

**REGULAR MEETING OF THE ANNUITY AND PENSION BOARD
EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE
789 N. WATER ST. (Employees' Retirement System)
TUESDAY, MARCH 26, 2024 – 9:00 A.M.**

Special Notice: The meeting will be held remotely via video conference. Instructions on how to observe the meeting will be available on ERS's website (www.cmers.com) prior to the meeting.

Please note and observe the following remote attendance etiquette to ensure a smooth and productive meeting:

- In order to cut down on background noise, participants in the meeting should put their phones on mute when they are not participating.
- At the start of the meeting, the Chairman will announce the names of the members of the Board present on the call, as well as anyone else who will be participating.
- Please request to be recognized by the Chairman if you would like to speak.
- Those participating on the call should identify themselves whenever they speak, and should ensure that the other participants on the call can hear them clearly.

REGULAR MEETING

- I. Approval of Minutes.
 - A. Regular Meeting Held February 27, 2024.

- II. Chief Investment Officer Report.

- III. Administration & Operations Committee Report.
 - A. Approval of Close out of 2023 Budget.

- IV. New Business.
 - A. Retirements, Death Claims, and Refunds (February).
 - B. Conference Requests – March 2024 Board Meeting.
 - C. Approval of the Revised Actuarial Valuation Report as of January 1, 2023 for Determination of the Actuarially Determined Employer Contributions for 2024.

Please be advised that the Annuity and Pension Board may vote to convene in closed session on the following item (IV.D.), as provided in Section 19.85(1)(e), Wisconsin State Statutes, to deliberate or negotiate the purchasing of public properties, the investing of public funds, or conducting other specified public business, whenever competitive or bargaining reasons require a closed session. The Board may then vote to reconvene in open session following the closed session.

- D. Discussion Regarding Current ERS Hearing Officer Appointments.

- V. Medical Reports.
 - A. All Duty & Ordinary Disability Applications & Re-examinations (March).

- VI. Unfinished Business.
 - A. Pending Legal Opinions and Service Requests Report.
 - B. Pending Legislation Report.
 - C. Executive Director's Report – Inventory of ERS Projects.
 - D. Approval of Cavanaugh Macdonald Book of Survivor Benefit Factors.

VII. Informational.

Please be advised that the Annuity and Pension Board may vote to convene in closed session on the following item (VII.A.), as provided in Section 19.85(1)(g), Wisconsin State Statutes, to confer with legal counsel concerning strategy to be adopted by the body with respect to litigation in which it is or is likely to become involved. The Board may then vote to reconvene in open session following the closed session.

- A. Pending Litigation Report.
- B. Conferences.
- C. Class Action Income 2024.
- D. Minutes of the Special Administration & Operations Committee Meeting Held February 27, 2024.
- E. Report on Bills.
- F. Deployment of Assets.
- G. Securities Lending Revenue and Budget Report.
- H. Preliminary Performance Report and Asset Allocation.

MEETING REMINDERS

ADMINISTRATION & OPERATIONS COMMITTEE MEETING

WEDNESDAY, APRIL 17, 2024 – 9:00 A.M.
789 N. WATER ST.

INVESTMENT COMMITTEE MEETING

THURSDAY, APRIL 18, 2024 – 9:00 A.M.
789 N. WATER ST.

REGULAR MEETING OF THE ANNUITY AND PENSION BOARD

TUESDAY, APRIL 23, 2024 – 9:00 A.M.
789 N. WATER ST.

I.

APPROVAL OF MINUTES

- A. Regular Meeting Held February 27, 2024.

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE
ANNUITY AND PENSION BOARD**

Minutes of the Regular Meeting
held February 27, 2024 via teleconference

The meeting was called to order at 9:00 a.m.

Board Members Present: Matthew Bell, Chair
 Deborah Ford
 Timothy Heling
 Molly King
 Tom Klusman
 Rudolph Konrad
 Nik Kovac
 Aycha Sawa

Retirement System Staff Present: Jerry Allen, Executive Director
 Melody Johnson, Deputy Director
 David Silber, Chief Investment Officer
 Daniel Gopalan, Chief Financial Officer
 Gust Petropoulos, Deputy Director – Disability
 Karen McElwee, Management Services Analyst
 Mary Turk, Business Operations Analyst
 Jan Wills, Board Stenographer

Others Present: Lisa Casel, Erin Scharlau, Carolyn Stittleburg, Legislative Audit Bureau; Patrick McClain, City Attorney's Office; Terry Siddiqui, DS Consulting, Inc., 10 members of the public called in to the meeting.

Regular Meeting.

Appointment of Committees for 2024.

Administration and Operations Committee. Mr. Bell appointed Ms. Sawa as Chair of the Administration and Operations Committee. Ms. Sawa accepted the Chair position and said she would continue until the end of her Comptroller term in April.

Investment Committee. Mr. Bell appointed Mr. Klusman as Chair of the Investment Committee. Mr. Klusman accepted the Chair position.

Legislative Committee. Mr. Bell appointed Ms. Ford as Chair of the Legislative Committee. Ms. Ford accepted the Chair position.

Litigation Committee. Mr. Bell stated a Chair would be appointed as needed.

Approval of Minutes.

Annual Meeting Held January 23, 2024. It was moved by Ms. Sawa, seconded by Mr. Heling, and unanimously carried, as amended, to approve the minutes of the Annual Meeting Held January 23, 2024.

At the request of Mr. Silber, the Chair took the meeting out of order to item IV. Investment Committee Report.

Investment Committee Report. Mr. Klusman reported that at its February 8th meeting, Callan provided a presentation on their 2024 capital market assumptions, which included slides that show that the Fund's existing strategic asset allocation target is projected to generate a 7.6% return over the next 10 years. He said Staff provided routine due diligence reports on Reams, Apogem, and Principal. Mr. Klusman stated Staff also presented the 4th quarter performance update and the annual Value Add Analysis. He said that as of December 31, 2023, the Fund's returns during the past five- and 10-year time periods rank in the 27th percentile of Northern Trust's peer universe (one is the best, 99 the worst), and rank in the 37th and 24th percentiles of Callan's peer universe over the past five- and 10-years, respectively. Mr. Klusman noted the Value Add Analysis estimates that the ERS has been able to add an additional \$1.1 billion to the Fund's value, net of fees, over the past 29 years by implementing the Fund's Stock, Bond, Private Equity, and Absolute Return allocations in a way that has outperformed low-cost passive benchmarks. He said \$428 million of that additional value is estimated to have been generated in the past 10 years. Mr. Klusman stated there were three items approved by the Committee. He noted the first was a Loomis Sayles contract amendment that Loomis needed in order to implement all of the Loomis guideline changes that the Board approved in the 4th quarter of last year. Mr. Klusman said the second approval item was an MFS Guideline Waiver which will allow MFS to avoid being forced to sell some of their exposure to Microsoft. He said the Waiver, which was requested by MFS and only applies to their Microsoft holdings, will allow MFS to hold Microsoft up to a maximum of the index plus 5%, whereas MFS' guidelines cap holdings at the index plus 3%. Mr. Klusman said the third approval item, the Approval of Recommendation regarding Public Equity Investment Manager, was discussed by the Committee in closed session. He said the Committee then went into open session to approve the Recommendation. Mr. Klusman concluded that the Investment Committee recommends approval of the following items – one, Approval of Loomis Sayles Contract Amendment, two, Approval of MFS Investment Management Guideline Waiver, and three, Approval of Recommendation regarding Public Equity Investment Manager.

Mr. Bell stated that the closed session language related to item IV.C. Approval of Recommendation regarding Public Equity Investment Manager was there as a placeholder. Mr. Bell then asked for a motion and second for the following three items in the Investment Committee Report.

Approval of Loomis Sayles Contract Amendment.

Approval of MFS Investment Management Guideline Waiver.

Please be advised that the Investment Committee may vote to convene in closed session on the following item as provided in Section 19.85(1)(e), Wisconsin State Statutes, to deliberate or negotiate the purchasing of public properties, the investing of public funds, or conducting other specified public business, whenever competitive or bargaining reasons require a closed session. The Investment Committee may then vote to reconvene in open session following the closed session.

The Board did not convene in closed session as noticed.

Approval of Recommendation regarding Public Equity Investment Manager.

It was moved by Ms. Ford, seconded by Ms. King, and unanimously carried, to approve the Investment Committee Report which includes the Approval of Loomis Sayles Contract Amendment, Approval of MFS Investment Management Guideline Waiver, and Approval of Recommendation regarding Public Equity Investment Manager.

The Chair returned the meeting to order to item III. Chief Investment Officer Report.

Chief Investment Officer Report. Mr. Silber stated Messrs. Courtright and Sauer are traveling this week for two due diligence visits and a conference, all in the same area. As a matter of information, Board members received the February 27, 2024 Performance Update. Mr. Silber said the Fund as of January 31, 2024, had a value of \$5.87 billion. He said the Fund return of -0.1% in January, gross of fees, underperformed by approximately 9 basis points. Mr. Silber said that major U.S. stock market indices continue to rise led by the Magnificent Seven stocks, and he noted that while the Fund has some of those holdings in its top 10, the Fund is more diversified in terms of its strategic asset allocation as well as in terms of being more global and small and value oriented. He stated they are seeing some Real Estate write-downs for January. Mr. Silber said the main relative Performance Driver was the Public Equity Style Bias which detracted 29 basis points, primarily from Small Cap and Value. He said this was partially offset by eight of 11 active Public Equity mandates outperforming, which added 17 basis points. Mr. Silber added the Fund has underperformed the benchmark in the one-year period, while outperforming in the five-, 10-, 15- and 20-year periods. He said as of February 26, 2024, the Fund return is 0.9% month-to-date, 0.7% year-to-date, and has a value of \$5.92 billion. Mr. Silber noted 11 out of 15 active mandates are outperforming year-to-date. He said the Fixed Income and Absolute Return asset classes are outperforming their respective benchmarks year-to-date. Mr. Silber said the Fund has an Investment Change of \$44 million, paid benefits and expenses of \$44.5 million, and has received contributions of \$211.4 million. He said that the monthly withdrawals for benefits will be paid from the cash balance this month. Mr. Silber concluded that the Approval item on the agenda related to the Public Equity Investment Manager is complete and Staff worked with Callan and Northern Trust to implement the transition as permitted by the Statement of Investment Policy. Mr. Silber said they placed \$25 million from the legacy manager into the custodian cash account and deposited the remaining \$60 million into Earnest.

Administration and Operations Committee Report. Ms. Sawa stated the Administration and Operations Committee had a Special meeting at 8:30 a.m. today. She said the Committee is recommending approval of the Engagement Letter from the Wisconsin Legislative Audit Bureau. Ms. Sawa said with the passage of Act 12, the Legislative Audit Bureau will be conducting the financial audit for the ERS. She stated the engagement letters are standard in external financial audits or any audit an organization would be receiving. She pointed out bullet point five of the ERS responsibilities “the reasonableness of significant assumptions used in making accounting estimates.” Ms. Sawa also said the ERS and Mr. Allen wanted to be cautious before signing the letter to make sure that it is crystal clear the actuarial assumptions are not part of this line . She said they have created two paragraphs they are going to add on to the Letter (shown on the screen as follows):

“ERS management has no vote in Board proceedings and as a result does not have any authority to make plan actuarial assumptions or determine their reasonableness. Accordingly, determining

the reasonableness of plan actuarial assumptions used in making accounting estimates is outside of ERS management's purview and control.”

“During the course of the audit, ERS management will provide documentation that the Board, in consultation with its expert independent actuarial and investment consultants, has duly authorized the plan actuarial assumptions used in making accounting estimates and thus determined their reasonableness.”

Mr. Allen noted the actuarial assumptions determine the plan liability and the staff does not set the discount rate, but that is reserved for the Trustees by the Charter and by state law. He said a footnote would be made to bullet point five to exclude from the acknowledgement by staff that it is responsible for determining the reasonableness of actuarial assumptions because authority to do so is reserved to the Board. Mr. Allen also said wants to make sure the acknowledgement of staff responsibilities is completely accurate as it is a sworn statement. Ms. Sawa added that the Committee did approve this item and recommend it to the full Board.

Approval of Terms of Audit Engagement Letter with the Wisconsin Legislative Audit Bureau.

It was moved by Ms. Sawa, with the modification made to the Terms of Audit Engagement Letter and shown on the screen , seconded by Mr. Heling, and unanimously carried, to approve the Approval of Terms of Audit Engagement Letter with the Wisconsin Legislative Audit Bureau.

New Business.

Retirements, Death Claims, and Refunds (January). Mr. Allen presented the following activity for the months of January 2024.

Administrative Withdrawal	\$21,462.14
Full Refund	\$100,152.21
Active Death Benefits reported	\$0.00
Deferred Death	\$16,135.47
Deferred Death-Member Only Refund	\$0.00
Ordinary Death Benefits reported	\$23,713.77
Retired Death Benefits reported	\$60,987.58
Survivor Death – Termination Benefits reported	\$4,844.58
Refund of Member Contributions paid	\$54,573.95

Mr. Heling noticed in the Retirements’ Department section of the report that Warren Price was listed as City of Milwaukee instead of Milwaukee Fire Department.

It was moved by Mr. Heling, seconded by Ms. Ford, and unanimously carried, to approve the Retirements, Death Claims, and Refunds report for January 2024, as amended indicating Mr. Price retired from the Fire Department.,

Conference Requests – February 2024 Board Meeting.

Erich Sauer	Public Funds Roundtable Conference
Sponsor:	Institutional Investor
Location:	Beverly Hills, CA
Date(s):	April 29 – May 2, 2024
Estimated Cost:	\$2,250.00

It was moved by Mr. Klusman, seconded by Ms. Sawa, and unanimously carried, to approve the Conference Requests – February 2024 Board Meeting.

Annual Obligation of Trustees and ERS Officers to Submit Annual Statement of Economic Interests. Mr. Allen mentioned the Trustees should have received an e-mail from the Ethics Board, with a link to complete the Annual Statement of Economic Interests form. He said it is due February 28, 2024.

Mr. Bell advised that the Annuity and Pension Board may vote to convene in closed session on the following items, as provided in Section 19.85 (1)(c), for considering employment, promotion, compensation or performance evaluation data of any public employe over which the governmental body has jurisdiction or exercises responsibility. The Board may then vote to reconvene in open session following the closed session.

It was moved by Mr. Klusman, seconded by Mr. Heling, and unanimously carried to convene in closed session by the following roll call vote: AYES: Mses. Ford, King, and Sawa; Messrs. Bell, Heling, Klusman, Konrad, and Kovac. NOES: None.

The Board convened in closed session at 9:30 a.m.

Mr. Klusman departed the meeting at 9:59 a.m.

The Board reconvened in open session at 10:05 a.m.

Approval of Recruiting Travel and Relocation Expenses for Pension Investment Analyst – Sr.

Approval of Initial Salary for Pension Investment Analyst – Sr.

Mr. Bell stated both motions for approval of these items passed in closed session.

Medical Reports.

All Duty & Ordinary Disability Applications & Re-examinations (February).

<u>Police – Applications – Duty</u>	<u>Recommendation</u>
Francis Galloway	Denial

Effective 10/15/2023

Police – Applications – Ordinary

Recommendation

Francis Galloway
Effective 10/15/2023

Approval

Police – Re-examinations – Duty

Recommendation

Vidal Colon
Bryan Norberg

Approval

Approval

Police – Re-examinations – Ordinary

Recommendation

Darcie Trunkel

Approval

Fire – Re-examinations – Duty

Recommendation

Kyle Dannies
Bradley Davis
John Schmaelzle

Approval

Approval

Approval

Fire – Re-examinations – Ordinary

Recommendation

Jared Bertsche

Approval

General City – Applications – Duty

Recommendation

Thomas Weir
Effective 07/08/2023

Approval

General City – Applications – Ordinary

Recommendation

Lisa Ruttenberg
Effective 03/03/2023

Denial

General City – Re-examinations – Ordinary

Recommendation

Demetrick Eskridge
Sherry Tomasello

Approval

It was moved by Mr. Heling, seconded by Ms. King, and unanimously carried, to approve the Duty & Ordinary Disability Applications & Re-examinations (February).

Unfinished Business.

Pending Legal Opinions and Service Requests Report. Mr. McClain noted the City Attorney's office is caught up with the legal opinions and service requests as earlier today the Board voted on the Loomis Sayles Investment Management Agreement.

Pending Legislation Report. Mr. Allen noted there was nothing new to report for this month. Mr. Konrad questioned whether the Pension Contribution Offset was still required to be on the report. Mr. McClain said they are close to reaching a final resolution of the case, but the it is still pending. He noted he would make some comments later about the status of the Pension Contribution Offset case and it would be removed from the Pending Legislation Report once a final judgment and disposition was made in the 2018 case.

Executive Director’s Report – Inventory of ERS Projects. As a matter of information, Staff presented a report on the ERS projects and updated the Board on ERS activities, a copy of which is on file with the ERS. Discussion ensued.

Cavanaugh Macdonald Book of Survivor Benefit Factors. Mr. Allen said the e-mail the Trustees received from Mr. Langer, the actuary, was informational. He said Mr. Langer would be talking with the Board about the updated 2024 Factors Book of survivorship benefits at the March Board meeting. He said the book was voluminous with thousands possible permutations. Mr. Allen said the Board approved the new actuarial survivor benefit factors in concept earlier, but now ERS has received the actual Factors Book. Mr. Bell said the Board would take up this item next month.

Informational.

Mr. Bell advised that the Annuity and Pension Board may vote to convene in closed session on the following item as provided in Section 19.85(1)(g), Wisconsin State Statutes, to confer with legal counsel concerning strategy to be adopted by the body with respect to litigation in which it is or is likely to become involved. The Board may then vote to reconvene in open session following the closed session.

It was moved by Mr. Konrad, seconded by Mr. Kovac, and unanimously carried, to convene in closed session. The Chair did not request a roll call.

The Board convened in closed session at 10:23 a.m.

The Board reconvened in open session at 10:57 a.m.

- 1) Pending Litigation Report.
- 2) Conferences.
- 3) Class Action Income 2024.
- 4) Adjusted Quarterly Cost Basis of Equity.
- 5) Minutes of the Investment Committee Meeting Held February 8, 2024.

The following is a list of activities since the last Board meeting, copies sent with meeting notice and attached to minutes:

- 6) Report on Bills.
- 7) Deployment of Assets.
- 8) Securities Lending Revenue and Budget Report.
- 9) Preliminary Performance Report and Asset Allocation.

Mr. Bell accepted and placed the Informational items on file.

There being no further business to come before the meeting, it was moved by Ms. King and seconded by Mr. Kovac, to adjourn the meeting.

Mr. Bell adjourned the meeting at 10:58 a.m.

Bernard J. Allen
Secretary and Executive Director

NOTE: All proceedings of the Annuity and Pension Board Meetings and related Committee Meetings are recorded. All recordings and material mentioned herein are on file in the office of the Employees' Retirement System, 789 N. Water Street, Suite 300.)

II.

CHIEF INVESTMENT OFFICER REPORT

Milwaukee Employees' Retirement System - March 26, 2024

Fund as of February 29, 2024

*Fund value of \$5.89b.

*Fund return of 1.1% in Feb., gross of fees, underperformed by approximately 21bp.

*Primary Relative Perf. Drivers:
Public Equity Style Bias -20bp
Primarily Value

Manager Selection

Real Estate -15bp
Loomis Sayles 6bp
Cash 6bp

*Fund has underperformed the benchmark in the YTD and 1-year periods, while outperforming in the 5, 10, 15, and 20-year periods.

Mar. Update (as of 3/19/24)

*Fund return 0.8% MTD
*Fund return 1.7% YTD
*Fund value \$5.95b

*9 out of 15 active mandates outperforming YTD.

*Fixed Income and Absolute Return asset classes outperforming their respective benchmarks YTD.

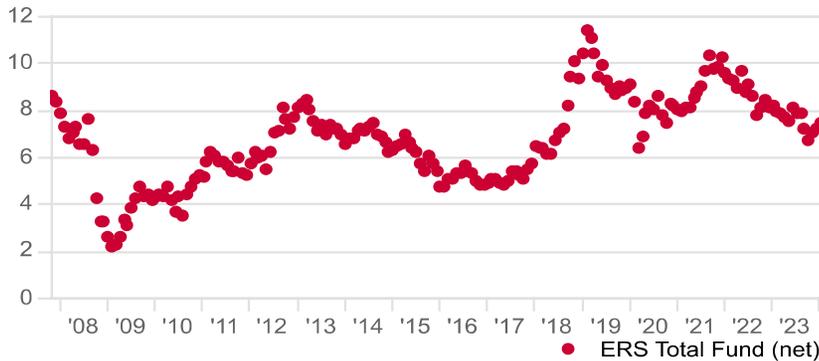
*Investment Change: \$105.8m
*Benefits & Expenses: 84.2m
*Contributions: 214.1m

Monthly Withdrawals:

To be discussed at meeting.

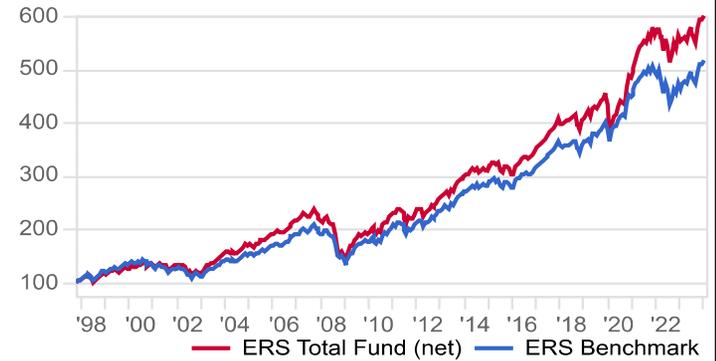
Total Fund - 10-Year Rolling Returns

11/28/1997 to 2/29/2024



Growth of \$100 - Total Fund & ERS Benchmark

11/28/1997 to 2/29/2024



Return Data

Source Data: Monthly Return

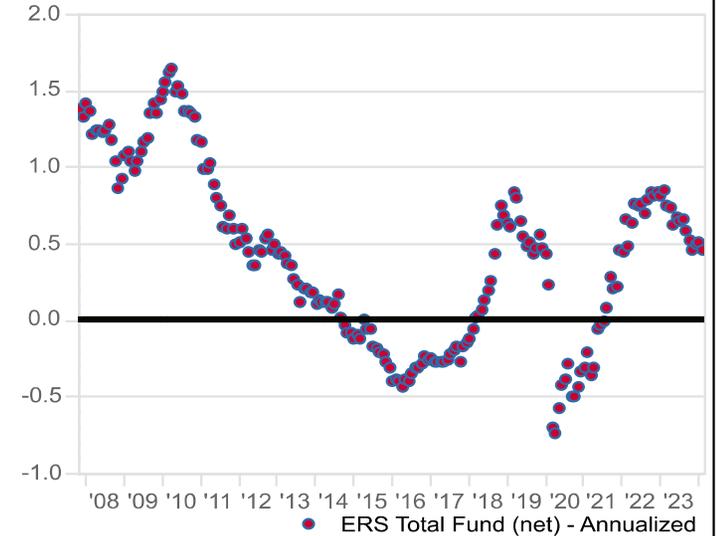
	1 Month	YTD	1 Year	5 Year	10 Year	15 Year	20 Year
Total Fund (net)	1.1	0.9	8.5	7.9	7.2	10.2	7.0
ERS Benchmark	1.2	1.2	11.3	7.3	6.7	9.6	6.7

Total Fund - 20-Year Risk & Return Data

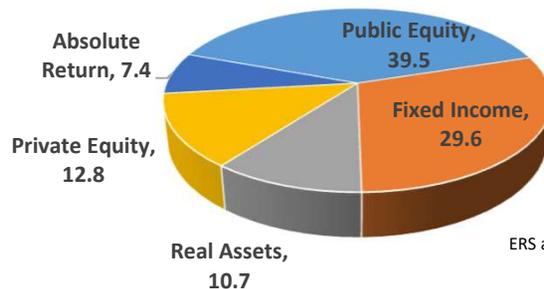
	Return	Std Dev	Tracking Error	Info Ratio (arith)	Sharpe Ratio	Alpha	Beta
Total Fund (net)	7.0	10.3	2.5	0.1	0.5	-0.2	1.1
ERS Benchmark	6.7	9.2	--	--	0.6	0.0	1.0

Total Fund - 10-Year Rolling Excess Returns

11/28/1997 to 2/29/2024

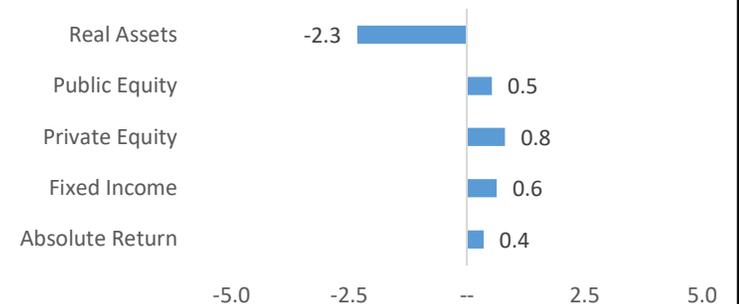


ERS Allocation as of February 29, 2024



ERS allocation weights may not total 100% due to rounding

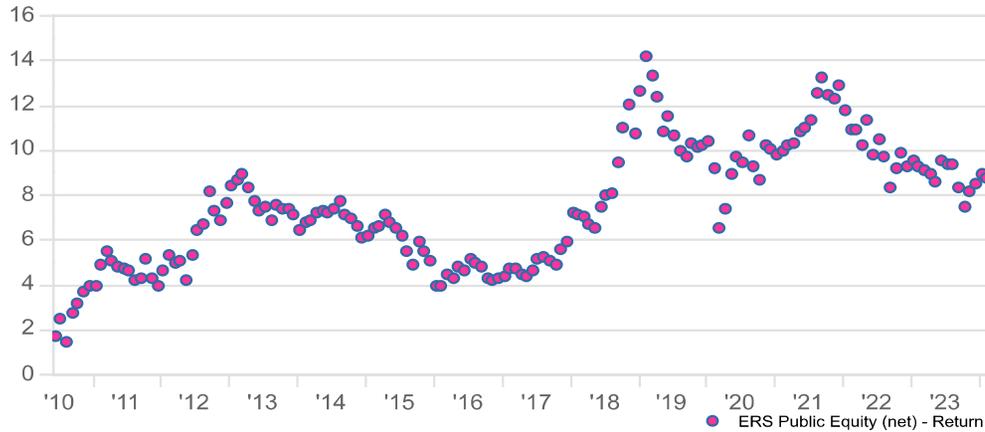
Asset Allocation vs Policy as of February 29, 2024



Milwaukee Employees' Retirement System - March 26, 2024

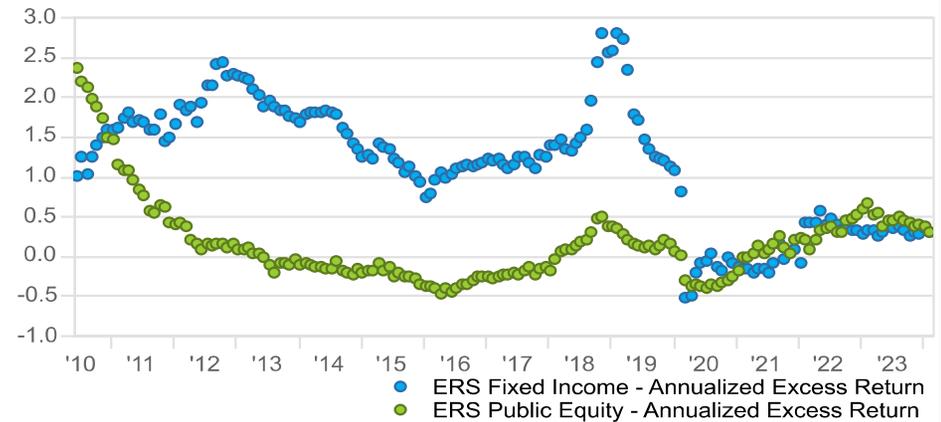
Public Equity - 10-Year Rolling Returns

06/30/2000 to 2/29/2024



Asset Class - 10-Year Rolling Excess Returns

06/30/2000 to 2/29/2024



Return Data

	1 Month	YTD	1 Year	5 Year	10 Year	15 Year	20 Year
Public Equity	3.6	3.5	19.3	10.9	9.1	13.3	8.1
Public Equity (net)	3.6	3.5	18.9	10.5	8.7	12.9	7.8
Public Equity Benchmark	4.2	4.4	21.6	10.1	8.4	12.5	7.6
MSCI ACWI IMI NR USD	4.2	4.4	21.6	10.1	8.1	12.1	7.7

Risk Adjusted Returns (6/30/14 - 2/29/24)

	Return	Std Dev	Sharpe Ratio	Max Drawdown
Public Equity (net)	8.6	15.6	0.5	-25.3
Fixed Income (net)	1.5	6.6	0.0	-13.6
Absolute Return (net)	5.8	9.4	0.5	-27.1

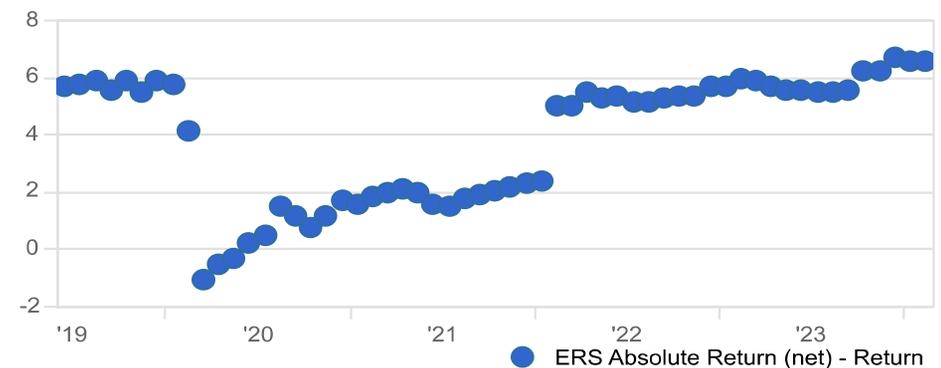
Fixed Income - 10-Year Rolling Returns

06/28/1996 to 2/29/2024



Absolute Return - 5-Year Rolling Returns

06/30/2014 to 2/29/2024



Return Data

	1 Month	YTD	1 Year	5 Year	10 Year	15 Year	20 Year
Fixed Income	-1.1	-1.2	4.4	1.0	1.9	4.8	4.2
Fixed Income (net)	-1.1	-1.2	4.3	0.9	1.7	4.6	4.0
Bbg US Agg Bond TR USD	-1.4	-1.7	3.3	0.6	1.4	2.6	3.0

Return Data

	1 Month	YTD	1 Year	3 Year	5 Year	7 Year
Absolute Return (net)	0.8	2.2	8.0	13.1	6.6	6.0
90-Day T-Bill + 3%	0.7	1.4	8.5	5.8	5.1	5.0

III.

ADMINISTRATION & OPERATIONS COMMITTEE REPORT

A. Approval of Close out of 2023 Budget.

Employees' Retirement System of the City of Milwaukee
 March 6, 2024
 Memorandum



To: Bernard J. Allen, Executive Director

From: Daniel Gopalan, CPA, ERS Chief Financial Officer

Re: Final 2023 Payment to the City and 2023 Budget to Actual Expenditures

I have completed my analysis for our expenditure activity for fiscal year 2023. Our expenditures for the year ended December 31, 2023 total \$18,348,432.30 of which \$516,089.47 relates to non-trust activities. The remaining \$17,832,324.83 represents amounts that are funded by the Trust for 2023 expenses.

We have previously advanced the City \$16,634,000 toward these costs in 2023, leaving a balance owed of \$1,198,342.83.

The final amount payable to the City is primarily comprised of costs incurred since the middle of December, the last time the Trust reimbursed the City for expenses and for amounts accrued to close out the fiscal year.

An analysis will be provided to the City with a cover letter requesting the City to prepare an invoice for this amount to be approved by the Board for final payment in settlement of the Trust's 2023 expenses.

Below you will find the 2023 Budget to Actual Summary:

CATEGORY	BUDGET	ACTUAL	AVAIL. BALANCE
SALARIES	\$ 3,749,620.00	\$ 4,419,587.23	(\$ 669,967.23)
FRINGE	1,687,329.00	1,858,556.40	(171,227.40)
GENERAL OFFICE	211,000.00	194,722.19	16,277.81
OPERATING SUPPLIES	5,000.00	7,979.56	(2,979.56)
FACILITY RENT & PROPERTY SERVICES	653,000.00	594,272.80	58,727.20
EQUIPMENT RENTAL	25,000.00	14,713.27	10,286.73
PROFESSIONAL SERVICES	12,120,000.00	9,673,555.63	2,446,444.37
INFORMATION TECHNOLOGY	1,565,000.00	652,333.72	912,666.28
OTHER OPERATING SERVICE	1,293,400.00	684,950.18	608,449.82
EQUIPMENT	2,036,000.00	247,761.32	1,788,238.68
TOTAL	\$ 23,345,349.00	\$ 18,348,432.30	\$ 4,996,916.70

c David Silber
 Melody Johnson

2023 Final Expenditures

		Budget-Non Trust		Actual-Non Trust			
		Budget-Trust Activity	Activity	Total Budget	Actual-Trust Activity	Activity	Total Actual
Direct Salary	84.8%	\$ 3,015,800.00	\$ 163,900.00	\$ 3,179,700.00	\$ 3,503,196.89	\$ 167,868.00	3,671,064.89
Indirect Salary (21.36% of DS)	15.2%	540,568.87	29,351.14	569,920.00	710,836.62	37,685.72	748,522.34
Total Salary		3,556,368.87	193,251.14	3,749,620.00	4,214,033.51	205,553.72	4,419,587.23
Fringe Benefits Applied	45.0%	1,600,366.00	86,963.00	1,687,329.00	1,766,056.40	92,500.00	1,858,556.40
City Indirect Cost	4.2%	127,000.00		127,000.00	147,100.00	-	147,100.00
Other Operating Expenditures		15,782,100.00	1,300.00	15,783,400.00	11,543,391.60	132,035.75	11,675,427.35
Equipment		2,036,000.00		2,036,000.00	247,761.32	-	247,761.32
Sub Total		23,101,834.87	281,514.14	23,383,349.00	17,918,342.83	430,089.47	18,348,432.30
Indirect-Non Trust Activity*	20.0%	(56,300.00)	56,300.00		(86,000.00)	86,000.00	
Total O&M Activity		23,045,534.87	337,814.14	23,383,349.00	17,832,342.83	516,089.47	18,348,432.30
Fiduciary Liab Deductible		-					
Grand Total		\$ 23,045,534.87	\$ 337,814.14	\$ 23,383,349.00	\$ 17,832,342.83	\$ 516,089.47	\$ 18,348,432.30

* Management oversight, share of other operating expenditures

Salary Detail of Non-ERS Activity		Non Trust Gross Salary Budget	Gross Salary Budget	Total Actual Gross Salary	Total Actual Direct Salary	Non Trust Gross Salary Actual	Non Trust Direct Salary Actual
Johnson Health	100%	46,529.00	46,529.00	55,911.18	42,327.27	55,911.18	42,327.00
Dollhopf - Life	100%	-	-	54,799.59	47,319.81	54,799.59	47,320.00
Jones - Life	100%	-	-	40,722.06	40,722.06	40,722.06	40,722.00
Hann Dental	100%	47,542.00	47,542.00	49,466.89	33,132.93	49,466.89	33,133.00
Gary Life	100%	47,543.00	47,543.00	-	-	-	-
Freeman Life	100%	47,542.00	47,542.00	-	-	-	-
Niemiec Health/LIS	2.0%	745.56	37,278.00	38,726.55	38,726.55	775.00	775.00
Niemiec PABF/FABF	5.0%	1,863.90	37,278.00	38,726.55	38,726.55	1,936.00	1,936.00
Bates Life	2.5%	1,485.68	59,427.00	77,703.51	66,210.76	1,943.00	1,655.00
		\$ 193,251.14	\$ 323,139.00	\$ 356,056.32	\$ 307,165.92	\$ 205,553.72	\$ 167,868.00

Salary Additives for 2023

Indirect as % of Direct	17.88%	Indirect as % of Gross	15.2%
Fringe as % of Direct	50.92%		

PABF O&M Budget for actuary:

NT Processing	1,300.00
	<u>\$ 1,300.00</u>

Document Number	Group/ Source	Vendor	Descr	Actuals	Non-Trust Exp	PABF
02060648	0000519668	NORT TRUS-001	4TH QTR PABF 2023	39.60		39.60
02107044	0000534939	NORT TRUS-001	2ND QTR PABF 2023	32.40		32.40
02059459	0000517658	CAVA MACD-001	FEB 22 RETAINER FEES	47,337.00	42,087.00	-
02063409	0000520549	CAVA MACD-001	MARCH 23 RETAINER FEES	45,250.00	-	-
02070267	0000522670	CAVA MACD-001	APRIL 23 RETAINER FEES	15,250.00	-	-
02078917	0000525436	CAVA MACD-001	MAY 23 RETAINER FEES	29,497.50	9,202.25	-
02085194	0000527411	CAVA MACD-001	JUNE 23 RETAINER FEES	11,275.00	5,287.50	-
02090083	0000529156	CAVA MACD-001	JULY 23 RETAINER FEES	10,343.50	4,503.50	-
02098665	0000532155	CAVA MACD-001	AUG 23 RETAINER FEES	46,679.50	41,429.50	-
02103010	0000533726	CAVA MACD-001	SEPT 23 RETAINER FEES	21,460.00	16,210.00	-
02103007	0000533723	DS CONS-001	09/01/2023 THROUGH 09/	25,800.00	3,440.00	-
02109657	0000535968	DS CONS-001	10/01/2023 THROUGH 10/	28,208.00	3,440.00	-
02117924	0000538561	DS CONS-001	11/01/2023 THROUGH 11/	26,488.00	3,440.00	-
02121605	0000539809	DS CONS-001	12/01/2023 THROUGH 12/	23,134.00	2,924.00	-
				<hr/>		
				330,794.50	131,963.75	72.00

IV.

NEW BUSINESS

- A. Retirements, Death Claims, and Refunds (February).
- B. Conference Requests – March 2024 Board Meeting.
- C. Approval of the Revised Actuarial Valuation Report as of January 1, 2023 for Determination of the Actuarially Determined Employer Contributions for 2024.

Please be advised that the Annuity and Pension Board may vote to convene in closed session on the following item (IV.D.), as provided in Section 19.85(1)(e), Wisconsin State Statutes, to deliberate or negotiate the purchasing of public properties, the investing of public funds, or conducting other specified public business, whenever competitive or bargaining reasons require a closed session. The Board may then vote to reconvene in open session following the closed session.

- D. Discussion Regarding Current ERS Hearing Officer Appointments.

Retirement Type	Retirement SubType	Last Name	First Name	Retirement Date	Option	Department
Regular	Deferred	BAALBAKI	HASSAN	2/3/2017	MAX	DPW-INFRASTRUCTURE-CONSTRUCT
Regular	Deferred	ROBERTS	PAULA	8/27/2023	MAX	HEALTH DEPARTMENT
Regular	Service	KRENZ	PAMELA	1/2/2024	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	CRISCI	PETER	1/3/2024	50	DPW-OPS-FLEET OPS
Regular	Service	EDWARDS	MYRA	1/3/2024	MAX	HEALTH-ADMINISTRATION
Regular	Service	LESZCZYNSKI	JOSEPH	1/5/2024	100	MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
Regular	Service	WITKOWSKI	GREGORY	1/5/2024	MAX	WISCONSIN CENTER DISTRICT
Regular	Service	HAGEN	JAMES	1/6/2024	100	DPW-INFRASTRUCTURE-BRIDGES & BLDGS
Regular	Service	KILPS	DAVID	1/6/2024	100	VEOLIA ENVIRONNEMENT
Regular	Service	LOPEZ	MONICA	1/6/2024	63	CITY OF MILWAUKEE
Regular	Service	NARLOCK	MARK	1/6/2024	100	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	PORTER	TROY	1/6/2024	MAX	MILWAUKEE POLICE DEPARTMENT
Regular	Service	SANCHEZ	VICTORIA	1/6/2024	75	LIBRARY - CENTRAL LIBRARY
Regular	Service	BONAN	TERESE	1/12/2024	100	MILWAUKEE PUBLIC SCHOOLS
Regular	Deferred	WEINER	LINDA	1/15/2024	100	MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
Regular	Deferred	KADLEC	JOSEPH	1/16/2024	MAX	HEALTH DEPARTMENT
Regular	Service	WOZNIAK	ERIN	1/19/2024	100	MILWAUKEE POLICE DEPARTMENT
Regular	Service	STRUCK	PRISCILLA	1/20/2024	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Deferred	WILSON	DALE	1/22/2024	100	DEPT OF NEIGHBORHOOD SRVCS
Regular	Deferred	BROSSEAU	RACHEL	1/28/2024	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	MENESES	AURELIO	1/29/2024	100	MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
Regular	Involuntary Separation	RUTLEDGE	AARON	1/31/2024	MAX	DPW-INFRASTRUCTURE-BRIDGES & BLDGS
Regular	Service	DONELSON	LINDA	1/31/2024	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	KACALA	PAMELA	2/1/2024	100	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	MCINTYRE	KENNETH	2/1/2024	100	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	TERRY	CHARLES	2/1/2024	MAX	DPW-INFRASTRUCTURE-ELECTRICAL

Board Report - February 2024

Deaths

Type	Last Name	First Name	Death Date	Payment Date	Amount
Deferred Death	TEWS	DANIEL	1/26/2024	2/29/2024	\$ 7,141.83
Deferred Death-Member Only Refund	SWIECIAK	JOEL	11/5/2023	2/29/2024	\$ 4,209.84
Retiree Death-Termination	ARNDT	FRANK	2/22/2023	2/29/2024	\$ 3,946.04
Retiree Death-Termination	CABANATUAN	RICHARD	12/6/2023	2/29/2024	\$ 530.13
Retiree Death-Termination	GAFFNEY	JANICE	12/28/2023	2/29/2024	\$ 226.00
Retiree Death-Termination	MOENCH	ROBERT	10/11/2023	2/29/2024	\$ 427.67
Retiree Death-Termination	NEMETH	ERWIN	1/3/2023	2/29/2024	\$ 257.46
Retiree Death-Termination	TREVILLIAN	MARY	9/27/2023	2/29/2024	\$ 1,902.75
Retiree Death-Termination	WALDENMEYER	WAYNE	9/29/2023	2/29/2024	\$ 3,976.37
Retiree Death-Termination	WEHNER	CAROLE	9/7/2023	2/29/2024	\$ 404.41
Surv Death-Termination	FRANKOVIS	SYLVIA	12/19/2023	2/29/2024	\$ 3,238.26
Surv Death-Termination	GOINS	DOROTHY	10/19/2023	2/29/2024	\$ 274.71
Surv Death-Termination	HUNTSINGER	ERNA	1/20/2024	2/29/2024	\$ 1,780.68
Surv Death-Termination	JURISIC	MARIA	12/25/2023	2/29/2024	\$ 79.87
Surv Death-Termination	RHEMER	JOAN	11/11/2023	2/29/2024	\$ 650.50
Surv Death-Termination	SPIPKER	CAROL	12/27/2023	2/29/2024	\$ 3,678.72
TOTAL					\$ 32,725.24
Retiree Death-Cont Opt	AUVUCHANON	MANIT	1/19/2024	2/1/2024	
Retiree Death-Cont Opt	BENSEMANN	EVELYN	2/2/2024	2/1/2024	
Retiree Death-Cont Opt	BURGER	IRVING	2/5/2024	2/1/2024	
Retiree Death-Cont Opt	COCROFT	EVERETT	1/29/2024	2/1/2024	
Retiree Death-Cont Opt	DUNN	JEREMIAH	7/19/2023	2/1/2024	
Retiree Death-Cont Opt	IHLENFELD	PAUL	2/8/2024	2/1/2024	
Retiree Death-Cont Opt	KING	LINDA	1/20/2024	2/1/2024	
Retiree Death-Cont Opt	LUCIER	DONALD	2/2/2024	2/1/2024	
Retiree Death-Cont Opt	MC WILLIAMS	QUINCY	2/4/2024	2/1/2024	
Retiree Death-Cont Opt	MITTEN	JOHN	1/8/2024	2/1/2024	
Retiree Death-Cont Opt	NIEWOLNY	RANDALL	1/28/2024	2/1/2024	
Retiree Death-Cont Opt	PEREZ	ANTONIO	1/29/2024	2/1/2024	
Retiree Death-Cont Opt	SEPIC	FRANK	2/5/2024	2/1/2024	
Retiree Death-Cont Opt	WYTCH	MATTHEW	1/19/2023	2/1/2024	
Retiree Death-Cont Opt	ZIMMERMAN	HENRY	2/9/2024	2/1/2024	

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Withdrawals

Type	Last Name	First Name	Payment Date	Amount
Administrative Withdrawal	EPPLEY	HAROLD	2/29/2024	\$ 986.22
Administrative Withdrawal	HANSON	KARI	2/29/2024	\$ 7,277.18
Administrative Withdrawal	HARRIS	CHETONA	2/29/2024	\$ 416.38
Administrative Withdrawal	JOHNSON	WILLIAM	2/29/2024	\$ 4,924.02
Administrative Withdrawal	MACHI	HOLLY	2/29/2024	\$ 19.02
Administrative Withdrawal	POLEN-WILLIAMS	STARLENE	2/29/2024	\$ 428.73
Administrative Withdrawal	SKENANDORE	JIMMY	2/29/2024	\$ 2,456.55
Administrative Withdrawal	SOCHA	ALICIA	2/29/2024	\$ 273.12
Administrative Withdrawal	SYED	FRAZ	2/29/2024	\$ 719.27
Full Refund	BURNS	LAFREDRICK	2/29/2024	\$ 13,379.84
Full Refund	FRANKOWSKI	MARK	2/29/2024	\$ 11,845.91
Full Refund	JONES	TAKELA	2/29/2024	\$ 3,314.99
Full Refund	MC GEE	CARLA	2/29/2024	\$ 12,345.53
Full Refund	PARKER	CHERISE	2/29/2024	\$ 10,329.75
Full Refund	ROGERS	JARVIS	2/29/2024	\$ 3,745.36
Full Refund	ROOKER	JEREMY	2/29/2024	\$ 10,797.59
Full Refund	ROOKER	TIFFANY	2/29/2024	\$ 19,812.17
Full Refund	TAYLOR	DANIEL	2/29/2024	\$ 592.66
Full Refund	THAO	ALLEN	2/29/2024	\$ 9,996.86
Member Only Refund	BARKSDALE	SHAWANDA	2/29/2024	\$ 3,802.16
Member Only Refund	BUCHBERGER	LEXI	2/29/2024	\$ 4,672.57
Member Only Refund	BURNS	KAI	2/29/2024	\$ 1,253.09
Member Only Refund	CHILDS	DUSTIN	2/29/2024	\$ 4,529.55
Member Only Refund	CRAWFORD	DANIELLE	2/29/2024	\$ 1,978.05
Member Only Refund	DAVIS	TIATA	2/29/2024	\$ 1,589.73
Member Only Refund	GRIFFIN	KEVIN	2/29/2024	\$ 5,475.54
Member Only Refund	JOHNSON	MARQUAVIUS	2/29/2024	\$ 448.13
Member Only Refund	LAMAR	ASHLEY	2/29/2024	\$ 3,761.50
Member Only Refund	LANDRY	BRITTANY	2/29/2024	\$ 6,896.78

Type	Last Name	First Name	Payment Date	Amount
Member Only Refund	PAYNE	PENNY	2/29/2024 \$	663.04
Member Only Refund	RAMSEY	ERICA	2/29/2024 \$	1,360.14
Member Only Refund	RECHLITZ	NICHOLAS	2/29/2024 \$	8,389.17
Member Only Refund	TAYLOR	MYSONIE	2/29/2024 \$	651.16
Member Only Refund	VANG	TOUA	2/29/2024 \$	615.17
Member Only Refund	WASHINGTON	NAOMI	2/29/2024 \$	2,614.71
Member Only Refund	WILLIAMS	DESTANEE	2/29/2024 \$	1,581.55
Member Only Refund	WILLIAMS	DOMINIQUE	2/29/2024 \$	1,370.70
			TOTAL \$	165,313.89

Conference Requests – March 2024 Board Meeting

David Silber	2024 Neuberger Berman Conference and Goldman Sachs Due Diligence
Sponsor(s):	Neuberger Berman and Goldman Sachs
Location:	New York, NY
Date(s):	June 25 - 27, 2024
Estimated Cost:	\$1,850.00



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**Results of the Second January 1, 2023 Actuarial Valuation
for the
City of Milwaukee Employees' Retirement System**

Presented by Larry Langer and Aaron Chochon
March 26, 2024

Purpose of the Second January 1, 2023 Actuarial Valuation



- The results of the First January 1, 2023 Actuarial Valuation, dated June 8, 2023, were presented at the June 28, 2023 Board meeting.
- On June 20, 2023, the Wisconsin Legislature passed 2023 Wisconsin Act 12 (Act 12). Several changes resulted from Act 12, some of which were prescribed by the bill while others were adopted by the Board in response.
- The overall effect of these changes was significant enough to warrant a Second January 1, 2023 Actuarial Valuation, in which we explain them and analyze their impact.

Purpose of the Second January 1, 2023 Actuarial Valuation



- As discussed at the July 24, 2023 Board Meeting, the January 1, 2023 Actuarial Valuation determines the Plan Year 2023 and Plan Year 2024 Employer Contributions:
 - the First January 1, 2023 Actuarial Valuation is the basis of the Plan Year 2023 Employer Contributions and
 - the Second January 1, 2023 Actuarial Valuation is the basis of the Plan Year 2024 Employer Contributions.
- We presented results of the Second January 1, 2023 Actuarial Valuation for the Combined Fund on a rounded basis at the July 24, 2023 Board meeting. In this presentation:
 - the results here for the Combined Fund are not rounded and
 - the impact of the other Funds is included.
- Historically, we have focused on the Combined Fund. Results in this presentation are for all CMERS Funds.

Purpose of the Second January 1, 2023 Actuarial Valuation



- This Second January 1, 2023 Actuarial Valuation is based on the same census data and asset statements as the First January 1, 2023 Actuarial Valuation
 - Economic and demographic experience is unchanged because it relates to calendar year 2022; calendar year 2023 experience will be reflected in the January 1, 2024 Actuarial Valuation.
 - The impact of Act 12 is reflected, including:
 - soft closure of CMERS as of January 1, 2024,
 - 6.80% prescribed investment return assumption,
 - 30-year level dollar amortization of the projected January 1, 2024 UAAL, and
 - policies recommended by CavMac and adopted by Board at the July 24, 2023 meeting.

Purpose of an Actuarial Valuation



Performed Annually as of January 1

- Update previous valuation with calendar 2022 events
- Comment on calendar 2022 events which impacted the January 1, 2023 valuation
- For this Second January 1, 2023 Actuarial Valuation, comment on the impact of Act 12 which occurred before the 2024 Plan Year.
- Includes Funding and GASB Results

Funding Results

- Employer Contribution for Plan Year 2024 (January 1, 2024 through January 31, 2025)
- Funded Ratios as of January 1, 2023
- UAAL (Unfunded Actuarial Accrued Liability) as of January 1, 2023
- Unless otherwise noted, this presentation focuses on Funding Results

GASB 67/68

- Accounting results as prescribed by the Governmental Accounting Standards Board for Pensions (67/68)
- Pension Expense and Net Pension Liability are analogous to Contribution and UAAL
- Note, the impact of Act 12 will be first reflected in the December 31, 2023 GASB results to be issued later this year



Purpose of the Actuarial Valuation

Section 36-15-15 of the Milwaukee City Charter requires the Actuary and Pension Board to “...prepare an annual valuation of the assets and liabilities of the funds of the retirement system”.
The primary purposes of performing a valuation are to:

estimate the liabilities for future benefits expected to be paid by the System;	determine the actuarially determined employer contributions required to fund the System on an actuarial basis in accordance with 2023 Wisconsin Act 12 (Act 12);	disclose certain asset and liability measures, and the funded status, as of the valuation date;	assess and disclose the key risks associated with funding the System;	monitor any deviation between actual plan experience and experience projected by the actuarial assumptions, and	analyze and report on any significant trends in contributions, assets and liabilities over the past several years.
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Actuarial Valuation Process

Reserve Funding



Builds funds during working careers.

