REGULAR MEETING OF THE ANNUITY AND PENSION BOARD EMPLOYES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE 789 N. WATER ST. (Employes' Retirement System)

TUESDAY, NOVÈMBER 22, 2022 – 9:00 Å.M.

Special Notice: Due to the COVID-19 pandemic, 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 October 25, 2022.
- II. Chief Investment Officer Report.
- III. Investment Committee Report.
 - A. Approval of Recommendation Regarding UBS Hedge Fund Solutions Allocation.
 - B. Approval of Statement of Investment Policy Update.
- IV. New Business.
 - A. Approval of Property and Excess Liability Insurance Renewal.
 - B. Discussion of Recommendations from the Five-Year Experience Study.
 - C. Retirements, Death Claims, and Refunds (October).
 - D. Approval of Contract for Independent Reviewer/Hearing Examiner Paul F. Reilly.
 - E. Proposed Change to Board Rule III.E.
 - F. Conference Requests November 2022 Board Meeting.
 - G. Proposed 2023 Board and Committee Meeting Dates.
 - H. Pension Board Election Results.

Please be advised that the Annuity and Pension Board may vote to convene in closed session on the following item (I.), 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.

- I. Approval of ERS Executive Staff Compensation.
- V. Medical Reports.
 - A. All Duty & Ordinary Disability Applications & Re-examinations (November).
- VI. Unfinished Business.
 - A. Pending Legal Opinions and Service Requests Report.
 - B. Pending Legislation Report.
 - C. Executive Director's Report Inventory of ERS Projects.
- VII. Informational.
 - A. Pending Litigation Report.
 - B. Conferences.
 - C. Class Action Income 2022 YTD.
 - D. Adjusted Quarterly Cost Basis of Equity.
 - E. Minutes of the Administration & Operations Committee Meeting Held October 19, 2022.
 - F. Report on Bills.
 - G. Deployment of Assets.
 - H. Securities Lending Revenue and Budget Report.
 - I. Preliminary Performance Report and Asset Allocation.

MEETING REMINDERS

INVESTMENT COMMITTEE MEETING

THURSDAY, DECEMBER 08, 2022 - 9:00 A.M.

789 N. WATER ST.

ADMINISTRATION & OPERATIONS COMMITTEE MEETING

THURSDAY, DECEMBER 15, 2022 – 9:00 A.M.

789 N. WATER ST.

REGULAR MEETING OF THE ANNUITY AND PENSION BOARD

TUESDAY, DECEMBER 20, 2022 – 9:00 A.M.

789 N. WATER ST.

APPROVAL OF MINUTES

A. Regular Meeting Held October 25, 2022.

EMPLOYES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE ANNUITY AND PENSION BOARD

Minutes of the Regular Meeting held October 25, 2022 via teleconference during COVID-19

The meeting was called to order at 9:05 a.m.

Board Members Present: Matthew Bell, Chair

James Campbell
Deborah Ford
Tom Klusman
Rudolph Konrad
Nik Kovac
Aycha Sawa

Board Members Not Present: Molly King

Retirement System Staff Present: Jerry Allen, Executive Director

Melody Johnson, Deputy Director

Daniel Gopalan, Chief Financial Officer David Silber, Chief Investment Officer

Erich Sauer, Deputy Chief Investment Officer Dave Walters, Senior Pension Investment Analyst Thomas Courtright, Pension Investment Analyst Gust Petropoulos, Deputy Director – Disability Mary Turk, Business Operations Analyst

Jan Wills, Board Stenographer

Others Present: Bryant Ferguson, Chinonso Osuji, Reinhart; Harper Donahue IV, Andrea Knickerbocker, Department of Employee Relations; Kathy Block, Patrick McClain, City Attorney's Office; Terry Siddiqui, DS Consulting, Inc., 10 members of the public called in to the meeting.

Regular Meeting.

At this point, due to some conflicts, Mr. Bell took the meeting out of order to closed session item IV.C. New Business, ERS Executive Staff Compensation.

New Business.

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)(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.

ERS Executive Staff Compensation.

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

The Board convened in closed session at 9:07 a.m.

Ms. King arrived at 9:15 a.m.

The Board reconvened in open session at 9:43 a.m.

Mr. Campbell left the meeting at 9:45 a.m.

At this point, Mr. Bell returned the meeting to the order of the meeting at I.A. Approval of Minutes, Regular Meeting Held September 28, 2022.

Approval of Minutes.

Regular Meeting Held September 28, 2022. It was moved by Ms. Sawa, seconded by Mr. Konrad, and unanimously carried, to approve the Minutes of the Regular Meeting Held September 28, 2022.

Chief Investment Officer Report.

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)(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.

Approval of Apogem Private Equity Fund X, LP Side Letter.

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

The Board convened in closed session at 9:46 a.m.

The Board reconvened in open session at 9:54 a.m.

It was moved by Ms. Ford, seconded by Mr. Klusman, and unanimously carried, to approve the Approval of Apogem Private Equity Fund X, LP Side Letter.

Chief Investment Officer Report. As a matter of information, Board members received the October 25, 2022 Performance Update. Mr. Sauer noted the Fund as of September 30, 2022, had a value of \$5.28 billion. He said the Fund return of -5.9% in September, net of fees, outperformed

by approximately 93 basis points. He said the primary relative performance driver under Manager Selection was Private Equity, which added 155 basis points. Mr. Sauer said Real Estate detracted 50 basis points, and Overweight to Private Equity detracted 33 basis points. Mr. Sauer noted the Fund outperformed the benchmark in all time periods shown. He said the Fund return, through October 24th was up 1.6% month-to-date. Mr. Sauer said the Fund return is down 10.0 percent year to date and the Fund value is \$5.36 billion. He noted 10 out of the Fund's 15 active mandates are outperforming year to date, and the Public Equity, Fixed Income, Private Equity, and Absolute Return asset classes, along with the Total Fund, are outperforming their benchmarks year to date. Mr. Sauer said the Fund has seen a year-to-date change in the value of its investments of -\$605.5 million, paid benefits & expenses of \$355.4 million, and received contributions of \$102.7 million. He said the monthly withdrawals for benefit payments are \$16.5 million from Reams and \$11.5 million from Loomis Sayles. Mr. Sauer noted there were other cash movements this month as \$32.5 million was contributed to Aptitude to continue funding that new mandate and that came from a \$25 million withdrawal from the ERS' government bond index. He said \$14 million dollars was moved from the S&P 500 into the AQR emerging markets fund in order to move the Public Equity structure closer to the structure approved by the Board recently. Mr. Sauer said they would receive \$28 million from UBS at the end of the month to get UBS closer to its target. He noted UBS is the best-performing manager year-to-date. Discussion ensued.

Mr. Silber followed with some prepared remarks and said Private Equity, Real Estate, and Absolute Return, over a decade ago, were less than 10% of the Fund's assets. He said now they are about one-third of the Fund's assets. Mr. Silber directed the Board to the 10-Year Rolling Excess Returns chart and noted they are adding value in difficult market conditions and are close to a cyclical high. Mr. Silber said the November 10th Investment Committee Meeting packet would be sent out at the end of next week. He said at the end of last month, it was announced that the UBS portfolio manager for the hedge fund strategy would be retiring from his current role on March 1, 2023. He said the new portfolio manager would present virtually at the November meeting. Mr. Silber said UBS is one of the ERS' largest managers with a 7% target of the Fund's assets. Mr. Silber also noted that conversations with Callan have begun about conducting an ALM study in 2023 as a result of the significant changes between Callan's preliminary 2023 and 2022 capital market assumptions. Mr. Silber noted Callen recommends waiting until the 2023 capital market assumptions are finalized before initiating an ALM study. He concluded that at the November meeting, there would be the 3rd Quarter Performance Report, an update on the Real Estate manager search, as well as due diligence reports.

Administration & Operations Committee Report. Ms. Sawa reported on the Special A&O meeting on October 19, 2022 and said the Committee is looking to be in alignment with the Internal Audit Charter to see which audit standards CliftonLarsenAllen is using. She said the standards would be finalized in December. She next mentioned, is the three-month extension for the banking services contract. She said the A&O Committee recommended approval of the contract extension. Ms. Block said the reason for the extension with the current incumbent is to give her more time to negotiate a new contract as other office demands and the upcoming election have used her time.

Approval of Contract for Banking Services.

It was moved by Mr. Konrad, seconded by Mr. Klusman, and unanimously carried, to approve the three-month extension for the Approval of Contract for Banking Services.

New Business.

Retirements, Death Claims, and Refunds (September). Mr. Allen presented the following activity for the months of September 2022.

Active Death Benefits reported	\$0.00
Deferred Death	\$16,332.42
Deferred Death-Member Only Refund	\$0.00
Ordinary Death Benefits reported	\$316,132.23
Retired Death Benefits reported	\$21,642.22
Survivor Death – Termination Benefits reported	\$15,247.28
Refund of Member Contributions paid	\$246,016.41

It was moved by Ms. Sawa, seconded by Ms. King, and unanimously carried, to approve the Retirements, Death Claims, and Refunds (September 2022).

Conference Requests - October 2022 Board Meeting. Staff presented the Conference Requests this month.

Erich Sauer, Mesirow Due Diligence

Dave Walters, Tom Courtright

Sponsor: Mesirow Location: Chicago, IL

Date: November 17, 2022 Estimated Cost: \$75.00 per person

Erich Sauer, Polen and Earnest Due Diligence

Thomas Courtright

Sponsor: Polen and Earnest

Location: Boca Raton, FL and Atlanta, GA

Date: December 13-15, 2022 Estimated Cost: \$1,750.00 per person

It was moved by Mr. Klusman, seconded by Ms. Ford, and unanimously carried, to approve the Conference Requests – October 2022 Board Meeting.

Medical Reports.

All Duty & Ordinary Disability Applications & Re-examinations (October). Staff presented certifications (October 2022) of the Fire and Police Medical Panel Physicians and the Medical Council relative to Duty & Ordinary Disability Retirement benefits as follows:

Anthony Bialecki Approval Natasha Padgett Approval

<u>Police – Re-examinations – Ordinary</u> <u>Recommendation</u>

Todd Rendon Approval Cassandris Smith Approval

<u>Fire – Re-examinations – Duty</u> <u>Recommendation</u>

Kenneth Berget Approval
Chad Hendricks Approval
Anthony Korducki Approval
Martin Kozlowski Approval
Thomas Ptak Approval

GC – Re-examinations – Duty Recommendation

Tina Swanson Approval

<u>GC – Application – Ordinary</u> <u>Recommendation</u>

Craig Winstead Approval

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

Unfinished Business.

Pending and Legal Opinions and Service Requests Report. As a matter of information, Board members received the Pending Legal Opinions and Service Requests Report. Mr. McClain said the Same-Sex spouse opinion is complete and required a few minor non-substantive revisions and will be on the schedule for the November meeting. He also noted the Service Credit request will be resolved by existing opinions and he is conducting a review from the City Attorney opinion library. Mr. McClain said a draft for the Indemnification Agreement would be discussed at the November meeting.

Pending Legislation Report. As a matter of information, Board members received the Pending Legislation Report. Staff commented that there was no new activity to report from last month.

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.

Informational.

The following is a list of informational items:

- 1) Pending Litigation Report.
- 2) Conferences.
- 3) Class Action Income 2022 YTD.
- 4) Minutes of the Investment Committee Meeting Held September 8, 2022.
- 5) Minutes of the Administration & Operations Committee Meeting Held September 21, 2022.

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 10:26 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 Employes' Retirement System, 789 N. Water Street, Suite 300.)

CHIEF INVESTMENT OFFICER REPORT

Milwaukee Employes' Retirement System - November 22, 2022

Fund as of October 31, 2022

*Fund value of \$5.41b.

*Fund return of 3.2% in October, gross of fees, outperformed by approximately 56bp.

*Primary Relative Perf. Drivers: Manager Selection

DFA Mandates 18bp
Brandes 11bp
Blair 10bp
Style Bias 28bp
US Value & Small Added

International Detracted
Overall Allocation -16bp

*Fund has outperformed benchmark in all time periods shown.

Nov. Update (11/15/22 estimates)

*Fund return 3.3% MTD
*Fund return -5.7% YTD
*Fund value \$5.58b

*10 out of 16 active mandates outperforming YTD.

*Public Equity, Fixed Income, Private Equity, and Absolute Return asset classes, along with Total Fund, outperforming their respective benchmarks YTD.

*Investment Change: - \$348.2m *Benefits & Expenses: 393.2m *Contributions: 105.2m

Monthly Withdrawals:

Blair \$9.5m, Brandes \$9.5m, Principal \$6m, Polen \$4.5m

Total Fund - 10-Year Rolling Returns



Growth of \$100 - Total Fund & ERS Benchmark 11/28/1997 to 10/31/2022 600 400 300 200 100 '98 '00 '02 '04 '06 '08 '10 '12 '14 '16 '18 '20 '22 ERS Total Fund (net) — ERS Benchmark

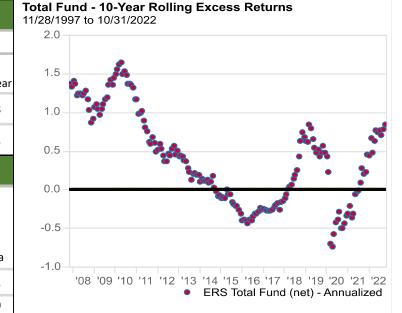
Return Data

Source Data: Monthly Return

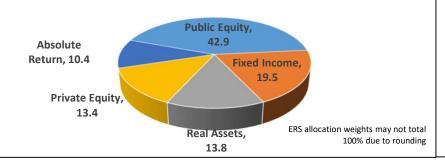
	1 Month	YTD	1 Year	5 Year	10 Year	15 Year	20 Yea
Total Fund (net)	3.2	-8.6	-6.2	6.4	8.1	5.5	7.8
ERS Benchmark	2.6	-12.5	-11.4	5.1	7.3	5.2	7.1

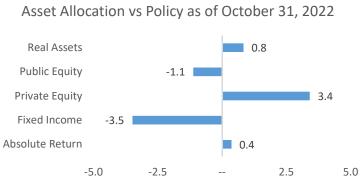
Total Fund - 20-Year Risk & Return Data

	Return	Std Dev	Tracking Error	Info Ratio (arith)	Sharpe Ratio	Alpha	Beta
Total Fund (net)	7.8	10.3	2.5	0.3	0.6	0.0	1.1
ERS Benchmark	7.1	9.2			0.6	0.0	1.0



ERS Allocation as of October 31, 2022





Milwaukee Employes' Retirement System - November 22, 2022 **Public Equity - 10-Year Rolling Returns** Asset Class - 10-Year Rolling Excess Returns 06/30/2000 to 10/31/2022 06/30/2000 to 10/31/2022 16 3.0 2.5 14 2.0 12 1.5 10 1.0 8 0.5 6 0.0 -0.5 '18 '19 '10 '15 ERS Fixed Income - Annualized Excess Return '10 '12 ERS Public Equity - Annualized Excess Return ERS Public Equity (net) - Return **Return Data** Risk Adjusted Returns (6/30/14 - 10/31/22) Sharpe Max Ratio Drawdown 1 Month YTD 1 Year 5 Year 10 Year 15 Year 20 Year Return Std Dev **Public Equity** 7.5 -19.2 -18.0 6.0 9.5 5.5 8.6 Public Equity (net) 6.5 15.6 0.4 -25.3 Public Equity (net) 7.5 -19.4 -18.3 5.6 9.2 5.1 8.2 Fixed Income (net) 0.7 6.3 0.0 -13.6 Public Equity Benchmark 7.9 6.2 -21.1 -20.2 5.0 8.7 5.1 Absolute Return (net) 5.4 10.1 0.5 -27.1 Absolute Return - 3-Year Rolling Returns MSCI ACWI IMI NR USD 6.2 -20.2 5.0 4.3 -21.1 8.0 8.1 06/30/2014 to 10/31/2022 Fixed Income - 10-Year Rolling Returns 8 06/28/1996 to 10/31/2022 10 8 2 6 0 4 -2 2 -4 0 -6 '10 '11 '12 '13 '14 '15 '16 '17 '18 '19 '20 '21 -8 ERS Fixed Income (net) - Return '22 '18 '19 '17 ERS Absolute Return (net) - Return **Return Data**

	1 Month	YTD	1 Year	5 Year	10 Year	15 Year	20 Year	Return Data						
Fixed Income	-0.7	-10.0	-9.9	-0.2	1.2	3.5	4.6		1 Month	YTD	1 Year	3 Year	5 Year	7 Year
Fixed Income (net)	-0.7	-10.1	-10.0	-0.4	1.1	3.4	4.5	Absolute Return (net)	0.8	21.2	23.5	4.8	5.3	5.3
Bbg US Agg Bond TR USD	-1.3	-15.7	-15.7	-0.5	0.7	2.6	3.0	90-Day T-Bill + 3%	0.5	3.8	4.4	3.7	4.2	4.0

INVESTMENT COMMITTEE REPORT

- Approval of Recommendation Regarding UBS Hedge Fund Solutions Allocation. Approval of Statement of Investment Policy Update. A.
- B.

STATEMENT OF INVESTMENT POLICY Updated November September 2022

THE EMPLOYES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE

789 N. Water Street, 3rd Floor Milwaukee, WI 53202 (414) 286-3557

Individual manager guidelines are updated upon Annuity and Pension Board Approval

To fulfill such responsibilities, the Trustees are authorized and in the case of Investment Managers, required to retain professional experts including but not limited to:

- 1. **Staff**: The Retirement Staff ("Staff"), as designated by the Board is the agent of the Board. The Board does not delegate investment management responsibility through the use of its Staff. Staff duties include:
 - A. Monitoring Investment Managers for adherence to policies and guidelines.
 - B. Evaluating and managing the relationships with the Investment Consultant to ensure they are providing all necessary assistance to Staff and the Board as agreed to in service contracts.
 - C. Monitoring the Investment Consultant's manager search process, and conducting due diligence on any Investment Manager selected for hire by the Investment Committee that was considered and recommended to ERS by its Investment Consultant.
 - D. Identifying Investment Managers to withdraw funds from, and taking actions necessary to raise cash from the identified Investment Managers to pay Fund benefits, Fund expenses, and Fund capital call commitments, as necessary. Given there are many factors that are considered when deciding how much money to withdraw from Investment Managers at a given time, Staff retains discretion in its implementation of raising funds from Investment Managers. That said, Staff will strive to minimize the subjectivity involved in raising funds by implementing a process that works within the framework of the target allocations stated within the Investment Policy, the Asset Allocation memodated September 2, 2021, and each asset allocation's respective structure. Staff will include a report on cash activity at the regularly scheduled Board meetings.
 - E. In the rare instance when the Fund has a cash-flow positive month (i.e. contributions are greater than cash outflows), Staff may deposit funds into Investment Managers if their strategy is below the target allocation approved within each asset allocation's respective structure or the Asset Allocation memo dated September 2, 2021. Staff will include a report on cash activity at the regularly scheduled Board meetings.
 - F. Restructuring the portfolio following manager terminations with the assistance of its Investment Consultant and Investment Manager(s).
 - G. Organizing and/or participating in any special research required to manage the Fund more effectively and in response to any questions raised by the Board.
 - H. Supporting the Board in the development and approval of the Investment Policy Statement, implementing the Policy Statement and reporting at least monthly on investment activity and matters of significance.
 - I. Ensuring the Investment Managers conform to the terms of their contracts and that performance monitoring systems are sufficient to provide the Board with timely, accurate and useful information.

TARGET ALLOCATIONS

The Board has determined that the following asset allocation policy is appropriate for the Fund. This allocation policy will be reviewed periodically and may be modified, if appropriate, in light of changes in the structure or goals of the Fund. The following asset allocation policy reflects interim Maximum and Minimum ranges for the Fixed Income and Absolute Return allocations, respectively, that were approved by the Board at its September 2021 meeting.

Public Equity	Target	<u>Minimum</u>	Maximum
Domestic Equity			
Passive Large Cap	7.8%		
Active Large Cap	5.0%		
Active Mid/Small Cap	7.0%		
Total Domestic Equity	19.8%	15.8%	23.8%
Total International Equity	15.4%	12.4%	18.4%
Total Global Equity	8.8%	4.8%	12.8%
Total Public Equity	44%	39%	49%
Fixed Income			
Cash	1%	0%	2.0%
Passive Fixed Income	5.5%		
Core Opportunistic Fixed Income	16.5%		
Total Fixed Income	23%	<u>17.5</u> 19%*	30 26%**
Real Assets			
Private Real Estate	9.7%		
Public Diversified Real Assets	3.3%	1.3%	5.3%
Total Real Assets	13%	10%	16%
Private Equity	10%	7%	15%
Absolute Return	10%	<u>7</u> 6% <u>**</u>	15%
<u>Total</u>	<u>100%</u>		

^{*}Fixed Income Minimum range lowered on an Interim basis from 20% to 17.59% inat the SeptNov ember 2022 Board meeting for the purpose of providing Staff with additional flexibility to fund a new Absolute Return strategy and to make monthly benefit payments to beneficiaries. Absent further action, the Minimum Fixed Income range will revert back to 20% on MarchFebruary 1, 2023.

^{**}Reflects Interim Maximum and Minimum ranges approved by the Board at its September 2021 meeting.

NEW BUSINESS

- A. Approval of Property and Excess Liability Insurance Renewal.
- B. Discussion of Recommendations from the Five-Year Experience Study.
- C. Retirements, Death Claims, and Refunds (October).
- D. Approval of Contract for Independent Reviewer/Hearing Examiner Paul F. Reilly.
- E. Proposed Change to Board Rule III.E.
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I. ERS Executive Staff Compensation.

Brown & Brown

EMPLOYES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE

Package and Excess Liability

Insurance Proposal

Policy Term December 1, 2022 - December 1, 2023



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Disclaimer

This renewal proposal document is furnished as a matter of information for your convenience. It only summarizes the proposed policies, and does not reflect all of the terms, conditions, and exclusions of said policies. Moreover, the information contained herein reflects proposed coverage as of the effective dates of the proposed policies and does not include subsequent changes. This document does not alter, amend, or extend the coverage afforded by the insurance policies themselves.

As respects coverage placed on claims made contracts, coverage is provided for claims first made against the Insured during the policy period. Any claim made against an Insured must be reported during that policy period. Hays Companies highly recommends ensuring all events which trigger the definition of Claim within the policy, even if they are under the retention/deductible, are reported to the current insurance carrier under the current policy period prior to expiration.

IMPORTANT NOTE

These quotations are conditioned upon there being no material change in risk between the date of this proposal and the inception date of the proposed coverage. In the event of such change, the underwriter(s) may, at their sole discretion, modify or withdraw the quotation. The coverage afforded hereunder may not be accepted after the quotation expiration date set forth above.

Hays Companies Inc highly recommends ensuring all events which trigger the definition of Claim within the policy, even if they are under the retention/deductible, be reported to the current insurance carrier under the current policy period to expiration.

Package and Excess Liability Premium Summary

Coverage	DECEMBER 1, 2021 – DECEMBER 1, 2022 PREMIUM	DECEMBER 1, 2022 – DECEMBER 1, 2023 PREMIUM	% Change
Package Premium (Includes Terrorism)	\$8,399	\$9,100	8.3% Increase
Property Limit	\$6,467,790	\$6,791,180	5.0% Increase
Property Deductible	\$1,000	\$1,000	N/A
\$5Mil Excess Liability Premium (Includes Terrorism)	\$4,325	\$4,700	8.7% Increase
Total Policy Year Premium	\$12,724	\$13,800	8.5% Increase

Payment Plan

Hanover: Direct Bill – Annual Payment. The ERS may have already received an invoice direct from Hanover regarding these policies



Marketing Efforts

We are pleased to provide the Employes' Retirement System of the City of Milwaukee with the December 1, 2022 – 2023 Office Package and Umbrella Liability insurance renewal.

We marketed the ERS Package and Umbrella Liability coverage to Hanover (the incumbent insurer) and Acuity and EMC Insurance Company. We are recommending renewing the Hanover Package and Excess Liability coverage, with a total annual premium of \$13,800, even though the EMC total annual premium was slightly lower at \$13,724, as the Hanover renewal offers broader coverage in certain areas and a \$1,000 property deductible.

The quote we negotiated with EMC Insurance Company was for \$13,724 in total Package and Excess Liability premium. EMC's property deductible is \$2,500 (Hanover has a \$1,000 deductible) and some of the sublimited property coverages were lower than Hanover. In addition, the EMC General Liability coverage was quoted with a \$500,000 limit for Damage to Premises Rented to You, while Hanover has \$1,000,000 limit. Finally, EMC also required a Protective Safeguards endorsement for sprinklered locations, which Hanover does not. For the above reasons and the fact that Hanover has been a consistent partner to ERS, we are recommending renewing with Hanover.

Acuity declined to offer a quote as they are not a market for governmental entities.

For this renewal the overall Hanover total annual premium is up 8.5% or \$1,076. Hanover also has a 5% automatic inflation guard percentage built in Business Personal Property values.

Currently the ERS purchases a \$5,000,000 Excess Liability Policy.

Subjectivities - Hanover:

None



Market Security Analysis

Insurer	Line of Coverage	AM Best Rating	Financial Strength Rating Outlook	Credit Rating Outlook
Citizens Insurance Company of America (Hanover)	Package	A / XV	Stable	Stable
The Hanover Insurance Company	Excess Liability	A / XV	Stable	Stable

For more information see the Best Ratings System page provided at the end of this proposal, or go to the web and visit: http://www.ambest.com/ratings/index.html



ERS Office Package (Property/ General Liability and Crime) Policy Term December 1, 2022 – December 1, 2023

Named Insured:	Employes' Retirement System of the City of Milwaukee
Insurance Company:	Citizens Insurance Company of America (Hanover)

Property Coverage

	Expiring Hanover	Renewal Hanover
Business Personal Property including Electronic Data Processing (Equipment & Media) located at 789 Water Street, Suite 300 (Location 1)	\$4,432,050	\$4,653,653 (Automatic 5% inflation increase)
Business Personal Property including Electronic Data Processing (Equipment & Media) located at 10850 W. Park Place Suite 450 (Location 2)	\$901,740	\$946,827 (Automatic 5% inflation increase)
Business Personal Property including Electronic Data Processing (Equipment & Media) located at 5830 Femrite Drive, Madison, WI (Location 3)	\$1,134,000	\$1,190,700 (Automatic 5% inflation increase)
Business Income / Extra Expense	Actual Loss Sustained Basis – 12 Months	Actual Loss Sustained Basis –12 Months
Valuation	Replacement Cost	Replacement Cost
Co-insurance	Agreed Value	Agreed Value
Extended Business Income	90 Days	90 Days
Extended Period of Indemnity	60 Days Included	60 Days Included
Equipment Breakdown Coverage	Included	Included
Emergency Event Management	\$10,000	\$10,000
Expediting Expense	\$25,000	\$25,000
Extra Expense	\$50,000	\$50,000
Fine Arts	Included in \$250,000 Basket Limit of Insurance	Included in \$250,000 Basket Limit of Insurance
Accounts Receivable	Included in \$250,000 Basket Limit of Insurance	Included in \$250,000 Basket Limit of Insurance
Valuable Papers	Included in \$250,000 Basket Limit of Insurance	Included in \$250,000 Basket Limit of Insurance
Debris Removal	\$100,000	\$100,000



	Expiring Hanover	Renewal Hanover
Sewer Backup	\$100,000	\$100,000
Pollutant Clean-Up Removal	\$50,000	\$50,000
Property in Transit	\$100,000	\$100,000
Preservation of Property	90 Days	90 Days
Preservation of Property – Expense	\$25,000	\$25,000

	Expiring Hanover	Renewal Hanover
Newly Acquired – Business Personal Property	\$250,000	\$250,000
Temporary Relocation of Property	\$50,000	\$50,000
Unnamed Locations	\$100,000	\$100,000
Utility Services – Direct Damage	\$50,000	\$50,000
Utility Services – Business Income	\$50,000	\$50,000
Computer and Funds Transfer Fraud	\$50,000	\$50,000
Employee Theft Including ERISA	\$100,000	\$100,000
Employee Tools and Work Clothing	\$10,000	\$10,000
Forgery or Alteration	\$50,000	\$50,000
Money & Securities	\$25,000	\$25,000
Terrorism	Included	Included
Property (Including Glass)	\$1,000	\$1,000
Business Income	24 Hours	24 Hours

Hanover Policy includes but is not limited to: (Policy form is available for full detail):

Exclusions;

- Loss Due to Virus or Bacteria
- Additional Exclusions are built into the base policy forms as well

Hanover Extensions and Amending Endorsements;

- Special Provisions Loss Payee for:
- Druml Marine LLC, 10425 W. North Ave. Suite 245, Milwaukee, WI 53226
- Business Income (and Extra Expense) Coverage Form Actual Loss Sustained
- Emergency Event Management
- Silver Property Broadening Endorsement
- Business Income Changes Beginning of the Period of Restoration
- Equipment Breakdown Coverage (Including Electronic Circuitry Impairment)
- Equipment Breakdown Coverage Part Equipment Breakdown Coverage Schedule
- Causes of Loss Special Form
- Building and Personal Property Coverage Form
- Commercial Property Conditions
- Wisconsin Changes



Crime Coverage

There is a nominal amount of crime coverage included under the Hanover Package policy however, the ERS is included as an Insured under the City of Milwaukee's Crime policy where more substantial limits and broader coverage terms are present.

