# City of Cincinnati Retirement System
# Board of Trustees Meeting

## Agenda

**May 4, 2023 / 2:00 P.M.**
**City Hall, Council Chambers and via Zoom**



**Call to Order**

**Public Comment**

**Approval of Minutes**
- Meeting Minutes – April 6, 2023

**Report from Investment Committee**

**Informational – Staff Report**
- Procurement Update (RFPs for Investment Consultant and Fiduciary Audit)
- CRS Presentation at Budget and Finance Comm (May 1)
- Status of Executive Director Search Process
- 1st Quarter Budget Update
- 1st Quarter DROP Update
- 1st Quarter Demographics Update
- Staff Update

**Old Business**
- Status of Disabled Adult Children Ordinance
- Benefits Survey Update

**New Business**
- 2022 Actuarial Valuations (Cheiron)
- Naming of Board Executive Director Search Committee Members
- Fiduciary Audit RFP
- Naming of Board RFP Committee Members

- Governance Committee Items
    - Implement 180 Day Deadline to Complete Disability Application (Board Rule 11; CMC 203-41)
    - Executive Director Recommendation re Disability Cases
    - Ethics Policy

**Adjournment**

**Next Meeting:** Thursday, June 8, 2023, 2:00 P.M. City Hall Council Chambers and via Zoom

# City of Cincinnati Retirement System
# Board of Trustees Meeting
# Minutes
# April 6, 2023/ 2:00 P.M.
# City Hall – Council Chambers and remote

**Board Members Present**
Bill Moller, Chair
Tom Gamel, Co-chair
Kathy Rahtz
Mark Menkhaus, Jr.
Monica Morton
John Juech
Seth Walsh
Aliya Riddle

**Administration**
Mike Barnhill, Consultant
Karen Alder

**Law Department**
Linda Smith

**CALL TO ORDER**
Chair Moller called the meeting to order at 2:07pm and a roll call of attendance was taken. Trustee Juech joined at 2:20pm, Trustee Walsh departed at 2:30pm, and Trustee West was absent.

**PUBLIC COMMENT**
No public comment.

**APPROVAL OF MINUTES**
Approval of the minutes of the Board meeting of March 2, 2023 and March 23, 2023, was moved by Trustee Gamel and seconded by Trustee Morton. The minutes were approved by unanimous roll call vote.

**Report from the Investment Committee**
The Governance Committee meeting was cancelled since there was not a quorum. Therefore, there was no committee report given.

**Informational – Staff Report**

- *February 2023 Investment Results* - Consultant Barnhill provided an overview of the report from Marquette. He explained year to date returns were positive and the one-year performance was -3.6%.
- *Procurement Update* – Director Alder informed the board that the Investment Consultant RFP was in final form and a copy was included in the packet. She stated that the Fiduciary Audit RFP was being finalized and a copy would be provided at the next board meeting. She also explained the RFP process and that the investment consultant evaluation committee would include: the Retirement Interim Director, the Retirement Finance Manager, the City Treasurer all as voting members and any trustee who wanted to participate. Consultant Barnhill would serve as a consultant to the evaluation committee. The final recommendation from the evaluation committee would be brought to the CRS Board for approval. The Chair asked for volunteers to serve on the evaluation committee.

- *Status of the Board Letter Approved at March 23, 2023 Meeting* – The letter was sent to the Mayor and City Council. The Budget and Finance Committee Chair reached out to request a presentation from the Board in early May. The Chair indicated that he would represent the Board and that he and Director Alder would make the presentation. The Chair invited all board members to also participate or attend.
- *Status of Anthem and Christ Hospital Negotiations* – Director Alder explained that the two parties reached an agreement and Christ Hospital will remain in the network.
- *Status of Executive Director* – Director Alder reported that the job has been posted on all free sites. She also explained that the consultant was reaching out to targeted candidates.

**Old Business**

- *Legal Opinion Discussion* – Trustee Rahtz stated that she met with the City Solicitor to discuss her concerns over the delay in two legal opinions that were requested in October of 2019. Director Alder and Assistant Solicitor Smith were also in attendance. She said that she felt the delay was disrespectful to the Board. She said it was a good discussion and that she left the meeting feeling more positive. She agreed the item could be removed from the agenda moving forward.
- *Status of Disabled Adult Children Ordinance* – Director Alder reported that staff sent comments on the draft ordinance back to the Law Department and a copy of the final would be provided at the next board meeting for approval.
- *Status of Pending Disability Applications* – The Chair explained that the CRS Medical Director recommended the approval of two disability applications. Trustee Gamel made a motion for the approval of Ms. Aultman's application and Trustee Rahtz seconded. Trustee Gamel made a motion for the approval of Mr. Southard's application and Trustee Menkhaus seconded. Both applications were approved by a separate roll call vote.
- *Benefits Survey Update* – Director Alder reported that the surveys will be mailed on April 14th.

**New Business**

- *Budget Amendment* – Trustee Moller made a motion to move money from the salary line item to a non-personnel line to pay for the advertising of the Executive Director position. Trustee Gamel seconded the motion, and the motion was approved by a unanimous roll call vote.
- *Naming of Board Executive Director Search Committee Members* - The Chair asked for Trustees to participate in reviewing acceptable applications, selecting candidates, and interviewing.

Trustee Moller encouraged Trustees to attend the committee meetings. He explained that recent meetings have been cancelled and/or votes delayed because of the lack of a quorum.

*Committee Assignments Update*

Trustee Moller assigned Trustee Riddle to the Governance, Performance Evaluation and Benefits committees. All trustees serve on the Investment Committee.

**Adjournment**

Following a motion to adjourn by Trustee Gamel and seconded by Trustee Morton, the Board approved the motion by unanimous roll call vote. The meeting adjourned at 2:36pm.

Meeting video link: https://archive.org/details/crs-board-meeting-4-6-23

Next Meeting: May 4, 2023 at 2:00 p.m.

__________________________________________

Secretary

city of CINCINNATI RETIREMENT

# Cincinnati Retirement System: 2023 Update

May 2023

# CINCINNATI RETIREMENT SYSTEM
# →Welcome to CRS!

- Our Mission: *Help members retire successfully*
- Established in 1931 as a defined benefit plan; pre-dates Social Security
  - Public employees in OH do not participate in Social Security
  - CRS members can be eligible for reduced Social Security through another employer
- CRS covers only certain City of Cincinnati employees. Excludes:
  - Sworn Police and Fire (OP&F), Members of Ohio systems (OPERS), Elected Officials

# CINCINNATI RETIREMENT SYSTEM →Governance

- Governed by:
  - Collaborative Settlement Agreement-2016
  - CMC Ch. 203; Admin Code Art. XV
  - Board Rules and Policies
- Board of Trustees (4yr terms)
  - 4 Mayor-appointed, confirmed by Council
  - 3 elected by retirees
  - 2 elected by active employees
  - Board has exclusive authority over trusts
  - Meets first Thursday of each month; carried on CitiCable

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# CINCINNATI RETIREMENT SYSTEM
## →Defined Benefits: Pension + Health

- City provides a defined benefit retirement plan for its employees as described in City benefits summary publications
  - Pension Benefits
    - A monthly stipend based on length of employee’s career calculated by formula
  - Health Benefits
    - For employees hired before 1/1/2016
    - Similar to employee health plan pre-65
    - Medicare Advantage Plan post-65

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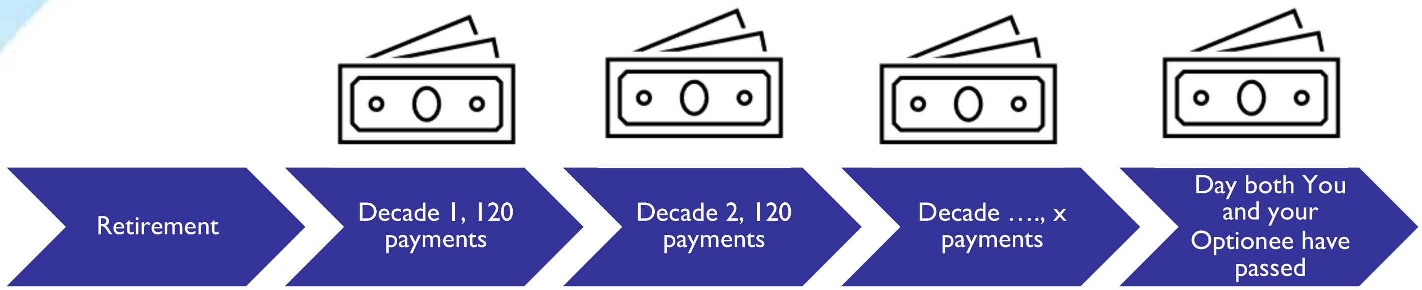
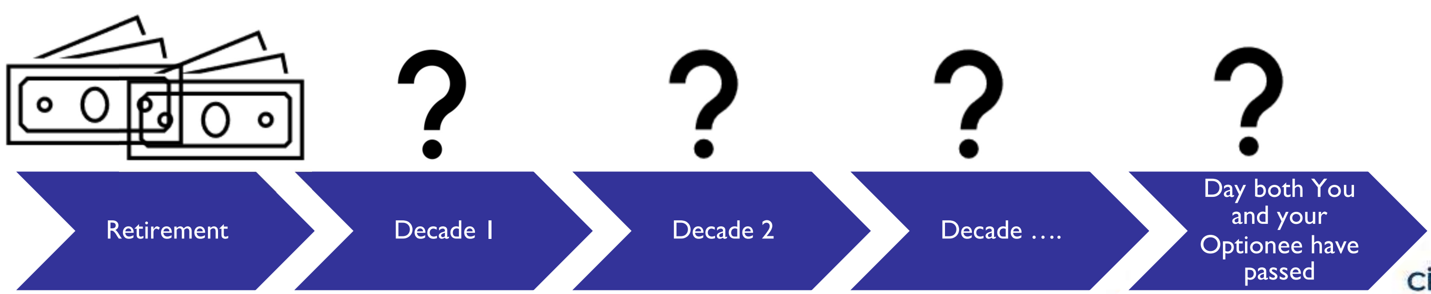
# CINCINNATI RETIREMENT SYSTEM
## →Monthly Pension Benefit

- CRS provides a “Defined Benefit” pension
  - “Defined Benefit” means a guaranteed formula-based monthly payment for retiree’s life




- Different than “Defined Contribution” which provides a lump sum at retirement (e.g., 401k)



# CINCINNATI RETIREMENT SYSTEM

## →CRS Defined Benefits: Why?

Long-term Public Service → Retirement Security

- City provides defined retirement benefits to recruit and retain talented employees to provide superior public service

# CINCINNATI RETIREMENT SYSTEM
## →Defined Benefits: Funding

- City is primarily responsible for funding defined benefits; CSA minimum contribution = 16.25%
  - Employees contribute 9%
  - Investment returns (7.5% assumed per CSA)
  - Employer accepts the financial risk of a DB plan
- Pension is seriously underfunded (70.6%)
- Actuary experience study projects system trending toward insolvency by 2051
- Risk of inability to provide retirement benefits
  - Impacts current employees and retirees

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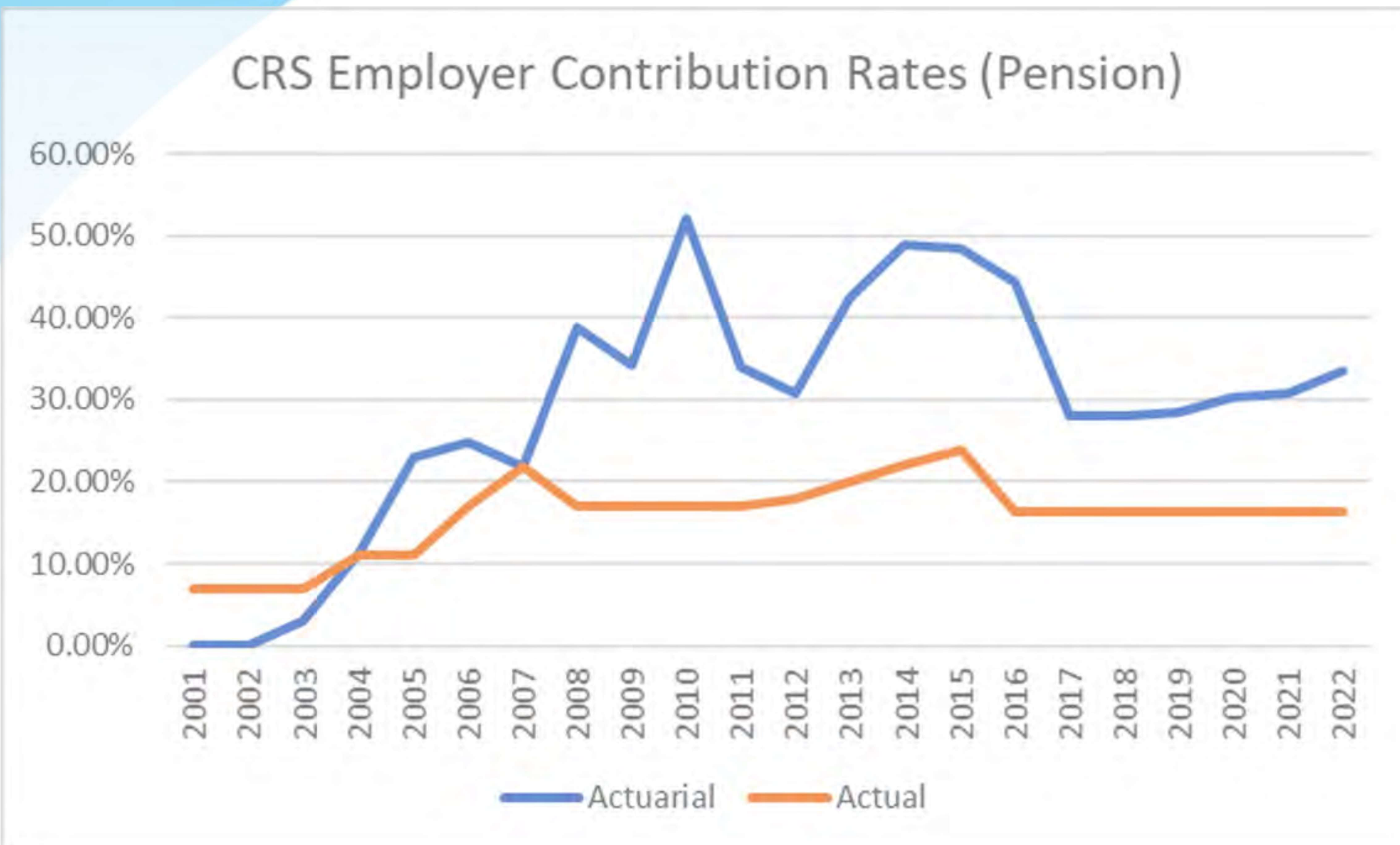
# CINCINNATI RETIREMENT SYSTEM →City Contributions: Underfunding Since 2006

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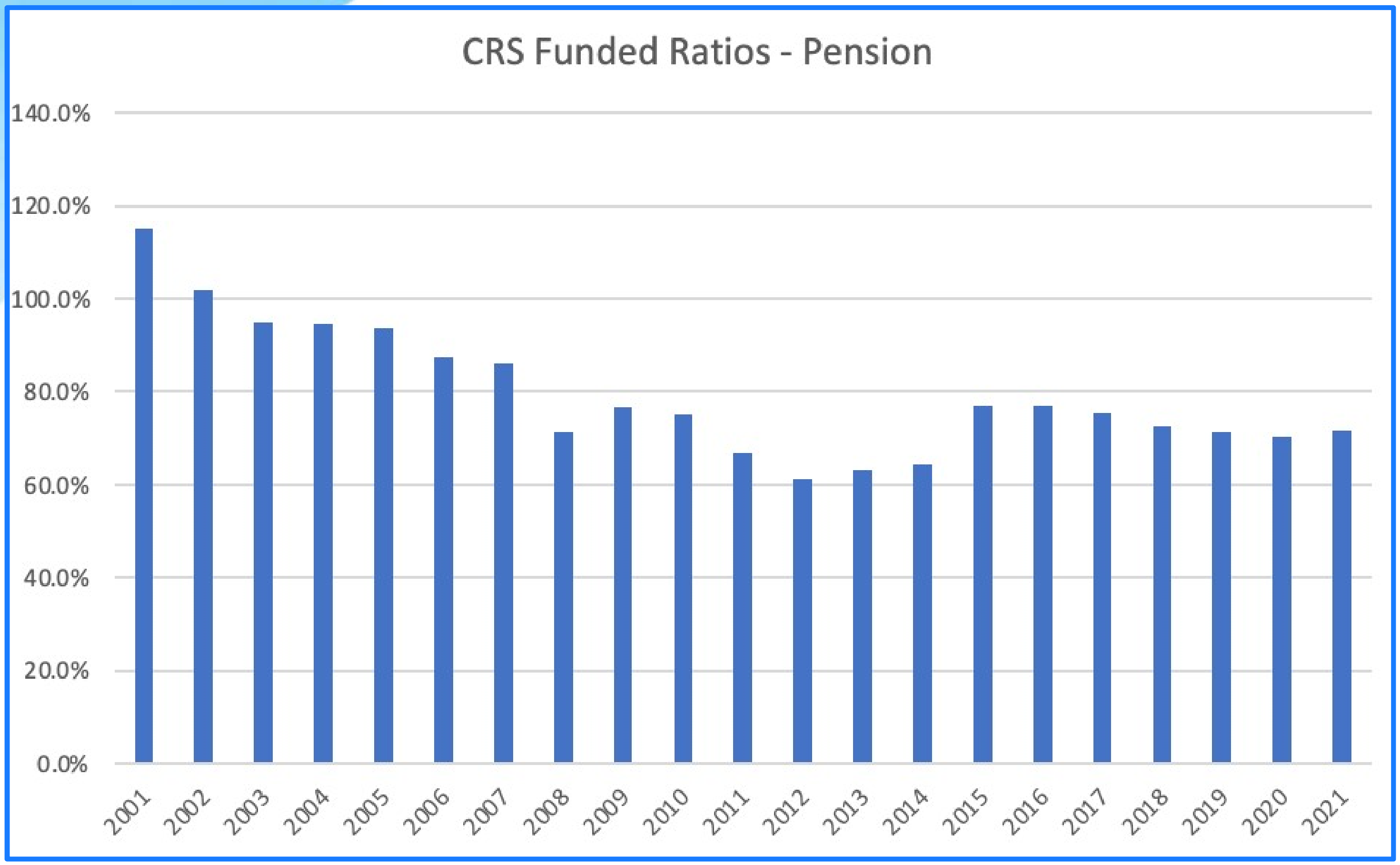
# CINCINNATI RETIREMENT SYSTEM
# →Funding Benefits: Funding Ratios

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# CINCINNATI RETIREMENT SYSTEM
## →Funding Benefits: Investments (2021)

Annual CRS Rates of Investment Return

| Plan Year | Investment Return Assumption | Market Return |
|---|---|---|
| 2011 | 7.50% | 0.88% |
| 2012 | 7.50% | 12.06% |
| 2013 | 7.50% | 16.99% |
| 2014 | 7.50% | 6.46% |
| 2015 | 7.50% | -0.11% |
| 2016 | 7.50% | 9.24% |
| 2017 | 7.50% | 14.51% |
| 2018 | 7.50% | -3.93% |
| 2019 | 7.50% | 16.40% |
| 2020 | 7.50% | 8.03% |
| 2021 | 7.50% | 18.06% |
| **10-Year compound Average** | | **9.54%** |
| **5-Year Compound Average** | | **10.31%** |

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# CINCINNATI RETIREMENT SYSTEM
## →Experience Study (2023)

- Actuary reviews last 5yrs of plan experience
  - Demographic assumptions include when members retire, mortality, how many elect DROP
  - Economic assumptions include how much the system will earn from investments
- Actuary proposed assumption changes
  - Demographic changes increase liability by $35mm, or 1.6% increase in actuarial liability
  - City should consider reducing earnings assumption from 7.5% closer to peer 7.0%

# CINCINNATI RETIREMENT SYSTEM
# →Experience Study: Impact

## Impact of Economic Assumptions

| Demographic Assumptions / Discount Rate* | December 31, 2021 Actuarial Liability ($mil) | December 31, 2021 Funded Status (AVA) | Gross Normal Cost (% of Pay) | City's Actuarially Determined Contribution Rate |
|---|---|---|---|---|
| Proposed / 7.50% | $ 2,595.2 | 70.6% | 12.51% | 34.46% |
| Proposed / 7.25% | $ 2,657.5 | 68.9% | 13.24% | 36.89% |
| Proposed / 7.00% | $ 2,722.4 | 67.3% | 14.01% | 39.36% |

*Inflation kept at 2.75% in all scenarios above.*

# CINCINNATI RETIREMENT SYSTEM
## →Funding Options

Funding Options

- Increase contribution rate by 1.5% annually – 7.5% earnings assumption
- Increase contribution rate by 1.75% annually – 7.25% earnings assumption
- Increase contribution rate by 2% annually – 7.0% earnings assumption (median level of pension plans nationally)
- Peer plan median is 7.0%, range 6.5% to 8.0%

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# CINCINNATI RETIREMENT SYSTEM
## →CRS Trustee Board Recommendation

- Increase the City employer contribution by 1.5% each year to achieve full funding by 2045
- Adopt the multi-year incremental increase funding methodology to achieve full funding by 2045
- Update the multi-year funding methodology annually and budget accordingly

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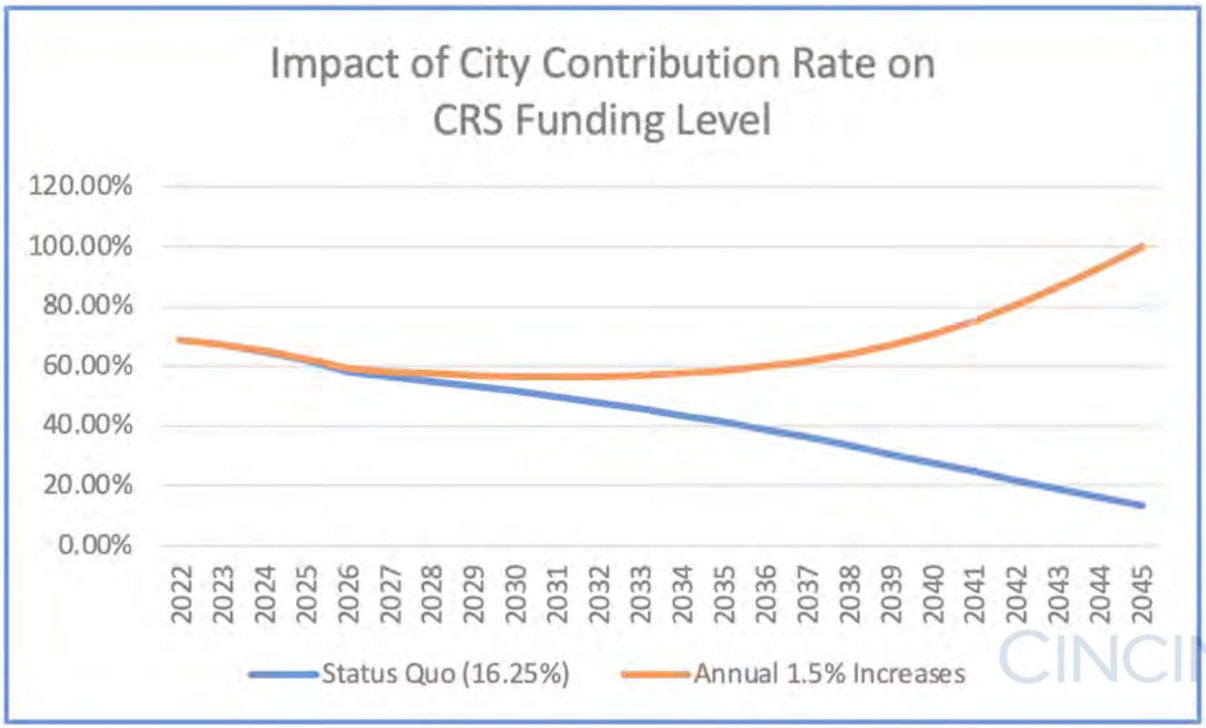
# CINCINNATI RETIREMENT SYSTEM
# →CRS Trustee Board Recommendation

- Increasing City contribution rate by 1.5% annually by 2045 will fully fund City pension benefits (red line below)
- Making no change (leaving at 16.25%) will result in system nearly out of funds by 2045 (blue line below)

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# CINCINNATI RETIREMENT SYSTEM

## →Questions?

- Please visit the CRS Website: https://cincinnati-oh.gov/retirement/
- Email: retirement@cincinnati-oh.gov
- Office:
  City Hall, Room 328
  801 Plum Street
  Cincinnati, OH 45202
  (513) 352-3227

city of CINCINNATI RETIREMENT

# CINCINNATI RETIREMENT SYSTEM
## →Contact Info

- Contact info:

Karen Alder
CRS Interim Executive Director
(513) 352-2551
karen.alder@cincinnati-oh.gov

Bill Moller
Chair of Board of Trustees

city of CINCINNATI RETIREMENT

## City of Cincinnati Retirement System
## Cash Flow Budget Analysis - as of March 31, 2023

| | Budget 2023 | Actual Q1, 2023 | Difference | % of Budget Utilized | 25% of Budget | Difference 25% of Budget v Actual |
|---|---|---|---|---|---|---|
| 25% Expectation | | | | | | |
| Office Staff | 2,179,260 | 410,408 | 1,768,852 | 19% | 544,815 | 134,407 |
| Office Expenses | 131,000 | 13,908 | 117,092 | 11% | 32,750 | 18,842 |
| Training and Travel | 84,230 | 1,702 | 82,528 | 2% | 21,058 | 19,356 |
| Data Processing | 607,500 | 30,203 | 577,297 | 5% | 151,875 | 121,672 |
| Professional Fees | 607,740 | 72,700 | 535,040 | 12% | 151,935 | 79,235 |
| Other | 7,500 | 1,250 | 6,250 | 17% | 1,875 | 625 |
| Fiduciary Insurance | 106,700 | 0 | 106,700 | 0% | 26,675 | 26,675 |
| **Operating Budget Total** | 3,723,930 | 530,171 | 3,193,759 | 14% | 930,983 | 400,812 |
| **Member Cost** (25% expectation) | 232,418,700 | 54,909,400 | 177,509,300 | 24% | 58,104,675 | 3,195,275 |
| **Contributions** (25% Expectation) | 63,290,350 | 16,863,385 | (46,426,965) | 27% | 15,822,588 | 1,040,797 |
| **Net Investment Returns** (25% Expectation) | 148,528,149 | 71,390,898 | (77,137,251) | | 37,132,037 | 34,258,861 |

**2023 CRS CASH FLOW BUDGET**

| I. OPERATING EXPENSES | 2023 BUDGET | % Cost of Operations | 2023 YTD March | Difference Budget v Actual | 25% of Budget | Difference 25% v Actual | |
|---|---|---|---|---|---|---|---|
| A Office Staff | | | | | | | |
| 1. Salaries & Wages | 1,575,260 | 42.30% | 300,178 | 1,275,082 | 393,815 | 93,637 | |
| 2. Fringe (35%) | 574,000 | 15.41% | 89,190 | 484,810 | 143,500 | 54,310 | |
| 3. Temporary Services | 30,000 | 0.81% | 21,040 | 8,960 | 7,500 | (13,540) | |
| A. Total Office Staff | 2,179,260 | 58.52% | 410,408 | 1,768,852 | 544,815 | 134,407 | |
| B Office Expenses | | | | | | | |
| 1. Office Improvements | 28,000 | 0.75% | 0 | 28,000 | 7,000 | 7,000 | |
| 2. Equipment / Purchase and Rent | 10,000 | 0.27% | 752 | 9,248 | 2,500 | 1,748 | |
| 3. Supplies | 3,300 | 0.09% | 303 | 2,997 | 825 | 522 | |
| 4. Printing and Postage | 89,700 | 2.41% | 12,853 | 76,847 | 22,425 | 9,572 | |
| B. Total Office Expenses | 131,000 | 3.52% | 13,908 | 117,092 | 32,750 | 18,842 | |
| C Training and Travel | | | | | | | |
| 1. Training/Travel Board | 32,500 | 0.87% | 0 | 32,500 | 8,125 | 8,125 | |
| 2. Training/Travel Staff | 51,730 | 1.39% | 1,702 | 50,028 | 12,933 | 11,231 | |
| C. Total Training and Travel | 84,230 | 2.26% | 1,702 | 82,528 | 21,058 | 19,356 | |
| D Data Processing Expenses | | | | | | | |
| 1. Pension Gold Hosting and Modifications | 202,200 | 5.43% | 0 | 202,200 | 50,550 | 50,550 | Programing fees paid in block purchase |
| 2. Pension Gold Annual License Fee | 150,000 | 4.03% | 0 | 150,000 | 37,500 | 37,500 | Paid once per year |
| 3. Regional Computer Center (ETS) | 4,200 | 0.11% | 1,830 | 2,370 | 1,050 | (780) | |
| 4. Hardware and Software for PCs | 90,750 | 2.44% | 18,984 | 71,766 | 22,688 | 3,704 | |
| 5. Other | 160,350 | 4.31% | 9,389 | 150,961 | 40,088 | 30,699 | |
| D. Total IT Expenses | 607,500 | 16.32% | 30,203 | 577,297 | 151,876 | 121,673 | |
| E Professional Services | | | | | | | |
| 1. Actuarial Fees | 178,000 | 4.78% | 47,055 | 130,945 | 44,500 | (2,555) | Survivor benefits study |
| 2. Consulting Fees | 241,740 | 6.49% | 23,437 | 218,303 | 60,435 | 36,998 | |
| 3. Legal Services | 110,000 | 2.95% | 2,058 | 107,942 | 27,500 | 25,442 | |
| 4. Retiree Locator Fees | 3,000 | 0.08% | 150 | 2,850 | 750 | 600 | |
| 5. Treasury, Accounts and Audits | 25,000 | 0.67% | 0 | 25,000 | 6,250 | 6,250 | |
| 6. Financial Audit | 50,000 | 1.34% | 0 | 50,000 | 12,500 | | |
| E. Total Professional Services | 607,740 | 16.31% | 72,700 | 535,040 | 151,935 | 79,235 | |
| F Other Expenses | | | | | | | |
| 1. Board Meeting Expenses | 2,500 | 0.07% | 0 | 2,500 | 625 | 625 | |
| 2. Membership and Subscriptions | 5,000 | 0.13% | 1,250 | 3,750 | 1,250 | 0 | |
| F. Total Other | 7,500 | 0.20% | 1,250 | 6,250 | 1,875 | 625 | |
| G. Insurance | | | | | | | |
| Fiduciary Insurance | 106,700 | 2.87% | 0 | 106,700 | 26,675 | 26,675 | Paid once per year |
| G. Total Insurance | 106,700 | 2.87% | 0 | 106,700 | 26,675 | 26,675 | |
| Total Operating Costs | 3,723,930 | 100.00% | 530,171 | 3,193,759 | 930,984 | 400,813 | |

| 2023 CRS CASH FLOW BUDGET | 2023 | % Cost of | 2023 | Difference | 25% of | Difference |
|---|---|---|---|---|---|---|
| (Continued) | BUDGET | Operations | YTD March | Budget v Actual | Budget | 25% v Actual |
| II. MEMBER BENEFITS EXPENSES | | | | | | |
| A. Pensions | 197,006,500 | 84.76% | 48,836,073 | 148,170,427 | 49,251,625 | 415,552 |
| B. Return of Contributions | 2,874,000 | 1.24% | 437,680 | 2,436,320 | 718,500 | 280,820 |
| C. Death Benefits | 670,000 | 0.29% | 159,500 | 510,500 | 167,500 | 8,000 |
| D. Medical | 31,868,200 | 13.71% | 5,476,147 | 26,392,053 | 7,967,050 | 2,490,903 |
| Total Benefit Costs | 232,418,700 | 100.00% | 54,909,400 | 177,509,300 | 58,104,675 | 3,195,275 |
| | 2023 | % of | 2023 | Difference | 25% of | Difference |
| | BUDGET | Contributions | YTD March | Budget v Actual | Budget | 25% v Actual |
| III. CONTRIBUTIONS | | | | | | |
| A. City Contributions | 39,930,050 | 63.09% | 10,375,451 | (29,554,599) | 9,982,513 | 392,938 |
| B. Employee Contributions (9.0%) | 21,377,100 | 33.78% | 5,931,292 | (15,445,808) | 5,344,275 | 587,017 |
| C. Retiree Medical Premiums | 2,233,200 | 3.53% | 556,642 | (1,676,558) | 558,300 | (1,658) |
| D. Transfers In (Out) Reciprocity | (250,000) | -0.40% | 0 | 250,000 | (62,500) | 62,500 |
| Total Contributions | 63,290,350 | 100.00% | 16,863,385 | (46,426,965) | 15,822,588 | 1,040,797 |
| IV. NET INVESTMENT RETURNS | | | | | | |
| A. Gross Returns | 156,455,149 | | 73,347,703 | (83,107,446) | 39,113,787 | 34,233,916 |
| B. Investment Expenses | | | | | | |
| 1. Custodial Fees | 232,000 | | 49,475 | 182,525 | 58,000 | 8,525 |
| 2. Investment Consultant | 285,000 | | 58,750 | 226,250 | 71,250 | 12,500 |
| 3. Investment Management Fees | 7,410,000 | | 1,848,580 | 5,561,420 | 1,852,500 | 3,920 |
| Total Investment Expenses | 7,927,000 | 0.38% | 1,956,805 | 5,970,195 | 1,981,750 | 24,945 |
| Net Investment Returns (Budget 7.5%) | 148,528,149 | | 71,390,898 | (77,137,251) | 37,132,037 | 34,258,861 |
| NET CHANGE IN FUND BALANCE | (24,324,131) | | 32,814,712 | 57,138,843 | (6,081,034) | 38,895,746 |
| Net Assets Beginning Balance | 2,203,917,404 | 1/1/2023 | 2,203,917,404 | | | |
| Net Assets Ending Balance | 2,179,593,273 | 12/31/2023 | 2,236,732,116 | | | |

# Cincinnati Retirement System

## DROP Quarterly Report for 2023

| | Totals at 12/31/2022 | Q1 | Q2 | Q3 | Q4 | 2023 | Life of Plan Participation |
|---|---|---|---|---|---|---|---|
| **Participants** | | | | | | | |
| Beginning | | 173 | | | | **173** | |
| New Participants | 373 | 1 | | | | **1** | **374** |
| Withdrawn Particpants | -200 | -16 | | | | **-16** | **-216** |
| **Remaining** | **173** | **158** | | | | **158** | **158** |
| **DROP Balance** | | | | | | | |
| Opening Balance | | | | | | **$ 26,520,139** | |
| **In-Flows to DROP** | | | | | | | |
| Deferred Pension Payments | $ 50,283,884 | $ 2,000,043 | | | | **$ 2,000,043** | **$ 52,283,927** |
| Member Contributions* | $ 7,192,305 | $ 327,276 | | | | **$ 327,276** | **$ 7,519,581** |
| Interest Payable | $ 1,829,799 | $ 273,092 | | | | **$ 273,092** | **$ 2,102,891** |
| **Subtotal** | **$ 59,305,988** | **$ 2,600,411** | **$ -** | **$ -** | **$ -** | **$ 2,600,411** | **$ 61,906,399** |
| **Out-Flows from DROP** | | | | | | | |
| Disbursement of Accounts | $ (30,947,360) | $ (3,487,459) | | | | **$ (3,487,459)** | **$ (34,434,819)** |
| **Transfers to Pension Trust** | | | | | | | |
| Participant Fees* | $ (1,796,519) | $ (81,816) | | | | **$ (81,816)** | **$ (1,878,335)** |
| Forfeited Interest | $ (41,970) | $ - | | | | **$ -** | **$ (41,970)** |
| **Subtotal** | **$ (32,785,849)** | **$ (3,569,275)** | **$ -** | **$ -** | **$ -** | **$ (3,569,275)** | **$ (36,355,124)** |
| **Change To DROP Quarterly** | | **$ (968,864)** | **$ -** | **$ -** | **$ -** | **$ (968,864)** | |
| **Ending DROP Liability** | **$ 26,520,139** | | | | | **$ 25,551,275** | **$ 25,551,275** |

* Member Contributions equal 9% of pensionable compensation with 25% of collected amount transferred to Pension Trust as fees for participation in the DROP program.

# Demographic Report for the CRS Board

| | 12/31/2022 | 1st Quarter (3/31/2023) | 2nd Quarter (6/30/2023) | 3rd Quarter (9/30/2023) | 4th Quarter (12/31/2023) |
|---|---|---|---|---|---|
| Total F/T Active Employee Members *(Does NOT include DROP participants)* | 3018 | 3041 | | | |
| Total Payees *(includes retirees, optionees in pay status, and Survivors - does NOT include DROP participants)* | 4160 | 4146 | | | |
| Number of Retiree & Optionee Deaths YTD *(includes Optionees who died and were not in pay status)* | 206 | 53 | | | |

*Total Payees includes payees receiving multiple benefits AND Rehired Retirees. For example, a retiree who is receiving another benefit as an optionee is counted twice. This count does not correlate directly to the number of pensioners depicted in the Annual Actuarial Valuation due to differences in accounting for new retirees, deceased pensioners, DROP participants, and payees receiving multiple benefits.*

*Pensioner count is based on payroll date 1 day after end of quarter*

**LES**

**- 2023**

**MODIFYING** the provisions of Chapter 203, "Employees' Retirement System," of the Cincinnati Municipal Code by AMENDING Section 203-42, "Health Care Benefits," Section 203-43, "Health Care Benefits For Membership Dates Prior to January 9, 1997 and Retirement Effective Dates After January 1, 2016," Section 203-44, "Health Care Benefits For Membership Dates On and After January 9, 1997," and Section 203-48, "Health Care Benefits for Eligible Dependent Family Members," to implement policy changes made by the Cincinnati Retirement System Board.

WHEREAS, the Cincinnati Retirement System Board ("Board") desires to provide healthcare coverage to the adult disabled children of retirees whenever possible; and

WHEREAS, following a review of the rules related to Social Security Disability Income ("SSDI") and Supplemental Security Income ("SSI"), the Board has determined that the cost of this healthcare coverage to the 115 Trust that funds retirees' healthcare is not significant; and

WHEREAS, the Board no longer wants to require retirees to provide a Certificate of Disability from the Social Security Administration or to apply for SSI on behalf of a disabled adult child as a condition for retiree healthcare coverage for an adult disabled child under Chapter 203, regardless of the disabled adult child's eligibility for such benefits, and

WHEREAS, the Board wants to require those retiree members and their spouses or eligible dependent children who are eligible to receive Medicare benefits to enroll in Medicare as a condition of receiving retiree healthcare coverage under Chapter 203; and

WHEREAS, the Board voted to change the Board's policies to address eligibility requirements for retirees' disabled adult children to receive retiree healthcare coverage and desires to revise Chapter 203 to implement those changes; now, therefore,

BE IT ORDAINED by the Council of the City of Cincinnati, State of Ohio:

Section 1. That existing Section 203-42, "Health Care Benefits," Section 203-43, "Health Care Benefits For Membership Dates Prior to January 9, 1997 and Retirement Effective Dates After January 1, 2016," Section 203-44, "Health Care Benefits For Membership Dates On and After January 9, 1997," and Section 203-48, "Health Care Benefits for Eligible Dependent Family Members," of the Cincinnati Municipal Code are hereby amended to read as follows:

**Sec. 203-42. Health Care Benefits.**

(a) In addition to other benefits provided in this chapter, the Retiree health care benefits described in this Section shall be provided to the following persons:

(i) A Member who retired on or before July 1, 2011 and whose eligibility for health care benefits was determined on their Retirement Effective Date according to the provisions of this chapter in effect on such date, or

(ii) A Member of Group C who retires on or after August 1, 2011 with 15 years of Membership Service, or

(iii) A Member of Group D, E, or F whose most recent membership enrollment date is before January 9, 1997 and who retired on or after August 1, 2011 and on or before January 1, 2016 with 15 years of Membership Service, or

(iv) Persons receiving the benefits of a retirement optional allowance under Section 203-63 and who are eligible for benefits under Section 203-48 of this chapter, provided that the Member satisfied the health care eligibility requirements of paragraph (i), (ii) or (iii) above at the time the Member retired, or

(v) A surviving spouse, eligible dependent child ~~and~~or orphan receiving survivor benefits as provided in Section 203-49 of this chapter on or before January 1, 2016.

(b) The benefits to be provided under this Section are:

(i) Medical and prescription drug coverage similar to coverage in effect for eligible ~~Retirees~~Pensioners on January 1, 2014, and ~~Member~~Retiree premium contributions are not to exceed 5% of the full funding rate for each tier of coverage:

(A) For in-network benefits:

(I) An annual deductible of $300 per person and $600 per family;

(II) A maximum annual medical out-of-pocket expense of $1,500 per person and $3,000 per family; and

(III) Prescription co-pays: $10 for generic; $20 for brand name; $30 for non-formulary; with no out-of-pocket limit.

(B) For out-of-network benefits:

(I) An annual deductible of $600 per person and $1,200 per family;

(II) A maximum annual medical out-of-pocket expense of $3000 per person and $6,000 per family; and

(III) Limited out-of-network coverage for prescription drugs.

(ii) Dental and vision insurance coverage which shall be purchased and fully paid for by the Retirees, their surviving spouse, or their eligible dependents or orphans, as provided in Section 203-48 of this chapter.

(c) Members who retired before September 1, 2007, and their surviving spouse as provided in Section 203-48 of this chapter, who met the requirements of former Section 203-43(d), subsections (i), (ii), (iii), or (iv) as in effect prior to July 1, 2011, and who as of January 1, 2012, and annually thereafter, meet the requirements of subsection (i) below are entitled to the benefits described in subsection (ii) below.

(i) ~~Members~~Pensioners must establish that their annual household income is less than $30,000 by annually submitting to the Retirement System a copy of their federal income tax return or any other or additional documentation the Retirement System requires to determine annually whether the ~~Member's~~ Pensioner's household income is less than $30,000. For purposes of this Section, "household income" shall mean the total income of the ~~Member~~Pensioner, including the income of the ~~Member's~~Pensioner's spouse if married, after adding back the nontaxable portion of interest, dividends, pensions, annuities, IRA distributions, and social security benefits. Business or investment losses are not included in "household income" and may not be used to reduce the amount of "household income" for purposes of this Section. ~~Members~~Pensioners must submit a copy of their federal income tax return (and that of their spouse, if applicable) for the prior year to the Retirement System no later than the date determined by the Retirement System each year, or any other or additional documentation the Retirement System requires. Failure to submit the required documentation shall result in the ~~Member~~Pensioner becoming permanently ineligible for the benefits described in (c)(ii) of this Section. The ~~Member~~ Pensioner will be eligible for coverage as described in (b) of this Section.

(ii) ~~Members~~Pensioners who meet the requirements of subsection (i)~~,~~ above shall receive medical and prescription drug coverage with no premium cost with the following benefits:

(A) For in-network benefits:

(I) An annual deductible of $0;

(II) A maximum annual medical out-of-pocket expense of $500 per person and $1,000 per family;

(III) A maximum annual prescription drug out-of-pocket expense of $500 per person; and

(IV) Prescription drug tiers: $5 for generic; $15 for brand name; $30 for non-formulary.

(B) For out-of-network benefits:

(I) An annual deductible of $0;

(II) A maximum annual medical out-of-pocket expense of $1000 per person and $2,000 per family; and

(III) Limited out-of-network coverage for prescription drugs.

~~Members~~Pensioners who meet the requirements of subsection (i) above shall be provided dental and vision coverage to be purchased and fully paid for by the Retire~~es~~, their surviving spouse, or their eligible dependents ~~or orphans~~.

(d) Any person eligible to receive healthcare coverage under this Chapter who is eligible for coverage under Medicare shall apply for Medicare coverage and provide documentation to the Retirement System that is acceptable to the Retirement System that confirms either acceptance or denial for such coverage. To the extent allowable under applicable federal law, coverage under this Section for any person who is eligible to be covered under Medicare shall be secondary to coverage of such person under Medicare. The benefit payable under this Section shall be reduced by the greater of: (a) the amount actually paid by Medicare Part A and Part B; or (b) the amount Medicare would pay if the person were enrolled in Medicare Part A and Part B. A person is considered eligible for Medicare for these purposes during any period such person has coverage under Medicare Part A or Part B or, while otherwise qualifying for coverage under Medicare Part A (premium free) or Part B, does not have such coverage under Medicare Part A or Part B solely because such person has refused, discontinued, or failed to make any necessary application or applicable payment for Medicare Part A or Part B coverage.

(e) The director of retirement or the director's designee shall adopt rules and policies necessary to implement this Section.

**Sec. 203-43. Health Care Benefits For Membership Dates Prior to January 9, 1997 and Retirement Effective Dates After January 1, 2016.**

(a) In addition to other benefits provided in this chapter, the Retiree health care benefits described in this Section shall be provided to the following persons:

(i) A Qualified Member (as defined in paragraph (c) below) who retires after January 1, 2016 who is at least 60 years of age with a minimum of 20 years of Membership Service and who is not otherwise eligible for health care benefits under Section 203-42, or

(ii) A Qualified Member (as defined in paragraph (c) below) who retires with 30 or more years of Creditable Service consisting of a minimum of 20 years of Membership Service and who is not otherwise entitled to benefits under Section 203-42, or

(iii) Persons receiving the benefits of a retirement optional allowance under Section 203-63 of this chapter, and who are eligible for benefits under Section 203-48 of this chapter, provided that the Member satisfied the requirements of either paragraph (i) or paragraph (ii) above at the time the Member retired and who is not otherwise entitled to benefits under Section 203-42, or

(iv) Each surviving spouse, and each eligible dependent child ~~and~~or orphan of a deceased Active Member who would have been eligible for benefits under this S~~s~~ection, who is receiving survivor benefits as provided in Section 203-49 of this Chapter, provided that:

(A) the deceased Active Member's most recent membership enrollment date is before January 9, 1997 and the survivor benefit commenced on or after February 1, 2016 and the deceased Active Member is not otherwise entitled to benefits under Section 203-42; and

(B) a surviving spouse may only obtain coverage if the surviving spouse possessed a valid marriage certificate or other proof of marriage recognized by the State of Ohio, dated prior to the date of the Active Member's death. However, if the deceased Active Member dies on or after January 1, 2019, the surviving spouse is eligible for coverage only if the spouse was not legally separated from the deceased Active Member at the time of the deceased Active Member's death.

(v) Qualified Members who are not covered by the provisions of the Collaborative Settlement Agreement and who retire on or after February 1, 2016 and on or before January 1, 2017 and who have at least 15 years of Membership Service.

(b) The benefits to be provided under this Section are:

(i) Medical and prescription drug coverage similar to the most favorable plan available to active Employees, excluding Police & Fire and Building & Trade unions, and Member premium contributions are not to exceed 10% of the full funding rate for each tier of coverage; and

(ii) Dental and vision insurance coverage which shall be purchased and fully paid for by the Retirees, their surviving spouse, or their eligible dependents or orphans as provided in Section 203-48 of this chapter.

(iii) Any person eligible to receive healthcare coverage under this Chapter who is eligible for coverage under Medicare shall apply for Medicare coverage and provide documentation to the Retirement System that is acceptable to the Retirement System that confirms either acceptance or denial for such coverage. To the extent allowable under applicable federal law, coverage under this Section for any person ~~a Member~~ who is eligible to be covered under Medicare shall be secondary to coverage of such Member under Medicare. The benefit payable under this Section shall be reduced by the greater of: (a) the amount actually paid by Medicare Part A and Part B; or (b) the amount Medicare would pay if the Member were enrolled in Medicare Part A and/or Part B. A Member is considered eligible for Medicare for these purposes during any period such Member has coverage under Medicare Part A or Part B or, while otherwise qualifying for coverage under Medicare Part A (premium free) or Part B, does not have such coverage under Medicare Part A or Part B solely because such Member has refused, discontinued, or failed to make any necessary application or applicable payment for Medicare Part A or Part B coverage.

(c) For purposes of this Section, a Qualified Member is a Member who was an Active Member before January 9, 1997. The following rules shall apply for purposes of determining whether a Member was an Active Member before January 9, 1997:

(i) If the Member terminates Membership due to a withdrawal of Accumulated Contributions (as provided in Section 203-11(d)) or a transfer of service credit and Accumulated Contributions to a State Retirement System (as provided in Sections 203-8 and 203-7-A), the Member shall not be considered to have been an Active Member for any period attributable to the withdrawn or transferred contributions, irrespective of whether the Member is subsequently granted credit for such period of service pursuant to Section 203-29, Section 203-8 or any similar provisions of this Retirement System.

(ii) A Member shall not be considered to have been an Active Member for any period of Creditable Service of a Member that is attributable to State Retirement System Service Credit, Out of State and Federal Service Credit, or Unpaid Authorized Leave of Absence Service Credit.

(iii) If a Member ceases (or ceased) to be an Employee, the Member shall not be considered to have been an Active Member for any period of employment that precedes the date the Member ceases (or ceased) to be an Employee, unless the Member does not withdraw all or any part of his Accumulated Contributions.

(iv) Notwithstanding the foregoing, if a Member is granted service credit for a period of military absence pursuant to Sections 203-27 or 203-27A, to the extent required by federal law, the Member shall be considered to have been an Active Member during the period of military absence.

(d) Any Inactive Member who is rehired on or after January 1, 2016 shall not be eligible for benefits under this Section.

(e) The director of retirement or ~~his or her~~the director's designee shall adopt rules and policies necessary to implement this Section.

**Sec. 203-44. Health Care Benefits For Membership Dates On and After January 9, 1997.**

(a) In addition to other benefits provided in this chapter, the <u>Retiree </u>health care benefits described in this Section shall be provided to the following persons:

(i) A Member whose most recent membership enrollment date is on or after January 9, 1997 and on or before December 31, 2015, and who:

(A) Retired on or after August 1, 2011 and on or before January 1, 2016 with 15 years of Membership Service and who is not entitled to benefits under Section 203-42 or 203-43, or

(B) Retires on or after February 1, 2016 and who is at least 60 years of age with a minimum of 20 years of Membership Service and who is not otherwise eligible for health care benefits under Section 203-42 or Section 203-43, or

(C) Retires on or after February 1, 2016 with 30 or more years of Creditable Service consisting of a minimum of 20 years of Membership Service and who is not otherwise entitled to benefits under Section 203-42 or Section 203-43.

(ii) Persons receiving the benefits of a retirement optional allowance under Section 203-63 of this Chapter, and who are eligible for benefits under Section 203-48 of this Chapter, provided that the Member satisfied the requirements of paragraph (i) above at the time the Member retired and who is not otherwise entitled to benefits under Section 203-42 or Section 203-43.

(iii) Members whose most recent membership enrollment date is on or after January 9, 1997 and who are not covered by the provisions of the Collaborative

Settlement Agreement and who retire on or after February 1, 2016 and on or before January 1, 2017 and who have at least 15 years of Membership Service.

(iv) Each surviving spouse, and each eligible dependent child ~~and~~or orphan of a deceased Active Member who would have been eligible for benefits under this S~~s~~ection, who is receiving survivor benefits as provided in Section 203-49 of this Chapter, provided that:

(A) the deceased Active Member's most recent membership enrollment date is on or after January 9, 1997 and on or before December 31, 2015; and

(B) a surviving spouse may only obtain benefits if the surviving spouse possessed a valid marriage certificate or other proof of marriage recognized by the State of Ohio, dated prior to the date of the Active Member's death. However, if the deceased Active Member dies on or after January 1, 2019, the surviving spouse is eligible for coverage only if the spouse was not legally separated from the deceased Active Member at the time of the deceased Active Member's death.

