City of Cambridge Retirement System

# January 1, 2025 Interim Actuarial Valuation Results

September 8, 2025 / Kathleen A. Riley, FSA, MAAA, EA / Henry Nearing, FCA, MAAA, EA



Segal

# Financial information

- The rate of return on the market value of assets was 9.12% for the plan year ending December 31, 2024. The return on the actuarial value of assets was 6.46% for the same period. This resulted in an actuarial loss of $11.8 million for the year December 31, 2024 when measured against the assumed rate of return of 7.10%.

- The actuarial value of assets as of December 31, 2024 was $1.97 billion, or 102.2% of the market value of assets of $1.93 billion.

  - As of December 31, 2023, the actuarial value of assets was 104.7% of the market value of assets.

- The actuarial value of assets does not reflect an unrecognized investment loss as of December 31, 2024 of $42.2 million. This investment loss will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent it is not offset by recognition of investment gains derived from future experience.

  - This implies that earning the assumed rate of investment return (net of expenses) on a market value basis will result in investment losses on the actuarial value of assets in the next few years.
  - The projected unfunded actuarial accrued liability in Funding Schedule 1 in this report does not reflect the recognition of deferred investment losses.
  - Funding Schedule 2 is based on the market value of assets and illustrates how the unrecognized investment loss may affect future funding schedules.

# Funding schedules

## Funding schedule adopted with the January 1, 2024 valuation

With the prior valuation, the Board approved a funding schedule that fully funds the System by June 30, 2029 with appropriations that are level through fiscal 2028 and a smaller appropriation in fiscal 2029, if all assumptions are met and there are no changes in the plan of benefits or actuarial assumptions. Because the actual contribution in fiscal 2025 exceeded the required appropriation, the excess will reduce the actual contributions in fiscal 2026 and fiscal 2027.

| (1) Fiscal Year Ended June 30 | (2) Employer Normal Cost | (3) Amortization of Remaining Unfunded Liability | (4) Actuarially Determined Contribution (ADC): (2)+(3) | Actual Payment in Fiscal Year | Excess/ Deficiency for Fiscal Year | (5) Total Unfunded Actuarial Accrued Liability at Beginning of Fiscal Year | (6) Percent Increase in Actuarially Determined Contribution |
|---|---|---|---|---|---|---|---|
| 2025 | $16,470,634 | $46,167,815 | $62,638,449 | $78,816,418 | $16,177,969 | $173,964,458 | - - |
| 2026 | 17,032,768 | 45,605,681 | 62,638,449 | 53,902,346 | -8,736,103 | 119,543,600 | 0.00% |
| 2027 | 17,613,912 | 45,024,537 | 62,638,449 | 55,196,583 | -7,441,866 | 88,543,878 | 0.00% |
| 2028 | 18,214,703 | 44,423,746 | 62,638,449 | 62,638,449 | 0 | 54,579,453 | 0.00% |
| 2029 | 18,835,801 | 10,876,762 | 29,712,563 | 29,712,563 | 0 | 10,876,762 | -52.56% |
| 2030 | 19,477,886 | 0 | 19,477,886 | | | 0 | -34.45% |

Notes:

Actuarially determined contribution for fiscal year 2025 has been reset to $62,638,449.

Actuarially determined contributions are assumed to be paid on July 1.

Item (2) reflects 3.0% growth in payroll and a 0.15% adjustment to total normal cost to reflect the effect of mortality improvements due to the generational mortality assumption.

Projected normal cost does not reflect the future impact of pension reform for new hires.

Projected unfunded actuarial accrued liability does not reflect the recognition of deferred investment gains or losses.

## Interim funding schedules reflecting 2024 investment experience

- We have prepared two funding schedules to illustrate the impact of the 2024 investment experience on future appropriations.
- In Funding Schedule 1, the investment loss on an actuarial basis for 2024 is reflected in the fiscal 2029 appropriation.
- In Funding Schedule 2, the investment loss on a market value basis for 2024 is reflected. The schedule is extended to fiscal 2030 with higher appropriations in fiscal 2029 and fiscal 2030. This schedule is provided only to illustrate the impact of the unrecognized investment losses.

# Funding Schedule 1
## Reflects 2024 actuarial investment loss
## Fully funded by June 30, 2029

| (1) Fiscal Year Ended June 30 | (2) Employer Normal Cost | (3) Amortization of Remaining Unfunded Liability | (4) Actuarially Determined Contribution (ADC): (2)+(3) | Actual Payment in Fiscal Year | Excess/ Deficiency for Fiscal Year | (5) Total Unfunded Actuarial Accrued Liability at Beginning of Fiscal Year | (6) Percent Increase in Actuarially Determined Contribution |
|---|---|---|---|---|---|---|---|
| 2026 | $17,032,768 | $45,605,681 | $62,638,449 | $53,902,346 | -$8,736,103 | $131,930,850 | - - |
| 2027 | 17,613,912 | 45,024,537 | 62,638,449 | 55,196,583 | -7,441,866 | 101,810,622 | 0.00% |
| 2028 | 18,214,703 | 44,423,746 | 62,638,449 | 62,638,449 | 0 | 68,788,136 | 0.00% |
| 2029 | 18,835,801 | 26,094,262 | 44,930,063 | 44,930,063 | 0 | 26,094,262 | -28.27% |
| 2030 | 19,477,886 | 0 | 19,477,886 | 19,477,886 | 0 | 0 | -56.65% |

Notes:

Actuarially determined contribution for fiscal year 2026 is set equal to the amount determined with the prior valuation.