General Liability Coverages

		Expiring Hanover		Renewal Hanover
General Aggregate		\$2,00	00,000	\$2,000,000
Products / Completed Operations Aggregate		Included in G Aggı	eneral regate	Included in General Aggregate
Personal and Advertising Injury	\$1,000,000		\$1,000,000	
Each Occurrence Limit		\$1,00	00,000	\$1,000,000
Damage to Premises Rented to You		\$1,00	00,000	\$1,000,000
Medical Payments – Any One Person		\$1	10,000	\$10,000
Auto Coverage: Hired & Non-Owned Auto Liabil Only	ity	\$1,00	00,000	\$1,000,000

Hanover Policy includes but is not limited to the following: (Policy form is available for full detail):

Exclusions:

- Asbestos Liability
- Access or Disclosure of Confidential or Personal and Data-related Liability With Limited Bodily Injury Exception
- Employment-Related Practices Exclusion
- Fungi or Bacteria
- Punitive Damages Related to a Certified Act of Terrorism
- Silica or Silica Related Dust
- Additional Exclusions are built into base policy forms as well

Hanover Extensions and Amending Endorsements;

- Commercial General Liability Broadening Endorsement
- Commercial General Liability Enhancement Endorsement
- Commercial General Liability Coverage Form Occurrence
- Business Auto Coverage Form
- Wisconsin Changes
- Wisconsin Changes Amendments of Policy Conditions
- Cap On Losses From Certified Acts of Terrorism



IMPORTANT NOTES:

- This policy includes Hired and Non-Owned Automobile Liability Coverage. Therefore, when you hire
 an auto on ERS company business, you do not need to buy the liability coverage. However, you
 should purchase physical damage coverage for the rental vehicle, unless you want to self-insure that
 exposure.
- The ERS maintains its own website. While the Hanover package policy includes two General Liability Broadening endorsements, there is <u>no</u> coverage for privacy related claims. Cyber liability coverage has been separately purchased by the ERS.

In the past, we have offered the following coverage / options which you have declined;

Flood Coverage



ERS Office Excess Liability

Policy Term December 1, 2022 - December 1, 2023

Named Insured:	Employes' Retirement System of the City of Milwaukee
Insurance Company:	The Hanover Insurance Company

ERS Excess Liability Coverage

	Expiring Hanover	Renewal Hanover
Each Occurrence / Each Claim Limit	\$5,000,000	\$5,000,000
Products / Completed Operations Aggregate Limit	\$5,000,000	\$5,000,000
General Aggregate Limit	\$5,000,000	\$5,000,000
Retained Limit	\$0	\$0

Hanover Policy includes but is not limited to: (Policy form is available for full detail):

Exclusions;

- Total Pollution with Hostile Fire Exception (Coverage A)
- Professional Liability (Coverage A)
- Abuse and Molestation (Coverage A and B)
- Lead (Coverage A and B)
- Punitive Damages Related to a Certified Act of Terrorism
- Fungi or Bacteria Liability (Coverage A and B)
- Silica (Coverage A and B)
- Discrimination (Coverage A and B)
- Exclusions are built into base policy form as well

Hanover Extensions and Amending Endorsements;

- Notice of Right to File a Complaint
- Trade or Economic Sanctions Endorsement
- Hanover Commercial Follow Form Excess and Umbrella Policy
- Wisconsin Changes
- Underlying Insurance Defined (Coverage A and B)
- Cap on Losses from Certified Acts of Terrorism

Notice of Carrier Financial Status

Hays Companies, Inc., and its parent company, Brown & Brown, Inc. (collectively "Brown & Brown") do not certify, warrant or guarantee the financial soundness or stability of any insurance carrier or alternative risk transfer entity. We endeavored to place your coverage with an insurance carrier with an AM Best Company financial rating of "A-" or better.* While Brown & Brown cannot certify, warrant or guarantee the financial soundness or stability of a company or otherwise predict whether the financial condition of a company might improve or deteriorate, we are hereby providing you with notice and disclosure of financial condition so that you can make an informed decision regarding the placement of insurance coverage. Accordingly, this will serve as notice of the following with regard to the placement of the insurance indicated below and with regard to any subsequent renewal of such insurance:

- Brown & Brown may have other options for your insurance placement, including quotations with insurance carriers holding an "A-" or better rating from AM Best Company. Alternative quotes may be available with an A- or better rated carrier upon your request.
- The financial condition of insurance companies may change rapidly and that such changes are beyond the control of Brown & Brown.
- You have had the ability to review the financial information for this carrier as found in one or more of the following sources: a state department of insurance website, AM Best Company website, carrier or a carrier website.
- You have had an opportunity to consider the information provided regarding your insurance quote and insurance placement and review it with your accountants, legal counsel and advisors.



Market Security Explanation

Ratings

A++, A+ Superior
A and A- Excellent
B++, B+ Good
B and B- Fair
C++, C+ Marginal
C and C- Weak
D Poor

E Under Regulatory Supervision

F In Liquidation
S Rating Suspended

Rating Modifiers

U Under Review

The rating may change in the near term typically within 6 months. Generally this is event driven, with positive, negative or developing implications.

Rating Outlooks

Assigned to an Interactive Financial Strength Rating (A++ to D) to indicate its potential direction over an intermediate term, generally defined as 12 to 36 months.

Adjusted Policyholder's Surplus (\$000's)

Class I	Up	to	1,000
Class II	1,000	to	2,000
Class III	2,000	to	5,000
Class IV	5,000	to	10,000
Class V	10,000	to	25,000
Class VI	25,000	to	50,000
Class VII	50,000	to	100,000
Class VIII	100,000	to	250,000
Class IX	250,000	to	500,000
Class X	500,000	to	750,000
Class XI	750,000	to	1,000,000
Class XII	1,000,000	to	1,250,000
Class XIII	1,250,000	to	1,500,000
Class XIV	1,500,000	to	2,000,000
Class XV	2,000,000	or	Greater

Opinion Outlooks

(In Addition to Rating)

Positive:

Indicates possible rating upgrade due to favorable financial/market trends relative to the current rating level.

Negative:

Indicates possible rating downgrade due to unfavorable financial/market trends relative to the current rating level.

Stable:

Indicates low likelihood of a rating change



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"Understanding Best's Ratings" can be found at

www.ambest.com/ratings/index.html

Consumer Disclosure

Disclosure of Sources of Compensation

Compensation. In addition to the commissions or fees received by us for assistance with the placement, servicing, claims handling, or renewal of your insurance coverages, other parties, such as excess and surplus lines brokers, wholesale brokers, reinsurance intermediaries, underwriting managers and similar parties, some of which may be owned in whole or in part by Brown & Brown, Inc., may also receive compensation for their role in providing insurance products or services to you pursuant to their separate contracts with insurance or reinsurance carriers. That compensation is derived from your premium payments. Additionally, it is possible that we, or our corporate parents or affiliates, may receive contingent payments or allowances from insurers based on factors which are not client-specific, such as the performance and/or size of an overall book of business produced with an insurer. We generally do not know if such a contingent payment will be made by a particular insurer, or the amount of any such contingent payments, until the underwriting year is closed. That compensation is partially derived from your premium dollars, after being combined (or "pooled") with the premium dollars of other insureds that have purchased similar types of coverage. We may also receive invitations to programs sponsored and paid for by insurance carriers to inform brokers regarding their products and services, including possible participation in company-sponsored events such as trips, seminars, and advisory council meetings, based upon the total volume of business placed with the carrier you select. We may, on occasion, receive loans or credit from insurance companies. Additionally, in the ordinary course of our business, we may receive and retain interest on premiums you pay from the date we receive them until the date of premiums are remitted to the insurance company or intermediary. In the event that we assist with placement and other details of arranging for the financing of your insurance premium, we may also receive a fee from the premium finance company.

If an intermediary is utilized in the placement of coverage, the intermediary may or may not be owned in whole or part by Brown & Brown, Inc. or its subsidiaries. Brown & Brown entities operate independently and are not required to utilize other companies owned by Brown & Brown, Inc., but routinely do so. In addition to providing access to the insurance company, the Wholesale Insurance Broker/Managing General Agent may provide additional services including, but not limited to: underwriting; loss control; risk placement; coverage review; claims coordination with insurance company; and policy issuance. Compensation paid for those services is derived from your premium payment, which may on average be 15% of the premium you pay for coverage and may include additional fees charged by the intermediary.

Questions and Information Requests. Should you have any questions, or require additional information, please contact this office at (612) 333-3323 or, if you prefer, submit your question or request online at http://www.bbinsurance.com/customerinquiry/

About Us



- Hays Companies was founded in 1994
- Became part of the Brown & Brown Team in 2018
- Full-service insurance brokerage consultancy specializing in:
 - o Employee Benefits
 - Property & Casualty
 - Risk Management Consulting
 - Private Client Group
 - National Programs
 - Wholesale Brokerage
- Over 490,000 clients
- 1,300+ insurer relationships

300+



11,000 + TEAMMATES







- Passionate consultants & unrivaled expertise
- A culture built on discipline and customer focus
- Our customers are our purpose
- Authentic and experienced team in whom you can place your trust
- Proactive, responsive service with a sense of urgency



Brown & Brown





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The experience and dedication you deserve

City of Milwaukee Employes' Retirement System Funding Policy Discussion

Presented by: Cavanaugh Macdonald Consulting

Original Presentation: August 24, 2022

Appendix: November 22, 2022



www.CavMacConsulting.com



Actuarial Assumptions vs Funding Policy



- > Actuarial Assumptions are used to project benefits expected to be paid from the retirement system.
 - Guidance to actuaries is provided under:
 - ASOP No. 35 Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations
 - ASOP No. 27 Selection of Economic Assumptions for Measuring Pension Obligations
- ➤ The **Funding Policy** is used to develop the timing of contributions to be made to the retirement system once the projected benefits are developed using actuarial assumptions.
 - Guidance to actuaries is provided under:
 - ASOP No. 4 Measuring Pension Obligations and Determining Pension Plan Costs or Contributions
 - ASOP No. 44, Selection and Use of Asset Valuation Methods for Pension Valuations
 - Conference of Consulting Actuaries Public Plans Community Actuarial Funding Policies and Practices for Public Pension Plans



Funding Policy



- > The four components of a funding policy are:
 - Actuarial Cost Method the technique used to allocate the total present value of future benefits over an employee's working career (normal cost/service cost).
 - Asset Smoothing Method the technique used to recognize returns that vary from expected over some period of time so as to reduce the effects of market volatility and stabilize contributions.
 - Amortization Policy The length of time and payment amount to determine the payment schedule to eliminate any UAAL.
 - Output Smoothing Method methods used to reduce contribution volatility such as a contribution phase-in or corridor



Policy Objectives for Public Pension Plan Funding Policies



> Sufficiency

 The funding target should be the value of benefits accrued to date

Intergenerational equity

 Taxpayers should pay for workers' pensions while those workers are providing their services – fund for benefits over the worker's career.

> Stability of contributions

 While stable contributions are easy to budget for, stability should not be achieved at the expense of the first two

Accountability and transparency

 Each component of the funding policy should be clear on the intent and effect

Governance

- Agency risk associated with individuals influencing costs
- Need for sustained budget commitment from employer



Preliminary Funding Policy Recommendations



Preliminary Funding Policy Recommendations						
Component Current Proposed Comment						
> Actuarial Cost Method	Entry Age Normal	no change	Annual costs level as a % of pay over each member's career			
> Actuarial Value of Assets						
Smoothing period	5-year fixed	no change	Period sufficiently short enough to preclude use of corridor			
Corridor	no corridor	no change	Corridor can result in contribution volatility			
> Amortization policy						
■ Structure	Closed layered	no change	Documents source and treatment of UAAL			
Unfunded payment increases	2%	no change	Reflects lower revenue growth			
■ Period differs by UAAL source:						
- Initial 2019 UAAL	25 years	no change	20 years left as of 1.1.2023			
- Gains/Losses	15 years	20 years	Reasonable for well funded plan; provides lower contribution volatility			
 Contribution gains/losses 	15 years	5 years	Isolate differences and amortize over shorter period			
- Assumptions	25 years	no change	Remeasure of liabilities to mitigate future gains/losses merits longer period			
- Methods	25 years	no change	Same as assumptions			
- Plan Provisions						
- Actives	25 years	15 years	Or match to demographics of affected group			
- Early Retire Incentive	25 years	5 years	To mitigate negative cashflow			
- Inactives - reduction	25 years	10 years	Or match to demographics of affected group			
- Inactives - increase	25 years	1 years	Match to demographics of affected group			
- Fresh start	None	25 years	No UAAL bases when 100% funded; establish new UAA base over 25 years			
➤ Output smoothing			See next slide			



Preliminary Funding Policy Recommendations



Output Smoothing Preliminary Recommendations						
Component	Current	Proposed	Comment			
➤ Output smoothing						
■ Minimum Employer Contributon	ER Normal Cost	ER Normal Cost	Maintain contribution for employer cost of benefits accruing			
■ Contribution increase Phase-in	None	5 years	Increase contributions over next 5 years for budgeting flexibility and to position for next reset			
■ Stable contribution policy						
- Projected returns	2022 Callan	2023 Callan	Make use of latest information			
- Asset measurement date	1.1.2022	1.1.2023	Consistency with projected returns			
- Contribution basis	Rate	Dollar	Ensure payment of UAAL			



Funding Policy



Inputs

Membership Data
Asset Data
Benefit Provisions
Assumptions

Funding Methodology

↓ Results

Results
Actuarial Value of Assets
Actuarial Accrued Liability
UAAL/Funded Ratio
Net Actuarial Gain or Loss
Employer Contributions
Projections

- > The Objectives of the Stable Contribution Policy include:
 - Achieve stable and predictable contribution levels over the period between experience reviews that maintains the actuarial integrity of the ERS.
 - Comply with Actuarial Standards of Practice.
 - Budget annually for the normal cost; this was achieved by eliminating the Full Funding Limit.
 - Make progress on reducing unfunded liability at least as fast as the Prior Contribution Requirement at the median; said another way, the Stable Employer Contribution Policy is at least actuarially equivalent to the Prior Contribution Requirement over the period from 2018 through 2022.
 - Maintain asset coverage greater than or equal to the retired lives liabilities.
 - No changes to member contributions.

The following reading discusses elements of reasonable funding policies. The Stable Contribution Policy was designed with these elements in mind.

https://www.gfoa.org/materials/core-elements-of-a-funding-policy



Public Sector Funding Policies Fixed vs Actuarial Funding



- > Fixed contributions 32% of large plans
 - Funding set in statute
 - Actuary determines if sufficient through projections
 - Fixed contribution policies can be successful if:
 - Contribution levels are sufficient to fund benefits over a reasonable period
 - A mechanism for periodic adjustment is included
- Actuarial Funding 68% of large plans
 - Non-ASOP Compliant Actuarial Funding is based on the actuarial valuation process but does not fund to 100% and/or results in long periods of negative amortization
 - ASOP Compliant Actuarial Funding is based on the actuarial valuation process and funds to 100% without long periods of negative amortization



Employer Contributions



(Combined Fund only as of January 1, 2022)

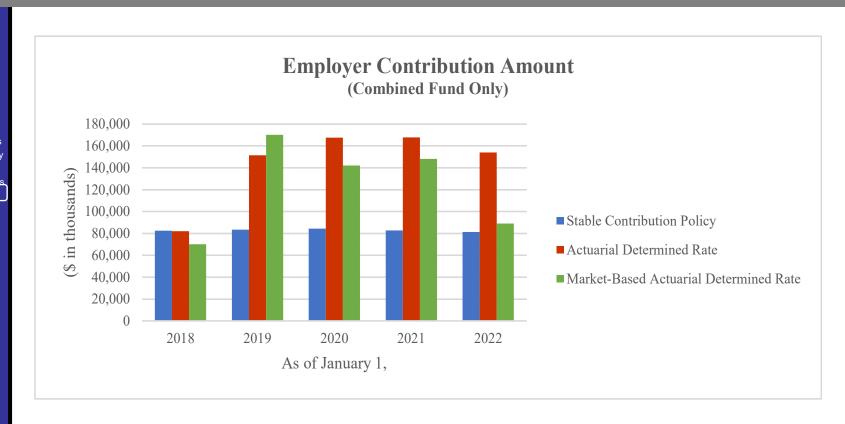
Inputs

Membership Data
Asset Data
Benefit Provisions
Assumptions
Funding Methodology

↓ Results

Results
Actuarial Value of Assets
Actuarial Accrued Liability
UAAL/Funded Ratio
Net Actuarial Gain or Loss

Net Actuarial Gain or Los Employer Contributions Projections

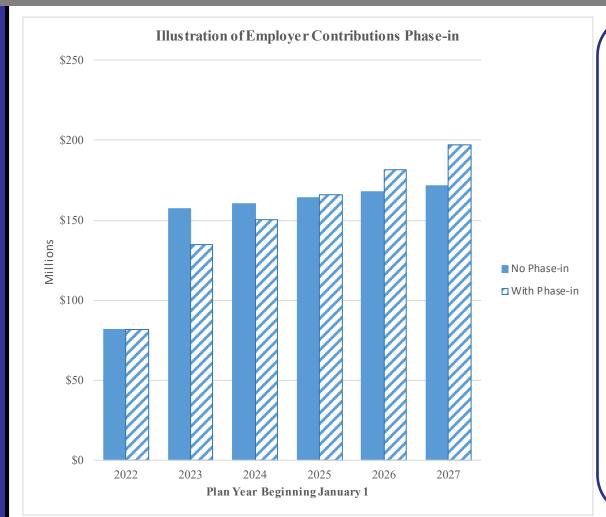


Given the difference between the actuarially determined employer contributions and the stable contribution policy contributions it would be prudent for participating employers to start preparing now for higher contributions when the Stable Contribution Policy is reset for calendar year 2023.



Phase-in Illustration





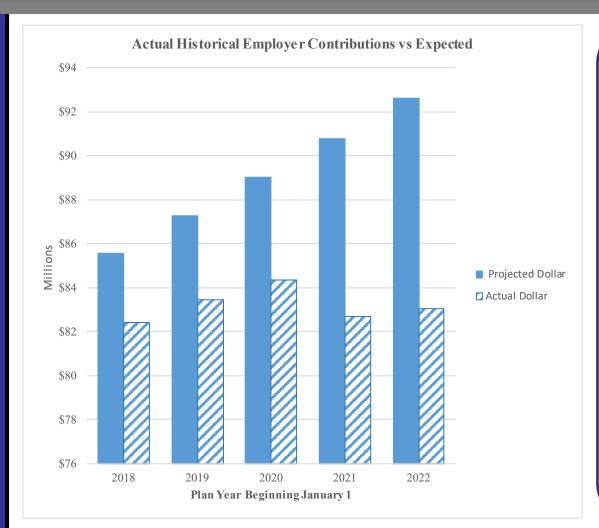
This illustrates a phase-in of employer contributions. Phase-ins are common in the Public Sector when large employer contribution increases are anticipated. For the Stable Contribution Policy, the additional benefit is that the ERS is better situated at the reset for the 2028 valuation.

Important note – this is an illustration. Final numbers will be based on the set of assumptions adopted by the Board.



Employer Contribution: Dollar vs Rate





Traditionally, the Stable **Employer Contribution has** been developed as a rate. Based on the 2018 reset. projected contributions for 2022 were over \$92 million. Because of flat payroll, actual amounts for 2021 were \$82.7 million. This caused some headwinds for funding of the UAAL. We will be considering the use of dollar amounts instead of rates. This will provide employers with a five-year projection of projected dollar amounts. Note that the "actual" dollar amount for 2022 is estimated.



Appendix



- ➤ At the September 28, 2022 Board Meeting we were asked for more discussion on the Funding Policy presentation given at the August 24, 2022 Board Meeting
- ➤ This appendix is intended to provide that deeper dive on our preliminary recommendations
- The slides before this remain unchanged other than we updated slide 5 to reflect clarification from staff that there is no corridor on the actuarial valuation of assets.
- Our focus here will be on:
 - Amortization Policy
 - Phase-in



Public Sector Pension Plan Funding Policy Resources



BEST PRACTICES

Core Elements of a Funding Policy

GFOA recommends that governments adopt a funding policy that provides reasonable assurthe cost of those benefits will be funded in an equitable and sustainable manner.

Compensation packages for active workers may include pensions as well as health-care an similar benefits for those employees after they have completed their active service. Generic health-care and other benefits are described as other postemployment benefits (OPEB) to them from pensions.[1] Employers are required to recognize the cost of pension benefits as employees earn them, and the Governmental Accounting Standards Board (GASB) extends requirement to OPEB.[2] While pensions have long been funded on an actuarial basis, OPEI have not. The change in accounting standards has focused attention on the costs of OPEB, concerns about rising health-care costs and an aging public-sector workforce. The real iss the change in accounting standards for such a funding policy and OPEB, as such, but rather underlying budgetary and funding challenge that those accounting standards highlight. More challenge requires governments to ensure that both pension and OPEB are sustainable ove term - that they are affordable to stakeholders, competitive, and sufficient to meet employ and that they may be reasonably expected to remain so.

GFOA recommends that every state and local government that offers defined benefit pens and/or OPEB formally adopt a funding policy that provides reasonable assurance that the those benefits will be funded in an equitable and sustainable manner. Such a retirement be funding policy would need to incorporate the following principles and objectives:



Conference of Consulting Actuaries
Public Plans Community (CCA PPC)

Actuarial Funding Policies and Practices for Public Pension Plans

October 2014

Our recommendations are based on the guidance from these two resources. We mentioned the **Core Elements of a Funding Policy** (GFOA Policy) in the August presentation because it is a quicker read. **Actuarial Funding Policies and Practices for Public Pension Plans** (CCA Policy) provides a deeper dive.



Amortization Policy



- Amortization policy The length of time and the structure selected for increasing or decreasing contributions to systematically eliminate any unfunded actuarial accrued liability or surplus.
- Amortization policies have been tightened down from the open 30-year level percent of pay amortization that has commonly held as the minimum
- Amortization of unfunded actuarial accrued liability:
 - Should use a layered approach for the various components to be amortized (that is, an approach that separately tracks the different components to be amortized, or a pension debt schedule)
 - Should use a period relevant to the source of UAAL;
 - Can allow payments to the UAAL to increase over time;
 - Can allow limited negative amortization.
- We will discuss each of these over the next few slides.



Amortization of UAAL: Should use a layered approach



➤ The valuation has used a layered approach during our tenure as CMERS actuary as documented in the valuation reports in the chart below.

Amortization Base	Date Established	Original Amount	Outstanding Balance as of January 1, 2022	Remaining Amortization Period	Annual Payment	
2019 Initial UAAL Base	1/1/2019	\$ 1,204,699	\$ 1,198,147	22	\$ 89,481	
2020 Experience Base	1/1/2020	142,702	134,747	13	13,934	
2021 Experience Base	1/1/2021	1,814	1,767	14	174	
2022 Experience Base	1/1/2022	(143,792)	(143,792)	15	(13,495)	
Total			\$ 1,190,869		\$ 90,094	

➤ We recommend this approach be continued.

GFOA Policy:

Use a layered approach for the various components to be amortized (that is, an approach that separately tracks the different components to be amortized)

CCA Policy:

Listed under Model Practices on Page 26





Should use a period relevant to the source of UAAL

- Currently amortization policy is 15 years for gain/loss and 25 for all else
- Generally, experience gain/loss bases are established annually, and assumption change bases are established every five years after the experience review
- There are many different sources of UAAL
 - Experience Gain/loss
 - Assumption Changes
 - Method Changes
 - Plan Amendments
 - Early Retirement Incentive
 - Contribution gain/loss
 - Fresh Start
 - Closed Plan
- > The remaining events happen much less frequently, if at all
- We recommend establishing policies for other events before they occur





Should use a period relevant to the source of UAAL

- Recommendations (summarized below) are within parameters of the GFOA and CCA Policy papers
- Note that the policy papers do not provide guidance on contributions shortfalls
- Papers allow for using overfunding to reduce contribution below employer normal cost, which we are not recommending
- > Illustrations of different payment periods follow this section

	Period			
Event	Current	Proposed	Commentary	
- Initial 2019 UAAL	25	21	21 years left as of 1.1.2023	
- Gains/Losses	15	20	Reasonable for well funded plan; provides lower	
			contribution volatility	
- Contribution	15	5	Shorter period to avoid perpetual underfunding	
- Assumptions	25	25	Within policy	
- Methods	25	25	Same as assumptions	
- Plan Provisions				
- Actives	25	15	Or match to demographics of affected group	
- Early Retire Incentive	25	5	To mitigate negative cashflow	
 Inactives - reduction 	25	10	Or match to demographics of affected group	
- Inactives - increase	25	1	Match to demographics of affected group	
- Plan Closure	25	10	Match to demographics of affected group	
- Fresh start	None	25	No UAAL bases when 100% funded; establish new UAAL	
			base over 25 years	

GFOA Policy:

•Never exceed 25 years, but ideally fall in the 15-20 year range; closed plans aggregate or 10 years

CCA Policy:

Listed under Model Practices on Page 26; recommendation highlights, not exhaustive

Source	Period		
Active Plan Amendments ¹²	Lesser of active demographics ¹⁸ , or 15 years		
Inactive Plan Amendments	Lesser of inactive demographics ¹³ , or 10 years		
Experience Gain/Loss	15 to 20 years		
Assumption or Method Changes ¹⁴	15 to 25 years		
Early Retirement Incentives	5 years or less		





Can allow payments to the UAAL to increase over time

- UAAL payments currently increase at 2% per year
- Increasing UAAL payments are common for Public Pension Plans
- Referred to as "level percent of pay amortization" where payroll growth is effectively the UAAL payment increase
- CMC is comfortable with the current 2% assumption if City revenues for pensions are projected to grow at that rate
- ➤ If revenues for pension are projected to be flat, as they have been, consideration should be given to lowering the increase, perhaps to level dollar 0% increases
- Illustrations of different payment increases follow this section

GFOA Policy:

•Never exceed 25 years, but ideally fall in the 15– 20-year range; closed plans aggregate or 10 years

CCA Policy:

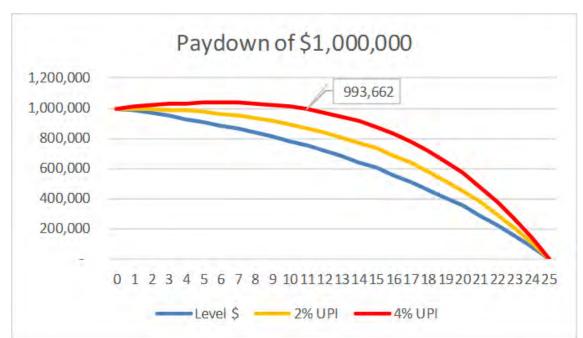
Listed under Model Practices on Page 26





Can allow limited negative amortization

- Given the policy periods and UAAL payment increases, negative amortization is not anticipated
- An illustration of the concept is below
 - Note using a 4% UAAL payment increase over 25-year results in a higher UAAL until year 11
 - Negative amortization using a 2% UAAL payment increase does not result in negative amortization



GFOA Policy:

Silent

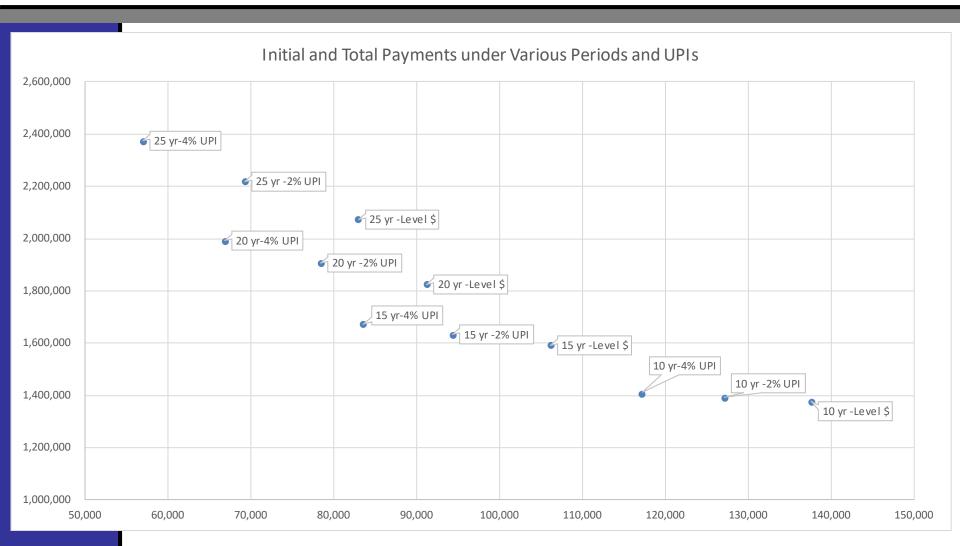
CCA Policy:

Negative amortization is not precluded on Page 21



Generally Shorter Periods and Lower UPIs Results in Higher Initial and Lower Total Payments (or Credits)...