Accordingly, the provisions of Section 203-33 of this Chapter, which provide for Service Retirement Allowances after vesting, shall not entitle ~~persons~~Members who are so vested to health care benefits under the provisions of this Section unless such ~~persons are~~ Members ~~who~~ also qualify for health care benefits under the provisions of this Section.

(b) The benefits to be provided under this Section are:

(i) Medical and prescription drug coverage similar to the most favorable plan available to active Employees, excluding Police & Fire and Building & Trade unions; and subject to Member premium contributions described in (c) below; and

(ii) Dental and vision insurance coverage shall be purchased and fully paid for by the ~~Member~~Retiree, their surviving spouse, and their eligible dependents or orphans.

(iii) Any person eligible to receive healthcare coverage under this Chapter who is eligible for coverage under Medicare shall apply for Medicare coverage and provide documentation to the Retirement System that is acceptable to the Retirement System that confirms either acceptance or denial for such coverage. To the extent allowable under applicable federal law, coverage under this S~~s~~ection for any person who is eligible to be covered under Medicare shall be secondary to coverage of such person under Medicare. The benefit payable under this Section shall be reduced by the greater of: (a) the amount actually paid by Medicare Part A and Part B; or (b) the amount Medicare would pay if the person were enrolled in Medicare Part A and/or Part B. A person is considered eligible for Medicare for these purposes during any period such person has coverage under Medicare Part A or Part B or, while otherwise qualifying for coverage under Medicare Part A or Part B, does not have such coverage under Medicare Part A (premium free) or Part B solely because such person has refused, discontinued, or failed to make any necessary application or applicable payment for Medicare Part A or Part B coverage.

(c) Except for dental and vision insurance coverage, the percentage of the full funding rates, or premiums, for medical and prescription drug coverage to be paid by the Retirement System on behalf of persons entitled to benefits under this Section shall be based on a formula consisting of the sum of (i) the number of the Member's full years of Creditable Service, and (ii) the Member's age at the earlier of the Member's Retirement date or the date that the Member ceased to be an Active Member, with each such full year of Membership Service and each such year of age at Retirement date counting as one point each. Years of age at Retirement shall mean years of age at the birthday immediately preceding the earlier of the Member's Retirement date or the date that the Member ceased to be an Active Member. The number of full years of Creditable Service and the years of age at Retirement date shall be added together and shall result in the payment of medical and prescription drug coverage in the following percentage amounts:

95% of full cost or full premiums for 90 points

75% of full cost or full premiums for 80 to 89 points

50% of full cost or full premiums for 70 to 79 points

25% of full cost or full premiums for 60 to 69 points

If a Member's total points are less than 60, the Member is only eligible for individual medical and prescription drug coverage. The Retirement System will pay 25% of the premium for individual medical and prescription drug coverage. No spouse or family coverage is available.

A Member's years of Creditable Service shall be used for the purpose of determining the points of a Member under this subsection (c), but will not include years of Creditable Service credited under a previous Service Retirement Allowance provided under this Chapter.

(d) If a Member leaves the City service prior to Retirement and is entitled to a deferred Service Retirement Allowance and such Member is entitled to benefits under this Section, no benefits shall be provided to the Member until the Member reaches the later of their normal retirement date, or their Medicare eligibility age.

(e) Any Inactive Member who is rehired on or after January 1, 2016 shall not be eligible for benefits under this Section.

(f) The director of retirement or the director's ~~his or her~~ designee shall adopt rules and policies necessary to implement this Section.

**Sec. 203-48. Health Care Benefits for Eligible Dependent Family Members.**

Notwithstanding any other provisions of this chapter, health care benefits provided by the Retirement System for eligible dependent family members of Retirees or deceased Active Members shall be limited to the following:

(a) Eligibility for Health Care:

(i) If a Retiree or deceased Active Member is eligible to receive health care benefits pursuant to this Chapter, only the following dependents as defined by and in accordance with the Ohio Administrative Code 145-4-09, "Definition of Eligible Dependent for Health Care Coverage," or Internal Revenue Code Section 152 (a)(1), "Qualifying Child," may be enrolled for health insurance purposes:

(A) A Retiree's spouse possessing a valid marriage certificate or other proof of marriage as recognized by the State of Ohio, dated prior to the effective date of retirement, and beginning January 1, 2019 who is not legally separated from the Retiree; or

(B) A surviving spouse of a deceased Retiree who is receiving benefits under Section 203-63, and who possessed a valid marriage certificate or other proof of marriage recognized by the State of Ohio, dated prior to the effective date of retirement. However, if the deceased Retiree dies on or after January 1, 2019, the spouse is eligible for coverage only if the spouse was not legally separated from the deceased Retiree at the time of the deceased Retiree's death; or

(C) A surviving spouse of a deceased Active Member who is receiving benefits under Section 203-49, and who possessed a valid marriage certificate or other proof of marriage recognized by the State of Ohio, dated prior to the date of death. However, if the deceased Active Member dies on or after January 1, 2019, the spouse is eligible for coverage only if the spouse was not legally separated from the deceased Active Member at the time of the deceased Active Member's death; or

(D) A Retiree's or a deceased Active Member's biological children who were born or children who were legally adopted by the Retiree prior to the effective date of retirement, or in the case of a deceased Active Member, prior to the date of death.

(ii) A Retiree's child who has never entered into a marriage recognized by the State of Ohio is eligible for coverage if the child is either under the age of 19 or is a student attending an accredited school on a fulltime basis for at least 7 months of the calendar year and who has not attained the age of 24.

(iii) Coverage shall be extended if the Retiree's child is permanently and totally disabled in accordance with Social Security Disability Definition, 42 U.S.C. 416i(1), prior to the limiting age specified in Section (a)(ii) herein ~~and maintains his or her residence within the household of the Retiree~~. For purposes of this S~~s~~ection, the term "disability" means the inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment, which can be expected to result in death or has lasted or can be expected to last for a continuous period of not less than 12 months. Evidence of the incapacity shall be required to be provided to the ~~Board~~ Retirement System's Medical Director for review and recommendation regarding whether the child is permanently and totally disabled, ~~such as a Certificate of Disability or other adequate proof from the United States Social Security Administration~~, and the Medical Director's recommendation shall be subject to approval by the Board. Appeals from the Board's determination will be governed by rules adopted by the director of retirement.

(iv) Any person eligible to receive healthcare coverage under this Chapter who is eligible for coverage under Medicare shall apply for Medicare coverage and provide documentation to the Retirement System that is acceptable to the Retirement System and confirms either acceptance or denial for such coverage. To the extent allowable under applicable federal law, coverage under this Section for any person who is eligible to be covered under Medicare shall be secondary to coverage of such person under Medicare. The benefit payable under this Section shall be reduced by the greater of: (a) the amount actually paid by Medicare Part A and Part B; or (b) the amount Medicare would pay if the person were enrolled in Medicare Part A and/or Part B. A person is considered eligible for Medicare for these purposes during any period such person has coverage under Medicare Part A or Part B or, while otherwise qualifying for coverage under Medicare Part A or Part B, does not have such coverage under Medicare Part A (premium free) or Part B solely because such person has refused, discontinued, or failed to make any necessary application or applicable payment for Medicare Part A or Part B coverage.

(b) Eligibility to Purchase Health Care at 100% of Premium Cost:

(i) The ability to enroll a spouse, minor child, or minor grandchild for Health Care benefits shall be closed to spouses when the date of marriage is after the date of the Retiree's retirement, to children born or adopted after the Retiree's date of Retirement and to minor grandchildren after December 31, 2017, unless subsection (ii) below applies.

(ii) Otherwise eligible spouses and dependents who were married to, born of, or adopted by the Retiree after the Retiree's date of Retirement, and one minor grandchild born to an unmarried, un-emancipated minor child of the Retiree that the Retiree is permitted to claim as a dependent on the Retiree's federal tax return in accordance with Section 152 of the Internal Revenue Code, will be entitled to remain enrolled in coverage as long as they meet all other eligibility requirements, were enrolled in Retiree Health Care coverage on January 1, 2018, and provided that there is no break in coverage. Once a break in coverage occurs, spouses, dependents, and minor grandchildren will be subject to all the eligibility requirements of Chapter 203, including this S~~s~~ection, and will be ineligible for re-enrollment unless they meet all the eligibility requirements of Chapter 203.

(c) If an individual receives a monthly benefit as an Optionee of a deceased Retiree of the Retirement System, he or she may enroll the biological children who were born of the Retiree or any eligible children who were legally adopted by the Retiree prior to the effective date of the Retiree's Retirement, provided that all such individuals meet the criteria listed in Sections (a)(i),(ii), (iii), or (iv) ~~(iii)~~ herein.

(d) If a Retiree has not selected a pension payment option that includes an Optionee, health care benefits provided by the Retirement System for the Retiree's dependent spouse and eligible biological or legally adopted dependent child/ren terminates following the death of the Retiree.

(e) For the purposes of this chapter, it is the responsibility of the Retiree, Optionee, or survivor to notify the Retirement System in writing, within 60 days of the date that any spouse or dependent child fails to meet eligibility requirements. Failure to provide such notice to the Retirement System may result in overpaid health care claims for which the Retiree, Optionee, or survivor shall be responsible in addition to penalties imposed in Section (f) herein.

(f) The Board maintains the right to conduct compliance-related audits of spouse and dependent eligibility and to impose penalties for non-compliance. Penalties for non-compliance shall include suspension of health care coverage of ~~the Retiree, Optionee, or surviving spouse and his or her dependents~~any person eligible for coverage under this chapter for a period of 3 years and a requirement that ~~the Retiree, Optionee, or surviving spouse~~such individuals repay all improperly paid prescription drug claims. After the three-year suspension period, the ~~Retiree, Optionee, or surviving spouse, or dependent children's~~eligible individual's health insurance may only be reinstated upon full repayment of the amount of the improperly paid prescription drug claims. The ~~Retiree, Optionee, or surviving spouse~~eligible individual is responsible for making payment arrangements to repay the amounts owed. If the ~~Retiree, Optionee, or surviving spouse~~eligible individual has been found legally incompetent by a court, the Board, at its sole discretion, may elect to modify the penalty imposed by this S~~s~~ection.

(g) The director of retirement or the director's designee shall adopt rules and policies necessary to implement this Section.

Section 2. That this ordinance shall take effect and be in force from and after the earliest period allowed by law.

Passed: ________________________________, 2023

________________________________
Aftab Pureval, Mayor

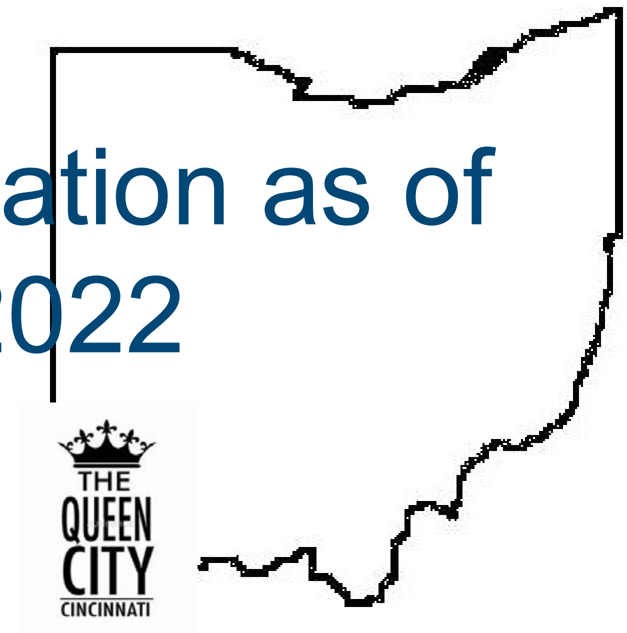
Attest: ________________________________
Clerk

New language underscored. Deletions struck through.

# Cincinnati Retirement System

Classic Values, Innovative Advice

# Pension Actuarial Valuation as of December 31, 2022




May 4, 2023

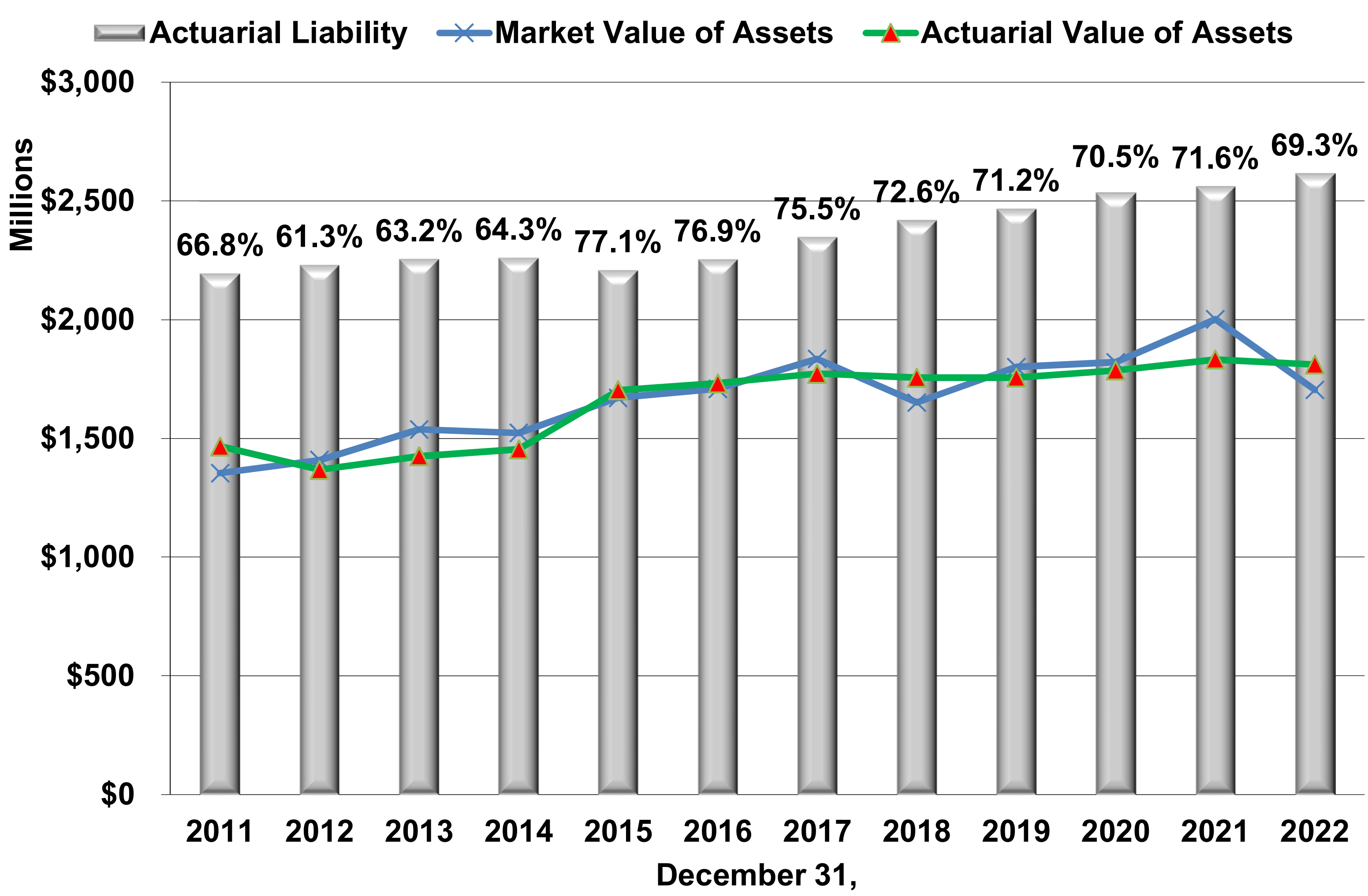
Presented by
Kevin Woodrich, FSA, EA, MAAA
Janet Cranna, FSA, EA, MAAA

# Agenda

- Historical Trends
- December 31, 2022 Valuation Results
- Stress Testing
- ASOP 4

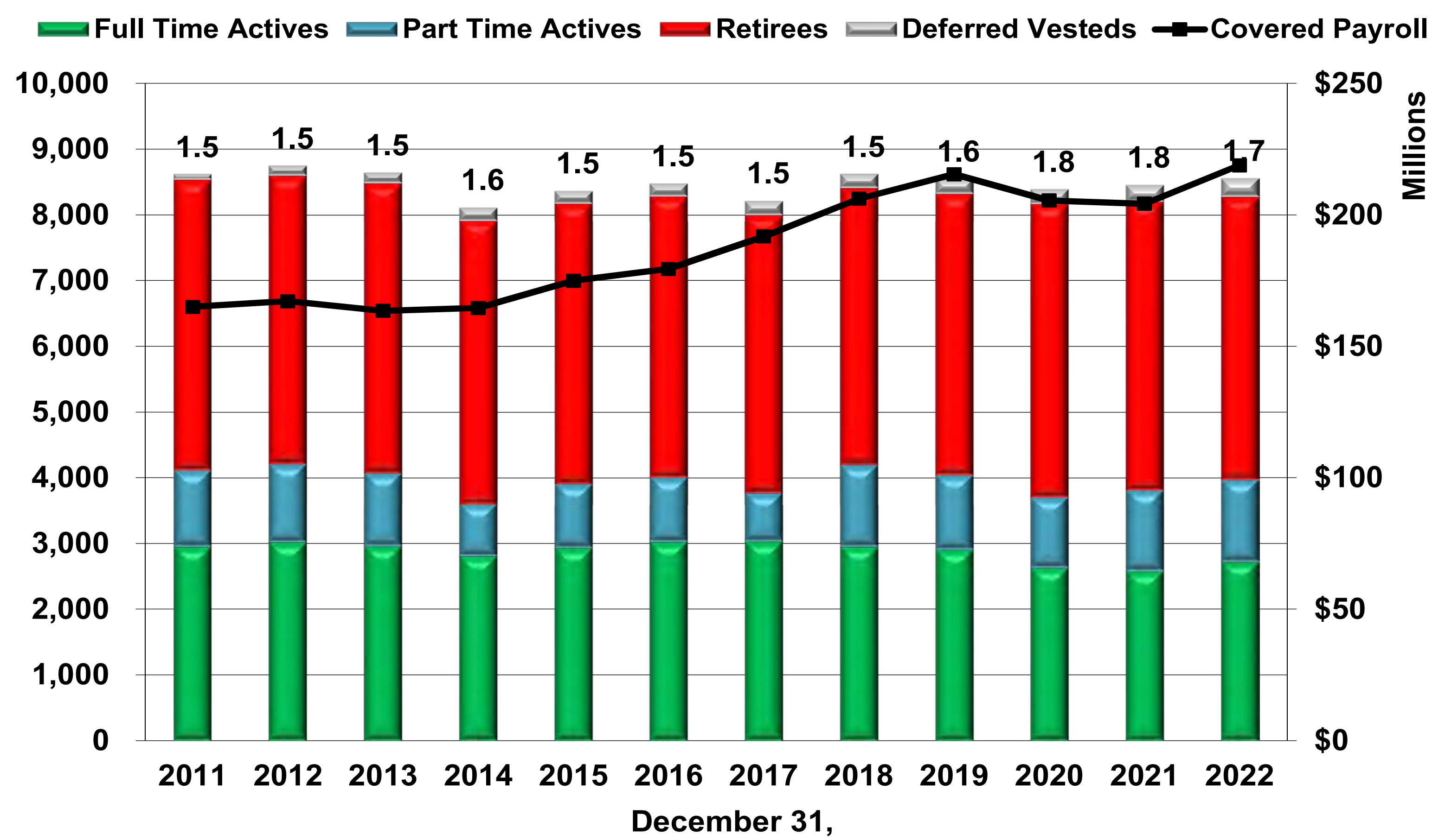
# Historical Trends

# Assets and Liabilities



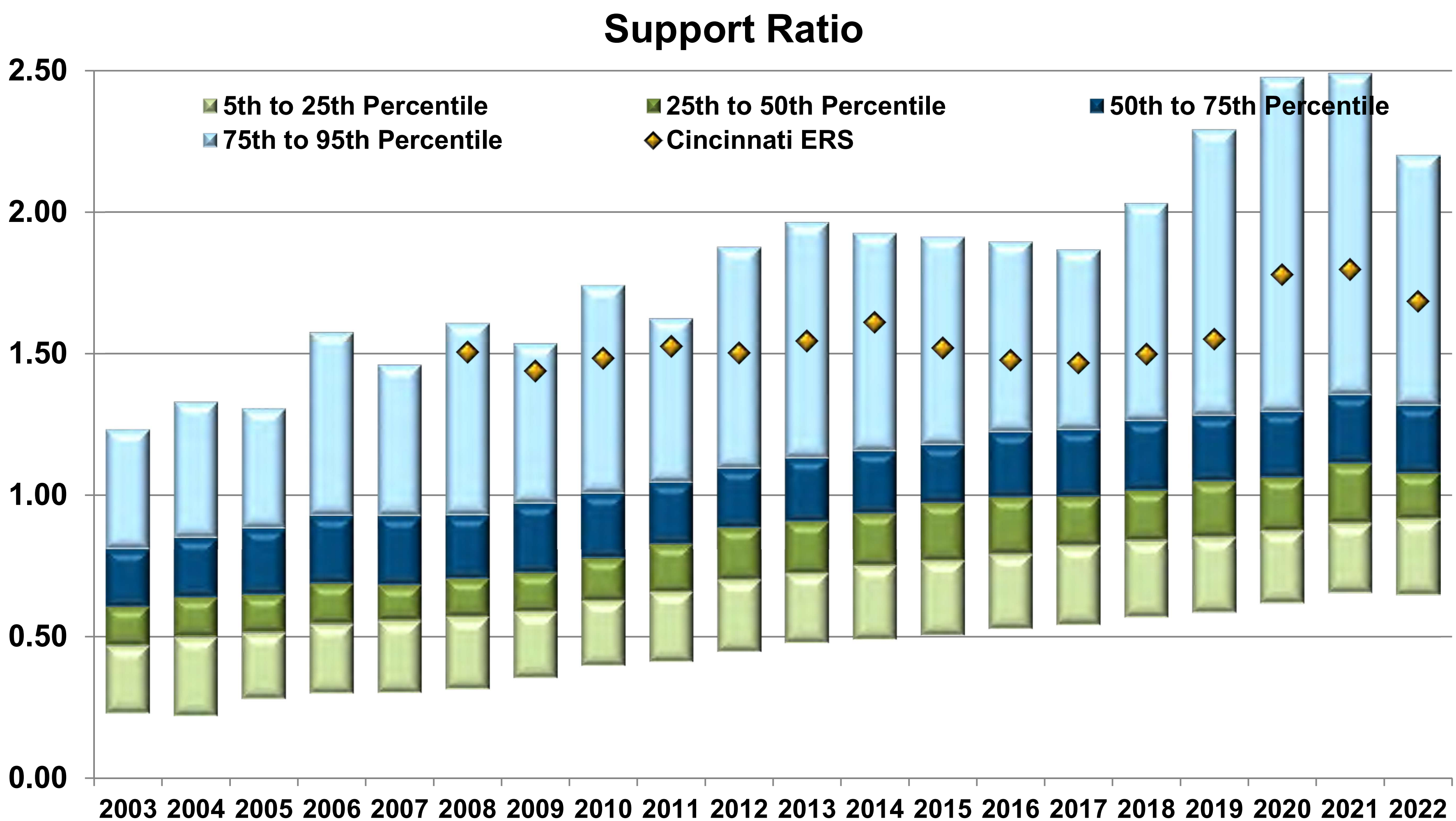

Funded status shown above bars is Actuarial Value of Assets divided by Actuarial Liability.

# Membership Trends




Support ratio above bars is the ratio of the number of inactives (Retirees and Deferred Vesteds) per active (Full-Time only). Payroll includes Full-Time and Part-Time actives for years shown. Beginning in 2018, amount includes payroll of DROP participants.

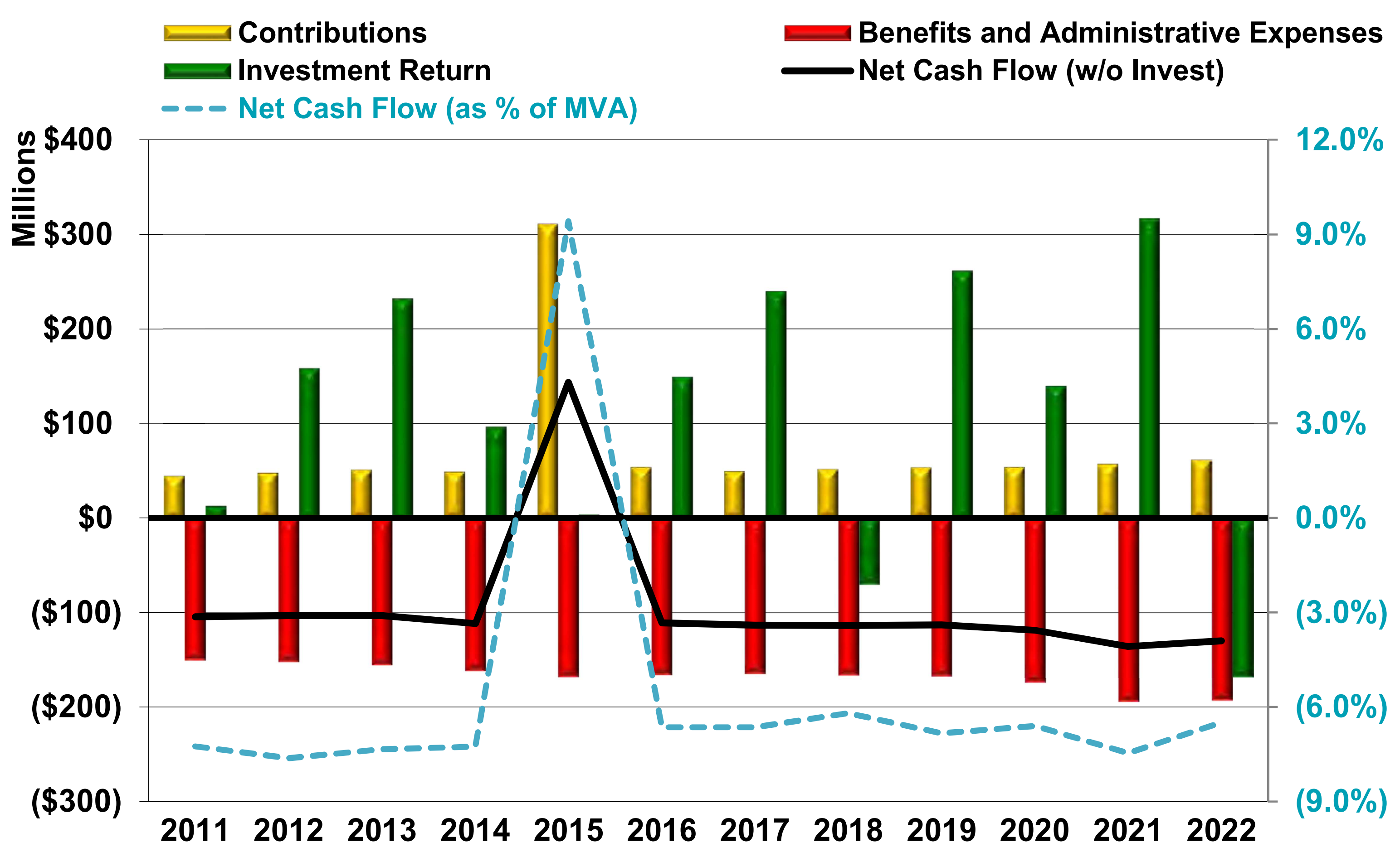
# Public Survey Comparisons




*Survey Data from Public Plans Data as of 4/12/2023*

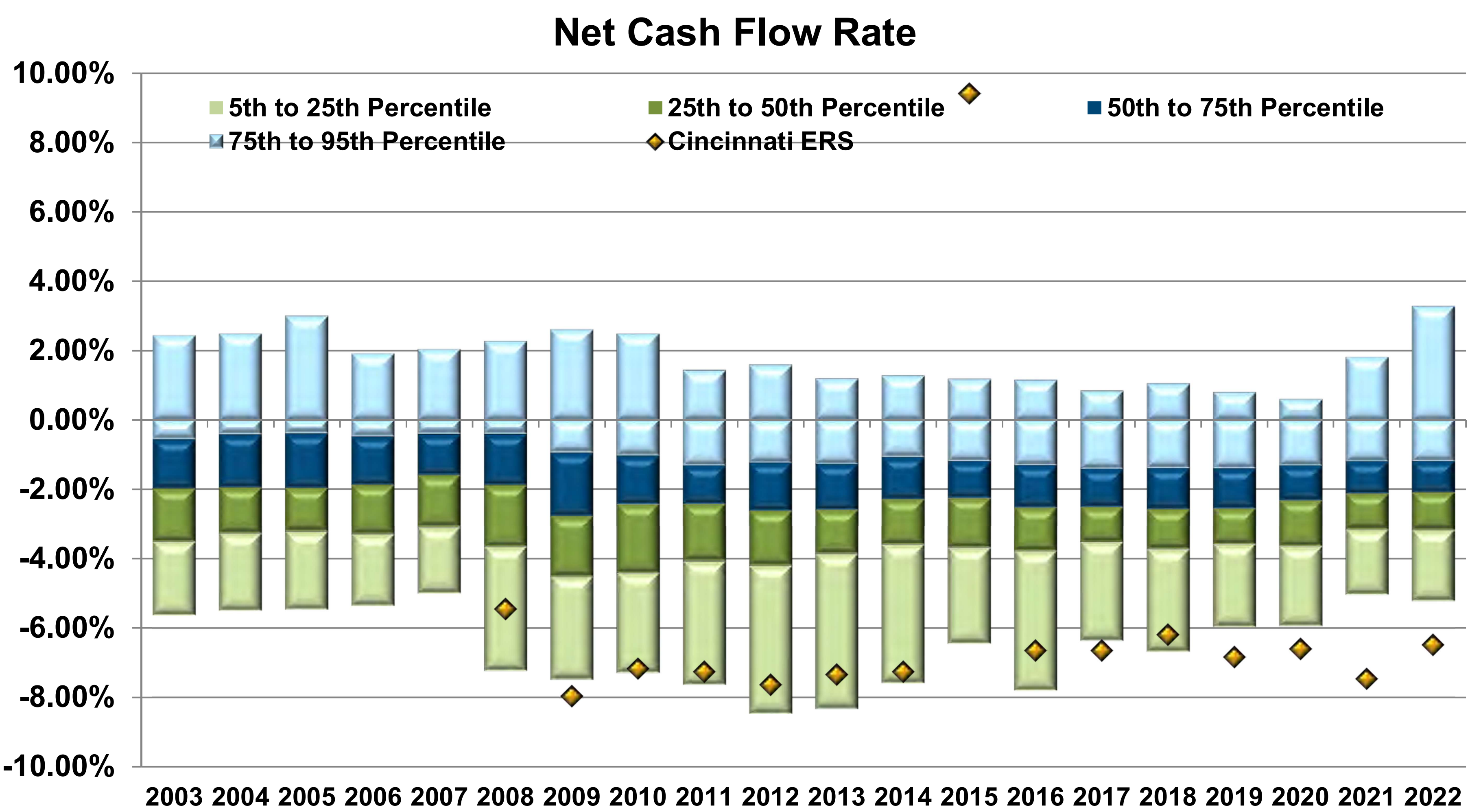
**Support ratio is the ratio of the number of inactives (Retirees and Deferred Vesteds) per active (Full Time only).**

# Cash Flows




For 2015, there was an additional contribution of $220.0 million per the CSA and $17.9 million for transferred earnings and expenses.

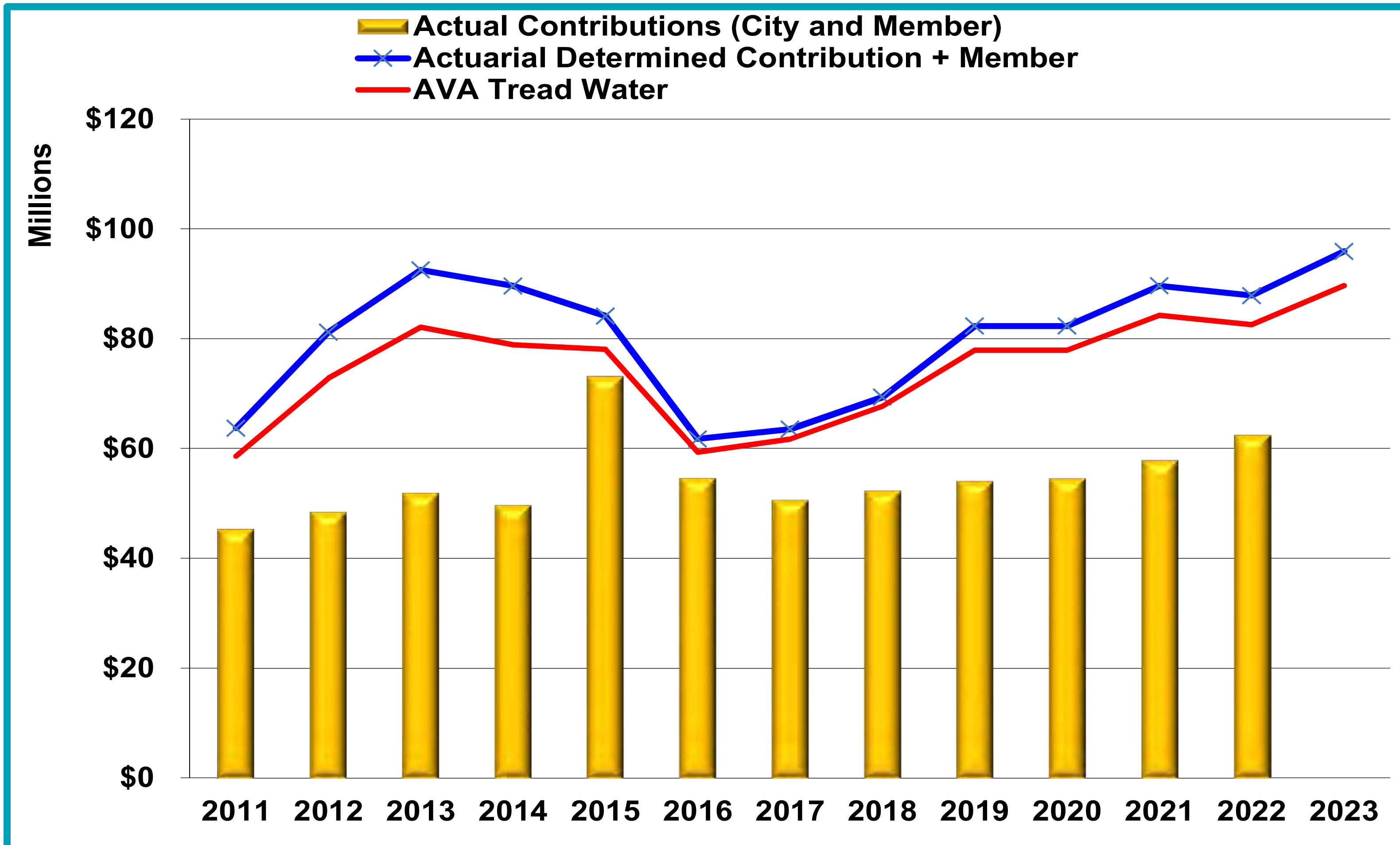
# Public Survey Comparisons




*Survey Data from Public Plans Data as of 4/12/2023*

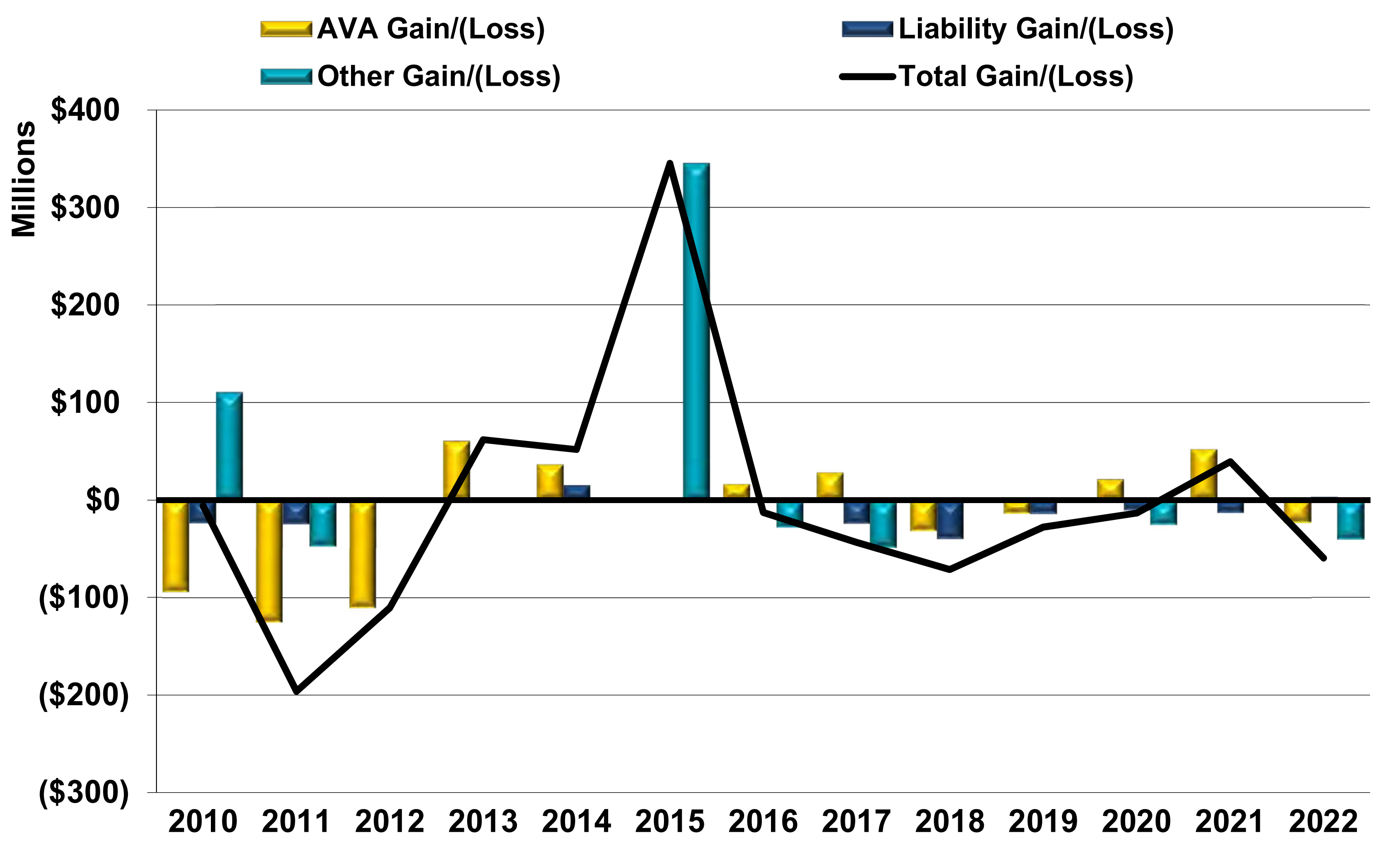
**For 2015, there was an additional contribution of $220.0 million per the CSA and $17.9 million for transferred earnings and expenses.**

# Contributions versus ADC



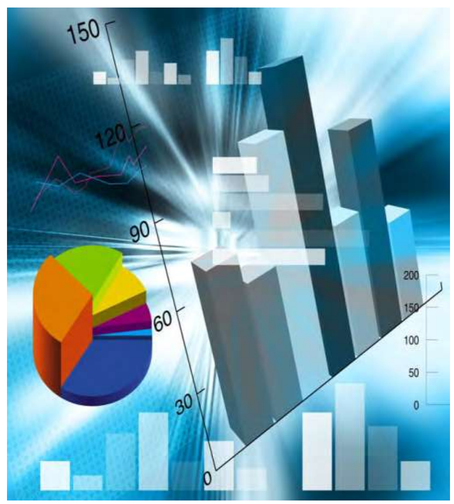

Actuarial Determined Contribution (ADC) calculated as of December 31 preceding year shown.
For 2015, there was an additional contribution of $220.0 million per the CSA and $17.9 million for transferred earnings and expenses.

# Actuarial Gain/(Loss) History



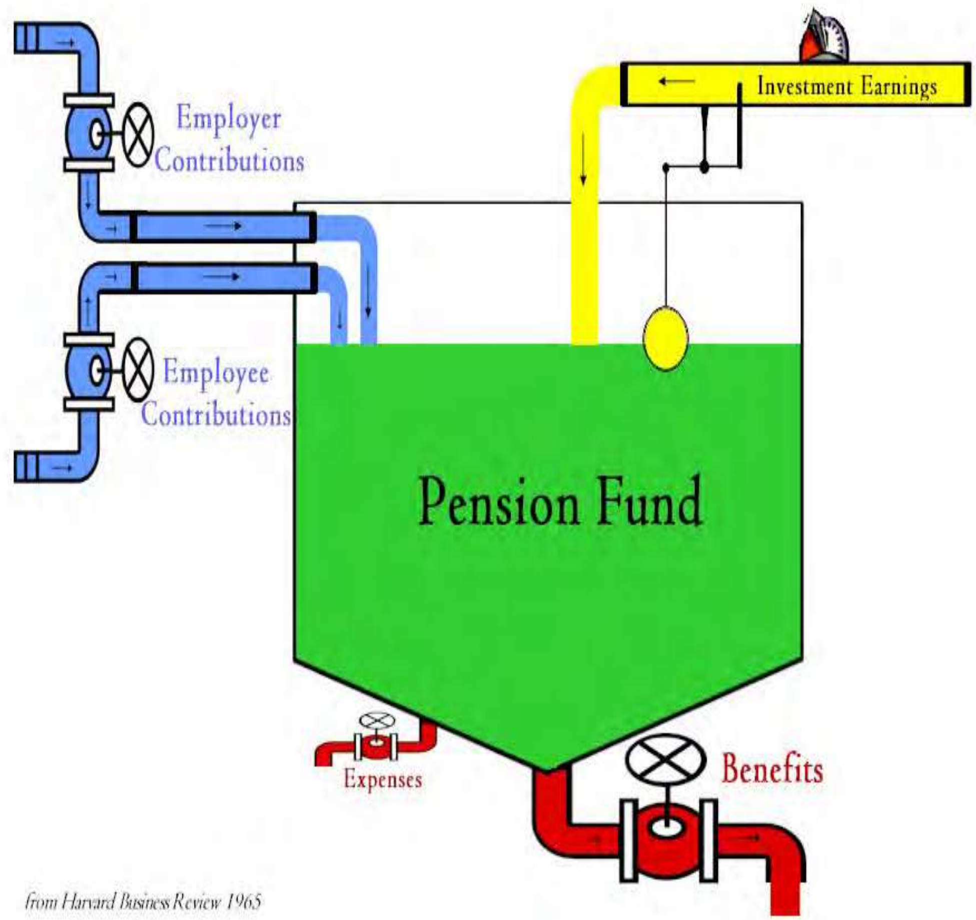

Other Gain/(Loss) includes assumption, method or plan changes.

# December 31, 2022 Actuarial Valuation Results



# The Actuarial Valuation Process

1. Collect information
   - Member data
   - Plan provisions
   - Asset information
2. Apply assumptions
   - Demographic
   - Economic
3. Project all future benefit payments
4. Determine a present value of the benefits
5. Compare to assets
6. Calculate employer and employee contributions

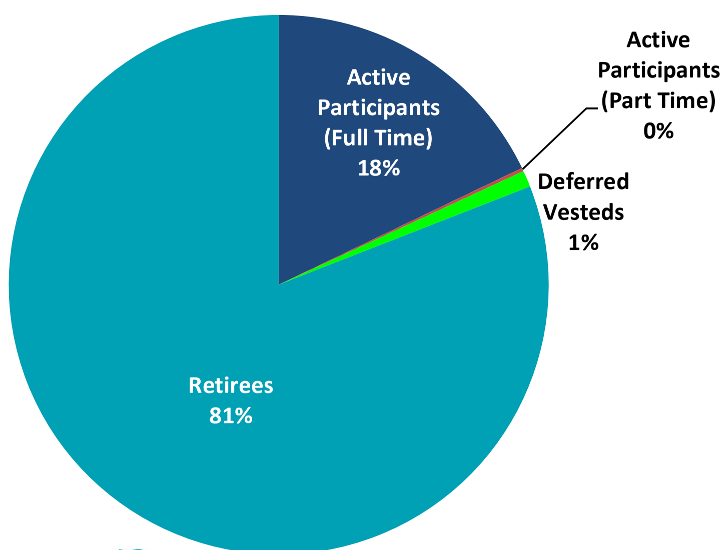



from Harvard Business Review 1965

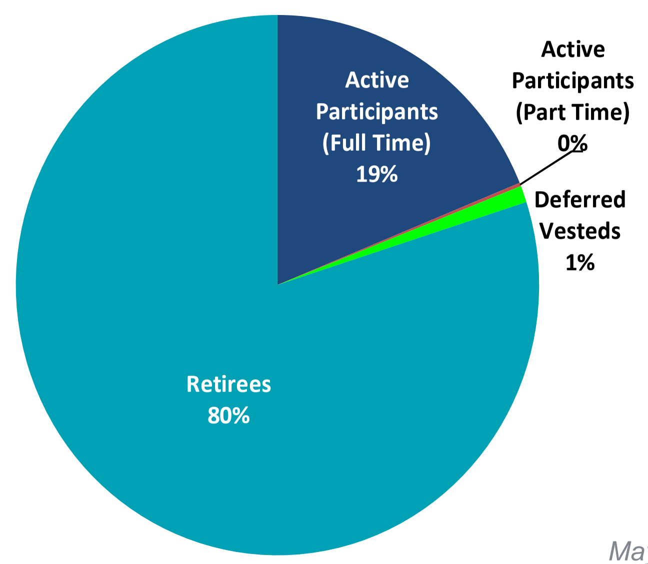
# Key Results

- Return on Market Value of Assets = (8.68%) (dollar-weighted)
- Return on Actuarial Value of Assets = 6.18%
- Actuarial Determined Contribution rate increased from 32.86% to 34.02%
- Adopted assumption changes increased liabilities by 39.8 million (1.5% of liabilities)
- Funded Ratio (AVA/AL) decreased from 71.6% to 69.3%

**December 31, 2021 Actuarial Liability**




**December 31, 2022 Actuarial Liability**



# Valuation Results

## Key Results

| Valuation as of: | December 31, 2021 | December 31, 2022 | % Change |
|---|---|---|---|
| **Participant Counts** | | | |
| a) Full Time Actives | 2,580 | 2,718 | 5.3% |
| b) Part Time Actives[1] | 1,238 | 1,257 | 1.5% |
| c) Deferred Vesteds | 247 | 275 | 11.3% |
| d) Members in Pay Status[2] | 4,390 | 4,305 | (1.9%) |
| e) Total | 8,455 | 8,555 | 1.2% |
| f) Annual Salaries of Full Time Active Members[2] | $ 189,528,659 | $ 205,235,180 | 8.3% |
| g) Annual Retirement Allowances | $ 183,826,082 | $ 187,455,628 | 2.0% |
| **Assets and Liabilities** | | | |
| h) Present Value of Future Benefits | $ 2,770,203,731 | $ 2,838,782,578 | 2.5% |
| i) Actuarial Liability | $ 2,560,258,522 | $ 2,614,702,553 | 2.1% |
| j) Actuarial Value of Assets (AVA) | $ 1,831,954,857 | $ 1,811,291,262 | (1.1%) |
| k) Unfunded Actuarial Liability [(i) - (j)] | $ 728,303,665 | $ 803,411,291 | 10.3% |
| l) Funded Ratio on AVA basis [(j) ÷ (i)] | 71.6% | 69.3% | (2.3%) |
| m) Market Value of Assets (MVA) | $ 2,001,579,000 | $ 1,703,876,000 | (14.9%) |
| n) Funded Ratio on MVA basis [(m) ÷ (i)] | 78.2% | 65.2% | (13.0%) |
| **City's Actuarial Determined Contribution (ADC)** | FYE June 30, 2023 | FYE June 30, 2024 | |
| o) Gross Normal Cost Rate | 12.10% | 12.40% | 0.30% |
| q) Plan Changes[3] | 1.30% | 1.22% | (0.08%) |
| r) Unfunded Actuarial Liability Amortization Rate | 27.66% | 28.60% | 0.94% |
| s) Administrative Expenses | 0.80% | 0.80% | 0.00% |
| t) Expected Employee Contributions | (9.00%) | (9.00%) | 0.00% |
| u) City's ADC Rate [(o) + (p) + (q) + (r) + (s) + (t)] | 32.86% | 34.02% | 1.16% |

1 *As of December 31, 2022, 348 of the 1,257 Part Time actives had reported last pay periods before December 2022.*

2 *Includes 157 and 184 members as of December 31, 2022 and 2021 respectively currently participating in DROP.*

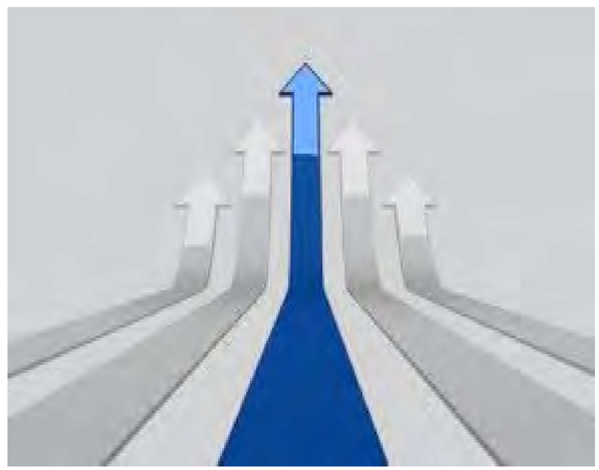
3 *The City began making level annual payments for the ERIP in December 2021. The City intends on making an additional 14 level annual payments of $2.7 million by July 31 of each year.*

# Reconciliation of UAL

| ($ millions) | Liability | Actuarial Assets | UAL | Funded Ratio |
|---|---|---|---|---|
| As of December 31, 2021 | $2,560.3 | $1,832.0 | $ 728.3 | 71.6% |
| | | | | |
| Expected Changes* | $ (168.5) | $ (129.9) | $ (38.6) | |
| Assumption Changes | 39.8 | 0.0 | 39.8 | |
| Expected Interest / Invest Return | 186.7 | 132.6 | 54.1 | |
| Total | $ 58.0 | $ 2.7 | $ 55.3 | |
| Expected at December 31, 2022 | $2,618.3 | $1,834.7 | $ 783.6 | 70.1% |
| Actual at December 31, 2022 | $2,614.7 | $1,811.3 | $ 803.4 | 69.3% |
| (Gain) / Loss | $ (3.6) | $ 23.4 | $ 19.8 | |

**Normal Cost, Expenses, Contributions, and Benefit Payments*

# A Look Ahead



# Projections – Before 2022 Experience

**Taken from the December 31, 2021 valuation model but reflects assumption changes adopted March 2023. Assumes 7.5% for PYE 2022 and every year thereafter.**

