.2%	123.0%	126.3%	69.0%
Leverage					
Debt (\$000)	\$86,873	\$88,411	\$97,042	\$90,250	\$34,496
Adjusted net pension liabilities (\$000)	\$127,023	\$167,408	\$212,487	\$200,467	\$55,543
Adjusted net OPEB liabilities (\$000)	\$110,594	\$112,480	\$130,568	\$133,248	\$6,316
Other long-term liabilities (\$000)	\$0	\$375	\$1,552	\$3,341	\$1,623
Long-term liabilities ratio (%)	297.0%	325.8%	364.2%	342.7%	244.8%
Fixed costs					
Implied debt service (\$000)	\$5,398	\$6,334	\$6,331	\$6,807	\$2,436
Pension tread water contribution (\$000)	\$4,132	\$2,474	\$1,779	N/A	\$1,565
OPEB contributions (\$000)	\$4,093	\$3,927	\$3,697	\$3,503	\$178
Implied cost of other long-term liabilities (\$000)	\$12	\$0	\$27	\$109	\$109
Fixed-costs ratio (%)	12.5%	11.3%	9.8%	9.8%	11.1%

For definitions of the metrics in the table above please refer to the [US Cities and Counties Methodology](#) or see the Glossary in the Appendix below. Metrics represented as N/A indicate the data were not available at the time of publication. The medians come from our most recently published [US Cities and Counties Median Report](#).

The Economic Growth metric cited above compares the five-year CAGR of real GDP for Milwaukee-Waukesha, WI Metropolitan Statistical Area to the five-year CAGR of real GDP for the US.

Sources: US Census Bureau, West Allis (City of) WI's financial statements and Moody's Investors Service, US Bureau of Economic Analysis

Profile

The City of West Allis is located in [Milwaukee County](#) (Aa3 stable) in southeastern [Wisconsin](#) (Aa1 stable). The city is directly west of Milwaukee and has just over 60,000 residents. The city's primary functions include public safety, economic and housing assistance, water distribution and disposal, public works, recreational facilities and other general government services.

Detailed credit considerations

Economy: mature community with a growing economy

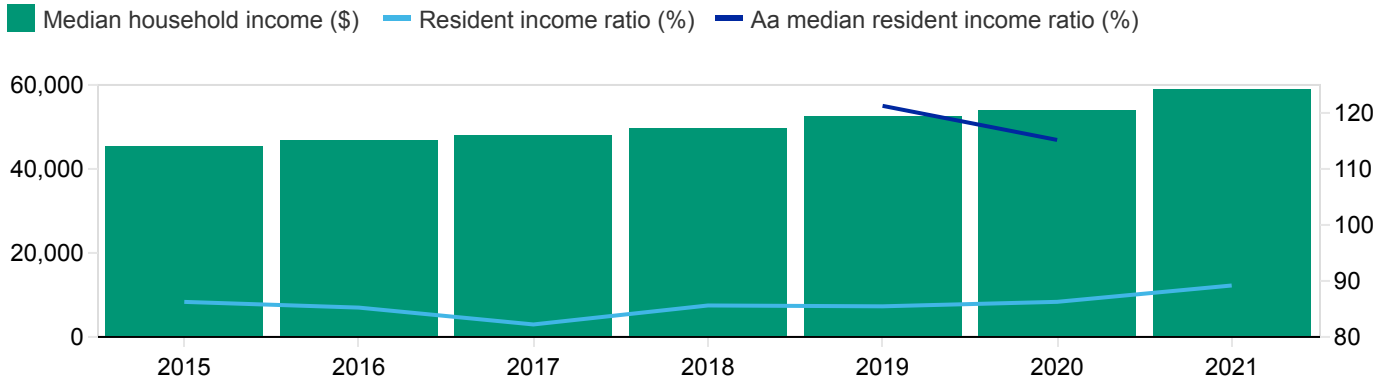
The city's local economy and tax base benefit from its proximity to Milwaukee, which will support long-term stability, though the MSA's pace of growth has trailed the nation. That said, management reports major development within the city, including a major \$40 million expansion at Chr. Hansen Inc, a company that produces natural ingredient solutions for the food, nutritional, pharmaceutical and agricultural industries.