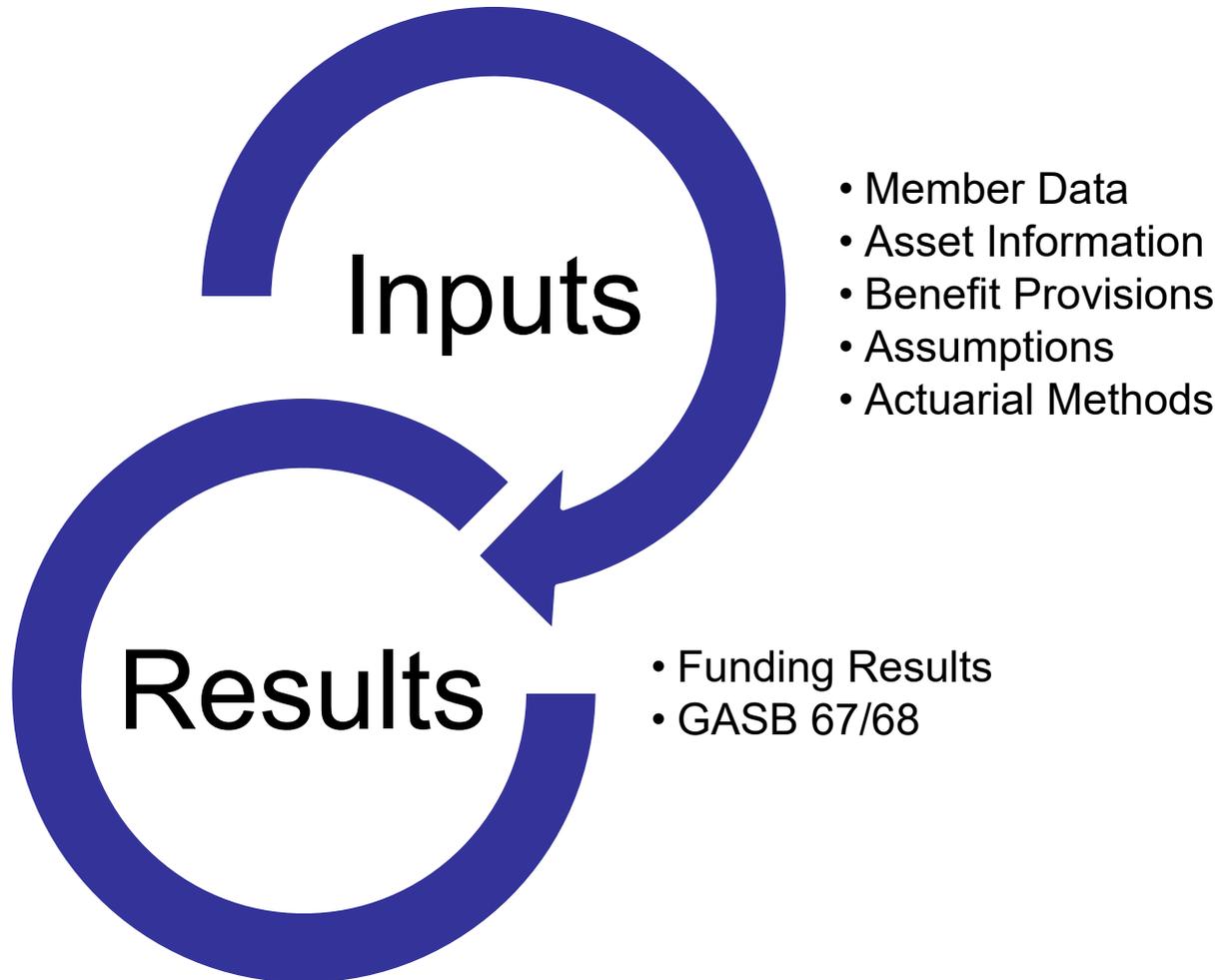
Investment returns help pay for benefits.

Actuarial valuation is mathematical model of financial future of system.

Actuarial cost method's goal is level contributions as percent of payroll.

Contribution equity among generations of active members and taxpayers.

Actuarial Valuation Process



The valuation process can be viewed as a budgeting process. Like a budget, we make use of information we know as of a certain date and using assumptions we estimate what we think will happen in the future.

To the right are the inputs and results of the valuation process.

Member Data, Asset Information and Benefit Provisions are provided by Staff. Thank you!!

Assumptions and Actuarial Methods will vary depending on the purpose of the calculation. Unless prescribed elsewhere, such as the investment return assumption and 30-year amortization policy under Act 12, these are determined by the Board of Trustees, with input from the actuary and other professionals.

Events During Calendar Year 2022 Which Impacted Both the First and Second January 1, 2023 Actuarial Valuation Results



Plan Experience

- Market return for Calendar 2022 of -6.49%, as reported by Northern Trust, was less than the 7.50% assumption; Return on an actuarial basis was 7.6% due to scheduled recognition of previous deferred asset gains
- Contributions under the Stable Contribution policy were \$76.6 million lower than the ADEC (Actuarially Determined Employer Contribution) primarily due to the reduction in the investment return to 7.50% for the January 1, 2019 actuarial valuation

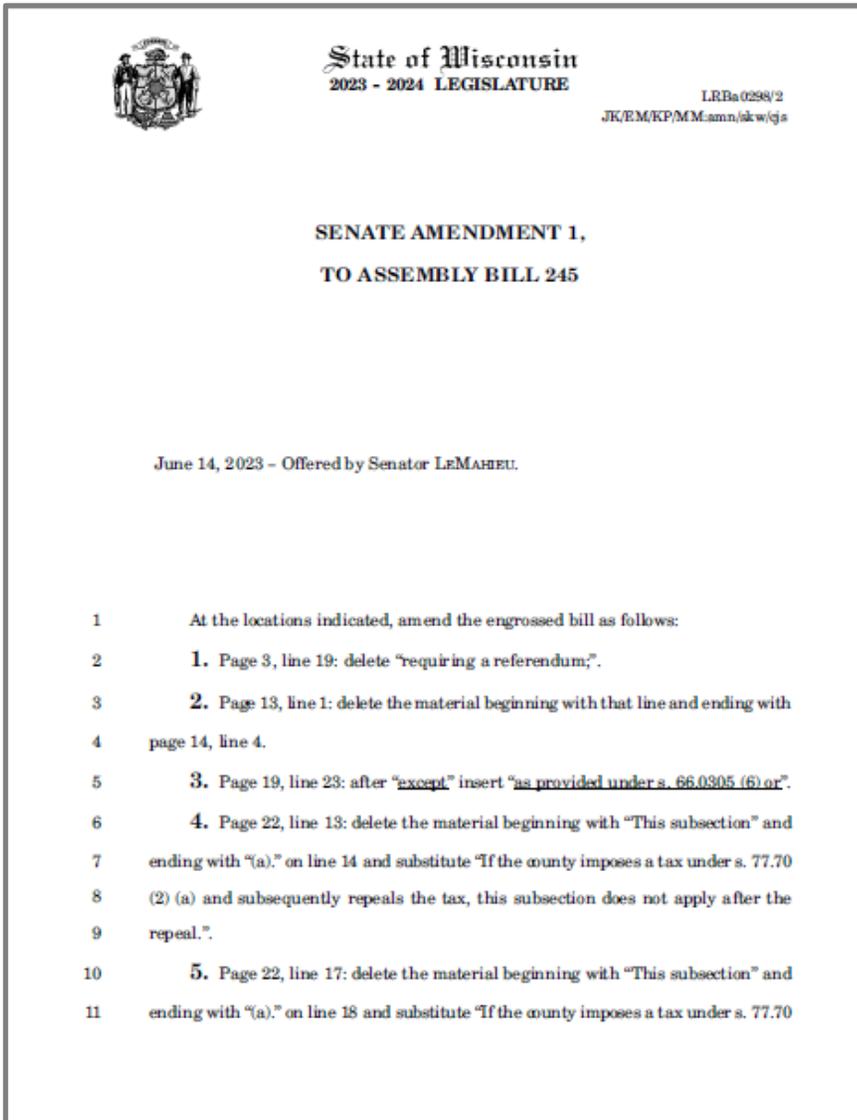
Assumption Changes

- At the February 27, 2023 Board meeting, the following was adopted:
 - Change Retiree Mortality, Other Mortality, Retirement, Termination, Disability, Duty-related disability and Salary increases
 - Maintain 7.50% investment return assumption

Funding Policy Changes

- At the February 27, 2023 Board meeting, the following was adopted:
 - Adoption of many amortization period policies, including increasing Gain/Loss Amortization period from 15 to 20 years
 - Continuation of the Stable Employer Contribution Policy with the understanding that rates can be updated before the 2028 reset for changes in assumptions or plan provisions.
 - Stable rates presented at the March 28, 2023 Board meeting based on preliminary assets. Final assets were \$400,000 higher and would not have impacted rates; final admin expenses would have slightly increased rate.

The Impact of Act 12 is Reflected in the Second January 1, 2023 Actuarial Valuation Results



➤ **2023 Wisconsin Act 12 (Act 12):** On June 20, 2023, the 2023 Wisconsin Legislature enacted Act 12, which allows the City of Milwaukee to impose a tax if the following conditions are met:

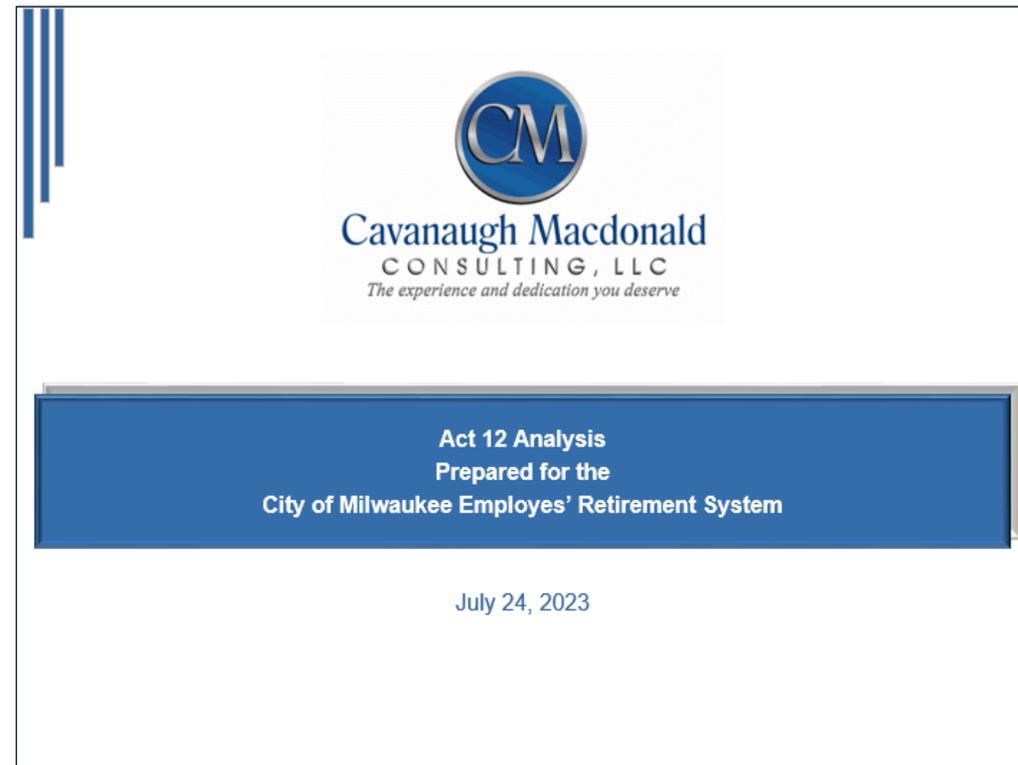
- The City of Milwaukee elects to join WRS for all new employees effective January 1, 2024. CMERS members as of December 31, 2023 continue to accrue benefits under CMERS.
- The tax will cease after the earlier of 30 years or the first year following the Plan Year in which CMERS actuary determines CMERS to be fully funded.
- The Stable Employer Contribution Policy is repealed with employer contributions being determined by the annual actuarial valuation.
- 30-year amortization of the projected January 1, 2024 UAAL, and
- Investment return assumption no higher than WRS. This valuation uses an investment return assumption of 6.80% which is consistent with that used by WRS for active employees.

Act 12 Resulted in Additional Changes to this Second January 1, 2023 Actuarial Valuation



As noted in “Our Act 12 Analysis Prepared for the City of Milwaukee Employees’ Retirement System” which CMC presented to the Retirement Board on July 24, 2023, Act 12 was silent on many issues needed to complete this annual valuation and was inconsistent with Board policy in some areas. The reader is encouraged to read that presentation. To address those issues, CMC recommended the following changes to implement Act 12, which were adopted by the Board:

- **Implement a One-Year Contribution Lag:** To allow time for budgeting, a “Contribution Lag” was implemented. This results in using the January 1, 2023 Actuarial Valuation for both Plan Year 2023 and Plan Year 2024 employer contributions. Note that the January 1, 2024 Actuarial Valuation, which will be presented in early summer of 2024, will be used for Plan Year 2025 employer contributions.
- **Amortization Policy for Future UAAL:** Future increases in the UAAL are amortized over a closed 10-year period with payments calculated as level-dollar amounts, and future decreases in the UAAL will be amortized over either a closed 10-year period or the remainder of the 30-year period beginning on January 1, 2024, whichever is longer. Had the Retirement Board’s policy of a 10-year level dollar amortization of the UAAL been used, the actuarially determined employer contribution would increase by \$109.8 million, from \$217.2 million to \$327.0 million.
- **Allocation of Actuarially Determined Employer Contribution Across Agencies:** Due to the closure of CMERS, we recommended that each employer’s actuarially determined employer contribution be determined using the actual normal cost amount for their participating employees, and an allocation of the total administrative expenses and UAAL payment based on their percentage share of the total AAL.
- **Replace Employer Contribution Rates with Employer Contribution Dollars:** Because the closure of CMERS will eventually result in employers having no payroll upon which to apply rates, the actuarial valuation will only show the amount of the actuarially determined employer contributions.



Impact of Events on the Second January 1, 2023 Actuarial Valuation



- Over the next few slides, we outline the impact on UAAL, funded ratio and employer contributions.
- Results before Act 12 are consistent with the First January 1, 2023 Actuarial Valuation.
- We have isolated the impact of Act 12 on each of these slides.

Change in UAAL



	(\$ in millions)
Unfunded Actuarial Accrued Liability (UAAL) as of 01/01/2022	\$ 1,140.9
- Expected Change in UAAL	(11.3)
- Actual Contributions Versus Actuarial Contributions	76.6
- Investment Experience	(4.8)
- Demographic Experience	29.4
- Experience Study Changes	23.5
- Other Experience	(34.6)
UAAL as of 01/01/2023 Prior to Act 12 Changes	\$ 1,219.7
- Impact of Act 12	563.9
Unfunded Actuarial Accrued Liability (UAAL) as of 01/01/2023	\$ 1,783.6

- Before Act 12, the UAAL increased by \$78.8 million primarily due to actual employer contributions under the Stable Employer Contribution Policy being less than the actuarial contribution.
- Act 12 increased the UAAL by \$563.9 million as a result of the reduction in the investment return assumption from 7.5% to 6.8%.

Change in Funded Ratio



	Funded Ratio Based On	
	Actuarial Value of Assets	Market Value of Assets
January 1, 2022 Funded Ratio	83.4%	93.5%
- Expected Change	0.5%	1.1%
- Actual Contributions Versus Actuarial Contributions	(0.5%)	(0.5%)
- Investment Experience	0.0%	(15.3%)
- Demographic Experience	(0.4%)	(0.3%)
- Experience Study Changes	(0.3%)	(0.3%)
- Other Experience	<u>0.0%</u>	<u>0.0%</u>
- Total change	(0.7%)	(15.3%)
January 1, 2023 Funded Ratio Prior to Act 12	82.7%	78.2%
- Impact of Act 12	<u>(6.1%)</u>	<u>(5.8%)</u>
January 1, 2023 Funded Ratio	76.6%	72.4%

- Before Act 12, on an Actuarial Basis, the Funded Ratio decreased 0.7% primarily due to demographic experience and assumptions changes resulting from the experience review recommendations adopted at the February 27, 2023 Board meeting. Stable rates below ADEC also lowered the Funded Ratio.
- Before Act 12, on a Market Value basis, the funded ratio decreased 15.3% primarily due to investment returns.
- Act 12 reduced the Funded Ratio by an additional 6.1% solely due to the reduction in the investment return assumption from 7.5% to 6.8%.

Change in Employer Contribution



	(\$ Millions)	
Actuarial Determined Employer Contribution (ADEC) as of 01/01/2022	\$	154.2
- Expected Change		3.1
- Change in Employer Normal Cost		1.8
- Actual Contributions Versus Actuarial Contributions		6.9
- Investment Experience		(0.4)
- Demographic Experience		2.6
- Assumption Changes		1.7
- Other Experience		(1.8)
ADEC as of 01/01/2023 Prior to Act 12 Changes		168.1
- Impact of Act 12		49.1
Actuarially Determined Employer Contribution for 2024 Plan Year	\$	217.2

- Before Act 12, the Employer Contribution increased by \$13.9 million due to various reasons discussed at the June 2023 Board meeting.
- Act 12 increased the Employer Contribution due to the reduction in the investment return assumption from 7.5% to 6.8%. The January 1, 2024 closure of CMERS slightly offsets this increase.

Comparative Summary of Assets and Liabilities



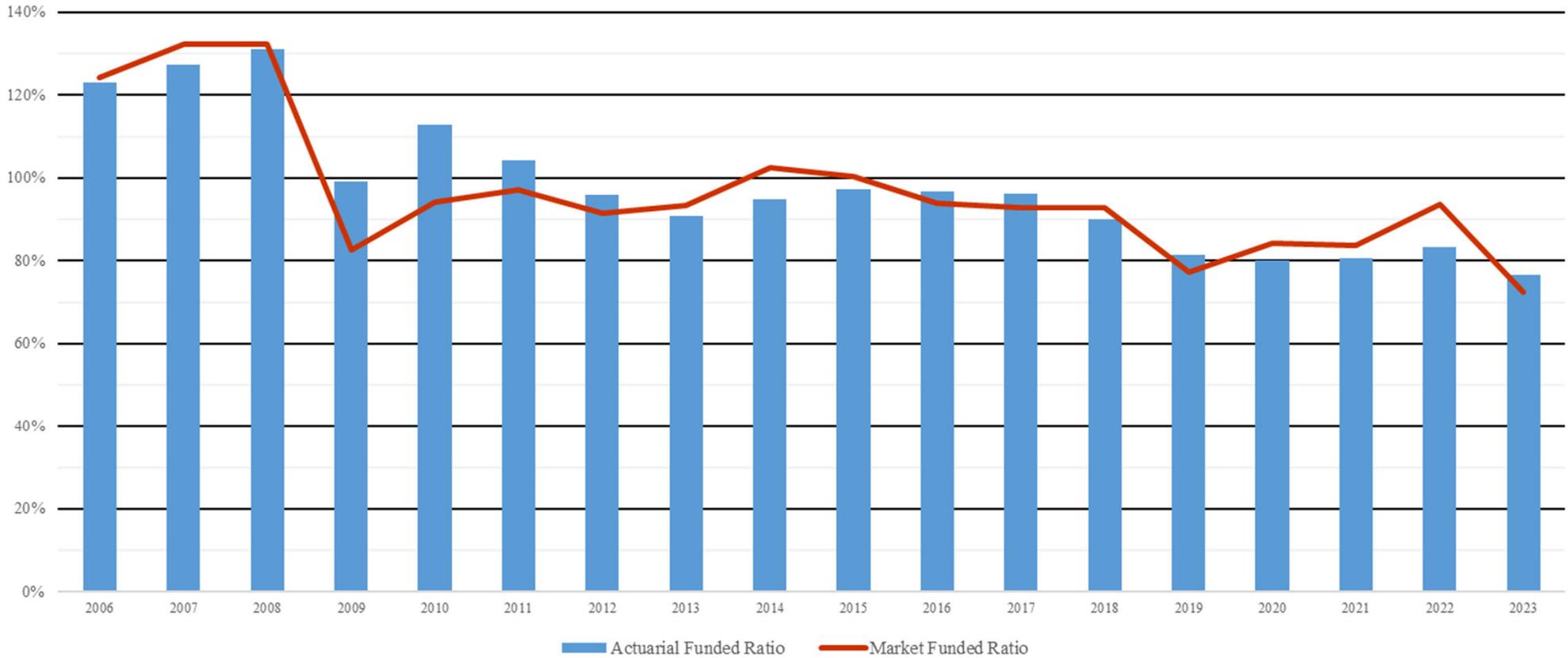
	January 1, 2023	January 1, 2022	% Change
Assets and Liabilities			
a. Asset Values (includes contributions receivable)			
(i) Actuarial Value of Assets (AVA)	\$5,847,404,000	\$5,734,986,000	2.0%
(ii) Market Value of Assets (MVA)	\$5,525,958,000	\$6,431,356,000	(14.1%)
b. Actuarial Accrued Liability (AAL)	\$7,631,007,000	\$6,875,927,000	11.0%
c. Funded Status			
(i) Unfunded AAL (Based on AVA)	\$1,783,603,000	\$1,140,941,000	56.3%
(ii) Funded Ratio (Based on AVA)	76.6%	83.4%	(8.2%)
(iii) Unfunded AAL (Based on MVA)	\$2,105,049,000	\$444,571,000	373.5%
(iv) Funded Ratio (Based on MVA)	72.4%	93.5%	(22.6%)

- Like other public funds with January 1, 2023 valuation dates, the market value of assets decreased during Calendar Year 2022.
- Liabilities grew more than expected due to adopted and prescribed assumption changes and plan experience.
- The above resulted in higher-than-expected UAAL and lower-than-expected Funded Ratios.

Historical Funded Ratio



Funded Ratio as of January 1,



The funded ratio over the period shown has reduced primarily due to the Great Recession of 2007 to 2009 and the reduction in the assumed rate of return from 8.50% in 2006 to 6.80% as of 2023.



Employer Contributions for Plan Year 2024 as of January 1, 2024



<u>Total Employer Contribution Across All Funds</u>					
	Combined Fund	Retirement Fund	General Employees' Duty Disability Fund	Combined Retirement & Disability Fund	Total
Employer					
1) City of Milwaukee					
a) General*	\$48,492,652	\$0	\$0	\$116,355	\$48,609,007
b) Police	85,954,775	0	0	55,018	86,009,793
c) Fire	40,443,999	0	0	33	40,444,032
d) Total City	\$174,891,426	\$0	\$0	\$171,406	\$175,062,832
2) Non-City Agencies					
a) Water Department	\$4,493,203	\$0	\$0	\$205	\$4,493,408
b) School Board	27,348,946	0	0	150,632	27,499,578
c) Milwaukee Technical College	259,247	0	0	0	259,247
d) Sewerage Commission	5,559,643	0	0	5,003	5,564,646
e) Veolia	1,408,947	0	0	0	1,408,947
f) Wisconsin Center District	979,661	0	0	1,869	981,530
g) Housing Authority	1,934,222	0	0	16,885	1,951,107
h) Total Non-City	\$41,983,869	\$0	\$0	\$174,594	\$42,158,463
3) Total System: 1d + 2h	\$216,875,295	\$0	\$0	\$346,000	\$217,221,295

* Includes Elected Officials and Redevelopment Authority

Note: Amounts shown as of January 1, 2024. Interest accrues at 6.80% for contributions made after January 1, 2024.



ESTIMATED Employer Contributions Allocated by Employer



Estimated Employer Contributions for Plan Year as of January 1 Allocated by Employer.
\$ Thousands

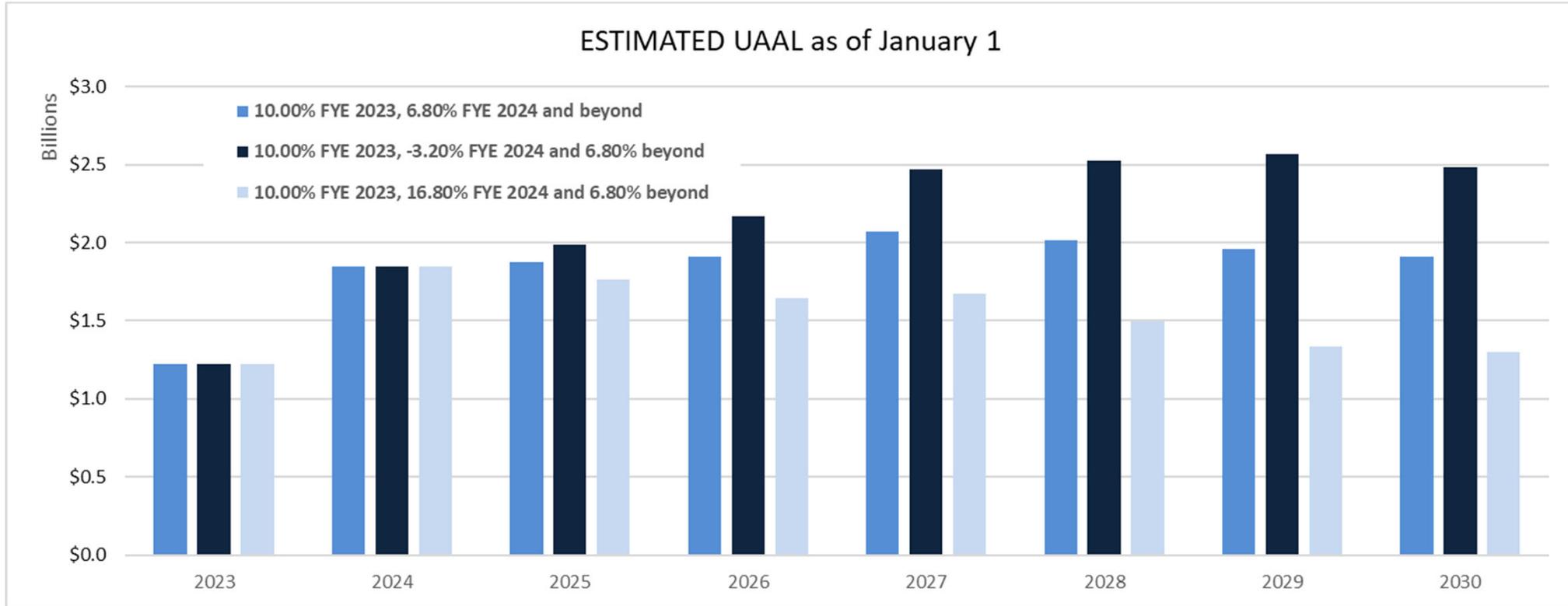
	2023	2024	2025	2026	2027
1) City of Milwaukee					
a) General	\$35,131	\$48,608	\$47,093	\$49,008	\$50,806
b) Police	68,158	86,010	85,987	91,536	96,581
c) Fire	28,592	40,443	40,294	42,805	45,169
d) Total City	\$131,881	\$175,061	\$173,374	\$183,349	\$192,556
2) Non-City Employers					
a) Water Dept	\$3,687	\$4,494	\$4,382	\$4,573	\$4,753
b) School Board	26,204	27,500	26,560	27,507	28,423
c) Milwaukee Technical College	0	259	237	237	234
d) Sewerage Commission	4,249	5,565	5,383	5,606	5,822
e) Veolia	134	1,408	1,352	1,417	1,473
f) Wisconsin Center District	1,259	982	954	973	1,008
g) Housing Authority	1,291	1,951	1,897	1,988	2,076
h) Total Non-City	\$36,824	\$42,159	\$40,765	\$42,301	\$43,789
3) Total System: 1d + 2h	\$168,705	\$217,220	\$214,139	\$225,650	\$236,345

Note: Amounts shown as of January 1. Amounts accrue with interest if made after January 1.

Contributions for Plan Years 2023 and 2024 are based on the January 1, 2023 Actuarial Valuation and are final. Future estimates will be replaced by actual amounts in future actuarial valuations. As we will see on slide 21, with the elimination of the Stable Employer Contribution Policy due to Act 12, there is the potential for significant employer contribution volatility.



ESTIMATED UAAL: Based on FYE 2023 return of 10%, FYE 2024 returns of 6.8%, -3.2% and 16.8% and 6.8% beyond



The graph above is an estimate of future UAAL under alternate investment returns in FYE 2024 and 6.80% thereafter. The increase from 2023 to 2024 is due to the decrease in the investment return assumption and the 10% return for 2023. We won't know the actual until the January 1, 2024 actuarial valuation is completed.

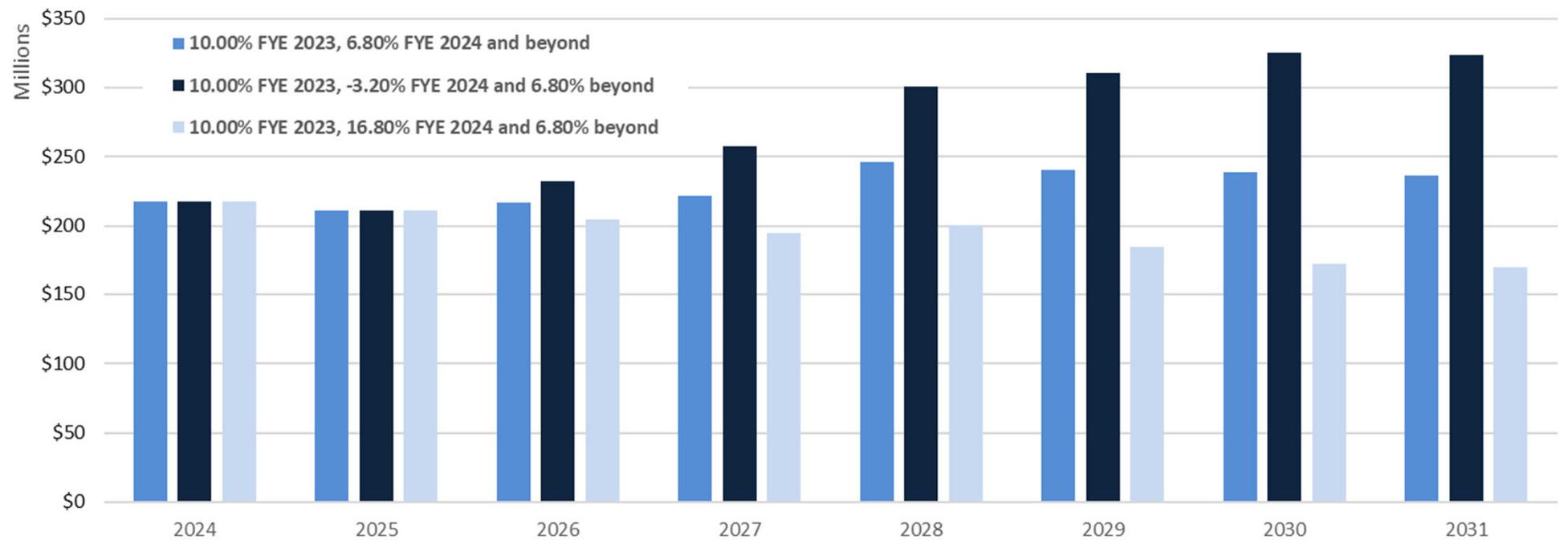
Under the five-year asset smoothing, the impact of returns that differ from the 6.80% return assumption is phased in over five years. This means that the full impact of the 2024 return will not be fully reflected until the January 1, 2029 actuarial valuation and the estimated UAAL is projected to increase over the period even if 6.80% is achieved due to unrecognized asset losses as of January 1, 2023 and projected losses above if any.

Based on the level dollar amortization of the UAAL, we would expect the UAAL to decrease absent these unrecognized asset losses.



ESTIMATED Employer Contributions: Based on FYE 2023 return of 10%, FYE 2024 returns of 6.8%, -3.2% and 16.8% and 6.8% beyond

ESTIMATED Employer Contributions for Plan Year as of January 1



The graph above is an estimate of future Employer Contributions under alternate investment returns in FYE 2024 and 6.80% thereafter. We used the 10% return for 2023 to estimate the Plan Year 2025 Employer Contributions but will not know the actual Plan Year 2025 Employer Contribution until the January 1, 2024 actuarial valuation is completed.

Under the five-year asset smoothing, the impact of returns that differ from the 6.80% return assumption is phased in over five years. This means that the full impact of the 2024 return will not be fully reflected until the January 1, 2029 actuarial valuation, which sets the employer contribution for Plan Year 2030. The estimated employer contribution is projected to increase over the period even if 6.80% is achieved due to unrecognized asset losses as of January 1, 2023 and projected losses above if any.

Based on the level dollar amortization of the UAAL and the closure of CMERS, we would expect Employer Contributions to decrease absent the unrecognized asset losses.

What a Difference a Year and Legislation Makes



From left to right, we show estimated Employer Contributions from the 2022, First 2023 and Second 2023 Actuarial Valuations.

All estimates are based on all assumptions being met.

The primary differences in the projections are due to unfavorable market returns for calendar year 2022 and Act 12 in 2023. Other experience had much less impact.

The purpose here is a reminder that results can be quite volatile, with positive results like we saw with the January 1, 2022 results and not so positive with the January 1, 2023 results.

This volatility is why we perform actuarial valuations every year.

Key Takeaways



Act 12 resulted in significant changes to the funding of CMERS.



The January 1, 2023 Actuarial Valuation is used to determine *both* Plan Year 2023 and Plan Year 2024 Employer Contributions.



With the elimination of the Stable Employer Contribution Policy under Act 12, expect employer contribution volatility.



As noted in the projections, the UAAL is expected to increase over the next few years with Employer Contributions increasing.

Actuarial Certification



The results were prepared under the direction of actuaries who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. These results have been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions about them.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law.

Larry Langer, ASA, EA, MAAA, FCA
Principal and Consulting Actuary

Patrice A. Beckham, FSA, EA, MAAA, FCA
Consulting Actuary

Aaron Chochon, ASA, EA, MAAA, FCA
Consulting Actuary



Questions?



Thank you!



*The Second January 1, 2023 Actuarial Valuation of the City of Milwaukee Employees' Retirement System for Determining Actuarially Determined Employer Contributions for Plan Year 2024
Presented March 26, 2024 by Cavanaugh Macdonald Consulting, LLC*



Appendix



Comparative Summary of Census Data

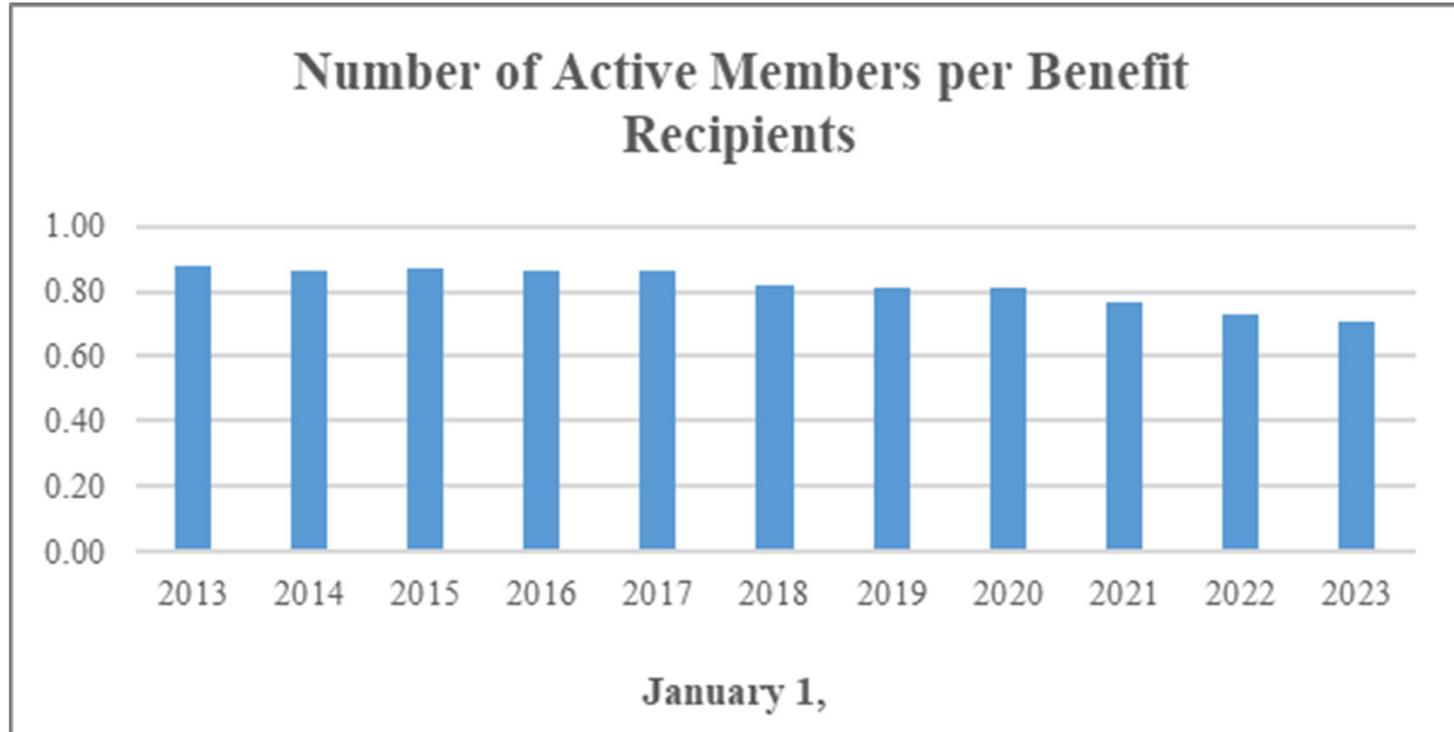


	January 1, 2023	January 1, 2022	% Change
Membership Data			
a. Active Members			
(i) Count			
- General Employees	7,509	7,768	(3.3%)
- Policemen	1,592	1,631	(2.4%)
- Firemen	<u>699</u>	<u>695</u>	0.6%
- Total	9,800	10,094	(2.9%)
(ii) Total Estimated Payroll			
- General Employees	\$390,258,000	\$369,306,000	5.7%
- Policemen	146,653,000	148,844,000	(1.5%)
- Firemen	<u>62,373,000</u>	<u>61,201,000</u>	1.9%
- Total	\$599,284,000	\$579,351,000	3.4%
b. Retirees, Beneficiaries and Disabled Members			
(i) Number	13,853	13,758	0.7%
(ii) Total Annual Benefits	\$451,053,000	\$434,381,000	3.8%
(iii) Average Annual Benefit	\$32,560	\$31,573	3.1%

Additional summaries of census information submitted for the valuation can be found in the report.



Historical Census Data



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Active	10,714	10,675	10,964	10,982	11,083	10,845	10,851	10,974	10,567	10,094	9,800
In-Pay	12,109	12,468	12,580	12,746	12,872	13,181	13,355	13,543	13,636	13,747	13,842
Act/In-Pay	0.88	0.86	0.87	0.86	0.86	0.82	0.81	0.81	0.77	0.73	0.71

Since 2017, CMERS has experienced a 12% reduction in active headcount. This creates pressure on the contribution rate due to lower covered payroll.

Market Value of Assets



1. Market Value of Assets as of January 1, 2022	\$ 6,431,356
2. Transfer of Assets as of January 1, 2022	\$ 0
3. Contributions During Year	
a. Member	\$ 32,204
b. Employer	121,571
c. Total	\$ 153,775
4. Disbursements During Year	
a. Monthly Annuities	\$ 452,407
b. Refunds	5,211
c. Administrative Expenses	7,181
d. Total	\$ 464,799
5. Investment Return (net of Investment Expenses)	\$ (594,374)
6. Market Value of Assets as of December 31, 2022 (1) + (2) + (3c) - (4d) + (5)	\$ 5,525,958
7. Rate of Return, as Reported by Northern Trust (ERS' Custodian)	(6.49%)

Investment experience during 2022 was unfavorable.

Note the amount of contributions relative to disbursements. It is common in a mature plan for contributions to be less than disbursements, with investment returns making up the difference.

Over 99% of the assets are in the Combined Fund.

Actuarial Value of Assets



1. Actuarial Value of Assets as of January 1, 2022	\$ 5,734,986
2. Transfer of Assets as of January 1, 2022	\$ 0
3. Contributions During Year	
a. Member	\$ 32,204
b. Employer	121,571
c. Total	<u>\$ 153,775</u>
4. Disbursements During Year	
a. Monthly Annuities	\$ 452,407
b. Refunds	5,211
c. Administrative Expenses	7,181
d. Total	<u>\$ 464,799</u>
5. Investment Return (net of Investment Expenses)	\$ 423,442
7. Actuarial Value of Assets as of December 31, 2022 (1) + (2) + (3c) - (4d) + (5)	\$ 5,847,404
8. Estimated Rate of Return	7.60%

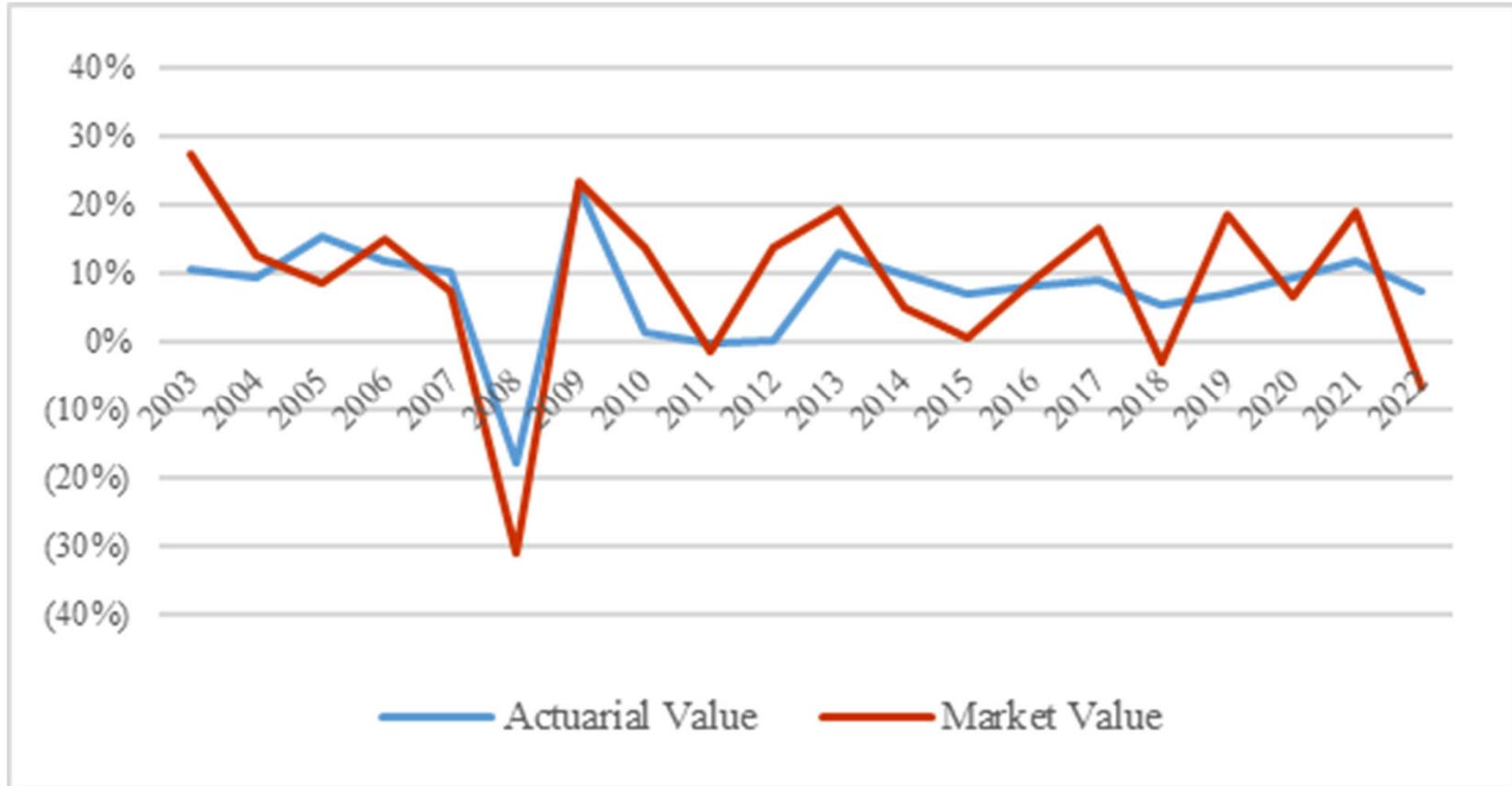
Return during 2022 was above the 7.50% assumed rate of return. As a result, the funded ratio using the actuarial value of assets increased.

Note the amount of contributions relative to disbursements. It is common in a mature plan for contributions to be less than disbursements, with investment returns and accumulated assets making up the difference.

Over 99% of the assets are in the Combined Fund.



Historical Asset Returns



Returns on an actuarial basis are smoother than on a market basis, which results in contribution stability when the stable contribution policy is set. Note that before 2010, a 10% corridor was used, resulting in more volatility. Use of an asset smoothing method is almost universal for public plans



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Employees' Retirement System of the City of Milwaukee

Actuarial Valuation Report of the
Second 85th Annual Actuarial
Valuation as of January 1, 2023
For Determining Actuarially
Determined Employer Contributions
For Plan Year 2024

February 21, 2024





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February 21, 2024

Annuity and Pension Board
Employees' Retirement System of the City of Milwaukee
789 North Water Street, Suite 300
Milwaukee, WI 53202

Members of the Board:

At your request, we performed this *Second* Eighty-fifth Annual Actuarial Valuation of the Employees' Retirement System of the City of Milwaukee (referred to as "ERS" or "System") as of January 1, 2023 to be used for determining actuarially determined employer contributions for the 2024 plan year. For the purposes of this report, the 2024 plan year refers to the allowable employer contribution window, as defined under Chapter 36 of the City Charter, beginning January 1, 2024 and ending January 31, 2025. The *First* Eighty-fifth Annual Actuarial Valuation of the Employees' Retirement System of the City of Milwaukee as of January 1, 2023 had been performed and submitted on June 8, 2023 and was used for determining the actuarially determined employer contributions for the 2023 plan year. However, due to the passage of Act 12 on June 21, 2023, we are issuing this second actuarial valuation report which reflects the statutory changes and subsequent Board actions. The major findings of the valuation are contained in this report, which reflects the benefit provisions and funding policy in place on January 1, 2023, and the impact of Act 12.

The primary purposes of the valuation report are to determine the actuarially determined employer contribution for the 2024 plan year, to describe the current financial condition of ERS, and to analyze changes in such condition. Use of this report for any other purposes, or by anyone other than ERS and its auditors, may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the report for that purpose. The attached pages should not be provided without a copy of this cover letter. Because of the risk of misinterpretation of actuarial results, you should ask Cavanaugh Macdonald Consulting (CMC) to review any statement you wish to make on the results contained in this report. CMC will not accept any liability for any such statement made without prior review.

In preparing our report, we relied, without audit, on information (some oral and some in writing) supplied by ERS staff. This information includes, but is not limited to, statutory provisions, member data and financial information. Although reviewed for reasonableness and consistency with the prior valuation, these elements have not been audited by CMC and we cannot certify as to the accuracy and completeness of the data supplied. The valuation results depend on the integrity of this information. If any of the information is inaccurate or incomplete, our results may be different, and our calculations may need to be



revised. The valuation results are also based on the actuarial assumptions, benefit provisions and funding policy as disclosed in this report. If you have reason to believe that the plan provisions are incorrectly described, that important plan provisions relevant to this valuation are not disclosed, or that conditions have changed since the calculations were made, you should contact the authors of this actuarial report prior to relying on this information.

The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix C. We believe that these assumptions are appropriate and reasonable and also comply with all applicable Actuarial Standards of Practice (ASOPs). We certify that all costs and liabilities have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the plan and reasonable expectations) and which, in combination, offer the best estimate of anticipated experience affecting the plan. Nevertheless, the emerging costs will vary from those presented in this report to the extent actual experience differs from that projected by the actuarial assumptions.

In order to prepare the results in this report, we have utilized appropriate actuarial models that were developed to measure liabilities and develop actuarial costs. These models include tools that we have produced and tested, along with commercially available valuation software that we have reviewed to confirm the appropriateness and accuracy of the output. In utilizing these models, we develop and use input parameters and assumptions about future contingent events along with recognized actuarial approaches to develop the necessary results. Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period) and changes in plan provisions or applicable law. Due to the limited scope of this assignment, CMC has not performed an analysis of the potential range of such future measurements.

Actuarial computations presented in this report are for purposes of evaluating the funding of the Plan and determining actuarially determined employer contributions for the following plan year. Actuarial computations for purposes of fulfilling financial accounting requirements under Governmental Accounting Standard Number 67 and 68 are provided in separate reports. The calculations in the enclosed report have been made on a basis consistent with our understanding of the Plan's funding requirements and goals. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualifications Standards to render the actuarial opinions contained in this report. In addition, this report has been prepared in accordance with all applicable Actuarial Standards of Practice. We are available to answer questions about it or to provide additional information, as needed.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'LL'.

Larry Langer, ASA, EA, FCA, MAAA
Principal and Consulting Actuary

A handwritten signature in blue ink, appearing to read 'Patrice Beckham'.

Patrice A. Beckham, FSA, EA, FCA, MAAA
Consulting Actuary

A handwritten signature in blue ink, appearing to read 'Aaron Chochon'.

Aaron Chochon, ASA, EA, FCA, MAAA
Senior Actuary



SECTION I: EXECUTIVE SUMMARY

Introduction and Background

The law governing the Employees' Retirement System (ERS) requires the Actuary and Pension Board to "...prepare an annual valuation of the assets and liabilities of the funds of the retirement system" (Section 36-15-15 of the Milwaukee City Charter (MCC)). Cavanaugh Macdonald Consulting, the Actuary, has completed the *second* eighty-fifth annual actuarial valuation of the ERS as of January 1, 2023 to reflect the statutory changes under 2023 Wisconsin Act 12 and subsequent Board actions. The primary purposes of performing a valuation are to:

- estimate the liabilities for future benefits expected to be paid by the System;
- determine the actuarially determined employer contributions required to fund the System on an actuarial basis in accordance with 2023 Wisconsin Act 12 (Act 12);
- disclose certain asset and liability measures, and the funded status, as of the valuation date;
- assess and disclose the key risks associated with funding the System;
- monitor any deviation between actual plan experience and experience projected by the actuarial assumptions, and
- analyze and report on any significant trends in contributions, assets and liabilities over the past several years.

Events Impacting this January 1, 2023 Actuarial Valuation for Determining Actuarially Determined Employer Contributions During 2024

2023 Wisconsin Act 12 (Act 12): On June 20, 2023, the 2023 Wisconsin Legislature enacted Act 12, which allows the City of Milwaukee to impose a tax if the following conditions are met:

- The City of Milwaukee elects to join WRS for all new employees effective January 1, 2024. CMERS members as of December 31, 2023 continue to accrue benefits under CMERS.
- The tax will cease the earlier of 30 years or with the first year the CMERS actuary determines CMERS to be fully funded.
- The Stable Employer Contribution Policy is repealed with employer contributions being determined by the annual actuarial valuation.
- 30-year amortization of the January 1, 2024 UAAL, and
- Investment return assumption no higher than WRS. This valuation uses an investment return assumption of 6.80% which is consistent with that used by WRS for active employees.