CHEIRON

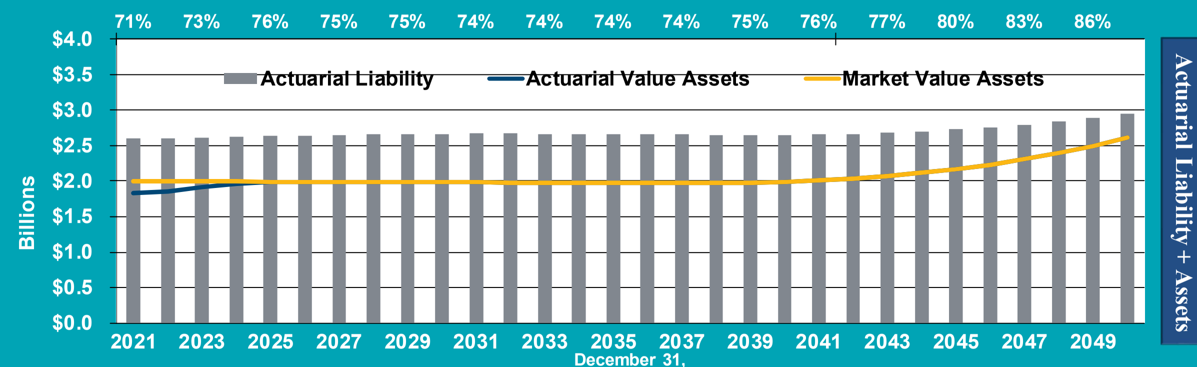
| PYE 12/31 | Return | ER Rate |
|---|---|---|
| 2022 | 7.50% | 16.25% |
| 2023 | 7.50% | 16.25% |
| 2024 | 7.50% | 16.25% |
| 2025 | 7.50% | 16.25% |
| 2026 | 7.50% | 16.25% |
| 2027 | 7.50% | 16.25% |
| 2028 | 7.50% | 16.25% |
| 2029 | 7.50% | 16.25% |
| 2030 | 7.50% | 16.25% |
| 2031 | 7.50% | 16.25% |
| 2032 | 7.50% | 16.25% |
| 2033 | 7.50% | 16.25% |
| 2034 | 7.50% | 16.25% |
| 2035 | 7.50% | 16.25% |
| 2036 | 7.50% | 16.25% |
| 2037 | 7.50% | 16.25% |
| 2038 | 7.50% | 16.25% |
| 2039 | 7.50% | 16.25% |
| 2040 | 7.50% | 16.25% |
| 2041 | 7.50% | 16.25% |
| Avg | 7.50% | |

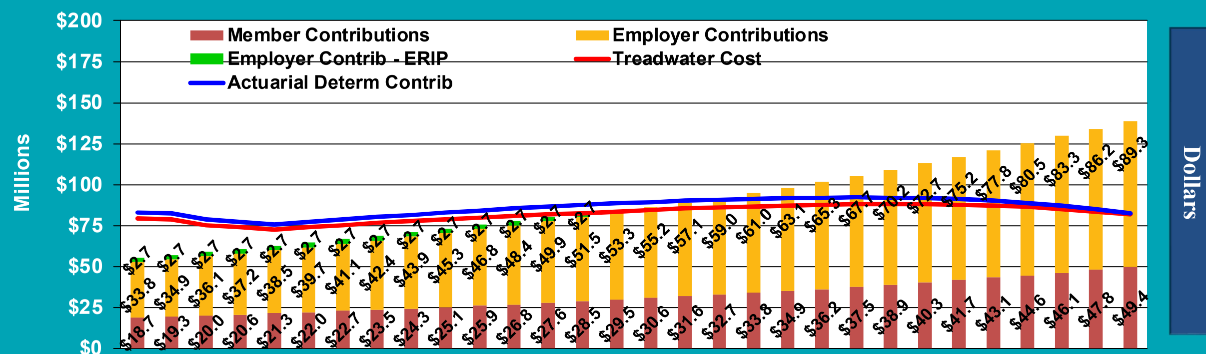
Baseline
Historical
1932

| | |
|---|---|
| Fully Funded | 2055 |
| Insolvency Year | Never |

| Funding Policy | |
|---|---|
| City Funding Policy | Current |
| EE Contribution Rate | 9.00% |
| Amortization Period | |
| 1=Fixed, 2=Layers, 3=Rolling | |
| Amortization Pay Growth | 0.00% |

| | |
|---|---|
| Choice | Proposed / 7.50% |
| Discount Rate | 7.50% |



# Projections – After 2022 Experience / Baseline

CHEIRON

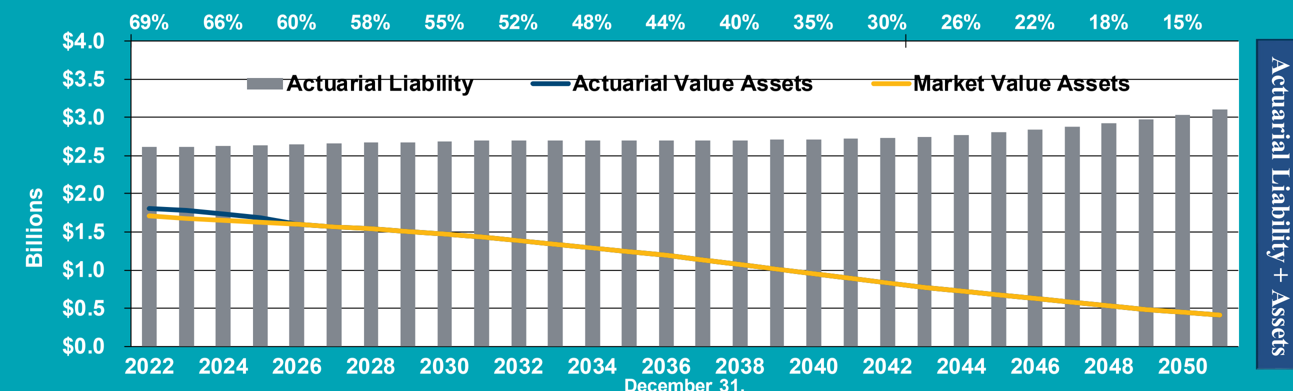
| PYE 12/31 | Return | ER Rate |
|---|---|---|
| 2023 | 7.50% | 16.25% |
| 2024 | 7.50% | 16.25% |
| 2025 | 7.50% | 16.25% |
| 2026 | 7.50% | 16.25% |
| 2027 | 7.50% | 16.25% |
| 2028 | 7.50% | 16.25% |
| 2029 | 7.50% | 16.25% |
| 2030 | 7.50% | 16.25% |
| 2031 | 7.50% | 16.25% |
| 2032 | 7.50% | 16.25% |
| 2033 | 7.50% | 16.25% |
| 2034 | 7.50% | 16.25% |
| 2035 | 7.50% | 16.25% |
| 2036 | 7.50% | 16.25% |
| 2037 | 7.50% | 16.25% |
| 2038 | 7.50% | 16.25% |
| 2039 | 7.50% | 16.25% |
| 2040 | 7.50% | 16.25% |
| 2041 | 7.50% | 16.25% |
| 2042 | 7.50% | 16.25% |
| Avg | 7.50% | |

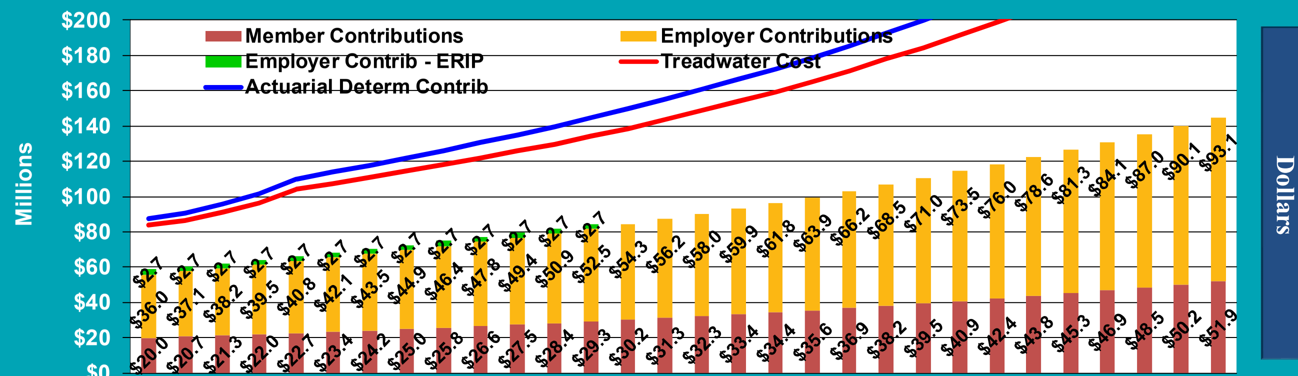
Baseline
Historical
1932

| | |
|---|---|
| Insolvency Year | Never |

| Funding Policy | |
|---|---|
| City Funding Policy | Current |
| EE Contribution Rate | 9.00% |
| Amortization Period | [redacted] |
| 1=Fixed, 2=Layers, 3=Rolling | |
| Amortization Pay Growth | 0.00% |

| | |
|---|---|
| Discount Rate | 7.50% |



# Projections – Implications of 2023

| Assumed 2023 Investment Return* | Projected Insolvency Year | Projected Year to be 100% Funded |
|---|---|---|
| 15.0% | None | 2087 |
| 7.5% | None | >2130 |
| 0.0% | 2046 | None |
| (7.5%) | 2041 | None |
| (15.0%) | 2038 | None |

***Assumed 7.5% per year for 2024 and thereafter and annual contributions based on 16.25% of Full Time payroll.***

# Revised ASOP 4

- ASOP 4: Measuring Pension Obligations and Determining Pension Plan Costs or Contributions
- Revised ASOP 4 is effective for measurement dates on or after February 15, 2023
- First effective for CRS with the December 31, 2023 valuation

# Revised ASOP 4 – Changes

- Major changes include:
  - Low-Default-Risk Obligation Measure (LDROM)
  - Disclose a Reasonable Actuarially Determined Contribution (ADC)
  - Assess Implications of Funding Policy (current valuation report already includes this)

# LDROM

- For funding valuations, actuary must calculate and disclose a Low-Default-Risk Obligation Measure (LDROM)
  - Discount rate(s) “derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of benefits expected to be paid in the future” such as
    - US Treasury yields
    - Yields on highly rated corporate or municipal bonds

# LDROM

- Difference between LDROM and Actuarial Liability can be viewed as:
  - The expected reduction in taxpayer cost from investing in a diversified portfolio, or
  - The expected cost of eliminating investment risk

# Disclose a Reasonable ADC

- Actuarially Determined Contribution is reasonable if:
  - All significant assumptions selected by the actuary are reasonable
  - All significant prescribed assumptions or methods set by another party do not significantly conflict with actuary's professional judgement
  - Amortization method is consistent with ASOPs
  - Asset valuation method is consistent with ASOPs
  - Funding policy should be consistent with the plan accumulating assets adequate to make benefit payments when due

# Amortization Method

- When selecting an amortization method, the method should
  - Fully amortize the unfunded actuarial liability in a reasonable time period, or
  - Reduce outstanding balance by a reasonable amount <u>each year</u>
  - No rolling negative amortization
- Current amortization method (30 year open) has rolling negative amortization

# Disclose a Reasonable ADC

- We will be required to disclose a Reasonable ADC in addition to the Board's Funding Benchmark, unless the Funding Benchmark is revised
- Potential changes to the Funding Benchmark include:
  - Closing the 30-year amortization period until it reaches 15 years and then using 15-year rolling amortization
  - Using layered amortization with 20-year closed periods
  - Using a 15-year rolling amortization
- This is a disclosure requirement and does not impact the City's contribution policy of 16.25% of full-time payroll

# Required Disclosures

The purpose of this presentation is to present the actuarial valuation results for the Cincinnati Retirement System (CRS or System). This presentation is for the use of the Board and System staff.

In preparing this presentation, we relied on information (some oral and some written) supplied by the Cincinnati Retirement System. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23, Data Quality.

The actuarial assumptions and methods are the same as those used in the preparation of the Actuarial Valuation Report as of December 31, 2022. The assumptions were presented at the March 3 meeting and adopted by the Board on March 23. The census data provided to us by CRS was as of December 31, 2022.

The assumptions reflect our understanding of the likely future experience of the System, and the assumptions as a whole represent our best estimate for the future experience of the System. The results of this presentation are dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from the actuarial assumptions, the true cost of the System could vary from our results.

Cheiron utilizes ProVal, an actuarial valuation software leased from Winklevoss Technologies (WinTech) to calculate the liabilities, normal costs and projected benefit payments. We have relied on WinTech as the developer of ProVal. We have reviewed ProVal and have a basic understanding of it and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in assumptions or output of ProVal that would affect this actuarial valuation.

Projections in this presentation were developed using *P-Scan*, our proprietary tool for developing deterministic projections to illustrate the impact of changes in assumptions and actual experience (particularly investment experience) on the future financial status of the Plan.

This presentation and its contents were prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this presentation. This presentation does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This presentation was prepared solely for the Cincinnati Retirement System for the purposes described herein. Other users of this presentation are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

Kevin Woodrich, FSA, EA, MAAA
Principal Consulting Actuary

Janet Cranna, FSA, EA, MAAA
Principal Consulting Actuary

# City of Cincinnati Retirement System (CRS)

CHEIRON
Classic Values, Innovative Advice

# 12/31/2022 Actuarial Valuation CRS OPEB Trust

city of CINCINNATI RETIREMENT

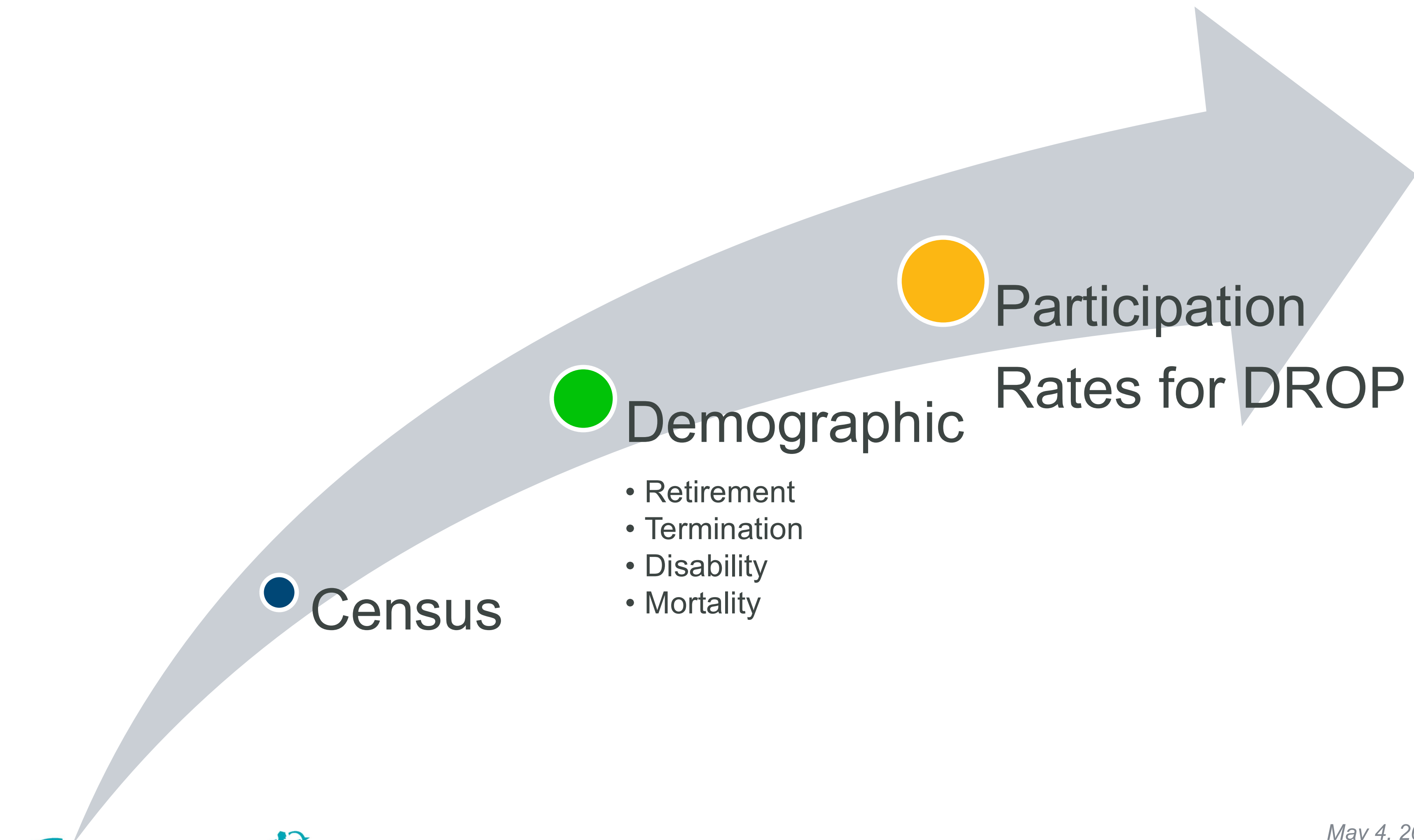
**May 4, 2023**
Gaelle Gravot, FSA, MAAA
Margaret Tempkin, FSA, EA, MAAA

# Topics for Discussion

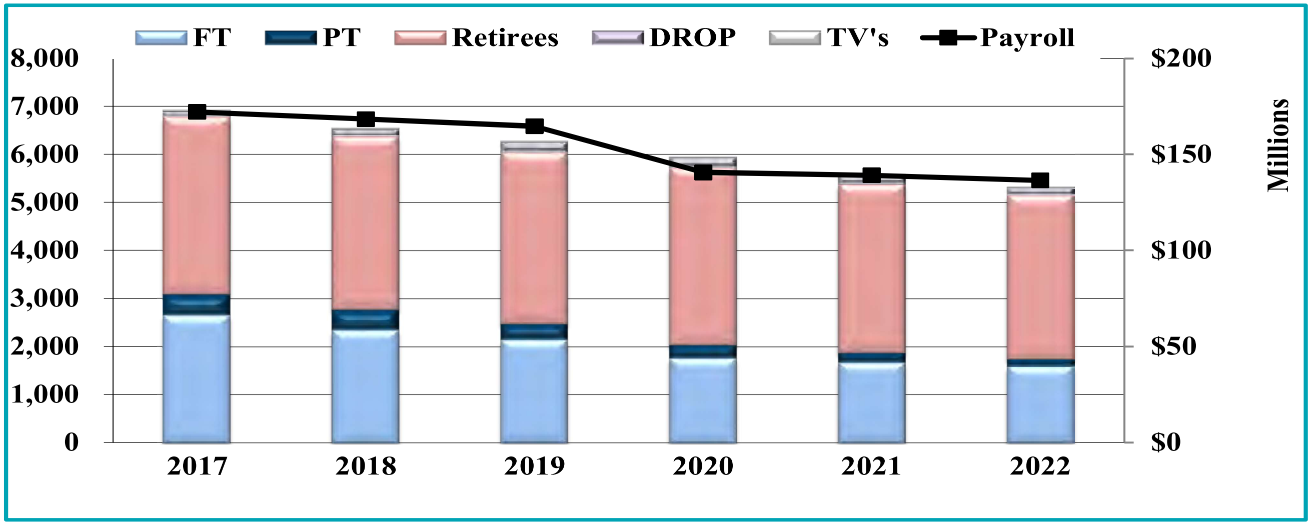
- Review of 12/31/2022 Actuarial Valuation
- Projections
- Next steps

# About 2022 Actuarial Valuation

- What changed since last valuation



# Historical Participant Information



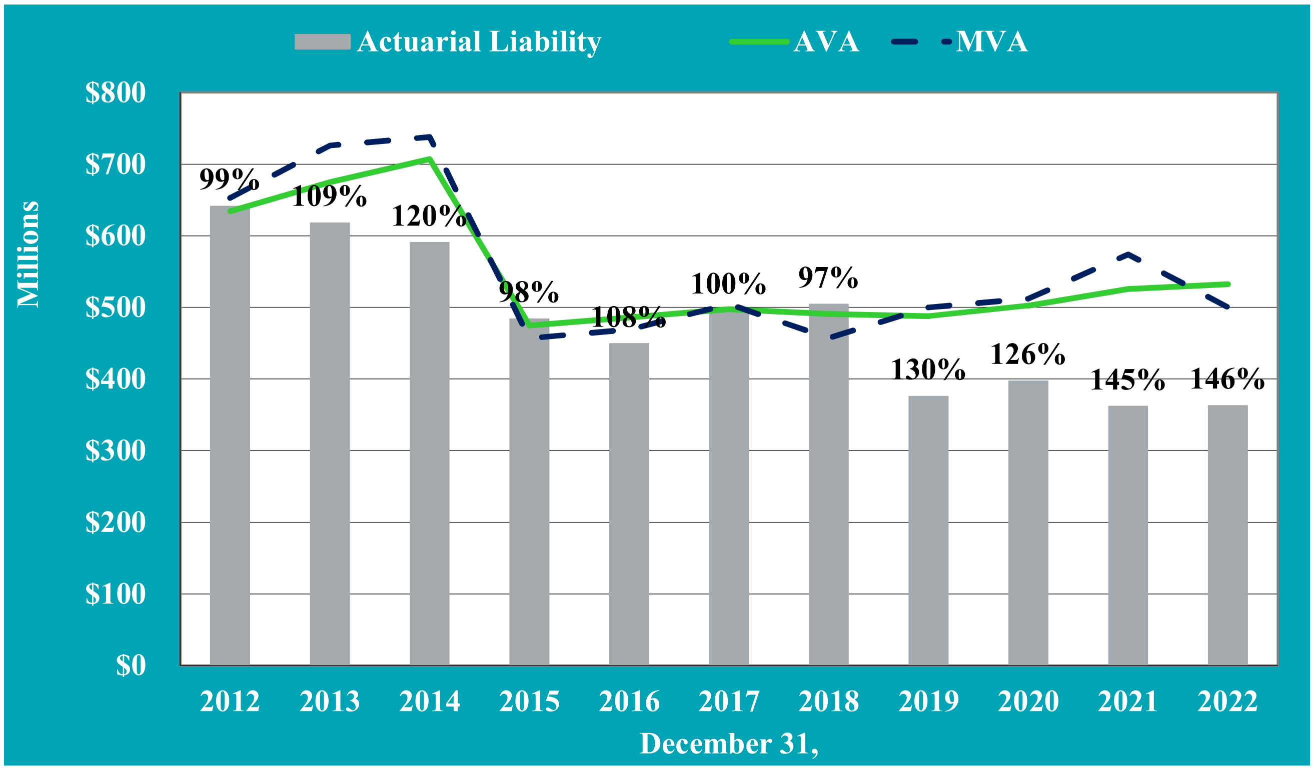

- Plan was closed December 31, 2015
- In 2017 – Part Time participants included

| Year | FT | PT | Retirees | DROP | TV's | Spouses* |
|---|---|---|---|---|---|---|
| 2017 | 2,664 | 437 | 3,684 | 108 | 26 | 1,419 |
| 2018 | 2,357 | 421 | 3,602 | 145 | 27 | 1,366 |
| 2019 | 2,151 | 330 | 3,565 | 217 | 26 | 1,361 |
| 2020 | 1,767 | 279 | 3,683 | 209 | 25 | 1,427 |
| 2021 | 1,673 | 210 | 3,511 | 185 | 20 | 1,398 |
| 2022 | 1,593 | 163 | 3,409 | 157 | 18 | 1,353 |

* Spouses not shown above in graph

# Historical Information (AL vs Assets)

In 2022, the fund is 146% funded on an AVA basis, and 138% on a MVA basis




- Plan was closed December 31, 2015
- Drop in liability in 2016 due to lower anticipated drug costs, contribution rate changes, and the asset drop was due to transfer of assets to the pension
- Move to MA plan effective January 1, 2020 reduced 2019 liabilities by over $127 million

# 12/31/2022 Valuation Participant Data

| Group | December 31, 2021 | December 31, 2022 |
|---|---|---|
| **Active Participants** | | |
| Active Full Time Employees | 1,673 | 1,593 |
| Active Part Time Employees | 210 | 163 |
| Active DROP Employees | 185 | 157 |
| Total | 2,068 | 1,913 |
| Covered Payroll | $139,123,528 | $136,460,218 |
| Total Compensation | $205,675,789 | $219,049,414 |
| Active Full Time Employees - ineligible for retiree health benefits | 1,194 | 1,361 |
| Active Part Time Employees - ineligible for retiree health benefits | 344 | 436 |
| Total - ineligible for retiree health benefits | 1,538 | 1,797 |
| **Inactive Participants** | | |
| Number of retirees and surviving spouses currently receiving retiree health benefits | 3,511 | 3,409 |
| Spouses currently receiving retiree health benefits | 1,398 | 1,353 |
| Total | 4,909 | 4,762 |
| Retired members and surviving spouses not currently receiving retiree health benefits but may elect coverage in the future | 351 | 354 |
| Total | 5,260 | 5,116 |
| Terminated vested members eligible for retiree health benefits | 20 | 18 |
| Terminated vested members not eligible for retiree health benefits | 219 | 257 |
| Total | 5,499 | 5,391 |

# 12/31/2022 Valuation Results

- The results below are used for the funding of the OPEB Trust and are not applicable for the financial statements
- The results are used to determine the Actuarially Determined Contribution (ADC), which is $0

**Summary of Valuation Results**

| Valuation Date | December 31, 2021 | December 31, 2022 |
|---|---|---|
| Discount Rate | 7.50% | 7.50% |
| Actuarial Liability (AL) | $ 362,353,468 | $ 363,450,123 |
| Actuarial Value of Assets | 525,773,721 | 532,169,108 |
| **Unfunded actuarial liability (UAL)** | **$ (163,420,253)** | **$ (168,718,985)** |
| Funded Ratio (AVA/AL) | 145.10% | 146.42% |
| Market Value of Assets | $ 573,939,000 | $ 500,041,000 |
| Funded Ratio (MVA/AL) | 158.39% | 137.58% |
| **Fiscal Year Ending** | **June 30, 2023** | **June 30, 2024** |
| Actuarially Determined Contribution | $ 0 | $ 0 |
| **Calendar Year** | **2022** | **2023** |
| Actual/Expected Net Benefit Payments | 24,670,000 | 28,714,315 |

# 12/31/2022 Valuation Detail

## The valuation remains over funded for 2022

| Actuarial Liability | | |
|---|---|---|
| **Valuation Date** | **December 31, 2021** | **December 31, 2022** |
| Discount Rate | 7.50% | 7.50% |
| **Actuarial Liability** | | |
| Current active members | $ 103,004,022 | $ 102,663,410 |
| Current retirees, beneficiaries, and dependents | 259,349,446 | 260,786,713 |
| **Total Actuarial Liability (AL)** | **$ 362,353,468** | **$ 363,450,123** |
| Actuarial Value of Assets (AVA) | 525,773,721 | 532,169,108 |
| **Unfunded Actuarial Liability (UAL)** | **$ (163,420,253)** | **$ (168,718,985)** |
| Funded Ratio (AVA/AL) | 145.10% | 146.42% |
| Market Value of Assets (MVA) | $ 573,939,000 | $ 500,041,000 |
| **Unfunded Actuarial Liability (UAL)** | **$ (211,585,532)** | **$ (136,590,877)** |
| Funded Ratio (MVA/AL) | 158.39% | 137.58% |
| **Normal Cost** | **$ 2,609,568** | **$ 2,562,945** |

# 12/31/2022 Valuation Reconciliation

| Reconciliation of Actuarial Liability | | |
|---|---|---|
| **Actuarial Liability at December 31, 2021** | **$** | **362,353,468** |
| Normal Cost | | 2,609,568 |
| Expected Benefits paid throughout the year | | (28,243,266) |
| Interest | | 26,313,105 |
| Expected Actuarial Liability at December 31, 2022 | $ | 363,032,875 |
| **Actuarial Liability at December 31, 2022** | | **363,450,123** |
| Gain or (Loss) | $ | (417,248) |
| Gain or (Loss) due to: | | |
| Benefit changes | $ | - |
| Census changes | | 4,073,513 |
| Demographic changes | | (4,490,761) |
| Health Care Claims and Trend changes | | - |
| Total changes | $ | (417,248) |

- Census change - $4.1 million gain
  - was primarily due to reduction in population electing/eligible for post retirement healthcare
- Demographic Assumption change - $4.5 million loss
  - Experience study improved mortality, lowered disability, increased retirement, lowered termination and increased DROP election %

# 12/31/2022 Valuation Projections – 7.5%

H-scan OPEB

## Stress Testing

Increase in trends: 0.00%

| Health Trends | Starting Trend | 2023 Year | 2024 Year | 2025 Year | 2026 Year | 2027 Year | 2028 Year | 2029 Year | 2030 Year | 2031 Year | Ultimate Trend | Years to Ultimate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pre-Med | 7.75% | 7.50% | 7.00% | 6.66% | 6.32% | 5.99% | 5.65% | 5.31% | 4.97% | 4.90% | 4.00% | 14 |
| Post-Med | 7.30% | 6.55% | 6.58% | 6.31% | 6.04% | 5.78% | 5.51% | 5.24% | 4.97% | 4.90% | 4.00% | 14 |

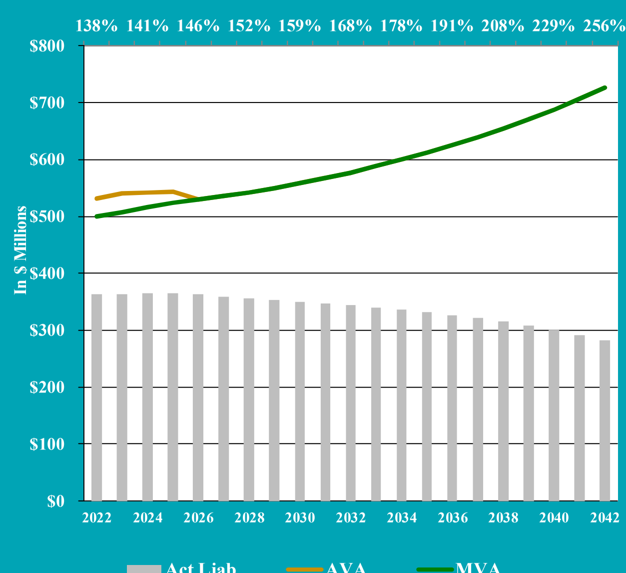
| | | | |
|---|---|---|---|
| Valuation Year | 31-Dec 2022 | Valuation Method | EAN |
| Total or Closed Payroll | Total | Investment Return | 7.50% |
| Open or Fixed Amortizatic | Open | GASB 74 Discount Rate | 7.50% |
| Actuarial Amort. Years | 30 | | |
| Average Salary Increases | 3.25% | 2023 calendar year return | 7.50% |

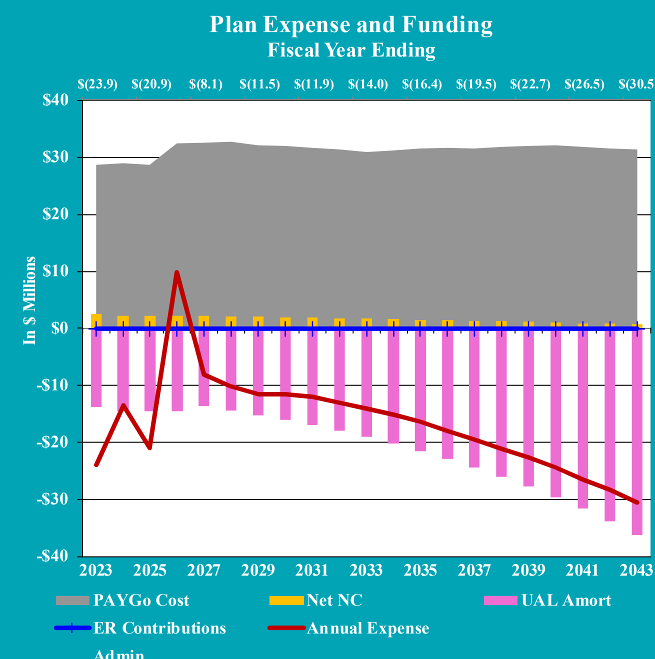
Baseline Historical

2001

Equity % 80%

| Calendar Year | |
|---|---|
| 2023 | 7.50% |
| 2024 | 7.50% |
| 2025 | 7.50% |
| 2026 | 7.50% |
| 2027 | 7.50% |
| 2028 | 7.50% |
| 2029 | 7.50% |
| 2030 | 7.50% |
| 2031 | 7.50% |
| 2032 | 7.50% |
| 2033 | 7.50% |
| 2034 | 7.50% |
| 2035 | 7.50% |
| 2036 | 7.50% |
| 2037 | 7.50% |
| 2038 | 7.50% |
| 2039 | 7.50% |
| 2040 | 7.50% |
| 2041 | 7.50% |
| 2042 | 7.50% |
| Avg | 7.50% |



# 12/31/2022 Valuation Projections
## 2023 Return negative 12.5%

H-scan OPEB

## Stress Testing

Increase in trends: 0.00%

| Health Trends | Starting Trend | 2023 Year | 2024 Year | 2025 Year | 2026 Year | 2027 Year | 2028 Year | 2029 Year | 2030 Year | 2031 Year | Ultimate Trend | Years to Ultimate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pre-Med | 7.75% | 7.50% | 7.00% | 6.66% | 6.32% | 5.99% | 5.65% | 5.31% | 4.97% | 4.90% | 4.00% | 14 |
| Post-Med | 7.30% | 6.55% | 6.58% | 6.31% | 6.04% | 5.78% | 5.51% | 5.24% | 4.97% | 4.90% | 4.00% | 14 |

| | | |
|---|---|---|
| Valuation Year | 31-Dec | 2022 |
| Total or Closed Payroll | | Total |
| Open or Fixed Amortizatic | | Open |
| Actuarial Amort. Years | | 30 |
| Average Salary Increases | | 3.25% |

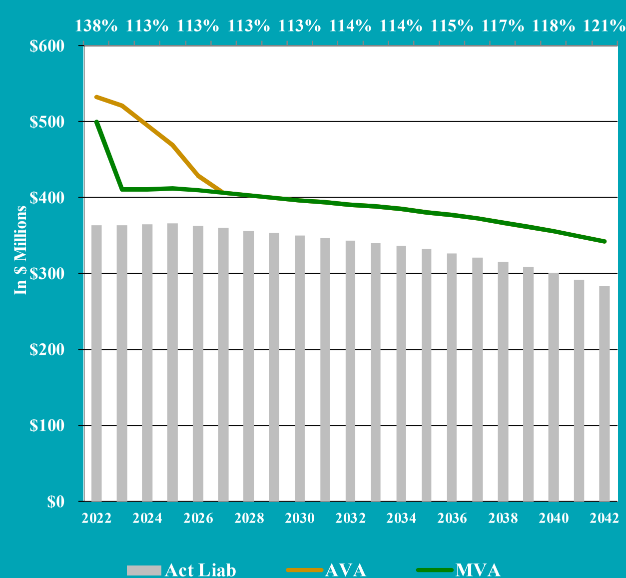
| | |
|---|---|
| Valuation Method | EAN |
| Investment Return | 7.50% |
| GASB 74 Discount Rate | 7.50% |
| 2023 calendar year return | -12.50% |

Baseline Historical

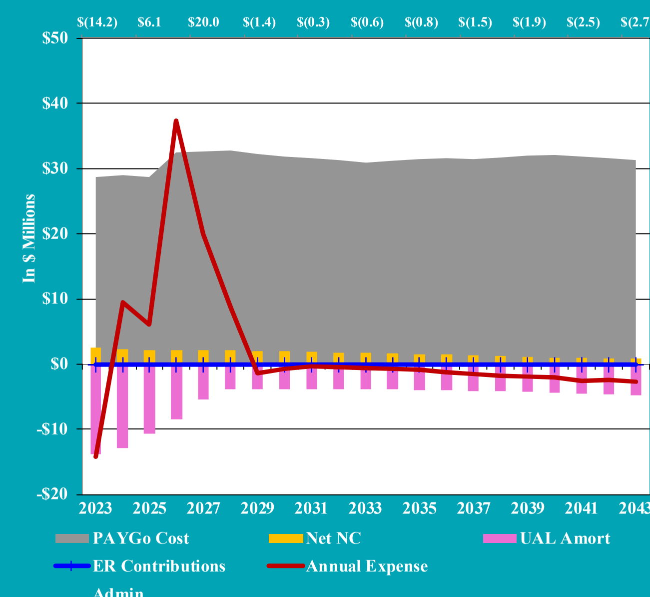
| | |
|---|---|
| | 2001 |
| Equity % | 80% |

| Calendar Year | |
|---|---|
| 2023 | -12.50% |
| 2024 | 7.50% |
| 2025 | 7.50% |
| 2026 | 7.50% |
| 2027 | 7.50% |
| 2028 | 7.50% |
| 2029 | 7.50% |
| 2030 | 7.50% |
| 2031 | 7.50% |
| 2032 | 7.50% |
| 2033 | 7.50% |
| 2034 | 7.50% |
| 2035 | 7.50% |
| 2036 | 7.50% |
| 2037 | 7.50% |
| 2038 | 7.50% |
| 2039 | 7.50% |
| 2040 | 7.50% |
| 2041 | 7.50% |
| 2042 | 7.50% |
| Avg | 6.40% |

### Assets and Liabilities




### Plan Expense and Funding
Fiscal Year Ending



# 12/31/2022 Valuation Projections – Average 7.26%
# 20 Year Historical Asset Mix (80% Equities / 20% Fixed)

H-scan OPEB

## Stress Testing

Increase in trends: 0.00%

| Health Trends | Starting Trend | 2023 Year | 2024 Year | 2025 Year | 2026 Year | 2027 Year | 2028 Year | 2029 Year | 2030 Year | 2031 Year | Ultimate Trend | Years to Ultimate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pre-Med | 7.75% | 7.50% | 7.00% | 6.66% | 6.32% | 5.99% | 5.65% | 5.31% | 4.97% | 4.90% | 4.00% | 14 |
| Post-Med | 7.30% | 6.55% | 6.58% | 6.31% | 6.04% | 5.78% | 5.51% | 5.24% | 4.97% | 4.90% | 4.00% | 14 |

| | | |
|---|---|---|
| Valuation Year | 31-Dec | 2022 |
| Total or Closed Payroll | | Total |
| Open or Fixed Amortizatic | | Open |
| Actuarial Amort. Years | | 30 |
| Average Salary Increases | | 3.25% |

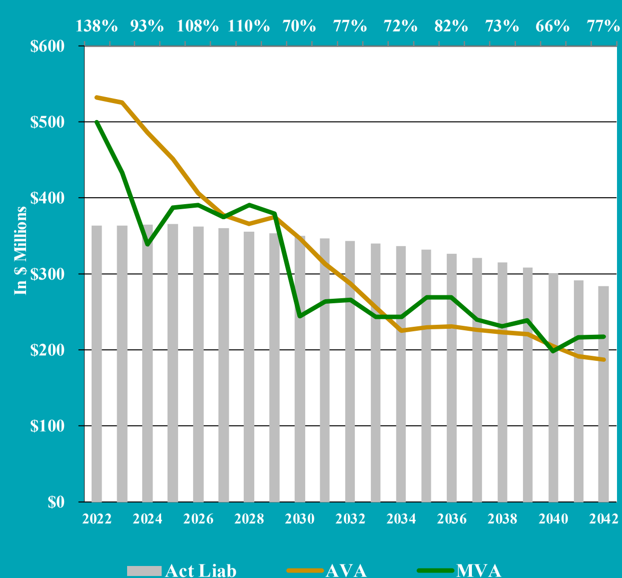
| | |
|---|---|
| Valuation Method | EAN |
| Investment Return | 7.50% |
| GASB 74 Discount Rate | 7.50% |
| 2023 calendar year return | -7.82% |

Baseline | Historical

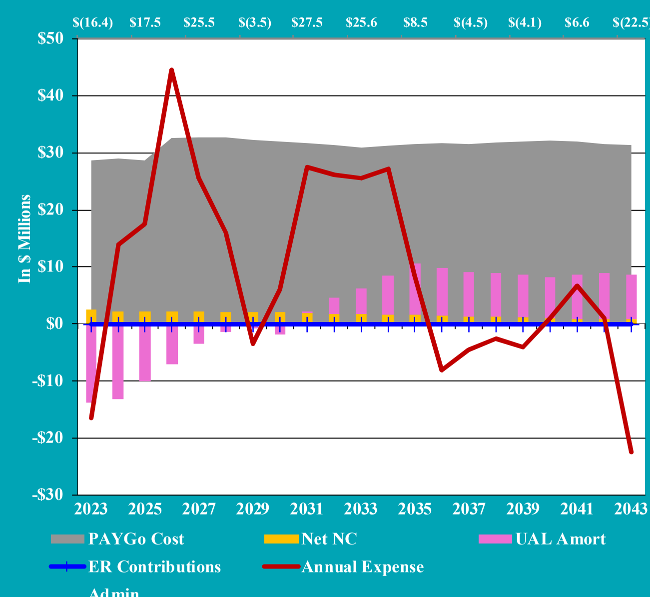
| | |
|---|---|
| | 2001 |
| Equity % | 80% |

| Calendar Year | |
|---|---|
| 2023 | -7.82% |
| 2024 | -15.63% |
| 2025 | 23.78% |
| 2026 | 9.57% |
| 2027 | 4.42% |
| 2028 | 13.50% |
| 2029 | 5.79% |
| 2030 | -28.55% |
| 2031 | 22.36% |
| 2032 | 13.40% |
| 2033 | 3.26% |
| 2034 | 13.65% |
| 2035 | 25.51% |
| 2036 | 12.14% |
| 2037 | 1.22% |
| 2038 | 10.10% |
| 2039 | 18.17% |
| 2040 | -3.51% |
| 2041 | 26.93% |
| 2042 | 16.22% |
| Avg | 7.26% |

### Assets and Liabilities




### Plan Expense and Funding
Fiscal Year Ending



# Next Steps

- GASB 74/75
  - Determine the blended discount rate
    - Preliminarily, the fund should pass the depletion testing if assets return at least -12.5%
    - If pass test, will use 7.5% for 6/30/2023
    - If not pass, the discount rate will be blended
    - Highly dependent on investment returns
      - Example, if less than -12.5% return does happen, the blended rate could be as low as 7.10%
  - Draft GASB 75 report and provide in July 2023
- Develop contribution rates for the three health plans as of January 1, 2024
  - Provide results by September 2023

# Disclosures

The purpose of this presentation is to present the results from the December 31, 2022 Retiree Health Benefits Plan for the City of Cincinnati OPEB Plan. Other users of this presentation are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other user.

In preparing this presentation, we relied on information, some oral and some written, supplied by the Cincinnati's staff, its vendors. This information includes, but is not limited to, the plan provisions, member data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

The analysis was based on financial data through December 31, 2022 and the January 1, 2023 membership data. Unless otherwise noted, the assumptions and methods are outlined in the December 31, 2022 Actuarial Valuation Report. Future results may differ significantly from this presentation due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and changes in plan provisions or applicable law.

Cheiron utilizes ProVal, an actuarial valuation software leased from Winklevoss Technologies (WinTech) to calculate the liabilities, normal costs and projected benefit payments. We have relied on WinTech as the developer of ProVal. We have reviewed ProVal and have a basic understanding of it and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in assumptions or output of ProVal that would affect this actuarial valuation.

This presentation includes projections of future contributions, claims, assets, reserves, funded status for the purpose of assisting the Board of Trustees with the management of the Fund. We have used Cheiron's H-Scan model to develop these projections. The model is also used to stress test the impact of volatile asset returns over the projection period.

This presentation and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this presentation. This presentation does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

Gaelle Gravot, FSA, MAAA
Principal Consulting Actuary

Margaret Tempkin, FSA, EA, MAAA
Principal Consulting Actuary

# Appendices

# App A. CRS Health Benefits

## *Eligibility*

Per Ordinance 336-2016 adopted by the City Council on October 26, 2016, employees hired after December 31, 2015 **are not** eligible to receive retiree health benefits.

Eligibility requirements:

- Age 60 with 20 years of service (yos) (15 years of service for Group C) or 30 years of service at any age
- At least 20 years of service must be CRS membership service

# App A. CRS Health Benefits

## *Benefits offered*

- Medical, Prescription Drugs, Dental and Vision
- Eligible retirees, beneficiaries, and their dependents Pre and Post Medicare eligibility
- Three Retiree Medical Plans:

| Secure* | Select | Model |
|---|---|---|
| Retired prior to 9/1/07 with income <$30K | Group C, or retired between 9/1/07 and 1/1/16 | Not Group C and retired after 1/1/16 |

* Participants not meeting the income requirement can elect either the Select or Model plan.

# App A. CRS Health Benefits

## Contribution Rules

| | Secure | Select | Model |
|---|---|---|---|
| **Group 1 (hired before 1/9/97)** | $0 | 5% of full cost adjusted for Medicare eligibility | 10% of full cost adjusted for Medicare eligibility |
| **Group 2 (hired after 1/9/97)** | $0 | Varies - See sliding scale below | Varies - See Sliding scale below |

| Sliding Scale | | |
|---|---|---|
| **Points:** | **Select** | **Model** |
| 90+ | 5% | 10% |
| 80-89 | 25% | 25% |
| 70-79 | 50% | 50% |

# App A. CRS Health Benefits

## Plan Benefit Comparison

| Non-Medicare | Secure | Select | Model |
|---|---|---|---|
| Deductible (Ind / Fam)[1] | $0/$0 | $300/$600 | $500/$1,000 |
| Coinsurance (INN / OON)[2] | 20% / 50% | 20% / 50% | 20% / 50% |
| Out-of-Pocket Max (OOP Max) | $500 / $1,000 | $1,500 / $3,000 | $2,000 / $4,000 |
| OON Deductible / OOP Max | 2 x INN | 2 x INN | 2 x INN |
| Prescription Drug<br>Mail Order | $5 / $15 / $30<br>$10 / $30 / $60 | $10 / $20 / $30<br>$20 / $40 / $60 | $10 / $20 / $30<br>$20 / $40 / $60 |
| **Medicare** | **Secure** | **Select** | **Model** |
| Deductible (Ind)[1] | $0 | $300 | $500 |
| Coinsurance (INN / OON)[2] | 4% / 10% | 4% / 10% | 4% / 10% |
| Out-of-Pocket Max (OOP Max) | $500 | $1,500 | $2,000 |
| OON Deductible / OOP Max | Combined INN | Combined INN | Combined INN |
| Prescription Drug<br>Mail Order | $5 / $15 / $30<br>$10 / $30 / $60 | $10 / $20 / $30<br>$20 / $40 / $60 | $10 / $20 / $30<br>$20 / $40 / $60 |

[1] Ind / Fam: Individual / Family

[2] INN / OON: In-Network / Out-of-Network

# App B. Actuarial Valuation Assumptions

- Demographic assumptions
  - based on the City's 2023 actuary's experience study adopted March 23, 2023
- Economic assumptions:
  - Based on claims experience through December 2021
  - Claims are trended forward based on
  - Trends reflect future information in medical and drug costs, plan design and general inflation

## Claims Development

- 2021 claims were developed based on the calendar year (CY) 2019, 2020 and 2021 claims broken down by the three plans and four population subsets (Medicare Eligible Part A&B (ME part AB), Medicare Eligible Part B Only(ME part B), Medicare Eligible Part A Only (ME part A) and Non-Medicare Eligible (NME)). A 13% load was applied to CY 2020 experience for anticipated “COVID rebound.”
- Retirees are enrolled in:
  - The Medicare Advantage plans if Part A&B, or Part B only eligible
  - The self-insured medical plans otherwise
- All participants age 65+ are assumed to be eligible for Part D

## Trends

- Trends were developed by determining the expected increase in trends for each type of coverage, medical vs pharmacy, Non-Medicare and Medicare

| Year | Medical NME | Medical ME | Drug NME | Drug ME |
|---|---|---|---|---|
| **2021** | **8%** | **0%** | **8%** | **7%** |
| 2022 | 7.8% | 8.5% | 7.8% | 6.8% |
| 2035 (Ultimate) | 4.00% | 4.00% | 4.00% | 4.00% |

**REQUEST FOR PROPOSALS**

# *Fiduciary Audit – Governance Review (Phase I)*

**DUE DATE:**

**RFP NUMBER:** **RFP1085FIDUCIARYAUDIT**

**ACCEPTANCE PLACE:** **https://cincinnati-oh.bonfirehub.com/**

All proposals must be submitted electronically via the City's Bonfire portal at the above link. Responses submitted by hard copy, mail, or e-mail will not be accepted. See "RFP Submissions" for more details.

**Requests for information related to this Proposal should be directed to:**

Annette Gordon, Buyer, at: annette.gordon@cincinnati-oh.gov

Issue Date: *June 5, 2023*

**NOTE:** The City publishes information on the City of Cincinnati Internet web site at www.cincinnati-oh.gov, which includes the Cincinnati Municipal Code (CMC) and the information concerning the rules and regulations governing the City's Small Business Enterprise (SBE) Program and Minority/Women Business Enterprise (M/WBE) Program. Offerors may register as a City vendor online at https://vss.cincinnati-oh.gov/vssprod/Advantage4.

**REQUEST FOR PROPOSALS**
**FROM THE CITY OF CINCINNATI**
***Fiduciary Audit – Governance Review (Phase I)***

**SECTION/TITLE** **PAGE**



**Commented [DP1]:** Delete if not needed

# I. REQUEST

## INTRODUCTION

The City of Cincinnati, Ohio, (hereinafter referred as "City") is issuing this Request for Proposals (hereinafter "RFP") pursuant to the provisions of the Cincinnati Municipal Code (CMC), Chapter 321 and City Manager Administrative Regulation 23 for Professional Services, from parties, (hereinafter "Offerors). The Offeror shall provide a comprehensive review of the governance of the Cincinnati Retirement System. The goal of the review is to conduct a current state analysis to identify appropriate issues to address the concerns of key stakeholders and develop preliminary recommendations.

## GENERAL BACKGROUND AND INFORMATION

The Cincinnati Retirement System was established in 1931, the first Ohio pension plan for general city employees. It pre-dates Social Security and the Ohio Public Employees Retirement System. CRS is a defined-benefit pension plan, established by Chapter 203 of the Cincinnati Municipal Code and is a qualified governmental plan for tax purposes pursuant to 26 USC § 414(d).

The System is administered through the Retirement Division of the City and is not a standalone legal entity. As such, the Retirement Division is subject to the City's Human Resources policies & procedures, Purchasing requirements, IT oversight and support, etc. Employees of the Retirement Division consists of seven administrative employees, two information technology employees, two finance employees, and the executive director. CRS staff calculate and administer the benefits utilizing a pension administration system. A vendor supports the pension administration system. The City Solicitor serves as legal counsel and attorney per article XV of the administrative code. An external consulting firm provides investment advisory services.

The System is governed by a nine-member board of trustees with four members appointed by the Mayor and City Council, two members elected by active members and three members elected by retirees. The System is comprised of employees of the City, excluding sworn fire and police employees. As of December 31, 2022, there were 2,983 covered full-time employees and 4,079 covered retirees in the System. The current ratio of actives to retirees is 1:1.37.

The System is financed through contributions from the employees and the employer as well as income earned on investments of the System. The employer contributes a fixed 16.25% of covered payroll and employees contribute 9%. The market value of assets for the System for the year ended December 31, 2021, was $2.6 billion. The actuarial value of assets was $2.4 billion as of December 31, 2021. The System was 71.6% funded for pension and 145.1% funded for health care as of December 31, 2021.