The city is primarily residential (63% of equalized value) with a moderate commercial presence (33%). Housing demand increased during the pandemic resulting in an uptick in new single-family building permit activity. Permit value in 2022 was \$1.2 million, which was up from \$275,000 the previous year. The largest industry sectors that drive the local economy are manufacturing, health care, and retail services.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moody.com> for the most updated credit rating action information and rating history.

Resident wealth and incomes are slightly below average, with adjusted MHI at 89% of the national average and full value per capita at about \$92,000. The population of West Allis has grown modestly over the past decade. Unemployment in West Allis was 3.3% as of May 2023, which was above the state (2.7%) and on par with the nation (3.4%).

Exhibit 2
Resident Income



Source: Moody's Investors Service

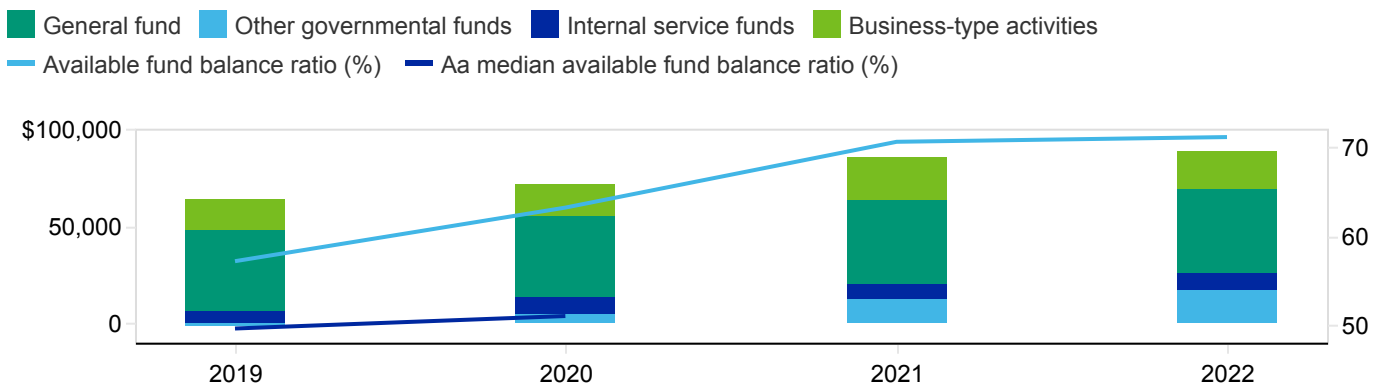
Financial operations: strong reserves and stable operations

The city's financial operations will likely remain strong because of ongoing economic development and the city's proactive budget management. The fiscal 2023 general fund budget is balanced. Given the city's conservative budget management and history of outperforming its budget, it will likely generate positive variances by year-end.

Fiscal 2022 available fund balance (total governmental available fund balance + business-type net current assets) totaled a strong 71% of revenue with the majority held in the city's general fund (exhibit 3). Fund balance and cash balance have met the city's informal policy to maintain at least five months of unassigned general fund reserves for the past three years.

General fund activities comprise roughly of 69% of total governmental revenue. The largest single source of revenue in the city's governmental funds is property taxes which totaled about 56% of governmental fund revenue in fiscal 2022 followed by intergovernmental revenue from the state at about 30%. Property taxes are subject to strict levy limits apart from new construction, which has led to revenue growth from ongoing development. Business-type activities comprise roughly 23% of the city's total revenue and consist of water, sewer, stormwater and other nonmajor funds.

Exhibit 3
Fund Balance



Source: Moody's Investors Service

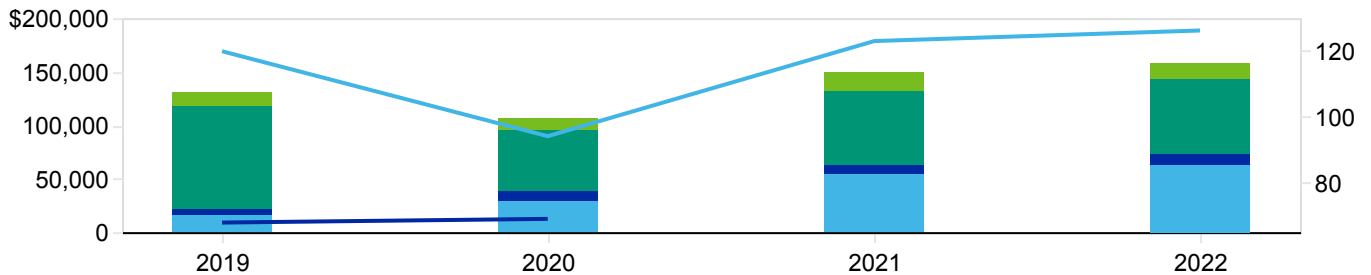
Liquidity

The city's liquidity position is very strong, with unrestricted cash equivalent to 126% of revenue in fiscal 2022. Liquidity is stronger than available fund balance because of the funds restricted for economic development in the city's TID funds along with special revenue funds for restricted purposes. Most of the remaining cash is held in the city's general fund and other governmental funds (see exhibit 4).

