

Police and Firemen's Retirement System of New Jersey

Actuarial Valuation and Review as of July 1, 2024



This valuation report should only be copied, reproduced, or shared with other parties in its entirety as necessary for the proper administration of the System.

© 2025 by The Segal Group, Inc.

Segal



333 West 34th Street, 3rd Floor
New York, NY 10001-2402
segalco.com
T 212.251.5000

February 26, 2025

Police and Firemen's Retirement System of New Jersey
50 West State Street, Trenton, New Jersey 08625

Dear Board of Trustees Members:

We are pleased to submit this Actuarial Valuation and Review as of July 1, 2024. It summarizes the actuarial data used in the valuation, analyzes the preceding year's experience, and establishes the funding requirements for fiscal ending June 30, 2026.

This report has been prepared in accordance with generally accepted actuarial principles and practices for the exclusive use and benefit of the Board of Trustees, based upon information provided by the staff of the Police and Firemen's Retirement System of New Jersey, the Division of Pensions and Benefits, and other service providers.

Segal does not audit the data provided. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. To the extent we can, however, Segal does review the data for reasonableness and consistency. Based on our review of the data, we have no reason to doubt the substantial accuracy of the information on which we have based this report and we have no reason to believe there are facts or circumstances that would affect the validity of these results.

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.

The actuarial calculations were directed under the supervision of Jonathan P. Scarpa. I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of my knowledge, the information supplied in this actuarial valuation is complete and accurate, except as noted in Section 4. The assumptions used in this actuarial valuation were selected by the Board of Trustees based upon my analysis and recommendations. In my opinion, the assumptions are reasonable and take into account the experience of the System and reasonable expectations. In addition, in my opinion, the combined effect of these assumptions is expected to have no significant bias.

February 26, 2025

Segal makes no representation or warranty as to the future status of the Plan 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.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

Segal

A handwritten signature in blue ink that reads "Frank Santasiero". The signature is written in a cursive, flowing style.

Frank Santasiero, FSA, FCA, MAAA
Vice President and Consulting Actuary

A handwritten signature in blue ink that reads "Jonathan P. Scarpa". The signature is written in a cursive, flowing style.

Jonathan P. Scarpa, FSA, MAAA
Vice President and Consulting Actuary

Table of Contents

Section 1: Actuarial Valuation Summary	6
Purpose and basis	6
Valuation highlights.....	7
Changes from prior valuation	8
Risk	9
Summary of key valuation results – State	10
Summary of key valuation results – Local Employers	12
Important information about actuarial valuations	14
 Section 2: Actuarial Valuation Results.....	16
Participant information	16
Assets.....	28
Actuarial experience	38
Statutory Pension Contribution	43
Schedule of state funding progress through June 30, 2024	54
Schedule of local employers’ funding progress through June 30, 2024.....	55
Schedule of total funding progress through June 30, 2024	56
Low-Default-Risk Obligation Measure (LDRM).....	59
Risk	60
GFOA funded liability by type	67
Active Liability by Type	71
 Section 3: Supplemental Information.....	73
Exhibit A: Table of plan demographics for State	73

Table of Contents

Exhibit B: Table of plan demographics for Local Employers.....	74
Exhibit C: State Members in active service as of June 30, 2024 by age, years of service, and average compensation	75
Exhibit D: Local Members in active service as of June 30, 2024 by age, years of service, and average compensation	76
Exhibit E: Reconciliation of participant data	77
 Section 4: Actuarial Valuation Basis.....	 78
Exhibit I: Actuarial assumptions, methods and models	78
Exhibit II: Summary of plan provisions	84
Exhibit III: Contribution rates.....	88
Exhibit IV: Legislation History	89
 Section 5: Additional Required Exhibits.....	 92
Exhibit 1: Early Retirement Incentive Program ERI 1 Contribution Schedules.....	92
Exhibit 2: Chapter 19, P.L. 2009 Deferral and Payment Schedules	93
 Appendix A: Definition of Pension Terms	 99

Section 1: Actuarial Valuation Summary

Purpose and basis

This report has been prepared by Segal to present a funding valuation of the Police and Firemen's Retirement System of New Jersey as of July 1, 2024. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to determine the funding requirements for the fiscal year ending June 30, 2026.

The contribution requirements presented in this report are based on:

- The benefit provisions of the Pension Plan as of June 30, 2024, in accordance with New Jersey Statute and, as administered by the Board;
- The characteristics of covered active members, inactive vested, and retired members and beneficiaries as of June 30, 2024, provided by the Division of Pension and Benefits;
- The assets of the System as of June 30, 2024, provided by the Division of Pensions and Benefits;
- Economic assumptions regarding future salary increases and investment earnings;
- Other actuarial assumptions regarding employee terminations, retirement, death, etc. and
- The funding policy and asset valuation method in accordance with New Jersey Statute

Certain disclosure information required by GASB Statements No. 67 and 68 as of July 1, 2024 for the System is provided in a separate report.

Section 1: Actuarial Valuation Summary

Valuation highlights

- Segal strongly recommends an actuarial funding method that targets 100% funding of the actuarial accrued liability. Generally, this implies payments that are ultimately at least enough to cover normal cost, interest on the unfunded actuarial accrued liability. The funding policy defined in the New Jersey Statute meets this standard as long as full Statutory Pension Contribution is appropriated. However, as discussed later in this report the funding policy results in the unfunded liability being paid off over a longer time than may be reasonable under actuarial standards. See Section 3, Statutory Pension Contribution for further discussion.
- For the State plan, there was an actuarial loss of \$108.2 million for the year ended June 30, 2024, a combination of an investment loss of \$44.0 million, and a loss from sources other than investments of \$64.2 million. The loss from other sources was primarily due to demographic experience for the year ended June 30, 2024, including salary increases greater than expected. For the Local plan, the actuarial loss of \$389.0 million, is due to an investment gain of \$27.1 million, and a loss from sources other than investments of \$416.1 million. The loss from other sources was primarily due to demographic experience, notably salary increases greater than expected.
- The rate of return on the market value of assets was 8.8% for the State plan and 9.9% for the Local Employers' plan for the year ended June 30, 2024. The return on the actuarial value of assets was 4.8% for the State and 7.1% for Local Employers for the same period due to the actuarial smoothing method as defined in the Statute. This resulted in an actuarial loss for the State plan asset pool and an actuarial gain for the Local plan asset pool when measured against the assumed rate of return of 7.0%. The assumed rate of return is set by the State Treasurer and is reflected in the Statutory and GASB valuations that are presented to the Board for their review and acceptance. Based on the target allocation and expectations for future investment returns, Segal continues to believe this assumption is reasonable.

The actuarial value of assets is 107.3%% of the market value of assets for the State plan and 99.7% of the market value of assets for Local Employers' plan. The investment experience in the past years has only been partially recognized in the actuarial value of assets.

Section 1: Actuarial Valuation Summary

Changes from prior valuation

- The funded ratio (the ratio of the actuarial value of assets to actuarial accrued liability) is 42.2% for the State plan (including the Special Asset Value), compared to the prior year funded ratio of 41.0%. For the Local Employers' plan, the funded ratio is 72.0%, compared to the prior year funded ratio of 71.5%. This ratio is one measure of funding status, and its history is a measure of funding progress. Using the market value of assets, the funded ratio is 37.2% compared to 34.9% as of the prior valuation date for the State plan. For the Local Employers' plan, using market value, the funded ratio is 72.2% compared to 70.0% in the prior year. The increase in the funded percentage based on the market value of assets for the State and Local Employers' plan is primarily due to the market value investment gain during the year ended June 30, 2024. These measurements are not necessarily appropriate for assessing the sufficiency of the plan assets to cover the estimated cost of settling the Plan's benefit obligation or the need for or the amount of future contributions.
- The Statutory Pension Contribution, after State-paid Local cost shifting, determined as of July 1, 2024 and payable in the 2026 fiscal year, for the upcoming year is \$647.3 million, or 128.1% of payroll for the State plan, and \$1.39 billion or 35.6% of payroll, for the Local Employer's plan, both of which remained relatively level as compared to the prior year.

Section 1: Actuarial Valuation Summary

Risk

- It is important to note that this actuarial valuation is based on plan assets as of June 30, 2024. The System's funded status does not reflect short-term fluctuations of the market, but rather is based on the market values on the last day of the plan year. Segal is available to prepare projections of potential outcomes of market conditions and other demographic experience upon request.
- Since the actuarial valuation results are dependent on a given set of assumptions, there is a risk that emerging results may differ significantly as actual experience proves to be different from the assumptions. We have not been engaged to perform a detailed analysis of the potential range of the impact of risk relative to the System's future financial condition, but have included a brief discussion of some risks that may affect the System in Section 2.
- A more detailed assessment would provide the Board with a better understanding of the inherent risks and could be important for the System because:
 - The outlook for financial markets is uncertain
 - Relatively small changes in investment performance can produce large swings in the unfunded liabilities.
 - Retired participants account for most of the System's liabilities, leaving limited options for reducing costs in the event of adverse experience.

Section 1: Actuarial Valuation Summary

Summary of key valuation results – State

Valuation Result	Current	Prior
Statutory Pension Contribution (Fiscal Year Ending)	June 30, 2026	June 30, 2025
• State Normal Cost at End of Year ¹	\$143,250,995	\$141,878,177
• Amortization Payment of UAL ¹	504,027,834	495,395,002
• Total Statutory Contribution for FYE	647,278,830	637,273,179
• Expected Percent Appropriated	100.0%	100.0%
• State Appropriation for Pension	647,278,830	637,273,179
• Expected Lottery Enterprise Contribution Offset	0	0
• Net State Contribution	647,278,830	637,273,179
Actuarial accrued liability for plan year beginning	July 1, 2024	July 1, 2023
• Retired members and beneficiaries	\$4,518,793,310	\$4,368,805,767
• Inactive vested members	1,620,703	2,182,116
• Contributing active members	1,839,198,004	1,791,832,834
• Non-contributing active members	85,824,588	97,775,382
• Total	\$6,445,436,605	\$6,260,596,099
• Gross normal cost	110,362,826	109,553,664
Assets for plan year beginning July 1		
• Market value of assets (MVA) ²	\$2,398,922,319	\$2,185,260,627
• Actuarial value of assets (AVA) ²	2,574,713,768	2,421,317,571
• Actuarial value of assets as a percentage of market value of assets	107.3%	110.8%
• Actuarial value of assets including Special Asset Value (AVA + SAV) ²	2,721,788,227	2,569,891,158
Funded status for plan year beginning July 1		
• Unfunded/(overfunded) actuarial accrued liability on market value of assets	\$4,046,514,286	\$4,075,335,472
• Funded percentage on MVA basis	37.2%	34.9%
• Unfunded/(overfunded) actuarial accrued liability on actuarial value of assets	\$3,870,722,836	\$3,839,278,528
• Funded percentage on AVA basis	39.9%	38.7%
• Unfunded/(overfunded) actuarial accrued liability on AVA + SAV	3,723,648,378	\$3,690,704,941
• Funded percentage on AVA + SAV basis	42.2%	41.0%

¹ Includes \$242,823,848 and \$241,309,891 for FYE 2026 and 2025, respectively, for Local obligations expected to be payable by the State in accordance with Chapter 109, P.L. 1979, Chapter 511, P.L. 1991, Chapter 247, P.L. 1993, Chapter 428, P.L. 1999, Chapter 86, P.L. 2001, and Chapter 318, P.L. 2001

² Includes discounted State receivable contributions and Lottery proceeds from the upcoming Fiscal Year

Section 1: Actuarial Valuation Summary

Valuation Result	Current	Prior
Demographic data as of	June 30, 2024	June 30, 2023
• Number of retired members and beneficiaries ¹	7,878	7,685
• Number of inactive vested members	9	9
• Number of contributing active members	5,328	5,502
• Number of non-contributing active members	453	508
• Appropriation payroll ²	\$505,393,726	\$499,740,835
• Annual retirement allowances in pay	\$397,005,173	\$381,195,722

¹ QDRO recipients are excluded from counts

² Limited annual compensation for contributing actives

Section 1: Actuarial Valuation Summary

Summary of key valuation results – Local Employers

Valuation Result	Current	Prior
Statutory Pension Contribution (Fiscal Year Ending)	June 30, 2026	June 30, 2025
• Local Employers Normal Cost at End of Year ¹	\$437,571,086	\$424,750,441
• Amortization Payment of UAL ¹	945,826,054	914,934,769
• Total Statutory Contribution	1,383,397,140	1,339,685,210
• ERI Payments	415,396	404,278
• Chapter 19, P.L. 2009 Payments	22,482,872	25,354,273
• Non-Contributory Group Insurance premium	46,388,181	44,283,147
Actuarial accrued liability for plan year beginning	July 1, 2024	July 1, 2023
• Retired members and beneficiaries ²	\$31,249,540,905	\$30,082,691,090
• Inactive vested members	14,216,117	13,892,510
• Contributing active members	14,024,156,337	13,731,110,657
• Non-contributing active members	284,037,134	325,190,881
• Total	\$45,571,950,493	\$44,152,885,138
• Gross normal cost, excluding NCGI premium	844,129,360	817,293,678
Assets for plan year beginning July 1		
• Market value of assets (MVA) ³	\$32,926,048,855	\$30,921,878,881
• Actuarial value of assets (AVA) ³	32,817,602,791	31,560,308,528
• Actuarial value of assets as a percentage of market value of assets	99.7%	102.1%
Funded status for plan year beginning July 1		
• Unfunded/(overfunded) actuarial accrued liability on market value of assets	\$12,645,901,638	\$13,231,006,257
• Funded percentage on MVA basis	72.2%	70.0%
• Unfunded/(overfunded) actuarial accrued liability on actuarial value of assets	\$12,754,347,702	\$12,592,576,610
• Funded percentage on AVA basis	72.0%	71.5%

¹ Includes \$242,823,848 and \$241,309,891 for FYE 2026 and 2025, respectively, for Local obligations payable by the State in accordance with Chapter 109, P.L. 1979, Chapter 511, P.L. 1991, Chapter 247, P.L. 1993, Chapter 428, P.L. 1999, Chapter 86, P.L. 2001, and Chapter 318, P.L. 2001

² Includes present value of ERI payments of \$2,572,735 in 2024 and \$2,763,651 in 2023

³ Includes discounted State receivable contributions and Lottery proceeds from the upcoming Fiscal Year

Section 1: Actuarial Valuation Summary

Valuation Result	Current	Prior
Demographic data as of	June 30, 2024	June 30, 2023
• Number of retired members and beneficiaries ¹	43,241	42,424
• Number of inactive vested members	58	57
• Number of contributing active members	34,582	34,054
• Number of non-contributing active members	1,323	1,387
• Appropriation payroll ²	\$3,888,815,180	\$3,738,600,013
• Annual retirement allowances in pay	\$2,805,854,328	\$2,697,293,403

¹ QDRO recipients are excluded from counts, and individuals without a State or Local division indicated are assumed to be Local (included here).

² Limited annual compensation for contributing actives

Section 1: Actuarial Valuation Summary

Important information about actuarial valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare a valuation, Segal relies on a number of input items. These include:

Input Item	Description
Plan provisions	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
Participant information	An actuarial valuation for a plan is based on data provided to the actuary by the System. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Financial information	Part of the cost of a plan will be paid from existing assets — the balance will need to come from future contributions and investment income. The valuation is based on the asset values as of the valuation date, typically reported by the System. A snapshot as of a single date may not be an appropriate value for determining a single year's contribution requirement, especially in volatile markets. Plan sponsors often use an "actuarial value of assets" that differs from market value to gradually reflect year-to-year changes in the market value of assets in determining the contribution requirements.
Actuarial assumptions	In preparing an actuarial valuation, Segal starts by developing a forecast of the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of participants in each year, as well as forecasts of the plan's benefits for each of those events. In addition, the benefits forecasted for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved on the plan's assets. All of these factors are uncertain and unknowable. Thus, there will be a range of reasonable assumptions, and the results may vary materially based on which assumptions are selected within that range. That is, there is no right answer (except with hindsight). It is important for any user of an actuarial valuation to understand and accept this constraint. The actuarial model may use approximations and estimates that will have an immaterial impact on our results. In addition, the actuarial assumptions may change over time, and while this can have a significant impact on the reported results, it does not mean that the previous assumptions or results were unreasonable or wrong.