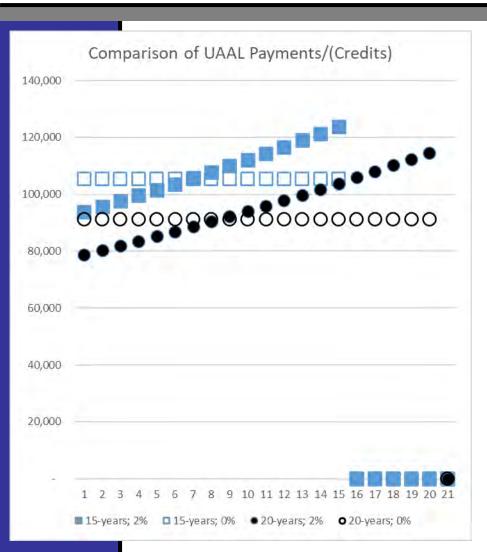


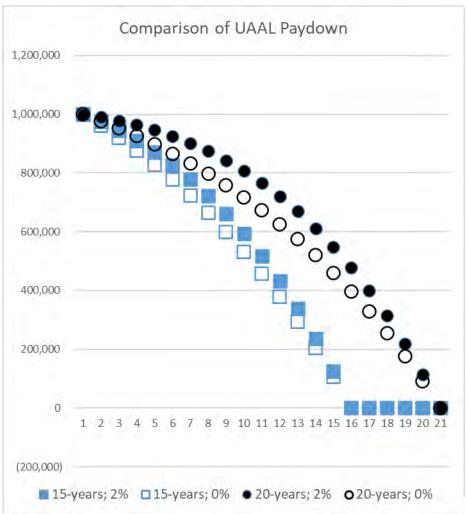




Comparison of: 15-year to 20-year Period and 2% to 0% UAAL Payment Increase



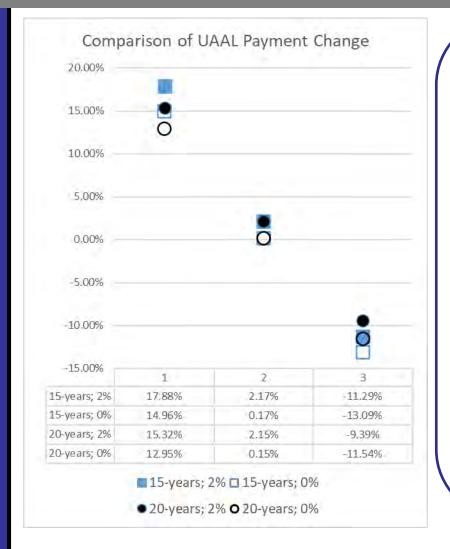






Longer Amortization Periods Provide for More Contribution Stability





Retroactively applying a 20-year amortization period with level dollar and 2% increases and a 15-year period with level dollar results in the increases shown. Longer periods provide for less contribution year to year change, but also extends the period to fund.

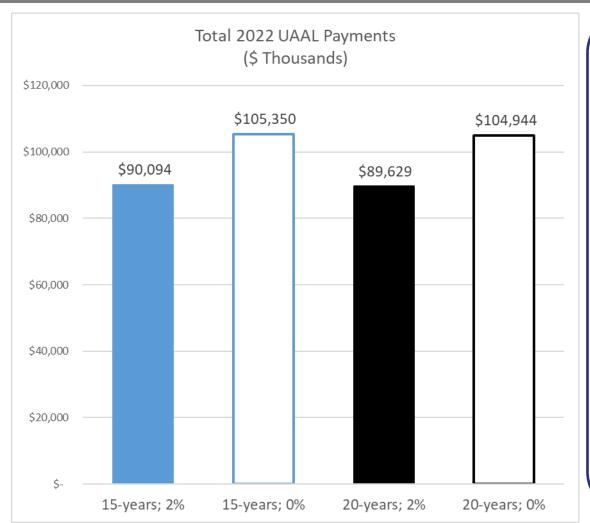
Over \$600 million in returns that have not been reflected in 1.1.2022 valuation. Under the 20-year scenarios, the reduction in contributions would be less. Conversely, returns during calendar 2022, which are likely to be less than expected,, would result in a lower increase compared to the 15-year period.

Note: the exhibit is based on re-amortizing the 2019 Initial UAAL over 22 years as a level dollar in the level dollar scenarios.



Impact of 15-year and 20-year Period and 2% to 0% UAAL Payment Increase on 2022 UAAL Payments





Here are the total UAAL Payments based on the methods outlined on the previous page. Using the level dollar (0%) payments results in higher amounts in 2022. The use of 15 or 20 years for the experience had limited impact.



Contribution Phase-in



- Clarification on Contribution Phase-in
- As we clarified at the September Board meeting
 - CMC serves many Retirement Boards that have adopted a contribution phase-in
 - Part of our role is to advise on the broad range of practice
 - We are not recommending a phase-in; it is something to consider
- If amounts budgeted for CMERS by the City cannot be increased for a long period of time:
 - We would not recommend a contribution phase-in
 - Similarly, we would not recommend increasing the UAAL payment increase



Certification



In order to prepare these results, we have utilized appropriate actuarial models that were developed for this purpose. These models use assumptions about future contingent events along with recognized actuarial approaches to develop the needed results. 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. Because of limited scope, Cavanaugh Macdonald performed no analysis of the potential range of such future differences, except for some limited analysis in financial projections or required disclosure information. Results prior to January 1, 2019 were provided by the prior consulting actuary.

We meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions about it.

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

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



The experience and dedication you deserve

City of Milwaukee Employe's Retirement System Board Presentation

Experience Study Results: Economic Assumptions

Presented By: Cavanaugh Macdonald Consulting

August 24, 2022



www.CavMacConsulting.com

Background



- Assumptions do not affect the true cost of the plan the actual benefit payments paid from the trust
- Assumptions have a significant impact on the calculation of liabilities and actuarial contribution rates
 - Actuaries use assumptions to estimate the timing, duration and amount of future benefit payments that depend on unknown contingent events
 - Assumptions impact the allocation of costs so usually set neither overly conservative or aggressive
- ➤ Assumptions are just that assumptions. If actual experience differs from the assumption over time, contribution timing will differ also.

CMERS Experience Study



- Performed every five years for CMERS
 - Last study covered calendar years 2012 through 2016
 - Investment return assumption reviewed when CMC assumed actuarial duties (early 2019)
 - Current study covers calendar years 2017 through 2021
- Monitor all actuarial assumptions and methods used in the valuation process
- > Schedule:
 - August discuss economic assumptions.
 - September discuss demographic assumptions.
 - October discuss stable contribution policy.
 - No Board action until all results have been presented.
 - January 1, 2023 valuation based on new assumptions

Purpose of Experience Study



- Provides basis for analyzing existing assumptions and developing recommended changes
- Actuary's role is to make <u>recommendations</u> for each assumption
 - As fiduciaries, the Board is responsible for the selection of actuarial assumptions
 - Board can adopt all, none, or some of actuary's recommendations

Selection of Assumptions



What Are They?

Economic

- Price Inflation
- Investment Return
- Wage Growth
- COLA
- Interest Crediting Rate on EE Contr
- PayrollGrowth/UAALpayment increase

Demographic

- Retirement Rates
- Promotional/Step Pay Increases
- Disability
- Turnover
- Mortality

Who Selects Them?

Economic

- Board
- Actuary
- Other Advisors

Demographic

- Mostly Actuary
- Board Approves

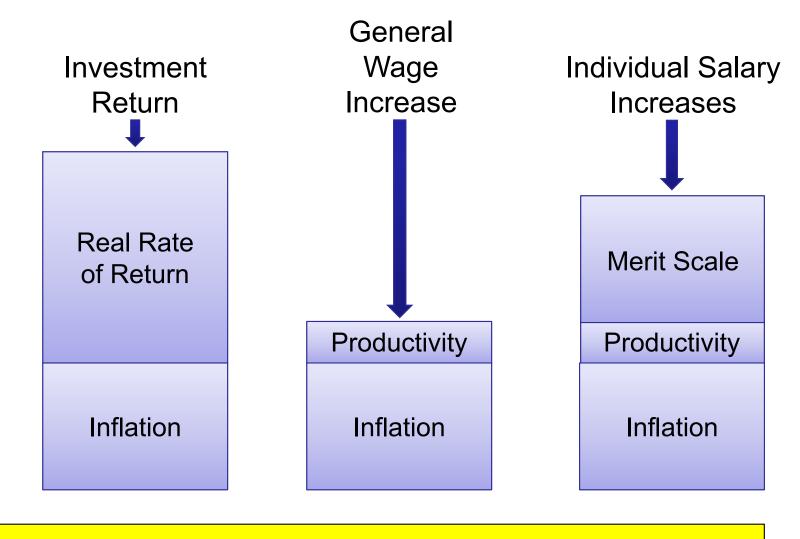
Actuarial Standard of Practice Number 27



- Provides guidance to actuaries in the selection of economic assumptions for valuing pension benefits
- Recommendation is for a "reasonable assumption"
 - Appropriate for purpose of measurement
 - Reflects actuary's professional judgment
 - Consider relevant historical and current economic data
 - Reflects actuary's estimate of future experience, estimates inherent in market data, or combination
 - No significant bias (not significantly optimistic or pessimistic)
 - Can include some conservatism for adverse deviation
- Advises actuaries not to assign too much credibility to recent experience

Economic Assumptions Building Block Method





Note: inflation assumption and productivity must be consistent in all assumptions.

Inflation Assumption



- Price inflation represents annual increase in cost of living, typically measured by CPI
- ➤ Current assumption is 2.50%
- Indirectly impacts the valuation as a component of other economic assumptions
 - Investment return
 - General wage growth (which becomes part of individual salary increase assumption)
 - Payroll growth for amortization of unfunded actuarial liability
 - COLAs for certain retirees

Inflation Assumption

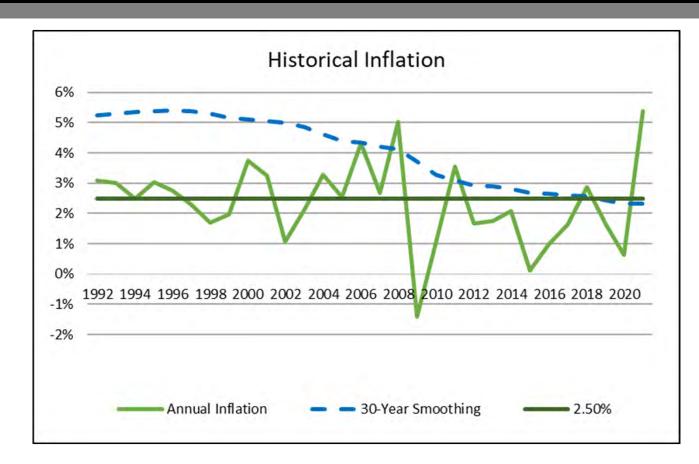


- Considerations for setting the assumption
 - Historical inflation
 - Future expectations
 - Financial Markets
 - CMERS' investment consultant (Callan)
 - Other investment professionals
 - Economists and other financial professionals
 - Social Security projections
 - Other systems (largely used to identify broad trends)

Historical Price Inflation



(measured from 12/31/21)



Period	Inflation	Period	Inflation
60 Years	3.79%	30 Years	2.37%
50 Years	3.90%	20 Years	2.31%
40 Years	2.76%	10 Years	2.14%

Future Inflation Expectations



- ➤ Financial markets: "breakeven rate of inflation" is difference between yields on fixed coupon Treasury bonds and inflation-protected Treasuries (TIPS)
 - December 2021: difference on 30-year bonds was 2.34%
 - July 2022: 30-year was 2.29%, 5-year was 2.73%
- Philadelphia FED Q2 2022 Survey of Professional Forecasters: 2.80% over next 10 years

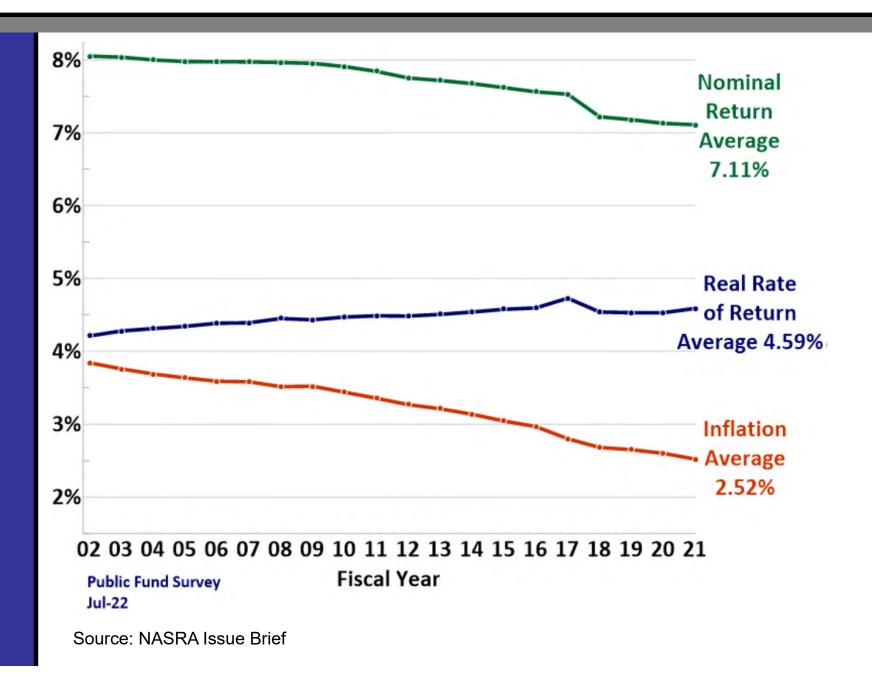
Future Inflation Expectations



- Investment professionals
 - Callan 30 year (Q1 2022): 2.25%
 - Callan 30 year (*Preliminary 2023*): 2.37%
 - Horizon Survey (Aug 2021): 2.14% to 2.23%
- Social Security projections (June 2022)
 - Best estimate: 2.40%
 - Range: 1.80% to 3.00%

Peer Group Comparison Inflation Assumptions





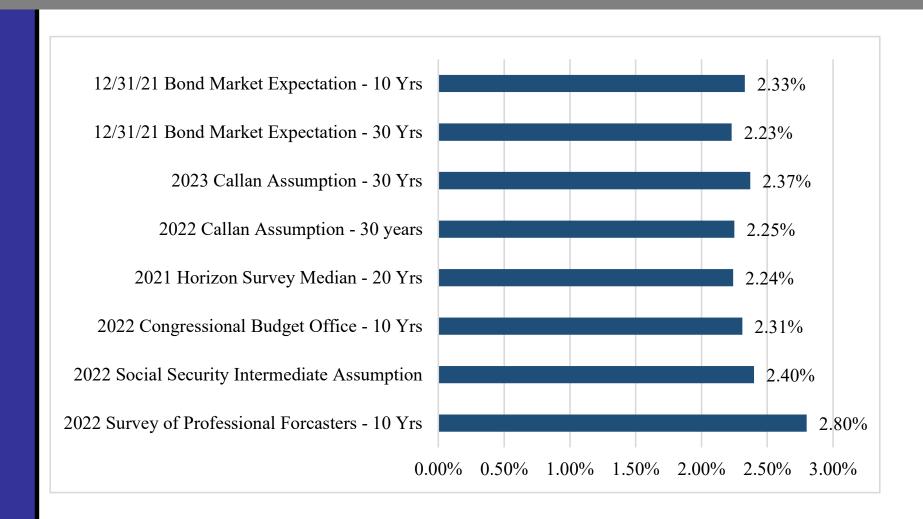
Recent Inflation Issues



- Inflation has been very high recently
 - 8.5% for the 12-month period ending July 2022
- Long-term considerations
 - The Federal Reserve is still targeting lower inflation
 - Bond market pricing indicates traders anticipate a return to lower inflation within a few years
 - We will be revisiting all assumptions in five years when the next experience study is performed
- Keep long term focus and don't overreact to recent experience

Selected Metrics of Expected Rates of Inflation





The current inflation assumption of 2.50% is in the range of current expectations. We recommend no change to the inflation assumption.

Investment Return Assumption



- Asset allocation is determined first and that leads to the development of the investment return assumption, not vice versa
 - Level of risk is determined by the Investment Policy including the objectives, duties, policies and procedures related to plan investments
- Asset allocation is the key factor in setting this assumption
 - Portfolios that take risk are expected to be rewarded with higher returns, along with potentially greater volatility

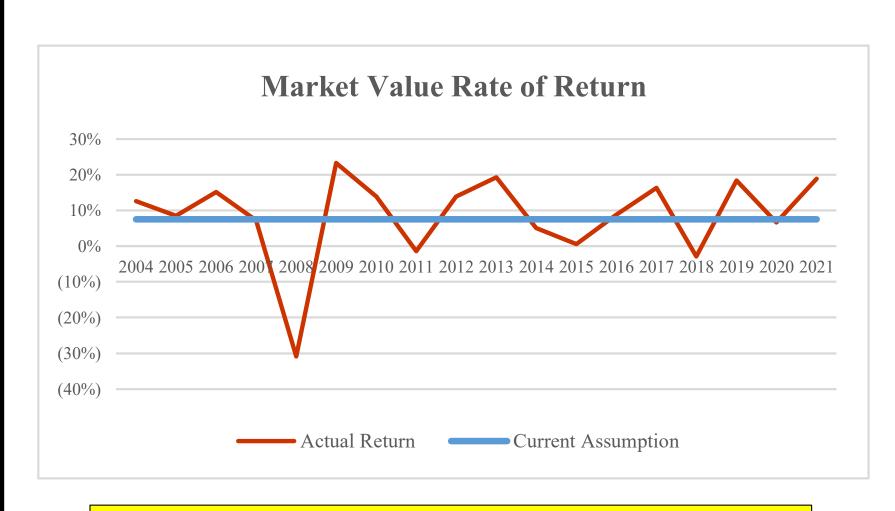
Investment Return Assumption



- Building block approach
 - Rate of price inflation (previously discussed)
 - Real rate of return
 - Sum is expected investment return
- Asset allocation is the key factor in setting this assumption
 - Portfolios that are more aggressive can generally expect higher returns along with potentially greater volatility
- Most powerful assumption in valuation
 - Small changes can have large impact on liabilities and contribution rates
 - Current assumption: 7.50% (2.50% inflation plus 5.00% real rate of return).

CMERS Historical Fiscal Year Returns



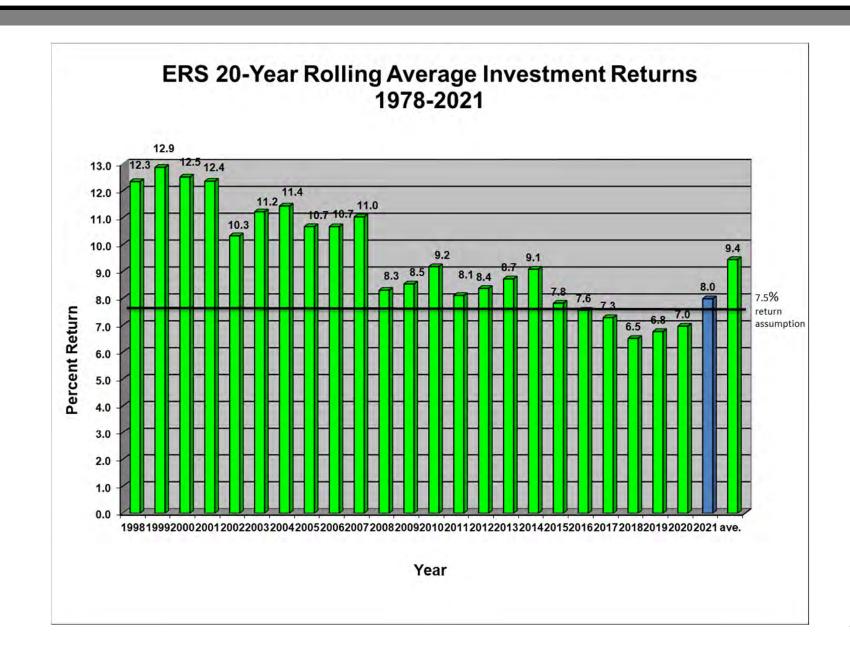


Compound returns

Last 5 years: 11.16% Last 10 years: 10.08% Last 20 years: 7.49%

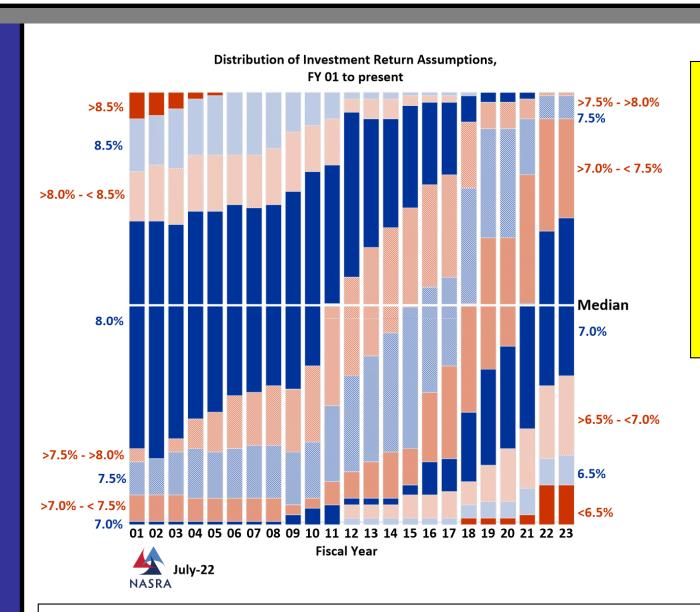
CMERS Historical Fiscal Year Returns





Peer Group Comparison



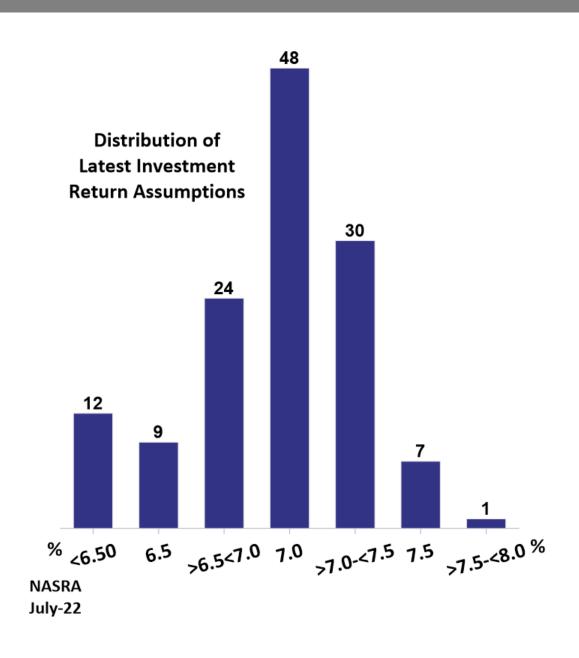


Lower market
expectations have
resulted in a
significant change to
lower investment
return assumptions
since 2001. The trend
has continued since
CMERS lowered the
assumption to 7.5% in
2019.

Note: Investment mixes may differ significantly between funds.

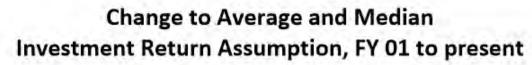
Distribution of Current Investment Return Assumptions

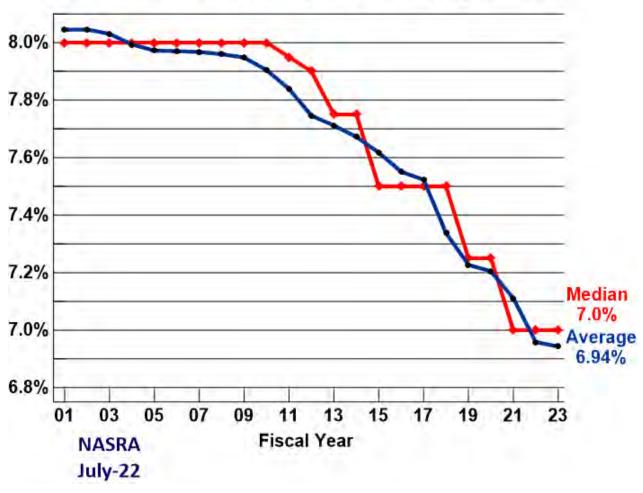




Change in Average and Median Investment Return Assumptions







Investment Return Assumption



- Forward looking analysis using capital market assumptions
- We are not investment experts, so we rely on CMERS' investment consultant, Callan
 - Use Callan's capital market assumptions to model expected range of returns (same results as Callan)
 - Callan has both short term (10 year) and long term (30 year) assumptions
 - Verify reasonableness of Callan's assumption by comparing to Horizon Actuarial Survey (35 investment consultants)
 - Focus on real rate of return for our analysis

Investment Return Assumption



Expected returns, based on Callan's assumption and CMERS' asset allocation at the time. Expected return = 50th percentile result

	2019 Assumptions		2022 Assumptions		2023 Assumptions	
	Callan (10-Year)	Callan (30-Year)	Callan (10-Year)	Callan (30-Year)	Callan (10-Year)	Callan (30-Year)
Nominal Return	6.67%	7.39%	5.90%	6.97%	6.80%	7.41%
Inflation	<u>2.25%</u>	2.25%	2.25%	2.25%	2.50%	<u>2.37%</u>
Real Return	4.42%	5.14%	3.65%	4.72%	4.30%	5.04%

Considerations for Expected Return



- Actuarial standards require that we use our best estimate, i.e., "reasonable assumption"
- ➤ Callan's expectations vary significantly from Q12022 to preliminary 2023. Which is appropriate?
 - If we use 2023 assumptions, we model lower return in 2022.
 - If we use 1/1/22 valuation results, we use 2022 assumptions.
- Callan's returns are "passive", no consideration of return from active management or expenses
- Significant negative cash flows (benefit payments exceed contributions) so lower returns in short term have implications
- ➤ If assumption is not changed, we would expect actuarial losses on investment experience over the next ten years.

Recommended Investment Return Assumption



We believe it is prudent to start to reflect lower expected returns to increase the likelihood of meeting/exceeding the assumed return over time.

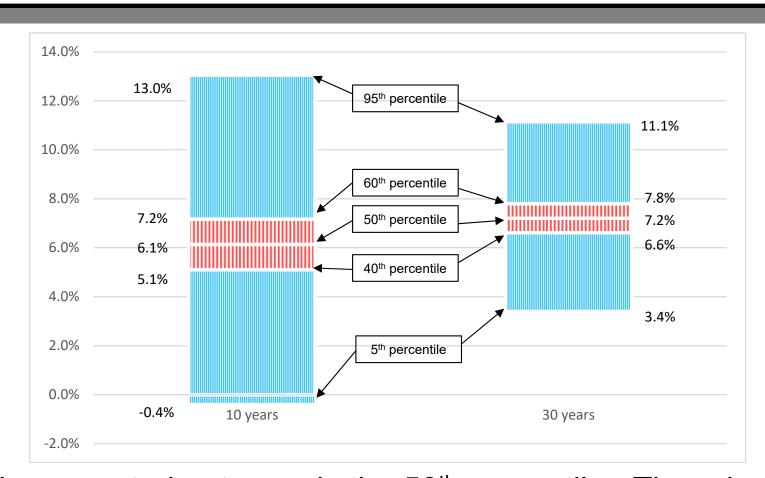
Assumption	Current	Recommended
Price inflation	2.50%	2.50%
Real return	<u>5.00%</u>	4.90%
Investment return	7.50%	7.40%

Effective with the January 1, 2023 valuation.

