

**REGULAR MEETING OF THE ANNUITY AND PENSION BOARD  
EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF MILWAUKEE  
789 N. WATER ST. (Employees' Retirement System)  
MONDAY, FEBRUARY 27, 2023 – 9:00 A.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](http://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. Appointment of Committees for 2023.
- A. Administration and Operations Committee.
  - B. Investment Committee.
  - C. Legislative Committee.
  - D. Litigation Committee

- II. Approval of Minutes.
- A. Annual Meeting Held January 24, 2023.

- III. Chief Investment Officer Report.

- IV. Investment Committee Report.

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

- A. Approval of Real Estate Manager Search Finalists.
- B. Approval of Statement of Investment Policy Update.

- V. Administration & Operations Committee Report.

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

- A. Selection of Finalist Financial Audit Firm.

VI. New Business.

- A. Fiduciary Education Training – Assistant City Attorney Patrick McClain.
- B. Approval of Five-Year Experience Study.
- C. Retirements, Death Claims, and Refunds (January).
- D. Conference Requests – February 2023 Board Meeting.

VII. Medical Reports.

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

VIII. Unfinished Business.

- A. Pending Legal Opinions and Service Requests Report.
- B. Pending Legislation Report.

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

- C. Executive Director's Report – Inventory of ERS Projects.

IX. Informational.

- A. Pending Litigation Report.
- B. Conferences.
- C. Class Action Income 2023 YTD.
- D. Adjusted Quarterly Cost Basis of Equity.
- E. Minutes of the Special Administration & Operations Committee Meeting Held January 30, 2023.
- F. Minutes of the Investment Committee Meeting Held February 9, 2023.
- G. Report on Bills.
- H. Deployment of Assets.
- I. Securities Lending Revenue and Budget Report.
- J. Preliminary Performance Report and Asset Allocation.

## MEETING REMINDERS

### **ADMINISTRATION & OPERATIONS COMMITTEE MEETING**

**WEDNESDAY, MARCH 22, 2023 – 9:00 A.M.**

789 N. WATER ST.

### **REGULAR MEETING OF THE ANNUITY AND PENSION BOARD**

**TUESDAY, MARCH 28, 2023 – 9:00 A.M.**

789 N. WATER ST.

I.

APPOINTMENT OF COMMITTEES FOR 2023

- A. Administration and Operations Committee.
- B. Investment Committee.
- C. Legislative Committee.
- D. Litigation Committee.

II.

APPROVAL OF MINUTES

- A. Annual Meeting Held January 24, 2023.

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

Minutes of the Annual Meeting  
held January 24, 2023 via teleconference during COVID-19

The meeting was called to order at 9:02 a.m.

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

Board Members Not Present:       Molly King (arrived 9:04 a.m.)

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  
  Mary Turk, Business Operations Analyst  
  Jan Wills, Board Stenographer

Others Present: Patrick McClain, City Attorney's Office; Terry Siddiqui, DS Consulting, Inc., seven members of the public called in to the meeting.

**Annual Meeting.**

**Introduction of New Board Member.** Mr. Bell introduced the new Board member Mr. Timothy Heling. Mr. Heling stated he was on the Board previously until the Board was reorganized. He noted he would be the best fiduciary Trustee he could be. Mr. Heling provided some background information and said he is married for 12 years with one daughter, is a firefighter with the City for the last 18 years, a lieutenant, soon to be captain, and also a paramedic. He commented that he enjoys his job and serving the citizens of Milwaukee. Mr. Heling said he grew up in Milwaukee and has lived here his whole life. He said his father and grandfather were firemen and seeing them living their lives in their retirement is a huge motivator for joining the Board. He noted that he wants to see the pension thrive for many, many more years. He stated the stock market got him interested in joining the Board and he looks forward to learning as much as he can and working with the Board and Staff. He concluded his goal is to leave the pension fund in its strongest position.

## **Officers for 2023.**

**Election of Chair.** Mr. Bell asked for nominations for Chair. It was moved by Mr. Konrad and seconded by Mr. Heling to nominate Mr. Bell for Chair. There being no further nominations, nominations were closed and a unanimous vote was cast for Mr. Bell as Chair of the Annuity and Pension Board.

**Election of Vice-Chair.** Mr. Bell asked for nominations for Vice-Chair. Mr. Klusman nominated Mr. Kovac for Vice-Chair. It was moved by Mr. Klusman and seconded by Mr. Konrad to nominate Mr. Kovac for Vice-Chair. There being no further nominations, nominations were closed and a unanimous vote was cast for Mr. Kovac as Vice-Chair of the Annuity and Pension Board.

## **Approval of Minutes.**

**Regular Meeting Held December 20, 2022.** It was moved by Ms. Sawa, seconded by Mr. Klusman, and unanimously carried, to approve the Minutes of the Regular Meeting Held December 20, 2022.

**Chief Investment Officer Report.** As a matter of information, Board members received the January 24, 2023 Performance Update. Mr. Sauer noted the December numbers are close to being final, but Staff is waiting on one report from a smaller hedge fund of fund manager who notified Staff they are flat or slightly positive for the month. He said the numbers are not expected to change materially from what is on the report. He noted the Fund as of December 31, 2022, had a value of \$5.47 billion. Mr. Sauer said Fund had a return of -1.8% in December, net of fees, which outperformed the blended benchmark by approximately 38 basis points. He said the primary relative performance drivers were Style Bias, which added 29 basis points, and came primarily from U.S. Large Cap Value & International. Mr. Sauer said in regard to Manager Selection, Private Equity contributed 23 basis points and Real Estate detracted 21 basis points. He said the Fund outperformed the benchmark in all time periods shown. Mr. Sauer said the one-year return is now -6.5%, which is a 10 basis point improvement from -6.6%, which was reported on the summary sent out with the Board package. This improvement was due to the Fund's large hedge fund of fund manager UBS. For the 2022 Summary, he said the Total Fund and all asset classes, except for Real Assets, outperformed their benchmarks, net of fees. He noted 10 out of 16 active mandates outperformed, net of fees. Mr. Sauer said the Fund has seen a year-to-date change in the value of its investments of -\$394.8 million, paid benefits and expenses of \$473.3 million, and received contributions of \$117.9 million. He said the Fund return is up 3.4% so far in January and the Fund's approximate value is \$5.76 billion. Mr. Sauer noted eight out of the Fund's 13 active mandates are outperforming year to date. He noted there has been an investment change of \$192.2 million. Mr. Sauer said the first expense payment to the City was \$1.9 million and the Fund received contributions of \$103 million. He said due to City and Agency contributions, benefits would be paid from the Fund's cash balance this month.

Mr. Silber noted it cannot be controlled when the stock market has negative returns, but what can be controlled is setting the Fund's asset allocation and focusing on the implementation to strive to add value. He said in regards to what can be controlled, there is a lot to feel good about. Mr. Silber said the Fund's 10- and 20-year returns were around 8%, net of fees. He said since the difficult 2020, the Fund had a historic year in 2021 in an environment where markets went up a lot and the

Fund added 607 basis points on top of its benchmark and ranked in the top quartile of its peer universe. He said the Fund was able to add about 410 basis points, net of fees, in 2022, in a year when the market was very different, with both stocks and bonds down double digits. Mr. Silber said also noted it looks like the Fund will be in the top quartile again in 2022, adding hundreds of millions of dollars to the Fund. He said the agenda for the February 9 Investment Committee Meeting would include Phase I of the ALM Study, the ongoing Real Estate Investment Manager search, liquidity follow-up, the 4<sup>th</sup> quarter performance report, due diligence reports, and the value add analysis.

### **New Business.**

**Authorization to Sign Vouchers.** It was moved by Ms. Sawa, seconded by Mr. Konrad, and unanimously carried, to approve the Authorization to Sign Vouchers, as revised, with the change to Bill Christianson as Deputy Comptroller.

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

Active Death Benefits reported	\$0.00
Deferred Death	\$22,435.18
Deferred Death-Member Only Refund	\$2,329.75
Ordinary Death Benefits reported	\$0.00
Retired Death Benefits reported	\$22,031.99
Survivor Death – Termination Benefits reported	\$8,134.50
Refund of Member Contributions paid	\$257,514.75

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

**Conference Requests – January 2023 Board Meeting.** Staff noted this was a placeholder item as there were no requests made at the January meeting.

**Approval of 2022 Securities Lending Budget.** Mr. Allen said this was an annual housekeeping item and Mr. Gopalan noted the Securities Lending program is run by the ERS' custodian Northern Trust. He said the program generates revenue by lending out securities and the earnings are split 80/20 with Northern Trust receiving 20%. Mr. Gopalan commented that Chapter 36 requires sweeping the securities lending earnings into the Combined Retirement Fund every year. He said the earnings have been trending lower the last 10 years due to high collateral requirements and there are fewer securities in separate accounts. He noted in 2022 that the earnings were over \$791,000, which was an increase over 2021, which was just under \$553,000. Mr. Gopalan said the increase was due to volatility in the market. Discussion ensued.

It was moved by Ms. Ford, seconded by Mr. Kovac, and unanimously carried, to approve the Approval of 2022 Securities Lending Budget.

**Annual Obligation of Trustees and ERS Officers to Submit Annual Statement of Economic Interests.** Mr. Allen mentioned to the Trustees that the form can be completed online, is due February 28, and the Ethics Board is serious about the due date as there is a \$50 fine per day for each day the form is not submitted. Mr. Heling asked if he needed to complete another form after just submitting the form after becoming a new Board member and Mr. Allen said he would check on that for him.

**Proposed Changes to Board Rule III.E.** Mr. Allen noted this was carried over from last month regarding in-person re-exams being waived in rare cases such as being on dialysis and would pose a health hazard for that person. He clarified that any waivers would have to be approved by the full Medical Panel and Medical Council and not just one physician from the Medical Panel. Mr. McClain added that the revisions are intended to address some concerns raised by the Board members and the redlined revisions are intended to take care of the concerns by the Board members. Discussion ensued. Mr. Klusman requested that the Executive Director, instead of the Disability Deputy Director, notify the Annuity and Pension Board and adding “at its next regular meeting” at the paragraph end.

It was moved by Mr. Konrad, seconded by Mr. Klusman, and unanimously carried, to approve the Proposed Changes to Board Rule III.E as modified to say Executive Director instead of Disability Deputy Director, and adding “at its next regular meeting.”

**Approval of Resolution for Annuity and Pension Board Member Captain James A. Campbell.**

Mr. Bell read Mr. Campbell’s resolution:

#### A Resolution

WHEREAS, Captain James A. Campbell, served with distinction as a Trustee of the Employees’ Retirement System of the City of Milwaukee continuously from January 2018 through December 2022, also serving as Annuity and Pension Board Vice-Chair in 2021 and 2022, on the Investment Committee throughout his term of office and on the Administration & Operations Committee as well, and faithfully and conscientiously discharged his duty to solely represent the interests of all the Members and Beneficiaries of this System during his tenure of office; and

WHEREAS, Captain James A. Campbell’s knowledge of pension benefits enabled him to make many valuable contributions to the Annuity and Pension Board and the well-being of the Employees’ Retirement System of the City of Milwaukee and its thousands of participants, including, and especially, his diligent stewardship in pursuing adequate funding for the System; and

WHEREAS, Captain James A. Campbell served on the Investment Committee of the Annuity and Pension Board throughout his tenure assisting in the development of the Employees’ Retirement System’s Strategic Asset Allocation which has generated hundreds of millions of



dollars of long-term excess returns for the exclusive benefit of the System's Members and Beneficiaries, and exhibited the courage, discipline, and composure necessary to preserve the Board's Investment Policy during the COVID-19 pandemic market panic and helped guide the System safely through perilous times with a steady and able hand; and

WHEREAS, Captain James A. Campbell's departure is a great loss to the Annuity and Pension Board and all the Members and Beneficiaries of the Employees' Retirement System; therefore, be it

RESOLVED, By the Annuity and Pension Board that it hereby expresses its deep and sincere appreciation and gratitude to Captain James A. Campbell for his invaluable, selfless, and loyal service; and be it

FURTHER RESOLVED, That this resolution be recorded in the permanent records of this Board and that a suitably engrossed copy be forwarded to Captain James A. Campbell.

**ADOPTED JANUARY 24, 2023**  
**Annuity and Pension Board**

\_\_\_\_\_  
CHAIR

\_\_\_\_\_  
CHIEF INVESTMENT OFFICER

\_\_\_\_\_  
DEPUTY DIRECTOR

\_\_\_\_\_  
EXECUTIVE DIRECTOR

It was moved by Ms. Ford, seconded by Mr. Konrad, and unanimously carried, to approve the Approval of Resolution for Annuity and Pension Board Member Captain James A. Campbell.

**ERS Investment Staff Compensation (Analyst).** 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.

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

The Board convened in closed session at 9:51 a.m.

Ms. King left the meeting at 10:00 a.m.

The Board reconvened in open session at 10:03 a.m.

### **Medical Reports.**

**All Duty & Ordinary Disability Applications & Re-examinations (January).** Staff presented certifications (January 2023) of the Fire and Police Medical Panel Physicians and the Medical Council relative to Duty & Ordinary Disability Retirement benefits as follows:

<u>Police – Re-examinations – Duty</u>	<u>Recommendation</u>
Vidal Colon	Approval
Deana Martinez	Approval
Jason Mucha	Approval
<u>Police – Re-examinations – Ordinary</u>	<u>Recommendation</u>
Bryan Norberg	Approval
<u>Fire – Re-examinations – Duty</u>	<u>Recommendation</u>
Jerry Allen	Approval
Thomas Repaci	Approval
Thomas Scholz	Approval
Paul Singer	Approval
<u>GC – Applications – Ordinary</u>	<u>Recommendation</u>
David Frank 09/09/2021	Denial
<u>GC – Re-examinations – Ordinary</u>	<u>Recommendation</u>
Saverio Bruno	Approval
Scott Geiger	Approval
Tarji Heard	Approval

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

### **Unfinished Business.**

**Pending Legal Opinions and Service Requests Report.** Mr. McClain commented there was an inquiry regarding how employees who hold multiple positions with the City should be

treated for purposes of pension benefits. He stated two legal opinions already exist and employees with multiple City positions can accrue service credit for both positions, but service credit cannot exceed one calendar year. Mr. McClain said salaries for both positions can be used when calculating final average salaries. Mr. McClain said there has been some delay on the indemnification agreement and he was assessing whether the indemnification agreement for the Board and ERS was even necessary, based on a number of different factors. He stated city attorney and outside counsel opinions were reviewed back to 2002 and 2003 and it was determined that the Annuity and Pension Board and the Pension system itself are City agencies and ERS employees are City employees. He noted the State statutory indemnification provisions for municipal employees does just that and it applies to public officers and employees acting within the scope of their employment. Mr. McClain said given those opinions and the language in the statute, the City attorneys took an assessment as to whether a separate indemnification agreement was required to afford municipal indemnity to the ERS. He concluded that it has not been codified in an official City legal opinion and that would be the final say on the matter. Mr. McClain said, based on their internal discussions, the ERS is already covered by the state statutory provisions and an indemnity agreement is not necessary. He commented that it is a benefit to the Board as the existing indemnification agreement has some exclusions of coverage, which could have provided less coverage than the State statutory provisions. Mr. McClain said that while the City Attorney formal opinion is still pending, the ERS, employees, Annuity, and Pension Board would be covered by the State indemnity provision and a separate agreement is unnecessary to extend that coverage.

**Pending Legislation Report.** Mr. Allen stated there are no new developments to report, but if there is legislation at the local or state level, it will be immediately reported to the Board.

**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.**

- 1) Pending Litigation Report.
- 2) Conferences.
- 3) Class Action Income 2022
- 4) Minutes of the Investment Committee Meeting Held December 8, 2022.
- 5) Minutes of the Administration & Operations Committee Meeting Held December 15, 2022.
- 6) Copies of the Board Rules and Regulations and ERS Ethics Policy.

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

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

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

Mr. Bell adjourned the meeting at 10:41 a.m.

Bernard J. Allen  
Secretary and Executive Director

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

### III.

#### CHIEF INVESTMENT OFFICER REPORT

# Milwaukee Employees' Retirement System - February 27, 2023

## Fund as of January 31, 2023

\*Fund value of \$5.76b.

\*Fund return of 4.1% in Jan., gross of fees, underperformed by approximately 13bp.

\*Primary Relative Perf. Drivers:  
Manager Selection

Real Estate -23bp  
Brandes 14bp  
Polen 12bp  
Overweight Private Equity -12bp

\*Fund has outperformed benchmark in all other time periods shown.

## Feb. Update (as of 2/17/23)

\*Fund return -0.5% MTD  
\*Fund return 3.5% YTD  
\*Fund value \$5.73b

\*12 out of 16 active mandates outperforming YTD.

\*Public Equity and Fixed Income asset classes outperforming their respective benchmarks YTD.

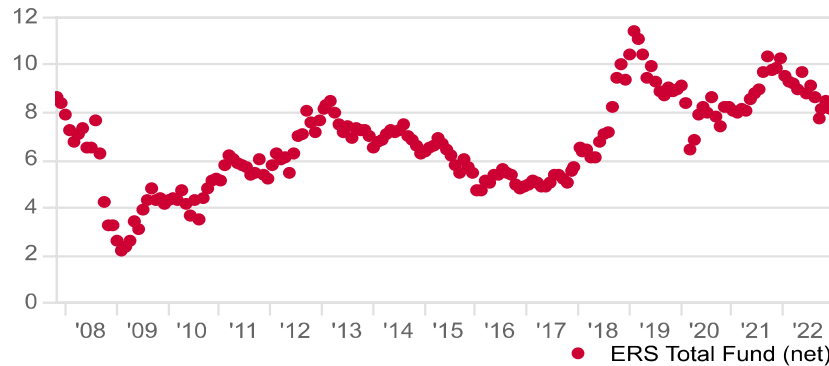
\*Investment Change: \$197.1m  
\*Benefits & Expenses: 41.1m  
\*Contributions: 106.9m

## Monthly Withdrawals:

Due to City and Agency contributions, and UBS redemption, benefits will be paid from Cash this month.

## Total Fund - 10-Year Rolling Returns

11/28/1997 to 01/31/2023



## Return Data

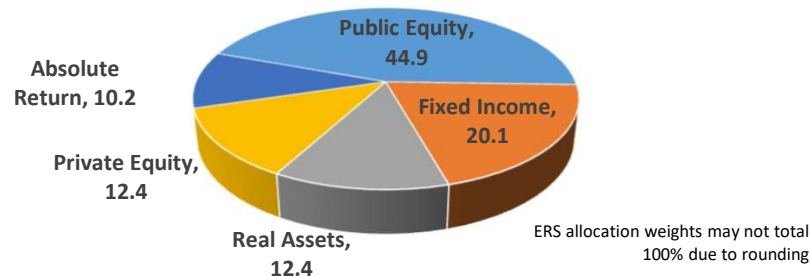
Source Data: Monthly Return

	1 Month	1 Year	5 Year	10 Year	15 Year	20 Year
Total Fund (net)	4.1	-0.6	6.6	8.2	6.5	8.1
ERS Benchmark	4.2	-4.3	5.3	7.4	6.2	7.5

## Total Fund - 20-Year Risk & Return Data

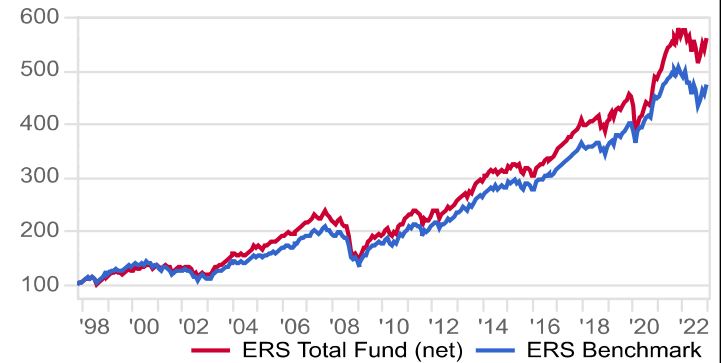
	Return	Std Dev	Tracking Error	Info Ratio (arith)	Sharpe Ratio	Alpha	Beta
Total Fund (net)	8.1	10.3	2.5	0.2	0.7	0.0	1.1
ERS Benchmark	7.5	9.2	--	--	0.7	0.0	1.0

## ERS Allocation as of January 31, 2023



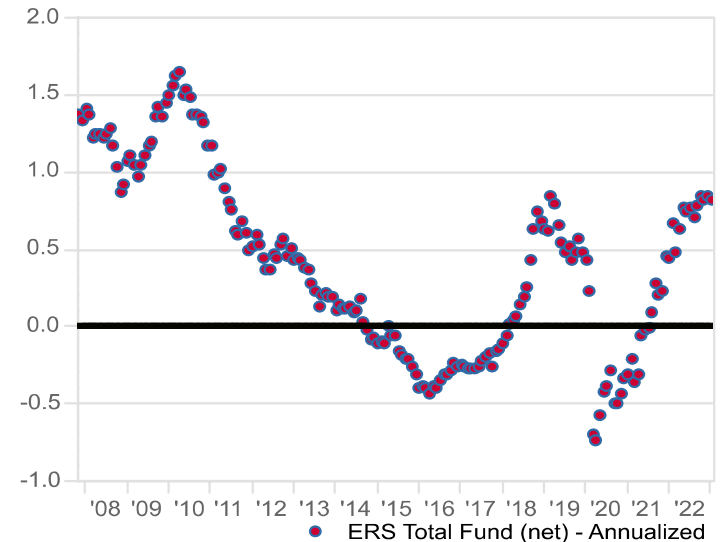
## Growth of \$100 - Total Fund & ERS Benchmark

11/28/1997 to 01/31/2023

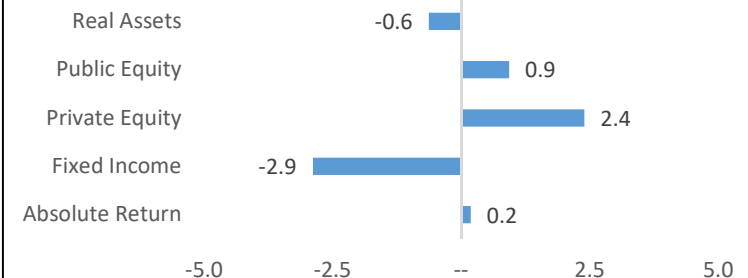


## Total Fund - 10-Year Rolling Excess Returns

11/28/1997 to 01/31/2023



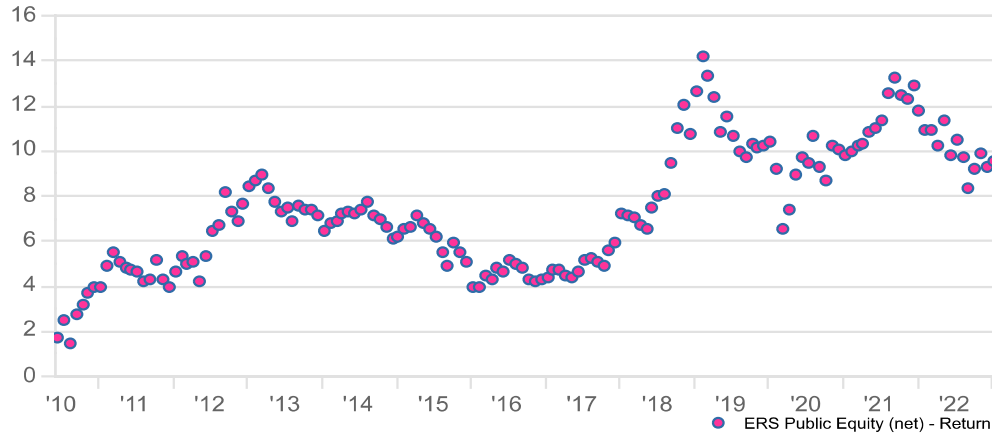
## Asset Allocation vs Policy as of January 31, 2023



# Milwaukee Employees' Retirement System - February 27, 2023

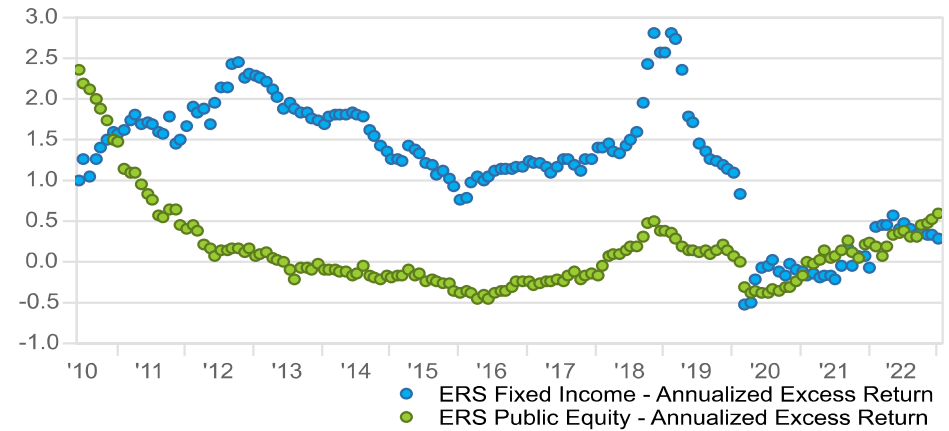
## Public Equity - 10-Year Rolling Returns

06/30/2000 to 01/31/2023



## Asset Class - 10-Year Rolling Excess Returns

06/30/2000 to 01/31/2023

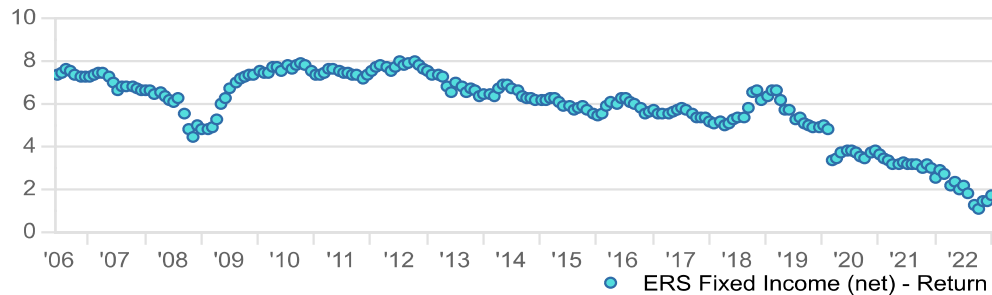


## Return Data

	1 Month	1 Year	5 Year	10 Year	15 Year	20 Year
Public Equity	8.0	-4.6	6.7	9.9	7.3	9.3
Public Equity (net)	8.0	-4.9	6.3	9.5	6.9	9.0
Public Equity Benchmark	7.4	-7.6	5.4	8.9	6.7	8.6
MSCI ACWI IMI NR USD	7.4	-7.6	5.4	8.2	6.1	8.8

## Fixed Income - 10-Year Rolling Returns

06/28/1996 to 01/31/2023

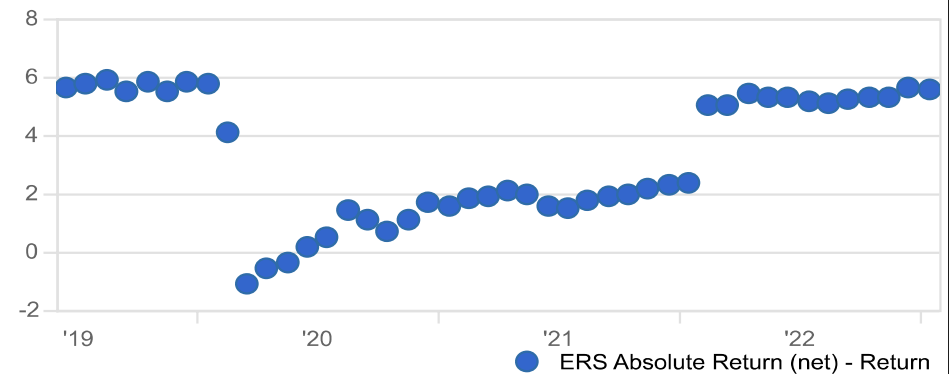


## Risk Adjusted Returns (6/30/14 - 01/31/23)

	Return	Std Dev	Sharpe Ratio	Max Drawdown
Public Equity (net)	7.8	15.8	0.4	-25.3
Fixed Income (net)	1.5	6.4	0.1	-13.6
Absolute Return (net)	5.6	10.0	0.5	-27.1

## Absolute Return - 5-Year Rolling Returns

06/30/2014 to 01/31/2023



## Return Data

	1 Month	1 Year	5 Year	10 Year	15 Year	20 Year
Fixed Income	3.5	-1.7	1.1	1.8	3.9	4.7
Fixed Income (net)	3.5	-1.8	1.0	1.7	3.7	4.6
Bbg US Agg Bond TR USD	3.1	-8.4	0.9	1.4	2.8	3.3

## Return Data

	1 Month	1 Year	3 Year	5 Year	7 Year
Absolute Return (net)	0.6	24.2	4.9	5.6	5.7
90-Day T-Bill + 3%	0.6	5.5	3.9	4.4	4.2

#### IV.

##### INVESTMENT COMMITTEE REPORT

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

- A. Approval of Real Estate Manager Search Finalists.
- B. Approval of Statement of Investment Policy Update.



**STATEMENT OF INVESTMENT POLICY**  
Updated ~~February~~November 20232

**THE EMPLOYEES' RETIREMENT  
SYSTEM OF THE CITY OF MILWAUKEE**  
789 N. Water Street, 3<sup>rd</sup> 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 Liquidity Analysis memo dated February 9, 2023](#), 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 Liquidity Analysis memo dated February 9, 2023](#). 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.

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

\*Fixed Income Minimum range lowered on an Interim basis to 17.5% in November 2022 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 ~~January 31, March 1, 2024~~3.

V.

ADMINISTRATION & OPERATIONS COMMITTEE REPORT

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

A. Selection of Finalist Financial Audit Firm.

## VI.

### NEW BUSINESS

- A. Fiduciary Education Training – Assistant City Attorney Patrick McClain.
- B. Approval of Five-Year Experience Study.
- C. Retirements, Death Claims, and Refunds (January).
- D. Conference Requests – February 2023 Board Meeting.



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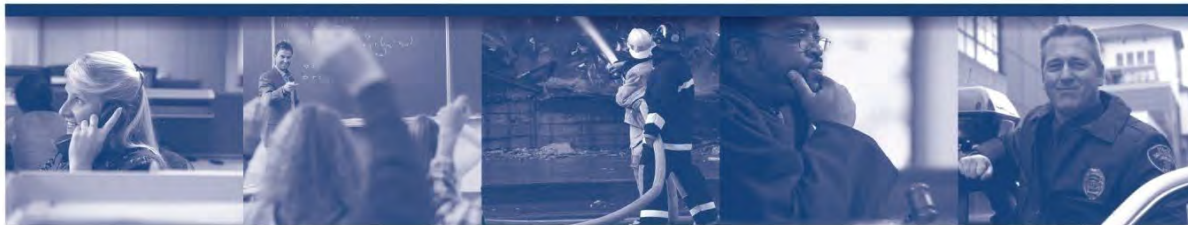
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# City of Milwaukee Employee's Retirement System Board Presentation

## **Experience Study Results: Summary of Recommendations**

**Presented By: Cavanaugh Macdonald Consulting**

**February 27 2023**



# Background



- CMC has made 4 presentations related to the Experience Study Results:
  - Economic Assumptions – August 24, 2022
  - Funding Policy Discussion
    - August 24, 2022
    - November 22, 2022 (appendix)
  - Demographic Assumptions – September 28, 2022
- These are included in the meeting packet
- Proposed motions are on the next page
- References to the recommendations as well as an update to the investment return assumption analysis reflecting Callan's February 9, 2023 presentation follow the proposed motions

# Proposed Motions



- We have broken the results into 4 motions for the Board to consider:
  - ***Demographic Assumptions*** – Change Retiree Mortality, Other Mortality, Retirement, Termination, Disability, Duty-related disability and Salary increases
  - ***Economic Assumptions*** – Maintain current 7.50% assumption or consider lowering
  - ***Actuarial Methods*** – Change the funding periods for Gains/Losses (20 years), Contribution gains/losses (5), plan provisions for active (15), early retirement incentive (5) inactive reductions (15) inactive increases (1) and fresh start (25). **Though not previously discussed, if CMERS were closed to new actives (10).**
  - ***Stable Contribution Policy*** – Choose between Eliminate or Maintain based on 1.1.2023 actuarial valuation with understanding that rates can be updated before 2028 reset for changes in assumptions or plan provisions
- Assumptions or methods not mentioned above can remain the same



# Proposed Demographic Assumption 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.

- CMC recommendation for changes can be found on slide 15 of the Demographic Assumptions presentation presented September 28, 2022 and is replicated here for convenience
- Demographic Assumptions not listed were reviewed but changes are not recommended.