Exhibit 4

Cash

■ General fund
 ■ Other governmental funds
 ■ Internal service funds
 ■ Business-type activities
 — Liquidity ratio (%)
 — Aa median liquidity ratio (%)



Source: Moody's Investors Service

Leverage: elevated long-term liabilities and moderate fixed costs

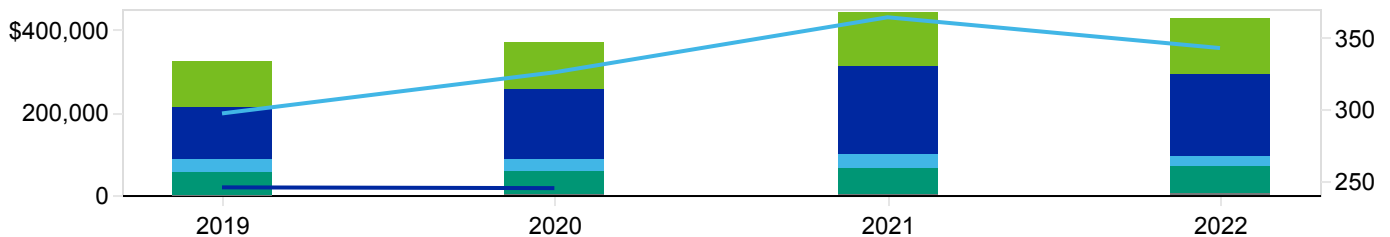
The city's long term liabilities will remain elevated because of ongoing borrowing plans, representing the city's primary credit challenge. Following an upcoming issuance for projects in the city's capital plan, total leverage will equal about 347% of fiscal 2022 revenue. Outstanding liabilities are primarily debt and pension liabilities (see exhibit 5). Adjusted fixed costs are moderate totaling about 10% of fiscal 2022 revenue.

City officials have preliminary plans to build a new public works and utility facility with an estimated total cost around \$75 million. The city will likely use remaining ARPA money or reserves to cash fund the non-utility portion of the facility and borrow for the remaining portion in two phases.

Exhibit 5

Total Primary Government - Long Term Liabilities

■ Governmental Debt
 ■ Business-Type Activity Debt
 ■ Adjusted net pension liabilities
 ■ Adjusted net other post-employment liabilities
 ■ Other long-term liabilities
 — Long-term liabilities ratio (%)
 — Aa median long-term liabilities ratio (%)



Source: Moody's Investors Service

Legal security

The city's general obligation (GO) debt, including the Series 2023A notes, is supported by an unlimited property tax pledge on all taxable property within the city without limitation as to rate or amount.

Debt structure

All of the city's debt is fixed rate. Amortization of long-term debt is above average with 87% of principal retired within 10 years.

Debt-related derivatives

The city has no exposure to any debt-related derivatives.

Pensions and OPEB

West Allis participates in the Wisconsin Retirement System (WRS), a statewide cost-sharing plan. Contributions are determined using a level contribution actuarial method in an effort to keep employer and employee contribution rates at a level percentage of payroll over time, and are set at 100% of the plan's funding requirement. As a result, WRS remains one of the best-funded public employee retirement systems in the country.

