

Michigan Public School Employees' Retiree Health Benefits

Annual Actuarial Valuation Report
as of September 30, 2024





March 3, 2025

Mr. Anthony Estell
Director, Office of Retirement Services
530 W. Allegan
Lansing, Michigan 48933

Dear Mr. Estell:

Submitted in this report are the results of an actuarial valuation of the assets and liabilities associated with the defined benefit portion of the retiree health benefits provided to Michigan public school employees by the Michigan Public School Employees' Retirement System (MPERS). Computed liabilities are net of any expected retiree paid premiums required to receive retiree health benefits. The date of the valuation was September 30, 2024. The actuarially computed employer contribution has been calculated for the fiscal year beginning October 1, 2026.

This report was prepared at the request of the Office of Retirement Services (ORS) and those designated or approved by the Office of Retirement Services. This report may be provided to parties other than the Office of Retirement Services only in its entirety and only with the permission of the Office of Retirement Services. GRS is not responsible for unauthorized use of this report.

The purpose of the valuation was to measure the System's funding progress, determine the actuarially computed employer contribution for the 2026-2027 fiscal year and to provide actuarial information for the System's financial report. This report should not be relied on for any other purpose.

The valuation was based upon information furnished by the Office of Retirement Services, concerning retiree health benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We are not responsible for the accuracy or completeness of the information provided by the Office of Retirement Services.

The valuation summarized in this report involves actuarial calculations that require making assumptions about future events. We believe that the assumptions and methods used in this report are reasonable and appropriate. The combined effect of the assumptions, excluding prescribed assumptions or methods set by law, is expected to have no significant bias (i.e., not significantly optimistic or pessimistic). However, other assumptions and methods could also be reasonable and result in materially different results. Some of the numbers in this report are rounded. The use of rounded numbers for plan liabilities should not imply a lack of precision. In addition, because it is not possible or practical to consider every possible contingency, we may use summary information, estimates or simplifications for calculations to facilitate the modeling of future events. We may also exclude factors or data that we deem to be immaterial.

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This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

Future actuarial measurements may differ significantly from those presented in this report due to such factors as experience differing from that anticipated by actuarial assumptions, changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. This valuation was based on the assumption that the plan sponsor will continue to be able to make any contribution necessary to fund the plan in the future. A determination of the plan sponsor's ability to make the necessary contributions in the future is beyond the scope of our expertise and was not performed by us.

To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the Plan as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Mita D. Drazilov, Louise M. Gates, and Christopher M. Smith are Members of the American Academy of Actuaries (MAAA), are independent of the plan sponsor and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

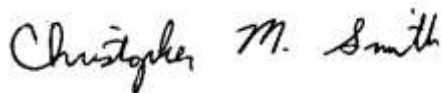
Respectfully submitted,
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MDD/LMG/CMS:rmn



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EXECUTIVE SUMMARY/BOARD SUMMARY

Executive Summary/Board Summary

Actuarially Computed Employer Contribution

It was reported that full funding of the retiree health benefit program began in fiscal year 2013. It was also reported that the September 30, 2024 annual actuarial valuation is used to establish the employer contribution for fiscal year 2027. Therefore, this report presents the actuarially computed employer contribution for fiscal year 2027 (based upon a 6.00% investment return assumption). Plan changes resulting from Public Act 300 of 2012 are reflected in this valuation. (They were first reflected in the September 30, 2012 valuation.) A brief summary of the plan changes still in effect follows:

- (1) 90% employer subsidy for benefit recipients already Medicare eligible as of January 1, 2013;
- (2) 80% employer subsidy for other members not covered by a grading provision;
- (3) 80% maximum employer subsidy for members covered by a grading provision;
- (4) Members hired prior to September 4, 2012 had the option to elect to forfeit employer subsidized retiree health coverage and participate in the Personal Healthcare Fund (PHF); and
- (5) Members hired on or after September 4, 2012 participate in the PHF with defined benefit retiree health coverage essentially limited to a lump sum payment at termination (\$1,000 or \$2,000 depending on age at termination), except in cases of duty death-in-service.

The actuarially computed employer contribution for fiscal year 2027 was determined to be \$83,906,924.

The actuarially computed employer contribution for the fiscal year beginning October 1, 2026 has been calculated using a 6.00% investment return assumption. Below is a summary of the actuarially computed employer contributions for the 2026 and the 2027 fiscal years. The use of a 6.00% investment return assumption in this valuation of the plan is based upon the full funding of the retiree health benefit program in conjunction with the Dedicated Gains Policy.

| Actuarially Computed Employer Contribution | Full Funding (6.00% Interest) |
|---|---|
| Fiscal Year Beginning 10/1/2026 | \$ 83,906,924 |
| Fiscal Year Beginning 10/1/2025 | 49,305,979 |

For additional details please see Section A of the report. Please note, the actuarially computed employer contribution shown in this report does not reflect any contribution floors as described in Public Act 92 of 2017 and Public Act 181 of 2018 and amended in Public Act 127 of 2024 and is in addition to any reconciliation payments as required by subsection 41(9) of MPSERS statute, unless otherwise indicated.



Executive Summary/Board Summary

Liabilities and Assets

The present value of all benefits expected to be paid to current plan members, as of September 30, 2024, is \$10.9 billion. The actuarial accrued liability, which is the portion of the \$10.9 billion attributable to service accrued by plan members as of September 30, 2024, is \$9.2 billion. As of September 30, 2024, there is \$14.0 billion in valuation assets available to offset the liabilities of the plan.

The funded status of the plan, which is the ratio of plan assets to actuarial accrued liabilities as of September 30, 2024, is 151.9%. No amortization payment is required to finance the unfunded actuarial accrued liability. In accordance with the Funding Policy, any actuarial value of assets in excess of 140% of the actuarial accrued liability may be used to reduce the computed employer normal cost (i.e., amortization credit).

Public Act 127 of 2024

Public Act 127 of 2024 is reflected in the September 30, 2024 valuation. The provisions of Public Act 127 of 2024 are as follows:

- For fiscal year 2025, the UAAL dollar contribution floor is reset to the actuarially determined UAAL contribution;
- Effective fiscal year 2026, the employer UAAL contribution rate cap is reduced from 20.96% to 15.21% for non-university reporting units;
- Effective fiscal year 2026, the 3% employee contribution requirement for premium subsidy retiree medical coverage will be eliminated for future contributions; and
- Effective fiscal year 2026, the employer normal cost contribution floor is eliminated for the retiree health plan.

Comparison with Prior Year Valuation

The actuarial accrued liability decreased from \$9.8 billion to \$9.2 billion, and the actuarially computed employer contribution increased from \$49.3 million to \$83.9 million.

The medical and prescription drug trend rates used in the valuation were changed to better reflect anticipated future experience. The change in medical and drug trend rates increased the Actuarial Accrued Liability by \$239.7 million; however, the actuarially computed employer contribution was unchanged due to the funded status of the plan.

Reflecting the provisions of the Public Act of 127 of 2024 did not impact the Actuarial Accrued Liability; however, it did increase the actuarially computed employer contribution by \$83.9 million due to the elimination of the 3% employee contribution requirement for members with premium subsidy retiree medical coverage.



Executive Summary/Board Summary

Comparison with Prior Year Valuation (Concluded)

In addition, there was an overall actuarial gain (i.e., favorable plan experience) during the fiscal year ending September 30, 2024. The primary source of this actuarial gain was that the employer subsidized October 1, 2024 per person health benefit costs were lower than projected by the 2023 valuation assumptions. The lower-than-projected per person health benefit costs decreased the Actuarial Accrued Liability by \$1.1 billion and decreased the actuarially computed employer contribution by \$49.8 million. Actual fiscal year 2024 employer paid benefits and investment return were, to a lesser extent, additional sources of favorable experience.

Dedicated Gains Policy

In 2017, the Board adopted a Dedicated Gains Policy. The purpose of the Policy is to reduce the investment return assumption for actuarial valuation purposes if the fiscal year's market value rate of return exceeds a certain amount. In accordance with discussions with ORS staff for purposes of the September 30, 2021 funding valuation, the excess return first eliminates the amount of the September 30, 2020 funding value of assets that exceeded the September 30, 2020 market value of assets. The remaining excess return is then used to reduce the investment return assumption to offset the increase in the computed employer contribution from where it otherwise would have been. Starting with the September 30, 2021 funding valuation, in accordance with modifications to the Dedicated Gains Policy, the Dedicated Gains Policy cannot lower the investment return assumption below 6.00%. In accordance with direction provided by ORS, due to the normal cost floor provision for MPSERS, the amount of excess investment return for MPSERS does not cover the increase in the first year employer normal cost contribution.

For the September 30, 2024 valuation, the investment return assumption remained at 6.00% as a result of the Policy. Please see page D-3 for additional detail.

Funding Policy

The Retirement Board adopted a Funding Policy for use in the September 30, 2023 and later actuarial valuations. Our understanding of the provisions of this Funding Policy are detailed in Section G of this report.



SECTION A

VALUATION RESULTS

Development of the Actuarially Computed Employer Contribution

| Contributions for | Fiscal Year Beginning October 1, 2026 |
|---|--|
| | <u>6.00% Interest</u> |
| | <u>Total</u> |
| Employer Normal Cost | \$ 226,835,446 |
| UAAL Amortization Payment/(Credit) ¹ | |
| Preliminary UAAL Amortization Payment/(Credit) ² | \$ (626,736,581) |
| Funded Ratio | 151.9% |
| Final UAAL Amortization Payment/(Credit) | \$ (142,928,522) |
| Actuarially Computed Employer Contribution | \$ 83,906,924 |
| | Fiscal Year Beginning October 1, 2025 |
| | <u>6.00% Interest</u> |
| | <u>Total</u> |
| Employer Normal Cost ³ | \$ 49,305,979 |
| UAAL Amortization Payment/(Credit) | |
| Preliminary UAAL Amortization Payment/(Credit) ² | \$ (421,837,290) |
| Funded Ratio | 126.9% |
| Final UAAL Amortization Payment/(Credit) | \$ 0 |
| Actuarially Computed Employer Contribution ³ | \$ 49,305,979 |

¹ See page A-2 for documentation of the amortization payment/(credit) dollars.

² Unfunded Actuarial Accrued Liabilities (UAAL) were amortized over 12 years from October 1, 2026 (13 years in the 2023 valuation from October 1, 2025).

³ The employer normal cost and the actuarially computed employer contribution for fiscal year 2026 in the table above are from the published September 30, 2023 actuarial valuation report. Subsequent to issuing the September 30, 2023 actuarial valuation report, Public Act 127 of 2024 was adopted. The adoption of Public Act 127 of 2024 increases the fiscal year 2026 employer normal cost and actuarially computed employer contribution from \$49.3 million to \$227.5 million.

The UAAL was amortized as a level dollar amount over a period of 12 years. The actuarially computed employer contribution amounts presented throughout this report do not reflect the normal cost or UAAL contribution floor provisions of Public Act 92 of 2017 and Public Act 181 of 2018 and amended in Public Act 127 of 2024 and are in addition to any reconciliation payments as required by subsection 41(9) of MPSERS statute, unless otherwise indicated.