# Proposed Economic Assumption Changes



- CMC initial recommendation can be found on slide 39 of the Economic Assumptions presentation presented August 24, 2022
- The only recommended change at that time was lowering the assumed investment return to 7.40%; all other assumptions were reasonable
- We have updated the next 4 slides based on the February 9, 2023 Callan Presentation
- Given the increase in return expectations, the Board can vote to maintain the assumption at 7.50%
- Consideration can be given to reducing the assumption to less than 7.50%

# Investment Return Assumption

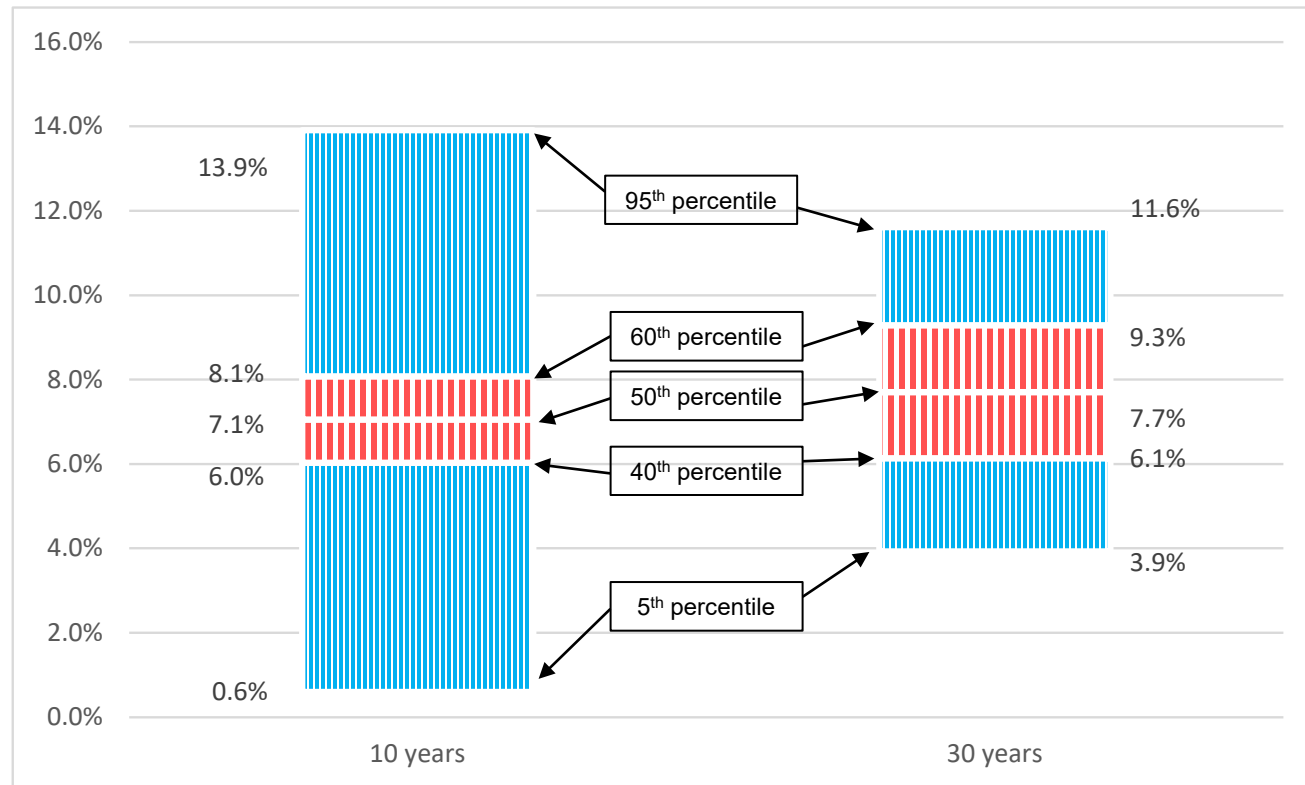


Expected returns, based on Callan's final 2023 capital market assumption and CMERS' current target asset allocation.

	2019 Assumptions		2023 Assumptions	
	Callan (10-Year)	Callan (30-Year)	Callan (10-Year)	Callan (30-Year)
Nominal Return	6.67%	7.39%	7.05%	7.55%
Inflation	<u>2.25%</u>	<u>2.25%</u>	<u>2.50%</u>	<u>2.35%</u>
Real Return	4.42%	5.14%	4.55%	5.20%

# Considerations for Expected Return

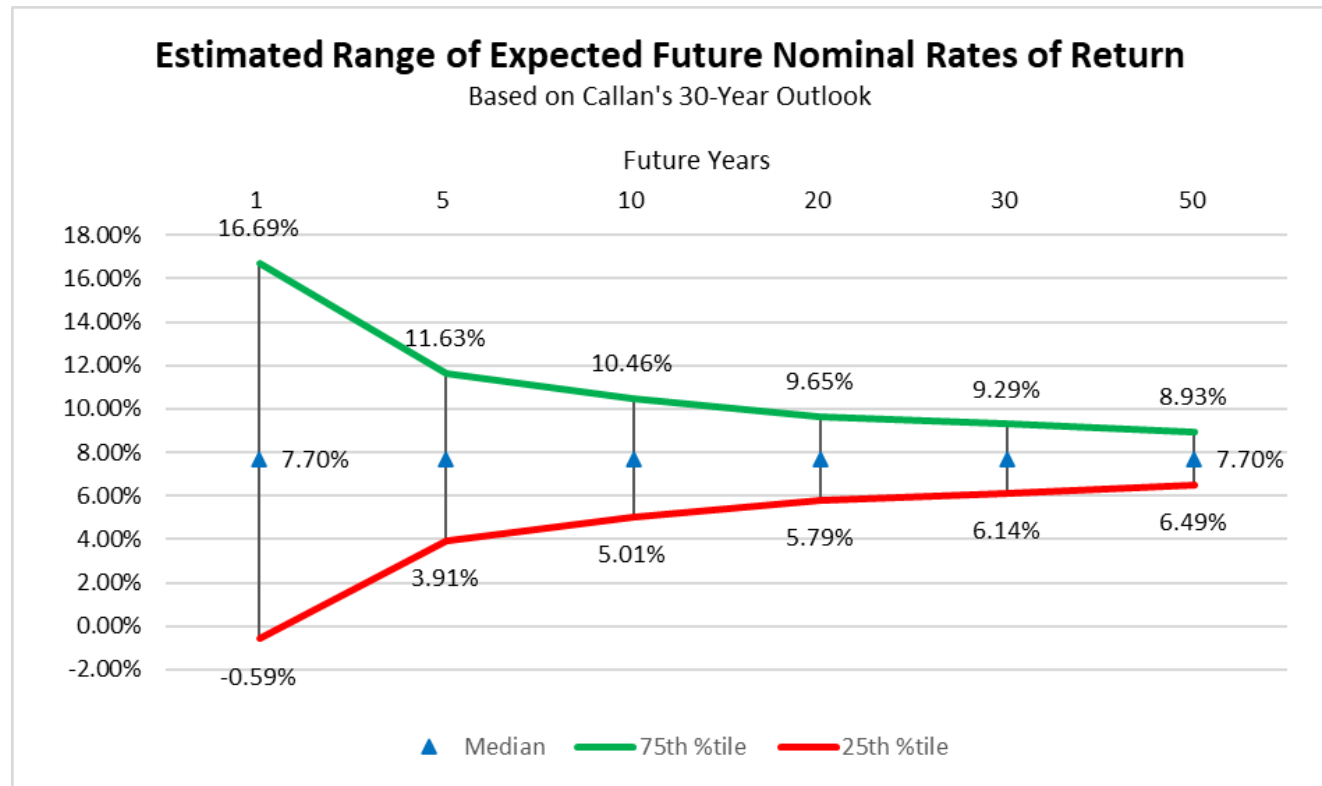
## (Using Callan's Final 2023 Expectations)



The expected outcome is the 50<sup>th</sup> percentile. There is a 50% chance that the return will be below 7.1% over 10 years and 7.7% over 30 years. Note the 7.70% return over 30 years is based on the CMC assumption of 2.50% instead of the 2.35% Callan assumption on the previous slide. Similarly, there is a 60% chance that returns will be less than 9.3% over 30 years.

# Distribution of Expected Future Nominal Returns

## (Using Callan's Final 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 7.70% and a 25% chance it will be below 6.49%.

# Summary of Findings: Investment Return Assumption



- Current assumption: 7.50% nominal return
- Based on Callan's final 2023 30-year expected real return distribution and 2.50% inflation:
  - *50<sup>th</sup> percentile return: 7.70%*
  - *45<sup>th</sup> percentile return: 7.41%*
- 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.

# Proposed Funding Policy Changes



Component	Preliminary Funding Policy Recommendations		
	Current	Proposed	Comment
➤ <b>Actuarial Cost Method</b>	Entry Age Normal	no change	Annual costs level as a % of pay over each member's career
➤ <b>Actuarial Value of Assets</b>			
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
➤ <b>Amortization policy</b>			
■ 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 UAAL base over 25 years
➤ <b>Output smoothing</b>			See next slide

➤ CMC recommendation for changes can be found on slide 5 of the Funding Policy Presentation presented November 22, 2022 and are replicated here for convenience.

➤ Other than increasing the gain loss amortization period to 20 years, many of the policies may never be needed.



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# **City of Milwaukee Employees' Retirement System Funding Policy Discussion**

**Presented by: Cavanaugh Macdonald Consulting**

**Original Presentation: August 24, 2022**

**Appendix: November 22, 2022**





# 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
➤ <b>Actuarial Cost Method</b>	Entry Age Normal	no change	Annual costs level as a % of pay over each member's career
➤ <b>Actuarial Value of Assets</b>			
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
➤ <b>Amortization policy</b>			
■ Structure	Closed layered	no change	Documents source and treatment of UAAL
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- Plan Provisions			
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- 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 UAAL base over 25 years
➤ <b>Output smoothing</b>			See next slide

# Preliminary Funding Policy Recommendations

Component	Output Smoothing Preliminary Recommendations		
	Current	Proposed	Comment
<b>➤ Output smoothing</b>			
■ Minimum Employer Contribution	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

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)

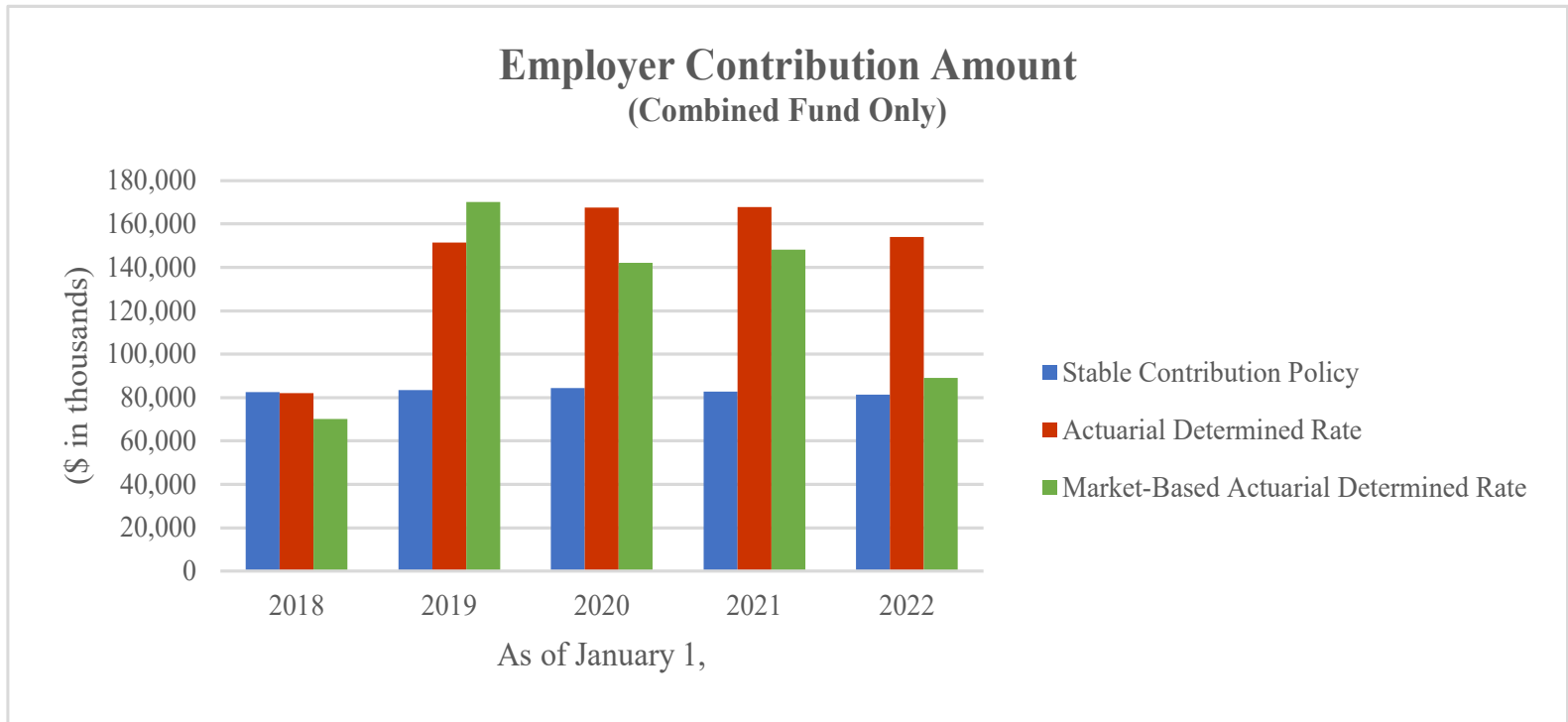
## Inputs

Membership Data  
Asset Data  
Benefit Provisions  
Assumptions  
Funding Methodology



## Results

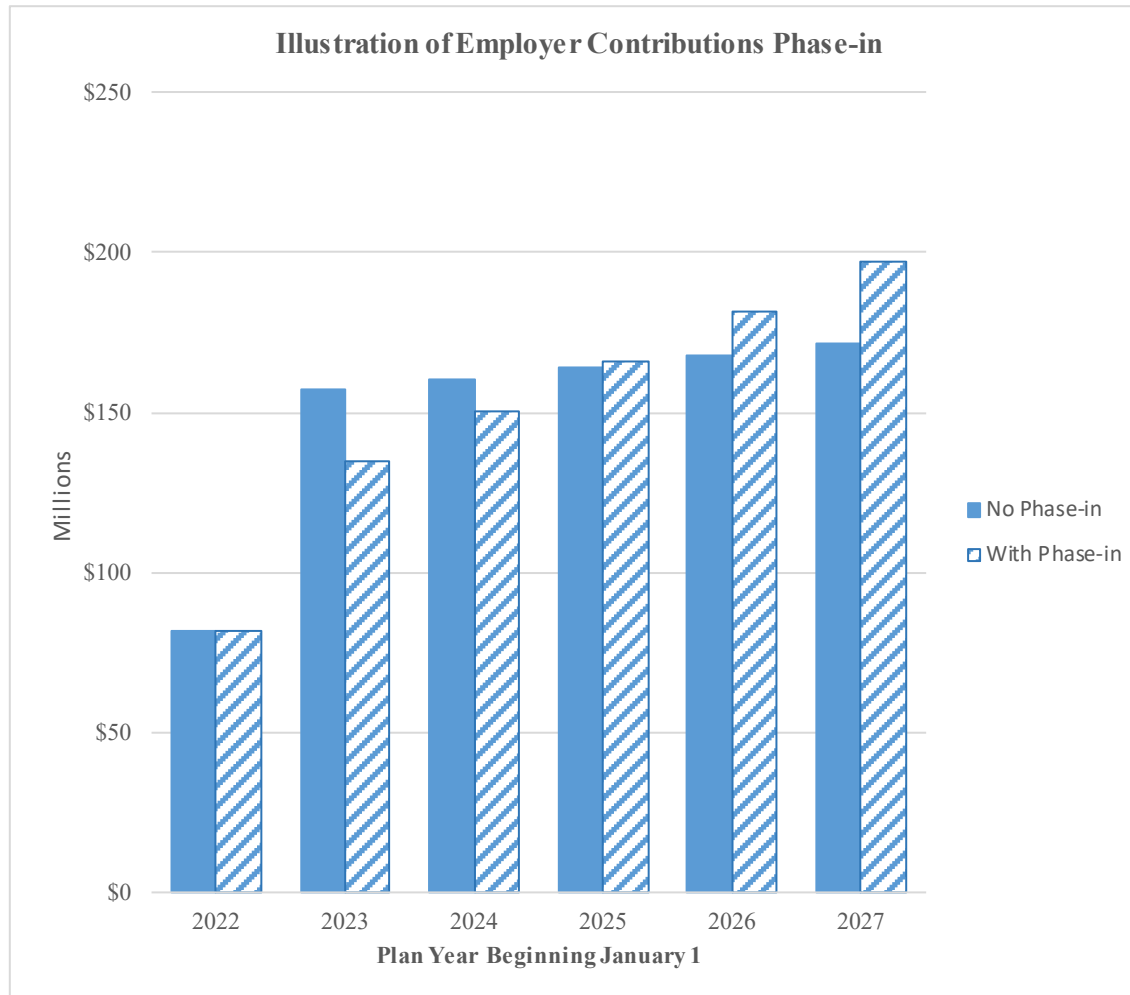
Actuarial Value of Assets  
Actuarial Accrued Liability  
UAAL/Funded Ratio  
Net Actuarial Gain or Loss  
**Employer Contributions**  
Projections



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.



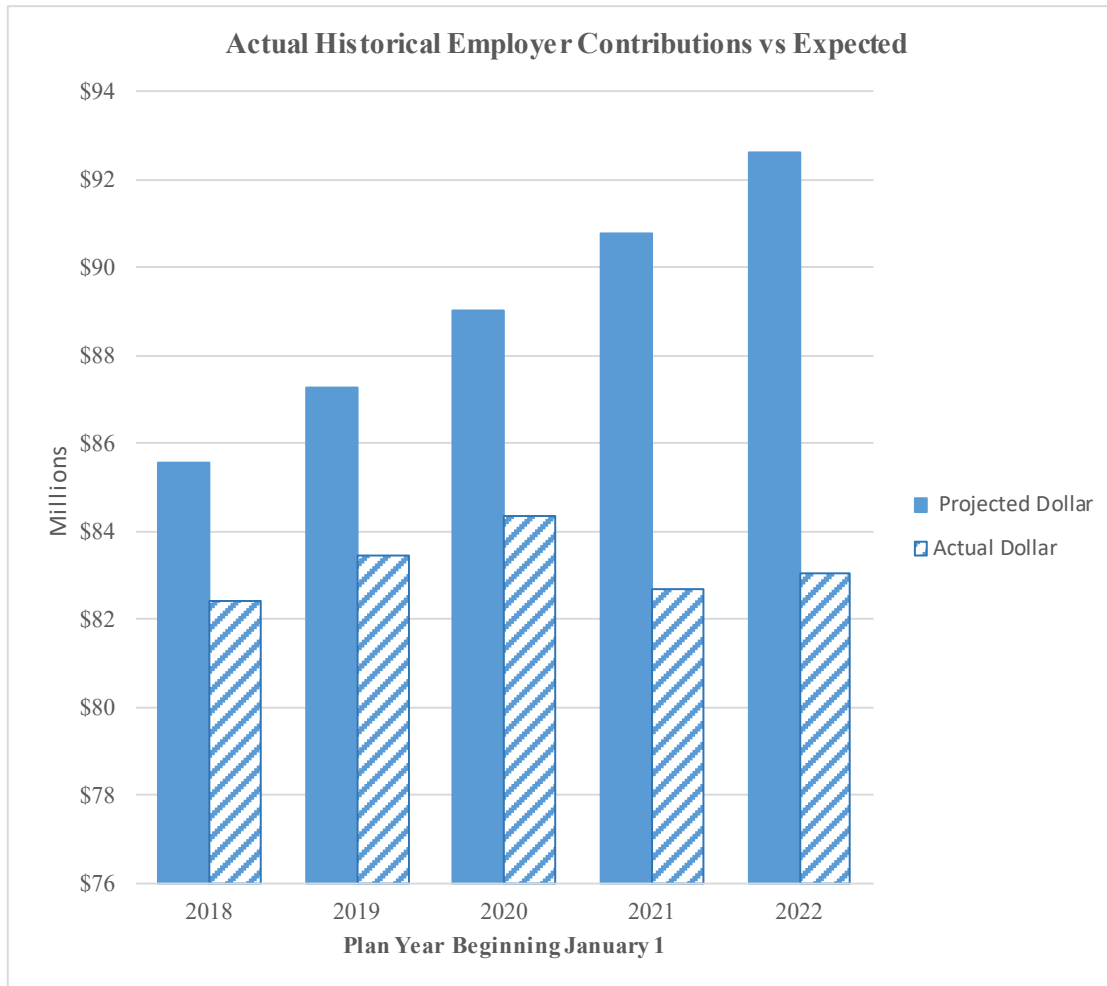
# Phase-in Illustration



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 assurance that the 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 and 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 distinguish them from pensions.[1] Employers are required to recognize the cost of pension benefits as they earn them, and the Governmental Accounting Standards Board (GASB) extends this requirement to OPEB.[2] While pensions have long been funded on an actuarial basis, OPEB have not. The change in accounting standards has focused attention on the costs of OPEB, but concerns about rising health-care costs and an aging public-sector workforce. The real issue is the change in accounting standards for such a funding policy and OPEB, as such, but rather the underlying budgetary and funding challenge that those accounting standards highlight. This challenge requires governments to ensure that both pension and OPEB are sustainable over the long term - that they are affordable to stakeholders, competitive, and sufficient to meet employment needs and that they may be reasonably expected to remain so.

GFOA recommends that every state and local government that offers defined benefit pensions and/or OPEB formally adopt a funding policy that provides reasonable assurance that the cost of those benefits will be funded in an equitable and sustainable manner. Such a retirement benefit 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)
<b>Total</b>			<b>\$ 1,190,869</b>		<b>\$ 90,094</b>

- 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*

# Amortization of UAAL:

## 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



# Amortization of UAAL:

## 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

### 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

Event	Period		Commentary
	Current	Proposed	
- <b>Initial 2019 UAAL</b>	25	21	21 years left as of 1.1.2023
- <b>Gains/Losses</b>	15	20	Reasonable for well funded plan; provides lower contribution volatility
- <b>Contribution</b>	15	5	Shorter period to avoid perpetual underfunding
- <b>Assumptions</b>	25	25	Within policy
- <b>Methods</b>	25	25	Same as assumptions
- <b>Plan Provisions</b>			
- 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
- <b>Fresh start</b>	None	25	No UAAL bases when 100% funded; establish new UAAL base over 25 years

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



# Amortization of UAAL:

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

# Amortization of UAAL:

## Can allow limited negative amortization

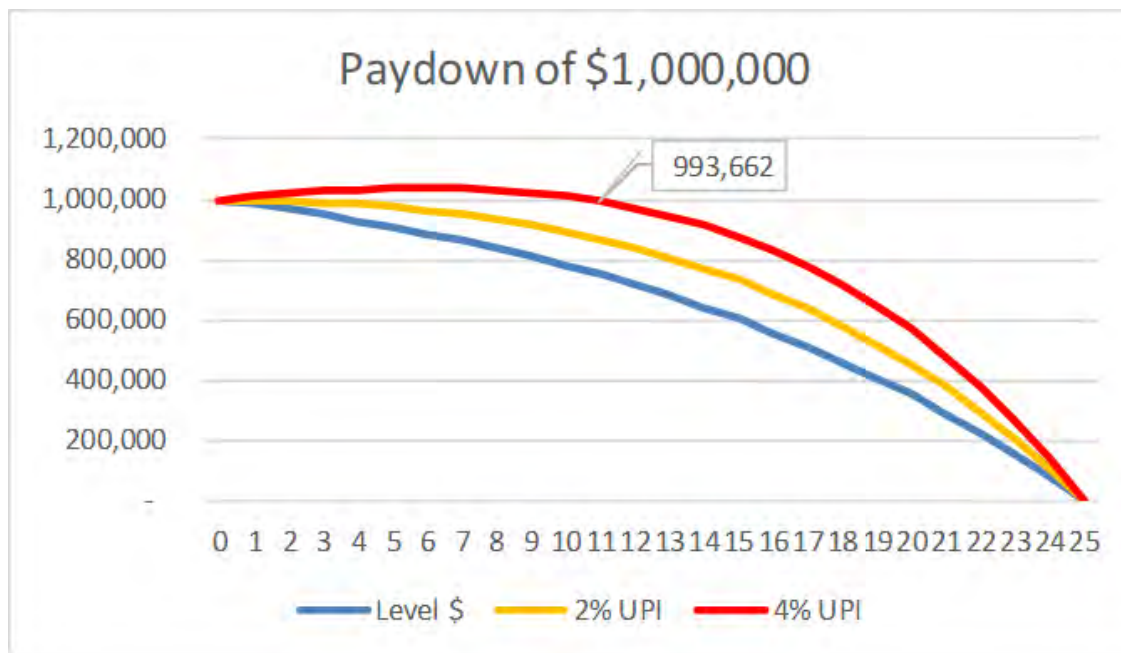
- Given the policy periods and UAAL payment increases, negative amortization is not anticipated
- An illustration of the concept is below
  - Note using a 4% UAAL payment increase over 25-year results in a higher UAAL until year 11
  - Negative amortization using a 2% UAAL payment increase does not result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

### GFOA Policy:

*Silent*

### CCA Policy:

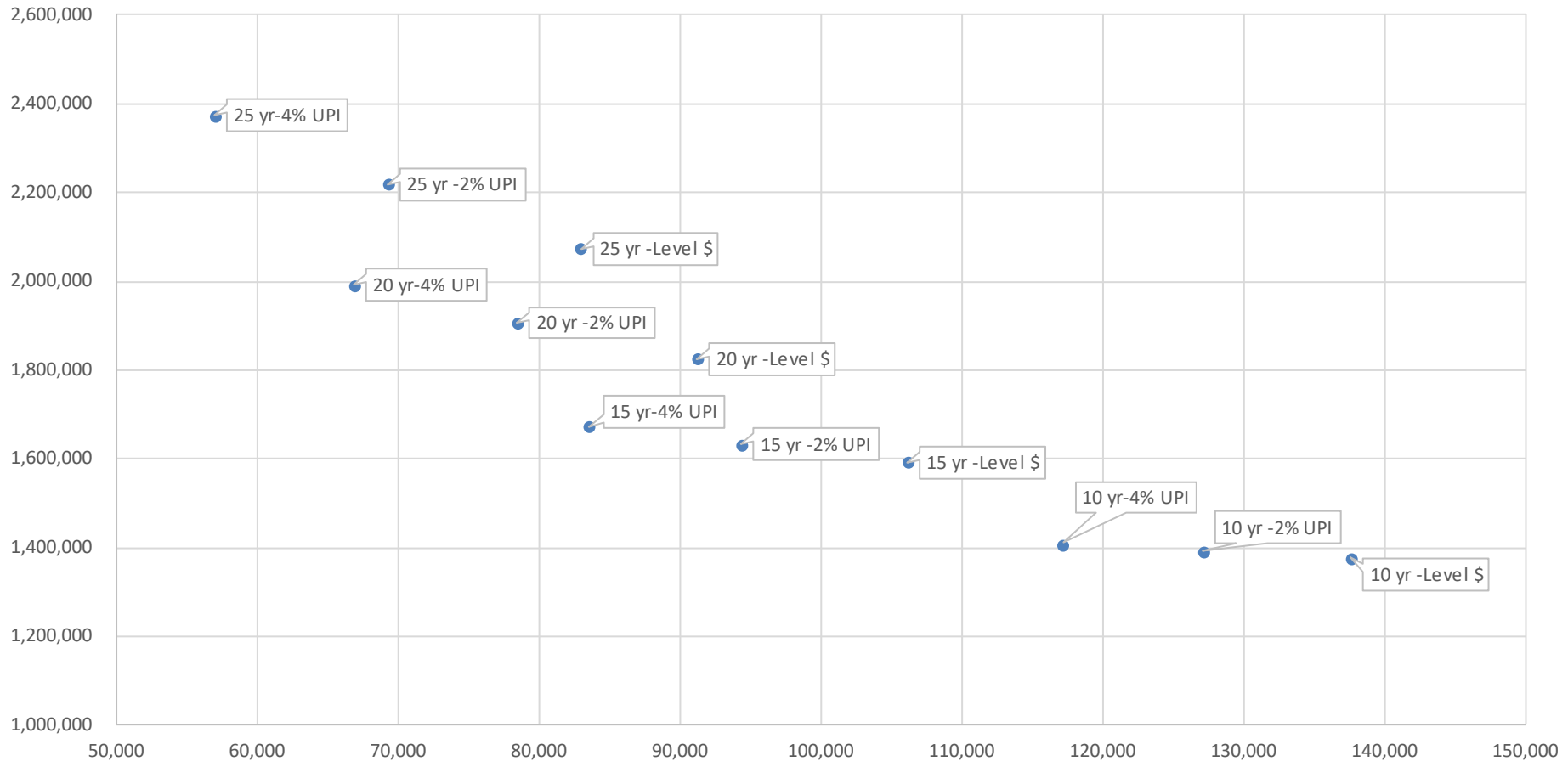
*Negative amortization is not precluded on Page 21*



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

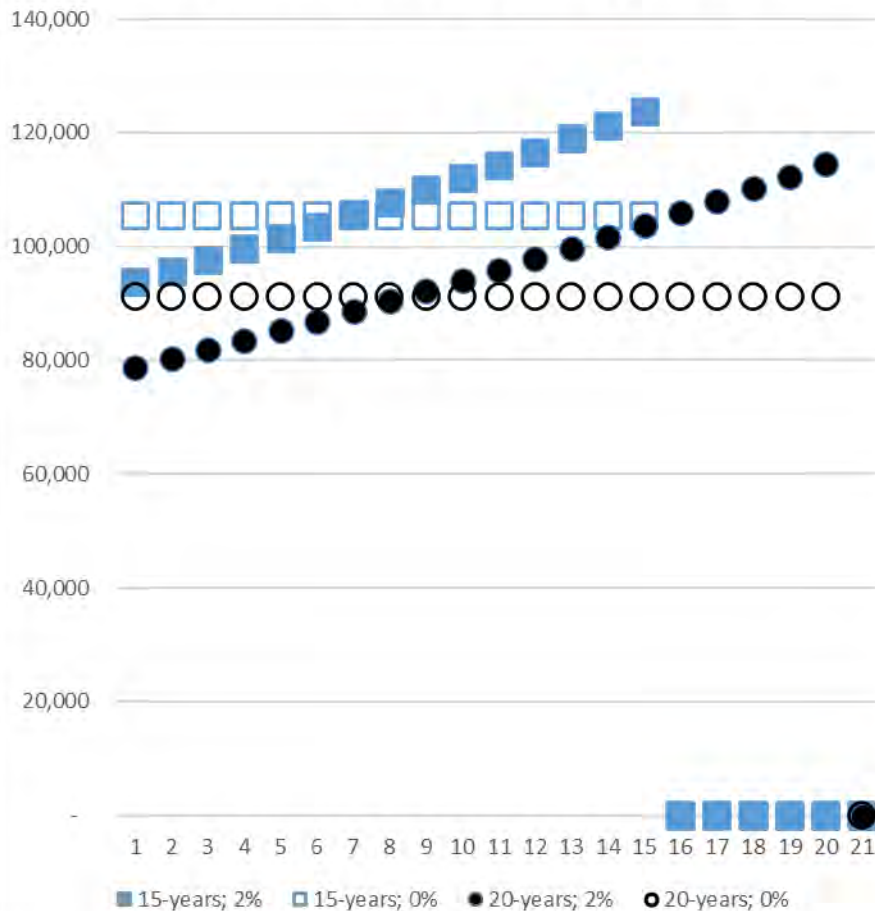


Initial and Total Payments under Various Periods and UPIs

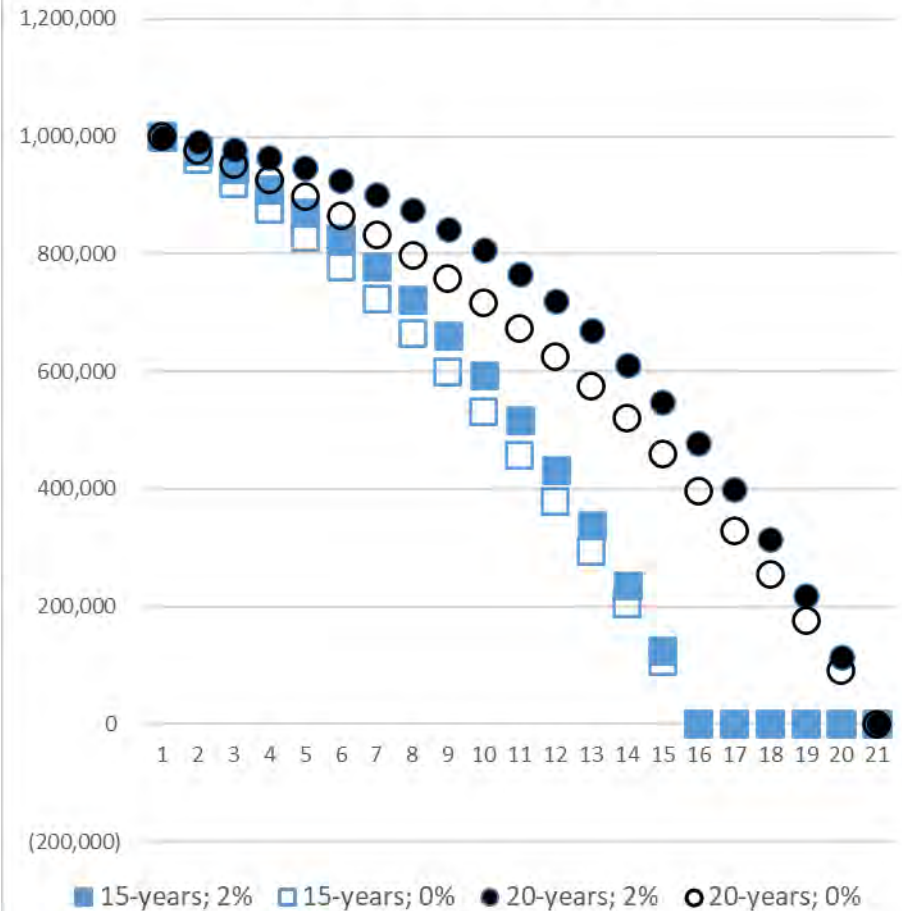


# Comparison of: 15-year to 20-year Period and 2% to 0% UAAL Payment Increase

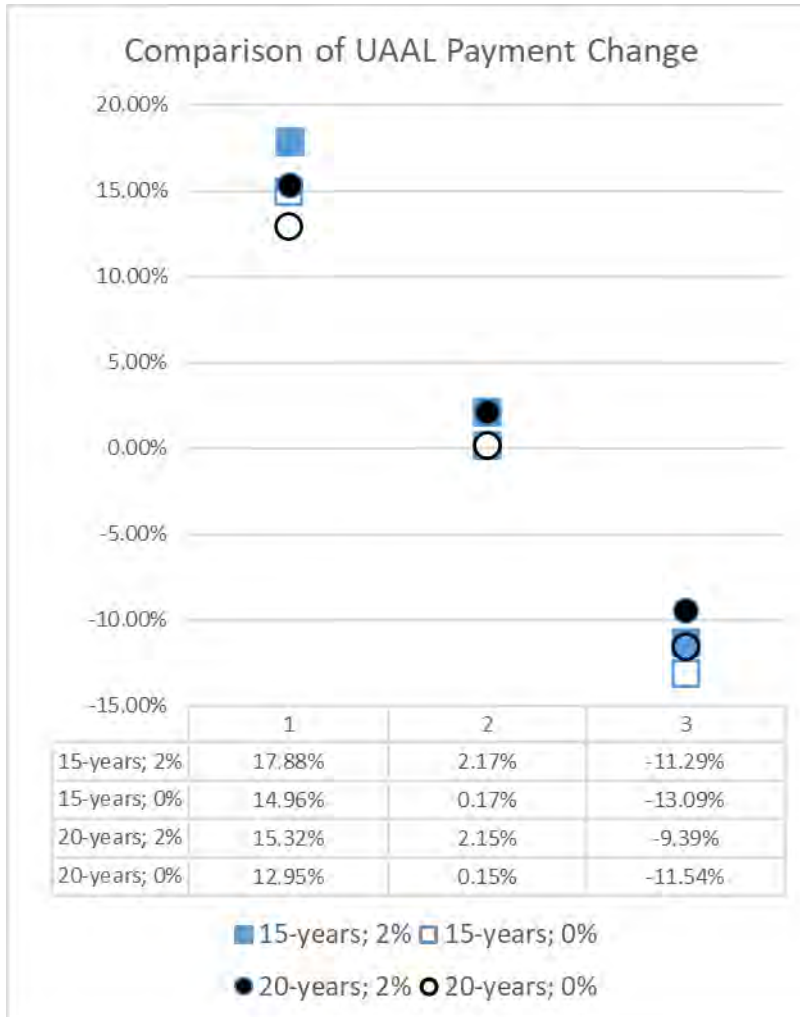
Comparison of UAAL Payments/(Credits)