In 2011, City Council approved changes to pension benefits for active employees. In recent years the active employees filed multiple suits against the City in response to the pension changes. The retirees joined the litigation in anticipation of changes to future cost-of-living-adjustments (COLA's). The City and the adverse parties in the pension litigation agreed to a collaborative mediation in Federal District Court to attempt to reach an agreed resolution of the City's pension issues.

A settlement agreement with a term of 30 years was approved by the United States District Court for the Southern District of Ohio, Western Division on October 5, 2015 and was generally effective January 1, 2016. The agreement includes an employer contribution rate of 16.25%, a change in the COLA from a 3% compound to a fixed 3% simple COLA, a three year suspension of COLA payments for current retirees and future retirees upon their retirement date, and provided for the termination of the 401(h) retiree health care account and replaced it with a standalone OPEB 115 Trust.

Please refer to the Cincinnati Retirement System's website at https://www.cincinnati-oh.gov/retirement/ for more information. The website includes Board and Committee minutes, description of benefits offered, valuation reports, quarterly investment reports (see Investment Committee minutes), Governance Manual, the Collaborative Settlement Agreement, etc.

**SCOPE OF SERVICES/SPECIFICATIONS**

A phased process for a Fiduciary Audit is desired. The first phase is to conduct a Governance Review which will include the following analysis of the current state of the City of Cincinnati Retirement System:

A. Review policies, charters and practices.

B. Develop CRS Governance profile.

C. Conduct a 360 Governance self-assessment survey.

D. Analyze the results of A, B, and C above.

E. Prepare a preliminary discussion document.

F. Discuss the preliminary findings, conclusion, and recommendations with the CRS Board.

**TERM**

The term of this Agreement shall commence on the effective date of the Agreement. The term of this Agreement shall be 12 months.

**QUALIFICATIONS**

*Describe the desired qualifications in a successful Offeror. May want to include:*

*A. Offeror's Ownership*

*B. Personnel Qualifications*

*C. Competitive Position and Future Commitment*

*D. Experience*

*E. Demonstration of expertise in its field*

*F. Etc.*

**TIMETABLE**

| Milestones for the process are: | Date |
|---|---|
| 1. Release of RFP | 06/05/2023 |
| 2. Deadline for written questions | 06/19/2023 |
| **3. OFFERORS SUBMIT PROPOSALS** | **08/04/2023** |

4. City initiates negotiations with preferred Offeror (approx.) 10/01/2023

**QUESTIONS CONCERNING THE RFP**

All questions or requests for clarification must be submitted in writing no later than June 19, 2023 at 11:00am ET. Questions and clarification requests may be emailed to Annette Gordon at annette.gordon@cincinnati-oh.gov or submitted through the Bonfire portal at https://cincinnati-oh.bonfirehub.com/. If emailing, please reference "RFP1085FIDUCIARYAUDIT, Fiduciary Audit – Governance Review (Phase I)" in the subject field of the message. Questions received after the designated period may not be considered. Any response made by the City will be provided in writing via Addendum.

**Commented [DP2]:** Buyer Name and Email

Offerors are strictly prohibited from contacting any other City employees or any third-party representatives of the City on any matter having to do with this RFP. All communications this RFP must be made to the City's contact person, or any other City representatives designated by the Chief Procurement Officer in writing.

**PREVENTING UNFAIR COMPETITIVE ADVANTAGES**

Fairness and transparency in the procurement process require that Offerors competing for a specific project do not derive a competitive advantage from having provided services related to the project/contract/work assignment in question. To that end, pursuant to Administrative Regulation No. 62 and the City's RFP Manual, a firm, and each of its affiliates, hired to provide services for the preparation or implementation of a project shall be disqualified from any subsequent procurement solicitation to provide goods, works, or services resulting from or directly related to the firm's services for such preparation or implementation, unless an exception is made by the City Manager in writing.

**RFP SUBMISSIONS (Public Records Requirements)**

The Offeror shall develop a written response to this RFP structured to comply with Section II of this RFP.

While each proposal will be considered objectively, the city assumes no obligation to accept to take action on any proposal. The City assumes no liability for any costs incurred in preparing or submitting any proposals.

An electronic Proposal **must** be submitted through the City's Bonfire portal at https://cincinnati-oh.bonfirehub.com/. **Responses submitted by hard copy, mail, or e-mail will not accepted.**

Important notes:

- Logging in and/or uploading your file(s) does not mean your response is submitted. Offerors must successfully upload all file(s) and **must** click the submit button before closing time.
- You will receive an email confirmation receipt with a unique confirmation number once you finalize your submission. This will confirm that you have successfully submitted your Statement of Qualifications.
- If a requested file is mandatory, you will not be able to complete your submission until the requirement is met.
- Uploading large documents may take time, depending on the size of the file(s) and your internet connection speed.

- Please note the type (.doc, .pdf, etc.) and number of files (one only or multiple) allowed. The maximum file size for upload is 1,000 MB. Please do not embed any documents within your uploaded files as they will not be accessible or evaluated.

For technical questions or issues related to your submission, please contact Bonfire directly at support@gobonfire.com or 1 (800) 354-8010, ext. 2. The support team is available Monday-Friday, 8:00 a.m. – 8:00 p.m. ET. You can also visit their help forum at https://bonfirehub.zendesk.com/hc.

The **deadline** for responding to this RFP and for submitting all related materials is:

***(August 4, 2023 by 4:00PM EDT)***

**Late proposals will not be accepted.**

Proposals can be withdrawn at any time until the deadline date, at which time proposals will be considered firm and become the property of the City and will not be returned. Offeror must login to Bonfire to withdraw their submission through the system. If resubmitting, Offeror is responsible for submitting prior to the closing time and receiving a new email confirmation receipt. By responding to this RFP, Offerors waive any challenge to the City's decisions.

By submitting this Proposal, Offeror acknowledges that the City is governed by the Ohio Public Records Laws. Notwithstanding any statement to the contrary, the City's handling of any confidentiality obligations is subject to the limitations of this paragraph. Offeror's Proposal may be subject to disclosure under the Ohio Public Records Laws. The City shall have no duty to defend the rights of Offeror or any of its agents or affiliates in any records requested to be disclosed. Confidential proprietary material must be clearly identified by the Offeror as "trade secret" and easily separable from the rest of the Proposal. The Offeror recognizes and agrees that the City is not responsible or liable in any way for any losses that the Offeror may suffer from the disclosure of information or materials to third parties.

Upon receipt of a public records request for which any document clearly marked by Offeror as "Trade Secret" is responsive, the City will notify Offeror of its intent to release records to the requestor. Offeror shall have a maximum of five (5) business days beginning with the date it receives notification to respond to the City by either accommodating the requestor or pursuing legal remedies to stop the City's release of requested information. Said notification shall relieve the City of any further obligation under any claim of Offeror or any of its agents or affiliates in any jurisdiction in connection with the disclosure of such records. Offeror and its agents and affiliates shall have the right to pursue legal and/or equitable remedies to stop or limit disclosure at their sole expense.

Offerors submitting proposals in response to and consistent with this RFP shall submit the required or miscellaneous forms in accordance with Section IV of the RFP.

**SELECTION PROCESS AND AWARD CRITERIA**

Selection of a preferred Offeror and subsequent award of contract will comply with City Administrative Regulation No. 23 and the Cincinnati Municipal Code (CMC). The City will award a contract to the successful Offeror considering the total requirements for this procurement and what is "Most Advantageous to the City" in accordance with CMC Chapter 321.

The City's Selection Committee will review and evaluate all properly submitted proposals that are received on or before the deadline. The Selection Committee will submit its finding to the Chief Procurement Officer as to which proposal(s) is/are "Most Advantageous" to the City taking into consideration price and evaluation factors set forth below. The Chief Procurement Officer will review the Selection Committee’s findings and will then submit a recommendation to the City Manager who will make the award for the City pursuant to CMC Section 321-65.

Experience and Technical Qualifications: 25%

Services and Consulting approach; 25%

Methodology, Work Product, and Timeline: 25%

Fee Structure: 20%

Small Business Enterprise utilizations: 5%

The City reserves the right to ask for additional information and clarification from or about any or all of the Offerors. The City may require selected Offerors to make an oral presentation of their proposals.

**PROCESS FOR ENTERING INTO AGREEMENT**

The Offeror(s) whose proposal is/are found to be the "Most Advantageous" to the City of Cincinnati will be offered the opportunity to negotiate with the intent to enter into an Agreement with the City. The scope, terms and conditions of that Agreement shall be in substantial conformance with the terms, conditions and specifications described in this RFP and with the proposal that is submitted by the Offeror whose proposal is found to be the "Most Advantageous" to the City.

The Offeror should be prepared to begin contract negotiations upon submitting a proposal. If the Offeror is not able to begin contract negotiations, the City may disqualify that Offeror.

The City reserves the right to negotiate the Agreement to include any portion or portions of the services covered by this RFP. The City reserves the right to reject any and all proposals in total or by components.

The City reserves the right to make one total award, one award for each section, multiple awards, or a combination of awards, and to exercise its judgment concerning the selection of one or more proposals, the terms of any resultant agreement(s), and the determination of which, if any, proposal(s) is Most Advantageous to the City, as a result of this RFP process.

**ADDITIONAL INFORMATION**

The City reserves the right to check all references furnished and consider responses received in determining the award.

The City reserves the right to perform investigations as may be deemed necessary by the City to assure that competent persons will be and are utilized in the performance of the Agreement and to verify the accuracy of the contents of proposals.

The City publishes information on the City of Cincinnati web site at www.cincinnati-oh.gov, which includes the Cincinnati Municipal Code.

**CONTRACTOR REGISTRATION**

The Offeror awarded the contract shall be a registrant under Vendor Self Service (VSS) at time of award. Go to https://vss.cincinnati-oh.gov/vssprod/Advantage4 to register.

### CHANGES AND ADDENDA TO RFP DOCUMENTS

It shall be the Offeror's responsibility to make the inquiry as to changes and addenda issued. All such changes or addenda shall become part of the contract and all Offerors shall be bound by such changes or addenda.

Offerors may download all addenda and other RFP documents from the City's Vendor Self Service portal (https://vss.cincinnati-oh.gov/vssprod/Advantage4) and should frequently return to the site to monitor for project-specific updates and addenda.

**Equal Employment Opportunity Program**: A summary of the City's Equal Employment Opportunity Program is included in the RFP Section III. Equal Employment Opportunity (EEO) Form (DEI147) is referenced only for information purposes in the RFP Section IV. It does not have to be signed or returned with Proposals. The successful Offeror will be required to complete the DEI 147 at contract execution.

**Living Wage**: A summary of the City's Living Wage requirements is included in the RFP Section III. The Living Wage Affidavit is referenced only for information purposes in the RFP Section IV. It does not have to be signed or returned with Proposals. The successful Offeror will be required to complete this Affidavit at contract execution.

**Commented [WU3]:** Applies only if RFP is for a service contract

**Non-Discrimination Policy**: A summary of the City's Non-Discrimination Policy is referenced in the RFP Section IV.

### OFFEROR'S COVENANT OF NON-DISCRIMINATION

Pursuant to the City of Cincinnati's policy of non-discrimination, specifically in its purchasing and contracting practices, **by signing this proposal** and as a condition of contract award, the Offeror covenants, represents and warrants that:

- The Offeror will not discriminate against small business enterprises on the basis of race, ethnicity, gender or disability in the process of contracting, subcontracting and purchasing;
- The Offeror will use good faith efforts to promote opportunities for SBEs and M/WBEs to participate in and compete for opportunities to the extent of their availability and capacity;
- If awarded the contract, the Offeror will submit to ongoing monitoring by and submittal of reports to the City's Department of Economic Inclusion;
- The Offeror will submit to investigations and/or audits by the Department of Economic Inclusion in connection with routine monitoring or as a result of specific allegations of discrimination.

### S/M/WBE SUBCONTRACTING

There is no specific S/M/WBE subcontracting goal for this project. However, the City desires that opportunities for City-certified SBEs, WBEs, and/or MBEs be generated to the maximum extent practicable. As such, S/M/WBE subcontracting will be one of the factors the City considers for award.

Offerors subcontracting any portion of the work must complete, sign and return the appropriate economic inclusion forms found in the "No Goals Inclusion Packet" with your proposal.

The "No Goals Inclusion Packet" which includes the applicable forms to be completed and included with the proposal is available at the following webpage: http://cincinnati-oh.gov/inclusion/forms/subcontractor-inclusion-goal-packages-for-bids-rfps/. When on the aforementioned webpage, please click on the weblink called "No Goals Inclusion Packet" to download and access the appropriate forms.

Offeror is responsible for verifying that each M/S/WBE to be used on a contract is certified by the DEI as of the proposal due date. The M/S/WBEs named must be certified to provide the services that they are listed to perform, and the services must be required as part of the work on this contract. A directory of certified M/S/WBEs is available online at https://cincinnati.diversitycompliance.com or at the offices of DEI.

### VENDORS INELIGIBLE TO CONTRACT OR SUBCONTRACT WITH THE CITY

The City maintains a list of Vendors Debarred from Contracting or Subcontracting with the City may be accessed at: http://www.cincinnati-oh.gov/purchasing or may be furnished in other form upon request to the Chief Procurement Officer. The City will not contract with any Bidder on the list. It is each Offeror's responsibility to verify that each subcontractor it proposes to use is an eligible firm or person. The City will not approve a subcontractor whose name appears on the list.

## II. PROPOSALS

### CONTENT AND FORM OF PROPOSALS

The proposal must be signed by a person who has legal authority to contractually bind the Offeror.

The Proposal shall include, but is not limited to, the following and must be presented in the following order:

**1. Executive Summary**

Provide a narrative summary of the proposal being submitted. This summary should identify all of the services and work products that are being offered in the proposal and should demonstrate your firm's understanding of the project. In addition to the summary, please provide the following general information:

- Your firm's primary contact for this proposal and, if different, for CRS staff use during the audit, including the contact's name, title, address, telephone number, and email address;
- General ownership structure of your organization, including subsidiary and affiliated companies, and joint venture relationships;
- Information regarding any material change in your firm's structure of ownership within the last eighteen months, or any material change in ownership, staff, or structure currently under review or being contemplated by your firm;
- If available, a third-party assessment or report concerning client satisfaction and measures of your firm's strengths and weaknesses;
- Any material litigation which has been threatened against your firm or to which your firm is currently a party;

- A list and brief description of litigation brought against your firm by existing or former clients over the last five years; and
- A list of any professional relationships involving CRS or the City of Cincinnati for the past five years, together with a statement explaining why such relationships do not constitute a conflict of interest relative to performing the proposed review.

**2. Capabilities and Experience**

Describe your firm's capabilities and experience within the last five years in performing fiduciary performance audits or studies of public employee retirement systems. Include information on the types and sizes of public employee retirement systems for which past work has been performed, including whether the systems were defined-benefit or defined-contribution plans, the types and number of participating employees, number of participants, and other relevant indicators of plan type, size, and comparability to CRS. You may provide a sampling or summary description of the scope of these projects and non-proprietary key findings and recommendations. Reviewing internal trading and trade processing operations;

**3. Staff Qualifications**

Describe the qualifications of all management and lead professional personnel who will participate in the fiduciary audit. Each personnel description shall include: (1) a resume; and (2) a summary of experience each has had in performing fiduciary audits or studies of public employee retirement systems. A management plan is required which provides the roles and responsibilities that each of the management and professional staff will have on the fiduciary audit and include an estimated portion of the audit's time that will be spent by each on the audit and the individual's hourly billable rate.

Lead professionals included on the project team should, at a minimum, have performed a fiduciary audit or study of a public employee retirement system within the last two years.

Include your firm's affiliations with organizations that sponsor and support investment- or fiduciary-related research.

**4. References**

Include a list of at least three organizations, but no more than five, that may be used as references for your work on fiduciary audits or studies. At least one reference should be similar in size and structure to CRS and exist within a larger governmental entity. References may be contacted to determine the quality of the work performed, personnel assigned to the project, and contract adherence. The following should be included for the references listed:

- Date of the fiduciary audit work;
- Name and address of client;
- Name and telephone number of an individual in the client organization who is familiar with the work; and
- Description of the work performed.

**5. Methodology, Work Product, and Timeline**

Describe the proposed methodology for each element of the components listed in "Scope of Services" on pages 2 through 4. The description should include specific techniques that will be used, including anticipated sampling techniques and sizes, and proposed sources of data and information. You may propose alternative ways of addressing the elements of the audit's scope.

In describing your proposed methodology, also identify the type and level of assistance that you anticipate will be needed from the staff of CRS, including assistance to understand the operations and records of CRS and to access, obtain, and analyze information needed for the audit. The description of the proposed methodology shall also identify meetings, interviews, programming support, space needs, etc., that you anticipate needing from CRS.

Include one or more examples of work products for fiduciary audits that may help to illustrate the proposed methodology and final work product.

Provide an estimated date that the final report will be submitted and the projected timeline or the anticipated work requirements and milestone dates to reach that date. This may be expressed as time after start of contract (i.e. "1 week after contract start date") rather than specific calendar dates.

**6. Cost Information**

The pricing summary should include a breakdown of costs per element, including personnel costs (including hourly rates and estimated hours for professional and clerical staff assigned to the audit); travel and lodging; data processing costs; materials; and any other potential costs. The cost estimates in the pricing summary must include all necessary charges to and must be a "not to exceed" figure.

**7. Required Forms**

See Section IV on page 19.

**EXCEPTIONS**

The proposal shall include a statement indicating compliance with the Terms and Conditions presented in Section III of this RFP or a statement indicating any exceptions thereto subject to negotiations.

## III. CONTRACT TERMS AND CONDITIONS

The Offeror's response to this Request for Proposal (RFP) will be made a part of the contract with the City. Terms and Conditions, substantially in the form contained herein, shall be included in the Agreement between the City and the successful Offeror. In this Section, "Offeror" is referred to as "Contractor."

Unless otherwise stated by the Offeror in the response to this RFP, the Offeror agrees to the following Contract Terms and Conditions, which will become part of the subsequently negotiated contract.

**SUBCONTRACTING**

None of the work or services covered by this Agreement shall be subcontracted, except as set forth herein, without the prior written approval of the City of Cincinnati. The City assumes no obligation to pay, and will not pay, a contractor for any work and/or services performed by a subcontractor on the contract prior to the City Manager's approval of that subcontractor. Any work or services subcontracted hereunder shall be specified by written contract or agreement and shall be subject to each provision of this Agreement.

In the event the Contractor employs a subcontractor without first securing the required approval of the subcontractor by the City, the City shall have the right to stop payment to the Contractor or withhold any monies due the Contractor until the subcontractor is approved by the City.

The Professional Service Subcontractor Approval Policy and Procedures and the Approval Request Form is available at http://www.cincinnati-oh.gov/purchasing/ or may be furnished in other form upon request.

The City maintains a list of Vendors Debarred from Contracting or Subcontracting with the City that may be accessed at: http://www.cincinnati-oh.gov/purchasing or may be furnished in other form upon request. The City will not contract with any firm or person on the list. It is Contractor's responsibility to verify that each subcontractor it proposes to use is an eligible firm or person. The City will not approve a subcontractor whose name appears on the list.

The City shall neither accept nor be liable for any increase in costs, or other expenses, delay, loss, or subsequent ineligibility to contract with the City, incurred by a contractor as a result of the City rejecting any proposed person, firm, partner, principal, affiliate, subcontractor or supplier that is debarred or suspended after the submission of a bid, proposal, or other communication leading to a contract, but before the approval or award of the contract.

The City shall not unreasonably withhold approval of a subcontractor.

**ASSIGNMENT OF CONTRACT**

The Contractor shall not assign any interest in this Agreement, and shall not transfer any interest in the same, whether by assignment or novation, without the prior written consent of the City of Cincinnati.

**COMPLIANCE WITH LAWS AND POLICIES**

This Agreement is subject to and Contractor shall comply with all statutes, ordinances, regulations, and rules of the Federal Government, the State of Ohio, the County of Hamilton and the City of Cincinnati.

**EQUAL EMPLOYMENT OPPORTUNITY**

The Contractor shall be subject to the provisions of the City of Cincinnati Municipal Code Chapter

325, regarding Equal Employment Opportunity (EEO). The EEO Program requires the Contractor awarded the contract to complete and submit a DEI 147 form. The DEI 147 form is designed to provide an evaluation of the Contractor's policies and practices relating to the extension of equal employment opportunity to all persons without regard to race, religion, color, sex, sexual orientation, gender identification, national or ethnic origin, age, handicap, or Vietnam military service.

Failure to comply with the City's request for submission of the DEI 147 form within ten (10) days of the date of the request will be sufficient cause to reject the proposal due to the Contractor being non responsive.

**AMERICANS WITH DISABILITIES ACT**

The City of Cincinnati is committed to supporting the Americans with Disabilities Act. Please contact the City's Office of Aging and Accessibility if you require any special accommodations.

**SMALL BUSINESS ENTERPRISE AND MINORITY AND WOMEN ENTERPRISE**

This contract is subject to and Contractor shall comply with the provisions of the Small Business Enterprise (SBEs) Program contained in Chapter 323 and the Minority and Women Business Enterprise (M/WBE) Programs contained in Chapter 324 of the Cincinnati Municipal Code. Section 323-99 and 324-99 of the Cincinnati Municipal Code are hereby incorporated by reference into this contract.

The Contractor shall utilize best efforts to recruit and maximize the participation of all qualified segments of the business community in subcontracting work, including the utilization of SBEs and M/WBEs. This includes the use of practices such as assuring the inclusion of qualified SBEs and M/WBEs, in bid solicitations and dividing large contracts into smaller contracts when economically feasible.

The SBEs and M/WBEs must be certified under the appropriate City commodity code by the time of the bid closing.

Information regarding the City's SBE and M/WBE programs and a directory of certified firms can be found at the following website: http://www.cincinnati-oh.gov/inclusion/.

**CONTRACTOR'S COVENANT OF NON-DISCRIMINATION**

Pursuant to the City of Cincinnati's policy of non-discrimination, specifically in its purchasing and contracting practices and as a condition of contract award, we covenant, represent and warrant that:

- We will not discriminate against small business enterprises on the basis of race, ethnicity, gender or disability in the process of contracting, subcontracting and purchasing;
- We will use good faith efforts to promote opportunities for small business enterprises to participate in and compete for opportunities to the extent of their availability and capacity;
- We will submit to ongoing monitoring by and submittal of reports to the City's Department of Economic Inclusion;
- We will submit to investigations and/or audits by the Department of Economic Inclusion in connection with routine monitoring or as a result of specific allegations of discrimination.

**LIVING WAGE PROVISIONS**

This contract is subject to the Living Wage provisions of the Cincinnati Municipal Code (CMC), Chapter 317. The provisions require that, unless specific exemptions apply or a waiver is granted, all employers (as defined) under service contracts shall provide payment of a minimum wage to employees (as defined) as follows:

- For employees expected to work fewer than 1,500 hours on an annual basis on this specific City contract, Contractors shall provide payment of a minimum wage to employees of $13.40 per hour with health benefits (as defined) or otherwise $15.12 per hour. Such rate shall be adjusted annually pursuant to the terms of the CMC 317.
- For employees expected to work 1,500 hours or more on an annual basis on this specific City contract, Contractors shall provide payment of a minimum wage to employees of $17.15 per hour, regardless of whether the employer provides health care benefits.

Under the Living Wage provisions, the City shall have the authority, under appropriate circumstances, to terminate this contract and to seek other remedies.

Commented [WU4]: Applies only if RFP is for a service contract

**PROMPT PAY**

This Agreement is subject to the provisions of Chapter 319 of the Cincinnati Municipal Code, which provides for a "Prompt Payment System."

**EVALUATION, REPORTS, INFORMATION AND AUDITS**

The Contractor agrees to participate full in all evaluation activities initiated by the City. The Contractor, at such times and in such form as the City may require, shall furnish the City such reports as may be requested pertaining to the work, student participation, course tracking, and services undertaken pursuant to this Agreement, the costs and obligations incurred or to be incurred in connection therewith, and any other matters covered by this Agreement. The Contractor shall retain all financial and administration records for a period of three years after the expiration or termination of this Agreement, and shall permit the City or any of its representatives or auditors access to such records.

**HOLD HARMLESS**

The Contractor shall protect, defend and hold harmless the City of Cincinnati, its agents, employees, and volunteers from any and all loss, claims, expenses, actions, causes of action, costs, damages, and obligations, financial or otherwise, including attorney fees and legal expenses, arising from any and all acts of the Contractor, its agents, employees, licensees, invitees, that result in injury to persons or damage to property.

**INDEMNIFICATION AND INSURANCE**

The Contractor shall indemnify, defend and save the City, its agents, and employees harmless from and against any and all losses, damages, settlements, costs, charges, professional fees, or other expenses or liabilities of every kind and character arising out of or relating to any and all claims, liens, demands, obligations, actions, proceedings, or causes of action of every kind and character in connection with or arising directly or indirectly out of errors or omissions or negligent acts by the Contractor including by the Contractor's employees and agents in the performance of this Agreement.

The Contractor, at its sole cost and expense, shall procure and maintain Workers Compensation insurance coverage. A copy of a document evidencing such Workers Compensation coverage shall be furnished to the City of Cincinnati prior to commencement of services by the Contractor under this Agreement.

The Contractor, at its sole cost and expense, shall procure and maintain at all times during the term of this Agreement Comprehensive General Liability Insurance (including personal injury) with a combined single limit for personal injury and property damage of not less than One Million Dollars ($1,000,000) per occurrence.

The Contractor, at its sole cost and expense, shall procure and maintain at all times during the term of this Agreement Automobile Liability (including Non-Owned and Hired Auto Coverage) of not less than One Million Dollars ($1,000,000) per occurrence.

The Contractor shall have the City named as an additional insured on the Comprehensive General Liability and Automobile Liability Insurance policies, and the policies shall waive subrogation against the City.

The Contractor shall furnish to the City Certificates of Insurance certifying the above types and amounts of insurance. Such Certificates shall include a Notice of Cancellation clause with notification being sent to the City.

**CONFLICT OF INTEREST**

A. No officer, employee, or agent of the City who exercises any functions or responsibilities in connection with the planning and carrying out of the program, nor any immediate family member, close business associate of such officer, employee or agent, or organization which is about to employ any such person, shall have any personal financial interest, direct or indirect, in the Contractor or in this Agreement, and the Contractor shall take appropriate steps to assure compliance with this provision.

B. The Contractor agrees that it will not contract with any subcontractor in which it has any personal financial interest, direct or indirect. The Contractor further covenants that no person having any conflicting interest shall be employed in the performance of this Agreement .

C. The Contractor agrees not to engage in activities on behalf of the City that produce a direct or indirect financial gain for the Contractor other than the agreed-upon compensation, without the City's informed, prior, written consent.

**CONFIDENTIALITY**

The Contractor, its agents, and its employees, will keep and retain any and all information and records generated under this Agreement in the strictest confidence and will neither use such information or records nor disclose such information or records to anyone without the explicit written permission of the City. The Contractor warrants that it has and will continue to have safeguards in place to assure that such information and records are kept confidential by the Contractor, its agents, and its employees.

**PROPRIETARY MATERIALS**

The City acknowledges that in the course of performing services, the Contractor may use products, materials, or propriety methodologies. The City agrees that it shall have or obtain no rights in such propriety products, materials, and methodologies except pursuant to a separate written agreement executed by the parties.

The Contractor acknowledges that in the course of performing services for the City, the materials and information produced for the City are the exclusive properties of the City and may not be disseminated in any manner without prior written approval of the City.

**WARRANTY**

The Contractor warrants that the services to be provided by it hereunder will be performed in a good, timely, and professional manner by qualified staff and in accordance with generally accepted professional practices. The Contractor further warrants that the design and recommended solution are workable and capable of meeting the objective and purpose of the project as described in this RFP.

**OWNERSHIP OF PROPERTY**

The Contractor agrees that at the expiration or in the event of any termination of the Agreement that any memoranda, maps, drawings, working papers, reports, records, files either electronic or paper and other similar items produced in connection with this Agreement shall become the property of the City and the Contractor shall promptly deliver such items to the City.

**TERMINATION**

A. **Termination of Contract for Cause.** If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner the Contractor's obligations under this Agreement or if the Contractor violates any of the terms and conditions, covenants or agreements of the Agreement, if no attempt is made to cure the failure within a period of ten (10) days or a longer period specified in writing, the City shall have the right to terminate this Agreement by giving written notice to the Contractor specifying the effective date of the termination, at least five (5) days before such effective date. Notwithstanding the above, the Contractor shall not be relieved of liability to the City for damages sustained by the City of Cincinnati by virtue of any breach of this Agreement by the Contractor, and the City of Cincinnati may withhold any payments to the Contractor for the purposes of set-off until such time as the exact amount of damages due the City from the Contractor is determined. Exceptions may be made with respect to defaults of subcontractors.

   In the event this Agreement is terminated for cause, all finished or unfinished documents, data, studies, reports, and/or information prepared by the Contractor under this Agreement shall, at the option of the City, become the City's property and the Contractor shall be entitled to receive equitable compensation for any work satisfactorily completed at the date of termination.

B. **Non-Performance/Periodic Payments.** Any periodic payments from the City specified in this Agreement will be contingent upon performance of contractual obligations to date, including the proper receipt of supporting receipts, invoices, reports, statements, or any other supporting information as required by the City in this Agreement. In addition to having the right to terminate the Agreement, if the Contractor fails to satisfactorily meet any one of the Agreement obligations, the City may not approve periodic payments to the Contractor and/or may file liens as may be necessary against the Contractor's assets or future assets, until the Contractor satisfactorily fulfills its obligations under the Agreement or satisfactorily reimburses the City for any prior payments. The City also reserves the right to seek any other legal financial remedies as necessary pursuant to any damages the City may have encountered through the Contractor's default on any of the Agreement obligations until all or part of the City's prior payments have been recouped as the City deems appropriate, but such recoupment shall not to exceed the total amount of any prior payments. The City also reserves the right in the event of non-performance of this Agreement to prohibit any future or limited contractual relationships with the Contractor either directly or indirectly.

   If the Contractor terminates this Agreement after the work has begun, the City shall not be required to compensate the Contractor for services/work not fully completed.

C. **Termination for Convenience of City.** The City may terminate this Agreement by giving thirty (30) days notice in writing from the City to the Contractor. If this Agreement is terminated by the City as provided, the Contractor will be compensated per ODOT CMS 108.09.

D. **Alternatives to Termination.** In the event the Contractor fails to fulfill the terms and conditions of this Contract in a timely and diligent manner, the City reserves the right, at its sole option, as an alternative to termination of the Contract, to reduce the services required herein of the Contractor and reduce the project budget in a manner which reflects such a reduction, by giving notice of such in writing, stating the date such reduction will become effective.

**INDEPENDENT CONTRACTOR**

Contractor shall perform all work and services described herein as an independent contractor and not as an officer, agent, servant or employee of the City. Contractor shall have exclusive control of and the exclusive right to control the details of the services and work performed hereunder and all persons performing the same and shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors, and subcontractors, if any. Nothing herein shall be construed as creating a partnership or joint venture between the City and Contractor. No person performing any of the work or services described hereunder shall be considered an officer, agent, servant or employee of the City, nor shall any such person be entitled to any benefits available or granted to employees of the City.

**CERTIFICATION AS TO NON-DEBARMENT**

Contractor certifies that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in the transaction covered by this Agreement. Contractor acknowledges and agrees that if it or its principals is/are presently debarred then it shall promptly return to the City any funds received pursuant to this Agreement. In such event, any materials received by the City pursuant to this agreement shall be retained as liquidated damages.

**WAIVER**

This Agreement shall be construed in a manner that a waiver of any breach of any provision of this Agreement shall not constitute or operate as a waiver of any other breach of such provision or of any other provisions, nor shall any failure to enforce any provision hereof operate as a waiver of such provision or of any other provision.

**LAW TO GOVERN**

The Agreement is entered into and is to be performed in the State of Ohio, City of Cincinnati, and Contractor agrees that the law of the State of Ohio shall govern the rights, obligations, duties and liabilities of the parties to this Agreement and shall govern the interpretation of this Agreement.

**FORUM SELECTION**

Jurisdiction for any claim or lawsuit arising or resulting from this Agreement shall be Ohio courts. The Contractor and its successors and assigns acknowledge and agree that all state courts of record sitting in Hamilton County, Ohio, shall be the exclusive forum for the filing, initiation, and prosecution of any suit or proceeding arising from or out of, or relating to, this Agreement, or any amendment or attachment thereto, including any duty owed by the Contractor to the City in connection therewith.

**AMENDMENT**

This Agreement may be modified or amended only by a written agreement duly executed by the parties hereto or their representatives.

**ENTIRETY**

This Agreement and the Exhibits attached hereto contain the entire Agreement between the parties as to the matters contained herein. Any oral representations or modifications concerning this Agreement shall be of no force and effect.

**SEVERABILITY**

This Agreement shall be severable, if any part or parts of this Agreement shall for any reason be held or unenforceable by a court of competent jurisdiction, all remaining parts shall remain binding and in full force and effect.

## IV. REQUIRED AND MISCELLANEOUS FORMS

**REQUIRED AND MISCELLANEOUS FORMS TO BE EXECUTED BY OFFEROR AND SUBMITTED WITH PROPOSAL**

- ATTACHMENT 1 – Offeror Corporate and Contact Information
  - Required with Proposal Submission

- ATTACHMENT 2 – Affidavit of Accuracy and Signature Page
  - Required with Proposal Submission

- ATTACHMENT 3 – City of Cincinnati Living Wage Affidavit
  - Informational Use Only. The successful Offeror may be required to complete this Affidavit at contract execution. A copy of the form is available at the following webpage: http://cincinnati-oh.gov/inclusion/forms/living-wage-forms/.

- ATTACHMENT 4 – Subcontracting Outreach Program
  - The "No Goals Inclusion Packet" which includes the applicable forms to be completed and included with the proposal is available at the following webpage: http://cincinnati-oh.gov/inclusion/forms/subcontractor-inclusion-goal-packages-for-bids-rfps/. When on the aforementioned webpage, please click on the weblink called "No Goals Inclusion Packet" to download and access the appropriate forms.

- ATTACHMENT 5 – Equal Employment Opportunity (EEO) Form (DEI147)
  - Informational Use Only. The successful Offeror may be required to complete this form at contract execution. A copy of the form is available at the following webpage: http://cincinnati-oh.gov/inclusion/forms/subcontractor-inclusion-goal-packages-for-bids-rfps/.

- ATTACHMENT 6 – Proposal Bond Form
  - Required with Proposal Submission

**Commented [WU5]:** Applies only if RFQ is for a service contract

## Proposal: Implement 180-day Deadline to Complete Disability Application in Board Rules

**City Municipal Code**
Sec. 203-41. - Disability Retirement Allowance.

No Active Member with fewer than five years of Creditable Service with the Retirement System shall be eligible for disability benefits pursuant to this Section. Any Active Member having completed 5 years of Creditable Service with the Retirement System on or after April 1, 2013, who is disabled by reason of an accidental or non-accidental cause may be retired by the Board upon the application of the Member or the head of his department not less than 30 and no more than 180 days next following the date of filing such application, on a disability retirement allowance, provided the medical director after a medical examination of such Member shall certify that such Member is mentally or physically incapacitated for the further performance of duty, and such incapacity is likely to be permanent, and such Member should be retired; provided further, where the findings of the medical director are disputed, the Board may employ not more than two additional competent disinterested physicians to make a physical examination of such applicant and report their medical findings to the Board. In all disputed cases the decision of the Board shall be final.

**Board Rules**
Rule XI Disability Application and Appeal Process
A. Applications and Audits
1) Member has 30 calendar days from application date or receipt of audit notification, to meet with the Cincinnati Retirement System's (CRS) Medical Director for a medical evaluation.
2) Member has 60 calendar days from application date or receipt of audit notification, to have medical records forwarded from their healthcare providers to the CRS Medical Director.
[*Add this new section*:]
**3) Member has 180 calendar days from application date to complete the application, including the submission of the member's optionee election form.**

**Proposal: Implement Executive Director Recommendation in Board Disability Rules**

**Board Rules**
Rule XI Disability Application and Appeal Process
A. Applications and Audits
1) Member has 30 calendar days from application date or receipt of audit notification, to meet with the Cincinnati Retirement System's (CRS) Medical Director for a medical evaluation.
2) Member has 60 calendar days from application date or receipt of audit notification, to have medical records forwarded from their healthcare providers to the CRS Medical Director.
**3) [Reserved]**
[*Add this new section*:]
**4) The Executive Director may provide additional background information to the Board with respect to a pending application for disability retirement. It is the Board's responsibility to either approve or deny the application based upon the recommendation of the medical director and evidence provided in the application, or to request additional information from the medical director in order to either approve or deny the application for disability.**

**Commented [SL1]:** Under Article XV, Section 12 of the Administrative Code, the Executive Director's responsibilities are to "oversee the benefits administration, investment management, and member services."

**Commented [SL2]:** See CMC 203-41 and 203-55

**Deleted:** ~~may comment upon and make a recommendation to the Board regarding a pending application for disability retirement~~

Draft Cincinnati Retirement System
Ethics Policy

Preamble

The policy of the Cincinnati Retirement System (CRS) is to carry out its mission in accordance with the strictest ethical guidelines and to ensure that board members and employees conduct themselves in a manner that fosters public confidence in the integrity of CRS and its processes.

Ethics Rules

1. CRS board members and employees must, at all times, abide by Ohio Revised Code and Cincinnati Municipal Code provisions related to their fiduciary duties. Board members and employees must conduct themselves, at all times, in a manner that avoids favoritism, bias, and the appearance of impropriety.

2. A general summary of the restraints upon the conduct of all CRS board members and employees includes, but is not limited to, those listed below.

   No CRS board member or employee shall:

   a. Have any personal interests related to the City or CRS that would constitute a conflict of interest, or that would create the appearance of a conflict of interest. Being a member of the CRS or a beneficiary of the CRS, or having a family member who is a member or beneficiary of the CRS, shall not constitute a conflict of interest;

   b. Solicit or accept anything of value from anyone doing business with or interested in matters before the board or the CRS. Anything of value may include lavish meals, tickets to professional sporting events, and other items over $25 in value;

   c. Solicit or accept employment from anyone doing business with or interested in matters before the board or the CRS, unless the board member or employee completely withdraws from any discussions, deliberations, votes, or decisions regarding the party offering employment, and the board approves the withdrawal in the case of a board member or the executive director of the system, or the executive director approves the withdrawal in the case of another employee;

   d. Use his or her public position to obtain any advantages or benefits for the board member or employee, a family member thereof, or anyone with whom the board member or employee has a business or employment relationship;

e. Be paid or accept any form of compensation for personal services rendered on a matter before, or sell goods or services to, the board or the CRS, except for compensation received from the City of Cincinnati;

f. Be paid or accept any form of compensation for personal services rendered on a matter before, or sell (except by competitive bid) goods or services to, any state agency other than the board or the CRS, unless the board member or employee first discloses the services or sales and fully withdraws from matters before the board or the CRS that directly affect officials and employees of the other state agency;

g. Vote, authorize, recommend, discuss, participate or in any other way use his or her position to secure approval of a board or system contract (including employment or personal services) in which the board member or employee, an immediate family member thereof, or anyone with whom the board member or employee has a business or employment relationship, has an interest;

h. Solicit or accept an honorarium, except CRS employees who are not required to file a financial disclosure may receive an honorarium only if the honorarium is unrelated to the CRS employee's public office or employment, and it is not paid for by any person or other entity, or by a representative or association of those persons or entities, doing business with the board or the CRS;

i. During public service, and for one year after leaving public service, represent any person, in any fashion, before any public agency, with respect to a matter in which the board member or employee personally participated while serving with the board or system;

j. Use or disclose confidential information, that was designated as confidential, or that is confidential by operation of law, unless appropriately authorized;

k. Use or share non-public investment or financial information for personal gain, or for the personal gain of another person, except for the collective gain of the CRS members and their beneficiaries;

l. Use, or authorize the use of, his or her title, the name of the board or the CRS, or the board's or CRS system's logo in a manner that suggests impropriety, favoritism, or bias by the board or system, or the board member or employee;

m. Solicit or accept any compensation, except from the City of Cincinnati, to perform his or her official duties or any act or service in his or her official capacity; and

n. Solicit or accept from any person, including a partnership of which the system is a partner, payment of CRS related travel expenses, including expenses incurred with the travel for lodging, meals, food, and beverages unless permitted by Ohio Administrative Code 102-3-08.

3. No person who is running for a position on the CRS board, or who currently serves on the CRS board, shall solicit or accept campaign contributions from any person or entity that the person knows or has reason to know: (1) has a contract related to investment of the system's funds; (2) is marketing or otherwise attempting to secure business involving the system's funds; or (3) is an agent or acting on behalf of any person or entity described in (1) or (2). Campaign contributions include contributions made to a campaign committee, political party, legislative campaign fund, political action committee, or political contributing entity on behalf of the person running for a position on the CRS Board.

## Conflict Disclosure

CRS board members and employees must promptly disclose any circumstances that could result in any actual or potential conflict of interest so that the matter may be fully assessed. CRS board members and employees are encouraged to consult the City Solicitor regarding any potential conflict of interest. CRS board members are required to report to the executive director, and CRS employees are required to report to their supervisor, any actual conflict of interest.

In the event of a conflict of interest, the conflicted CRS board member or employee may not vote, authorize, recommend, discuss or in any other way participate in the matter. A CRS board member shall remove himself or herself from the meeting room during that portion of the meeting involving the item from which that member is conflicted.

## Financial Disclosure

The CRS executive director shall file an annual financial disclosure statement with the City of Cincinnati Clerk of Council. This financial disclosure statement shall be filed annually by April 15 for the preceding calendar year.

## Definitions

1. "Anything of value" includes anything of monetary value, including, but not limited to, money, loans, gifts, food or beverages, social event tickets and expenses, travel expenses, golf outings, consulting fees, compensation, or employment. "Value" means worth greater than de minimus or nominal, and in no event worth more than $25.

2. "Anyone doing business" with the board or the CRS system includes, but is not limited to, any person, corporation, or other party that is doing or seeking to do business with,

regulated by, or has interests before the board or system, including anyone who is known or should be known to be an agent or acting on behalf of such a party, including any partnership or which the system is a partner, any person or entity that has a contract related to investment of the system's funds, and any other person marketing or otherwise attempting to secure business involving the system's funds.

3. "Family member" includes a spouse, children, step-children, siblings, parents, step-parents, grandparents and grandchildren. "Family member" also includes any other person related by blood or marriage (e.g. cousins, aunts, uncles, in-laws, nieces, nephews) if that person resides in the same household as the CRS board member or employee.

Classic Values, Innovative Advice

# Cincinnati Retirement System

## Actuarial Valuation
## as of December 31, 2022

**Produced by Cheiron**

**May 2023**

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## ***Appendices***

May 1, 2023

Board of Trustees
Cincinnati Retirement System
801 Plum Street, Suite 328
Cincinnati, Ohio 45202

***Re: Cincinnati Retirement System***
***Actuarial Valuation as of December 31, 2022***

Dear Members of the Board,

At your request, we have conducted our annual actuarial valuation of the Cincinnati Retirement System (CRS or System) as of December 31, 2022. The results of the valuation are contained in this report. The purpose of this report is to present the annual actuarial valuation of the Cincinnati Retirement System. This report is for the use of the Cincinnati Retirement System Board of Trustees and its auditors in preparing financial reports in accordance with applicable law and accounting requirements.

The results of this report are only applicable to the Fiscal Year Ending June 30, 2024, and rely on future plan experience conforming to the underlying assumptions. The assumptions have been updated to reflect those adopted by the Board on March 23, 2023, as a result of the experience study covering the period January 1, 2017 to December 31, 2021. To the extent that actual plan experience deviates from the underlying assumptions, the results would vary accordingly.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the assumptions, changes in assumptions, and changes in plan provisions or applicable law.

In preparing our report, we relied on information (some oral and some written) supplied by the Cincinnati Retirement System. This information includes, but is not limited to, plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standards of Practice No. 23, *Data Quality*.

This report was prepared exclusively for the Cincinnati Retirement System for the purpose described herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any such other users.

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinions contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

Sincerely,
Cheiron

| | |
|---|---|
| Janet H. Cranna, FSA, EA, MAAA, FCA | Kevin J. Woodrich, FSA, EA, MAAA |
| Principal Consulting Actuary | Principal Consulting Actuary |

cc: Karen Alder
Robert Murray, ASA, EA, MAAA

## SECTION I – BOARD SUMMARY

Cheiron has performed the actuarial valuation of the Cincinnati Retirement System as of December 31, 2022. The purpose of this report is to disclose the following as of the valuation date:

1) The financial condition of the System;
2) Past trends in the financial progress of the System;
3) Compare the City's current contribution rate of 16.25% of payroll to the Actuarially Determined Contribution (ADC) rate based on this valuation for Fiscal Year Ending June 30, 2024;
4) Identify and assess the risks to the System; and
5) Provide specific information and documentation required for the System's financial reporting.

An actuarial valuation establishes and analyzes the System's assets and liabilities on a consistent basis and traces the progress of both from one year to the next. It includes measurement of the System's investment performance as well as an analysis of actuarial liability gains and losses.

This report does not include calculations under GASB Statements Nos. 67 and 68 which are provided in separate reports.

Results shown in this report for years prior to December 31, 2018 were provided by the prior actuary.

## Valuation Basis

An experience study was performed covering the period January 1, 2017 to December 31, 2021. The results were presented to the Board at the March 2, 2023 meeting and later adopted by the Board on March 23, 2023. A detailed list of these assumptions can be found in Appendix B of this report. An investment return assumption of 7.50% was used as prescribed by item 29 of the Collaborative Settlement Agreement (CSA) signed October 5, 2015.

**SECTION I – BOARD SUMMARY**

## Key Results

The following Table I-1 summarizes the key results of the valuation with respect to the System's membership, assets and liabilities, and contributions. The results are presented and compared for both the current and prior year.

**Table I-1**
**Key Results**

| Valuation as of: | December 31, 2021 | December 31, 2022 | % Change |
|---|---|---|---|
| **Membership Counts** | | | |
| a) Full Time Actives | 2,580 | 2,718 | 5.3% |
| b) Part Time Actives[1] | 1,238 | 1,257 | 1.5% |
| c) Terminated Vesteds | 247 | 275 | 11.3% |
| d) Members in Pay Status[2] | 4,390 | 4,305 | (1.9%) |
| e) Total | 8,455 | 8,555 | 1.2% |
| f) Annual Salaries of Full Time Actives | $ 189,528,659 | $ 205,235,180 | 8.3% |
| g) Annual Salaries of DROP Members[2] | $ 14,694,718 | $ 13,599,642 | (7.5%) |
| h) Annual Retirement Allowances | $ 183,826,082 | $ 187,455,628 | 2.0% |
| **Assets and Liabilities** | | | |
| i) Present Value of Future Benefits | $ 2,770,203,731 | $ 2,838,782,578 | 2.5% |
| j) Actuarial Liability | $ 2,560,258,522 | $ 2,614,702,553 | 2.1% |
| k) Actuarial Value of Assets (AVA) | $ 1,831,954,857 | $ 1,811,291,262 | (1.1%) |
| l) Unfunded Actuarial Liability (UAL) [(j) - (k)] | $ 728,303,665 | $ 803,411,291 | 10.3% |
| m) Funded Ratio on AVA basis [(k) ÷ (j)] | 71.6% | 69.3% | (2.3%) |
| n) Market Value of Assets (MVA) | $ 2,001,579,000 | $ 1,703,876,000 | (14.9%) |
| o) Funded Ratio on MVA basis [(n) ÷ (j)] | 78.2% | 65.2% | (13.0%) |
| **City's Actuarially Determined Contribution (ADC)** | FYE June 30, 2023 | FYE June 30, 2024 | |
| p) Gross Normal Cost Rate | 12.10% | 12.40% | 0.30% |
| q) Plan Changes - ERIP[3] | 1.30% | 1.22% | (0.08%) |
| r) UAL Amortization Rate (excluding ERIP) | 27.66% | 28.60% | 0.94% |
| s) Administrative Expenses | 0.80% | 0.80% | 0.00% |
| t) Expected Employee Contributions | (9.00%) | (9.00%) | 0.00% |
| u) City's ADC as % of Payroll [(p) + (q) + (r) + (s) + (t)] | 32.86% | 34.02% | 1.16% |

[1] *As of December 31, 2022, 348 of the 1,257 Part Time actives had reported last pay periods before December 2022.*

[2] *Includes 157 and 184 members as of December 31, 2022 and 2021 respectively currently participating in DROP.*

[3] *The City began making level annual payments for the ERIP in December 2021. The City is currently contributing the remaining 14 annual payments of $2.7 million by July 31 of each future year.*

## SECTION I – BOARD SUMMARY

Below we highlight significant results of this valuation.

- The return on the Market Value of Assets was a *negative* 8.68% for the year ended December 31, 2022 which was lower than the assumed rate of return of 7.50%. In dollars, the total actuarial investment loss (the difference between actual and expected returns on a market value basis) was $313.1 million.
- For various purposes, the System uses an Actuarial Value of Assets which smooths annual actuarial investment gains and losses over a period of five years. This means the $313.1 investment loss described above will be phased in at a rate of approximately $62.6 million per year over the next five years. The smoothed Actuarial Value of Assets is $1,811.3 million (106.3% of the market value of $1,703.9 million). The $107.4 million difference between the Market Value of Assets and the Actuarial Value of Assets represents a net deferred investment loss that will be recognized in the future.
- Despite the poor investment return on a Market Value of Assets basis, the return on the Actuarial Value of Assets was a positive 6.18%, resulting in an actuarial investment loss of $23.4 million. This is because the System had a net deferred investment gain as of December 31, 2021 which helped mitigate the impact of this year's unfavorable return.
- The Actuarial Liability increased from $2,560.3 million as of December 31, 2021 to $2,614.7 million as of December 31, 2022. The assumption changes adopted by the Board following the experience study increased liabilities by $39.8 million. During the year, there was also a small liability experience gain of $3.6 million (0.1% of liabilities).
- As a result of the experience outlined above, the funded ratio based on the Actuarial Value of Assets decreased from 71.6% to 69.3% and the Unfunded Actuarial Liability (UAL) increased from $728.3 million to $803.4 million. Based on the Market Value of Assets, the funded ratio decreased from 78.2% to 65.2%.
- In accordance with the Collaborative Settlement Agreement, the City contributes 16.25% of payroll on behalf of full-time active members and members participating in the Deferred Retirement Option Program (DROP). The City contributes 3% of payroll for part-time active members. Based on these fixed contribution rates, the UAL is currently not projected to be paid off. Under some investment scenarios, the System is projected to go insolvent. Detailed projections of the System's funded status and contributions are presented later in this section and in Section II.
- The System also calculates an Actuarially Determined Contribution (ADC) rate, which pays off the UAL in 30 years in equal annual installments. It was calculated to be 34.02% of payroll for Fiscal Year ending June 30, 2024. As a result of the fixed contribution rate of 16.25% being less than the Actuarial Determined Contribution rate and the negative 8.68% return for the year ending December 31, 2022, the UAL is not projected to be paid off over the same 30-year period. The ADC is a snapshot measurement which does not take into account expected future increases in total payroll over the next 30 years, the continued recognition of the net deferred investment loss or the expected decrease in the projected

value of benefits (i.e., normal cost) accrued by actives in the future due to new entrants earning a benefit under Group G. Finally, the Board intends on working collaboratively with the actuary this year to evaluate the current ADC and make any necessary changes.