Development of the Actuarially Computed Employer Contribution

Preliminary UAAL Amortization Payment/(Credit)

The table below documents the development of the fiscal year 2027 preliminary UAAL amortization payment/(credit) shown on page A-1.

| Type of UAAL | Valuation Established | Amounts for Fiscal Year Beginning October 1, 2026 | | | |
|-----------------|-----------------------|---|---------------------------------------|---------------------|--------------------------------------|
| | | Outstanding UAAL Balance as of October 1, 2026 | Remaining Amortization Period (years) | Amortization Factor | Annual Amortization Payment/(Credit) |
| Initial | 9/30/2024 | \$ (5,410,564,769) | 12 | 8.63291681 | \$ (626,736,581) |
| Subtotal | | \$ (5,410,564,769) | | | \$ (626,736,581) |

UAAL Amortization Credit

Since the funded ratio as of September 30, 2024 is greater than 140% (referred to as the funding target in the Funding Policy), assets in excess of 140% of the actuarial accrued liability may be used in the development of the annual amortization payment/(credit). The table below documents the development of the fiscal year 2027 UAAL final amortization payment/(credit) shown on page A-1.

| Type of UAAL | Valuation Established | Amounts for Fiscal Year Beginning October 1, 2026 | | | |
|---|-----------------------|---|---------------------------------------|---------------------|--------------------------------------|
| | | UAAL Amount in Excess of 140% Funding Target | Remaining Amortization Period (years) | Amortization Factor | Annual Amortization Payment/(Credit) |
| Funding Target Excess | 9/30/2024 | \$ (1,233,890,036) | 12 | 8.63291681 | \$ (142,928,522) |
| Subtotal | | \$ (1,233,890,036) | | | \$ (142,928,522) |
| Normal Cost | | | | | \$ 226,835,446 |
| UAAL Amortization Payment/(Credit) | | | | | \$ (142,928,522) |



Determination of Unfunded Actuarial Accrued Liability

| | September 30, 2024 | | |
|---|--|--|----------------------|
| | <u>6.00% Interest</u> | | |
| | Gross Prior to Payments From Medicare | Offset for Payments From Medicare | Total |
| A. Present Value of Future Benefits | | | |
| i) Retirees and Beneficiaries | \$ 45,267,431,879 | \$ (40,479,527,460) | \$ 4,787,904,419 |
| ii) Inactive Vested Members | 718,900,878 | (643,721,795) | 75,179,083 |
| iii) Active Members | <u>27,763,152,662</u> | <u>(21,686,990,600)</u> | <u>6,076,162,062</u> |
| Total Present Value of Future Benefits | \$ 73,749,485,419 | \$ (62,810,239,855) | \$ 10,939,245,564 |
| B. Present Value of Future Normal Costs | 7,711,457,750 | (5,984,095,596) | 1,727,362,154 |
| C. Actuarial Accrued Liabilities (A-B) | \$ 66,038,027,669 | \$ (56,826,144,259) | \$ 9,211,883,410 |
| D. Actuarial Value of Assets | 13,994,794,513 | | 13,994,794,513 |
| E. Unfunded Actuarial Accrued Liability (C-D) | \$ 52,043,233,156 | \$ (56,826,144,259) | \$ (4,782,911,103) |
| F. Funded Ratio (D/C) | | | 151.92% |
| | September 30, 2023 | | |
| | <u>6.00% Interest</u> | | |
| | Gross Prior to Payments From Medicare | Offset for Payments From Medicare | Total |
| A. Present Value of Future Benefits | | | |
| i) Retirees and Beneficiaries | \$ 43,430,816,190 | \$ (38,075,586,476) | \$ 5,355,229,714 |
| ii) Inactive Vested Members | 655,366,971 | (585,117,082) | 70,249,889 |
| iii) Active Members | <u>27,101,977,647</u> | <u>(20,917,539,496)</u> | <u>6,184,438,151</u> |
| Total Present Value of Future Benefits | \$ 71,188,160,808 | \$ (59,578,243,054) | \$ 11,609,917,754 |
| B. Present Value of Future Normal Costs | 7,592,757,056 | (5,825,772,122) | 1,766,984,934 |
| C. Actuarial Accrued Liabilities (A-B) | \$ 63,595,403,752 | \$ (53,752,470,932) | \$ 9,842,932,820 |
| D. Actuarial Value of Assets | 12,495,501,870 | | 12,495,501,870 |
| E. Unfunded Actuarial Accrued Liability (C-D) | \$ 51,099,901,882 | \$ (53,752,470,932) | \$ (2,652,569,050) |
| F. Funded Ratio (D/C) | | | 126.95% |



Experience Gain/(Loss)

Gains/(Losses) During the Year Ended September 30, 2024 Resulting from Differences Between Assumed and Actual Experience

A. Derivation of Actuarial Gain/(Loss):

| | | |
|---|----|-----------------|
| 1. Unfunded Actuarial Accrued Liability (UAAL) - Previous Valuation | \$ | (2,652,569,050) |
| 2. Total Normal Cost (employer plus member) for Year Ending 9/30/2024 | | 252,253,113 |
| 3. Total Contributions (employer plus member) for Year Ending 9/30/2024 | | 1,005,693,387 |
| 4. Interest on: | | |
| a. UAAL: Discount Rate* x (1) | | (159,154,143) |
| b. Normal Cost and Contributions: Discount Rate* / 2 x [(2) - (3)] | | (22,603,208) |
| c. Net Total: (a) + (b) | | (181,757,351) |
| 5. Change in UAAL due to Benefit Changes | | - |
| 6. Change in UAAL due to Assumptions (Trend/Experience Study) | | 239,681,104 |
| 7. Expected UAAL Current Year: | | |
| (1) + (2) - (3) + (4c) + (5) + (6) | | (3,348,085,571) |
| 8. Actual UAAL Current Year | | (4,782,911,103) |
| 9. Experience Gain/(Loss): (7) - (8) | | 1,434,825,532 |

B. Approximate Portion of Gain/(Loss) due to Investments 65,881,963

C. Approximate Portion of Gain/(Loss) due to Liabilities: (A.9) - (B) 1,368,943,569

* Discount rate is 6.00%.

Please note that row B above includes the accelerated recognition of investment gains associated with the Dedicated Gains Policy, if applicable.

Type of Activity

| | Gain/(Loss) |
|---|--------------------|
| 1. Premiums. Gains and losses resulting from actual premiums in valuation year versus that assumed from prior valuation. | \$ 1,104,008,441 |
| 2. Investment Income. If there is greater investment income than assumed, there is a gain. If less income, a loss. | 65,881,963 |
| 3. Demographic and Other. Gains and losses resulting from demographic experience, data adjustments, timing of financial transactions, etc. | 264,935,128 |
| 4. Composite Gain/(Loss) During Year. | \$ 1,434,825,532 |



Comments

Comment A: It was reported that full funding of the retiree health benefit program began in fiscal year 2013. It was also reported that the September 30, 2024 annual actuarial valuation is used to establish the employer contribution for fiscal year 2027. Therefore, this report presents the actuarially computed employer contribution for fiscal year 2027 (based upon a 6.00% discount rate). Plan changes resulting from Public Act 300 of 2012 are reflected in this valuation. (They were first reflected in the September 30, 2012 valuation.) A brief summary of the plan changes still in effect follows:

- (1) 90% employer subsidy for benefit recipients already Medicare eligible as of January 1, 2013;
- (2) 80% employer subsidy for other members not covered by a grading provision;
- (3) 80% maximum employer subsidy for members covered by a grading provision;
- (4) Members hired prior to September 4, 2012 had the option to elect to forfeit employer subsidized retiree health coverage and participate in the Personal Healthcare Fund (PHF); and
- (5) Members hired on or after September 4, 2012 participate in the PHF with defined benefit retiree health coverage essentially limited to a lump sum payment at termination (\$1,000 or \$2,000 depending on age at termination), except in cases of duty death-in-service.

The actuarially computed employer contribution for fiscal year 2027 was determined to be \$83,906,924. Please note, the actuarially computed employer contribution shown in this report does not reflect any contribution floors as described in Public Act 92 of 2017 and Public Act 181 of 2018 and amended in Public Act 127 of 2024 and is in addition to any reconciliation payments as required by subsection 41(9) of MPSERS statute, unless otherwise indicated.

Comment B: One of the key assumptions used in any valuation of the cost of post-employment benefits is the investment rate of return on Plan assets. Higher assumed investment returns will result in a lower actuarially computed employer contribution. Lower returns will tend to increase the actuarially computed employer contributions. We have calculated the liability and the resulting actuarially computed employer contribution based on a 6.00% assumed rate of return, and based on the employer's funding policy of contributing the full actuarially computed employer contribution into a qualified trust.

In accordance with the Dedicated Gains Policy, the investment return remained 6.00%.

Comment C: Starting with the September 30, 2018 valuation, the actuarial value of assets was developed using an asset smoothing method. The actuarial value of assets recognizes assumed investment return fully each year. Differences between actual and assumed investment return are phased-in over a closed 5-year period. Prior to the September 30, 2018 valuation, the actuarial value of assets was equal to the market value of assets. The market value of assets as of September 30, 2024 was \$14.6 billion, while the actuarial value of assets as of September 30, 2024 was \$14.0 billion.



Comments

Comment D: Because retiree health benefits are not related to active member payroll, full funding employer contributions are reported as a dollar amount, instead of expressed as a percentage of payroll. Some readers, however, are interested in the actuarially computed employer contributions expressed as a percentage of payroll. The non-PHF active member payroll is projected to be \$5,861.4 million for the year beginning October 1, 2026, and the PHF active member payroll is projected to be \$5,533.4 million for the year beginning October 1, 2026. With the introduction of the PHF, the employer normal cost percent (i.e., 3.87%) is expressed as a percentage of non-PHF active member payroll, while the UAAL percent (i.e., -1.25%) is expressed as a percentage of total payroll (i.e., including both non-PHF and PHF active member payroll) based on current administrative practice. The actuarially computed employer contribution amounts expressed as percentages of payroll do not reflect the normal cost or UAAL contribution floor provisions of Public Act 92 of 2017 and Public Act 181 of 2018 and amended by Public Act 127 of 2024 and is in addition to any reconciliation payments as required by subsection 41(9) of the MPSERS statute.

Comment E: The fiscal year 2027 employer contribution rate shown includes level dollar amortization of the unfunded actuarial accrued liability, according to the Funding Policy, over 12 years, beginning October 1, 2026.

Comment F: The employer subsidized October 1, 2024 per person health benefit costs were lower than projected by the 2023 valuation assumptions. The lower actual increases from 2023 to 2024 resulted in a lower-than-projected actuarially computed employer contribution and accrued liability.