Comparison of UAAL Paydown



# Longer Amortization Periods Provide for More Contribution Stability

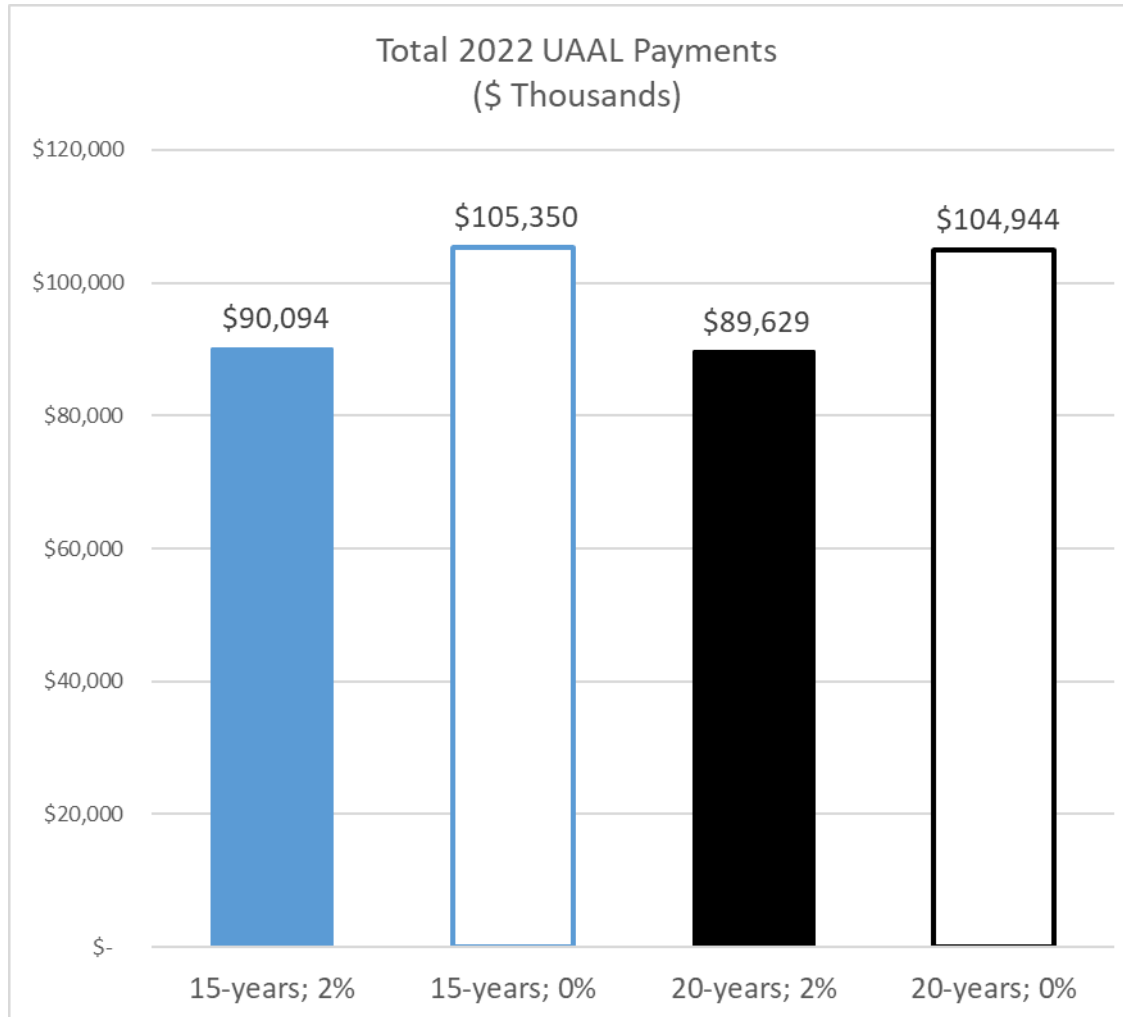


Retroactively applying a 20-year amortization period with level dollar and 2% increases and a 15-year period with level dollar results in the increases shown. Longer periods provide for less contribution year to year change, but also extends the period to fund.

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





**Cavanaugh Macdonald**  
CONSULTING, LLC

*The experience and dedication you deserve*

# City of Milwaukee Employee's Retirement System Board Presentation

## **Experience Study Results: Economic Assumptions**

**Presented By: Cavanaugh Macdonald Consulting**

**August 24, 2022**



# 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 recommendations 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
- Payroll Growth/UAAL payment increase

### Demographic

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

## Who Selects Them?

### Economic

- Board
- Actuary
- Other Advisors

### Demographic

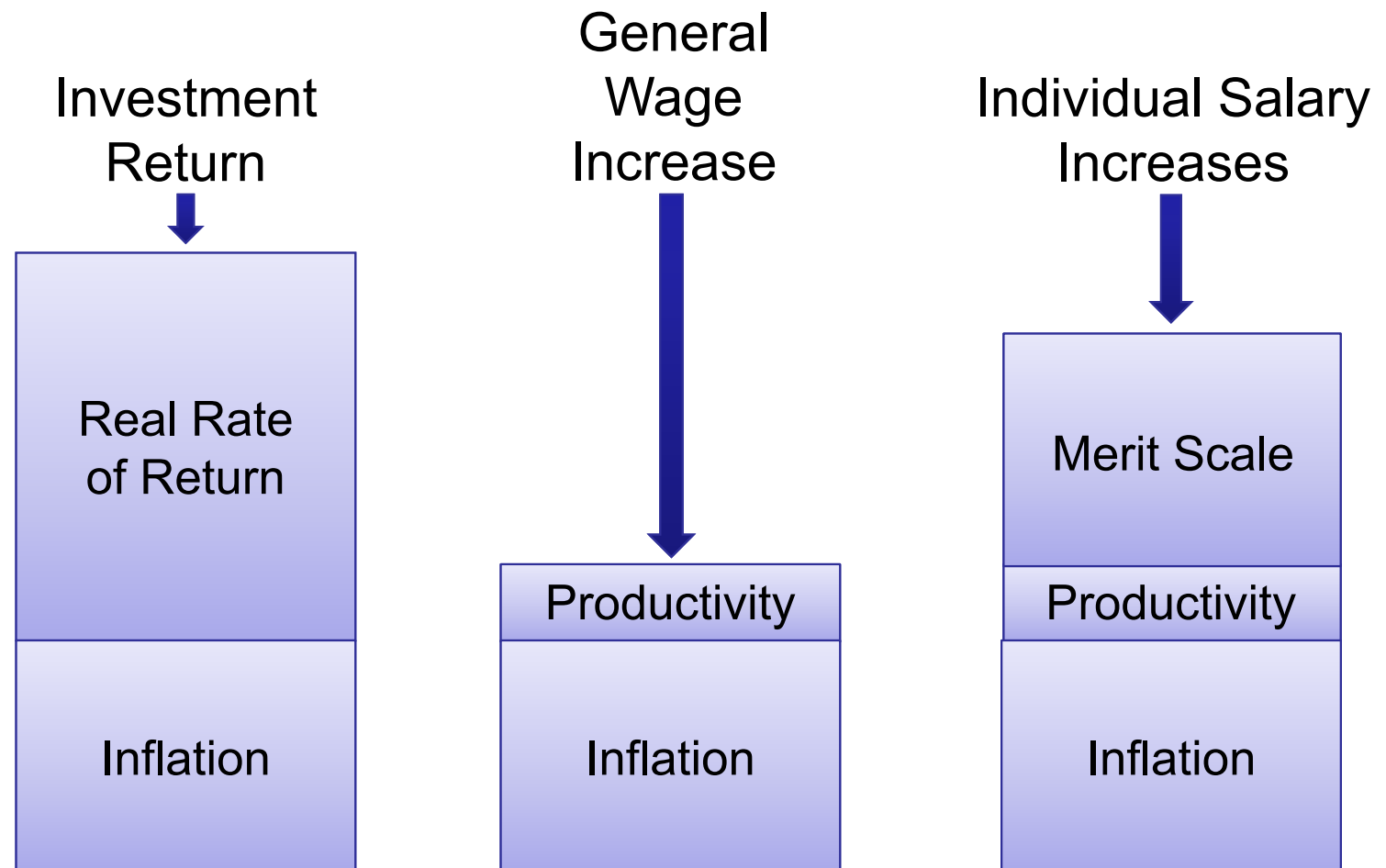
- Mostly Actuary
- Board Approves

# 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



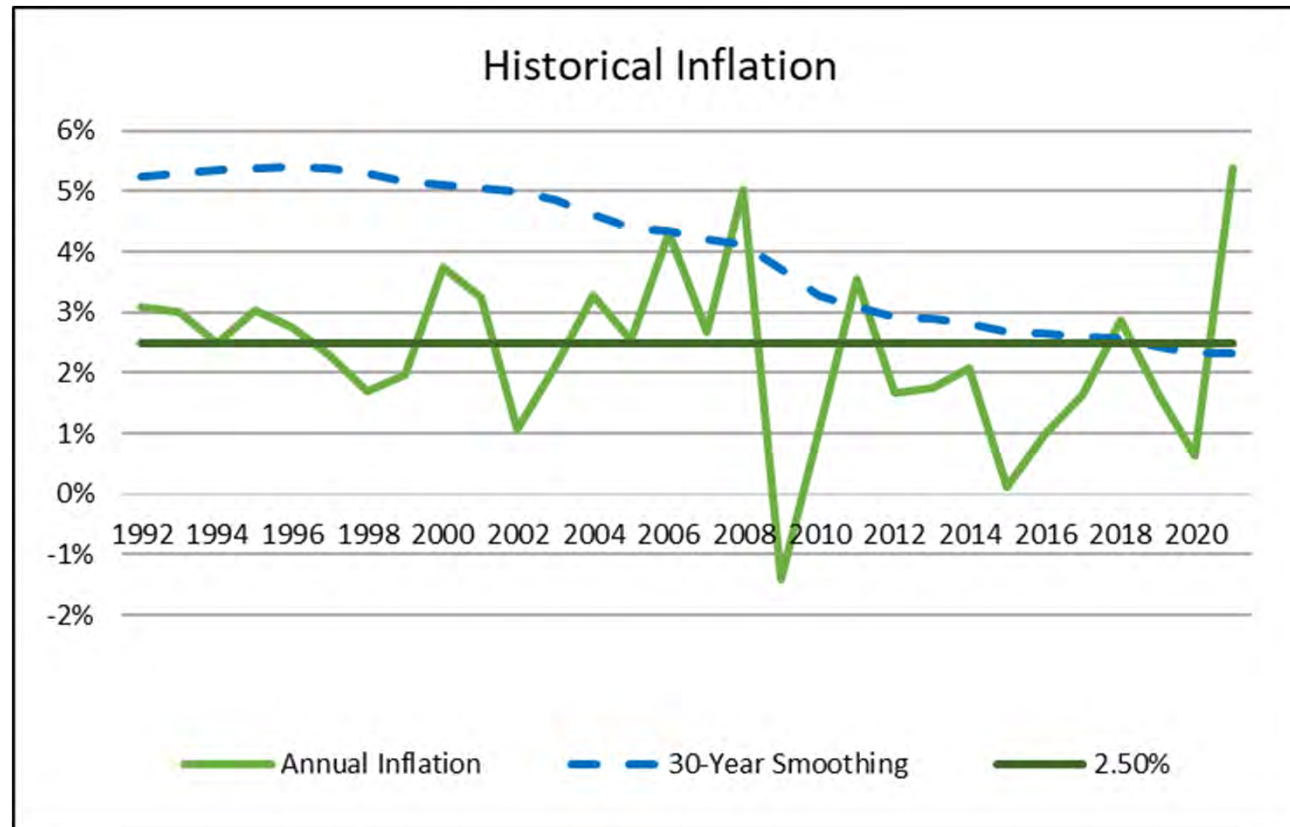
# Inflation Assumption



- 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



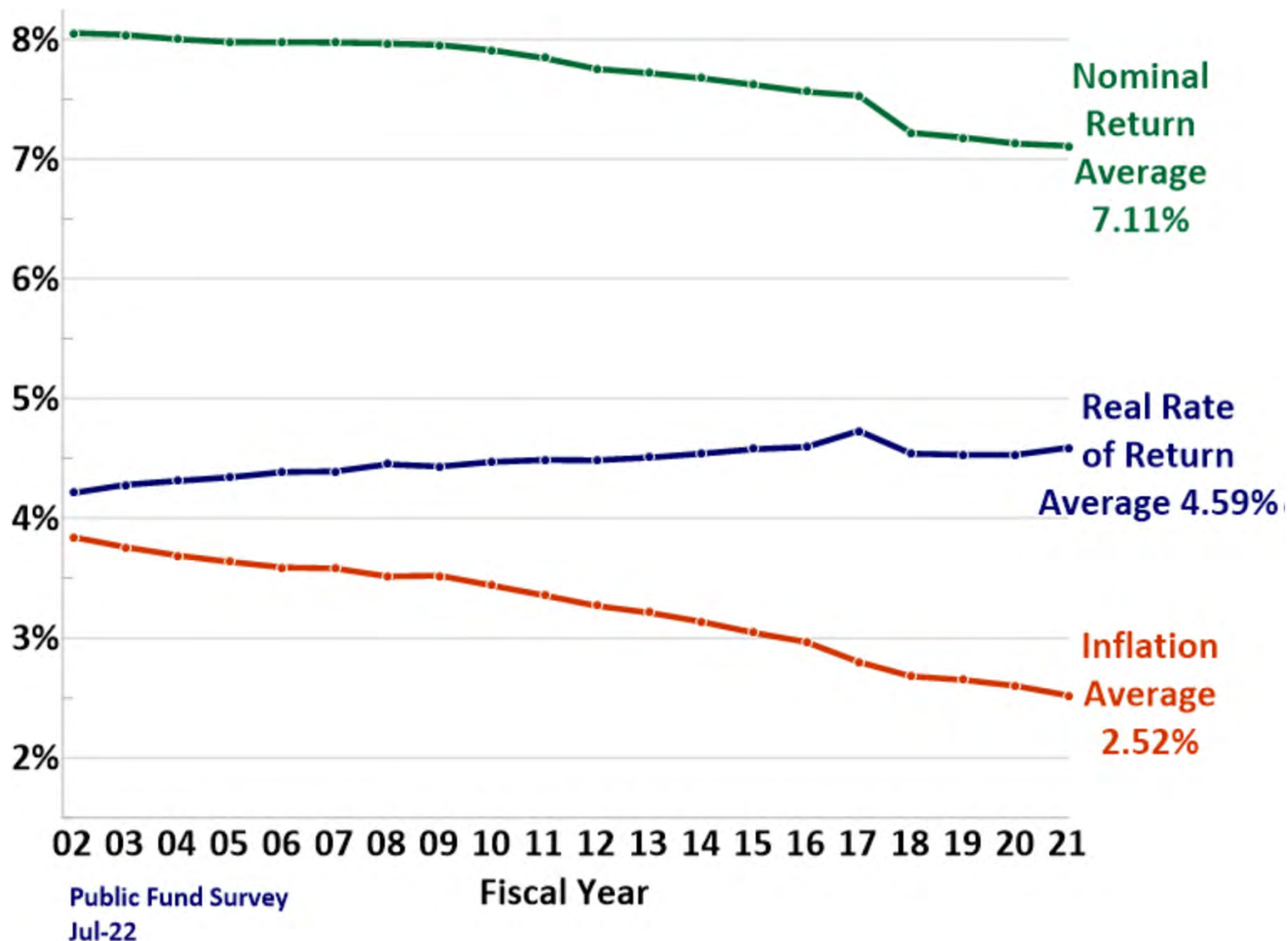
- Financial markets: “breakeven rate of inflation” is difference between yields on fixed coupon Treasury bonds and inflation-protected Treasuries (TIPS)
  - December 2021: difference on 30-year bonds was 2.34%
  - July 2022: 30-year was 2.29%, 5-year was 2.73%
- Philadelphia FED Q2 2022 Survey of Professional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