## Recent Trends

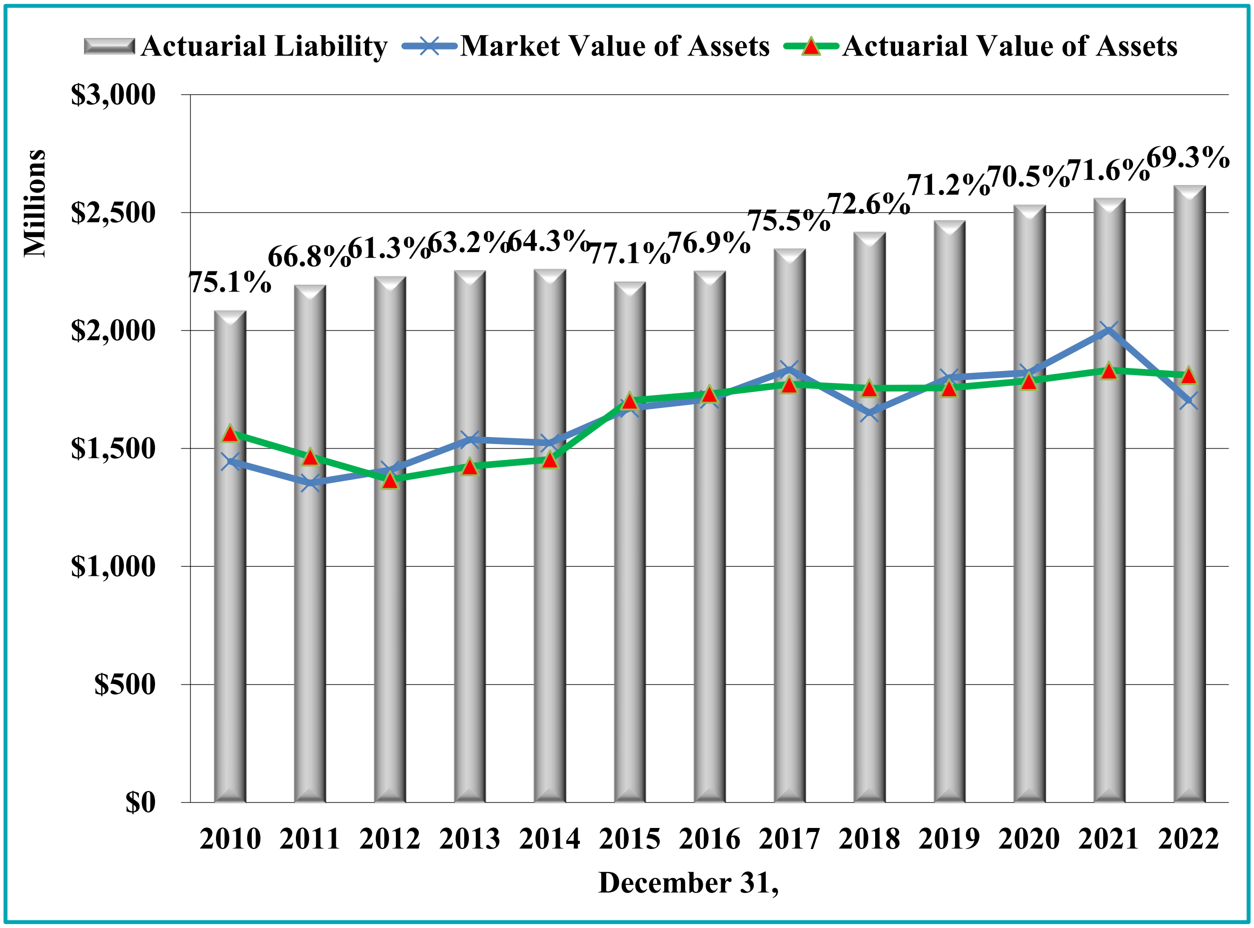
Although most of the attention given to the valuation reflects the most recently computed unfunded actuarial liability, funded ratio, and contribution amounts, each valuation is merely a snapshot of the long-term progress of a pension fund. It is important to take a step back from the current year results and view them in the context of the System's recent history as well as trends expected into the future. Beginning on the following page, we present a series of graphs that display historical trends for key factors in the valuations of the last 13 years.

## SECTION I – BOARD SUMMARY

Assets and Liabilities

The gray bars represent the Actuarial Liability (AL). The blue line is the Market Value of Assets (MVA) and the green line is the Actuarial Value of Assets (AVA). The System's funded ratio (ratio of actuarial assets to actuarial liability) is shown along the top of the bars.

The sharp increase in the funded ratio from December 31, 2014 to December 31, 2015 was due primarily to $220 million in additional monies transferred from the healthcare assets to the pension assets as a result of the Collaborative Settlement Agreement. With the exception of 2021, the plan had experienced a gradual decline in the funded ratio since December 31, 2015 due to the System's experience as well as the City not making contributions sufficient to pay off the UAL. In 2021, the funded ratio increased slightly due to the strong investment performance.

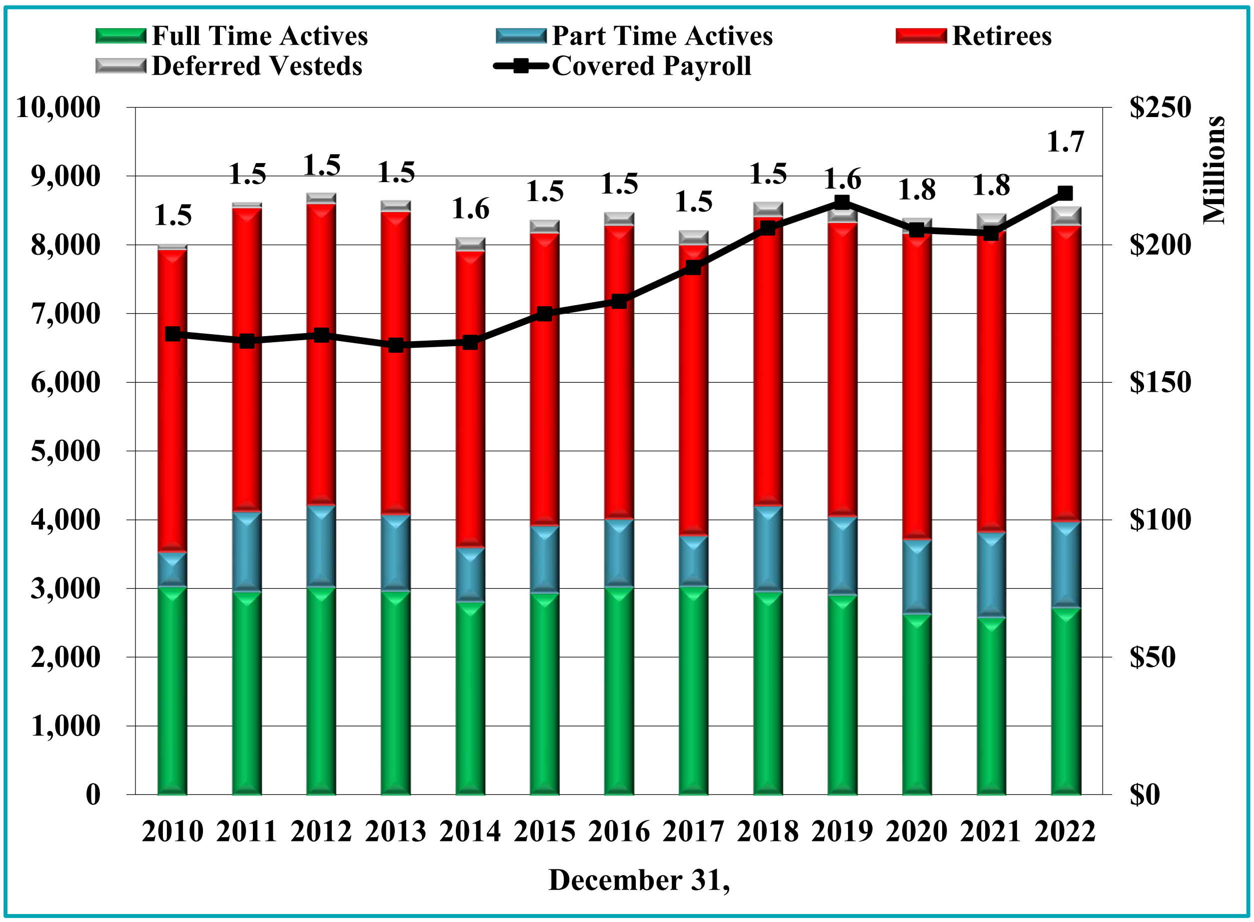


## SECTION I – BOARD SUMMARY

Membership Trends

The graph below shows the membership counts of the System for the last thirteen valuations. The numbers which appear at the top of each bar (the "support ratio") represent the ratio of the number of inactive members, including DROP members, to full time active contributing members at each valuation date, and provide a measure of the maturity of the System. The inactive-to-active ratio has remained stable over the period. As more of the liability moves from actives to inactives, the System matures and is subject to higher risk exposure from market volatility. This is because the impact of investment losses will have to be offset by future contributions. These contributions, in turn, will only be made on behalf of proportionately fewer active members compared to the total number of members.

The black line represents the payroll for active members over the period, and it corresponds with the scale on the right. The payroll for the 1,257 part-time actives of $13.9 million was not included since the City does not contribute the full 16.25% of payroll for part-time actives.

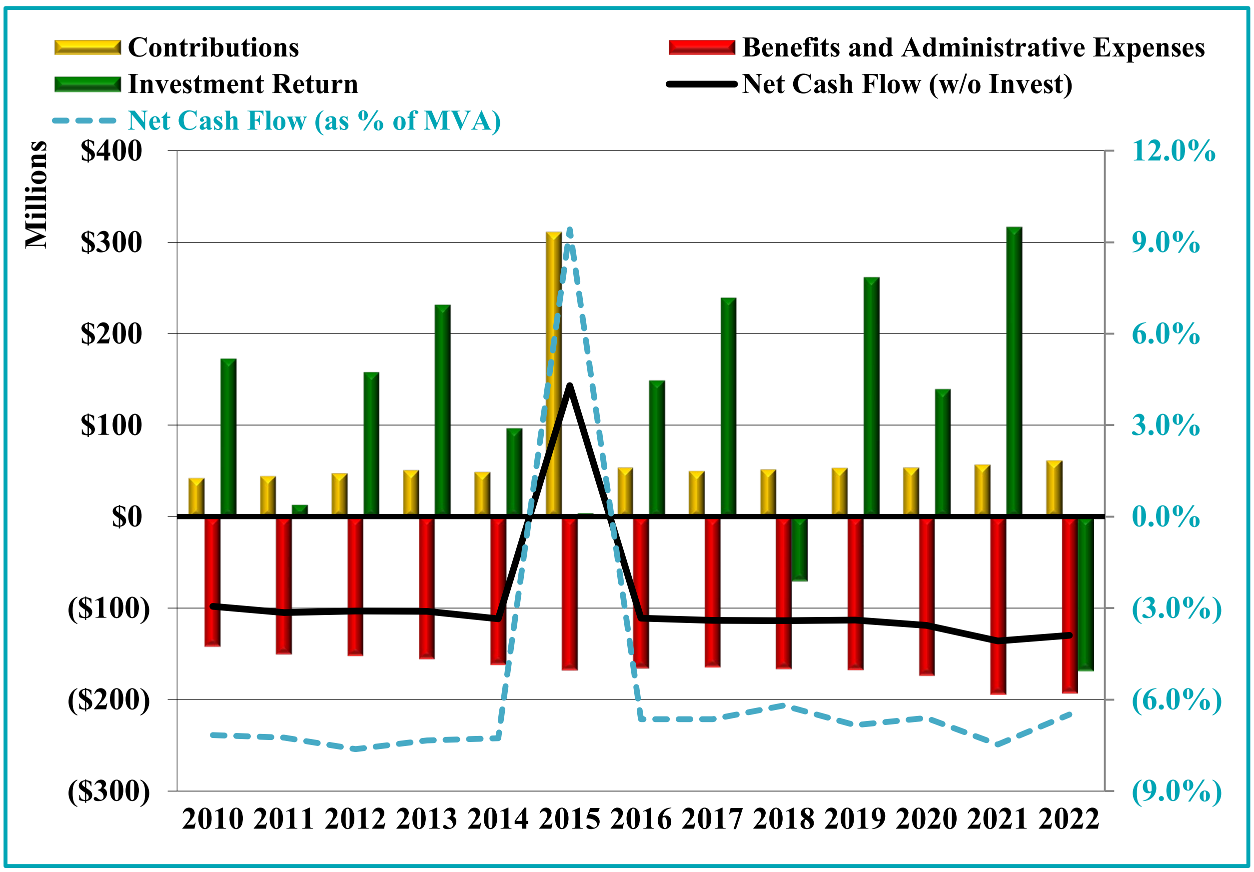


## SECTION I – BOARD SUMMARY

Cash Flows

The following graph shows the System's net cash flow (contributions less benefit payments and expenses) at the end of each plan year. For the entire period shown, the net cash flow excluding investments has been negative except for 2015 when $220 million was transferred into the System pursuant to the Collaborative Settlement Agreement. This illustrates that contributions have not been sufficient to cover benefits and expenses in any years over the past decade. A major implication of negative cash flow is that the difference each year must be met first from cash generated by investments and then paid out of the principal assets, representing additional risk for the System if investments need to be sold in a down market to cover benefit payments.

The dotted line shows the net cash flow as a percent of the market assets and goes with the axis on the right. For the 13-year period shown (ignoring 2015) the net cash flow as a percent of assets has ranged between -8% and -6%. This indicates that a plan is expected to defund with an increased risk of insolvency if the contributions do not catch up to cover a higher portion of the benefit payments and expenses.



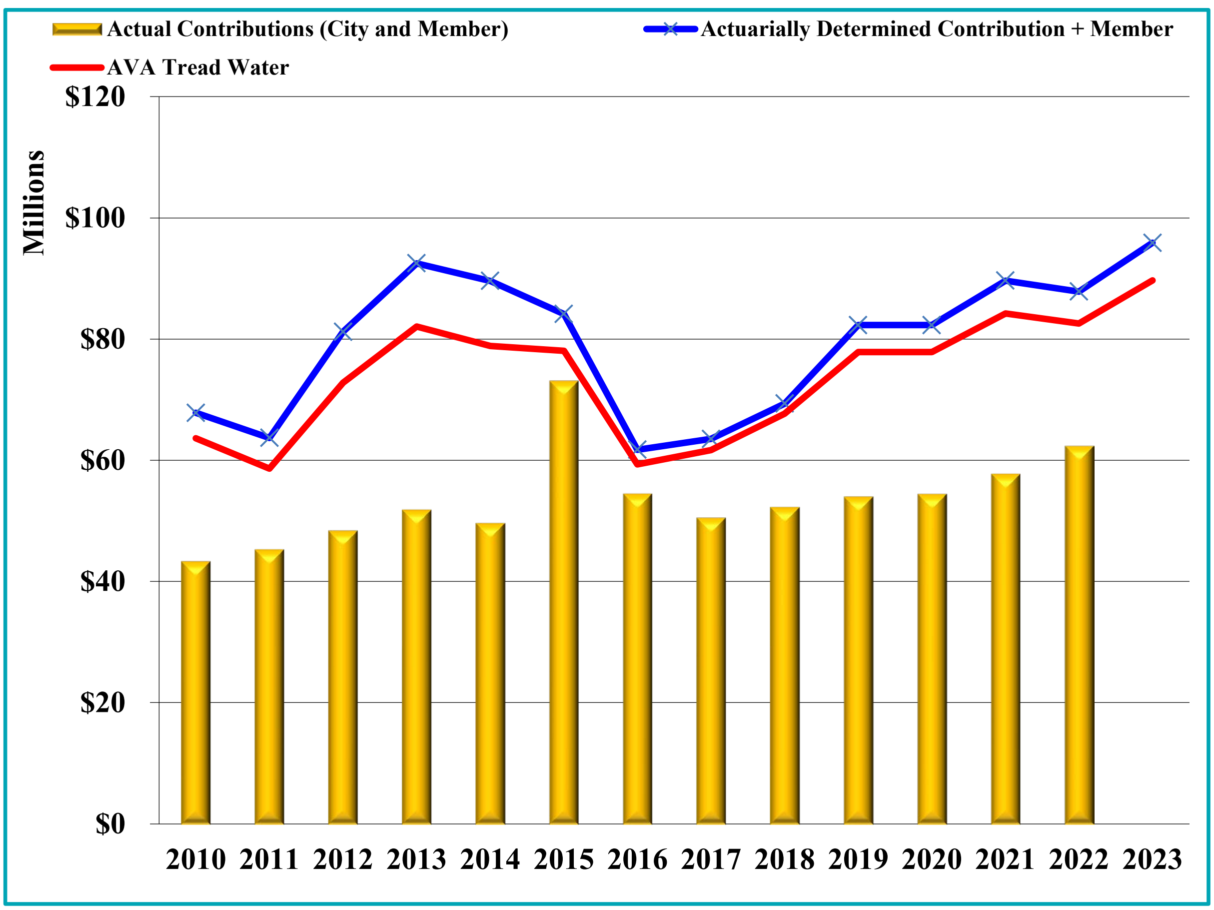
## SECTION I – BOARD SUMMARY

Contributions

This graph shows the historical trends for the actual contribution amounts made by both the City and members (yellow bars). The blue line shows the actuarially determined contributions over the period. The Actuarially Determined Contribution (ADC) is comprised of four components: normal cost which represents the value of the benefits expected to be earned for the upcoming year, assumed administrative expenses, ongoing contributions for the ERIP and an open 30-year level dollar amortization of any unfunded actuarial liability (net of the present value of future amounts expected to be contributed for the ERIP).

The red line is the **Tread Water** line, which is the normal cost plus the interest on the UAL based on an actuarial value of assets basis. The tread water line shows the minimum contributions needed to avoid an increase in the UAL.

The graph shows that not only has the City been making contributions less than the Actuarially Determined Contribution, but that the contributions are significantly below the tread water line. When contributions are lower than the normal cost plus interest on the UAL, the unfunded actuarial liability can normally be expected to grow from one year to the next. Please refer to the projections on the next page for more details, and to Section II for illustrations of the sensitivity of the System's funded status to investment returns.



## Projected Future Outlook

The analysis of the projected financial trends is perhaps the most important component of the valuation. The graphs presented in this section show the expected progress of the System's funded status over the next 30 years, measured in terms of the expected funded ratios, and the projected contributions made by the members (9% of payroll) and by the City (16.25% of payroll for full-time active members and DROP members; 3.0% for part-time members). In addition, we have assumed that the City will continue to make a contribution of $2.7 million by July 31 each year for the remaining 13 years to pay for the increase in liabilities due to the ERIP.

While the experience will not conform exactly to the assumptions every year, the trends reflect reasonable expectations. As a result, in addition to the baseline projection, we provided additional **stress testing** based on varying investment returns in the future. These scenarios are shown in Section II.

The projections assume a constant active population. As members retire, terminate, and die based on the current valuation assumptions, it is assumed that new members will replace them based on characteristics (age/gender/salary) similar to recent new members.

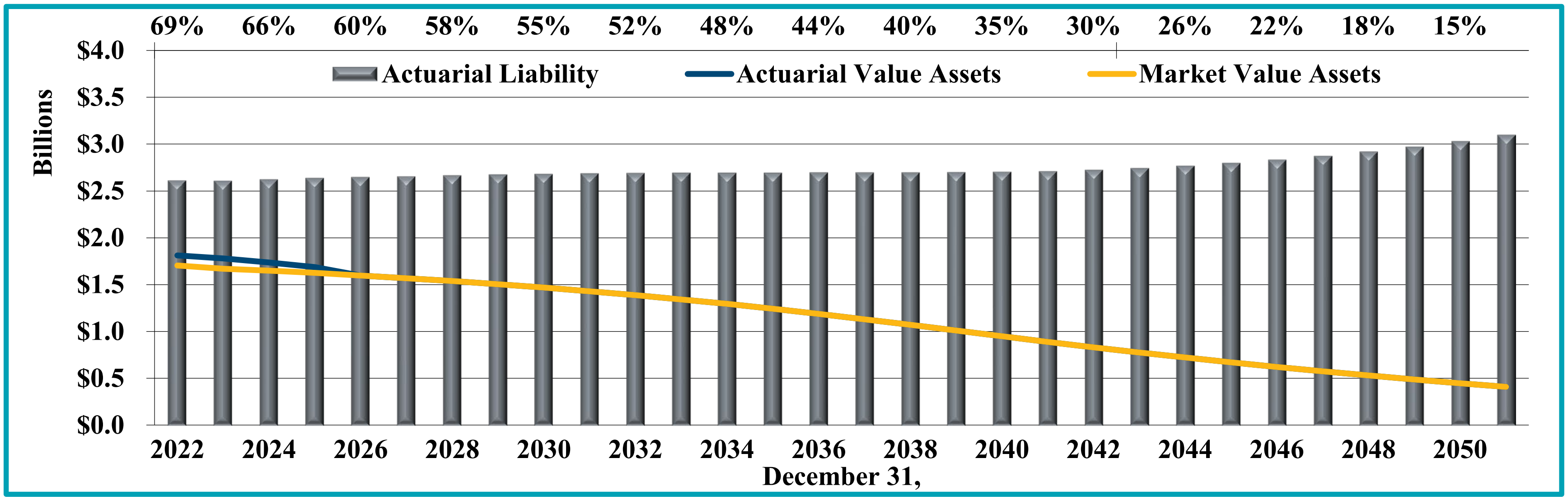
## SECTION I – BOARD SUMMARY

Baseline Scenario

The baseline projection shows the outcome if all actuarial assumptions, including the long-term rate of return assumption of 7.50%, are exactly met.

The first graph compares the Market Value of Assets (gold line) and the Actuarial or smoothed Value of Assets (blue line) to the System's Actuarial Liabilities (gray bars). In addition, at the top of the graph, we show the System's funded ratio on an Actuarial Value of Assets basis (ratio of Actuarial Value of Assets to Actuarial Liabilities). The years shown in the graph signify the valuation date as of December 31 of the labeled year.

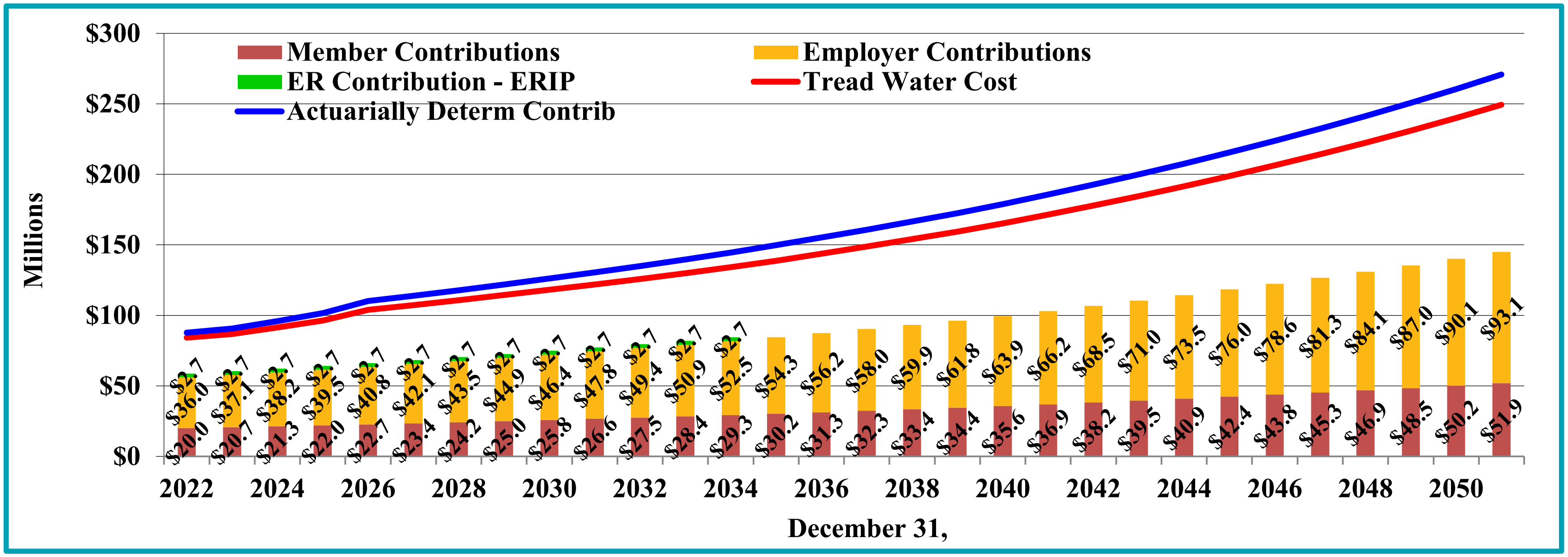
As shown earlier in the report, the investment return over the 2022 Plan Year was significantly lower than the assumed 7.50%. As a result, the System's funded ratio on an Actuarial Value of Assets basis is projected to decrease over the next 30 years.



## SECTION I – BOARD SUMMARY

The second graph below shows the projected contributions compared to the actuarially determined contributions shown in dollars. The member contributions are in maroon and the City's contributions are in gold. Similar to the historical graph before, the red line represents the Tread Water cost necessary to avoid decreasing funded status.

As shown below, total contributions are expected to increase throughout the projection period as total payroll is expected to increase. Without additional contributions or plan changes, the Actuarially Determined Contributions and the Tread Water Cost are expected to increase as the funded status worsens. For purposes of the projection, we assumed that the active population would remain constant. Projected payroll is based on the number of members valued as actives for this valuation and assumes that their positions are filled upon leaving employment with a new hire with an average starting salary of $58,300 (indexed by wage inflation for years beyond 2023).




Please see Section II for additional scenarios illustrating the sensitivity of these projections under various economic scenarios.

# SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

Actuarial valuations are based on a set of assumptions about future economic and demographic experience. These assumptions represent a reasonable estimate of future experience, but the actual future experience will undoubtedly be different and may be significantly different. This section of the report is intended to identify the primary risks to the System, provide some background information about those risks, and provide an assessment of those risks.

## Identification of Risks

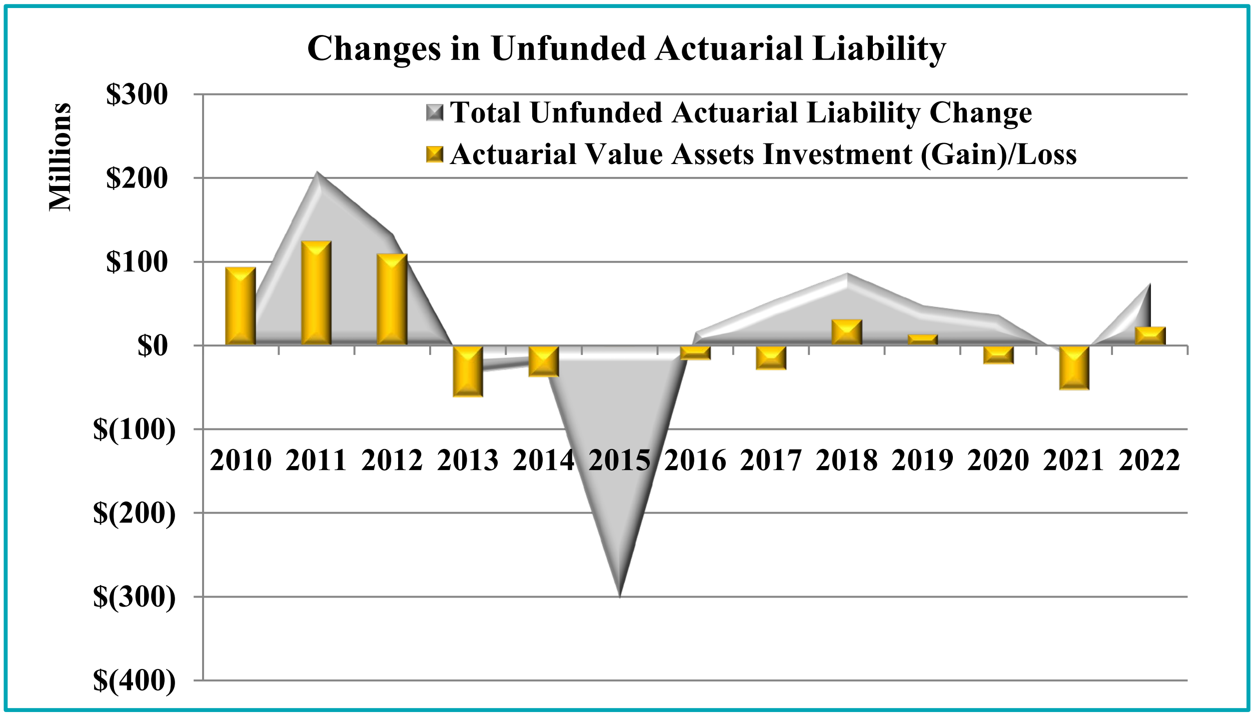
As we have discussed with the Board, the fundamental risk to the System is that the contributions needed to pay the benefits become unaffordable. While there are a number of factors that could lead to contribution amounts becoming unaffordable, we believe the primary risks are:

- Investment risk,
- Interest rate risk,
- Longevity and other demographic risks,
- Contribution risk; and
- Assumption change risk.

Other risks that we have not identified may also turn out to be important.

## SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

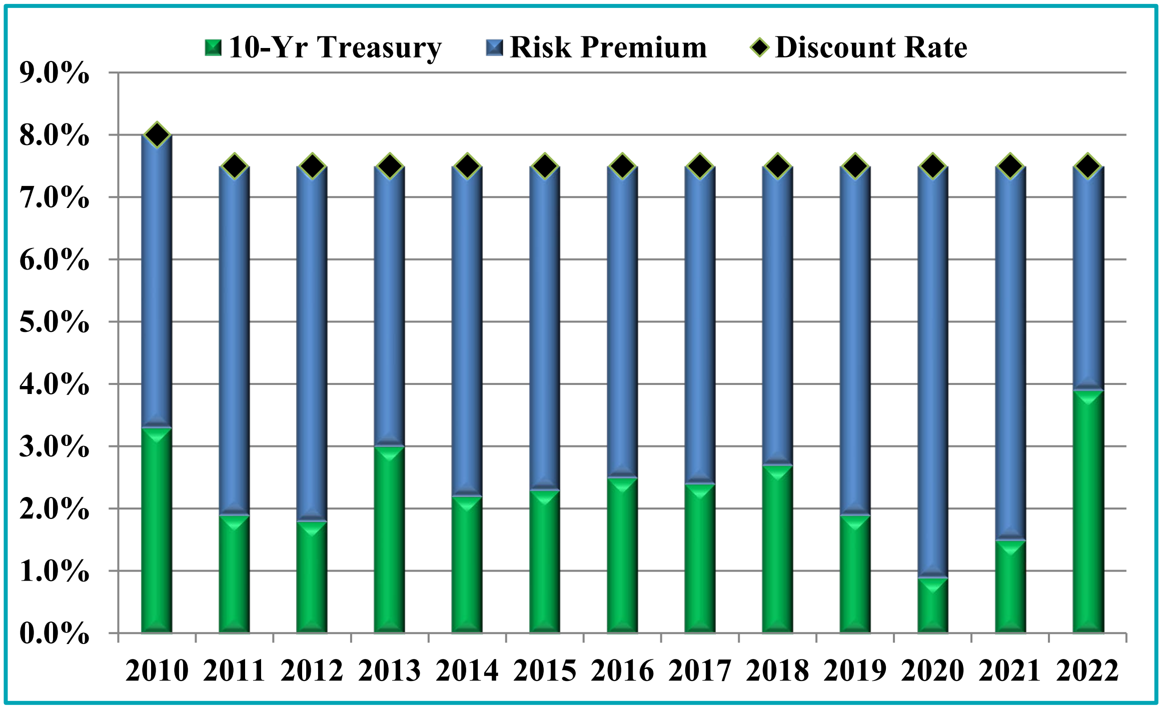
*Investment Risk* is the potential for investment returns to be different than expected. Lower investment returns than anticipated will increase the Unfunded Actuarial Liability necessitating higher contributions in the future unless there are other gains that offset these investment losses. The potential volatility of future investment returns is determined by the System's asset allocation and the affordability of the investment risk is determined by the amount of assets invested relative to the size of the plan sponsor or other contribution base.




The graph above shows the impact of investment gains and losses on the smoothed Actuarial Value of Assets over the last 13 years compared to the System's total change in Unfunded Actuarial Liability. There was an actuarial investment loss this year due to the lower than anticipated return.

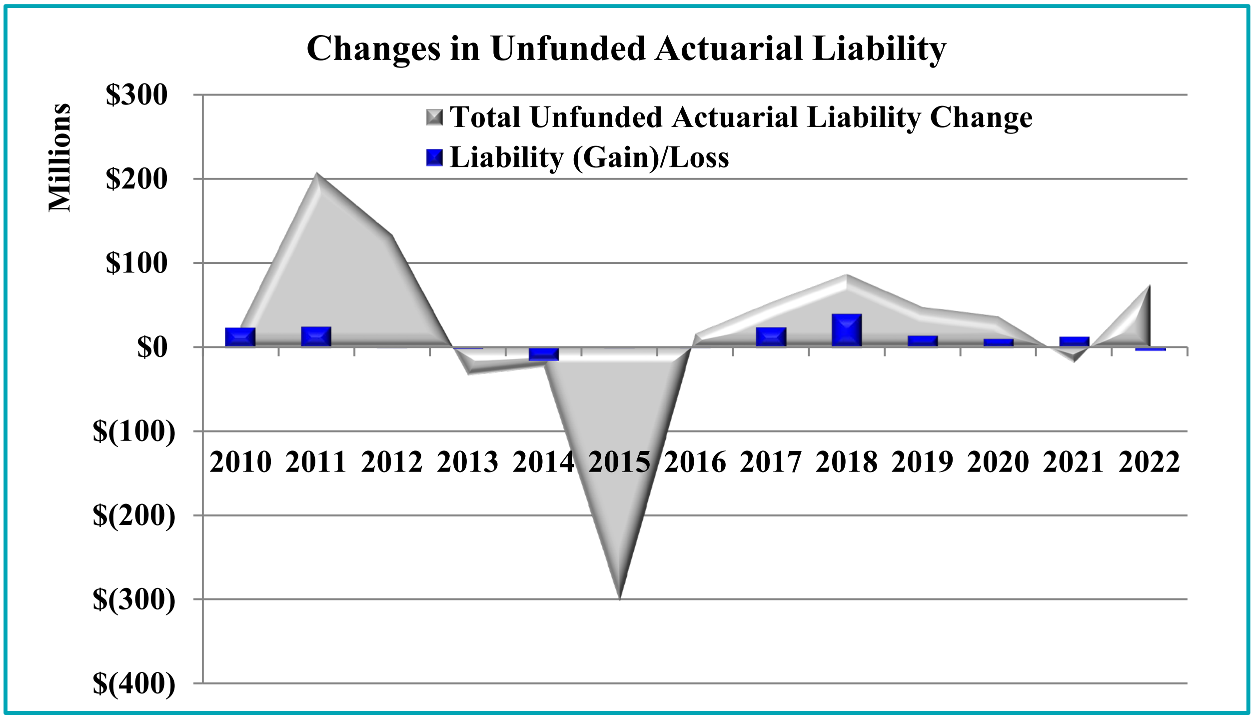
## SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

*Interest rate risk* is the potential for interest rates to be different than expected. For public plans, short term fluctuations in interest rates have little or no effect as the Plan's liability is usually measured based on the expected return on assets. Longer-term trends in interest rates however can have a powerful effect. The chart below shows the yield on a 10-year Treasury security compared to the System's assumed rate of return. The difference is a simple measure of the amount of investment risk taken. As illustrated below, the yield on a 10-year Treasury security was the lowest in 2020 while the yield for 2022 was the highest.



## SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

*Longevity and other demographic risks* are the potential for mortality or other demographic experience to be different than expected. Generally, longevity and other demographic risks emerge slowly over time and are often dwarfed by other changes, particularly those due to investment returns. The following graph shows the demographic gains and losses over the last 13 years compared to the total change in the UAL for each year. There was a small liability gain for the 2022 experience.



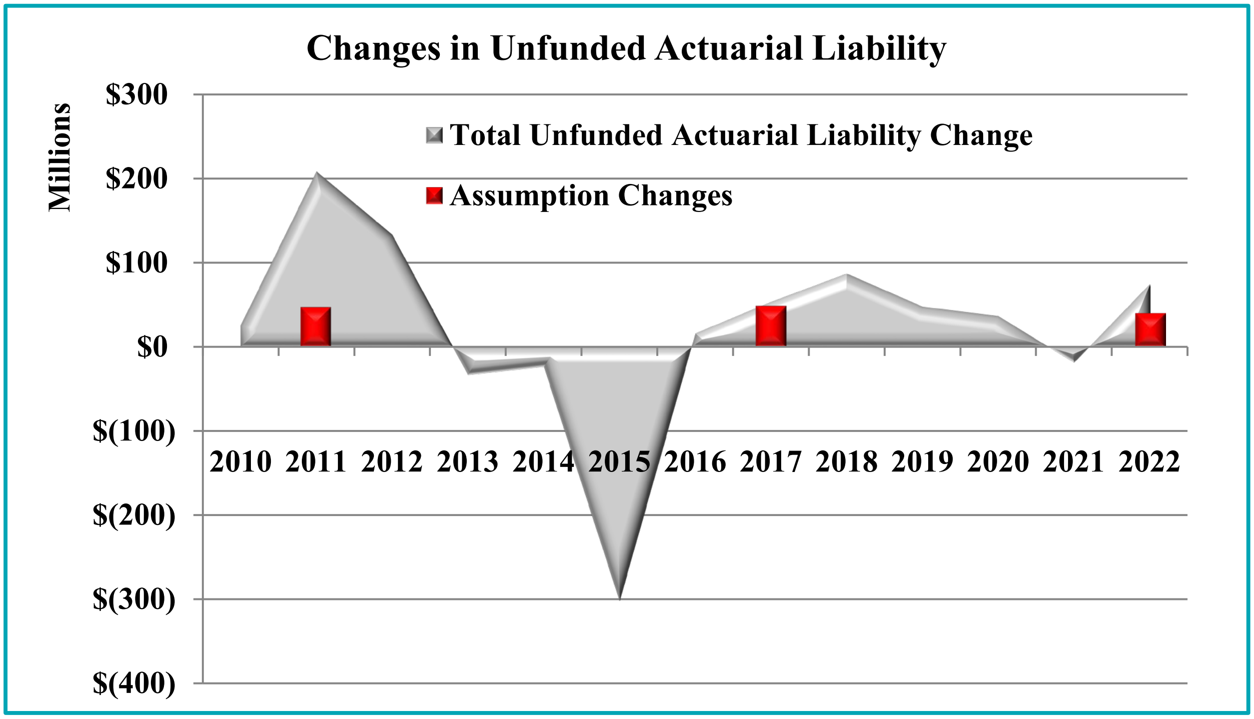

*Contribution risk* is the potential for actual future contributions to deviate from expected future contributions. There are different sources of contribution risk ranging from the sponsor choosing to not make contributions in accordance with the funding policy to material changes in the contribution base (e.g., covered employees, covered payroll, sponsor revenue) that affect the amount of contributions the Plan can collect.

The normal cost plus the interest on the Unfunded Actuarial Liability is referred to as the "Tread Water Cost" because if contributions are less than the Tread Water Cost, the UAL is expected to grow; and if contributions are greater than the Tread Water Cost, the UAL is expected to decline. For this System, the City has consistently contributed less than the Tread Water Cost which has added to the growing UAL in the past. The graph on page 10 in the Board Summary illustrates this.

## SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

*Assumption change risk* is the potential for the environment to change such that future valuation assumptions are different than the current assumptions. For example, declines in interest rates over the last three decades resulted in higher investment returns for fixed-income investments but lower expected future returns necessitating either a change in investment policy, a reduction in discount rate, or some combination of the two. Assumption change risk is an extension of the other risks identified, but rather than capturing the risk as it is experienced, it captures the cost of recognizing a change in environment when the current assumption is no longer reasonable.

As shown in the following graph, the assumption changes in 2011, 2017 and 2022 had a significant impact on the measure of the UAL. It is important to note that some of these changes include a downward revision to the estimate of future investment earnings and ultimately costs will be determined by actual investment earnings. As a result, future expectations of investment returns may continue to decline necessitating a reduction in the discount rate. The assumption changes made with this December 31, 2022 valuation were a result of the most recent experience study presented in March 2023.



**SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK**

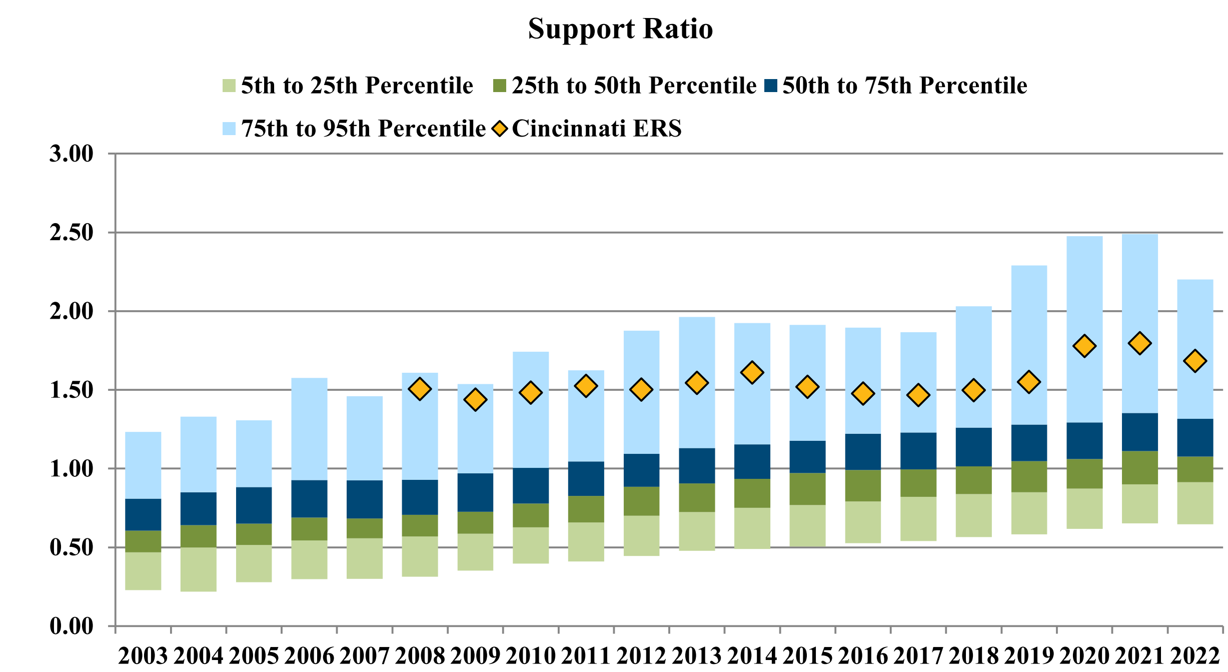
## Plan Maturity Measures

The future financial condition of a mature pension plan is more sensitive to each of the risks identified above than a less mature plan. Before assessing each of these risks, it is important to understand the maturity of this System compared to other plans and how the maturity has changed over time.

Plan maturity can be measured in a variety of ways, but they all get at one basic dynamic - the larger the plan is compared to the contribution or revenue base that supports it, the more sensitive the plan will be to risk. The measures below have been selected as the most important in understanding the primary risks identified for this System.

### Inactives per Active (Support Ratio)

One simple measure of plan maturity is the ratio of the number of inactive members (those receiving benefits or entitled to a deferred benefit) to the number of active members. The revenue base supporting the plan is usually proportional to the number of active members, so a relatively high number of inactives compared to actives indicate a larger plan relative to its revenue base as well.



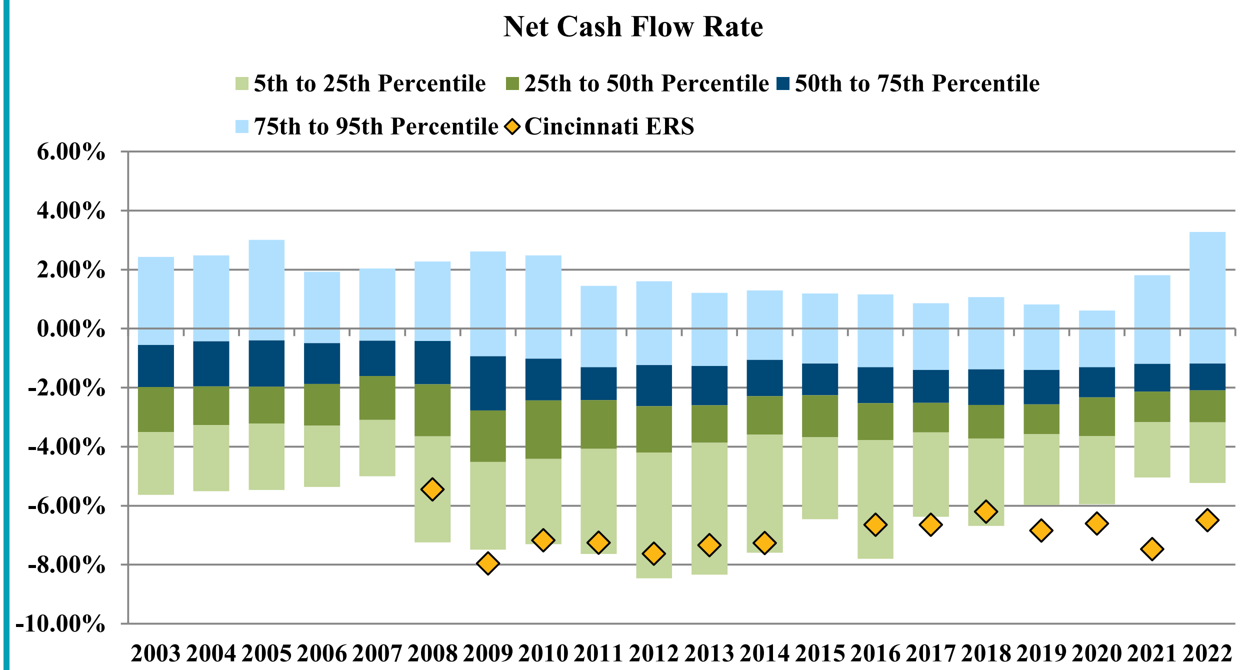
*Survey Data from Public Plans Data as of 4/12/2023*

The graph above shows the distribution from the 5th to 95th percentile of support ratios for the plans in the Public Plans Database. The gold diamonds show how the Cincinnati Retirement System compares to the other plans. Whereas the support ratios for the plans as a whole have increased over the period as they mature, Cincinnati's support ratio has remained relatively stable over the last decade prior to the past three years and continues to be in the upper quartile.

## SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

### Net Cash Flow

The net cash flow of the plan as a percentage of the beginning of year assets indicates the sensitivity of the plan to short-term investment returns. Net cash flow is equal to contributions less benefit payments and administrative expenses. Mature plans can have large amounts of benefit payments compared to contributions, particularly if they are well funded. Investment losses in the short-term are compounded by the net withdrawal from the plan leaving a smaller asset base to try to recover from the investment losses. Large negative cash flows can also create liquidity issues.




*Survey Data from Public Plans Data as of 4/12/2023*

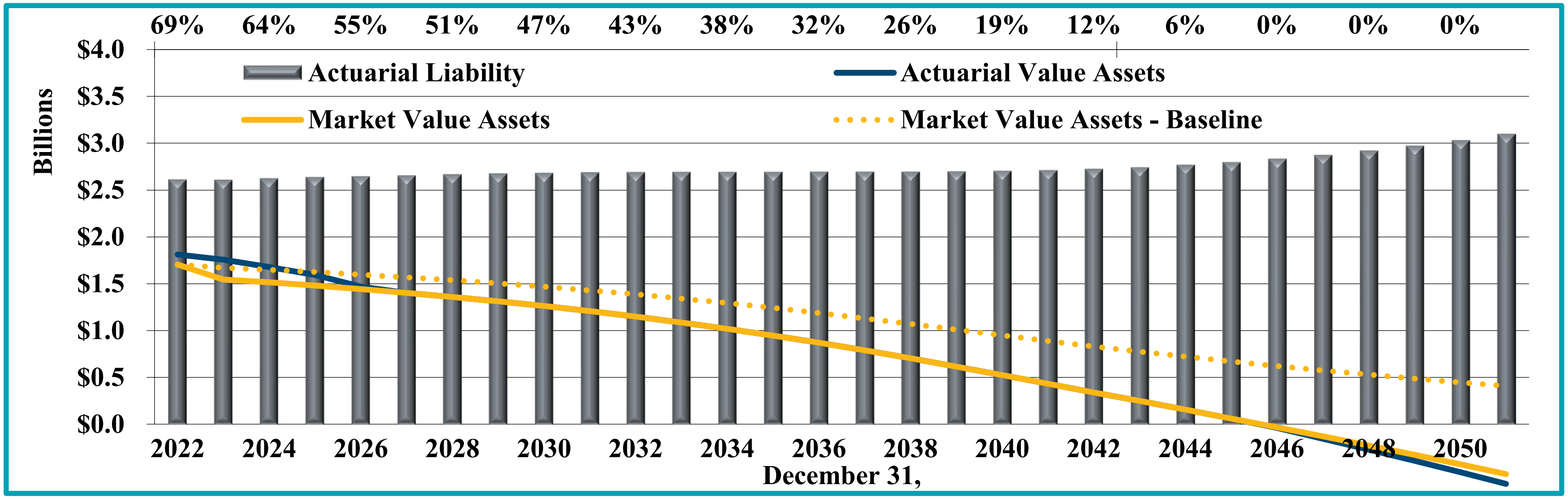
The graph above shows how the Cincinnati Retirement System's negative net cash flow as a percent of assets has compared to the other public plans in the database. With the exception of 2015, which reflects the large amount of monies transferred pursuant to the Collaborative Settlement Agreement, the System has been amongst the top 5 percentile in having the largest negative cash flow. This higher negative cash flow subjects the System to a higher amount of investment risk since assets must earn more to avoid the System's assets from decreasing from one year to the next. In periods of market underperformance, the impact on the System is greater due to this higher negative cash flow. To illustrate this, the System's funded status was projected to steadily increase to 93% over the next 30 years prior to the 2022 investment experience. As shown earlier in this report, the System's funded status is now projected to decrease to 15% funded at the end of 30 years if all assumptions are realized.

## Deterministic Scenarios/Stress Testing

We developed several hypothetical scenarios to illustrate the impact actual investment returns may have on future funded status and contribution rates. The scenarios are balanced between positive and negative scenarios and are intended to illustrate the importance of both the return itself as well as the timing of such returns.