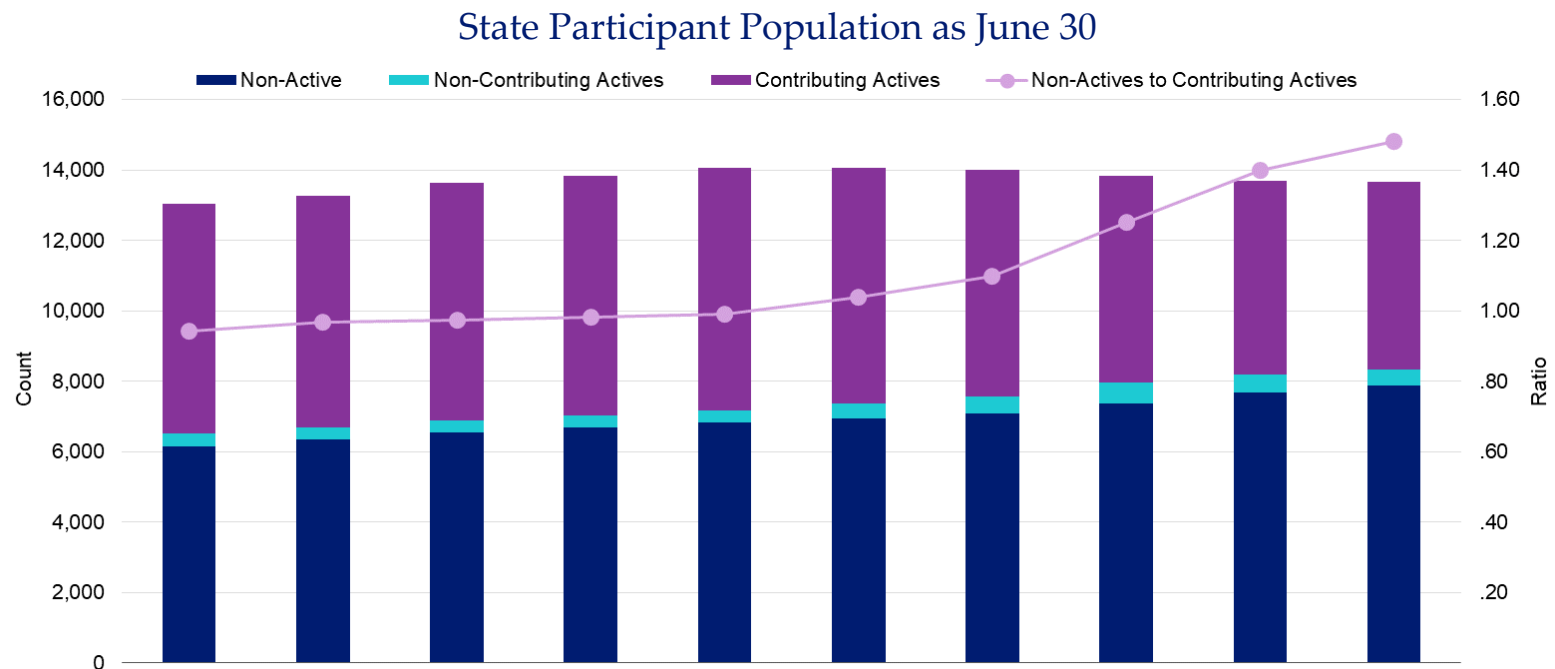
Section 1: Actuarial Valuation Summary

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The actuarial valuation is prepared at the request of the System. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- 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.
- If the System is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice and is not acting as a fiduciary to the System. The valuation is based on Segal's understanding of applicable guidance in these areas and of the System's provisions, but they may be subject to alternative interpretations. The System should look to their other advisors for expertise in these areas.
- While Segal maintains extensive quality assurance procedures, an actuarial valuation involves complex computer models and numerous inputs. In the event that an inaccuracy is discovered after presentation of Segal's valuation, Segal may revise that valuation or make an appropriate adjustment in the next valuation.
- Segal's report shall be deemed to be final and accepted by the System upon delivery and review. Trustees should notify Segal immediately of any questions or concerns about the final content.

Section 2: Actuarial Valuation Results

Participant information

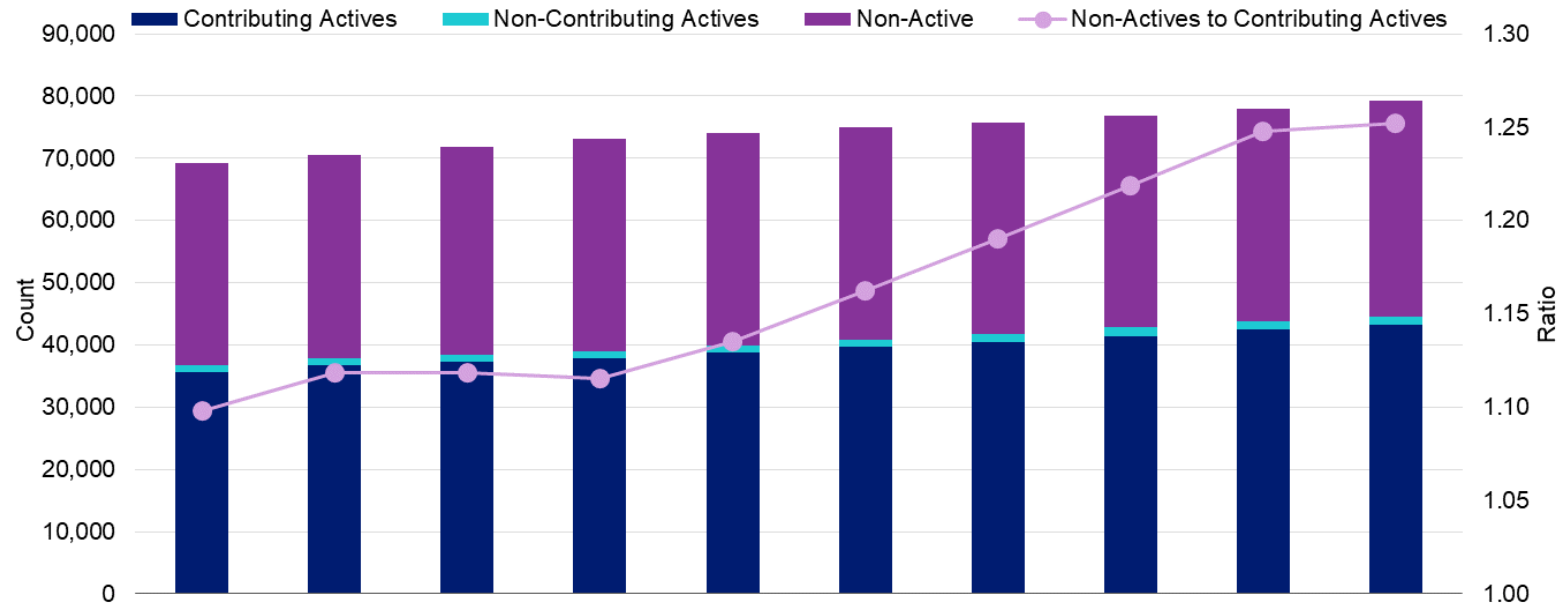


Legend	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Non-Active ¹	6,160	6,354	6,555	6,679	6,816	6,950	7,083	7,371	7,694	7,887
Non-Contributing Actives	352	340	342	362	364	426	471	584	508	453
Contributing Active	6,531	6,571	6,730	6,807	6,875	6,688	6,445	5,887	5,502	5,328
Ratio	0.94	0.97	0.97	0.98	0.99	1.04	1.10	1.25	1.40	1.48

¹ Includes members in pay status and deferred vested participants

Section 2: Actuarial Valuation Results

Local Employers' Participant Population as June 30



Legend	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Non-Active ¹	35,715	36,704	37,357	37,930	38,786	39,688	40,495	41,442	42,481	43,299
Non-Contributing Actives	955	1,060	1,037	1,113	1,117	1,168	1,241	1,341	1,387	1,323
Contributing Active	32,521	32,818	33,410	34,013	34,164	34,150	34,031	34,004	34,054	34,582
Ratio	1.10	1.12	1.12	1.12	1.14	1.16	1.19	1.22	1.25	1.25

¹ Includes members in pay status and deferred vested participants

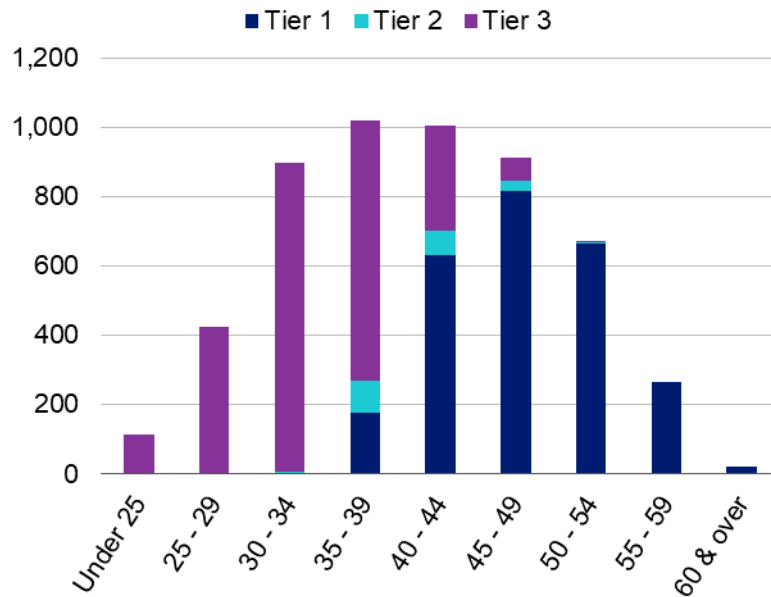
Section 2: Actuarial Valuation Results

State Contributing Active members

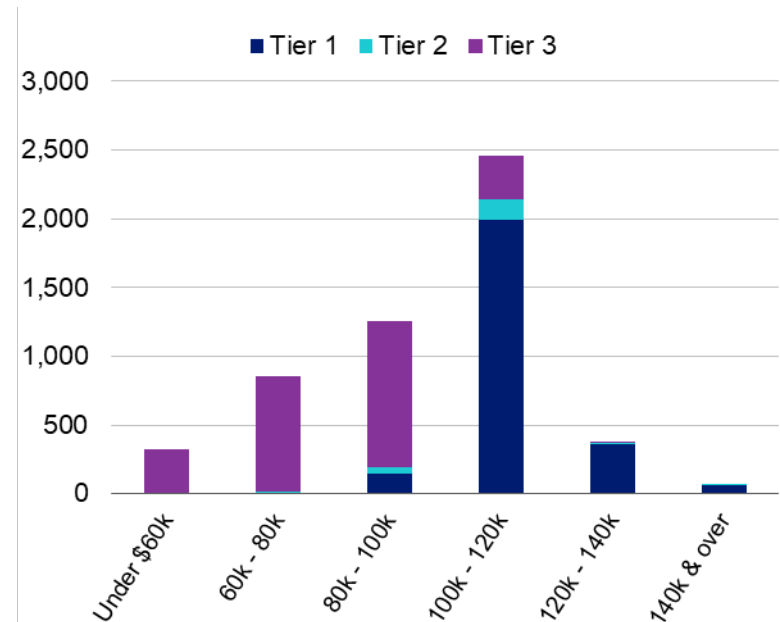
As of June 30,	2024	2023	Change
Active members	5,328	5,502	-3.2%
Average age	41.2	40.9	0.3
Average years of service	14.1	13.8	0.3
Average compensation	\$94,895	\$90,829	4.5%

Distribution of Active Members as of June 30, 2024

Actives by Age



Actives by Compensation



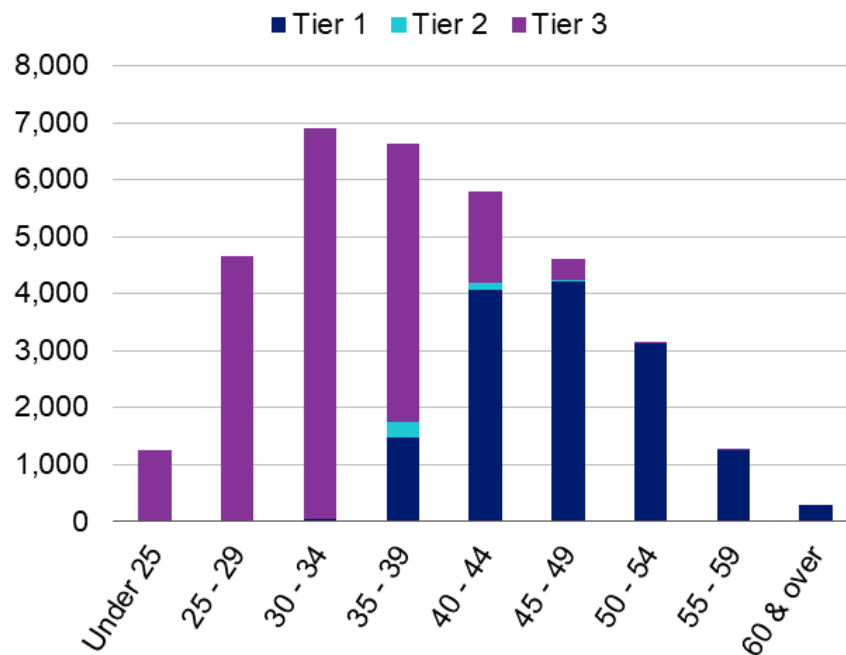
Section 2: Actuarial Valuation Results

Local Employers' Contributing Active members

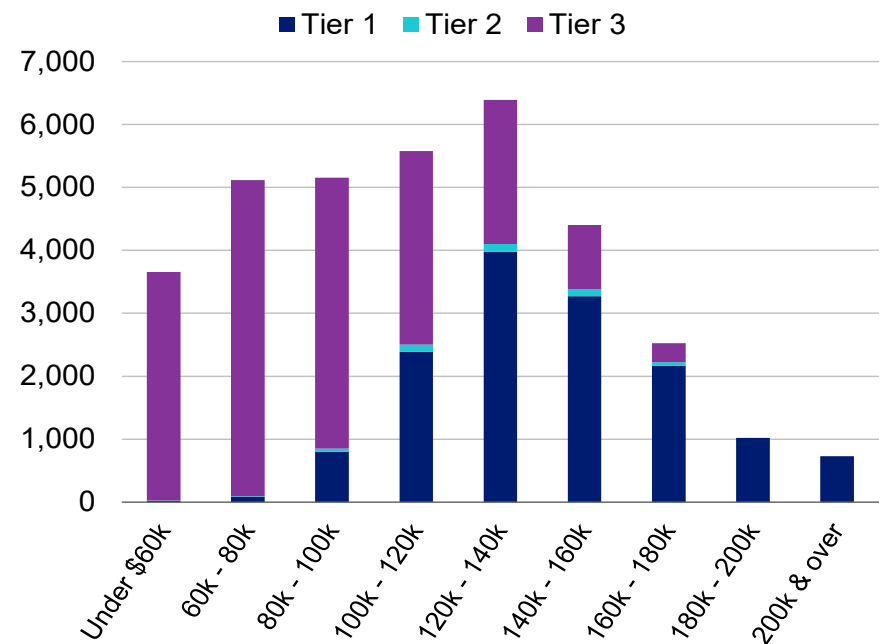
As of June 30,	2024	2023	Change
Active members	34,582	34,054	1.5%
Average age	39.1	39.4	-0.3
Average years of service	12.8	13.1	-0.3
Average compensation	\$112,531	\$109,784	2.5%

Distribution of Active Members as of June 30, 2024

Actives by Age



Actives by Compensation



Section 2: Actuarial Valuation Results

Inactive participants and Non-Contributory Active Members

- In this year's valuation, there were 67¹ inactive participants with a vested right to a deferred or immediate vested benefit, as compared to 66 in the prior year.
- Additionally, this year's valuation includes liabilities for 1,323 Local Employers and 453 State non-contributing active members, as compared to 1,387 and 508 respectively, in the prior year. These members are valued as active members for liability purposes but are assumed to not earn future benefit accruals. The average last reported pay is \$83,708 for Local Employers' members and \$75,022 for State members.