Comment G: Beginning with the September 30, 2019 valuation, it was reported to the actuary that a reconciliation process, similar to that used for the pension valuation, had been implemented with respect to the employer retiree health contributions, with reconciliation payments beginning in fiscal year 2021. The contribution requirements shown on page A-1 are in addition to any reconciliation payments as required by subsection 41(9) of the MPSERS statute. The scheduled reconciliation payments were prepared and reported by the Office of Retirement Services (ORS) and are presented on page F-12.

Comment H: It is our understanding that the plan is participating in a Medicare Advantage (MA) program and an Employer Group Waiver Plan (EGWP) for calendar year 2025. The September 30, 2024 actuarial valuation was completed under the assumption that the plan will participate in an MA program and an EGWP for each year following the valuation date.

Comment I: In an MA program and an EGWP, the actuarial liability is based on the difference between the present value of future claims minus the present value of future Centers for Medicare and Medicaid Services' (CMS) reimbursements. For purposes of this valuation, future growth in CMS reimbursements was assumed to be equal to future growth in post-65 medical and prescription drugs claims. Valuation results are highly dependent upon these reimbursements. For example, if CMS reimbursements each year were 1% lower than assumed, the accrued liability would increase by approximately \$0.57 billion.

Comments

Comment J: Future trends in health costs defy accurate prediction. To the extent that future costs increase more (or less) than projected in this report, the computed liabilities and the actuarially computed employer contributions will be higher (or lower) than shown in this report.

Comment K: Governmental Accounting Standards Board (GASB) Statement No. 74 was effective for the plan year ending September 30, 2017. A separate report was issued to comply with the actuarial requirements of this Statement.

Comment L: Unless otherwise indicated, a funded status measurement presented in this report is based upon the actuarial accrued liability and the actuarial value of assets. Unless otherwise indicated, with regards to any funded status measurements presented in this report:

- (1) The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations. In addition, the measurement is inappropriate for assessing benefit security for the membership.
- (2) The measurement is dependent upon the actuarial cost method, which, in combination with the plan's amortization policy and asset valuation method, affects the timing and amounts of future contributions. The amounts of future contributions will most certainly differ from those assumed in this report due to future actual experience differing from assumed experience based upon the actuarial assumptions. A funded status measurement in this report of 100% is not synonymous with no required future contributions. If the funded status were 100%, the plan would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit).
- (3) The measurement would produce a different result if the market value of assets were used instead of the actuarial value of assets, unless the market value of assets is used in the measurement.

SECTION B

RETIREE PREMIUM RATE DEVELOPMENT

Retiree Premium Rate Development

Background

The System's eligible retirees and their dependents may elect to receive benefits from a number of health care plans, including the self-funded Blue Cross Blue Shield of Michigan (BCBSM) PPO plan for Non-Medicare retirees, the BCBSM Medicare Advantage Plan for Medicare retirees, and fully-insured HMO plans from Blue Care Network (BCN) and Priority Health. Prescription drug benefits are self-funded, provided by OptumRx. Dental and vision benefits are self-funded, provided by Delta Dental and EyeMed, respectively.

Rate Development

For the self-funded programs, premium rates are developed by an independent actuarial firm using calendar year 2023 medical and prescription drug claims experience, in conjunction with exposure data for covered retired members of the health care program, trended to the rating period, 2025. Claims are loaded for administrative expenses and net of Centers for Medicare and Medicaid Services reimbursements (Medicare Advantage medical and Employer Group Waiver Plans prescription drug offsets) and prescription drug rebates.

The premium rates are evaluated for suitability in the valuation process using the claims, administrative expenses, and reimbursements provided by the independent actuarial firm and adjusted to the valuation period (i.e., October 1, 2024 to September 30, 2025). A dependent load of 12.6% was added to the pre-65 spousal rates to account for retirees with depended coverage.

Age graded and gender distinct premiums and Medicare offset payments are utilized by this valuation. The initial costs developed are appropriate for the unique age and gender distribution currently existing. Over the future years covered by this valuation, the age and gender distribution will most likely change. Therefore, our process "distributes" the average premium over all age/gender combinations and assigns a unique premium for each combination. This process more accurately reflects health care costs in the retired population over the projection period.

In a Medicare Advantage program, the liability is based on the difference between the present value of future claims minus the present value of future reimbursements from CMS. CMS' reimbursement is based on a very competitive bid process and has resulted in recent Medicare Advantage premiums trending at low rates of increase. For purposes of this valuation, future growth in Medicare reimbursements was assumed to be equal to future growth in post-65 medical and prescription drugs claims.



Retiree Premium Rate Development

The tables below show the resulting one-person combined gross medical and prescription drug monthly premiums (employer paid subsidy plus member paid subsidy), as well as the Medicare Payments (Medicare Advantage Plan and EGWP) offset at select ages. The premium (or per capita cost) rates shown below reflect the use of age grading.

Monthly One-Person Rates For Medical and Prescription Drug Coverage

| Per Capita Costs for Retirees Not Eligible for Medicare | | | | |
|--|-------------------------------------|-----------|--|--------|
| Age | Gross Medical and Prescription Drug | | Medicare Payments Offset (MA and EGWP) | |
| | Male | Female | Male | Female |
| 50 | \$ 572.03 | \$ 704.68 | N/A | N/A |
| 60 | 972.18 | 957.27 | N/A | N/A |
| 64 | 1,182.20 | 1,115.68 | N/A | N/A |

| Per Capita Costs for Retirees Eligible for Medicare | | | | |
|--|-------------------------------------|-----------|--|-----------|
| Age | Gross Medical and Prescription Drug | | Medicare Payments Offset (MA and EGWP) | |
| | Male | Female | Male | Female |
| 65 | \$ 997.23 | \$ 940.59 | \$ 937.10 | \$ 883.87 |
| 75 | 1,166.76 | 1,138.50 | 1,096.40 | 1,069.85 |
| 85 | 1,233.78 | 1,248.31 | 1,159.38 | 1,173.03 |

| Per Capita Costs for Beneficiaries Not Eligible for Medicare | | | | |
|---|-------------------------------------|-----------|--|--------|
| Age | Gross Medical and Prescription Drug | | Medicare Payments Offset (MA and EGWP) | |
| | Male | Female | Male | Female |
| 50 | \$ 551.37 | \$ 679.24 | N/A | N/A |
| 60 | 937.08 | 922.71 | N/A | N/A |
| 64 | 1,139.52 | 1,075.40 | N/A | N/A |

| Per Capita Costs for Beneficiaries Eligible for Medicare | | | | |
|---|-------------------------------------|-------------|--|-----------|
| Age | Gross Medical and Prescription Drug | | Medicare Payments Offset (MA and EGWP) | |
| | Male | Female | Male | Female |
| 65 | \$ 1,060.26 | \$ 1,000.04 | \$ 996.34 | \$ 939.74 |
| 75 | 1,240.50 | 1,210.46 | 1,165.71 | 1,137.48 |
| 85 | 1,311.76 | 1,327.21 | 1,232.67 | 1,247.19 |

The dental and vision premium rates used in this valuation of the Plan were not “age graded” since these claims do not vary significantly by age. The gross monthly one and two person combined dental/vision premiums used in this valuation are \$33.39 and \$66.78, respectively.



Retiree Premium Rate Development

Health Care Cost Trend Assumption

The health care cost trend rate is the rate of change in per capita health care claims over time as a result of factors such as medical inflation, utilization of health care services, plan design, and technological improvements. It is a crucial economic assumption that is required for measuring retiree health care benefit obligations.

Retiree health care valuations use a health care cost trend assumption (trend vector) that changes over the years. The trend vector used in this valuation begins with a near-term trend assumption and declines over a time to an ultimate trend rate. The near-term rates reflect the increases in the current cost of health care goods and services. The process of trending down to a lower ultimate trend relies on the theory that premiums will moderate over the long-term. It is on this basis that we project premium rate increases will continue to exceed wage inflation for the next fifteen years, but by less each year until leveling off at a rate assumed to be 3.50% in this valuation.

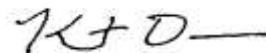
While experience is often the best starting point for future costs, GRS does not rely on a group's experience in setting the near-term trend assumptions since trends vary significantly from year to year and are not credible for most groups. Therefore, professional judgment, trends from GRS's book of business and industry benchmarks (e.g., trend reports from various Pharmacy Benefit Management organizations and national healthcare benefit consulting firms) are used in conjunction with a group's historical experience to establish the trend assumptions.

Actuarial Disclosures

The premium rates used in this valuation were developed using the proprietary Excel models which, in Kurt Dosson's professional judgment, provide the initial projected costs which are consistent with the purposes of the valuation. We performed tests to ensure that the models, in their entirety, reasonably represent that which is intended to be modeled.

Aging factors used in the premium development models were developed based on the information and data from a 2013 study commissioned by the Society of Actuaries entitled "Health Care Costs – From Birth to Death."

Kurt Dosson is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to certify the per capita retiree health care rates (shown on pages B-2, B-4, and B-5) and the health care trend rates (shown on page F-10).



Kurt Dosson, ASA, FCA, MAAA



Retiree Premium Rate Development

Gross Monthly One-Person Retiree Rates for Medical and Prescription Drug Coverage