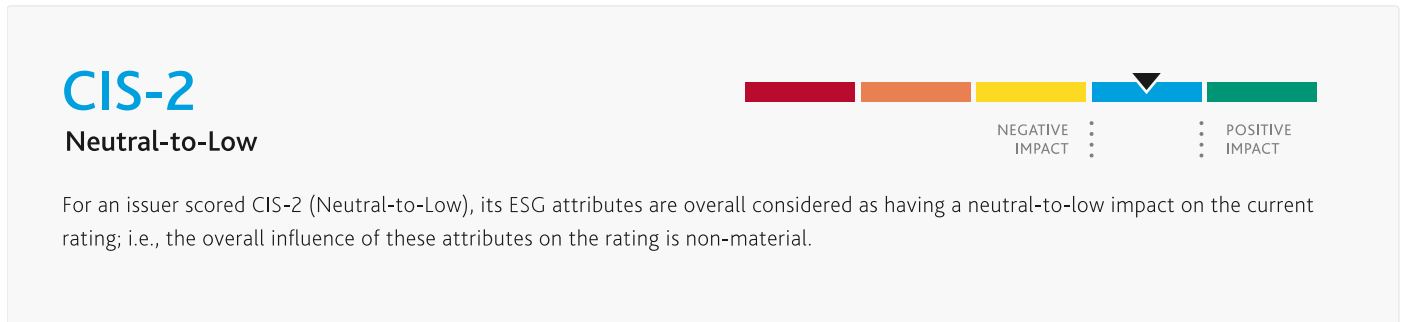
The city's OPEB liability reflects an implicit rate subsidy for retirees who pay to remain on the city's health care plan and life insurance benefits to eligible employees via the Local Retiree Life Insurance Fund (LRLIF), a multiple-employer defined benefit OPEB plan. These liabilities are funded on a pay-as-you go basis.

ESG considerations

West Allis (City of) WI's ESG Credit Impact Score is Neutral-to-Low CIS-2

Exhibit 6

ESG Credit Impact Score

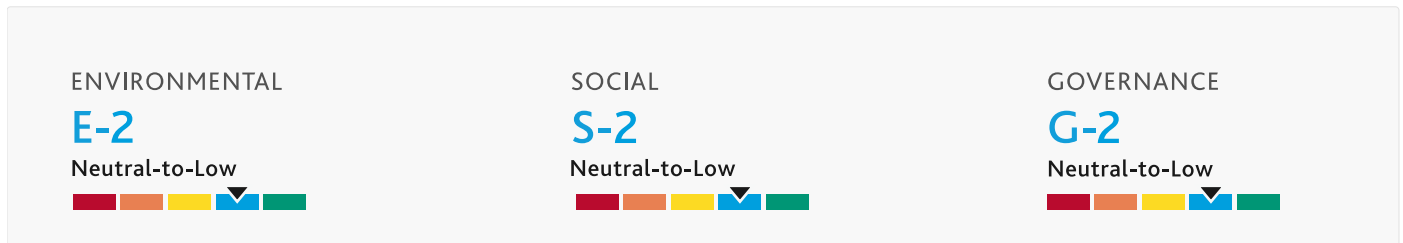


Source: Moody's Investors Service

West Allis' ESG Credit Impact Score is neutral-to-low (**CIS-2**), reflecting neutral to low exposure to environmental, social, and governance risks.

Exhibit 7

ESG Issuer Profile Scores



Source: Moody's Investors Service

Environmental

The city's environmental issuer profile score is neutral to low (**E-2**), reflecting neutral to low exposure to physical climate risks, carbon transition, water management, natural capital, and waste and pollution. The city has pursued various projects with the Wisconsin Department of Natural Resources, the Environmental Protection Agency, and Milwaukee Metropolitan Sewerage District, including water filtration projects, permeable parking lots, and rain gardens.

Social

The city's social issuer profile score is neutral to low (**S-2**), reflecting neutral to low exposure to social risks, including access to basic services, housing, health and safety, education, and demographic trends, and moderate exposure in labor and income. Educational attainment is in line with national medians and housing is affordable. The city has seen modest population loss over the last decade. Life expectancy at birth and the city's violent crime rate are somewhat unfavorable compared to national medians. Unemployment rates are above the state and nation and resident incomes and wealth are below average.

Governance

The city's governance issuer profile score is neutral to low (**G-2**). Like all Wisconsin cities, West Allis' major revenue source, property tax revenue, is subject to a cap that restricts cities from increasing their operating property tax levies except to capture amounts represented by net new construction growth. The city benefits from strong management practices, evidenced by maintenance of stable reserves and proactive policy changes which have reduced fixed costs.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moody's.com. In order to view the latest scores, please click [here](#) to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Rating methodology and scorecard factors

The US Cities and Counties Rating Methodology includes a scorecard, which summarizes the rating factors generally most important to city and county credit profiles. Because the scorecard is a summary, and may not include every consideration in the credit analysis for a specific issuer, a scorecard-indicated outcome may or may not map closely to the actual rating assigned.