Considerations for Expected Return



(Using Callan's Q1 2022 Expectations)

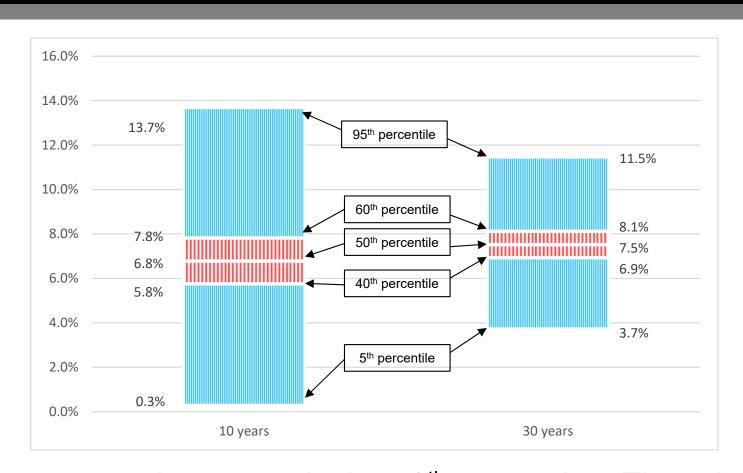


The expected outcome is the 50th percentile. There is a 50% chance that the return will be below 6.1% over 10 years and 7.2% over 30 years. Similarly, there is a 60% chance that returns will be less than 7.8% over 30 years.

Considerations for Expected Return



(Using Callan's Preliminary 2023 Expectations)

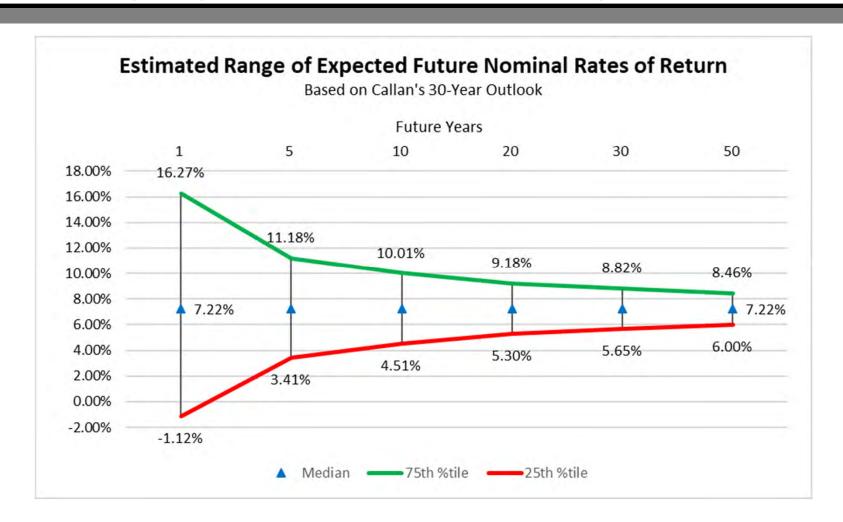


The expected outcome is the 50th percentile. There is a 50% chance that the return will be below 6.8% over 10 years and 7.5% over 30 years. Similarly, there is a 60% chance that returns will be less than 8.1% over 30 years.

Distribution of Expected Future Nominal Returns



(Using Callan's Q1 2022 Expectations)

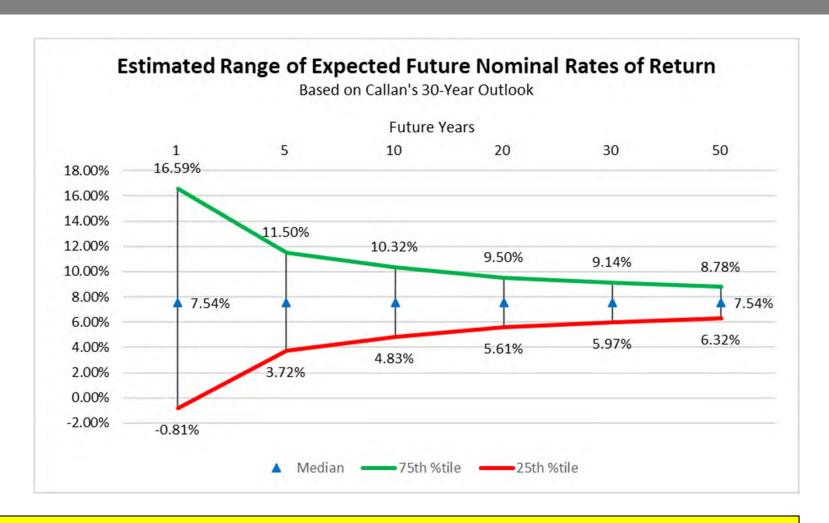


The range of potential outcomes is very wide, particularly over shorter periods of time. After 30 years, there is a 50% chance the effective return will be less than 7.22% and a 25% chance it will be below 6.00%.

Distribution of Expected Future Nominal Returns



(Using Callan's Preliminary 2023 Expectations)



The range of potential outcomes is very wide, particularly over shorter periods of time. After 30 years, there is a 50% chance the effective return will be less than 7.54% and a 25% chance it will be below 6.32%.

Investment Return Assumption



- Considerations in setting the investment return assumption
 - Our perspective is long term (30+ years), but we cannot ignore the short term as it has a material impact on the accumulation of funds over time
 - Capital market assumptions, developed by investment consulting firms, are intended for a different purpose, i.e., asset allocation
 - Capital market assumptions change frequently (sometimes more than once per year) based on current market conditions
 - Currently, short-term market expectations are materially lower than long term expectations
- May not be appropriate to set the investment return assumption by simply using investment consultant's expected return. More analysis is needed.

Summary of Findings: Investment Return Assumption



- ➤ Current assumption: 7.50% nominal return
- ➤ Based on Callan's preliminary 2023 30-year expected real return distribution and 2.50% inflation:
 - 50th percentile return: 7.54%
 - 45th percentile return: 7.18%
- Does not reflect the impact of active management.
- ➤ The Board's risk perspective and appetite are also considerations there is not a single "right answer".
- Assumption must be reasonable under actuarial standards and involve the actuary's professional judgement.

Considerations in Setting Investment Return Assumption



- Historical analysis (limited value)
- Forward-looking analysis of expected return
 - Using Callan's current capital market assumptions
 - Consider other investment consultants' assumptions
- Funding dynamics like negative cash flows and impact of the contribution rate funding policy
- ➤ Board's risk perspective/risk tolerance
- Peer group comparison (useful for general trends only)

Cost Impact of Changes



- ➤ The investment return assumption is the most significant assumption in the valuation process. There is no other change in set of economic assumptions.
- ➤ Lowering investment return assumption results in higher normal cost and actuarial liability (and therefore, unfunded actuarial liability)

UAL Payment Increase



- UAL payment increase assumption is used solely to determine the amortization payment on the Unfunded Actuarial Liability
- Current assumption of 2.00% anticipates some decline in active population or lower salary growth than general wage growth assumption

UAL Payment Increase

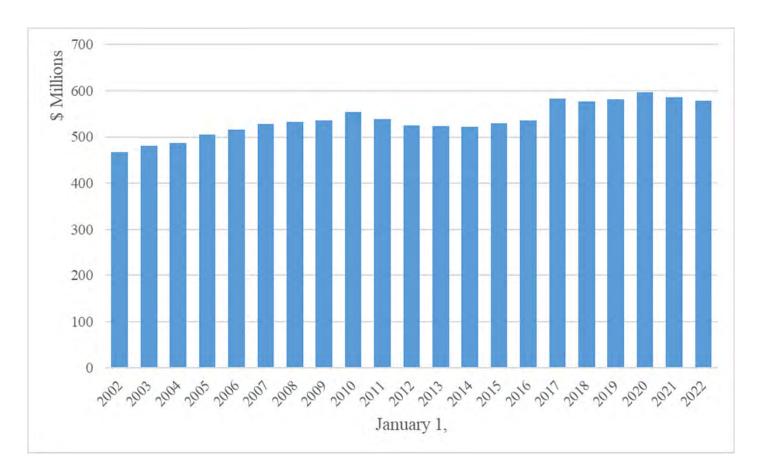


- ➤ Reduction in number of active members in CMERS in the past has resulted in lower growth in covered payroll than expected based on the current assumption.
 - Future trend in size of membership
 - Reflect in assumption or address in modifications to Stable Contribution Policy
- ➤ Recommend retaining current UAL payment increase assumption of 2.0%, which results in UAL payments increasing 2.0% per year.

CMERS Total Covered Payroll



➤ Average increase in total covered payroll was about 1% over the past 10-year and 20-year periods.



Administrative Expenses



Included directly in the annual actuarial contribution rate

➤ This explicit reflection of administrative expenses is transparent and the most commonly used approach by other systems

Recommend this approach be continued.

Summary of Recommended Economic Assumptions



Assumption	Current	Recommended
Price inflation	2.50%	2.50%
Interest on Member Accounts	4.00%	4.00%
General wage growthGeneral employeesPolice/Fire	2.50% 4.00%	TBD TBD
Payroll growth for UAAL payment	2.00%	2.00%
Investment Return	7.50%	7.40%
Administrative Expenses	Explicit	Explicit



The experience and dedication you deserve

City of Milwaukee Employe's Retirement System Board Presentation

Experience Study Results: Demographic Assumptions

Presented By: Cavanaugh Macdonald Consulting September 28, 2022



www.CavMacConsulting.com



CMERS Experience Study



- Performed every five years for CMERS
 - Last study covered calendar years 2012 through 2016
 - Investment return assumption reviewed when CMC assumed actuarial duties (early 2019)
 - Current study covers calendar years 2017 through 2021
 - Only four years of experience were available
- Monitor all actuarial assumptions and methods used in the valuation process
- > Timeline:
 - August discuss economic assumptions.
 - September discuss demographic assumptions.
 - October discuss stable contribution policy.
 - No Board action until all results have been presented.
 - January 1, 2023 valuation based on new assumptions



Background



- Pension funding is a long-term proposition with expected benefit payments for current members spanning 80+ years
- Assumptions have a significant impact on the calculation of liabilities and actuarial contribution rates
 - Future benefit payments are dependent on a number of contingent events that are unknown
 - Actuaries use assumptions to estimate the timing, duration and amount of future benefit payments and then calculate their current value (present value)
 - Assumptions will impact the <u>allocation</u> of costs (contributions) so usually set neither overly conservative or aggressive
- ➤ Assumptions are just that assumptions. If actual experience differs from the assumptions over time, the costs (contributions) will differ also.



Actuarial Assumptions



- ➤ No "correct" assumptions
 - Blend of both art and science
 - There is a range of reasonable assumptions for every assumption
 - Professional judgment involved
- > Assumptions are long-term estimates
 - Experience emerges short term and is measured in each experience study
 - Year to year and period to period fluctuations are expected
- Can create challenges in interpreting data and assigning credibility to it, especially with smaller datasets



Purpose of Experience Study



- Assumptions are critical to the calculation of liabilities. Must ensure they are best estimates of future experience.
- Experience study is the basis for analyzing and evaluating the existing actuarial methods and assumptions and developing recommended changes, if needed.
- > Actuary's role is to make <u>recommendations</u> for each assumption
 - As fiduciaries, the Board is responsible for the selection of actuarial assumptions
 - Board can adopt all, none, or some of actuary's recommendations
- Assumptions and methods do not affect the true cost of the plan, which is the actual benefit payments paid from the trust.
 - Assumptions and methods will influence the timing and amount of contributions.



Experience Studies



- Compare actual experience during study period with expected results, based on current assumptions
- Past experience provides strong guidance for some assumptions (like mortality) and weak guidance for others (like investment return)
- Both science and art
 - Objective (science): number crunching of actual and expected numbers of members and rates of occurrence
 - Subjective (art): interpreting the information and deciding on appropriate changes



Types of Assumptions



What Are They?

Economic

- Price Inflation
- Investment Return
- Wage Growth
- COLA
- Interest Crediting Rate on EE Contr
- Payroll Growth/UAAL payment increase

Demographic

- Retirement Rates
- Promotional/Step Pay Increases
- Disability
- Turnover
- Mortality

Who Selects Them?

Economic

- Board
- Actuary
- Other Advisors

Demographic

- Mostly Actuary
- Board Approves





Our focus today is on the demographic assumptions.



Measuring Demographic Experience



- Compare what actually happened to individual members with what was expected to happen <u>based</u> on the actuarial assumptions
- Assess "credibility" amount of weight assigned to the recent experience
 - Length of study period
 - Unusual events during study period
 - Size of the group
- ➤ Key evaluation tool is actual decrements/expected decrements (called *Actual/Expected* or *A/E ratio*)
 - "Decrement" is a change in the member's status (e.g., retirement, termination, death)



Measuring Demographic Experience (Count vs Liability Basis)



Count Basis

- **Step 1**: Determine <u>number of members</u> changing membership status (decrements) during study period, tabulated by groupings that may include age, duration, gender and plan
- **Step 2**: Determine <u>number of members</u> expected to change status by multiplying membership statistics (called exposures) by the expected rates of decrement
- **Step 3**: Compare <u>number</u> of actual decrements to <u>number</u> of expected decrements, called the Actual to Expected Ratio (expressed as %)

Liability Basis

 Same steps as Count Basis, but results are based on the estimated liability (salary and service) of members instead of the count of members



Measuring Demographic Experience (Example)



- 10 members eligible to retire at age 62
- Actuarial assumption is 10% retire at age 62

<u>Count</u>	<u>Salary</u>	<u>Service</u>	<u>Liability</u> <u>Weighted</u>
8	\$ 20,000	5	\$ 800,000
<u>2</u>	80,000	20	3,200,000
10			4,000,000

■ Actual Experience: 1 member with \$80,000 and 20 years retires

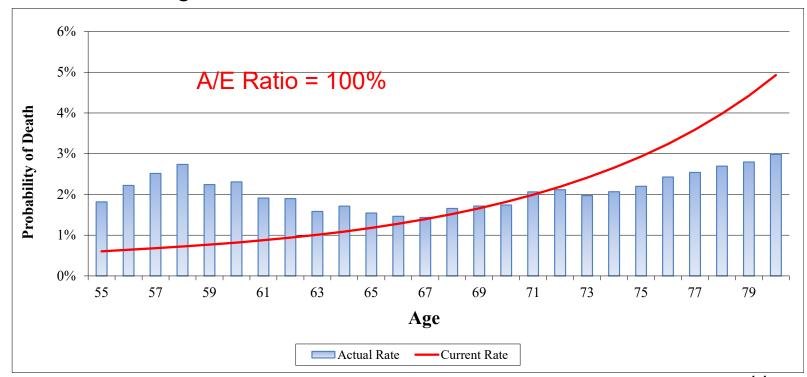
	Count <u>Basis</u>	Liability <u>Weighted</u>
Exposure	10	\$4,000,000
Expected Decrement	1	400,000
Actual Decrement	1	1,600,000
Actual/Expected Ratio	100%	400%



Evaluating the Results of Demographic Experience



Generally, the closer the Actual/Expected ratio is to 100%, the better the current assumption anticipated the overall experience. However, the pattern of the actual experience may vary significantly from the assumption indicating a need for change.





General Cost Impact of Assumption Change



> General cost impact of each change in isolation

Assumption	Change in Assumption	Typical Effect On Liabilities/Costs
Mortality	Decrease (longer life expectancy)	Increase
Retirement	Retire Later	Decrease
Disability	Lower Disability	Decrease
Termination	Decrease	Increase
Salary Increases	Decrease	Decrease
Refund Election	Increase (more refunds)	Generally Decrease



Observations of Actual vs Expected Experience



	Comments
Mortality	Actual release of liability due to deaths was less than expected, except for General – Females. Larger difference for P/F than General.
Retirement	Higher number of retirements from active status for all 3 groups except for early retirement for General Employees (fewer than expected). Actual vs expected experience was much higher for Police (188% A/E ratio) and Fire (152% A/E ratio)
Termination	Slightly more members terminated from active status than expected for General (103% A/E ratio), but far fewer than expected for P/F (63% A/E ratio).
Disability	Significantly lower number of actual vs expected disabilities for all 3 groups. Total of 18 disabilities over 4 years for groups combined.
Duty-related Disability	More disabilities were duty-related than assumed for General (24% vs 10% expected). Significantly lower number of duty-related disabilities for P/F (31% vs 78% expected). However, limited data means less credible.
Salary increase	General Employees had higher increases than expected. Rates are relatively flat with slightly higher increases at shorter durations. Strong correlation to service for Police/Fire with higher increases at shorter durations. Lower increases at higher durations than currently assumed.



Recommended Changes



	Recommendation	Cost Impact
Mortality	Limited data and therefore, limited credibility. Move to most recent table published, based on public plan data. Separate assumptions for General and P/F.	Lower costs for General. Increase costs for P/F.
Retirement	Partially reflect actual experience by moving part way toward actual experience. Lower early retirement rates for General and increase rates for normal retirement. Significantly increase retirement rates for P/F.	Increase costs for both General and P/F.
Termination	Move to service-based assumption for both General (Male and Female) as well as Police/Fire (separate rates for each). Closely reflect observed experience	Lower costs for General. Increase costs for P/F.
Disability	Lower disability rates for both General and Police/Fire	Lower costs for all groups.
Duty-related Disability Percentage	Increase for General. Decrease for union Police/Fire. Non-union Police/Fire match General. None eligible for 90% benefit.	Increase costs for General. Lower costs for P/F.
Salary increase	Move to service-based assumption for both General and Police/Fire with 3.0% general wage increase.	Increase costs for General but decrease costs for P/F.



Recommended Assumptions



	Recommendation
Retiree Mortality	General Employees: Pub-2010 Below Median Employee Mortality Table with 1-year age setback for males and 2-year set forward for females Police/Fire: Pub-2010 Public Safety Mortality Table with 1-year age set forward for males and females Future improvements: Scale MP-2021
Other Mortality	Same family of tables (Pub-2010) with same age adjustments for active members, disabled retirees and beneficiaries/joint annuitants Future improvements: Scale MP-2021
Retirement	Lower early retirement rates for General Employees and adjust normal retirement rates for males/females to better fit experience (some increase/some decrease). Increase retirement rates for Police and Fire to better reflect actual experience.
Termination	Move to service-based assumption for both General and Police and Fire (separate assumptions for each). Higher rates for earlier durations.
Disability	Lower the disability assumption for all 3 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. None eligible for 90% benefit.
Salary increase	Move to service-based assumption for both General Employees and Police/Fire with 3.0% general wage increase assumption.



Estimated Cost Impact for System (Based on 1/1/21 Valuation)



(\$ in millions)	Baseline	All Demographic Changes	Demographic Changes and 7.40%
Actuarial Accrued Liability	\$6,876	\$6,912	\$6,987
Actuarial Value of Assets	<u>\$5,735</u>	<u>\$5,735</u>	<u>\$5,735</u>
Unfunded Actuarial Accrued Liability (UAAL)	\$1,141	\$1,177	\$1,252
Funded Ratio	83.41%	82.97%	82.08%
Combined Fund Contribution Rates			
Normal Cost Rate	15.60%	15.81%	16.16%
Administrative Expense Rate	1.05%	1.04%	1.04%
UAAL Rate	<u>15.60%</u>	<u>15.83%</u>	<u>16.71%</u>
Total Contribution Rate	32.25%	32.68%	33.91%
Member Contribution Rate	<u>5.57%</u>	<u>5.56%</u>	<u>5.56%</u>
Employer Contribution Rate	26.68%	27.12%	28.35%

Note: Numbers may not add due to rounding.

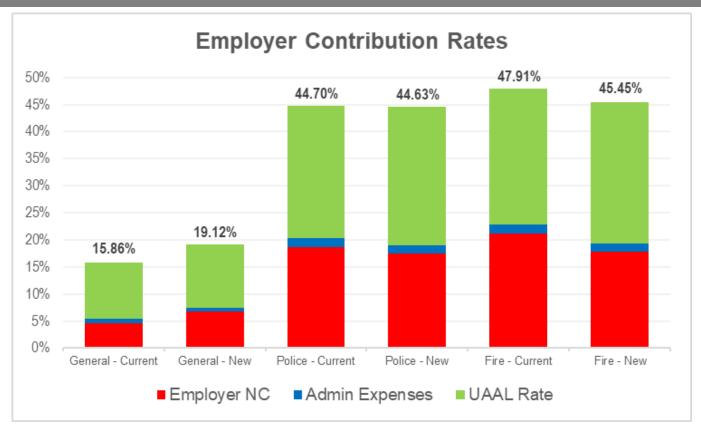
The dollar impact of the assumption changes, as measured in the January 1, 2023 valuation, will be different than that shown here.

The impact of the assumption changes is amortized over a closed 20-year period.



Assumption Change Impact by Group



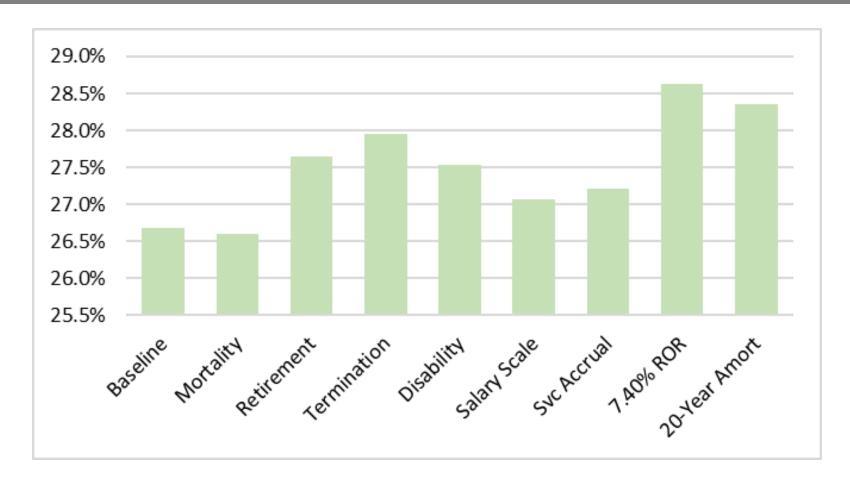


(\$ millions)	General			Police			Fire		
	Current	<u>New</u>	<u>Increase</u>	Current	<u>New</u>	<u>Increase</u>	Current	<u>New</u>	<u>Increase</u>
Actuarial									
Liability	\$2,993	\$3,049	\$56	\$2,596	\$2,633	\$37	\$1,288	\$1,306	\$18



Assumption Change Impact on Total Actuarial Contribution Rate





Note: The cost impact of each assumption change is dependent on the order in which the changes are considered.



Certification



In order to prepare these results, we have utilized appropriate actuarial models that were developed for this purpose. These models use assumptions about future contingent events along with recognized actuarial approaches to develop the needed results. 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. Because of limited scope, Cavanaugh Macdonald performed no analysis of the potential range of such future differences, except for some limited analysis in financial projections or required disclosure information.

We meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions about it.

Larry Langer, ASA, EA, FCA, MAAA Principal and Consulting Actuary Patrice A. Beckham, FSA, EA, FCA, MAAA Principal and Consulting Actuary





Appendix of Technical Documentation



Post-retirement Mortality Assumption





Mortality varies by many factors including:

- geography,
- marital status,
- education,
- income and
- sex.



Mortality Assumption

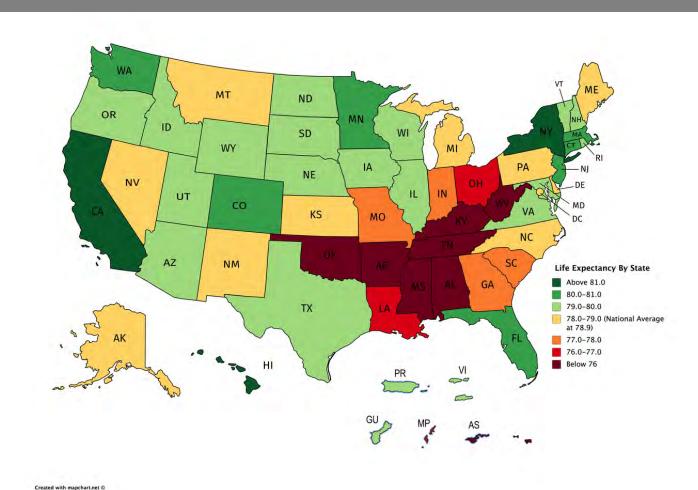


- Critical assumption from a cost perspective because it anticipates the duration of benefit payments
 - If people live longer, benefits are paid longer, and it increases the liabilities and costs of the system
- Our focus is on mortality at key retirement ages (e.g. 55-85), not life expectancy at birth
- May adjust standard tables in order to better fit the actual experience
 - Age setback or set forward
 - Benefit size (Below or Above Median)
 - Scaling factors



Geographic Variations in Mortality





Note: life expectancy at birth



Mortality Assumption



- Two components of the valuation mortality assumption
 - Current mortality rates (referred to as the "base table")
 - Future mortality improvements
- Current mortality rates/Base table
 - Start with a standard table, usually a recent table
 - Tables may be adjusted to better fit the observed data
 - Credibility is determined based on number of deaths and exposures, as well as professional judgement
- > Future mortality improvements
 - Actuaries must consider future mortality improvements in recommending a mortality assumption
 - We believe it is prudent for a retirement system to include an assumption regarding future improvements



Current CMERS Mortality Assumption (All Groups)



- > RP-2014 Healthy Annuitant Mortality Table
 - Males scaled 111%
 - Females scaled 110%
 - Future mortality improvements using Scale MP-2016
- ➤ RP-2014 Disabled Mortality Table
 - 102% for males
 - 98% for females
 - Future mortality improvements using Scale MP-2016
- Pre-retirement Deaths: RP-2014 Non-annuitant Mortality Table with Scale MP-2016
- Actual/Expected ratio should be near 100% as future mortality improvements are reflected directly in the valuation software



Actual Mortality Experience



Experience indicates actual deaths (ages 60 to 85 for General and ages 55 to 85 for Police and Fire) were lower than expected (A/E Ratio is lower than 100%)

	Males	Females
General Employees	96%	106%
Police and Fire	87%	Insufficient data
Total	91%	106%

- Fewer deaths than expected means less liability was released than anticipated which results in actuarial losses.
- Some adjustment to the mortality assumption is appropriate.