As noted in "Our Act 12 Analysis Prepared for the City of Milwaukee Employees' Retirement System" which CMC presented to the Retirement Board on July 24, 2023, Act 12 was silent on many issues needed to complete this annual valuation and was inconsistent with Board policy in some areas. The reader is encouraged to read that presentation. To address those issues, CMC recommended the following changes to implement Act 12, which were adopted by the Board:

- ***Implement a One-Year Contribution Lag:*** "Contribution Lag" is the term used for the difference between the valuation date and the date the actuarially determined employer contributions from that valuation are to be contributed. The *first* January 1, 2023 actuarial valuation dated June 8, 2023 did not incorporate a contribution lag – that valuation was used to determine employer contributions for plan year 2023. This January 1, 2023 actuarial valuation uses a one-year contribution lag and as such is for determining actuarially determined employer contributions during for plan year 2024. *Note, this means we are using the January 1, 2023 actuarial valuation for both plan years 2023 and 2024 employer contribution requirements. Subsequent actuarial valuations will be for the year following – for example the January 1, 2024 actuarial valuation will be used to determine the actuarially determined employer contributions for 2025.*



SECTION I: EXECUTIVE SUMMARY

- ***Amortization Policy for Future UAAL:*** At the February 27, 2023 Retirement Board meeting, one of our recommendations, which the Retirement Board adopted, was the use of a 10-year level dollar amortization of the UAAL if CMERS was closed. As noted above, Act 12 prescribed a 30-year amortization of the January 1, 2024 UAAL, which is inconsistent with our recommendation. We recommended and the Board adopted a layered amortization policy, where future increases in the UAAL are amortized over a closed 10-year period with payments calculated as level-dollar amounts, and future decreases in the UAAL will be amortized over either a closed 10-year period or the remainder of the 30-year period beginning on January 1, 2024, whichever is longer. While not required under ASOP 4, we will be disclosing the actuarially determined employer contribution based on our pre-Act 12 recommendation of a closed 10-year amortization period using level dollar payments as adopted by the Retirement Board. Had the Retirement Board's policy of a 10-year level dollar amortization of the UAAL been used, the actuarially determined employer contribution would increase by \$109.8 million, from \$217.2 million to \$327.0 million.
- ***Allocation of Actuarially Determined Employer Contribution Across Agencies:*** Due to the closure of CMERS, we recommended that each employer's actuarially determined employer contribution be determined using the actual normal cost amount for their participating employees, and an allocation of the total administrative expenses and UAAL payment based on their percentage share of the total AAL. The previous policy was to allocate based on active AAL which would have resulted in allocating actuarially determined employer contributions only to employers with active members despite there currently being inactive UAAL as a direct result of Act 12.
- ***Replace Employer Contribution Rates with Employer Contribution Dollars:*** Because the closure of CMERS will eventually result in employers having no payroll upon which to apply rates, the actuarial valuation will only show the amount of the actuarially determined employer contributions.

Experience Study: Every five years, the System's Actuary performs an Experience Study to assess the appropriateness of the current set of actuarial assumptions and methods. The most recent study was performed in 2022, which analyzed actuarial experience during the five-year period ending December 31, 2021. As a result of the 2022 Experience Study, several changes to the demographic actuarial assumptions were recommended and adopted by the Board, at its February 2023 meeting as well as proposed changes to the UAAL amortization method. The key assumption changes include:

- **Mortality assumption:** For General employees, move to Pub-2010 Below Median General Mortality Table with one-year age setback for males and two-year set forward for females. For Policemen and Firemen, move to Pub-2010 Median Public Safety Mortality Tables with one-year age set forward for males and females. Future mortality improvements are modeled using SOA Scale MP-2021.
- **Retirement:** Lower early retirement rates for General Employees and adjust normal retirement rates for males and females to better fit experience. Increase retirement rates for Police and Fire to better reflect actual experience.
- **Termination:** Move to service-based assumption for both General as well as Policemen and Firemen.
- **Disability:** Lower the disability assumption for all groups to partially reflect the observed experience.
- **Duty-Related Disability:** 20% for General and Non-union Police and Fire. 60% for MPA Police and 75% for MPFFA Fire. No disabilities are assumed to be eligible for 90% benefit.
- **Salary Increase:** Move to service-based assumption for both General Employees as well as Policemen and Firemen, with 3.0% general wage increase assumption.



SECTION I: EXECUTIVE SUMMARY

- Future Service Accruals: Active members are assumed earn a full year of service each year in the future.

In addition to the assumption changes, the Board also adopted the following changes to the UAAL amortization schedule:

- Future changes to the UAAL arising from actual experience that is different than assumed will be amortized over a closed 20-year period instead of a closed 15-year period. This has since been superseded by the changes introduced under Act 12.
- If the UAAL is negative, all prior bases will be eliminated, and the participating employers will be required to contribute their share of the annual normal cost and administrative expenses.
- Changes to the UAAL arising from contributions which are above or below the actuarially determined employer contribution amount will be amortized over a closed 5-year period.
- Changes to the UAAL arising from other sources will be amortized over various periods, depending on the nature of the change and which participants are affected.

System Experience during 2022: System experience was mixed during 2022 as noted below:

- Investment Experience: There was unfavorable investment experience on the market value of assets during calendar year 2022, resulting in a return on assets of -6.49% as reported by Northern Trust. However, due to the asset smoothing method the return on the actuarial value of assets was 7.60%, which is above the assumed rate of return of 7.50%. This resulted in a small actuarial gain on assets.
- Liability Experience: Liability gains (losses) result from actual experience that results in lower (higher) liability than expected based on the actuarial assumptions. Overall, there was unfavorable experience during 2022 for the System's liabilities, as expressed by a larger actuarial accrued liability than expected. The largest source of unfavorable experience was more members retiring than expected during 2022.
- In total, the size of the active membership declined from 10,094 to 9,800 (2.9%) during 2022, which also impacted the total covered payroll. The actuarial assumption reflects an expectation that covered payroll will increase 2.0% per year. As a result, the dollar amount of the unfunded actuarial accrued liability payments increases by 2.0% each year. To the extent actual increases in the covered payroll do not occur as expected, it results in a higher unfunded actuarial accrued liability contribution rate.
- The Global Pension Settlement (GPS) provides that members enrolled through June 28, 2000, must provide written consent to the ERS in order to be eligible for the benefit enhancements of GPS. Members enrolled after June 28, 2000 are automatically participants in the Combined Fund. Since the January 1, 2022 valuation, twelve individuals who were eligible for ERS benefits as of June 28, 2000 – and who had not previously consented to GPS – have now consented. As a result, assets will be transferred from the non-consenter funds in which these members previously participated to the Combined Fund.



SECTION I: EXECUTIVE SUMMARY

Fiscal Impact of Events

In this section, we discuss the fiscal impact of the events above on the UAAL, funded ratio and the actuarially determined employer contribution for CMERS.

A summary of the changes to the UAAL from the January 1, 2022 valuation to the January 1, 2023 valuations is shown in the table and discussion below:

	(\$ in millions)
Unfunded Actuarial Accrued Liability (UAAL) as of 01/01/2022	\$ 1,140.9
- Expected Change in UAAL	(11.3)
- Actual Contributions Versus Actuarial Contributions	76.6
- Investment Experience	(4.8)
- Demographic Experience	29.4
- Experience Study Changes	23.5
- Other Experience	(34.6)
UAAL as of 01/01/2023 Prior to Act 12 Changes	\$ 1,219.7
- Impact of Act 12	563.9
Unfunded Actuarial Accrued Liability (UAAL) as of 01/01/2023	\$ 1,783.6

The UAAL was *expected* to decrease by 11.3 million during 2022. *Actual contributions* which were less than actuarial increased UAAL by \$76.6 million.

There was unfavorable *investment experience* on the market value of assets during calendar year 2022, resulting in a return on assets of -6.49% as reported by Northern Trust. However, due to the asset smoothing method the return on the actuarial value of assets was 7.60%, which is above the assumed rate of return of 7.50%. As a result, the unfunded actuarial accrued liability decreased by \$4.8 million. Due to the unfavorable investment experience on the market value of assets during 2022, the net deferred investment gain of \$696 million in last year's valuation is now a net deferred investment loss of \$321 million. Absent offsetting favorable experience in the future, this experience will decrease the funded ratio and increase the actuarially determined employer contribution as it flows through the asset smoothing method.

The purpose of conducting an actuarial valuation of a retirement system is to estimate the costs and liabilities for the benefits provided by the system, to determine the annual level of actuarially determined employer contributions required to support these benefits and, finally, to analyze the system's actual experience as it compares with the actuarial assumptions used in the valuation. The costs and liabilities reported in the valuation depend not only upon the dollar amount of the benefits to be paid, but also upon factors such as mortality rates, termination rates, and retirement rates. The net liability *demographic experience* for the System during 2022 was an actuarial loss of \$29.4 million. The most significant source of the net unfavorable liability experience during 2022 was more members retiring than anticipated by the actuarial assumptions.

There were twelve *GPS Consenters* during 2022 who elected to participate in the Combined Fund during 2022. They represent about 5% of the total non-consenters. Due to the small number of individuals who consented and the associated liability, this did not have a significant impact on the valuation results and we did not isolate the impact above.



SECTION I: EXECUTIVE SUMMARY

Implementing the results of the *experience study* resulted in an increase in UAAL of \$23.5 million. *Other experience* reduced the UAAL by \$34.6 million.

The amounts above reconcile the UAAL in the January 1, 2022 actuarial valuation to the January 1, 2023 valuation dated June 8, 2023, which is used to determine the employer contributions for 2023. *Act 12* increased the UAAL as of January 1, 2023 by \$563.9 million. This increase in UAAL is due solely to the reduction in the discount rate from 7.50% to 6.80%

The *funded ratio* is the ratio of assets to the actuarial accrued liabilities of the System. Traditionally the measurement is based on the actuarial value of assets, but we have included the measurement on the market basis as well. Generally, increases in the UAAL result in decreases in the funded ratio. A summary of the changes to the funded ratio on both an actuarial and market basis from the January 1, 2022 valuation to the January 1, 2023 valuations is shown in the table and discussion below. Unless noted, our discussion focuses on the funded ratio based on actuarial value of assets:

	Funded Ratio Based On	
	Actuarial Value of Assets	Market Value of Assets
January 1, 2022 Funded Ratio	83.4%	93.5%
- Expected Change	0.5%	1.1%
- Actual Contributions Versus Actuarial Contributions	(0.5%)	(0.5%)
- Investment Experience	0.0%	(15.3%)
- Demographic Experience	(0.4%)	(0.3%)
- Experience Study Changes	(0.3%)	(0.3%)
- Other Experience	<u>0.0%</u>	<u>0.0%</u>
- Total change	(0.7%)	(15.3%)
January 1, 2023 Funded Ratio Prior to Act 12	82.7%	78.2%
- Impact of Act 12	<u>(6.1%)</u>	<u>(5.8%)</u>
January 1, 2023 Funded Ratio	76.6%	72.4%

The funded ratio was *expected* to increase by 0.5% during 2022. *Actual contributions* which were less than actuarial decreased the funded ratio by 0.5%.

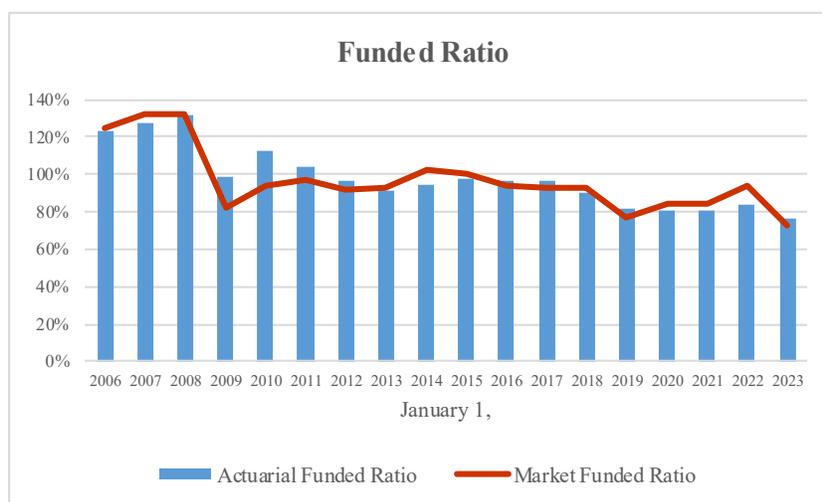
Investment experience on an actuarial, or smoothed, basis resulted in (almost) no change in the funded ratio on an actuarial basis as the actuarial return was just above the assumed return of 7.50%. On a market basis, the decrease was 15.3% due to the reflection of the -6.49% investment return during 2022. *Demographic experience* decreased the funded ratio by 0.4%, primarily due to more retirements than expected. The changes implemented due to the *experience study* decreased the funded ratio by 0.3%.

The amounts above reconcile the funded ratio in the January 1, 2022 actuarial valuation to the January 1, 2023 valuation dated June 8, 2023, which is used to determine the employer contributions for 2023. *Act 12* decreased the funded ratio as of January 1, 2023 by 6.1%. Like the UAAL reconciliation, this figure is due solely to the reduction in the discount rate from 7.50% to 6.80%



SECTION I: EXECUTIVE SUMMARY

The following graph shows the historical funded ratio using both the market value and actuarial value of assets.



Note that the funded ratio does not necessarily indicate whether or not additional funding is needed, nor does it indicate whether or not the plan has sufficient funds to settle all current obligations.

A summary of the changes in the *Actuarially Determined Employer Contributions* for the System is shown below:

	(\$ Millions)	
Actuarial Determined Employer Contribution (ADEC) as of 01/01/2022	\$	154.2
- Expected Change		3.1
- Change in Employer Normal Cost		1.8
- Actual Contributions Versus Actuarial Contributions		6.9
- Investment Experience		(0.4)
- Demographic Experience		2.6
- Assumption Changes		1.7
- Other Experience		(1.8)
ADEC as of 01/01/2023 Prior to Act 12 Changes		168.1
- Impact of Act 12		49.1
Actuarially Determined Employer Contribution for 2024 Plan Year	\$	217.2

Due to the assumed rate of payroll growth, the actuarial determined employer contribution was *expected* to increase by \$3.1 million since the prior valuation. *Actual contributions*, which were less than the actuarial contribution rate, increased the 2023 actuarial determined employer contribution amount by \$6.9 million. *Investment experience* on an actuarial, or smoothed, basis resulted in slight reduction of \$0.4 million in the actuarial determined employer contribution as the actuarial return was just above the assumed return of 7.50%. *Demographic experience* increased the actuarial determined employer contribution by \$2.6



SECTION I: EXECUTIVE SUMMARY

million, primarily due to more retirements than expected. The changes implemented due to the *experience study* increased the actuarial determined employer contribution by \$1.8 million.

The amounts above reconcile the actuarial determined employer contribution from calendar 2022 to 2023, which were reported in the actuarial valuation reports from June 2022 and 2023 respectively. This actuarial valuation, also as of January 1, 2023, determines the 2024 actuarially determined employer contribution. *Act 12* increases the actuarial determined employer contribution by \$49.1 million. Much of this increase is due to the prescribed decrease in the investment return assumption from 7.50% to 6.80%. The implementation of the contribution lag and the closure of the plan was a small portion of the change with the contribution lag increasing and the closure of the plan to new entrants as of January 1, 2024 decreasing the actuarial determined employer contribution respectively.

Summary of Key Valuation Results

This report, prepared as of January 1, 2023, presents the results of the eighty-fifth annual valuation of the System. The actuarially determined employer contributions for plan year 2024, which reflect the prescribed funding policy under 2023 Wisconsin Act 12, are summarized below:

<u>Total Employer Contribution Across All Funds</u>					
	Combined Fund	Retirement Fund	General Employees' Duty Disability Fund	Combined Retirement & Disability Fund	Total
Employer					
1) City of Milwaukee					
a) General*	\$48,492,652	\$0	\$0	\$116,355	\$48,609,007
b) Police	85,954,775	0	0	55,018	86,009,793
c) Fire	40,443,999	0	0	33	40,444,032
d) Total City	\$174,891,426	\$0	\$0	\$171,406	\$175,062,832
2) Non-City Agencies					
a) Water Department	\$4,493,203	\$0	\$0	\$205	\$4,493,408
b) School Board	27,348,946	0	0	150,632	27,499,578
c) Milwaukee Technical College	259,247	0	0	0	259,247
d) Sewerage Commission	5,559,643	0	0	5,003	5,564,646
e) Veolia	1,408,947	0	0	0	1,408,947
f) Wisconsin Center District	979,661	0	0	1,869	981,530
g) Housing Authority	1,934,222	0	0	16,885	1,951,107
h) Total Non-City	\$41,983,869	\$0	\$0	\$174,594	\$42,158,463
3) Total System: 1d + 2h	\$216,875,295	\$0	\$0	\$346,000	\$217,221,295

* Includes Elected Officials and Redevelopment Authority

Note: Amounts shown as of January 1, 2024. Interest accrues at 6.80% for contributions made after January 1, 2024.



SECTION I: EXECUTIVE SUMMARY

Key Takeaways

- On June 20, 2023, the 2023 Wisconsin Legislature enacted Act 12, making several impactful changes to ERS. These changes include:
 - Employees of the City and other participating employers hired on or after January 1, 2024 will participate in the Wisconsin Retirement System rather than ERS.
 - The System's investment return assumption can be no higher than that of WRS, which is currently set at 6.80% for active employees. As a result, the investment return assumption of 7.50%, which was adopted during the 2017-2021 Experience Study, was lowered to 6.80%.
 - The Stable Employer Contribution policy was repealed, and participating employers are now required to contribute an actuarially calculated amount each year. In order to more easily administer the revised funding policy, the Board, upon the recommendation of their actuary, adopted a one-year contribution lag so that results of the current valuation report set the required contribution amount for employers during the following plan year.
 - The projected UAAL as of January 1, 2024, as calculated in the *second* January 1, 2023 actuarial valuation, will be amortized as a level-dollar amount over a closed 30-year period. Future changes in the System's UAAL are to be amortized in accordance with Actuarial Standards of Practice. At their July 24, 2023 meeting, upon the recommendation of their actuary, the Board adopted a policy to amortize future increases in the UAAL over a closed 10-year period with level-dollar payments. Future decreases in the UAAL will be amortized over either a closed 10-year period or the remainder of the 30-year period beginning on January 1, 2024, whichever is longer.
- Several changes to the actuarial assumptions and methods have been adopted as a result of the 2022 Experience Study, which analyzed the System's actuarial experience during the five-year period from January 1, 2017 through December 31, 2021.
- Due to the negative investment return on the market value of assets during 2022, the net deferred investment gain (market value of assets greater than actuarial value) of \$696 million in last year's valuation is now a net deferred investment loss of \$321 million in the current valuation. Absent offsetting favorable experience in the future, this experience will decrease the funded ratio and increase the actuarially determined employer contributions as it flows through the asset smoothing method. While this will have a negative impact on future valuation results, other actuarial experience may offset the impact of the deferred investment losses.

A typical retirement plan faces many different risks. The term "risk" is most commonly associated with an outcome with undesirable results. However, in the actuarial world risk can be translated as uncertainty. The actuarial valuation process uses many actuarial assumptions to project how future actuarially determined employer contributions and investment returns will meet the cash flow needs for future benefit payments. Of course, we know that actual experience will not unfold exactly as anticipated by the assumptions and that uncertainty, whether favorable or unfavorable, creates risk. Actuarial Standard of Practice Number 51 defines risk as the potential of actual future measurements to deviate from expected results due to actual experience that is different than the actuarial assumptions. Risk evaluation is an important part of managing a defined benefit plan. Please see the Risk Considerations section of this report for an in-depth discussion of the specific risks facing CMERS.

We conclude this executive summary by presenting comparative statistics and actuarial information from both the January 1, 2022 and this January 1, 2023 valuations.



SECTION I: EXECUTIVE SUMMARY

Summary of Principal Results

	January 1, 2023	January 1, 2022	% Change
1. Membership Data			
a. Active Members			
(i) Count			
- General Employees	7,509	7,768	(3.3%)
- Policemen	1,592	1,631	(2.4%)
- Firemen	<u>699</u>	<u>695</u>	0.6%
- Total	9,800	10,094	(2.9%)
(ii) Total Estimated Payroll			
- General Employees	\$390,258,000	\$369,306,000	5.7%
- Policemen	146,653,000	148,844,000	(1.5%)
- Firemen	<u>62,373,000</u>	<u>61,201,000</u>	1.9%
- Total	\$599,284,000	\$579,351,000	3.4%
b. Retirees, Beneficiaries and Disabled Members			
(i) Number	13,853	13,758	0.7%
(ii) Total Annual Benefits	\$451,053,000	\$434,381,000	3.8%
(iii) Average Annual Benefit	\$32,560	\$31,573	3.1%
2. Assets and Liabilities			
a. Asset Values (includes contributions receivable)			
(i) Actuarial Value of Assets (AVA)	\$5,847,404,000	\$5,734,986,000	2.0%
(ii) Market Value of Assets (MVA)	\$5,525,958,000	\$6,431,356,000	(14.1%)
b. Actuarial Accrued Liability (AAL)	\$7,631,007,000	\$6,875,927,000	11.0%
c. Funded Status			
(i) Unfunded AAL (Based on AVA)	\$1,783,603,000	\$1,140,941,000	56.3%
(ii) Funded Ratio (Based on AVA)	76.6%	83.4%	(8.2%)
(iii) Unfunded AAL (Based on MVA)	\$2,105,049,000	\$444,571,000	373.5%
(iv) Funded Ratio (Based on MVA)	72.4%	93.5%	(22.6%)
3. Total Employer Contribution (All Funds)	Due 01/01/2024		
1) City of Milwaukee			
a) General*	\$48,609,007	N/A	N/A
b) Police	86,009,793	N/A	N/A
c) Fire	<u>40,444,032</u>	N/A	N/A
d) City Subtotal	\$175,062,832	N/A	N/A
2) Non-City Agencies			
a) Water Department	\$4,493,408	N/A	N/A
b) School Board	27,499,578	N/A	N/A
c) Milwaukee Technical College	259,247	N/A	N/A
d) Sewerage Commission	5,564,646	N/A	N/A
e) Veolia	1,408,947	N/A	N/A
f) Wisconsin Center District	981,530	N/A	N/A
g) Housing Authority	1,951,107	N/A	N/A
3) Total	\$217,221,295		



SECTION I: EXECUTIVE SUMMARY

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SECTION II: SCOPE OF THE REPORT

This report presents the *second* actuarial valuation of the Employees' Retirement System of the City of Milwaukee as of January 1, 2023, and reflects the statutory changes brought forth under Act 12, as well as any subsequent actions taken by the Annuity and Pension Board. This valuation was prepared at the request of the System's Annuity and Pension Board. The report is based on the funding policy, plan provisions, actuarial assumptions, and actuarial methods in effect as of January 1, 2023.

Please pay particular attention to our cover letter, where the guidelines employed in the preparation of this report are outlined. We also comment on the sources and reliability of both the data and the actuarial assumptions upon which our findings are based. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief.

A summary of the findings resulting from this valuation is presented in the previous section. Section III summarizes the membership data as of the valuation date. Section IV describes the assets and investment experience of the System. Section V discloses the obligations (liabilities) of the System and Section VI includes the calculation of actuarially determined employer contributions for the following plan year. Section VII discloses key maturity measurements and discusses the key risks facing the funding of the System.

This report includes several appendices:

- Appendix A Schedules of valuation data classified by various categories of members.
- Appendix B A summary of the current benefit structure, as determined by the provisions of governing law on the valuation date.
- Appendix C A summary of the actuarial methods and assumptions used to estimate liabilities and determine actuarially determined employer contributions.
- Appendix D A glossary of actuarial terms.



SECTION II: SCOPE OF THE REPORT

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SECTION III: MEMBER DATA SUMMARY

TABLE 1

Member Counts by Vested Status

Number of Members	1/1/2023			1/1/2022
	Vested	Non-Vested	Total	Total
Active				
- General Employees	5,059	2,450	7,509	7,768
- Policemen	1,384	208	1,592	1,631
- Firemen	<u>524</u>	<u>175</u>	<u>699</u>	<u>695</u>
- Total Active Members	6,967	2,833	9,800	10,094
Inactive				
- Deferred Retirees			3,578	3,363
- Refunds Payable			<u>2,382</u>	<u>2,149</u>
- Total Inactive Members			5,960	5,512
Benefit Recipients				
- Combined Fund				
General Employees			9,761	9,717
Policemen			2,670	2,615
Firemen			<u>1,411</u>	<u>1,415</u>
- Combined Fund Subtotal			13,842	13,747
- Retirement Fund			11	11
- Duty Disability Funds				
General Employees			0	0
Policemen			0	0
Firemen			<u>0</u>	<u>0</u>
- Duty Disability Funds Subtotal			0	0
- Firemen's Heart & Lung Fund			<u>0</u>	<u>0</u>
- Total Benefit Recipients			13,853	13,758
Total Membership			29,613	29,364

Note: Members are vested once they attain four years of service.



SECTION III: MEMBER DATA SUMMARY

TABLE 2

Member Counts by Consent Status

1/1/2023 Membership			
Number of Members	Consenters	Others	Total
Active			
- General Employees	7,476	33	7,509
- Policemen	1,591	1	1,592
- Firemen	<u>699</u>	<u>0</u>	<u>699</u>
- Total Active Members	9,766	34	9,800
Inactive			
- Deferred Retirees	3,392	186	3,578
- Refunds Due	<u>2,380</u>	<u>2</u>	<u>2,382</u>
- Total Inactive Members	5,772	188	5,960
Benefit Recipients			
- Combined Fund	13,842	NA	13,842
- Retirement Fund	NA	11	11
- Duty Disability Funds			
General Employees	0	0	0
Policemen	0	0	0
Firemen	<u>0</u>	<u>0</u>	<u>0</u>
- Duty Disability Funds Subtotal	0	0	0
- Firemen's Heart & Lung Fund	<u>0</u>	<u>0</u>	<u>0</u>
- Total Benefit Recipients	13,842	11	13,853
Total Membership	29,380	233	29,613

- Notes: (1) In addition to the above, there are members who have separated from service without vested rights to either a pension or a refund of accumulated contributions. There is no current actuarial liability for such individuals, and their membership will be terminated if they do not return to active service within five years of their date of separation from ERS covered employment.
- (2) Active members who worked fewer than 100 hours in the prior year, but who have not officially terminated employment are included in the count of inactives in Table 1 and Table 2. These members are not assumed to earn additional service in future years.



SECTION III: MEMBER DATA SUMMARY

TABLE 3

Member Data Summary

	1/1/2023	1/1/2022
Projected Annual Earnings		
- General Employees	\$ 390,258,000	\$ 369,306,000
- Policemen	146,653,000	148,844,000
- Firemen	<u>62,373,000</u>	<u>61,201,000</u>
- Total Projected Annual Earnings	\$ 599,284,000	\$ 579,351,000
Average Projected Earnings		
- General Employees	\$ 51,972	\$ 47,542
- Policemen	\$ 92,119	\$ 91,259
- Firemen	\$ 89,232	\$ 88,059
Annual Benefit Payments Currently Being Made		
- Combined Fund	\$ 450,787,045	\$ 434,137,398
- Retirement Fund	\$ 266,087	\$ 243,510
- Duty Disability Funds		
General Employees	\$ 0	\$ 0
Policemen	0	0
Firemen	<u>0</u>	<u>0</u>
- Duty Disability Funds Subtotal	\$ 0	\$ 0
- Firemen's Heart & Lung Fund	\$ <u>0</u>	\$ <u>0</u>
- Total Benefit Payments	\$ 451,053,132	\$ 434,380,908

- Notes: (1) "Projected Annual Earnings" represents the expected earnable compensation for the year following the valuation date.
- (2) "Annual Benefit Payments Currently Being Made" equals 12 times the full December monthly payment. The amounts shown include all amounts payable by the ERS and have been reduced by workers' compensation offsets for members who are currently repaying a workers' compensation award.



SECTION III: MEMBER DATA SUMMARY

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SECTION IV: ASSET DATA

In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is January 1, 2023. On that date, the assets available for the payment of benefits are appraised. The assets are compared with the liabilities of the System, which are generally in excess of assets. The actuarial process then leads to a method of determining the actuarially determined employer contributions needed by members and the employer in the future to balance the System's assets and liabilities.

Market Value of Assets

The current market value represents the "snapshot" or "cash-out" value of System assets as of the valuation date. In addition, the market value of assets provides a basis for measuring investment performance during the year. Table 4 summarizes the change in the market value of assets from January 1, 2022 to January 1, 2023.

Actuarial Value of Assets

Neither the market value of assets, representing a "cash-out" value of System assets, nor the book values of assets, representing the cost of investments, may be the best measure of the System's ongoing ability to meet its obligations.

To arrive at a suitable value of assets for the actuarial valuation, a technique for determining the actuarial value of assets is used which dampens swings in the market value while still indirectly recognizing market values. Under the asset smoothing methodology, the difference between the actual and assumed investment return on the market value of assets is recognized evenly over a five-year period.

Table 5 shows the development of the actuarial value of assets (AVA) as of the valuation date.



SECTION IV: ASSET DATA

TABLE 4

Market Value of Assets
(Dollars in thousands)

	Global Combined Fund	Retirement Fund	Combined Retirement Fund	General Employees' Duty Disability Fund	Employers' Reserve Fund	Securities Lending Fund	Total
1. Market Value of Assets as of January 1, 2022	\$ 6,367,898	\$ 13,433	\$ 7,267	\$ 122	\$ 42,081	\$ 555	\$ 6,431,356
2. Transfer of Assets as of January 1, 2022	\$ 3,398	\$ (2,667)	\$ (717)	\$ (14)	\$ 0	\$ 0	\$ 0
3. Contributions During Year							
a. Member	\$ 32,202	\$ 0	\$ 2	\$ 0	\$ 0	\$ 0	\$ 32,204
b. Employer	81,519	0	52	0	40,000	0	121,571
c. Total	\$ 113,721	\$ 0	\$ 54	\$ 0	\$ 40,000	\$ 0	\$ 153,775
4. Disbursements During Year							
a. Monthly Annuities	\$ 452,308	\$ 52	\$ 47	\$ 0	\$ 0	\$ 0	\$ 452,407
b. Refunds	5,185	0	26	0	0	0	5,211
c. Administrative Expenses	6,628	0	0	0	0	553	7,181
d. Total	\$ 464,121	\$ 52	\$ 73	\$ 0	\$ 0	\$ 553	\$ 464,799
5. Investment Return (net of Investment Expenses)	\$ (593,792)	\$ (893)	\$ (544)	\$ (9)	\$ (1,342)	\$ 2,206	\$ (594,374)
6. Market Value of Assets as of December 31, 2022 (1) + (2) + (3c) - (4d) + (5)	\$ 5,427,104	\$ 9,821	\$ 5,987	\$ 99	\$ 80,739	\$ 2,208	\$ 5,525,958
7. Rate of Return, as Reported by Northern Trust (ERS' Custodian)							(6.49%)

**SECTION IV: ASSET DATA**

TABLE 5
Actuarial Value of Assets
(Dollars in thousands)

1. Market Value of Assets Available for Benefit Payments on January 1, 2022*	\$ 6,388,720
2. Contributions During 2022**	113,775
3. Benefit Payments and Administrative Expenses During 2022**	(464,246)
4. Expected Investment Income at 7.50% on (1), (2) and (3)	466,249
5. Expected Market Value of Assets on January 1, 2023	\$ 6,504,498
6. Market Value of Assets Available for Benefit Payments on January 1, 2023*	\$ 5,443,011
7. Excess/(Shortfall) of Investment Income	
a. Year Ending 12/31/22: (6) - (5)	\$ (1,061,487)
b. Year Ending 12/31/21	699,388
c. Year Ending 12/31/20	4,009
d. Year Ending 12/31/19	532,533
e. Year Ending 12/31/18	(580,714)
8. Deferral of Excess/(Shortfall) of Investment Income	
a. Year Ending 12/31/22 (80.0%)	\$ (849,190)
b. Year Ending 12/31/21 (60.0%)	419,633
c. Year Ending 12/31/20 (40.0%)	1,604
d. Year Ending 12/31/19 (20.0%)	106,507
e. Year Ending 12/31/18 (0.0%)	0
f. Total	\$ (321,446)
10. Preliminary Actuarial Value of Assets on January 1, 2023 (6) - (8f)	\$ 5,764,457
11. Employers' Reserve Fund and the Securities Lending Fund on January 1, 2023	\$ 82,947
12. Final Actuarial Value of Assets on January 1, 2023 (10) + (11)	\$ 5,847,404
13. Total Market Value of Assets on January 1, 2023	\$ 5,525,958
14. Actuarial Value Divided by Market Value (12) ÷ (13)	105.9%
15. Estimated Rate of Return	7.6%

* Excludes the Employers' Reserve Fund and the Securities Lending Fund.

** Excludes contributions, benefit payments and expenses from the Employers' Reserve Fund and the Securities Lending Fund.



SECTION IV: ASSET DATA

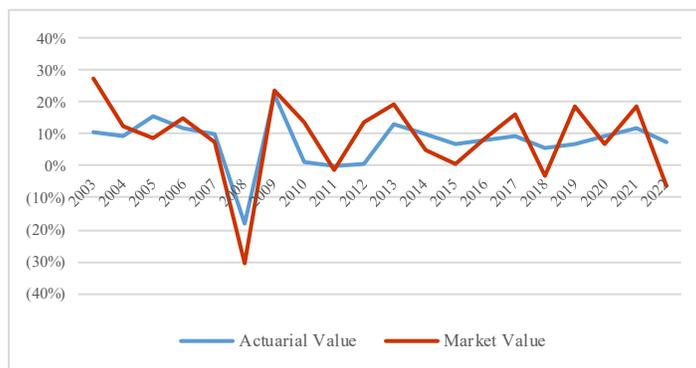
**TABLE 6
Historical Asset Returns**

The table below provides a history of the rate of return on the actuarial value and market value of assets and the assumed rate of return. Effective with this valuation, the assumed rate of return is 6.80%. Note that the System utilized a 10% asset corridor prior to 2009, which impacted the calculation of the actuarial value of assets and, therefore, the return on the actuarial value of assets. Rates of return on a market value basis are provided by the System’s custodian, Northern Trust.

Year	Actuarial Value of Assets	Market Value of Assets
2003	10.46%	27.34%
2004	9.49%	12.61%
2005	15.34%	8.46%
2006	11.83%	15.13%
2007	10.17%	7.21%
2008	(17.88%)	(30.84%)
2009	22.62%	23.30%
2010	1.34%	13.86%
2011	(0.09%)	(1.43%)
2012	0.43%	13.88%
2013	12.85%	19.29%
2014	9.91%	5.09%
2015	7.00%	0.54%
2016	8.33%	8.83%
2017	9.09%	16.38%
2018	5.33%	(2.91%)
2019	6.94%	18.44%
2020	9.22%	6.62%
2021	11.76%	18.89%
2022	7.60%	(6.49%)
Average*	7.29%	7.87%
Max	22.62%	27.34%
Min	(17.88%)	(30.84%)
Range	40.50%	58.18%

Note: Rates of return on Actuarial Value of Assets prior to 2018 were provided by the prior actuary.

* Average is calculated on a geometric basis.





SECTION IV: ASSET DATA

TABLE 7

Allocation of Assets Among Funds
(Dollars in thousands)

As part of the financial statements, the System provides a breakdown of the total market value of assets by Fund. The Employer Reserve Fund and Security Lending Fund are valued at market value for actuarial purposes and earmarked for specific purposes other than directly funding the benefits of the System’s members. The actuarial value of assets is determined in total and then adjusted by subtracting the Employer Reserve Fund and Security Lending Fund. The remaining actuarial value of assets is then allocated to each Fund based on its portion of the total market value.

Fund	Market Value	Actuarial Value
1. Combined Fund	\$ 5,427,104	\$ 5,747,610
2. Employers' Reserve Fund	\$ 80,739	\$ 80,739
3. Retirement Fund	\$ 9,821	\$ 10,401
4. General Employees' Duty Disability Fund	\$ 99	\$ 105
5. Fire & Police Duty Disability Fund	\$ 0	\$ 0
6. Firemen's Heart & Lung Fund	\$ 0	\$ 0
7. Combined Retirement & Disability Fund	\$ 5,987	\$ 6,341
8. Securities Lending Fund	\$ 2,208	\$ 2,208
9. Total All Funds	\$ 5,525,958	\$ 5,847,404

Note: Values shown include January 31, 2023 contributions receivable.



SECTION IV: ASSET DATA

TABLE 8
Allocations Between Non-Consenters Who Consented to GPS During 2022 and Those Who Did Not
(Dollars in thousands)

The Global Pension Settlement (GPS) provides that members enrolled through June 28, 2000 must provide written consent to the ERS in order to be eligible for the benefit enhancements of GPS. Members enrolled after June 28, 2000 are automatically participants in the Combined Fund. Since the January 1, 2022 valuation, twelve individuals who were eligible for ERS benefits as of June 28, 2000 – and who had not previously consented to GPS – have now consented.

GPS provides that the market value of the assets in the funds for Non-Consenters be divided among Consenters and Non-Consenters. The division is based on the actuarial accrued liability covered by each fund under the pre-GPS plan provisions. The required division of assets for members who consented during 2022 was calculated as of January 1, 2022. As a result, assets will be transferred from the non-consenter Funds in which these members previously participated to the Global Combined Fund, as shown below.

Fund	Allocation of 1/1/2022 Market Value of Assets in Funds for Non-Consenters in Proportion to 1/1/2022 Actuarial Accrued Liability			Allocation of 1/31/2023 Employer Contribution to Funds for Non-Consenters in Proportion to 1/1/2022 Covered Compensation		
	Consenters in 2022	Others	Total (Audited)	Consenters in 2022	Others	Total
1. Retirement Fund	\$ 1,804	\$ 11,629	\$ 13,433	\$ 0	\$ 0	\$ 0
2. General Employees' Duty Disability Fund	49	73	122	0	0	0
3. Fire & Police Duty Disability Fund	0	0	0	0	0	0
4. Firemen's Heart & Lung Fund	0	0	0	0	0	0
5. Combined Retirement & Disability Fund	26	7,241	7,267	0	50	50
6. Total Funds for Non-Consenters	\$ 1,879	\$ 18,943	\$ 20,822	\$ 0	\$ 50	\$ 50

Notes: (i) January 1, 2022 assets allocated to members who consented to Global Settlement during 2022 are transferred to the Combined Fund as of January 1, 2022.
(ii) January 31, 2023 Employer Contributions allocated to members who consented to Global Settlement during 2022 are credited to the Combined Fund instead of to the funds for non-consenters.



SECTION V: SYSTEM LIABILITIES

In the previous section, an actuarial valuation was compared with an inventory process, and an analysis was given of the inventory of the System's assets as of the valuation date, January 1, 2023. In this section, the discussion will focus on the commitments (future benefit payments) of the System, which are referred to as its liabilities. All liabilities reflect the benefit provisions in place as of January 1, 2023.

Present Value of All Future Benefits (PVFB)

Table 9 contains an analysis of the actuarial present value of all future benefits (PVFB) for contributing members, inactive members, retirees and their beneficiaries.

The liabilities summarized in Table 9 include the actuarial present value of all future benefits expected to be paid with respect to each member. For an active member, this value includes the measurement of both benefits already earned and future benefits to be earned. For all members, active and retired, the value extends over benefits earnable and payable for the rest of their lives and for the lives of the surviving beneficiaries.

Actuarial Accrued Liability (AAL)

A fundamental principle in financing the liabilities of a retirement program is that the cost of its benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. An actuarial cost method is a mathematical technique that allocates the present value of future benefits into annual costs. In order to do this allocation, it is necessary for the funding method to "breakdown" the present value of future benefits into two components:

- (1) that which is attributable to the past and
- (2) that which is attributable to the future.

Actuarial terminology calls the part attributable to the past the "past service liability" or the "actuarial accrued liability" or "AAL". The portion allocated to the future is known as the present value of future normal costs, with the specific piece of it allocated to the current year being called the "normal cost." Table 9 contains the calculation of actuarial accrued liability for the System. The Entry Age Normal actuarial cost method is used to develop the actuarial accrued liability.

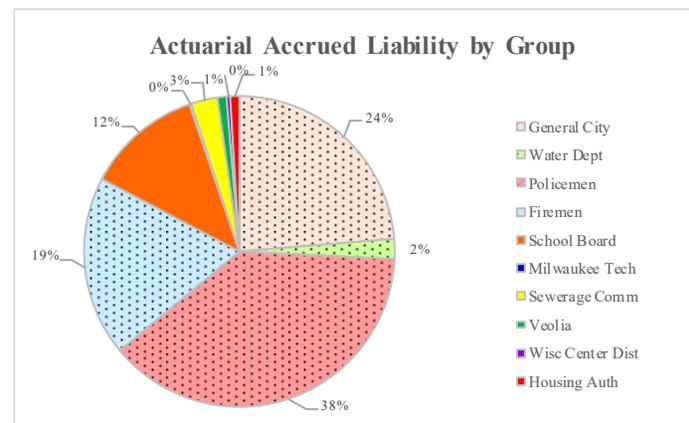


SECTION V: SYSTEM LIABILITIES

TABLE 9
Actuarial Accrued Liability by Employer
(Dollars in thousands)

	General City*	Water Department	School Board	Milwaukee Technical College	Sewerage Commission	Veolia	Wisconsin Center District	Housing Authority	Policemen	Firemen	Total
1. Present Value of Future Benefits for Active Members											
a. Retirement Benefits	556,865	55,962	353,166	0	67,068	5,168	13,599	22,570	1,020,519	426,499	2,521,416
b. Withdrawal Benefits	39,845	4,154	27,509	0	5,844	0	1,352	1,440	19,684	5,599	105,427
c. Disability Benefits	8,891	941	5,818	0	1,135	16	269	325	25,990	44,004	87,389
d. Death Benefits	6,127	706	3,793	0	797	40	184	247	4,953	2,837	19,684
Total	611,728	61,763	390,286	0	74,844	5,224	15,404	24,582	1,071,146	478,939	2,733,916
2. Present Value of Future Normal Costs	178,176	19,043	115,667	0	22,616	377	5,767	6,261	382,831	184,473	915,211
3. Actuarial Accrued Liability (AAL) for Active Members (1) - (2)	433,552	42,720	274,619	0	52,228	4,847	9,637	18,321	688,315	294,466	1,818,705
4. Present Value of Future Benefits for Inactive Members											
- Members with Deferred Benefits	62,768	3,705	59,552	0	4,041	454	2,611	3,528	53,001	11,668	201,328
- Members with Refunds Payable	1,524	139	2,450	0	57	0	51	36	271	54	4,582
- Retirees, Beneficiaries and Disabled Members	1,311,668	111,245	585,302	14,582	155,535	65,767	15,788	50,366	2,174,666	1,121,473	5,606,392
Total	1,375,960	115,089	647,304	14,582	159,633	66,221	18,450	53,930	2,227,938	1,133,195	5,812,302
5. Total Actuarial Accrued Liability (3) + (4)	1,809,512	157,809	921,923	14,582	211,861	71,068	28,087	72,251	2,916,253	1,427,661	7,631,007

* Includes Elected Officials and Redevelopment Authority





SECTION V: SYSTEM LIABILITIES

TABLE 10

Funded Status on Actuarial and Market Value by Fund
(Dollars in thousands)

Fund	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	Market Value of Assets (MVA)	Unfunded Actuarial Accrued Liability Based on AVA (UAAL)	Unfunded Actuarial Accrued Liability Based on MVA (UAAL)	Percent Funded Based on AVA	Percent Funded Based on MVA
1. Combined Fund	\$ 7,616,350	\$ 5,747,610	\$ 5,427,104	\$ 1,868,740	\$ 2,189,246	75.5%	71.3%
2. Employers' Reserve Fund	0	80,739	80,739	(80,739)	(80,739)	N/A	N/A
3. Retirement Fund	5,667	10,401	9,821	(4,734)	(4,154)	183.5%	173.3%
4. General Employees' Duty Disability Fund	5	105	99	(100)	(94)	2100.0%	1980.0%
5. Fire & Police Duty Disability Fund	0	0	0	0	0	N/A	N/A
6. Firemen's Heart & Lung Fund	0	0	0	0	0	N/A	N/A
7. Combined Retirement & Disability Fund	8,985	6,341	5,987	2,644	2,998	70.6%	66.6%
8. Securities Lending Fund	0	2,208	2,208	(2,208)	(2,208)	N/A	N/A
9. Total All Funds	\$ 7,631,007	\$ 5,847,404	\$ 5,525,958	\$ 1,783,603	\$ 2,105,049	76.6%	72.4%



SECTION V: SYSTEM LIABILITIES

TABLE 11

**Actuarial Balance Sheet
As of January 1, 2023**

The valuation balance sheet shows the assets and liabilities of ERS (in total, all employers and all Funds). The items shown in the balance sheet are present values actuarially determined as of the current valuation date.

ASSETS

Actuarial Value of Assets	\$	5,847,404,000
Unfunded Actuarial Accrued Liability		1,783,603,000
Present Value of Future Normal Costs	\$	<u>915,211,000</u>
Total Assets	\$	8,546,218,000

LIABILITIES

Present Value of Future Benefits			
Active members			
Retirement	\$	2,521,416,000	
Withdrawal		105,427,000	
Disability		87,389,000	
Death		<u>19,684,000</u>	
Total	\$	2,733,916,000	
Inactive members		205,910,000	
Retirees, disabilities and beneficiaries		<u>5,606,392,000</u>	
Total Liabilities	\$	8,546,218,000	



SECTION V: SYSTEM LIABILITIES

TABLE 12

Calculation of Actuarial Gain/(Loss)

The overall actuarial gain/(loss) is comprised of both a liability gain/(loss) and an actuarial asset gain/(loss). Each of these represents the difference between the expected and actual values as of January 1, 2023.

Liabilities

1. Actuarial Accrued Liability as of January 1, 2022	\$6,875,927,000
2. Normal Cost During 2022	90,333,000
3. Benefit Payments During 2022	(457,618,000)
4. Interest on (1), (2) and (3) at 7.50%	505,619,000
5. Experience Study Changes	23,479,000
6. Lower Investment Return Assumption to 6.80%	563,898,000
7. Expected Actuarial Accrued Liability as of January 1, 2023	<u>\$7,601,638,000</u>
8. Actuarial Accrued Liability as of January 1, 2023	\$7,631,007,000

Assets

9. Actuarial Value of Assets as of January 1, 2022	\$5,734,986,000
10. Contributions During 2022	153,775,000
11. Benefit Payments and Administrative Expenses During 2022	(464,799,000)
12. Interest on (9), (10) and (11) at 7.50%	418,671,000
13. Expected Actuarial Value of Assets as of January 1, 2023	<u>\$5,842,633,000</u>
14. Actuarial Value of Assets as of January 1, 2023	\$5,847,404,000

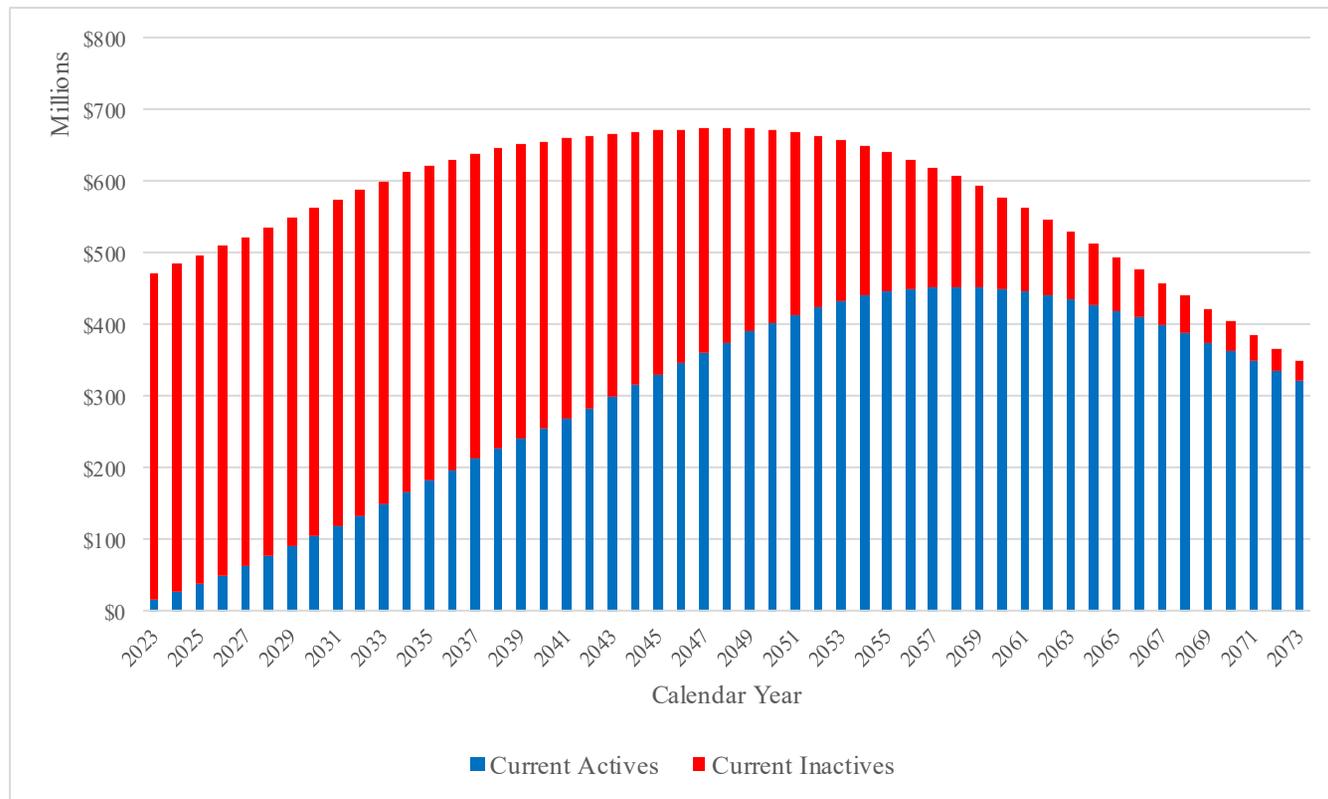
Gain / (Loss)

15. Liability Gain/(Loss) (7) - (8)	(\$29,369,000)
16. Asset Gain/(Loss) (14) - (13)	\$4,771,000
17. Total Gain/(Loss) (15) + (16)	(\$24,598,000)



SECTION V: SYSTEM LIABILITIES

TABLE 13
Expected Benefit Payments



Note: Cash flows are the expected future non-discounted payments to current members. These numbers exclude refund payouts to current non-vested inactive members and assume all actuarial assumptions are met in the future, including the retirement assumption.



SECTION V: SYSTEM LIABILITIES

TABLE 14

Schedule of Funding Progress
(Dollars in thousands)

Valuation as of January 1	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio
2008	\$ 5,192,000	\$ 3,958,061	\$ 0	131.2%
2009	4,076,297	4,113,089	36,792	99.1%
2010	4,814,402	4,269,324	0	112.8%
2011	4,641,425	4,447,548	0	104.4%
2012	4,404,635	4,587,915	183,280	96.0%
2013	4,259,889	4,689,814	429,925	90.8%
2014	4,580,729	4,831,689	250,960	94.8%
2015	4,797,437	4,935,482	138,045	97.2%
2016	4,899,155	5,065,141	165,986	96.7%
2017	5,055,700	5,259,300	203,600	96.1%
2018	5,233,486	5,819,762	586,276	89.9%
2019	5,219,184	6,400,901	1,181,717	81.5%
2020	5,285,205	6,597,457	1,312,252	80.1%
2021	5,440,867	6,745,299	1,304,432	80.7%
2022	5,734,986	6,875,927	1,140,941	83.4%
2023	5,847,404	7,067,109	1,219,705	82.7%
2023*	5,847,404	7,631,007	1,783,603	76.6%

* Due to the passage of 2023 Wisconsin Act 12, the investment return assumption was lowered from 7.5% to 6.8% and a second 2023 actuarial valuation report was issued for the primary purpose of determining the 2024 actuarial determined employer contribution amount.