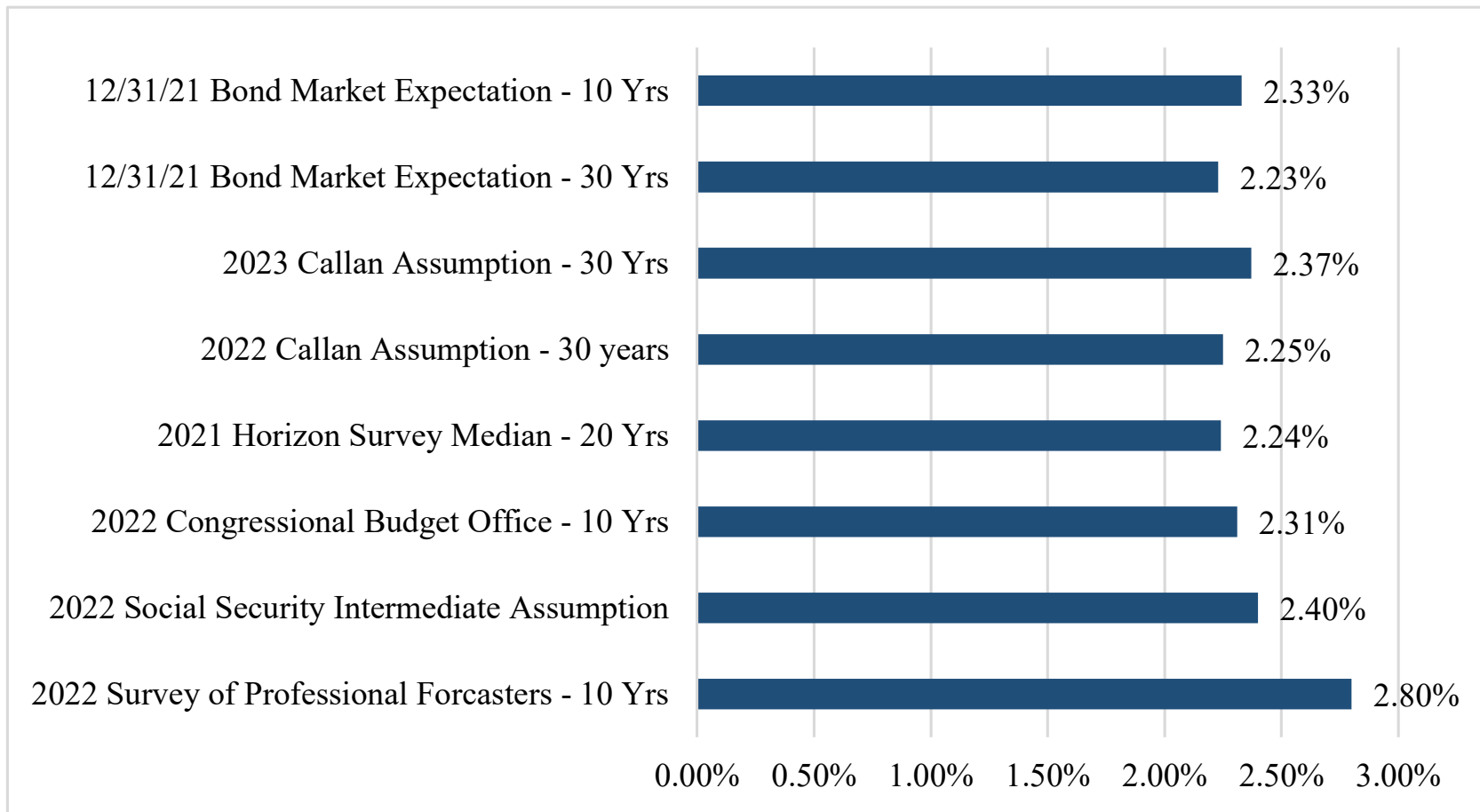


# Recent Inflation Issues



- 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

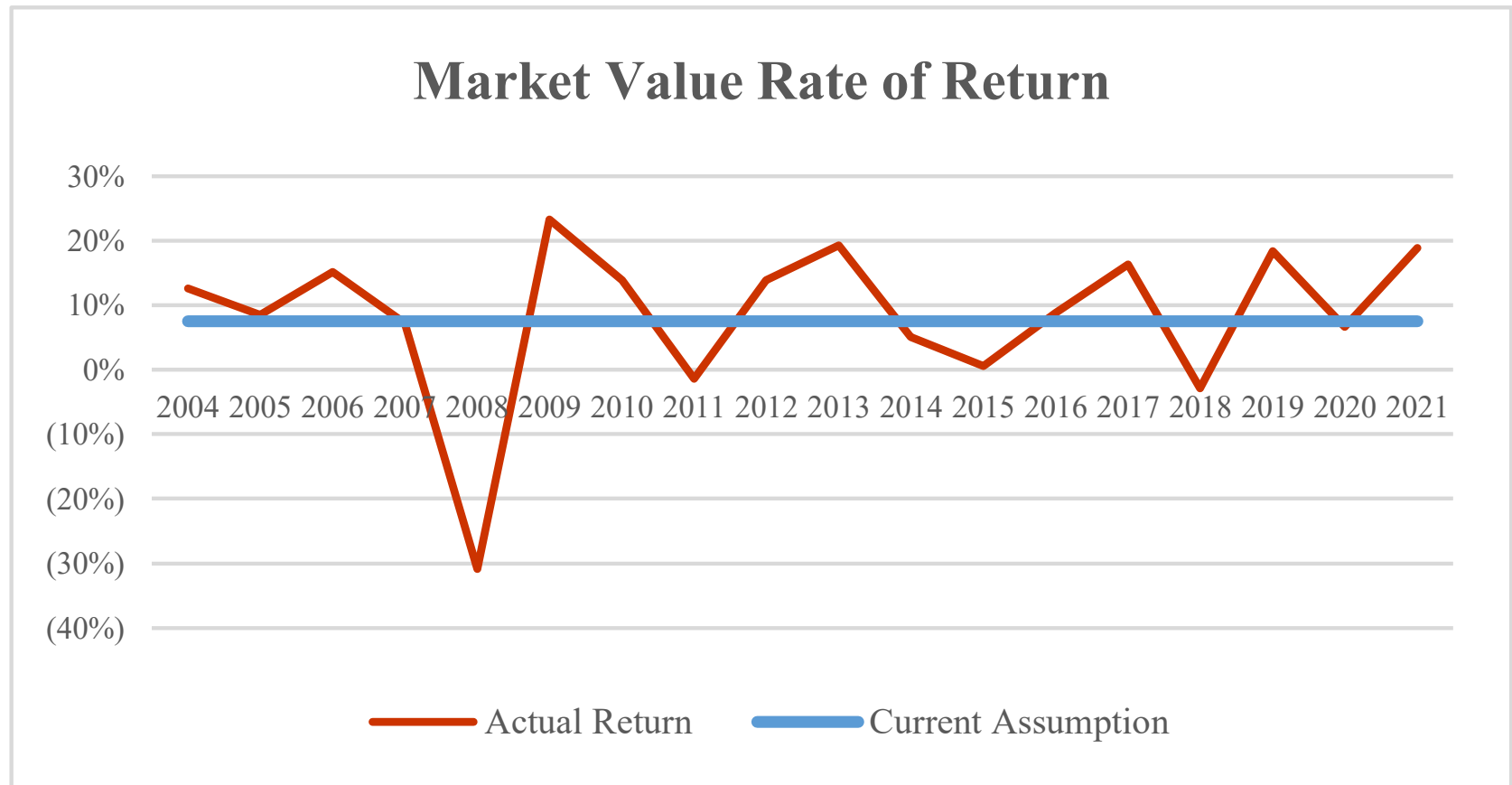


# Investment Return Assumption



- 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%

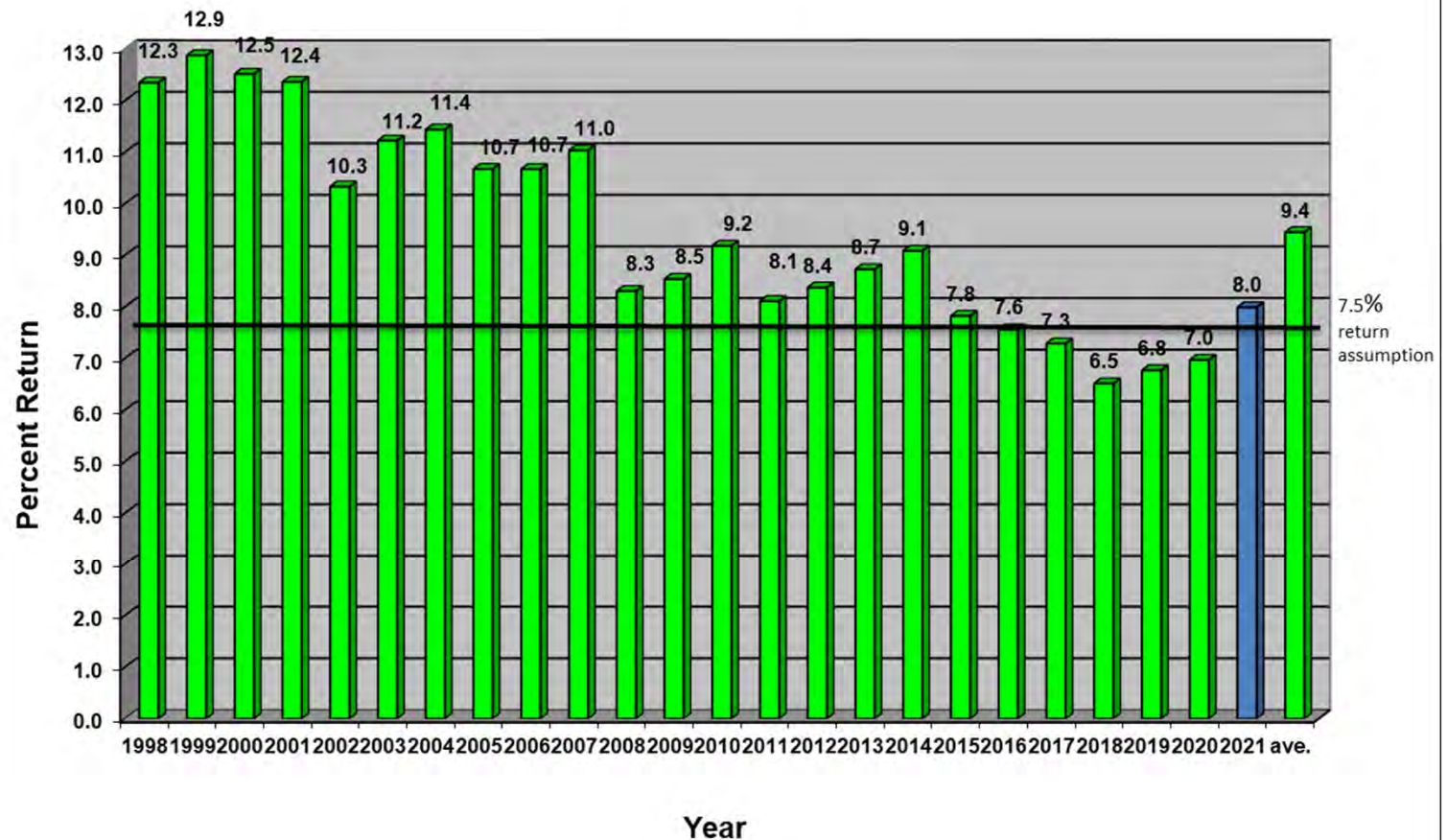
Last 10 years: 10.08%

Last 20 years: 7.49%

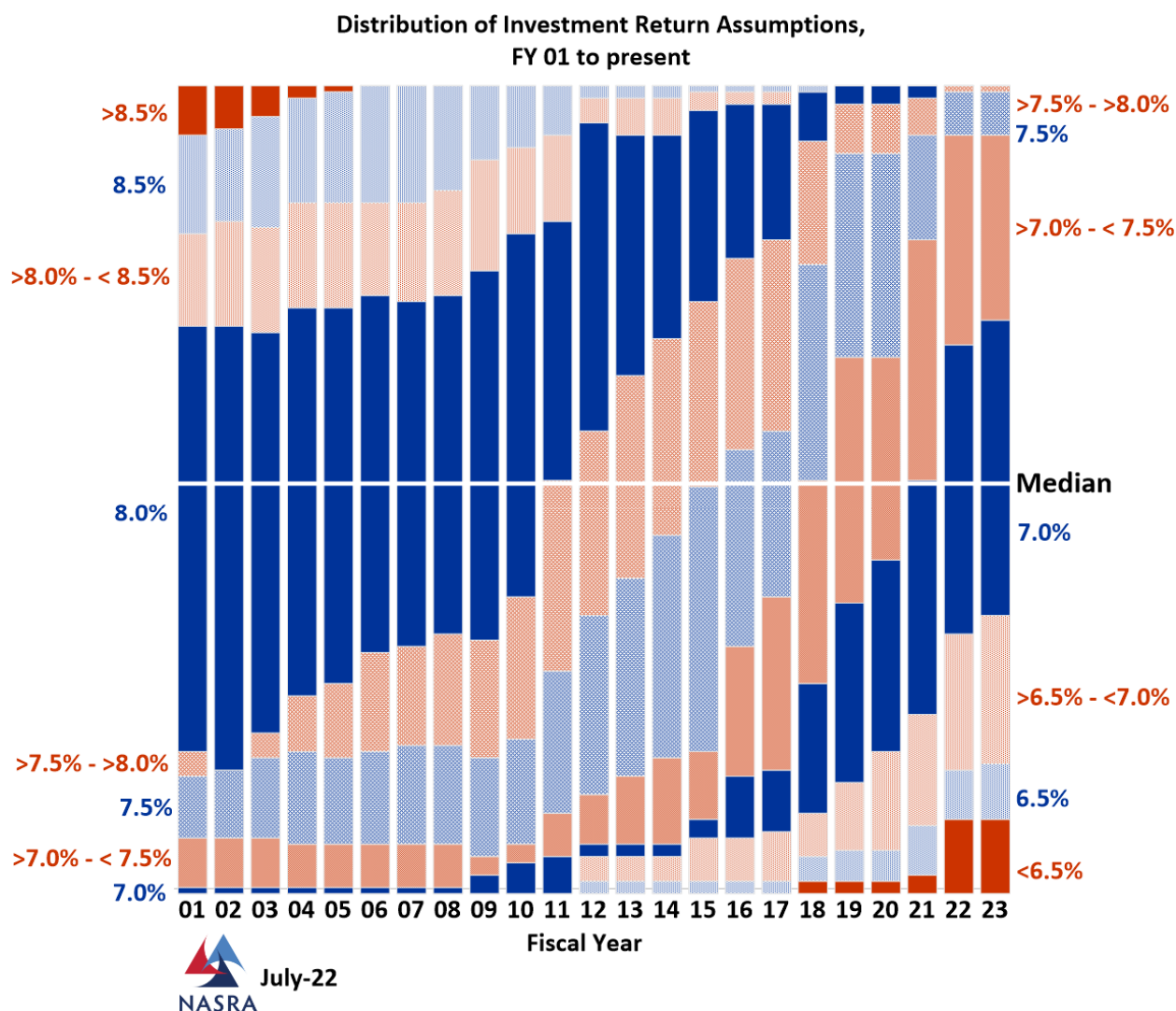
# CMERS Historical Fiscal Year Returns



ERS 20-Year Rolling Average Investment Returns  
1978-2021



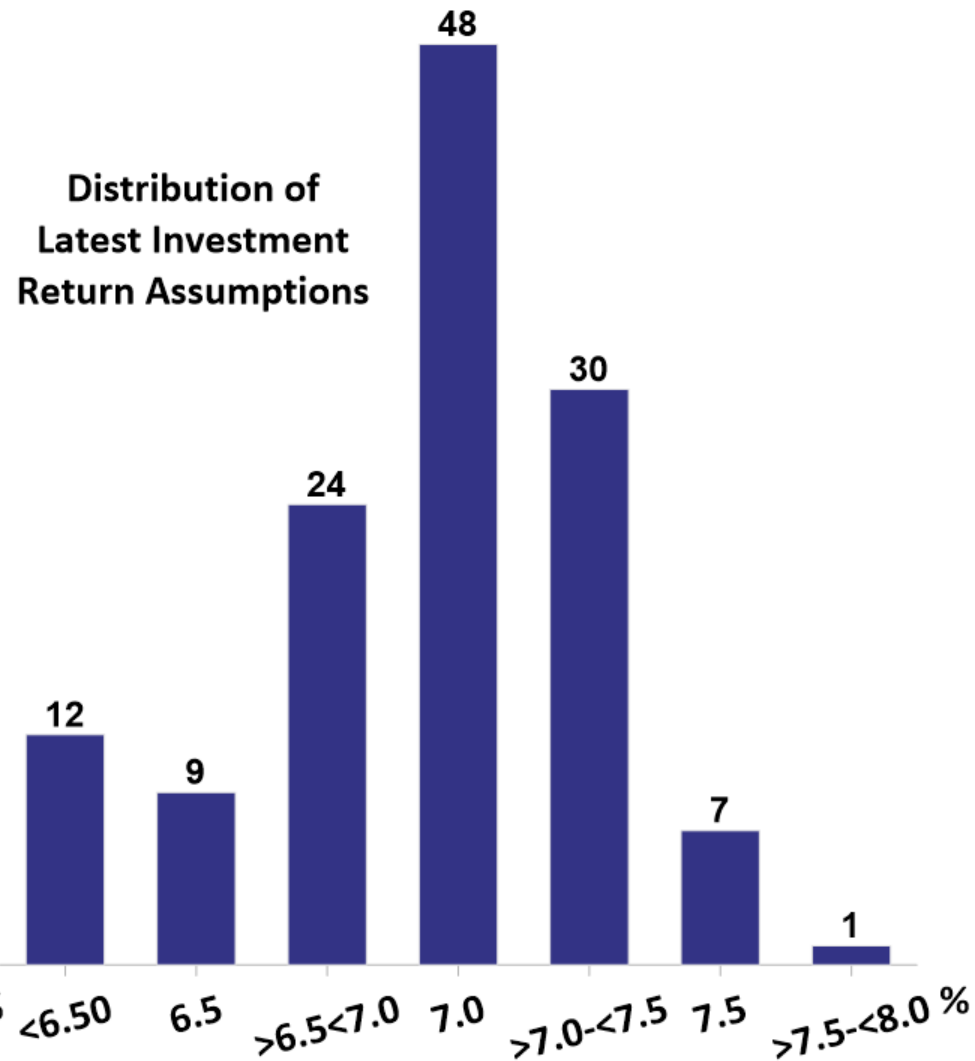
# Peer Group Comparison



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

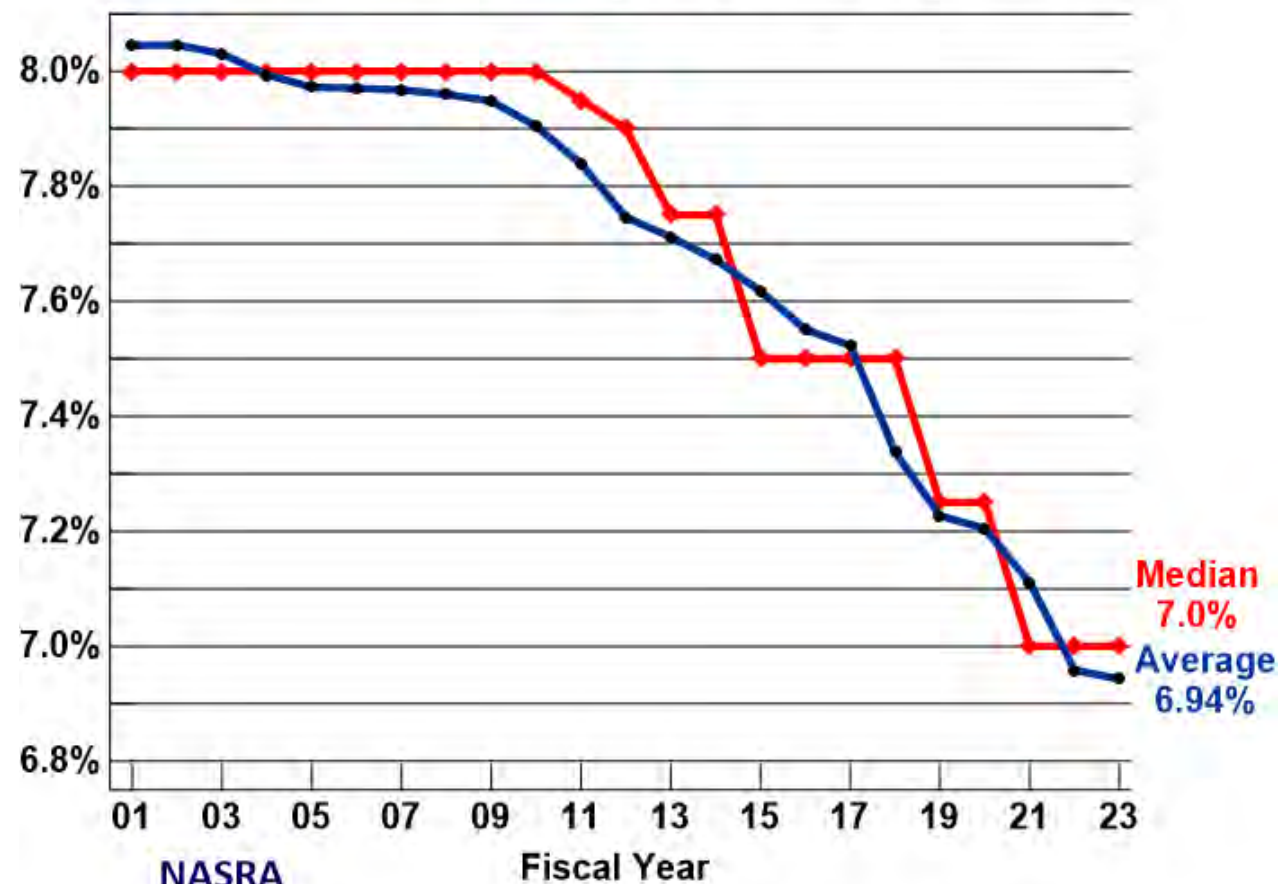


NASRA  
July-22

# Change in Average and Median Investment Return Assumptions



Change to Average and Median Investment Return Assumption, FY 01 to present



NASRA  
July-22



# 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 = 50<sup>th</sup> 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>	<u>2.25%</u>	<u>2.25%</u>	<u>2.25%</u>	<u>2.50%</u>	<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



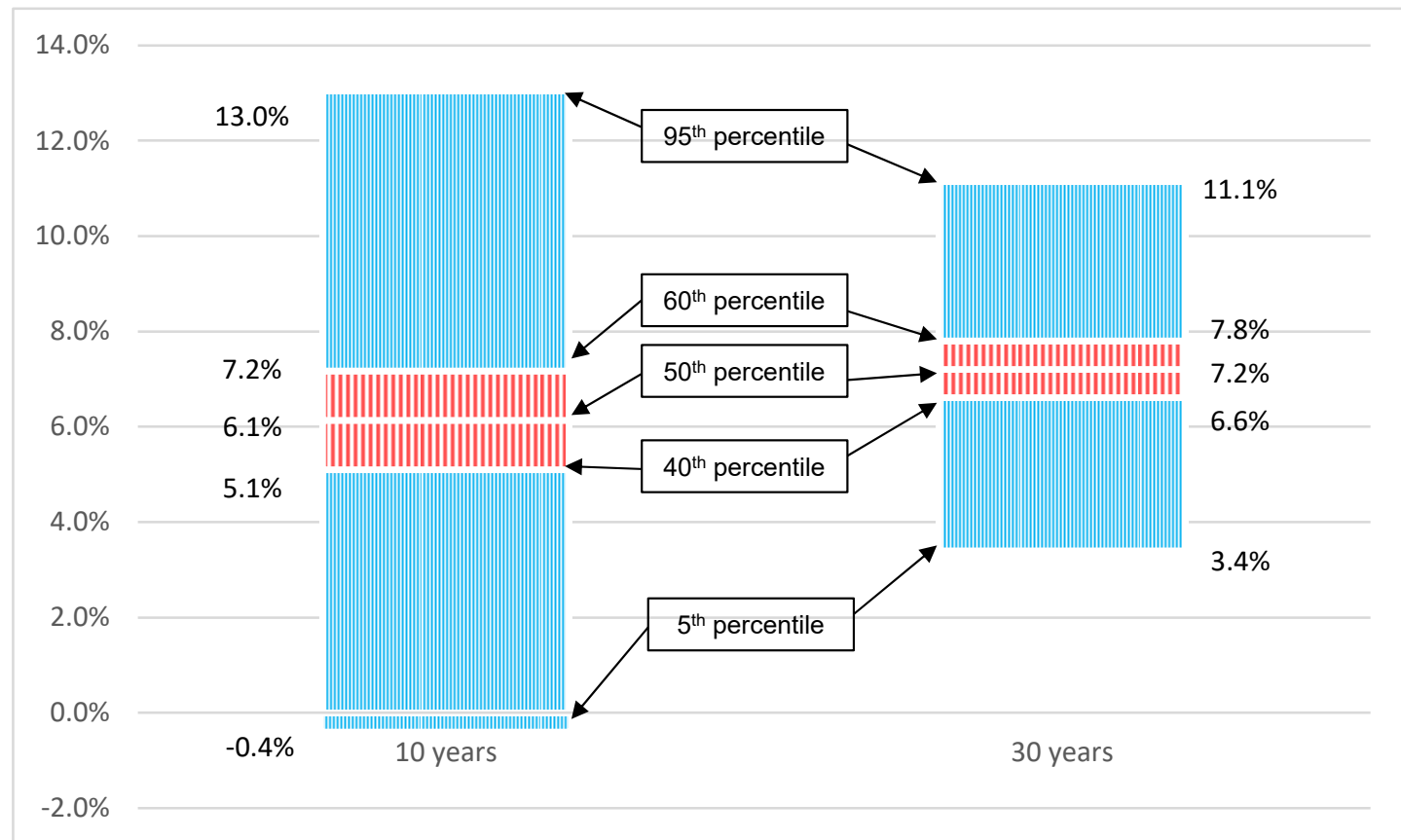
We believe it is prudent to start to reflect lower expected returns to increase the likelihood of meeting/exceeding the assumed return over time.

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

Effective with the January 1, 2023 valuation.

# Considerations for Expected Return

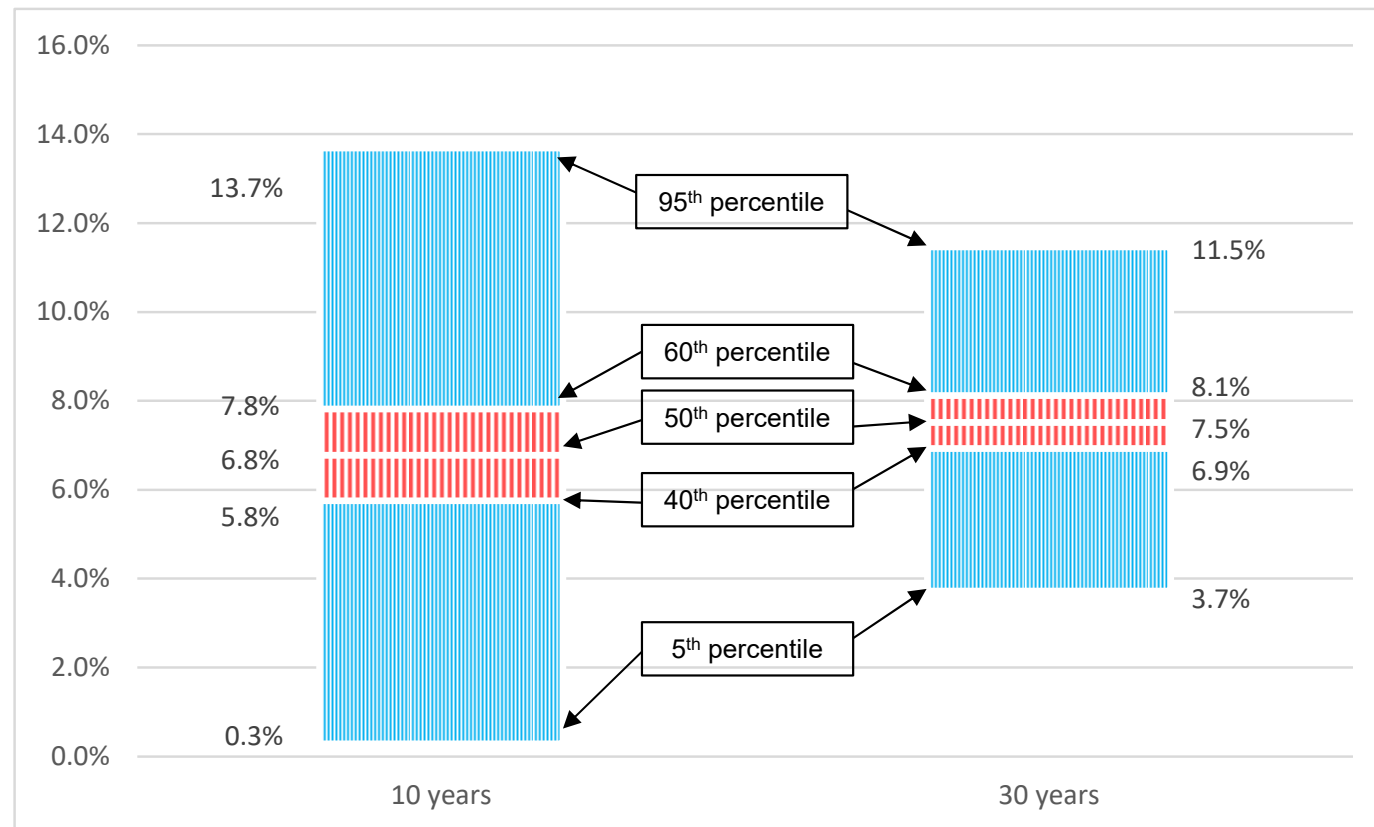
## (Using Callan's Q1 2022 Expectations)



The expected outcome is the 50<sup>th</sup> 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.

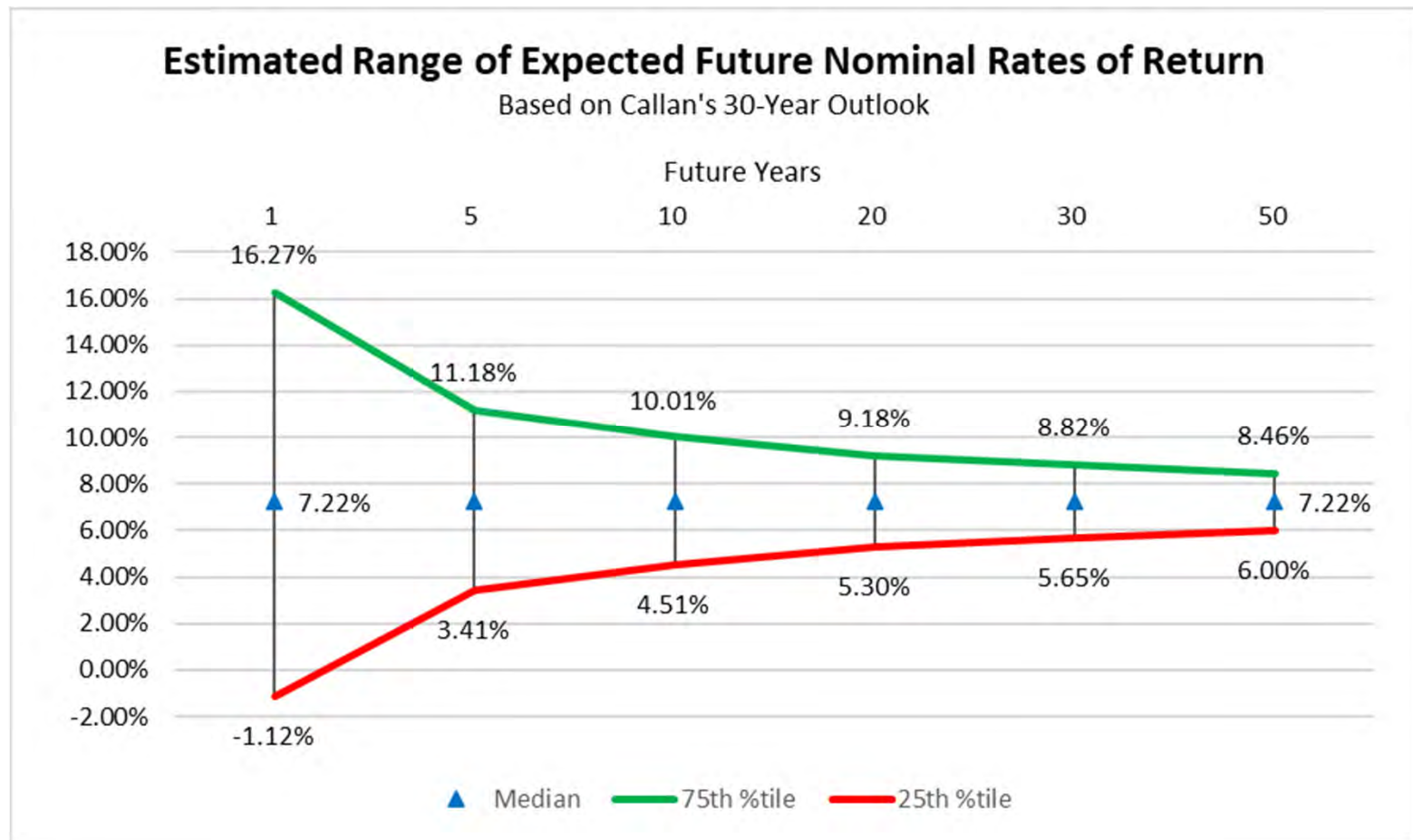
# Considerations for Expected Return

## (Using Callan's Preliminary 2023 Expectations)



The expected outcome is the 50<sup>th</sup> 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.

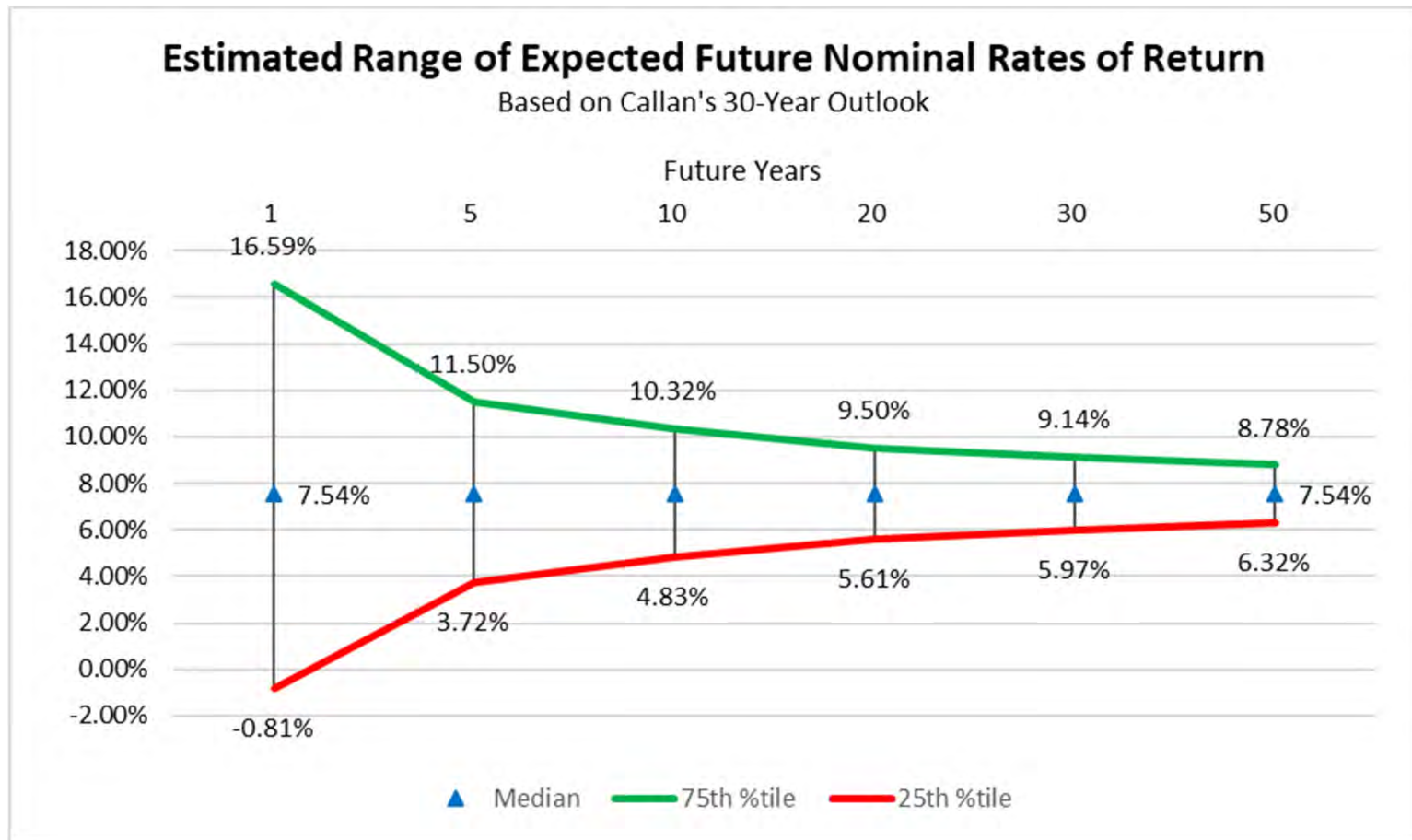
# Distribution of Expected Future Nominal Returns (Using Callan's Q1 2022 Expectations)



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:
  - *50<sup>th</sup> percentile return: 7.54%*
  - *45<sup>th</sup> 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

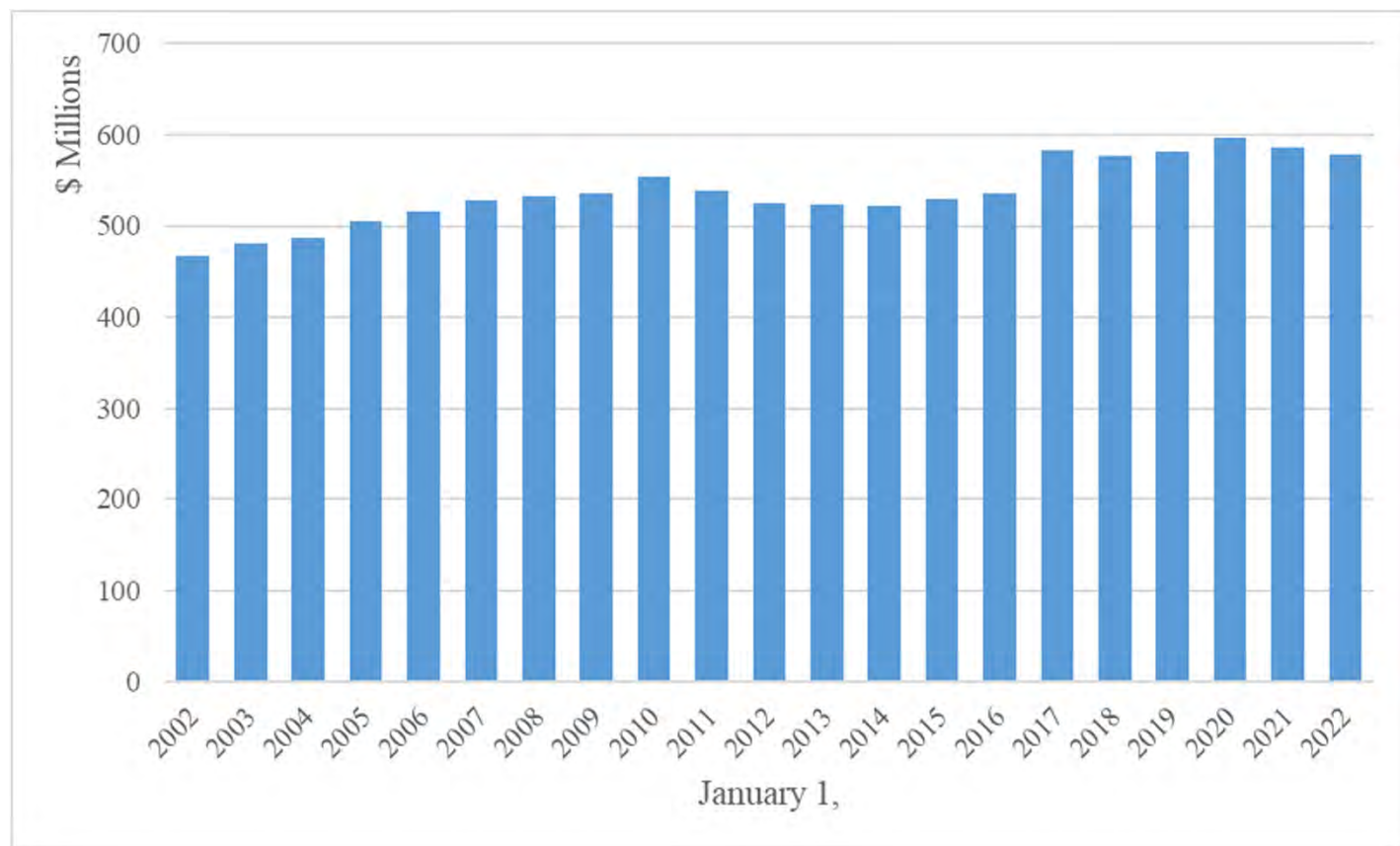


- Reduction in number of active members in CMERS in the past has resulted in lower growth in covered payroll than expected based on the current assumption.
  - Future trend in size of membership
  - Reflect in assumption or address in modifications to Stable Contribution Policy
- Recommend retaining 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 growth <ul style="list-style-type: none"> <li>• General employees</li> <li>• Police/Fire</li> </ul>	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



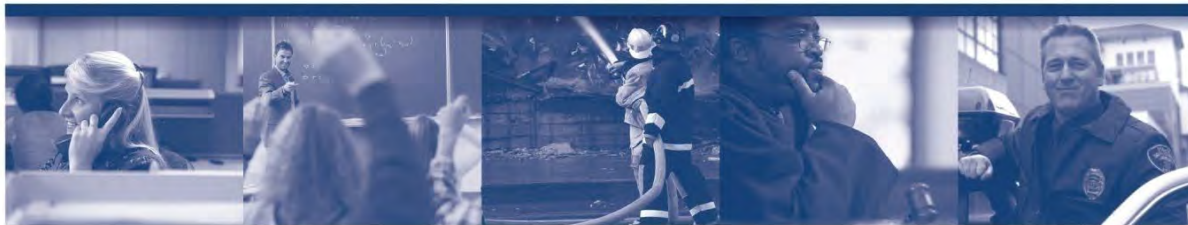
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# City of Milwaukee Employee's Retirement System Board Presentation

## Experience Study Results: Demographic Assumptions

**Presented By: Cavanaugh Macdonald Consulting**  
**September 28, 2022**





# 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

- 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 allocation 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.

- 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 recommendations 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 based 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 number of members changing membership status (decrements) during study period, tabulated by groupings that may include age, duration, gender and plan
- **Step 2:** Determine number of members expected to change status by multiplying membership statistics (called exposures) by the expected rates of decrement
- **Step 3:** Compare number of actual decrements to number 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 Weighted</u>
8	\$ 20,000	5	\$ 800,000
<u>2</u>	80,000	20	<u>3,200,000</u>
10			4,000,000

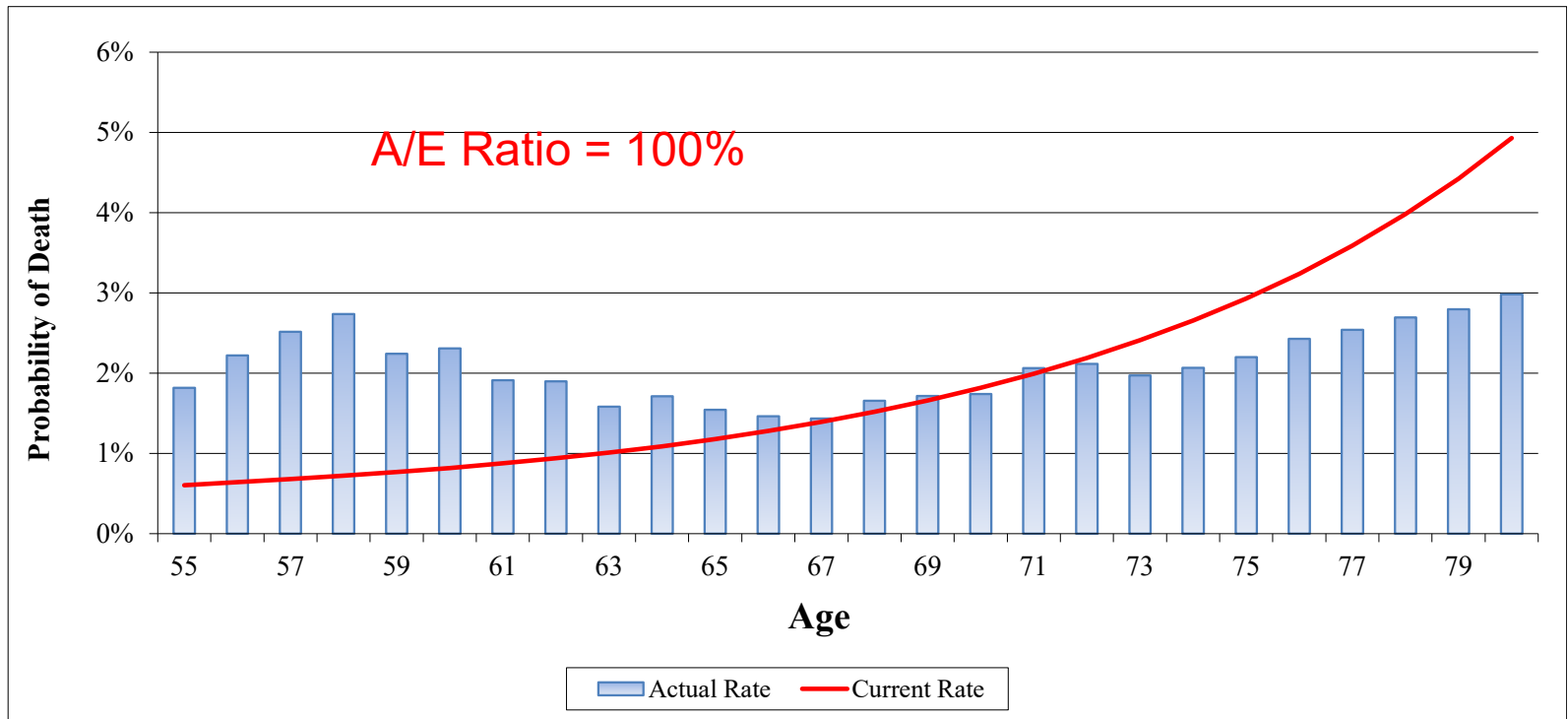
- Actual Experience: 1 member with \$80,000 and 20 years retires

	<u>Count Basis</u>	<u>Liability 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)



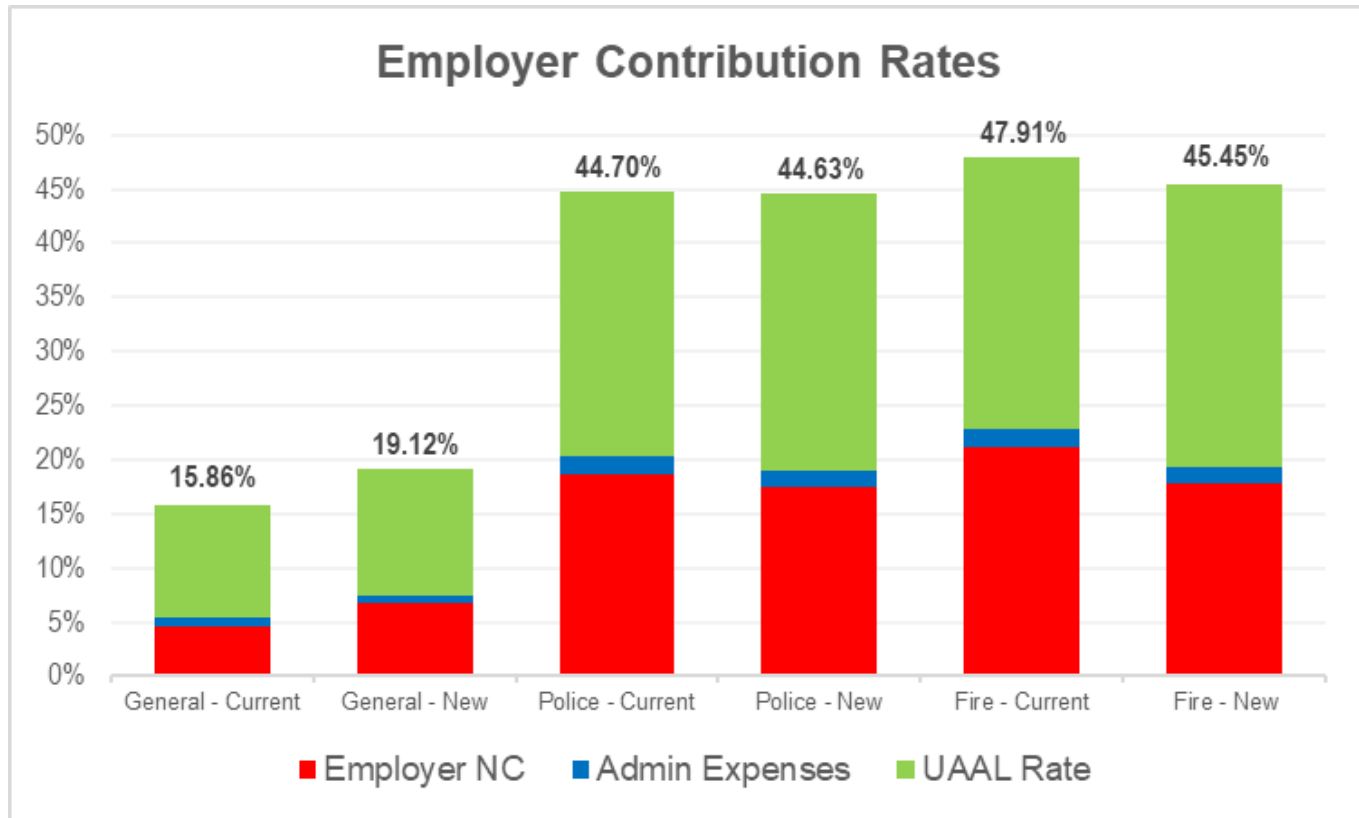
(\$ in millions)	Baseline	All Demographic Changes	Demographic Changes and 7.40%
Actuarial Accrued Liability	\$6,876	\$6,912	\$6,987
Actuarial Value of Assets	<u>\$5,735</u>	<u>\$5,735</u>	<u>\$5,735</u>
Unfunded Actuarial Accrued Liability (UAAL)	\$1,141	\$1,177	\$1,252
Funded Ratio	83.41%	82.97%	82.08%
<b>Combined Fund Contribution Rates</b>			
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>
<b>Employer Contribution Rate</b>	<b>26.68%</b>	<b>27.12%</b>	<b>28.35%</b>

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.