Recommendations for Mortality Assumptions



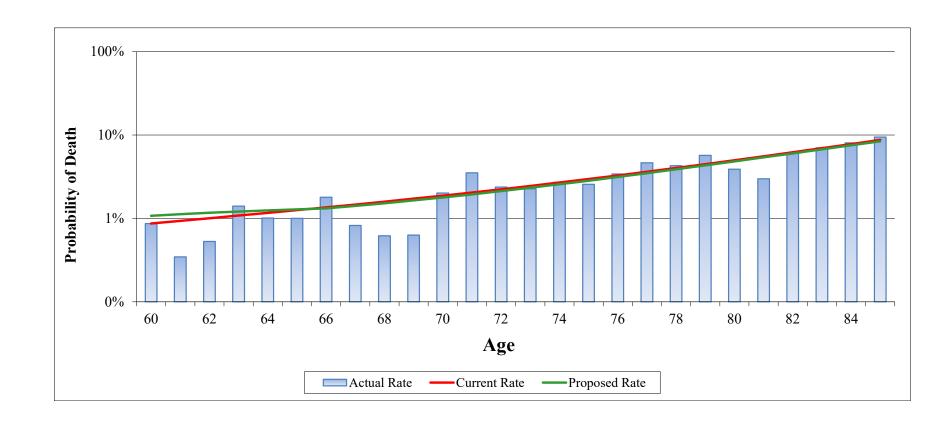
- For the first time (2019), the Society of Actuaries published a set of mortality tables, <u>based solely on public plan data</u> (Pub-2010 Mortality Tables)
 - Different tables by occupation: Teachers, Public Safety and General Employees
 - Above-Median, Median, and Below-Median
 - Key resource for the selection of mortality assumptions for public plans
- Recommendations:
 - Pub-2010 Below Median General Employees Mortality Table with a oneyear age setback for males and a two-year set forward for females
 - Pub-2010 Public Safety Mortality Table with one-year set forward
 - Improvements in future based on Scale MP-2021

	Males	Females	
	Current / Proposed	Current / Proposed	
General Employees	96% / 99%	106% / 103%	
Police and Fire	87% / 94%	Limited Data	



Male Retiree Mortality Experience General Employees





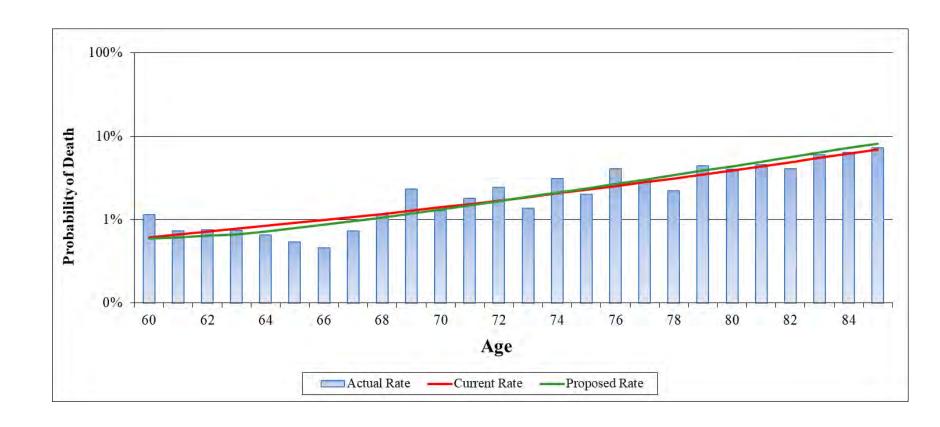
A/E Ratio on Current Assumption: 96%

A/E Ratio on Proposed Assumption: 99%



Female Retiree Mortality Experience General Employees



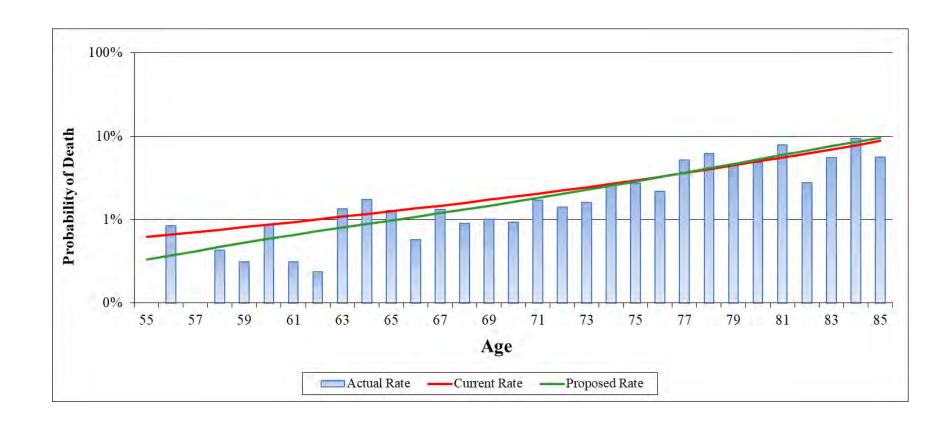


A/E Ratio on Current Assumption: 106% A/E Ratio on Proposed Assumption: 103%



Male Retiree Mortality Experience Police and Fire





A/E Ratio on Current Assumption: 87% A/E Ratio on Proposed Assumption: 94%



Recommendations for Other Mortality Assumptions



- ➤ Our recommendation is to use the same Pub-2010 family of mortality tables for Actives, Disabled and Beneficiaries
- Recommendation for Active Base Table:
 - General Employees: General Employees Below Median Mortality Table setback one year for males and set forward two years for females
 - Police/Fire: Public Safety Mortality Table set forward one year
- Recommendation for Disabled Base Table:
 - General Members Disabled Mortality Table
 - Public Safety Disabled Mortality Table
- Recommendation for Beneficiary Base Table:
 - General Members Below Median Contingent Survivor Mortality Table
 - Public Safety Contingent Survivor Mortality Table
- Future mortality improvements for all groups modeled using Scale MP-2021



Retirement Assumptions



- ➤ This assumption models retirement directly from active status:
 - Rates vary by:
 - Membership group: General vs Police/Fire
 - Gender: male vs female
 - Tier (different eligibility for early and normal)
 - Early retirement vs Normal Retirement (unreduced benefits)
 - No credible data for later tiers those assumptions are developed based on professional judgement



Analysis of Current Retirement Assumptions



A summary of retirement experience for all groups is shown below:

				A/E I	Ratio
	Exposure	<u>Actual</u>	Expected	Count	Weighted
General: Early	2,430	53	97	55%	45%
General: Normal					
Male Female	2,046 2,414	438 495	478 507	92% 98%	102% 120%
Police	755	361	196	184%	188%
Fire	537	156	103	151%	152%

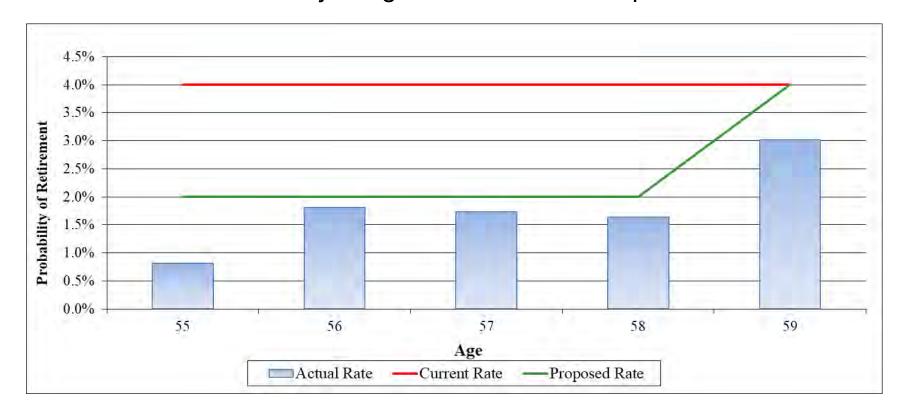
- Significantly higher retirement rates for Police/Fire
- Recommend modifying all retirement assumptions



Retirement Experience General Employees: Early Retirement



Recommend adjusting rates to better fit experience



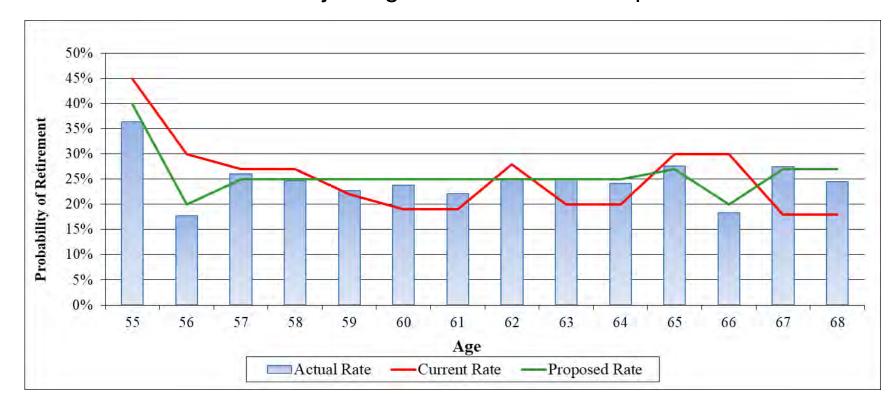
Current Assumption A/E Ratio (liability-weighted): 45% Proposed Assumption A/E Ratio (liability-weighted): 75%



Male Retirement Experience General Employees: Normal Retirement



Recommend adjusting rates to better fit experience



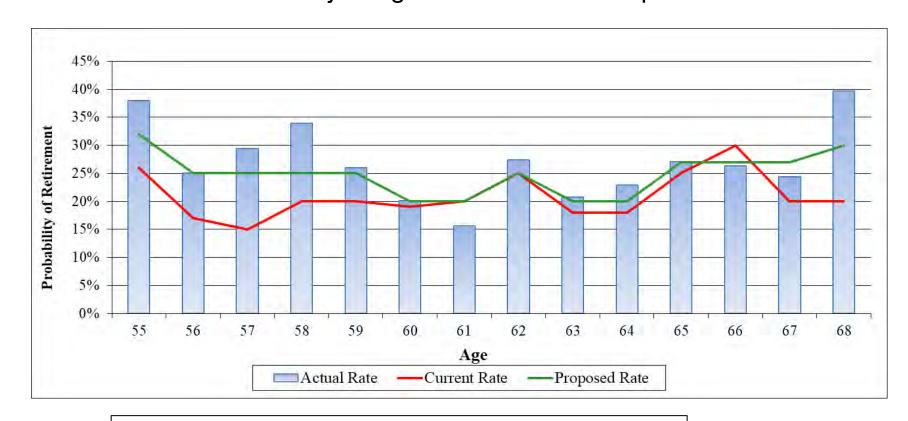
Current Assumption A/E Ratio (liability-weighted): 102% Proposed Assumption A/E Ratio (liability-weighted): 96%



Female Retirement Experience General Employees: Normal Retirement



> Recommend adjusting rates to better fit experience



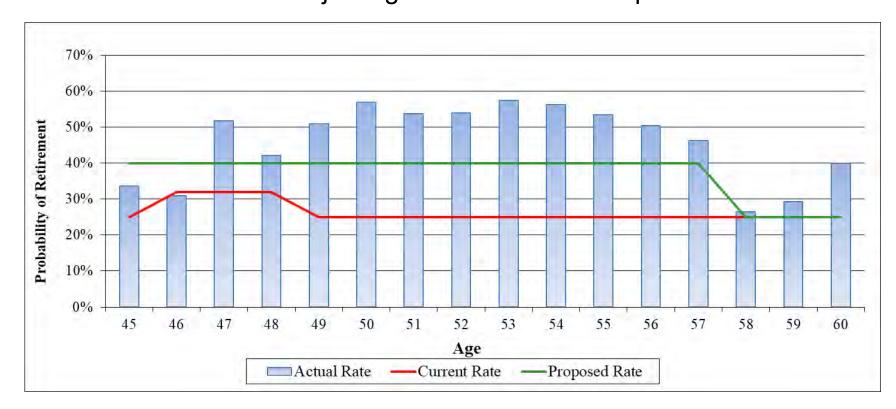
Current Assumption A/E Ratio (liability-weighted): 120% Proposed Assumption A/E Ratio (liability-weighted): 105%



Retirement Experience Police



> Recommend adjusting rates to better fit experience



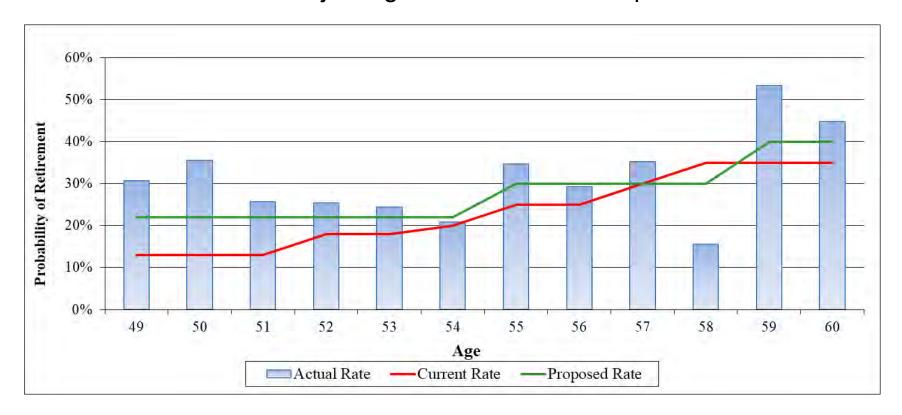
Current Assumption A/E Ratio (liability-weighted): 188% Proposed Assumption A/E Ratio (liability-weighted): 128%



Retirement Experience Fire



Recommend adjusting rates to better fit experience



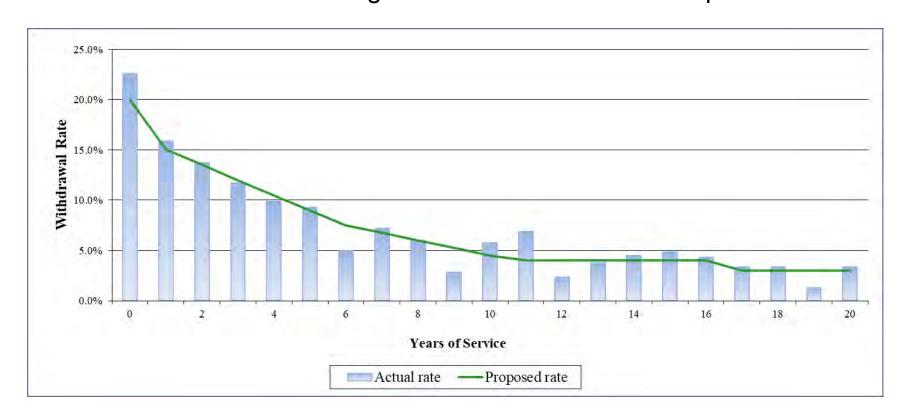
Current Assumption A/E Ratio (liability-weighted): 152% Proposed Assumption A/E Ratio (liability-weighted): 119%



Termination Experience Male General Employees



> Recommend moving to a duration-based assumption.



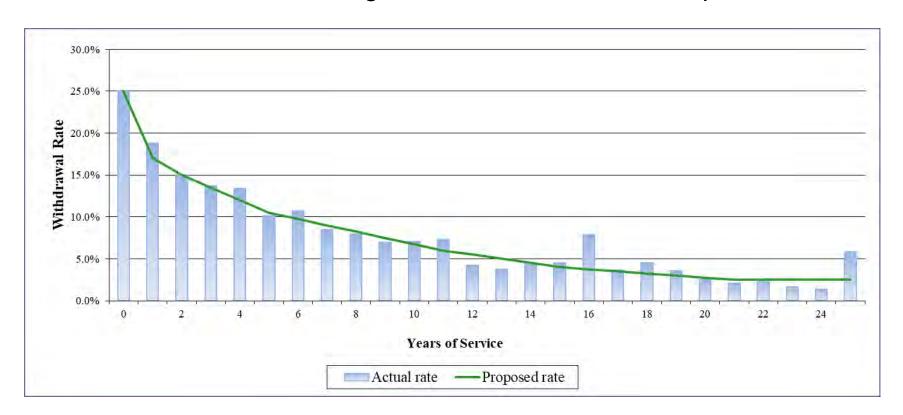
Proposed Assumption A/E Ratio (weighted): 98%



Termination Experience Female General Employees



Recommend moving to a duration-based assumption.



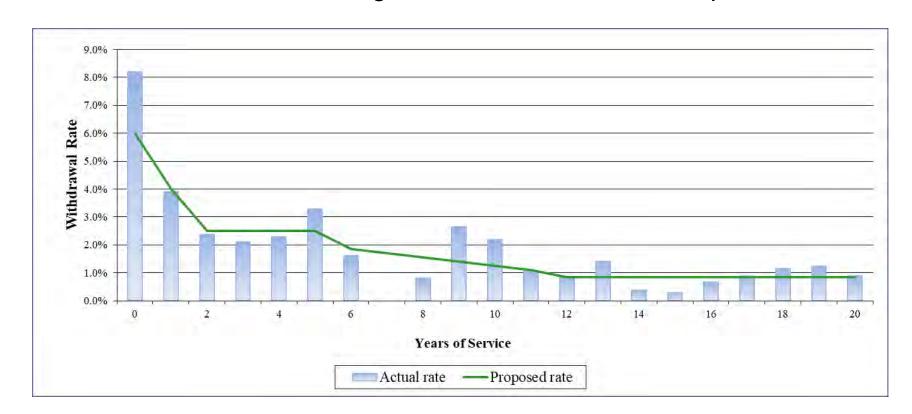
Proposed Assumption A/E Ratio (weighted): 105%



Termination Experience Police



> Recommend moving to a duration-based assumption.



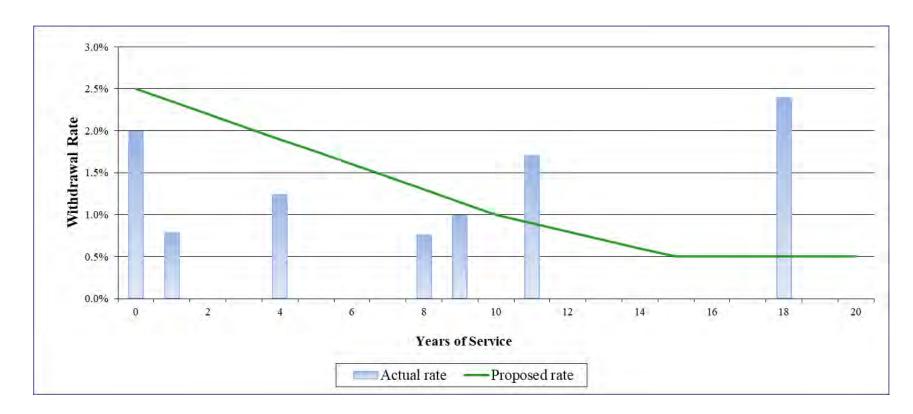
Proposed Assumption A/E Ratio (weighted): 104%



Termination Experience Fire



> Recommend moving to a duration-based assumption.



Proposed Assumption A/E Ratio (weighted): 57%



Disability Assumption



- Probability that members will become disabled while actively working
 - Different benefits are payable, so a specific assumption is needed to model future benefit payments
- Current assumptions vary by General Employees, Police and Fire

			A/E Ratio	
	Actual	Expected	Current	Proposed
General	6	47	13%	29%
Police	7	11	64%	70%
Fire	5	16	31%	63%

Actual disabilities were much lower than expected for all groups



Other Miscellaneous Assumptions



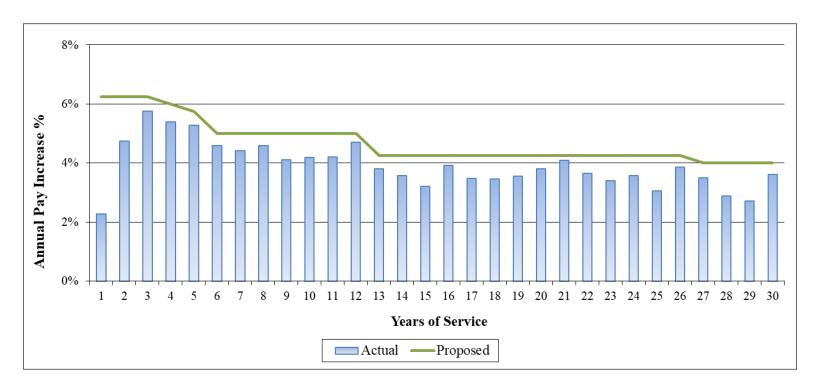
- ➤ Percent of disabilities that are duty-related and percent of each type (20% for General and non-union P/F, 60% for MPA Police and 75% for MPFFA Fire)
- Marriage and dependent children assumptions (no change)
- Percentage of active deaths that are duty related (no change)
- Imputed military service (no change)
- Seasonal service credit varies by group (no change)
- Future service accruals (all members assumed to earn 1 year in future)
- Valuation of terminated vested members: greater of refund or present value of annuity at normal retirement age (no change)



Salary Experience General Employees



> Recommend moving to a duration-based assumption.



Note: Actual salary increases were below the proposed assumption because inflation over the observed period was below the assumed 2.50%.

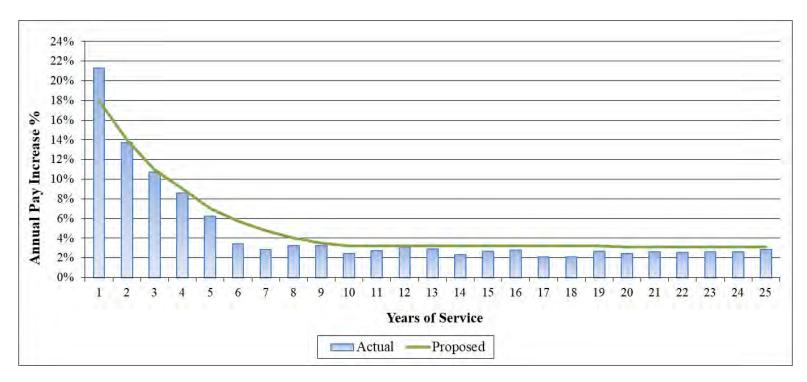
Proposed Assumption A/E Ratio (weighted): 81%



Salary Experience Police & Fire



> Recommend moving to a duration-based assumption.



Note: Actual salary increases were below the proposed assumption because inflation over the observed period was below the assumed 2.50%.

Proposed Assumption A/E Ratio (weighted): 90%



800 City Hall, 200 E. Wells St., Milwaukee, WI 53202, Telephone 414-286-2601, Fax 414-286-8550

MEMORANDUM

TO: City of Milwaukee Annuity and Pension Board

FROM: Patrick McClain, Assistant City Attorney

DATE: September 20, 2022

RE: Analysis of Legislative Amendments Necessary to Effectuate Proposed

Modifications to ERS Funding Policy

At a special meeting of the Annuity and Pension Board held on August 24, 2022, the ERS's actuary, Cavanaugh Macdonald Consulting, LLC ("CavMac"), proposed a series of changes to the ERS funding policy. This memo summarizes our analysis of any amendments to Chapter 36 of the Milwaukee City Charter that would be necessary to effectuate the proposed changes.

In its proposal, CavMac identified 20 different "components" of the current ERS funding policy. Of these, CavMac recommended "no change" to eight components. These "no change" components included: (1) Entry Age Normal actuarial cost method; (2) 5-year fixed smoothing period; (3) closed layered amortization structure; (4) 2% amortization payment increases; (5) the 25-year initial (2019) UAAL amortization period; (6) the 25-year amortization assumptions period; (7) the 25-year amortization methods period; and (8) the Normal Cost minimum employer contribution. Additionally, although the report recommends the elimination of the 20% asset smoothing corridor, no change is actually required for this component. The 20% corridor was previously eliminated by charter ordinance in 2017 at the recommendation of the Board's then-actuary. No additional action is therefore required in regard to the 20% corridor.

CavMac has correspondingly recommended changes to the remaining 11 components. Based on our analysis, we have concluded that most of the proposed changes would require amendments to the current version of Chapter 36. The proposed changes and any necessary amendments are itemized in the chart on the following page.

Component	Current	Proposed	Amendment Required?	Notes
Gains/Losses Amort. Period	15 years	20 years	Yes*	MCC § 36-15-15-b currently requires "any" change in UAAL arising from actuarial gains or losses to be amortized over 15 years.
Contribution Gains/Losses Amort. Period	15 years	5 years	Yes*	MCC § 36-15-15-b currently requires "any" change in UAAL arising from actuarial gains or losses to be amortized over 15 years.
Amortization (Actives)	25 years	15 years	Yes*	MCC § 36-15-15-b currently requires all UAAL arising from changes in plan provisions to be amortized over a fixed 25- year period.
Amortization (Early Retire Incentive)	25 years	5 years	Yes*	MCC § 36-15-15-b currently requires all UAAL arising from changes in plan provisions to be amortized over a fixed 25- year period.
Amortization (Inactives - Reduction)	25 years	10 years	Yes*	MCC § 36-15-15-b currently requires all UAAL arising from changes in plan provisions to be amortized over a fixed 25- year period.
Amortization (Inactives - Increase)	25 years	1 year	Yes*	MCC § 36-15-15-b currently requires all UAAL arising from changes in plan provisions to be amortized over a fixed 25- year period.
Fresh Start	None	25 years	Yes	No current provision authorizes a "fresh start" 25-year UAAL amortization.
Contribution Phase-In	None	5 Years	Recommended	Because MCC §§ 36-08-6-h-2 does not expressly allow phase-in contributions, an amendment is recommended.
Projected Returns	2022 Callan	2023 Callan	No	MCC §§ 36-08-6-h-2, 36-15-14, and 36-15-15 permit the actuary to reset the stable contribution rate according to actuarial standards of practice.
Asset Measure Date	1/1/2022	1/1/2023	No	MCC §§ 36-08-6-h-2, 36-15-14, and 36-15-15 permit the actuary to reset the stable contribution rate according to actuarial standards of practice.
Contribution Basis	Rate	Dollar	Yes	MCC § 36-08-6-h-2 currently requires the actuarial contribution rate to be expressed as a percentage of covered compensation.

^{*} Requires an affirmative vote of at least 5 members of the Annuity and Pension Board, as well as certification from CavMac that the changes comply with Actuarial Standards of Practice. *See infra;* MCC § 36-15-15-b.

Annuity and Pension Board September 20, 2022 Page 3

Finally, we note—as denoted by the asterisks in the preceding table—many of the proposed changes require amendments to MCC § 36-15-15. Under its current terms, this provision cannot be altered without formal action by both the Board and the ERS's actuary. Specifically, MCC § 36-15-15-b states that "[n]o changes shall be made to this paragraph without an affirmative vote of the board of at least 5 of its members, and written certification from the board's actuary that such changes comply with Actuarial Standards of Practice." As such, if the Board elects to adopt CavMac's recommendations, the Board is required to complete the described actions before the Common Council may enact any changes to MCC § 36-15-15.

I am available to discuss this memorandum and any related concerns at the Board's convenience. Thank you.