| Gross Rate | | | Age | Gross Rate | | Age | Gross Rate | |
|------------|-----------|-----------|-----|------------|-----------|-----|-------------|-------------|
| Age | Male | Female | | Male | Female | | Male | Female |
| 16 | \$ 255.43 | \$ 257.40 | 51 | \$ 605.26 | \$ 729.07 | 86 | \$ 1,229.23 | \$ 1,252.79 |
| 17 | 253.64 | 269.23 | 52 | 639.87 | 752.98 | 87 | 1,224.21 | 1,256.09 |
| 18 | 245.75 | 276.94 | 53 | 675.88 | 776.26 | 88 | 1,219.30 | 1,258.62 |
| 19 | 233.26 | 281.76 | 54 | 713.47 | 799.09 | 89 | 1,214.83 | 1,260.39 |
| 20 | 218.79 | 286.30 | 55 | 752.72 | 821.86 | 90 | 1,210.91 | 1,260.82 |
| 21 | 205.01 | 293.53 | 56 | 793.64 | 845.21 | 91 | 1,207.50 | 1,259.05 |
| 22 | 193.94 | 305.81 | 57 | 836.17 | 869.83 | 92 | 1,204.38 | 1,254.06 |
| 23 | 186.78 | 324.32 | 58 | 880.11 | 896.36 | 93 | 1,201.30 | 1,244.85 |
| 24 | 183.97 | 348.98 | 59 | 925.37 | 925.37 | 94 | 1,197.96 | 1,230.48 |
| 25 | 185.23 | 378.67 | 60 | 972.18 | 957.27 | 95 | 1,194.13 | 1,210.22 |
| 26 | 189.89 | 411.56 | 61 | 1,021.01 | 992.29 | 96 | 1,189.63 | 1,183.47 |
| 27 | 197.12 | 445.51 | 62 | 1,072.17 | 1,030.49 | 97 | 1,184.34 | 1,149.89 |
| 28 | 206.08 | 478.38 | 63 | 1,125.89 | 1,071.67 | 98 | 1,178.26 | 1,109.37 |
| 29 | 216.15 | 508.29 | 64 | 1,182.20 | 1,115.68 | 99 | 1,178.26 | 1,109.37 |
| 30 | 226.81 | 533.72 | 65 | 997.23 | 940.59 | 100 | 1,178.26 | 1,109.37 |
| 31 | 237.69 | 553.70 | 66 | 1,013.98 | 963.72 | 101 | 1,178.26 | 1,109.37 |
| 32 | 248.59 | 567.86 | 67 | 1,031.27 | 986.43 | 102 | 1,178.26 | 1,109.37 |
| 33 | 259.55 | 576.46 | 68 | 1,049.06 | 1,008.69 | 103 | 1,178.26 | 1,109.37 |
| 34 | 270.80 | 580.31 | 69 | 1,067.45 | 1,030.37 | 104 | 1,178.26 | 1,109.37 |
| 35 | 282.59 | 580.62 | 70 | 1,086.35 | 1,051.21 | 105 | 1,178.26 | 1,109.37 |
| 36 | 295.18 | 578.76 | 71 | 1,105.07 | 1,071.08 | 106 | 1,178.26 | 1,109.37 |
| 37 | 308.64 | 576.09 | 72 | 1,122.77 | 1,089.85 | 107 | 1,178.26 | 1,109.37 |
| 38 | 322.88 | 573.80 | 73 | 1,138.91 | 1,107.43 | 108 | 1,178.26 | 1,109.37 |
| 39 | 337.68 | 572.75 | 74 | 1,153.48 | 1,123.66 | 109 | 1,178.26 | 1,109.37 |
| 40 | 352.89 | 573.42 | 75 | 1,166.76 | 1,138.50 | 110 | 1,178.26 | 1,109.37 |
| 41 | 368.49 | 575.91 | 76 | 1,179.26 | 1,152.20 | 111 | 1,178.26 | 1,109.37 |
| 42 | 384.65 | 580.24 | 77 | 1,191.46 | 1,165.25 | 112 | 1,178.26 | 1,109.37 |
| 43 | 401.65 | 586.54 | 78 | 1,203.50 | 1,178.09 | 113 | 1,178.26 | 1,109.37 |
| 44 | 419.74 | 595.11 | 79 | 1,214.90 | 1,190.91 | 114 | 1,178.26 | 1,109.37 |
| 45 | 439.31 | 606.30 | 80 | 1,224.87 | 1,203.45 | 115 | 1,178.26 | 1,109.37 |
| 46 | 460.80 | 620.48 | 81 | 1,232.51 | 1,215.12 | 116 | 1,178.26 | 1,109.37 |
| 47 | 484.67 | 637.78 | 82 | 1,237.12 | 1,225.51 | 117 | 1,178.26 | 1,109.37 |
| 48 | 511.25 | 658.02 | 83 | 1,238.53 | 1,234.59 | 118 | 1,178.26 | 1,109.37 |
| 49 | 540.50 | 680.64 | 84 | 1,237.16 | 1,242.26 | 119 | 1,178.26 | 1,109.37 |
| 50 | 572.03 | 704.68 | 85 | 1,233.78 | 1,248.31 | 120 | 1,178.26 | 1,109.37 |

Aging factors were based on the 2013 SOA Study “Health Care Costs – From Birth to Death.” While not shown, per capita costs for beneficiaries are based on the same aging factor tables as those of the retirees.



Retiree Premium Rate Development

Medical Payments Retiree Offset (MA and PDP)

| Gross Rate | | | Age | Gross Rate | | Age | Gross Rate | |
|------------|------|--------|-----|------------|-----------|-----|-------------|-------------|
| Age | Male | Female | | Male | Female | | Male | Female |
| 16 | N/A | N/A | 51 | N/A | N/A | 86 | \$ 1,155.10 | \$ 1,177.24 |
| 17 | N/A | N/A | 52 | N/A | N/A | 87 | 1,150.39 | 1,180.34 |
| 18 | N/A | N/A | 53 | N/A | N/A | 88 | 1,145.77 | 1,182.73 |
| 19 | N/A | N/A | 54 | N/A | N/A | 89 | 1,141.57 | 1,184.38 |
| 20 | N/A | N/A | 55 | N/A | N/A | 90 | 1,137.89 | 1,184.78 |
| 21 | N/A | N/A | 56 | N/A | N/A | 91 | 1,134.68 | 1,183.13 |
| 22 | N/A | N/A | 57 | N/A | N/A | 92 | 1,131.76 | 1,178.44 |
| 23 | N/A | N/A | 58 | N/A | N/A | 93 | 1,128.86 | 1,169.78 |
| 24 | N/A | N/A | 59 | N/A | N/A | 94 | 1,125.72 | 1,156.28 |
| 25 | N/A | N/A | 60 | N/A | N/A | 95 | 1,122.12 | 1,137.24 |
| 26 | N/A | N/A | 61 | N/A | N/A | 96 | 1,117.89 | 1,112.10 |
| 27 | N/A | N/A | 62 | N/A | N/A | 97 | 1,112.92 | 1,080.55 |
| 28 | N/A | N/A | 63 | N/A | N/A | 98 | 1,107.20 | 1,042.47 |
| 29 | N/A | N/A | 64 | N/A | N/A | 99 | 1,107.20 | 1,042.47 |
| 30 | N/A | N/A | 65 | \$ 937.10 | \$ 883.87 | 100 | 1,107.20 | 1,042.47 |
| 31 | N/A | N/A | 66 | 952.83 | 905.60 | 101 | 1,107.20 | 1,042.47 |
| 32 | N/A | N/A | 67 | 969.08 | 926.94 | 102 | 1,107.20 | 1,042.47 |
| 33 | N/A | N/A | 68 | 985.79 | 947.86 | 103 | 1,107.20 | 1,042.47 |
| 34 | N/A | N/A | 69 | 1,003.08 | 968.23 | 104 | 1,107.20 | 1,042.47 |
| 35 | N/A | N/A | 70 | 1,020.84 | 987.82 | 105 | 1,107.20 | 1,042.47 |
| 36 | N/A | N/A | 71 | 1,038.43 | 1,006.49 | 106 | 1,107.20 | 1,042.47 |
| 37 | N/A | N/A | 72 | 1,055.06 | 1,024.13 | 107 | 1,107.20 | 1,042.47 |
| 38 | N/A | N/A | 73 | 1,070.23 | 1,040.65 | 108 | 1,107.20 | 1,042.47 |
| 39 | N/A | N/A | 74 | 1,083.93 | 1,055.90 | 109 | 1,107.20 | 1,042.47 |
| 40 | N/A | N/A | 75 | 1,096.40 | 1,069.85 | 110 | 1,107.20 | 1,042.47 |
| 41 | N/A | N/A | 76 | 1,108.14 | 1,082.72 | 111 | 1,107.20 | 1,042.47 |
| 42 | N/A | N/A | 77 | 1,119.61 | 1,094.98 | 112 | 1,107.20 | 1,042.47 |
| 43 | N/A | N/A | 78 | 1,130.92 | 1,107.05 | 113 | 1,107.20 | 1,042.47 |
| 44 | N/A | N/A | 79 | 1,141.64 | 1,119.09 | 114 | 1,107.20 | 1,042.47 |
| 45 | N/A | N/A | 80 | 1,151.00 | 1,130.88 | 115 | 1,107.20 | 1,042.47 |
| 46 | N/A | N/A | 81 | 1,158.19 | 1,141.85 | 116 | 1,107.20 | 1,042.47 |
| 47 | N/A | N/A | 82 | 1,162.52 | 1,151.61 | 117 | 1,107.20 | 1,042.47 |
| 48 | N/A | N/A | 83 | 1,163.84 | 1,160.14 | 118 | 1,107.20 | 1,042.47 |
| 49 | N/A | N/A | 84 | 1,162.55 | 1,167.35 | 119 | 1,107.20 | 1,042.47 |
| 50 | N/A | N/A | 85 | 1,159.38 | 1,173.03 | 120 | 1,107.20 | 1,042.47 |

Aging factors were based on the 2013 SOA Study “Health Care Costs – From Birth to Death.” While not shown, per capita costs for beneficiaries are based on the same aging factor tables as those of the retirees.



SECTION C

SUMMARY OF POST-RETIREMENT HEALTH BENEFITS COVERAGE

Summary of Post-Retirement Health Benefits Coverage

Members hired before September 4, 2012 have the option of subsidized health coverage, which was funded on a cash disbursement basis by the employers through fiscal year 2012. Beginning fiscal year 2013, it is funded on a prefunded basis. The Michigan Public School Employees' Retirement System (MPSERS) has contracted to provide comprehensive group medical, prescription drug, hearing, dental and vision coverage for retirees and beneficiaries. Health care benefits are provided both on a self-funded and fully insured basis. A portion of the premium is paid by the System with the balance paid by the benefit recipient.

Pension recipients hired before July 1, 2008 are eligible for 80% employer paid Master Health Plan and Dental and Vision coverage for themselves and their dependents. However, those retirees Medicare eligible on January 1, 2013 receive 90% employer subsidy. Certain eligibility requirements are described below:

- a. In order to receive the subsidy, a member must meet the definition of an active member immediately preceding their retirement. A member is considered active and eligible if they have earned one-tenth (0.1) or more years of service in each of the five school fiscal years immediately before their retirement effective date, or at least one-half (0.5) years of service within the two school fiscal years immediately before their retirement effective date.
- b. If a member initiated a service credit purchase on or after July 1, 2008, they are subject to a delayed insurance subsidy if the service credit purchase allows a member to retire for a benefit for which they would not have been eligible without the service credit purchase.

Members hired before July 1, 2008 who retire from deferred vested status with less than 30 years of service, who terminate employment after October 31, 1980 with vested deferred benefits, are eligible for partially MPSERS paid health benefit coverage (no payment if less than 21 years of service, 10% of the maximum MPSERS payment for each year of service over 20 years up to 100% of the maximum employer payment for 30 or more years of service). Members who retire from deferred status and terminated employment before October 31, 1980, are entitled to 100% of the subsidy allowed by law.



Summary of Post-Retirement Health Benefits Coverage

Pension recipients hired after June 30, 2008, but before September 4, 2012 are eligible for 80% MPSERS paid Master Health Plan and Dental and Vision coverage for themselves and their dependents, but the premium subsidy is graded based on career length as described below:

- a. Member is age 60 or older at retirement
 - If member has 10 or more years of total service, MPSERS pays 30% of the monthly premium for the first 10 years of total service. The subsidy increases by an additional 4% for each additional year of service, up to the maximum of 80% of the monthly premium if 23 years of total service or more.
 - If member has fewer than 10 years of total service, there is no MPSERS paid coverage.
- b. Member is under age 60 at retirement
 - If member has 25 years of actual service, the employer pays 80% of the monthly premium.
 - If the member has under 25 years of actual service, upon attainment of age 60 the member may apply for employer paid coverage (as described by the schedule shown above in a.).