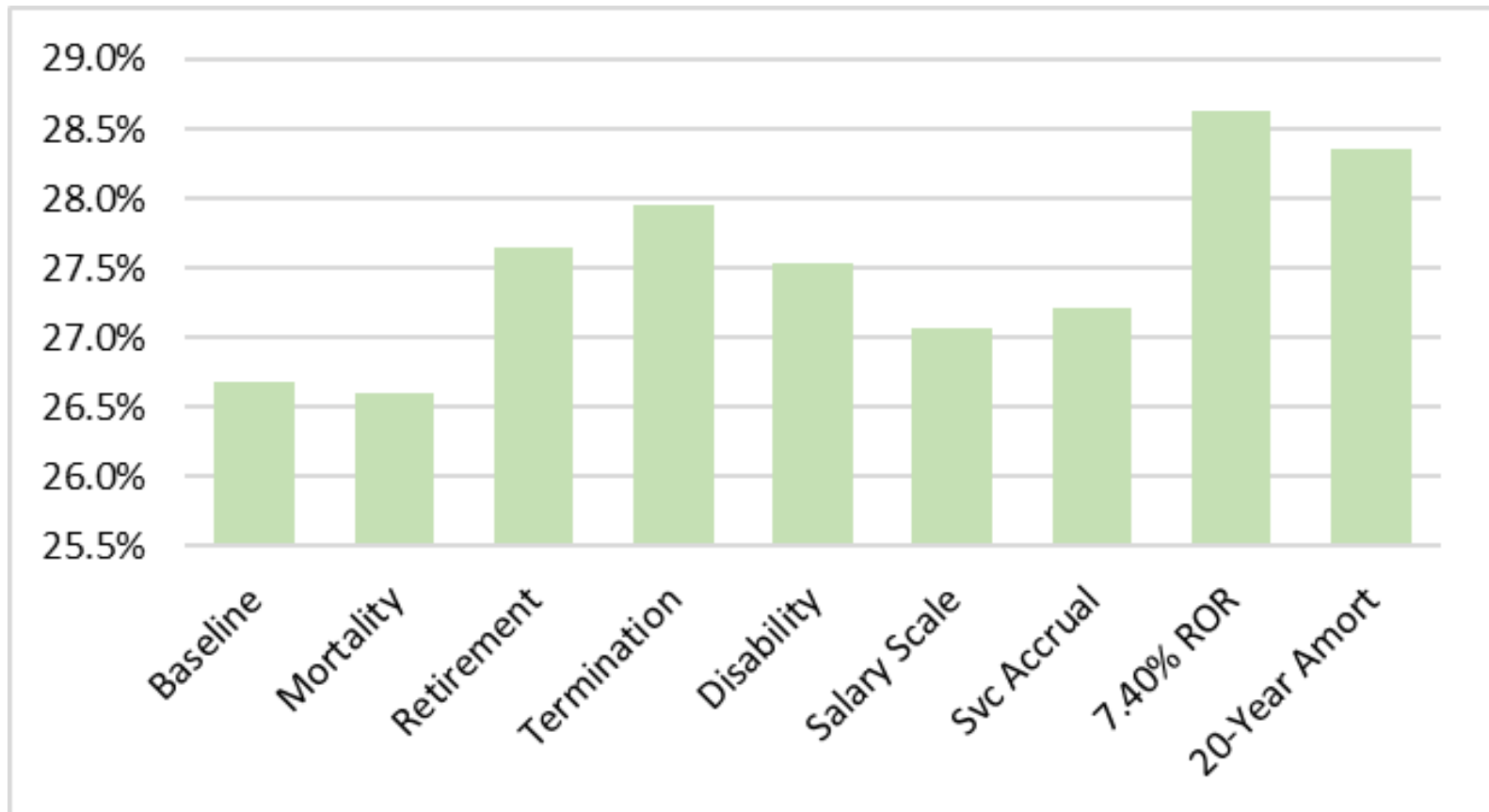
# Assumption Change Impact by Group



(\$ millions)	General			Police			Fire		
	Current	New	Increase	Current	New	Increase	Current	New	Increase
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:

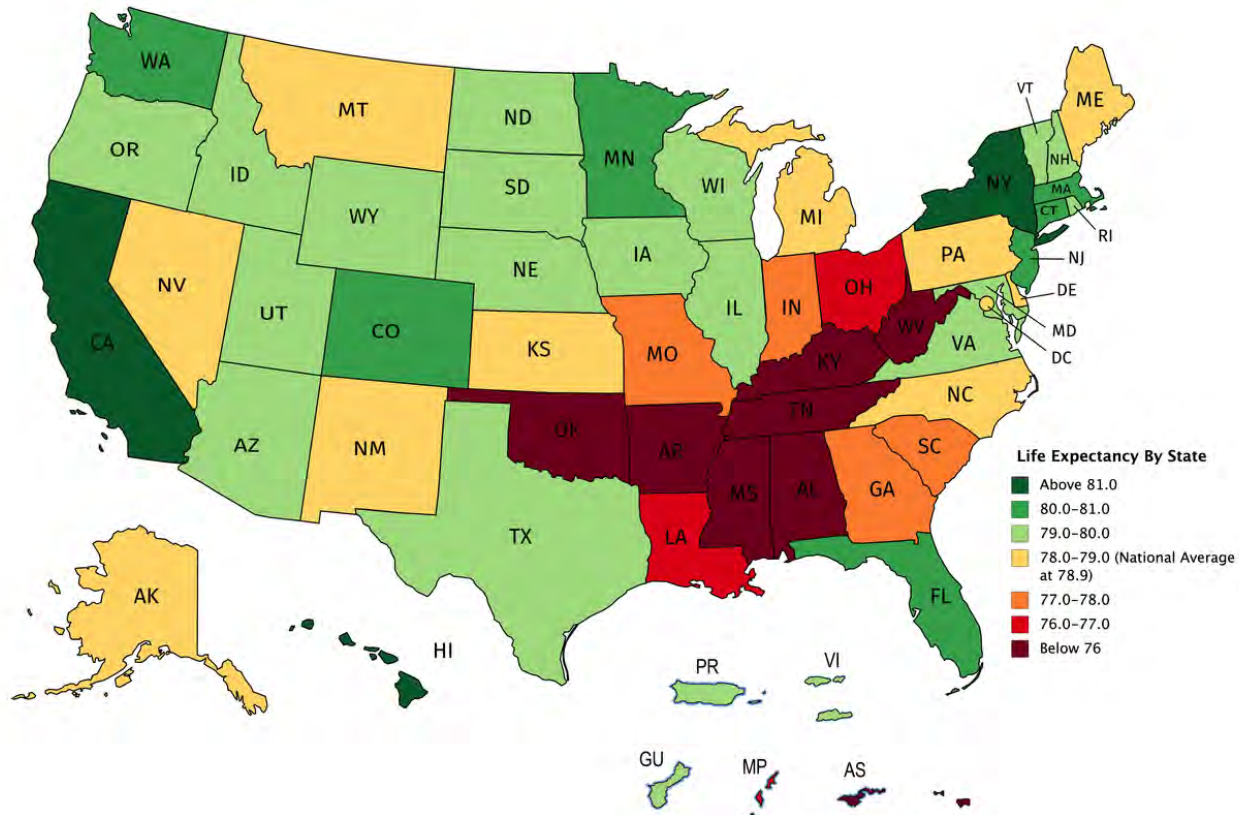
- geography,
- marital status,
- education,
- income and
- sex.

# 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



Created with mapchart.net ©

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.

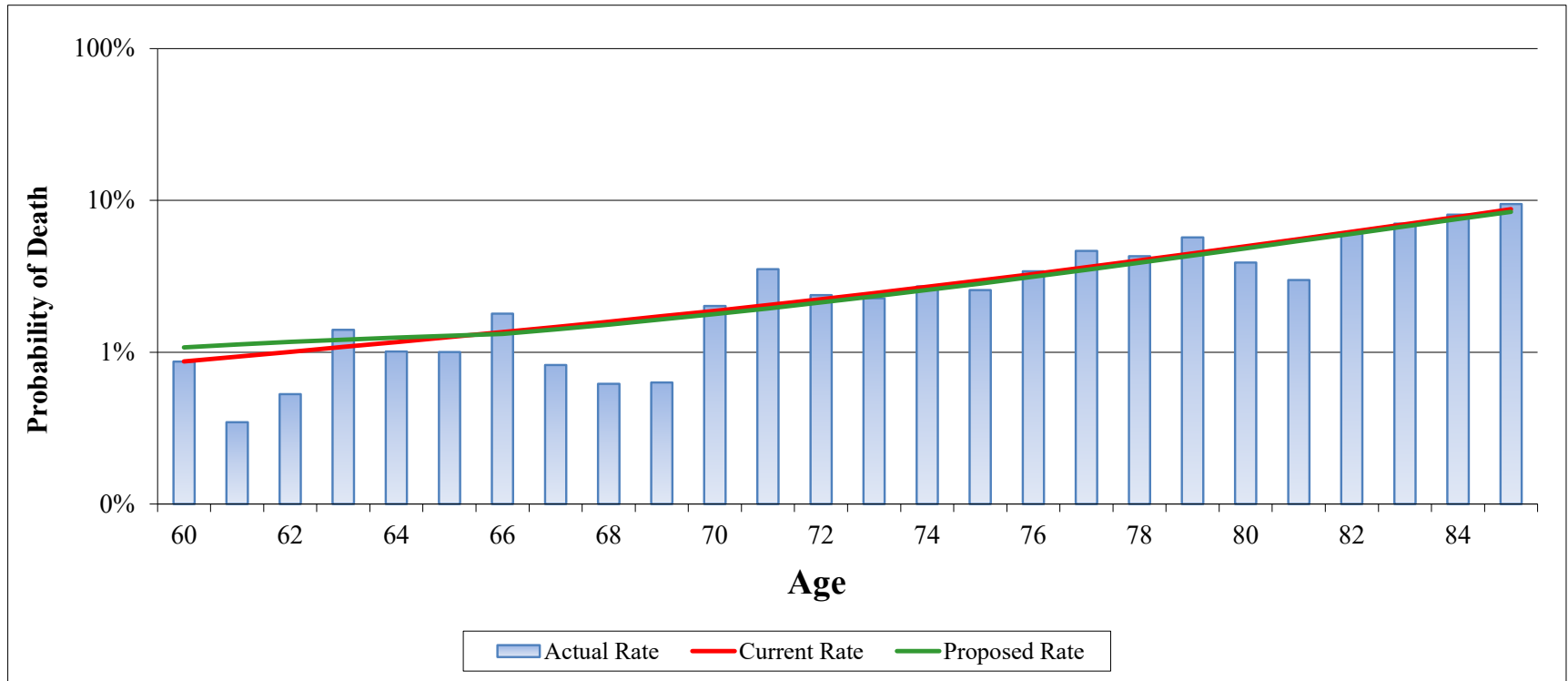
# Recommendations for Mortality Assumptions



- For the first time (2019), the Society of Actuaries published a set of mortality tables, based solely on public plan data (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 one-year 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

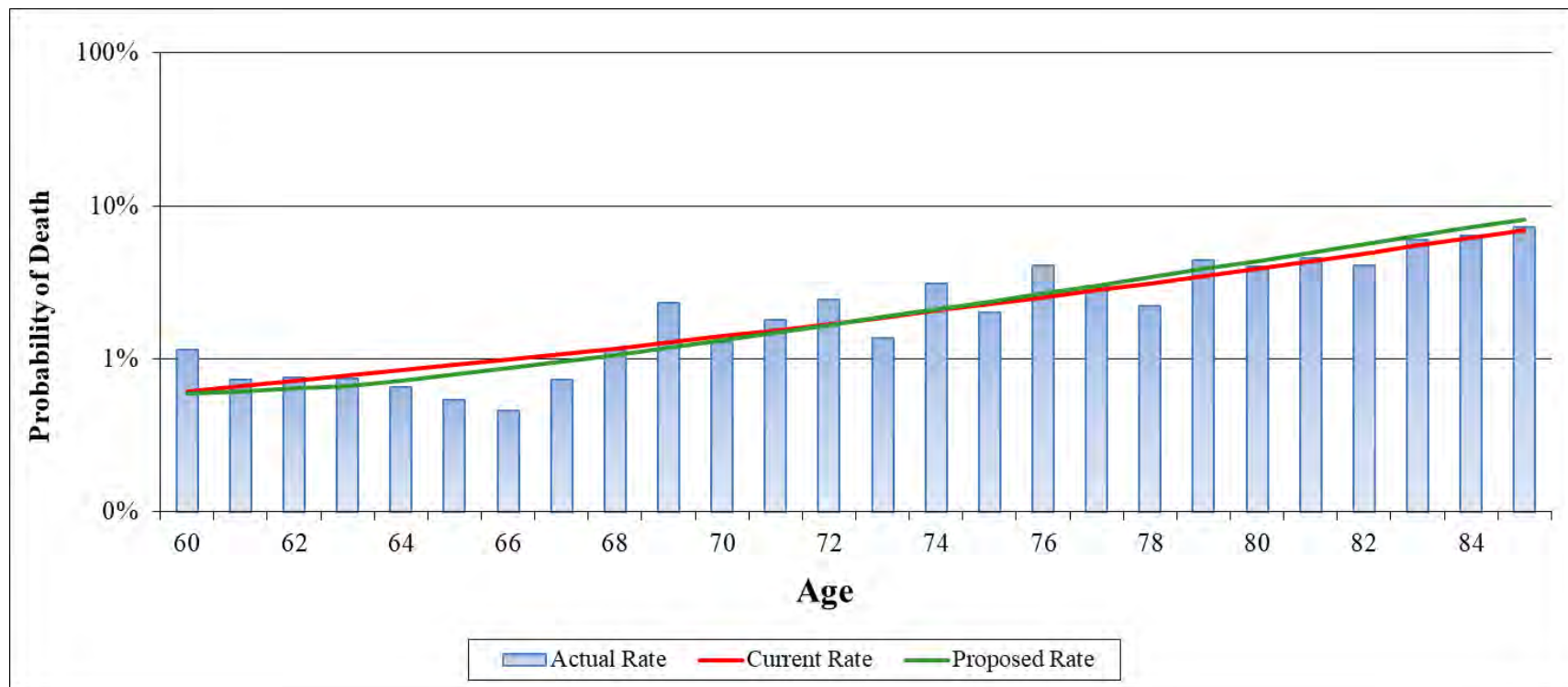
# Male Retiree Mortality Experience General Employees



A/E Ratio on Current Assumption: 96%

A/E Ratio on Proposed Assumption: 99%

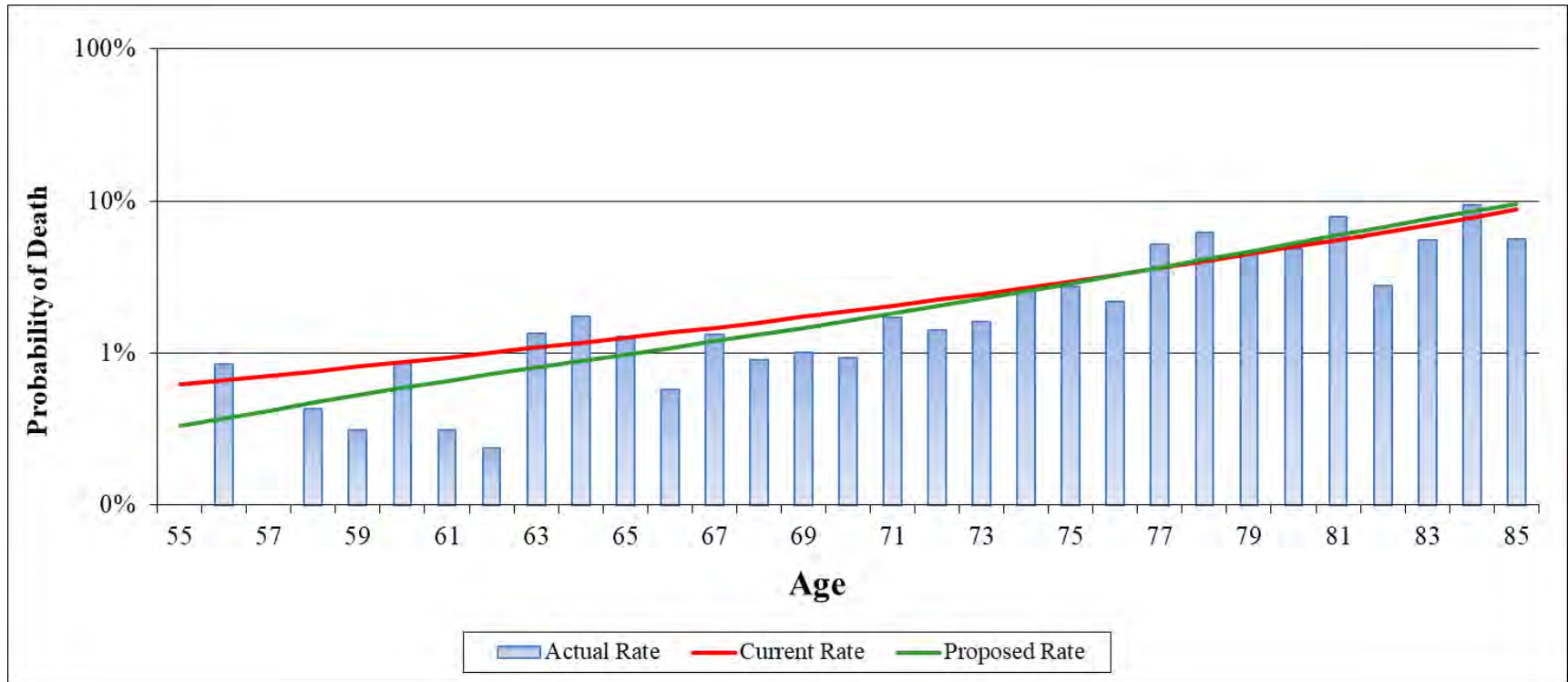
# Female Retiree Mortality Experience General Employees



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 Ratio	
	<u>Exposure</u>	<u>Actual</u>	<u>Expected</u>	<u>Count</u>	<u>Weighted</u>
General: Early	2,430	53	97	55%	45%
General: Normal					
Male	2,046	438	478	92%	102%
Female	2,414	495	507	98%	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

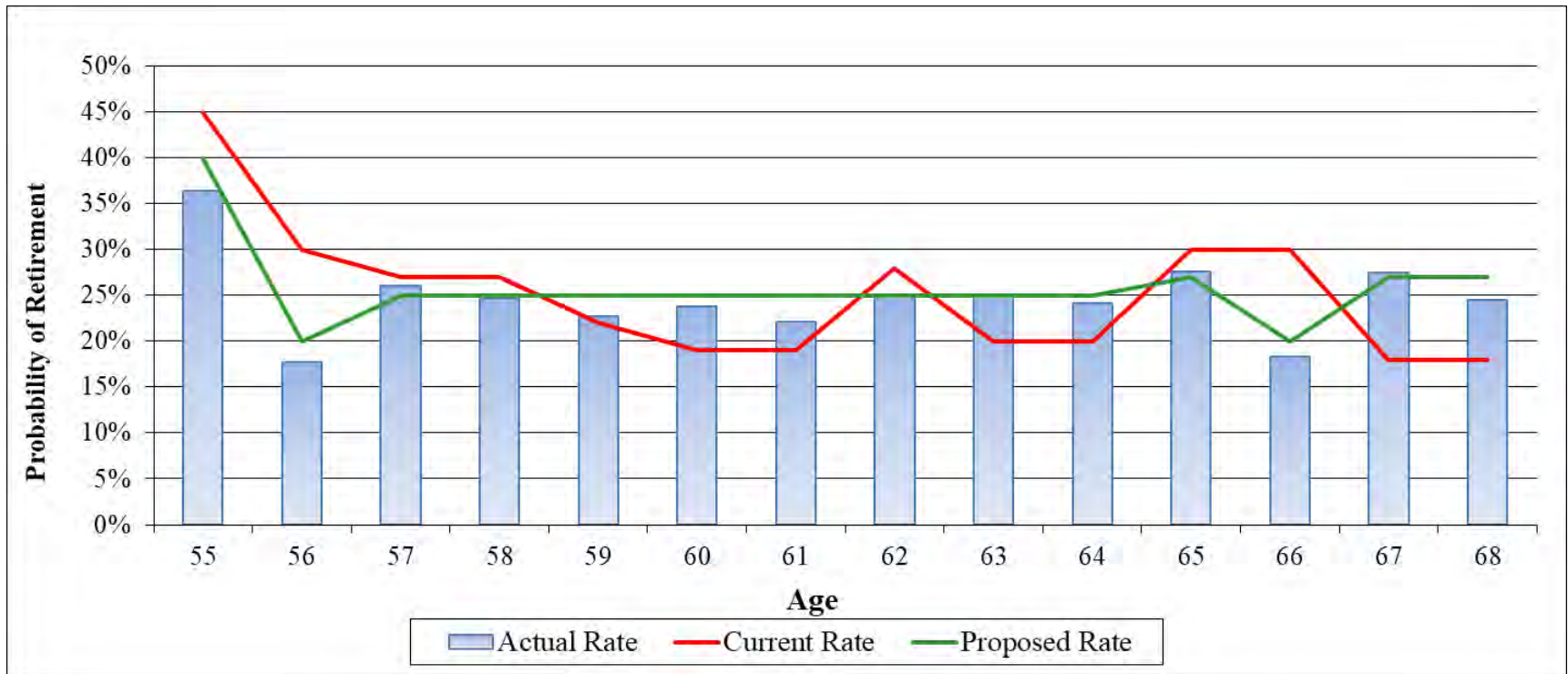


Current Assumption A/E Ratio (liability-weighted): 45%  
Proposed Assumption A/E Ratio (liability-weighted): 75%

# Male Retirement Experience

## General Employees: Normal Retirement

- Recommend adjusting rates to better fit experience

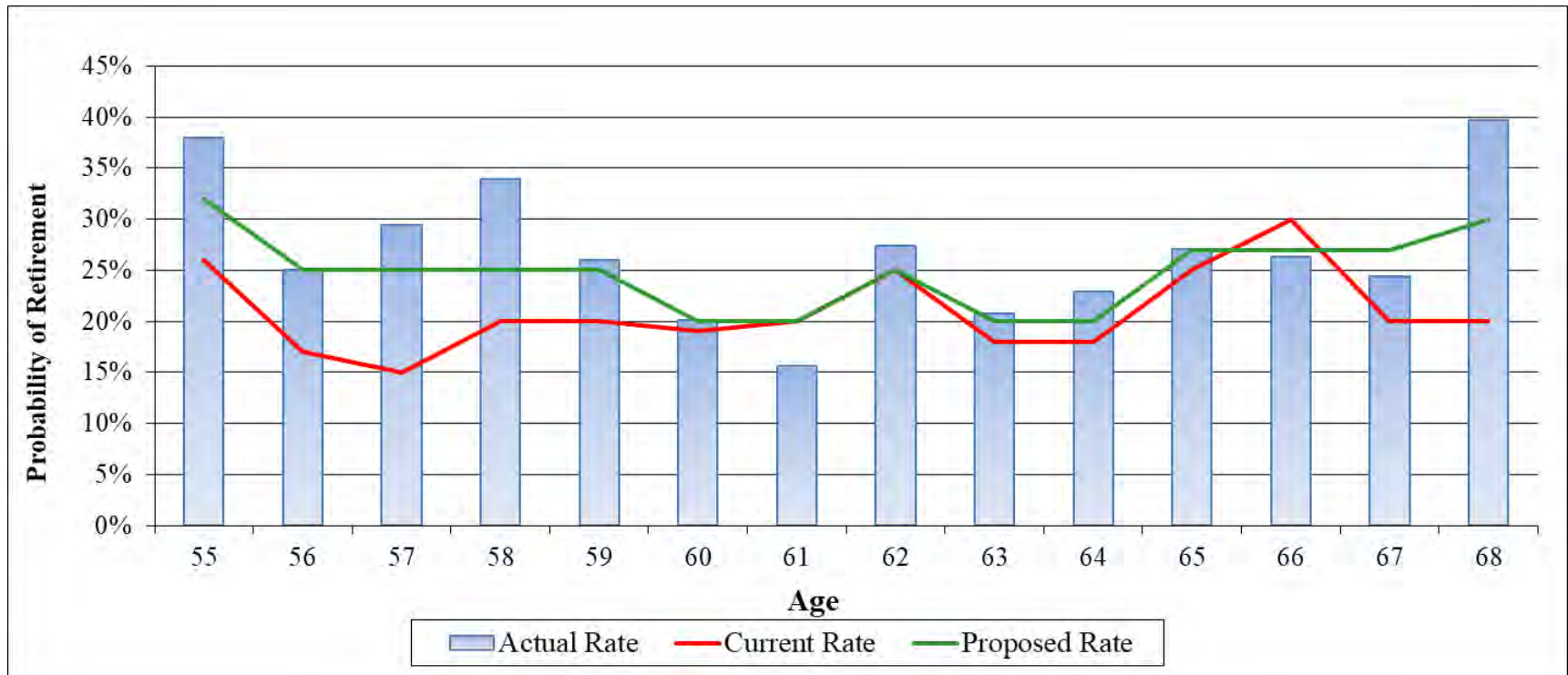


Current Assumption A/E Ratio (liability-weighted): 102%  
Proposed Assumption A/E Ratio (liability-weighted): 96%

# Female Retirement Experience

## General Employees: Normal Retirement

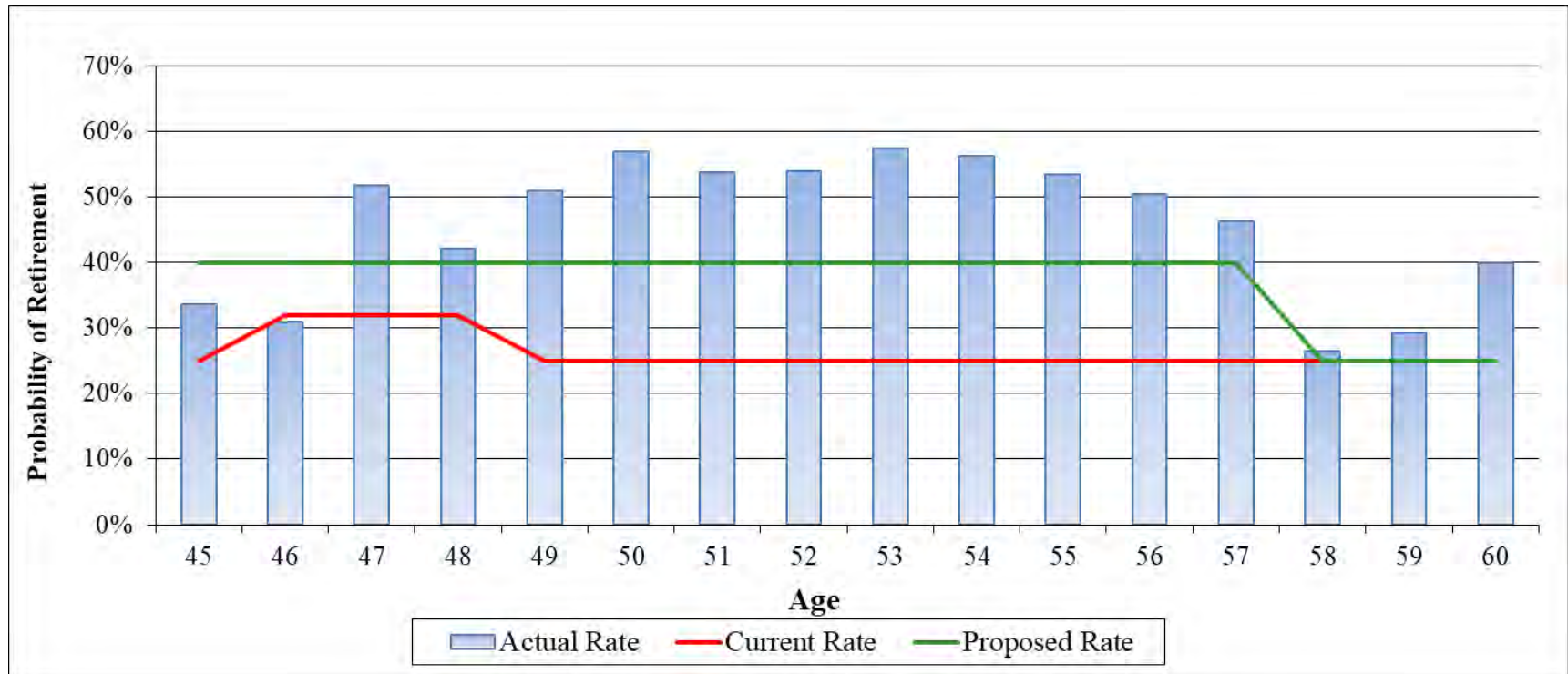
- Recommend adjusting rates to better fit experience



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

# Retirement Experience Police

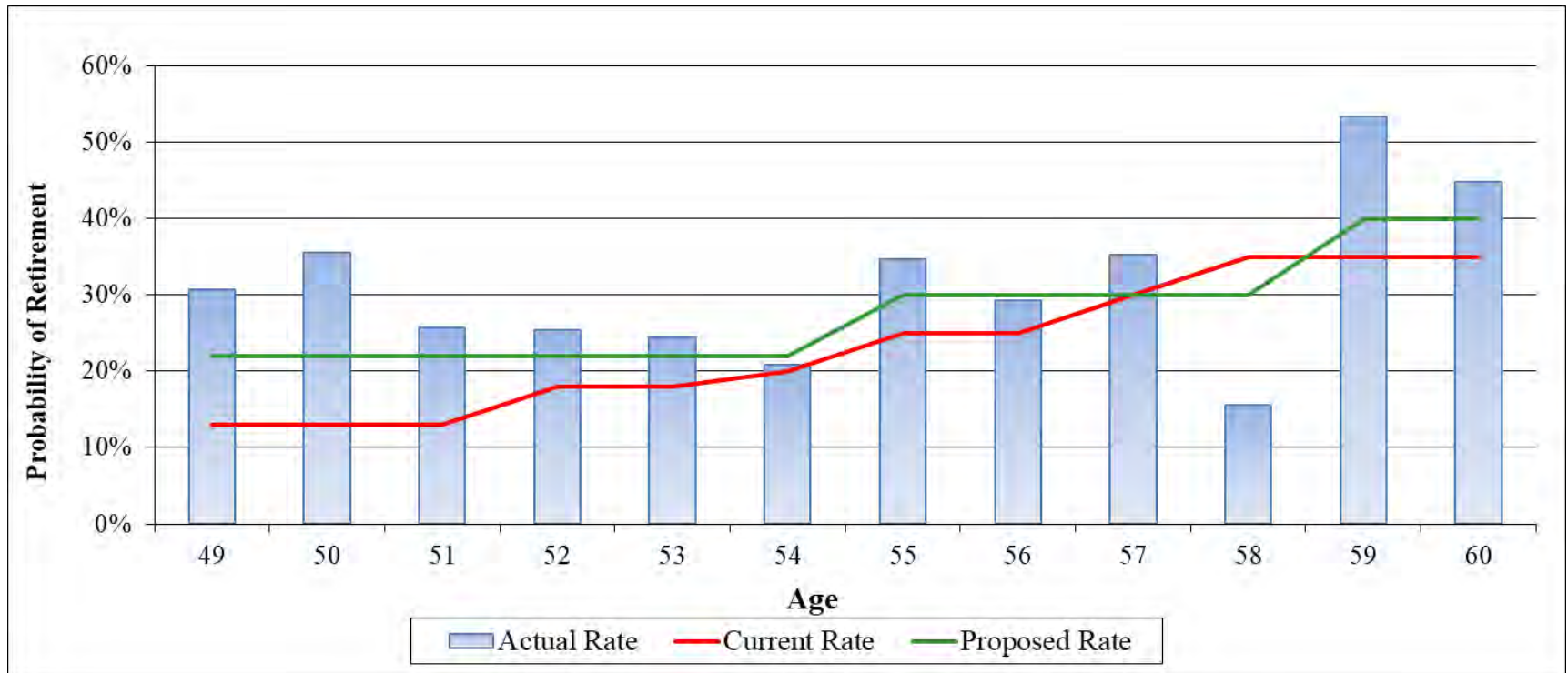
- Recommend adjusting rates to better fit experience