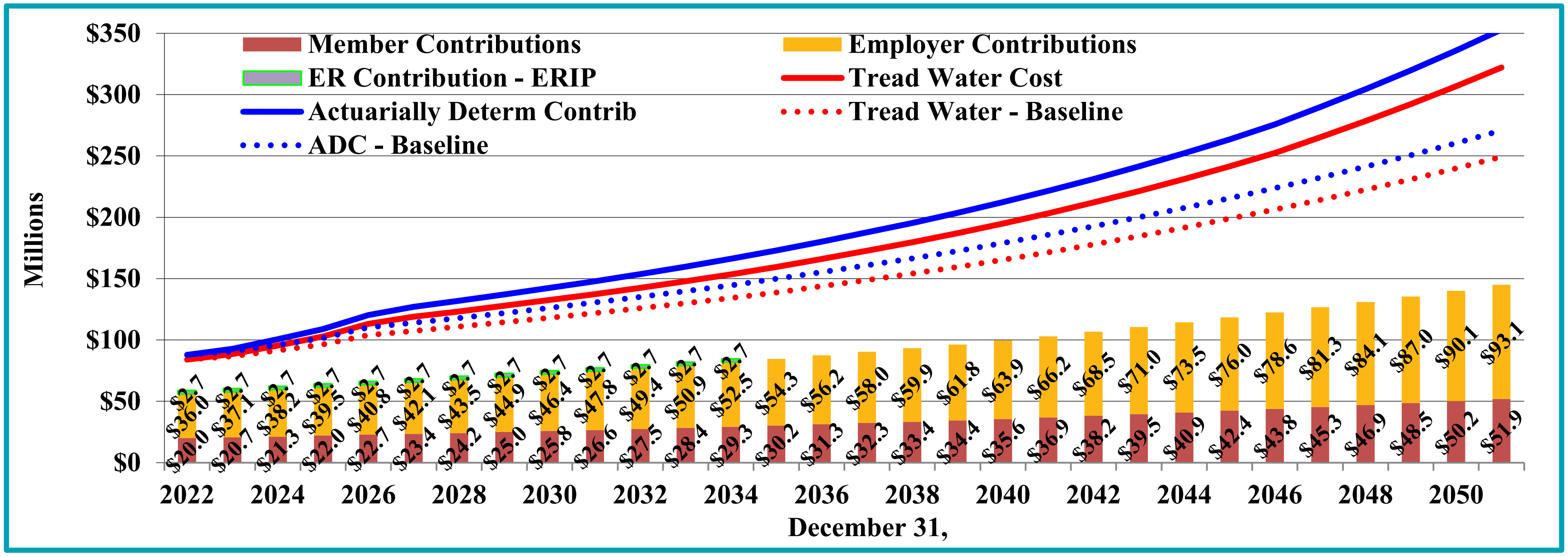
The graphs on the following pages show the projections under each of these theoretical scenarios. The asset/liability graphs include a gold dotted line representing the baseline market value of assets and the contribution graphs include a blue dotted line representing the baseline ADC projections to facilitate the comparison between the particular scenario and the projections assuming all assumptions are met. The baseline projections are shown in the Board Summary.

**Investment Return of 0% for 2023 followed by 7.5% per year thereafter**




As illustrated above, one year of a flat return (0%) for the Plan year ending December 31, 2023 followed by a 7.5% return per year thereafter has a significant impact on the solvency projection of the System. Under this projection, the System is projected to become insolvent by 2046.

## SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK




Under this scenario, the Actuarially Determined Contribution and Tread Water Cost are expected to increase over the next 30 years. The contributions (bars) are the same as the baseline since the City's contributions are currently made based on a fixed rate regardless of its funded status.

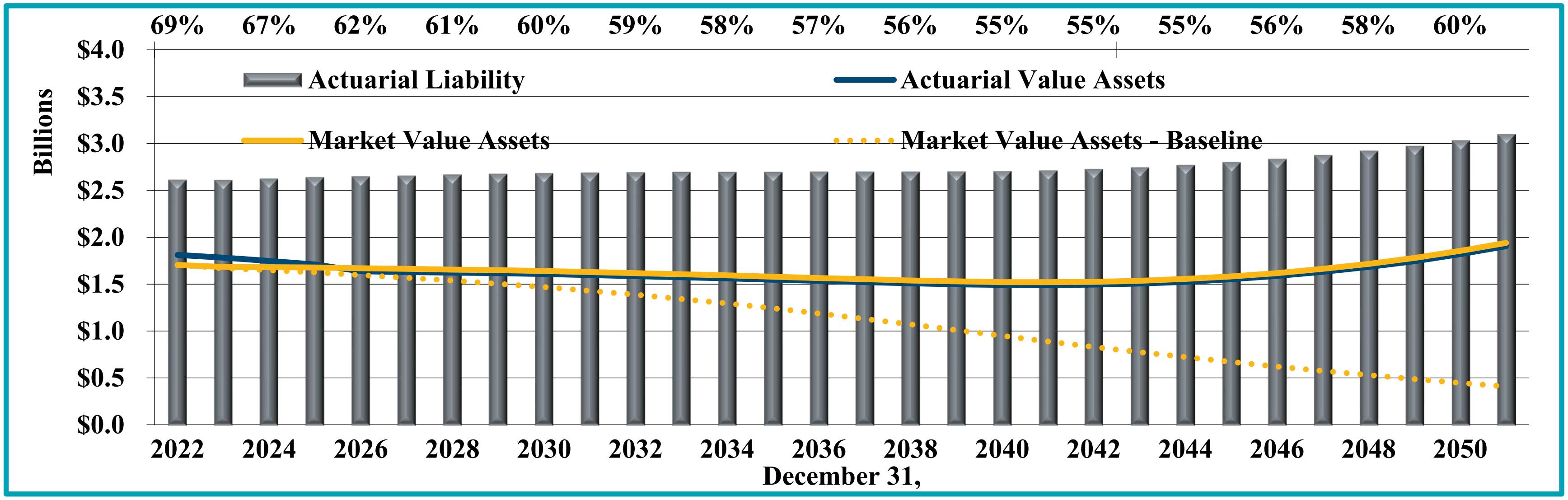
## SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

The table below further illustrates the impact that an unfavorable investment return for the year ending December 31, 2023 would have on the projected insolvency of the System's assets assuming no changes to benefits or contribution rates and all assumptions are realized. All future years beyond 2023 were assumed to have an investment return of 7.5%.

| Assumed 2023 Investment Return | Projected Insolvency Year | Projected to be 100% Funded |
|---|---|---|
| 15.0% | None | 2087 |
| 7.5% | None | >2130 |
| 0.0% | 2046 | None |
| (7.5%) | 2041 | None |
| (15.0%) | 2038 | None |

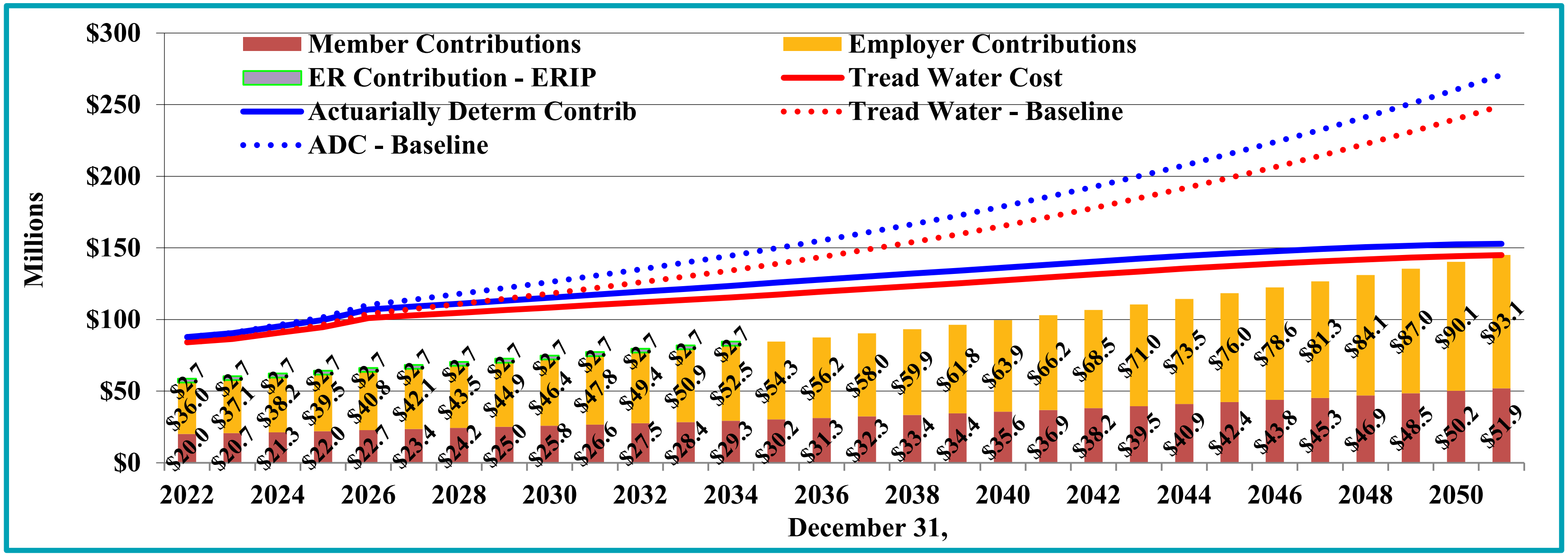
## SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

**Investment Return of 8.5% per year**




Conversely, the chart above shows the impact on the System's projected assets if all future years' investment returns are 8.5% per year. As shown above, the funded percentage has increased from 15% to 60% by December 31, 2050 and fully funded by 2065.

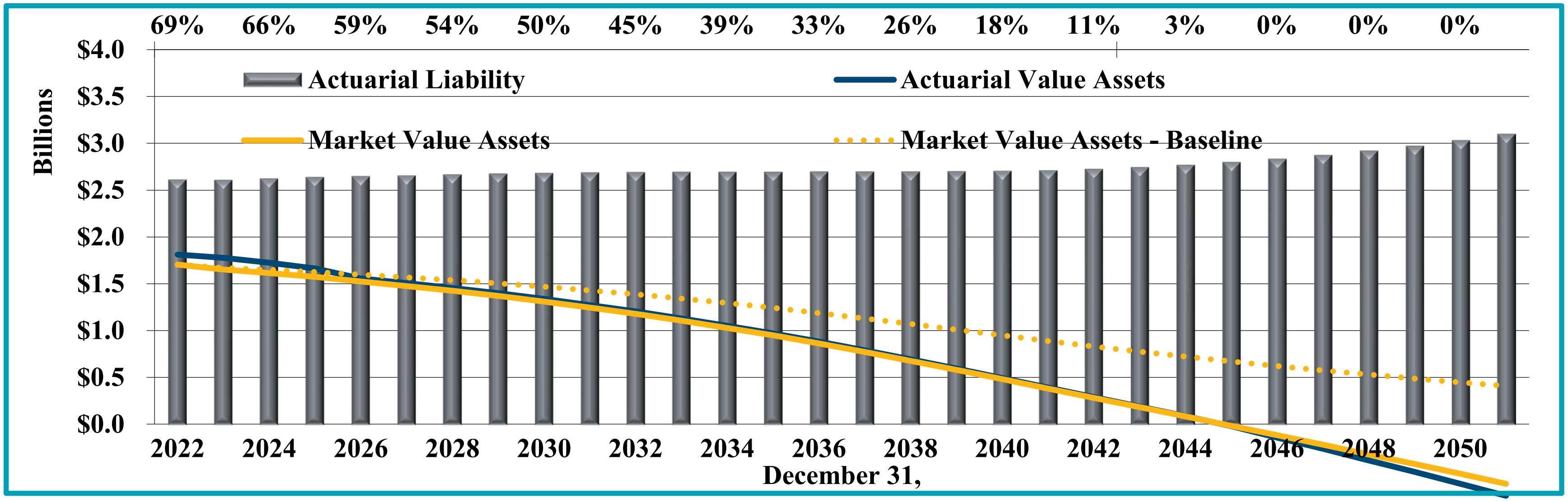
## SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK




As anticipated, both the Actuarially Determined Contribution and Tread Water Cost are materially lower than if the assets were to return the assumed 7.5% per year.

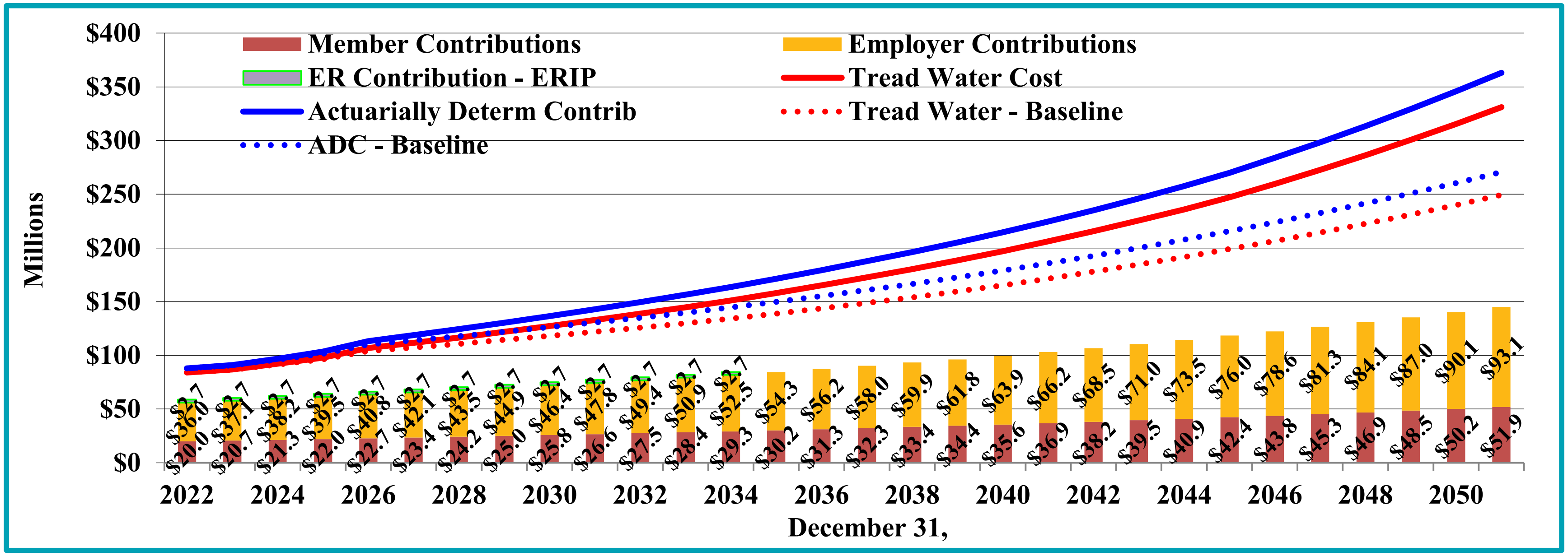
## SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

**Investment Return of 6.5% per year**




If the assets were to return 6.5% per year (1% less than the assumed 7.5%), the System would become insolvent by December 31, 2045.

## SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK




As anticipated, both the Actuarially Determined Contribution and Tread Water Cost are higher than if the assets were to return the assumed 7.5% per year.

The scenarios shown above represent deterministic projections. These types of projections show the financial impact on the System under a set of fixed returns. Alternatively, stochastic projections graph the probability of the key metrics such as funded status based on a large number of scenarios (e.g., 1,000) based on the expected long-term return and risk characteristics of the portfolio. Whereas we have not included a stochastic analysis in this report, we would be happy to share this analysis if requested.

**More Detailed Assessment**

A more detailed assessment is always valuable to enhance the understanding of the risks identified above. While more detail would provide some additional value, we do not believe it is necessary to perform an in-depth analysis every year. We recommend the Board review the analysis provided above annually and consider a more detailed analysis periodically and when there is a substantial change in the financial position or maturity of the System.

## SECTION III – ASSETS

The System uses and discloses two different asset measurements which are presented in this section of the report: market value and actuarial value of assets. The market value represents the value of the assets if they were liquidated on the valuation date. The actuarial value of assets is a value that smooths annual investment returns to reduce annual investment volatility and is used in determining the actuarial determined contribution.

In this section, we present detailed information on the System's assets including:

- Statement of the cash flow during the year,
- Disclosure of investment performance for the year, and
- Development of the actuarial value of assets.

## Changes in Market Value

The components of asset change from one year to the next include contributions (both City and Member), benefit payments, expenses, and investment income (realized and unrealized.)

The specific changes during 2022 are presented on the next page.

## SECTION III – ASSETS

**Table III-1**
**Reconciliation of the Market Value of Assets**

| | | |
|---|---|---|
| **Market Value of Assets - December 31, 2021** | $ | 2,001,579,000 |
| | | |
| **Additions** | | |
| Contributions | | |
| Employer | $ | 41,413,000 |
| Member | | 20,991,000 |
| Total Contributions | $ | 62,404,000 |
| Gross Investment Income | | (162,204,000) |
| Investment Expenses | | (5,636,000) |
| Total Additions | $ | (105,436,000) |
| | | |
| **Deductions** | | |
| Benefits Paid | $ | 190,070,000 |
| Net Transfers | | 192,000 |
| Administrative Expenses | | 2,005,000 |
| Total Deductions | $ | 192,267,000 |
| | | |
| Net Increase(Decrease) | $ | (297,703,000) |
| | | |
| **Market Value of Assets - December 31, 2022** | $ | 1,703,876,000 |

## Investment Performance

The following table calculates the investment gain/loss and the return for the plan year on a Market Value basis. The return is an appropriate measure for comparing the actual asset performance to the long-term 7.50% assumption.

**Table III-2**
**Market Value Investment Gains/(Losses)**

| | | |
|---|---|---|
| **Market Value of Assets - December 31, 2021** | $ | 2,001,579,000 |
| Contributions | $ | 62,404,000 |
| Benefits Paid | | (190,070,000) |
| Net Transfers | | (192,000) |
| Administrative Expenses | | (2,005,000) |
| Expected Investment Earnings (7.50%) | | 145,274,757 |
| **Expected Market Value of Assets - December 31, 2022** | $ | 2,016,990,757 |
| **Investment Gain / (Loss)** | $ | (313,114,757) |
| **Market Value of Assets - December 31, 2022** | $ | 1,703,876,000 |
| **Return** | | (8.68%) |

**SECTION III – ASSETS**

## Actuarial Value of Assets

To determine on-going funding requirements, most pension systems utilize an actuarial value of assets that differs from the market value of assets. The actuarial value of assets represents an asset value based on averaging or smoothing year-to-year market value returns for purposes of reducing contribution volatility. For this System, the actuarial value of assets recognizes a portion of the difference between the actual market value of assets and the expected market value of assets. The amount recognized each year is 20% of the difference between actual market value and expected market value. The expected market value is determined using the System's actual cash flows and assumed actuarial rate of return. The actuarial value of assets is constrained so that it cannot exceed 120% of the market value and cannot be less than 80% of the market value. The asset valuation method is described more fully in Appendix B.

The following table illustrates the calculation of the actuarial value of assets for the December 31, 2022 valuation.

**Table III-3**
**Development of December 31, 2022 Actuarial Value of Assets**

| | | | | | |
|---|---|---|---|---|---|
| a) | Market Value of Assets - December 31, 2022 | | | | $ 1,703,876,000 |
| b) | Deferred Gains or (Losses) | | | | |
| | Plan Year | Market Value Gain or (Loss) | Percent Recognized | Percent Deferred | Amount Deferred |
| | 2022 | $ (313,114,757) | 20% | 80% | $ (250,491,806) |
| | 2021 | 185,065,851 | 40% | 60% | 111,039,511 |
| | 2020 | 9,138,110 | 60% | 40% | 3,655,244 |
| | 2019 | 141,908,946 | 80% | 20% | 28,381,789 |
| | 2018 | (203,374,909) | 100% | 0% | 0 |
| | | | | Total Deferred: | $ (107,415,262) |
| c) | Preliminary Actuarial Value of Assets - December 31, 2022 [(a) - (b)] | | | | $ 1,811,291,262 |
| d) | Corridor for Actuarial Value of Assets | | | | |
| | 80% of Market Value of Assets | | | | $ 1,363,100,800 |
| | 120% of Market Value of Assets | | | | $ 2,044,651,200 |
| e) | Actuarial Value of Assets - December 31, 2022 | | | | $ 1,811,291,262 |
| f) | Actuarial Value of Assets as a % of Market Value of Assets [(e) ÷ (a)] | | | | 106% |

## Asset Gains / (Losses) on Actuarial Value Basis

The following table calculates the actuarial investment gain/loss and the return for the plan year on an Actuarial Value basis. This actuarial gain/loss is one component of the System's overall actuarial experience gain/loss.

The Actuarial Value of Assets returned 6.18% for the year primarily due to the continued recognition of the net investment gains attributable to prior years, including the 18.06% market value return for 2021. This resulted in a $23.4 million actuarial investment loss when compared to the 7.50% expected return as shown below. Since the Market Value of Assets currently lags the Actuarial Value of Assets by $107.4 million, this represents a net deferred investment loss that will continue to be recognized over the next four years and mitigate the impact of any favorable returns in the future.

**Table III-4**
**Actuarial Value Investment Gains/(Losses)**

| | | |
|---|---|---|
| **Actuarial Value of Assets - December 31, 2021** | $ | 1,831,954,857 |
| Contributions | $ | 62,404,000 |
| Benefits Paid | | (190,070,000) |
| Net Transfers | | (192,000) |
| Administrative Expenses | | (2,005,000) |
| Expected Investment Earnings (7.50%) | | 132,552,946 |
| **Expected Actuarial Value of Assets - December 31, 2022** | $ | 1,834,644,803 |
| **Investment Gain / (Loss)** | $ | (23,353,541) |
| **Actuarial Value of Assets - December 31, 2022** | $ | 1,811,291,262 |
| **Return** | | 6.18% |

## Investment Performance

The market value of assets (MVA) returned a *negative* 8.68% during 2022, which is significantly less than the assumed 7.50% return. A return of 6.18% on the actuarial value of assets (AVA) is primarily the result of the asset smoothing method being utilized for the calculation of the actuarial value of assets. Since only 20% of this year's loss from the performance of the System is recognized in a given year, in periods of very favorable performance, the AVA will not increase as rapidly as the MVA. In a period of unfavorable returns such as this past year, the AVA will not decrease as fast as the MVA.

**Table III-5**
**Annual Rates of Return**

| Plan Year | Investment Return Assumption | Market Value | Actuarial Value |
|---|---|---|---|
| 2013 | 7.50% | 16.99% | 12.11% |
| 2014 | 7.50% | 6.46% | 10.18% |
| 2015 | 7.50% | (0.11%) | 7.51% |
| 2016 | 7.50% | 9.24% | 8.50% |
| 2017 | 7.50% | 14.51% | 9.19% |
| 2018 | 7.50% | (3.93%) | 5.66% |
| 2019 | 7.50% | 16.40% | 6.69% |
| 2020 | 7.50% | 8.03% | 8.82% |
| 2021 | 7.50% | 18.06% | 10.55% |
| 2022 | 7.50% | (8.68%) | 6.18% |
| **10-Year Compound Average** | | **7.32%** | **8.52%** |
| **5-Year Compound Average** | | **5.43%** | **7.56%** |

## SECTION IV – LIABILITIES

In this section, we present detailed information on System liabilities including:

- **Disclosure** of System liabilities at December 31, 2021 and December 31, 2022, and
- Statement of **changes** in these liabilities during the year.

## Disclosure

Two types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures and the purpose for which they are using them.

- **Present Value of Benefits:** Used for analyzing the financial outlook of the System. This represents the amount of money needed today to fund all future benefits and expenses of the System, assuming members continue to accrue benefits and all assumptions are met.

- **Actuarial Liability:** Used for funding calculations. This liability is calculated taking the present value of benefits above and subtracting the present value of future member contributions and future employer normal costs under an acceptable actuarial funding method. This method is referred to as the **Entry Age Normal** funding method.

None of the liability figures disclosed in this report is meant to be a measure of the System's settlement liability.

The following table discloses each of these liabilities for the current and prior valuations. With respect to the Actuarial Liability, a subtraction of the Actuarial Value of Assets yields a **net surplus** or an **unfunded liability**.

## SECTION IV – LIABILITIES

**Table IV-1**
**Liabilities/Net (Surplus)/Unfunded**

| | December 31, 2021 | December 31, 2022 |
|---|---|---|
| Present Value of Benefits | | |
| Active Participants (Full Time) | $ 667,461,999 | $ 716,288,832 |
| Active Participants (Part Time) | 5,236,765 | 5,221,217 |
| Deferred Vesteds | 25,338,032 | 26,198,171 |
| Retirees | 2,072,166,935 | 2,091,074,358 |
| **Present Value of Benefits (PVB)** | **$ 2,770,203,731** | **$ 2,838,782,578** |
| | | |
| City's Normal Cost* | $ 7,391,618 | $ 8,619,878 |
| | | |
| Actuarial Liability | | |
| Active Participants (Full Time) | $ 457,516,790 | $ 492,208,807 |
| Active Participants (Part Time) | 5,236,765 | 5,221,217 |
| Deferred Vesteds | 25,338,032 | 26,198,171 |
| Retirees | 2,072,166,935 | 2,091,074,358 |
| **Actuarial Liability (AL)** | **$ 2,560,258,522** | **$ 2,614,702,553** |
| Actuarial Value of Assets (AVA) | 1,831,954,857 | 1,811,291,262 |
| **Net (Surplus)/Unfunded (AL – AVA)** | **$ 728,303,665** | **$ 803,411,291** |
| **Funded Status (AVA basis)** | **71.6%** | **69.3%** |

* *Includes administrative expense and net of Employee Contributions*

## SECTION IV – LIABILITIES

### Changes in Liabilities

Each of the liabilities disclosed in the prior table is expected to change at each valuation. The components of that change, depending upon which liability is analyzed, can include:

- New hires since the last valuation
- Benefits accrued since the last valuation
- Plan amendments changing benefits
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Members retiring, terminating, or dying at rates different than expected
- A change in actuarial or investment assumptions
- A change in the actuarial funding method

Unfunded liabilities will change because of all of the above and due to changes in the System's assets resulting from the following:

- Employer contributions less than the full actuarial contribution
- Investment earnings different than expected
- A change in the method used to measure system assets

In each valuation, we report on those elements of change that are of particular significance, potentially affecting the long-term financial outlook of the System. Below we present key changes in liabilities since the last valuation.

**Table IV-2**
**Change in Liabilities**

| | Present Value of Benefits | Actuarial Liability |
|---|---|---|
| Liabilities as of 12/31/2021 | $ 2,770,203,731 | $ 2,560,258,522 |
| Liabilities as of 12/31/2022 | $ 2,838,782,578 | $ 2,614,702,553 |
| Liability Increase (Decrease) | $ 68,578,847 | $ 54,444,031 |
| Change Due to: | | |
| Assumption Change | $ 40,930,850 | $ 39,821,286 |
| Plan Changes | 0 | 0 |
| Actuarial (Gain)/Loss | NC | (3,552,972) |
| Benefits Accumulated and Other Sources | 27,647,997 | 18,175,717 |

NC = not calculated

## SECTION IV – LIABILITIES

Table IV-3 shows the components of the actuarial liability experience (gain)/loss. In total, the System had a small liability gain equating to just 0.1% of liabilities.

**Table IV-3**
**Sources of Actuarial Liability (Gain)/Loss**
**($ in Thousands)**

| | Source | | (Gain) / Loss Amount | % of Liability |
|---|---|---|---|---|
| 1. | Salary | $ | 2,449.5 | 0.1% |
| 2. | Active experience (retirements, termination, etc.) | | (10,254.3) | (0.4%) |
| 3. | New entrants | | 5,601.3 | 0.2% |
| 4. | Inactive mortality | | (5,776.4) | (0.2%) |
| 5. | Inactive experience | | 1,205.5 | 0.1% |
| 6. | Rehired inactives | | (441.8) | 0.0% |
| 7. | Benefit payments different than expected | | (6,078.8) | (0.2%) |
| 8. | DROP experience | | 4,985.4 | 0.2% |
| 9. | Miscellaneous / Change in Account Balances | | 4,756.6 | 0.2% |
| 10. | Total Liability (Gain) / Loss | $ | (3,553.0) | (0.1%) |

## SECTION V – CONTRIBUTIONS

In the process of evaluating the financial condition of any pension system, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions is needed to properly maintain the funding status of the system. Typically, the actuarial process will use a funding technique that will result in a pattern of contributions that is both stable and predictable.

For this system, the funding method employed is the **Entry Age Actuarial Cost Method**. Under this method, there are three key components to calculating the Actuarially Determined Contribution (ADC): the **normal cost rate**, the **unfunded actuarial liability rate** (UAL rate), and the **administrative expense rate**. The normal cost rate represents the value of benefits being earned by the active members, as a percent of pay, for the upcoming year. The City's normal cost rate is calculated by taking the total normal cost rate for full-time actives less the member contribution rate of 9%. Based on the Board's funding benchmark, the unfunded actuarial liability rate represents the amount necessary, as a level dollar amount, to pay off the unfunded liability over an open 30-year period. The final piece of the ADC is the administrative expense rate of 0.80% of pay.

However, the City does not contribute based on the Actuarially Determined Contribution rate, nor should the ADC rate be construed as a recommended contribution rate. If the City were to contribute based on the ADC, the unfunded liability would not be expected to be fully paid off based on the open 30-year amortization period. In accordance with the Collaborative Settlement Agreement, the City currently contributes 16.25% of pay for full-time active and DROP members. A contribution totaling 3.00% of pay is made on behalf of part-time actives.

Lastly, we have assumed that the City will contribute $2.7 million each year for the next 13 years by July 31 of each year to pay for the increase in liabilities due to the Early Retirement Incentive Program (ERIP).

## SECTION V – CONTRIBUTIONS

**Table V-1**
**Development of Actuarially Determined Contribution Rate**

| | | December 31, 2021 (for Fiscal Year ending June 30, 2023) | December 31, 2022 (for Fiscal Year ending June 30, 2024) |
|---|---|---|---|
| **1.** | **Actuarial Liability** | | |
| | a. Active Employees (Full Time) | $ 457,516,790 | $ 492,208,807 |
| | b. Active Employees (Part Time) | 5,236,765 | 5,221,217 |
| | c. Vested Terminated Members | 25,338,032 | 26,198,171 |
| | d. Retired Members and Inactive Members | 2,072,166,935 | 2,091,074,358 |
| | e. Total Present Value | $ 2,560,258,522 | $ 2,614,702,553 |
| **2.** | **Actuarial Value of Assets** | $ 1,831,954,857 | $ 1,811,291,262 |
| **3.** | **Unfunded Actuarial Liability (UAL) (1) - (2)** | $ 728,303,665 | $ 803,411,291 |
| **4.** | **Gross Normal Cost Rate** | 12.10% | 12.40% |
| **5.** | **Amortization of Prior Plan Changes** | | |
| | a. Present Value of Remaining Amortization Payments for ERIP | $ 23,726,076 | $ 22,710,661 |
| | b. Years of Amortization Payments Remaining | 14 | 13 |
| | c. ERIP Amortization Payment[1] | 2,711,907 | 2,711,907 |
| | d. Total Active Payroll[2] | 208,017,324 | 222,900,213 |
| | e. Total Amortization Payment (as % of Payroll) [5c. ÷ 5d.] | 1.30% | 1.22% |
| **6.** | **UAL Amortization Payment** | | |
| | a. UAL not due to Plan Changes | $ 704,577,589 | $ 780,700,630 |
| | b. 30-Year UAL Amortization Payment[3] | 57,538,759 | 63,755,286 |
| | c. Total Active Payroll[2] | 208,017,324 | 222,900,213 |
| | d. Total Amortization Payment (as % of Payroll) [6b. ÷ 6c.] | 27.66% | 28.60% |
| **7.** | **Administrative Expenses** | 0.80% | 0.80% |
| **8.** | **Expected Employee Contributions** | (9.00%) | (9.00%) |
| **9.** | **City's Actuarial Determined Contribution Rate [4. + 5e. + 6d. + 7. + 8.]** | 32.86% | 34.02% |
| **10.** | **City's Estimated ADC in Dollars [5d. x 9.]** | $ 68,354,000 | $ 75,831,000 |

1 Adjusted with interest to July 31.
2 Adjusted with interest to mid-year based on General Wage Inflation of 3.75%.
3 Adjusted with interest to mid-year.

## SECTION VI – ACCOUNTING STATEMENT INFORMATION

Table VI-1 shows the history of gains and losses and Table VI-2 shows the Schedule of Funding Progress.

**Table VI - 1**
**Gain or (Loss) for Year Ending December 31,**
**($ in Thousands)**

| Type of Activity | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|---|---|---|
| Investment Income | $ 60,722 | $ 36,688 | $ 413 | $ 16,400 | $ 28,361 | $ (31,660) | $ (13,917) | $ 21,573 | $ 52,277 | $ (23,354) |
| Combined Liability Experience | 1,134 | 15,199 | (777) | (1,424) | (23,609) | 31,318 | (14,043) | (10,191) | (12,922) | 3,553 |
| Total Gain (Loss) | $ 61,856 | $ 51,887 | $ (364) | $ 14,976 | $ 4,752 | $ (342) | $ (27,960) | $ 11,382 | $ 39,355 | $ (19,801) |
| Non-Recurring Items | 0 | 0 | 345,573 | (27,754) | (48,308) | (39,236) | 0 | (24,671) | 0 | (39,821) |
| Composite Gain (Loss) during Year | $ 61,856 | $ 51,887 | $ 345,209 | $ (12,778) | $ (43,556) | $ (39,578) | $ (27,960) | $ (13,289) | $ 39,355 | $ (59,622) |

**Table VI - 2**
**Schedule of Funding Progress**
**($ in Thousands)**

| Actuarial Valuation Date | (a) Actuarial Value of Assets | (b) Entry Age Actuarial Liability | (b) - (a) Unfunded Actuarial Liability | (a) ÷ (b) Funded Ratio | (c) Covered Payroll | [(b) - (a)] ÷ (c) UAL as a % of Covered Payroll |
|---|---|---|---|---|---|---|
| 12/31/2013 | $ 1,424,933 | $ 2,254,121 | $ 829,188 | 63.2% | $ 163,477 | 507.2% |
| 12/31/2014 | 1,453,922 | 2,259,822 | 805,900 | 64.3% | 164,575 | 489.7% |
| 12/31/2015 | 1,703,002 | 2,207,484 | 504,482 | 77.1% | 174,963 | 288.3% |
| 12/31/2016 | 1,732,053 | 2,252,875 | 520,822 | 76.9% | 179,463 | 290.2% |
| 12/31/2017 | 1,772,494 | 2,346,906 | 574,412 | 75.5% | 191,806 | 299.5% |
| 12/31/2018 | 1,755,861 | 2,417,515 | 661,654 | 72.6% | 206,122 | 321.0% |
| 12/31/2019 | 1,756,533 | 2,466,349 | 709,816 | 71.2% | 215,460 | 329.4% |
| 12/31/2020 | 1,786,650 | 2,533,247 | 746,597 | 70.5% | 205,439 | 363.4% |
| 12/31/2021 | 1,831,955 | 2,560,259 | 728,304 | 71.6% | 204,223 | 356.6% |
| 12/31/2022 | 1,811,291 | 2,614,702 | 803,411 | 69.3% | 218,835 | 367.1% |

## SECTION VI – ACCOUNTING STATEMENT INFORMATION

Additional information as of December 31, 2022:

| | |
|---|---|
| Valuation Date | December 31, 2022 |
| Actuarial Cost Method | Entry Age |
| Amortization Method | Level Dollar Open |
| Amortization Period | 30 Years |
| Asset Valuation Method | Five Year Smoothed Market Value |
| | |
| Actuarial Assumptions | |
| Investment Return (includes inflation) | 7.50% |
| Projected Salary Increases (includes inflation) | 3.75% - 8.75% |
| Inflation | 2.75% |
| Cost-of-Living Adjustments | 3.00% |

## APPENDIX A – MEMBERSHIP INFORMATION

The data for this valuation was provided electronically by the Cincinnati Retirement System staff. Cheiron did not perform a formal audit of the data. However, we did perform checks of the data for reasonableness and consistency in accordance with Actuarial Standards of Practice No. 23, *Data Quality*.

Data reported in this Appendix is as of December 31, 2022.

## APPENDIX A – MEMBERSHIP INFORMATION

**Status Reconciliation of Participating Members**

| | Active Full-Time | Active Part-Time | Terminated Vested | Retired | Disabled | Beneficiary | Total |
|---|---|---|---|---|---|---|---|
| As of December 31, 2021 | 2,580 | 1,238 | 247 | 3,649 | 137 | 604 | 8,455 |
| New Hires | 75 | 640 | | | | | 715 |
| To Active Part-Time | (20) | 20 | | | | | 0 |
| To Active Full-Time | 275 | (275) | | | | | 0 |
| Terminated Vested | (41) | (13) | 54 | | | | 0 |
| Terminated Non-Vested | (106) | (351) | | | | | (457) |
| Refund of Contributions | | | | | | | 0 |
| Retired | (47) | | (8) | 55 | | | 0 |
| Disabled | | | | | | | 0 |
| Deceased with Beneficiary | | | | (63) | (1) | 64 | 0 |
| Deceased without Beneficiary | | | (18) | (89) | (14) | (38) | (159) |
| Miscellaneous Changes | 2 | (2) | | 1 | | | 1 |
| As of December 31, 2022 | 2,718 | 1,257 | 275 | 3,553 | 122 | 630 | 8,555 |

## APPENDIX A – MEMBERSHIP INFORMATION

| Active Member Count by Age and Service as of December 31, 2022 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Years of Service | | | | | | | | | |
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40 & Over | Total Count |
| Under 25 | 35 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 |
| 25-29 | 117 | 49 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 177 |
| 30-34 | 140 | 110 | 29 | 7 | 0 | 0 | 0 | 0 | 0 | 286 |
| 35-39 | 119 | 125 | 73 | 40 | 11 | 0 | 0 | 0 | 0 | 368 |
| 40-44 | 118 | 96 | 71 | 40 | 51 | 7 | 0 | 0 | 0 | 383 |
| 45-49 | 85 | 95 | 71 | 66 | 61 | 27 | 4 | 0 | 0 | 409 |
| 50-54 | 73 | 60 | 64 | 73 | 75 | 56 | 7 | 0 | 0 | 408 |
| 55-59 | 41 | 65 | 50 | 45 | 70 | 61 | 29 | 4 | 0 | 365 |
| 60-64 | 12 | 34 | 24 | 37 | 38 | 30 | 15 | 3 | 0 | 193 |
| 65-69 | 5 | 23 | 9 | 8 | 11 | 8 | 2 | 5 | 0 | 71 |
| 70 & Over | 1 | 1 | 1 | 4 | 3 | 3 | 0 | 1 | 2 | 16 |
| Total Count | 746 | 665 | 403 | 320 | 320 | 192 | 57 | 13 | 2 | 2,718 |

Average Service: 11.8

## APPENDIX A – MEMBERSHIP INFORMATION

| Average Compensation of Active Members by Age and Service as of December 31, 2022 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Years of Service | | | | | | | | | |
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40 & Over | Avg. Comp. |
| Under 25 | $52,556 | $46,984 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $51,627 |
| 25-29 | 60,888 | 63,883 | 61,237 | 0 | 0 | 0 | 0 | 0 | 0 | 61,738 |
| 30-34 | 69,118 | 71,160 | 71,710 | 64,849 | 0 | 0 | 0 | 0 | 0 | 70,062 |
| 35-39 | 70,580 | 76,579 | 83,582 | 74,990 | 68,395 | 0 | 0 | 0 | 0 | 75,611 |
| 40-44 | 66,456 | 74,946 | 83,527 | 75,381 | 80,214 | 71,973 | 0 | 0 | 0 | 74,614 |
| 45-49 | 71,924 | 74,738 | 86,262 | 83,395 | 83,776 | 86,635 | 83,155 | 0 | 0 | 79,766 |
| 50-54 | 70,291 | 72,433 | 82,798 | 81,920 | 83,607 | 82,749 | 120,798 | 0 | 0 | 79,673 |
| 55-59 | 73,764 | 78,620 | 80,619 | 77,481 | 78,386 | 86,991 | 89,513 | 69,652 | 0 | 80,329 |
| 60-64 | 80,050 | 75,274 | 70,987 | 77,228 | 75,102 | 73,227 | 74,791 | 83,442 | 0 | 75,150 |
| 65-69 | 68,653 | 84,998 | 95,657 | 68,668 | 62,464 | 79,458 | 107,696 | 73,978 | 0 | 79,106 |
| 70 & Over | 72,565 | 43,397 | 53,310 | 69,102 | 83,324 | 72,830 | 0 | 61,812 | 76,032 | 70,501 |
| Average | 67,729 | 73,937 | 81,533 | 78,509 | 79,694 | 82,470 | 89,673 | 73,895 | 76,032 | 75,510 |

## APPENDIX A – MEMBERSHIP INFORMATION

| Summary of Inactive Membership Data as of December 31, 2022 | | | | | |
|---|---|---|---|---|---|
| Group | Count | | Total Annual Benefit | | Average Annual Benefit |
| Retirees | 3,553 | $ | 166,945,467 | $ | 46,987 |
| Disableds | 122 | $ | 2,361,812 | $ | 19,359 |
| Survivor | 630 | $ | 18,148,349 | $ | 28,807 |
| Total | 4,305 | $ | 187,455,628 | $ | 43,544 |

| Annual Benefits by Age as of December 31, 2022 | | | | | |
|---|---|---|---|---|---|
| Attained Age | Number of Members | | Total Annual Benefits | | Average Annual Benefit |
| < 40 | 4 | $ | 122,293 | $ | 30,573 |
| 40 - 44 | 2 | | 36,587 | | 18,294 |
| 45 - 49 | 22 | | 815,890 | | 37,086 |
| 50 - 54 | 169 | | 7,725,803 | | 45,715 |
| 55 - 59 | 458 | | 20,201,329 | | 44,108 |
| 60 - 64 | 761 | | 33,431,057 | | 43,930 |
| 65 - 69 | 946 | | 42,863,382 | | 45,310 |
| 70 - 74 | 846 | | 38,632,968 | | 45,665 |
| 75 - 79 | 480 | | 20,612,664 | | 42,943 |
| 80 - 84 | 342 | | 14,077,379 | | 41,162 |
| 85 - 89 | 178 | | 6,082,637 | | 34,172 |
| 90 - 94 | 81 | | 2,592,264 | | 32,003 |
| 95 - 99 | 13 | | 235,811 | | 18,139 |
| 100+ | 3 | | 25,564 | | 8,521 |
| **Total** | **4,305** | **$** | **187,455,628** | **$** | **43,544** |

**APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS**

## A. Actuarial Assumptions

*Rationale for Economic and Demographic Assumptions*
The actuarial assumptions were adopted by the Board of Trustees on March 23, 2023 based on an experience study performed for the period January 1, 2017 to December 31, 2021. The results of this study were presented to the Board on March 2, 2023 and are incorporated into this report by reference. An investment return assumption of 7.50% was used as prescribed by item 29 of the Collaborative Settlement Agreement (CSA) signed October 5, 2015. In conjunction with the experience study, the investment consultant reported an annual expected return of 8.04% based on the System's portfolio and their most recent capital market assumptions.

1. **Investment Rate of Return**

   7.50% per year, net of investment *expenses*

2. **Inflation Assumption**

   2.75% per annum

3. **Expenses**

   Estimated budgeted administrative expenses of 0.80% of payroll are added to the normal cost rate

4. **Salary Increases**

   Salary increases are assumed to vary by service. Representative rates are as follows:

| Service | Annual Increase |
|---|---|
| 0 | 8.75% |
| 1 | 8.25 |
| 2 | 7.75 |
| 3 | 7.25 |
| 4 | 6.75 |
| 5 | 6.25 |
| 6 | 5.75 |
| 7 | 5.25 |
| 8-14 | 4.75 |
| 15-20 | 4.25 |
| 21+ | 3.75 |

5. **Mortality Rates**

   Active Members: Pub-2010 General Employees Amount-Weighted Mortality Table [*PubG-2010 Employee*] as published by the Society of Actuaries (SOA), and with future improvement from the base year of 2010 on a generational basis using SOA's Scale MP-2021.

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Healthy Inactive Members: Pub-2010 General Healthy Retirees Amount-Weighted Mortality Table [*PubG-2010 Healthy Retiree*] as published by the SOA with a 110% adjustment for males and 115% adjustment for females, and with future improvement from the base year of 2010 on a generational basis using SOA's Scale MP-2021.

Disabled Inactive Members: Pub-2010 Non-Safety Disabled Retirees Amount-Weighted Mortality Table [*PubNS-2010 Disabled Retiree*] as published by the SOA, and with future improvement from the base year of 2010 on a generational basis using SOA's Scale MP-2021.

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

### 6. Retirement Rates

| Annual Rates of Retirement Groups C, E, and F | | | | |
|---|---|---|---|---|
| Age | 5 Years of Service | 6 – 24 Years of Service | 25 – 28 Years of Service | 29+ Years of Service |
| 50-54 | | | | 60.0% |
| 55-56 | | | 6.0% | 60.0 |
| 57 | | | 6.0 | 70.0 |
| 58 | | | 6.0 | 80.0 |
| 59 | | | 10.0 | 80.0 |
| 60 | 12.5% | 12.5% | 12.5 | 60.0 |
| 61 | 12.5 | 12.5 | 12.5 | 40.0 |
| 62-63 | 12.5 | 12.5 | 12.5 | 50.0 |
| 64 | 12.5 | 12.5 | 12.5 | 60.0 |
| 65 | 12.5 | 20.0 | 20.0 | 80.0 |
| 66 | 12.5 | 12.5 | 12.5 | 80.0 |
| 67 | 12.5 | 35.0 | 35.0 | 80.0 |
| 68-69 | 12.5 | 20.0 | 20.0 | 80.0 |
| 70 | 100.0 | 100.0 | 100.0 | 100.0 |

| Annual Rates of Retirement Group G | | | | | |
|---|---|---|---|---|---|
| Age | 5 Years of Service | 6 – 14 Years of Service | 15 – 28 Years of Service | 29-30 Years of Service | 31+ Years of Service |
| 57 | | | 6.0% | 6.0% | 6.0% |
| 58 | | | 6.0 | 6.0 | 6.0 |
| 59 | | | 10.0 | 10.0 | 10.0 |
| 60 | | | 10.0 | 10.0 | 10.0 |
| 61 | | | 10.0 | 10.0 | 10.0 |
| 62 | | | 10.0 | 60.0 | 50.0 |
| 63 | | | 10.0 | 60.0 | 50.0 |
| 64 | | | 10.0 | 70.0 | 60.0 |
| 65 | | | 10.0 | 80.0 | 80.0 |
| 66 | | | 10.0 | 80.0 | 80.0 |
| 67 | 12.5% | 35.0% | 35.0 | 60.0 | 80.0 |
| 68 | 12.5 | 20.0 | 20.0 | 80.0 | 80.0 |
| 69 | 12.5 | 20.0 | 20.0 | 80.0 | 80.0 |
| 70 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

### 7. Termination Rates

Sample termination rates are as follows:

| Annual Rates of Termination | |
|---|---|
| Years of Service | Rate of Withdrawal |
| < 1 | 15.00% |
| 1 | 10.00 |
| 2 | 8.00 |
| 3 | 7.00 |
| 4 | 6.50 |
| 5 | 6.00 |
| 6 | 5.00 |
| 7 | 4.00 |
| 8 | 3.00 |
| 9-14 | 2.50 |
| 15+ | 2.00 |

60% of vested members who terminate elect to leave their contributions in the Plan in order to be eligible for a benefit at their normal retirement; 40% of members elect to withdraw their contributions

### 8. Disability Rates

Sample disability rates are as follows:

| Age | Annual Rates of Disability[1] |
|---|---|
| 20 | 0.0025% |
| 25 | 0.0050% |
| 30 | 0.0075% |
| 35 | 0.0125% |
| 40 | 0.0225% |
| 45 | 0.0375% |
| 50 | 0.0675% |
| 55 | 0.1050% |
| 60 | 0.1250% |
| 64 | 0.1250% |

[1] Rates are 0% when member is eligible for normal retirement

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

**9. Part-time Active Members**

All part-time active members are assumed to receive a refund of their employee contributions with interest upon leaving the System.

**10. DROP Participation**

30% of eligible CSA Employee members eligible for DROP benefits are assumed to decline participation and 70% are assumed to elect participation. Those electing to participate are assumed to remain in DROP for three years.

**11. DROP Crediting Rate**

3.25% per annum

**12. Percent Married**

60% of members are assumed to be married for the purpose of valuing pre-retirement survivor benefits.

**13. Spouse Age Difference**

Unless otherwise reported in the data, the male spouse is assumed to be three years older than the female spouse.

**14. Changes Since Last Valuation**

Demographic assumptions were updated in accordance with the most recent experience study which affected the following assumptions:

- Mortality Tables
- Termination Rates
- Retirement Rates
- Disability Rates
- Marriage Assumptions
- Salary Increases
- DROP Participation

# B. Methods

## 1. Actuarial Funding Method

The funding method for the valuation of liabilities used for this valuation is the Entry Age Normal (EAN) method. Under this funding method, a normal cost rate is determined as a level percentage of pay for each active member. The normal cost rate multiplied by payroll equals the total normal cost for each member. The normal cost contributions (Employer and Member) will pay for projected benefits at retirement for each active member.

The actuarial liability is the difference between the present value of future benefits and the present value of future normal costs. The difference between this actuarial liability and the actuarial value of assets is the unfunded actuarial liability (UAL).

The portion of the actuarial liability in excess of plan assets, the UAL, is amortized to develop an additional cost that is added to each year's employer's normal cost. Under this funding method, actuarial gains and losses are directly reflected in the size of the unfunded actuarial liability. The amortization method is described below.

## 2. Amortization Method

The actuarially determined contribution (ADC) is determined as the sum of (a) the employer's normal cost rate, (b) the administrative expense rate, and (c) the UAL rate. Based on the Board's funding benchmark, the UAL rate represents the amount necessary to amortize the UAL (excluding liabilities due to the ERIP) over a 30-year open period as a level dollar amount. If the City were to contribute based on the ADC, the unfunded liability would not be expected to be fully paid off based on the open 30-year amortization period.

In addition, the City is paying for the Early Retirement Incentive Program in 15 level annual amounts. The first contribution for the ERIP was made in December 2021. The City is currently paying the remaining 14 contributions by July 31 of each future year.

## 3. Actuarial Value of Assets

The actuarial value of assets recognizes a portion of the difference between the actual market value of assets and the expected market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between actual market value and expected market value. In addition, the actuarial value of assets cannot be less than 80%, or more than 120%, of the market value of assets.

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

### 4. Valuation Software

Cheiron utilizes ProVal, an actuarial valuation software leased from Winklevoss Technologies (WinTech) to calculate the liabilities, normal costs, and projected benefit payments. We have relied on WinTech as the developer of ProVal. We have reviewed ProVal and have a basic understanding of it and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in assumptions or output of ProVal that would affect this actuarial valuation.

### 5. Projection Model

This report includes deterministic projections of future contributions, assets, and funded status for the purpose of assisting the Board and CRS staff with the management of the System. We have used Cheiron's *P-Scan* model to develop these projections. The model is also used to stress test the impact of volatile asset returns over the projection period.

The *P-Scan* projection uses standard roll-forward techniques that implicitly assume a stable active population. Changes in the demographic characteristics of the active population will lead to different results.