Coverage for eligible dependents is the same as the member's subsidy.

Members hired on or after September 4, 2012 become participants of the Personal Healthcare Fund (PHF) and will not be eligible for an insurance premium subsidy in retirement. For members hired on or after September 4, 2012, the maximum insurance premium subsidy is payable to the surviving spouse and health dependents of members who die as a result of injury or illness resulting from job activities. For all other members hired on or after September 4, 2012, their post-retirement health benefits coverage is limited to a credit into a Health Reimbursement Account at termination if they have at least 10 years of service. The credit will be \$2,000 for participants who are at least age 60 at termination or \$1,000 for participants who are less than age 60 at termination.



Summary of Post-Retirement Health Benefits Coverage

Public Act 300 of 2012 granted all members of MPSERS, who earned service credit in the 12 months ending September 4, 2012, or were on an approved professional services or military leave of absence on September 4, 2012, a voluntary election regarding their retirement healthcare. Any changes to a member's healthcare benefit are effective as of the member's *transition date*, which is defined as the first day of the pay period that begins on or after February 1, 2013.

Under Public Act 300 of 2012, members were given the choice between i. and ii. below:

- i. Maintaining eligibility for the premium subsidy described above, and contributing 3% of their compensation while still working, or
- ii. Entering the PHF.

Members not making an election defaulted into the premium subsidy arrangement.

These contributions are refundable in certain cases:

- If you leave public school employment and do not qualify for any premium subsidy.
- If you die before becoming eligible for the subsidy benefit and your beneficiary is not eligible for a premium subsidy.
- If you die with retiree healthcare fund contributions still on account, and no survivor benefits are payable, any remaining contributions will be refunded to your refund beneficiary or your estate.

Refunds of member contributions to the healthcare funding account are issued as a supplemental retirement allowance (payable at age 60 and payable from the pension plan) paid out over a 60 month period.

Public Act 127 of 2024 prospectively eliminated the 3% employee contribution requirement for premium subsidy retiree medical coverage for people who became members before September 4, 2012, effective with fiscal year 2026.

A delayed subsidy applies to retirees who purchased service credit on or after July 1, 2008. Such individuals are eligible for premium subsidy benefits at age 60 or when they would have been eligible to retire without having made a service purchase, whichever comes first. They may enroll in the insurances earlier, but are responsible for the full premium until the premium subsidy begins.



SECTION D

FUND ASSETS

Statement of Plan Net Assets (Assets at Market or Fair Value)

| | September 30 | |
|--|----------------------|---------------------|
| | <u>2023</u> | <u>2024</u> |
| Equity in Common Cash | \$ 34,582,682 | \$ 47,478,945 |
| Total Receivables | 397,251,455 | 351,787,880 |
| Short Term Investment Pools | 498,757,472 | 617,288,861 |
| Fixed Income Pools | 1,054,100,794 | 1,455,634,491 |
| Domestic Equity Pools | 2,278,971,871 | 3,041,591,107 |
| Real Estate and Infrastructure Pools | 1,200,412,725 | 1,261,749,360 |
| Private Equity Pools | 2,782,024,061 | 3,011,609,015 |
| International Equity Pools | 1,534,162,691 | 2,033,240,986 |
| Absolute Return Pools | 1,230,667,841 | 1,416,762,110 |
| Real Return and Opportunistic Pools | 1,267,363,098 | 1,340,191,456 |
| Securities Lending Collateral less Obligations | <u>0</u> | <u>0</u> |
| Total Assets | 12,278,294,690 | 14,577,334,211 |
| Other Liabilities | <u>(260,977,448)</u> | <u>(25,123,826)</u> |
| Net Assets Held in Trust for Pension Benefits | \$12,017,317,242 | \$14,552,210,385 |

Note: The assets shown above are assumed to not include any assets associated with the Personal Healthcare Fund.

Reconciliation of Market Value of Assets

For the One Year Period Ending

| | September 30, 2023 | September 30, 2024 |
|---|-------------------------|-------------------------|
| Market Value, Beginning of Year | \$ 10,618,766,169 | \$ 12,017,317,242 |
| Audit Adjustment, Beginning of Year | - | - |
| Additions | | |
| Contributions | | |
| Employer Contributions | \$ 783,148,294 | \$ 803,531,139 |
| Nonemployer Contributing Entities | - | - |
| Member Contributions | 202,972,230 | 202,162,248 |
| Other Governmental Contributions | 214,638,461 | 281,663,106 |
| Total Contributions | \$ 1,200,758,985 | \$ 1,287,356,493 |
| Investment Income | | |
| Net Appreciation in Fair Value of Investments | \$ 685,830,896 | \$ 1,647,090,886 |
| Interest and Dividends | 233,726,789 | 278,273,084 |
| Other Net Investment Income | 1,428,945 | 1,232,145 |
| Less Investment Expense | (51,746,954) | (55,470,514) |
| Net Investment Income | \$ 869,239,676 | \$ 1,871,125,601 |
| Other | \$ 124,396 | \$ 84,758 |
| Total Additions | \$ 2,070,123,057 | \$ 3,158,566,852 |
| Deductions | | |
| Health Benefit Payments | \$ 663,312,800 | \$ 615,040,782 |
| OPEB Plan Administrative Expense ⁽¹⁾ | 8,259,184 | 8,632,927 |
| Other | - | - |
| Total Deductions | \$ 671,571,984 | \$ 623,673,709 |
| Market Value, End of Year | \$ 12,017,317,242 | \$ 14,552,210,385 |
| Net, Market Rate of Return | 7.99% | 15.15% |

⁽¹⁾ Administrative expenses include staff salaries and benefits, consulting, printing, postage, telephone, and other.

Note: The assets shown above are assumed to not include any assets associated with the Personal Healthcare Fund.



Determination of Actuarial Value of Assets

| Year Ended September 30 | 2024 | 2025 | 2026 | 2027 | 2028 |
|---|-------------------|----------------|----------------|----------------|----------------|
| A. Funding Value Beginning of Year | \$ 12,495,501,870 | | | | |
| B. Market Value | | | | | |
| B1. Market Value End of Year | 14,552,210,385 | | | | |
| B2. Market Value Beginning of Year | 12,017,317,242 | | | | |
| B3. Audit Adjustment | - | | | | |
| C. Non-Investment Net Cash Flow | | | | | |
| C1. Member Contributions | 202,162,248 | | | | |
| C2. Employer Contributions | 803,531,139 | | | | |
| C3. Other Governmental Contributions | 281,663,106 | | | | |
| C4. Benefit Payments | (614,911,976) | | | | |
| C5. Contribution Refunds / Transfers | (128,806) | | | | |
| C6. Administrative Expenses | (8,632,927) | | | | |
| C7. Other | 84,758 | | | | |
| C8. Total Net Cash Flow: C1 + C2 + C3 + C4 + C5 + C6 + C7 | 663,767,542 | | | | |
| D. Investment Return | | | | | |
| D1. Market Return Total: B1 - B2 - B3 - C8 | 1,871,125,601 | | | | |
| D2. Assumed Rate of Return | 6.00% | 6.00% | | | |
| D3. Market Rate of Return | 15.15% | | | | |
| D4. Dedicated Gains Policy Trigger (Excess Return %) | 0.00% | | | | |
| D5. Market Return for Immediate Recognition: D4 x (B2 + B3 + C8/2) | - | | | | |
| D6. Assumed Amount of Return: D2 x (A + B3 + C8/2) | 769,643,138 | | | | |
| D7. Amount Subject to Phase-In: D1 - D5 - D6 | 1,101,482,463 | | | | |
| E. Phased-In Recognition of Investment Return | | | | | |
| E1. Current Year: 0.20 x D7 | 220,296,493 | | | | |
| E2. First Prior Year | 33,637,437 | \$ 220,296,493 | | | |
| E3. Second Prior Year | (236,630,443) | 33,637,437 | \$ 220,296,493 | | |
| E4. Third Prior Year | 48,578,476 | (236,630,443) | 33,637,437 | \$ 220,296,493 | |
| E5. Fourth Prior Year | - | 48,578,477 | (236,630,441) | 33,637,435 | \$ 220,296,491 |
| E6. Total Phase-Ins | \$ 65,881,963 | \$ 65,881,964 | \$ 17,303,489 | \$ 253,933,928 | \$ 220,296,491 |
| F. Funding Value End of Year | | | | | |
| F1. Preliminary Funding Value End of Year: A + B3 + C8 + D5 + D6 + E6 | \$ 13,994,794,513 | | | | |
| F2. Corridor Percent | 30% | | | | |
| F3. Upper Corridor Limit: (100% + F2) x B1 | 18,917,873,501 | | | | |
| F4. Lower Corridor Limit: (100% - F2) x B1 | 10,186,547,270 | | | | |
| F5. Funding Value End of Year | \$ 13,994,794,513 | | | | |
| G. Difference Between Market and Funding Value | 557,415,872 | | | | |
| H. Recognized Rate of Return | 6.51% | | | | |
| I. Market Rate of Return | 15.15% | | | | |
| J. Ratio of Funding Value to Market Value | 0.9617 | | | | |



Determination of Actuarial Value of Assets (Concluded)