Note: Information prior to 2019 is from the prior actuary.



SECTION V: SYSTEM LIABILITIES

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SECTION VI: SYSTEM ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTIONS

The previous two sections were devoted to a discussion of the assets and liabilities of the System. A comparison of Tables 5 and Table 9 indicates that current assets fall short of meeting the present value of future benefits (total liability). This deficiency has to be made up by future actuarially determined employer contributions and investment income. An actuarial valuation sets out a schedule of future actuarially determined employer contributions that will deal with this deficiency in an orderly fashion.

The method used to determine the incidence of the contributions in various years is called the actuarial cost method. Under an actuarial cost method, the actuarially determined employer contributions required to meet the difference between current assets and current liabilities are allocated each year between two elements: (1) the normal cost and (2) the payment on the unfunded actuarial accrued liability. The actuarial cost method for the System is the traditional Entry Age Normal (EAN) level-percent of pay cost method. Under this EAN cost method, the actuarial present value of each member's projected benefits is allocated as a level-percent of their compensation from their entry age to their assumed exit age. The portion of the actuarial present value allocated to the valuation year is called the normal cost. The actuarial present value of benefits allocated to prior years of service is called the actuarial accrued liability. The unfunded actuarial accrued liability represents the difference between the actuarial accrued liability and the actuarial value of assets as of the valuation date. The unfunded actuarial accrued liability is calculated each year and reflects experience gains/losses.

On June 20, 2023, the Wisconsin Legislature enacted 2023 Wisconsin Act 12 (Act 12). In exchange for adopting the various restrictions to the City of Milwaukee under Act 12, some of which do not directly affect the System, the City is allowed to pass a sales tax to help pay for the additional costs resulting from the lower assumed rate of return and the natural operation of a retirement system that is closed to future employees. This sales tax is set to expire once the System reaches full funding status or after 30 years has passed, whichever occurs first. For as long as the sales tax remains in place, Act 12 allows an amount of no more than 90% of the sales tax revenue collected in the first full calendar year (2024) to help fund certain costs under the System.

Act 12 eliminated the Stable Employer Contribution Policy that had been used to determine required employer contribution rates under the Combined Fund since 2013. In place of the Stable Employer Contribution Policy, Act 12 prescribes a new statutory policy which requires participating employers to contribute an actuarially calculated amount each year. At their July 24, 2023 meeting, the Board voted to adopt a one-year contribution lag upon the recommendation of their actuary. Therefore, the *second* January 1, 2023 actuarial valuation will serve as the basis for determining the required employer contribution amounts for plan year 2024.

For purposes of calculating the System's unfunded actuarial accrued liability (UAAL) amortization payment, Act 12 stipulates that the projected January 1, 2024 UAAL, as calculated in the *second* January 1, 2023 actuarial valuation, will be amortized as a level-dollar amount over a closed 30-year period. Future changes in the System's UAAL are to be amortized in accordance with Actuarial Standards of Practice. At their July 24, 2023 meeting, the Board adopted a policy to amortize future increases in the UAAL over a closed 10-year period upon the recommendation of their actuary. Future decreases to the UAAL will be used to offset the remaining balance of the 2024 UAAL, unless there are fewer than 10 years left to amortize the 2024 UAAL. In which case, the decrease in the UAAL will be amortized over a closed, 10-year period. Act 12 further specifies that the investment return assumption used by ERS for purposes of determining actuarial liabilities and required actuarially determined employer contributions cannot be greater than the assumption used by the Wisconsin Retirement System (WRS), which is currently set at 6.80% for active employees.



SECTION VI: SYSTEM ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTIONS

Following this page are several tables which document the development of the elements of the actuarially determined employer contribution for each fund allocated by employer, The exhibits are as follows:

- Table 15 shows the development of the projected January 1, 2024 UAAL by Fund, which is the basis for the beginning of the year for which we are determining the actuarially determined employer contributions.
- Table 16 shows the development of the amounts in Table 15 by Fund for each participating employer.
- Tables 17A-D develop each employer's proportionate share of the total UAAL amortization payment under each Fund using the projected UAAL amounts from Table 15. These tables also show each employer's proportionate share of administrative expenses. Each employer's proportionate share is developed in accordance with the provisions under 2023 Wisconsin Act 12 and Board policy.
- Tables 18A-D show each employer's share of the total Actuarially Determined Employer Contribution amount under each Fund for plan year 2024. These amounts are allocated based on each employer's percentage share of the total AAL. Note that administrative expenses are allocated only to the Combined Fund.
- Table 19 shows the Actuarially Determined Employer Contribution by Employer for all Funds payable as of select dates. It is important to note that the amounts shown for January 1, 2024 are summarized from Tables 18A-D and the amounts shown for subsequent dates are adjusted for interest at 6.80%.
- Table 20 shows the amount of the Actuarially Determined Employer Contributions that are eligible to be paid from 2023 Wisconsin Act 12 Sales Tax Proceeds.



SECTION VI: SYSTEM ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTIONS

TABLE 15

Projected Unfunded Actuarial Accrued Liability at January 1, 2024 by Fund

	Combined Fund	Retirement Fund	General Employees Duty Disability Fund	Combined Retirement & Disability Fund	Total For All Funds
1. Actuarial Accrued Liability, January 1, 2023	\$7,616,350,267	\$5,667,156	\$4,559	\$8,985,144	\$7,631,007,126
2. Normal Cost for 2023	99,224,387	39,513	266	209,593	99,473,759
3. Expected Benefit Payments During 2023	(472,559,297)	(192,867)	0	(79,164)	(472,831,328)
4. Interest at 6.80%	508,856,290	381,604	328	622,595	509,860,817
5. Projected Actuarial Accrued Liability, January 1, 2024	\$7,751,871,647	\$5,895,406	\$5,153	\$9,738,168	\$7,767,510,374
6. Actuarial Value of Assets, January 1, 2023	\$5,747,610,000	\$10,401,000	\$105,000	\$6,341,000	\$5,764,457,000
7. Expected Contributions During 2023	207,581,000	0	0	204,000	207,785,000
8. Expected Benefit Payments and Expenses During 2023	(479,352,997)	(192,867)	0	(79,164)	(479,625,028)
9. Interest at 6.80%	381,749,192	700,818	7,140	435,363	382,892,513
10. Projected Actuarial Value of Assets, January 1, 2024	\$5,857,587,195	\$10,908,951	\$112,140	\$6,901,199	\$5,875,509,485
11. Projected Unfunded Actuarial Accrued Liability, January 1, 2024	\$1,894,284,452	(\$5,013,545)	(\$106,987)	\$2,836,969	\$1,892,000,889



SECTION VI: SYSTEM ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTIONS

TABLE 16

**Projected Unfunded Actuarial Accrued Liability at January 1, 2024
by Fund for Each Participating Employer**

	City			Non-City Employers							Total For All Employers
	General	Policemen	Firemen	Water Department	School Board	Milwaukee Technical College	Sewerage Commission	Veolia	Wisconsin Center District	Housing Authority	
Combined Fund											
Actuarial Accrued Liability	1,820,395,551	2,987,021,138	1,452,466,832	160,595,407	932,381,418	13,688,634	212,584,179	70,672,442	28,840,441	73,225,605	7,751,871,647
Actuarial Value of Assets	<u>1,375,554,983</u>	<u>2,257,098,357</u>	<u>1,097,535,086</u>	<u>121,351,545</u>	<u>704,540,233</u>	<u>10,343,614</u>	<u>160,636,092</u>	<u>53,402,586</u>	<u>21,792,853</u>	<u>55,331,846</u>	<u>5,857,587,195</u>
Unfunded Actuarial Accrued Liability	444,840,568	729,922,781	354,931,746	39,243,862	227,841,185	3,345,020	51,948,087	17,269,856	7,047,588	17,893,759	1,894,284,452
Retirement Fund											
Actuarial Accrued Liability	1,662,165	515,037	110,885	0	3,404,978	0	120,493	0	59,568	22,280	5,895,406
Actuarial Value of Assets	<u>3,075,696</u>	<u>953,033</u>	<u>205,183</u>	<u>0</u>	<u>6,300,624</u>	<u>0</u>	<u>222,962</u>	<u>0</u>	<u>110,226</u>	<u>41,227</u>	<u>10,908,951</u>
Unfunded Actuarial Accrued Liability	(1,413,531)	(437,996)	(94,298)	0	(2,895,646)	0	(102,469)	0	(50,658)	(18,947)	(5,013,545)
General Employees' Duty Disability Fund											
Actuarial Accrued Liability	1,387	0	0	0	3,766	0	0	0	0	0	5,153
Actuarial Value of Assets	<u>30,184</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>81,956</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>112,140</u>
Unfunded Actuarial Accrued Liability	(28,797)	0	0	0	(78,190)	0	0	0	0	0	(106,987)
Combined Retirement & Disability Fund											
Actuarial Accrued Liability	3,254,294	1,344,100	1,577	9,500	4,318,080	0	232,221	0	86,773	491,623	9,738,168
Actuarial Value of Assets	<u>2,306,238</u>	<u>952,530</u>	<u>1,118</u>	<u>6,732</u>	<u>3,060,117</u>	<u>0</u>	<u>164,569</u>	<u>0</u>	<u>61,494</u>	<u>348,401</u>	<u>6,901,199</u>
Unfunded Actuarial Accrued Liability	948,056	391,570	459	2,768	1,257,963	0	67,652	0	25,279	143,222	2,836,969
Total for All Funds	444,346,296	729,876,355	354,837,907	39,246,630	226,125,312	3,345,020	51,913,270	17,269,856	7,022,209	18,018,034	1,892,000,889



SECTION VI: SYSTEM ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTIONS

TABLE 17A

**Amortization of Unfunded Actuarial Accrued Liability (UAAL)
(Combined Fund)**

The tables below provide the calculation of the UAAL amortization payment for the Combined Fund, applicable for plan year 2024, as well as the allocation of the UAAL payment and administrative expenses for all participating agencies.

Amortization Base	Original Amount	Projected Balance as of January 1, 2024	Remaining Amortization Period	Annual Payment*
2024 UAAL Base**	\$ 1,894,284,452	\$ 1,894,284,452	30	\$ 140,073,219
Total		\$ 1,894,284,452		\$ 140,073,219

* Reflects beginning of year timing.

** Due to the passage of Act 12 by the 2023 Wisconsin Legislature, the projected UAAL as of January 1, 2024 was re-amortized over a closed 30-year period.

Employer	Projected January 1, 2024 Unfunded AAL	Employer Percentage Share	UAAL Payment	Administrative Expenses
1) City of Milwaukee				
a) General*	\$444,840,568	23.48%	\$32,893,819	\$1,582,355
b) Policemen	729,922,781	38.53%	53,974,277	2,596,428
c) Firemen	<u>354,931,746</u>	<u>18.75%</u>	<u>26,245,495</u>	<u>1,262,538</u>
d) Total City	\$1,529,695,095	80.76%	\$113,113,591	\$5,441,321
2) Non-City Agencies				
a) Water Department	\$39,243,862	2.07%	\$2,901,895	\$139,595
b) School Board	227,841,185	12.03%	16,847,759	810,460
c) Milwaukee Technical College	3,345,020	0.18%	247,348	11,899
d) Sewerage Commission	51,948,087	2.74%	3,841,311	184,786
e) Veolia	17,269,856	0.91%	1,277,023	61,431
f) Wisconsin Center District	7,047,588	0.37%	521,135	25,069
g) Housing Authority	<u>17,893,759</u>	<u>0.94%</u>	<u>1,323,157</u>	<u>63,650</u>
h) Total Non-City	\$364,589,357	19.24%	\$26,959,628	\$1,296,890
Total: 1(d) + 2(h)	\$1,894,284,452	100.00%	\$140,073,219	\$6,738,211

* Includes Elected Officials and Redevelopment Authority

Note: Actual contribution requirement will be adjusted for the actual payment date of the contribution.



SECTION VI: SYSTEM ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTIONS

TABLE 17B

**Amortization of the Unfunded Actuarial Accrued Liability (UAAL)
(Retirement Fund)**

The tables below provide the calculation of the UAAL amortization payment for the Retirement Fund, applicable for plan year 2024, as well as the allocation of the UAAL payment and administrative expenses for all participating agencies.

Amortization Base	Original Amount	Projected Balance as of January 1, 2024	Remaining Amortization Period	Annual Payment*
2024 UAAL Base	\$ (5,013,545)	\$ (5,013,545)	30	\$ (370,728)
Total		\$ (5,013,545)		\$ (370,728)

* Reflects beginning of year timing.

Employer	Projected January 1, 2024 Unfunded AAL	Employer Percentage Share	UAAL Payment	Administrative Expenses
1) City of Milwaukee				
a) General*	(\$1,413,531)	28.19%	(\$104,524)	\$0
b) Policemen	(437,996)	8.74%	(32,388)	0
c) Firemen	<u>(94,298)</u>	<u>1.88%</u>	<u>(6,973)</u>	<u>0</u>
d) Total City	(\$1,945,825)	38.81%	(\$143,885)	\$0
2) Non-City Agencies				
a) Water Department	\$0	0.00%	\$0	\$0
b) School Board	(2,895,646)	57.76%	(214,119)	0
c) Milwaukee Technical College	0	0.00%	0	0
d) Sewerage Commission	(102,469)	2.04%	(7,577)	0
e) Veolia	0	0.00%	0	0
f) Wisconsin Center District	(50,658)	1.01%	(3,746)	0
g) Housing Authority	<u>(18,947)</u>	<u>0.38%</u>	<u>(1,401)</u>	<u>0</u>
h) Total Non-City	(\$3,067,720)	61.19%	(\$226,843)	\$0
Total: 1(d) + 2(h)	(\$5,013,545)	100.00%	(\$370,728)	\$0

* Includes Elected Officials and Redevelopment Authority

Note: Actual contribution requirement will be adjusted for the actual payment date of the contribution.



SECTION VI: SYSTEM ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTIONS

TABLE 17C

**Amortization of the Unfunded Actuarial Accrued Liability (UAAL)
(General Employees Duty Disability Fund)**

The tables below provide the calculation of the UAAL amortization payment for the General Employees Duty Disability Fund, applicable for plan year 2024, as well as the allocation of the UAAL payment and administrative expenses for all participating agencies.

Amortization Base	Original Amount	Projected Balance as of January 1, 2024	Remaining Amortization Period	Annual Payment*
2024 UAAL Base	\$ (106,987)	\$ (106,987)	30	\$ (7,911)
Total		\$ (106,987)		\$ (7,911)

* Reflects beginning of year timing.

Employer	Projected January 1, 2024 Unfunded AAL	Employer Percentage Share	UAAL Payment	Administrative Expenses
1) City of Milwaukee				
a) General*	(\$28,797)	26.92%	(\$2,129)	\$0
b) Policemen	0	0.00%	0	0
c) Firemen	0	0.00%	0	0
d) Total City	(\$28,797)	26.92%	(\$2,129)	\$0
2) Non-City Agencies				
a) Water Department	\$0	0.00%	\$0	\$0
b) School Board	(78,190)	73.08%	(5,782)	0
c) Milwaukee Technical College	0	0.00%	0	0
d) Sewerage Commission	0	0.00%	0	0
e) Veolia	0	0.00%	0	0
f) Wisconsin Center District	0	0.00%	0	0
g) Housing Authority	0	0.00%	0	0
h) Total Non-City	(\$78,190)	73.08%	(\$5,782)	\$0
Total	(\$106,987)	100.00%	(\$7,911)	\$0

* Includes Elected Officials and Redevelopment Authority

Note: Actual contribution requirement will be adjusted for the actual payment date of the contribution.



SECTION VI: SYSTEM ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTIONS

TABLE 17D

**Amortization of the Unfunded Actuarial Accrued Liability (UAAL)
(Combined Retirement & Disability Fund)**

The tables below provide the calculation of the UAAL amortization payment for the Combined Retirement and Disability Fund, applicable for plan year 2024, as well as the allocation of the UAAL payment and administrative expenses for all participating agencies.

Amortization Base	Original Amount	Projected Balance as of January 1, 2024	Remaining Amortization Period	Annual Payment*
2024 UAAL Base**	\$ 2,836,969	\$ 2,836,969	30	\$ 209,780
Total		\$ 2,836,969		\$ 209,780

* Reflects beginning of year timing.

** Due to the passage of Act 12 by the 2023 Wisconsin Legislature, the projected UAAL as of January 1, 2024 was re-amortized over a closed 30-year period.

Employer	Projected January 1, 2024 Unfunded AAL	Employer Percentage Share	UAAL Payment	Administrative Expenses
1) City of Milwaukee				
a) General*	\$948,056	33.42%	\$70,104	\$0
b) Policemen	391,570	13.80%	28,955	0
c) Firemen	459	0.02%	33	0
d) Total City	\$1,340,085	47.24%	\$99,092	\$0
2) Non-City Agencies				
a) Water Department	\$2,768	0.10%	\$205	\$0
b) School Board	1,257,963	44.34%	93,020	0
c) Milwaukee Technical College	0	0.00%	0	0
d) Sewerage Commission	67,652	2.38%	5,003	0
e) Veolia	0	0.00%	0	0
f) Wisconsin Center District	25,279	0.89%	1,869	0
g) Housing Authority	143,222	5.05%	10,591	0
h) Total Non-City	\$1,496,884	52.76%	\$110,688	\$0
Total	\$2,836,969	100.00%	\$209,780	\$0

* Includes Elected Officials and Redevelopment Authority

Note: Actual contribution requirement will be adjusted for the actual payment date of the contribution.



SECTION VI: SYSTEM ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTIONS

TABLE 18A

Allocation of the January 1, 2024 Actuarially Determined Employer Contribution by Employer for the Combined Fund

	(1)	(2)	(3) = (1) - (2)	(4)	(5)	(6) = (3)+(4)+(5)
Employer	Total Projected 2024 Normal Cost	Projected Member Contributions	Employer Share Projected 2024 Normal Cost	Expected Administrative Expenses	Employer Share UAAL Payment	Total Employer Contribution
1) City of Milwaukee						
a) General	\$22,180,999	\$8,164,521	\$14,016,478	\$1,582,355	\$32,893,819	\$48,492,652
b) Police	39,341,780	9,957,710	29,384,070	2,596,428	53,974,277	85,954,775
c) Fire	17,163,390	4,227,424	12,935,966	1,262,538	26,245,495	40,443,999
d) Total City	\$78,686,169	\$22,349,655	\$56,336,514	\$5,441,321	\$113,113,591	\$174,891,426
2) Non-City Agencies						
a) Water Department	\$2,299,564	\$847,851	\$1,451,713	\$139,595	\$2,901,895	\$4,493,203
b) School Board	15,894,434	6,203,707	9,690,727	810,460	16,847,759	27,348,946
c) Milwaukee Technical College	0	0	0	11,899	247,348	259,247
d) Sewerage Commission	2,517,978	984,432	1,533,546	184,786	3,841,311	5,559,643
e) Veolia	100,498	30,005	70,493	61,431	1,277,023	1,408,947
f) Wisconsin Center District	696,291	262,834	433,457	25,069	521,135	979,661
g) Housing Authority	859,751	312,336	547,415	63,650	1,323,157	1,934,222
h) Total Non-City	\$22,368,516	\$8,641,165	\$13,727,351	\$1,296,890	\$26,959,628	\$41,983,869
3) Total System: 1d + 2h	\$101,054,685	\$30,990,820	\$70,063,865	\$6,738,211	\$140,073,219	\$216,875,295

Note: Amounts shown are as of January 1, 2024. Interest accrues at 6.80% per year for contributions made after January 1, 2024.



SECTION VI: SYSTEM ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTIONS

TABLE 18B

Allocation of the January 1, 2024 Actuarially Determined Employer Contribution by Employer Employers for the Retirement Fund

	(1)	(2)	(3) = (1) - (2)	(4)	(5)	(6) = (3)+(4)+(5)
Employer	Total Projected 2024 Normal Cost	Projected Member Contributions	Employer Share Projected 2024 Normal Cost	Expected Administrative Expenses	Employer Share UAAL Payment	Total Employer Contribution
1) City of Milwaukee						
a) General	\$8,642	\$2,836	\$5,806	\$0	(\$104,524)	\$0
b) Police	0	0	0	0	(32,388)	0
c) Fire	0	0	0	0	(6,973)	0
d) Total City	\$8,642	\$2,836	\$5,806	\$0	(\$143,885)	\$0
2) Non-City Agencies						
a) Water Department	\$0	\$0	\$0	\$0	\$0	\$0
b) School Board	29,500	12,673	16,827	0	(214,119)	0
c) Milwaukee Technical College	0	0	0	0	0	0
d) Sewerage Commission	0	0	0	0	(7,577)	0
e) Veolia	0	0	0	0	0	0
f) Wisconsin Center District	0	0	0	0	(3,746)	0
g) Housing Authority	0	0	0	0	(1,401)	0
h) Total Non-City	\$29,500	\$12,673	\$16,827	\$0	(\$226,843)	\$0
3) Total System: 1d + 2h	\$38,142	\$15,509	\$22,633	\$0	(\$370,728)	\$0

Note: Amounts shown are as of January 1, 2024. Interest accrues at 6.80% per year for contributions made after January 1, 2024.



SECTION VI: SYSTEM ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTIONS

TABLE 18C

Allocation of January 1, 2024 Actuarially Determined Employer Contribution by Employer for the General Employees Duty Disability Fund

	(1)	(2)	(3) = (1) - (2)	(4)	(5)	(6) = (3)+(4)+(5)
Employer	Total Projected 2024 Normal Cost	Projected Member Contributions	Employer Share Projected 2024 Normal Cost	Expected Administrative Expenses	Employer Share UAAL Payment	Total Employer Contribution
1) City of Milwaukee						
a) General	\$45	\$0	\$45	\$0	(\$2,129)	\$0
b) Police	0	0	0	0	0	0
c) Fire	0	0	0	0	0	0
d) Total City	\$45	\$0	\$45	\$0	(\$2,129)	\$0
2) Non-City Agencies						
a) Water Department	\$0	\$0	\$0	\$0	\$0	\$0
b) School Board	221	0	221	0	(5,782)	0
c) Milwaukee Technical College	0	0	0	0	0	0
d) Sewerage Commission	0	0	0	0	0	0
e) Veolia	0	0	0	0	0	0
f) Wisconsin Center District	0	0	0	0	0	0
g) Housing Authority	0	0	0	0	0	0
h) Total Non-City	\$221	\$0	\$221	\$0	(\$5,782)	\$0
3) Total System: 1d + 2h	\$266	\$0	\$266	\$0	(\$7,911)	\$0

Note: Amounts shown are as of January 1, 2024. Interest accrues at 6.80% per year for contributions made after January 1, 2024.



SECTION VI: SYSTEM ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTIONS

TABLE 18D

Allocation of the January 1, 2024 Actuarially Determined Employer Contribution by Employer for the Combined Retirement and Disability Fund

	(1)	(2)	(3) = (1) - (2)	(4)	(5)	(6) = (3)+(4)+(5)
Employer	Total Projected 2024 Normal Cost	Projected Member Contributions	Employer Share Projected 2024 Normal Cost	Expected Administrative Expenses	Employer Share UAAL Payment	Total Employer Contribution
1) City of Milwaukee						
a) General	\$72,406	\$26,155	\$46,251	\$0	\$70,104	\$116,355
b) Police	34,707	8,644	26,063	0	28,955	55,018
c) Fire	0	0	0	0	33	33
d) Total City	\$107,113	\$34,799	\$72,314	\$0	\$99,092	\$171,406
2) Non-City Agencies						
a) Water Department	\$0	\$0	\$0	\$0	\$205	\$205
b) School Board	92,674	35,062	57,612	0	93,020	150,632
c) Milwaukee Technical College	0	0	0	0	0	0
d) Sewerage Commission	0	0	0	0	5,003	5,003
e) Veolia	0	0	0	0	0	0
f) Wisconsin Center District	0	0	0	0	1,869	1,869
g) Housing Authority	10,120	3,826	6,294	0	10,591	16,885
h) Total Non-City	\$102,794	\$38,888	\$63,906	\$0	\$110,688	\$174,594
3) Total System: 1d + 2h	\$209,907	\$73,687	\$136,220	\$0	\$209,780	\$346,000

Note: Amounts shown are as of January 1, 2024. Interest accrues at 6.80% per year for contributions made after January 1, 2024.



SECTION VI: SYSTEM ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTIONS

TABLE 19

Allocation of the Actuarially Determined Employer Contributions to Individual Employers

	Total Employer Contribution Across All Funds as of:				
	Jan 1, 2024	April 1, 2024	July 1, 2024	Oct 1, 2024	Dec 31, 2024
Employer					
1) City of Milwaukee					
a) General*	\$48,609,007	\$49,415,087	\$50,234,534	\$51,067,570	\$51,914,420
b) Police	86,009,793	87,436,087	88,886,034	90,360,025	91,858,459
c) Fire	40,444,032	41,114,713	41,796,515	42,489,624	43,194,226
d) Total City	\$175,062,832	\$177,965,887	\$180,917,083	\$183,917,219	\$186,967,105
2) Non-City Agencies					
a) Water Department	\$4,493,408	\$4,567,922	\$4,643,672	\$4,720,678	\$4,798,961
b) School Board	27,499,578	27,955,602	28,419,188	28,890,461	29,369,550
c) Milwaukee Technical College	259,247	263,546	267,916	272,359	276,876
d) Sewerage Commission	5,564,646	5,656,924	5,750,732	5,846,096	5,943,041
e) Veolia	1,408,947	1,432,311	1,456,063	1,480,209	1,504,755
f) Wisconsin Center District	981,530	997,807	1,014,354	1,031,175	1,048,275
g) Housing Authority	1,951,107	1,983,462	2,016,354	2,049,791	2,083,783
h) Total Non-City	\$42,158,463	\$42,857,574	\$43,568,279	\$44,290,769	\$45,025,241
3) Total System: 1d + 2h	\$217,221,295	\$220,823,461	\$224,485,362	\$228,207,988	\$231,992,346

* Includes Elected Officials and Redevelopment Authority

Note: Interest accrues at 6.80% per year for contributions made after January 1, 2024.

Amounts are not additive. Figures shown represent each employer's full actuarially determined employer contribution amount at the respective contribution dates.



SECTION VI: SYSTEM ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTIONS

TABLE 20

**Actuarially Determined Employer Contributions Eligible to be Paid From
2023 Wisconsin Act 12 Sales Tax Proceeds**

Wisconsin Act 12 of 2023 (Act 12) allows an amount of no more than 90% of the sales tax revenue collected in the first full calendar year (2024) to help fund the following costs under the System:

1. The City’s share of the unfunded actuarial accrued liability (UAAL) as of January 1, 2024. This portion of the UAAL is to be amortized on a level-dollar basis over a closed, 30-year period using an assumed rate of return no greater than what has been adopted by the Wisconsin Retirement System.
2. The City’s share of the cost of amortizing future changes to the UAAL. Future increases in the UAAL are to be amortized using the same basis as the January 1, 2024 UAAL, but over a closed 10-year period. Future decreases in the UAAL will be amortized over either a closed 10-year period or the remainder of the 30-year period beginning on January 1, 2024, whichever is longer.
3. The increase in normal costs attributable to the Combined Fund from 2022 to the present year for both the City and non-City employers.

Under Act 12, administrative expenses are to be included in all normal cost contributions. The following table shows the 2024 contribution amounts for each employer that are eligible to be paid from the Act 12 sales tax proceeds. Amounts are shown as of January 1, 2024.

	<u>Total Normal Cost for the Combined Fund Only</u>			<u>Total UAAL</u>	
	<u>2022 Total</u>	<u>2024 Total</u>	<u>Increase/ (Decrease)</u>	<u>Payment for All Funds</u>	<u>Total</u>
1) City of Milwaukee					
a) General	\$16,236,384	\$23,763,354	\$7,526,970	\$32,963,923	\$40,490,893
b) Police	33,883,422	41,938,208	8,054,786	54,003,232	62,058,018
c) Fire	15,750,167	18,425,928	2,675,761	26,245,528	28,921,289
d) Total City	\$65,869,973	\$84,127,490	\$18,257,517	\$113,212,683	\$131,470,200
2) Non-City Employers					
a) Water Dept	\$1,729,279	\$2,439,159	\$709,880	N/A	\$709,880
b) School Board	12,447,912	16,704,894	4,256,982	N/A	4,256,982
c) Milwaukee Technical College	0	11,899	11,899	N/A	11,899
d) Sewerage Commission	1,899,423	2,702,764	803,341	N/A	803,341
e) Veolia	85,835	161,929	76,094	N/A	76,094
f) Wisconsin Center District	503,437	721,360	217,923	N/A	217,923
g) Housing Authority	661,527	923,401	261,874	N/A	261,874
h) Total Non-City	\$17,327,413	\$23,665,406	\$6,337,993	N/A	\$6,337,993
3) Total System: 1(d) + 2(h)	\$83,197,386	\$107,792,896	\$24,595,510	\$113,212,683	\$137,808,193



SECTION VI: SYSTEM ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTIONS

TABLE 20
(continued)

**Actuarially Determined Employer Contributions Eligible to be Paid From
2023 Wisconsin Act 12 Sales Tax Proceeds**

Development of 2022 Normal Cost

There are various methods for calculating the amount contributed to cover the normal cost expense during 2022 that could be utilized for this purpose. Two reasonable alternatives include:

1. Use the normal cost amount calculated for the January 1, 2022 actuarial valuation, which is based on the assumptions adopted by the Annuity and Pension Board (Board) in 2017 for the 2018 through 2022 actuarial valuations and the 7.50% investment return adopted by the Board for the 2019 through 2022 actuarial valuations.
2. Calculate the 2022 normal cost based upon the assumptions used for the development of the Stable Employer Contribution Rate in effect during plan years 2018 through 2022. These are the assumptions which were adopted by the Annuity and Pension Board (Board) in 2017 and include an investment return assumption of 8.00% for 2018 through 2022 and 8.25% thereafter.

Since the employer contributions to the Combined Fund for plan year 2022 are based on the Stable Employer Contribution Policy, our calculation is based on the second alternative. The Stable Employer Contribution Policy rates for 2018 through 2022 were developed by the prior actuary, and sufficient documentation indicating how to separate the individual contribution components, such as normal cost, was not provided. However, during the transition process we were able to replicate the prior actuary's results within reasonable limits. Therefore, we used the results of the January 1, 2022 actuarial valuation, which Cavanaugh Macdonald Consulting developed, and updated those results to reflect the prior actuary's investment return assumption (8.00% for 2018 through 2022 and 8.25% thereafter).



SECTION VI: SYSTEM ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTIONS

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SECTION VII: RISK CONSIDERATIONS

Actuarial Standards of Practice are issued by the Actuarial Standards Board and are binding on credentialed actuaries practicing in the United States. These standards generally identify what the actuary should consider, document and disclose when performing an actuarial assignment. In September, 2017, Actuarial Standard of Practice Number 51, *Assessment and Disclosure of Risk in Measuring Pension Obligations*, (ASOP 51) was issued as final with application to measurement dates on or after November 1, 2018. This ASOP, which applies to funding valuations, actuarial projections, and actuarial cost studies of proposed plan changes, was first applicable for the January 1, 2019 actuarial valuation for the Employees' Retirement System of the City of Milwaukee (System).

While actuarial assumptions allow for a projection of how future actuarially determined employer contributions and investment returns will meet the cash flow needs for future benefit payments, actual experience will not unfold exactly as anticipated by the assumptions. In this section, we discuss some of the risk factors that can have a significant impact – positive or negative – on the actuarial projection of liability and actuarially determined employer contributions .

There are a number of risks inherent in the funding of a defined benefit plan. These include:

- economic risks, such as investment return and inflation;
- demographic risks such as mortality, payroll growth, aging population, and retirement ages;
- contribution risk like volatility making it difficult for the plan sponsor to fund the plan; and
- external risks such as the regulatory and political environment (not included in ASOP 51).

The last two are not risks that the actuary must opine on under ASOP 51.

There is a direct correlation between healthy, well-funded retirement plans and consistent contributions of at least the full actuarially determined employer contributions each year. Under 2023 Wisconsin Act 12 (Act 12), the main source of funding for the System comes from the sales tax permitted under Act 12. This sales tax is currently set to expire once the System attains a 100% funded ratio or after 30 years have passed, whichever occurs first. Finally, Act 12 allows an amount of no more than 90% of the sales tax revenue collected in the first full calendar year (2024) to help fund the following costs under the System:

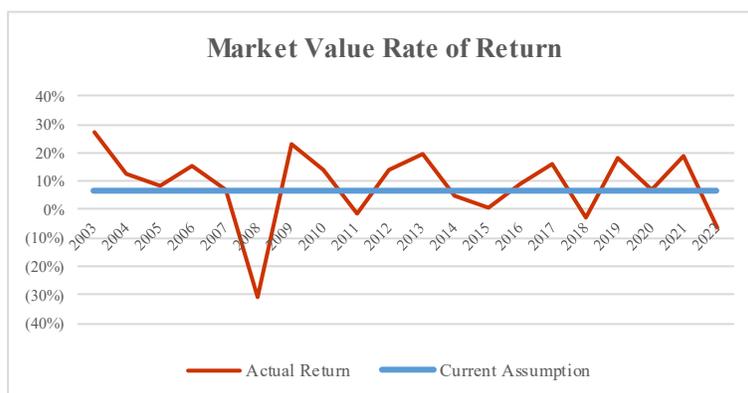
1. The City's share of the unfunded actuarial accrued liability (UAAL) as of January 1, 2024.
2. The City's share of the cost of amortizing future changes to the UAAL.
3. The increase in normal costs attributable to the Combined Fund from 2022 to the present year for both the City and non-City employers.

Currently, 90% of the sales tax revenue collected during 2024 is expected to be sufficient to fund all the eligible costs outlined above in the future. However, unfavorable asset or liability experience in the future may change this. Another factor that could significantly impact the System's costs is future changes to the investment return assumption. Under Act 12, the Systems' investment return assumption cannot be greater than the rate used by the Wisconsin Retirement System, and so ERS does not have full control over the most impactful assumption used in actuarial valuation. Please see Table 24 for an illustration of the cost impact due to lowering the investment return assumption based on the current valuation results.

The most significant risk factor for most plans is investment return because of the volatility of the returns and the size of an asset fund under a mature plan. A perusal of historical rates over 10-20 years reveals that the actual return each year is rarely close to the average return over the same period. This is an expected result given the underlying capital market assumptions and the asset allocation. However, the valuation is a measurement based on a single investment return, usually around the median of the distribution of returns. The magnitude of variations in investment returns and the short timeframe in which they occur makes the management of this risk very challenging. See the chart below for the historical rates of return over the past 19 years.



SECTION VII: RISK CONSIDERATIONS



This metric means the same investment experience would move the actuarially determined employer contributions more significantly for CMERS as compared to most other public plans. For example, a return that is 10% lower than assumed (or -3.20%) equates to an actuarial loss of about \$553 million. Given the amortization period of 10 years for actuarial losses, an increase of about \$77 million each year for each of the next 10 years would be required to compensate for an investment return that is 10% below the assumed rate of return in just one year. Note that the System’s asset smoothing method would initially dampen the contribution impact.

A key demographic risk for all retirement systems, including CMERS, is improvements in mortality (longevity) greater than anticipated. While the mortality assumption used in the valuation reflects some improvement in mortality experience and this assumption is evaluated and refined in each experience study, the risk arises because there is a possibility of some sudden shift, perhaps from a significant medical breakthrough that could rapidly improve mortality rates and increase liabilities. Likewise, there is some possibility of a significant public health crisis that could result in a significant number of additional deaths in a short time period, as experienced with the COVID-19 pandemic. This type of event is also significant, although more easily absorbed. While either of these events could happen, it represents a relatively small probability and thus represents much less risk than the volatility associated with investment returns.

As plan demographics change over time, along with the funded status, the risk factors may also change. The following exhibits summarize certain historical information that provide an indication as to how key risk metrics have changed over time.



SECTION VII: RISK CONSIDERATIONS

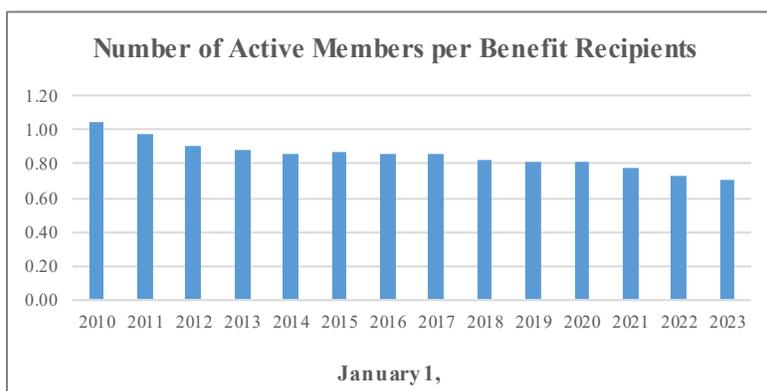
TABLE 21

RATIO OF ACTIVE TO RETIREE COUNT

The payment on the unfunded actuarial accrued liability is calculated anticipating covered payroll increases each year in the future. To the extent actual payroll does not meet the assumed rate of increase (currently 2.0%), a higher rate of pay is necessary to collect the same dollar amount of payment on the unfunded actuarial accrued liability. A reduction in the number of active members usually restricts the growth of covered payroll. ERS has experienced a 16% decline in the active membership over the past 13 years which can create more volatility (risk) on the actuarially determined employer contributions to fund the System.

Valuation Date January 1	Active Count	In-Pay Count	Active/ In-Pay
2010	11,664	11,178	1.04
2011	11,247	11,542	0.97
2012	10,767	11,937	0.90
2013	10,714	12,109	0.88
2014	10,675	12,468	0.86
2015	10,964	12,580	0.87
2016	10,982	12,746	0.86
2017	11,083	12,872	0.86
2018	10,845	13,181	0.82
2019	10,851	13,355	0.81
2020	10,974	13,543	0.81
2021	10,567	13,636	0.77
2022	10,094	13,747	0.73
2023	9,800	13,842	0.71

Note the ratio of active members to benefit recipients is not as critical for ERS as it is for, say, Social Security. The Plan has been funded, in advance, precisely for this reason and those assets exist to help pay the benefits of members. It is, however, a sign of the maturity of the System.





SECTION VII: RISK CONSIDERATIONS

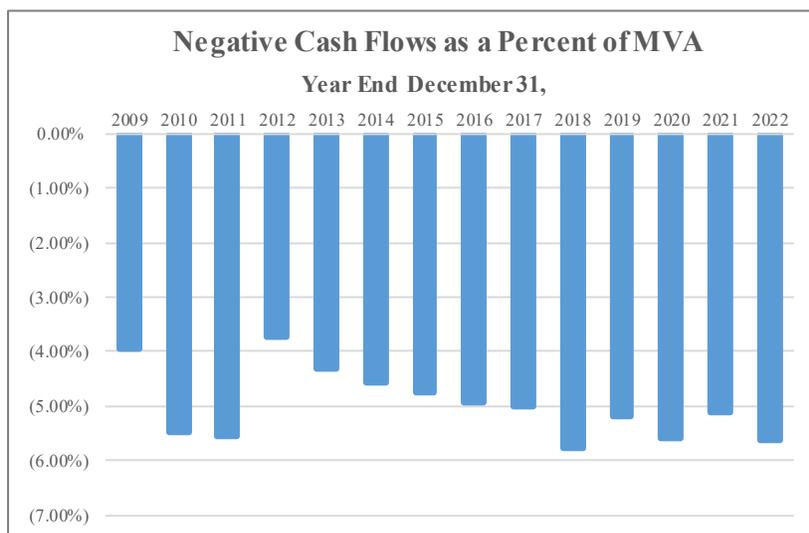
TABLE 22

HISTORICAL CASH FLOWS

(Dollars in thousands)

Plans with large negative cash flows generally experience increased sensitivity to investment return volatility. Cash flows, for this purpose, are measured as contributions minus benefit payments. If the System has negative cash flows and then experiences returns below the assumed rate, there are fewer assets to be reinvested to earn the higher returns that often follow. Negative cash flows can also impact the System’s asset allocation and is a consideration in setting the investment policy of the system. CMERS has a relatively high negative cash flow so this metric should be closely monitored. The higher the net cash flow is as a percentage of the market value of assets, the greater the risk to the System’s funding.

Year End	Market Value of Assets (MVA)	Contributions	Benefit Payments and Expenses	Net Cash Flow	Net Cash Flow as a Percent of MVA
12/31/2009	\$4,020,640	\$95,992	\$255,014	(\$159,022)	(3.96%)
12/31/2010	4,322,384	35,699	271,710	(236,011)	(5.46%)
12/31/2011	4,197,264	52,675	285,565	(232,890)	(5.55%)
12/31/2012	4,375,197	138,968	302,439	(163,471)	(3.74%)
12/31/2013	4,949,534	122,157	334,858	(212,701)	(4.30%)
12/31/2014	4,953,150	116,507	342,569	(226,062)	(4.56%)
12/31/2015	4,752,308	121,751	347,888	(226,137)	(4.76%)
12/31/2016	4,886,669	110,013	351,303	(241,290)	(4.94%)
12/31/2017	5,396,527	116,018	385,331	(269,313)	(4.99%)
12/31/2018	4,950,881	115,251	400,707	(285,456)	(5.77%)
12/31/2019	5,557,077	129,022	416,104	(287,082)	(5.17%)
12/31/2020	5,649,734	119,852	436,331	(316,479)	(5.60%)
12/31/2021	6,431,356	122,621	451,989	(329,368)	(5.12%)
12/31/2022	5,525,958	153,775	464,799	(311,024)	(5.63%)





SECTION VII: RISK CONSIDERATIONS

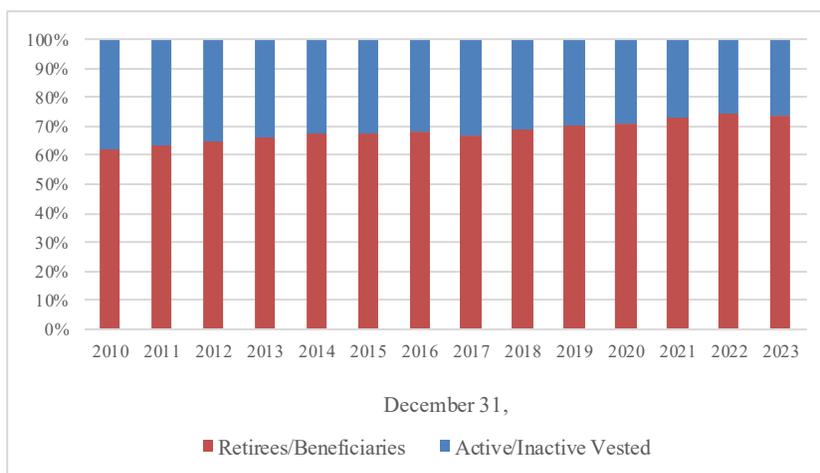
TABLE 23

LIABILITY MATURITY MEASUREMENTS

(Dollars in thousands)

Most public sector retirement systems have been in operation for many decades like CMERS. As a result, they have aging plan populations, and in some cases declining active populations, resulting in an increasing ratio of retirees to active members and a growing percentage of retiree liability. With more of the total liability residing with retirees, investment volatility has a greater impact on the funding of the system since it is more difficult to restore the system financially after losses occur when there is comparatively less payroll over which to spread the cost.

Actuarial Valuation Date	Retiree Liability (a)	Total Actuarial Accrued Liability (b)	Retiree Percentage (a / b)
1/1/2010	\$2,637,961	\$4,269,324	61.8%
1/1/2011	2,835,309	4,447,548	63.7%
1/1/2012	2,987,922	4,587,915	65.1%
1/1/2013	3,121,007	4,689,814	66.5%
1/1/2014	3,254,212	4,831,689	67.4%
1/1/2015	3,344,604	4,935,482	67.8%
1/1/2016	3,462,308	5,065,141	68.4%
1/1/2017	3,512,367	5,259,300	66.8%
1/1/2018	3,993,493	5,819,762	68.6%
1/1/2019	4,491,023	6,400,901	70.2%
1/1/2020	4,682,004	6,597,457	71.0%
1/1/2021	4,907,245	6,745,299	72.8%
1/1/2022	5,106,118	6,875,927	74.3%
1/1/2023	5,606,392	7,631,007	73.5%





SECTION VII: RISK CONSIDERATIONS

TABLE 24

Comparison of Valuation Results Under Alternate Investment Return Assumptions
(Dollars in thousands)

This exhibit compares the key January 1, 2023 valuation results for the System under three (3) different investment return assumptions to illustrate the impact of different assumptions on the System’s funding. Note that only the investment return assumption is changed, as identified in the heading below, and the assumption cannot exceed the rate used by the Wisconsin Retirement System, which is currently 6.80% for active employees. All other assumptions are unchanged for purposes of this analysis.

Investment Return Assumption	5.80%	6.30%	6.80%
Contributions			
- Total Normal Cost	\$129,514	\$114,293	\$101,265
- Member Contributions	(31,065)	(31,065)	(31,065)
- Employer Normal Cost	\$98,449	\$83,228	\$70,200
- Projected Administrative Expenses	\$6,738	\$6,738	\$6,738
- Unfunded Actuarial Accrued Liability	\$256,310	\$196,548	\$140,283
Total Employer Contribution	\$361,497	\$286,514	\$217,221
Actuarial Value of Assets	\$5,847,404	\$5,847,404	\$5,847,404
Actuarial Accrued Liability	8,579,191	8,082,578	7,631,007
Unfunded Actuarial Accrued Liability	\$2,731,787	\$2,235,174	\$1,783,603
Funded Ratio	68.2%	72.3%	76.6%

Note: Numbers may not add due to rounding. All other assumptions are unchanged for purposes of this sensitivity analysis.



APPENDIX A: MEMBERSHIP DATA

MEMBER DATA RECONCILIATION

January 1, 2022 to January 1, 2023

The number of members included in the valuation, as summarized in the table below, is in accordance with the data submitted by the System for members of the valuation date.

	Active Members	Refund Payable	Deferred Vested	Benefit Recipients			Total
				Disabled Members	Retirees	Beneficiaries	
Participants as of January 1, 2022	10,094	2,149	3,363	493	11,218	2,047	29,364
New Participants	1,165	144	52	0	0	142	1,503
Return to Work	96	(53)	(43)	0	0	0	0
Terminations							
- Refunded	(195)	(343)	(90)	0	0	0	(628)
- Refund Payable	(484)	484	0	0	0	0	0
- Deferred Vested	(496)	0	496	0	0	0	0
Service Retirements							
- Annuity	(347)	0	(168)	0	515	0	0
- Lump Sum	(12)	0	(13)	0	0	0	(25)
Disabilities							
- Duty-Related	0	0	0	0	0	0	0
- Non Duty-Related	(4)	0	(2)	6	0	0	0
Deaths	(17)	(2)	(14)	(15)	(386)	(166)	(600)
Benefit Payments Stopped	0	0	0	0	0	(1)	(1)
Reached Service Retirement Conversion Age	0	0	0	(21)	21	0	0
Data Adjustments	0	3	(3)	3	(3)	0	0
Participants as of January 1, 2023	9,800	2,382	3,578	466	11,365	2,022	29,613

Notes: Duty disabled members who have reached their conversion age are included in the Retirees count.

Refund Payable counts include beneficiaries and estates that are owed a lump sum benefit as of January 1, 2023.