¹ Nine State members with average monthly retirement allowance of \$1,612 and 58 Local Employers' members with average monthly retirement allowance of \$2,126

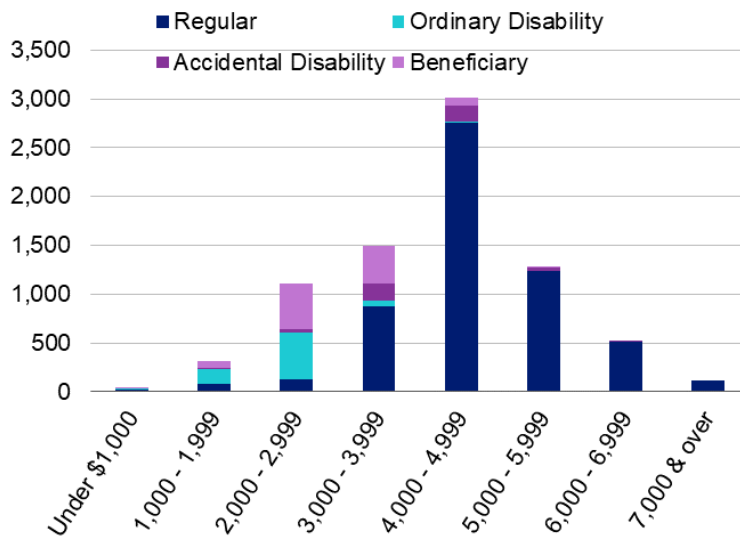
Section 2: Actuarial Valuation Results

State Retired members and beneficiaries

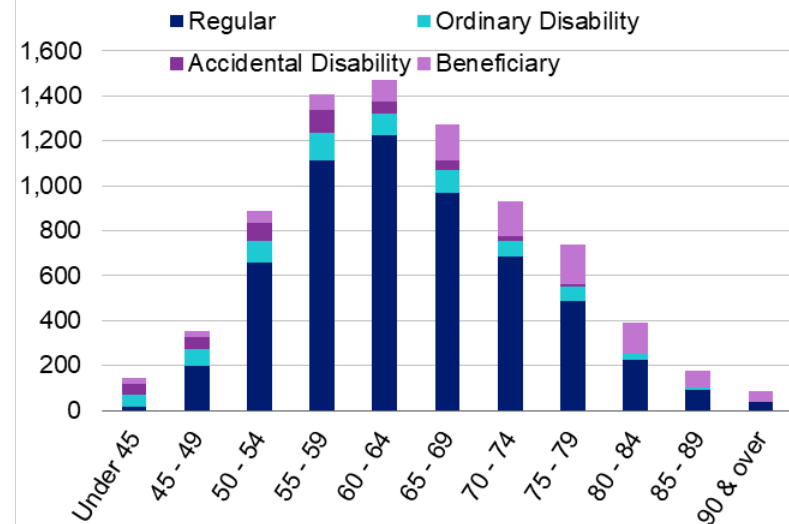
As of June 30,	2024	2023	Change
Retired members ¹	6,844	6,683	2.4%
Average age	63.2	62.8	0.4
Average retirement allowance	\$4,394 ²	\$4,337	1.3%
Beneficiaries	1,034	1,002	3.2%
Total monthly retirement allowance	\$33,083,764	\$31,849,643	3.9%

Distribution of Retired Members and Beneficiaries as of June 30, 2024

By Type and Monthly Amount



By Type and Age



¹ As of June 30, 2024, there are 5,706 retirees and 1,138 disabled pensioners as compared to 5,569 and 1,114 in the prior year.

² \$4,404 for police and \$4,001 for firefighters

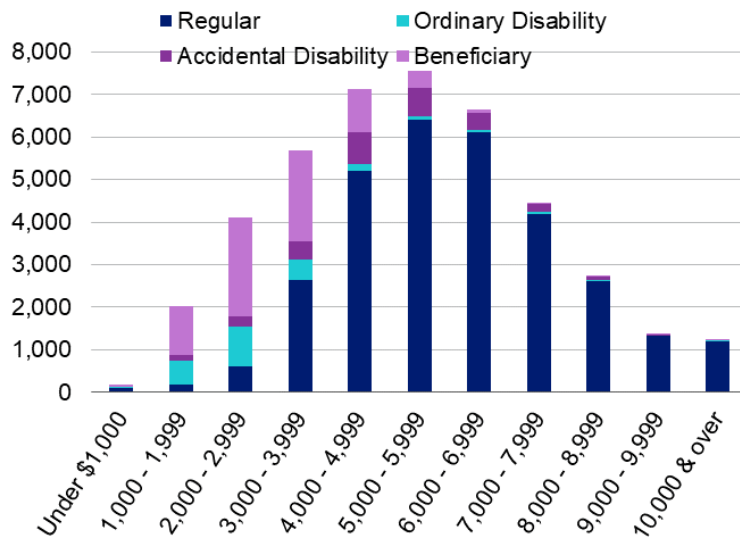
Section 2: Actuarial Valuation Results

Local Employers' Retired members and beneficiaries

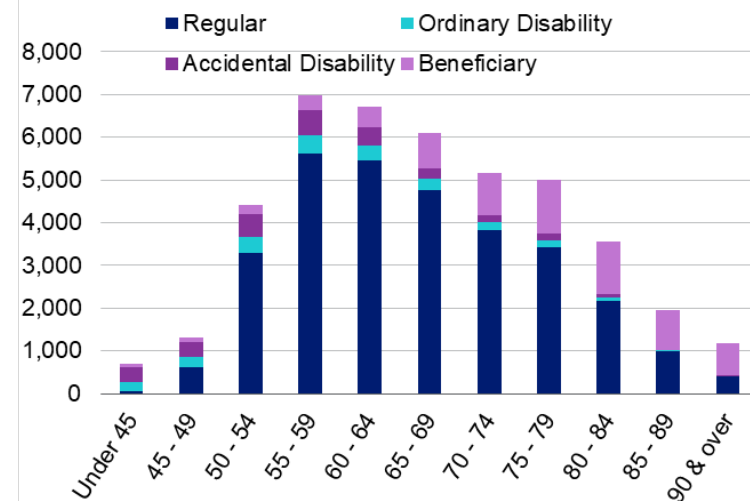
As of June 30,	2024	2023	Change
Retired members ¹	35,865	35,162	2.0%
Average age	64.9	64.7	0.2
Average retirement allowance	\$5,873 ²	\$5,759	2.0%
Beneficiaries	7,376	7,262	1.6%
Total monthly retirement allowance	\$233,821,194	\$224,774,450	4.0%

Distribution of Retired Members and Beneficiaries as of June 30, 2024

By Type and Monthly Amount



By Type and Age



¹ As of June 30, 2024, there are 30,599 retirees and 5,266 disabled pensioners as compared to 30,036 and 5,126 in the prior year.

² \$5,833 for police and \$6,119 for firefighters

Section 2: Actuarial Valuation Results

Schedule of State Retirees and Beneficiaries Added to and Removed From Rolls

Year Ended June 30	Number Added to Rolls ^{2,3}	Monthly Allowance	Number Removed from Rolls ^{1,2,3}	Monthly Allowance	Number of Rolls at End of Year ^{1,2,3}	Monthly Allowance	Average Monthly Allowance ^{1,2,3}	% Increase in Average Monthly Allowance ^{1,2,3}
2015	597	\$2,292,186	136	\$369,001	6,588	\$23,495,099	\$3,566	1.2%
2016	407	1,493,013	188	489,017	6,807	24,479,256	3,596	0.8%
2017	372	1,421,383	172	430,209	7,007	25,467,343	3,635	1.1%
2018	256	1,036,585	131	405,610	6,673	26,106,430	3,912	7.6%
2019	249	1,014,037	119	361,530	6,803	26,762,268	3,934	0.6%
2020	271	1,207,265	137	418,754	6,937	27,567,145	3,974	1.0%
2021	286	1,212,191	150	412,041	7,073	28,336,037	4,006	0.8%
2022	453	2,096,228	163	498,737	7,363	29,938,242	4,066	1.5%
2023	479	2,394,110	157	505,900	7,685	31,849,643	4,144	1.9%
2024	332	1,681,757	139	465,013	7,878	33,083,764	4,200	1.4%

¹ Beginning with the 2018 valuation, QDRO records excluded from headcounts and QDRO benefits included with member records. This change resulted in 459 fewer records on the rolls as of July 1, 2018.

² Location 91999 was reclassified as a Local Employer beginning with the 2016 valuation; 30 retirees receiving \$1,361,259 and 6 beneficiaries receiving \$168,613 were added to the Local employer rolls and removed from the State rolls in 2016.

³ Location 91999 was reclassified as a State employer beginning with the 2018 valuation; 29 retirees receiving \$1,398,446 and 5 beneficiaries receiving \$123,147 were added to the State rolls and removed from the Local employer rolls in 2018.

Section 2: Actuarial Valuation Results

Schedule of Local Retirees and Beneficiaries Added to and Removed From Rolls

Year Ended June 30	Number Added to Rolls ^{2,3}	Monthly Allowance	Number Removed from Rolls ¹²³	Monthly Allowance	Number of Rolls at End of Year ^{1,2,3}	Monthly Allowance	Average Monthly Allowance ^{1,2,3}	% Increase in Average Monthly Allowance ^{1,2,3}
2015	2,223	\$11,456,024	1,008	\$2,880,555	37,664	\$160,654,194	\$4,265	2.2%
2016	2,131	10,658,583	977	2,789,886	38,818	168,511,414	4,341	1.8%
2017	1,879	9,957,898	1,157	3,431,423	39,540	175,032,121	4,427	2.0%
2018	1,740	10,106,546	1,169	3,779,983	37,894	181,417,626	4,788	8.2%
2019	1,890	11,175,391	1,050	3,554,518	38,734	189,138,213	4,883	2.0%
2020	2,051	12,596,624	1,151	3,932,059	39,634	197,897,721	4,993	2.3%
2021	1,838	11,658,999	1,027	3,095,844	40,445	205,736,239	5,087	1.9%
2022	2,080	12,915,190	1,135	4,068,310	41,390	214,634,351	5,186	1.9%
2023	2,161	14,065,024	1,127	4,047,907	42,424	224,774,450	5,298	2.2%
2024	2,013	13,194,149	1,196	4,355,828	43,241	233,821,194	5,407	2.1%

¹ Beginning with the 2018 valuation, QDRO records excluded from headcounts and QDRO benefits included with member records. This change resulted in 2,217 fewer records on the rolls as of July 1, 2018

² Location 91999 was reclassified as a Local Employer beginning with the 2016 valuation; 30 retirees receiving \$1,361,259 and 6 beneficiaries receiving \$168,613 were added to the Local employer rolls and removed from the State rolls in 2016.

³ Location 91999 was reclassified as a State employer beginning with the 2018 valuation; 29 retirees receiving \$1,398,446 and 5 beneficiaries receiving \$123,147 were added to the State rolls and removed from the Local employer rolls in 2018.

Section 2: Actuarial Valuation Results

Schedule of Total Retirees and Beneficiaries Added to and Removed From Rolls

Year Ended June 30	Number Added to Rolls ^{2,3}	Monthly Allowance	Number Removed from Rolls ^{1,2,3}	Monthly Allowance	Number of Rolls at End of Year ^{1,2,3}	Monthly Allowance	Average Monthly Allowance ^{1,2,3}	% Increase in Average Monthly Allowance ^{1,2,3}
2015	2,820	\$13,748,210	1,144	\$3,249,556	44,252	\$184,149,293	4,161	2.0%
2016	2,538	12,151,596	1,165	3,278,903	45,625	192,990,670	4,230	1.7%
2017	2,251	11,379,281	1,329	3,861,632	46,547	200,499,464	4,308	1.8%
2018	1,996	11,143,131	1,300	4,185,593	44,567	207,524,056	4,656	8.1%
2019	2,139	12,189,428	1,169	3,916,048	45,537	215,900,481	4,741	1.8%
2020	2,322	13,803,889	1,288	4,350,813	46,571	225,464,866	4,841	2.1%
2021	2,124	12,916,757	1,175	3,507,885	47,518	234,072,276	4,926	1.8%
2022	2,533	15,011,418	1,298	4,567,047	48,753	244,572,592	5,017	1.8%
2023	2,640	16,459,134	1,284	4,552,917	50,109	256,624,093	5,121	2.1%
2024	2,345	14,875,906	1,335	4,820,841	51,119	266,904,958	5,221	2.0%

¹ Beginning with the 2018 valuation, QDRO records excluded from headcounts and QDRO benefits included with member records. This change resulted in 2,676 fewer records on the rolls as of July 1, 2018

² Location 91999 was reclassified as a Local Employer beginning with the 2016 valuation; 30 retirees receiving \$1,361,259 and 6 beneficiaries receiving \$168,613 were added to the Local employer rolls and removed from the State rolls in 2016.

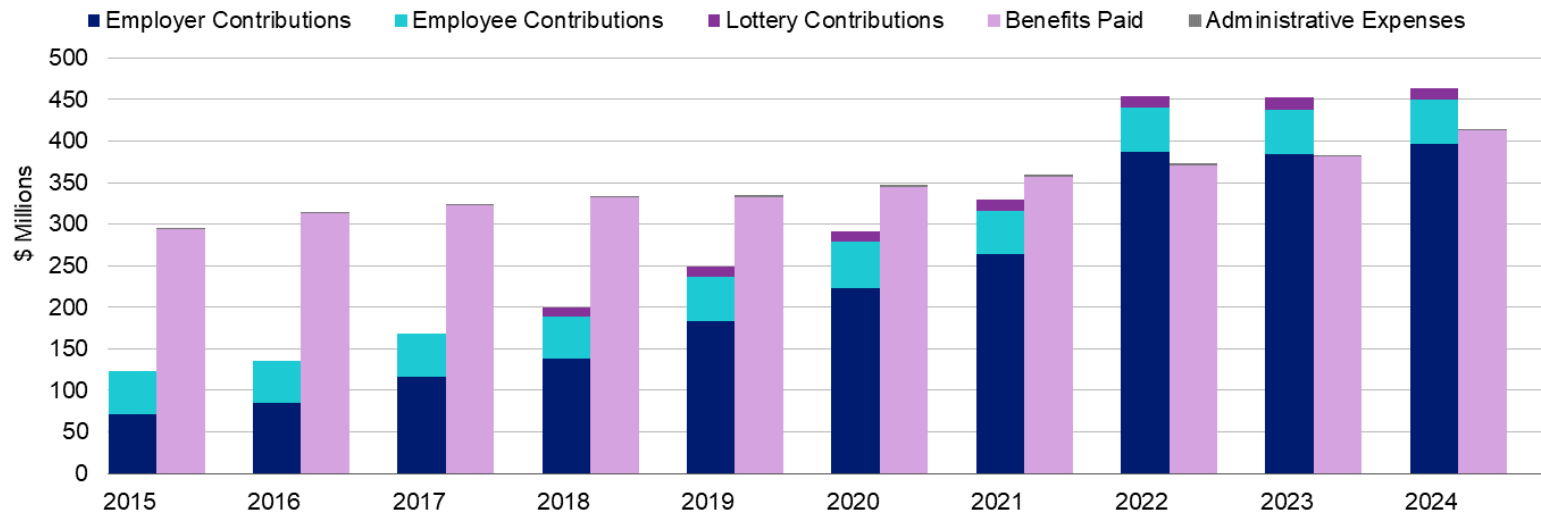
³ Location 91999 was reclassified as a State employer beginning with the 2018 valuation; 29 retirees receiving \$1,398,446 and 5 beneficiaries receiving \$123,147 were added to the State rolls and removed from the Local employer rolls in 2018.

Section 2: Actuarial Valuation Results

Financial information

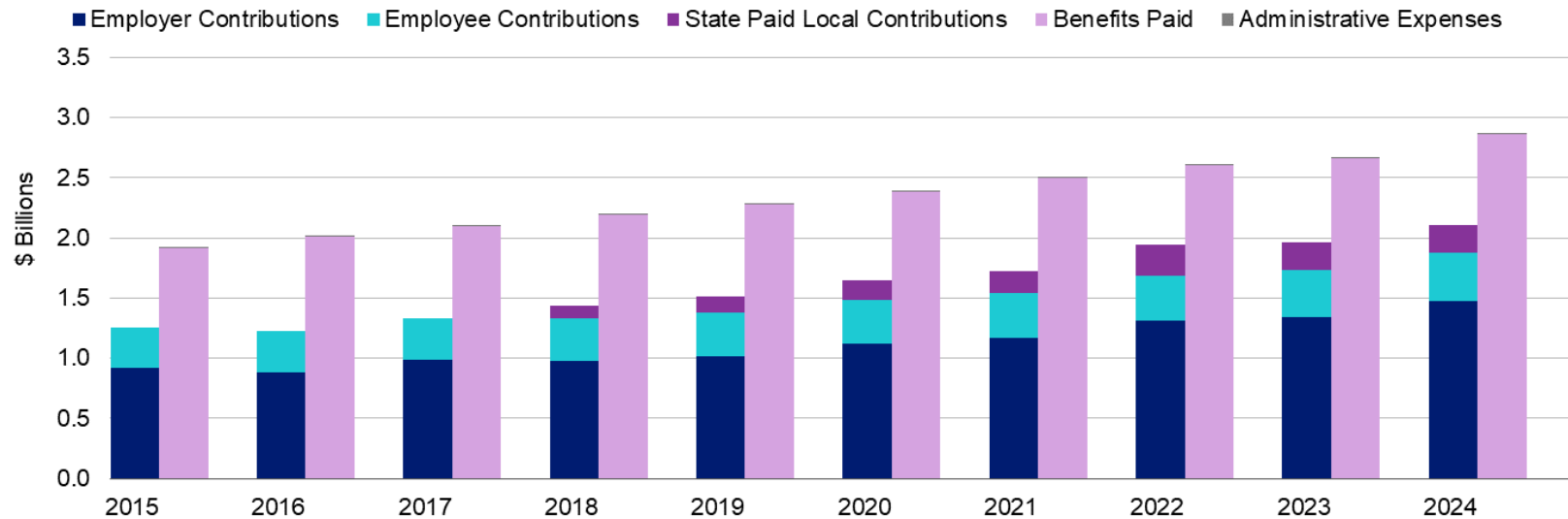
- Retirement plan funding anticipates that, over the long term, both contributions (less administrative expenses) and investment earnings (less investment fees) will be needed to cover benefit payments. Retirement plan assets change as a result of the net impact of these income and expense components.
- Historically the State net cash flow has been significantly negative, however, in recent years that has changed as the State has appropriated 100% of the statutory contribution.