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

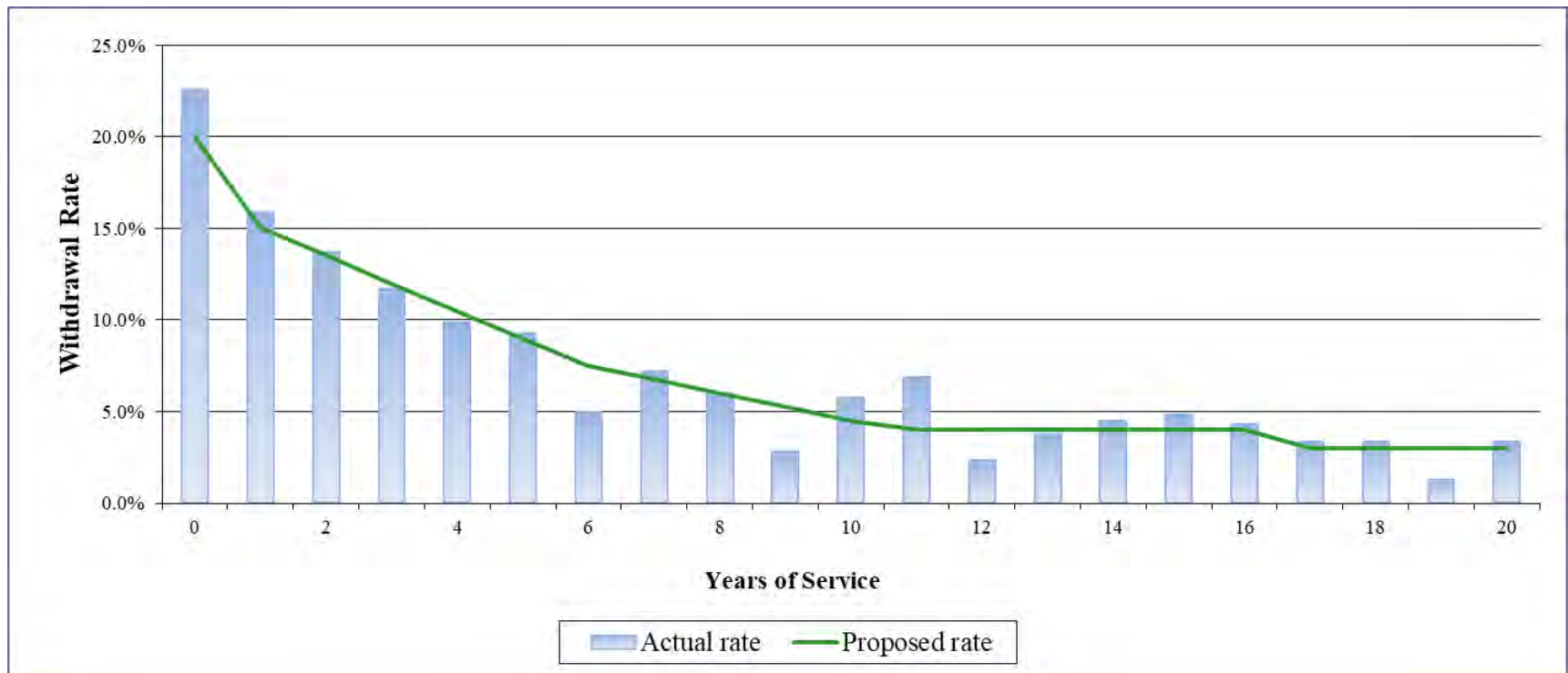


Current Assumption A/E Ratio (liability-weighted): 152%  
Proposed Assumption A/E Ratio (liability-weighted): 119%



# Termination Experience Male General Employees

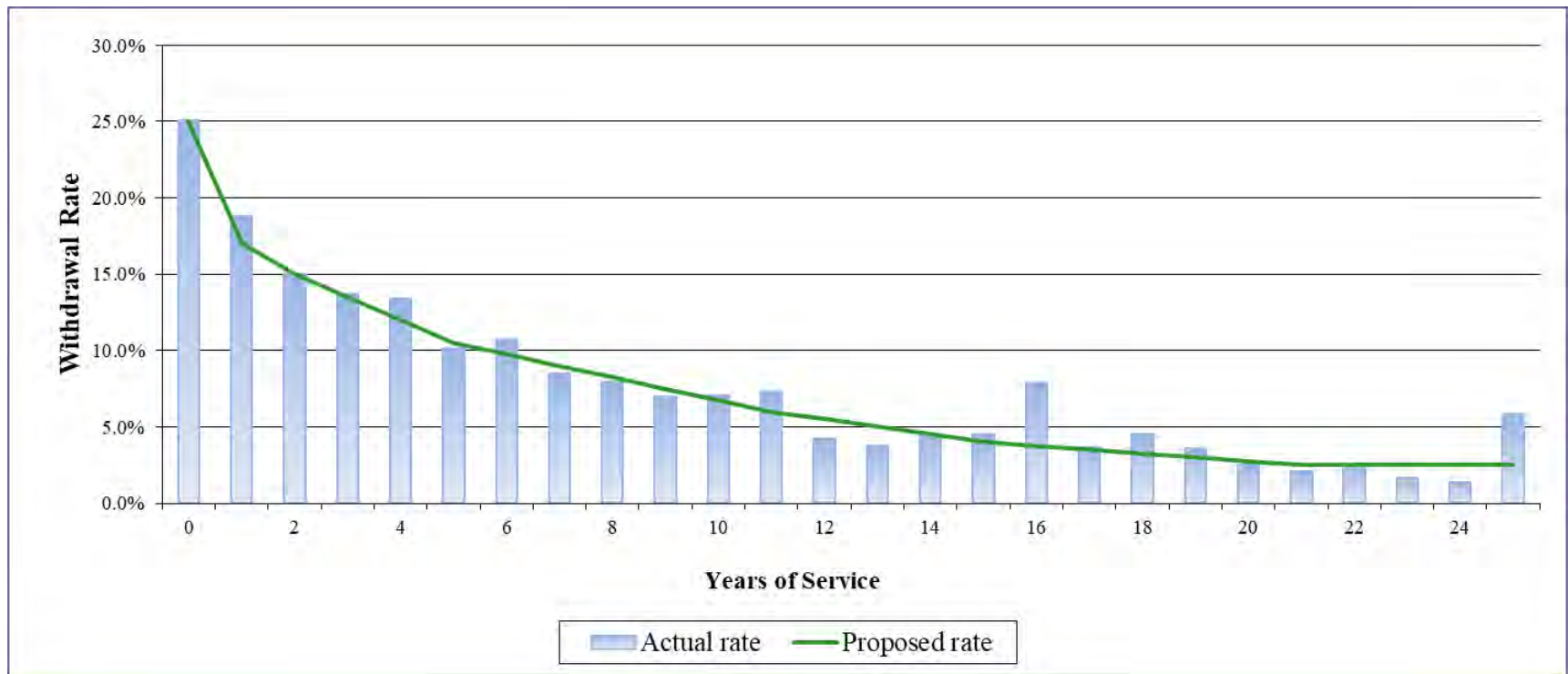
- Recommend moving to a duration-based assumption.



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

# Termination Experience Female General Employees

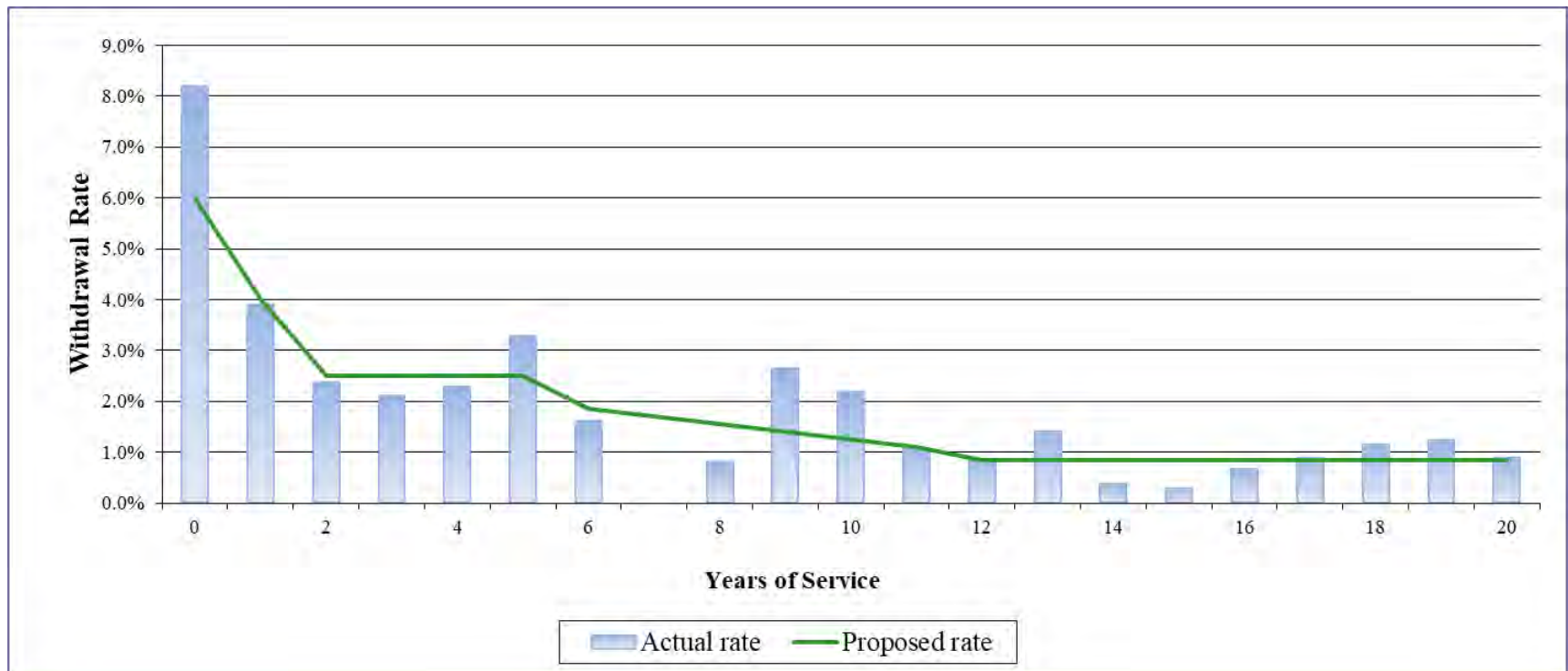
- Recommend moving to a duration-based assumption.



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

# Termination Experience Police

- Recommend moving to a duration-based assumption.

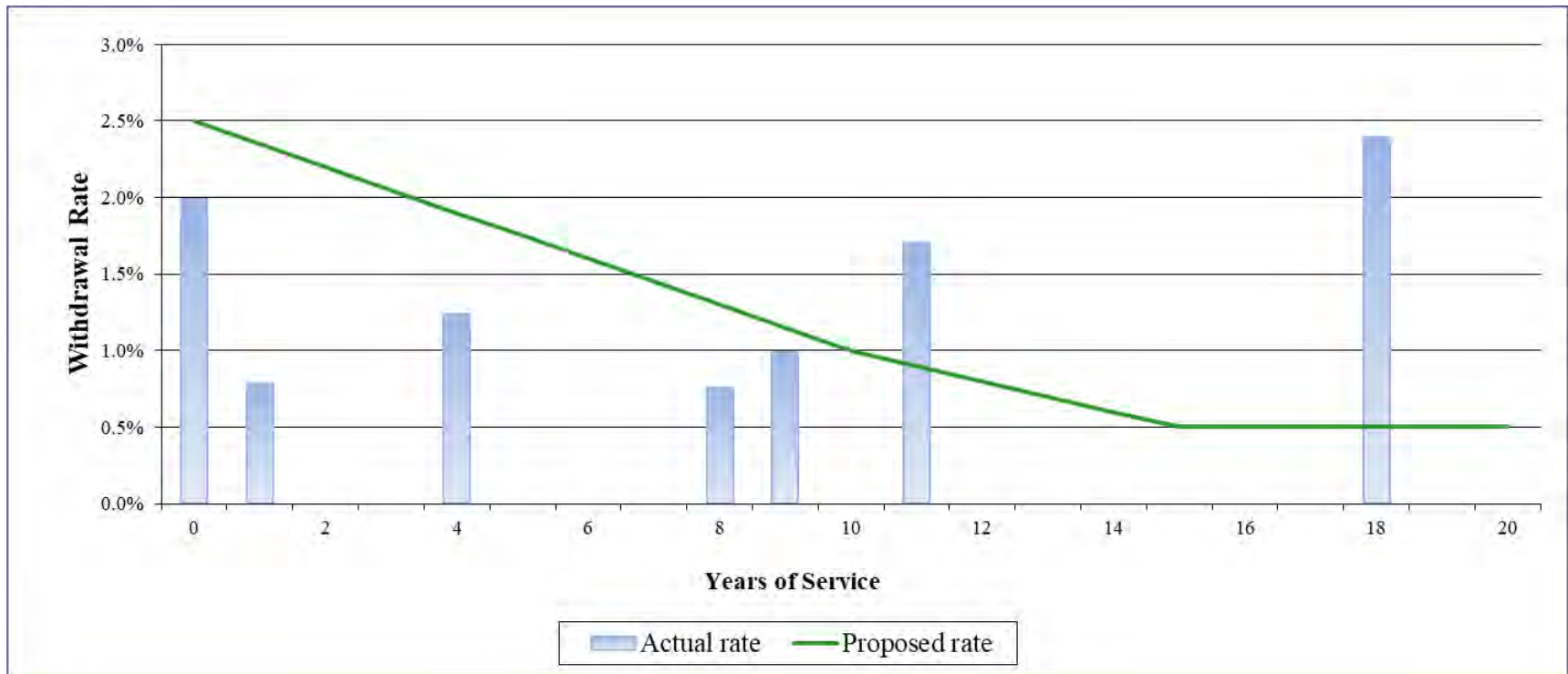


Proposed Assumption A/E Ratio (weighted): 104%



# 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

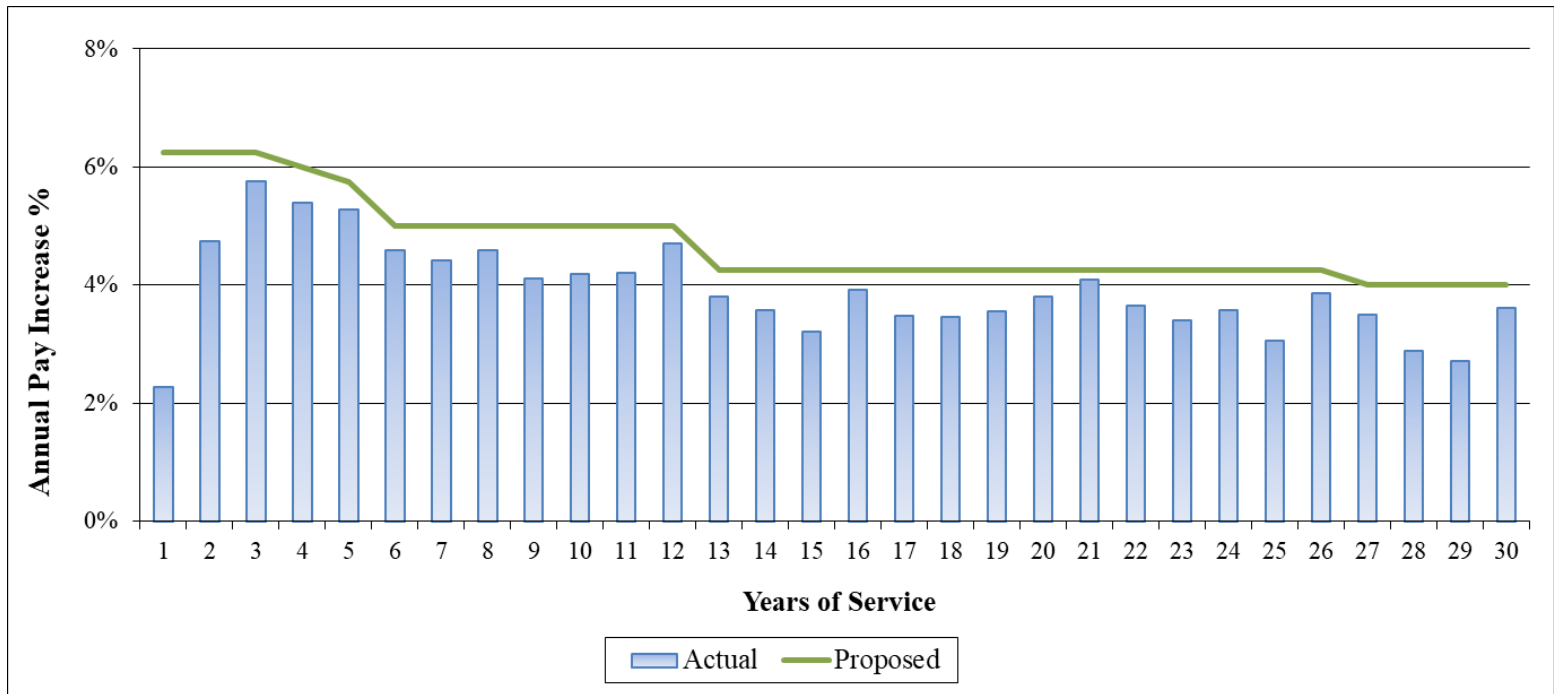
# Other Miscellaneous Assumptions



- 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.

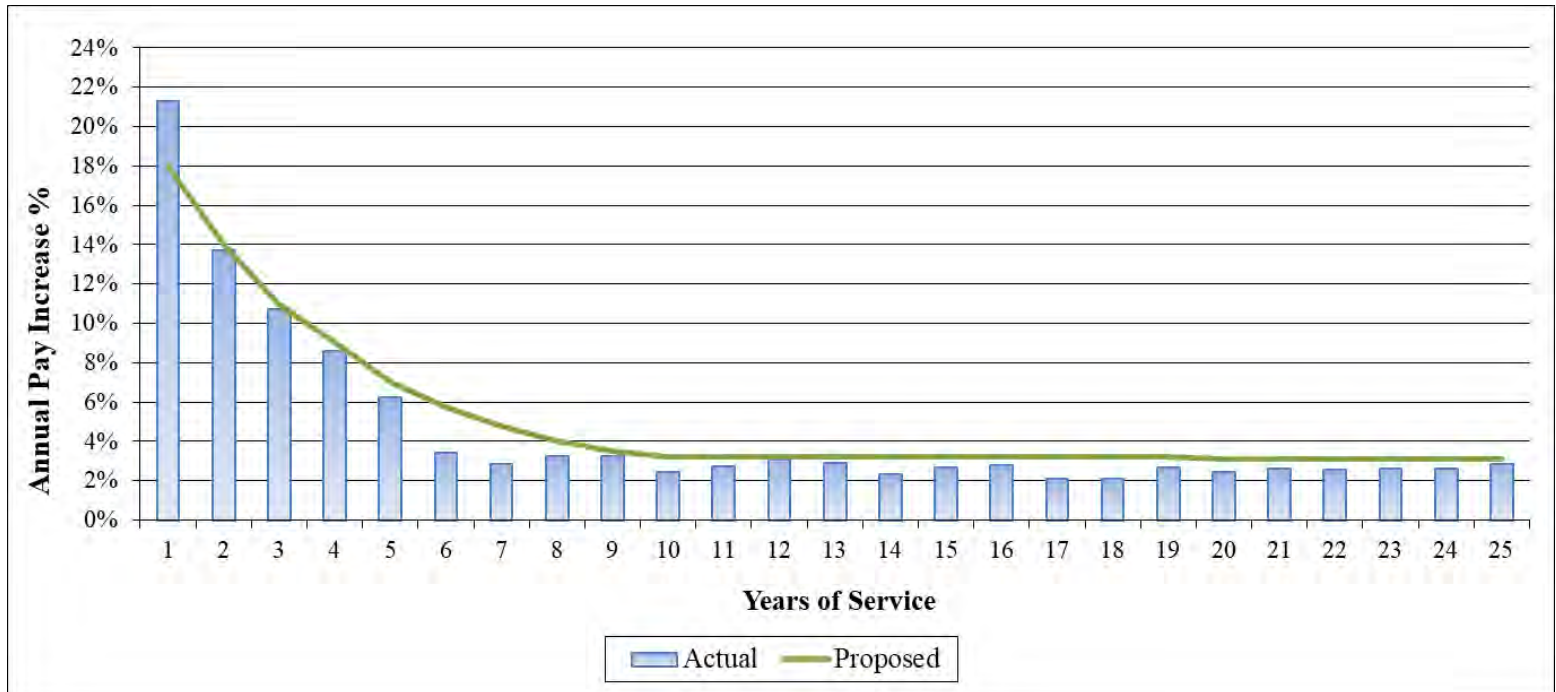


Note: Actual salary increases were below the proposed assumption because inflation over the observed period was below the assumed 2.50%.

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

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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.

Annuity and Pension Board

September 20, 2022

Page 2

Component	Current	Proposed	Amendment Required?	Notes
<i>Gains/Losses Amort. Period</i>	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.
<i>Contribution Gains/Losses Amort. Period</i>	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.
<i>Amortization (Actives)</i>	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.
<i>Amortization (Early Retire Incentive)</i>	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.
<i>Amortization (Inactives - Reduction)</i>	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.
<i>Amortization (Inactives - Increase)</i>	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.
<i>Fresh Start</i>	None	25 years	Yes	No current provision authorizes a “fresh start” 25-year UAAL amortization.
<i>Contribution Phase-In</i>	None	5 Years	Recommended	Because MCC §§ 36-08-6-h-2 does not expressly allow phase-in contributions, an amendment is recommended.
<i>Projected Returns</i>	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.
<i>Asset Measure Date</i>	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.
<i>Contribution Basis</i>	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.

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 - January 2023

## Retirements

Retirement Type	Retirement SubType	Last Name	First Name	Retirement Date	Option	Department
Regular	Deferred	WREN	DERIC	9/28/2021	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	HARMON	PATRICIA	8/3/2022	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	KOLTON	ROBERT	12/1/2022	MAX	DPW-INFRASTRUCTURE-ELECTRICAL
Regular	Service	OWENS	JUSTIN	12/2/2022	100	FIRE - FIREFIGHTING
Regular	Service	MANISCALCO	NICK	12/3/2022	MAX	DPW-OPS-SANITATION
Regular	Service	SCHUMACHER	ROXANE	12/3/2022	MAX	DCD - MGMT & SPECIAL PROJECTS
Regular	Service	SCHULTZ	KARL	12/10/2022	MAX	DPW-OPS-FLEET SERVICES
Regular	Service	KANE	STEVEN	12/12/2022	MAX	MILWAUKEE POLICE DEPARTMENT
Regular	Service	HARMON	DONTAE	12/15/2022	100	MILWAUKEE POLICE DEPARTMENT
Regular	Service	GROTE	TERRI	12/16/2022	MAX	ELECTION COMMISSION
Regular	Service	HAYWOOD	MICHELE	12/17/2022	MAX	MILWAUKEE POLICE DEPARTMENT
Regular	Service	PARKER	LISA	12/17/2022	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	WASHINGTON	RODNEY	12/17/2022	100	MILWAUKEE POLICE DEPARTMENT
Regular	Service	CHAPERON	MICHAEL	12/19/2022	100	MILWAUKEE POLICE DEPARTMENT
Regular	Service	PATTI	CARMELO	12/21/2022	50	MILWAUKEE POLICE DEPARTMENT
Regular	Deferred	ALLEN	CELESTE	12/22/2022	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	BEVIRT	ANDREW	12/22/2022	62	FIRE - FIREFIGHTING
Regular	Service	DELIE	STEVEN	12/22/2022	100	MILWAUKEE POLICE DEPARTMENT
Regular	Service	DELEON	DAVID	12/23/2022	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	JOHNSON	MICHAEL	12/23/2022	MAX	MILWAUKEE POLICE DEPARTMENT
Regular	Service	BRAHM	DOUGLAS	12/24/2022	100	MILWAUKEE POLICE DEPARTMENT
Regular	Service	GONZALES	RODNEY	12/24/2022	100	MILWAUKEE POLICE DEPARTMENT
Regular	Deferred	LUCIER	DAVID	12/25/2022	MAX	MILWAUKEE FIRE DEPARTMENT
Regular	Service	ANAGNOSTOPOULOS	KELLY	12/25/2022	50	MILWAUKEE POLICE DEPARTMENT
Regular	Service	BROOKS	ROBERT	12/25/2022	50	DPW - SEWER - UNDERGROUND
Regular	Service	MALANCHE	GENA	12/25/2022	MAX	MILWAUKEE POLICE DEPARTMENT
Regular	Service	ROSSMANN	JOEL	12/25/2022	MAX	MILWAUKEE POLICE DEPARTMENT
Regular	Service	WINTER	ALAN	12/25/2022	MAX	MILWAUKEE POLICE DEPARTMENT
Regular	Deferred	SKENADORE	JAMES	12/26/2022	100	BOARD OF ZONING APPEALS
Regular	Deferred	POLK	RICHARD	12/29/2022	100	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	DEBAERE	KAREN	12/30/2022	MAX	HEALTH-ADMINISTRATION
Regular	Service	CAPTAIN	LAURA	12/31/2022	60	MILWAUKEE POLICE DEPARTMENT
Regular	Service	DE LA GARZA	MARIA	12/31/2022	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	FALK	STEVEN	12/31/2022	MAX	FIRE - FIREFIGHTING
Regular	Service	FRITZ	DAVID	12/31/2022	100	FIRE - FIREFIGHTING
Regular	Service	HOLT	STEPHEN	12/31/2022	MAX	DPW-OPS-FLEET SERVICES
Regular	Service	NEILS	DAVID	12/31/2022	50	MILWAUKEE POLICE DEPARTMENT
Regular	Service	SMITH	JENNIFER	12/31/2022	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Service	VEAL	BETTY	12/31/2022	MAX	MILWAUKEE PUBLIC SCHOOLS
Regular	Early	PURDY	BRANDON	1/1/2023	100	CITY OF MILWAUKEE
Regular	Service	ADDISON	MATTIE	1/1/2023	MAX	DPW-INFRASTRUCTURE-ST/BRIDGES
Regular	Service	HAASCH	JOSEPH	1/1/2023	100	FIRE - FIREFIGHTING
Regular	Service	HATALA	CARLEN	1/1/2023	100	COMMON COUNCIL - CITY CLERK
Regular	Service	KUTZKE	EDWARD	1/1/2023	60	FIRE - FIREFIGHTING
Regular	Service	SCHMIDTKNECHT	PATRICIA	1/1/2023	MAX	HACM
Regular	Service	UDEE	TOM	1/1/2023	57	DPW-OPS-FLEET SERVICES

## Board Report - January 2023

## Deaths

Type	Last Name	First Name	Death Date	Payment Date	Amount
Deferred Death	MEYER	MELODY	3/25/2019	1/31/2023	\$ 25,626.71
Retiree Death-Termination	ADAMS	WINIFRED	4/14/2020	1/31/2023	\$ 50.01
Retiree Death-Termination	BECKEN	HALVER	12/4/2022	1/31/2023	\$ 279.03
Retiree Death-Termination	BELL	KELLEY	5/2/2020	1/31/2023	\$ 166.04
Retiree Death-Termination	BURNSIDE	JEANNETE	11/14/2022	1/31/2023	\$ 2,199.73
Retiree Death-Termination	EDMONDS	WILLIAM	12/4/2022	1/31/2023	\$ 655.77
Retiree Death-Termination	KLAPKA	BARBARA	7/2/2022	1/31/2023	\$ 63.58
Retiree Death-Termination	KOWALCZYK	RICHARD	1/21/2022	1/31/2023	\$ 2,981.25
Retiree Death-Termination	KREMER	CHARLES	9/14/2022	1/31/2023	\$ 1,204.09
Retiree Death-Termination	RECHLITZ	JAMES	12/12/2022	1/31/2023	\$ 2,878.90
Retiree Death-Termination	RODEFER	TILLIE	11/22/2022	1/31/2023	\$ 568.83
Retiree Death-Termination	SIEMIK	ROSLINDA	11/21/2022	1/31/2023	\$ 853.96
Retiree Death-Termination	SKORCZ	JAMES	9/17/2022	1/31/2023	\$ 697.72
Retiree Death-Termination	STEC	STANLEY	11/25/2022	1/31/2023	\$ 2,641.28
Retiree Death-Termination	STOEHLKER	GERTRUD	2/14/2022	1/31/2023	\$ 93.40
Retiree Death-Termination	TRABERT	MICHAEL	11/13/2022	1/31/2023	\$ 1,472.87
Retiree Death-Termination	VEGA	HARRY	12/16/2022	1/31/2023	\$ 16,035.22
Retiree Death-Termination	WESTBROOK	SANDRA	11/14/2022	1/31/2023	\$ 2,137.07
Retiree Death-Termination	WILLIAMS	LILLIE	10/9/2020	1/31/2023	\$ 212.80
Retiree Death-Termination	ZEREN	JAMES	11/4/2022	1/31/2023	\$ 232.24
Surv Death-Termination	ALVAREZ	NANCY	10/20/2022	1/31/2023	\$ 1,433.00
Surv Death-Termination	CALLIES	MAUREEN	11/10/2022	1/31/2023	\$ 490.91
Surv Death-Termination	CHURCHILL	JOYCE	10/23/2022	1/31/2023	\$ 889.94
Surv Death-Termination	KLAPKA	BARBARA	7/2/2022	1/31/2023	\$ 129.20
Surv Death-Termination	KLEIMAN	MARY	7/10/2022	1/31/2023	\$ 358.31
Surv Death-Termination	KREMER	CHARLES	9/14/2022	1/31/2023	\$ 53.78
Surv Death-Termination	MANN	GRACIE	9/25/2022	1/31/2023	\$ 871.28
Surv Death-Termination	NOVAK	CHERYL	12/8/2022	1/31/2023	\$ 1,714.28
Surv Death-Termination	PIERING	ALLAN	9/29/2022	1/31/2023	\$ 278.72
Surv Death-Termination	RICK	LINDA	8/17/2022	1/31/2023	\$ 403.76
Surv Death-Termination	RYCHWALSKI	BERNICE	11/16/2022	1/31/2023	\$ 197.10
Surv Death-Termination	ZAESKE	DOLORES	10/28/2022	1/31/2023	\$ 1,629.84
TOTAL					\$ 69,500.62

Type	Last Name	First Name	Death Date	Payment Date	Amount
Retiree Death-Cont Opt	BIALEK	CAROL	1/1/2023	1/1/2023	
Retiree Death-Cont Opt	BURTON	VALERIE	1/4/2023	1/1/2023	
Retiree Death-Cont Opt	CRUZ	VALERIE	12/14/2022	1/1/2023	
Retiree Death-Cont Opt	EDWARDS	WARREN	1/14/2023	1/1/2023	
Retiree Death-Cont Opt	GIVENS	MELVIN	12/22/2022	1/1/2023	
Retiree Death-Cont Opt	GROH	EUGENE	12/25/2022	1/1/2023	
Retiree Death-Cont Opt	HILDEN	THOMAS	12/16/2022	1/1/2023	
Retiree Death-Cont Opt	HOTCHKISS	ROBERT	12/24/2022	1/1/2023	
Retiree Death-Cont Opt	LUEHRING	MARIE	12/17/2022	1/1/2023	
Retiree Death-Cont Opt	MICHEL	JAMES	12/21/2022	1/1/2023	
Retiree Death-Cont Opt	MUEHL	DAVID	12/30/2022	1/1/2023	
Retiree Death-Cont Opt	REIMER	RUSSEL	1/5/2023	1/1/2023	
Retiree Death-Cont Opt	RILEY	ROBIN	1/9/2023	1/1/2023	
Retiree Death-Cont Opt	SAUBERAN	DONALD	1/1/2023	1/1/2023	
Retiree Death-Cont Opt	SMITH	SHARON	12/19/2022	1/1/2023	
Retiree Death-Cont Opt	SPONGBERG	JOHN	12/17/2022	1/1/2023	
Retiree Death-Cont Opt	STRONG	CRYSTAL	11/25/2022	1/1/2023	
Retiree Death-Cont Opt	THUROW	RICHARD	1/7/2023	1/1/2023	
Retiree Death-Cont Opt	TORBECK	DENNIS	1/18/2023	1/1/2023	
Retiree Death-Cont Opt	VIDMAR	ROBERT	1/9/2023	1/1/2023	
Retiree Death-Cont Opt	WEBER	ALLAN	12/14/2022	1/1/2023	

**Board Report - January 2023****Withdrawals**

Type	Last Name	First Name	Payment Date	Amount
Administrative Withdrawal	BIZUB	JESSICA	1/31/2023	\$ 2,246.84
Administrative Withdrawal	CAMPBELL	KENNETH	1/31/2023	\$ 785.63
Administrative Withdrawal	FERGUSON	JOHN	1/31/2023	\$ 94.63
Administrative Withdrawal	FORD	SHANIQUEA	1/31/2023	\$ 201.33
Administrative Withdrawal	HERNANDEZ	IRIS	1/31/2023	\$ 4,108.00
Administrative Withdrawal	JACOBSEN	LISA	1/31/2023	\$ 422.51
Administrative Withdrawal	JAMES	BENJAMIN	1/31/2023	\$ 7,697.50
Administrative Withdrawal	LUDERUS	APRIL	1/31/2023	\$ 114.37
Administrative Withdrawal	MCKINNEY	NASSAU	1/31/2023	\$ 199.15
Administrative Withdrawal	MILOSTAN	DANIEL	1/31/2023	\$ 4,281.66
Administrative Withdrawal	MOORE-JANKE	ASHLEY	1/31/2023	\$ 286.07
Administrative Withdrawal	MOSLEY-CALVIN	JUSTYN	1/31/2023	\$ 1,405.96
Administrative Withdrawal	PARHAM	CHAD	1/31/2023	\$ 255.34
Administrative Withdrawal	PLANTENBERG	ERIC	1/31/2023	\$ 1,742.18
Administrative Withdrawal	THAY	ANNIC	1/31/2023	\$ 495.37
Administrative Withdrawal	VALDES	HIRAM	1/31/2023	\$ 342.51
Administrative Withdrawal	VANG	MALY	1/31/2023	\$ 14,451.08
Full Refund	ANDERSON	AARON	1/31/2023	\$ 22,760.65
Full Refund	AYESH	MUHAMMAD	1/31/2023	\$ 19,895.17
Full Refund	BONDS	MICHAEL	1/31/2023	\$ 5,823.81
Full Refund	BOWERS	RONALD	1/31/2023	\$ 19,550.13
Full Refund	BRANCH	TYVEON	1/31/2023	\$ 1,112.25
Full Refund	BURGER	ZACHARY	1/31/2023	\$ 8,400.48
Full Refund	BYRD	BRANDI	1/31/2023	\$ 4,406.18
Full Refund	GREENE	SHERRY	1/31/2023	\$ 10,603.99
Full Refund	HAMMES	QUINTEN	1/31/2023	\$ 99,043.45
Full Refund	HANSON	MARGARET	1/31/2023	\$ 5,616.02
Full Refund	LEWIS	CHANTIA	1/31/2023	\$ 15,910.51
Full Refund	NICKLE	FLOYD	1/31/2023	\$ 8,974.88