Exhibit 8

West Allis (City of) WI

	Measure	Weight	Score
Economy			
Resident income ratio	89.0%	10.0%	A
Full value per capita	91,638	10.0%	A
Economic growth metric	-1.2%	10.0%	A
Financial Performance			
Available fund balance ratio	71.1%	20.0%	Aaa
Liquidity ratio	126.3%	10.0%	Aaa
Institutional Framework			
Institutional Framework	Aa	10.0%	Aa
Leverage			
Long-term liabilities ratio	342.7%	20.0%	A
Fixed-costs ratio	9.8%	10.0%	Aaa
Notching factors			
No notchings applied			
Scorecard-Indicated Outcome			Aa3
Assigned Rating			Aa2

The complete list of outstanding ratings assigned to the West Allis (City of) WI is available on their [issuer page](#). Details on the current ESG scores assigned to the West Allis (City of) WI are available on their [ESGView page](#).

Sources: US Census Bureau, West Allis (City of) WI's financial statements and Moody's Investors Service

Appendix

Exhibit 9

Key Indicators Glossary

	Definition	Typical Source*
Economy		
Resident income ratio	Median Household Income (MHI) for the city or county, adjusted for Regional Price Parity (RPP), as a % of the US MHI	MHI: US Census Bureau - American Community Survey 5-Year Estimates RPP: US Bureau of Economic Analysis
Full value	Estimated market value of taxable property in the city or county	State repositories; audited financial statements; continuing disclosures
Population	Population of the city or county	US Census Bureau - American Community Survey 5-Year Estimates
Full value per capita	Full value / population	
Economic growth metric	Five year CAGR of real GDP for Metropolitan Statistical Area or county minus the five-year CAGR of real GDP for the US	Real GDP: US Bureau of Economic Analysis
Financial performance		
Revenue	Sum of revenue from total governmental funds, operating and non-operating revenue from total business-type activities, and non-operating revenue from internal services funds, excluding transfers and one-time revenue, e.g., bond proceeds or capital contributions	Audited financial statements
Available fund balance	Sum of all fund balances that are classified as unassigned, assigned or committed in the total governmental funds, plus unrestricted current assets minus current liabilities from the city's or county's business-type activities and internal services funds	Audited financial statements
Net unrestricted cash	Sum of unrestricted cash in governmental activities, business type activities and internal services fund, net of short-term debt	Audited financial statements
Available fund balance ratio	Available fund balance (including net current assets from business-type activities and internal services funds) / Revenue	
Liquidity ratio	Net unrestricted cash / Revenue	
Leverage		
Debt	Outstanding long-term bonds and all other forms of long-term debt across the governmental and business-type activities, including debt of another entity for which it has provided a guarantee disclosed in its financial statements	Audited financial statements; official statements
Adjusted net pension liabilities (ANPL)	Total primary government's pension liabilities adjusted by Moody's to standardize the discount rate used to compute the present value of accrued benefits	Audited financial statements; Moody's Investors Service
Adjusted net OPEB liabilities (ANOL)	Total primary government's net other post-employment benefit (OPEB) liabilities adjusted by Moody's to standardize the discount rate used to compute the present value of accrued benefits	Audited financial statements; Moody's Investors Service
Other long-term liabilities (OLTL)	Miscellaneous long-term liabilities reported under the governmental and business-type activities entries	Audited financial statements
Long-term liabilities ratio	Debt + ANPL + ANOL + OLTL / Revenue	
Fixed costs		
Implied debt service	Annual cost to amortize city or county's long-term debt over 20 years with level payments	Audited financial statements; official statements; Moody's Investors Service
Pension tread water contribution	Pension contribution necessary to prevent reported unfunded pension liabilities from growing, year over year, in nominal dollars, if all actuarial assumptions are met	Audited financial statements; Moody's Investors Service
OPEB contribution	City or county's actual contribution in a given period	Audited financial statements
Implied cost of OLTL	Annual cost to amortize city or county's other long-term liabilities over 20 years with level payments	Audited financial statements; Moody's Investors Service
Fixed-costs ratio	Implied debt service + Pension tread water + OPEB contributions + Implied cost of OLTL / Revenue	

*Note: If typical data source is not available then alternative sources or proxy data may be considered. For more detailed definitions of the metrics listed above please refer to the [US City and Counties Methodology](#).