Comparison of Contributions Made with Benefits and Expenses Paid
for the State plan for Years Ended June 30



Section 2: Actuarial Valuation Results

Comparison of Contributions¹ Made with Benefits and Expenses Paid for Local Employer plan for Years Ended June 30



- Despite contributing the full statutory contribution amount, the Local Employer plan has experienced negative cash flow over the ten-year period ended June 30, 2024. For the year ended June 30, 2024, the plan had a negative cash flow of approximately \$821 million, or 2.7% of the market value of assets as of the beginning of the year.

¹ State paid local contributions were not reported separately in valuation reports prior to FYE 2018 and as such are included in employer contributions prior to that year

Section 2: Actuarial Valuation Results

Assets

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board of Trustees has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable. As prescribed in the New Jersey Statute, the actuarial value of assets is calculated by recognizing 20% of the difference between the expected actuarial value of assets, based on the long-term investment return assumption, and the market value of assets.

Actuarial Standards of Practice (ASOP) No. 44 describes characteristics of asset valuation methods and provides guidelines to what is considered an appropriate asset valuation method. Those guidelines include that the asset valuation method should recognize the difference between the actuarial value of assets and market value of assets over a reasonably short period of time and does not produce actuarial value of assets that is consistently above or below the market value of assets. The asset method required under N.J. Statute may produce an actuarial value that is consistently above or below the market value of assets and the differences between market and actuarial value may not be recognized over a reasonably short period of time. Therefore, the asset valuation method may not meet the requirements of ASOP No. 44.

The following tables present the market value as of June 30, 2024 and June 30, 2023, the System's net cash flows for the year ended June 30, 2024, and the development of the actuarial value of assets as of June 30, 2024.

Section 2: Actuarial Valuation Results

Summary of Assets at Market Value

	June 30, 2024	June 30, 2023
Assets:		
• Cash	\$1,301,844,017	\$251,031,721
• Investment Holdings	30,056,233,674	29,085,422,999
• Employers' Contributions Receivable - State	0	0
• Employers' Contributions Receivable – Chapter 19	53,931,474	11,793,328
• Employers' Contributions Receivable – NCGI State	1,039,062	811,785
• Employers' Contributions Receivable – NCGI Local Employers	44,283,147	41,718,524
• Employers' Contributions Receivable – Common L	1,608,000	1,548,000
• Employers' Contributions Receivable – Local Employers	1,348,316,910	1,294,294,240
• Employers' Contributions Receivable – Local Employers ERI	2,950,565	3,376,720
• Employers' Contributions Receivable – Retroactive Contributions	21,245,383	10,292,620
• Employers' Contributions Receivable – Delayed Enrollments	256,286	152,201
• Employers' Contributions Receivable – Delayed Appropriations	1,406,409	705,054
• Member's Contributions Receivable	60,763,238	55,871,258
• Accrued Interest on Investments	93,022,989	4,382,153
• Accounts Receivable – Other	5,555,618	35,534,127
• New Jersey Mortgage Receivable	1,960,349,616	1,831,574,707
• Loans Receivable	200,512,549	212,859,388
• Interest Receivable on Loans	1,519,816	1,341,308
• Securities Lending Collateral	1,160,065,612	570,995,092
• Forward Currency Receivable	205,432,677	0
• Securities Sold in Transit	<u>197,891,769</u>	<u>0</u>
Total assets	\$36,718,228,811	\$33,413,705,225
Liabilities:		
• Pension Payroll Payable	(223,812,458)	(213,598,930)

Section 2: Actuarial Valuation Results

	June 30, 2024	June 30, 2023
• Pension Adjustment Payroll Payable	(\$13,125,833)	(\$13,663,021)
• Withholdings Payable	(35,031,452)	(33,725,105)
• Death Benefits Payable	(3,243,719)	(5,338,509)
• Securities Lending Collateral & Rebates Payable	(1,159,827,947)	(570,785,875)
• Securities Purchased in Transit	(209,838,668)	0
• Forward Currency Payable	(204,726,797)	0
• Administrative Expenses Payable	(1,900,000)	0
• Accounts Payable - Other	(10,388,061)	(9,359,498)
Total Liabilities	(\$1,861,894,935)	(\$846,470,940)
Preliminary Market Value of Assets	\$34,856,333,876	\$32,567,234,286
Discounted Receivables:		
• Expected Lottery Revenue	\$13,061,770	\$12,942,516
• State Appropriations	610,996,096	598,007,623
Adjustments to Financial Report:		
• Discounting of Local Employers Appropriations Receivable	(66,284,964)	(63,845,591)
• Discounting of Local Employers ERI Contributions Receivable	(204,066)	(233,714)
• True-up of Present Value of Chapter 19, P.L. 2009 Contributions Receivable	(17,480,829)	55,683,520
• Exclusion of Reserve for Non-Contributory Group Insurance	(71,450,705)	(62,649,128)
Market Value of Assets	\$35,324,971,174	\$33,107,139,508

Note: Figures may not add due to rounding

Section 2: Actuarial Valuation Results

Summary Statement of Income and Expenses on a Market Value Basis for FYE June 30, 2024

	State	Local Employers	Total
Preliminary Market Value of Assets at Beginning of Year	\$1,798,863,386	\$30,768,370,896	\$32,567,234,282
Additions:			
Contributions:			
• Member Contributions	53,038,073	401,450,392	454,488,465
• Member Transfer Contributions	605,795	2,431,829	3,037,625
• State and Local Appropriations	389,516,000	1,339,685,210	1,729,201,210
• State Contributions on Behalf of Locals	0	234,210,000	234,210,000
• State Lottery	14,100,000	0	14,100,000
• NCGI Contributions	6,493,476	44,258,052	50,751,528
• Transfers from Other Systems	52,002	208,821	260,823
• Other - Delayed Enrollments	23,034	210,772	233,805
• Other - Delayed Appropriations.	0	1,540,315	1,540,315
• Other – Retroactive	0	20,893,369	20,893,369
• Other – Additional	0	140,451	140,451
• Other - NCGI Adjustment	0	0	0
• Employer contribution – Chapter 19	0	64,063,502	64,063,502
• Total Contributions	\$463,828,380	\$2,109,092,714	\$2,572,921,093
Net Investment Income	157,056,954	2,838,926,023	2,995,982,977
Total Additions	620,885,333	4,948,018,737	5,568,904,070
Deductions:			
• Withdrawal of Member Contributions	\$2,614,547	\$9,966,902	\$12,581,449
• Withdrawal of Member Transfer Contributions	136,030	569,200	705,230
• Adjustment for Member Loans	81,931	0	81,931
• Withdrawal of Transfer Contributions	318,133	204,065	522,198
• Retirement Allowances	387,301,223	2,673,058,313	3,060,359,536
• Pension Adjustment Benefits	16,529,124	137,968,242	154,497,366
• Death Benefit Claims	6,493,476	39,841,914	46,335,390
• Administrative Expenses	49,991	4,671,388	4,721,380
Total Deductions	413,524,456	2,866,280,024	3,279,804,480

Section 2: Actuarial Valuation Results

	State	Local Employers	Total
Net Increase/(Decrease)	\$207,360,877	\$2,081,738,713	\$2,289,099,590
Preliminary Market Value of Assets at End of Year	\$2,006,224,263	\$32,850,109,609	\$34,856,333,872
Discounted Receivables:			
• Expected Lottery Revenue	13,061,770	0	13,061,770
• State Appropriations	379,636,286	231,359,810	610,996,096
• Adjustments to Financial Report:			
• Discounting of Local Employers Appropriations Receivable	0	(66,284,964)	(66,284,964)
• Discounting of Local Employers ERI Contributions Receivable	0	(204,066)	(204,066)
• True-up of Present Value of Chapter 19, P.L. 2009 Contributions Receivable	0	(17,480,829)	(17,480,829)
• Exclusion of Reserve for Non-Contributory Group Insurance	0	(71,450,705)	(71,450,705)
Market Value of Assets at End of Year	\$2,398,922,319	\$32,926,048,855	\$35,324,971,174
Approximate Investment Return	8.8%	9.9%	9.8%

Note: Figures may not add due to rounding

Section 2: Actuarial Valuation Results

Determination of Actuarial Value of Assets for Year Ended June 30, 2024

	State	Local Employers	Total
1 Preliminary Actuarial Value of Assets as of July 1, 2023 ¹	\$2,034,920,330	\$31,419,921,770	\$33,454,842,100
2 Net Cash Flow excluding investment income ²	50,303,924	(795,896,532)	(745,592,608)
3 Expected Investment Income ³	140,739,321	2,051,613,503	2,192,352,824
4 Expected actuarial value of assets as of July 1, 2024: (1) + (2) + (3)	2,225,963,575	32,675,638,741	34,901,602,316
5 Preliminary market value of assets as of July 1, 2024 ⁴ :	2,006,224,263	32,811,196,321	34,817,420,584
6 20% of difference from MVA: 20% * [(5) - (4)]	(43,947,862)	27,111,516	(16,836,346)
7 Preliminary Actuarial Value of Assets as of July 1, 2024: (4) + (6)	\$2,182,015,712	\$32,702,750,257	\$34,884,765,969
8 Discounted Receivables			
• State Appropriations	\$379,636,286	\$231,359,810	\$610,996,096
• Expected Lottery Revenue	13,061,770	0	13,061,770
• Chapter 19, P.L. 2009 Contributions for FYE 2026 and Later	0	22,482,872	22,482,872
Total	392,698,056	253,842,682	646,540,738
9 Adjustments			
• Discounting of Local Employers Appropriations Receivable	0	(66,284,964)	(66,284,964)
• Discounting of Chapter 19, P.L. 2009 Contributions for FYE 2025	0	(1,254,479)	(1,254,479)
• Exclusion of reserve for Non-Contributory Group Insurance	0	(71,450,705)	(71,450,705)
Total	0	(138,990,148)	(138,990,148)
10 Actuarial value of assets as of July 1, 2024: (7) + (8) + (9)	\$2,574,713,768	\$32,817,602,791	\$35,392,316,560
11 Rate of return on actuarial value of assets:	4.8%	7.1%	6.9%
12 Ratio of actuarial value of assets to market value of assets:	107.3%	99.7%	100.2%

Note: Figures may not add due to rounding

¹ Excludes discounted State appropriations receivable, present value of Chapter 19, P.L. 2009, and other adjustments

² Amount for Local Employers includes Chapter 19, P.L. 2009 contribution receivable for FYE 2025 of \$25,354,280

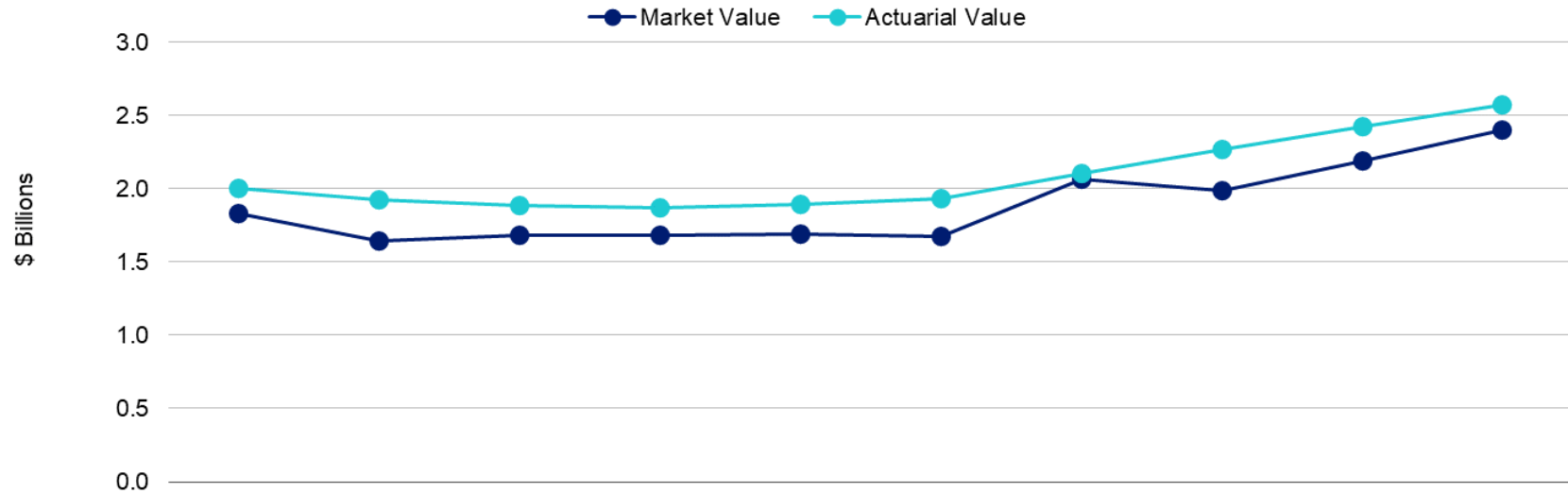
³ Refer to Section 4, Exhibit I for details on the assumed timing of contributions

⁴ Amount for Local employers includes adjustments to June 30, 2024 Financial Report for the interest portion of Local Employers ERI contributions receivable of (\$204,066) and true-up of Chapter 19, P.L. 2009 contributions for FYE 2025 of (\$38,709,222).

Section 2: Actuarial Valuation Results

Asset history for years ended June 30

State Market Value of Assets¹ vs Actuarial Value of Assets



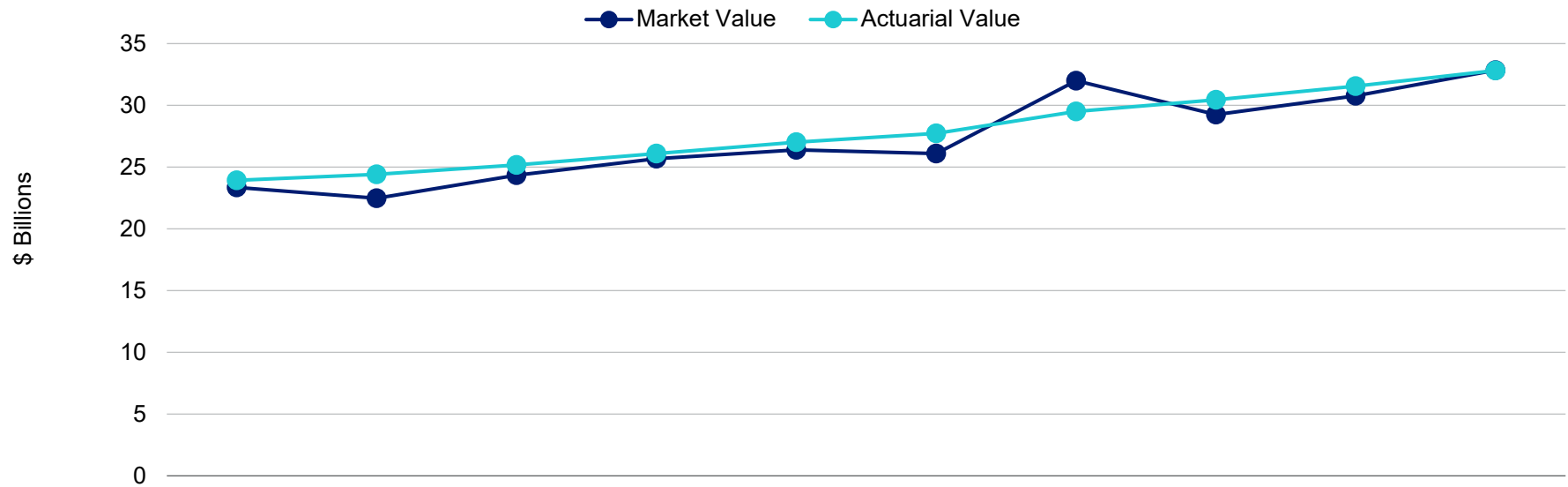
Legend	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
■ Market value ²	\$1.83	\$1.65	\$1.68	\$1.68	\$1.69	\$1.67	\$2.06	\$1.99	\$2.19	\$2.40
■ Actuarial value ²	2.00	1.93	1.89	1.87	1.90	1.94	2.10	2.27	2.42	2.57
Ratio	1.09	1.17	1.12	1.11	1.12	1.16	1.02	1.14	1.11	1.07