Type	Last Name	First Name	Payment Date	Amount
Full Refund	REED	DENISE	1/31/2023 \$	5,278.87
Full Refund	REED	DERRICK	1/31/2023 \$	9,402.94
Full Refund	SCHUTZ	NEAL	1/31/2023 \$	17,443.06
Full Refund	SILLS	LENA	1/31/2023 \$	11,947.84
Full Refund	WALLNER	JONATHAN	1/31/2023 \$	11,419.08
Full Refund	WILLIAMS	CHRISTINA	1/31/2023 \$	5,087.09
Member Only Refund	ALEXANDER	DAVID	1/31/2023 \$	3,656.41
Member Only Refund	CAMPBELL	CHERYL	1/31/2023 \$	536.46
Member Only Refund	CHILDS	MELISSA	1/31/2023 \$	1,964.99
Member Only Refund	GLUNZ	AMANDA	1/31/2023 \$	1,096.26
Member Only Refund	LAW	ALEXA	1/31/2023 \$	285.05
Member Only Refund	MARJI	NATALIA	1/31/2023 \$	108.96
Member Only Refund	MARKS	THOMAS	1/31/2023 \$	787.84
Member Only Refund	MARSHALL	KIANNA	1/31/2023 \$	1,352.10
Member Only Refund	MARTIN	JIMIKA	1/31/2023 \$	948.13
Member Only Refund	MILLER	CHRISHONNA	1/31/2023 \$	1,982.47
Member Only Refund	MOHAMED	ASIYA	1/31/2023 \$	1,726.40
Member Only Refund	NELSON	KATHERINE	1/31/2023 \$	1,300.03
Member Only Refund	NORGAL	TREVOR	1/31/2023 \$	3,592.26
Member Only Refund	PATTON	KATHERINE	1/31/2023 \$	2,123.69
Member Only Refund	SHANNON	ROSE	1/31/2023 \$	5,218.47
Member Only Refund	SHOATES	RACHEL	1/31/2023 \$	386.61
Member Only Refund	SPIVEY	SANTANA	1/31/2023 \$	572.58
Member Only Refund	STARKS	LORRAINE	1/31/2023 \$	288.83
Member Only Refund	TISDALE	JULIAN	1/31/2023 \$	4,186.72
Member Only Refund	VICK	RHONYAI	1/31/2023 \$	2,039.11
Member Only Refund	WALKER	AKEMI	1/31/2023 \$	3,356.89
Member Only Refund	WEISSE	ABIGAIL	1/31/2023 \$	9,645.63
Member Only Refund	YAN	XIAOHAN	1/31/2023 \$	1,887.17
TOTAL \$				370,849.59

## **Conference Requests – February 2023 Board Meeting**

Erich Sauer,  
Thomas Courtright,  
Dave Walters

Brian Kennedy (Loomis Sayles) CFA Luncheon

Sponsor:

CFA Society Milwaukee

Location:

Milwaukee, WI

Date(s):

March 8, 2023

Estimated Cost:

\$15.00 per person

Thomas Courtright

Callan 2023 National Conference

Sponsor:

Callan

Location:

Scottsdale, AZ

Date(s):

April 2 - 4, 2023

Estimated Cost:

\$1,900.00

## VII.

### MEDICAL REPORTS

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

MERITS	CITY OF MILWAUKEE EMPLOYEES' RETIREMENT SYSTEM	Page Number: 1 OF 1
	Medical Panel Approvals Report	DATE RAN : 02/16/2023
Approved by Executive Director	Pension Board Meeting Date 02/27/2023	TIME RAN : 05:56

DOCTOR DECISION

<u>Case Number</u>	<u>Name</u>	<u>Title</u>	<u>Employer</u>	<u>Case Type</u>	<u>Case Sub-Type</u>	<u>City</u>	<u>Union</u>	<u>Third</u>	<u>Disability Date</u>	<u>Comments</u>
921	BALTUTIS, GILBERT	FIRE FIGHTER	FIRE	DD 75%	Re-Examination	Approved	Approved		08/24/2011	
1096	SCHMAELZLE, JOHN	FIRE FIGHTER	FIRE	DD 75%	Re-Examination	Approved	Approved		08/27/2013	
1313	DAVIS, BRADLEY	FIRE CAPTAIN- INCIDENT SF	MFD	DD 75%	Re-Examination	Approved	Approved		02/01/2022	
1276	HEHN, ROBERT	FIRE FIGHTER	MFD	DD 75%	Re-Examination	Approved	Approved		05/01/2018	Exempt from Re-Exam
478	JACOBS, CHRISTINE	FIRE FIGHTER	MFD	DD 75%	Re-Examination	Approved	Approved		05/26/2007	
685	SMITH, ROBERT	FIRE LIEUTENANT	MILWAUKEE FIRE DEPT	DD 75%	Re-Examination	Approved	Approved		06/27/2006	

Number of Cases: 6

*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 EMPLOYEES' RETIREMENT SYSTEM

Page Number: 1 OF 1

## Medical Council Approvals Report

DATE RAN : 02/03/2023

Board Meeting: 02/27/2023

TIME RAN : 12:13

<u>Name</u>	<u>Title</u>	<u>Employer</u>	<u>CaseType</u>	<u>Case Sub-Type</u>	<u>Disability Date</u>	<u>Medical Council Meeting Date</u>
GEPPERT, DEREK	FIREFIGHTER	MFD	Duty Disability 90%	Re-Examination	06/09/2018	02/03/2023
MENDEZ, WILMA	SCHOOL AIDE - PARA	MPS	Ordinary Disability	Re-Examination	08/01/2008	02/03/2023
TOMASELLO, SHERRY	BRIDGE OPERATOR	DPW-INFRASTRUCTURE	Ordinary Disability	Re-Examination	07/28/2020	02/03/2023
URIBE, SAMUEL	FIREFIGHTER	MFD	Ordinary Disability	Re-Examination	07/02/2018	02/03/2023

Number of Cases: 4

*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.*

## VIII.

### UNFINISHED BUSINESS

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



## February 27, 2023 Board Meeting

### **PENDING LEGAL OPINIONS AND SERVICE REQUESTS REPORT**

#### **PART 1. LEGAL OPINIONS - OFFICE OF CITY ATTORNEY**

None.

#### **PART 2. LEGAL OPINIONS - OUTSIDE LEGAL COUNSEL**

None.

#### **PART 3. SERVICE REQUESTS - OFFICE OF CITY ATTORNEY**

**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.

**08/23/22**

**Financial Audit Services**

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

**01/04/23**

**Internal Audit Services**

City Attorney's Office asked to assist ERS staff with the drafting of a Request for Proposal for internal audit services, and to negotiate a contract for services with selected vendor.

**01/31/23** Second request for legal services forwarded to the City Attorney's Office.

**02/01/23**

**Contract for Professional Management Services**

ERS staff requests assistance from legal counsel to negotiate and draft professional management, information services and quality assurance consulting agreement.

#### **PART 4. SERVICE REQUESTS - OUTSIDE LEGAL COUNSEL**

None.



## February 27, 2023 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.

## Employees' Retirement System – Executive Director's Report

February 2023

### I. Personnel Update

A. ERS is working with DER to fill the following vacancy: Records Technician II.

### II. Member Services

A. New retirees on payroll in January - 50; 39 are currently anticipated for the February payroll.

B. Retiree/Employee deaths in November - 40.

C. Below is a breakdown of to-date ERS benefits payouts/active/deferred counts:

Category	Count
<b>Annuitants</b>	
Death - Duty	26
Death - Ordinary	97
Disability - Duty	371
Disability - Ordinary	582
Retirement	12,723
Separation	38
<b>Total Annuitants</b>	<b>13,837</b>
<b>Active</b>	<b>10,785</b>
<b>Deferred</b>	<b>3,188</b>
<b>Total Population</b>	<b>27,810</b>

### III. Financial Services

A. The 1/1/23 actuarial census data extract has been sent to the actuary. This extract will be used by the actuary to compile the actuarial valuation.

B. The 2022 Form 1099-Rs were mailed out to members on January 29<sup>th</sup>. We have also loaded the forms into MERITS so members can download the forms using self-service.

C. Outside Earnings letters will be mailed by March 15<sup>th</sup>. These letters are sent out to members who have elected early retirement or received certain types of disability payments and have not reached full retirement age.

D. **We have reconciled the 2022 expense payments made by the City on ERS' behalf and the reimbursements paid by ERS to the City as part of our 2022 Budget closeout.**

#### IV. Information Services

- A. Struts Upgrade and Modernize MERITS Website in progress.
- B. VMware Host Servers Upgrade in progress.
- C. VMware Workspace ONE Implementation in progress.
- D. Titan Content Manager Upgrade completed.
- E. Network Infrastructure Firmware/OS Upgrade in progress.
- F. 789 and Remote Office PC Firmware Upgrade completed.
- G. Video Conferencing System Upgrade in progress.
- H. Microsoft Exchange Upgrade in progress.
- I. IT Vulnerability Audit in progress.
- J. SQL Server Upgrade – MERITS & FileNet Databases in progress.
- K. Tape Libraries and Tape Media Upgrader in progress.
- L. Symantec Endpoint Protection Upgrade in progress.
- M. Change Auditor Upgrade in progress.

#### V. Administration

In connection with the meeting last month in Madison at the Capitol, Larry Langer and the team at Cavanaugh MacDonald were asked by speaker Vos to model additional scenarios for CMERS, including plan closure in favor of enrolling new hires into the WRS, assuming the WRS 6.8% discount rate and 10-year level amortization for CMERS following plan closure.

Attached is a schedule of employer contributions for the requested plan closure scenario, along with a baseline schedule for comparison purposed in the event the plan remains open. The yellow highlighted amounts are the amounts of estimated annual employer contributions for the City, excluding City agencies.

In the event of legislation mandating plan closure with a 6.8% discount rate and 10-year level amortization of unfunded liability, the total City contribution for 10 years is modeled by the actuary at approximately \$275 million annually for each of 10 years compared to City contributions modeled to start at approximately \$129 million and increase annually thereafter under the base case, if CMERS remains open to new hires. The ask for increased revenue by the City under the plan closure scenario would, if authorized by legislation, be earmarked toward payment of approximately \$214 million annually of unfunded liability.

Larry, Jim Bohl of the Intergovernmental Relations Department, and I also met with the Chief of Staff for Senate Majority Leader Devin LeMahieu at the request of the Senator on January 26<sup>th</sup> at the Capitol to answer questions regarding CMERS funding issues and requested state aid for this purpose.

There are no actual legislative proposals to report as of this writing.



Mr. Jerry Allen  
January 25, 2023  
Page 23

Projection of Employer Contributions Soft Close of CMERS with New Hires Participating in WRS (Amounts in Millions) Scenario 6c - 6.80% Investment Return Assumption and 10-Year Level Dollar Amortization																		
Year	CMERS									WRS						Total		
	Employer Normal Cost			Admin Expenses			UAAL Payment			CMERS ER Contribution								
	City	Other	Total	City	Other	Total	City	Other	Total	City	Other	Total	City	Other	Total	City	Other	Total
2022	\$ 49	\$ 9	\$ 58	\$ 5	\$ 1	\$ 6	\$ 13	\$ 5	\$ 17	\$ 67	\$ 14	\$ 81	\$ -	\$ -	\$ -	\$ 67	\$ 14	\$ 81
2023	55	13	68	5	1	6	214	64	278	273	78	352	1	1	2	274	79	353
2024	53	12	65	5	1	6	214	63	278	273	77	349	3	2	6	276	79	355
2025	52	11	63	5	1	7	215	63	278	272	75	347	6	3	9	278	78	356
2026	51	10	61	5	1	7	216	62	278	272	74	345	8	4	13	280	78	358
2027	49	10	59	6	1	7	216	61	278	271	72	343	11	5	16	282	77	359
2028	47	9	56	6	1	7	217	61	278	270	71	341	14	6	20	284	77	361
2029	45	8	54	6	1	7	217	61	278	268	70	339	17	7	24	285	77	362
2030	44	8	51	6	1	7	218	60	278	267	69	337	20	8	28	287	77	364
2031	42	7	49	6	1	8	219	59	278	267	68	334	23	9	32	290	77	367
2032	40	7	47	6	1	8	219	58	278	266	66	332	26	10	36	292	76	368
2033	38	6	44	7	1	8	-	-	-	44	8	52	30	11	41	74	19	93
2034	35	6	41	7	2	8	-	-	-	42	8	49	33	12	46	75	20	95
2035	33	5	39	7	2	8	-	-	-	40	7	47	37	13	50	77	20	97
2036	32	5	37	7	2	9	-	-	-	39	7	45	41	14	55	80	21	101
2037	30	5	35	7	2	9	-	-	-	37	7	43	44	15	59	81	22	103
2038	29	4	33	7	2	9	-	-	-	36	6	42	48	16	64	84	22	106
2039	27	4	31	8	2	9	-	-	-	35	6	40	52	17	68	87	23	110
2040	26	4	29	8	2	9	-	-	-	33	6	39	55	18	73	88	24	112
2041	24	3	27	8	2	10	-	-	-	32	6	37	59	19	78	91	25	116
2042	22	3	25	8	2	10	-	-	-	30	5	35	63	20	83	93	25	118
2043	20	3	23	8	2	10	-	-	-	29	5	34	67	21	88	96	26	122
2044	18	3	21	9	2	10	-	-	-	27	5	31	71	22	93	98	27	125
2045	16	2	18	9	2	11	-	-	-	25	5	29	76	23	99	101	28	129
2046	14	2	16	9	2	11	-	-	-	23	5	27	80	24	104	103	29	132
2047	12	2	14	9	2	11	-	-	-	21	5	25	85	25	110	106	30	136
2048	10	2	12	9	2	12	-	-	-	20	5	24	90	26	116	110	31	141
2049	9	2	10	9	3	12	-	-	-	18	5	22	94	27	121	112	32	144
2050	7	1	9	9	3	12	-	-	-	16	5	21	99	28	127	115	33	148
2051	6	1	7	9	3	12	-	-	-	15	5	19	103	30	133	118	35	153
2052	5	1	6	10	3	13	-	-	-	14	5	18	108	31	139	122	36	158

Note: Numbers may not add due to rounding.



Scenario 3 Projection of Employer Contributions CMERS Remains Open to New Hires (Amounts in Millions)												
Year	Experience Study & Estimated \$5.5 Billion January 1, 2023 Market Value											
	Employer Normal Cost			Admin Expenses			UAAL Payment			Total ER Contribution		
	City	Other	Total	City	Other	Total	City	Other	Total	City	Other	Total
2022	\$ 49	\$ 9	\$ 58	\$ 5	\$ 1	\$ 6	\$ 13	\$ 5	\$ 17	\$ 67	\$ 14	\$ 81
2023	48	12	61	5	1	6	76	24	100	129	37	166
2024	49	12	61	5	1	6	75	23	98	129	36	165
2025	49	12	62	5	1	7	81	24	105	135	38	173
2026	50	12	62	5	1	7	87	26	112	142	39	181
2027	51	12	63	6	1	7	101	30	131	158	43	201
2028	52	12	64	6	1	7	103	30	133	160	44	203
2029	52	12	65	6	1	7	104	31	135	162	44	207
2030	54	12	66	6	1	7	106	31	137	165	44	210
2031	55	12	67	6	1	8	108	31	138	168	45	213
2032	56	12	68	6	2	8	109	31	141	171	45	217
2033	57	13	69	6	2	8	111	32	142	174	46	220
2034	58	13	71	7	2	8	112	33	144	176	47	223
2035	59	13	72	7	2	8	113	34	147	179	48	227
2036	61	13	74	7	2	9	114	34	149	182	49	231
2037	63	14	76	7	2	9	116	35	151	185	50	236
2038	64	14	78	7	2	9	118	35	153	189	51	240
2039	66	14	80	7	2	9	120	35	155	194	51	245
2040	68	15	83	8	2	9	109	32	141	185	48	233
2041	70	15	85	8	2	10	111	32	143	189	49	237
2042	72	15	87	8	2	10	126	36	161	206	53	259
2043	74	16	90	8	2	10	120	34	154	202	52	254
2044	76	16	92	8	2	10	0	0	0	84	18	103
2045	78	17	94	9	2	11	0	0	0	87	19	105
2046	80	17	97	9	2	11	0	0	0	89	19	108
2047	82	17	100	9	2	11	0	0	0	92	20	111
2048	85	18	103	9	2	12	0	0	0	94	20	115
2049	87	19	106	10	2	12	0	0	0	97	21	118
2050	90	19	109	10	2	12	0	0	0	100	21	121
2051	92	20	112	10	2	12	0	0	0	103	22	125
2052	95	20	115	10	2	13	0	0	0	105	23	128

Note: Numbers may not add due to rounding.



# Basic Website Metrics

	2022												2023
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.
Visits	5,053	4,698	5,107	4,872	4,212	4,565	4,852	5,268	3,791	5,538	8,511	4,837	<b>5,930</b>
Users	3,810	3,551	3,375	3,751	3,147	3,458	3,408	3,728	2,640	3,979	7,068	3,496	<b>3,947</b>
Page Views	13,532	12,267	13,227	12,458	11,258	10,415	11,694	13,000	9,856	13,918	20,851	11,753	<b>14,873</b>
Ave. Visit	2:18	2:10	2:10	2:14	2:29	1:13	1:09	1:07	1:29	1:12	:52	1:27	<b>1:39</b>

- In November 2022, numbers are inflated due to IT Vulnerability Audit.

## IX.

### INFORMATIONAL

- A. Pending Litigation Report.
- B. Conferences.
- C. Class Action Income 2023 YTD.
- D. Adjusted Quarterly Cost Basis of Equity.
- E. Minutes of the Special Administration & Operations Committee Meeting Held January 30, 2023.
- F. Minutes of the Investment Committee Meeting Held February 9, 2023.
- G. Report on Bills.
- H. Deployment of Assets.
- I. Securities Lending Revenue and Budget Report.
- J. Preliminary Performance Report and Asset Allocation.



## February 27, 2023 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 Employees' Retirement System alleging the defendants violated the collective bargaining agreements as it relates to the payment of the 5.8% pension offset.

**\*\*See prior Reports for case history\*\***

➤ 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\*\***

➤ 12/13/22 Circuit Court affirms Pension Board decision denying Application for Accidental Death Benefits.

➤ **01/27/23** Appeal filing deadline; no appeal has been filed. Litigation matter closed.

##### **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\*\***

➤ **01/30/23** Court grants plaintiffs' Motion for Summary/Declaratory Judgment. Appeal pending.

##### **Sandrah Crawford v. City of Milwaukee ERS, et al; Case No. 2022CV007800**

Member requests judicial review of Pension Board's denial of duty disability retirement benefits.

**\*\*See prior Reports for case history\*\***

➤ **01/25/23** Defendants' Notice of Retainer and Answer filed with court.

## **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.

### **Albert Greene Jr; Administrative Case Nos. 1511 and 1512**

- Appeal hearing requested; pending scheduling.

### **Benjean Lara; Administrative Case Nos. 1488, 1489 and 1490**

- Day 1 of administrative appeal hearing conducted on January 12, 2023. Pending scheduling of Day 2 of appeal hearing.

## **Part 3. Notice of Claim filed with ERS**

None.

## **Part 4. ERS Litigation through Outside Legal Counsel**

None.

# Client Conferences 2023

**Board Meeting: February 27, 2023**

DATE(S)	CONFERENCE(S) / LOCATION(S)	SPONSOR(S)
March 1 – 2, 2023	“Callan College” Introduction to Investments Chicago, IL	Callan Associates
April 2 – 4, 2023	Callan Institute’s 2023 National Conference Scottsdale, AZ	Callan Associates
May 2 – 4, 2023	DFA Annual Conference Austin, TX	Dimensional Fund Advisors
August 23 – 24, 2023 10:30 am – 1:30 pm	“Callan College” on Alternative Investments Virtual	Callan Associates
September 26 – 28, 2023 10:30 am – 1:30 pm	“Callan College” Introduction to Investments Virtual	Callan Associates
October 26, 2023	2023 October Regional Workshop Chicago, IL	Callan Associates

# Trustee Conferences 2023

**Board Meeting: February 27, 2023**

DATE(S)		
March 6 – 8, 2023	CII Spring 2023 Conference Washington, DC	Council of Institutional Investors
March 8, 2023 11:45 am – 1:00 pm	Effective Portfolio Management during Stages of the Credit Cycle – Brian Kennedy Milwaukee, WI	CFA Society Milwaukee
April 17 – 19, 2023	The Pension Bridge Annual 2023 San Francisco, CA	With Intelligence
April 19, 2023	7 <sup>th</sup> 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 1 – 4, 2023	Wharton Investment Programs: Portfolio Concepts and Management Philadelphia, PA	International Foundation of Employee Benefit Plans
May 9 – 10, 2023	Private Markets: Refining Asset Allocation Amidst Complexity Miami, FL	Pensions & Investments
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 <sup>th</sup> Annual Midwest Institutional Forum Chicago, IL	Markets Group
May 23 – 24, 2023	9 <sup>th</sup> Annual Redefining Fixed Income Forum Chicago, IL	Institutional Investor
July 16 – 18, 2023	ALTSCHI Chicago, IL	Markets Group

## Trustee Conferences 2023

**Board Meeting: February 27, 2023**

DATE(S)	CONFERENCE(S) / LOCATION(S)	SPONSOR(S)
July 18 – 20, 2023	Wharton Investment Programs: Alternative Investment Strategies San Francisco, CA	International Foundation of Employee Benefit Plans
July 24 – 25, 2023	Certificate of Achievement in Public Plan Policy (CAPPP): Pensions Part I Chicago, IL	International Foundation of Employee Benefit Plans
July 25 – 27, 2023	Institutional Investor Week Newport, RI	Institutional Investor
July 26 – 27, 2023	Certificate of Achievement in Public Plan Policy (CAPPP): Pensions Part II Chicago, IL	International Foundation of Employee Benefit Plans
August 20 – 22, 2023	Public Pension Funding Forum Chicago, IL	NCPERS
September 11 – 13, 2023	CII Fall 2023 Conference Long Beach, CA	Council of Institutional Investors
September 12, 2023	9 <sup>th</sup> Annual Great Plains Institutional Forum Minneapolis, MN	Markets Group
September 19 – 20, 2023	Public Pension Conference Scottsdale, AZ	Pensions & Investments
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

### Class Action Income 2023 YTD

Asset Description	Date(s)	Amount
Allergan, Inc.	1/11/2023 \$	82
USA Technologies, Inc.	2/13/2023 \$	10,120
Total Class Action Income Received in 2023 YTD		\$ 10,202



## Adjusted Quarterly Cost Basis of Equity December 31, 2022

Date	Market Value of Total Fund	Equity as Percent of Portfolio on a Market Value Basis %	Cost Value of Total Fund	Equity as Percent of Portfolio on Cost Basis %
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%
Dec-22	5,469,372,844	46.0%	4,476,020,934	44.5%

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

Minutes of the Special Administration and Operations Committee Meeting  
held January 30, 2023 via teleconference during COVID-19

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

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

ERS Staff Present: Bernard Allen, Executive Director  
Melody Johnson, Deputy Director  
Dan Gopalan, Chief Financial Officer  
Erich Sauer, Deputy Chief Investment Officer  
Mary Turk, Business Operations Analyst  
Jan Wills, Board Stenographer

Others Present: Jason Coyle, Darlene Middleman, Baker Tilly; Brad Berls, Lealan Miller, Abbie Belthoff, Eide Bailly; Timothy Heling, ERS Trustee; Terry Siddiqui, DS Consulting Partners, Inc., no members of the public called in to the meeting.

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

**Presentations by Financial Audit Firms and Selection of Finalist Firm.**

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

The Committee convened in closed session at 9:02 a.m.

Ms. King left the meeting at 9:30 a.m.

The Committee reconvened in open session at 10:14 a.m.

Ms. Sawa stated that after discussion the A&O Committee recommends that the Staff of ERS move ahead with contract negotiations with the finalist firm.

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

There being no further business, Ms. Sawa adjourned the meeting at 10:15 a.m.

Bernard J. Allen  
Secretary and Executive Director

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

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

Minutes of the Investment Committee Meeting  
held February 9, 2023 via teleconference during COVID-19

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

Committee Members Present:       Matthew Bell  
  Deborah Ford  
  Timothy Heling  
  Thomas Klusman, Chair  
  Rudy Konrad  
  Nik Kovac  
  Aycha Sawa

Committee Members Not Present:   Molly King

ERS Staff Present:                   Jerry Allen, Executive Director  
  David Silber, Chief Investment Officer  
  Erich Sauer, Deputy Chief Investment Officer  
  Dave Walters, Pension Investment Analyst – Sr.  
  Thomas Courtright, Pension Investment Analyst  
  Dan Gopalan, Chief Financial Officer  
  Gust Petropoulos, Deputy Director Disability  
  Jan Wills, Board Stenographer

Others Present: Jason Ellement, John Jackson, Mike Joecken, Adam Lozinski, Callan; Pat Beckham, Aaron Chochon, Larry Langer, Cavanaugh Macdonald; Terry Siddiqui, DS Consulting, Inc.; three members of the public called in.

**Callan 2023 Asset-Liability Study Phase 1 Presentation.** Mr. Silber stated the Asset-Liability Study is completed every three to five years, with the last Study completed in 2020. He said Callan is presenting phase 1 of the Study now because last year there was a historic rise in interest rates, which had a material impact on the capital market assumptions that Callan uses, and the actuary will be asking the Board to select the discount rate that the Fund's liabilities are measured on at its February meeting. Mr. Silber said Committee members can ask any questions of Callan on capital market assumptions, asset allocation, and expected rate of return. He said Callan has put together three types of asset class mixes that are meant to be representative of risk and return considerations for the Committee to see. Mr. Silber concluded that Callan would later have Phase 2 and Phase 3 presentations.

Mr. Joecken said both equity and fixed income for the third or fourth time in 100 years had negative returns at the same time in a calendar year, so capital market assumptions were adjusted and Callan moved the Study to three years instead of five. He noted as they get more information from the actuary, Callan will move forward with Phase 2 and Phase 3 presentations. Mr. Joecken stated today they would discuss capital market assumptions, lay out alternative asset mixes, and help the Committee get comfortable with the discount rate.

Messrs. Ellement and Lozinski of Callan's Capital Markets group discussed the Capital Market Assumptions with the topics of Why Make Capital Markets Projections?; Callan 2023-2032 Capital Market Assumptions; Inflation Forecasts: Survey of Professional Forecasters, 10-Year Horizon; 10-Year Breakeven Rate: Bond Market Forecast of Inflation; Yield Curve Continued to Rise and Became Inverted in Second Half of 2022; 10-Year Expected Returns; Comparison of Core Fixed Income Return Components; 10-Year Expected Equity Returns; U.S. Equity Market: S&P 500 Valuation Measures; U.S. Equity Market: Return of Cash; and 2023 vs. 2022. Discussion ensued.

Ms. King arrived at 9:40 a.m.

Messrs. Ellement and Lozinski also discussed Alternative Asset Mixes, including the topics of 10-Year Returns; 30-Year Returns; Public Fund Actuarial Discount Rates; and Preliminary Liquidity Stress Test on Current Target. Discussion ensued.

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

Ms. King asked Committee members and Staff for a moment of remembrance for the loss of Officer Jerving and said our thoughts go out to his family and colleagues.

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

The Committee convened in closed session at 10:49 a.m.

### **Callan Real Estate Manager Search Update.**

### **Approval of Real Estate Manager Search Finalists.**

The Committee reconvened in open session at 11:35 a.m.

Mr. Klusman noted the Committee, in closed session, approved the Approval of Real Estate Manager Search Finalists.

**Liquidity Analysis Memo.** As a matter of information, Committee members received from Mr. Silber a Liquidity Analysis memo dated February 9, 2023. Mr. Silber commented that there has been a prolonged downturn in stocks and bonds since the beginning of 2022, with both down double digits. He stated this market environment creates a liquidity issue for the Fund because the Fund pays out more money in benefits than it receives in contributions, and investments have to be sold each month to make up for that gap. Mr. Silber said stocks are in the portfolio because Callan expects them to be worth more in the future than they are now. He said stocks are needed to achieve the 7.5% long-term target. Mr. Silber confirmed the Fund has enough liquidity to pay

benefits without selling any stock investments through March 2025, even if markets do not bounce back between now and then. He said the Committee has a guideline issue however, as the guidelines do not want the Fixed Income allocation to drop more than 3% below the 23% target. Mr. Silber said there is an interim 17.5% minimum Fixed Income allocation, effective until March 1, 2023, that the Board approved last November. He is recommending the ERS extend the interim minimum Fixed Income allocation to January 31, 2024 to provide Staff flexibility as it determines which investments to sell each month to cover the Fund's benefit payments. ERS is a long-term investor and hopes stocks rebound in 2023. However, Mr. Silber said he would continue to prepare contingency plans in case stocks do not bounce back in 2023. He said the Fund is in a good liquidity position in 2023 because the ERS intentionally went overweight to bonds at the beginning of 2022, and also because of the Committee's decision last November to raise cash by lowering the UBS target from 7% to 4%.

**Approval of Statement of Investment Policy Update.** Mr. Silber noted the redlined changes to extend, from March 1, 2023 to January 31, 2024, the footnote that allows the Fund's Fixed Income minimum range to be 17.5%, as mentioned in the Liquidity Analysis Memo. It was moved by Ms. King, seconded by Mr. Konrad, and unanimously carried, to approve the Approval of Statement of Investment Policy Update.

**CMERS 4<sup>th</sup> Quarter 2022 Performance Update.** As a matter of information, Committee members received the 4<sup>th</sup> Quarter 2022 Performance Update booklet. Mr. Sauer discussed the Relative Performance Expectations and said Value Equity Bias was significantly positive in CMERS' favor, Small Cap Equity Bias was a slight detractor, but Fixed Income Credit and Private Equity were also slightly in the Fund's favor. He said the Fund outperformed with the CMERS Total Fund (net) for Q4 up 5.6% with the CMERS Benchmark up 4.8%. Mr. Sauer said the one-year return for the ERS Total Fund (net) was -6.5% with stocks and bonds down. He said the -6.5% return did outperform the Fund's -10.6% benchmark return. He said the Fund's 10-year rolling return in 2022 was above 8% for most of the year, and ended at 8.1% with 90 basis points of outperformance. Mr. Sauer noted what generated outperformance in the 4<sup>th</sup> quarter was value, international stocks which performed better than domestic stocks, manager selection with value managers Brandes and the DFA Mandates, and Private Equity. He commented that the Growth Managers Polen and Blair detracted, as did the Overweight to Private Equity and the Underweight to Public Equity. Mr. Sauer said for the Total Fund vs. the Universe, the Fund was just outside the top quartile in the 4<sup>th</sup> quarter, but solidly top quartile in all the other time periods shown. He said even with the COVID drawdown, which is incorporated in the three-year and longer periods, it is nice to see those longer-term time periods stacking up so well against peers. Mr. Sauer then stated Public Equity had strong performance in the 4<sup>th</sup> quarter with Value being in the Fund's favor as well as Value and Small Cap for the one-year period. Mr. Silber complimented the Board for selecting and approving the Public Equity structure option in September 2022. He said the decision, which Staff was able to mostly implement before the 4<sup>th</sup> quarter started, added millions of dollars. Mr. Sauer noted the growth manager of MFS outperformed at 10.6% in the 4<sup>th</sup> quarter. He then commented that the Fixed Income Managers of Loomis and Reams generated outperformance in the 4<sup>th</sup> quarter and had protection on the downside. Mr. Sauer discussed Absolute Return and noted Aptitude, funded in the 4<sup>th</sup> quarter, was off to a good start with the portfolio they put together for CMERS. He said the goal of Absolute Return allocation was to make money when both stocks and bonds were down and UBS delivered on that this year at 8.9% for the full year. Mr. Sauer concluded that the Fund's value as of February 8 is \$5.76 billion, the

January estimate is that the ERS Fund is up 4.0% versus 4.2% for the benchmark, flat in February, with the year-to-date being 4.0% versus 4.2%. Mr. Klusman thanked the Investment Staff for an excellent report.

**Value Add Analysis.** Mr. Walters said the Analysis looks at the incremental value that is created by making the choice to invest some of the Fund with actively managed strategies rather than using an entirely passive set of strategies. He said the Analysis looks at the cumulative value add since 1995, excluding Real Assets, where the Fund has added \$1.3 billion dollars, net of fees. He noted that in the past 10 years, \$635 million was added net of fees. Mr. Walters commented that Private Equity and Absolute Return, which the Fund first invested in during 2010 and 2014, respectively, contributed more than one-third of the Value Add in the 28 year analysis. He noted International Equity generated over \$380 million and Fixed Income generated \$274 million of added value. Mr. Walters stated that Public Equity and Fixed Income alone generated over \$800 million dollars of value add over the past 28 years, net of fees.

### **Due Diligence Reports.**

**Brandes Investment Partners.** As a matter of information, Committee members received from Mr. Walters a Memorandum regarding the Brandes Investment Partners Due Diligence meeting he and Mr. Silber had with Brandes on September 15, 2022 (onsite) and November 30, 2022 (virtual). Mr. Walters said it was a routine visit and that Brandes has managed an International Equity Large Cap Value strategy for the Fund since January 1998. He noted Brandes has managed approximately \$339 million or 6.2% of the Fund's assets and is the largest strategy within Public Equity assets. Mr. Walters said Brandes is concentrated as it holds 55-85 individual stocks and they look for undervalued stocks positioned for long-term price appreciation. He noted Brandes has outperformed the benchmark since the strategy's inception. Mr. Walters commented that Brandes is in an ownership transition and they are making their fourth of 10 payouts, without any debt, to the retired founder Charles Brandes and the CEO reported their Firm remains profitable and their balance sheet is healthy. Mr. Walters concluded that in October 2019, Brandes finalized the initial transition of several back office functions to SEI, an outsourced service provider.

**Earnest Partners.** As a matter of information, Committee members received from Mr. Courtright a Memorandum regarding Earnest Partners Due Diligence Meeting that he and Mr. Sauer had with Earnest Partners on December 15, 2022. Mr. Courtright stated Earnest has managed a Mid-Cap Core Equity Strategy for the Fund since May 2005. He noted Earnest's back office operation capabilities are stable and they use a large, centralized 14-member team of professionals to implement the strategy and undertake security research as well as portfolio management. Mr. Courtright commented that three persons left the Earnest team since the last meeting the Investment Staff had with them in 2020, but Earnest has hired replacements for all three. He also said their Investment team has a disciplined process in securities research and portfolio construction, allowing Earnest to retain consistency and continuity across different market environments. Mr. Courtright said Earnest keeps focused on what the stocks' earnings results will be over the next three to five years. He said they use quantitative tools, such as a Return Pattern Recognition model and risk management tool called Downside Deviations, for determining stocks to invest in and to eliminate drawdowns in markets. Mr. Courtright concluded that Earnest is very capable to manage the Mid-Cap Core Equity Strategy.

12/08/22

Mr. Allen reminded Committee members to submit their Statements of Economic Interests to the Ethics Board, by February 28.