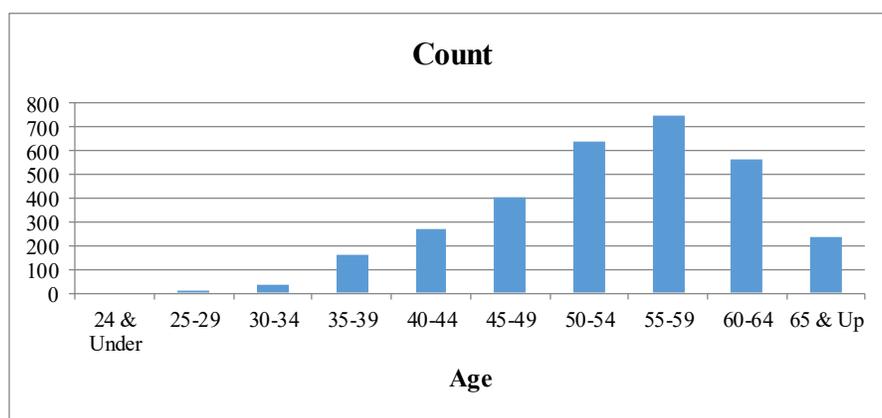
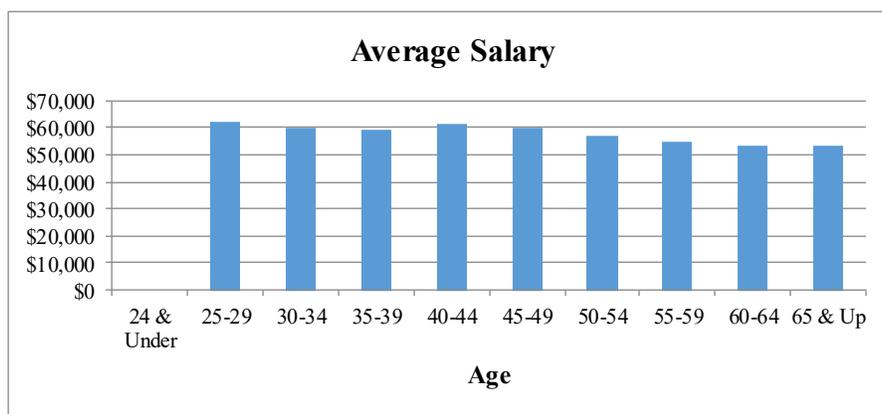


APPENDIX A: MEMBERSHIP DATA

**SUMMARY OF ACTIVE MEMBERS
as of January 1, 2023**

General Employees – Tier 1

Age	Count			Reported FY 2022 Earnings		
	Male	Female	Total	Male	Female	Total
24 & Under	0	0	0	\$ 0	\$ 0	\$ 0
25-29	1	0	1	61,751	0	61,751
30-34	19	15	34	1,176,003	855,425	2,031,428
35-39	86	80	166	5,798,692	4,040,139	9,838,831
40-44	124	144	268	8,322,530	8,114,826	16,437,356
45-49	197	208	405	13,501,603	10,667,339	24,168,942
50-54	305	331	636	19,852,555	16,286,905	36,139,460
55-59	364	385	749	22,739,147	18,036,548	40,775,695
60-64	247	318	565	16,159,028	14,035,641	30,194,669
65 & Up	<u>100</u>	<u>138</u>	<u>238</u>	<u>6,727,961</u>	<u>5,870,532</u>	<u>12,598,493</u>
Total	1,443	1,619	3,062	\$ 94,339,270	\$ 77,907,355	\$ 172,246,625



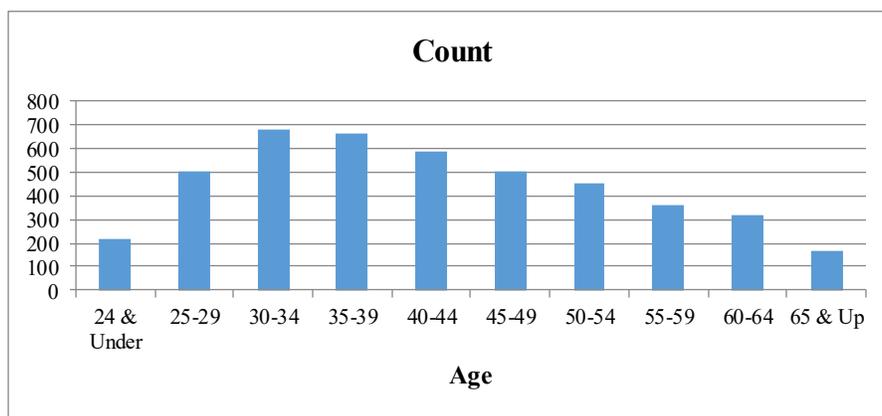
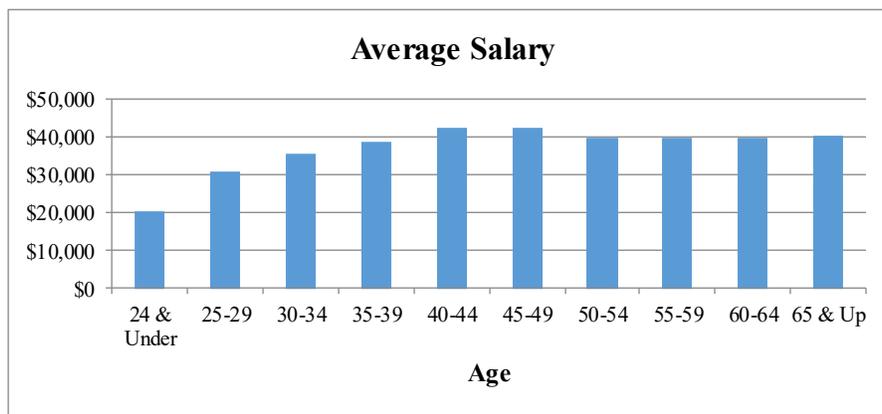


APPENDIX A: MEMBERSHIP DATA

**SUMMARY OF ACTIVE MEMBERS
as of January 1, 2023**

General Employees – Tier 2

Age	Count			Reported FY 2022 Earnings		
	Male	Female	Total	Male	Female	Total
24 & Under	97	118	215	\$ 2,271,822	\$ 2,119,036	\$ 4,390,858
25-29	203	299	502	7,008,499	8,484,371	15,492,870
30-34	274	403	677	11,227,919	12,701,080	23,928,999
35-39	258	406	664	11,322,552	14,194,339	25,516,891
40-44	238	351	589	12,084,386	12,714,066	24,798,452
45-49	200	305	505	9,867,411	11,436,128	21,303,539
50-54	198	257	455	9,013,411	8,968,447	17,981,858
55-59	164	197	361	7,517,266	6,795,240	14,312,506
60-64	154	161	315	7,289,912	5,193,673	12,483,585
65 & Up	<u>76</u>	<u>88</u>	<u>164</u>	<u>4,019,052</u>	<u>2,561,605</u>	<u>6,580,657</u>
Total	1,862	2,585	4,447	\$ 81,622,230	\$ 85,167,985	\$ 166,790,215



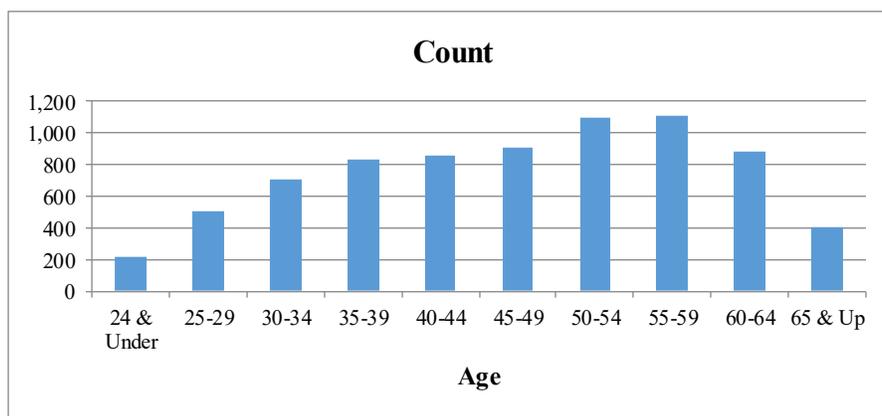
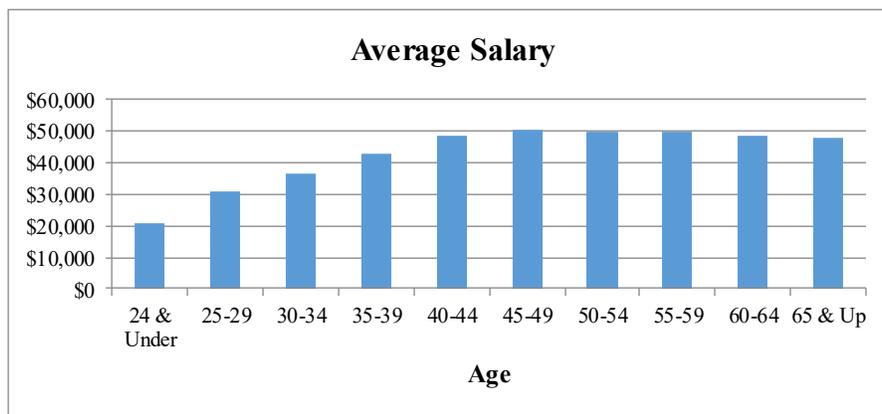


APPENDIX A: MEMBERSHIP DATA

**SUMMARY OF ACTIVE MEMBERS
as of January 1, 2023**

General Employees – Total

<u>Age</u>	<u>Count</u>			<u>Reported FY 2022 Earnings</u>		
	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
24 & Under	97	118	215	\$ 2,271,822	\$ 2,119,036	\$ 4,390,858
25-29	204	299	503	7,070,250	8,484,371	15,554,621
30-34	293	418	711	12,403,922	13,556,505	25,960,427
35-39	344	486	830	17,121,244	18,234,478	35,355,722
40-44	362	495	857	20,406,916	20,828,892	41,235,808
45-49	397	513	910	23,369,014	22,103,467	45,472,481
50-54	503	588	1,091	28,865,966	25,255,352	54,121,318
55-59	528	582	1,110	30,256,413	24,831,788	55,088,201
60-64	401	479	880	23,448,940	19,229,314	42,678,254
65 & Up	<u>176</u>	<u>226</u>	<u>402</u>	<u>10,747,013</u>	<u>8,432,137</u>	<u>19,179,150</u>
Total	3,305	4,204	7,509	\$ 175,961,500	\$ 163,075,340	\$ 339,036,840



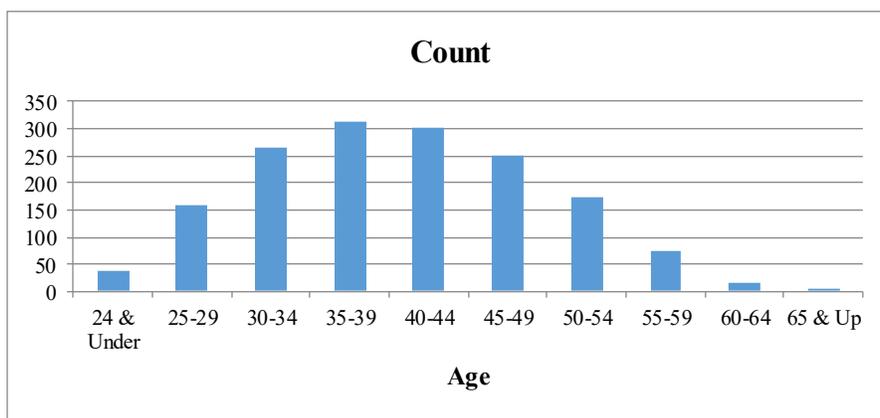
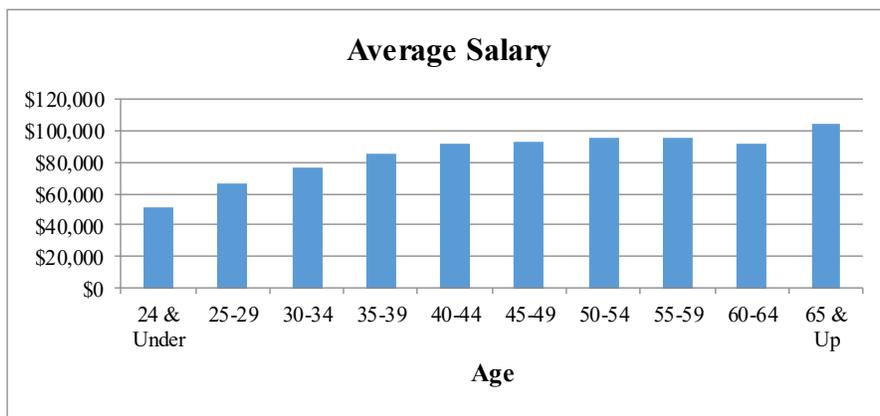


APPENDIX A: MEMBERSHIP DATA

**SUMMARY OF ACTIVE MEMBERS
as of January 1, 2023**

Policemen

<u>Age</u>	<u>Count</u>			<u>Reported FY 2022 Earnings</u>		
	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
24 & Under	27	12	39	\$ 1,458,793	\$ 525,411	\$ 1,984,204
25-29	131	29	160	8,742,114	1,800,191	10,542,305
30-34	226	40	266	17,618,598	2,827,169	20,445,767
35-39	267	45	312	22,602,102	3,972,608	26,574,710
40-44	239	62	301	21,886,521	5,784,652	27,671,173
45-49	217	33	250	20,103,243	3,099,977	23,203,220
50-54	145	27	172	13,771,977	2,516,933	16,288,910
55-59	64	11	75	6,016,360	1,092,756	7,109,116
60-64	14	1	15	1,271,733	104,657	1,376,390
65 & Up	<u>1</u>	<u>1</u>	<u>2</u>	<u>116,091</u>	<u>90,765</u>	<u>206,856</u>
Total	1,331	261	1,592	\$ 113,587,532	\$ 21,815,119	\$ 135,402,651



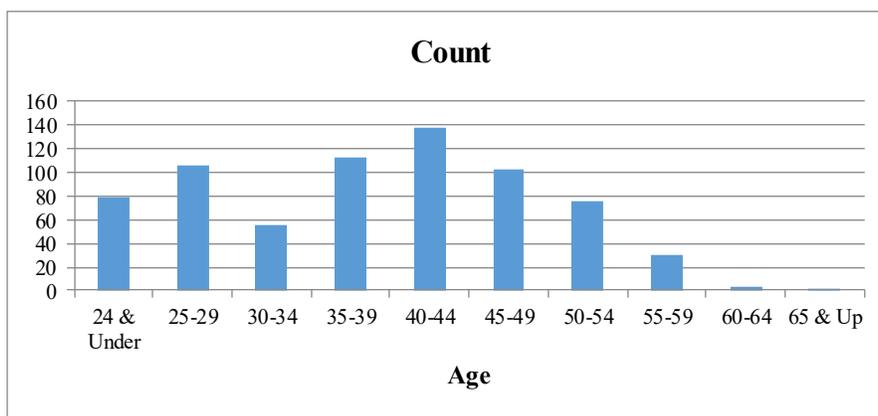
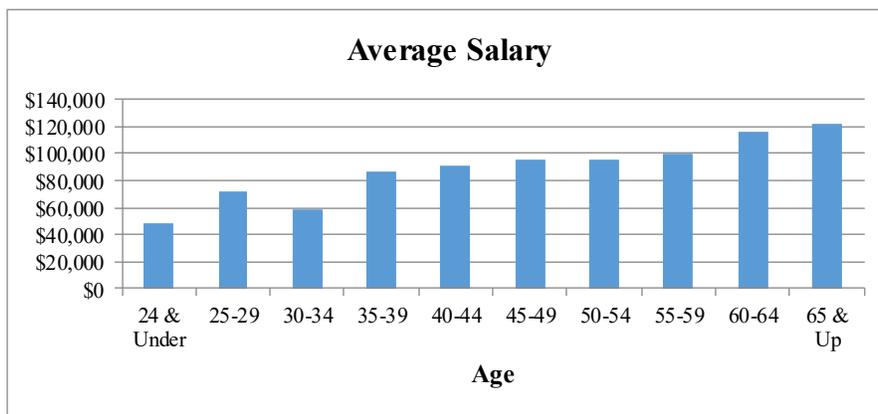


APPENDIX A: MEMBERSHIP DATA

**SUMMARY OF ACTIVE MEMBERS
as of January 1, 2023**

Firemen

Age	Count			Reported FY 2022 Earnings		
	Male	Female	Total	Male	Female	Total
24 & Under	58	20	78	\$ 2,803,919	\$ 913,420	\$ 3,717,339
25-29	96	10	106	6,768,674	790,751	7,559,425
30-34	51	4	55	3,013,971	232,561	3,246,532
35-39	106	6	112	9,195,006	487,990	9,682,996
40-44	132	5	137	12,089,378	435,707	12,525,085
45-49	100	2	102	9,509,164	190,652	9,699,816
50-54	74	1	75	7,055,621	139,279	7,194,900
55-59	29	1	30	2,906,372	101,104	3,007,476
60-64	3	0	3	346,624	0	346,624
65 & Up	<u>1</u>	<u>0</u>	<u>1</u>	<u>121,406</u>	<u>0</u>	<u>121,406</u>
Total	650	49	699	\$ 53,810,135	\$ 3,291,464	\$ 57,101,599





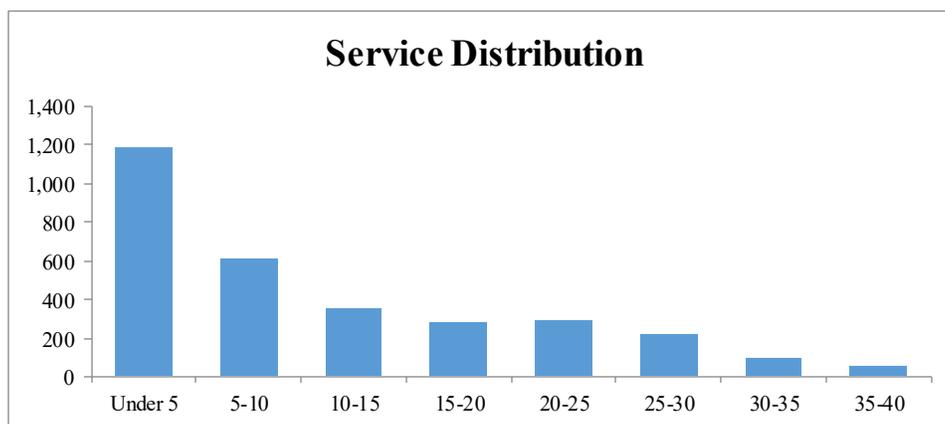
APPENDIX A: MEMBERSHIP DATA

**DISTRIBUTION OF ACTIVE MEMBERS
as of January 1, 2023**

General City*

Age	Service								Total
	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	
24 & Under	53	0	0	0	0	0	0	0	53
25-29	180	11	0	0	0	0	0	0	191
30-34	190	58	14	0	0	0	0	0	262
35-39	181	107	51	22	0	0	0	0	361
40-44	149	114	64	50	17	0	0	0	394
45-49	140	83	45	55	58	19	1	0	401
50-54	118	90	68	58	91	67	16	1	509
55-59	85	60	50	49	77	83	36	12	452
60-64	69	57	41	34	37	41	34	19	332
65 & Up	25	32	17	18	11	11	14	20	148
Total	1,190	612	350	286	291	221	101	52	3,103

* Includes Elected Officials, General Employees of the City of Milwaukee, and Redevelopment Authority



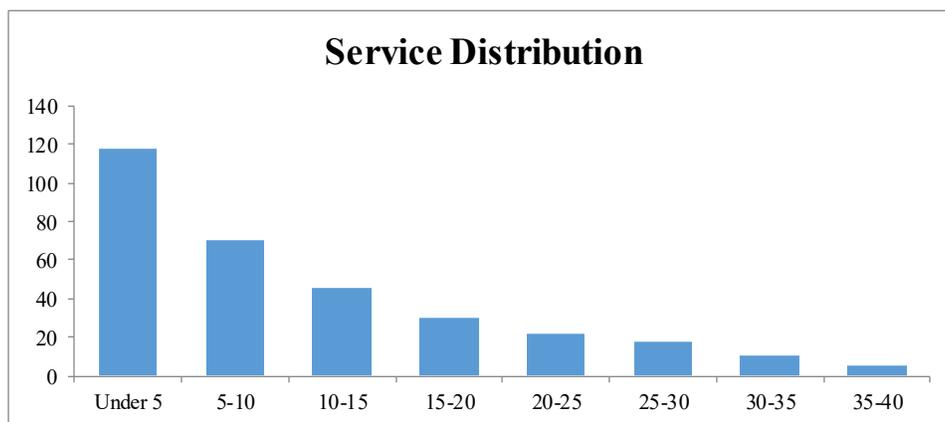


APPENDIX A: MEMBERSHIP DATA

**DISTRIBUTION OF ACTIVE MEMBERS
as of January 1, 2023**

Water Department

Age	Service								Total
	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	
24 & Under	3	0	0	0	0	0	0	0	3
25-29	21	2	0	0	0	0	0	0	23
30-34	23	8	1	0	0	0	0	0	32
35-39	18	14	3	1	0	0	0	0	36
40-44	10	15	5	5	2	1	0	0	38
45-49	15	11	9	7	7	1	0	0	50
50-54	12	7	9	7	6	2	4	0	47
55-59	9	9	11	7	5	9	4	0	54
60-64	3	3	7	2	2	4	2	4	27
65 & Up	3	1	0	1	0	1	0	1	7
Total	117	70	45	30	22	18	10	5	317



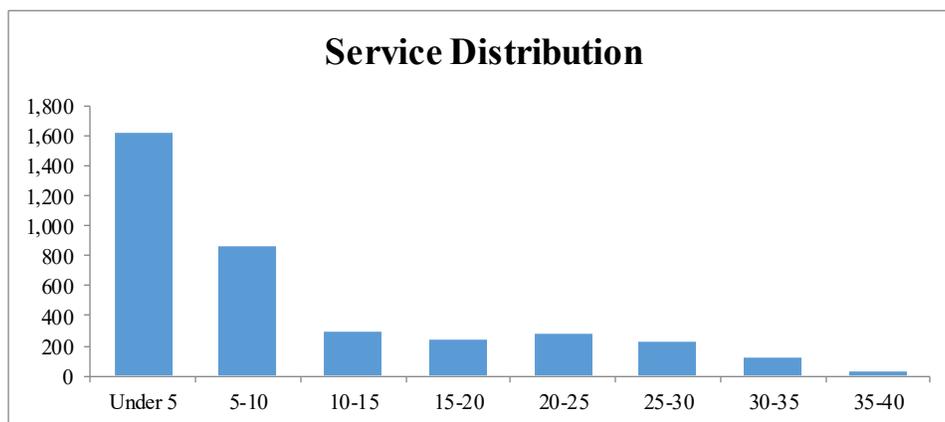


APPENDIX A: MEMBERSHIP DATA

**DISTRIBUTION OF ACTIVE MEMBERS
as of January 1, 2023**

School Board

Age	Service								Total
	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	
24 & Under	148	1	0	0	0	0	0	0	149
25-29	234	25	0	0	0	0	0	0	259
30-34	270	100	3	1	0	0	0	0	374
35-39	225	129	22	3	0	0	0	0	379
40-44	187	115	36	22	13	0	0	0	373
45-49	148	118	38	39	33	15	1	0	392
50-54	139	112	58	51	61	46	12	0	479
55-59	119	90	56	67	72	80	54	8	546
60-64	102	103	56	34	67	60	43	12	477
65 & Up	44	63	20	19	34	22	12	9	223
Total	1,616	856	289	236	280	223	122	29	3,651



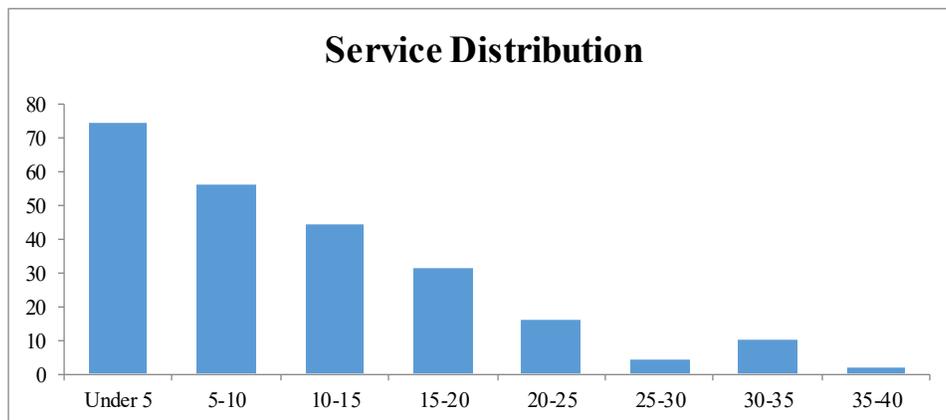


APPENDIX A: MEMBERSHIP DATA

**DISTRIBUTION OF ACTIVE MEMBERS
as of January 1, 2023**

Sewerage Commission

Age	Service								Total
	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	
24 & Under	5	0	0	0	0	0	0	0	5
25-29	16	2	0	0	0	0	0	0	18
30-34	17	11	2	0	0	0	0	0	30
35-39	15	13	12	2	0	0	0	0	42
40-44	6	9	11	1	0	0	0	0	27
45-49	8	7	9	12	2	0	0	0	38
50-54	4	3	5	8	3	1	1	0	25
55-59	2	6	3	3	2	3	3	0	22
60-64	1	3	1	4	6	0	5	1	21
65 & Up	0	2	1	1	3	0	1	1	9
Total	74	56	44	31	16	4	10	2	237



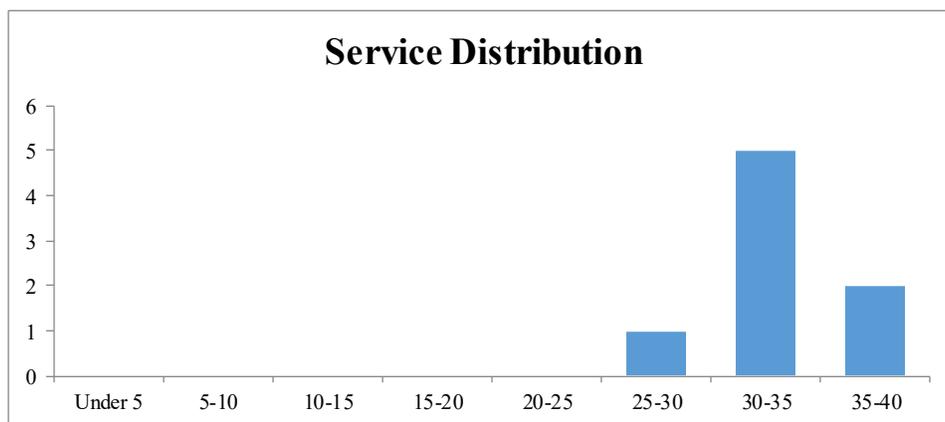


APPENDIX A: MEMBERSHIP DATA

**DISTRIBUTION OF ACTIVE MEMBERS
as of January 1, 2023**

Veolia

<u>Age</u>	<u>Service</u>								<u>Total</u>
	<u>Under 5</u>	<u>5-10</u>	<u>10-15</u>	<u>15-20</u>	<u>20-25</u>	<u>25-30</u>	<u>30-35</u>	<u>35-40</u>	
24 & Under	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	1	1	0	2
60-64	0	0	0	0	0	0	3	0	3
65 & Up	0	0	0	0	0	0	1	2	3
Total	0	0	0	0	0	1	5	2	8



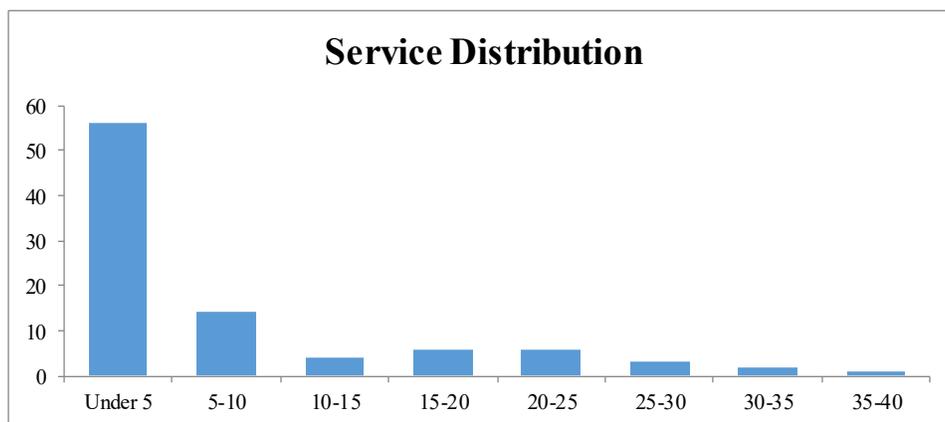


APPENDIX A: MEMBERSHIP DATA

**DISTRIBUTION OF ACTIVE MEMBERS
as of January 1, 2023**

Wisconsin District Center

Age	Service								Total
	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	
24 & Under	4	0	0	0	0	0	0	0	4
25-29	8	1	0	0	0	0	0	0	9
30-34	6	2	1	0	0	0	0	0	9
35-39	5	1	0	0	0	0	0	0	6
40-44	8	0	0	2	1	0	0	0	11
45-49	5	4	1	2	2	0	0	0	14
50-54	7	2	1	0	1	2	0	0	13
55-59	5	2	0	1	1	1	1	0	11
60-64	2	2	0	1	0	0	1	0	6
65 & Up	6	0	1	0	1	0	0	1	9
Total	56	14	4	6	6	3	2	1	92



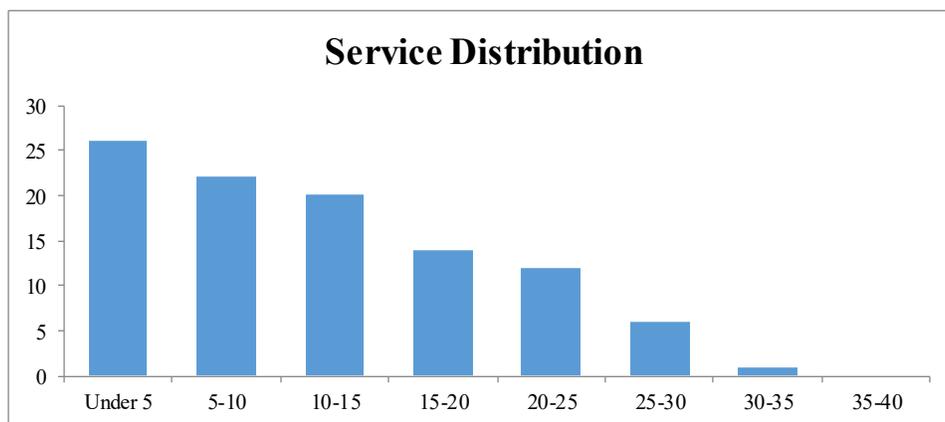


APPENDIX A: MEMBERSHIP DATA

**DISTRIBUTION OF ACTIVE MEMBERS
as of January 1, 2023**

Housing Authority

Age	Service								Total
	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	
24 & Under	1	0	0	0	0	0	0	0	1
25-29	3	0	0	0	0	0	0	0	3
30-34	2	2	0	0	0	0	0	0	4
35-39	3	1	1	1	0	0	0	0	6
40-44	7	4	3	0	0	0	0	0	14
45-49	2	6	1	5	1	0	0	0	15
50-54	4	4	2	3	4	0	1	0	18
55-59	3	1	8	1	5	5	0	0	23
60-64	1	4	3	3	2	1	0	0	14
65 & Up	0	0	2	1	0	0	0	0	3
Total	26	22	20	14	12	6	1	0	101



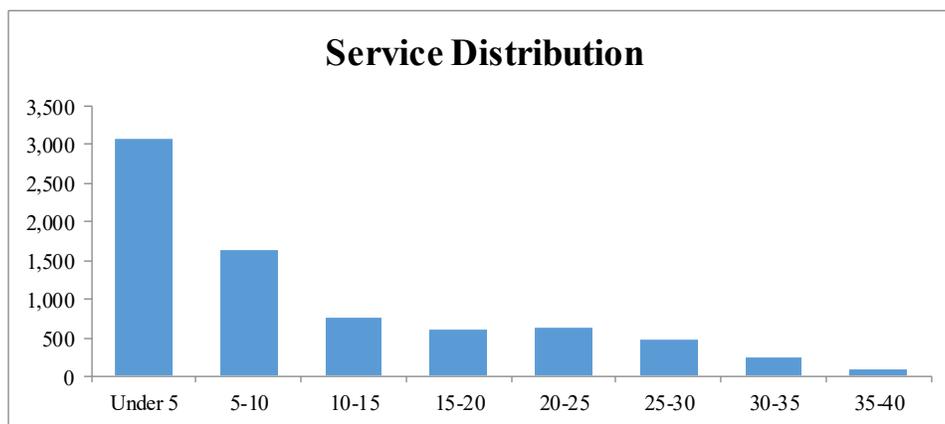


APPENDIX A: MEMBERSHIP DATA

**DISTRIBUTION OF ACTIVE MEMBERS
as of January 1, 2023**

General Employees – Total

Age	Service								Total
	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	
24 & Under	214	1	0	0	0	0	0	0	215
25-29	462	41	0	0	0	0	0	0	503
30-34	508	181	21	1	0	0	0	0	711
35-39	447	265	89	29	0	0	0	0	830
40-44	367	257	119	80	33	1	0	0	857
45-49	318	229	103	120	103	35	2	0	910
50-54	284	218	143	127	166	118	34	1	1,091
55-59	223	168	128	128	162	182	99	20	1,110
60-64	178	172	108	78	114	106	88	36	880
65 & Up	78	98	41	40	49	34	28	34	402
Total	3,079	1,630	752	603	627	476	251	91	7,509



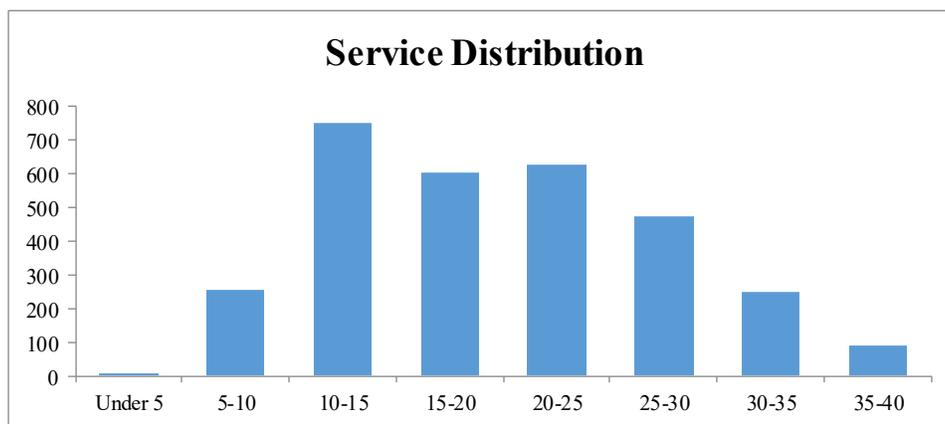


APPENDIX A: MEMBERSHIP DATA

**DISTRIBUTION OF ACTIVE MEMBERS
as of January 1, 2023**

General Employees – Tier 1

Age	Service								Total
	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	
24 & Under	0	0	0	0	0	0	0	0	0
25-29	0	1	0	0	0	0	0	0	1
30-34	1	11	21	1	0	0	0	0	34
35-39	0	48	89	29	0	0	0	0	166
40-44	2	33	119	80	33	1	0	0	268
45-49	1	41	103	120	103	35	2	0	405
50-54	2	45	143	127	166	118	34	1	636
55-59	0	30	128	128	162	182	99	20	749
60-64	1	34	108	78	114	106	88	36	565
65 & Up	0	12	41	40	49	34	28	34	238
Total	7	255	752	603	627	476	251	91	3,062



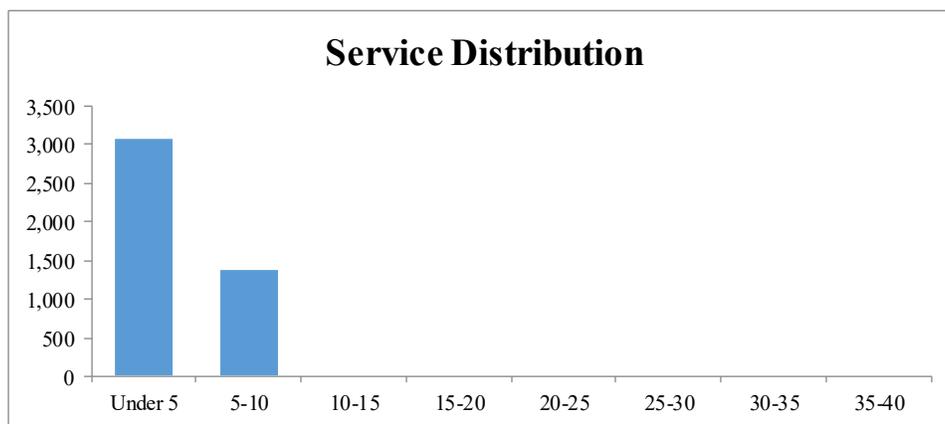


APPENDIX A: MEMBERSHIP DATA

**DISTRIBUTION OF ACTIVE MEMBERS
as of January 1, 2023**

General Employees – Tier 2

Age	Service								Total
	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	
24 & Under	214	1	0	0	0	0	0	0	215
25-29	462	40	0	0	0	0	0	0	502
30-34	507	170	0	0	0	0	0	0	677
35-39	447	217	0	0	0	0	0	0	664
40-44	365	224	0	0	0	0	0	0	589
45-49	317	188	0	0	0	0	0	0	505
50-54	282	173	0	0	0	0	0	0	455
55-59	223	138	0	0	0	0	0	0	361
60-64	177	138	0	0	0	0	0	0	315
65 & Up	78	86	0	0	0	0	0	0	164
Total	3,072	1,375	0	0	0	0	0	0	4,447



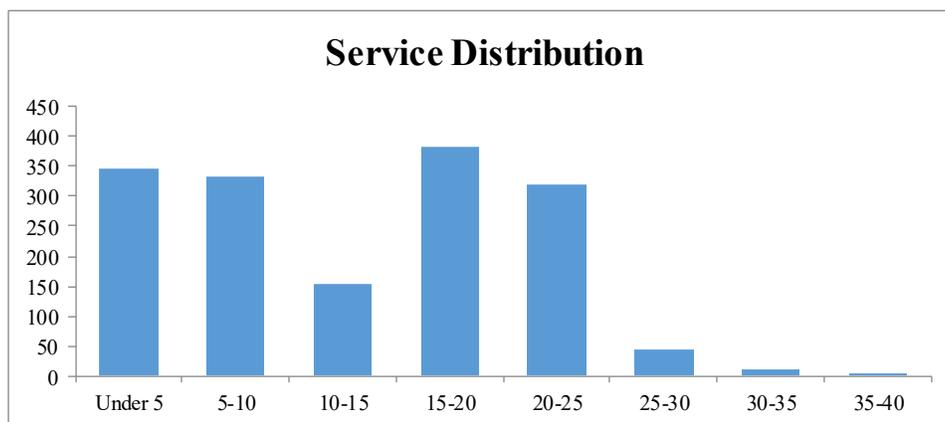


APPENDIX A: MEMBERSHIP DATA

**DISTRIBUTION OF ACTIVE MEMBERS
as of January 1, 2023**

Policemen

<u>Age</u>	<u>Service</u>								<u>Total</u>
	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	
24 & Under	39	0	0	0	0	0	0	0	39
25-29	111	49	0	0	0	0	0	0	160
30-34	101	109	43	13	0	0	0	0	266
35-39	50	103	64	87	8	0	0	0	312
40-44	25	47	29	136	62	2	0	0	301
45-49	19	13	10	91	107	10	0	0	250
50-54	2	6	6	35	98	20	5	0	172
55-59	0	3	2	16	38	12	4	0	75
60-64	0	1	0	2	6	2	3	1	15
65 & Up	0	0	0	1	0	0	1	0	2
Total	347	331	154	381	319	46	13	1	1,592



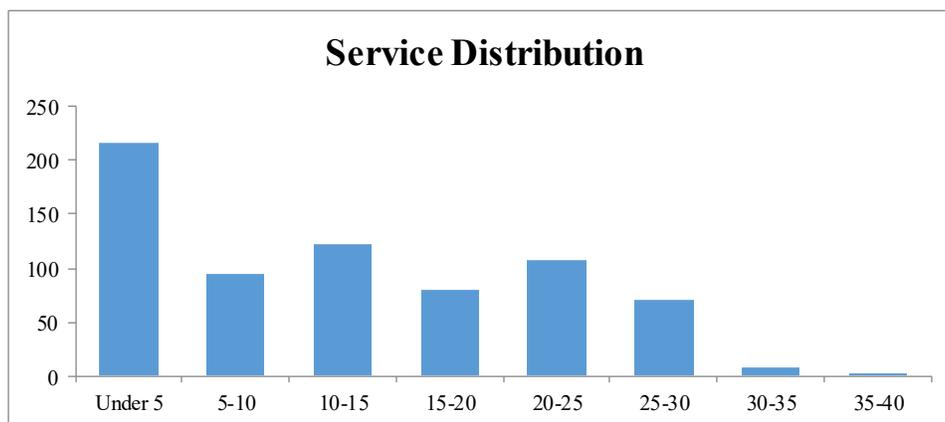


APPENDIX A: MEMBERSHIP DATA

**DISTRIBUTION OF ACTIVE MEMBERS
as of January 1, 2023**

Firemen

Age	Service								Total
	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	
24 & Under	78	0	0	0	0	0	0	0	78
25-29	55	51	0	0	0	0	0	0	106
30-34	43	9	3	0	0	0	0	0	55
35-39	22	14	38	38	0	0	0	0	112
40-44	11	14	49	11	39	13	0	0	137
45-49	3	5	18	19	33	24	0	0	102
50-54	3	1	12	7	27	25	0	0	75
55-59	1	0	2	4	8	8	7	0	30
60-64	0	0	0	0	0	1	1	1	3
65 & Up	0	0	0	0	0	0	0	1	1
Total	216	94	122	79	107	71	8	2	699



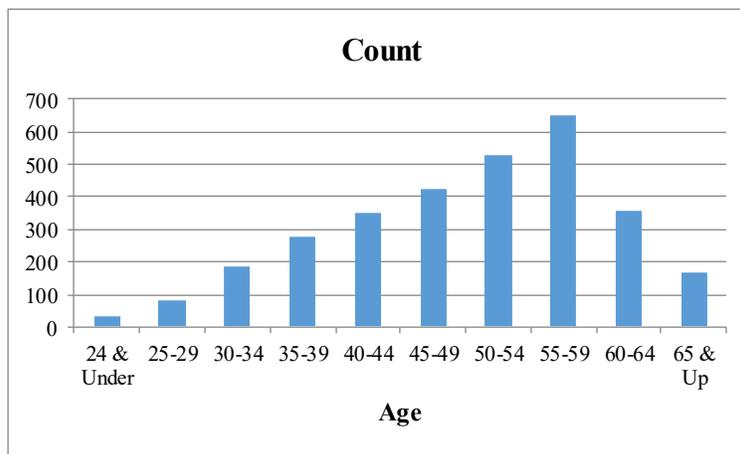
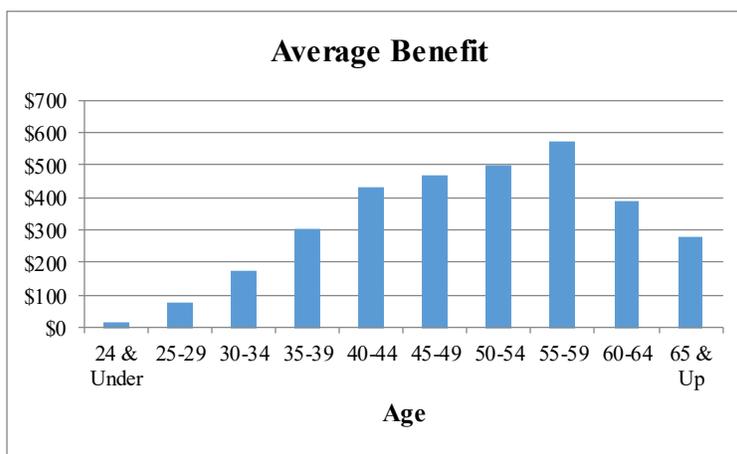


APPENDIX A: MEMBERSHIP DATA

**SUMMARY OF INACTIVE VESTED MEMBERS
as of January 1, 2023**

General Employees

Age	Count			Estimated Monthly Benefits		
	Male	Female	Total	Male	Female	Total
24 & Under	12	18	30	\$ 240	\$ 197	\$ 437
25-29	32	51	83	2,307	4,032	6,339
30-34	72	114	186	14,206	18,072	32,278
35-39	98	180	278	31,230	53,363	84,593
40-44	139	214	353	70,974	80,959	151,933
45-49	175	251	426	87,583	112,019	199,602
50-54	218	313	531	131,138	134,473	265,611
55-59	253	396	649	166,795	205,678	372,473
60-64	137	221	358	59,036	80,059	139,095
65 & Up	<u>69</u>	<u>101</u>	<u>170</u>	<u>23,620</u>	<u>23,826</u>	<u>47,446</u>
Total	1,205	1,859	3,064	\$ 587,129	\$ 712,678	\$ 1,299,807



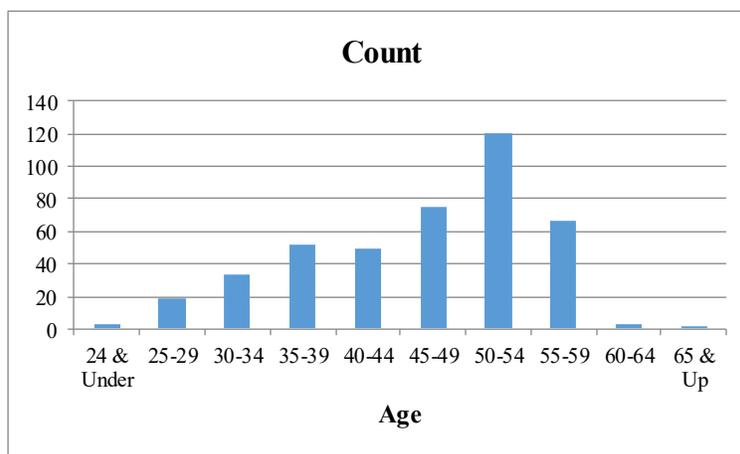
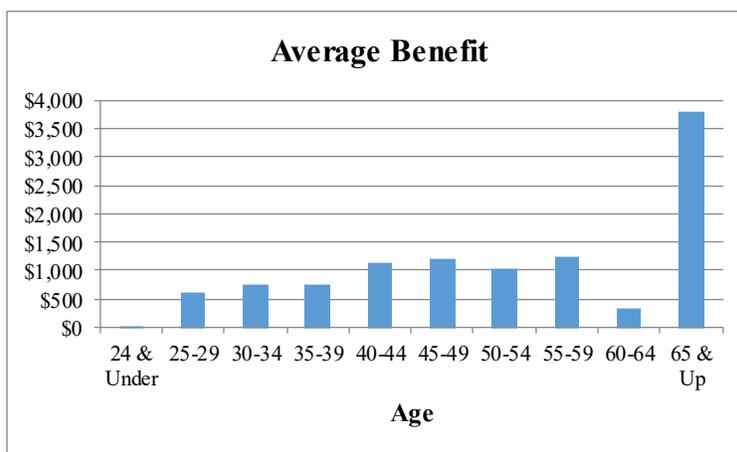


APPENDIX A: MEMBERSHIP DATA

**SUMMARY OF INACTIVE VESTED MEMBERS
as of January 1, 2023**

Policemen

Age	Count			Estimated Monthly Benefits		
	Male	Female	Total	Male	Female	Total
24 & Under	2	1	3	\$ 20	\$ 1	\$ 21
25-29	15	4	19	8,647	3,000	11,647
30-34	29	4	33	22,113	2,300	24,413
35-39	39	13	52	31,339	7,089	38,428
40-44	36	14	50	42,959	13,496	56,455
45-49	57	18	75	75,447	15,601	91,048
50-54	89	31	120	97,572	27,487	125,059
55-59	49	18	67	60,443	23,227	83,670
60-64	3	0	3	1,038	0	1,038
65 & Up	<u>1</u>	<u>0</u>	<u>1</u>	<u>3,795</u>	<u>0</u>	<u>3,795</u>
Total	320	103	423	\$ 343,373	\$ 92,201	\$ 435,574



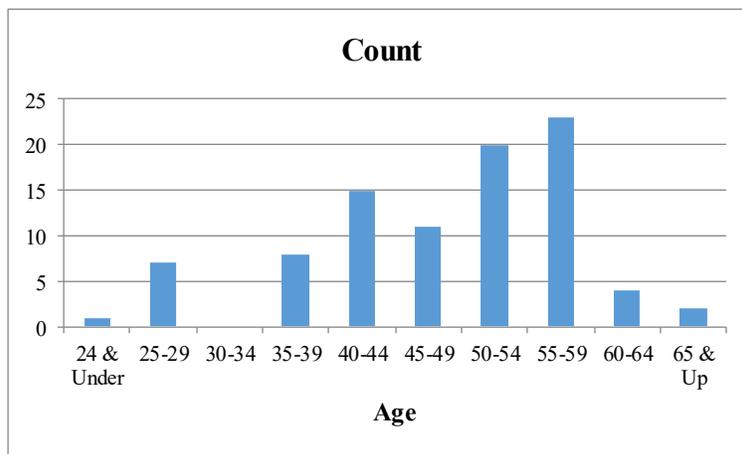
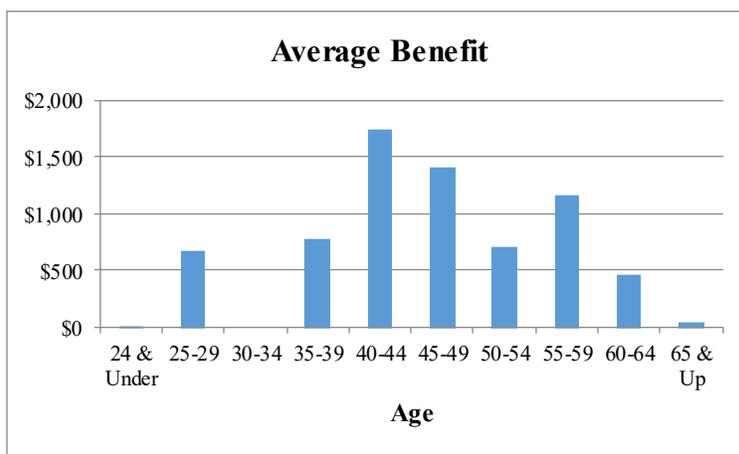


APPENDIX A: MEMBERSHIP DATA

**SUMMARY OF INACTIVE VESTED MEMBERS
as of January 1, 2023**

Firemen

Age	Count			Estimated Monthly Benefits		
	Male	Female	Total	Male	Female	Total
24 & Under	1	0	1	\$ 4	\$ 0	\$ 4
25-29	6	1	7	4,068	704	4,772
30-34	0	0	0	0	0	0
35-39	7	1	8	6,225	9	6,234
40-44	14	1	15	22,438	3,559	25,997
45-49	11	0	11	15,431	0	15,431
50-54	18	2	20	14,008	31	14,039
55-59	22	1	23	25,423	1,479	26,902
60-64	4	0	4	1,826	0	1,826
65 & Up	<u>2</u>	<u>0</u>	<u>2</u>	<u>81</u>	<u>0</u>	<u>81</u>
Total	85	6	91	\$ 89,504	\$ 5,782	\$ 95,286





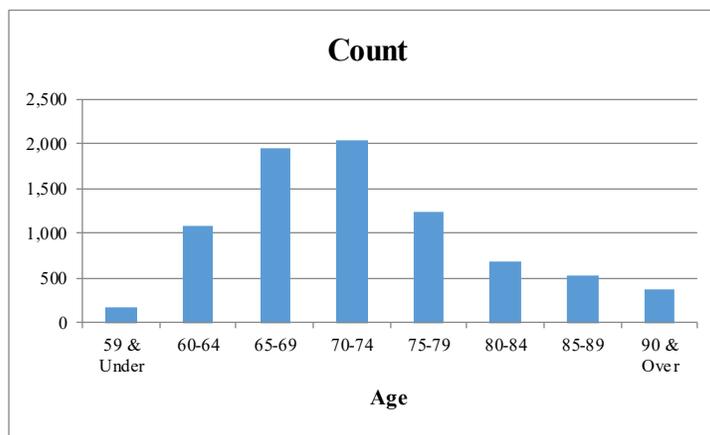
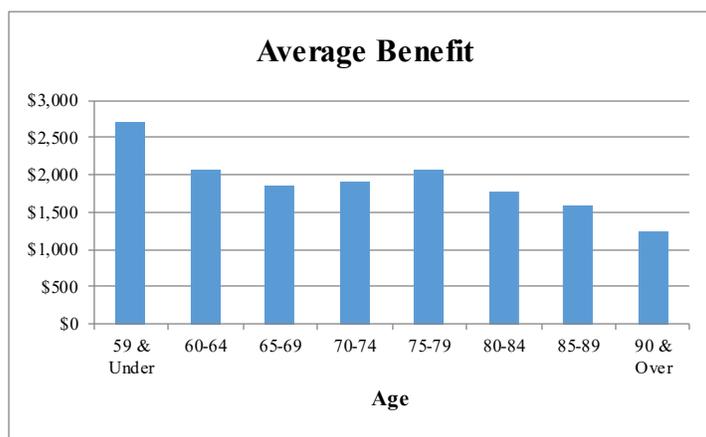
APPENDIX A: MEMBERSHIP DATA

**SUMMARY OF RETIRED MEMBERS
as of January 1, 2023**

General Employees

Age	Count			Monthly Benefits		
	Male	Female	Total	Male	Female	Total
59 & Under	79	86	165	\$ 230,673	\$ 214,532	\$ 445,205
60-64	516	572	1,088	1,223,646	1,014,010	2,237,656
65-69	911	1,036	1,947	2,139,765	1,464,221	3,603,986
70-74	1,005	1,033	2,038	2,366,475	1,511,064	3,877,539
75-79	627	621	1,248	1,704,201	865,257	2,569,458
80-84	295	400	695	770,976	459,477	1,230,453
85-89	212	310	522	532,818	297,810	830,628
90 & Over	<u>130</u>	<u>251</u>	<u>381</u>	<u>301,395</u>	<u>176,664</u>	<u>478,059</u>
Total	3,775	4,309	8,084	\$ 9,269,949	\$ 6,003,035	\$ 15,272,984

Note: The counts shown are for members who are receiving benefits as of January 1, 2023. Benefit amounts are the full December monthly payment and have been reduced for any workers' compensation offsets.