¹ Excluding Special Asset Value

² In \$ billions

Section 3: Supplemental Information

Local Employer Market Value of Assets vs Actuarial Value of Assets



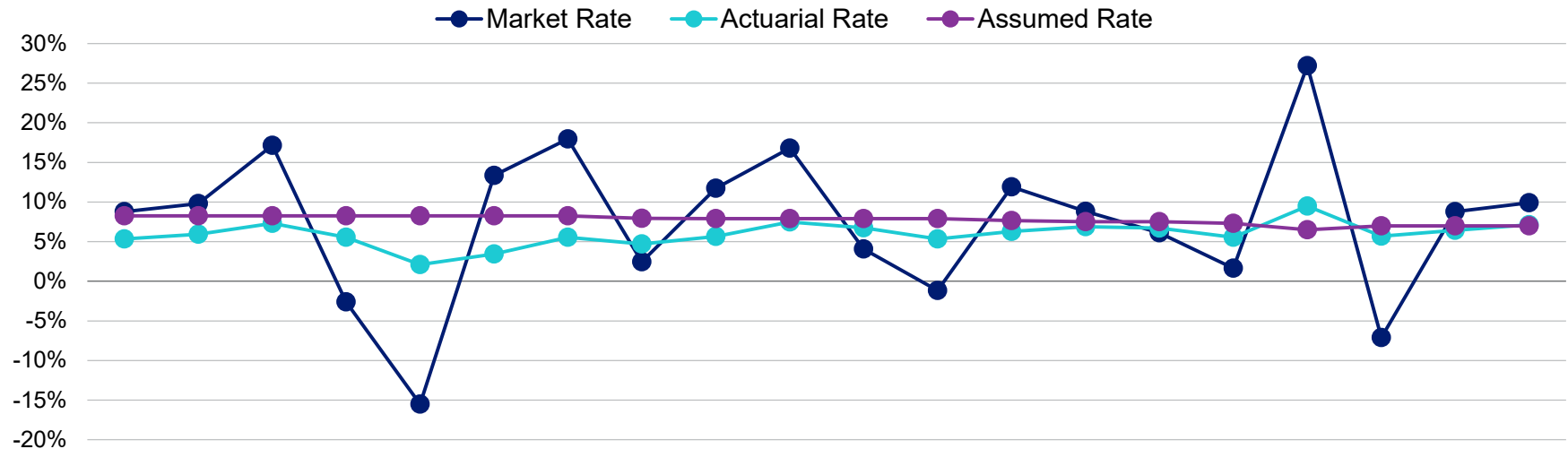
Legend	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
■ Market value ¹	\$23.36	\$22.47	\$24.35	\$25.68	\$26.41	\$26.10	\$31.99	\$29.25	\$30.92	\$32.93
■ Actuarial value ¹	23.94	24.42	25.18	26.11	27.02	27.72	29.50	30.45	31.56	32.82
Ratio	1.02	1.09	1.03	1.02	1.02	1.06	0.92	1.04	1.02	1.00

¹ In \$ billions

Section 2: Actuarial Valuation Results

Historical investment returns

Market and Actuarial Rates of Return versus Assumed Rate for Years Ended June 30



Legend	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Market rate	8.8%	9.8%	17.1%	-2.6%	-15.5%	13.3%	18.0%	2.5%	11.7%	16.8%	4.1%	-1.1%	11.9%	8.8%	6.1%	1.6%	27.2%	-7.1%	8.7%	9.8%
Actuarial rate	5.3%	6.0%	7.3%	5.6%	2.1%	3.4%	5.6%	4.7%	5.7%	7.5%	6.7%	5.3%	6.3%	6.9%	6.7%	5.5%	9.5%	5.7%	6.3%	6.9%
Assumed rate	8.25%	8.25%	8.25%	8.25%	8.25%	8.25%	8.25%	7.95%	7.90%	7.90%	7.90%	7.90%	7.65%	7.50%	7.50%	7.30%	7.30%	7.00%	7.00%	7.00%

Average Rates of Return	Market Value	Actuarial Value
Most recent five-year average return:	7.46%	6.67%
Most recent ten-year average return:	6.66%	6.57%
Most recent 15-year average return:	8.52%	6.17%
20-year average return:	7.07%	5.94%

Section 2: Actuarial Valuation Results

Development of Special Asset Value (SAV)

Under the Lottery Enterprise Contribution Act (Chapter 98, P.L. 2017), the State portion of PFRS receives 1.2% of the proceeds of the Lottery Enterprise for a term of 30 years (through June 30, 2046). The Special Asset Value (SAV) is calculated as the present value of the remaining projected lottery proceeds at the actuarial assumed rate of investment return.

1	Lottery Enterprise Value as of Appraisal Date of June 30, 2017 ¹	\$13,535,103,380
2	Depreciated value as of end of Valuation Year ¹	13,114,139,245
3	Discounted value as of July 1, 2024 at 7.00%	12,256,204,902
4	Allocation to PFRS	1.2%
5	Special Asset Value as of July 1, 2024 3 x 4	\$147,074,459

¹ Provided by the Division of Pensions and Benefits

Section 2: Actuarial Valuation Results

Actuarial experience

Assumptions should consider experience and should be based on reasonable expectations for the future.

Each year actual experience is compared to that projected by the assumptions. Differences are reflected in the actuarial valuation.

Assumptions are not changed if experience is believed to be a short-term development that will not continue over the long term. On the other hand, if experience is expected to continue, assumptions are changed.

Actuarial Experience for State for Year Ended June 30, 2024

Assumption	Amount
1. Net actuarial gain/(loss) from investments ¹	(\$43,947,862)
2. Gain/(loss) from administrative expenses	(51,741)
3. Net gain/(loss) from contributions	13,917,183
4. Net gain/(loss) from salary scale	(21,678,862)
5. Net gain/(loss) from other experience	(56,390,559)
6. Net experience gain/(loss): 1 + 2 + 3 + 4	(\$108,151,841)

Actuarial Experience for Local Employers for Year Ended June 30, 2024

Assumption	Amount
1. Net actuarial gain/(loss) from investments ¹	\$27,111,516
2. Gain/(loss) from administrative expenses	(4,834,887)
3. Net gain/(loss) from contributions	52,033,438
4. Net gain/(loss) from salary scale	(195,910,636)
5. Net gain/(loss) from other experience	(267,364,640)
6. Net experience gain/(loss): 1 + 2 + 3 + 4	(\$388,965,209)

¹ Details on next page

Section 2: Actuarial Valuation Results

Investment experience

Actuarial planning is long term. The obligations of a pension plan are expected to continue for the lifetime of all its participants.

The assumed long-term rate of return of 7.00% considers past experience, the asset allocation policy of the Board and future expectations.

Investment Experience

Investment	State Market Value	State Actuarial Value	Local Employers' Market Value	Local Employers' Actuarial Value
1. Net investment income	\$157,056,954	\$96,791,459	\$2,838,926,023	\$2,078,725,019
2. Average value of assets	1,774,504,784	2,010,561,728	28,657,213,456	29,308,764,331
3. Rate of return: 1 ÷ 2	8.85%	4.81%	9.91%	7.09%
4. Assumed rate of return	7.00%	7.00%	7.00%	7.00%
5. Expected investment income: 2 x 4	\$124,215,335	\$140,739,321	\$2,006,004,942	\$2,051,613,503
6. Net investment gain/(loss): 1 – 5	\$32,841,619	(\$43,947,862)	\$832,921,081	\$27,111,516

Section 2: Actuarial Valuation Results

Non-investment experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- Mortality experience (more or fewer than expected deaths)
- The extent of turnover among participants
- Retirement experience (earlier or later than projected)
- The number of disability retirements (more or fewer than projected)
- Salary increases (greater or smaller than projected)
- Member contributions (more or less than projected)

For the year ended June 30, 2024 the non-investment experience resulted in a 1.0% loss for the State plan and a 0.9% loss for the Local Employers' plan, neither of which is considered significant. For both the State plan and the Local Employers' plan, the primary source was mortality experience (fewer deaths than expected) and salary increases (greater than expected).

Actuarial assumptions

- There are no assumption changes reflected in this report.

Plan provisions

- There were no changes in plan provisions since the prior valuation.

Section 2: Actuarial Valuation Results

Unfunded/(overfunded) actuarial accrued liability

Development of State Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended June 30, 2024

Unfunded/(Overfunded) Actuarial Accrued Liability	Amount
1. Unfunded/(overfunded) actuarial accrued liability at beginning of year	\$3,839,278,528
2. Gross normal cost at beginning of year	109,553,664
3. Total projected contributions	(450,326,294)
4. Interest on 1, 2 & 3	264,065,097
5. Expected unfunded/(overfunded) actuarial accrued liability	3,762,570,995
6. Changes due to:	
a. Actuarial investment loss	43,947,862
b. Contributions greater than expected	(13,917,183)
c. Salary increases greater than expected	21,678,862
d. Other actuarial loss	56,442,300
e. Total changes	108,151,841
7. Unfunded/(overfunded) actuarial accrued liability at end of year	\$3,870,722,836

Section 2: Actuarial Valuation Results

Development of Local Employers' Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended June 30, 2024

Unfunded/(Overfunded) Actuarial Accrued Liability	Amount
1. Unfunded/(overfunded) actuarial accrued liability at beginning of year	\$12,592,576,610
2. Normal cost at beginning of year	817,293,678
3. Total projected contributions	(1,874,458,597)
4. Interest on 1, 2 & 3	829,970,802
5. Expected unfunded/(overfunded) actuarial accrued liability	12,365,382,493
6. Changes due to:	
a. Actuarial investment gain	(27,111,516)
b. Contributions greater than expected	(52,033,438)
c. Salary increases greater than expected	195,910,636
d. Other actuarial loss	272,199,527
e. Total changes	388,965,209
7. Unfunded/(overfunded) actuarial accrued liability at end of year	\$12,754,347,702

Section 2: Actuarial Valuation Results

Statutory Pension Contribution

The statutory pension contribution for the State and Local Employers is equal to the employer normal cost payment and a payment on the unfunded/(overfunded) actuarial accrued liability. There is no explicit cost component related to administrative expenses, instead, they are net of the investment return assumption. The current methodology is intended to result in predictable employer contributions that provide benefit security to plan participants while balancing the needs of current and future contributors to the plan.

The NJ statute governing the System (Chapter 78, P.L. 2011) prescribes the funding policy used to calculate the statutory pension contribution. Specifically, the unfunded actuarial liability is amortized over a closed 30-year period as a level dollar amount beginning with the July 1, 2018 actuarial valuation. On July 1, 2028 when the amortization period has 20 years remaining, annual increases or decreases in the unfunded actuarial accrued liability will increase or decrease the amortization period unless that period is in excess of 20 years. If so, the unfunded actuarial accrued liability is amortized over 20 years. As of July 1, 2024 there are 24 years remaining on the closed amortization schedule. As noted, effective July 1, 2028, the amortization period may remain open, therefore, the unfunded liability for both the State and Local Employer plans will not be fully amortized over the next 30 years. Over that time period, 69% of the unfunded liability for the State plan and 64% of the unfunded liability for the Local Employers' plan is projected to be paid off.

As previously mentioned in this report, the actuarial value of assets as defined in the New Jersey Statute may not converge to the market value of assets over a reasonable time period and therefore may not comply with the requirements of Actuarial Standard of Practice No. 44. As a result of these same factors, there is a risk that calculating the statutory pension contribution based on this asset methodology may create a mismatch between the System's cash flow needs and what would usually be recommended as an actuarially determined contribution. For this reason, we have also provided a determination of the Statutory Pension Contribution based on the market value of assets as an illustration of an alternative actuarially determined contribution. If the market value of assets had been used to develop the statutory contribution for the fiscal year ending 2026, the State portion would be \$662 million, 2.3% greater than based on the actuarial value of assets, and the Local Employer portion would be \$1.37 billion, 0.7% less than based on the actuarial value of assets respectively.

The State portion of PFRS receives 1.2% of the annual lottery proceeds for a 30-year period ending June 30, 2046 in accordance with the Lottery Enterprise Contribution Act (Chapter 98, P.L. 2017). The statutory pension contribution is no longer offset by the projected lottery proceeds in accordance with the Lottery Enterprise Contribution Act (Chapter 98, P.L. 2017). For purposes of determining the unfunded actuarial accrued liability for the State the Special Asset Value is not included.

The contribution requirement for the State and Local Employer plans developed on the following pages as of July 1, 2024 are based on the data previously described, the actuarial assumptions, methods and plan provisions described in *Section 4*, including all changes affecting future costs adopted at the time of the actuarial valuation, actuarial gains and losses.

Section 3: Supplemental Information

Development of Unfunded Actuarial Liability

		July 1, 2024			July 1, 2023		
		State	Local ¹	Total	State	Local ¹	Total
1	Actuarial Liability	\$6,445,436,604	\$45,571,950,493	\$52,017,387,097	\$6,260,596,099	\$44,152,885,138	\$50,413,481,237
2	Actuarial value of assets ²	\$2,574,713,768	\$32,817,602,791	\$35,392,316,560	\$2,421,317,571	\$31,560,308,528	\$33,981,626,099
3	Unfunded Liability						
	a. Basic	\$3,703,365,207	\$10,840,939,507	\$14,544,304,714	\$3,672,944,336	\$10,655,099,677	\$14,328,044,013
	b. Chapter 204, P.L. 1989	440,753	3,673,272	4,114,025	480,902	4,007,875	4,488,777
	c. Chapter 247, P.L. 1993	0	113,448,516	113,448,516	0	115,662,456	115,662,456
	d. Chapter 428, P.L. 1999 ³	166,916,875	803,638,702	970,555,577	165,853,289	809,212,503	975,065,792
	e. Chapter 109, P.L. 1979	0	644,470,586	644,470,586	0	654,823,687	654,823,687
	f. Chapter 511, P.L. 1991	0	<u>348,177,118</u>	<u>348,177,118</u>	<u>0</u>	<u>353,770,411</u>	<u>353,770,411</u>
	g. Total	3,870,722,836	12,754,347,702	16,625,070,537	3,839,278,528	12,592,576,610	16,431,855,138
4	Adjustment to Unfunded Actuarial Liability for Phase-In of State-Paid Local Obligations						
	a. Chapter 247, P.L. 1993	\$111,419,836	(\$111,419,836)	\$0	\$113,209,741	(\$113,209,741)	\$0
	b. Chapter 428, P.L. 1999 ³	582,331,177	(\$582,331,177)	0	591,686,040	(\$591,686,040)	0
	c. Chapter 109, P.L. 1979	644,470,586	(\$644,470,586)	0	654,823,687	(\$654,823,687)	0
	d. Chapter 511, P.L. 1991	<u>348,177,118</u>	<u>(\$348,177,118)</u>	<u>0</u>	<u>353,770,411</u>	<u>(\$353,770,411)</u>	<u>0</u>
	e. Total	1,686,398,718	(\$1,686,398,718)	0	1,713,489,879	(\$1,713,489,879)	0
5	Net unfunded actuarial liability (3) + (4)	\$5,557,121,553	\$11,067,948,984	\$16,625,070,537	\$5,552,768,407	\$10,879,086,731	\$16,431,855,138

¹ Excludes UAL amounts due to Local Employer ERI programs and Chapter 19, P.L. 2009 Local Employer deferrals because receivables for these amounts are included in the AVA

² Excludes Special Asset Value

³ Includes UAL amounts for Chapter 86, P.L. 2001 and Chapter 318, P.L. 2001. Based on established methodology, the Chapter 428, P.L. 1999 UAL is assumed to be a level percentage of the total UAL excluding amounts attributable to Chapter 86, P.L. 2001, Chapter 318, P.L. 2001, Chapter 109, P.L. 1979 and Chapter 511, P.L. 1991 as well as amounts attributable to the phase-in of State-paid Local obligations associated with Chapter 247, P.L. 1993 and Chapter 428, P.L. 1999. The percentage is 4% for State and 2% for Local.