PATRICK MCCLAIN

cc: Bernard Allen, Executive Director

Encl.: (1) CavMac "Funding Policy Discussion" Presentation (12 pages)

(2) Chapter 36 Excerpts (3 pages)

Board Report - October 2022 Retirements

Retirement Type	Retirement SubType	Last Name	First Name	Retirement Date	Option	Department
Regular	Deferred	BRUMFIELD	ALCIONA	6/29/2014	MAX	DEPT OF CITY DEVELOPMENT
Regular	Deferred	DAHLY	DONNA	1/31/2018	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Deferred	HILLIARD	TERRY	2/2/2020	MAX	MILWAUKEE POLICE DEPARTMENT
Regular	Deferred	BOIVIN	DAVID	9/17/2021	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	WALL	DANIEL	5/10/2022	MAX	DPW-INFRASTRUCTURE-BRIDGES & BLDGS
Regular	Service	JACKSON	CELIA	6/11/2022	MAX	CITY ATTORNEY
Regular	Service	HARRISON	MATTIE	6/26/2022	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	MORALES GARCIA	MIGUEL	6/30/2022	100	HACM
Regular	Deferred	SCHNEIDER	JOHN	7/27/2022	MAX	HACM
Regular	Service	LAFAIVE	JAMES	8/2/2022	MAX	INTERN PROGRAM
Regular	Deferred	EDWARDS	BRENDA	8/3/2022	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Deferred	PARISH	LISA	8/6/2022	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	BOESHAAR	SANDRA	8/6/2022	MAX	DPW-WATER-HOWARD
Regular	Deferred	SAVAGE	CHRISTOPHER	8/7/2022	100	CITY OF MILWAUKEE
Regular	Deferred	KNAUB	ELLENE	8/8/2022	100	MILWAUKEE PUBLIC SCHOOLS
Regular	Deferred	PITTMAN	DIEAN	8/11/2022	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	KYLE LEWIS	LEA	8/11/2022	100	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	STATEN	BETHEL	8/14/2022	50	MILWAUKEE PUBLIC SCHOOLS
Regular	Deferred	ROEHL	RENAE	8/15/2022	MAX	BOARD OF ZONING APPEALS
Regular	Service	CONNER	BARBARA	8/16/2022	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Deferred	MILLER	JAMES	8/17/2022	75	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	MATTHAEUS	ROCHELLE	8/19/2022	MAX	CITY OF MILWAUKEE
Regular	Service	PRUST	ESTELA	8/19/2022	66	COMPTROLLER
Regular	Service	HASSEL	LAURIE	8/20/2022	100	MILWAUKEE POLICE DEPARTMENT
Regular	Service	GROH	EUGENE	8/21/2022	100	MILWAUKEE POLICE DEPARTMENT
Regular	Service	MELLENTHIEN	BRAD	8/21/2022	50	MILWAUKEE POLICE DEPARTMENT
Regular	Deferred	WOPPERT	FRANKLIN	8/22/2022	MAX	DPW-INFRASTRUCTURE FIELD OPS
Regular	Deferred	FELDMAN	LELAND	8/23/2022	53	MPD - OPERATIONS
Regular	Service	RAY	DONALD	8/23/2022	50	FIRE - FIREFIGHTING
Regular	Deferred	MAES	CRISTIAN	8/27/2022	100	MILWAUKEE POLICE DEPARTMENT
Regular	Deferred	BASS-HAMPTON	QUOVITA	8/28/2022	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	GAUTHIER	JEFFREY	8/30/2022	75	FIRE - FIREFIGHTING
Regular	Deferred	OLIVAS	ELOINA	8/31/2022	100	MILWAUKEE PUBLIC SCHOOLS
Regular	Conversion (Duty Disability to Regular)	SCHUSTER	MICHAEL	9/1/2022	100	MILWAUKEE POLICE DEPARTMENT
Regular	Service	D'ACQUISTO	MARIBETH	9/1/2022	MAX	CITY OF MILWAUKEE
Regular	Service	GOGGINS	NOLA	9/1/2022	75	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	WISNIEWSKI	MARGARET	9/1/2022	MAX	CITY OF MILWAUKEE

Type	Last Name	First Name	Death Date	Payment Date	Amount
Deferred Death	CARRINGTON	KEITH	8/22/2022	9/30/2022	\$ 16,332.42
Ordinary Death	DEVORSE	MARIA	8/1/2022	9/30/2022	\$ 168,801.64
Ordinary Death	FEARS	JACQUELINE	7/30/2022	9/30/2022	\$ 33,735.73
Ordinary Death	GILL	ANGELA	5/1/2022	9/30/2022	\$ 18,449.44
Ordinary Death	HARPER	LUCIUS	7/8/2022	9/30/2022	\$ 79,112.16
Ordinary Death	MATTHEWS	GEORGE	4/21/2020	9/30/2022	\$ 16,033.26
Retiree Death-Termination	ABBOTT	DONALD	6/17/2022	9/30/2022	\$ 580.40
Retiree Death-Termination	AUSTIN	ERMAJEAN	7/23/2022	9/30/2022	\$ 476.60
Retiree Death-Termination	BRENNAN	JAMES	6/6/2021	9/30/2022	\$ 121.31
Retiree Death-Termination	DE'BRABANT	ROBERT	2/10/2021	9/30/2022	\$ 754.85
Retiree Death-Termination	FARDY	NANCY	4/15/2022	9/30/2022	\$ 1,067.48
Retiree Death-Termination	FUHRMAN	GENE	7/28/2022	9/30/2022	\$ 4,614.49
Retiree Death-Termination	HARTIG	JAMES	7/7/2022	9/30/2022	\$ 318.09
Retiree Death-Termination	JENDUSA	PROVIE	7/29/2022	9/30/2022	\$ 401.16
Retiree Death-Termination	JOHNSON	BRIAN	3/24/2022	9/30/2022	\$ 949.22
Retiree Death-Termination	KARTES	KEVIN	7/25/2022	9/30/2022	\$ 345.54
Retiree Death-Termination	KING	ELIZABETH	7/17/2022	9/30/2022	\$ 338.42
Retiree Death-Termination	MLYNCZAK	RICHARD	8/9/2022	9/30/2022	\$ 1,811.94
Retiree Death-Termination	MUELLER	MOLLY	1/17/2022	9/30/2022	\$ 240.83
Retiree Death-Termination	NICOLINI	MARK	1/19/2022	9/30/2022	\$ 4,731.02
Retiree Death-Termination	OWENS	SHIRLEY	8/6/2022	9/30/2022	\$ 247.35
Retiree Death-Termination	ROMANS	ARTHUR	8/23/2022	9/30/2022	\$ 975.90
Retiree Death-Termination	RUSCITTI	ARLENE	8/7/2022	9/30/2022	\$ 121.12
Retiree Death-Termination	SEIFERT	CLARENCE	8/6/2020	9/30/2022	\$ 442.09
Retiree Death-Termination	SINGER	RITA	7/26/2020	9/30/2022	\$ 114.75
Retiree Death-Termination	STEINBORN	THEODORE	7/29/2022	9/30/2022	\$ 1,947.89
Retiree Death-Termination	STOERZER	HENRY	12/30/2020	9/30/2022	\$ 352.48
Retiree Death-Termination	WILSON	CAROL	4/13/2022	9/30/2022	\$ 235.88
Retiree Death-Termination	WITKOWSKI	JUDITH	8/7/2022	9/30/2022	\$ 453.41
Surv Death-Termination	BARTOSZEWICZ	THERESA	12/27/2020	9/30/2022	\$ 2,262.45
Surv Death-Termination	BREGER	RUTH	8/18/2020	9/30/2022	\$ 1,820.90
Surv Death-Termination	COLLENBURG	MARLENE	8/8/2022	9/30/2022	\$ 1,472.66

Type	Last Name	First Name	Death Date	Payment Date	Amount
Surv Death-Termination	CURRO	MARY	2/25/2022	9/30/2022 \$	1,067.63
Surv Death-Termination	DOMBROWSKI	LAVERNE	7/21/2022	9/30/2022 \$	503.00
Surv Death-Termination	FALKNER	MARY	4/1/2021	9/30/2022 \$	114.55
Surv Death-Termination	FUHRMAN	GENE	7/28/2022	9/30/2022 \$	164.62
Surv Death-Termination	GAGAS	MARY	7/23/2022	9/30/2022 \$	323.92
Surv Death-Termination	HANSEN	PAMELA	3/21/2022	9/30/2022 \$	1,120.65
Surv Death-Termination	JAHNKE	GEORGIANA	7/15/2022	9/30/2022 \$	451.50
Surv Death-Termination	KING	ELIZABETH	7/17/2022	9/30/2022 \$	777.46
Surv Death-Termination	KLATT	ELEANORE	3/2/2022	9/30/2022 \$	79.30
Surv Death-Termination	KUXHAUSE	ANNE	9/30/2020	9/30/2022 \$	163.13
Surv Death-Termination	LARSEN	DARLENE	12/30/2021	9/30/2022 \$	1,733.97
Surv Death-Termination	REIMANN	CARYL	6/4/2022	9/30/2022 \$	104.20
Surv Death-Termination	RUSCITTI	ARLENE	8/7/2022	9/30/2022 \$	571.92
Surv Death-Termination	STANISLAWSKI	BERNARDINE	7/21/2022	9/30/2022 \$	170.60
Surv Death-Termination	TROST	MABEL	7/7/2022	9/30/2022 \$	398.61
Surv Death-Termination	WAEDEKIN	LOIS	5/9/2021	9/30/2022 \$	334.44
Surv Death-Termination	WEBER	GERALDINE	6/15/2021	9/30/2022 \$	1,066.04
Surv Death-Termination	ZUROWSKI	ELIZABETH	6/28/2022	9/30/2022 \$	545.73
				TOTAL \$	369,354.15
Retiree Death-Cont Opt	BELL	THOMAS	8/2/2022	9/1/2022	
Retiree Death-Cont Opt	GULCZYNSKI	RICHARD	8/9/2022	9/1/2022	
Retiree Death-Cont Opt	HEITZMANN	JOHN	5/25/2022	9/1/2022	
Retiree Death-Cont Opt	LEE	EDWARD	9/20/2022	9/1/2022	
Retiree Death-Cont Opt	METZEN	WILLIAM	8/24/2022	9/1/2022	
Retiree Death-Cont Opt	POLASKE	PAUL	9/19/2022	9/1/2022	
Retiree Death-Cont Opt	PRAMENKO	EUGENE	9/14/2022	9/1/2022	
Retiree Death-Cont Opt	REPKA	THOMAS	9/6/2022	9/1/2022	
Retiree Death-Cont Opt	SCHILLACI	JEROME	9/2/2022	9/1/2022	
Retiree Death-Cont Opt	STAEGER	ALAN	8/23/2022	9/1/2022	
Retiree Death-Cont Opt	WALECKI	THOMAS	9/8/2022	9/1/2022	

Board Report - October 2022

Type '	Last Name		ent Date		Amount
Administrative Withdrawal	ACHEAMPONG	NANA YAA	9/30/2022	•	2,824.19
Administrative Withdrawal	ANDERSON	LAWANNDA	9/30/2022	•	451.50
Administrative Withdrawal	BUFORD	NAKKITA	9/30/2022		2,867.08
Administrative Withdrawal	DRISSI	SAMIA	9/30/2022	\$	247.48
Administrative Withdrawal	FINKEN	ALEXANDRA	9/30/2022	\$	710.97
Administrative Withdrawal	GARCIA	RAUL	9/30/2022		388.70
Administrative Withdrawal	HALE	DWAYNE	9/30/2022	\$	1,253.75
Administrative Withdrawal	KITTOCK	LUKE	9/30/2022	\$	10,511.44
Administrative Withdrawal	LLOYD	JOHN	9/30/2022	\$	151.46
Administrative Withdrawal	MANGI	THOMAS	9/30/2022	\$	1,869.46
Administrative Withdrawal	MELENDEZ	SUSANNA	9/30/2022	\$	721.78
Administrative Withdrawal	OCAMPO	ESTEE	9/30/2022	\$	252.78
Administrative Withdrawal	TERRY	KENDRA	9/30/2022	\$	414.34
Full Refund	BEVERLY-FITZGERALD	LAQUANA	9/30/2022	\$	7,276.28
Full Refund	BOYD	MATANYA	9/30/2022	\$	8,547.68
Full Refund	DAVIS	ASHAUNTI	9/30/2022	\$	3,084.33
Full Refund	DENNIS	ARLENE	9/30/2022	\$	7,545.86
Full Refund	EARLY	DOMINIQUE	9/30/2022	\$	2,685.66
Full Refund	GANTT	SARA	9/30/2022	\$	14,697.24
Full Refund	GONZALEZ	MELANY	9/30/2022	\$	22,632.99
Full Refund	GUDE	CHARLES	9/30/2022	\$	5,745.35
Full Refund	MENDOZA	MARISOL	9/30/2022	\$	12,078.90
Full Refund	METHU	JAMES [®]	9/30/2022	\$	10,430.68
Full Refund	MORALES	IVELISSE	9/30/2022	\$	11,091.26
Full Refund	MUSIL	DAVID	9/30/2022	\$	7,833.16
Full Refund	NOHELTY	KAYLA	9/30/2022	\$	7,416.22
Full Refund	PRITZLAFF	DOMINICK	9/30/2022		15,106.30
Full Refund	RADFORD	CHRISTOPHER	9/30/2022		5,027.63
Full Refund	RAMSEY	ERIC	9/30/2022		16,428.55

Туре	Last Name	First Name	Payment Date	Amount
Member Only Refund	ANDERSON	ANTHONY	9/30/2022	\$ 2,549.51
Member Only Refund	ANDERSON	JEFFREY	9/30/2022	\$ 920.56
Member Only Refund	BROWN	LATOYA	9/30/2022	\$ 3,383.60
Member Only Refund	BROXTON	ERIKA	9/30/2022	\$ 558.28
Member Only Refund	DAVIS	CHANTIA	9/30/2022	\$ 3,042.70
Member Only Refund	FLOCK	JASON	9/30/2022	\$ 1,118.58
Member Only Refund	FORD	MARCUS	9/30/2022	\$ 2,989.90
Member Only Refund	HANNA	ELLIOT	9/30/2022	\$ 1,315.10
Member Only Refund	HARDRICK	QIARA	9/30/2022	\$ 512.40
Member Only Refund	HARRIS	CASHAY	9/30/2022	\$ 442.17
Member Only Refund	HOLLIMAN-NAPPIER	KENNEDY	9/30/2022	\$ 1,232.33
Member Only Refund	LEWIS	GENIQUA	9/30/2022	\$ 914.04
Member Only Refund	LONGSHORE	SAMANTHA	9/30/2022	\$ 9,403.68
Member Only Refund	LOPEZ	JOSE	9/30/2022	\$ 3,406.91
Member Only Refund	MADISON	JMEIRA	9/30/2022	\$ 169.33
Member Only Refund	MC CONNELL	TWYLA	9/30/2022	\$ 2,696.94
Member Only Refund	MOORE	CLAYTON	9/30/2022	\$ 3,262.01
Member Only Refund	PARKER	TIFFANY	9/30/2022	\$ 404.99
Member Only Refund	ROBERTSON	STEVEN	9/30/2022	\$ 11,166.43
Member Only Refund	SAFFOLD	GLENN	9/30/2022	\$ 1,795.55
Member Only Refund	SAWAR	MICHAEL	9/30/2022	\$ 2,416.18
Member Only Refund	SMITH	JAZMYN	9/30/2022	\$ 1,163.85
Member Only Refund	SMITH	RONALD	9/30/2022	\$ 2,630.04
Member Only Refund	WALKER	QUENTIN	9/30/2022	\$ 5,067.82
Member Only Refund	WARD	DERRICK	9/30/2022	\$ 1,201.00
Member Only Refund	WILLIAMS	ANNETTE	9/30/2022	\$ 1,959.49



Memorandum

TO: Bernard J. Allen, Executive Director

Annuity and Pension Board

FROM: Gust Petropoulos, Disability Deputy Director

DATE: November 11, 2022

RE: Independent Reviewer/Hearing Examiner – Paul Reilly

The Employes' Retirement System (ERS) utilizes the services of retired Wisconsin Circuit Court judges and attorneys to conduct the reviews and administrative appeal hearings in connection with Disability and Duty Death applications and re-examinations (pursuant to §36-15-18, MCC and Annuity & Pension Board Rules and Regulations §§XX and XXI). Over the last few years, there has been some attrition in the number of Reviewers and Hearing Examiners. I had communicated this to Judge Dennis Moroney, a current Reviewer and Hearing Examiner, in an effort to obtain recommended candidates to fill the role. In September 2022 Judge Moroney informed me that he would recommend Judge Paul Reilly. I spoke with Judge Reilly and discussed the duties. He expressed interest and provided his resume.

Judge Reilly is a retired Appeals Court Jurist for the State of Wisconsin. He is currently a reserve judge and conducts mediation services. Assistant City Attorney Patrick McClain has reviewed Judge Reilly's credentials and has found that he would be well qualified. Upon the recommendation of Judge Moroney and review by Mr. McClain, I recommend the Annuity and Pension Board retain his services in the capacity of an Independent Reviewer and Hearing Examiner.

Hon. Paul F. Reilly (ret.) 35847 Waterstone Cir. Oconomowoc WI 53066 262-844-0641

preilly@concurrence adr.com

PROFESSIONAL EXPERIENCE

CONCURRENCE ADR, LLC: January 2022-Present

STATE OF WISCONSIN,

Reserve Judge, March 2022-Present

Wisconsin Court of Appeals, District 2; 2010-2022 (Presiding Judge 2016-2022)

Waukesha County Circuit Court; 2003-2010 (Rotations in Criminal, Civil and Family Divisions)

HIPPENMEYER, REILLY, MOODIE & BLUM; 1987-2003

CITY ATTORNEY, CITY OF NEW BERLIN WIS.; 1997-2003

EDUCATION

UNIVERSITY OF WISCONSIN LAW SCHOOL, Madison, Wisconsin Juris Doctorate, May 1987

UNIVERSITY OF WISCONSIN SCHOOL of BUSINESS, Madison, Wisconsin, Bachelor of Business Administration; Risk & Insurance; May 1984

BAR ADMISSIONS

State of Wisconsin, 1987

U.S. Court of Appeals, 7th Cir. 1990

Eastern & Western District Federal Courts of Wisconsin, 1987

PROFESSIONAL AND CIVIC ACTIVITIES

- State Bar of Wisconsin; Board of Governors
- Waukesha County Bar Association, Past-President
- Wisconsin Civil Jury Instruction Committee (2008-2022)
- Wisconsin Judicial Commission (2010-2016, Chair, 2015)
- Judicial Faculty, State Courts of Wisconsin

HEARING EXAMINER SERVICES AGREEMENT

AGREEMENT made by and between Paul F. Reilly of Oconomowoc, Wisconsin ("Hearing Examiner"), and the Employes' Retirement System of the City of Milwaukee ("ERS"), with its principal offices located at 789 North Water Street, Suite 300, Milwaukee, Wisconsin 53202.

RECITALS

- 1. ERS exists by virtue of Chapter 396, Laws of 1937, and Chapter 36 of the Milwaukee City Charter, 1971 compilation as amended, and has all of the powers and privileges of a corporation as enumerated in Chapters 180 and 182 of the Wisconsin Statues.
- 2. The general administration and responsibility for the operation of the ERS and for making effective the provisions of Chapter 36 of the Milwaukee City Charter is vested in the Annuity and Pension Board ("Board").
- 3. Under Milwaukee City Charter §36-15-7, the Board is authorized to engage such services as shall be required to transact the business of the ERS.
- 4. Pursuant to Milwaukee City Charter §36-15-18, any person aggrieved within the meaning of Wis. Stats. Ch. 68, by a determination of the Board reviewable under Wis. Stats. Ch. 68, may have such determination reviewed in accordance with the procedures established in Wis. Stats. §§68.08 to 68.13.
- 5. Under Wis. Stats. §68.09(2), review of an initial determination may be conducted by a person other than the person or entity who made the initial determination. Under Wis. Stats. §68.11, a hearing on an administrative appeal may be conducted by an impartial person designated by the Board to conduct a hearing and report to the Board.
- 6. The Board rules establishing the review procedure provide for an independent review, and appointment of an impartial hearing examiner to review initial determinations and conduct

administrative appeal hearings.

7. The Board is desirous of entering into an agreement with a person who shall serve in the capacity of a hearing examiner, and Hearing Examiner is desirous of serving in that capacity in accordance with the terms and conditions set forth in this Agreement.

NOW THEREFORE, in consideration of the mutual promises of the parties contained herein, the ERS and the Hearing Examiner hereby agree as follows:

I. DESCRIPTION OF THE WORK

Hearing Examiner agrees to serve as an independent reviewer or hearing examiner for ERS in accordance with Articles XX and XXI of the Rules and Regulations of the Board annexed hereto. Hearing Examiner shall serve in a particular matter at the designation of the Board.

II. PAYMENT

ERS shall pay the Hearing Examiner at the rate of \$200.00 (One hundred ten dollars) per hour for work performed as described in Section I, above. Compensation for fractions of hours worked shall be prorated on the basis of the hourly rate. In addition, ERS will reimburse Hearing Examiner for reasonable related expenses such as typing, photocopying and mailing.

III. PROMPT PAYMENT POLICY

ERS, as a matter of policy, shall strive to pay all timely and properly completed invoices within thirty (30) days of submission. Payment to the Hearing Examiner will be deemed timely if the payment is mailed, delivered, or transferred within forty fifth (45) days after receipt of a properly completed and undisputed invoice or receipt and acceptance of the service under this Agreement, whichever is later. If the ERS does not make payment by the 60th calendar day, the ERS shall pay simple interest beginning with the 31st calendar day at the rate of one percent (1%) per month,

unless the ERS disputes the amount of the invoice.

V. CUSTODY OF DOCUMENTS

The ERS shall retain ownership and custody of all documents provided to, reviewed or created by the Hearing Examiner in connection with the work he/she performs pursuant to this Agreement. Hearing Examiner shall return to the ERS all copies of all documentation with which he/she is provided, reviews, and/or creates in connection with his/her work under this Agreement, and no copies of such documents shall remain with the Hearing Examiner.

VI. COMPLIANCE WITH MEDICAL PRIVACY LAWS

At all times, Hearing Examiner shall abide by any and all applicable state and federal medical privacy laws and regulations, including but not limited to Section 146.82 of the Wisconsin Statutes and the Health Insurance Portability and Accountability Act of 1996 (HIPAA), as amended from time to time, if applicable.

VII. RELATIONSHIP OF THE PARTIES

The Hearing Examiner is an independent contractor for the ERS. Hearing Examiner is not an employee of the ERS and is not entitled to any fringe benefits, including, but not limited to, group insurance and pension plan benefits. Personal income tax payments, social security contributions, and all other governmental reporting and contributions required as a consequence of the Hearing Examiner receiving payment under this Agreement shall be the sole responsibility of the Hearing Examiner. Hearing Examiner may practice his/her profession during those periods when he/she is not performing work under this Agreement. The Board may, during the term of this Agreement, engage independent contractors to perform the same work Hearing Examiner performs hereunder.

VIII. INDEMNIFICATION

The Board agrees to indemnify and hold harmless the Hearing Examiner for any and all

liability, costs, attorneys' fees, and judgments which the Hearing Examiner may incur as a result of Hearing Examiner negligent performance under the terms of the Agreement. Hearing Examiner agrees to tender the defense of any claim or lawsuit falling within the terms of this paragraph by delivering the complaint, or otherwise providing notification of the lawsuit, to the Executive Director within five (5) business days of receipt thereof and to fully cooperate with the ERS and Board in the defense thereof.

IX. CONFLICTS OF INTEREST

No officer, employee, or agent of the City of Milwaukee ("City") who exercises any functions or responsibilities in connection with the carrying out of any services or requirements to which this Agreement pertains, shall have any personal interest, direct or indirect, in this Agreement. No member of the governing body of the City and no other public official of the City who exercises any functions or responsibilities in the review or approval of the carrying out of this Agreement shall have any personal interest, direct or indirect, in this Agreement.

The Hearing Examiner covenants that he/she presently has no interest, and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of his/her services hereunder. An interest on the part of the Hearing must be disclosed to the ERS and/or the City.

X. QUALIFICATIONS OF HEARING EXAMINER

Hearing Examiner must be licensed to practice law in the State of Wisconsin, in good standing under the laws of the State of Wisconsin, and must remain so throughout the term of this Agreement.

XI. DURATION

This Agreement shall be in force as and from the date of execution of this Agreement

until terminated by either party upon written notice of termination. Either party may cancel this Agreement on fifteen (15) days written notice.

XII. NOTICE

Notices provided under this Agreement shall be provided, via first class U.S. Mail, to: For ERS:

Bernard J. Allen, Executive Director Employes' Retirement System 789 North Water Street, Suite 300 Milwaukee, WI 53202

For the Hearing Examiner:

Paul F. Reilly 35847 Waterstone Circle Oconomowoc, WI 53066

XIII. CHOICE OF LAW AND VENUE

This Agreement, and all questions arising in connection herewith shall be governed by and construed in accordance with the internal laws of the State of Wisconsin. Venue for any action arising out of or in any way related to this Agreement shall be exclusively in the City of Milwaukee for matters arising under state law and in federal district court in the eastern district of Wisconsin for matters arising under federal jurisdiction.

XIV. PUBLIC RECORDS

The Hearing Examiner understands that the ERS is bound by the Wisconsin Public Records Law, and as such, all of the terms of this Agreement are subject to and conditioned on the provisions of Wis. Stat. Sec. 19.21 et. sec., including but not limited to those records that are produced or collected under this Agreement. The Hearing Examiner acknowledges that he/she is obligated to assist the ERS in retaining and producing records that are subject to the Wisconsin Public Records Law, and that the failure to do so shall constitute a material breach of this

Agreement, and that the Hearing Examiner must defend and hold the ERS harmless from liability due to his/her fault under that law. Except as otherwise required by this Agreement, those records shall be maintained for a period of seven years.

XV. NONDISCRIMINATION

To the extent applicable to this Agreement, if any, the Hearing Examiner agrees not to discriminate against any qualified employee or qualified applicant for employment because of sex, race, religion, color, national origin or ancestry, age, disability, lawful source of income, marital status, sexual orientation, gender identity or expression, past or present membership in the military service, familial status, or based on affiliation with or perceived affiliation with any of these protected categories. This requirement shall apply, but not be limited to, the following: tenure, terms or conditions of employment, promotion, demotion or transfer, recruitment or recruitment advertising, employment rules and policies, lay-off or termination, rates of pay or other forms of compensation, and selection for training including apprenticeship.

To the extent applicable to this Agreement, if any, no person in the United States shall, on the grounds of race, color, religion, sex, or national origin, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity made possible by or resulting from this Agreement. The ERS and each employer will comply with all requirements imposed by or pursuant to the regulations of the appropriate federal agency effectuating Title VI of the Civil Rights Act of 1964.

To the extent applicable to this Agreement, Hearing Examiner agrees to comply with all applicable requirements of the Americans with Disabilities Act of 1990, 42 U.S.C. 12101, et seq. IN WITNESS WHEREOF, the parties hereto have executed this Agreement at Milwaukee, Wisconsin this _____day of ______, 20___.

IN THE PRESENCE OF:	
	Paul F. Reilly
IN THE PRESENCE OF:	EMPLOYES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE
	Matthew Bell, President Annuity and Pension Board
	Bernard J. Allen, Executive Director Employes' Retirement System
This form document was drafted by the office of the City Attorney.	

1054-2018-221:246748.1



Memorandum

TO: Bernard J. Allen, Executive Director

Annuity and Pension Board

FROM: Gust Petropoulos, Disability Deputy Director

DATE: November 11, 2022

RE: Proposed change to Board Rule III.E.

On rare occasion ERS Disability staff has encountered circumstances that make it difficult to comply with rule III.E and also administer the provisions of the Re-examination requirement in Chapter 36 of the City's Charter Ordinance. This is most often due to the physical condition of the retiree who is to be re-examined. Following is a proposed change to this Board Rule that would be consistent with the spirit of the current rule, but give discretion and flexibility to ERS staff and examining Medical Doctors. The proposed changes are underlined. This proposal has been discussed with Assistant City Attorney Patrick McClain. He and I present the following language as a starting point for discussion by the Annuity and Pension Board.

"A member, retired on account of a duty disability retirement, who lives outside of the City of Milwaukee shall be required to return to Milwaukee to report to the Medical Council or Medical Panel for medical re-examination as provided in Section 36-05-3-c of the Milwaukee City Charter for Firemen and Policemen and Section 36-07-1 of the Milwaukee City Charter for other employes on duty disability retirement. However, the Board may authorize such examination to be made by a physician selected by the Medical Council and the fee for such examination shall be as determined by the Medical Council and shall be paid by the ERS upon receipt of a report from the physician. Notwithstanding the foregoing, the Disability Deputy Director may, upon recommendation by the selected physician that an in-person examination is not required, authorize a re-examination to be conducted remotely by virtual means."

Conference Requests – November 2022 Board Meeting

Erich Sauer Visions, Insights, Perspectives Conference

Sponsor: Institutional Real Estate, Inc.
Location: Rancho Palos Verdes, CA
Date(s): January 17-20, 2023

Estimated Cost: \$2,250

David Silber, BlackRock Due Diligence & Potential Callan Office Visit

Dave Walters

Sponsor: BlackRock

Location: San Francisco, CA
Date(s): February 1-3, 2023
Estimated Cost: \$1,600 per person

David Silber, 2023 Public Funds Roundtable

Dave Walters

Sponsor: Institutional Investor Location: Los Angeles, CA
Date(s): April 24-27, 2023
Estimated Cost: \$2,100 per person

2023 **Board and Committee Meeting Dates** All meetings begin at 9:00 a.m. unless otherwise noted.

January	24	Board (Tuesday)
February	9 28	Investment (Thursday) Board (Tuesday)
March	16 28	A&O (Thursday) Board (Tuesday)
April	20 25	Investment (Thursday) Board (Tuesday)
May	04 23	Investment (Thursday) Board (Tuesday)
June	08 21 27	Investment (Thursday) A&O (Wednesday) Board (Tuesday)
July	25	Board (Tuesday)
September	07 20 26	Investment (Thursday) A&O (Wednesday) Board (Tuesday)
October	24	Board (Tuesday)
November	09 28	Investment (Thursday) Board (Tuesday)
December	07 19 20	Investment (Thursday) Board (Tuesday) A&O (Wednesday)

PLEASE POST

ANNUITY AND PENSION BOARD

RESULTS OF NOVEMBER 4, 2022 AT LARGE MEMBER ELECTION

The results of the Annuity and Pension Board At Large Member Election held November 4, 2022 are as follows:

Name of Candidate	Number of Votes
David Misky	571
Timothy Heling	1.318

ANNUITY AND PENSION BOARD

Bernard J. Allen Executive Director

November 4, 2022

Bulletin 195-b

MEDICAL REPORTS

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

MERITS

CITY OF MILWAUKEE EMPLOYES' RETIREMENT SYSTEM

Medical Panel Approvals Report

Pension Board Meeting Date 11/22/2022

Page Number:

1 OF 1

DATE RAN : TIME RAN : 11/14/2022 09:18

DOCTOR DECISION

Case Number	Name	<u>Title</u>	Employer	Case Type	Case Sub- Type	<u>City</u>	<u>Union</u>	Third	<u>Disability</u> <u>Date</u>	<u>Comments</u>
1079	GILLESPIE, THOMAS	FIRE FIGHTER	FIRE	DD 75%	Re-Examination	Approved	Approved		08/01/2020	Exempt from Re-Exam
1143	KENDZIORSKI, ROBERT	POLICE OFFICER	POLICE	DD 75%	Re-Examination	Approved	Approved		12/08/2013	

Number of Cases: 2

Approved by Executive Director

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.

MERITS

CITY OF MILWAUKEE EMPLOYES' RETIREMENT SYSTEM

Medical Council Approvals Report

Board Meeting: 11/22/2022

Page Number:

1 OF 1

DATE RAN:

11/11/2022

TIME RAN:

12:13

Name	<u>Title</u>	Employer	<u>CaseType</u>	Case Sub-Type	Disability Date	Medical Council Meeting Date
HALL, CHESTERFIELD	CUSTODIAN II	HOUSING AUTHORITY	Ordinary Disability	Re-Examination	10/16/2013	11/11/2022
HAMPTON, SHEILA	BLDG SERV HELPER 1	MPS	Ordinary Disability	Re-Examination	05/01/2021	11/11/2022
HEIKKINEN, BONNIE	EDUCATIONAL ASST - PARA	MPS	Ordinary Disability	Re-Examination	07/22/2017	11/11/2022
MORRIS, CHARA	FOOD SERVICE ASST	MPS	Ordinary Disability	Re-Examination	10/05/2018	11/11/2022

Number of Cases:

Δ

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

- Pending Legal Opinions and Service Requests Report.
 Pending Legislation Report.
 Executive Director's Report Inventory of ERS Projects. A.
- B.
- C.