It was moved by Mr. Bell and seconded by Mr. Konrad to adjourn the meeting.

There being no further business, Mr. Klusman adjourned the meeting at 12:16 p.m.

Bernard J. Allen  
Secretary and Executive Director

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



**Fiscal Year**  
**2023**  
**Department**  
**Employees' Retirement System**

**City of Milwaukee**  
**Departmental**  
**Appropriation Budget Balances**

**As of: 2023-01-31**

	Budget	2023-1	Year to Date Expended	Life to Date Commitments	Remaining Budget
<i>Regular Departmental Appropriations:</i>					
Employee Salaries & Wages	3,749,620.00	-	-	-	3,749,620.00
Base Pay-Salary & Wage	-	223,024.02	223,024.02	-	(223,024.02)
Overtime Premium	-	40.62	40.62	-	(40.62)
Time Paid Not Worked	-	113,890.41	113,890.41	-	(113,890.41)
Employee Salaries & Wages	\$ 3,749,620.00	336,955.05	\$ 336,955.05	\$ -	\$ 3,412,664.95
Fringe Benefits Applied	1,687,329.00	-	-	-	1,687,329.00
Applied Employee Benefits	\$ 1,687,329.00	-	\$ -	\$ -	\$ 1,687,329.00
Operating Expenditures	15,910,400.00	-	-	-	15,910,400.00
Office Supplies	-	1,095.67	1,095.67	-	(1,095.67)
Magazines,Subscription	-	28.17	28.17	-	(28.17)
Postal and Mailing Services	-	10,617.37	10,617.37	-	(10,617.37)
Electricity	-	3,210.86	3,210.86	-	(3,210.86)
Films & Other Educational Item	-	998.00	998.00	-	(998.00)
Building Rental	-	32,874.09	32,874.09	-	(32,874.09)
Printing & Dupl Machine Rental	-	261.58	261.58	-	(261.58)
Consulting	-	(170.00)	(170.00)	-	170.00
Medical,Surgical & Lab	-	3,688.79	3,688.79	-	(3,688.79)
Administrative Charges	-	8,730.65	8,730.65	-	(8,730.65)
Other Professional Services	-	1,083,657.21	1,083,657.21	-	(1,083,657.21)
Systems Support	-	56,024.50	56,024.50	-	(56,024.50)
IT Infrastructure	-	4,307.30	4,307.30	-	(4,307.30)
Telephone, Communications	-	7,142.66	7,142.66	-	(7,142.66)
Bldgs-Machinery & Equip Repair	-	2,234.00	2,234.00	-	(2,234.00)
Travel & Subsistence	-	1,557.25	1,557.25	-	(1,557.25)
Printing Services	-	160.04	160.04	-	(160.04)
Other Misc Services	-	200.00	200.00	-	(200.00)
Operating Expenditures	\$ 15,910,400.00	1,216,618.14	\$ 1,216,618.14	\$ -	\$ 14,693,781.86
All Equipment	2,036,000.00	-	-	-	2,036,000.00
Total Equipment	\$ 2,036,000.00	-	\$ -	\$ -	\$ 2,036,000.00
Total Regular Class	<u>\$ 23,383,349.00</u>	<u>1,553,573.19</u>	<u>\$ 1,553,573.19</u>	<u>\$ -</u>	<u>\$ 21,829,775.81</u>
<i>Other Departmental Appropriations:</i>					
Pol Pension Lump-Sum Sup Cont	10,000.00	-	-	-	10,000.00
PABF Payroll	24,000.00	3,552.80	3,552.80	-	20,447.20
Group Life Insurance Premium	4,200,000.00	-	-	-	4,200,000.00
Retiree's Benefit Adjustment	25,000.00	329.15	329.15	-	24,670.85
Other Classes	\$ 4,259,000.00	3,881.95	\$ 3,881.95	\$ -	\$ 4,255,118.05
Total Dept Appropriations	<u>\$ 27,642,349.00</u>	<u>1,557,455.14</u>	<u>\$ 1,557,455.14</u>	<u>\$ -</u>	<u>\$ 26,084,893.86</u>

# Monthly Board Report

31-Jan-23

Account number COMALL

CITY OF MILW ALL ACCTS

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## Manager Mix Report

Account Name/ Account Number	Cash/ % of account	Short Term/ % of account	Equity/ % of account	Fixed/ % of account	R.E. and Other/ % of account	Pendings/ % of account	Total Market Value/ % of consolidation
MILWAUKEE-CASH ACCOUNT	0.00	81,239,283.06	0.00	0.00	0.00	0.00	81,239,283.06
2605491	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	1.39%
MILWAUKEE-THE NORTHERN TRS	0.00	0.00	220,076,483.30	0.00	0.00	0.00	220,076,483.30
2605496	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	3.77%
MILWAUKEE-ERS EXPENSE FUND	0.00	64,400.27	0.00	0.00	0.00	0.00	64,400.27
2605504	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%
MILWAUKEE-PABF BENEFIT PAYMENT	0.00	2,508.94	0.00	0.00	0.00	0.00	2,508.94
2610128	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%
MILWAUKEE-DFA INTERNATIONAL	0.00	0.00	196,508,989.20	0.00	0.00	0.00	196,508,989.20
2619838	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	3.36%
MILWAUKEE-EARNEST -SL	0.00	2,028,162.88	113,084,668.90	0.00	0.00	0.00	115,112,831.80
2630942	0.00%	1.76%	98.24%	0.00%	0.00%	0.00%	1.97%
MILWAUKEE - UBS A&Q	0.00	0.00	0.00	0.00	425,948,135.70	0.00	425,948,135.70
2637239	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	7.29%
MILWAUKEE-DFA	0.00	0.00	203,857,276.40	0.00	0.00	0.00	203,857,276.40
2637848	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	3.49%
MILWAUKEE-BAIRD	0.00	27,546,582.15	0.00	55,399,325.26	0.00	-1,570,117.16	81,375,790.25
2674604	0.00%	33.85%	0.00%	68.08%	0.00%	-1.93%	1.39%
MILWAUKEE-CASTLEARK	0.00	857,503.23	86,901,448.15	0.00	0.00	-99,975.04	87,658,976.34
2697782	0.00%	0.98%	99.14%	0.00%	0.00%	-0.11%	1.50%
MILWAUKEE - BLACKROCK R1000V	0.00	0.00	218,019,524.30	0.00	0.00	0.00	218,019,524.30
4472746	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	3.73%
MILWAUKEE-LOOMIS SAYLE	1,581,406.43	0.00	4,757,071.95	340,764,074.00	0.00	-91,751.22	347,010,801.10
CME01	0.46%	0.00%	1.37%	98.20%	0.00%	-0.03%	5.94%
MILWAUKEE-BRANDES INT'L EQUITY	4,153,444.85	0.00	368,643,452.40	0.00	1,615,326.80	0.00	374,412,224.00
CME03	1.11%	0.00%	98.46%	0.00%	0.43%	0.00%	6.41%
MILWAUKEE-REAMS	7,394,837.04	0.00	0.00	617,898,224.00	8,851,535.65	-128,444,642.40	505,699,954.20
CME04	1.46%	0.00%	0.00%	122.19%	1.75%	-25.40%	8.66%
MILWAUKEE-BLAIR	9,564,323.12	0.00	256,927,080.80	0.00	849,485.25	130,388.00	267,471,277.20
CME05	3.58%	0.00%	96.06%	0.00%	0.32%	0.05%	4.58%

# Monthly Board Report

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CITY OF MILW ALL ACCTS

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## Manager Mix Report

Account Name/ Account Number	Cash/ % of account	Short Term/ % of account	Equity/ % of account	Fixed/ % of account	R.E. and Other/ % of account	Pendings/ % of account	Total Market Value/ % of consolidation
MILWAUKEE-MFS	2,412,511.42	0.00	228,323,155.80	0.00	406,443.49	-115,290.12	231,026,820.60
CME12	1.04%	0.00%	98.83%	0.00%	0.18%	-0.05%	3.96%
MILWAUKEE-POLEN	0.00	1,685,203.11	131,866,473.40	0.00	0.00	400,408.78	133,952,085.30
2644553	0.00%	1.26%	98.44%	0.00%	0.00%	0.30%	2.29%
MILWAUKEE - PRINCIPAL DRA -SL	0.00	0.00	177,009,193.90	0.00	0.00	0.00	177,009,193.90
2677436	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	3.03%
MILWAUKEE-BLACKROCK GLOBAL-SL	0.00	0.00	279,259,718.00	0.00	0.00	0.00	279,259,718.00
2683493	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	4.78%
MILWAUKEE- AQR-SL	0.00	0.00	97,887,864.00	0.00	0.00	0.00	97,887,864.00
4468331	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	1.68%
MILWAUKEE- NEUBERGER SOF V-SL	0.00	0.00	0.00	0.00	12,470,436.00	0.00	12,470,436.00
4479679	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.21%
MILWAUKEE - ABBOTT 2022-SL	0.00	0.00	0.00	0.00	6,538,568.00	0.00	6,538,568.00
4479680	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.11%
MILWAUKEE-APTITUDE / 4479682	0.00	0.00	0.00	0.00	157,016,048.80	0.00	157,016,048.80
4479682	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	2.69%
MILWAUKEE - DFA US LCV	543,310.15	0.00	161,493,187.40	0.00	0.00	0.00	162,036,497.60
CME15	0.34%	0.00%	99.66%	0.00%	0.00%	0.00%	2.77%
MILWAUKEE - BLACKROCK US G-SL	0.00	0.00	0.00	224,129,096.10	0.00	0.00	224,129,096.10
MULTIPLE	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	3.84%
MILWAUKEE-PRIVATE EQUITY	0.00	0.00	0.00	0.00	694,801,964.00	0.00	694,801,964.00
MULTIPLE	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	11.90%
MILWAUKEE-REAL ESTATE	0.00	-311,180.63	0.00	0.00	540,441,701.75	-145,352.08	539,985,169.01
MULTIPLE	0.00%	-0.06%	0.00%	0.00%	100.08%	-0.03%	9.25%

# Monthly Board Report

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CITY OF MILW ALL ACCTS

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## Manager Mix Report

Account Name/ Account Number	Cash/ % of account	Short Term/ % of account	Equity/ % of account	Fixed/ % of account	R.E. and Other/ % of account	Pendings/ % of account	Total Market Value/ % of consolidation
<b>Total for consolidation</b>	<b>25,649,833.01</b>	<b>113,114,285.01</b>	<b>2,744,615,587.90</b>	<b>1,238,190,719.36</b>	<b>1,848,939,645.44</b>	<b>-129,936,331.24</b>	<b>5,840,573,739.37</b>
<b>% for consolidation</b>	<b>0.44%</b>	<b>1.94%</b>	<b>46.99%</b>	<b>21.20%</b>	<b>31.66%</b>	<b>-2.22%</b>	<b>100.00%</b>

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.

IRS CIRCULAR 230 NOTICE: To the extent that this message or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law. For more information about this notice, see <http://www.northerntrust.com/circular230>

**Employees' Retirement System**  
**Securities Lending Income and Expenses: 2023**  
**As of January 31, 2023**

<b>Date</b>	<b>Amounts Expended</b>			<b>Balance</b>
	<b>Income From Lending</b>	<b>Fees</b>	<b>Administrative Transfers</b>	
<b>Balance 12-31-22</b>				<b>\$791,432.47</b>
01/05/22	2,449.48	-	-	793,881.95
01/17/22	75,293.89	15,052.80	-	854,123.04
01/25/22	-	-	792,000.00	62,123.04
<b>Current Totals</b>	<b>\$77,743.37</b>	<b>\$15,052.80</b>	<b>\$792,000.00</b>	<b>\$62,123.04</b>

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

**MERS PERFORMANCE ESTIMATES**  
January 31, 2023

Account	2022 Return	Jan 2023	YTD Thru 1/31/23
<b>Northern Trust S&amp;P 500 Index</b>	-18.10%	6.28%	6.28%
S&P 500	-18.11%	6.28%	6.28%
Difference	0.01%	0.00%	0.00%
<b>BlackRock Russell 1000 Value Index</b>	-7.54%	5.18%	5.18%
Russell 1000 Value	-7.54%	5.18%	5.18%
Difference	0.00%	0.00%	0.00%
<b>DFA US Large Cap Value</b>	-4.95%	6.48%	6.48%
Russell 1000 Value	-7.54%	5.18%	5.18%
Difference	2.59%	1.30%	1.30%
<b>Polen</b>	-37.54%	11.70%	11.70%
S&P 500	-18.11%	6.28%	6.28%
Difference	-19.43%	5.42%	5.42%
<b>Earnest</b>	-15.13%	9.19%	9.19%
Russell MidCap	-17.32%	8.30%	8.30%
Difference	2.18%	0.89%	0.89%
<b>CastleArk</b>	-27.99%	6.75%	6.75%
Russell 2000 Growth	-26.36%	9.95%	9.95%
Difference	-1.63%	-3.20%	-3.20%
<b>DFA US Small Cap Value</b>	-1.67%	9.58%	9.58%
Russell 2000 Value	-14.48%	9.54%	9.54%
Difference	12.81%	0.04%	0.04%
<b>Brandes</b>	-6.88%	10.47%	10.47%
MSCI EAFE	-14.45%	8.10%	8.10%
Difference	7.57%	2.37%	2.37%
<b>William Blair</b>	-28.99%	7.41%	7.41%
MSCI ACWI ex US	-15.57%	8.13%	8.13%
Difference	-13.42%	-0.72%	-0.72%
<b>DFA Int'l Small Cap Value</b>	-9.75%	8.35%	8.35%
MSCI EAFE Small Cap	-21.39%	7.47%	7.47%
Difference	11.64%	0.88%	0.88%
<b>AQR</b>	-20.81%	8.43%	8.43%
MSCI EM	-20.09%	7.90%	7.90%
Difference	-0.72%	0.53%	0.53%
<b>BlackRock Global Alpha Tilts</b>	-16.81%	6.79%	6.79%
MSCI ACWI	-18.36%	7.17%	7.17%
Difference	1.55%	-0.38%	-0.38%
<b>MFS</b>	-18.15%	7.25%	7.25%
MSCI ACWI	-18.36%	7.17%	7.17%
Difference	0.22%	0.08%	0.08%
<b>BlackRock Gov't Bond Index</b>	-12.31%	2.67%	2.67%
Bloomberg Gov't Bond	-12.32%	2.48%	2.48%
Difference	0.01%	0.19%	0.19%
<b>Reams</b>	-11.39%	3.62%	3.62%
Bloomberg US Aggregate	-13.01%	3.08%	3.08%
Difference	1.62%	0.54%	0.54%
<b>Loomis Sayles</b>	-12.21%	3.90%	3.90%
Bloomberg US Aggregate	-13.01%	3.08%	3.08%
Difference	0.80%	0.82%	0.82%
<b>UBS</b>	8.91%	0.42%	0.42%
SOFR + 4%	4.90%	0.70%	0.70%
Difference	4.01%	-0.28%	-0.28%
<b>Aptitude</b>		1.10%	1.10%
SOFR + 4%		0.70%	0.70%
Difference		0.40%	0.40%
<b>Principal</b>	-5.88%	4.14%	4.14%
Blended Benchmark	-5.06%	5.07%	5.07%
Difference	-0.82%	-0.93%	-0.93%
<b>Baird</b>	-1.80%	0.79%	0.79%
Bloomberg Govt/Credit 1-3 Year	-3.69%	0.80%	0.80%
Difference	1.89%	-0.01%	-0.01%
<b>Total MERS</b>	<b>-6.49%</b>	<b>4.05%</b>	<b>4.05%</b>

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)

# ACTUAL ALLOCATIONS

January 31, 2023

		Target	Market Value	Allocation
EQUITY				
Public Equity				
Domestic				
Passive Large Cap Equity	Northern Trust (S&P 500)	3.89%	\$ 220,076,483	3.82%
	BlackRock (Russell 1000 Value)	3.89%	\$ 218,019,524	3.79%
	Sub-Total Passive Large Cap Equity	7.78%	\$ 438,096,008	7.61%
Active Large Cap Equity	Polen (S&P 500)	2.19%	\$ 133,952,085	2.33%
	DFA (Russell 1000 Value)	2.78%	\$ 162,036,498	2.81%
	Sub-Total Active Large Cap Equity	4.97%	\$ 295,988,583	5.14%
Active Mid/Small Cap Equity	Earnest Partners (Russell MidCap)	2.00%	\$ 115,112,832	2.00%
	CastleArk (Russell 2000 Growth)	1.61%	\$ 87,658,976	1.52%
	DFA (Russell 2000 Value)	3.44%	\$ 203,857,276	3.54%
	Sub-Total Active Mid/Small Cap Equity	7.05%	\$ 406,629,085	7.06%
Total Domestic		19.80%	\$ 1,140,713,675	19.81%
International				
Active International Equity	Brandes (MSCI EAFE)	5.80%	\$ 374,412,224	6.50%
	William Blair (MSCI ACWI ex US)	4.41%	\$ 267,471,277	4.65%
	DFA (MSCI EAFE Small Cap)	3.20%	\$ 196,508,989	3.41%
	AQR (MSCI EM)	1.99%	\$ 97,887,864	1.70%
Total International		15.40%	\$ 936,280,354	16.26%
Global				
Active Global Equity	BlackRock (MSCI ACWI)	4.84%	\$ 279,259,718	4.85%
	MFS (MSCI ACWI)	3.96%	\$ 231,026,821	4.01%
Total Global		8.80%	\$ 510,286,539	8.86%
Total Public Equity		44.00%	\$ 2,587,280,568	44.93%
Private Equity				
	Abbott Capital (Russell 3000 Quarter Lag + 2%)	3.50%	\$ 319,778,748	5.55%
	Mesirow (Russell 3000 Quarter Lag + 2%)	3.50%	\$ 277,273,541	4.82%
	Neuberger Berman (Russell 3000 Quarter Lag + 2%)	1.50%	\$ 37,580,582	0.65%
	Apogem (Russell 3000 Quarter Lag + 2%)	1.50%	\$ 79,178,097	1.38%
Total Private Equity		10.00%	\$ 713,810,968	12.40%
TOTAL EQUITY (Public Equity + Private Equity)		54.00%	\$ 3,301,091,536	57.33%
FIXED INCOME & ABSOLUTE RETURN				
Fixed Income				
Cash		1.00%	\$ 81,308,014	1.41%
Passive Fixed Income	BlackRock (Bloomberg US Government)	5.50%	\$ 224,129,096	3.89%
Active Fixed Income	Reams (Bloomberg US Aggregate)	9.90%	\$ 505,699,954	8.78%
	Loomis Sayles (Bloomberg US Aggregate)	6.60%	\$ 347,010,801	6.03%
	Sub-Total Active Fixed Income	16.50%	\$ 852,710,755	14.81%
Total Fixed Income		23.00%	\$ 1,158,147,866	20.11%
Absolute Return				
	Aptitude (SOFR + 4%)	3.00%	\$ 158,745,123	2.76%
	UBS (SOFR + 4%)	7.00%	\$ 427,742,229	7.43%
Total Absolute Return		10.00%	\$ 586,487,352	10.19%
TOTAL FIXED INCOME & ABSOLUTE RETURN		33.00%	\$ 1,744,635,218	30.30%
REAL ASSETS				
Private Real Estate - Core	JP Morgan (NFI-ODCE)	3.23%	\$ 140,457,136	2.44%
	Morgan Stanley (NFI-ODCE)	3.23%	\$ 163,636,785	2.84%
	LaSalle (NFI-ODCE)	1.62%	\$ 120,724,225	2.10%
	Prologis (NFI-ODCE)	1.62%	\$ 93,112,453	1.62%
	Sub-Total Private Real Estate - Core	9.70%	\$ 517,930,599	8.99%
Private Real Estate - Non-Core	Non-Core Real Estate (NFI-ODCE)	0.00%	\$ 17,443,726	0.30%
Public Real Assets	Principal (Blended Benchmark)	3.30%	\$ 177,009,194	3.07%
TOTAL REAL ASSETS		13.00%	\$ 712,383,518	12.37%
TOTAL ERS			\$ 5,758,110,272	100.00%
Total City Reserve Fund		R. W. Baird	81,375,790	

# PROJECTED TARGET ALLOCATIONS

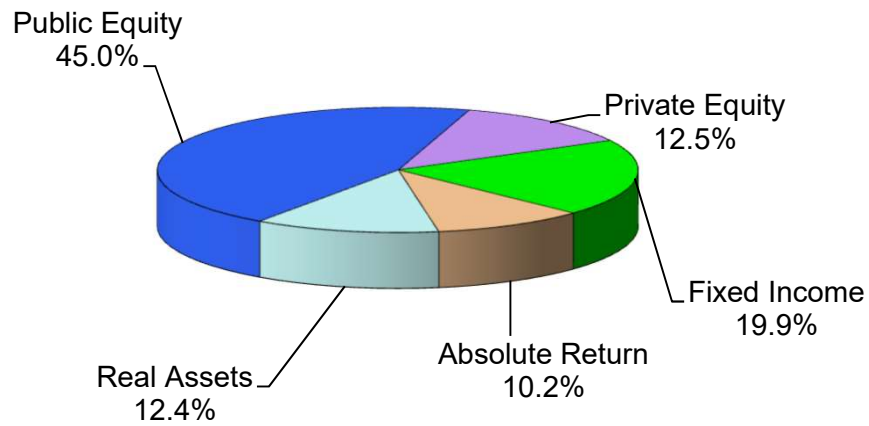
Feb 19, 2023

		Target	Market Value	Allocation
<b>EQUITY</b>				
<b>Public Equity</b>				
Domestic				
Passive Large Cap Equity	Northern Trust (S&P 500)	3.89%	\$ 220,513,937	3.85%
	BlackRock (Russell 1000 Value)	3.89%	\$ 216,283,060	3.77%
	Sub-Total Passive Large Cap Equity	7.78%	\$ 436,796,997	7.62%
Active Large Cap Equity	Polen (S&P 500)	2.19%	\$ 132,787,082	2.32%
	DFA (Russell 1000 Value)	2.78%	\$ 160,165,883	2.79%
	Sub-Total Active Large Cap Equity	4.97%	\$ 292,952,965	5.11%
Active Mid/Small Cap Equity	Earnest Partners (Russell MidCap)	2.00%	\$ 116,008,974	2.02%
	CastleArk (Russell 2000 Growth)	1.61%	\$ 88,420,541	1.54%
	DFA (Russell 2000 Value)	3.44%	\$ 206,086,853	3.60%
	Sub-Total Active Mid/Small Cap Equity	7.05%	\$ 410,516,367	7.16%
Total Domestic		19.80%	\$ 1,140,266,329	19.89%
International				
Active International Equity	Brandes (MSCI EAFE)	5.80%	\$ 376,332,807	6.57%
	William Blair (MSCI ACWI ex US)	4.41%	\$ 267,399,505	4.67%
	DFA (MSCI EAFE Small Cap)	3.20%	\$ 194,002,005	3.38%
	AQR (MSCI EM)	1.99%	\$ 94,883,171	1.66%
Total International		15.40%	\$ 932,617,488	16.27%
Global				
Active Global Equity	BlackRock (MSCI ACWI)	4.84%	\$ 278,070,099	4.85%
	MFS (MSCI ACWI)	3.96%	\$ 230,216,591	4.02%
Total Global		8.80%	\$ 508,286,690	8.87%
<b>Total Public Equity</b>		<b>44.00%</b>	<b>\$ 2,581,170,507</b>	<b>45.03%</b>
<b>Private Equity</b>				
	Abbott Capital (Russell 3000 Quarter Lag + 2%)	3.50%	\$ 319,778,748	5.58%
	Mesirow (Russell 3000 Quarter Lag + 2%)	3.50%	\$ 277,273,541	4.84%
	Neuberger Berman (Russell 3000 Quarter Lag + 2%)	1.50%	\$ 37,259,601	0.65%
	Apogem (Russell 3000 Quarter Lag + 2%)	1.50%	\$ 79,731,170	1.39%
<b>Total Private Equity</b>		<b>10.00%</b>	<b>\$ 714,043,060</b>	<b>12.46%</b>
<b>TOTAL EQUITY (Public Equity + Private Equity)</b>		<b>54.00%</b>	<b>\$ 3,295,213,567</b>	<b>57.49%</b>
<b>FIXED INCOME &amp; ABSOLUTE RETURN</b>				
<b>Fixed Income</b>				
Cash		1.00%	\$ 83,658,851	1.46%
Passive Fixed Income	BlackRock (Bloomberg US Government)	5.50%	\$ 220,024,132	3.84%
	Reams (Bloomberg US Aggregate)	9.90%	\$ 496,432,878	8.66%
Active Fixed Income	Loomis Sayles (Bloomberg US Aggregate)	6.60%	\$ 339,844,831	5.93%
	Sub-Total Active Fixed Income	16.50%	\$ 836,277,709	14.59%
<b>Total Fixed Income</b>		<b>23.00%</b>	<b>\$ 1,139,960,691</b>	<b>19.89%</b>
<b>Absolute Return</b>				
	Aptitude (SOFR + 4%)	3.00%	\$ 158,745,123	2.77%
	UBS (SOFR + 4%)	7.00%	\$ 427,742,229	7.46%
<b>Total Absolute Return</b>		<b>10.00%</b>	<b>\$ 586,487,352</b>	<b>10.23%</b>
<b>TOTAL FIXED INCOME &amp; ABSOLUTE RETURN</b>		<b>33.00%</b>	<b>\$ 1,726,448,044</b>	<b>30.12%</b>
<b>REAL ASSETS</b>				
Private Real Estate - Core	JP Morgan (NFI-ODCE)	3.23%	\$ 140,875,482	2.46%
	Morgan Stanley (NFI-ODCE)	3.23%	\$ 163,636,785	2.85%
	LaSalle (NFI-ODCE)	1.62%	\$ 120,724,483	2.11%
	Prologis (NFI-ODCE)	1.62%	\$ 93,112,453	1.62%
	Sub-Total Private Real Estate - Core	9.70%	\$ 518,349,203	9.04%
Private Real Estate - Non-Core	Non-Core Real Estate (NFI-ODCE)	0.00%	\$ 18,363,165	0.32%
Public Real Assets	Principal (Blended Benchmark)	3.30%	\$ 173,425,494	3.03%
<b>TOTAL REAL ASSETS</b>		<b>13.00%</b>	<b>\$ 710,137,863</b>	<b>12.39%</b>
<b>TOTAL ERS</b>			<b>\$ 5,731,799,473</b>	<b>100.00%</b>
<b>Total City Reserve Fund</b>		<b>R. W. Baird</b>	<b>81,204,931</b>	

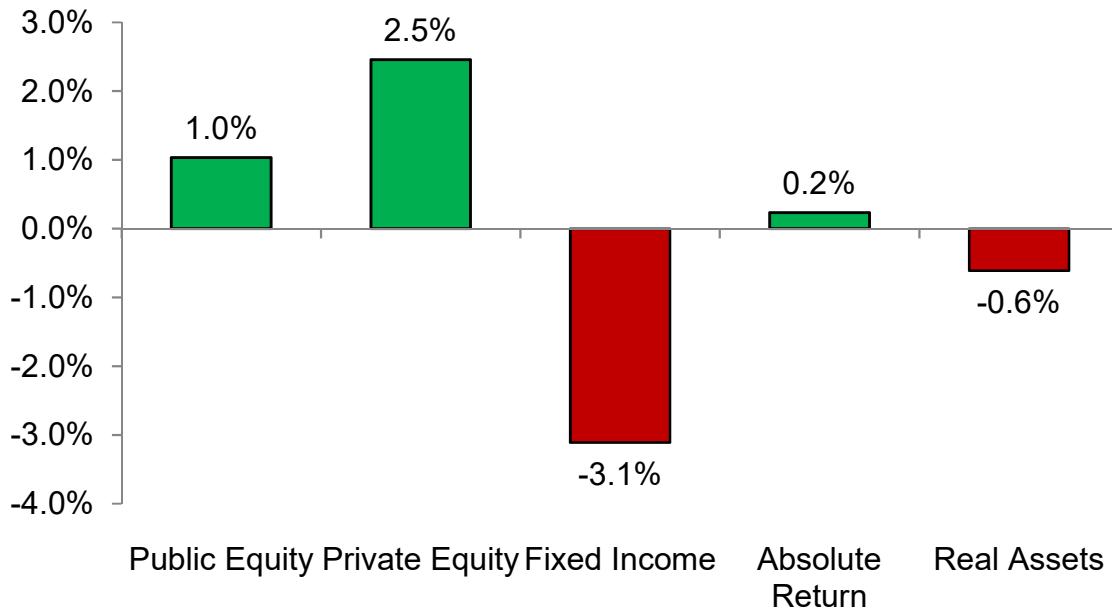


# PROJECTED VERSUS POLICY ALLOCATIONS

## Asset Mix Using Projected Balances



## Asset Allocation vs. Current Policy Benchmark



## YTD Market Value Change

December 31, 2022 Market Value including City Reserve & PABF Accounts			\$ 5,550,112,010
Monthly Cash Outflows thru	<u>February 19, 2023</u>		
Retiree Payroll Expense		\$ (38,010,983)	
PABF Payroll Expense		\$ (1,992)	
Expenses Paid		\$ (1,949,000)	
GPS Benefit Payments		\$ (1,129,737)	
Sub-Total Monthly Cash Outflows			\$ (41,091,712)
Monthly Cash Inflows thru	<u>February 19, 2023</u>		
Contributions		\$ 106,850,097	
PABF Contribution		\$ 3,985	
Sub-Total Monthly Contributions			\$ 106,854,082
Capital Market Gain/(Loss)			<u>\$ 197,130,024</u>
Value including City Reserve & PABF Accounts as of	<u>February 19, 2023</u>		<u>\$ 5,813,004,404</u>
Less City Reserve Account <sup>1</sup>			\$ 81,204,931
Less PABF Fund <sup>2</sup>			\$ 2,514
Net Projected ERS Fund Value as of	<u>February 19, 2023</u>		<u><u>\$ 5,731,796,959</u></u>

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.

# 2023 ESTIMATED MONTHLY CASH FLOWS

Revised 2/20/2023

(in 000's)

	12/31/2022	1/31/2023	2/29/2023	3/31/2023	4/30/2023	5/31/2023	6/30/2023	7/31/2023	8/31/2023	9/30/2023	10/31/2023	11/30/2023	
<b>Beginning Cash Account Balance</b>													
Townsend Cash Account	5,435	-											
Cash Contribution Account	-	-											
Milwaukee Cash Account	17,447	80,926											
Total Cash Available	22,883	80,926											
Less: Estimated Cash Needs for non-Investment Outflows	39,500	39,500											
Cash Available for Other Outflows	(16,617)	41,426											
<b>For Monthly Cash Outflows of:</b>													
Retiree Payroll Expense	(39,141)	(39,205)	(39,300)	(39,396)	(39,492)	(39,588)	(39,684)	(39,780)	(39,877)	(39,974)	(40,071)	(40,168)	(475,675)
Normal Retirement Payroll	(38,011)	(38,106)	(38,201)	(38,297)	(38,393)	(38,489)	(38,585)	(38,681)	(38,778)	(38,875)	(38,972)	(39,069)	(462,456)
Retiree Lump Sum Payments	(1,130)	(1,099)	(1,099)	(1,099)	(1,099)	(1,099)	(1,099)	(1,099)	(1,099)	(1,099)	(1,099)	(1,099)	(13,219)
Real Estate Capital Calls	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Equity Capital Calls	(826)	(1,589)	-	-	-	-	-	-	-	-	-	-	(2,414)
Expenses Paid through City	(1,949)	(1,554)	(1,949)	(1,949)	(1,949)	(1,949)	(1,949)	(1,949)	(1,949)	(1,949)	(1,949)	(1,949)	(22,993)
PABF Payroll	(2)	(12)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(34)
Sub-Total Monthly Cash Outflows	(41,917)	(42,360)	(41,251)	(41,347)	(41,443)	(41,538)	(41,635)	(41,731)	(41,828)	(41,925)	(42,022)	(42,119)	(501,116)
<b>For Monthly Cash Inflows:</b>													
Sponsoring Agency and Employee Contribution	2,514	2,483	3,734	2,496	2,502	2,508	2,514	3,781	2,527	2,533	2,540	2,546	32,677
Real Estate Distributions	2,400	16	-	-	-	-	-	-	-	-	-	-	2,417
Private Equity Distributions	235	1,622	-	-	-	-	-	-	-	-	-	-	1,857
Miscellaneous Income	164	315	80	80	80	80	80	80	80	80	80	80	1,279
Security Lending Transfer	792	-	-	-	-	-	-	-	-	-	-	-	792
City and Agency Required Contribution	101,853	-	-	-	-	-	-	-	-	-	-	-	101,853
PABF Inflow	2	2	12	2	2	2	2	2	2	2	2	2	34
Sub-Total Monthly Cash Inflows	107,961	4,438	3,826	2,578	2,584	2,590	2,596	3,863	2,609	2,615	2,622	2,628	140,909
Net Monthly Cash Inflows/(Outflows) Before Withdrawals	66,043	(37,921)	(37,425)	(38,769)	(38,859)	(38,948)	(39,038)	(37,868)	(39,219)	(39,310)	(39,400)	(39,492)	(360,207)
Net Monthly Cash Surplus (Need)	49,426	3,504	(37,425)	(38,769)	(38,859)	(38,948)	(39,038)	(37,868)	(39,219)	(39,310)	(39,400)	(39,492)	(335,398)
<b>Monthly Cash Withdrawals (Additions)</b>													
AQR													
BlackRock Global Alpha Tilts													
BlackRock Russell 1000 Value Index													
BlackRock US Government Bond Index													
Brandes													
CastleArk													
Dimensional Fund Advisors US Large Cap													
Dimensional Fund Advisors International													
Dimensional Fund Advisors US Small Cap													
Earnest													
Loomis Sayles													
MFS	(36,000)												
Northern Trust S&P 500 Index													
Polen													
Principal													
Reams													
UBS A&Q	28,000												
Goldman/Aptitude													
William Blair													
Sub-Total Monthly Cash Withdrawals	(8,000)	-	-	-	-	-	-	-	-	-	-	-	
<b>Estimated Month-End Cash Balance</b>													
Cash Available	41,426	3,504											
Estimated Cash Needs for non-Investment Outflows	39,500	39,500											
Total Cash Estimated on Hand For Next Month	80,926	43,004											