Source: Moody's Investors Service

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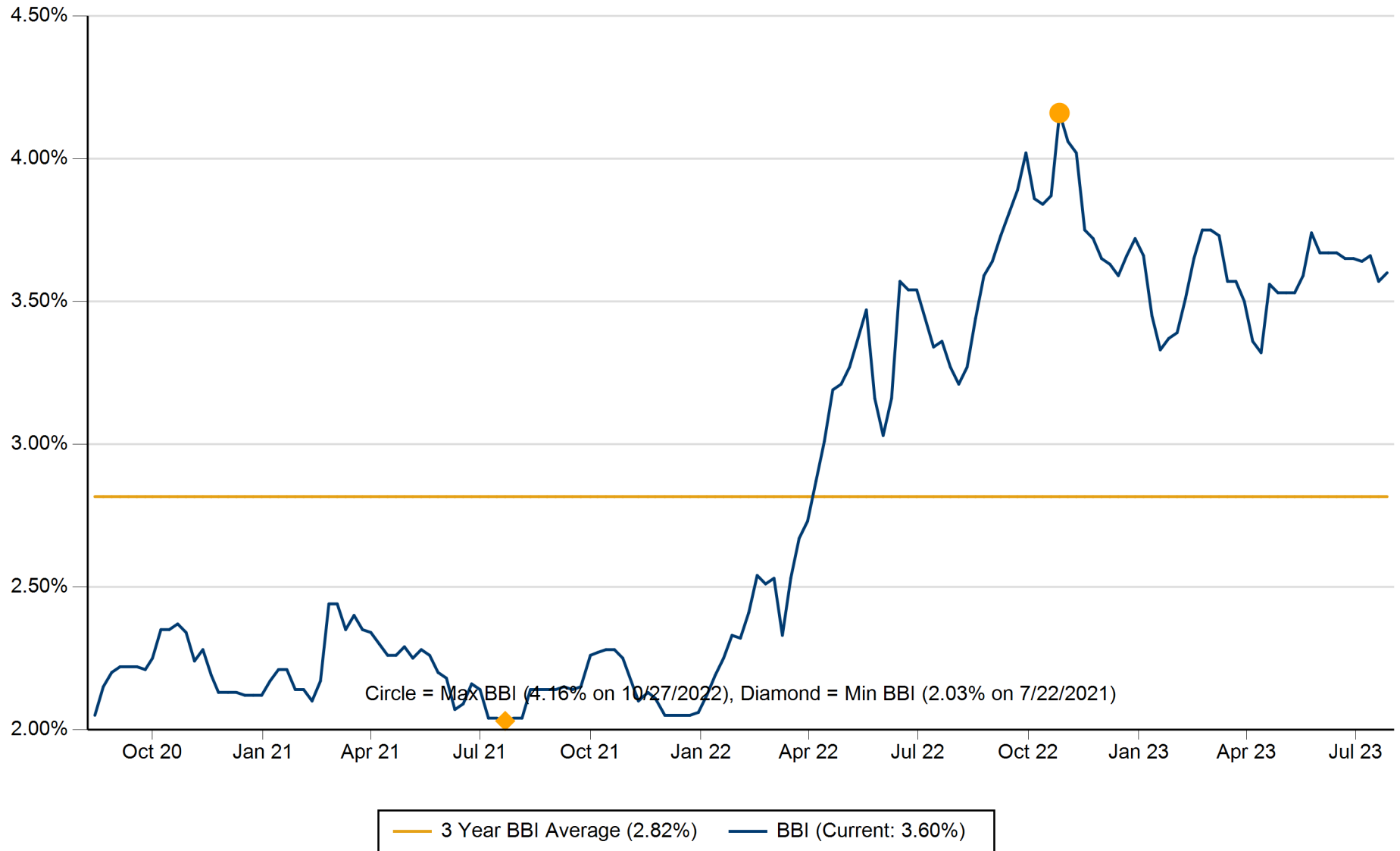
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3 YEAR TREND IN MUNICIPAL BOND INDICES

Weekly Rates August, 2020 - August, 2023



The Bond Buyer "20 Bond Index" (BBI) shows average yields on a group of municipal bonds that mature in 20 years and have an average rating equivalent to Moody's Aa2 and S&P's AA.

Source: The Bond Buyer