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

### 1. Membership

All employees of the City of Cincinnati shall be members of the System except for the following:

- Members of the Police and Fireman's Disability and Pension Fund of Ohio,
- Elected City officials,
- Employees for whom the City contributes to the Ohio Public Employees Retirement System,
- Members of the faculties, teaching staffs, research staffs, and administrative staff of the University of Cincinnati appointed to positions covered by the Teachers Insurance and Annuity Association Social Security Plan,
- Persons becoming employees after June 1, 1961, who are employed in any of the following employment classifications: bricklayer, carpenter, carpenter foreman, cement finisher, electrician, electrician foreman, painter, painter foreman, plasterer, plumber, sign painter, steamfitter and pipefitter, tinsmith, or composition roofer,
- Persons hired as police recruits who are not currently enrolled as a member of the System prior to their date of hire, and
- Current contributing members of the Ohio School Employees Retirement System (SERS) or the Ohio State Teachers Retirement System (STRS) who are hired by the City on a seasonal, temporary, or part-time basis.

Members of the System are divided into the following groups:

| Group | Criteria |
|---|---|
| A, B | Any member who has retired prior to 7/1/2011 |
| C | Any member who, as of June 30, 2011, was an active or deferred vested member and had either:<br>a) Completed at least 30 years of service, or<br>b) Reached age 60 and completed at least 5 years of service |
| D | Any active member who, between July 1, 2011 and December 31, 2013:<br>1) Either<br>a) Completed at least 30 years of service, or<br>b) Reached age 60 and completed at least 5 years of service; and<br>2) Retired prior to January 1, 2014 |
| E | Any active member who:<br>1) Between July 1, 2011 and December 31, 2013 either:<br>a) Completed at least 30 years of service, or<br>b) Reached age 60 and completed at least 5 years of service; and<br>2) Retires on or after January 1, 2014 |
| F | Any active member whose most recent membership enrollment date was prior to January 1, 2010 and who is not in groups A through E<br>Any deferred vested member whose most recent membership enrollment date was prior to January 1, 2010, is not in groups A through E, and has at least five years of service prior to the date separated from employment |

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

| Group | Criteria |
|---|---|
| G | Any member whose most recent membership enrollment date is on or after January 1, 2010, or<br>Any member rehired on or after January 1, 2010, who has fewer than five years of service as of June 30, 2011, or<br>Any retiree of the System who is receiving service retirement allowance and is re-employed on or after April 1, 2013 |

Members in the System are further classified as follows:

| Class | Criteria |
|---|---|
| CSA Retiree (CSA participants corresponding to Retirees Class) | Group A and B members and their designated optionees |
| CSA Employee (CSA participants corresponding to Current Employees Class) | Group C, D, E and F members (and their designated optionees) that were vested and employed on July 1, 2011 |
| CMC Employee (Non-CSA participants) | Group E and F members (and their designated optionees) that were either vested or employed on July 1, 2011 and no break in employment service since January 1, 2010 and prior to becoming vested |
| Non-CSA | Group G members and their designated optionees |

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

### 2. Service Retirement Benefit

***Groups A, B, C and D***

| | |
|---|---|
| Normal Retirement Eligibility | Age 60 with 5 years of service or 30 years of service |
| Early Retirement Eligibility | Age 55 with 25 years of service |
| Benefit Formula Multiplier | Members hired prior to July 12, 1998 were given a one-time irrevocable option to choose either the benefit formula using a 2.22% multiplier or the benefit formula using a 2.50% multiplier. For members hired on or after July 12, 1998, benefits are calculated using a 2.50% multiplier |
| Average Highest Compensation | Average of the highest three consecutive years of compensation |
| Years of Service | Years or fractional years of full-time service rendered to the plan sponsor |
| Benefit | a) An annuity which is actuarially equivalent to the accumulated contributions of the member at the time of retirement<br>b) A pension which together with the annuity produces a total annual retirement allowance equal to the product of the applicable benefit formula multiplier, the member's average highest compensation and the number of years of service<br><br>Early Retirement Benefit is actuarially reduced from normal retirement age |

***Group E***

| | |
|---|---|
| Normal Retirement Eligibility | Age 60 with 5 years of service or 30 years of service |
| Early Retirement Eligibility | Age 55 with 25 years of service |

Retirement benefit is composed of as many as three components:

*Part A Benefit*
For service earned through December 31, 2013

*Part B Benefit*
For service earned on and after January 1, 2014 up to a combined (Part A and Part B) 20 years of service

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

| | |
|---|---|
| | *Part C Benefit*<br>For service earned on and after January 1, 2014 in excess of a combined (Part A and Part B) 20 years of service |
| Benefit Formula Multiplier | *Part A Benefit*<br>Members hired prior to July 12, 1998 were given a one-time irrevocable option to choose either the benefit formula using a 2.22% multiplier or the benefit formula using a 2.50% multiplier. For members hired on or after July 12, 1998, benefits are calculated using a 2.50% multiplier<br><br>*Part B Benefit*<br>Members hired prior to July 12, 1998 were given a one-time irrevocable option to choose either the benefit formula using a 2.22% multiplier or the benefit formula using a 2.50% multiplier. For members hired on or after July 12, 1998, benefits are calculated using a 2.50% multiplier<br><br>*Part C Benefit*<br>2.20% multiplier |
| Average Highest Compensation | *Part A Benefit*<br>Average of the highest three consecutive years of compensation<br><br>*Part B Benefit*<br>Average of the highest five consecutive years of compensation<br><br>*Part C Benefit*<br>Average of the highest five consecutive years of compensation |
| Years of Service | Years or fractional years of full-time service rendered to the plan sponsor |

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

| | |
|---|---|
| Benefit | a) An annuity which is actuarially equivalent to the accumulated contributions of the member at the time of retirement<br><br>b) A pension which together with the annuity produces a total annual retirement allowance equal to the sum of Part A, Part B, and Part C benefits each of which is the product of the applicable benefit formula multiplier, the applicable average highest compensation, and the applicable number of years of service<br><br>Early Retirement Benefit is actuarially reduced from normal retirement age |

***Group F***

| | |
|---|---|
| Normal Retirement Eligibility | Age 60 with 5 years of service or 30 years of service |
| Early Retirement Eligibility | Age 55 with 25 years of service |

Retirement benefit is composed of as many as three components:

| | |
|---|---|
| | *Part A Benefit*<br>For service earned through June 30, 2011<br><br>*Part B Benefit*<br>For service earned on and after July 1, 2011 up to a combined (Part A and Part B) 20 years of service<br><br>*Part C Benefit*<br>For service earned on and after July 1, 2011 in excess of a combined (Part A and Part B) 20 years of service |
| Benefit Formula Multiplier | *Part A Benefit*<br>Members hired prior to July 12, 1998 were given a one-time irrevocable option to choose either the benefit formula using a 2.22% multiplier or the benefit formula using a 2.50% multiplier. For members hired on or after July 12, 1998, benefits are calculated using a 2.50% multiplier |

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

| | |
|---|---|
| | *Part B Benefit*<br>Members hired prior to July 12, 1998 were given a one-time irrevocable option to choose either the benefit formula using a 2.22% multiplier or the benefit formula using a 2.50% multiplier. For members hired on or after July 12, 1998, benefits are calculated using a 2.50% multiplier |
| | *Part C Benefit*<br>2.20% multiplier |
| Average Highest Compensation | *Part A Benefit*<br>Average of the highest three consecutive years of compensation |
| | *Part B Benefit*<br>Average of the highest five consecutive years of compensation |
| | *Part C Benefit*<br>Average of the highest five consecutive years of compensation |
| Years of Service | Years or fractional years of full-time service rendered to the plan sponsor |
| Benefit | a) An annuity which is actuarially equivalent to the accumulated contributions of the member at the time of retirement<br>b) A pension which together with the annuity produces a total annual retirement allowance equal to the sum of Part A, Part B, and Part C benefits each of which is the product of the applicable benefit formula multiplier, the applicable average highest compensation, and the applicable number of years of service |
| | Early Retirement Benefit is actuarially reduced from normal retirement age |

***Group G***

| | |
|---|---|
| Normal Retirement Eligibility | Age 67 with 5 years of service or age 62 with 30 years of service |
| Early Retirement Eligibility | Age 57 with 15 years of service |

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

| | |
|---|---|
| Benefit Formula Multiplier | Benefit is calculated using a 2.20% multiplier for all years of service up to 30 years and a 2.00% multiplier for all service in excess of 30 years |
| Average Highest Compensation | Average of the highest five consecutive years of compensation |
| Years of Service | Years or fractional years of full-time service rendered to the plan sponsor |
| Benefit | a) An annuity which is actuarially equivalent to the accumulated contributions of the member at the time of retirement<br>b) A pension which together with the annuity produces a total annual retirement allowance equal to the product of the applicable benefit formula multiplier, the member's average highest compensation and the number of years of service<br><br>Early Retirement Benefit is actuarially reduced from normal retirement age |

***All Groups***

In no event shall the retirement allowance be greater than 90% of a member's average highest compensation.

In no event shall the retirement allowance be greater than that permitted by Section 415 of the Internal Revenue Code.

The average highest compensation used in the calculation of benefits depends on which benefit formula applies to the member. The formula that uses the 2.22% multiplier includes overtime compensation and the lump sum payment for unused vacation and sick pay. The formulas that use all other multipliers do not include overtime or the lump sum payment.

### 3. Disability Retirement Benefit

| | |
|---|---|
| Eligibility | 5 years of service |
| Benefit | 90% of normal retirement benefit at disability date but not less than the smaller of:<br><br>a) 25% of the average highest compensation<br><br>b) 90% of the retirement benefit the member would have become entitled to had he continued in service to normal retirement age without further change in average highest compensation |

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

**4. Deferred Vested Retirement Benefit**

| | |
|---|---|
| Eligibility | 5 years of service |
| Benefit | Normal retirement benefit beginning at normal retirement age |

**5. Pre-retirement Death Benefit**

1) Contributions with interest

2) Survivor Benefits according to the type of survivors if the member has at least 18 months of service

**6. Post-retirement Death Benefit**

1) $5,000 lump sum for Groups A and B

2) If no Joint and Survivor Option is selected, the balance of member contributions not received back in retirement benefit payments prior to death

**7. Optional Forms of Benefit**

1) Joint and 100% Survivor Payment
2) Joint and 50% Survivor Payment
3) 66 2/3% Joint and Survivor Payment
4) 80% Joint and Survivor Payment

**8. Cost-of-Living Adjustments (COLA)**

| | |
|---|---|
| Groups A and B | 3% simple COLA based on the member's benefit on January 1, 2016 including all previously granted COLAs. Effective January 1, 2016, the COLA will be suspended for a 3-year period<br><br>In the 3rd year of the COLA suspension (calendar year 2018), members will receive a one-time payment that is the lesser of 3% of their base pension benefit or $1,000. This payment will be made on January 1, or the anniversary date of the member's retirement according to when the member normally receives a COLA |
| Groups C, D, E, F and G | 3% simple COLA based on the initial gross monthly benefit with a 3-year delay following each member's date of retirement |
| Poverty Exception | Any member of the Retirees Class or Current Employees |

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

Class who retired or retires with at least 5 years of service and whose household income is below 150% of federal poverty guidelines will receive a 3% compounding COLA until such time income exceeds 150% of federal poverty guidelines, at which time the member will receive a 3% simple COLA

**9. Contributions**

| | |
|---|---|
| Members | Each member, commencing January 1, 1978, contributes at a rate of 7.0% of the salary used to compute retirement benefits until retirement. Beginning January 1, 2010, the employee contribution rate was increased 0.5% per year over 4 years to reach 9.0% of pay. The CSA establishes that the contribution rate for members shall not exceed 9.0% of pay for the term of the agreement |
| Employers | The sponsoring employer makes annual contributions based on members' salaries so that, when members become eligible for benefits, reserves will have been accumulated to provide the pension and other benefits payable by the plan on account of creditable service |

**10. Deferred Retirement Option Plan (DROP)**

| | |
|---|---|
| Eligibility | Current Employees Class members with at least 30 years of service |
| Maximum Participation Period | 5 years |
| Minimum Participation Period | Participation in DROP for less than 2 years results in forfeiture of all interest earnings credited to the member's DROP account |
| Benefit | Monthly pension benefit calculated as if the eligible member actually retired on their DROP effective date, including any adjustments for an assigned optionee. The monthly pension benefit will be contributed to the member's DROP account in the CRS Pension Trust and paid out as a lump sum upon termination from the DROP |
| Employee Contributions | Members continue to contribute 9.0% of pay while participating in DROP. 75% of the contribution is credited to the member's DROP account and the remaining 25% of the contribution is paid to the CRS Pension Trust to offset the costs of administering the DROP |

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

| | |
|---|---|
| Employer Contributions | Employer contributions to the CRS Pension Trust continue to apply in the same manner as for other actively employed members who are not participating in the DROP. Employer contributions are not credited to the member's DROP account |
| Interest | DROP account balances are credited each month at a rate equal to the 10-year U.S. Treasury Note Business Day Series adjusted quarterly with a cap of 5% but not less than 0% |

**11. Changes Since Last Valuation**

None

## APPENDIX D – GLOSSARY OF TERMS

1. **Actuarial Assumptions**

   Assumptions as to the occurrence of future events affecting pension costs, such as mortality, withdrawal, disability, and retirement; changes in compensation; inflation; rates of investment earnings, and asset appreciation or depreciation; and other relevant items.

2. **Actuarial Cost Method**

   A procedure for determining the Actuarial Present Value of pension plan benefits and expenses and for developing an allocation of such value to each year of service, usually in the form of a Normal Cost and an Actuarial Liability.

3. **Actuarial Gain/(Loss)**

   A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

4. **Actuarial Liability**

   The portion of the Actuarial Present Value of Projected Benefits will not be paid by future Normal Costs. It represents the value of the past Normal Costs with interest to the valuation date.

5. **Actuarial Present Value (Present Value)**

   The value as of a given date of a future amount or series of payments. The Actuarial Present Value discounts the payments to the given date at the assumed investment return and includes the probability of the payment being made. As a simple example: assume you owe $100 to a friend one year from now. Also, assume there is a 1% probability of your friend dying over the next year, in which case you will not be obligated to pay him. If the assumed investment return is 10%, the actuarial present value is:

| Amount | | Probability of Payment | | 1/(1+Investment Return) | | |
|---|---|---|---|---|---|---|
| $100 | x | (1 - .01) | x | 1/(1+.1) | = | $90 |

6. **Actuarial Valuation**

   The determination, as of a specified date, of the Normal Cost, Actuarial Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

## APPENDIX D – GLOSSARY OF TERMS

7. **Actuarial Value of Assets**

   The value of cash, investments, and other property belonging to a pension plan as used by the actuary for the purpose of an Actuarial Valuation. The purpose of an Actuarial Value of Assets is to smooth out fluctuations in market values. This way long-term costs are not distorted by short-term fluctuations in the market.

8. **Actuarially Equivalent**

   Of equal Actuarial Present Value, determined as of a given date with each value based on the same set of Actuarial Assumptions.

9. **Amortization Payment**

   The portion of the pension plan contribution which is designed to pay interest and principal on the Unfunded Actuarial Liability in order to pay for that liability in a given number of years.

10. **Entry Age Normal Cost Method**

    A method under which the Actuarial Liability is calculated as the Actuarial Present Value of the Projected Benefits allocated to periods prior to the valuation year.

11. **Funded Ratio**

    The ratio of the Actuarial Value of Assets to the Actuarial Liabilities.

12. **Investment Return Assumption**

    The assumed interest rate used for projecting dollar related values in the future.

13. **Mortality Table**

    A set of percentages which estimate the probability of death at a particular point in time. Typically, the rates are annual and based on age and sex.

14. **Normal Cost**

    That portion of the Actuarial Present Value of pension plan benefits and expenses, which is allocated to a valuation year by the Actuarial Cost Method.

## APPENDIX D – GLOSSARY OF TERMS

### 15. Projected Benefits

Those pension plan benefit amounts which are expected to be paid in the future under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and increases in future compensation and service credits.

### 16. Unfunded Actuarial Liability

The excess of the Actuarial Liability over the Actuarial Value of Assets.

CHEIRON

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# City of Cincinnati

## Other Postemployment Benefits Actuarial Valuation Report as of December 31, 2022

**Produced by Cheiron**

**May 2023**

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May 1, 2023

Board of Trustees
Cincinnati Retirement System
801 Plum Street, Suite 328
Cincinnati, Ohio 45202

Dear Members of the Board:

As requested, we have performed an actuarial valuation of the post-employment benefits provided by the Retirement System for Employees of the City of Cincinnati (CRS) as of December 31, 2022. The following report contains our findings and disclosures required by the Governmental Accounting Standards Board (GASB) standards. This is the third valuation of the Plan performed by Cheiron. Valuation results shown for valuations prior to 2018 were derived from the prior actuary's report.

The purpose of this report is to present the annual actuarial valuation of the City of Cincinnati Postemployment Benefit Plan. This report is for the use of the City and its auditors in preparing financial reports in accordance with applicable law and accounting requirements. Any other user of this report is not an intended user and is considered a third party.

The results of this valuation rely on future plan experience conforming to the underlying assumptions and methods outlined in this report. Future results may differ significantly from the current results presented in this report due to such factors as the following: Plan experience differing from that anticipated by the assumptions, changes in assumptions, and changes in Plan provisions or applicable law. The potential impact of changes in Medicare from the Inflation Reduction Act has not been reflected in this valuation. Actuarial computations are calculated based on our understanding of GASB 74/75 and are for purposes of fulfilling employer funding requirements. Determinations for purposes other than meeting employer funding requirements may be significantly different from the results in this report. Additional accounting disclosures for the fiscal year ending June 30, 2023 related to GASB Statements 74 and 75 will be provided in a separate report.

Appendix A describes the Participant Data. Appendix B outlines Assumptions and Methods used in calculating the figures throughout the report. Appendix C contains our understanding of the substantive Plan provisions based on the information provided by the City.

In preparing our report, we relied without audit, on information (some oral and some written) supplied by Plan Administrators. This information includes, but is not limited to, the Plan provisions, employee data, and financial information. The demographic assumptions used in this report were based on the City's actuary's experience study adopted March 23, 2023. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

This actuarial valuation reflects a roll forward valuation in which claims and premiums were trended from the December 31, 2021 valuation. The census was updated based on the December 31, 2022 actual participants.

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we collectively meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This actuarial valuation report was prepared for the City of Cincinnati for the purposes described herein and for the use by the Plan Auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

Sincerely,
Cheiron

Margaret Tempkin, FSA, EA, MAAA
Principal Consulting Actuary

Gaelle Gravot, FSA, MAAA
Principal Consulting Actuary

## SECTION I – VALUATION SUMMARY

The City of Cincinnati has engaged Cheiron to provide an analysis of its post-employment benefit liabilities as of December 31, 2022. The primary purposes of performing this actuarial valuation are to:

- Estimate the Actuarially Determined Contribution (ADC) and the Actuarial Liability (AL) of the retiree health benefits using GASB 74 and 75 methodology,
- Provide disclosures for financial statements, and
- Provide projections for the ADC, Net OPEB Liability (NOL), and actuarial liabilities.

We have determined costs, liabilities, and trends for the substantive plan using actuarial assumptions and methods that we consider reasonable.

## GASB's OPEB Requirements

GASB's Statement 74 refers to the financial reporting for post-employment benefit plans other than pension plans, and Statement 75 refers to the employer accounting for these plans. Statement 74 is generally applicable where an entity has a separate trust or fund for OPEB benefits. We understand that the City of Cincinnati has a trust used to fund future OPEB obligations.

Statement 75 requires the employer to book the actuarial cost (net of employee, retiree, and their dependents' contributions) of the Plan as an expense on its financial statements. Additional disclosures required by GASB 74 and 75 include a description of the substantive plan, summary of significant accounting policies (which we have not included in this report), contributions, and a statement of funding progress, along with the methods and assumptions used for these disclosures.

The GASB 74 and 75 valuation sections are provided in a separate report.

## Funding Policy

For the purpose of this valuation, the ADC is calculated as the normal cost determined under the Entry Age Normal actuarial cost method, plus an open 30-year, level dollar amortization of the Unfunded Actuarial Liability, plus 0.25% of total payroll for administrative expenses. This report determines the ADC for the FYE June 30, 2024.

## SECTION I – VALUATION SUMMARY

Table I-1 below summarizes the December 31, 2022 and December 31, 2021 actuarial valuation results.

| Table I-1<br>Summary of Valuation Results | | | | |
|---|---|---|---|---|
| **Valuation Date** | | **December 31, 2021** | | **December 31, 2022** |
| Discount Rate | | 7.50% | | 7.50% |
| Actuarial Liability (AL) | $ | 362,353,468 | $ | 363,450,123 |
| Actuarial Value of Assets | | 525,773,721 | | 532,169,108 |
| **Unfunded actuarial liability (UAL)** | **$** | **(163,420,253)** | **$** | **(168,718,985)** |
| Funded Ratio (AVA/AL) | | 145.10% | | 146.42% |
| Market Value of Assets | $ | 573,939,000 | $ | 500,041,000 |
| Funded Ratio (MVA/AL) | | 158.39% | | 137.58% |
| **Fiscal Year Ending** | | **June 30, 2023** | | **June 30, 2024** |
| Actuarially Determined Contribution | $ | 0 | $ | 0 |
| **Calendar Year** | | **2022** | | **2023** |
| Actual/Expected Net Benefit Payments | | 24,670,000 | | 28,714,315 |

The Actuarial Liability increased from $362.4 million to $363.5 million this year. In addition to the expected increase in liability of $0.7 million due to normal cost, benefit payments, and interest, the Plan experienced other changes in liability attributable to a ($4.1) million decrease due to the population changes and a $4.5 million increase due to the change in assumptions from the pension experience study adopted in March 2023.

During the year ending December 31, 2022, the Plan's assets lost ($90.8) million on a market value basis. The return on market asset value was -8.67%, compared to the assumed return of 7.50%. The Plan's asset smoothing technique recognizes only a portion of the gains and losses for each year, and the return on the actuarial asset value was 6.17%. This return was below the assumed rate of return of 7.50% and resulted in an actuarial loss on investments for the Plan.

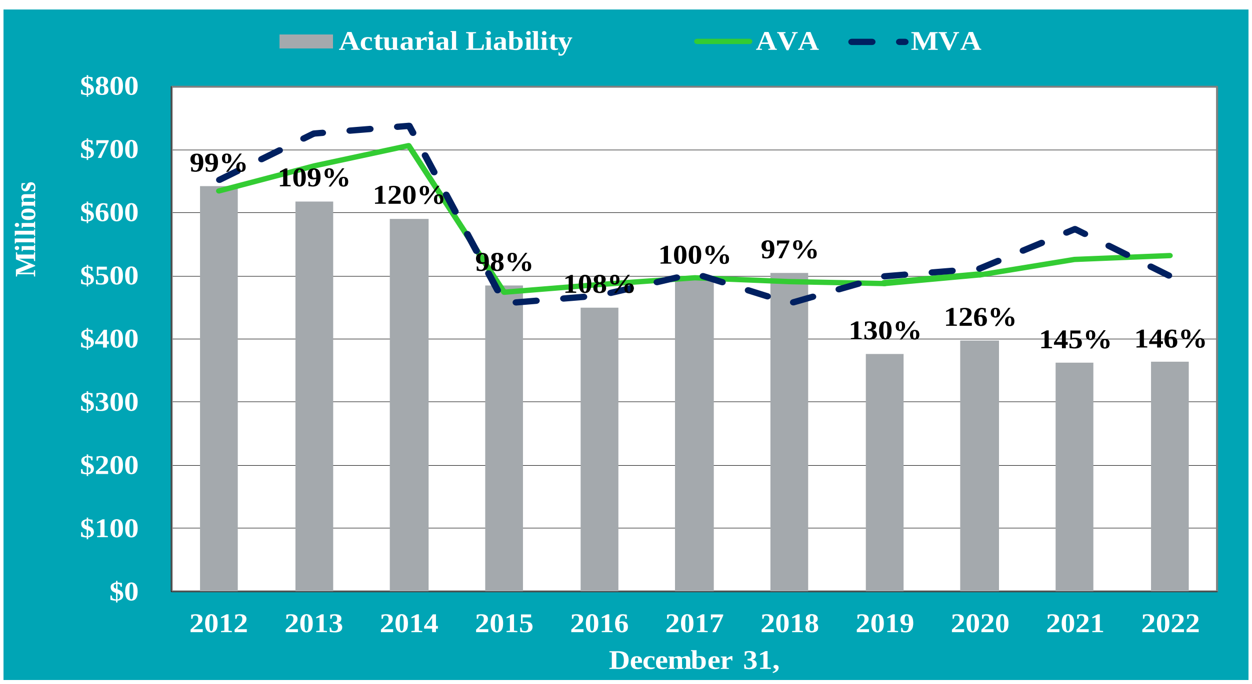
**SECTION I – VALUATION SUMMARY**

## Historical Trends

This chart shows the historical trend of assets and the Actuarial Liability for the City's OPEB Plan. The historical actuarial liabilities shown below are based on the funding valuation report for the Plan and not the actuarial liabilities developed under GASB 74/75. Cheiron performed valuations starting with 2018.

The grey bars represent the Actuarial Liability used to determine the Actuarially Determined Contribution (ADC). The liabilities prior to 2018 were based on actuarial reports produced by the prior actuary. In 2016, the Plan was closed to members hired after December 31, 2015. In 2019, the Plan adopted a fully insured Medicare Advantage Plan as of January 1, 2020, dropping the liability by $127 million. In 2021, the liability decreased again due to favorable claims experience.

The Market Value of Assets is represented by the dark blue dotted line and the Actuarial Value of Assets is represented by the green solid line. The Actuarial Value of Assets (AVA) is developed by smoothing five years of investment returns, as seen on page 5. The percentages above the bars represent the funded ratio based on the AVA. The funded percentage increased to 146% as of January 1, 2023 due to the smoothed Actuarial Value of Assets, experience gains and the assumption losses.



**SECTION II – ASSETS**

## Assets

The Plan's last valuation of liabilities was performed as of December 31, 2021. Table II-1 below shows the reconciliation of assets for the current and prior fiscal years. This section reconciles the assets of December 31, 2022 that were used to develop the FYE 2024 ADC.

**Table II-1**
**Changes in Market Value of Assets**

| | December 31, 2021 | December 31, 2022 |
|---|---|---|
| **Market Value of Assets - as of beginning of Fiscal Year** | **$511,980,000** | **$573,939,000** |
| **Additions** | | |
| Employer Contributions | $ 0 | $ 0 |
| Participant Contributions | 0 | 0 |
| Total contributions | $ 0 | $ 0 |
| Investment Return | | |
| Net Realized Appreciation and Unrealized Appreciation | 86,219,000 | (47,013,000) |
| Interest and Dividends | 2,576,000 | N/A |
| Partnership Income | 2,650,000 | N/A |
| Other Income | 9,000 | N/A |
| Total income from investment activities | $ 91,454,000 | $ (47,013,000) |
| Investment Expenses | (1,504,000) | (1,634,000) |
| Total Investment Return | $ 89,950,000 | $ (48,647,000) |
| **Deductions** | | |
| Benefit Payments Made | $ 27,525,000 | $ 24,670,000 |
| Administrative Expenses | 466,000 | 581,000 |
| Total Deductions | $ 27,991,000 | $ 25,251,000 |
| **Total** | | |
| Net Increase (Decrease) | $ 61,959,000 | $ (73,898,000) |
| **Market Value of Assets - as of end of Fiscal Year** | **$ 573,939,000** | **$500,041,000** |
| Market Return for Period | 18.06% | -8.67% |

## SECTION II – ASSETS

# Actuarial Value of Assets

The Actuarial Value of Assets is the current market value, adjusted by a five-year smoothing of gains and losses on a market value basis. Each year's gain or loss is determined as the difference between the actual market return and the expected market return using the assumed rate of investment return. The actuarial value is adjusted to remain within 20% of the market value. Table II-2 below illustrates the calculation of the market value gains and losses.

**Table II-2**
**Development of Unrecognized Gain/(Loss) on Investments**
**as of December 31, FYE**

| | Fiscal Year Ending 12/31/2018 | Fiscal Year Ending 12/31/2019 | Fiscal Year Ending * 12/31/2020 | Fiscal Year Ending 12/31/2021 | Fiscal Year Ending 12/31/2022 |
|---|---|---|---|---|---|
| **1. Market Value of Assets as of December 31, Beginning of Fiscal Year** | **$ 504,394,000** | **$ 457,249,000** | **$ 500,122,000** | **$ 511,980,000** | **$ 573,939,000** |
| Fiscal Year Cash Flow | | | | | |
| 2. Employer Contributions for the Plan Year Ending December 31, FYE | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| 3. Participant Contributions for the Plan Year Ending December 31, FYE | 0 | 0 | 0 | 0 | 0 |
| 4. Benefit Payments through December 31, FYE | (27,450,000) | (29,253,000) | (26,731,000) | (27,525,000) | (24,670,000) |
| 5. Administrative Expenses through December 31, FYE | (399,000) | (440,000) | (478,000) | (466,000) | (581,000) |
| 6. Net Cash Flow | $ (27,849,000) | $ (29,693,000) | $ (27,209,000) | $ (27,991,000) | $ (25,251,000) |
| Investment Performance | | | | | |
| 7. Interest of 7.50% on Market Value of Assets to December 31, FYE | $ 37,829,550 | $ 34,293,675 | $ 37,509,225 | $ 38,398,500 | $ 43,045,425 |
| 8. Interest on employer contributions assuming received at the end year to December 31, FYE | 0 | 0 | 0 | 0 | 0 |
| 9. Interest on participant contributions assuming received uniformly throughout the year to December 31, FYE | 0 | 0 | 0 | 0 | 0 |
| 10. Interest on benefit payments assuming payments made uniformly throughout the year to December 31, FYE | (1,029,375) | (1,096,988) | (1,002,413) | (1,032,188) | (925,125) |
| 11. Interest on administrative expenses assuming payments made uniformly throughout the year to December 31, FYE | (14,963) | (16,500) | (17,925) | (17,475) | (21,788) |
| 12. Expected Investment Performance (7 + 8 + 9 + 10 + 11) | $ 36,785,212 | $ 33,180,187 | $ 36,488,887 | $ 37,348,837 | $ 42,098,512 |
| 13. Expected Market Value of Assets as of December 31, FYE (1 + 6 + 12) | $ 513,330,212 | $ 460,736,187 | $ 509,401,887 | $ 521,337,837 | $ 590,786,512 |
| 14. **Market Value of Assets as of December 31, FYE** | **$ 457,249,000** | **$ 500,123,000** | **$ 511,980,000** | **$ 573,939,000** | **$ 500,041,000** |
| 15. Market Value of Assets Investment Gain/(Loss) (14 - 13) | $ (56,081,212) | $ 39,386,813 | $ 2,578,113 | $ 52,601,163 | $ (90,745,512) |

* The January 1, 2020 asset value was adjusted by $1,000 to account for rounding in the pension/OPEB asset allocation.

## SECTION II – ASSETS

Table II-3 illustrates the calculation of Actuarial Value of Assets for the December 31, 2022 valuation.

**Table II-3**
**Development of Actuarial Value of Assets**
**as of December 31, 2022**

| | | | | |
|---|---|---|---|---|
| **1. Actuarial Value of Assets as of December 31, 2021** | | | **$** | **525,773,721** |
| 2. Net Cash Flow (Contributions - Benefit Payments - Expenses) | | | $ | (25,251,000) |
| 3. Expected Investment Performance | | | $ | 42,098,512 |
| Recognition of gain/(loss) | | Initial Unrecognized Gain/(Loss) | | Recognition |
| 4. 20% of gain/(loss) as of December 31, 2018 | $ | (56,081,212) | $ | (11,216,242) |
| 5. 20% of gain/(loss) as of December 31, 2019 | $ | 39,386,813 | $ | 7,877,363 |
| 6. 20% of gain/(loss) as of December 31, 2020 | $ | 2,578,113 | $ | 515,623 |
| 7. 20% of gain/(loss) as of December 31, 2021 | $ | 52,601,163 | $ | 10,520,233 |
| 8. 20% of gain/(loss) as of December 31, 2022 | $ | (90,745,512) | $ | (18,149,102) |
| 9. Recognized gain/(loss) as of December 31, 2022 (sum of 4 - 8) | | | $ | (10,452,125) |
| **10. Actuarial Value of Assets as of December 31, 2022 (1 + 2 + 3 + 9)** | | | **$** | **532,169,108** |
| Market Value of Assets as of December 31, 2022 | | | $ | 500,041,000 |
| **Corridor for Actuarial Value of Assets** | | | | |
| 80% of Market Value | | | $ | 400,032,800 |
| 120% of Market Value | | | $ | 600,049,200 |
| Actuarial Value of Assets as of December 31, 2022 | | | $ | 532,169,108 |
| Actuarial Value as a percent of Market Value | | | | 106.4% |
| Return on Actuarial Value of Asset | | | | 6.17% |

## SECTION III – VALUATION RESULTS

This section of the report calculates the current and expected future contribution requirements under the City's funding policy. This valuation calculates the contribution for the fiscal year 2023-24.

The liabilities presented in this section are based on the assumption of an ongoing plan and would not be appropriate for measuring the settlement value of Plan obligations.

Information about the actuarial liabilities of the Plan as of December 31, 2022 and December 31, 2021 is shown in Table III-1 below.

**Table III-1**
**Actuarial Liability**

| Valuation Date | December 31, 2021 | December 31, 2022 |
|---|---|---|
| Discount Rate | 7.50% | 7.50% |
| **Actuarial Liability** | | |
| Current active members | $ 103,004,022 | $ 102,663,410 |
| Current retirees, beneficiaries, and dependents | 259,349,446 | 260,786,713 |
| **Total Actuarial Liability (AL)** | **$ 362,353,468** | **$ 363,450,123** |
| Actuarial Value of Assets (AVA) | 525,773,721 | 532,169,108 |
| **Unfunded Actuarial Liability (UAL)** | **$ (163,420,253)** | **$ (168,718,985)** |
| Funded Ratio (AVA/AL) | 145.10% | 146.42% |
| Market Value of Assets (MVA) | $ 573,939,000 | $ 500,041,000 |
| **Unfunded Actuarial Liability (UAL)** | **$ (211,585,532)** | **$ (136,590,877)** |
| Funded Ratio (MVA/AL) | 158.39% | 137.58% |
| **Normal Cost** | **$ 2,609,568** | **$ 2,562,945** |

Starting June 30, 2017, the City's GASB reporting requirements fall under GASB 74 and 75, and the unfunded liability is booked on the balance sheet. The above liability is shown for funding purposes only; the GASB 74 and 75 liability will be a roll-forward of this liability to the fiscal year ending June 30, 2023 and will be provided in a separate report.

## SECTION III – VALUATION RESULTS

Table III-2 below shows the Actuarial Liability(AL) for actives and retirees, the normal cost, the Actuarial Asset Value, and the resulting Unfunded Actuarial Liability (UAL) as of December 31, 2022 and December 31, 2021 at a 7.5% discount rate. Note that this development of the AL and UAL are based on the measurement date of December 31, 2022, and will be used in the determination of the Actuarially Determined Contribution for the 2023-24 fiscal year.

**Table III-2**
**Actuarial Liability, Normal Cost & Actuarial Asset Value as of**

| | December 31, 2021 | December 31, 2022 |
|---|---|---|
| **Actuarial Liability** | | |
| Active Liability | | |
| -Active Employees | $ 77,121,307 | $ 79,124,005 |
| -DROP Participants | 25,882,715 | 23,539,405 |
| **Total Active Liability** | **$ 103,004,022** | **$ 102,663,410** |
| Inactive Liability | | |
| -Retired Employees | $ 236,070,963 | $ 237,834,537 |
| -Beneficiary | 15,090,207 | 15,492,312 |
| -Disabled | 4,056,624 | 3,721,061 |
| -Deferred Beneficiaries | 2,083,785 | 2,068,384 |
| -Deferred Members | 2,047,867 | 1,670,419 |
| **Total Inactive Liability** | **$ 259,349,446** | **$ 260,786,713** |
| **Total Liability** | **$ 362,353,468** | **$ 363,450,123** |
| Actuarial Value of Assets | 525,773,721 | 532,169,108 |
| **Unfunded Actuarial Liability (UAL)** | **$ (163,420,253)** | **$ (168,718,985)** |
| **Normal Cost** | **$ 2,609,568** | **$ 2,562,945** |

## Reconciliation

Table III-3 provides an estimate of the major factors contributing to the change in liability since the last actuarial valuation report (AVR).

| Table III-3<br>Reconciliation of Actuarial Liability | | |
|---|---|---|
| **Actuarial Liability at December 31, 2021** | **$** | **362,353,468** |
| Normal Cost | | 2,609,568 |
| Expected Benefits paid throughout the year | | (28,243,266) |
| Interest | | 26,313,105 |
| Expected Actuarial Liability at December 31, 2022 | $ | 363,032,875 |
| **Actuarial Liability at December 31, 2022** | | **363,450,123** |
| Gain or (Loss) | $ | (417,248) |
| Gain or (Loss) due to: | | |
| Benefit changes | $ | - |
| Census changes | | 4,073,513 |
| Demographic Assumption changes | | (4,490,761) |
| Health Care Claims and Trend changes | | - |
| Total changes | $ | (417,248) |

Below is a brief description of each of the above components:

- *Benefits Changes* refers to changes in the Plan or eligibilities. There were no benefit changes since the prior valuation.
- *Census Changes* refers to differences in the valuation census due to members terminating, retiring, dying, and becoming disabled at rates different than expected.
- *Demographic Assumption changes* refer to the changes in demographic assumptions. There were changes in DROP election, retirement, termination, disability and mortality due to the 2023 experience study for the pension plan.
- *Healthcare Claims and Trend changes* refer to the change in projected healthcare cost vs. actual healthcare cost. There were no healthcare assumption changes this year.

## Actuarially Determined Contribution (ADC)

The ADC consists of three parts: (1) the *normal cost*, which represents the annual cost attributable to service earned in a given year, (2) the assumed administrative expense, and (3) the amortization of the UAL. In Table III-4 below, we show the computed FYE 2023 and FYE 2024 ADC based on a 7.5% assumed discount rate (based on a long-term view of returns on the asset allocation).

**Table III-4**
**Calculation of Actuarially Determined Contribution (ADC)**

| For Fiscal Year Ending | | 6/30/2023 | | 6/30/2024 |
|---|---|---|---|---|
| Normal Cost | $ | 2,610,000 | $ | 2,563,000 |
| Administrative Expenses [1] | | 514,000 | | 548,000 |
| Amortization of UAL | | (13,346,000) | | (13,778,000) |
| **Total ADC (not less than $0)** | **$** | **0** | **$** | **0** |
| **Calendar Year** | | **2022** | | **2023** |
| Covered Payroll | $ | 139,123,528 | $ | 136,460,218 |
| ADC as a percentage of pay | | 0.00% | | 0.00% |
| Total Compensation | $ | 205,675,789 | $ | 219,049,414 |
| ADC as a percentage of compensation | | 0.00% | | 0.00% |
| Actual/Expected Net Benefit Payments | $ | 24,670,000 | $ | 28,714,315 |

[1] *Administrative Expense of 0.25% of total compensation.*

## SECTION III – VALUATION RESULTS

# Projected Cash Flow

The following table presents a 30-year payout projection of employer payments for the City's OPEB Plan. Market Value of Assets are assumed to earn 7.50% returns.

**Table III-5**
**Projected Cash Flow**
**Assuming 7.5% Discount Rate**

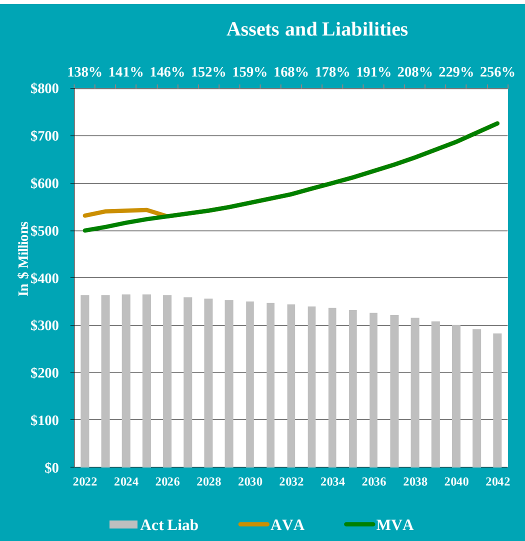
| Fiscal Year Ending December 31, | Expected Market Value Assets | Expected Employer Benefit Payments | Expected Actuarial Liability | Fiscal Year Ending June 30, | Expected Actuarial Determined Contribution |
|---|---|---|---|---|---|
| 2023 | $ 507,772,000 | $ 28,714,000 | $ 363,555,000 | 2023 | $ 0 |
| 2024 | 515,840,000 | 28,950,000 | 364,628,000 | 2024 | 0 |
| 2025 | 524,784,000 | 28,689,000 | 365,713,000 | 2025 | 0 |
| 2026 | 530,429,000 | 32,517,000 | 363,017,000 | 2026 | 0 |
| 2027 | 536,349,000 | 32,661,000 | 359,948,000 | 2027 | 0 |
| 2028 | 542,601,000 | 32,769,000 | 356,503,000 | 2028 | 0 |
| 2029 | 549,892,000 | 32,220,000 | 353,297,000 | 2029 | 0 |
| 2030 | 558,027,000 | 31,933,000 | 350,074,000 | 2030 | 0 |
| 2031 | 567,068,000 | 31,649,000 | 346,823,000 | 2031 | 0 |
| 2032 | 577,102,000 | 31,344,000 | 343,554,000 | 2032 | 0 |
| 2033 | 588,239,000 | 31,028,000 | 340,281,000 | 2033 | 0 |
| 2034 | 599,988,000 | 31,216,000 | 336,453,000 | 2034 | 0 |
| 2035 | 612,285,000 | 31,510,000 | 331,907,000 | 2035 | 0 |
| 2036 | 625,410,000 | 31,598,000 | 326,828,000 | 2036 | 0 |
| 2037 | 639,636,000 | 31,516,000 | 321,381,000 | 2037 | 0 |
| 2038 | 654,657,000 | 31,778,000 | 315,175,000 | 2038 | 0 |
| 2039 | 670,627,000 | 31,950,000 | 308,218,000 | 2039 | 0 |
| 2040 | 687,657,000 | 32,082,000 | 300,470,000 | 2040 | 0 |
| 2041 | 706,147,000 | 31,906,000 | 292,181,000 | 2041 | 0 |
| 2042 | 726,357,000 | 31,585,000 | 283,506,000 | 2042 | 0 |
| 2043 | 748,317,000 | 31,360,000 | 274,328,000 | 2043 | 0 |
| 2044 | 772,100,000 | 31,189,000 | 264,574,000 | 2044 | 0 |
| 2045 | 797,987,000 | 30,881,000 | 254,327,000 | 2045 | 0 |
| 2046 | 826,191,000 | 30,518,000 | 243,597,000 | 2046 | 0 |
| 2047 | 856,928,000 | 30,116,000 | 232,375,000 | 2047 | 0 |

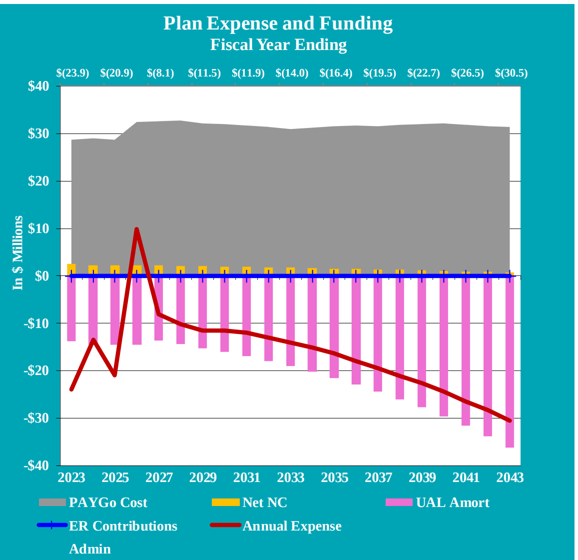
# Future Outlook

<u>Base Line Projections</u>

The two graphs on this page show the expected progress of the Plan over the next 15 years assuming the Plan's assets earn 7.50% on their market value and that all other assumptions are met. The graph titled "Assets and Liaibilities" shows the projected funded status over the next 15 years. The Plan is projected to be in a surplus position. The graph titled "Plan Expense and Funding" shows the expected net benefit stream as well as the expected expense for GASB 75, if all assumptions are met. The Plan's exected net benefit payments are relatively stable over the entire period. The bump in benefit payments in 2025 represents the current DROP participants assumed to retire in 2025.

| Calendar Year | |
|---|---|
| 2023 | 7.50% |
| 2024 | 7.50% |
| 2025 | 7.50% |
| 2026 | 7.50% |
| 2027 | 7.50% |
| 2028 | 7.50% |
| 2029 | 7.50% |
| 2030 | 7.50% |
| 2031 | 7.50% |
| 2032 | 7.50% |
| 2033 | 7.50% |
| 2034 | 7.50% |
| 2035 | 7.50% |
| 2036 | 7.50% |
| 2037 | 7.50% |
| 2038 | 7.50% |
| 2039 | 7.50% |
| 2040 | 7.50% |
| 2041 | 7.50% |
| 2042 | 7.50% |
| Avg | 7.50% |



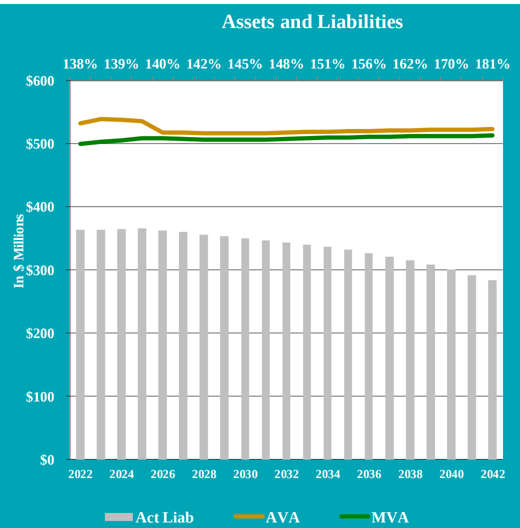



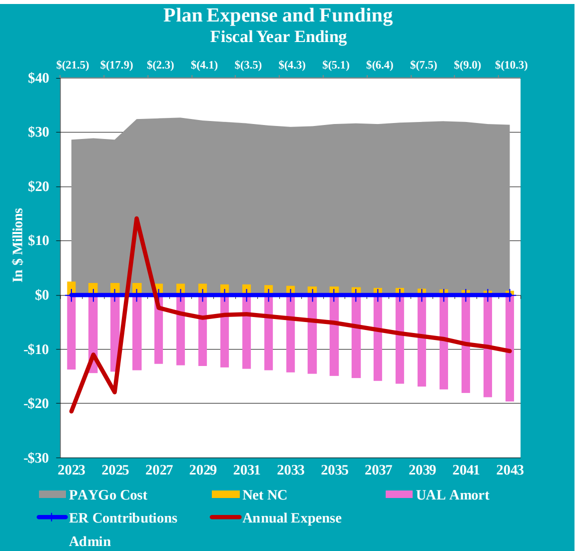
## SECTION III – VALUATION RESULTS

<u>6.5% Return Projections</u>

The two graphs on this page show the expected progress of the Plan over the next 15 years assuming the Plan's assets earn 6.50% on their market value and a discount rate of 6.50% assuming all other assumptions are met. The graph titled "Assets and Liaibilities" shows the projected funded status over the next 15 years. The Plan is projected to be in a less surplus position than the 7.50% projections. The projection of the Plan's funded status is highly driven by the investment returns. The graph titled "Plan Expense and Funding" shows the expected net benefit stream as well as the expected expense for GASB 75, if all other assumptions are met. The Plan's exected net benefit payments are relatively stable over the entire period. The bump in benefit payments in 2025, represent the current DROP participants assumed to retire in 2025.

| Calendar Year | |
|---|---|
| 2023 | 6.50% |
| 2024 | 6.50% |
| 2025 | 6.50% |
| 2026 | 6.50% |
| 2027 | 6.50% |
| 2028 | 6.50% |
| 2029 | 6.50% |
| 2030 | 6.50% |
| 2031 | 6.50% |
| 2032 | 6.50% |
| 2033 | 6.50% |
| 2034 | 6.50% |
| 2035 | 6.50% |
| 2036 | 6.50% |
| 2037 | 6.50% |
| 2038 | 6.50% |
| 2039 | 6.50% |
| 2040 | 6.50% |
| 2041 | 6.50% |
| 2042 | 6.50% |
| Avg | 6.50% |



## SECTION IV – SENSITIVITY OF RESULTS

The liabilities produced in this report are sensitive to the assumptions used. Table IV-1 shows liabilities under the actuarial funding scenario using a 1% increase and a decrease in healthcare trend rates to provide some measure of sensitivity. In all cases, we are using the full actuarial funding assumption of 7.50% for the discount rate.

**Table IV-1**
**Health Care Trend Rate Sensitivity**

| **Health Care Trend Rates** | **-1%** | **Base** | **+1%** |
|---|---|---|---|
| **Actuarial Liability** | | | |
| Current active members | $ 88,013,172 | $ 102,663,410 | $ 120,737,203 |
| Current retirees, beneficiaries, and dependents | 240,149,755 | 260,786,713 | 284,389,669 |
| Total Actuarial Liability (AL) | $ 328,162,927 | $ 363,450,123 | $ 405,126,872 |
| Actuarial Value of Assets | 532,169,108 | 532,169,108 | 532,169,108 |
| Unfunded Actuarial Liability (UAL) | $ (204,006,181) | $ (168,718,985) | $ (127,042,236) |
| Normal Cost | $ 2,099,250 | $ 2,562,945 | $ 3,162,397 |

Table IV-2 shows liabilities under the actuarial funding scenario using a 1% increase and a decrease in discount rates to provide some measure of sensitivity.

**Table IV-2**
**Discount Rate Sensitivity**

| **Discount Rate** | **6.50%** | **7.50%** | **8.50%** |
|---|---|---|---|
| **Actuarial Liability** | | | |
| Current active members | $ 117,884,829 | $ 102,663,410 | $ 89,999,301 |
| Current retirees, beneficiaries, and dependents | 284,168,624 | 260,786,713 | 240,652,521 |
| Total Actuarial Liability (AL) | $ 402,053,453 | $ 363,450,123 | $ 330,651,822 |
| Actuarial Value of Assets | 532,169,108 | 532,169,108 | 532,169,108 |
| Unfunded Actuarial Liability (UAL) | $ (130,115,655) | $ (168,718,985) | $ (201,517,286) |
| Normal Cost | $ 3,316,483 | $ 2,562,945 | $ 1,989,186 |

## SECTION V – FINANCIAL STATEMENT DISCLOSURES

The Government Finance Officers Association (GFOA) maintains a checklist of items to be included in the Annual Comprehensive Financial Report (ACFR) in order to receive recognition for excellence in financial reporting. In accordance with those statements, we have prepared the following disclosures.

## Schedule of Funding Progress

The schedule of funding progress compares the assets used for funding purposes to the comparable liabilities to determine how well the Plan is funded and how this status has changed over the past several years. The Actuarial Liability is compared to the Actuarial Value of Assets to determine the funding ratio. The Actuarial Liability under GASB is determined assuming that the Plan is ongoing and participants continue to terminate employment, retire, etc., in accordance with the actuarial assumptions.

Years prior to 2018 were taken from the prior actuary's report.