Actuarially determined contributions are assumed to be paid on July 1.

Item (2) reflects 3.0% growth in payroll and a 0.15% adjustment to total normal cost to reflect the effect of mortality improvements due to the generational mortality assumption.

Projected normal cost does not reflect the future impact of pension reform for new hires.

Projected unfunded actuarial accrued liability does not reflect the recognition of deferred investment gains or losses.

# Funding Schedule 2
## Uses the Market Value of Assets to Determine the Unfunded Liability
## Fully funded by June 30, 2030

| (1) Fiscal Year Ended June 30 | (2) Employer Normal Cost | (3) Amortization of Remaining Unfunded Liability | (4) Actuarially Determined Contribution (ADC): (2)+(3) | Actual Payment in Fiscal Year | Excess/ Deficiency for Fiscal Year | (5) Total Unfunded Actuarial Accrued Liability at Beginning of Fiscal Year | (6) Percent Increase in Actuarially Determined Contribution |
|---|---|---|---|---|---|---|---|
| 2026 | $17,032,768 | $45,605,681 | $62,638,449 | $53,902,346 | -$8,736,103 | $175,577,548 | - - |
| 2027 | 17,613,912 | 45,024,537 | 62,638,449 | 55,196,583 | -7,441,866 | 148,556,236 | 0.00% |
| 2028 | 18,214,703 | 44,423,746 | 62,638,449 | 62,638,449 | 0 | 118,852,688 | 0.00% |
| 2029 | 18,835,801 | 43,802,648 | 62,638,449 | 62,638,449 | 0 | 79,713,397 | 0.00% |
| 2030 | 19,477,886 | 38,460,412 | 57,938,298 | 57,938,298 | 0 | 38,460,412 | -7.50% |

Notes:
Actuarially determined contribution for fiscal year 2026 is set equal to the amount determined with the prior valuation.

Actuarially determined contributions are assumed to be paid on July 1.

Item (2) reflects 3.0% growth in payroll and a 0.15% adjustment to total normal cost to reflect the effect of mortality improvements due to the generational mortality assumption.

Projected normal cost does not reflect the future impact of pension reform for new hires.

Unfunded actuarial accrued liability based on market value of assets.

# Caveats and questions

- It is important to note that this actuarial valuation is based on plan assets as of December 31, 2024. The Plan's actuarial status is not based on the daily fluctuations of the market, but on the market values on the last day of the Plan Year. While it is impossible to determine how the market will perform in the future, and how that will affect the results of next year's valuation, Segal is available to prepare projections of potential outcomes upon request.
- Projections, by their nature, are not a guarantee of future results. The projections are intended to serve as estimates of future outcomes, based on the information available to us and the assumptions described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions.
- A discussion of the risks inherent in the measurement of pension plan obligations and other required disclosure information is included in the January 1, 2024 Actuarial Valuation and Review.

# Disclosures

- This report has been prepared in accordance with generally accepted actuarial principles and practices for the exclusive use and benefit of the Board, based on information provided by the staff of the Retirement System and the Retirement System's other service providers. This report should only be copied, reproduced, or shared with other parties in its entirety as necessary for the proper administration of the System.
- The actuarial assumptions and plan provisions used for this valuation are as described in the January 1, 2024 Actuarial Valuation and Review dated September 19, 2024. The financial information used in this valuation is as of December 31, 2024.
- The measurements shown in this actuarial valuation may not be applicable for other purposes. 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 economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law.
- An actuarial valuation is a measurement at a specific date - it is not a prediction of a plan's future financial condition. Accordingly, Segal did not perform an analysis of the potential range of financial measurements, except where otherwise noted.
- Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Deterministic cost projections are based on a proprietary forecasting model. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible actuary.

- The actuarial calculations were directed under the supervision of Kathleen A. Riley, FSA, MAAA, EA and Henry Nearing, FCA, MAAA, EA. They are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of their knowledge, the information supplied in this actuarial valuation is complete and accurate. The assumptions used in this actuarial valuation were selected by the Retirement Board based upon our analysis and recommendations. In their opinion the assumptions are reasonable and take into account the experience of the Retirement System and reasonable expectations. In addition, in their opinion, the combined effect of these assumptions is expected to have no significant bias.
- Segal makes no representation or warranty as to the future status of the Retirement System and does not guarantee any particular result. This document does not constitute legal, tax, accounting or investment advice or create or imply a fiduciary relationship. The Board is encouraged to discuss any issues raised in this report with the Plan's legal, tax and other advisors before taking, or refraining from taking, any action.