| Year Ended September 30 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|------------------|------------------|-------------------|-------------------|-------------------|
| A. Funding Value Beginning of Year | \$ 6,089,485,632 | \$ 6,957,871,742 | \$ 8,178,804,782 | \$ 10,547,883,872 | \$ 11,419,552,510 |
| B. Market Value | | | | | |
| B1. Market Value End of Year | 6,892,098,528 | 8,019,027,188 | 10,742,197,777 | 10,618,766,169 | 12,017,317,242 |
| B2. Market Value Beginning of Year | 6,111,241,252 | 6,892,098,528 | 8,019,027,188 | 10,742,197,777 | 10,618,766,169 |
| B3. Audit Adjustment | 283 | 34,921,939 | - | - | - |
| C. Non-Investment Net Cash Flow | | | | | |
| C1. Member Contributions | 208,197,137 | 204,752,249 | 203,769,106 | 205,596,047 | 202,972,230 |
| C2. Employer Contributions | 707,714,341 | 708,508,889 | 749,590,728 | 771,570,875 | 783,148,294 |
| C3. Other Governmental Contributions | 233,196,225 | 324,598,151 | 236,167,771 | 251,588,645 | 214,638,461 |
| C4. Benefit Payments | (700,257,338) | (514,214,731) | (612,545,011) | (806,955,727) | (663,180,193) |
| C5. Contribution Refunds / Transfers | (33,591) | (112,571) | (107,541) | (148,344) | (132,607) |
| C6. Administrative Expenses | (4,097,557) | (6,213,573) | (8,442,703) | (7,315,475) | (8,259,184) |
| C7. Other | 74,340 | 118,171 | 115,671 | 79,098 | 124,396 |
| C8. Total Net Cash Flow: C1 + C2 + C3 + C4 + C5 + C6 + C7 | 444,793,557 | 717,436,585 | 568,548,021 | 414,415,119 | 529,311,397 |
| D. Investment Return | | | | | |
| D1. Market Return Total: B1 - B2 - B3 - C8 | 336,063,436 | 374,570,136 | 2,154,622,568 | (537,846,727) | 869,239,676 |
| D2. Assumed Rate of Return | 6.95% | 6.95% | 6.95% | 6.00% | 6.00% |
| D3. Market Rate of Return | 5.31% | 5.14% | 25.95% | (4.91)% | 7.99% |
| D4. Dedicated Gains Policy Trigger (Excess Return %) | 0.00% | 0.00% | 15.94% | 0.00% | 0.00% |
| D5. Market Return for Immediate Recognition: D4 x (B2 + B3 + C8/2) | - | - | 1,323,546,211 | - | - |
| D6. Assumed Amount of Return: D2 x (A + B3 + C8/2) | 438,675,847 | 510,930,082 | 588,183,976 | 645,305,486 | 701,052,493 |
| D7. Amount Subject to Phase-In: D1 - D5 - D6 | (102,612,411) | (136,359,946) | 242,892,381 | (1,183,152,213) | 168,187,183 |
| E. Phased-In Recognition of Investment Return | | | | | |
| E1. Current Year: 0.20 x D7 | (20,522,482) | (27,271,989) | 48,578,476 | (236,630,443) | 33,637,437 |
| E2. First Prior Year | 5,438,905 | (20,522,482) | (109,087,957) | 48,578,476 | (236,630,443) |
| E3. Second Prior Year | - | 5,438,905 | (61,567,447) | - | 48,578,476 |
| E4. Third Prior Year | - | - | 10,877,810 | - | - |
| E5. Fourth Prior Year | - | - | - | - | - |
| E6. Total Phase-Ins | \$ (15,083,577) | \$ (42,355,566) | \$ (111,199,118) | \$ (188,051,967) | \$ (154,414,530) |
| F. Funding Value End of Year | | | | | |
| F1. Preliminary Funding Value End of Year: A + B3 + C8 + D5 + D6 + E6 | \$ 6,957,871,742 | \$ 8,178,804,782 | \$ 10,547,883,872 | \$ 11,419,552,510 | \$ 12,495,501,870 |
| F2. Corridor Percent | 30% | 30% | 30% | 30% | 30% |
| F3. Upper Corridor Limit: (100% + F2) x B1 | 8,959,728,086 | 10,424,735,344 | 13,964,857,110 | 13,804,396,020 | 15,622,512,415 |
| F4. Lower Corridor Limit: (100% - F2) x B1 | 4,824,468,970 | 5,613,319,032 | 7,519,538,444 | 7,433,136,318 | 8,412,122,069 |
| F5. Funding Value End of Year | \$ 6,957,871,742 | \$ 8,178,804,782 | \$ 10,547,883,872 | \$ 11,419,552,510 | \$ 12,495,501,870 |
| G. Difference Between Market and Funding Value | (65,773,214) | (159,777,594) | 194,313,905 | (800,786,341) | (478,184,628) |
| H. Recognized Rate of Return | 6.71 % | 6.37% | 21.28% | 4.25% | 4.68% |
| I. Market Rate of Return | 5.31 % | 5.14% | 25.95% | (4.91)% | 7.99% |
| J. Ratio of Funding Value to Market Value | 1.0095 | 1.0199 | 0.9819 | 1.0754 | 1.0398 |



SECTION E

SUMMARY OF REPORTED PARTICIPANT DATA

Summary of Reported Participant Data as of the Indicated Valuation Date

| Reported Program Participants | September 30, 2023 | September 30, 2024 |
|--|--------------------|--------------------|
| Active Members ⁵ | | |
| Graded Premium | | |
| Number | 103,319 | 98,015 |
| Average age | 51.1 | 51.6 |
| Average service | 18.2 | 18.5 |
| Reported payroll (millions) ⁴ | \$6,516.9 | \$6,507.8 |
| Average annual pay | \$63,076 | \$66,396 |
| Personal Healthcare Fund | | |
| Number ³ | 100,161 | 109,087 |
| Reported payroll (millions) ⁴ | \$3,460.2 | \$3,990.9 |
| Average annual pay | \$34,546 | \$36,585 |
| Inactive Vested Members | | |
| Number ¹ | 2,438 | 2,517 |
| Average age | 54.3 | 54.0 |
| Retirees and Beneficiaries | | |
| Number ² | 226,087 | 227,586 |
| Average age | 73.9 | 74.2 |

¹ Only includes inactive vested persons with 21 or more years of service at termination (10 or more years for MIPP/PPP members).

² Includes alternate payees and other individuals not eligible for or otherwise receiving subsidized retiree health benefits.

³ Of the 109,087 PHF actives as of September 30, 2024, 101,991 were hired on or after September 4, 2012 and are eligible for the \$1,000/\$2,000 lump sum at termination benefit.

⁴ The total annual payroll reported in the valuation data (including payroll for those employees excluded from the active data statistics above) is \$10,513.9 million as of September 30, 2024 (\$9,990.8 million as of September 30, 2023). UAAL contributions are expected to continue to be collected on the payroll of all active members in the future.

⁵ The active member statistics exclude people provided in the valuation with both \$0 pay and 0 service (6,808 as of September 30, 2023 and 7,004 as of September 30, 2024).

SECTION F

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

Valuation Methods

Actuarial cost method - Normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using an Individual Entry-Age Actuarial Cost Method having the following characteristics:

- (i) The annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement; and
- (ii) Each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains (losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Financing of unfunded actuarial accrued liabilities – The Unfunded Actuarial Accrued Liabilities (UAAL) as of September 30, 2024 are projected to the beginning of the fiscal year for which the contributions are being determined, in this case October 1, 2026 (i.e., the beginning of fiscal year 2027). The projection procedure increases the UAAL as of September 30, 2024 with interest and decreases it with the expected UAAL contributions for each of the two years between the actuarial valuation date and the beginning of the fiscal year for which contributions are being determined.

Unfunded actuarial accrued liabilities as of the beginning of fiscal year 2027 were amortized by level (principal & interest combined) dollar contributions over a reasonable period of future years according to the Funding Policy. The amortization period used in the development of the fiscal year 2027 employer contribution is shown in Section A of this report.

Actuarial value of system assets - The actuarial value of assets recognizes assumed investment income fully each year. Differences between actual and assumed investment income are phased in over a closed five year period. During periods when investment performance exceeds the assumed rate, actuarial value of assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, actuarial value of assets will tend to be greater than market value. The actuarial value of assets is not permitted to deviate from the market value of assets by more than 30%. The actuarial value of assets was adopted for use in the annual valuations beginning with the September 30, 2018 funding valuation for the System.

Present value of future reconciliation payments – Subsection 41(9) of the MPSERS statute provides for a process to reconcile actual employer contributions to the actuarially computed contribution requirements. In order to avoid duplication of the employer contributions, the present value of future reconciliation payments is subtracted from the UAAL to determine the remaining UAAL contribution. Please refer to page F-12.

Actuarial Assumptions

In accordance with Section 41(1) of the MPSERS statute (Act 300 of the Public Acts of 1980, as amended), the actuarial assumptions are adopted by the Retirement Board and the Department of Technology, Management and Budget after consultation with the actuary and the State Treasurer. The actuarial assumptions were based upon the results of an Experience Study for MPSERS covering the period October 1, 2017 through September 30, 2022. A report dated August 24, 2023 presented the results of the Experience Study. The actuarial assumptions represent estimates of future experience.

The rate of investment return, compounded annually net of investment expenses and including a component of 2.35% for price inflation, was assumed to be 6.00%. This assumption was first used for the September 30, 2021 funding valuation of the System.

The rates of salary increase used for individual members are in accordance with the table below. This assumption is used to project a member’s current pay to pay at retirement. This assumption was first used for the September 30, 2018 valuation of the System.

| Sample Ages | Salary Increase Assumptions For an Individual Member | | |
|-------------|---|----------------|--------------------|
| | Merit & Seniority | Base (Economy) | Increase Next Year |
| 20 | 8.80 % | 2.75 % | 11.55 % |
| 25 | 8.80 | 2.75 | 11.55 |
| 30 | 4.96 | 2.75 | 7.71 |
| 35 | 3.10 | 2.75 | 5.85 |
| 40 | 1.90 | 2.75 | 4.65 |
| 45 | 1.14 | 2.75 | 3.89 |
| 50 | 0.54 | 2.75 | 3.29 |
| 55 | 0.18 | 2.75 | 2.93 |
| 60 | 0.00 | 2.75 | 2.75 |
| 65 | 0.00 | 2.75 | 2.75 |
| Ref | 510 | | |

The tables shown in this section of the report may include a reference number (for example 510 is used above). These reference numbers are used by GRS to track and identify assumption tables.

Actuarial Assumptions

The mortality tables: The mortality tables described below were first used in the September 30, 2023 valuation:

- Healthy Male Retirees: PubT-2010 Retiree Mortality Male Table, scaled by 116% and projected with mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.
- Healthy Female Retirees: PubT-2010 Retiree Mortality Female Table, scaled by 116% and projected with mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.
- Disabled Male Retirees: PubNS-2010 Disabled Retiree Mortality Male Table, scaled by 100% and projected with mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.
- Disabled Female Retirees: PubNS-2010 Disabled Retiree Mortality Female Table, scaled by 100% and projected with mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.
- Male Active Members: PubT-2010 Employee Mortality Male Table, scaled by 100% and projected with mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.
- Female Active Members: PubT-2010 Employee Mortality Female Table, scaled by 100% and projected with mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.

| Sample Attained Ages | Future Life Expectancy (years)* | | | | | |
|----------------------------|---------------------------------|-------|-------------------------|-------|---------------------|-------|
| | Pre-Retirement | | Healthy Post-Retirement | | Disabled Retirement | |
| | Men | Women | Men | Women | Men | Women |
| 45 | 44.78 | 46.75 | 41.88 | 44.16 | 30.24 | 33.29 |
| 50 | 39.65 | 41.58 | 36.69 | 38.94 | 26.41 | 29.36 |
| 55 | 34.57 | 36.45 | 31.59 | 33.81 | 22.91 | 25.76 |
| 60 | 29.59 | 31.39 | 26.66 | 28.88 | 19.73 | 22.42 |
| 65 | 24.75 | 26.41 | 21.94 | 24.08 | 16.77 | 19.12 |
| 70 | 20.07 | 21.54 | 17.48 | 19.44 | 13.94 | 15.73 |
| 75 | 15.53 | 16.84 | 13.35 | 15.05 | 11.16 | 12.43 |
| 80 | 11.19 | 12.42 | 9.71 | 11.12 | 8.57 | 9.47 |

* Life expectancy in future years is determined by the fully generational MP-2021 projection scale. The sample values shown are for individuals with the indicated attained ages in 2024. Active member deaths are assumed to be non-duty related.