**Table V-1**
**Schedule of Funding Progress for Fiscal Year Ending December 31,**
**($ in Thousands)**

| Valuation Year | Actuarial Asset Value (a) | Actuarial Liability (b) | Unfunded Actuarial Liability (c )=(b-a) | Funded Ratio (d)=(a)/(b) | Covered Payroll* (e ) | UAL as a Percentage of Covered Payroll (f) = (c )/(e ) |
|---|---|---|---|---|---|---|
| 2012 | 634,173 | 641,876 | 7,703 | 98.8% | 167,148 | 5% |
| 2013 | 674,709 | 618,508 | (56,201) | 109.1% | 163,477 | (34)% |
| 2014 | 706,959 | 590,902 | (116,057) | 119.6% | 164,575 | (71)% |
| 2015 | 474,746 | 484,833 | 10,087 | 97.9% | 174,963 | 6% |
| 2016 | 485,845 | 450,026 | (35,819) | 108.0% | 168,785 | (21)% |
| 2017 | 497,233 | 496,188 | (1,045) | 100.2% | 172,156 | (1)% |
| 2018 | 490,887 | 504,757 | 13,870 | 97.3% | 168,420 | 8% |
| 2019 | 488,000 | 376,561 | (111,439) | 129.6% | 164,684 | (68)% |
| 2020 | 502,358 | 397,836 | (104,522) | 126.3% | 140,671 | (74)% |
| 2021 | 525,774 | 362,353 | (163,420) | 145.1% | 139,124 | (117)% |
| 2022 | 532,169 | 363,450 | (168,719) | 146.4% | 136,460 | (124)% |

* Covered Payroll represents the payroll of those members eligible for postretirement healthcare benefits. The Plan was closed December 31, 2015.

## Historical Asset Information

The historical asset information, Table V-2, shows the dollar-weighted rate of return for each of the Actuarial Value of Assets and the Market Value of Assets.

Years prior to 2018 were taken from the prior actuary's report.

**Table V-2**
**Historical Asset Information**
**($ in Thousands)**

| | Actuarial Value of Assets | | Market Value of Assets | |
|---|---|---|---|---|
| Valuation Year | Amount | Dollar-weighted Rate of Return | Amount | Dollar-weighted Rate of Return |
| 2009 | $746,029 | 0.40% | $621,691 | 19.13% |
| 2010 | 726,412 | 2.43% | 657,319 | 13.10% |
| 2011 | 668,392 | -1.65% | 616,464 | 0.87% |
| 2012 | 634,173 | 0.15% | 652,864 | 11.95% |
| 2013 | 674,709 | 12.02% | 726,098 | 16.81% |
| 2014 | 706,959 | 10.01% | 737,722 | 6.38% |
| 2015 | 474,746 | 7.39% | 456,918 | -0.11% |
| 2016 | 485,845 | 8.67% | 468,973 | 9.24% |
| 2017 | 497,233 | 8.88% | 504,394 | 14.51% |
| 2018 | 490,887 | 4.45% | 457,249 | -3.93% |
| 2019 | 488,000 | 5.63% | 500,123 | 16.40% |
| 2020 | 502,358 | 8.76% | 511,981 | 8.03% |
| 2021 | 525,774 | 10.53% | 573,939 | 18.06% |
| 2022 | 532,169 | 6.17% | 500,041 | -8.67% |

## APPENDIX A – MEMBERSHIP INFORMATION

The census data used to develop the Actuarial Liability (AL) as of December 31, 2022 and December 31, 2021 was provided by the Cincinnati Retirement System staff.

| Group | December 31, 2021 | December 31, 2022 |
|---|---|---|
| **Active Participants** | | |
| Active Full Time Employees | 1,673 | 1,593 |
| Active Part Time Employees | 210 | 163 |
| Active DROP Employees | 185 | 157 |
| Total | 2,068 | 1,913 |
| Covered Payroll | $139,123,528 | $136,460,218 |
| Total Compensation | $205,675,789 | $219,049,414 |
| Active Full Time Employees - ineligible for retiree health benefits | 1,194 | 1,361 |
| Active Part Time Employees - ineligible for retiree health benefits | 344 | 436 |
| Total - ineligible for retiree health benefits | 1,538 | 1,797 |
| **Inactive Participants** | | |
| Number of retirees and surviving spouses currently receiving retiree health benefits | 3,511 | 3,409 |
| Spouses currently receiving retiree health benefits | 1,398 | 1,353 |
| Total | 4,909 | 4,762 |
| Retired members and surviving spouses not currently receiving retiree health benefits but may elect coverage in the future | 351 | 354 |
| Total | 5,260 | 5,116 |
| Terminated vested members eligible for retiree health benefits | 20 | 18 |
| Terminated vested members not eligible for retiree health benefits | 219 | 257 |
| Total | 5,499 | 5,391 |

Note: In addition, there are 7,321 inactive participants hired before December 31, 2015 who are former employees with an employee account balance in the pension plan, but are assumed not to be vested. No retiree health benefit liability is assumed for these individuals.

## APPENDIX A – MEMBERSHIP INFORMATION

### Active Member Data as of December 31, 2022

**COUNTS BY AGE/SERVICE**

| | Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0 to 4 | 5 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30 to 34 | 35 to 39 | 40 & up | Total |
| Under 25 | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 25 to 29 | 27 | 12 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| 30 to 34 | 11 | 49 | 27 | 4 | 0 | 0 | 0 | 0 | 0 | 91 |
| 35 to 39 | 9 | 74 | 80 | 37 | 3 | 0 | 0 | 0 | 0 | 203 |
| 40 to 44 | 12 | 60 | 76 | 43 | 36 | 2 | 0 | 0 | 0 | 229 |
| 45 to 49 | 8 | 54 | 71 | 62 | 54 | 30 | 1 | 0 | 0 | 280 |
| 50 to 54 | 5 | 34 | 65 | 70 | 77 | 52 | 10 | 0 | 0 | 313 |
| 55 to 59 | 11 | 45 | 49 | 51 | 68 | 74 | 16 | 2 | 0 | 316 |
| 60 to 64 | 2 | 27 | 25 | 37 | 34 | 32 | 14 | 2 | 0 | 173 |
| 65 to 69 | 6 | 17 | 10 | 8 | 11 | 10 | 1 | 3 | 0 | 66 |
| 70 & up | 14 | 3 | 2 | 5 | 3 | 3 | 0 | 1 | 2 | 33 |
| Total | 114 | 377 | 407 | 317 | 286 | 203 | 42 | 8 | 2 | 1,756 |

**AVERAGE SALARY BY AGE/SERVICE**

| | Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0 to 4 | 5 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30 to 34 | 35 to 39 | 40 & up | Total |
| Under 25 | * | * | | | | | | | | 16,699 |
| 25 to 29 | 24,062 | * | * | | | | | | | 34,663 |
| 30 to 34 | * | 63,743 | 67,375 | * | | | | | | 60,813 |
| 35 to 39 | * | 65,260 | 75,414 | 79,105 | * | | | | | 69,317 |
| 40 to 44 | * | 64,000 | 78,229 | 75,829 | 77,402 | * | | | | 71,428 |
| 45 to 49 | * | 64,788 | 82,067 | 78,445 | 82,883 | 85,139 | | | | 76,937 |
| 50 to 54 | * | 55,020 | 76,876 | 79,004 | 80,346 | 80,046 | * | | | 76,236 |
| 55 to 59 | * | 64,998 | 74,198 | 68,019 | 77,313 | 84,713 | * | * | * | 73,391 |
| 60 to 64 | * | 50,875 | 63,741 | 73,360 | 75,605 | 70,466 | * | * | * | 67,808 |
| 65 to 69 | * | * | * | * | * | * | * | * | | 64,450 |
| 70 & up | * | * | * | * | * | * | * | * | * | 36,509 |
| Total | $ 19,504 | $ 61,695 | $ 76,048 | $ 75,119 | $ 78,261 | $ 80,712 | $ 84,647 | $ 79,538 | $ 73,284 | $ 70,246 |

## APPENDIX A – MEMBERSHIP INFORMATION

### Inactive Member Data as of December 31, 2022

| Health Care Plan | Under 65 | Over 65 | Total |
|---|---|---|---|
| Secure Plan | 3 | 56 | 59 |
| Select Plan | 368 | 3,420 | 3,788 |
| Model Plan | 678 | 231 | 909 |
| Total | 1,049 | 3,707 | 4,756 |

| Attained Age | Number of Retirees/ Survivng Spouses | Number of Covered Spouses |
|---|---|---|
| < 40 | 0 | 0 |
| 40 - 44 | 0 | 0 |
| 45 - 49 | 2 | 10 |
| 50 - 54 | 30 | 31 |
| 55 - 59 | 182 | 141 |
| 60 - 64 | 438 | 217 |
| 65 - 69 | 618 | 317 |
| 70 - 74 | 783 | 317 |
| 75 - 79 | 580 | 191 |
| 80 - 84 | 371 | 85 |
| 85 - 89 | 240 | 35 |
| 90 - 94 | 109 | 5 |
| 95 - 99 | 49 | 4 |
| 100+ | 7 | 0 |
| Total | **3,409** | **1,353** |

| Reconciliation of Members with Medical Coverage | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Active | DROP | Disabled | Survivors | Beneficiaries | Retired | Term Vested | Total |
| **December 31, 2021** | **1,883** | **185** | **105** | **39** | **419** | **2,948** | **20** | **5,599** |
| Retirement those that Elect Medical Coverage | (17) | (44) | | (5) | 6 | 62 | (2) | 0 |
| DROP | (16) | 16 | | | | | 0 | 0 |
| Termination, Eligible Medical Coverage | (1) | 0 | | | | | 1 | 0 |
| Termination/Retirement, No Medical Coverage | (111) | 0 | | | | | | (111) |
| Deaths / Drop Coverage | 0 | 0 | (16) | (3) | (39) | (151) | 0 | (209) |
| Data Changes | 18 | 0 | 0 | 6 | 23 | 15 | (1) | 61 |
| **December 31, 2022** | **1,756** | **157** | **89** | **37** | **409** | **2,874** | **18** | **5,340** |

Please note that the above data was used to project the figures in this report.

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions for this valuation were selected based on recent experience and expectations for the future. The current year's assumptions were detailed in the Cheiron's Pension experience study adopted March 23, 2023. We have reviewed the reports and letters of our Pension colleagues and believe the assumptions to be reasonable. The 7.50% discount rate used for valuation purposes as of December 31, 2022, is prescribed under paragraph 29 of the CSA. The actuarial cost method, the asset valuation method, and the amortization method used for funding purposes were selected by CRS during prior periods.

### Economic Assumptions

1. **Discount Rate** 7.50% per year

2. **Expected Return on Assets** 7.50% per year, net of investment expenses

3. **Administrative Expenses** 0.25% of total payroll

4. **Inflation Assumption** CPI: 2.75% per year
Medical CPI: 3.25% per year

5. **Salary Increase Rate** Salary increases are assumed to vary by service.
Representative rates are shown as follows:

| Service | Annual Increase |
|---|---|
| 0 | 8.75% |
| 5 | 6.25 |
| 10 | 4.75 |
| 15 | 4.25 |
| 21+ | 3.75 |

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

### 6. Per Person Health Care Cost Trends

Annual per capita health care claims costs are expected to increase in future years as a result of medical inflation, utilization, demographic changes, leverage in the plan design, and improvements in technology adjusted for any implicit and/or explicit cost containment features. Initial health care cost trend rates were selected based on an analysis of national average health trend surveys specific to similarly structured plans for both Medicare ineligible and Medicare-eligible participants. The assumed rates of increases in expected retiree health care claims costs and contributions vary by year, retiree health plan, and payment age, as shown in the table below:

Trends for current actives, non-Medicare retirees, and Part A only Medicare retirees:

| Calendar Year | All Plans Payment Age < 65 | Non-Model Plans Payment Age 65+ | Model Plans Payment Age 65+ |
|---|---|---|---|
| 2021 | 8.00% | 4.97% | 4.84% |
| 2022 | 7.75% | 7.27% | 7.30% |
| 2023 | 7.50% | 6.56% | 6.55% |
| 2024 | 7.00% | 6.57% | 6.58% |
| 2025 | 6.66% | 6.30% | 6.31% |
| 2026 | 6.32% | 6.04% | 6.04% |
| 2027 | 5.99% | 5.77% | 5.78% |
| 2028 | 5.65% | 5.51% | 5.51% |
| 2029 | 5.31% | 5.24% | 5.24% |
| 2030 | 4.97% | 4.97% | 4.97% |
| 2031 | 4.97% | 4.97% | 4.97% |
| 2032 | 4.63% | 4.63% | 4.63% |
| 2033 | 4.45% | 4.45% | 4.45% |
| 2034 | 4.35% | 4.35% | 4.35% |
| 2035 | 4.28% | 4.28% | 4.28% |
| 2036+ | 4.00% | 4.00% | 4.00% |

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Trends for current Medicare retirees:

| Calendar Year | Non-Model Plans Payment Age 65+ | Model Payment Age 65+ | Medicare A Only Payment Age 65+ |
|---|---|---|---|
| 2021 | 8.00% | 5.55% | 5.54% |
| 2022 | 7.75% | 7.14% | 7.14% |
| 2023 | 7.50% | 6.57% | 6.57% |
| 2024 | 7.00% | 6.52% | 6.52% |
| 2025 | 6.66% | 6.26% | 6.26% |
| 2026 | 6.32% | 6.00% | 6.01% |
| 2027 | 5.99% | 5.75% | 5.75% |
| 2028 | 5.65% | 5.49% | 5.49% |
| 2029 | 5.31% | 5.23% | 5.23% |
| 2030 | 4.97% | 4.97% | 4.97% |
| 2031 | 4.97% | 4.97% | 4.97% |
| 2032 | 4.63% | 4.63% | 4.63% |
| 2033 | 4.45% | 4.45% | 4.45% |
| 2034 | 4.35% | 4.35% | 4.35% |
| 2035 | 4.28% | 4.28% | 4.28% |
| 2036+ | 4.00% | 4.00% | 4.00% |

Trends for retiree contributions:

| Calendar Year | All Plans Payment Age < 65 | Non-Model Plans Payment Age 65+ | Model Plans Payment Age 65+ |
|---|---|---|---|
| 2021 | 8.00% | 4.97% | 5.15% |
| 2022 | 7.75% | 7.27% | 7.23% |
| 2023 | 7.50% | 6.56% | 6.56% |
| 2024 | 7.00% | 6.57% | 6.55% |
| 2025 | 6.66% | 6.30% | 6.29% |
| 2026 | 6.32% | 6.04% | 6.03% |
| 2027 | 5.99% | 5.77% | 5.76% |
| 2028 | 5.65% | 5.51% | 5.50% |
| 2029 | 5.31% | 5.24% | 5.24% |
| 2030 | 4.97% | 4.97% | 4.97% |
| 2031 | 4.97% | 4.97% | 4.97% |
| 2032 | 4.63% | 4.63% | 4.63% |
| 2033 | 4.45% | 4.46% | 4.46% |
| 2034 | 4.35% | 4.35% | 4.35% |
| 2035 | 4.28% | 4.28% | 4.28% |
| 2036+ | 4.00% | 4.00% | 4.00% |

### 7. Changes Since the Last Valuation

Salary Increase Rate has been updated to reflect the 2023 experience study change.

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

## Demographic Assumptions

### 1. Retirement Rates

Retirement rates for each group vary by age and service with the City. Sample rates are shown in the tables below.

| Annual Rate of Retirement Groups C, D, E, and F | | | | |
|---|---|---|---|---|
| Age | 5 Years of Service | 6-24 Years of Service | 25-28 Years of Service | 29-31+ Years of Service |
| 45-54 | | | | 60.0% |
| 55-56 | | | 6.0% | 60.0 |
| 57 | | | 6.0 | 70.0 |
| 58 | | | 6.0 | 80.0 |
| 59 | | | 10.0 | 80.0 |
| 60 | 12.5% | 12.5% | 12.5 | 60.0 |
| 61 | 12.5 | 12.5 | 12.5 | 40.0 |
| 62-63 | 12.5 | 12.5 | 12.5 | 50.0 |
| 64 | 12.5 | 12.5 | 12.5 | 60.0 |
| 65 | 12.5 | 20.0 | 20.0 | 80.0 |
| 66 | 12.5 | 12.5 | 12.5 | 80.0 |
| 67 | 12.5 | 35.0 | 35.0 | 80.0 |
| 68-69 | 12.5 | 20.0 | 20.0 | 80.0 |
| 70 | 100.0 | 100.0 | 100.0 | 100.0 |

| Annual Rate of Retirement Group G | | | | | |
|---|---|---|---|---|---|
| Age | 5 Years of Service | 6-14 Years of Service | 15-28 Years of Service | 29-30 Years of Service | 31+ Years of Service |
| 57-58 | | | 6.0% | 6.0% | 6.0% |
| 59-61 | | | 10.0 | 10.0 | 10.0 |
| 62-63 | | | 10.0 | 60.0 | 50.0 |
| 64 | | | 10.0 | 70.0 | 60.0 |
| 65-66 | | | 10.0 | 80.0 | 80.0 |
| 67 | 12.5% | 35.0% | 35.0 | 60.0 | 80.0 |
| 68-69 | 12.5 | 20.0 | 20.0 | 80.0 | 80.0 |
| 70 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

### 2. Rates of Withdrawal

Withdrawal rates for each group vary by service with the City. Sample rates are shown in the tables below.

| Annual Rate of Withdrawal | |
|---|---|
| Years of Service | Rate of Withdrawal |
| <1 | 15.00% |
| 1 | 10.00 |
| 2 | 8.00 |
| 3 | 7.00 |
| 4 | 6.50 |
| 5 | 6.00 |
| 6 | 5.00 |
| 7 | 4.00 |
| 8 | 3.00 |
| 9-14 | 2.50 |
| 15+ | 2.00 |

### 3. Rates of Disability

Disability rates for each group vary by age. Sample rates are shown in the table below.

| Age | Annual Rate of Disability* |
|---|---|
| 20 | 0.0025% |
| 25 | 0.0050 |
| 30 | 0.0075 |
| 35 | 0.0125 |
| 40 | 0.0225 |
| 45 | 0.0375 |
| 50 | 0.0675 |
| 55 | 0.1050 |
| 60 | 0.1250 |
| 65 | 0.1250 |

* *Rates are 0% when a member is eligible for normal retirement.*

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

### 4. Rates of Mortality

*Preretirement Mortality:* PUB-2010 General Employees Amount-weighted Mortality table with fully generational projected mortality improvements using MP-2021.

*Postretirement Mortality:* PUB-2010 General Retirees Amount-weighted Mortality table with fully generational projected mortality improvements using MP-2021.

*Disabled Mortality:* PUB-2010 General Disabled Retirees Amount-weighted Mortality table with fully generational projected mortality improvements using MP-2021.

### 5. DROP Participation

30% of eligible CSA Employee members eligible for DROP benefits are assumed to decline participation, and 70% are assumed to elect participation. Those electing to participate are assumed to remain in the DROP for three years.

### 6. Vested Withdrawal

60% of vested members who terminate elect to leave their contributions in the Plan in order to be eligible for a benefit at their normal retirement date, while the remaining 40% elect to withdraw their contributions.

### 7. Spousal Coverage

Actual census data, payment form elections, and current health care plan elections for spouses of current retirees were used. For spouses of eligible future retirees, a 100% spouse coverage election rate is assumed for those members choosing a joint & survivor payment form, and a 15% spouse coverage election rate is assumed for those members selecting a single-life annuity payment form. Under a joint & survivor payment form, retiree health benefits are available until the death of the last annuitant.

### 8. Dependent Age

For current retirees, the actual spouse date of birth was used when available. For future retirees, husbands are assumed to be three years older than wives.

### 9. Health Plan Administrative Expenses

Health plan administrative expenses are included in the per capita claims costs.

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

### 10. Percent of Members Electing Coverage

Actual census data and current Plan elections provided by CRS were used for those currently receiving retiree health benefits. Group 1 members who retired prior to September 1, 2007, and currently qualify for the Secure Plan, are assumed to re-qualify in all future years. All current participants not qualifying for the Secure Plan are covered either by the Select Plan or the Model Plan. Current participants are assumed to maintain their current retiree health benefits coverage until they are no longer eligible. The active members of Group C with at least 15 years of creditable service shall be entitled to retiree health benefits under the Select Plan as Group 1 members. All other eligible future retirees electing retiree health benefits are assumed to be covered by the Model Plan. 95% of eligible future retirees in Group 1 are assumed to elect retiree health benefits. Eligible future retirees in Group 2 are required to pay the portion of their cost as determined by the point system, so retiree health benefit election rates are assumed to reduce as the level of cost-sharing increases. The point system is based upon the sum of the member's full years of service and the member's age at separation from service. The assumed contribution rates and rates of participation for Group 1 and Group 2 members are as follows:

| Group | Pre-65 Retirement | Post-64 Retirement | Select Plan | Model Plan |
|---|---|---|---|---|
| Group 1 | 95% | 95% | 5% | 10% |
| Group 2 with 90+ Points | 90% grading to 70% over 20 years | 75% | 5% | 10% |
| Group 2 with 80 – 89 Points | 90% grading to 70% over 20 years | 75% | 25% | 25% |
| Group 2 with 70 – 79 Points | 50% grading to 25% over 20 years | 25% | 50% | 50% |

Note these assumptions are based on our 2022 analysis of election percentage.

It is assumed that 100% of eligible future disabled retirees will elect retiree health benefits.

### 11. Percent Electing Medical Expense Reimbursement Program (MERP)

Based upon current participation in the MERP, 0% of current and future retiree health benefits participants are assumed to elect the MERP. As credible experience for MERP participation is not yet available, the assumed rate of participation is an estimate and actual results may be materially different. As such, this assumption will need to be reviewed as credible experience evolves.

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

**12. New Retiree Listing**

Members who have newly retired but have not been completely processed for benefits were assumed to elected post-retirement medical. For those in Pension Group C, we have assumed they elect the Select Plan while all others elect the Model Plan.

**13. Changes Since the Last Valuation**

Retirement rates, disability rates and rates of withdrawal have been updated to reflect the 2023 experience study adopted by the Board on March 23, 2023.

Mortality tables were changed from RP-2014 with mortality improvement scale MP-2017 to PUB-2010 with mortality improvement scale MP-2021, per the 2023 experience study.

Drop Participation was increased from 40% to 70%, per the 2023 experience study.

## Claim and Expense Assumptions

The claims costs are developed based on claims experience projected to 2022 for the self insured benefits and actual premiums in effect for 2022 for the fully insured ones. Contractual administrative expenses for 2022 are included. The resulting per person per month (PPPM) cost is then adjusted using age curves.

**1. Average Annual Claims and Expense Assumptions & Methodology**

The Calendar Year (CY) 2022 claims costs were developed using actual CY 2020 and CY 2021 Medical and Rx claim experience. Claims were divided by benefit type (i.e., medical vs. Rx) and population category (i.e., non-Medicare eligible (NME) vs Medicare Eligible (ME))for each plan, and standardized to the Select Plan design for the 2021 enrollment. Rx claim costs were defined as Plan paid amounts minus pharmacy rebates. Large claims above $100,000 for Medical were removed from the experience prior to calculating the experience Per Adult Per Month (PAPM) cost.

We calculated the benefit relativity factors of the Select, Model, and Secure plan using the OptumInsight Comprehensive Pricing Tool for NME and OptumInsight Comprehensive Medicare Coordination Model for ME participants. Using the same model, we calculated the change in demographics between the 2020 and 2021 enrollments.

Using the benefit relativity and demographic factors, the experience PAPM costs of each plan and year were adjusted to the Select plan design for the 2021 population. The adjusted experience PAPM costs were then blended using:

- 40% of CY 2019, 10% of CY 2020 and 50% of CY 2021 experience for Medical NME,
- 20%/40%/40% of CY 2019/2020/2021, respectively, for Rx NME,
- 0%/50%/50% of CY 2019/2020/2021, respectively, for Rx ME, and
- 100% CY 2021 for Medical ME (Part A only members).

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Rates were trended to CY 2022 using an 8% annual trend. Large claims were trended separately assuming a 5% annual trend and added to the projected PAPM costs. To convert paid claims into incurred claims, we applied an extra 2.5 months of trend to medical and ½ month of trend to Rx. The CY 2022 projected Rx cost for ME was further adjusted to reflect the expected receivable payments from CMS (Part D Direct subsidy, Federal Reinsurance, Low Income Cost Share subsidy, Low Income Premium subsidy) and PhrMa (Gap Discount). These receivables were projected using CY 2019, 2020, and 2021 experience with payments through March 2022, adjusted for expected reconciliation payments for CY 2021.

Finally, we applied the benefit relativity factors to the Select projected costs PAPM to derive the Model and Secure projected costs PMPM. The PAPM costs for the ME Part A only population are expressed based on the entire ME population and added to the Medicare Advantage (MA) premium rates.

Claims curves were developed using the resulting projected PAPM claims costs, the premium rates for the fully insured MA plans, and our proprietary age curves. The costs of retirees over 65 who are eligible for Medicare Part A and didn’t sign up for Part B are spread across the entire ME population.

No child load was added to the NME pre-65 claims since the associated cost is assumed to be implicitly reflected in the Per Adult Per Month costs.

Expenses were projected for NME vs ME, based on actual CY 2021 expenses provided by CRS, trended to CY 2022 using a 4% trend.

The claim curves on the next page were trended to 2022 using the 2021 trends listed above.

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

| Calendar Year 2022 Average Claim and Expense Assumptions (Future Retirees and Current NME Inactives) | | | | | | |
|---|---|---|---|---|---|---|
| | Select Medicare Eligible | | Model Medicare Eligible | | Secure Medicare Eligible | |
| Age | Male | Female | Male | Female | Male | Female |
| 40 | $5,558 | $8,984 | $5,502 | $8,881 | $0 | $0 |
| 45 | 7,295 | 9,679 | 7,221 | 9,574 | 0 | 0 |
| 50 | 9,461 | 11,229 | 9,365 | 11,107 | 0 | 0 |
| 55 | 12,057 | 13,567 | 11,932 | 13,418 | 0 | 0 |
| 60 | 15,081 | 15,907 | 14,923 | 15,731 | 0 | 0 |
| 64 | 17,809 | 16,629 | 17,621 | 16,451 | 0 | 0 |
| 65 | $2,967 | $2,842 | $3,030 | $2,900 | $2,267 | $2,205 |
| 70 | 3,408 | 3,043 | 3,486 | 3,109 | 2,558 | 2,315 |
| 75 | 3,577 | 3,177 | 3,674 | 3,258 | 2,517 | 2,291 |
| 80 | 3,596 | 3,247 | 3,715 | 3,345 | 2,314 | 2,186 |
| 85 | 3,559 | 3,261 | 3,698 | 3,374 | 2,073 | 2,043 |

| Calendar Year 2022 Average Claim and Expense Assumptions (Current Inactives Medicare A & B Eligible) | | | | | | |
|---|---|---|---|---|---|---|
| | Select Non Medicare Eligible | | Model Non Medicare Eligible | | Secure Non Medicare Eligible | |
| Age | Male | Female | Male | Female | Male | Female |
| 40 | $2,759 | $2,610 | $2,750 | $2,602 | $3,001 | $2,833 |
| 45 | 3,973 | 3,759 | 3,960 | 3,747 | 4,322 | 4,080 |
| 50 | 5,042 | 4,771 | 5,026 | 4,755 | 5,485 | 5,178 |
| 55 | 5,525 | 5,228 | 5,507 | 5,211 | 6,010 | 5,675 |
| 60 | 5,209 | 4,929 | 5,192 | 4,913 | 5,667 | 5,350 |
| 64 | 4,382 | 4,147 | 4,368 | 4,133 | 4,767 | 4,501 |
| 65 | $2,655 | $2,556 | $2,646 | $2,548 | $2,888 | $2,775 |
| 70 | 3,032 | 2,719 | 3,023 | 2,711 | 3,307 | 2,960 |
| 75 | 3,118 | 2,791 | 3,110 | 2,783 | 3,431 | 3,060 |
| 80 | 3,052 | 2,793 | 3,045 | 2,786 | 3,398 | 3,091 |
| 85 | 2,938 | 2,747 | 2,933 | 2,741 | 3,311 | 3,068 |

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

| Calendar Year 2022 Average Claim and Expense Assumptions (Current Inactives Medicare B Only Eligible) | | | | | | |
|---|---|---|---|---|---|---|
| | Select Non Medicare Eligible | | Model Non Medicare Eligible | | Secure Non Medicare Eligible | |
| Age | Male | Female | Male | Female | Male | Female |
| 40 | $6,000 | $5,528 | $6,739 | $6,193 | $5,711 | $5,273 |
| 45 | 8,641 | 7,961 | 9,705 | 8,919 | 8,224 | 7,594 |
| 50 | 10,966 | 10,104 | 12,317 | 11,319 | 10,438 | 9,637 |
| 55 | 12,018 | 11,073 | 13,498 | 12,404 | 11,439 | 10,561 |
| 60 | 11,330 | 10,440 | 12,726 | 11,695 | 10,784 | 9,957 |
| 64 | 9,532 | 8,782 | 10,706 | 9,838 | 9,072 | 8,377 |
| 65 | $5,774 | $5,414 | $6,486 | $6,065 | $5,496 | $5,164 |
| 70 | 6,793 | 5,958 | 7,652 | 6,697 | 6,451 | 5,668 |
| 75 | 7,704 | 6,654 | 8,753 | 7,537 | 7,264 | 6,290 |
| 80 | 8,494 | 7,336 | 9,743 | 8,378 | 7,947 | 6,889 |
| 85 | 9,153 | 7,892 | 10,582 | 9,074 | 8,507 | 7,370 |

### 2. Retiree Health Care Plan Contributions

Assumed adult per capita health care contribution rates were developed for those participants in the Select and Model Plans who are required to contribute a portion of retiree health benefit costs as defined in Schedule C. Contributions were determined to fully fund retiree health benefit costs in 2022 based upon Medicare eligibility status. Rates are based on retiree cost experience, enrollment, and trended based on the assumptions. The following chart details the full (100%) adult per capita contribution assumptions. These amounts include medical, drug, and third-party administrative costs. The rates below are the trended 2023 rates using the trends listed above.

| | Retiree | | Spouse | |
|---|---|---|---|---|
| Health Plan | Payment Age < 65 | Payment Age 65+ | Payment Age < 65 | Payment Age 65+ |
| Secure Plan | $0 | $0 | $0 | $0 |
| Select Plan | $16,867 | $3,751 | $16,867 | $3,751 |
| Model Plan | $16,290 | $3,754 | $16,290 | $3,754 |

As members hired after December 31, 2015 are ineligible to receive retiree health benefits, the contributions assumed for years beyond 2022 are based upon the projected retiree health care costs associated with each projection year's closed group of participants, reflecting the impact of aging and health care inflation.

### 3. Medicare Part D Subsidy

The City offers an EGWP Part D plan to its Medicare retirees; it, therefore, does not participate in the Retiree Drug Subsidy program.

## APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

### 4. Medicare Part B Premium Subsidy

Assumed that Medicare eligible retirees pay the Medicare Part B premiums.

### 5. Medicare Coverage and Eligibility

Retiree health benefit participants age 65 and older who are eligible for premium-free Medicare Part A benefits are assumed to be enrolled in Medicare Part A. For those retiree health benefit participants who are not eligible for premium-free Medicare Part A coverage, CRS is assumed to remain the primary payer. For a portion of the Medicare-eligible group, the premium-free Medicare Part A eligibility status is provided by CRS. As the premium-free Medicare Part A eligibility status is determined from a wide range of sources with varying and, at times, limited content, the premium-free Medicare Part A eligibility status data is incomplete. Adjustments have been made to account for this incompleteness. As the true status of those who are, or will be eligible for premium-free Medicare Part A is uncertain, actual results may be materially different. For all unidentified current retirees, hired prior to April 1, 1986, and not assumed eligible for premium-free Medicare Part A coverage through their spouse, as well as those active employees hired prior to April 1, 1986, 10% are assumed to not qualify for premium-free Medicare Part A coverage. The assumption of 10% is based upon estimates from the current retiree population. 100% of deferred vested members are assumed to obtain the 40 or more quarters of Medicare-covered employment required for premium-free Medicare Part A coverage as a result of their subsequent employment. Retiree health benefit participants age 65 and older are assumed to be enrolled in Medicare Part B.

### 6. Marital and Spouse Assumptions

For participants who are not receiving benefits, 100% of participants are assumed to be married to a spouse of the opposite gender. Husbands are assumed to be three years older than their wives. For participants who are receiving benefits, the actual spouse age is used where available. If relevant spouse information is not available, husbands are assumed to be three years older than their wives.

### 7. Part-Time Employees

On July 1, 1991, the Plan was amended to include part-time employees. Part-time employees hired on or before December 31, 2015, have been included in the valuation.

### 8. Geography

Implicitly assumed to remain the same as current retirees.

### 9. Changes Since the Last Valuation

None.

**APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS**

## Methodology

The Entry Age Normal actuarial cost method is used to determine costs. Under this funding method, a normal cost rate is determined as a level percent of pay for each active Plan member and then summed to produce the total normal cost for the City.

The Actuarial Accrued Liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. It represents the value of the past normal costs with interest to the valuation date. The difference between this liability and funds accumulated as of the same date is referred to as the Unfunded Actuarial Liability.

The portion of the Actuarial Liability in excess of OPEB Trust’s assets is amortized to develop additional costs or savings which is added to each year’s employer normal cost to produce the Actuarial Defined Contribution (ADC). Under this cost method, actuarial gains and losses are directly reflected in the size of the ADC.

The Unfunded Actuarial Liability is amortized over an open 30-year period. The amortization is a level dollar amortization. CY 2022 claims and expenses were developed as described in Appendix B, Claims and Expenses Assumptions section above.

## Actuarial Value of Assets

For purposes of determining the contribution rate to the Plan, we use an Actuarial Value of Assets. The asset adjustment method dampens the volatility in asset values that could occur because of fluctuations in market conditions. Use of an asset smoothing method is consistent with the long-term nature of the actuarial valuation process.

The Actuarial Value of Assets is the current market value, adjusted by a five-year smoothing of gains and losses on a market value basis. Each year’s gain or loss is determined as the difference between the actual market return and the expected market return using the assumed rate of investment return. The actuarial value is adjusted to remain within 20% of the market value.

**APPENDIX C – SUMMARY OF PLAN PROVISIONS**

## Summary of Key Substantive Plan Provisions

**Pension Benefit Eligibility**

All active employees of the City except for the following:

- Members of the Police and Firemen's Disability and Pension Fund of Ohio.
- Elected City officials.
- Employees for whom the City contributes to PERS.
- Persons hired as police recruits who are not currently enrolled as a member of the System prior to their date of hire.
- Current contributing members of the School Employees Retirement System (SERS) or the State Teachers Retirement System (STRS) who are hired by the City on a seasonal, temporary, or part-time basis.

Members of the System are divided into the following groups:

| Group | Criteria |
|---|---|
| **A, B** | Any member who has retired prior to 7/1/2011 |
| **C** | Any member who, as of June 30, 2011, was an active or deferred vested member and had either:<br>a) Completed at least 30 years of service, or<br>b) Reached age 60 and completed at least 5 years of service. |
| **D** | Any active member who, between July 1, 2011 and December 31, 2013:<br>1) Either<br>a) Completed at least 30 years of service, or<br>b) Reached age 60 and completed at least 5 years of service; and<br>2) Retired prior to January 1, 2014. |
| **E** | Any active member who:<br>1) Between July 1, 2011 and December 31, 2013, either:<br>a) Completed at least 30 years of service, or<br>b) Reached age 60 and completed at least 5 years of service; and<br>2) Retires on or after January 1, 2014. |
| **F** | Any active member whose most recent membership enrollment date was prior to January 1, 2010 and who is not in groups A through E.<br><br>Any deferred vested member whose most recent membership enrollment date was prior to January 1, 2010, is not in groups A through E, and has at least five years of service prior to the date they separate from employment. |
| **G** | Any member whose most recent membership enrollment date is on or after January 1, 2010, or<br><br>Any member rehired on or after January 1, 2010, who has fewer than 5 years of service as of June 30, 2011, or<br><br>Any retiree of the System who is receiving a service retirement allowance and is re-employed on or after April 1, 2013. |

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

Members of the System are further classified as:

| Class | Criteria |
|---|---|
| **CSA Retiree**<br><br>(CSA participants corresponding to Retirees Class) | Group A and B members and their designated optionees. |
| **CSA Employee**<br><br>(CSA participants corresponding to Current Employees Class) | Group C, D, E, and F members (and their designated optionees) that were vested and employed on 7/1/2011. |
| **CMC Employee**<br><br>(Non-CSA participants) | Group E and F members (and their designated optionees) that were either vested or employed on 7/1/2011 and no break in employment service since 1/1/2010 and prior to becoming vested. |
| **Non-CSA** | Group G members and their designated optionees. |

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

**Years of Service:** Years or fractional years of full-time service rendered to the Plan Sponsor.

**Normal Retirement:**

Groups A, B, C, D, E, and F:
Age 60 with 5 years of service or 30 years of service.

Group G:
Age 67 with 5 years of service or age 62 with 30 years of service.

**Early Retirement:**

Groups A, B, C, D, E, and F:
Age 55 with 25 years of service.

Group G:
Age 57 with 15 years of service.

**Deferred Retirement Option Plan (DROP):**

Current Employees Class members with at least 30 years of service may participate in the DROP.

**Disability Retirement Eligibility:**

5 years of service.

**Deferred Vested Retirement Eligibility:**

5 years of service.

**Retiree Health Benefits Eligibility:**

Per Ordinance 336-2016 adopted by the City Council on October 26, 2016, employees hired after December 31, 2015, are not eligible to receive retiree health benefits.

Group 1: Those members of Group C or those members hired before January 9, 1997. For those members of Group C or those members who retire under the System prior to January 1, 2016 (including their survivors receiving pension benefits), a minimum of 15 years of service is required. For those members who retire under the System after December 31, 2015 (including their survivors receiving pension benefits), a minimum attained the age of 60 with 20 years of service or 30 years of service regardless of age is required.

Group 2: Those participants hired on or after January 9, 1997. For those members who retire under the System prior to January 1, 2016 (including their survivors receiving pension benefits), a minimum of 15 years of service is required. For those members who retire under the System after December 31, 2015 (including their survivors receiving pension benefits), a minimum attained the age of 60 with 20 years of service or 30 years of service regardless of age is required. Group 2 participants entitled to a deferred retirement allowance are eligible for health benefits upon attainment of the Medicare eligibility age.

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

Deferred Retirement Option Plan (DROP): Eligible Current Employees Class members may effectively retire and freeze their accrual of years of service with the System and defer receipt of retirement benefits, including retiree health benefits, for a period not to exceed five years while continuing City employment. For valuation purposes, current DROP participants are assumed to be active members, receiving health care benefits as an active employee. Service does not accrue while participating in the DROP and retiree health benefits are assumed to begin upon exit from active employment.

Members and Beneficiaries Assumed to be Eligible for Deferred Retiree Health Benefits as of December 31, 2016: Per Ordinance 336-2016 adopted by the City Council on October 26, 2016, members of Group C and their associated beneficiaries are eligible for retiree health benefits under the Select Plan based upon a minimum of 15 years of service. All other eligible members and their associated beneficiaries are eligible for retiree health benefits under the Model Plan based upon a minimum attained age of 60 with 20 years of service or 30 years of service regardless of age.

Dependents: A retiree may elect to cover an eligible spouse and/or eligible dependent children by paying the applicable retiree contribution rate for the specified enrollment tier.

**Retiree Health Benefits**

The System offers health care benefits (medical, prescription drugs, dental, and vision coverage) to eligible retirees, beneficiaries, and their dependents before and during Medicare eligibility.

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, members who retired prior to September 1, 2007, and who establish their annual household income to be less than $30,000, are eligible to receive medical and prescription drug coverage under the Secure Plan. Those members who retired prior to September 1, 2007, who do not qualify for coverage under the Secure Plan may elect medical and prescription drug coverage through either the Select Plan or Model Plan based upon eligibility.

Those members of Group C or those members who retired on or after September 1, 2007 (including those employees who retired under a special incentive plan in 2007) but prior to January 1, 2016, may elect medical and prescription drug coverage through the Select Plan. Those members not eligible for the Secure Plan or the Select Plan may elect coverage under the Model Plan.

**Active Service Death Benefits**

A surviving spouse, eligible dependent child, and orphan receiving survivor pension benefits as a result of death during employment of an eligible active member is eligible to receive retiree health benefits based upon the eligibility and terms applicable to the associated member.

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

### Medicare Part B Premium Reimbursement

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, CRS no longer reimburses the Medicare Part B premiums for retirees and spouses.

### Retiree Contributions

Participants covered by the Secure Plan do not contribute towards the cost of medical and prescription drug coverage. Group 1 participants covered by the Select Plan contribute an amount equal to five percent of the full cost of medical and prescription drug benefits of the retiree group with costs adjusted based upon the Medicare eligibility age (age 65). Group 1 participants covered by the Model Plan contribute an amount equal to ten percent of the full cost of medical and prescription drug benefits of the retiree group with costs adjusted based upon the Medicare eligibility age (age 65). Group 2 participants will pay the portion of the full cost of medical and prescription drug benefits of the coverage option for which they are eligible as determined by the point system.

| | Retiree Contribution as a Percentage of Cost | |
|---|---|---|
| Points | Select Plan | Model Plan |
| 90+ | 5% | 10% |
| 80-89 | 25% | |
| 70-79 | 50% | |

### Dental Benefits

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, all members electing to participate in the dental plan will be required to pay the full cost of dental coverage. As such, it is assumed CRS has no liability under GASB 74 and 75 for dental benefits.

### Vision Benefits

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, all members electing to participate in the vision plan will be required to pay the full cost of vision coverage. As such, it is assumed CRS has no liability under GASB 74 and 75 for vision benefits.

### Changes Since Prior Valuation

None

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

### Summary of 2022 Benefit Plans

Currently, the City of Cincinnati Postretirement Health Fund offers three plans for retired employees. Benefits are payable under the Plan for medical care obtained from the City's health care vendors. Medicare Part A eligible retirees who didn't buy into Part B get the same medical benefits as the non-Medicare retirees.

**City of Cincinnati Non-Medicare Retirees**

| Provider Network: | Anthem BCBS | Anthem BCBS | Anthem BCBS |
|---|---|---|---|
| **In-Network (INN) Benefits** | **Select Plan** | **Model Plan** | **Secure Plan** |
| Deductible (Individual / Family) | $300 / 600 | $500 / 1,000 | $0 / 0 |
| Coinsurance | 20% | 20% | 20% |
| Copays | | | |
| Office Visit (OV)-Primary Care (PCP) | DC | DC | DC |
| OV - Specialist Care Provider (SCP) | DC | DC | DC |
| Urgent Care (UC) | DC | DC | DC |
| Hospital Emergency Room (ER) | DC | DC | DC |
| Outpatient Surgery | DC | DC | DC |
| Hospital Inpatient | DC | DC | DC |
| Out-of-Pocket Max (Individual / Family) | $1,500 / 3,000 | $2,000 / 4,000 | $500 / 1,000 |
| **Out-of-Network (OON) Benefits** | | | |
| Deductible (Individual / Family) | $600 / 1,200 | $1,000 / 2,000 | $0 / 0 |
| Coinsurance | 50% | 50% | 50% |
| Hospital Emergency Room (ER) | INN DC | INN DC | INN DC |
| Out-of-Pocket (OOP) Max (Individ / Family) | $3,000 / 6,000 | $4,000 / 8,000 | $1,000 / 2,000 |
| **Lifetime Maximum** | Unlimited | Unlimited | Unlimited |
| **Annual Maximum** | Unlimited | Unlimited | Unlimited |
| **Prescription Drugs** | Non Medicare Coverage Only | Non Medicare Coverage Only | Non Medicare Coverage Only |
| Retail (30 Days) - Generic/Formulary /Non-Form. Copay | $10 / 20 / 30 | $10 / 20 / 30 | $5 / 15 / 30 |
| Mail Order (90 Days) - Generic/Formulary /Non-Form. Copay | $20 / 40 / 60 | $20 / 40 / 60 | $10 / 30 / 60 |
| Out-of-Pocket Max (Individual / Family) | None | None | $500 |
| **Detail Benefits** | | | |
| Mental Health (MH) / Substance Abuse (SA): | | | |
| - SA Lifetime Visit Limit (Inpatient / Outpatient) | Unlimited | Unlimited | Unlimited |
| - SA Lifetime OOP Maximum | Unlimited | Unlimited | Unlimited |
| - MH Per Year Visit Limit (Inpatient / Outpatient) | Unlimited | Unlimited | Unlimited |
| Home Health (INN / OON): | DC / DC up to 30 visits | DC / DC up to 30 visits | DC / DC up to 30 visits |
| Allergy Care: | DC | DC | DC |
| Rehabilitation (i.e., speech, occup. physical): | DC up to 60 visits | DC up to 60 visits | DC up to 60 visits |
| Chiropractors: | DC | DC | DC |
| Medical Supplies and Equipment: | DC | DC | DC |
| Maternity Care: | DC | DC | DC |
| Skilled Nursing Facility | DC | DC | DC |
| Hearing Aids: | DC | DC | DC |
| Preventive Care: | DC | DC | DC |
| **Medicare Integration:** | Exclusion[2] | Exclusion[2] | Exclusion[2] |

[1] *DC=Deductible and coinsurance applies.*

[2] *Medicare Pays first then the Plan applies the Plan's rules for non-Medicare covered benefits.Only Medicare Eligibles who have not bought into Medicare Part B are covered under the NME plan*

**Vendors**

| | |
|---|---|
| Medical Claims Administrator: | Anthem BCBS |
| Medical Network: | Anthem BCBS |
| Pharmacy Benefit Manager: | CVS / CareMark |
| Stop-Loss Insurer: | N/A |

## APPENDIX C – SUMMARY OF PLAN PROVISIONS

### City of Cincinnati Medicare Advantage Plans - For Medicare Part A&B and Part B only eligibles

| Provider Network: | Anthem BCBS | Anthem BCBS | Anthem BCBS |
|---|---|---|---|
| **In-Network (INN) Benefits** | **Select Plan** | **Model Plan** | **Secure Plan** |
| Deductible (Individual) | $300 | $500 | $0 |
| Coinsurance | 4% | 4% | 4% |
| Copays | | | |
| Office Visit (OV)-Primary Care (PCP) | DC | DC | DC |
| OV - Specialist Care Provider (SCP) | DC | DC | DC |
| Preventive Care: | $0 / C | $0 / C | $0 / C |
| Urgent Care (UC) | DC | DC | DC |
| Hospital Emergency Room (ER) | $50 | $50 | $50 |
| Skilled Nursing Facility (SNF) | $5/day for days 1-20, DC for days 21-100 | $5/day for days 1-20, DC for days 21-100 | $5/day for days 1-20, DC for days 21-100 |
| Outpatient Surgery | DC | DC | DC |
| Hospital Inpatient | DC | DC | DC |
| Home Health (INN / OON): | $0 / DC | $0 / DC | $0 / DC |
| Mental Health (MH) / Substance Abuse (SA): | DC | DC | DC |
| Out-of-Pocket Max (Individual / Family) | $1,500 | $2,000 | $500 |
| **Out-of-Network (OON) Benefits** | | | |
| Deductible (Individual) | Combined with INN | Combined with INN | Combined with INN |
| Coinsurance | 10% | 10% | 10% |
| Hospital Emergency Room (ER) | INN DC | INN DC | INN DC |
| Out-of-Pocket (OOP) Max (Individual) | $3,000 | $4,000 | $1,000 |
| **Lifetime Maximum** | Unlimited | Unlimited | Unlimited |
| **Annual Maximum** | Unlimited | Unlimited | Unlimited |
| **Prescription Drugs** | Medicare Coverage Only | Medicare Coverage Only | Medicare Coverage Only |
| Retail (30 Days) - Generic/Formulary /Non-Form. Copay | $10 / 20 / 30 | $10 / 20 / 30 | $5 / 15 / 30 |
| Mail Order (90 Days) - Generic/Formulary /Non-Form. Copay | $20 / 40 / 60 | $20 / 40 / 60 | $10 / 30 / 60 |
| Out-of-Pocket Max (Individual) | None | None | $500 |

[1] *DC=Deductible and coinsurance applies.*

[2] *C=Coinsurance applies.*

**APPENDIX D – GLOSSARY OF TERMS**

## 1. Actuarial Assumptions

Assumptions as to the occurrence of future events affecting OPEB costs, such as mortality, withdrawal, and retirement; changes in compensation; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; and other relevant items.

## 2. Actuarial Cost Method

A procedure for determining the Actuarial Present Value of OPEB plan benefits and expenses and for developing an allocation of such value to each year of service, usually in the form of a normal cost and an actuarial liability.

## 3. Actuarially Determined Contribution

A target or recommended contribution for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

## 4. Actuarial Gain (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

## 5. Actuarial Liability

The portion of the Actuarial Present Value of projected benefits will not be paid by future normal costs. It represents the value of the past normal costs with interest to the valuation date.

## 6. Actuarial Present Value (Present Value)

The value as of a given date of a future amount or series of payments, the Actuarial Present Value discounts the payments to the given date at the assumed investment return and includes the probability of the payment being made. As a simple example: assume you owe $100 to a friend one year from now. Also, assume there is a 1% probability of your friend dying over the next year, in which case you will not be obligated to pay him. If the assumed investment return is 10%, the Actuarial Present Value is:

| Amount | | Probability of Payment | | 1/ (1+Discount Rate) | | Present Value |
|---|---|---|---|---|---|---|
| $100 | x | (1 - .01) | x | 1/(1+.1) | = | $90 |

**APPENDIX D – GLOSSARY OF TERMS**

## 7. Actuarial Valuation Date

The date as of which an actuarial valuation is performed. This date may be up to 24 months prior to the measurement date and up to 30 months prior to the employer’s reporting date.

## 8. Actuarial Value of Assets

The value of cash, investments, and other property belonging to an OPEB plan as used by the actuary for the purpose of an actuarial valuation. The purpose of an Actuarial Value of Assets is to smooth out fluctuations in market values. This way long-term costs are not distorted by short-term fluctuations in the market.

## 9. Amortization Payment

The portion of the OPEB plan contribution which is designed to pay interest and principal on the Unfunded Actuarial Liability in order to pay for that liability in a given number of years.

## 10. Entry Age Normal Actuarial Cost Method

A method under which the Actuarial Present Value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages.

## 11. Normal Cost

That portion of the Actuarial Present Value of OPEB plan benefits and expenses which is allocated to a valuation year by the actuarial cost method.

## 12. Unfunded Actuarial Liability

The excess of the Actuarial Liability over the Actuarial Value of Assets.

## 13. Funded Percentage

The ratio of the Actuarial Value of Assets to the actuarial liabilities.

## 14. Mortality Table

A set of percentages which estimate the probability of death at a particular point in time. Typically, the rates are annual and based on age and sex.

**APPENDIX D – GLOSSARY OF TERMS**

## 15. Discount Rate

The assumed interest rate used for converting projected dollar-related values to a present value as of the valuation date.

## 16. Medical Trend

The assumed increase in dollar-related values in the future due to the increase in the cost of health care.

## 17. Entry Age Actuarial Cost Method

The actuarial cost method required for GASB 74 and 75 calculations. Under this method, the Actuarial Present Value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this Actuarial Present Value allocated to a valuation year is called the Service Cost. The portion of this Actuarial Present Value not provided for at a valuation date by the actuarial present value of future service costs is called the total OPEB liability.

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