November 22, 2022 Board Meeting

PENDING LEGAL OPINIONS AND SERVICE REQUESTS REPORT

PART 1. LEGAL OPINIONS - OFFICE OF CITY ATTORNEY

01/28/22 Same Sex Spouse Retirees

The Employes' Retirement System received an inquiry from a retiree as it relates to a post-retirement election of a same gender spouse survivor where state law was found to unconstitutionally prohibit same gender marriages previous to the retirement of the retiree.

11/03/22 Received legal opinion from City Attorney's Office.

11/22/22 On Pension Board Agenda.

07/18/22 Additional Service Credit and Final Average Salary

Whether additional service credit and final average salary accrue to a member who is a full time employee of the City proper and who also works part-time for one or more city agencies.

PART 2. LEGAL OPINIONS - OUTSIDE LEGAL COUNSEL

None.

PART 3. SERVICE REQUESTS - OFFICE OF CITY ATTORNEY

12/16/21 Contract for Banking Services

ERS staff requests assistance of legal counsel in drafting and negotiating a contract for banking services with vendor.

10/12/22 ERS received proposed Second Amendment to extend current banking services agreement with Wells Fargo Bank.

10/25/22 Contract extension approved by Pension Board. City Attorney's Office continues negotiations with Wells Fargo for a new banking services agreement.

08/03/22 Indemnification Agreement

ERS staff is requesting the City Attorney's Office to extend the current Indemnification Agreement with the City.

09/22/22 Received proposed draft from City Attorney's Office.

09/28/22 Pension Board requests additional revisions to the proposed draft agreement that incorporates its concerns.

08/23/22 Financial Audit Services

Legal counsel requested to negotiate and draft a contract for annual financial and compliance audit services.

PART 4. SERVICE REQUESTS - OUTSIDE LEGAL COUNSEL

10/10/22 Abbott Capital Private Equity Investor 2023

ERS investment staff requests legal counsel to review and negotiate a proposed Limited Partnership Agreement and Side Letter with Abbott Capital.

10/17/22 Matter referred to outside legal counsel, Reinhart Boerner Van Deuren S.C.



November 22, 2022 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.

Employes' Retirement System – Executive Director's Report

November 2022

I. Personnel Update

A. ERS is working with DER to fill the following positions: ERS Systems Administrator and 2 Program Assistant II.

II. Member Services

- A. New retirees on payroll in October 36; 23 are currently anticipated for the November payroll.
- B. Retiree/Employee deaths in September 23.
- C. There was a Retirement Workshop for MPA on 10/14/22 and 36 attended. There was a Retirement Workshop for MFD on 10/21/22 and 5 attended.
- D. The last General City Retirement Workshop for this year will be on Friday, 11/18/22.
- E. Both Life Insurance Specialist positions are vacant. A Transfer/Promotional Opportunity was sent out by DER on 10/28/22. This opportunity is for all current City of Milwaukee employees only. Based on the number and quality of applicants received, the same list will be used to fill both positions.
- F. Below is a breakdown of to-date ERS benefits payouts/active/deferred counts:

Category	Count
Annuitants	
Death - Duty	27
Death - Ordinary	96
Disability - Duty	379
Disability - Ordinary	582
Retirement	12,731
Separation	37
Total Annuitants	13,852
Active	10,712
Deferred	3,140
Total Population	27,704

III. Financial Services

- A. Staff will be meeting with Baker Tilly and Cavanaugh Macdonald in December to outline the work schedules for the 12/31/22 Financial Audit and 1/1/23 Actuarial Valuation.
- B. DER has completed the market study analysis for Business Operations and HR positions within ERS. We have started implementing the pay raises and will continue to implement them through Pay Period 23, which ends November 26th. We expect the market study analysis' for ERS senior manager to be implemented in December as well. DER also plans to complete a market study for ERS administrative and clerical positions in December.

IV. Information Services

A. Struts Upgrade and Modernize MERITS Website in progress.

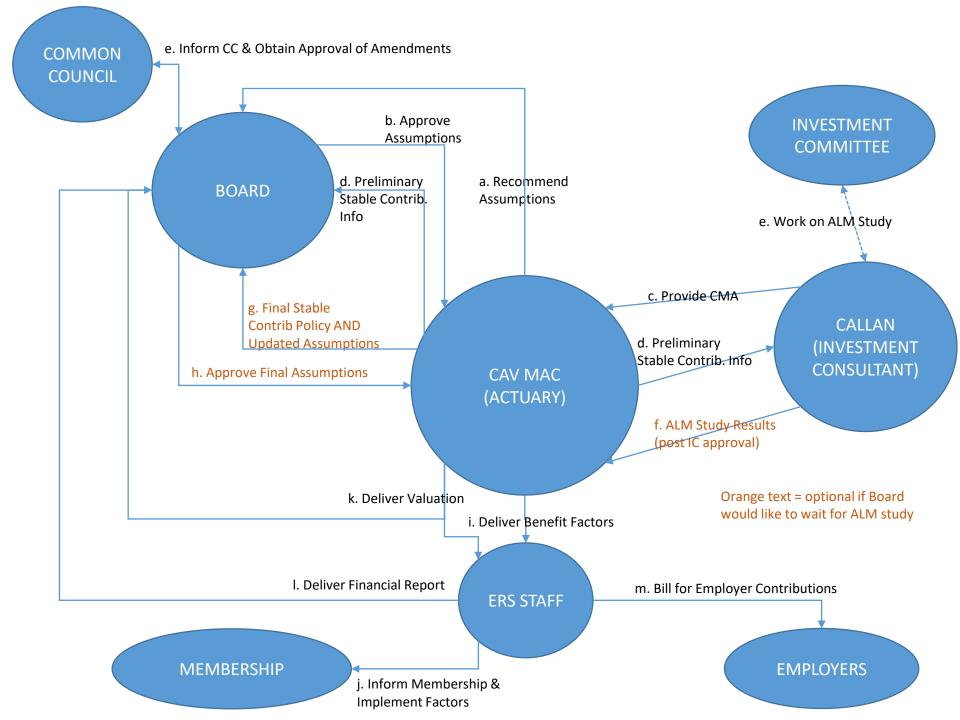
- B. FileNet P8-WebSphere Application Server Upgrade in progress.
- C. IBM-DataCap Upgrade in progress.
- D. System Galaxy Security System Upgrade in progress.
- E. VMware Workspace ONE Implementation in progress.
- F. Titan Content Manager Upgrade in progress.
- G. Network Infrastructure Firmware/OS Upgrade in progress.
- H. 789 and Remote Office PC Firmware Upgrade in progress.
- I. WUG Upgrade in progress.

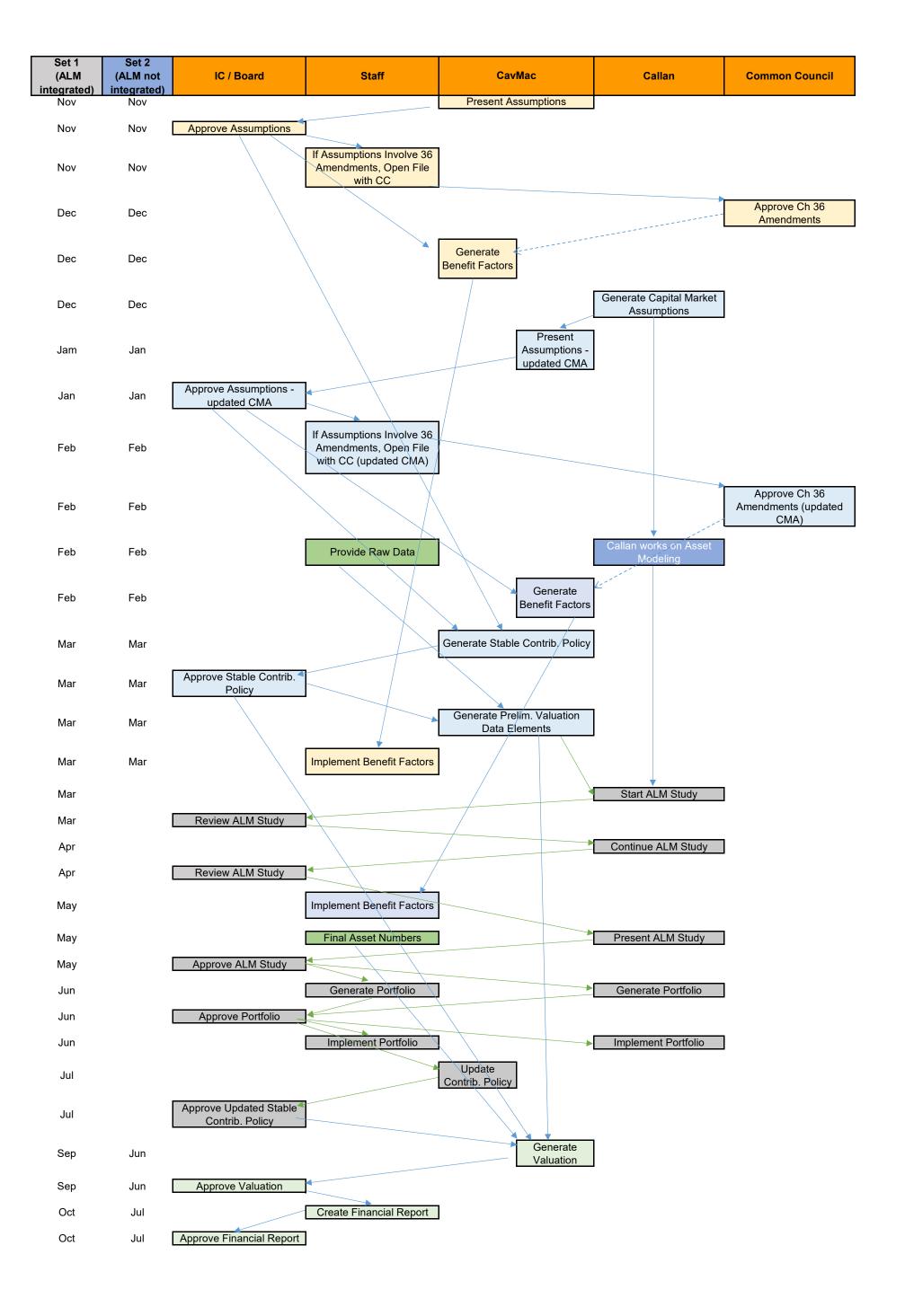
V. Administration

Pat Beckham and Larry Langer of Cavanaugh MacDonald are giving a presentation regarding proposed changes to the ERS funding policy resulting from the five-year experience study. Copies of the current and previous presentations regarding the five-year experience study and funding policy recommendations are included in with this month's board packet for reference.

Also attached is a graphic illustration of the work-flow and decision matrix associated with Board and staff activities in connection with determining and implementing both the outcomes of the five-experience study conducted by Cavanaugh MacDonald and the Asset-Liability Study proposed by Callan Assoc. These two studies are interrelated and present a fair amount of complexity, including a potential "chicken or egg" conundrum about which study is to be completed first with resulting outcomes incorporated as inputs in the other study.

In order to resolve the potential conundrum, Callan has advised that they will provide phase 1 of the Asset-Liability study at the proposed February 9, 2023 Investment Committee meeting which will model asset scenarios based on final capital market assumptions for 2023. Phase 2 of the study requires final determination of projected liabilities and reset of the stable contribution for the period 2023-2027 based on the updated discount rate adopted by the Board as **a result of Cavanaugh MacDonald's** five year experience study which in turn necessarily assumes the current investment policy and strategic asset allocation prior to completion of Phase 2 of the Asset-Liability Study.





Basic Website Metrics

2021 | 2022

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.
Visits	5,442	5,180	4,728	5,053	4,698	5,107	4,872	4,212	4,565	4,852	5,268	3,791	5,538
Users	4,015	3,813	3,667	3,810	3,551	3,375	3,751	3,147	3,458	3,408	3,728	2,640	3,979
Page Views	16,046	13,712	12,305	13,532	12,267	13,227	12,458	11,258	10,415	11,694	13,000	9,856	13,918
Ave. Visit	2:35	2:10	2:09	2:18	2:10	2:10	2:14	2:29	1:13	1:09	1:07	1:29	1:12

11/1/2022 GA4 began 7/1/2022

VII.

INFORMATIONAL

- A. Pending Litigation Report.
- B. Conferences.
- C. Class Action Income 2022 YTD.
- D. Adjusted Quarterly Cost Basis of Equity.
- E. Minutes of the Administration & Operations Committee Meeting Held October 19, 2022.
- F. Report on Bills.
- G. Deployment of Assets.
- H. Securities Lending Revenue and Budget Report.
- I. Preliminary Performance Report and Asset Allocation.



November 22, 2022 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 have filed suit on behalf of certain duty disability retirees against the City of Milwaukee and the Employes' 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

➤ 10/12/22 WI Supreme Court decision pending.

Faith Wooden v. City of Milwaukee, et al; Case No. 2022CV001119

Widow of a deceased public safety employee filed a Petition for Certiorari Review of the Annuity & Pension Board's Decision denying the petitioner's Application for Accidental Death Benefits.

- **See prior Reports for case history**
- > 09/14/22 Petitioner's Reply Brief filed.

MPA and Kurt Lacina v. City of Milwaukee, et al; Case No. 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**
- ➤ 10/13/22 Notice of Motion, Motion for Summary/Declaratory Judgment, Brief and Affidavits in Support filed.
- ➤ 10/19/22 Plaintiffs' Request to Adjourn Summary Judgment Hearing.
- > 01/27/23 Case scheduled for Summary Judgment Hearing.

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 date pending.

Sandrah Crawford; Administrative Case No. 1457

> Hearing held on October 26, 2022. Parties' proposed findings submitted on November 3, 2022. Hearing Examiner's decision pending.

Albert Greene Jr; Administrative Case Nos. 1511 and 1512

> Appeal hearing requested; pending scheduling.

Part 3. Notice of Claim filed with ERS

None.

Part 4. ERS Litigation through Outside Legal Counsel

None.

Client Conferences 2022-2023

Board Meeting: November 22, 2022

DATE(S)	CONFERENCE(S) / LOCATION(S)	SPONSOR(S)
April 2 – 4, 2023	Callan Institute's 2023 National Conference Scottsdale, AZ	Callan Associates

Trustee Conferences 2022-2023

Board Meeting: November 22, 2022

DATE(S)		
November 29, 2022	IREI : Live – Topic of the Day: ESG Virtual	Institutional Real Estate, Inc.
November 30 – December 1, 2022	Pension Bridge Alternatives 2022 Bi-Coastal Conference New York, NY & Los Angele0073, CA	with.Intelligence
January 10, 2023 Noon – 1pm	Reviewing My 2022 Forecast and What the Outlook for 2023 Holds – John Stoltzfus, Chief Investment Strategist at Oppenheimer Virtual	CFA Society Madison
January 17 – 19, 2023	2023 Visions, Insights & Perspectives (VIP) Rancho Palos Verdes, CA	Institutional Real Estate, Inc.
January 22 – 24, 2023	2023 Legislative Conference Washington, DC	NCPERS
February 27 – 28, 2023	Investment Basics – Certificate Series Course Orlando, FL	International Foundation of Employee Benefit Plans
March 6 – 8, 2023	CII Spring 2023 Conference Washington, DC	Council of Institutional Investors
April 19, 2023	7 th Annual Real Estate Midwest Forum Chicago, IL	Markets Group
April 24 – 26, 2023	2023 Public Funds Roundtable Los Angeles, CA	Institutional Investor
April 30 – May 3, 2023	Global Conference Los Angeles, CA	Milken Institute
May 20 – 21, 2023	NCPERS Accredited Fiduciary (NAF) Program & Trustee Education Seminar (TEDS) New Orleans, LA	NCPERS
May 21 – 24, 2023	Annual Conference & Exhibition (ACE) New Orleans, LA	NCPERS
May 23, 2023	9 th Annual Midwest Institutional Forum Chicago, IL	Markets Group

Trustee Conferences 2022-2023

Board Meeting: November 22, 2022

DATE(S)	CONFERENCE(S) / LOCATION(S)	SPONSOR(S)
July 20 - 21, 2023	ALTSCHI Chicago, IL	Markets Group
July 24 - 25, 2023	Certificate of Achievement in Public Plan Policy (CAPPP): Pensions Part I Chicago, IL	International Foundation of Employee Benefit Plans
July 26 - 27, 2023	Certificate of Achievement in Public Plan Policy (CAPPP): Pensions Part II Chicago, IL	International Foundation of Employee Benefit Plans
September 11 – 13, 2023	CII Fall 2023 Conference Long Beach, CA	Council of Institutional Investors
September 20 – 21, 2023	Investment Basics – Certificate Series Course Las Vegas, NV	International Foundation of Employee Benefit Plans
September 30 – October 1, 2023	Certificate of Achievement in Public Plan Policy (CAPPP): Pensions Part I Boston, MA	International Foundation of Employee Benefit Plans
October 3 – 5, 2023	2023 Roundtable for Consultants & Institutional Investors Chicago, IL	Institutional Investor
October 21 – 22, 2023	NCPERS Accredited Fiduciary (NAF) Program Las Vegas, NV	NCPERS
October 22 – 25, 2023	Financial, Actuarial, Legislative and Legal Conference (FALL) Las Vegas, NV	NCPERS

Upcoming Due Diligence Meetings

Date	Manager(s)	Team
December 13-15, 2022	Polen and Earnest (Boca Raton, FL and Atlanta, GA)	Erich and Tom
February 1-3, 2023	BlackRock, with possible Callan meeting (San Francisco, CA)	David S. and Dave W.

Class Action Income 2022 YTD

Asset Description	Date(s)	Amount
Foreign Exchange Benchmark Rates Antitrust Litigation	1/18/2022	\$ 4,007
First Solar	2/4/2022	\$ 14,395
Foreign Exchange Benchmark Rates Antitrust Litigation	2/28/2022	\$ 150
LIBOR-Based Securities Litigation	2/28/2022	\$ 871
AAC Holdings, Inc.	3/22/2022	\$ 79
Equifax, Inc.	4/22/2022	\$ 624
Royal Bank of Scotland	5/16/2022	\$ 84,200
GTT Communications, Inc.	5/27/2022	\$ 6,946
HP Company	7/8/2022	\$ 20
OSI Systems, Inc.	7/11/2022	\$ 953
Amedisys, Inc.	7/19/2022	\$ 303
Curo Group Holdings Corp.	7/19/2022	\$ 209
Joy Global, Inc.	8/1/2022	\$ 15
Extreme Networks, Inc.	8/25/2022	\$ 24
Centrais Electricas Brasileiras S.A.	10/6/2022	\$ 8,883
Total Class Action Income Received in 2022 YTD		\$ 121,679

Adjusted Quarterly Cost Basis of Equity September 30, 2022

		Equity as Percent of Portfolio on a Market Value		Equity as Percent of Portfolio on Cost
Date	Market Value of Total Fund	Basis %	Cost Value of Total Fund	Basis %
Jun-15	4,974,456,735	57.8%	4,213,135,754	53.1%
Sep-15		55.7%	4,188,522,173	53.5%
Dec-15	4,711,796,883	57.4%	4,160,594,964	54.1%
Mar-16	4,777,710,957	58.4%	4,201,741,347	55.8%
Jun-16	4,753,379,711	58.9%	4,167,278,877	56.8%
Sep-16	4,878,963,087	59.2%	4,265,248,439	52.6%
Dec-16	4,875,173,931	58.7%	4,259,899,650	51.6%
Mar-17	5,054,238,404	59.5%	4,296,075,081	54.0%
Jun-17	5,141,650,168	59.6%	4,238,775,000	54.0%
Sep-17	5,253,079,121	60.3%	4,219,738,169	54.0%
Dec-17	5,356,413,868	60.7%	4,347,067,963	54.6%
Mar-18	5,360,763,834	54.5%	4,493,669,234	48.5%
Jun-18	5,364,526,404	52.8%	4,508,052,439	47.2%
Sep-18	5,416,752,057	53.2%	4,475,388,278	47.5%
Dec-18	4,952,685,618	50.7%	4,457,976,536	48.9%
Mar-19	5,287,164,709	52.5%	4,458,818,165	48.5%
Jun-19	5,368,388,543	52.2%	4,439,503,880	48.5%
Sep-19	5,336,312,140	51.6%	4,409,684,126	48.6%
Dec-19	5,525,553,595	53.1%	4,370,713,537	48.7%
Mar-20	4,532,932,039	47.6%	4,421,955,418	47.5%
Jun-20	4,904,369,177	52.6%	4,216,408,115	50.3%
Sep-20	5,077,501,527	52.0%	4,228,679,409	49.0%
Dec-20	5,531,306,606	53.5%	4,270,905,026	47.9%
Mar-21	5,693,916,321	53.5%	4,338,199,305	46.1%
Jun-21	6,012,966,775	52.3%	4,337,113,221	45.0%
Sep-21	6,026,295,778	48.4%	4,378,190,704	42.2%
Dec-21	6,218,053,813	47.6%	4,473,429,725	41.0%
Mar-22	6,156,069,941	46.5%	4,642,000,891	41.1%
Jun-22	5,633,734,690	44.6%	4,548,655,130	43.9%
Sep-22	5,276,131,314	43.7%	4,538,899,040	44.8%

EMPLOYES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE ANNUITY AND PENSION BOARD

Minutes of the Special Administration and Operations Committee Meeting held October 19, 2022 via teleconference during COVID-19

The meeting was called to order at 9:03 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 Jeff Shober, Chief Technology Officer Mary Turk, Business Operations Analyst

Jan Wills, Board Stenographer

Others Present: Kathy Block, City Attorney's Office; Terry Siddiqui, DS Consulting Partners, Inc., no members of the public called in to the meeting.

Discussion of Internal Audit Charter. As a matter of information, Committee members received the Administration & Operations Committee Audit Charter and the Internal Audit Charter. Ms. Sawa had completed a detailed review of the annual Audit Charter and was thinking about the standards that are new that our internal auditors outsource to follow and wanted more assurance on what they were doing. Ms. Sawa had been in talks with CliftonLarsonAllen (CLA) and CLA had sent her the detailed standards they follow. She said they do follow the consulting standards of AICPA. Ms. Sawa said CLA would talk with the A&O Committee at its December 2022 meeting. Ms. Sawa also said the Committee would need to come to a consensus on what they want CLA to follow. She said the Committee would then need to re-word the Professional Standards paragraph in the audit charter.

Approval of Contract for Banking Services. As a matter of information, Committee members received the Second Amendment to the Service Agreement Between the Employes' Retirement System of the City of Milwaukee and Wells Fargo Bank, N.A. Ms. Block noted the contract is just a short three-month extension with the existing contract set to expire at the end of 2022. She said Wells Fargo was selected for a new contract that would have been set to begin in January 2023. She said Wells Fargo agreed to the same terms on the amendment until the end of March 2023.

It was moved by Ms. King, seconded by Mr. Klusman, and unanimously carried, to approve the Approval of Contract for Banking Services.

It was moved by Mr. Klusman, seconded by Ms. King, and unanimously carried, to approve the Renewal of Lease for 789 N. Water Street Building.

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

There being no further business, Ms. Sawa adjourned the meeting at 9:14 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 Employes' Retirement System, 789 N. Water Street, Suite 300.)

Fiscal Year 2022 Department

Employes' Retirement System

City of Milwaukee Departmental Appropriation Budget Balances

As of: 2022-10-31

			Budget	2022-7	2022-8	2022-9	2022-10	Year to Date Expended		Life to Date Commitments		Remaining Budget
Regular Departme	ntal Appropriations:											
Employee Salaries			3,583,222.00	-	-		-	-		_		3,583,222,00
Base Pay-Salary &			-	205,610.45	211,510.55	352,154.87	121,178.89	2,317,977,43	3	_		(2,317,977.43)
Overtime Premium			-	303.17	127.77	624.46	133,73	2,541,12		•		(2,541.12)
Other Worked Con	npensation		-	-	1,389.30	-	(334.64)	5,895,03		-		(5,895.03)
Non-Worked Comp	pensation		-	-	•	-	-	(24.00		_		24.00
Time Paid Not Wor	rked		-	41,307.82	41,479,35	40,009,84	9,074.98	376,281,29		_		(376,281.29)
	Employee Salaries & Wages	\$	3,583,222.00	247,221.44	254,506,97	392,789,17	130,052.96			_	\$	880,551,13
					•		,	-,,	•		*	000,001,10
Fringe Benefits App	plied		1,648,282.00	-		_	-	_		_		1,648,282.00
Fringe Benefits App	plied			106.074.44	109,118,29	181,676,69	62,516,19	1,195,844.61		_		(1,195,844.61)
	Applied Employee Benefits	\$	1,648,282,00	106,074.44	109,118.29	181,676.69	62,516.19		\$	_	\$	452,437.39
					·	•	,	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•		*	102, 101.00
Operating Expendit	tures		15,558,400.00	-	-	-	-	_		-		15,558,400.00
Office Supplies			-	956,70	1,062.79	883.81	808.29	5,819.68		_		(5,819.68)
Printed Forms			-	-	7,389.07	1,947.64	-	9,336.71		_		(9,336.71)
Magazines,Subscri	ption		-	2,390.84	2,870.77	847.20	820,20	7,381,20		_		(7,381.20)
Postal and Mailing	Services		-	9,785,65	14,141.15	18,226.41	11,254,57	120,269.18		_		(120,269.18)
Electricity			=	•	4,022.76	1,944,63	2,041.41	14.840.93				, , ,
Films & Other Educ	cational Item				.,022.70	(7,653.31)	2,041.41	17,070.33		-		(14,840.93)
Other Operating Su	vlagi		_	_	_	(7,000.01)	~	6,903,27		•		(0.003.07)
Building Rental	44.0		_	46.939.34	32.176.86	32.176.86	39,981.48	370,072.99		-		(6,903.27)
Printing & Dupl Mad	chine Rental			3,218.39	7,911.42	2,054.18	3,549.95	31,024.06		-		(370,072.99)
Consulting			_	40,666.67	49,750.01	39,366.03	30,499.99	351,526.32		-		(31,024.06)
Medical, Surgical &	Lab		_	8,941.90	11,432.38	4,483.39	10,063.37	94,149.03		-		(351,526.32)
Administrative Char			_	44,178,91	26.248.55	58.046.15	13,986,20	445,203.53		-		(94,149.03)
Other Professional			_	1,277,800.21	995,736.94	75,000.00	872.699.13	5,168,239.01		•		(445,203.53)
Systems Support			_	67,669.00	131,367.50	33,932,70	74,570.26			-		(5,168,239.01)
IT infrastructure			_	-	101,007.00	10,560.00	3,900.00	514,053,96 118,349,56		-		(514,053.96)
Infrastructure				_	•	10,360.00	3,900.00			•		(118,349.56)
Telephone, Commu	inications		-	10.700.62	5.617.49	3 100 00	0.750.74	49,203.13		-		(49,203.13)
Bidgs-Machinery &			-	5,121.00	5,617.49	3,109.08	8,756.71	61,106.52		-		(61,106.52)
Travel & Subsistent			-	3,708.94	E CCO 00	4 404 44		9,127.25		-		(9,127.25)
Equipment Repair (-	3,700.94	5,663.06	1,424.41	3,387.46	35,477.38		-		(35,477.38)
Printing Services	ans & Labo		-	0.440.00	040.00	4.000.40	-	532.77		-		(532.77)
Insurance-Non Hea	Ith		-	2,446.62	610.99	1,920.18	42.41	6,916.45		-		(6,916.45)
Other Misc Services			-	044.00	- 444.04			12,724.00		-		(12,724.00)
Other Misc Services	Operating Expenditures	\$	4E EER 400.00	341.02	1,114.34	8,070.32	533.17	29,712.20	_	-		(29,712.20)
	Operating Expenditures	Φ	15,558,400.00	1,524,865.81	1,297,116.08	286,339.68	1,076,894.60	\$ 7,461,969.13	\$	-	\$	8,096,430.87
All Equipment			873,000.00	_	_							070 000 00
= 4	Total Equipment	\$	873,000.00	_		-	-	\$ -	•	-	•	873,000.00
	rotal Edithion	Ψ.	0,0,000.00		-	-	-	Φ -	\$	•	\$	873,000.00
	Total Regular Class	\$	21,662,904.00	1,878,161.69	1,660,741.34	860,805,54	1,269,463.75	\$ 11,360,484.61	\$	_	\$	10,302,419.39
									T			.0,002,110.00
Other Departmental												
Pol Pension Lump-S	Sum Sup Cont		10,000.00	-	-		_	10,000.00		_		
PABF Payroll			55,000.00	-	1,996,29	3,677.04	1,995.45	28,303.75		-		26,696,25
Group Life Insurance	e Premium		4,560,000.00	369,837,56	372,374.99	372,777.42	376,183.53	3,757,025.15		-		802.974.85
Retiree's Benefit Ad	justment		32,000.00	1,889,92	2,219,07		3,545.52	20,959.16		-		11,040.84
•	Other Classes	\$	4,657,000.00	371,727.48	376,590.35	376,454.46	381,724.50		\$		\$	840,711.94
					0.0,000.00	0,0,707.70	001,727,00	¥ 3,010,200.00	Ψ		<u> </u>	040,7 1.94
	Total Dept Appropriations	\$	26,319,904.00	2,249,889.17	2,037,331.69	1,237,260.00	1,651,188.25	15,176,772.67	\$		\$	11,143,131.33
												, , 10 1.00