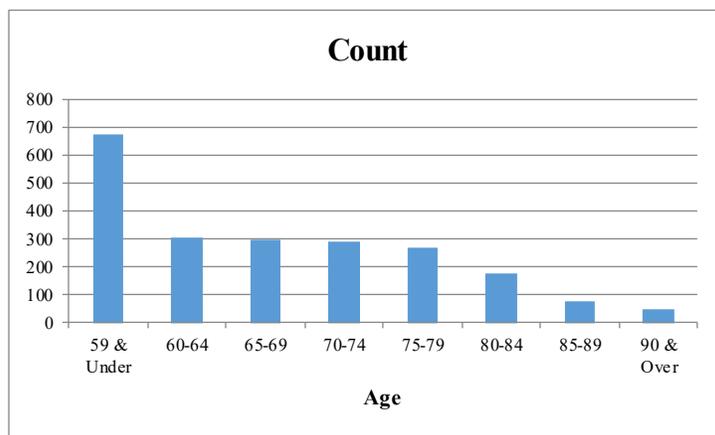
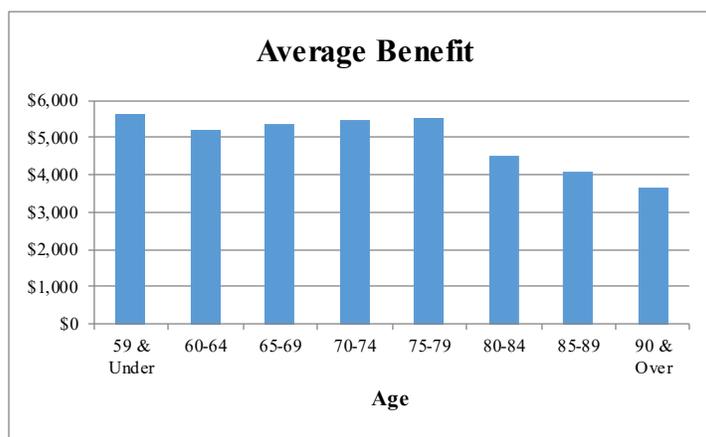
APPENDIX A: MEMBERSHIP DATA

**SUMMARY OF RETIRED MEMBERS
as of January 1, 2023**

Policemen

Age	Count			Monthly Benefits		
	Male	Female	Total	Male	Female	Total
59 & Under	544	132	676	\$ 3,058,941	\$ 764,237	\$ 3,823,178
60-64	252	55	307	1,312,851	285,393	1,598,244
65-69	257	42	299	1,368,889	227,182	1,596,071
70-74	257	33	290	1,420,874	170,811	1,591,685
75-79	261	10	271	1,448,904	44,297	1,493,201
80-84	173	1	174	780,658	3,986	784,644
85-89	76	0	76	309,728	0	309,728
90 & Over	<u>50</u>	<u>2</u>	<u>52</u>	<u>185,164</u>	<u>5,069</u>	<u>190,233</u>
Total	1,870	275	2,145	\$ 9,886,009	\$ 1,500,975	\$ 11,386,984

Note: The counts shown are for members who are receiving benefits as of January 1, 2023. Benefit amounts are the full December monthly payment and have been reduced for any workers' compensation offsets.





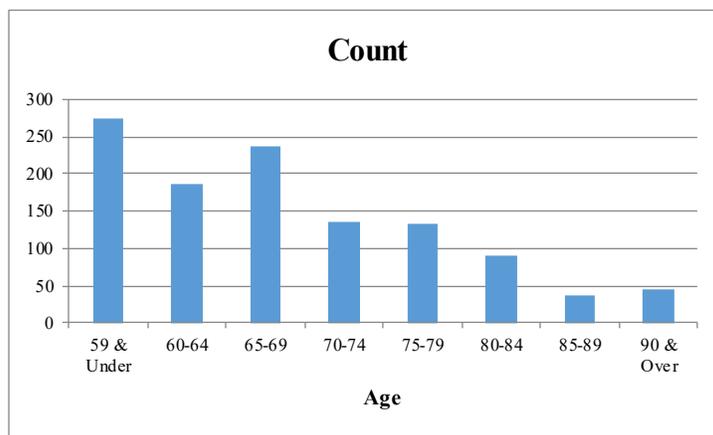
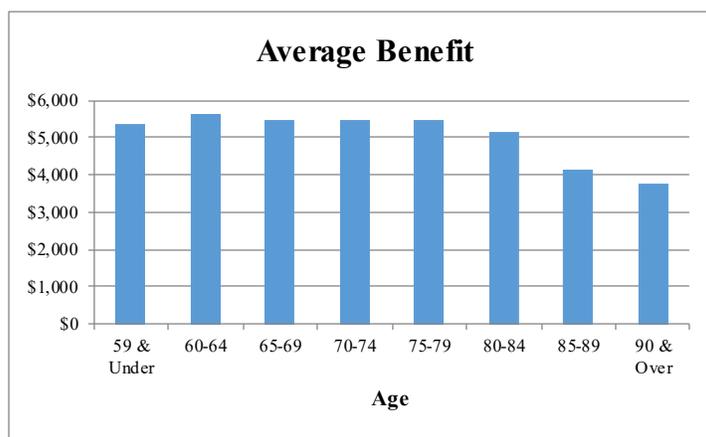
APPENDIX A: MEMBERSHIP DATA

**SUMMARY OF RETIRED MEMBERS
as of January 1, 2023**

Firemen

Age	Count			Monthly Benefits		
	Male	Female	Total	Male	Female	Total
59 & Under	257	16	273	\$ 1,372,563	\$ 85,048	\$ 1,457,611
60-64	169	17	186	948,374	96,728	1,045,102
65-69	226	12	238	1,249,436	52,191	1,301,627
70-74	129	6	135	710,690	24,569	735,259
75-79	133	0	133	725,105	0	725,105
80-84	89	0	89	456,951	0	456,951
85-89	38	0	38	157,918	0	157,918
90 & Over	<u>43</u>	<u>1</u>	<u>44</u>	<u>160,714</u>	<u>4,165</u>	<u>164,879</u>
Total	1,084	52	1,136	\$ 5,781,751	\$ 262,701	\$ 6,044,452

Note: The counts shown are for members who are receiving benefits as of January 1, 2023. Benefit amounts are the full December monthly payment and have been reduced for any workers' compensation offsets.





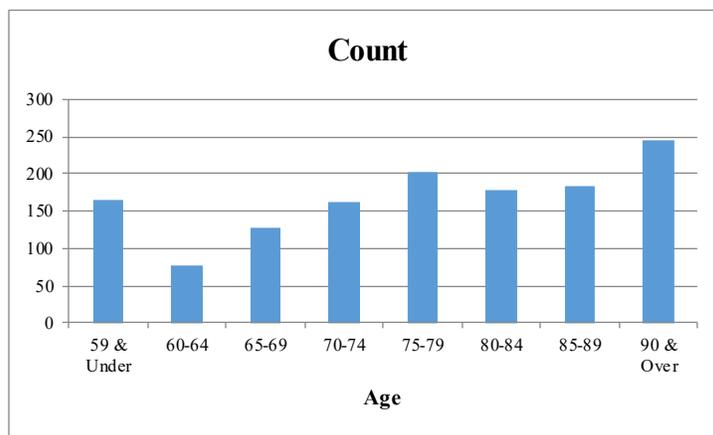
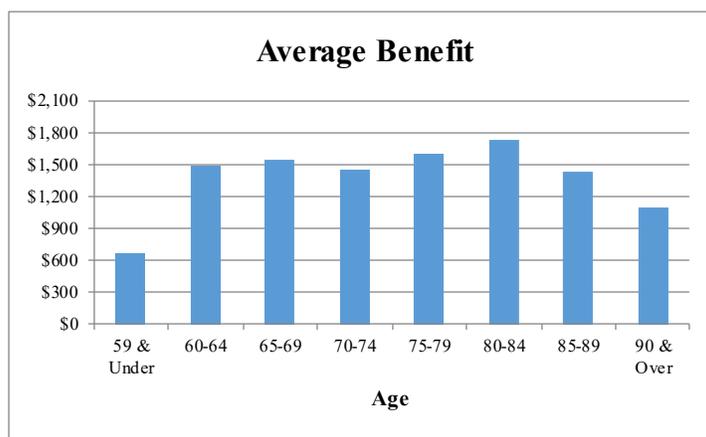
APPENDIX A: MEMBERSHIP DATA

**SUMMARY OF BENEFICIARIES
as of January 1, 2023**

General Employees

Age	Count			Monthly Benefits		
	Male	Female	Total	Male	Female	Total
59 & Under	67	99	166	\$ 36,371	\$ 73,973	\$ 110,344
60-64	15	62	77	12,012	101,695	113,707
65-69	26	102	128	26,742	170,081	196,823
70-74	27	135	162	24,292	210,769	235,061
75-79	31	170	201	26,851	295,265	322,116
80-84	15	162	177	12,424	294,383	306,807
85-89	14	170	184	11,917	252,672	264,589
90 & Over	<u>29</u>	<u>215</u>	<u>244</u>	<u>16,422</u>	<u>250,686</u>	<u>267,108</u>
Total	224	1,115	1,339	\$ 167,031	\$ 1,649,524	\$ 1,816,555

Note: The counts shown are for members who are receiving benefits as of January 1, 2023. Benefit amounts are the full December monthly payment and have been reduced for any workers' compensation offsets.





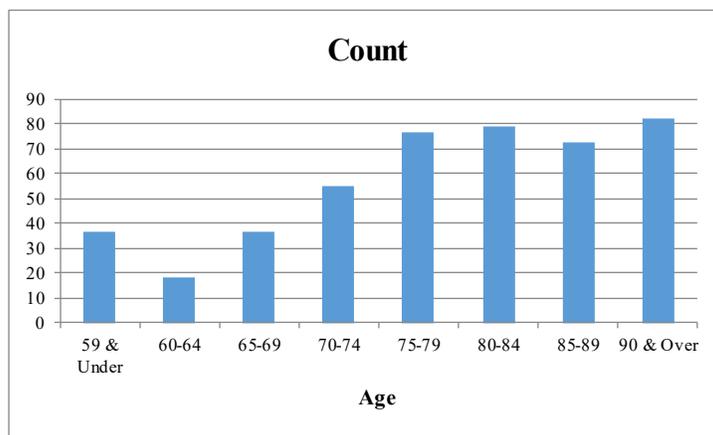
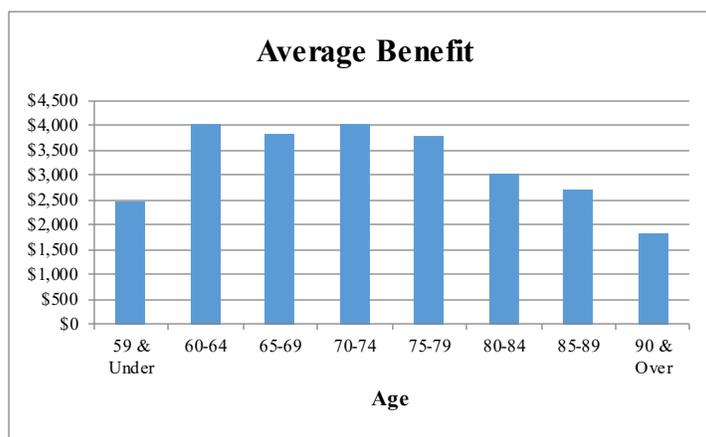
APPENDIX A: MEMBERSHIP DATA

**SUMMARY OF BENEFICIARIES
as of January 1, 2023**

Policemen

Age	Count			Monthly Benefits		
	Male	Female	Total	Male	Female	Total
59 & Under	6	31	37	\$ 7,146	\$ 83,727	\$ 90,873
60-64	0	18	18	0	72,095	72,095
65-69	4	33	37	6,617	135,491	142,108
70-74	2	53	55	4,679	217,196	221,875
75-79	1	76	77	3,667	287,697	291,364
80-84	0	79	79	0	238,608	238,608
85-89	0	73	73	0	196,145	196,145
90 & Over	<u>1</u>	<u>81</u>	<u>82</u>	<u>1,120</u>	<u>146,872</u>	<u>147,992</u>
Total	14	444	458	\$ 23,229	\$ 1,377,831	\$ 1,401,060

Note: The counts shown are for members who are receiving benefits as of January 1, 2023. Benefit amounts are the full December monthly payment and have been reduced for any workers' compensation offsets.





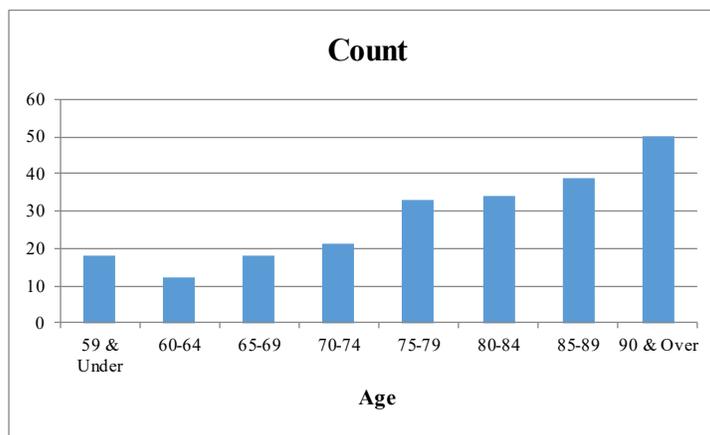
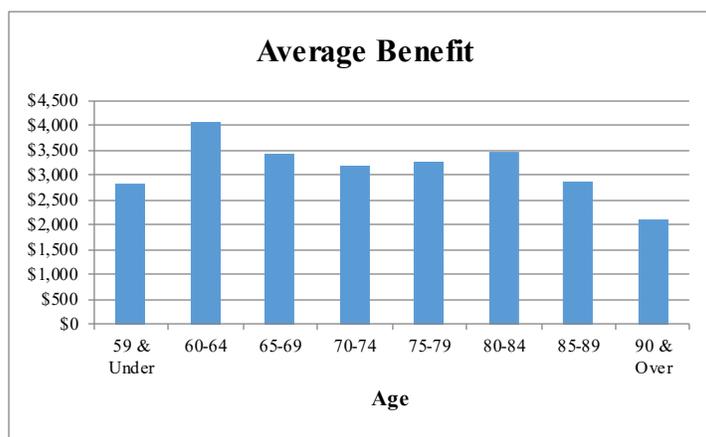
APPENDIX A: MEMBERSHIP DATA

**SUMMARY OF BENEFICIARIES
as of January 1, 2023**

Firemen

Age	Count			Monthly Benefits		
	Male	Female	Total	Male	Female	Total
59 & Under	6	12	18	\$ 7,299	\$ 43,346	\$ 50,645
60-64	1	11	12	1,995	46,807	48,802
65-69	0	18	18	0	61,646	61,646
70-74	0	21	21	0	66,588	66,588
75-79	0	33	33	0	107,226	107,226
80-84	0	34	34	0	117,242	117,242
85-89	0	39	39	0	111,558	111,558
90 & Over	<u>0</u>	<u>50</u>	<u>50</u>	<u>0</u>	<u>105,743</u>	<u>105,743</u>
Total	7	218	225	\$ 9,294	\$ 660,156	\$ 669,450

Note: The counts shown are for members who are receiving benefits as of January 1, 2023. Benefit amounts are the full December monthly payment and have been reduced for any workers' compensation offsets.





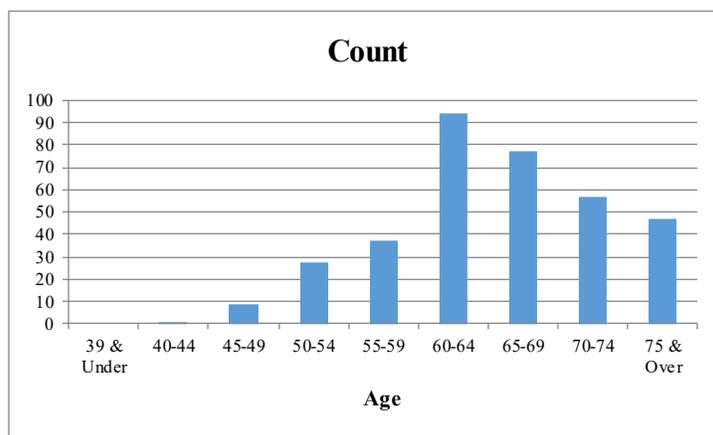
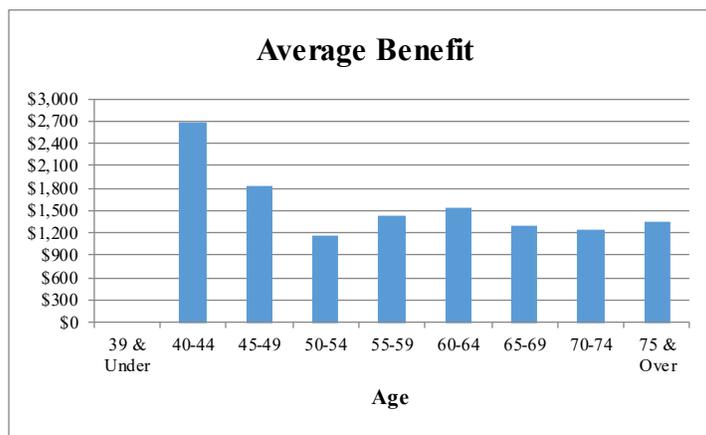
APPENDIX A: MEMBERSHIP DATA

**SUMMARY OF DISABLED MEMBERS
as of January 1, 2023**

General Employees

Age	Count			Monthly Benefits		
	Male	Female	Total	Male	Female	Total
39 & Under	0	0	0	\$ 0	\$ 0	\$ 0
40-44	1	0	1	2,684	0	2,684
45-49	4	5	9	6,348	10,008	16,356
50-54	12	15	27	16,601	15,036	31,637
55-59	17	20	37	29,114	24,070	53,184
60-64	50	44	94	99,434	46,161	145,595
65-69	32	45	77	56,196	43,777	99,973
70-74	23	34	57	33,853	37,493	71,346
75 & Over	<u>28</u>	<u>19</u>	<u>47</u>	<u>47,967</u>	<u>15,733</u>	<u>63,700</u>
Total	167	182	349	\$ 292,197	\$ 192,278	\$ 484,475

Note: The counts shown are for members who are receiving benefits as of January 1, 2023. Benefit amounts are the full December monthly payment and have been reduced for any workers' compensation offsets.





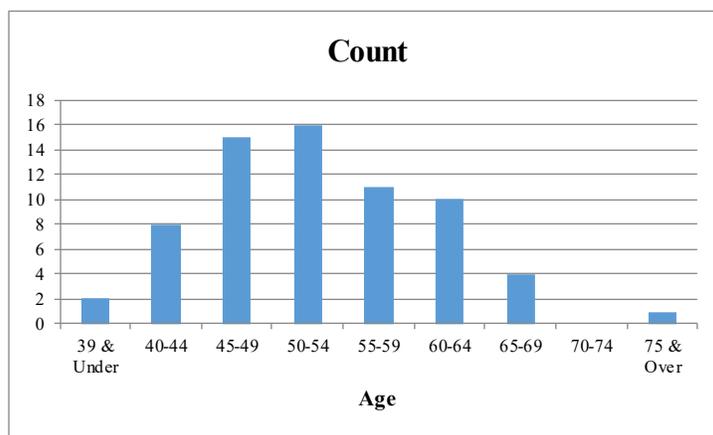
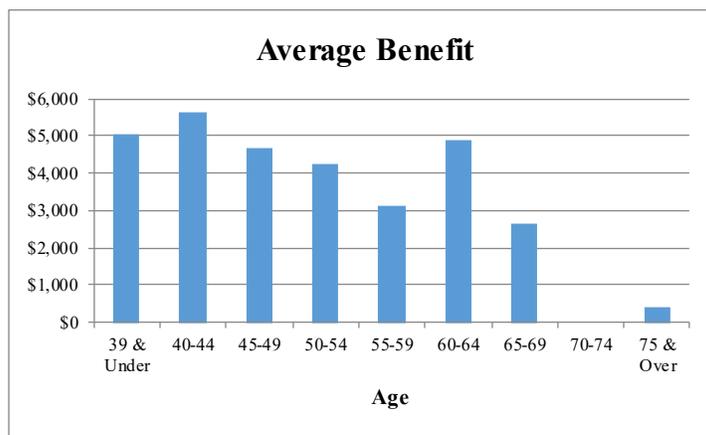
APPENDIX A: MEMBERSHIP DATA

**SUMMARY OF DISABLED MEMBERS
as of January 1, 2023**

Policemen

Age	Count			Monthly Benefits		
	Male	Female	Total	Male	Female	Total
39 & Under	2	0	2	\$ 10,071	\$ 0	\$ 10,071
40-44	5	3	8	28,464	16,406	44,870
45-49	12	3	15	58,013	12,401	70,414
50-54	7	9	16	28,989	39,321	68,310
55-59	8	3	11	18,313	15,824	34,137
60-64	6	4	10	32,165	16,622	48,787
65-69	3	1	4	9,104	1,498	10,602
70-74	0	0	0	0	0	0
75 & Over	<u>1</u>	<u>0</u>	<u>1</u>	<u>433</u>	<u>0</u>	<u>433</u>
Total	44	23	67	\$ 185,552	\$ 102,072	\$ 287,624

Note: The counts shown are for members who are receiving benefits as of January 1, 2023. Benefit amounts are the full December monthly payment and have been reduced for any workers' compensation offsets.





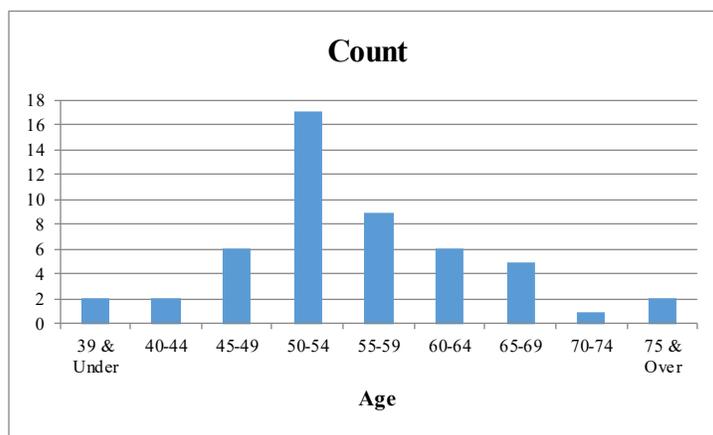
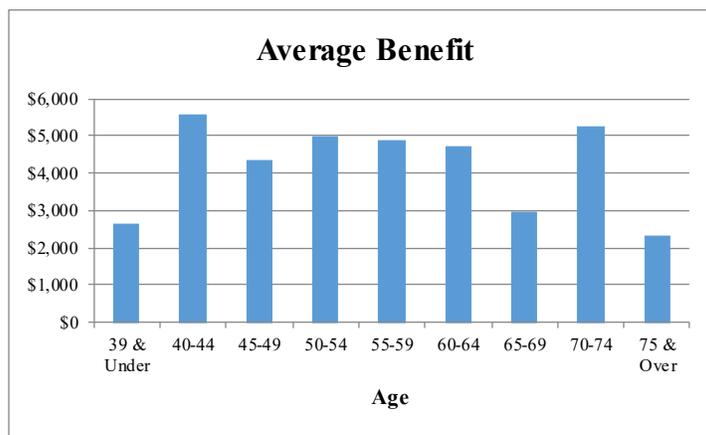
APPENDIX A: MEMBERSHIP DATA

**SUMMARY OF DISABLED MEMBERS
as of January 1, 2023**

Firemen

Age	Count			Monthly Benefits		
	Male	Female	Total	Male	Female	Total
39 & Under	2	0	2	\$ 5,327	\$ 0	\$ 5,327
40-44	2	0	2	11,190	0	11,190
45-49	6	0	6	26,149	0	26,149
50-54	16	1	17	79,448	5,216	84,664
55-59	9	0	9	44,044	0	44,044
60-64	4	2	6	19,031	9,187	28,218
65-69	2	3	5	6,228	8,503	14,731
70-74	1	0	1	5,245	0	5,245
75 & Over	<u>2</u>	<u>0</u>	<u>2</u>	<u>4,609</u>	<u>0</u>	<u>4,609</u>
Total	44	6	50	\$ 201,271	\$ 22,906	\$ 224,177

Note: The counts shown are for members who are receiving benefits as of January 1, 2023. Benefit amounts are the full December monthly payment and have been reduced for any workers' compensation offsets.





APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

SUMMARY OF BENEFIT PROVISIONS

A summary of the main benefit provisions of the Retirement System and of the sources of revenue from which benefits are paid is presented in the following digest. Items in parentheses in the text are the provisions applicable to law enforcement officers.

Eligibility for Membership

Membership is optional for all Employees that were in service as of January 1, 1938. Individuals employed prior to January 1, 2024 are automatically members as a condition of employment. Membership is optional for public officials elected prior to January 1, 2024. Note that unless specifically stated, elected officials follow the same rules as General Employees.

Additionally, effective January 1, 2014, there are two tiers of benefits. Tier 1 is for General Employees enrolled prior to January 1, 2014, and all Fire and Police Employees. Tier 2 is for General Employees enrolled on or after January 1, 2014.

As a result of 2023 Wisconsin Act 12, employees hired on or after January 1, 2024 are not eligible to participate in ERS.

Participation in the Combined Fund

On January 19, 2001 the Combined Fund was created and was retroactive to January 1, 2000. Individuals who participate in the Combined Fund may be eligible for certain benefit enhancements which are described in this Summary of Plan Provisions. Members who enroll in the ERS after June 28, 2000, and their eligible survivors, are automatically participants in the Combined Fund. Members enrolled in the ERS on or before June 28, 2000, and their eligible survivors, participate in the Combined Fund provided that the members consented in writing to the Global Pension Settlement. Eligible survivors of members or retirees who died on or before June 28, 2000 participate in the Combined Fund provided that the eligible survivors consented in writing to the Global Pension Settlement. Members or survivors whose benefit payments ceased prior to January 1, 2000, are not eligible for benefits from the Combined Fund.

Creditable Service

Creditable service equals prior service plus membership service. Prior service includes service as an employee prior to January 1, 1938, or prior to an amendment which made the employee eligible for membership in the ERS. Membership service means service as an employee since last becoming a member, on account of which contributions are made.

- For most Employees, 2080 hours of service constitute one year of creditable service. For prevailing wage Employees (carpenters and other tradespeople) 2000 hours constitute one year. For members employed by the school board for a 10-month school year, 1600 hours of service constitute a year of creditable service. After July 2006, for members serving as firefighters, 2590 hours of service constitutes one year of creditable service. After September 2016, for members serving as firefighters, 2756 hours of service constitutes one year of creditable service.
- Under certain conditions creditable service may be granted for periods of absence due to military service.



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

- For purposes of computing the service retirement allowance only, creditable service is granted for periods of eligibility for a duty disability retirement allowance.
- No more than one year of creditable service is granted for service in a single calendar year.

Imputed Service

Imputed service credit may be granted, under specified conditions, to members who consented to the Global Pension Settlement. Imputed service credit is used to calculate the amount of certain benefits but is not used to determine eligibility for any kind of benefit. An individual may be eligible for one or more types of imputed service credit.

Eligibility for Imputed Service Credit

Only individuals participating in the Combined Fund can become eligible for the following types of imputed service credit.

- a) **Imputed military service credit:** The member must have been active in the armed forces of the United States of America prior to his or her enrollment in the ERS, and must have been honorably discharged. A member must be described as in 36-04-1-c. An individual eligible for imputed military service credit must apply for the credit.
- b) **Imputed fire and police service credit:** The member must be described as in 36-04-4-a. The member must have been in active ERS service as a fireman or policeman as of January 1, 2000, and must also retire from ERS service as a fireman or policeman, or die while a fireman or policeman eligible for protective survivorship option benefits. To be eligible, the member must retire or die as a policeman or fireman and must have attained the minimum service retirement requirements as outlined in 36-05-1.
- c) **Imputed service credit under the dissolution of the Firemen and Policemen’s Survivorship Fund, (the “Fund”):** The member must be described as in 36-04-4-b. The member must have been a policeman who was an active member of the “Fund” as of January 1, 2000. If the policeman was in active ERS service as of January 1, 2000, he must either retire as a policeman on a service retirement allowance at the minimum service retirement age of 57 or after completing 25 years of creditable service as a fireman or policeman; or he must retire on a policeman’s duty disability retirement allowance and subsequently convert to a service retirement allowance. If the policeman was retired on a duty disability retirement allowance as of January 1, 2000, then he must subsequently convert to a service retirement allowance.

Benefits Affected by Imputed Service Credit

- a) **Imputed military service credit and/or imputed fire and police service credit:** The amount of the service retirement allowance, the conversion service retirement allowance, protective survivorship option benefits, and the extended life duty disability retirement allowance are affected. If the eligible individual is also entitled to a 5% Lump Sum Bonus, and/or an 8.6% Dissolution Bonus that is based on the affected benefit, then the imputed service credit is included in calculating the base for the bonus payment(s).



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

- b) Imputed service credit under the dissolution of the Firemen and Policemen's Survivorship Fund: The amount of the service retirement allowance and the conversion service retirement allowance are affected. If the service retirement allowance is affected, then the imputed service credit is included in calculating the base for the 5% Lump Sum Bonus.

See the benefit descriptions later in this summary for further details on how imputed service credit is used.

Amount of Imputed Service Credit

- a) Imputed military service credit: A period of eligible military service consists of a period of at least 90 consecutive days of active service in the armed forces of the United States prior to enrollment in the ERS. Total eligible military service equals the sum of all periods of eligible military service. Imputed military service credit equals one-third of the member's total eligible military service, to a maximum of three years of imputed military service credit.
- b) Imputed fire and police service credit: For policemen and firemen with 20 years of creditable service as a fireman or policeman - 1.5 years. For firemen with less than 20 years of creditable service as a fireman or policeman: 1.5 years times the full years of creditable fire and police service, divided by 20.
- c) Imputed service credit under the dissolution of the Firemen and Policemen's Survivorship Fund: 2 years.

Seasonal Service

Seasonal service credit may be granted under specified conditions to certain General City Employees. Seasonal service credit is used to calculate the amount of certain benefits but is not used to determine eligibility for any kind of benefit.

Eligibility for Seasonal Service Credit

In order to be eligible for seasonal service credit, a member must be a General City employee with five or more years of City service credit, and a member of one of the groups as outlined in 36-04-1-d.

Benefits Affected by Seasonal Service Credit

Seasonal service credit affects the amount of the service retirement allowance, the conversion service retirement allowance and protective survivorship option benefits. If the eligible individual is also entitled to a 5% Lump Sum Bonus that is based on the affected benefit, then the seasonal service credit is included in calculating the base for the bonus payment.

Amount of Seasonal Service Credit

Seasonal service is based on the hours worked as a City Labor-Seasonal employee and/or Playground Laborer-Seasonal employee (MPS), but limited to one year of additional service credit.



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

Qualifying for an ERS Benefit

Rules regarding qualifying time are encapsulated in the ERS Board Rules & Regulations, XV.G. The rules have been adopted and applied prospectively for enrollments prior to 1995, 1995 to 2001 and post 2001. All members are fully vested after attaining four years of qualifying time.

Earnable Compensation

The annual regular base salary that would be payable to a member if he or she worked the full normal working time for his or her position as described in 36-02-12. Earnable compensation for the calendar year preceding retirement may also include special pays as negotiated in labor agreements such as longevity in rank pay, (limited) variable shift assignment pay, police liaison officer pay, and/or certification pay for policemen; and emergency medical technician pay for firemen. Earnable compensation for school board Employees represented by Local 950, OEIU, also includes site differential pay.

Final Average Salary

- a) For General Employees, final average salary means the average annual earnable compensation computed on the 3 years of creditable service preceding retirement, death or separation from service during which earnable compensation was the highest.
- b) For policemen and firemen, final average salary means the average annual earnable compensation computed on the year of creditable service preceding retirement, death or separation from service during which earnable compensation was the highest.
- c) For members converting from a duty disability retirement allowance to a service retirement allowance, the service retirement allowance is computed on the basis of the current compensation of the member's position at the service retirement date.

Service Retirement

Eligibility for Service Retirement

For Tier 1 Benefits (applicable to General Employees enrolled prior to January 1, 2014 and all Fire and Police Employees), eligibility for service retirement is as defined under 36-05-01 as follows:

- a) A service retirement allowance is payable to any member who elects to retire after attaining the minimum service retirement age, which is age 60 for General Employees and age 57 for policemen and firemen.
- b) General Employees that have attained age 55 and completed 30 years of qualifying time are eligible for service retirement.
- c) Policemen who participate in the Combined Fund are eligible for service retirement at any age after attaining 25 years of fire or police qualifying time, if they were hired prior to December 20, 2015.
- d) Policemen who participate in the Combined Fund, who have attained age 50 are eligible for service retirement after completing 25 years of police qualifying time, if they were hired on/after December 20, 2015.



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

- e) Firemen who participate in the Combined Fund, who have attained age 49 and completed 22 years of fire or police qualifying time, are eligible for service retirement, if they were hired prior to July 30, 2016.
- f) Firemen who participate in the Combined Fund, who have attained age 52 and completed 25 years of fire qualifying time, are eligible for service retirement, if they were hired on/after July 30, 2016.
- g) Policeman and firemen who are not participants in the Combined Fund are eligible for service retirement after attaining age 52 and completing 25 years of fire or police qualifying time.

For Tier 2 Benefits (applicable to General Employees enrolled on or after January 1, 2014), eligibility for service retirement is as defined under 36-05-01 as follows:

- a) A service retirement allowance is payable to any member who elects to retire after attaining the minimum service retirement age, which is age 65 for General Employees.
- b) General Employees that have attained age 60 and completed 30 years of qualifying time are eligible for service retirement.

Amount of Service Retirement Allowance

The amount of a member's service retirement allowance under 36-05-01 is equal to the following:

- a) For General Employees, enrolled prior to January 1, 2014, 2% of final average salary for each year of creditable service, imputed military service, or seasonal service limited to 70% of final average salary. For General Employees, enrolled on or after January 1, 2014, 1.6% of final average salary for each year of creditable service, imputed military service, or seasonal service limited to 70% of final average salary.
- b) For firemen enrolled prior to March 1, 1989, and policemen enrolled prior to July 1, 1989, and who were in active service on or after January 1, 1995, 2.5% of final average salary for each year of creditable service or imputed service (of any kind).
- c) For firemen enrolled after February 28, 1989, and policemen enrolled after June 30, 1989, 2.5% of final average salary for each year of creditable service or imputed military service, limited to 90% of final average salary, plus 2.5% of final average salary for each year of imputed fire and police service or imputed service under the dissolution of the Firemen and Policemen's Survivorship Fund.
- d) For elected officials enrolled prior to January 1, 2014, 2.6% of final average salary for each year of creditable service as an elected official for years before 1996, limited to 70% of the final average salary; from 1996 forward the rate of accrual for creditable service, imputed military service, or seasonal service is 2.5% except for the mayor, who will have an accrual rate of 2.0%, limited to 70% of the final average salary, except for elected officials who were enrolled prior to 2014 and are first elected to office on or after January 1, 2014, in which case their accrual rate is 2% for each year if they contribute 5.5% of their earnable compensation, or 2.5% for each year if they contribute 7% of their earnable compensation. For elected officials enrolled on or after January 1, 2014, 1.6% of final average salary for each year of creditable service as an elected official limited to 70% of the final average salary.



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

Funds Charged with Service Retirement Allowance

For individuals participating in the Combined Fund, service retirement allowance payments are charged to the Combined Fund. For all other individuals, the service retirement allowance is charged to (i) the Retirement Fund if the member's enrollment date is prior to February 1, 1996, and (ii) the Combined Retirement and Disability Fund if the member enrolled on or after February 1, 1996.

Ordinary Disability Retirement Allowance

Eligibility for Ordinary Disability Retirement Allowance

A member who the medical council certifies is mentally or physically incapacitated for further performance of duty that such incapacity is likely to be permanent and that such member should be retired, is eligible for the ordinary disability retirement allowance. The ordinary disability allowance is not payable if the member qualifies for the duty disability allowance.

Amount of Ordinary Disability Retirement Allowance

Imputed service credit and seasonal service credit are not used in any part of the calculation of the Ordinary Disability Retirement Allowance. The "service retirement allowance" referred to below is calculated based on creditable service only.

- a) For General Employees, 90% of the service retirement allowance based on creditable service to date of disability retirement, but no less than 25% of final average salary, provided such amount does not exceed 90% of the retirement allowance payable had the member continued in service to the minimum service retirement age.
- b) For policemen and firemen hired after January 1, 1971, who have 5 years of service, 25% of final average salary plus 2% thereof for each year of creditable service in excess of 5 years up to a maximum of 50% of final average salary.
- c) For policemen and firemen hired before January 1, 1971, the greater of the benefit described in (a), or the benefit described in (b).
- d) The benefit is payable for life while the member remains disabled, except that for General Employees with less than 10 years of qualifying time, the duration is limited to one-fourth (1/4) of the period of the service accrued to the date of disability.
- e) Members receiving benefits for life may elect reduced benefits under an optional form of payment in order to provide a death benefit to a designated beneficiary.

Funds Charged with Ordinary Disability Retirement Allowance

Ordinary disability retirement allowance payments are charged to the Combined Fund if the eligible individual is a participant in the Combined Fund. Otherwise, the allowance is charged to (i) the Retirement Fund, if the member's enrollment date is before February 1, 1996, and (ii) the Combined Retirement and Disability Fund, if the member's enrollment date is on or after February 1, 1996.



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

Duty Disability Retirement Allowance

Eligibility for Duty Disability Retirement Allowance

If a member becomes permanently and totally incapacitated for duty as a result of the performance of his duty, and his mental or physical incapacitation is medically certified, such member is eligible for a duty disability retirement allowance. Unless the member is beyond his/her conversion age, in which case the member would be eligible for an extended lifetime Duty Disability benefit. The medical certification is made by the Medical Council for General Employees, for members of the MPA enrolled after June 28, 2005, and for members of the MPFFA enrolled after December 13, 2005 with disability based on a mental injury. For all other members, the medical certification is made by the Medical Panel, except as indicated below. There are certain diseases that are considered presumptive for purposes of duty disabilities.

All new duty disability applications are reviewed by the Medical Council effective June 19, 2016 for MPA members, effective January 1, 2016 for MPSO members, and effective July 29, 2016 for MPFFA members.

Effective July 14, 2015, a new state law was enacted related to duty disability benefits for mental injuries (section 62.624 Wis. Stat.). The ERS may only provide a duty disability benefit for a mental injury if the following criteria are met:

- a) The mental injury resulted from a situation of greater dimensions than the day-to-day mental stresses and tension and post-traumatic stress that all similarly situated Employees must experience as part of the employment, *and*
- b) The employer certifies that the mental injury is a duty-related injury.

Only if a duty-related mental injury has occurred, can the duty disability application be forwarded to the Medical Panel or Medical Council for the examination and requisite certification.

Amount of Duty Disability Related Benefits

Imputed service credit and seasonal service credit are not used when calculating a duty disability retirement allowance. Imputed service credit or seasonal service credit is used when calculating the conversion service retirement allowance referred to in paragraphs (a) - (c) below. Eligibility for imputed military service credit depends upon the date of the conversion, not upon the date of the duty disability retirement.

- a) For General Employees, the duty disability retirement allowance equals 75% of the member's final average salary. Members receive the allowance, while disability continues, until the later of age 65, or for a period of 5 years, at which time they convert to a service retirement allowance. General Employees receiving duty disability benefits may elect reduced benefits under an optional form of payment in order to provide a death benefit to a designated beneficiary.
- b) For firemen and policemen, the duty disability retirement allowance is 75% of the current annual salary for the position held by the member at retirement, plus \$40 per month for each child younger than age 18 (up to a maximum of 20% of the member's salary). In certain cases of extreme disability, when approved by a panel of physicians, the disability allowance will be 90% of such salary. Duty disability benefits paid to firemen on account of heart and lung disease are at the 75% level. In the event of the death of a policeman or fireman receiving a 75% or 90% disability



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

allowance, 70% or 75%, respectively, of the amount of the member's allowance shall be paid to the member's spouse during her lifetime.

The 90% duty disability allowances are payable for life. For policemen enrolled on or after January 1, 1990, and firemen enrolled on or after December 17, 1989, the 75% duty disability allowances are payable until the earlier of attainment of age 57, or completion of 25 years of service and attainment of age 52, at which time the member must either convert to a service retirement allowance or irrevocably elect to receive a recalculated duty disability allowance, referred to as an extended life duty disability allowance, as described in (c), below. Different conversion age requirements apply to policemen enrolled prior to January 1, 1990, and firemen enrolled prior to December 17, 1989, as discussed in (d), below. A fireman or policeman who becomes duty disabled on or after his conversion age may choose between a service retirement or extended life duty disability retirement.

- c) The extended life duty disability allowance referred to in (b), above, equals the lesser of the conversion service retirement allowance, or 75% of the current annual salary, provided further that the benefit will not be less than 57% of current annual salary for a fireman, or 60% of current annual salary for a policeman. "Current annual salary" here refers to the salary at the conversion age, for the position held by the member at the time of injury. The extended life duty disability allowance is payable for life and, unlike the duty disability allowance, is a fixed amount that does not change after the conversion age, notwithstanding any cost of living adjustments. Firemen or policemen receiving extended life duty disability benefits may elect reduced benefits under an optional form of payment in order to provide a death benefit to a designated beneficiary. Their spouses are not eligible to receive the 70% benefit payable to surviving spouses of firemen and policemen who die while in receipt of the 75% duty disability benefit.
- d) For policemen enrolled prior to January 1, 1990, and firemen enrolled prior to December 17, 1989, the conversion age determination depends upon the member's enrollment date and whether or not the member signed the DeBraska II release form.

Under Charter Ordinance 980130 Substitute 2 (DeBraska I), duty disabled firemen and policemen who retired on duty disability before October 17, 1992, have a conversion age equal to the greater of the conversion age in effect when they were enrolled, or the conversion age in effect at the time of their disability retirement.

Under Charter Ordinance 000789 (DeBraska II), duty disabled firemen and policemen who signed the DeBraska II release form are subject to the following conversion requirements: (i) members retired on duty disability prior to February 8, 1972, will receive duty disability benefits for life; (ii) members enrolled prior to February 8, 1972, who are either policemen who retired on duty disability on or after August 1, 1985, or firemen who retired on duty disability on or after March 1, 1984, will have a conversion age of 63; (iii) members enrolled on or after February 8, 1972, who retired on duty disability on or after October 17, 1992, will not be required to convert to service retirement prior to the conversion age requirements that were in effect when they enrolled; and (iv) for all other members who signed the DeBraska II release form, there is no difference between the conversion requirements of Charter Ordinance 980130 Substitute 2, and Charter Ordinance 000789. In general, only members who were duty disabled prior to January 1, 2001 were given the opportunity to sign the DeBraska II release form.

Under the Charter Ordinance (which reflects the Rehrauer decision) firemen and policemen who



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

retire (or previously retired) on duty disability and who did not sign the DeBraska II release form will convert at the highest conversion age agreed upon during their employment (Section 36-05-3). Members who enrolled prior to February 8, 1972, who are either policemen who retired on duty disability on or after November 1, 1976, or firemen who retired on duty disability on or after October 1, 1977, will receive duty disability for life if they did not sign the DeBraska II release form, and will have a conversion age of 63 if they did sign the DeBraska II release form.

Funds Charged with Duty Disability Related Benefits

- a) For participants in the Combined Fund, duty disability benefits paid to members, benefits paid to survivors of members who die while duty disabled, child allotment payments, conversion service retirement benefits, and extended life duty disability benefits are paid from the Combined Fund.
- b) For General Employees who do not participate in the Combined Fund, duty disability benefits, and survivor benefits paid to beneficiaries of General Employees who elect an optional form of payment and die while disabled, are paid from (i) the General Employees Duty Disability Fund if the member's enrollment date is prior to February 1, 1996, and (ii) the Combined Retirement and Disability Fund if the member's enrollment date is on or after February 1, 1996.
- c) For members who do not participate in the Combined Fund, benefits paid after conversion to either a service retirement allowance or an extended life disability benefit are charged to (i) the Retirement Fund if the member's enrollment date is prior to February 1, 1996, and (ii) the Combined Retirement and Disability Fund if the member's enrollment date is on or after February 1, 1996.

Ordinary Death Benefit

Eligibility and Amount of Ordinary Death Benefit

- a) In the event of death of a member while in service, a death benefit equal to the sum of the member's accumulated contributions, plus if the member has one or more years of active service, one-half his final average salary is payable to the designated beneficiary. Optional forms of payment of such benefit to the beneficiary are provided. If the member had elected a protective survivorship option – and duty death benefits are not payable – such option will become effective and the ordinary death benefit will not be payable. If a duty death benefit is payable the ordinary death benefit will not be paid.
- b) Unless the member elects an optional death benefit, the death benefit subsequent to retirement is the amount remaining, if any, of the member's contributions with interest to retirement less the sum of the allowance payments made prior to the member's death.

Funds Charged with Ordinary Death Benefits

Ordinary death benefits paid on behalf of a participant in the Combined Fund are charged to the Combined Fund. Otherwise, ordinary death benefits are charged to (i) the Retirement Fund if the member's enrollment date is prior to February 1, 1996, and (ii) the Combined Retirement and Disability Fund if the member's enrollment date is on or after February 1, 1996.



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

Protective Survivorship Option

Eligibility and Amount of Protective Survivorship Option

Firemen may elect a Protective Survivorship Option (PSO) during the 6 months that precede the earlier of attainment of age 49 and completion of 22 years of qualifying time as a fireman or policeman, or age 52 and 25 years of qualifying time as a fireman or policeman, or age 57. Policemen may elect a Protective Survivorship Option (PSO) during the 6 months that precede the earlier of attainment of age 57, or completion of 25 years of qualifying time as a policeman or fireman. Firemen and policemen who fail to elect a PSO during the eligible period are deemed to have elected an Option 2 PSO with the spouse as the named beneficiary.

General Employees who enrolled prior to January 1, 2014, may elect a PSO during the 6 months that precede the earlier of attainment of age 60 or completion of 30 years of qualifying time and attainment of age 55. General Employees who enrolled on or after January 1, 2014, may elect a PSO during the 6 months that precede the earlier of attainment of age 65, or completion of 30 years of qualifying time and attainment of age 60.

Firemen and policemen are allowed to reselect a PSO if they marry, or divorce, and to select a different option and/or beneficiary at retirement, if they wish. As of June 5, 2012, General Employees may also reselect a PSO if they marry, or divorce, or select a different option and/or beneficiary at retirement.

The PSO may be canceled if the joint annuitant predeceases the member before retirement; or if the member is divorced from the joint annuitant before retirement.

Under a PSO, if a member eligible to retire on a service retirement allowance dies prior to retirement, benefits begin to the named beneficiary just as if the member retired under such option immediately prior to his or her death, except that imputed service credit arising from the dissolution of the Firemen and Policemen's Survivorship Fund will not be used in the calculation of the PSO benefit. If a fireman eligible for PSO coverage dies prior to age 49, benefits for the named beneficiary will be deferred until the date the fireman would have attained age 49. Imputed military service, imputed fire and police service, and seasonal service credit may be used in the calculation of the deferred PSO benefit.

In all cases where the requirements are met for both a PSO benefit and a duty death benefit, the duty death benefit will be payable in lieu of the PSO.

Funds Charged with PSO Benefits

PSO benefits for participants in the Combined Fund are charged to the Combined Fund. Benefits for individuals who do not participate in the Combined Fund are charged to (i) the Retirement Fund if the member's enrollment date is prior to February 1, 1996, and (ii) the Combined Retirement and Disability Fund if the member's enrollment date is on or after February 1, 1996.



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

Duty Death Benefits

Eligibility and Amount of Duty Death Benefits

In the event the member's death occurs in the performance of his duty, a lump sum payment equal to the member's accumulated contributions, plus an annuity of 60% of such deceased member's final average salary will be paid to one of the following (payable in this order):

- The member's surviving spouse
- The member's children until their 21st birthday
- The member's dependent parents
- Death of a fireman that is due to heart or lung disease is considered a duty death.

Funds Charged with Duty Death Benefits

Benefits payable to participants in the Combined Fund are charged to the Combined Fund. Heart & Lung duty death benefits payable to individuals who are not participants in the Combined Fund are charged to the Heart & Lung Fund. Duty death benefits (other than Heart & Lung) payable to individuals who are not participants in the Combined Fund are charged to (i) the Retirement Fund for members whose enrollment dates are prior to February 1, 1996; and (ii) the Combined Retirement and Disability Fund for members whose enrollment dates are on or after February 1, 1996.

Member Contributions

Member contribution rates are the following percentages of annual salary:

General Employees	5.5% (tier 1 – enrolled prior to January 1, 2014) 4.0% (tier 2 – enrolled on or after January 1, 2014)
Firemen and Policemen- Elected Officials	7.0% 7.0% (tier 1 – enrolled prior to January 1, 2014 and elected to an office prior to January 1, 2014; if enrolled prior to January 1, 2014, and elected or the first time to an office on or after January 1, 2014, and employee was paying contributions prior to being elected, employee pays contributions at the rate they were paying prior to becoming an elected official; if enrolled prior to January 1, 2014, and elected or the first time to an office on or after January 1, 2014, and employer was picking up contributions on behalf of the employee prior to being elected, employer pays 7.0%) 4.0% (tier 2 – enrolled on or after January 1, 2014)

Under state law, per 2011 Wisconsin Act 10, participating employers are no longer permitted to make contributions on the member's behalf (with the exception of contractually agreed upon arrangements).

Member contributions made for or by participants in the Combined Fund are credited to the Combined Fund. Member contributions made for or by individuals who are not participants in the Combined Fund are credited to (i) the Retirement Fund for members whose enrollment dates are prior to February 1, 1996; and (ii) the Combined Retirement and Disability Fund for members whose enrollment dates are on or after February 1, 1996.



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

Pension Escalators

Several different pension escalators are paid by the ERS as listed and described under section 36-05-1(h). They are as follows:

- Fire and Police \$50 Escalator

Eligible Groups and Amounts

- a) Firemen in Local 215 who retired under a service retirement allowance between March 1, 1990, and December 31, 1992; members of the Milwaukee Police Association (MPA) who retired under a service retirement allowance between January 1, 1990, and December 31, 1992; members of the Milwaukee Police Supervisors Organization who retired under a service retirement allowance between January 1, 1991, and December 31, 1992; and firemen in Local 215 or members of the MPA who elect a deferred retirement allowance after separating from service between January 1, 1993, and December 31, 1994, with 25 years of service; are eligible for a pension escalator which increases their allowance by \$50 per month on the 4th, 7th, and 10th anniversary of retirement.
- b) Members who both retired on duty disability and converted from duty disability to service retirement during the eligibility period are eligible for the escalators on the 4th, 7th, and 10th anniversaries of their conversion dates.
- c) The surviving spouses of eligible retirees, or of members who died during the eligibility period, are eligible provided that the member elected an optional benefit at retirement – or elected a protective survivorship option (PSO) prior to retirement – with the spouse as beneficiary. The member’s surviving spouse receives increases on the member’s 4th, 7th, and 10th anniversary of retirement (or spouse’s retirement date in the case of a PSO) with the amount of the escalator adjusted to reflect the option elected by the member.

Funds Charged with Duty Death Benefits

Fire and Police \$50 escalators paid to participants in the Combined Fund are charged to the Combined Fund.

Fire and Police \$50 escalators paid to individuals who are not participants in the Combined Fund are charged to the Retirement Fund.

- January 1996 Catch-up COLA for pre-October, 1987 Retirees

Eligible Group

- a) General Employees that attained the minimum service retirement age and retired with a service retirement allowance prior to October 1, 1987, or who retired on a duty disability allowance and converted to a service retirement allowance prior to October 1, 1987.
- b) Firemen and policemen who retired prior to October 1, 1987, who became eligible to retire on service retirement at age 57, or after attaining age 52 and completing 25 years of service. Also,



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

firemen and policemen who retired on a duty disability allowance and converted to a service retirement allowance prior to October 1, 1987.

- c) Surviving spouses of eligible retirees, or of members who elected a PSO and died prior to October 1 1987, after naming their spouse as the designated beneficiary under Option 2, Option 3, or Option 4 with a percentage to the beneficiary.