Actuarial Assumptions

The rates of retirement used to measure the probability of eligible members retiring during the next year are shown below. These assumptions were first used for the September 30, 2023 valuation of the System.

A Basic member is eligible for normal retirement after attaining age 55 with 30 or more years of credited service, or after attaining age 60 with 10 or more years of credited service.

A MIP member is eligible for normal retirement after 30 years of service, or after attaining age 60 with 5 or more years of service.

A Basic or MIP member is eligible for early retirement after attaining age 55 with 15 but less than 30 years of credited service.

A Pension Plus member is eligible for normal retirement after attaining age 60 with 10 or more years of credited service. Pension Plus members are not eligible for early retirement. Currently, Pension Plus 2 members have the same retirement eligibility and retirement rates as Pension Plus members.

Normal Retirement

| Retirement Ages | Percent of Eligible Members Retiring | | | |
|--------------------|--------------------------------------|--------------|-------------------------------|--------------|
| | Basic Members | | MIP# and Pension Plus Members | |
| | Teachers | Non-Teachers | Teachers | Non-Teachers |
| 55 | 25 % | 20 % | | |
| 56 | 21 | 20 | | |
| 57 | 16 | 18 | | |
| 58 | 16 | 18 | | |
| 59 | 18 | 18 | | |
| 60 | 20 | 18 | 20 % | 17 % |
| 61 | 20 | 18 | 20 | 17 |
| 62 | 29 | 29 | 23 | 24 |
| 63 | 29 | 29 | 23 | 24 |
| 64 | 25 | 24 | 23 | 20 |
| 65 | 25 | 24 | 25 | 20 |
| 66 | 30 | 30 | 30 | 26 |
| 67 | 25 | 28 | 25 | 20 |
| 68 | 25 | 23 | 25 | 16 |
| 69 | 25 | 20 | 25 | 16 |
| 70 | 25 | 20 | 25 | 16 |
| 71 | 21 | 20 | 25 | 16 |
| 72 | 21 | 20 | 25 | 16 |
| 73 | 21 | 20 | 20 | 16 |
| 74 | 21 | 20 | 20 | 16 |
| 75 & Over | 100 | 100 | 100 | 100 |
| Ref | 2835 | 2836 | 2837 | 2838 |

Applies to MIP members with fewer than 30 years of service.



Actuarial Assumptions

Normal Retirement

| Years of Service | Percent of Eligible Members Retiring | |
|------------------|---------------------------------------|--------------|
| | MIP Members with 30+ Years of Service | |
| | Teachers | Non-Teachers |
| 30 | 25 % | 20 % |
| 31 | 20 | 20 |
| 32 | 20 | 18 |
| 33 | 18 | 18 |
| 34 | 19 | 18 |
| 35 | 19 | 18 |
| 36 | 21 | 18 |
| 37 | 24 | 18 |
| 38 | 24 | 25 |
| 39 | 27 | 25 |
| 40 | 30 | 25 |
| 41 | 30 | 25 |
| 42 | 30 | 30 |
| 43 | 30 | 30 |
| 44 | 30 | 30 |
| 45 | 30 | 30 |
| 46 | 30 | 30 |
| 47 | 30 | 30 |
| 48 | 30 | 30 |
| 49 | 30 | 30 |
| 50 | 100 | 100 |
| Ref | 2833 | 3414 |

Early Retirement

| Retirement Age | Percent of Eligible Members Retiring | |
|----------------|--------------------------------------|-------------|
| | Basic Members | MIP Members |
| 55 | 3.0 % | 3.0 % |
| 56 | 4.0 | 4.0 |
| 57 | 4.5 | 4.5 |
| 58 | 4.5 | 4.5 |
| 59 | 6.0 | 6.0 |
| Ref | 3413 | 3413 |

Actuarial Assumptions

Rates of separation from active membership used in the valuation are shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment, and was first used for the September 30, 2023 valuation of the System.

Non-Pension Plus 2 Plan Members

| Sample Ages | Years of Service | Percent Separating within Next Year | | | |
|-------------|------------------|-------------------------------------|--------------|------------------------|--------------|
| | | Pay More Than \$20,000 | | Pay Less Than \$20,000 | |
| | | Teachers | Non-Teachers | Teachers | Non-Teachers |
| All | 0 | 12.00 % | 35.00 % | 24.00 % | 40.00 % |
| | 1 | 9.00 | 14.00 | 22.00 | 26.00 |
| | 2 | 6.00 | 8.20 | 22.00 | 19.00 |
| | 3 | 5.00 | 6.80 | 22.00 | 16.00 |
| | 4 | 4.00 | 5.70 | 22.00 | 14.00 |
| 20 | 5 & over | 3.00 | 5.00 | 22.00 | 14.00 |
| 25 | | 3.00 | 4.76 | 22.00 | 14.00 |
| 30 | | 2.46 | 3.76 | 22.00 | 14.00 |
| 35 | | 1.62 | 2.48 | 20.80 | 13.40 |
| 40 | | 1.12 | 1.70 | 18.20 | 11.80 |
| 45 | | 0.88 | 1.44 | 16.40 | 9.80 |
| 50 | | 0.80 | 1.34 | 16.00 | 8.40 |
| 55 | 0.80 | 1.30 | 16.00 | 8.00 | |
| 60 | 0.80 | 1.30 | 16.00 | 8.00 | |
| Svc Ref | | 1484 | 877 | 1483 | 1137 |
| Age Ref | | 1629 | 1630 | 1450 | 1451 |

Pension Plus 2 Plan Members

| Sample Ages | Years of Service | Percent Separating within Next Year | | | |
|-------------|------------------|-------------------------------------|--------------|------------------------|--------------|
| | | Pay More Than \$20,000 | | Pay Less Than \$20,000 | |
| | | Teachers | Non-Teachers | Teachers | Non-Teachers |
| All | 0 | 6.00 % | 14.00 % | 24.00 % | 23.00 % |
| | 1 | 5.00 | 6.00 | 22.00 | 17.00 |
| | 2 | 4.00 | 5.00 | 22.00 | 15.00 |
| | 3 | 3.00 | 4.00 | 22.00 | 13.00 |
| | 4 | 2.00 | 3.00 | 22.00 | 8.00 |
| 20 | 5 & over | 2.01 | 3.35 | 16.50 | 10.50 |
| 25 | | 2.01 | 3.19 | 16.50 | 10.50 |
| 30 | | 1.65 | 2.52 | 16.50 | 10.50 |
| 35 | | 1.09 | 1.66 | 15.60 | 10.05 |
| 40 | | 0.75 | 1.14 | 13.65 | 8.85 |
| 45 | | 0.59 | 0.96 | 12.30 | 7.35 |
| 50 | | 0.54 | 0.90 | 12.00 | 6.30 |
| 55 | 0.54 | 0.87 | 12.00 | 6.00 | |
| 60 | 0.54 | 0.87 | 12.00 | 6.00 | |
| Svc Ref | | 1485 | 1487 | 1483 | 1486 |
| Age Ref | | 1629 | 1630 | 1450 | 1451 |
| Age Mult | | 67% | 67% | 75% | 75% |

Actuarial Assumptions

Rates of disability among active members used in the valuation are shown below, and were first used in the September 30, 2010 valuation of the System. Disabilities are assumed to be non-duty related.

| Sample Ages | Percent Becoming Disabled Within Next Year |
|-------------|--|
| 20 | 0.00 % |
| 25 | 0.01 |
| 30 | 0.01 |
| 35 | 0.02 |
| 40 | 0.05 |
| 45 | 0.10 |
| 50 | 0.18 |
| 55 | 0.26 |
| 60 | 0.36 |
| Ref. | 393 x 0.80 |

Service Credit Accrual Rates: Members were assumed to accrue service credit each year as described in the table below:

| | Assumed Average Service Credit Accrued Each Year |
|--------------------------------------|--|
| Teachers with Pay Over \$20,000 | 1.00 years |
| Non-Teachers with Pay Over \$20,000 | 1.00 |
| Teachers with Pay Under \$20,000 | 0.68 |
| Non-Teachers with Pay Under \$20,000 | 0.68 |

These accrual rates were first used for the September 30, 2023 valuation of the System.

Actuarial Assumptions

Unknown Data:

- Members with unknown gender were assumed to be female.
- Members with unknown dates of birth were assumed to have an entry-age equal to 33 for Basic members, 31 for MIP members, 33 for PPP members, and 31 for PPP2 members.
- Active members with non-zero service who were reported without any annual pay were assumed to have pay equal to the average pay of the corresponding active group.
- Members with unknown pre-Public Act 300 of 2012 benefit plan codes were assumed to be MIP Graded.
- Employer-paid medical and dental/vision coverage percentages were estimated when not provided for retirees.

Actuarial Assumptions

OPEB election assumptions - When retiree health costs are valued, assumptions must be made regarding the probability that the plan will be providing coverage. The following table summarizes (by gender): (1) the percentages of eligible members assumed to opt out of retiree medical coverage, (2) the percentages of eligible members not opting out of retiree medical coverage assumed to elect 1-person coverage, (3) the percentages of eligible members not opting out of retiree medical coverage assumed to elect 2-person coverage, and (4) the percentages of members electing 2-person retiree medical coverage where the coverage is assumed to continue beyond the retiree's death.

| | Opt Out* | Percentage of Those Not Opting Out Electing: | | |
|---------|----------|--|-------------------|------------|
| | | 1-Person Coverage | 2-Person Coverage | |
| | | | Electing | Continuing |
| Males | 21% | 25% | 75% | 80% |
| Females | 21% | 40% | 60% | 67% |

* It is assumed that 21% of future eligible recipients hired before July 1, 2008 and 30% of future eligible recipients hired on or after July 1, 2008 opt out.

Actuarial Assumptions

Health Care Cost Trend Rates – The reported per person premium is projected to increase as shown in the table below:

| Health Care Cost Trend Rates | | | |
|-------------------------------------|---|-----------------|---|
| October 1 | Medical / Prescription Drug Premium Increase | | Dental / Vision Premium Increase |
| | Pre-65 | Post-65* | |
| 2025 | 7.75 % | 6.50 % | 3.50 % |
| 2026 | 7.50 | 6.25 | 3.50 |
| 2027 | 7.25 | 6.00 | 3.50 |
| 2028 | 6.75 | 5.75 | 3.50 |
| 2029 | 6.50 | 5.75 | 3.50 |
| 2030 | 6.25 | 5.50 | 3.50 |
| 2031 | 6.00 | 5.25 | 3.50 |
| 2032 | 5.75 | 5.00 | 3.50 |
| 2033 | 5.25 | 4.75 | 3.50 |
| 2034 | 5.00 | 4.50 | 3.50 |
| 2035 | 4.75 | 4.25 | 3.50 |
| 2036 | 4.50 | 4.25 | 3.50 |
| 2037 | 4.00 | 4.00 | 3.50 |
| 2038 | 3.75 | 3.75 | 3.50 |
| 2039 & Beyond | 3.50 | 3.50 | 3.50 |

* Trend used for purposes of the Medicare Offset Payment as well.