CITY OF MILW ALL ACCTS

Page 1 of 3

Manager Mix Report

Monthly Board Report

Account Name/	Cash/	Short Term/	Equity/	Fixed/	R.E. and Other/	Pendings/	Total Market Value/
Account Number	% of acount	% of acount	% of acount	% of acount	% of acount	% of acount	% of consolidation
MILWAUKEE-TOWNSEND CASH	0.00	321,867.63	0.00	0.00	0.00	0.00	321,867.63
2602846	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.01%
MILWAUKEE-CASH ACCOUNT	0.00	46,781,478.67	0.00	0.00	0.00	0.00	46,781,478.67
2605491	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.85%
MILWAUKEE-THE NORTHERN TRS	0.00	0.00	208,098,114.40	0.00	0.00	0.00	208,098,114.40
2605496	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	3.79%
MILWAUKEE-ERS EXPENSE FUND	0.00	693,516.74	0.00	0.00	0.00	0.00	693,516.74
2605504	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.01%
MILWAUKEE-PABF BENEFIT PAYMENT	0.00	2,505.60	0.00	0.00	0.00	0.00	2,505.60
2610128	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%
MILWAUKEE-DFA INTERNATIONAL	0,00	0.00	166,335,394.50	0.00	0.00	0.00	166,335,394.50
2619838	0.00%	0.00%	100.00%	0.00%	0.00%	0,00%	3.03%
MILWAUKEE-EARNEST -SL	0.00	1,740,210.45	103,714,671.40	0.00	0.00	0.00	105,454,881.80
2630942	0.00%	1.65%	98.35%	0.00%	0.00%	0.00%	1.92%
MILWAUKEE - UB5 A&Q	0.00	0.00	0.00	0.00	438,626,159.60	0.00	438,626,159.60
2637239	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	8.00%
MILWAUKEE-DFA	0.00	0.00	193,599,587.10	0.00	0.00	0.00	193,599,587.10
2637848	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	3.53%
MILWAUKEE-BAIRD	0.00	25,391,220.63	0.00	56,371,475.49	0.00	-1,959,048.89	79,803,647.23
2674604	0.00%	31.82%	0.00%	70,64%	0.00%	-2.45%	1.46%
MILWAUKEE-CASTLEARK	0.00	521,273.46	85,554,634.30	0.00	0.00	-330,063.16	85,745,844.60
2697782	0.00%	0.61%	99.78%	0.00%	0.00%	-0.38%	1.56%
MILWAUKEE - BLACKROCK R1000V	0.00	0.00	203,290,288.40	0.00	0,00	0.00	203,290,288.40
4472746	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	3.71%
MILWAUKEE-LOOMIS SAYLE	2,030,591.88	0.00	4,858,521.23	314,647,480.80	0.00	2,901,141.90	324,437,735.80
CME01	0.63%	0.00%	1.50%	96.98%	0.00%	0.89%	5.92%
MILWAUKEE-BRANDES INT'L EQUITY	4,633,396.09	0.00	312,785,524.10	0.00	1,499,170.58	412,962.63	319,331,053.40
CME03	1,45%	0.00%	97.95%	0.00%	0.47%	0.13%	5.82%
MILWAUKEE-REAM5	28,888,592.97	0.00	0.00	611,618,991.10	7,821,093.41	-179,873,751.60	468,454,925.90
CME04	6.17%	0.00%	0.00%	130.56%	1.67%	-38.40%	8.54%

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Manager Mix Report

Account Name/	Cash/	Short Term/	Equity/	Fixed/	R.E. and Other/	Pendings/	Total Market Value/
Account Number	% of acount	% of acount	% of acount	% of acount	% of acount	% of acount	% of consolidation
MILWAUKEE-BLAIR	8,803,562.91	0.00	241,431,440.20	0.00	753,056.56	65,678.13	251,053,737.80
CME05	3.51%	0.00%	96.17%	0.00%	0.30%	0.03%	4.58%
MILWAUKEE-MFS	1,705,810.21	0.00	167,598,620.60	0.00	371,643.79	0.00	169,676,074.60
CME12	1.01%	0.00%	98.78%	0.00%	0.22%	0.00%	3.09%
MILWAUKEE-POLEN	0.00	11,440,425.22	122,436,405.20	0.00	0.00	0.00	133,876,830.40
2644553	0.00%	8 .55%	91.45%	0.00%	0.00%	0.00%	2.44%
MILWAUKEE - PRINCIPAL DRA -SL	0.00	0.00	176,825,949.90	0.00	0.00	0.00	176,825,949.90
2677436	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	3.22%
MILWAUKEE-BLACKROCK GLOBAL-SL	0.00	0.00	251,212,821.80	0.00	0.00	0.00	251,212,821.80
2683493	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	4.58%
MILWAUKEE- AQR-SL	0.00	0.00	82,504,708.00	0.00	0.00	0.00	82,504,708.00
4468331	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	1.50%
MILWAUKEE- NEUBERGER SOF V-SL	0.00	0.00	0.00	0.00	10,761,635.00	0.00	10,761,635.00
4479679	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.20%
MILWAUKEE - ABBOTT 2022-SL	0.00	0.00	0.00	0.00	5,383,816.00	0.00	5,383,816.00
4479680	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.10%
MILWAUKEE-APTITUDE / 4479682	0.00	0.00	0.00	0.00	117,738,000.00	0.00	117,738,000.00
4479682	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	2.15%
MILWAUKEE - DFA US LCV	498,492.29	0.00	149,840,745.50	0.00	0.00	-1,316.65	150,337,921.10
CME15	0.33%	0.00%	99.67%	0.00%	0.00%	0.00%	2.74%
MILWAUKEE - BLACKROCK US G-SL	0.00	0.00	0.00	214,069,246.40	0.00	0.00	214,069,246.40
MULTIPLE	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	3.90%
MILWAUKEE-PRIVATE EQUITY	0.00	0.00	0.00	0.00	708,996,568.00	0.00	708,996,568.00
MULTIPLE	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	12.93%
MILWAUKEE-REAL ESTATE	0.00	-315,830.09	0.00	0.00	570,961,504.20	315,560.21	570,961,234.30
MULTIPLE	0.00%	-0,06%	0.00%	0.00%	100.00%	0.06%	10.41%

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31-Oct-22

Manager Mix Report

Account Name/	Cash/	Short Term/	Equity/	Fixed/	R.E. and Other/	Pendings/	Total Market Value/
Account Number	% of acount	% of acount	% of acount	% of acount	% of acount	% of acount	% of consolidation
Total for consolidation	46,560,446,35	86,576,668.31	2,470,087,426.63	1,196,707,193.79	1,862,912,647.14	-178,468,837.43	5,484,375,544.67
% for consolidation	0.85%	1 58%	45.04%	21.82%	33.97%	-3.25%	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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Employes' Retirement System Securities Lending Income and Expenses: 2022 As of October 31, 2022

Amounts Expended

Date	Income From Lending	Fees	Administrative Transfers	Balance
Balance 12-31-21				\$552,798.88
Quarter 1 Totals	\$205,746.26	\$41,117.46	\$553,000.00	164,427.68
Quarter 2 Totals	\$349,721.49	\$69,872.91	\$0.00	444,276.26
Quarter 3 Totals	\$238,860.48	\$47,358.27	\$0.00	635,778.47
10/05/21 10/17/21	\$1,107.66 \$68,905.38	\$0.00 \$13,773.95	\$0.00 \$0.00	\$636,886.13 \$692,017.56
Current Totals	\$864,341.27	\$172,122.59	\$553,000.00	\$692,017.56

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

MERS PERFORMANCE ESTIMATES October 31, 2022

	I				1	\/TD TI
	 .	1st Quarter	2nd Quarter	3rd Quarter		YTD Thru
Account	2021 Return	2022	2022	2022	Oct 2022	10/31/22
Northern Trust S&P 500 Index	28.69%	-4.58%	-16.09%	-4.88%	8.09%	-17.69%
S&P 500	<u>28.71%</u>	<u>-4.60%</u>	<u>-16.10%</u>	<u>-4.88%</u>	8.10%	<u>-17.70%</u>
Difference BlackRock Russell 1000 Value Index	-0.01% 25.18%	0.02% -0.76%	0.01% -12.21%	0.00% -5.61%	-0.01%	0.01%
Russell 1000 Value	25.16% 25.16%	-0.76% -0.74%	-12.21% -12.21%	-5.61% -5.62%	10.26% 10.25%	-9.33% -9.32%
Difference	0.02%	-0.74% -0.02%	0.00%	0.01%	0.01%	-9.32 % -0.01%
DFA US Large Cap Value	27.52%	0.32%	-12.38%	-5.38%	12.90%	-6.10%
Russell 1000 Value	25.16%	-0.74%	<u>-12.21%</u>	-5.62%	10.25%	-9.32%
Difference	2.36%	1.06%	-0.17%	0.24%	2.65%	3.22%
Polen	24.84%	-13.76%	-24.05%	-5.13%	4.68%	-34.95%
S&P 500	28.71%	<u>-4.60%</u>	<u>-16.10%</u>	<u>-4.88%</u>	<u>8.10%</u>	<u>-17.70%</u>
Difference	-3.86%	-9.16%	-7.95%	-0.25%	-3.42%	-17.25%
Earnest	26.09%	-5.49%	-11.67%	-5.63%	7.77%	-15.10%
Russell MidCap Difference	22.58% 2.50%	<u>-5.68%</u>	<u>-16.85%</u>	<u>-3.44%</u>	8.88% 1.11%	<u>-17.55%</u>
	3.50%	0.19%	5.18%	-2.19%	-1.11%	2.45%
CastleArk Russell 2000 Growth	12.30% 2.83%	-15.30% -12.63%	-19.30% -19.25%	1.62% 0.24%	8.25% 9.49%	-24.80% -22.57%
Difference	9.46%	-12.63% -2.67%	-0.05%	1.38%	-1.24%	-22.51% -2.23%
DFA US Small Cap Value	40.61%	1.02%	-12.13%	-3.24%	14.96%	-1.25%
Russell 2000 Value	28.27%	-2.40%	-15.28%	-4.61%	12.59%	-11.19%
Difference	12.34%	3.42%	3.15%	1.37%	2.37%	9.94%
Brandes	14.37%	-2.65%	-10.45%	-11.85%	7.35%	-17.51%
MSCI EAFE	11.26%	<u>-5.91%</u>	<u>-14.51%</u>	<u>-9.36%</u>	5.38%	-23.17%
Difference	3.10%	3.26%	4.06%	-2.49%	1.97%	5.66%
William Blair	12.75%	-14.84%	-18.81%	-7.91%	5.21%	-33.01%
MSCI ACWI ex US	8.29%	<u>-5.33%</u>	<u>-13.54%</u>	<u>-9.80%</u>	3.00%	-23.96%
Difference	4.46%	-9.51%	-5.27%	1.89%	2.21%	-9.05%
DFA Int'l Small Cap Value	15.90%	-2.58%	-13.68%	-10.09%	5.59%	-20.17%
MSCI EAFE Small Cap	<u>10.10%</u>	<u>-8.53%</u>	<u>-17.69%</u>	<u>-9.83%</u>	4.23%	<u>-29.24%</u>
Difference	5.80%	5.95%	4.01%	-0.26%	1.36%	9.07%
AQR	0.24%	-3.66%	-13.84%	-12.78%	-2.89%	-29.70%
MSCI EM Difference	<u>-2.54%</u> 2.78%	<u>-6.97%</u> 3.31%	<u>-11.45%</u> -2.39%	<u>-11.57%</u> -1.21%	-3.10% 0.21%	<u>-29.42%</u> -0.28%
BlackRock Global Alpha Tilts	18.72%	-5.23%	-14.93%	-7.48%	7.14%	-20.08%
MSCI ACWI	18.54%	-5.36%	-15.66%	-6.82%	6.03%	-20.06 % -21.14%
Difference	0.18%	0.13%	0.73%	-0.66%	1.11%	1.06%
MFS	19.56%	-7.40%	-13.56%	-7.66%	4.64%	-22.65%
MSCI ACWI	18.54%	<u>-5.36%</u>	<u>-15.66%</u>	<u>-6.82%</u>	6.03%	<u>-21.14%</u>
Difference	1.02%	-2.04%	2.10%	-0.84%	-1.39%	-1.51%
BlackRock Gov't Bond Index		-5.42%	-3.70%	-4.28%	-1.35%	-14.00%
Bloomberg Gov't Bond		<u>-5.53%</u>	<u>-3.71%</u>	<u>-4.30%</u>	<u>-1.37%</u>	<u>-14.14%</u>
Difference		0.11%	0.01%	0.02%	0.02%	0.14%
Reams	-1.22%	-5.52%	-4.98%	-4.59%	-0.71%	-14.95%
Bloomberg US Aggregate	<u>-1.54%</u>	<u>-5.93%</u>	<u>-4.69%</u>	<u>-4.75%</u>	<u>-1.30%</u>	<u>-15.72%</u>
Difference	0.32%	0.41%	-0.29%	0.16%	0.59%	0.77%
Loomis Sayles	2.14%	-5.74%	-6.81%	-2.72%	-0.16%	-14.69%
Bloomberg US Aggregate Difference	<u>-1.54%</u> 3.69%	<u>-5.93%</u> 0.19%	<u>-4.69%</u> -2.12%	<u>-4.75%</u> 2.03%	<u>-1.30%</u> 1.14%	<u>-15.72%</u> 1.03%
UBS	3.09% 8 12%	*****				
UBS SOFR + 4% *	8.12% 4.27%	1.46% <u>0.45%</u>	3.06% 1.12%	0.65% 1.46%	0.73% 0.56%	6.01% <u>3.63%</u>
Difference	3.86%	1.01%	1.12%	-0.81%	0.36%	2.38%
Aptitude **	0.0070	1.0170	1.5770	-0.0170	0.17%	0.94%
SOFR + 4%					0.56%	0.56%
Difference					0.38%	0.38%
Principal	17.58%	5.82%	-9.98%	-8.19%	4.70%	-8.43%
Blended Benchmark	<u>15.87%</u>	<u>6.84%</u>	<u>-10.75%</u>	<u>-7.91%</u>	4.25%	<u>-8.46%</u>
Difference	1.72%	-1.02%	0.77%	-0.28%	0.45%	0.03%
Baird	-0.20%	-1.70%	-0.58%	-0.64%	-0.11%	-3.01%
Bloomberg Govt/Credit 1-3 Year	<u>-0.47%</u>	<u>-2.49%</u>	<u>-0.63%</u>	<u>-1.48%</u>	<u>-0.13%</u>	<u>-4.66%</u>
Difference	0.27%	0.79%	0.05%	0.84%	0.02%	1.65%
Total MERS	18.89%	-0.46%	-6.79%	-4.53%	3.16%	-8.62%

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)

 $^{^{\}star}$ The benchmark for UBS is SOFR + 4% as of March 1, 2022. Prior to March 1, 2022, the benchmark was One Year LIBOR + 4%.

 $^{^{\}star\star}$ Initial funding to Aptitude took place on 9/26/2022; performance began 10/1/2022

ACTUAL ALLOCATIONS October 31, 2022

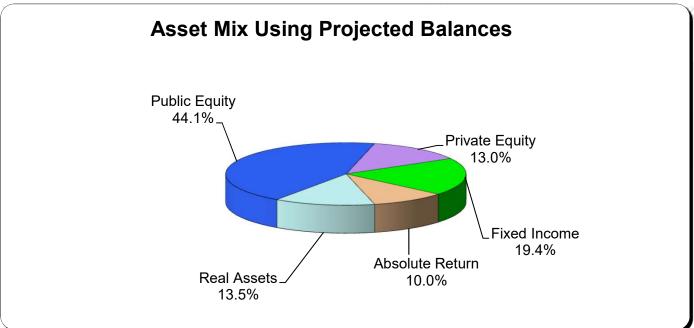
		Target		Market Value	Allocation
EQUITY					
Public Equity					
Domestic					
Passive Large Cap Equity	Northern Trust (S&P 500)	3.89%	\$	208,098,114	3.85%
	BlackRock (Russell 1000 Value)	3.89%	\$	203,290,288	3.76%
	Sub-Total Passive Large Cap Equity	7.78%	\$	411,388,403	7.61%
Active Large Cap Equity	Polen (S&P 500)	2.19%	\$	133,876,830	2.48%
	DFA (Russell 1000 Value)	2.78%	\$	150,337,921	2.78%
	Sub-Total Active Large Cap Equity	4.97%	\$	284,214,751	5.26%
Active Mid/Small Cap Equity	Earnest Partners (Russell MidCap)	2.00%	\$	105,454,882	1.95%
	CastleArk (Russell 2000 Growth)	1.61%	\$	85,745,845	1.59%
	DFA (Russell 2000 Value)	3.44%	\$	193,599,587	3.58%
	Sub-Total Active Mid/Small Cap Equity	7.05%	\$	384,800,314	7.12%
Total Domestic		19.80%	\$	1,080,403,468	19.98%
International					
Active International Equity	Brandes (MSCI EAFE)	5.80%	\$	319,331,053	5.91%
	William Blair (MSCI ACWI ex US)	4.41%	\$	251,053,738	4.64%
	DFA (MSCI EAFE Small Cap)	3.20%	\$	166,335,394	3.08%
	AQR (MSCI EM)	1.99%	\$	80,147,784	1.48%
Total International		15.40%	\$	816,867,970	15.11%
Global					
Active Global Equity	BlackRock (MSCI ACWI)	4.84%	\$	251,212,822	4.65%
	MFS (MSCI ACWI)	3.96%	\$	169,676,075	3.14%
Total Global		8.80%	\$	420,888,896	7.78%
Total Public Equity		44.00%	\$	2,318,160,334	42.88%
Private Equity					
, ,	Abbott Capital (Russell 3000 Quarter Lag + 2%)	3.50%	\$	328,938,070	6.08%
	Mesirow (Russell 3000 Quarter Lag + 2%)	3.50%	\$	279,848,240	5.18%
	Neuberger Berman (Russell 3000 Quarter Lag + 2%)	1.50%	\$	36,901,797	0.68%
	Apogem (Russell 3000 Quarter Lag + 2%)	1.50%	\$	79,453,912	1.47%
Total Private Equity	, ,	10.00%	\$	725,142,019	13.41%
TOTAL EQUITY (Public Equity + Private	Equity)	54.00%	\$	3,043,302,353	56.29%
FIXED INCOME & ABSOLUTE RETURN					
Fixed Income		4.000/	•	47 700 000	0.000/
Cash	PL 19 1 (PL 1 110.0	1.00%	\$	47,799,369	0.88%
Passive Fixed Income	BlackRock (Bloomberg US Government)	5.50%	\$	214,069,246	3.96%
Active Fixed Income	Reams (Bloomberg US Aggregate)	9.90%	\$	468,454,926	8.66%
	Loomis Sayles (Bloomberg US Aggregate)	6.60%	\$	324,437,736	6.00%
	Sub-Total Active Fixed Income	16.50%	\$	792,892,662	14.67%
Total Fixed Income		23.00%	\$	1,054,761,277	19.51%
Absolute Return					
	Aptitude (SOFR + 4%)	3.00%	\$	118,542,814	2.19%
	UBS (SOFR + 4%)	7.00%	\$	441,828,129	8.17%
Total Absolute Return	TIIDN	10.00%	\$	560,370,943	10.36%
TOTAL FIXED INCOME & ABSOLUTE RI	ETURN	33.00%	\$	1,615,132,220	29.87%
REAL ASSETS					
Private Real Estate - Core	JP Morgan (NFI-ODCE)	3.03%	\$	147,873,490	2.74%
	Morgan Stanley (NFI-ODCE)	3.03%	\$	175,546,220	3.25%
	LaSalle (NFI-ODCE)	1.52%	\$	126,763,721	2.34%
	Prologis (NFI-ODCE)	1.52%	\$	100,248,660	1.85%
	Sub-Total Private Real Estate - Core	9.10%	\$	550,432,091	10.18%
Private Real Estate - Non-Core	Non-Core Real Estate (NFI-ODCE)	0.00%	\$	20,742,924	0.38%
Public Real Assets	Principal (Blended Benchmark)	3.90%	\$	176,825,950	3.27%
TOTAL REAL ASSETS		13.00%	\$	748,000,965	13.84%
TOTAL ERS		100000	\$	5,406,435,538	100.00%
Total City Reserve Fund	R. W. Baird			79,803,647	
				,,	

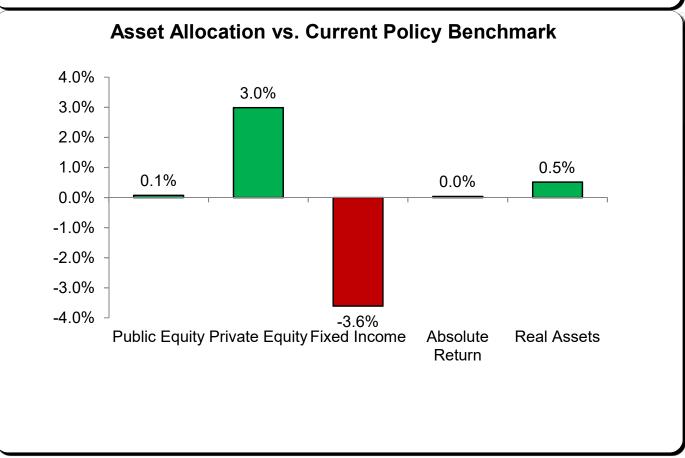
PROJECTED TARGET ALLOCATIONS

Nov 15, 2022

		Target		Market Value	Allocation
EQUITY					
Public Equity					
Domestic					
Passive Large Cap Equity	Northern Trust (S&P 500)	3.89%	\$	214,738,008	3.85%
	BlackRock (Russell 1000 Value)	3.89%	\$	211,222,770	3.78%
	Sub-Total Passive Large Cap Equity	7.78%	\$	425,960,779	7.63%
Active Large Cap Equity	Polen (S&P 500)	2.19%	\$	137,829,795	2.47%
	DFA (Russell 1000 Value)	2.78%	\$	156,879,037	2.81%
	Sub-Total Active Large Cap Equity	4.97%	\$	294,708,832	5.28%
Active Mid/Small Cap Equity	Earnest Partners (Russell MidCap)	2.00%	\$	109,500,945	1.96%
	CastleArk (Russell 2000 Growth)	1.61%	\$	85,565,737	1.53%
	DFA (Russell 2000 Value)	3.44%	\$	201,436,191	3.61%
	Sub-Total Active Mid/Small Cap Equity	7.05%	\$	396,502,873	7.10%
Total Domestic		19.80%	\$	1,117,172,484	20.01%
International					
Active International Equity	Brandes (MSCI EAFE)	5.80%	\$	351,610,011	6.30%
	William Blair (MSCI ACWI ex US)	4.41%	\$	272,642,613	4.88%
	DFA (MSCI EAFE Small Cap)	3.20%	\$	181,474,785	3.25%
	AQR (MSCI EM)	1.99%	\$	90,806,779	1.63%
Total International	. ,	15.40%	\$	896,534,188	16.06%
Global					
Active Global Equity	BlackRock (MSCI ACWI)	4.84%	\$	266.067.030	4.77%
rouve clobal Equity	MFS (MSCI ACWI)	3.96%	\$	181,017,976	3.24%
Total Global	WII O (WOOI AOWI)	8.80%	\$	447,085,006	8.01%
Total Public Equity		44.00%	\$	2,460,791,677	44.07%
Private Equity					
	Abbott Capital (Russell 3000 Quarter Lag + 2%)	3.50%	\$	328,938,070	5.89%
	Mesirow (Russell 3000 Quarter Lag + 2%)	3.50%	\$	279,848,240	5.01%
	Neuberger Berman (Russell 3000 Quarter Lag + 2%)	1.50%	\$	36,901,797	0.66%
	Apogem (Russell 3000 Quarter Lag + 2%)	1.50%	\$	79,453,912	1.42%
Total Private Equity		10.00%	\$	725,142,019	12.99%
TOTAL EQUITY (Public Equity + Private	Equity)	54.00%	\$	3,185,933,696	57.06%
FIXED INCOME & ABSOLUTE RETURN					
Fixed Income					
Cash		1.00%	\$	50,428,776	0.90%
Passive Fixed Income	BlackRock (Bloomberg US Government)	5.50%	\$	217,581,129	3.90%
Active Fixed Income	Reams (Bloomberg US Aggregate)	9.90%	\$	483,610,048	8.66%
	Loomis Sayles (Bloomberg US Aggregate)	6.60%	\$	331,171,906	5.93%
	Sub-Total Active Fixed Income	16.50%	\$	814,781,953	14.59%
Total Fixed Income		23.00%	\$	1,082,791,859	19.39%
Absolute Return		20.007,0		1,002,101,000	10.007
Absolute Return	Aptitude (SOFR + 4%)	3.00%	\$	118,542,814	2.12%
	UBS (SOFR + 4%)	7.00%	\$	441,828,129	7.91%
Total Absolute Return	OBO (OCITE 1470)	10.00%	\$	560,370,943	10.04%
TOTAL FIXED INCOME & ABSOLUTE R	FTIIRN	33.00%	\$	1,643,162,802	29.43%
TOTAL TIKED INCOMIL & ADOCEOTE IX	LIGHT	00.0070	Ψ	1,040,102,002	23.4370
REAL ASSETS					
Private Real Estate - Core	JP Morgan (NFI-ODCE)	3.23%	\$	147,873,490	2.65%
	Morgan Stanley (NFI-ODCE)	3.23%	\$	175,546,220	3.14%
	LaSalle (NFI-ODCE)	1.62%	\$	126,763,721	2.27%
	Prologis (NFI-ODCE)	1.62%	\$	99,089,052	1.77%
	Sub-Total Private Real Estate - Core	9.70%	\$	549,272,483	9.84%
Private Real Estate - Non-Core	Non-Core Real Estate (NFI-ODCE)	0.00%	\$	20,737,709	0.37%
Public Real Assets	Principal (Blended Benchmark)	3.30%	\$	184,490,233	3.30%
TOTAL REAL ASSETS		13.00%	\$	754,500,425	13.51%
TOTAL ERS			\$	5,583,596,923	100.00%
Total City Reserve Fund	R. W. Baird			80,252,182	
rotar ofty neserve ruffu	n. W. Dallu			00,232,102	

PROJECTED VERSUS POLICY ALLOCATIONS





YTD Market Value Change

December 31, 2021 Market Value including City Reserve & PABF Accounts			\$ 6,260,134,748
Monthly Cash Outflows thru Retiree Payroll Expense PABF Payroll Expense Expenses Paid GPS Benefit Payments Sub-Total Monthly Cash Outflows	November 15, 2022	\$ (373,027,678) \$ (40,820) \$ (12,267,842) \$ (7,911,443)	\$ (393,247,783)
Monthly Cash Inflows thru Contributions PABF Contribution Sub-Total Monthly Contributions City Reserve Fund Contribution	November 15, 2022	\$ 105,155,005 \$ 45,398	\$ 105,200,403 \$ 40,000,000
Capital Market Gain/(Loss) Value including City Reserve & PABF Account	ts as of November 15, 2022		\$ (348,238,263) \$ 5,663,849,105
Less City Reserve Account ¹	10 00 01 100 10, 2022		\$ 80,252,182
Less PABF Fund ² Net Projected ERS Fund Value as of	November 15, 2022		\$ 2,509
Net Projected ERS Fund Value as of	11076111061 13, 2022	<u></u>	\$ 5,583,594,414

¹ The City Reserve Account balance equals the market value currently held in the Baird account.

² PABF Fund balance equals the market value currently held in the PABF account.