Timing and Amount of Increase

The catch-up COLA was a permanent increase in the ERS monthly benefit which was granted effective January 1, 1996. The increase was an amount equal to (i) the total ERS benefit in payment, multiplied by the greater of (ii) the total percentage change in the cost of living for each full calendar month between the 8th anniversary of service retirement and October 1, 1995, and (iii) the total percentage change required to bring the member's allowance to 60% of its full inflation adjusted value considering inflation for the period from retirement to October 1, 1995. The percentage change in the cost of living was measured by the increase in the CPI-U, U.S. Cities, as reported by the U.S. Department of Labor, Bureau of Labor Statistics.

When the catch-up COLA was calculated, the factor was not applied to supplemental, pass through benefits, which are paid by the ERS but are not a liability of the ERS. These pass through benefits, which appear on the pension payroll data supplied to the actuary, are part of an old guaranteed minimum program. The ERS is a paying agent for these benefits, but is reimbursed by the City for all such payments.

Funds Charged

Catch-up COLA amounts paid to participants in the Combined Fund are charged to the Combined Fund. Catch-up COLA amounts paid to individuals who are not participants in the Combined Fund are charged to the Retirement Fund.

- 2% Escalator for pre-1993 Retirees

Eligible Group

- a) General Employees that attained the minimum service retirement age and retired with a service retirement allowance prior to January 1, 1993, or who retired on a duty disability allowance and converted to a service retirement allowance prior to January 1, 1993.
- b) Firemen and policemen who retired prior to January 1, 1993, who became eligible to retire on service retirement at age 57, or after attaining age 52 and completing 25 years of service. Also, firemen and policemen who retired on a duty disability allowance and converted to a service retirement allowance prior to January 1, 1993.
- c) Surviving spouses of eligible members who elected Option 3 with the spouse as the beneficiary, or of members who died prior to January 1, 1993 after electing an Option 3 PSO with the spouse as the beneficiary.



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

Timing and Amount of Increase

The first increase occurs with the later of the January 1996 installment or the installment next following the 8th anniversary of the member's service retirement date (or the 8th anniversary of the surviving spouse's retirement date in the case of a PSO). Thereafter, increases occur annually on the anniversary of the first increase.

The first increase is 2% of the total ERS benefit in payment. That is, the monthly benefit to which the increase is applied includes \$50 fire and police escalators, and the January, 1996 catch-up COLA amount, if any, but it excludes supplemental pass through payments, if any. Increases after the first are also 2%, and are compounded -- that is, they are applied to the total ERS benefit in payment, including all prior increases, and again, excluding any supplemental pass through payments. (The benefit initially payable to an eligible spouse upon the member's death includes 50% of any increases in payment at the member's death.)

Funds Charged

2% escalators paid to participants in the Combined Fund are charged to the Combined Fund. 2% escalators paid to individuals who are not participants in the Combined Fund are charged to the Retirement Fund.

- CPI Escalator for post-1992 Fire and Police Retirees who don't Participate in the Combined Fund and Pre-2000 CPI Escalator for post-1992 Fire and Police Retirees who do Participate in the Combined Fund

Eligible Group

- a) Firemen and policemen in active service on or after January 1, 1993, who become eligible to retire on service retirement at age 57 or after attaining age 52 and completing 25 years of service.
- b) Firemen and policemen who retire on either a 75% Fire & Police duty disability benefit or a Heart & Lung duty disability benefit (i) between January 1, 1993, and December 31, 1994, and thereafter convert to service retirement; or (ii) on or after January 1, 1995, and who are eligible to elect between service retirement and extended life duty disability benefits at their conversion age.
- c) Police in active service on or after January 1, 1995, who separate with 25 years of service and elect a deferred retirement allowance.
- d) Surviving spouses of eligible members who elect Option 2 or 3, or who elect Option 4 with a percentage to the spouse, or who elect a PSO with a percentage to the spouse.



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

Timing and Amount of Increase

For members who retired on service retirement between January 1, 1993, and December 31, 1994; or who retired on duty disability between January 1, 1993, and December 31, 1994, and later convert to service retirement; and for eligible surviving spouses of members who died prior to retirement between January 1, 1993, and December 31, 1994, with PSO coverage in effect; the first increase occurs for March of the year following the first full calendar year of service retirement. For all others, the first increase occurs one full year after the member's service retirement date. Thereafter, increases occur annually on the anniversary of the first increase.

The monthly benefit is increased by an amount equal to (i) the total allowance for the preceding December (including all prior increases), multiplied by the lesser of (ii) 3%, and (iii) the increase in the CPI-U, U.S. Cities Average, for the calendar year preceding the increase. (The benefit initially payable to an eligible spouse upon the member's death includes a proportionate share of any increases in payment at the member's death, based on the option elected.)

Funds Charged

Benefits payable to participants in the Combined Fund are charged to the Combined Fund. For individuals who are not participants in the Combined Fund: (i) benefits are charged to the Retirement Fund for members whose enrollment dates are prior to February 1, 1996; and (ii) benefits are charged to the Combined Retirement and Disability Fund for members whose enrollment dates are on or after February 1, 1996.

- Post-1999 CPI Escalator for post-1992 Fire and Police Retirees who Participate in the Combined Fund

Eligible Group

The eligible group is restricted to individuals who were firemen and policemen who retired on duty disability between October 17, 1992, and December 31, 1992; or who were in active service on or after January 1, 1993, who either retire as firemen or policemen, or who die in active service as firemen or policemen; and their eligible surviving spouses. The types of benefits that receive the CPI escalator include:

- a) The service retirement allowance and ordinary disability retirement allowance.
- b) Benefits paid to members after the duty disability conversion age: the conversion service retirement allowance or the extended life duty disability retirement allowance.
- c) Benefits paid to members after separation from service: the deferred retirement allowance, early retirement allowance, involuntary separation allowance, or the ERS allowance paid under the County transfer or State reciprocity provisions.
- d) The spouse survivor allowance paid to the surviving spouse of an eligible member who elects Option 2 or 3, or who elects Option 4 with a percentage to the spouse, or who elects a PSO with a percentage to the spouse.
- e) The fire and police or heart & lung duty disability surviving spouse allowance.



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

- f) The duty death surviving spouse allowance.

Timing and Amount of Increases that occur after 1999

- a) The first post-1999 increase occurs the later of March 2000 and March of the year following the first full calendar year of retirement for: members who retired on service retirement or ordinary disability between January 1, 1993, and December 31, 1994; or who convert to service retirement after a period of duty disability which commenced between January 1, 1993, and December 31, 1994; or who separated from service between January 1, 1993, and December 31, 1994, and subsequently retire on a deferred, early, involuntary separation, or County transfer/ State reciprocity allowance; eligible spouse survivors of such members, including PSO spouse survivors when the member died between January 1, 1993, and December 31, 1994; duty death surviving spouses of members who died between January 1, 1993, and December 31, 1994; and duty disability surviving spouses where both the member's duty disability retirement date and duty disabled death date were between January 1, 1993, and December 31, 1994.
- b) The first post-1999 increase occurs the later of the year 2000 anniversary or the first anniversary of the member's date of death for: duty disability surviving spouses where the member's duty disability death date is on or after January 1, 1995.
- c) For all others, the first post-1999 increase occurs the later of the year 2000 anniversary or the first anniversary of the member's retirement or pre-retirement death. (Note: this group includes members who retired on duty disability between October 17, 1992, and December 31, 1994, who subsequently elect an extended life duty disability retirement allowance, and members who retired on duty disability between October 17, 1992, and December 31, 1992, who subsequently convert to service retirement.)

Thereafter, increases occur annually on the anniversary of the first post-1999 increase.

The monthly benefit is increased by an amount equal to (i) the total allowance for the preceding December (including all prior increases), multiplied by the lesser of (ii) 3%, and (iii) the increase in the CPI-U, U.S. Cities Average, for the calendar year preceding the increase. If the member retired on duty disability between October 17, 1992, and December 31, 1992, and subsequently converts to service retirement, then the 2nd, 3rd, and 4th increases will not be less than 1.5%, and the 5th and subsequent increases will not be less than 2%. (The benefit initially payable to an eligible spouse upon the member's death includes a proportionate share of any increases in payment at the member's death, based on the option elected.)

Funds Charged

The CPI escalator is charged to the Combined Fund.



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

- 2% Guarantee for Fire and Police CPI Escalator for Participants in Combined Fund

The eligible group is restricted to firemen and policemen who retire on service retirement, their spouse survivors, and PSO spouse survivors. In addition, firemen members of Local 215 and policemen members of the MPA must have been in active service on or after January 1, 1998; policemen members of the MPSO must have been in active service on or after January 1, 1999; and non-represented firemen and policemen must have been in active service on or after January 1, 2000. The benefit is a guarantee that the CPI Escalator will not be less than 2% per annum.

- 2% Escalator for post-1992 General Employee Retirees who do Not Participate in Combined Fund

Eligible Group

- a) General Employees who retire on a service retirement allowance on or after January 1, 1993 who have either (i) attained age 60, or (ii) completed 30 years of service and attained age 55.
- b) General Employees receiving a duty disability retirement allowance who convert to service retirement on or after January 1, 1993.
- c) Spouses of eligible members who either elect Option 3 at retirement with the spouse as beneficiary, or who die after electing an Option 3 PSO with the spouse as beneficiary.

Timing and Amount of Increase

The first increase occurs with the installment next following the 8th anniversary of the member's service retirement or conversion to service retirement date (or the 8th anniversary of the surviving spouse's retirement date in the case of a PSO). Thereafter, increases occur annually on the anniversary of the first increase.

Each increase is 2%, and increases after the first are compounded -- that is, they are applied to the total benefit in payment, including all prior increases. (The benefit initially payable to an eligible spouse upon the member's death includes 50% of any increases in payment at the member's death.)

Funds Charged

For members whose enrollment dates are prior to February 1, 1996, the 2% escalator for post-1992 general employee retirees is paid from the Retirement Fund. For members whose enrollment dates are on or after February 1, 1996, the 2% escalator for post-1992 general employee retirees is paid from the Combined Retirement and Disability Fund.

- Post-1999 1.5% / 2% Escalator for General Employee Retirees and for Pre-1993 Fire and Police Retirees who Participate in the Combined Fund

Eligible Group

The eligible group includes (i) pre-1993 retirees and surviving spouses who are not eligible for either the 2% Escalator for pre-1993 retirees, or the Post-1999 CPI Escalator for post-1992 fire and police retirees; and (ii) post-1992 general employee retirees and their surviving spouses. The types of benefits that receive the 1.5%/2% escalator include:



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

- a) The service retirement allowance and ordinary disability retirement allowance for all members, and the duty disability retirement allowance for General Employees.
- b) Benefits paid to members after the duty disability conversion age: the conversion service retirement allowance for all members or the extended life duty disability retirement allowance for fire and police.
- c) Benefits paid to members after separation from service: the deferred retirement allowance, early retirement allowance, involuntary separation allowance, or the ERS allowance paid under the County transfer or State reciprocity provisions.
- d) The spouse survivor allowance paid to the surviving spouse of an eligible member who elects Option 2 or 3, or who elects Option 4 with a percentage to the spouse, or who elects a PSO with a percentage to the spouse.
- e) The fire and police or heart & lung duty disability surviving spouse allowance.
- f) The duty death surviving spouse allowance.

Timing and Amount of Increases that occur after 1999

- a) The first post-1999 increase occurs for January 2000 for eligible Option 2 and 4 spouse survivors of members retired on a service retirement allowance or a conversion service retirement allowance - and for eligible Option 2 and 4 PSO spouse survivors - when the member's date of retirement or pre-retirement death was prior to January 1988.
- b) The first post-1999 increase occurs the later of the year 2000 anniversary or the 2nd anniversary of the member's date of death for: duty disability surviving spouses of firemen and policemen.
- c) For all others, the first post-1999 increase occurs the later of the year 2000 anniversary or the 2nd anniversary of the member's retirement or pre-retirement death.

Thereafter, increases occur annually on the anniversary of the first increase.

All increases for the group described in paragraph (a) are 2% increases. For paragraphs (b) and (c), an increase which takes effect on the 2nd, 3rd, or 4th anniversary is a 1.5% increase. An increase which takes effect on the 5th or subsequent anniversary is a 2% increase. Increases after the first one are compounded -- that is, they are applied to the total benefit in payment, including all prior increases. (The benefit initially payable to an eligible spouse upon the member's death includes the spouse's proportionate share of any increases in payment at the member's death, based on the option elected.)

Tier 2 Employees receive an increase of 2% on the fifth anniversary of their retirement and on each anniversary that follows, but only for service retirement.

Fire and Police Survivorship Benefits Prior to the Global Pension Settlement

The survivors of firemen or policemen who die in active service or while in receipt of a disability allowance may be entitled to a survivorship benefit. The survivorship benefit is payable to the spouse of the deceased member provided the spouse has one or more eligible children in her care. Eligible children include unmarried children who are either under the age of 18, or are over age 18, but who suffer from a disability which commenced before the age of 18. The amount of the survivorship benefit for a death occurring in 2000 is \$600 monthly for the spouse and one child or for two or more eligible children. If there is no surviving widow and only one child, the benefit is \$300. Upon attainment of age 57, \$300 is payable to the spouse for her lifetime. Benefits payable to a spouse cease on remarriage and benefits payable in respect of children cease on attainment of age 18 (unless disabled prior to age 18) or marriage. For member deaths



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

that occurred prior to 2000 the monthly amount payable depends upon the plan provisions in effect at the member's death.

Fire and Police Survivorship Benefits for Survivors Participating in the Combined Fund

Survivors of firemen or policemen who died prior to 2000 while in active service or while retired on disability (and contributing to the Fire and Police Survivorship Fund) may be entitled to a survivorship benefit. The survivorship benefit is payable to the spouse of the deceased member provided the spouse has one or more eligible children in her care. For participants in the Combined Fund, the amount of the survivorship benefit for a death occurring prior to 2000 is \$600 monthly for the spouse and one child under age 18, or for two or more children under age 18. If there is no surviving widow and only one child, the benefit is \$300. The monthly amount payable to a disabled child over the age of 18 depends upon the plan provisions in effect at the member's death. Upon attainment of age 57, \$300 is payable to the spouse for her lifetime. Benefits payable to a spouse cease on remarriage and benefits payable in respect of children cease on attainment of age 18 (unless disability commenced prior to age 18) or marriage.

Survivorship Benefits for Participants in the Combined Fund are charged to the Combined Fund.

Separation Benefits

Eligibility and Amounts

Should a member separate from service, and no other benefit is payable, such a member will possibly be entitled to one of the options outlined below. Additional eligibility information about Separation Benefits is provided under 36-05-6.

- a) If the member has less than four years of creditable service, a refund of member contributions (not paid by the member's employer). Interest at 4.0% per annum on the 4%, 5.5%, or 7% member paid contributions is also payable.
- b) If the member has four years of creditable service, a deferred allowance payable at the minimum service retirement age.
- c) A refund of the member contributions and interest, including contributions paid on the member's behalf, is payable to (i) General Employees after 4 years of creditable service, or (ii) firemen or policemen after 10 years of creditable service.
- d) If the member's service is involuntarily terminated, or the member terminates voluntarily after attaining age 55 and completing 15 years of creditable service, such member may elect to receive a deferred allowance at the minimum service retirement age, or an immediate allowance that is the actuarial equivalent of the deferred allowance.
- e) If the member has 25 years of qualifying time as a fireman or policeman, and is not participating in the Combined Fund, a deferred allowance payable at age 52.
- f) If the member is a fireman with 25 years of qualifying time as a fireman or policeman, had not attained age 49 at the date of separation from service, and is participating in the Combined Fund, a deferred allowance payable at age 52.



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

Imputed service credit and seasonal service credit are not used when calculating separation benefits.

Funds Charged with Separation Benefits

Benefits paid to participants in the Combined Fund are charged to the Combined Fund. Separation benefits paid to individuals not participating in the Combined Fund are charged to (i) the Retirement Fund if the member's enrollment date is prior to February 1, 1996, and (ii) the Combined Fund if the member's enrollment date is on or after February 1, 1996.

Lump Sum Bonus Payments

Under the Global Pension Settlement, various lump sum bonus payments may be made to eligible individuals participating in the Combined Fund. An individual may be eligible for one or more types of lump sum bonus payments.

Eligibility for Lump Sum Bonus Payments

Only individuals participating in the Combined Fund can become eligible for the following types of lump sum bonus payments. In addition, the following conditions apply to the individual lump sum bonuses.

- a) 5% lump sum bonus: Members who are inactive as of January 1, 2000, will become eligible at the time that their deferred retirement allowance commences.

Members in active service as of January 1, 2000, will become eligible when they first retire.

If a member in active service as of January 1, 2000, dies prior to retirement and the member's surviving spouse is eligible for either a surviving spouse duty death benefit (including Heart & Lung duty death) or a PSO spouse survivor benefit then the surviving spouse is eligible for this bonus payment.

Only one 5% lump sum bonus will be paid on account of an individual member. Thus, if a member receiving a duty disability retirement allowance receives a 5% lump sum bonus on account of the duty disability benefit, then the member will not be eligible for an additional 5% lump sum bonus at the time of conversion.

- b) 8.6% lump sum bonus: A fireman or policeman in active service as of January 1, 2000, who (i) retires as a fireman or policeman on a service retirement allowance; or (ii) converts to service retirement or elects an extended life duty disability retirement allowance after retiring as a fireman or policeman on duty disability; (iii) attains age 63 while in receipt of an ordinary disability retirement allowance or a lifetime Fire & Police or Heart & Lung duty disability retirement allowance, is eligible for this bonus so long as the member did not receive 2 years of imputed service credit under the dissolution of the Firemen and Policemen's Survivorship Fund; (iv) or retires as a fireman or policeman on an extended life duty disability.

If a fireman or policeman in active service as of January 1, 2000, dies prior to retirement and the member's surviving spouse is eligible for either a surviving spouse duty death benefit (including Heart & Lung duty death) or a PSO spouse survivor benefit then the surviving spouse is eligible for this bonus payment.



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

A fireman or policeman retired on disability as of January 1, 2000, who is also an active member of the Firemen and Policemen's Survivorship Fund as of January 1, 2000 - under age 57 at 1/1/2000, and made all required contributions to the Survivorship Fund – is eligible for this bonus if he (i) converts to service retirement or elects an extended life duty disability retirement allowance; or (ii) is ineligible to convert to service retirement and attains age 63 while in receipt of the disability retirement allowance; provided that he (iii) did not receive 2 years of imputed service credit under the dissolution of the Firemen and Policemen's Survivorship Fund.

Amount of Lump Sum Bonus Payments

Age factors are used in the 5% lump sum bonus and the 8.6% lump sum bonus calculations. The age factors for these bonus payments are contained in s. 36-05-11-a.

- a) 5% lump sum bonus: For members who are either inactive or active as of January 1, 2000, who retire in the future, the bonus payment equals 5% times their initial annual retirement allowance times a factor based on attained age on the retirement date. The retirement allowance used in the bonus calculation is to be reduced for early retirement, if applicable, but is not to be reduced for any optional election the member might have made under s. 36-05-7.

If a member in active service as of January 1, 2000 dies prior to retirement and the member's surviving spouse is eligible for this bonus payment, then the bonus will equal 5% times the spouse's initial annual benefit times a factor based on the spouse's attained age when the benefit commences.

- b) 8.6% lump sum bonus: In the explanation that follows, whenever an annual allowance is used in calculating a bonus due to a member, the allowance used is the allowance that would be paid if the member did not elect an option under s. 36-05-7.

For members who retire on service retirement: 8.6% times the annual service retirement allowance times a factor based on attained age at retirement.

For surviving spouses who receive either a PSO benefit or a duty death benefit: 8.6% times the initial annual allowance payable to the spouse times a factor based on the spouse's attained age when the benefit commences.

For a member who is retired on duty disability as of January 1, 2000 - or who retires on duty disability thereafter - and who is eligible to convert to service retirement: 8.6% times the annual conversion service retirement allowance earned as of the conversion age times a factor based on attained age at conversion.

For a member who is retired on disability as of January 1, 2000 – or who retired on disability thereafter – who is ineligible to convert to service retirement, and who is age 63 or younger at the later of 1/1/2000 or the disability retirement date: 8.6% times the “hypothetical” annual conversion service retirement allowance earned at age 63 times the attained age factor for age 63. The “hypothetical” allowance is calculated as if the member were eligible to convert at age 63.

For a member who retires on disability after January 1, 2000, who is older than age 63 at the disability retirement date: 8.6% times the annual disability allowance payable when the allowance commences times a factor based on the member's attained age at retirement.



APPENDIX B: SUMMARY OF BENEFIT PROVISIONS

Funds Charged

The 5% lump sum bonus and the 8.6% lump sum bonus are paid from the Combined Fund.

Benefits Not Valued

None.



APPENDIX C: SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

Actuarial Methods

The method of financing the ERS is prescribed in Section 36.08 of the MCC.

Actuarial Cost Method

The method used to determine Normal Cost and Accrued Actuarial Liability (AAL) is the Individual Entry Age Normal Cost Method. The UAAL, under this method, is the AAL over the Actuarial Value of Assets. The total actuarially determined employer contribution is the sum of the employer portion of the Normal Cost (Total Normal Cost less expected member contributions) plus an amount to amortize the UAAL according to the Amortization Method plus an amount to reimbursement the previous year's administrative expense.

Asset Values

Two asset values are used in this report. A description of each and a brief explanation of where they are used follows:

- **Market Value**

The market value of assets is the value of investments if they were to be sold on the date valued. The market value of assets is used to develop the actuarial value of assets.

- **Actuarial Value**

The actuarial value of the assets in the Employers' Reserve Fund and the Securities Lending Fund is equal to the market value of assets. These Funds are not available to pay the benefits for ERS members, so they are excluded from the allocation of the actuarial value of assets to the various funds and groups and the resulting calculations of actuarially determined employer contributions. The actuarial value of assets for the remaining funds is a smoothed value of assets (see Table 5). The difference between (1) the expected return on the market value of assets at the beginning of the year, based on the investment return assumption and the net non-investment cash flows, and (2) the actual return on the market value of assets is smoothed equally over five years. As a result, there are five components of excess/shortfall returns to be smoothed each year.

Amortization Method

Amortization policies adopted by the Board at its February 24, 2023 meeting include:

- Future changes to the UAAL arising from actual experience that is different than assumed will be amortized over a closed 20-year period instead of a closed 15-year period. Payments are projected to increase at 2.00% per annum. This has since been superseded by the changes introduced under Act 12, as discussed below.
- If the UAAL is negative, all prior bases will be eliminated, and the participating employers will be required to contribute their share of the annual normal cost and administrative expenses.
- Changes to the UAAL arising from changes to plan provisions will be amortized over various periods, depending on the nature of the change and which participants are affected.
- Changes to the UAAL resulting from closure of CMERS will be amortized over a 10-year period as a level dollar, This has since been superseded by the changes introduced under Act 12, as discussed below.
- Changes to the UAAL arising from contributions which are above or below the actuarially determined employer contribution will be amortized over a closed 5-year period.



APPENDIX C: SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

As a result of the passage of 2023 Wisconsin Act 12, the projected January 1, 2024 UAAL balance, as calculated in the *second* January 1, 2023 actuarial valuation, will be amortized as a level-dollar amount over a closed 30-year period. Future changes in the System's UAAL are to be amortized in accordance with Actuarial Standards of Practice. At their July 24, 2023 Board meeting, the Board adopted a policy to amortize future increases in the UAAL over a closed 10-year period upon the recommendation of their actuary. Future decreases in the UAAL will be amortized over either a closed 10-year period or the remainder of the 30-year period beginning on January 1, 2024, whichever is longer.

Contribution Lag

2023 Wisconsin Act 12 repealed the System's prior funding policy, which was to reset employer contribution rates every five years in connection with the regular experience study. As a result, participating employers are now required to contribute the Actuarially Determined Employer Contribution amount as determined in each annual actuarial valuation report. In order to more easily administer the revised funding policy, the Board, upon the recommendation of their actuary, adopted a one-year contribution lag so that results of the current valuation report will set the required contribution amount for employers during the following plan year. This policy is first effective with the *second* 2023 actuarial valuation report.



APPENDIX C: SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

Demographic assumptions are based on the experience investigation prepared as of December 31, 2021 and adopted by the Board of Trustees on September 28, 2022 for use beginning with the January 1, 2023 actuarial valuation. The set of economic assumptions was adopted by the Board of Trustees on February 27, 2023, for use in the January 1, 2023 actuarial valuation. The next experience study is scheduled to be performed for inclusion with the January 1, 2028 actuarial valuation. However, due the passage of 2023 Wisconsin Act 12 on June 20, 2023, the investment return assumption cannot be greater than the rate used by the Wisconsin Retirement System, which has currently set their investment return assumption at 6.80% for active employees.

Investment Return Assumption: 6.80% per annum (net of investment expenses), compounded annually.

Inflation: 2.50% per annum.

Cost of Living Adjustments (COLA): For retirees whose COLA is defined as the lesser of 3.00% and CPI-U, the assumed COLA is 2.50% per annum.

Payroll Growth for UAAL amortization: None. UAAL amortization payments are developed on a level dollar basis.

Illustrative Rates of Salary Increase:

Service	Salary Increases*	
	General Employees	Firemen and Policemen
1	6.25%	18.00%
5	5.75	7.00
10	5.00	3.20
15	4.25	3.20
20	4.25	3.10
25	4.25	3.10
30	4.00	3.10
35	3.00	3.10
40	3.00	3.00

* Includes general wage increase assumption of 3.00%.

Annual increases of 2.50% per annum is assumed for Policemen, Firemen and General Employees on duty disability. The increases for duty disabled Firemen and Policemen affect both current duty disability benefits and future service retirement or extended life conversion benefits. The increases for General Employees affect only service retirement conversion benefits.

Mortality Assumptions:

- a. Active Members For General employees, Pub-2010 Below Median General Employee Mortality Table with a one-year age setback for males and a two-year age set forward for females, projected generationally using SOA Scale MP-2021.



APPENDIX C: SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

For Policemen and Firemen, Pub-2010 Median Public Safety Employee Mortality Table with a one-year age set forward for males and females, projected generationally using SOA Scale MP-2021.

- b. Healthy Retirees For General employees, Pub-2010 Below Median General Retiree Mortality Table with a one-year age setback for males and a two-year age set forward for females, projected generationally using SOA Scale MP-2021.

For Policemen and Firemen, Pub-2010 Median Public Safety Retiree Mortality Table with a one-year age set forward for males and females, projected generationally using SOA Scale MP-2021.

- c. Beneficiaries For General employees, Pub-2010 Below Median Contingent Survivors Mortality Table with a one-year age setback for males and a two-year age set forward for females, projected generationally using SOA Scale MP-2021.

For Policemen and Firemen, Pub-2010 Median Contingent Survivors Mortality Table with a one-year age set forward for males and females, projected generationally using SOA Scale MP-2021.

- d. Disabled Retirees For General employees, Pub-2010 Non-Safety Disabled Retiree Mortality Table with a one-year age setback for males and a two-year age set forward for females, projected generationally using SOA Scale MP-2021.

For Policemen and Firemen, Pub-2010 Safety Disabled Retiree Mortality Table with a one-year age set forward for males and females, projected generationally using SOA Scale MP-2021.

Illustrative Rates of Termination:

Service	General Employees		Policemen	Firemen
	Male	Female		
1	15.00%	17.00%	4.00%	2.35%
5	9.00	10.50	2.50	1.75
10	4.50	6.75	1.25	1.00
15	4.00	4.00	0.85	0.50
20	3.00	2.75	0.85	0.50
25	1.00	2.50	0.00	0.00
30	0.00	0.00	0.00	0.00

All terminations are assumed to be involuntary.

Members who terminate vested are assumed to take a refund if it is more valuable than their deferred benefit. Regular interest credited on contribution account balances is assumed to be 4.0%.



APPENDIX C: SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

Rates of Early and Normal Retirement:

General Employees

Age	Early Retirement		Normal Retirement			
	Tier 1	Tier 2	Tier 1		Tier 2	
	All	All	Males	Females	Males	Females
55	2%	2%	40%	32%		
56	2	2	20	25		
57	2	2	25	25		
58	2	2	25	25		
59	4	2	25	25		
60		2	25	20	40%	32%
61		2	25	20	25	20
62		2	25	25	25	25
63		2	25	20	25	20
64		4	25	20	25	20
65			27	27	27	27
66			20	27	20	27
67			27	27	27	27
68			27	30	27	30
69			27	30	27	30
70			100	100	100	100

Policemen and Firemen

Age	Firemen	Policemen	Age	Firemen	Policemen
42		40%	53	22%	40%
43		40	54	22	40
44		40	55	30	40
45		40	56	30	40
46		40	57	30	40
47		40	58	30	25
48		40	59	40	25
49	22%	40	60	40	25
50	22	40	61	50	25
51	22	40	62	50	50
52	22	40	63	100	100



APPENDIX C: SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

Illustrative Rates of Disability:

Age	Disability Rates		
	General Employees	Firemen	Policemen
20	0.040%	0.250%	0.024%
25	0.040	0.250	0.024
30	0.040	0.250	0.096
35	0.040	0.254	0.148
40	0.041	0.302	0.180
45	0.049	0.486	0.192
50	0.082	0.898	0.196
55	0.167	1.580	0.200
60	0.333	0.000	0.000
65	0.600	0.000	0.000

Elected officials are assumed to become disabled at the same rate as General Employees.

Duty Disabilities:

Employee Group	Percentage of Disabilities Incurred in the Performance of Duty	Percentage of Duty Disabilities Assumed		Assumption Adopted January 1
		Eligible For The 90% Benefit	Under The Heart & Lung Law	
General Employees	20.0%	N/A	N/A	2023
Police other than MPA	20.0%	0.0%	N/A	2023
MPA enrolled on or before 4/18/2005	60.0%	0.0%	N/A	2023
MPA enrolled after 4/18/2005	60.0%	0.0%	N/A	2023
Fire other than MPFFA	20.0%	0.0%	0.0%	2023
MPFFA enrolled on or before 10/3/2005	75.0%	0.0%	0.0%	2023
MPFFA enrolled after 10/3/2005	75.0%	0.0%	0.0%	2023

Upon reaching their service conversion date, 100% of Policemen and Firemen who become duty disabled are assumed to convert to a service retirement benefit.



APPENDIX C: SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

Marriage Assumption and Duty Disability Child Allotments:

It is assumed that female spouses are three years younger than males. In absence of evidence to the contrary, it is assumed that 85% of General Employees and 95% of Policemen and Firemen are married, with dependent children, described by the following table:

Member's Age at Death or Disability	Number of Dependent Children	Age of Youngest Child
20	0.0	-
25	1.5	1
30	2.5	2
35	2.5	5
40	2.5	8
45	2.0	11
50	1.5	14
55	1.0	15
60 and Over	0.0	-

The percentage of retiring employees assumed to elect option 3, the subsidized 50% option, is 25% for males and 15% for females. The percentage of General Employees assumed electing the 100% PSO option before retirement is 40% for males and 15% for females. For Firemen and Policemen, 95% are assumed to elect the 100% PSO option before retirement.

Duty Deaths:

The following percentages of deaths in active service are assumed to incur in the performance of duty:

General Employees: 5%
 Police & Fire: 10%. In addition, amongst firemen, 25% of duty deaths are assumed to occur under the Heart and Lung Law.

Imputed Military Service:

The following percentages of eligible members are assumed to earn 1 year of imputed military service credit:

General Employees: 10%
 Police: 13%
 Fire: 13%

These percentages are based on troop strength statistics from the Department of Defense website. (Adopted 1/1/2003)



APPENDIX C: SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

Seasonal Service Credit: The following percentages of eligible members are assumed to receive one year of seasonable service credit:

Member's Union or Bargaining Group	Percentage with Seasonal Service	Assumption Adopted January 1
District Council 48, AFSCME	27.09%	2005
Fire Equipment Dispatchers Local 494, IBEW	0.00%	2006
Electrical Group Local 494, IBEW	31.00%	2006
Machine Shop Local 494, IBEW	12.00%	2005
Bridge Operators Local 195, IBEW	28.57%	2005
Joint 129/48 Local 139, IOUE & DC48	100.00%	2005
Machinists Local 510, IAM	5.00%	2005
Sanitation Local 61, LIUNA	98.06%	2005
TEAM (Techs, Eng, Archs of Milw)	5.00%	2005
MBCTC (Bricklayers, Carpenters, Cement Masons, Painters, Iron Workers)	10.00%	2005
Police Sworn Management, Police Civilian Management, Managers, Elected Officials (except mayor)	3.13%	2005
Non-represented in the Police Department and General City non-represented	5.00%	2005

Miscellaneous

Future Service Accrual: Active members are assumed to accrue a full year of service in each future year (adopted 1/1/2023).

Annualized Compensation: For active members, their prior year reported compensation amount is annualized based on their Future Service Accrual and further increased by a leap year adjustment factor of 1.0034 ($26.089285 \div 26$).

Deemed Inactives: Active members who worked less than 100 hours in the prior year, but who have not officially terminated employment are treated as Inactives. These members are not assumed to earn additional service credit in future years.

Decrement Timing: All withdrawals, deaths, disabilities, and retirements are assumed to occur mid-year.



APPENDIX C: SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

Liability for Inactive Members: The data provided for inactive members does not contain all the elements to calculate the member's deferred benefit. The deferred benefit amounts for these members are estimated using the member's life-to-date earnings and assumed salary increases. For terminated members who are missing a termination date on their record, it is assumed that they terminated at age 35. The actuary is collecting data so that future members' deferred benefits can be estimated.

Administrative Expenses: Based on the most recent fiscal year end.

Normal Cost: Normal cost rate reflects the impact of new entrants during the year. Due to 2023 Wisconsin Act 12, there are no new entrants effective January 1, 2024.

Changes Since Prior Valuation: Due to the passage of 2023 Wisconsin Act 12, the following changes to the set of actuarial assumptions and methods have been adopted since the *first* January 1, 2023 actuarial valuation report was issued and adopted on June 8, 2023:

- The investment return assumption was lowered from 7.50% to 6.80%.
- The Board adopted a one-year lag to its contribution policy. This means that this January 1, 2023 valuation will be used to calculate the actuarially determined employer contributions for the 2024 plan year. (The original January 1, 2023 actuarial valuation dated June 8, 2023 was used to calculate the required contribution amount for the 2023 plan year.)
- The projected UAAL as of January 1, 2024 will be amortized using level-dollar contributions over a closed, 30-year period.
- Future increases to the System's UAAL will be amortized using level-dollar contributions over a closed 10-year period.
- Future decreases to the System's UAAL will serve to reduce the outstanding balance of the projected 2024 UAAL, unless there are fewer than 10 years remaining to amortize the projected 2024. In which case, future decreases will be amortized over a closed, 10-year period.



APPENDIX C: SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

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APPENDIX D: GLOSSARY OF TERMS

Note that the first definitions given are the “official” definitions of the term. For some terms there is a second definition, in italics, which is the unofficial definition.

Actuarial Accrued Liability (AAL): The portion of the Present Value of Projected Benefits (PVFB) allocated to past service. Also difference between (i) the actuarial present value of future benefits, and (ii) the present value of future normal cost. Sometimes referred to as “accrued liability” or “past service liability.” *The amount of money that should be in the fund. The funding target.*

Actuarial Assumptions: Estimates of future plan experience with respect to rates of mortality, disability, retirement, investment income and salary increases. Demographic (“people”) assumptions (rates of mortality, separation, and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic (“money”) assumptions (salary increases and investment income) consist of an underlying rate appropriate in an inflation- free environment plus a provision for a long-term average rate of inflation. *Estimates of future events used to project what we know now- current member data, assets, and benefit provisions – into an estimate of future benefits.*

Actuarial Cost Method: A mathematical budgeting procedure for allocating the dollar amount of the Present Value of Projected Benefits (PVFB) between the normal costs to be paid in the future and the actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”

Actuarial Methods: The collective term for the Actuarial Cost Method, the Amortization Payment for UAAL Method, and the Asset Valuation Method used to develop the actuarially determined employer contributions for the Retirement System. *The funding policy.*

Actuarial Equivalent: Benefits whose actuarial present values are equal.

Actuarial Present Value: The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Actuarial Value of Assets (AVA): A smoothed value of assets which is used to limit actuarially determined employer contributions volatility. Also known as the funding value of assets. *Smoothed value of assets.*

Amortization Payment for UAAL: Payment of the unfunded actuarial accrued liability by means of periodic contributions of interest and principal, as opposed to a lump sum payment. The components of the amortization payment for UAAL includes:

- Amortization Period Length – Generally amortization periods of up to 15 to 25 years (and certainly not longer than 30). Similar to a mortgage, the shorter the amortization period, the higher the payment and the faster the UAAL is paid off.
- Amortization payment increases – Future payments can be level dollar, like a mortgage, or as a level percent of pay. Most Retirement Systems amortize UAAL as a level percent of pay which when combined with the employer normal cost that is developed as a level percent of pay can result in contributions that are easier to budget.



APPENDIX D: GLOSSARY OF TERMS

- Amortization type – An amortization schedule can be closed or open. A closed amortization schedule is similar to a mortgage – at the end of the amortization period the UAAL is designed to be paid off. An open amortization period is similar to refinancing the UAAL year after year.
- Amortization schedule – UAAL can be amortized over a single amortization period, or it can be amortized over a schedule.

The amortization payment for UAAL can be thought of as the UAAL mortgage payment.

Asset Valuation Method: The components of how the actuarial value of assets is to be developed. CMERS uses a five-year smoothing of asset gains and losses, which is the most commonly used method.

Experience Gain (Loss): A measure of the difference between actual experience and experience anticipated by a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used. *The experience Gain (Loss) represents how much the actuary missed the mark in a given year.*

Funded Ratio: The percent of the actuarial accrued liabilities covered by the actuarial value of assets. Also known as the funded status. *The ratio of how much money you actually have in the fund to the amount you should have in the fund.*

Normal Cost: The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as “current service cost.” An amortization payment toward the unfunded actuarial accrued liability is paid in addition to the normal cost to arrive at the total contribution in a given year. *The cost of benefits accruing during the year.*

Present Value of Future Normal Cost (PVFNC): The portion of the Present Value of Projected Benefits (PVFB) allocated to future service. *The value in today’s dollars of the amount of contribution to be made in the future for benefits accruing for members in the Retirement System as of the valuation date.*

Present Value of Future Benefits (PVFB): The projected future benefit payments of the plan are discounted into today’s dollars using an assumed rate of investment return assumption to determine the Present Value of Future Benefits (PVFB) of the Retirement System. The PVFB is the discounted value of the projected benefits promised to all members as of a valuation date, including future pay and service for members which has not yet been earned. *If the Retirement System held assets equal to the PVFB and all the assumptions were realized, there would be sufficient funds to pay off all the benefits to be paid in the future for members in the Retirement System as of the valuation date.*

Reserve Account: An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability (UAAL): The difference between the actuarial accrued liability (AAL) and actuarial value of assets (AVA). The UAAL is sometimes referred to as “unfunded accrued liability.” *Funding shortfall, or prefunded amount if negative.*

Valuation Date: The date that the actuarial valuation calculations are performed as of. *Also known as the “snapshot date”.*

V.

MEDICAL REPORTS

A. All Duty & Ordinary Disability Applications & Re-examinations (March).

MERITS	CITY OF MILWAUKEE EMPLOYES' RETIREMENT SYSTEM	Page Number: 1 OF 1
	Medical Panel Approvals Report	DATE RAN : 03/14/2024
Approved by Executive Director	Pension Board Meeting Date 03/26/2024	TIME RAN : 11:24

DOCTOR DECISION

<u>Case Number</u>	<u>Name</u>	<u>Title</u>	<u>Employer</u>	<u>Case Type</u>	<u>Case Sub-Type</u>	<u>City</u>	<u>Union</u>	<u>Third</u>	<u>Disability Date</u>	<u>Comments</u>
546	KOZLOWSKI, MARTIN	FIRE FIGHTER	FIRE	DD 75%	Re-Examination	Approved	Approved		03/01/2019	Exempt from Re-Exam
672	GILLUM, DE RONN	POLICE OFFICER	MILWAUKEE POLICE DEPT.	DD 75%	Re-Examination	Approved	Approved		06/27/2006	

Number of Cases: 2

This report includes Fire duty disabilities with an application date prior to July 29, 2016; Police MPA duty disabilities with an application date prior to June 19, 2016; and Police MPSO duty disabilities with an application date prior to January 1, 2016.

<u>Name</u>	<u>Title</u>	<u>Employer</u>	<u>CaseType</u>	<u>Case Sub-Type</u>	<u>Disability Date</u>	<u>Medical Council Meeting Date</u>	<u>in Person Exam Waiver</u>
BARANOWSKI, BRANDON	POLICE OFFICER	MPD	Duty Disability 75%	Re-Examination	01/23/2018	03/08/2024	
DROUGHT, MATTHEW	POLICE OFFICER	MPD	Ordinary Disability	Application	01/13/2024	03/08/2024	
GARNCARZ, ANDREW	FIREFIGHTER	MFD	Duty Disability 75%	Re-Examination	04/01/2021	03/08/2024	
GEPPERT, DEREK	FIREFIGHTER	MFD	Duty Disability 90%	Re-Examination	06/09/2018	03/08/2024	
URIBE, SAMUEL	FIREFIGHTER	MFD	Ordinary Disability	Re-Examination	07/02/2018	03/08/2024	
WEINZIERL, THOMAS	FIRE PARAMEDIC	MFD	Ordinary Disability	Re-Examination	03/04/2021	03/08/2024	
WILSON, TOMMY	POLICE OFFICER	MPD	Ordinary Disability	Re-Examination	10/02/2018	03/08/2024	

Number of Cases: 7

This report includes all GC disabilities; all ordinary disabilities; Fire duty disabilities with an application date on/after July 29, 2016; Police MPA duty disabilities with an application date on/after June 19, 2016; and Police MPSO duty disabilities with an application date on/after January 1, 2016.

VI.

UNFINISHED BUSINESS

- A. Pending Legal Opinions and Service Requests Report.
- B. Pending Legislation Report.
- C. Executive Director's Report – Inventory of ERS Projects.
- D. Approval of Cavanaugh Macdonald Book of Survivor Benefit Factors.



March 26, 2024 Board Meeting

PENDING LEGAL OPINIONS AND SERVICE REQUESTS REPORT

PART 1. LEGAL OPINIONS - OFFICE OF CITY ATTORNEY

None.

PART 2. LEGAL OPINIONS - OUTSIDE LEGAL COUNSEL

None.

PART 3. SERVICE REQUESTS - OFFICE OF CITY ATTORNEY

None.

PART 4. SERVICE REQUESTS - OUTSIDE LEGAL COUNSEL

None.



March 26, 2024 Board Meeting

PENDING LEGISLATION REPORT

PART 1. PENDING CHARTER ORDINANCES FOR COMMON COUNCIL ACTION

None.

PART 2. PENDING CHANGES TO THE RULES & REGULATIONS

None.

PART 3. PENDING LEGISLATIVE COMMITTEE REFERRALS

Pension Contribution Offset

12/13/16 ERS requested legal guidance on whether the 5.8% pension contribution offset for public safety employees pursuant to recent labor contract settlements or interest arbitration, is includable as "salary" for adjusting duty disability retirement allowance.

02/16/17 City Attorney issued a legal opinion advising that since members receiving a duty disability retirement allowance have not paid the member contributions, they are not entitled to the 5.8% pension contribution offset.

02/27/17 Opinion referred to Legislative Committee for consideration on whether the pension contribution offset received by general city and protective service members should be included in the calculation of the Conversion to Service Retirement and Extended Life retirement allowances.

07/31/17 Committee recommended this matter be held pending resolution of litigation.

PART 4. PENDING STATE LEGISLATION

None.

Employees' Retirement System – Executive Director's Report

March 2024

I. Personnel Update

- A. ERS is working with DER to fill the positions of ERS Fiscal Services Assistant and Investment Analyst - Senior.

II. Member Services

- A. New retirees on payroll in February - 26; 23 are currently anticipated for the March payroll.
- B. Retiree/Employee deaths entered in January - 47.
- C. Benefit Estimate requests because of Survivorship Factors changing has slowed down.
- D. There was a General City Retirement Workshop 2/23/24 and 22 members attended.
- E. There was a new Fire Recruit class 3/4/24 and 38 attended. ERS was there to sign the new recruits up for Life Insurance. This is the first class that will be enrolled in the Wisconsin Retirement System so ERS did not provide a pension presentation. There is a brief video that they watched about the WRS that had all the information that they would need including contact information.
- F. Below is a breakdown of to-date ERS benefits payouts/active/deferred counts:

Category	Count
Annuitants	
Death - Duty	24
Death - Ordinary	100
Disability - Duty	358
Disability - Ordinary	565
Retirement	12,761
Separation	38
Total Annuitants	13,846
Active	11,281
Deferred	3,169
Total Population	28,296

III. Financial Services

- A. Staff has begun work on the 2025 Budget Request which is anticipated to be presented at the next Board meeting.
- B. Staff continues to work with the actuary and financial auditors.

IV. Information Services

- A. Struts Upgrade and Modernize MERITS Website in progress.
- B. Domain Controller Upgrade in progress.
- C. IT Vulnerability Audit in progress.
- D. Third Party Review of Network Architecture Firmware Upgrade in progress.
- E. Network Infrastructure Firmware Upgrade in progress.
- F. Storage Area Network Firmware Upgrade in progress.
- G. IP Address Review and Cleanup 2023 in progress.
- H. DNS Review and Cleanup 2023 in progress.
- I. AD Review and Cleanup 2023 in progress.

- J. Firewall Review and Cleanup 2023 in progress.
- K. MS Windows Desktop and Laptop OS Upgrade in progress.
- L. Titan Upgrade for CMERS.com in progress.
- M. Perforce Upgrade in progress.
- N. Server Firmware Upgrade completed.

V. Administration

- A. Cavanaugh Macdonald has issued an Actuarial Valuation Report as of January 1, 2023 for Determining the Actuarial Determined Employer Contributions for **Plan Year 2024**. This is a revised 2023 valuation report to conform to the funding requirements of Wisconsin Act 12. The CavMac firm is presenting the report to the Board at this month's meeting. The Actuarial Valuation Report as of January 1, 2023 for Determining the Actuarial Determined Employer Contributions for **Plan Year 2025** is scheduled to be presented to the Board at its June 25, 2024 meeting. As reported by the actuary on p. 31 of the revised 2023 valuation report, "Act 12 eliminated the Stable Contribution Policy that had been used to determine required employer contributions under the Combined Fund since 2013. In place of the Stable Contribution Policy, Act 12 prescribes a new statutory policy which requires participating employers to contribute an actuarially calculated amount each year."

In this regard, of particular note in the revised 2023 report is Section VII: Risk Considerations (see especially p. 48). The actuary reports, "A return that is 10% lower than the assumed (or -3.2%) equates to actuarial loss of about \$553 million. Given the amortization period of 10 years for actuarial losses, **an increase of about \$77 million each year for the next 10 years would be required to compensate for an investment return that is 10% below the assumed rate of return in just one year.** Note that the System's asset smoothing method would initially dampen the contribution impact (emphasis added)."

However, this observation was based on a revised valuation report as of January 1, 2023 that did not anticipate the Plan Year 2023 investment return (approx. 10%) would outperform the Plan's 6.8% assumed rate of return. As a result, the January 1, 2024 valuation may be expected to indicate less of an impact in the event of a 10% shortfall in the assumed 6.8% return. The fact remains though, that a feature of the post-Act 12 environment is capital market volatility will be more quickly recognized in the Plan's funding requirements and the employers' budget accounts under Act 12 than previously. Negative annual returns have occurred five times since 2000 and there have been three occurrences of an order of magnitude significantly greater than -3.2% in the same period. Thus, negative returns are well within the first standard deviation of expected return. The Board may wish to take this new Act 12 funding requirement impact into account when evaluating risk tolerance for CMERS as a closed plan.

For the updated 2024 Factors Book, please see this link:

https://www.cmers.com/CMERS_RD/Off-Nav/Docs.htm

From: Larry Langer <LarryL@cavmacconsulting.com>

Sent: Thursday, February 1, 2024 8:22 AM

To: Allen, Jerry <Jerry.Allen@CMERS.com>; Siddiqui, Terry <Terry.Siddiqui@cmers.com>

Cc: Aaron Chochon <AaronC@cavmacconsulting.com>

Subject: CMERS 2024 Factor Book

All

Attached is an update to the 2024 Factors Book sent January 11, 2024. We have updated this book to accommodate the Merits system's use of an actuarially equivalent formula to convert the J&100% factors to other percentages based on the "Buck" formula. During this process we reviewed the Buck formula and found it to be reasonable. While the other J& factors changed, the J&100% factors are unchanged and include the modified cash refund death benefit.

Note that other factors not mentioned above remain unchanged.

We are available to discuss.

CavMac

PS: It's a big file – let us know you receive this.

Larry Langer, ASA, EA, FCA, MAAA
Principal and Consulting Actuary
Cavanaugh Macdonald Consulting, LLC
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Basic Website Metrics

	2023											2024	
	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.
Visits	4,981	5,474	5,447	5,137	4,907	5,735	5,601	5,341	5,626	5,370	5,023	5,918	6,216
Users	3,585	3,894	3,859	3,589	3,380	3,663	3,667	3,490	3,758	3,923	3,525	4,121	4,119
Page Views	11,668	12,933	13,201	12,927	12,220	13,694	13,930	12,747	14,150	13,570	12,238	14,925	15,831
Ave. Visit	1:27	1:25	1:28	1:33	1:40	1:32	2:24	1:31	1:35	1:29	1:30	1:35	1:11

VII.

INFORMATIONAL

Please be advised that the Annuity and Pension Board may vote to convene in closed session on the following item (VII.A.), as provided in Section 19.85(1)(g), Wisconsin State Statutes, to confer with legal counsel concerning strategy to be adopted by the body with respect to litigation in which it is or is likely to become involved. The Board may then vote to reconvene in open session following the closed session.

- A. Pending Litigation Report.
- B. Conferences.
- C. Class Action Income 2024.
- D. Minutes of the Special Administration & Operations Committee Meeting Held February 27, 2024.
- E. Report on Bills.
- F. Deployment of Assets.
- G. Securities Lending Revenue and Budget Report.
- H. Preliminary Performance Report and Asset Allocation.



March 26, 2024 Board Meeting

PENDING LITIGATION REPORT

Part 1. ERS Litigation through the City Attorney

MPSO/Local 215, et al. v City of Milwaukee, et al; Case Nos. 2019AP001319; 2018CV001274

MPSO and Local 215 filed suit on behalf of certain duty disability retirees against the City of Milwaukee and the Employees' Retirement System alleging the defendants violated the collective bargaining agreements as it relates to the payment of the 5.8% pension offset.

See prior Reports for case history

- **02/05/24** Motion hearing held. Plaintiffs' Motion to Consolidate denied by the Court. The Court will issue its written decision by April 5, 2024 as it relates to the Plaintiffs' Motions for Attorney's Fees.
- **02/19/24** Court signs Order Denying Motion for Consolidation.

MPA and Kurt Lacina v. City of Milwaukee, et al; Case Nos. 2023AP000301; and 2022CV001965

Kurt Lacina alleges his DDRA was wrongfully offset by a worker's compensation permanent partial disability award by defendants.

See prior Reports for case history

- 10/18/23 Appellants' Reply Brief filed. Case awaiting assignment to appellate panel.

Frank Vrtochnick, et al v. City of Milwaukee, et al; Case No. 2023CV003007

Plaintiff alleges the City and the ERS breached the Milwaukee Police Association 2013-2016 collective bargaining agreement and Chapter 36 of the Milwaukee City Charter as it pertains to the inclusion of the 5.8% pension offset in the member's "base salary" for purposes of calculating the duty disability retirement allowance. The plaintiff seeks to have this current litigation classified as a Class Action to include all other similarly-situated employees hired prior to October 3, 2011 and represented by the Milwaukee Police Association.