Section 2: Actuarial Valuation Results

Development of Unfunded Actuarial Liability Contribution

	July 1, 2024 Fiscal Year Ending 2026 Payment			July 1, 2023 Fiscal Year Ending 2025 Payment		
	State	Local ¹	Total	State	Local ¹	Total
1 Amortization of UAL						
a. Basic	\$301,768,959	\$883,374,672	\$1,185,143,631	\$294,558,181	\$854,504,312	\$1,149,062,493
b. Chapter 204, P.L. 1989	68,983	574,911	643,894	68,983	574,911	643,894
c. Chapter 247, P.L. 1993	0	9,244,360	9,244,360	0	9,275,753	9,275,753
d. Chapter 428, P.L. 1999 ²	13,601,233	65,484,553	79,085,785	13,300,894	64,896,209	78,197,103
e. Chapter 109, P.L. 1979	0	52,514,728	52,514,728	0	52,514,728	52,514,728
f. Chapter 511, P.L. 1991	<u>0</u>	<u>28,371,236</u>	<u>28,371,236</u>	<u>0</u>	<u>28,371,235</u>	<u>28,371,235</u>
g. Total	315,439,174	1,039,564,460	1,355,003,634	307,928,058	1,010,137,148	1,318,065,206
2 Adjustment to UAL Contribution for Phase-In of State-Paid Local Obligations						
a. Chapter 247, P.L. 1993	\$9,244,360	(\$9,244,360)	\$0	\$9,275,753	(\$9,275,753)	0
b. Chapter 428, P.L. 1999 ²	65,484,553	(65,484,553)	0	64,896,209	(64,896,209)	0
c. Chapter 109, P.L. 1979	52,514,728	(52,514,728)	0	52,514,728	(52,514,728)	0
d. Chapter 511, P.L. 1991	28,371,236	(28,371,236)	0	28,371,235	(28,371,235)	0
e. Total	155,614,876	(155,614,876)	0	155,057,925	(155,057,925)	0
3 UAL Contribution as of Valuation Date (1) + (2)	\$471,054,051	\$883,949,583	\$1,355,003,634	\$462,985,983	\$855,079,223	\$1,318,065,206
4 Interest to Beginning of Fiscal Year	32,973,784	61,876,471	94,850,254	32,409,019	59,855,546	92,264,565
5 UAL Contribution as of Beginning of Fiscal Year (3) + (4)	\$504,027,834	\$945,826,054	\$1,449,853,889	\$495,395,002	\$914,934,769	\$1,410,329,771

¹ Excludes UAL amounts due to Local Employer ERI programs and Chapter 19, P.L. 2009 Local Employer deferrals because receivables for these amounts are included in the AVA

² Includes UAL amounts for Chapter 86, P.L. 2001 and Chapter 318, P.L. 2001.

Section 3: Supplemental Information

Development of Normal Cost Contribution

		July 1, 2024 Fiscal Year Ending 2026 Payment			July 1, 2023 Fiscal Year Ending 2025 Payment		
		State	Local	Total	State	Local	Total
1	Gross Normal Cost, excluding NCGI Premium						
	a. Basic	\$101,287,249	\$772,806,060	\$874,093,309	\$100,184,700	\$746,828,340	\$847,013,040
	b. Chapter 247, P.L. 1993	0	0	0	0	35,801	35,801
	c. Chapter 428, P.L. 1999	1,333,066	11,554,142	12,887,208	1,704,679	12,744,326	14,449,005
	d. Chapter 109, P.L. 1979 ¹	5,559,331	42,776,967	48,336,298	5,497,149	41,124,600	46,621,749
	e. Chapter 511, P.L. 1991	2,183,180	16,992,191	19,175,371	<u>2,167,136</u>	<u>16,560,611</u>	<u>18,727,747</u>
	f. Total	110,362,826	844,129,360	954,492,186	109,553,664	817,293,678	926,847,342
2	Expected Member Contributions	(\$47,806,691)	(\$363,861,120)	(\$411,667,811)	(\$47,422,575)	(\$349,865,311)	(\$397,287,886)
3	Employer Normal Cost (1) + (2)	\$62,556,135	\$480,268,240	\$542,824,375	\$62,131,089	\$467,428,367	\$529,559,456
4	Portion of Local Normal Cost Payable by State						
	a. Chapter 247, P.L. 1993	\$0	\$0	\$0	\$35,801	(\$35,801)	\$0
	b. Chapter 428, P.L. 1999	11,554,142	(\$11,554,142)	0	12,744,326	(12,744,326)	0
	c. Chapter 109, P.L. 1979	42,776,967	(42,776,967)	0	41,124,600	(41,124,600)	0
	d. Chapter 511, P.L. 1991	16,992,191	(16,992,191)	<u>0</u>	16,560,611	(16,560,611)	<u>0</u>
	e. Total	71,323,300	(71,323,300)	\$0	70,465,338	(70,465,338)	\$0
5	Normal Cost Contribution as of Valuation Date (3) + (4)	\$133,879,435	\$408,944,940	\$542,824,375	\$132,596,427	\$396,963,029	\$529,559,456
6	Interest to Beginning of Fiscal Year	9,371,560	28,626,146	37,997,706	9,281,750	27,787,412	37,069,162
7	Normal Cost Contribution as of Beginning of Fiscal Year (5) + (6)	\$143,250,995	\$437,571,086	\$580,822,081	\$141,878,177	\$424,750,441	\$566,628,618
8	Non-Contributory Group Insurance Premium at Beginning of Fiscal Year (one-year term cost)	N/A	\$46,388,181	\$46,388,181	N/A	\$44,283,147	\$44,283,147

¹ Per statute, 1.1% of appropriation payroll

Section 2: Actuarial Valuation Results

Development of Statutory Pension Contribution

	July 1, 2024 Fiscal Year Ending 2026 Payment			July 1, 2023 Fiscal Year Ending 2025 Payment		
	State	Local	Total	State	Local	Total
1 Normal Cost Contribution ¹						
a. Basic	\$57,224,197	\$437,571,086	\$494,795,283	\$56,455,474	\$424,750,441	\$481,205,915
a. Chapter 247, P.L. 1993	0	0	0	38,307	0	38,307
b. Chapter 428, P.L. 1999	13,789,313	0	13,789,313	15,460,435	0	15,460,435
c. Chapter 109, P.L. 1979	51,719,839	0	51,719,839	49,885,272	0	49,885,272
d. Chapter 511, P.L. 1991	<u>20,517,647</u>	<u>0</u>	<u>20,517,647</u>	<u>20,038,689</u>	<u>0</u>	<u>20,038,689</u>
e. Total	143,250,995	437,571,086	580,822,081	\$141,878,177	\$424,750,441	\$566,628,618
2 UAL Contribution ^{1,2}						
a. Basic	\$322,892,786	\$945,210,899	\$1,268,103,685	\$315,177,254	\$914,319,614	\$1,229,496,868
b. Chapter 204, P.L. 1989	73,812	615,155	688,967	73,812	615,155	688,967
c. Chapter 247, P.L. 1993	9,891,465	0	9,891,465	9,925,055	0	9,925,055
d. Chapter 428, P.L. 1999	84,621,790	0	84,621,790	83,670,900	0	83,670,900
e. Chapter 109, P.L. 1979	56,190,759	0	56,190,759	56,190,759	0	56,190,759
f. Chapter 511, P.L. 1991	30,357,222	0	30,357,222	<u>30,357,222</u>	<u>0</u>	<u>30,357,222</u>
g. Total	\$504,027,834	\$945,826,054	\$1,449,853,889	\$495,395,002	\$914,934,769	\$1,410,329,771
3 Total Statutory Contribution (1) + (2)	\$647,278,830	\$1,383,397,140	\$2,030,675,970	\$637,273,179	\$1,339,685,210	\$1,976,958,389
4 Lottery Enterprise Contribution Offset	\$0	\$0	\$0	\$0	\$0	\$0
5 Net Pension Contribution (3) + (4)	\$647,278,830	\$1,383,397,140	\$2,030,675,970	\$637,273,179	\$1,339,685,210	\$1,976,958,389
6 Non-Contributory Group Insurance Premium at Beginning of Fiscal Year (one-year term cost)	N/A	\$46,388,181	\$46,388,181	N/A	\$44,283,147	\$44,283,147

¹ State amounts for Chapter 247, P.L. 1993, Chapter 428, P.L. 1999, Chapter 109, P.L. 1979 and Chapter 511, P.L. 1991 include contributions toward State-paid Local obligations, both amounts attributable to the current fiscal year and amounts that were not contributed in prior years due to the phase-in of contributions. The total State-paid Local obligations are \$242,823,848 and \$241,309,891 for the July 1, 2024 and July 1, 2023 valuations, respectively.

² Excludes UAL amounts due to Local Employer ERI programs and Chapter 19, P.L. 2009 Local Employer deferrals because receivables for these amounts are included in the AVA. Refer to Section 5 for additional information regarding these payments.

Section 2: Actuarial Valuation Results

Reconciliation of Statutory Pension Contribution

Reconciliation of State Statutory Pension Contribution¹ from July 1, 2023 to July 1, 2024

Step	Amount	Percent of Payroll
Statutory pension contribution as of July 1, 2023	\$395,963,287	79.23%
Changes in Statutory pension contribution		
• Effect of member and employer contributions (more)/less than projected	-1,213,426	-0.24%
• Effect of investment (gain)/loss	3,831,771	0.77%
• Effect of other (gains) and losses on accrued liability	5,597,882	1.12%
• Net effect of other changes, including composition and number of participants	-275,466	-0.06%
• Total change	\$8,491,694	1.70%
Total change in percentage due to payroll change		-0.90%
Statutory pension contribution as of July 1, 2024	\$404,454,981	80.03%

¹ Before adjustments for State-paid Local obligations

Section 2: Actuarial Valuation Results

Reconciliation of Local Employers' Statutory Pension Contribution¹ from July 1, 2023 to July 1, 2024

Step	Amount	Percent of Payroll
Statutory pension contribution as of July 1, 2023	\$1,580,995,101	42.29%
Changes in Statutory pension contribution		
• Effect of member and employer contributions (more)/less than projected	-4,536,745	-0.12%
• Effect of investment (gain)/loss	-2,363,827	-0.06%
• Effect of other (gains) and losses on accrued liability	36,277,322	0.97%
• Net effect of other changes, including composition and number of participants	15,849,137	0.42%
• Total change	\$45,225,888	1.21%
Total change in percentage due to payroll change		-1.68%
Statutory pension contribution as of July 1, 2024	\$1,626,220,989	41.82%

¹ Before adjustments for State-paid Local obligations

Section 3: Supplemental Information

The following tables present the State and Local Employers' statutory contributions¹ as a percentage of appropriation payroll for FYE 2026 compared to FYE 2025 both in total and broken out by chapter. Despite experiencing an actuarial loss, the Local Employer contribution, as a percentage of payroll, decreased from the prior year. The decrease was due to increases in appropriation payroll that offset the increase as a result of the actuarial experience loss.

	July 1, 2024 Fiscal Year Ending 2026 Payment			July 1, 2023 Fiscal Year Ending 2025 Payment		
	State	Local	Total	State	Local	Total
Prior to Statutory State-Paid Local Adjustments						
Normal Cost Contribution Rate	13.244%	13.214%	13.218%	13.303%	13.378%	13.369%
UAL Contribution Rate ²	66.784%	28.603%	32.995%	<u>65.931%</u>	<u>28.910%</u>	<u>33.276%</u>
Total Pension Contribution Rate	80.028%	41.818%	46.213%	79.234%	42.288%	46.645%
Non-Contributory Group Insurance Premium Rate	N/A	1.193%	N/A	N/A	1.184%	N/A
After Statutory State-Paid Local Adjustments						
Normal Cost Contribution Rate	28.344%	11.252%	13.218%	28.391%	11.361%	13.369%
UAL Contribution Rate ²	<u>99.730%</u>	<u>24.322%</u>	<u>32.995%</u>	<u>99.130%</u>	<u>24.473%</u>	<u>33.276%</u>
Total Pension Contribution Rate	128.074%	35.574%	46.213%	127.521%	35.834%	46.645%
Non-Contributory Group Insurance Premium Rate	N/A	1.193%	N/A	N/A	1.184%	N/A

¹ Excludes UAL amounts due to Local Employer ERI programs and Chapter 19, P.L. 2009 Local Employer deferrals because receivables for these amounts are included in the AVA

² In order to demonstrate the total costs of the System, these rates include the contributions associated with Chapter 204, P.L. 1989. However, the Chapter 204, P.L. 1989 contributions are payable by individual employers.

Section 2: Actuarial Valuation Results

	July 1, 2024 Fiscal Year Ending 2026 Payment		July 1, 2023 Fiscal Year Ending 2025 Payment	
	State	Local	State	Local
Normal Cost Contribution Rate¹				
Basic Allowances	11.323%	11.252%	11.297%	11.361%
Chapter 247, P.L. 1993				
PERS Local normal rate for individuals without past service	N/A	16.377%	N/A	16.863%
PERS Local normal rate for individuals with past service	N/A	2.965%	N/A	3.125%
Portion of Municipalities and Local Group costs payable by the State	0.000%	N/A	0.007%	N/A
Chapter 428, P.L. 1999	2.728%	N/A	3.094%	N/A
Chapter 109, P.L. 1979	10.234%	N/A	9.982%	N/A
Chapter 511, P.L. 1991	4.060%	N/A	4.010%	N/A
UAL Contribution Rate^{1,2}				
Basic Allowances	63.889%	24.306%	63.068%	24.456%
Chapter 204, P.L. 1989 ³	--	--	--	--
Chapter 247, P.L. 1993	1.957%	N/A	1.986%	N/A
Chapter 428, P.L. 1999 ⁴	16.744%	N/A	16.743%	N/A
Chapter 109, P.L. 1979	11.118%	N/A	11.244%	N/A
Chapter 511, P.L. 1991	6.007%	N/A	6.075%	N/A
Non-Contributory Group Insurance Premium Rate	N/A	1.193%	N/A	1.184%

¹ State rates for Chapter 247, P.L. 1993, Chapter 428, P.L. 1999, Chapter 109, P.L. 1979 and Chapter 511, P.L. 1991 include contributions toward State-paid Local obligations, both amounts attributable to the current fiscal year and amounts that were not contributed in prior years due to the phase-in of contributions.

² Excludes UAL contributions due to Local Employer ERI programs and Chapter 19, P.L. 2009 Local Employer deferrals because receivables for these amounts are included in the AVA.

³ Employer specific costs under Chapter 204 detailed on next page.

⁴ Includes UAL contribution rates for Chapter 86, P.L. 2001 and Chapter 318, P.L. 2001.

Section 2: Actuarial Valuation Results

The table below details the recommended Chapter 204, P.L. 1989 payment for applicable locations. See the *Legislation History* section of this report for a description of this legislation.

Chapter 204, P.L. 1989 Payment Schedule

		July 1, 2024 Fiscal Year Ending 2026		July 1, 2023 Fiscal Year Ending 2025	
Location Number	Location Name	Payment as of Beginning of Fiscal Year	Years Remaining	Payment as of Beginning of Fiscal Year	Years Remaining
State Locations					
00053	Juvenile Justice Comm/Community Program	\$2,121	8	\$2,121	9
00323	Dept Division of Human Resources	68,128	8	68,128	9
00498	Rutgers Biomedical	<u>3,564</u>	8	<u>3,564</u>	9
	Total	\$73,812		\$73,812	
Municipalities and Local Groups					
21202	Camden City	\$89,552	8	\$89,552	9
39300	Belmar Borough	11,979	8	11,979	9
46800	Roxbury Township	22,670	8	22,670	9
49700	Wes Windsor Township	33,627	8	33,627	9
57700	Sea Isle City	6,084	8	6,084	9
62400	NJ Institute of Technology	97,015	8	97,015	9
62500	Brookdale Community College	105,421	8	105,421	9
62700	Essex County College	31,682	8	31,682	9
75000	Lakewood Twp Fire District #1	16,825	8	16,825	9
75700	Middlesex County College	117,181	8	117,181	9
76200	Lower Camden Co Reg HS District #1	2,530	8	2,530	9
77500	Hopewell Twp Fire District #1	10,427	8	10,427	9
78600	South Jersey Transit Authority	51,174	8	51,174	9
78700	Washington Twp Bd of Fire Comm	17,901	8	17,901	9
79600	Upper Freehold Township	<u>1,088</u>	8	<u>1,088</u>	9
	Total	\$615,155		\$615,155	

Section 2: Actuarial Valuation Results

Fiscal Year Ending 2026 Contributions for State College Locations

Location Number	Location Name	Number of Members	2024 Appropriation Payroll	Normal Cost Contribution	UAL Contribution	Net FYE 2026 Pension Contribution ¹
00410	Rowan University	32	\$2,645,547	\$749,865	\$2,638,011	\$3,387,876
00412	Kean University	13	1,030,528	292,097	1,027,592	1,319,690
00413	William Paterson University of NJ	18	1,525,778	432,473	1,521,432	1,953,905
00414	Montclair State University	24	2,263,282	641,514	2,256,835	2,898,349
00415	The College of New Jersey	14	1,187,458	336,578	1,184,075	1,520,654
00421	Stockton University	15	1,073,215	304,197	1,070,158	1,374,354
00498	Rutgers University	121	11,647,102	3,301,305	11,617,487	14,918,792
62400	NJ Institute of Technology	26	2,453,654	695,474	2,543,679	3,239,154
Total		263	23,826,564	\$6,753,505	\$23,859,269	\$30,612,774

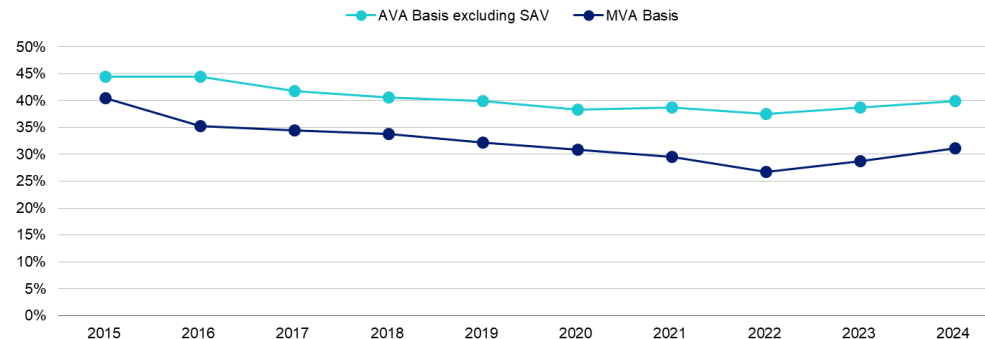
¹ The lottery enterprise contribution is no longer used to offset the pension contribution.