The retiree share of the per person medical/prescription drug premium was assumed to increase at the same rate as the medical/prescription drug premiums.

Health care cost trend rates are established for each annual actuarial valuation. These assumptions are used to determine how much per capita costs are expected to increase from one year to the next. In general, the trend rates are higher in the years immediately following the valuation, grading down over the next 10 to 15 years to the “ultimate health care trend rate.”

Miscellaneous and Technical Assumptions

| | |
|---|---|
| <i>Administrative Expenses</i> | The normal cost contribution includes a load for administrative expense based upon actual administrative expenses from the prior fiscal year. |
| <i>Decrement Operation</i> | Disability and withdrawal decrements do not operate during retirement eligibility. |
| <i>Decrement Timing</i> | Retirement decrements are assumed to occur on July 1. All other decrements are assumed to occur mid-year. |
| <i>Eligibility Testing</i> | Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur. |
| <i>Health Care Reform</i> | Health care reform was considered in the valuation to the extent that reported per capita costs reflect plan changes due to health care reform. |
| <i>Incidence of Contributions</i> | Contributions are assumed to be received continuously throughout the year. |
| <i>Liability Adjustments</i> | <p>The inactive vested member liability includes \$94,00 associated with participants who may be entitled to a pending \$1,000/2,000 lump sum.</p> <p>The retirees and beneficiaries liability includes \$176,000 associated with participants who may be entitled to a pending \$1,000/2,000 lump sum.</p> |
| <i>Marriage Assumption</i> | 75% of males and 65% of females were assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active and inactive vested member valuation purposes. |
| <i>Medicare MA and EGWP Payments</i> | MA and EGWP payments from Medicare were assumed to continue indefinitely and increase in accordance with the rates shown on the prior page. |

Miscellaneous and Technical Assumptions

Reconciliation Payments

ORS provided the following schedule of reconciliation payments. For purposes of determining the present value of reconciliation payments, it was assumed that payments occur in the middle of the fiscal period.

| Fiscal Year | Reconciliation Payment |
|--------------------|-------------------------------|
| 2025 | \$ 10,877,124 |
| 2026 | 0 |
| 2027 | 0 |
| 2028 | 0 |
| 2029 | 0 |
| 2030 | 0 |

Salary Increase Timing

Salary increases were assumed to be at the beginning of the fiscal year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.

Teacher/ Non-Teacher Assumption Classification

For purposes of the assumptions in this report differentiated between Teachers and Non-Teachers, a Teacher designation includes any active record with job classification code in the 1200s. For retiree records, the job classification code is not supplied.

SECTION G

FUNDING POLICY

Funding Policy

The goal of the Funding Policy is to ensure adequate funding of the plans and to set a funding target that will allow the plans to remain at or above that target during successive years of investment or actuarial losses.

Funding Security

1. Until the pension plan is at or above 120% funded or the Other Post-Employment Benefits (OPEB) plan is at or above 140% funded [hereafter funding target], as determined in its annual actuarial valuation, the employer contribution rate cannot be less than the actuarially determined employer normal cost.
 - a. For systems with multiple subplans (i.e., MPSERS, SPRS), until all of the subplans are at or above the funding target, the employer contribution rate cannot be less than the actuarially determined employer normal cost.
2. Once the pension plan or the OPEB plan is at or above the funding target, the employer normal cost contribution for any fiscal year will be reduced by the negative UAAL in excess of the funding target. The employer normal cost contribution rate can be reduced to no less than 0%.
 - a. The negative UAAL payments for any fiscal year will not be greater than the total amount of contributions for that year.

Layered Amortization

3. Layered Amortization Principles
 - a. Once 15 years for open plans (10 years for closed plans) remain in the current amortization period for the existing UAAL, the existing UAAL will be frozen and amortized by the end of the plan's amortization period, unless the period is extended.
 - b. Beginning with the actuarial valuation where the amortization period of the existing UAAL is less than 15 years for open plans (10 years for closed plans), and for subsequent annual actuarial valuations, changes in the UAAL due to actuarial gains or losses or from changes to actuarial assumptions will be amortized over a closed 15-year amortization period for open plans (10 years for closed plans).
 - c. Regardless of funded %, once plans have reached layered amortization, negative UAAL layers will be recognized (i.e., offset positive UAAL layers).
 - d. If the plan is more than 100% funded, all the layers will be eliminated, and an open 20-year amortization period will be used.
 - e. Increases in the UAAL due to changes in benefit provisions will be amortized over a closed 15-year period for active members and a closed 5-year period for non-active members (i.e., retired members and deferred members), unless specified otherwise in statute.
 - f. Decreases in the UAAL due to changes in benefit provisions will be amortized over a closed 20-year period for all members, unless specified otherwise in statute.
4. These provisions will be applied separately to the pension and OPEB plans.
5. MPSERS Pension Plus 2 is exempt from the UAAL amortization provisions of this policy due to its amortization method being defined in Section 41b(2) of PA 300 of 1980, as amended.
 - a. Pension Plus 2 members will pay 50% of the total NC rate. Employers will pay the greater of 50% of the total NC rate or the employer NC contribution rate from the previous fiscal year, pursuant to Section 41(2)(c).



Funding Policy (Concluded)

Considerations for MPSERS OPEB Actuarial Valuation

6. According to the Funding Policy, layered amortization for the MPSERS OPEB actuarial valuation begins effective with the September 30, 2027 valuation date.
7. For the MPSERS OPEB actuarial valuation, in accordance with the MPSERS Retirement Act – Public Act 300 of 1980 as amended, the payroll growth assumption used to calculate the UAAL contribution will be gradually reduced to 0%, effectively transitioning the UAAL amortization method from a level percent of payroll method to a level dollar method.
8. The Funding Policy was adopted by the Retirement Board for use in the September 30, 2023 and later actuarial valuations.

APPENDIX

SUPPLEMENTARY INFORMATION

Supplementary Information

Schedule of Health Funding Progress (\$ Amounts in Millions)

| Valuation Date September 30 | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (UAAL) (b-a) | Funded Ratio (a/b) | UAAL Covered Payroll (c) | UAAL as a % of Covered Payroll ((b-a)/c) |
|-----------------------------------|--|--|------------------------------------|--------------------------|-----------------------------------|--|
| 2015 | \$ 3,530.6 | \$ 12,832.4 | \$ 9,301.9 | 27.51 % | \$ 8,263.9 | 112.6 % |
| 2016 | 4,279.1 | 13,105.1 | 8,826.1 | 32.65 | 8,206.1 | 107.6 |
| 2016 ¹ | 4,279.1 | 13,776.4 | 9,497.3 | 31.06 | 8,206.1 | 115.7 |
| 2017 | 5,177.8 | 13,115.7 | 7,938.0 | 39.48 | 8,220.8 | 96.6 |
| 2017 ¹ | 5,177.8 | 13,587.7 | 8,409.9 | 38.11 | 8,220.8 | 102.3 |
| 2018 | 5,944.4 | 12,872.7 | 6,928.3 | 46.18 | 8,300.0 | 83.5 |
| 2018 ¹ | 6,089.5 | 13,748.9 | 7,659.5 | 44.29 | 8,300.0 | 92.3 |
| 2019 | 6,957.9 | 13,009.7 | 6,051.8 | 53.48 | 8,690.8 | 69.6 |
| 2020 | 8,178.8 | 11,884.9 | 3,706.1 | 68.82 | 8,716.3 | 42.5 |
| 2021 | 9,606.5 | 11,077.1 | 1,470.6 | 86.72 | 8,901.4 | 16.5 |
| 2021 ¹ | 10,547.9 | 12,376.9 | 1,829.1 | 85.22 | 8,901.4 | 20.6 |
| 2022 | 11,419.6 | 11,508.1 | 88.6 | 99.23 | 9,607.3 | 0.9 |
| 2023 | 12,495.5 | 10,069.5 | (2,426.0) | 124.09 | 9,990.8 | (24.3) |
| 2023 ¹ | 12,495.5 | 9,842.9 | (2,652.6) | 126.95 | 9,990.8 | (26.6) |
| 2024 | 13,994.8 | 9,211.9 | (4,782.9) | 151.92 | 10,513.9 | (45.5) |

¹ Change in assumptions shown for years where assumptions other than the trend assumption have changed. Beginning with the September 30, 2021 valuation, results as of the same valuation date prior to the assumption change reflect expected trend from the prior year's valuation.



Supplementary Information

Schedule of Employer Health Contributions

| Fiscal Year Ended September 30 | Actuarially Computed Employer Contribution ³ | Actual Contributions ² | Percentage Contributed |
|---|--|--|-----------------------------------|
| 2016 | \$ 911,687,353 | \$ 886,354,172 | 97.2% |
| 2017 | 815,984,986 | 794,666,783 | 97.4 |
| 2018 | 673,996,085 | 663,708,218 | 98.5 |
| 2019 | 711,059,338 | 707,714,341 | 99.5 |
| 2020 | 638,384,571 | 708,508,889 | 111.0 |
| 2021 | 605,290,358 | 749,590,728 | 123.8 |
| 2022 | 500,203,569 | 771,570,875 | 154.3 |
| 2023 | 293,916,193 | 783,148,294 | 266.5 |
| 2024 | 145,229,765 | 803,531,139 | 553.3 |
| 2025 | 76,224,210 | 1 | 1 |

¹ Not Available.

² Prior to fiscal year 2018, includes Other Governmental Contributions.

³ The actuarially computed employer contribution amounts presented throughout this report do not reflect the normal cost or UAAL contribution floor provisions of Public Act 92 of 2017 and Public Act 181 of 2018 and amended in Public Act 127 of 2024. Any reconciliation payments as required by subsection 41(9) of MPERS statute are included above.

Supplementary Information

The following assumptions and methods were used in the September 30, 2024 actuarial valuation results shown on the previous page:

| | |
|--|--------------------------------------|
| Valuation Date | September 30, 2024 |
| Actuarial Cost Method | Entry-Age |
| Amortization Method | Level Dollar, Closed |
| Remaining Amortization Period | 12 years, Ending September 30, 2038 |
| Asset Valuation Method | 5-Year Smoothed Market Value |
| Actuarial Assumptions: | |
| Investment Rate of Return (discount rate) | 6.00% per year |
| Wage Inflation Rate | 2.75% |
| Payroll Growth (Actual Payroll) | 2.75% |
| Payroll Growth (Amortization Purposes) | 0.00% |
| Health Care Cost Trend Rates | |
| Medical / Prescription Drug Premiums (Pre-65) | 7.75% Year 1 graded to 3.50% Year 15 |
| Medical / Prescription Drug Premiums (Post-65) | 6.50% Year 1 graded to 3.50% Year 15 |
| Medicare Offset Payments | 6.50% Year 1 graded to 3.50% Year 15 |
| Dental / Vision Premiums | 3.50% each year |