See prior Reports for case history

- 02/07/24 Status conference held; Briefing schedule placed on the record. Case adjourned to May 22, 2024 at 1:30 pm to hear Defendants' Motion to Dismiss.
- **05/22/24** Scheduled for hearing on Defendants' Motion to Dismiss.

Benjean Lara v. City of Milwaukee, et al; Case No. 2023CV007107

Member filed Petition for Certiorari Review of Pension Board's denial of disability (duty and ordinary) retirement benefits.

See prior Reports for case history

- **02/13/24** Supplemental Administrative Record filed with Court by Defendants.
- **02/29/24** Petitioner's Brief in Support of Petition for Writ of Certiorari filed with Court.
- **03/29/24** Respondent's Brief due.

John Klein et al. v. City of Milwaukee et al.; Case Nos. 2022AP001401; and 2021CV004632

Plaintiffs allege the City of Milwaukee and the Employees' Retirement System improperly determined eligibility for certain retirement benefits provided for under the terms of the Global Pension Settlement and as codified in Chapter 36 of the Milwaukee City Charter.

- 02/11/21 Notice of Claim served upon ERS and forwarded to fiduciary carriers
- 07/29/22 Plaintiffs' Motion for Declaratory Judgement denied. Case dismissed.
- 08/15/22 Plaintiffs' Notice of Appeal filed.
- 12/23/22 Brief of Appellants filed.
- 01/23/22 Brief of Respondents filed.
- 02/03/23 Appellants' Reply Brief filed. Awaiting case assignment.
- 02/03/23 Case submitted on briefs. Pending decision.

Part 2. ERS Administrative Appeal Hearings through the City Attorney

Jason Rodriguez; Administrative Case No. 1443

- Hearing stayed pending outcome of Appellant's state workers compensation (WC) appeal hearing. First WC appeal hearing held May 10, 2022. Second WC appeal hearing pending scheduling.

James Gentry; Administrative Case No. 1522

- Appeal hearing scheduled for March 18, 2024.

Part 3. Notice of Claim filed with ERS

None.

Part 4. ERS Litigation through Outside Legal Counsel

None.

Client Conferences 2024

Board Meeting: March 26, 2024

DATE(S)	CONFERENCE(S) / LOCATION(S)	SPONSOR(S)
April 8 – 10, 2024	Callan's 2024 National Conference San Francisco, CA	Callan Associates
May 15 - 16, 2024	2024 Institutional Investor Insights (In3) New York, NY	BlackRock
June 11 – 12, 2024	"Callan College" Introduction to Investments Chicago, IL	Callan Associates
June 26 – 27, 2024	2024 Neuberger Berman Private Markets Limited Partners Annual Meetings New York, NY	Neuberger Berman
September 17 – 18, 2024	2024 USLF Annual Meeting San Francisco, CA	ProLogis
September 24 – 26, 2024 10:30 am – 1:30 pm	"Callan College" Introduction to Investments Virtual	Callan Associates
October 23, 2024 8:00am – 10:30am	2024 October Workshop Chicago, IL	Callan Associates

Trustee Conferences 2024

Board Meeting: March 26, 2024

DATE(S)		
April 9 – 10, 2024	Private Markets Conference – The LP Perspective Chicago, IL	Pensions & Investments
April 15 – 17, 2024	Pension Bridge The Annual 2024 Half Moon Bay, CA	with.Intelligence
April 17, 2024	8 th Annual Real Estate Midwest Forum Chicago, IL	Markets Group
April 29 – May 1, 2024	Public Funds Roundtable 2024 Beverly Hills, CA	Institutional Investor
May 5 – 8, 2024	Milken Institute 2024 Global Conference Beverly Hills, CA	Milken Institute
May 6 - 9, 2024	Portfolio Concepts and Management (Wharton) Philadelphia, PA	International Foundation of Employee Benefit Plans
May 8, 2024	2024 Madison Investment Conference Madison, WI	CFA Society Madison, SWIB, Wisconsin School of Business
May 14 – 15, 2024	10 th Annual Midwest Institutional Forum Chicago, IL	Markets Group
May 18 – 19, 2024	NCPERS Accredited Fiduciary (NAF) Program and Trustee Educational Seminar (TEDS) Seattle, WA	NCPERS
May 19 – 22, 2024	Annual Conference & Exhibition (ACE) Seattle, WA	NCPERS
May 22, 2024	10 th Annual Redefining Fixed Income Forum Chicago, IL	Institutional Investor
June 5 – 7, 2024	2024 Visions, Insights, & Perspective (VIP) Infrastructure Washington, DC	Institutional Real Estate, Inc.

Trustee Conferences 2024

Board Meeting: March 26, 2024

DATE(S)	CONFERENCE(S) / LOCATION(S)	SPONSOR(S)
June 24 – 26, 2024	Institutional Investor Week Newport, RI	Institutional Investor
July 22 – 23, 2024	Alternatives Forum - ALTSCHI Chicago, IL	Markets Group
July 30 – 31, 2024	Certificate of Achievement in Public Plan Policy (CAPPP): Pensions Part I Boston, MA	International Foundation of Employee Benefit Plans
August 1 – 2, 2024	Certificate of Achievement in Public Plan Policy (CAPPP): Pensions Part II Boston, MA	International Foundation of Employee Benefit Plans
August 18 – 20, 2024	Public Pension Funding Forum Boston, MA	NCPERS
September 9 – 11, 2024	CII Fall 2024 Conference Brooklyn, NY	Council of Institutional Investors
September 16 - 17, 2024	Investment Basics Nashville, TN	International Foundation of Employee Benefit Plans
September 17, 2024	10 th Annual Great Plains Institutional Forum Minneapolis, MN	Markets Group
October 8 – 9, 2024	2024 Roundtable for Consultants and Institutional Investors Chicago, IL	Institutional Investor
October 16 – 17, 2024	Pension Bridge Alternatives 2024 New York, NY	with.Intelligence
October 26 – 27, 2024	NCPERS Accredited Fiduciary (NAF) Program & Program for Advanced Trustee Studies (PATS) Palm Springs, CA	NCPERS
October 27 – 30, 2024	Public Safety Conference Palm Springs, CA	NCPERS
November 9 – 10, 2024	Certificate of Achievement in Public Plan Policy (CAPPP): Pensions Part II San Diego, CA	International Foundation of Employee Benefit Plans

Upcoming Due Diligence Meetings

Date	Manager(s)	Team
June 25, 2024	Aptitude	David

Class Action Income 2024 YTD

Asset Description	Date(s)	Amount
Arthrocare Corp.	1/5/2024 \$	28,400
Teva Pharmaceutical	1/8/2024 \$	1,273
Countrywide Financial	1/30/2024 \$	82
Bank of America	2/7/2024 \$	14,750
Corrections Corp. of America	2/16/2024 \$	362
Petroleo Brasileiro SA	2/27/2024 \$	81,460
Total Class Action Income Received in 2024 YTD	\$	126,328

**EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE
ANNUITY AND PENSION BOARD**

Minutes of the Special Administration and Operations Committee Meeting
held February 27, 2024 via teleconference

The meeting was called to order at 8:30 a.m.

Committee Members Present: Molly King
Tom Klusman
Aycha Sawa, Chair

ERS Staff Present: Bernard Allen, Executive Director
Melody Johnson, Deputy Director
David Silber, Chief Investment Officer
Dan Gopalan, Chief Financial Officer
Gust Petropoulos, Deputy Director – Disability
Mary Turk, Business Operations Analyst
Jan Wills, Board Stenographer

Others Present: Patrick McClain, City Attorney's Office; Lisa Casel, Erin Scharlau, Carolyn Stittleburg, Legislative Audit Bureau; Matthew Bell, Deborah Ford, Timothy Heling, Annuity and Pension Board Trustees; Terry Siddiqui, DS Consulting, Inc., four members of the public called in to the meeting.

Approval of Terms of Audit Engagement Letter with the Wisconsin Legislative Audit Bureau.

Mr. Allen said the Charter Ordinance 36-15 and the A&O Audit Charter provide that the Board of Trustees will engage the auditors and the role of the A&O Committee is to make a recommendation to the full Board. He stated under 36-15, the Board is charged with administering the system in all of its aspects, including recordkeeping, investment management, preparation of financial statements, and engaging the auditors for the financial audit. Mr. Allen said 2023 Wisconsin Act 12 provides that the financial audit, both the ERS and for the County pension plan, will be performed by the Legislative Audit Bureau (LAB). He added that it is mandated by Act 12, but there is more to the state pension law than just Act 12. He noted there is Chapter 36, the 1937 Act, the 1947 Act, the 2018 Supreme Court case, the decision that gives the Board the authority to administer the Plan, and also Act 12 itself by its terms. Mr. Allen stated Section 242 provides that the Annuity and Pension Board will continue to administer the Plan. He said, after talking with Mr. McClain, there needs to be some governance authority that engages the auditors. Mr. Allen referred Committee members to their packets containing the Terms of Audit Engagement letter from the Legislative Audit Bureau regarding the audit engagement. He said the bureau is asking for the Chief Financial Officer, Chief Investment Officer, and Executive Director to sign the letter and to acknowledge several things mentioned on page four that are shown as ERS staff responsibilities. Mr. Allen said the ERS staff took exception to bullet number five on page four which is the ERS Staff to acknowledge they are responsible for determining the reasonableness

of significant assumptions used in making accounting estimates. He said the ERS asked the Legislative Audit Bureau (LAB) to clarify this item. Mr. Allen said there are accounting assumptions made in connection with the financial statements, some of which are actuarial assumptions which the Charter reserves exclusively to the Board of Trustees and not to the staff. He said the staff asked LAB to clarify the assumptions they are asking the staff to acknowledge they are responsible for determining. Mr. Allen noted the Legislative Audit Bureau said they would modify this and send us a revised letter but they have not done so to date. He said because the ERS wants to get on with the audit, the ERS has some suggested language which will be annotated in the letter. Mr. Allen said it is also stated in his February 7, 2024 letter to the State Auditor that the last paragraph explains that determining the actuarial assumptions is reserved to the Board of Trustees and not the Staff. He said the audit engagement letter is a part of the financials and is a sworn statement. ERS staff is careful about signing sworn statements so everything is factually correct.

Mr. Allen noted the ERS is suggesting the following language (displayed on the screen) which is factually correct:

“ERS management has no vote in Board proceedings and as a result does not have any authority to make plan actuarial assumptions or determine their reasonableness. Accordingly, determining the reasonableness of plan actuarial assumptions used in making accounting estimates is outside of ERS management's purview and control.”

“During the course of the audit, ERS management will provide documentation that the Board, in consultation with its expert independent actuarial and investment consultants, has duly authorized the plan actuarial assumptions used in making accounting estimates and thus determined their reasonableness.”

Mr. Allen stated there are accounting assumptions made for routine things which are not material for the ERS' situation. He gave an example of estimating the percentage of receivables ultimately paid and noted the ERS has a good track record for this item. He clarified in the financial statements, the ERS has to make some assumption of the actual receivables received. He said those assumptions are made by the ERS accounting team, but the ERS staff does not make actuarial assumptions.

Mr. Gopalan named other assumptions for financial statements which included receivables, certain accruals made as part of year-end in relation to payables, routine annual accrual estimates, and the ERS does some estimates for investments which are based on information from given to ERS by investment managers.

Mr. Allen also said staff would retain the bullet point, but footnote it with the two quoted paragraphs listed above to make it clear the ERS staff is not making the actuarial assumptions. He said a motion would be in order to engage the Legislative Audit Bureau to perform the audit.

Ms. Sawa asked Mr. McClain if the revision is made with the added language, does that make the engagement letter valid. Mr. McClain said “absolutely” as there are no signature lines for both the ERS and the LAB. He referred the Committee to the last page and said it was an Acknowledgement, acknowledging the terms of the engagement, including the responsibilities of

the ERS management. Mr. Allen said in prior audits there was an agreement with the outside audit firm that the Board authorized. Mr. McClain said it is not a contract, but the ERS officers are being asked to acknowledge the terms and representation stated in the letter, but there is just one bullet point the ERS wants a correction on. He said the Legislative Audit Bureau agreed to make a change, but the ERS did not receive the change at the time of the meeting. Mr. McClain said they would propose the language and submit it. Mr. McClain stated if they come back and provide clarification language close to what the ERS has, the Committee and Board could approve the execution of the engagement letter, with the caveat that provision be corrected, and giving the officers the latitude to use the ERS' correction or whatever correction the LAB proposes. Mr. McClain noted it is the LAB's letter and based upon what they want to accept, and based on prior representations, the ERS is optimistic the LAB will make the required changes or accept the required changes. He said if the LAB refuses to accept a modified letter, the ERS is at an impasse because the ERS can't sign a factually incorrect acknowledgement. Mr. McClain said he thinks the LAB understands the ERS' concerns. Mr. McClain concluded the Committee can approve the engagement letter with the understanding the bullet point be corrected to reflect the actual governance responsibilities of the system.

Mr. Klusman asked why the ERS is entertaining signing something as he had a couple of concerns and would be comfortable signing something not called an engagement letter, but rather a memo of understanding. Mr. McClain said Act 12, in relation to the Legislative Audit Bureau, empowered it to do two things: one, an annual financial audit of the ERS, which is in Wisconsin Statutes 13.941 and two, require the Legislative Audit Bureau to contract for an actuarial audit every five years. He said the letter before the Board, and if one reads Chapter 13, the sections relating to the audit bureau, it says they are governed by industry standards, and are required to comply with generally accepted auditing standards. Mr. McClain noted an engagement letter is industry standard practice, required by statute. He said nothing in Act 12 did away with the ERS governance controls, but created a state-mandated auditor. Ms. Sawa stated the Comptroller's office does engagement letters with its external auditors and is standard practice. Mr. McClain said this is also new for the Legislative Audit Bureau. Mr. Allen said the audit director explained requesting ERS staff to agree to the audit engagement is pursuant to their professional audit standards. However, the audit profession cannot change the governance requirements of the ERS and that is why approval of the letter was brought to the Committee. He said there was also concern about the factual correctness of the statement about the assumptions. The Legislative Audit Bureau did not distinguish actuarial assumptions from the other accounting assumptions. Mr. Allen said Act 12 prescribes both the County fund and City fund will pay for the audit. He said there is no contract in place with a "not to exceed," cost provision. Instead the ERS will receive a billing letter from LAB which will be brought back to the Committee and Board to determine the reasonableness of any amount for services for which the ERS is billed.,.

Mr. Klusman said he is not comfortable with the form the letter is in and wants to see the final product. Mr. Allen said staff is planning to put a footnote using the language on the screen and retain the bullet point number five on page four, asterisk it, and clarify that the assumptions do not include actuarial assumptions.

It was moved by Mr. Klusman, and seconded by Ms. King to approve, as modified, the Approval of Terms of Audit Engagement Letter, as modified, with the Wisconsin Legislative Audit Bureau.

It was moved by Ms. King, and seconded by Mr. Klusman to adjourn the meeting.

Ms. Sawa adjourned the meeting at 8:55 a.m.

Bernard J. Allen
Secretary and Executive Director

NOTE: All proceedings of the Annuity and Pension Board Meetings and related Committee Meetings are recorded. All recordings and material mentioned herein are on file in the office of the Employees' Retirement System, 789 N. Water Street, Suite 300.)

Fiscal Year
2024
Department
Employees' Retirement System

City of Milwaukee
Departmental
Appropriation Budget Balances

As of: 2024-03-31

	Budget	2024-1	2024-2	2024-3	Year to Date Expended	Life to Date Commitments	Remaining Budget
<i>Regular Departmental Appropriations:</i>							
Employee Salaries & Wages	5,002,345.00	-	-	-	-	-	5,002,345.00
Base Pay-Salary & Wage	-	236,445.99	349,712.62	-	586,158.61	-	(586,158.61)
Overtime Premium	-	65.67	46.60	-	112.27	-	(112.27)
Time Paid Not Worked	-	123,944.27	19,059.21	-	143,003.48	-	(143,003.48)
Employee Salaries & Wages	\$ 5,002,345.00	360,455.93	368,818.43	-	\$ 729,274.36	\$ -	\$ 4,273,070.64
Fringe Benefits Applied	2,251,055.00	-	-	-	-	-	2,251,055.00
Fringe Benefits Applied	-	124,252.37	183,773.99	-	308,026.36	-	(308,026.36)
Applied Employee Benefits	\$ 2,251,055.00	124,252.37	183,773.99	-	\$ 308,026.36	\$ -	\$ 1,943,028.64
Operating Expenditures	16,305,400.00	-	-	-	-	-	16,305,400.00
Office Supplies	-	349.31	889.79	-	1,239.10	-	(1,239.10)
Magazines, Subscription	-	479.46	297.47	-	776.93	-	(776.93)
Postal and Mailing Services	-	130.00	12,219.29	-	12,349.29	-	(12,349.29)
Electricity	-	-	3,839.62	-	3,839.62	-	(3,839.62)
Other Operating Supply	-	1,450.00	-	-	1,450.00	-	(1,450.00)
Building Rental	-	75,773.06	52,700.39	-	128,473.45	-	(128,473.45)
Printing & Dupl Machine Rental	-	1,126.29	-	-	1,126.29	-	(1,126.29)
Consulting	-	16,921.68	47,549.15	18,380.40	82,851.23	-	(82,851.23)
Medical, Surgical & Lab	-	5,500.00	30,315.35	-	35,815.35	-	(35,815.35)
Administrative Charges	-	14,136.29	50,936.16	6,926.76	71,999.21	-	(71,999.21)
Other Professional Services	-	(1,233,143.40)	573,608.34	-	(659,535.06)	-	659,535.06
Systems Support	-	-	27,965.00	26,605.00	54,570.00	-	(54,570.00)
IT Infrastructure	-	-	6,170.00	-	6,170.00	-	(6,170.00)
Telephone, Communications	-	5,721.23	4,245.76	-	9,966.99	-	(9,966.99)
Travel & Subsistence	-	5,667.01	1,973.23	-	7,640.24	-	(7,640.24)
Insurance-Non Health	-	11,569.00	-	-	11,569.00	-	(11,569.00)
Other Misc Services	-	14,121.84	210.00	-	14,331.84	-	(14,331.84)
Operating Expenditures	\$ 16,305,400.00	(1,080,198.23)	812,919.55	51,912.16	\$ (215,366.52)	\$ -	\$ 16,520,766.52
All Equipment	713,000.00	-	-	-	-	-	713,000.00
Computer Server & Components	-	10,194.14	37,375.00	-	47,569.14	-	(47,569.14)
Total Equipment	\$ 713,000.00	10,194.14	37,375.00	-	\$ 47,569.14	\$ -	\$ 665,430.86
Total Regular Class	\$ 24,271,800.00	(585,295.79)	1,402,886.97	51,912.16	\$ 869,503.34	\$ -	\$ 23,402,296.66
<i>Other Departmental Appropriations:</i>							
Pol Pension Lump-Sum Sup Cont	2,000.00	-	-	-	-	-	2,000.00
PABF Payroll	12,000.00	-	1,000.00	-	1,000.00	-	11,000.00
Group Life Insurance Premium	4,200,000.00	-	696,585.42	-	696,585.42	-	3,503,414.58
Retiree's Benefit Adjustment	25,000.00	1,467.22	-	-	1,467.22	-	23,532.78
Other Classes	\$ 4,239,000.00	1,467.22	697,585.42	-	\$ 699,052.64	\$ -	\$ 3,539,947.36
Total Dept Appropriations	\$ 28,510,800.00	(583,828.57)	2,100,472.39	51,912.16	\$ 1,568,555.98	\$ -	\$ 26,942,244.02

Monthly Board Report

29-Feb-24

Account number COMALL

CITY OF MILW ALL ACCTS

Page 1 of 3

Manager Mix Report

Account Name/ Account Number	Cash/ % of account	Short Term/ % of account	Equity/ % of account	Fixed/ % of account	R.E. and Other/ % of account	Pendings/ % of account	Total Market Value/ % of consolidation
MILWAUKEE-CASH ACCOUNT 2605491	0.00 0.00%	168,531,975.70 100.00%	0.00 0.00%	0.00 0.00%	0.00 0.00%	-3,717.00 0.00%	168,528,258.70 2.82%
MILWAUKEE-THE NORTHERN TRS 2605496	0.00 0.00%	0.00 0.00%	208,498,248.70 100.00%	0.00 0.00%	0.00 0.00%	0.00 0.00%	208,498,248.70 3.49%
MILWAUKEE-ERS EXPENSE FUND 2605504	0.00 0.00%	344,708.21 100.00%	0.00 0.00%	0.00 0.00%	0.00 0.00%	0.00 0.00%	344,708.21 0.01%
MILWAUKEE-PABF BENEFIT PAYMENT 2610128	0.00 0.00%	4,674.70 100.00%	0.00 0.00%	0.00 0.00%	0.00 0.00%	0.00 0.00%	4,674.70 0.00%
MILWAUKEE-DFA INTERNATIONAL 2619838	0.00 0.00%	0.00 0.00%	162,032,144.70 100.00%	0.00 0.00%	0.00 0.00%	0.00 0.00%	162,032,144.70 2.71%
MILWAUKEE-EARNEST -SL 2630942	0.00 0.00%	3,585,446.26 2.14%	164,061,173.60 97.86%	0.00 0.00%	0.00 0.00%	0.00 0.00%	167,646,619.90 2.80%
MILWAUKEE - UBS A&Q 2637239	0.00 0.00%	0.00 0.00%	0.00 0.00%	0.00 0.00%	255,919,573.10 100.00%	0.00 0.00%	255,919,573.10 4.28%
MILWAUKEE-DFA 2637848	0.00 0.00%	0.00 0.00%	181,820,777.50 100.00%	0.00 0.00%	0.00 0.00%	0.00 0.00%	181,820,777.50 3.04%
MILWAUKEE-BAIRD 2674604	0.00 0.00%	23,922,252.31 27.99%	0.00 0.00%	61,558,418.18 72.01%	0.00 0.00%	0.00 0.00%	85,480,670.49 1.43%
MILWAUKEE - BLACKROCK R1000V 4472746	0.00 0.00%	0.00 0.00%	200,094,106.90 100.00%	0.00 0.00%	0.00 0.00%	0.00 0.00%	200,094,106.90 3.35%
MILWAUKEE-LOOMIS SAYLE CME01	1,262,909.50 0.28%	0.00 0.00%	8,362,587.25 1.84%	444,462,262.10 97.94%	0.00 0.00%	-275,176.54 -0.06%	453,812,582.30 7.59%
MILWAUKEE-BRANDES INT'L EQUITY CME03	10,537,034.76 3.27%	0.00 0.00%	312,750,409.10 96.91%	0.00 0.00%	1,948,666.10 0.60%	-2,512,965.69 -0.78%	322,723,144.30 5.40%
MILWAUKEE-REAMS CME04	64,501,794.44 9.00%	0.00 0.00%	0.00 0.00%	827,345,028.80 115.41%	3,969,904.05 0.55%	-178,967,494.60 -24.97%	716,849,232.60 11.99%
MILWAUKEE-BLAIR CME05	3,849,121.74 1.65%	0.00 0.00%	228,211,222.00 97.91%	0.00 0.00%	917,164.07 0.39%	100,475.87 0.04%	233,077,983.70 3.90%
MILWAUKEE-MFS CME12	2,253,389.81 1.09%	0.00 0.00%	203,148,042.10 98.70%	0.00 0.00%	420,882.78 0.20%	0.00 0.00%	205,822,314.70 3.44%

Monthly Board Report

29-Feb-24

Account number COMALL

CITY OF MILW ALL ACCTS

Page 2 of 3

Manager Mix Report

Account Name/ Account Number	Cash/ % of account	Short Term/ % of account	Equity/ % of account	Fixed/ % of account	R.E. and Other/ % of account	Pendings/ % of account	Total Market Value/ % of consolidation
MILWAUKEE-POLEN 2644553	0.00 0.00%	6,052,114.35 4.65%	124,563,567.60 95.60%	0.00 0.00%	0.00 0.00%	-324,285.82 -0.25%	130,291,396.10 2.18%
MILWAUKEE - PRINCIPAL DRA -SL 2677436	0.00 0.00%	0.00 0.00%	171,633,643.50 100.00%	0.00 0.00%	0.00 0.00%	0.00 0.00%	171,633,643.50 2.87%
MILWAUKEE-BLACKROCK GLOBAL-SL 2683493	0.00 0.00%	0.00 0.00%	262,044,323.10 100.00%	0.00 0.00%	0.00 0.00%	0.00 0.00%	262,044,323.10 4.38%
MILWAUKEE-PUBLIC EQUITY 2697782	0.00 0.00%	-3,717.00 -70.82%	5,248.40 100.00%	0.00 0.00%	0.00 0.00%	3,717.00 70.82%	5,248.40 0.00%
MILWAUKEE- AQR-SL 4468331	0.00 0.00%	0.00 0.00%	110,755,322.00 100.00%	0.00 0.00%	0.00 0.00%	0.00 0.00%	110,755,322.00 1.85%
MILWAUKEE-APTITUDE / 4479682 4479682	0.00 0.00%	0.00 0.00%	0.00 0.00%	0.00 0.00%	174,374,539.10 100.00%	0.00 0.00%	174,374,539.10 2.92%
MILWAUKEE-INV TRAN CME08	8,368.86 28.48%	0.00 0.00%	21,011.22 71.52%	0.00 0.00%	0.00 0.00%	0.00 0.00%	29,380.08 0.00%
MILWAUKEE - DFA US LCV CME15	451,477.59 0.31%	0.00 0.00%	145,035,422.50 99.71%	0.00 0.00%	0.00 0.00%	-26,470.77 -0.02%	145,460,429.30 2.43%
MILWAUKEE-REAL ESTATE MULTIPLE	0.00 0.00%	0.00 0.00%	0.00 0.00%	0.00 0.00%	458,277,574.97 100.19%	-869,388.19 -0.19%	457,408,186.77 7.65%
MILWAUKEE-PRIVATE EQUITY MULTIPLE	0.00 0.00%	0.00 0.00%	0.00 0.00%	0.00 0.00%	755,133,282.00 100.00%	0.00 0.00%	755,133,282.00 12.63%
MILWAUKEE - BLACKROCK US G-SL MULTIPLE	0.00 0.00%	0.00 0.00%	0.00 0.00%	407,354,579.70 100.00%	0.00 0.00%	0.00 0.00%	407,354,579.70 6.82%

Monthly Board Report

29-Feb-24

Account number COMALL

CITY OF MILW ALL ACCTS

Page 3 of 3

Manager Mix Report

Account Name/ Account Number	Cash/ % of account	Short Term/ % of account	Equity/ % of account	Fixed/ % of account	R.E. and Other/ % of account	Pendings/ % of account	Total Market Value/ % of consolidation
Total for consolidation	82,864,096.70	202,437,454.53	2,483,037,250.17	1,740,720,288.78	1,650,961,586.17	-182,875,305.74	5,977,145,370.55
% for consolidation	1.39%	3.39%	41.54%	29.12%	27.62%	-3.06%	100.00%

Please note that this report has been prepared using best available data. This report may also contain information provided by third parties, derived by third parties or derived from third party data and/or data that may have been categorized or otherwise reported based upon client direction - Northern Trust assumes no responsibility for the accuracy, timeliness or completeness of any such information. Northern Trust assumes no responsibility for the consequences of investment decisions made in reliance on information contained in this report. If you have questions regarding third party data or direction as it relates to this report, please contact your Northern Trust relationship team.

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**Employees' Retirement System
Securities Lending Income and Expenses: 2024
As of February 2024**

Date	Income From Lending	Amounts Expended		Balance
		Fees	Administrative Transfers	
Balance 12-31-23				\$852,821.09
01/04/24	3,652.42	-	-	856,473.51
01/16/24	236,817.30	47,355.57	-	1,045,935.24
01/16/24	-	-	853,000.00	192,935.24
02/05/24	3,207.34	-	-	196,142.58
02/15/24	184,406.58	36,874.56	-	343,674.60
Current Totals	\$428,083.64	\$84,230.13	\$853,000.00	\$343,674.60

Note: Expenses for Board Travel/Education, Computer Equipment, Publications and Consulting are now paid from the Operations/Management account

MERS PERFORMANCE ESTIMATES
February 29, 2024

Account	2023 Return	Jan 2024	Feb 2024	YTD Thru 2/29/24
Northern Trust S&P 500 Index	26.30%	1.68%	5.34%	7.10%
S&P 500	<u>26.29%</u>	<u>1.68%</u>	<u>5.34%</u>	<u>7.11%</u>
Difference	0.01%	0.00%	0.00%	0.00%
BlackRock Russell 1000 Value Index	11.51%	0.10%	3.69%	3.80%
Russell 1000 Value	<u>11.46%</u>	<u>0.10%</u>	<u>3.69%</u>	<u>3.80%</u>
Difference	0.05%	0.00%	0.00%	0.00%
DFA US Large Cap Value	12.49%	0.70%	4.26%	4.98%
Russell 1000 Value	<u>11.46%</u>	<u>0.10%</u>	<u>3.69%</u>	<u>3.80%</u>
Difference	1.03%	0.59%	0.57%	1.18%
Polen	38.59%	4.10%	3.86%	8.12%
S&P 500	<u>26.29%</u>	<u>1.68%</u>	<u>5.34%</u>	<u>7.11%</u>
Difference	12.30%	2.42%	-1.48%	1.01%
Earnest	17.75%	-0.73%	4.01%	3.26%
Russell MidCap	<u>17.23%</u>	<u>-1.42%</u>	<u>5.59%</u>	<u>4.08%</u>
Difference	0.52%	0.70%	-1.57%	-0.82%
CastleArk	10.67%	0.58%	8.12%	8.75%
Russell 2000 Growth	<u>18.66%</u>	<u>-3.21%</u>	<u>5.56%</u>	<u>2.17%</u>
Difference	-7.99%	3.79%	2.57%	6.58%
DFA US Small Cap Value	21.83%	-3.21%	1.82%	-1.45%
Russell 2000 Value	<u>14.65%</u>	<u>-4.54%</u>	<u>3.27%</u>	<u>-1.42%</u>
Difference	7.18%	1.33%	-1.45%	-0.03%
Brandes	31.52%	-0.36%	0.60%	0.23%
MSCI EAFE	<u>18.24%</u>	<u>0.58%</u>	<u>1.83%</u>	<u>2.42%</u>
Difference	13.29%	-0.94%	-1.23%	-2.19%
William Blair	15.90%	0.03%	4.18%	4.21%
MSCI ACWI ex US	<u>16.21%</u>	<u>-0.98%</u>	<u>2.55%</u>	<u>1.54%</u>
Difference	-0.31%	1.01%	1.63%	2.67%
DFA Int'l Small Cap Value	17.56%	-1.51%	1.43%	-0.09%
MSCI EAFE Small Cap	<u>13.16%</u>	<u>-1.65%</u>	<u>0.38%</u>	<u>-1.27%</u>
Difference	4.40%	0.14%	1.05%	1.18%
AQR	17.92%	-2.25%	6.43%	4.04%
MSCI EM	<u>9.83%</u>	<u>-4.64%</u>	<u>4.76%</u>	<u>-0.11%</u>
Difference	8.09%	2.39%	1.67%	4.15%
BlackRock Global Alpha Tilts	23.33%	0.25%	4.60%	4.87%
MSCI ACWI	<u>22.20%</u>	<u>0.59%</u>	<u>4.29%</u>	<u>4.90%</u>
Difference	1.13%	-0.33%	0.31%	-0.03%
MFS	21.34%	-0.02%	4.33%	4.32%
MSCI ACWI	<u>22.20%</u>	<u>0.59%</u>	<u>4.29%</u>	<u>4.90%</u>
Difference	-0.87%	-0.60%	0.04%	-0.58%
BlackRock Gov't Bond Index	4.26%	-0.18%	-1.29%	-1.47%
Bloomberg Gov't Bond	<u>4.09%</u>	<u>-0.27%</u>	<u>-1.30%</u>	<u>-1.56%</u>
Difference	0.17%	0.09%	0.01%	0.09%
Reams	6.76%	-0.26%	-1.30%	-1.56%
Bloomberg US Aggregate	<u>5.53%</u>	<u>-0.27%</u>	<u>-1.41%</u>	<u>-1.68%</u>
Difference	1.23%	0.02%	0.11%	0.12%
Loomis Sayles	8.53%	0.08%	-0.68%	-0.60%
Bloomberg US Aggregate	<u>5.53%</u>	<u>-0.27%</u>	<u>-1.41%</u>	<u>-1.68%</u>
Difference	3.00%	0.35%	0.73%	1.08%
UBS	6.80%	1.42%	0.17%	1.59%
SOFR + 4%	<u>9.02%</u>	<u>0.81%</u>	<u>0.74%</u>	<u>1.55%</u>
Difference	-2.21%	0.61%	-0.57%	0.04%
Aptitude	5.24%	1.52%	1.60%	3.15%
SOFR + 4%	<u>9.02%</u>	<u>0.81%</u>	<u>0.74%</u>	<u>1.55%</u>
Difference	-3.78%	0.72%	0.86%	1.60%
Principal	3.31%	-2.41%	0.15%	-2.26%
Blended Benchmark	<u>4.31%</u>	<u>-2.68%</u>	<u>-0.62%</u>	<u>-3.28%</u>
Difference	-1.00%	0.27%	0.77%	1.02%
Baird	5.46%	0.46%	-0.02%	0.44%
Bloomberg Govt/Credit 1-3 Year	<u>4.61%</u>	<u>0.39%</u>	<u>-0.36%</u>	<u>0.02%</u>
Difference	0.85%	0.07%	0.34%	0.42%
Total MERS	9.98%	-0.12%	1.05%	0.93%

The calculation for the Fund's total rate of return is based on the Modified Dietz method. Although periodic cash flows (i.e., contributions, redemptions) are not time weighted, they are accounted for in the Fund's total rate of return. Therefore, this estimated rate of return may vary slightly from the rate of return reported by the custodian.

The returns shown are gross of fees (except Total MERS, DFA International Small Cap Value, William Blair International Growth, AQR, Principal, UBS, and Aptitude)
CastleArk performance runs through February 14, 2024.

ACTUAL ALLOCATIONS

February 29, 2024

		Target	Market Value	Allocation
EQUITY				
Public Equity				
Domestic				
Passive Large Cap Equity	Northern Trust (S&P 500)	3.45%	\$ 208,498,249	3.54%
	BlackRock (Russell 1000 Value)	3.45%	\$ 200,094,107	3.39%
	Sub-Total Passive Large Cap Equity	6.90%	\$ 408,592,356	6.93%
Active Large Cap Equity	Polen (S&P 500)	1.94%	\$ 130,291,396	2.21%
	DFA (Russell 1000 Value)	2.46%	\$ 145,460,429	2.47%
	Sub-Total Active Large Cap Equity	4.40%	\$ 275,751,825	4.68%
Active Mid/Small Cap Equity	Earnest Partners (Russell MidCap)	1.77%	\$ 167,646,620	2.84%
	CastleArk (Russell 2000 Growth)	1.42%	\$ 5,248	0.00%
	DFA (Russell 2000 Value)	3.05%	\$ 181,820,778	3.08%
	Sub-Total Active Mid/Small Cap Equity	6.24%	\$ 349,472,646	5.93%
Total Domestic		17.55%	\$ 1,033,816,827	17.54%
International				
Active International Equity	Brandes (MSCI EAFE)	5.14%	\$ 322,723,144	5.47%
	William Blair (MSCI ACWI ex US)	3.91%	\$ 233,077,984	3.95%
	DFA (MSCI EAFE Small Cap)	2.84%	\$ 162,032,145	2.75%
	AQR (MSCI EM)	1.76%	\$ 110,755,322	1.88%
Total International		13.65%	\$ 828,588,595	14.06%
Global				
Active Global Equity	BlackRock (MSCI ACWI)	4.29%	\$ 262,044,323	4.45%
	MFS (MSCI ACWI)	3.51%	\$ 205,822,315	3.49%
Total Global		7.80%	\$ 467,866,638	7.94%
Total Public Equity		39.00%	\$ 2,330,272,059	39.53%
Private Equity				
	Abbott Capital (Russell 3000 Quarter Lag + 2%)	4.20%	\$ 307,883,330	5.22%
	Mesirow (Russell 3000 Quarter Lag + 2%)	4.20%	\$ 282,397,617	4.79%
	Neuberger Berman (Russell 3000 Quarter Lag + 2%)	1.80%	\$ 63,607,288	1.08%
	Apogem (Russell 3000 Quarter Lag + 2%)	1.80%	\$ 101,245,047	1.72%
Total Private Equity		12.00%	\$ 755,133,282	12.81%
TOTAL EQUITY (Public Equity + Private Equity)		51.00%	\$ 3,085,405,341	52.34%
FIXED INCOME & ABSOLUTE RETURN				
Fixed Income				
Cash				
		1.00%	\$ 168,907,022	2.87%
Passive Fixed Income	BlackRock (Bloomberg US Government)	7.22%	\$ 407,354,580	6.91%
	Active Fixed Income	12.83%	\$ 716,849,233	12.16%
	Reams (Bloomberg US Aggregate)	7.95%	\$ 453,812,582	7.70%
	Loomis Sayles (Bloomberg US Aggregate)	20.78%	\$ 1,170,661,815	19.86%
	Sub-Total Active Fixed Income	29.00%	\$ 1,746,923,416	29.63%
Total Fixed Income		29.00%	\$ 1,746,923,416	29.63%
Absolute Return				
	Aptitude (SOFR + 4%)	3.00%	\$ 177,171,098	3.01%
	UBS (SOFR + 4%)	4.00%	\$ 256,354,636	4.35%
Total Absolute Return		7.00%	\$ 433,525,735	7.35%
TOTAL FIXED INCOME & ABSOLUTE RETURN		36.00%	\$ 2,180,449,151	36.99%
REAL ASSETS				
Private Real Estate - Core	JP Morgan (NFI-ODCE)	2.50%	\$ 115,065,239	1.95%
	Morgan Stanley (NFI-ODCE)	2.70%	\$ 146,326,191	2.48%
	LaSalle (NFI-ODCE)	2.30%	\$ 106,093,550	1.80%
	Prologis (NFI-ODCE)	1.30%	\$ 79,820,986	1.35%
	New Core Fund (NFI-ODCE)	0.90%	\$ -	0.00%
	Sub-Total Private Real Estate - Core	9.70%	\$ 447,305,966	7.59%
Private Real Estate - Non-Core	Non-Core Real Estate (NFI-ODCE)	0.00%	\$ 10,102,221	0.17%
Public Real Assets	Principal (Blended Benchmark)	3.30%	\$ 171,633,644	2.91%
TOTAL REAL ASSETS		13.00%	\$ 629,041,830	10.67%
TOTAL ERS			\$ 5,894,896,323	100.00%
Total City Reserve Fund		R. W. Baird	85,480,670	

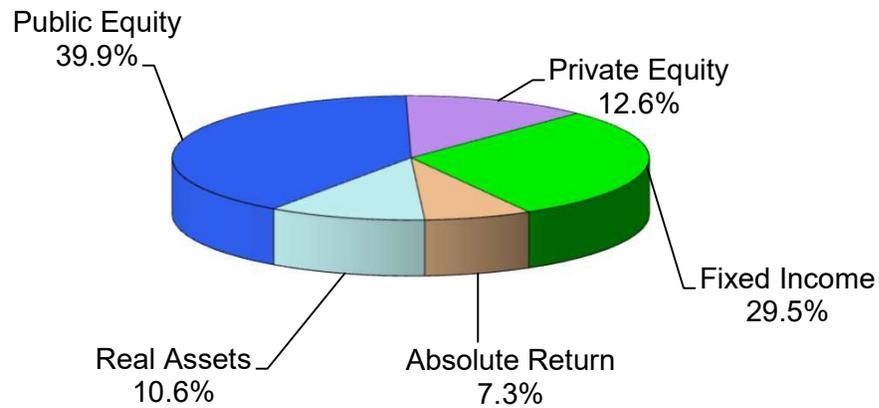
PROJECTED TARGET ALLOCATIONS

Mar 19, 2024

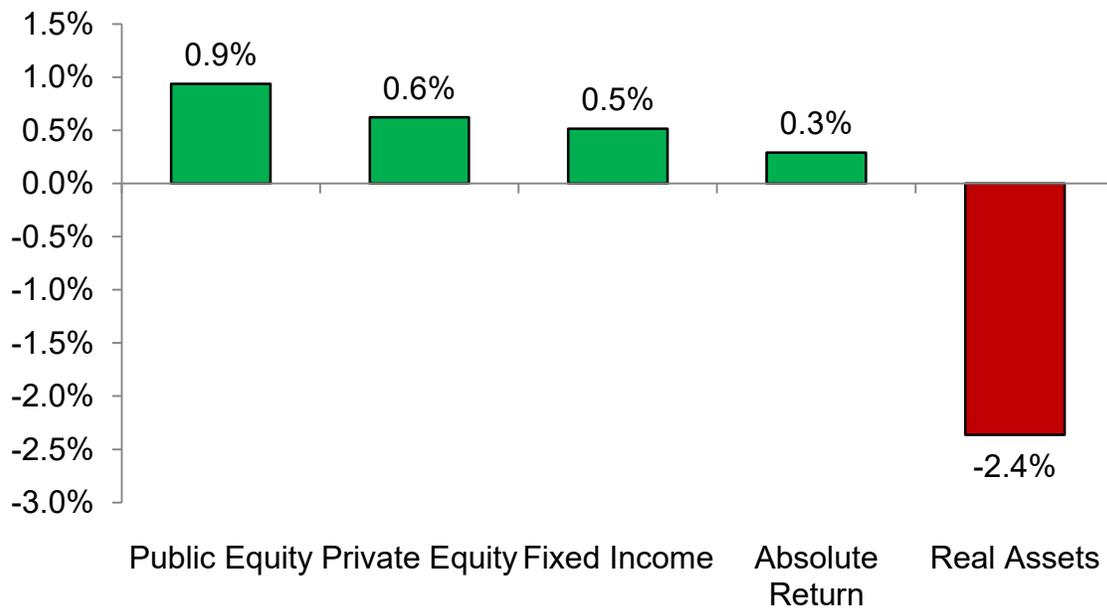
		Target	Market Value	Allocation
EQUITY				
Public Equity				
Domestic				
Passive Large Cap Equity	Northern Trust (S&P 500)	3.45%	\$ 212,024,816	3.57%
	BlackRock (Russell 1000 Value)	3.45%	\$ 204,388,479	3.44%
	Sub-Total Passive Large Cap Equity	6.90%	\$ 416,413,295	7.00%
Active Large Cap Equity	Polen (S&P 500)	1.94%	\$ 130,206,534	2.19%
	DFA (Russell 1000 Value)	2.46%	\$ 149,861,862	2.52%
	Sub-Total Active Large Cap Equity	4.40%	\$ 280,068,396	4.71%
Active Mid/Small Cap Equity	Earnest Partners (Russell MidCap)	3.20%	\$ 170,774,068	2.87%
	CastleArk (Russell 2000 Growth)	0.00%	2	0.00%
	DFA (Russell 2000 Value)	3.05%	\$ 181,806,816	3.06%
	Sub-Total Active Mid/Small Cap Equity	6.24%	\$ 352,580,886	5.93%
Total Domestic		17.55%	\$ 1,049,062,576	17.64%
International				
Active International Equity	Brandes (MSCI EAFE)	5.14%	\$ 332,299,111	5.59%
	William Blair (MSCI ACWI ex US)	3.91%	\$ 236,788,792	3.98%
	DFA (MSCI EAFE Small Cap)	2.84%	\$ 167,685,317	2.82%
	AQR (MSCI EM)	1.76%	\$ 111,705,411	1.88%
Total International		13.65%	\$ 848,478,631	14.27%
Global				
Active Global Equity	BlackRock (MSCI ACWI)	4.29%	\$ 268,662,799	4.52%
	MFS (MSCI ACWI)	3.51%	\$ 208,891,651	3.51%
Total Global		7.80%	\$ 477,554,450	8.03%
Total Public Equity		39.00%	\$ 2,375,095,656	39.94%
Private Equity				
	Abbott Capital (Russell 3000 Quarter Lag + 2%)	4.20%	\$ 302,738,330	5.09%
	Mesirow (Russell 3000 Quarter Lag + 2%)	4.20%	\$ 282,397,617	4.75%
	Neuberger Berman (Russell 3000 Quarter Lag + 2%)	1.80%	\$ 63,416,480	1.07%
	Apogem (Russell 3000 Quarter Lag + 2%)	1.80%	\$ 102,153,108	1.72%
Total Private Equity		12.00%	\$ 750,705,535	12.62%
TOTAL EQUITY (Public Equity + Private Equity)		51.00%	\$ 3,125,801,191	52.56%
FIXED INCOME & ABSOLUTE RETURN				
Fixed Income				
Cash				
		1.00%	\$ 175,375,558	2.95%
Passive Fixed Income	BlackRock (Bloomberg US Government)	7.22%	\$ 406,833,236	6.84%
Active Fixed Income	Reams (Bloomberg US Aggregate)	12.83%	\$ 717,369,329	12.06%
	Loomis Sayles (Bloomberg US Aggregate)	7.95%	\$ 455,625,022	7.66%
	Sub-Total Active Fixed Income	20.78%	\$ 1,172,994,351	19.72%
Total Fixed Income		29.00%	\$ 1,755,203,145	29.51%
Absolute Return				
	Aptitude (SOFR + 4%)	3.00%	\$ 177,171,098	2.98%
	UBS (SOFR + 4%)	4.00%	\$ 256,354,636	4.31%
Total Absolute Return		7.00%	\$ 433,525,735	7.29%
TOTAL FIXED INCOME & ABSOLUTE RETURN		36.00%	\$ 2,188,728,880	36.80%
REAL ASSETS				
Private Real Estate - Core				
	JP Morgan (NFI-ODCE)	2.50%	\$ 115,065,239	1.93%
	Morgan Stanley (NFI-ODCE)	2.70%	\$ 146,326,191	2.46%
	LaSalle (NFI-ODCE)	2.30%	\$ 106,093,550	1.78%
	Prologis (NFI-ODCE)	1.30%	\$ 79,820,986	1.34%
	New Core Fund (NFI-ODCE)	0.90%	-	0.00%
	Sub-Total Private Real Estate - Core	9.70%	\$ 447,305,966	7.52%
Private Real Estate - Non-Core	Non-Core Real Estate (NFI-ODCE)	0.00%	\$ 10,101,330	0.17%
Public Real Assets	Principal (Blended Benchmark)	3.30%	\$ 175,217,344	2.95%
TOTAL REAL ASSETS		13.00%	\$ 632,624,639	10.64%
TOTAL ERS			\$ 5,947,154,711	100.00%
Total City Reserve Fund		R. W. Baird		85,736,909

PROJECTED VERSUS POLICY ALLOCATIONS

Asset Mix Using Projected Balances



Asset Allocation vs. Current Policy Benchmark



2024 ESTIMATED MONTHLY CASH FLOWS

Revised 3/20/2024

(in 000's)

	<u>12/31/2023</u>	<u>1/31/2024</u>	<u>2/29/2024</u>	<u>3/31/2024</u>	<u>4/30/2024</u>	<u>5/31/2024</u>	<u>6/30/2024</u>	<u>7/31/2024</u>	<u>8/31/2024</u>	<u>9/30/2024</u>	<u>10/31/2024</u>	<u>11/30/2024</u>	
Beginning Cash Account Balance													
Townsend Cash Account	-	-	-										
Cash Contribution Account	-	-	-										
Milwaukee Cash Account	46,059	179,092	167,742										
Total Cash Available	46,059	179,092	167,742										
Less: Estimated Cash Needs for non-Investment Outflows	39,500	39,500	39,500										
Cash Available for Other Outflows	6,559	139,592	128,242										
For Monthly Cash Outflows of:													
	<u>Jan-2024</u>	<u>Feb-2024</u>	<u>Mar-2024</u>	<u>Apr-2024</u>	<u>May-2024</u>	<u>Jun-2024</u>	<u>Jul-2024</u>	<u>Aug-2024</u>	<u>Sep-2024</u>	<u>Oct-2024</u>	<u>Nov-2024</u>	<u>Dec-2024</u>	<u>Total 2024</u>
Retiree Payroll Expense	(40,300)	(39,713)	(40,045)	(40,142)	(40,240)	(40,338)	(40,437)	(40,535)	(40,634)	(40,733)	(40,832)	(40,932)	(484,882)
Normal Retirement Payroll	(39,242)	(38,947)	(39,045)	(39,142)	(39,240)	(39,338)	(39,437)	(39,535)	(39,634)	(39,733)	(39,832)	(39,932)	(473,059)
Retiree Lump Sum Payments	(1,058)	(765)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(11,823)
Real Estate Capital Calls	-	-	(23)	-	-	-	-	-	-	-	-	-	(23)
Private Equity Capital Calls	(2,149)	(3,464)	(4,814)	-	-	-	-	-	-	-	-	-	(10,427)
Expenses Paid through City	(2,023)	(2,156)	-	(2,023)	(2,023)	(2,023)	(2,023)	(2,023)	(2,023)	(2,023)	(2,023)	(2,023)	(22,386)
PABF Payroll	(1)	(3)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(8)
Sub-Total Monthly Cash Outflows	(44,472)	(45,336)	(44,882)	(42,166)	(42,264)	(42,362)	(42,460)	(42,559)	(42,658)	(42,757)	(42,856)	(42,956)	(517,726)
For Monthly Cash Inflows:													
Sponsoring Agency and Employee Contribution	2,710	2,721	2,724	2,731	2,737	2,744	2,751	4,137	2,765	2,772	2,779	2,786	34,357
Real Estate Distributions	1,920	-	-	-	-	-	-	-	-	-	-	-	1,920
Private Equity Distributions	904	3,891	7,689	-	-	-	-	-	-	-	-	-	12,484
Miscellaneous Income	163	950	790	95	95	95	95	95	95	95	95	95	2,759
Security Lending Transfer	853	-	-	-	-	-	-	-	-	-	-	-	853
City and Agency Required Contribution	205,954	987	-	-	-	-	-	-	-	-	-	-	206,941
PABF Inflow	-	1	3	1	1	1	1	1	1	1	1	1	8
Sub-Total Monthly Cash Inflows	212,505	8,551	11,206	2,826	2,833	2,840	2,847	4,233	2,860	2,867	2,874	2,881	259,322
Net Monthly Cash Inflows/(Outflows) Before Withdrawals	168,033	(36,785)	(33,677)	(39,340)	(39,431)	(39,522)	(39,613)	(38,326)	(39,797)	(39,889)	(39,982)	(40,074)	(258,404)
Net Monthly Cash Surplus (Need)	174,592	102,807	94,565	(39,340)	(39,431)	(39,522)	(39,613)	(38,326)	(39,797)	(39,889)	(39,982)	(40,074)	15,990
Monthly Cash Withdrawals (Additions)													
AQR													
BlackRock Global Alpha Tilts													
BlackRock Russell 1000 Value Index													
BlackRock US Government Bond Index	(54,000)												
Brandes													
CastleArk													
Dimensional Fund Advisors US Large Cap													
Dimensional Fund Advisors International													
Dimensional Fund Advisors US Small Cap													
Earnest													
Loomis Sayles													
MFS													
Northern Trust S&P 500 Index													
Polen													
Principal													
Reams													
Transition Account		25,435	33										
UBS A&Q	19,000												
Goldman/Aptitude			(12,000)										
William Blair													
Sub-Total Monthly Cash Withdrawals	(35,000)	25,435	(11,967)										
Estimated Month-End Cash Balance													
Cash Available	139,592	128,242	82,598										
Estimated Cash Needs for non-Investment Outflows	39,500	39,500	39,500										
Total Cash Estimated on Hand For Next Month	179,092	167,742	122,098										