Section 2: Actuarial Valuation Results

Schedule of State funding progress through June 30, 2024

Actuarial Valuation Date of July 1	Actuarial Value of Assets ¹ (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) – (a)	Funded Ratio (a) / (b)	Covered Compensation ² (c)	UAAL as a Percentage of Covered Compensation [(b) – (a)] / (c)
2015	\$2,004,579,109	\$4,516,438,165	\$2,511,859,056	44.38%	\$518,087,705	484.83%
2016	1,928,447,404	4,676,642,040	2,748,194,636	41.24%	507,802,380	541.19%
2017	1,887,486,318	4,873,081,731	2,985,595,413	38.73%	504,025,065	592.35%
2018	1,872,048,766	4,983,733,970	3,111,685,204	37.56%	479,941,514	648.35%
2019	1,896,362,754	5,261,107,456	3,364,744,702	36.04%	487,025,462	690.88%
2020	1,935,340,424	5,449,871,027	3,514,530,603	35.51%	511,392,879	687.25%
2021	2,103,993,000	5,814,553,891	3,710,560,891	36.18%	506,255,584	732.94%
2022	2,267,954,515	6,055,686,895	3,787,732,380	37.45%	556,078,849	681.15%
2023	2,421,317,571	6,260,596,099	3,839,278,528	38.68%	499,740,835	768.25%
2024	2,574,713,768	6,445,436,604	3,870,722,836	39.95%	505,393,726	765.88%

State Employers' Funded Ratio History for Years Ended June 30, 2015 – 2024



¹ Including receivables but excluding SAV

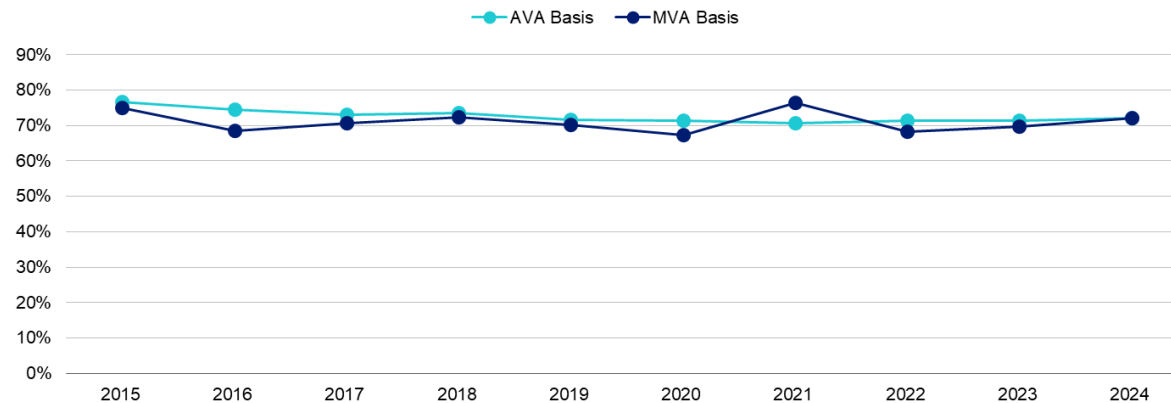
² Includes non-contributing actives prior to July 1, 2018

Section 2: Actuarial Valuation Results

Schedule of Local Employers' funding progress through June 30, 2024

Actuarial Valuation Date of July 1	Actuarial Value of Assets ¹ (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) – (a)	Funded Ratio (a) / (b)	Covered Compensation ² (c)	UAAL as a Percentage of Covered Compensation [(b) – (a)] / (c)
2015	\$23,935,037,150	\$31,205,965,303	\$7,270,928,153	76.70%	\$3,272,560,644	222.18%
2016	24,420,145,823	32,793,439,210	8,373,293,387	74.47%	3,320,721,980	252.15%
2017	25,183,776,588	34,474,127,537	9,290,350,949	73.05%	3,399,605,586	273.28%
2018	26,109,128,660	35,523,376,524	9,414,247,864	73.50%	3,390,777,193	277.64%
2019	27,023,458,408	37,671,711,185	10,648,252,777	71.73%	3,450,951,747	308.56%
2020	27,723,057,451	38,853,311,601	11,130,254,150	71.35%	3,505,375,030	317.52%
2021	29,499,250,329	41,694,235,840	12,194,985,511	70.75%	3,563,943,590	342.18%
2022	30,451,072,262	42,690,941,416	12,239,869,154	71.33%	3,752,809,563	326.15%
2023	31,560,308,528	44,152,885,138	12,592,576,610	71.48%	3,738,600,013	336.83%
2024	32,817,602,791	45,571,950,493	12,754,347,702	72.01%	3,888,815,180	327.98%

Local Employers' Funded Ratio History for Years Ended June 30, 2015 – 2024



¹ Including receivables

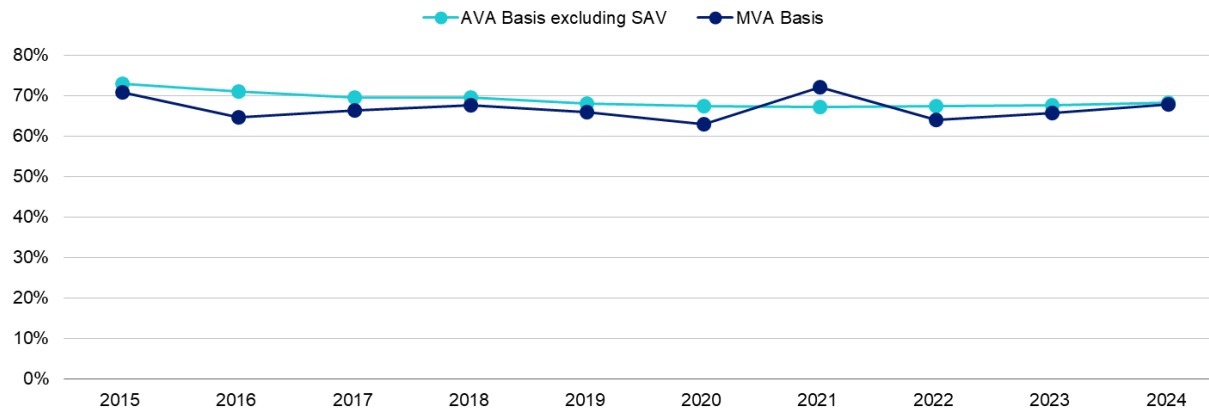
² Includes non-contributing actives prior to July 1, 2018

Section 2: Actuarial Valuation Results

Schedule of Total funding progress through June 30, 2024

Actuarial Valuation Date of July 1	Actuarial Value of Assets ¹ (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) – (a)	Funded Ratio (a) / (b)	Covered Compensation ² (c)	UAAL as a Percentage of Covered Compensation [(b) – (a)] / (c)
07/01/2015	\$25,939,616,259	\$35,722,403,468	\$9,782,787,209	72.61%	\$3,790,648,349	258.08%
07/01/2016	\$26,348,593,227	\$37,470,081,250	\$11,121,488,023	70.32%	\$3,828,524,360	290.49%
07/01/2017	\$27,071,262,906	\$39,347,209,268	\$12,275,946,362	68.80%	\$3,903,630,651	314.48%
07/01/2018	\$27,981,177,426	\$40,507,110,494	\$12,525,933,068	69.08%	\$3,870,718,707	323.61%
07/01/2019	\$28,919,821,162	\$42,932,818,641	\$14,012,997,479	67.36%	\$3,937,977,209	355.84%
07/01/2020	\$29,658,397,875	\$44,303,182,628	\$14,644,784,753	66.94%	\$4,016,767,909	364.59%
07/01/2021	\$31,603,243,329	\$47,508,789,731	\$15,905,546,402	66.52%	\$4,070,199,174	390.78%
07/01/2022	\$32,719,026,792	\$48,746,628,310	\$16,027,601,518	67.12%	\$4,159,231,628	385.35%
07/01/2023	\$33,981,626,099	\$50,413,481,237	\$16,431,855,138	67.41%	\$4,238,340,848	387.70%
07/01/2024	\$35,392,316,560	\$52,017,387,098	\$16,625,070,537	68.04%	\$4,394,208,906	378.34%

Total Employers' Funded Ratio History for Years Ended June 30, 2015 – 2024



¹ Including receivables but excluding SAV

² Includes non-contributing actives prior to July 1, 2018

Section 3: Supplemental Information

History of employer contributions

History of State Employer Contributions¹: 2016 – 2025

Actuarially Determined Employer Contribution (ADC) versus Actual Employer Contribution (AEC)

Year Ended June 30	ADC Amount	ADC Percentage of Covered Compensation	AEC Pension Contribution	AEC Percentage of Covered Compensation	Lottery Revenue	Percent Contributed
2016	\$461,081,051	89.00%	\$138,324,000	26.70%	\$0	30.0%
2017	483,877,347	95.29%	195,221,000	38.44%	0	40.3%
2018	502,917,964	99.78%	239,446,000	47.51%	11,712,026	49.9%
2019	529,722,755	110.37%	307,999,000	64.17%	13,260,000	60.6%
2020	544,579,266	111.82%	368,129,000	75.59%	12,180,000	69.8%
2021	569,662,114	111.39%	431,325,000	84.34%	13,260,000	78.0%
2022	594,266,603	117.38%	628,098,000	124.06%	13,333,020	107.9%
2023	608,900,926	118.35%	610,150,000	118.40%	14,040,000	102.5%
2024	623,726,111	124.81%	623,726,000	124.81%	14,100,000	102.3%
2025 ²	637,273,179	126.09%	637,273,179	126.09%	13,511,200	102.1%

¹ Excludes contributions for NCGI and includes Local Employer obligations payable by the State

² Reflects a State appropriation of 100% of the Statutory pension contribution and expected Lottery revenue

Section 2: Actuarial Valuation Results

History of Local Employer Contributions¹: 2016 – 2025

Actuarially Determined Employer Contribution (ADC) versus Actual Employer Contribution (AEC)

Year Ended June 30	ADC Amount	ADC Percentage of Covered Compensation	AEC Pension Contribution	AEC Percentage of Covered Compensation	Percent Contributed
2016	\$804,063,662	24.57%	\$804,063,662	24.57%	100.00%
2017	807,438,390	24.32%	807,438,390	24.32%	100.00%
2018	877,147,545	25.80%	877,147,545	25.80%	100.00%
2019	968,867,296	28.57%	968,540,115	28.56%	99.97%
2020	991,786,398	28.74%	991,786,398	28.74%	100.00%
2021	1,108,329,223	31.62%	1,108,329,223	31.62%	100.00%
2022	1,154,235,618	32.39%	1,154,235,618	32.39%	100.00%
2023	1,262,504,384	34.65%	1,262,504,384	34.65%	100.00%
2024	1,290,383,051	35.51%	1,290,383,051	35.51%	100.00%
2025	1,339,685,210	34.45%	1,339,685,210	34.45%	100.00%

¹ Excludes contributions for NCGI, ERI payments and Chapter 19 payments and includes adjustments for Local obligations payable by the State

Section 2: Actuarial Valuation Results

Low-Default-Risk Obligation Measure (LDROM)

In December 2021, the Actuarial Standards Board issued a revision of Actuarial Standard of Practice No. 4 (ASOP 4) *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*. One of the revisions to ASOP 4 requires the disclosure of a Low-Default-Risk Obligation Measure (LDROM) when performing a funding valuation. The LDROM presented in this report is calculated using the same methodology and assumptions used to determine the Actuarial Accrued Liability (AAL) used for funding, except for the discount rate. The LDROM is required to be calculated using “a discount rate...derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of benefits expected to be paid in the future.”

The LDROM is a calculation assuming a plan’s assets are invested in an all-bond portfolio, generally lowering expected long-term investment returns. The discount rate selected and used for this purpose is the Bond Buyer General Obligation 20-year Municipal Bond Index Rate, published at the end of each week. The last published rate prior to the valuation date, by The Bond Buyer (www.bondbuyer.com), is 3.93% for use effective June 30, 2024. This is the rate used to determine the discount rate for valuing reported public pension plan liabilities in accordance with Governmental Accounting Standards when plan assets are projected to be insufficient to make projected benefit payments, and the 20-year period reasonably approximates the duration of plan liabilities. The LDROM is not used to determine a plan’s funded status or Actuarially Determined Contribution. The plan’s expected return on assets, currently 7.00%, is used for these calculations.

As of June 30, 2024, the LDROM for the system is \$78,267,029,658. The difference between the plan’s AAL of \$52,017,387,097 and the LDROM can be thought of as the increase in the AAL if the entire portfolio were invested in low-default-risk securities. Alternatively, this difference could also be viewed as representing the expected savings from investing in the plan’s diversified portfolio compared to investing only in low-default-risk securities.

ASOP 4 requires commentary to help the intended user understand the significance of the LDROM with respect to the funded status of the plan, plan contributions, and the security of member benefits. In general, if plan assets were invested exclusively in low-default-risk securities, the funded status would be lower and the Actuarially Determined Contribution would be higher. While investing in a portfolio with low-default-risk securities may be more likely to reduce investment volatility and the volatility of employer contributions, it also may be more likely to result in higher employer contributions or lower benefits.

Section 2: Actuarial Valuation Results

Risk

The actuarial valuation results are dependent on a single set of assumptions; however, there is a risk that emerging results may differ significantly as actual experience proves to be different from the current assumptions.

We have not been engaged to perform a detailed analysis of the potential range of the impact of risk relative to the System's future financial condition but have included a brief discussion of some risks that may affect the System.

- **Economic and Other Related Risks.** Potential implications for the System due to the following economic effects (that were not reflected as of the valuation date) include:
 - Volatile financial markets and investment returns lower than assumed
 - High inflationary environment impacting salary increases

- **Investment Risk** (the risk that returns will be different than expected)

The market value rate of return over the last 10 years has ranged from a low of -7.1% to a high of 27.2%.

- **Longevity Risk** (the risk that mortality experience will be different than expected)

The actuarial valuation includes an expectation of future improvement in life expectancy. Emerging plan experience that does not match these expectations will result in either an increase or decrease in the actuarially determined contribution.

- **Contribution Risk** (the risk that actual contributions will be different from actuarially determined contribution)

The System's funding policy requires payment of the actuarially determined contribution. As long as this policy is adhered to, contribution risk is minimized. However, as noted earlier in the report, the funding policy as defined in the Statute may result in the unfunded liability being paid off over a longer than reasonable period of time.

- **Demographic Risk** (the risk that member experience will be different than assumed)

Examples of this risk include:

- Actual retirements occurring earlier or later than assumed. The value of retirement plan benefits is sensitive to the rate of benefit accruals and any early retirement subsidies that apply.
- More or less active member turnover than assumed.
- Salary increases more or less than expected.
- There are external factors including legislative or financial reporting changes that could impact the System's funding and disclosure requirements. While we do not assume any changes in such external factors, it is important to understand that they could have significant consequences for the System.

Section 2: Actuarial Valuation Results

- Actual Experience Over the Last Ten Years

Past experience can help demonstrate the sensitivity of key results to the System's actual experience. Over the past ten years:

- The funded percentage on the actuarial value of assets has fluctuated between a high of 72.6% on July 1, 2014 to a low of 66.5% on July 1, 2021

- Maturity Measures

As pension plans mature, the cash needed to fulfill benefit obligations will increase over time. Therefore, cash flow projections and analysis should be performed to assure that the System's asset allocation is aligned to meet emerging pension liabilities.

- Detailed Risk Assessment

Although projections are provided in this report, we recommend a more detailed assessment of the risks to provide the Board with a better understanding of the risks inherent in the System. This assessment may include scenario testing, sensitivity testing, stress testing, and stochastic modeling.

A detailed risk assessment could be important for the System because:

- The outlook for financial markets is uncertain.
- Relatively small changes in investment performance can produce large swings in the unfunded liabilities
- Retired members account for most of the System's liabilities, leaving limited options for reducing plan costs in the event of adverse experience.

Section 2: Actuarial Valuation Results

Projections

The projections on the following pages show the projected funded status and projected statutory pension contribution assuming the following:

- All actuarial assumptions including the investment return assumption of 7.00% are exactly met.
- State and Local Employers' appropriations are paid in full each year according to the assumptions detailed in this report.
- Annual administrative expenses are assumed to increase 2.75% per year from the level paid in FYE 2024 adjusted for accounts payable for the State and from the average level in the prior three years for Local Employers and limited to 15% of benefit payments.
- Contributing active population remains level in all future years.
- New entrants are assumed to enter in the middle of the plan year with the same demographic characteristics as new hires in the last three years. Salary at entry is based on actual new hires reported in the 2024 valuation data (increased 3.25% each future year).

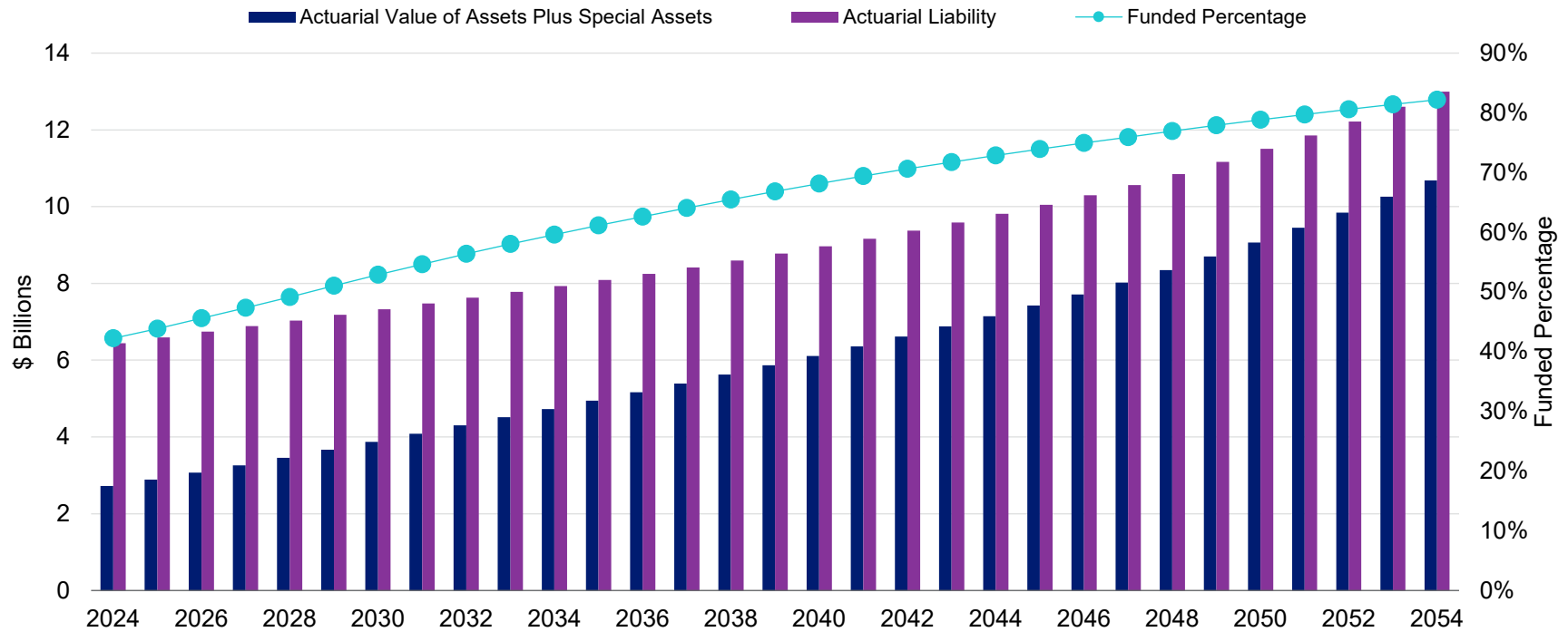
For both the State and Local Employers' portions of the system the funded percentage, based on MVA, is projected to increase each year in the future. The State portion is projected to reach 80% funded in 2051 and the Local Employers' portion is projected to reach 80% funded in 2033. Neither the State nor the Local Employer portions of the System are projected to reach 100% funded over the next 30 years.

For the State plan, the statutory contribution is projected to increase to \$423.4 million in year ended June 30, 2030, then decrease and remain relatively level at approximately \$380 million. For the Local Employers' plan, the aggregate employer statutory contribution (including both contributions payable by the State and Local Employers) is projected to gradually increase over the next thirty years to a high of \$1.7 billion in 2056.

Additional scenarios would highlight the sensitivity of funded percentage and statutory contribution to the risks mentioned above.

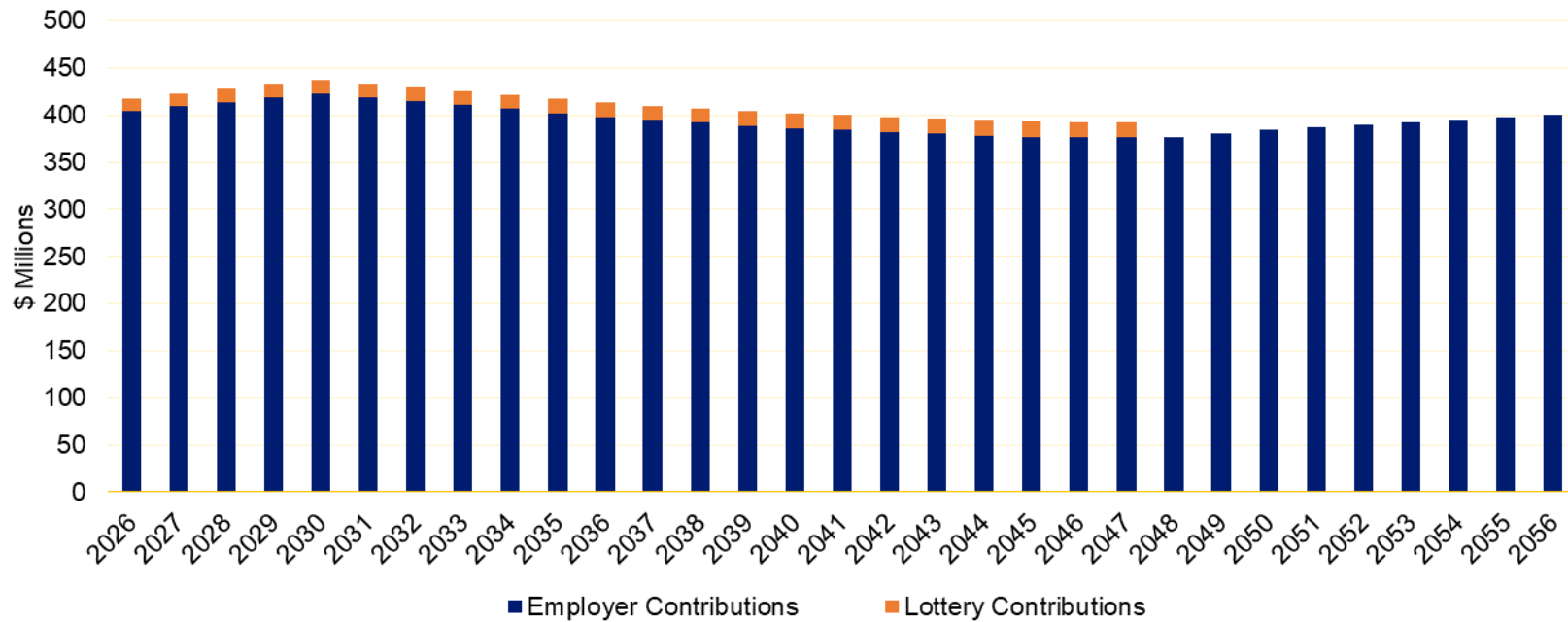
Section 2: Actuarial Valuation Results

Projection of Funded Percentage for State Plan

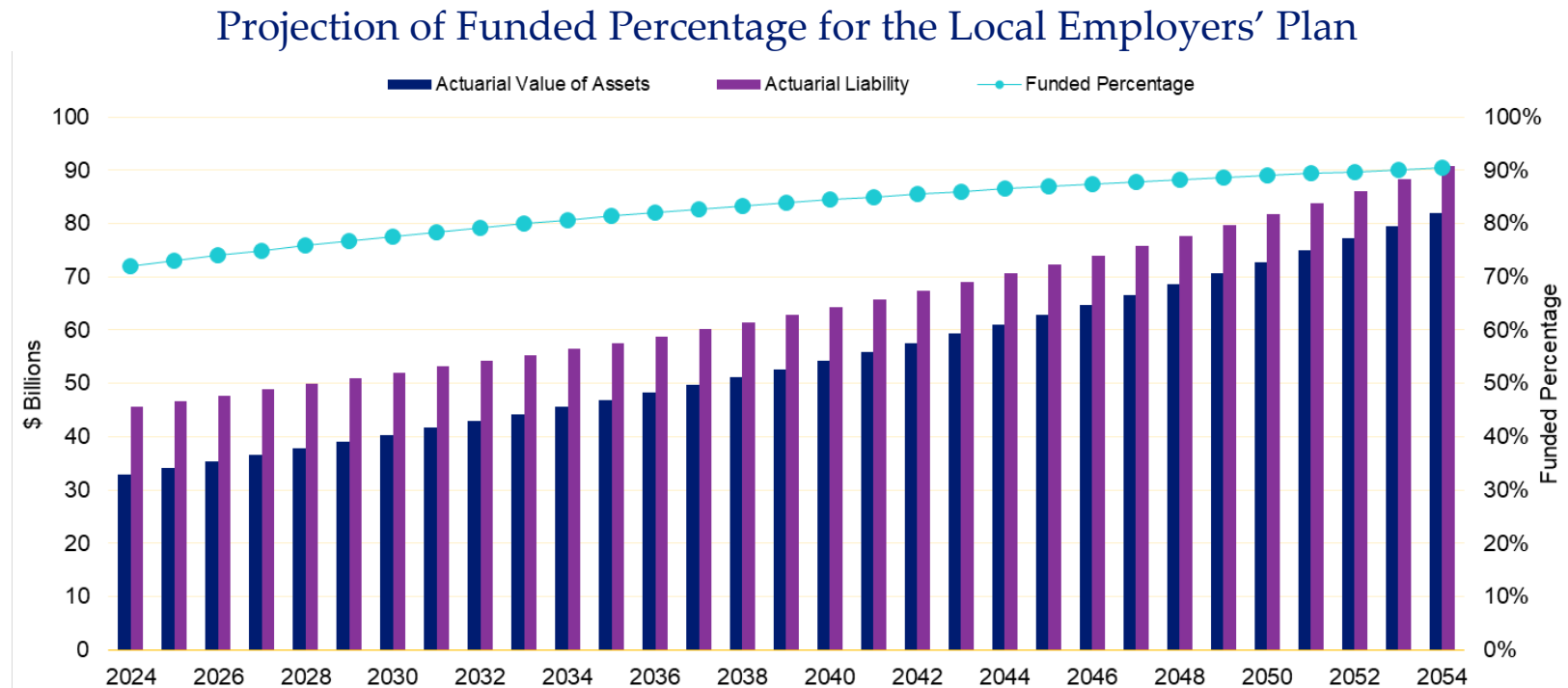


Section 2: Actuarial Valuation Results

Projected Aggregate Employer Contributions and Lottery Revenue for the State Plan

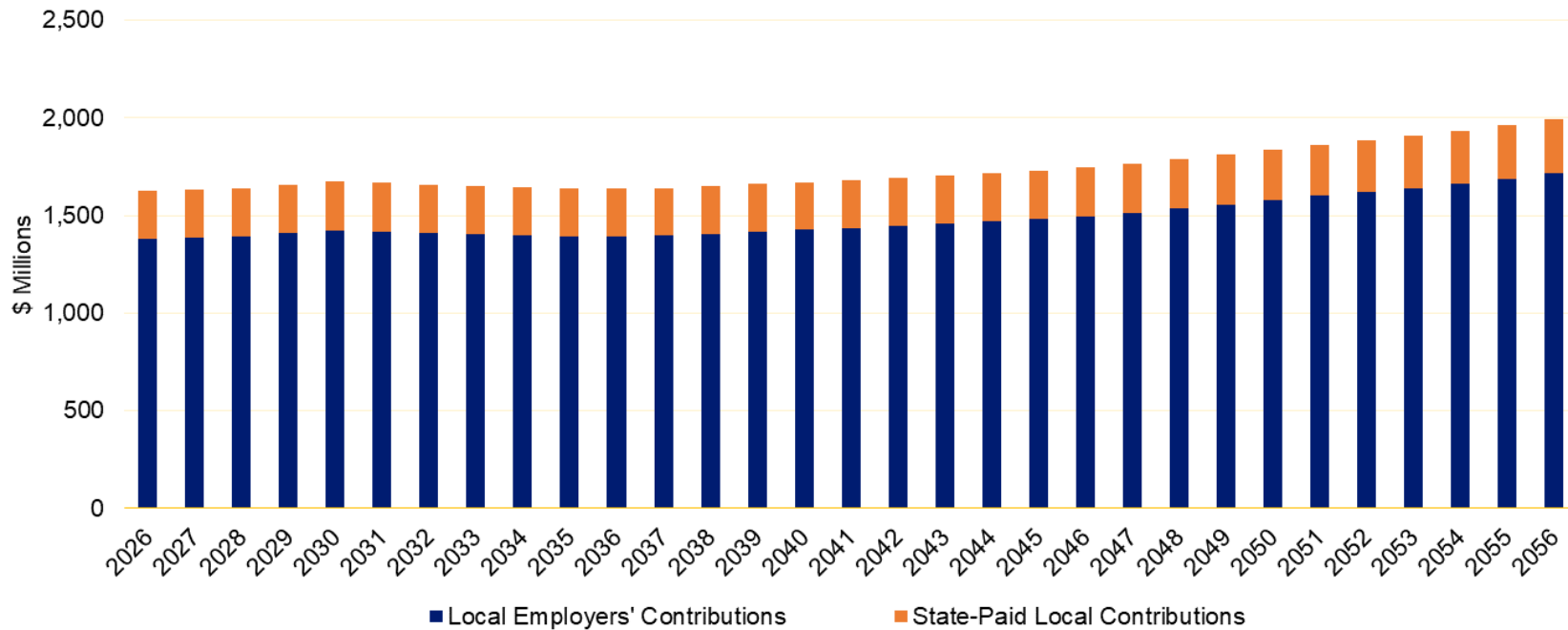


Section 2: Actuarial Valuation Results



Section 2: Actuarial Valuation Results

Projected Aggregate Employer Contributions for the Local Employers' Plan



Section 2: Actuarial Valuation Results

GFOA funded liability by type

The Actuarial Accrued Liability represents the present value of benefits earned, calculated using the System's actuarial cost method. The Actuarial Value of Assets reflects the financial resources available to liquidate the liability. The portion of the liability covered by assets reflects the extent to which accumulated plan assets are sufficient to pay future benefits, and is shown for liabilities associated with employee contributions, pensioner liabilities, and other liabilities. The Government Finance Officers Association (GFOA) recommends that the funding policy aim to achieve a funded ratio of 100 percent.

State GFOA Funded Liability by Type as of June 30

Type	2024	2023
Actuarial accrued liability (AAL)		
Active member contributions ¹	\$530,136,960	\$524,847,464
Retirees and beneficiaries	4,518,793,310	4,368,805,767
Active and inactive members (employer-financed)	1,396,506,334	1,366,942,868
Total	\$6,445,436,604	\$6,260,596,099
Actuarial value of assets	2,574,713,768	2,421,317,571
Cumulative portion of AAL covered		
Active member contributions	100.00%	100.00%
Retirees and beneficiaries	45.25%	43.41%
Active and inactive members (employer-financed)	0.00%	0.00%

¹ Includes contributing and non-contributing actives

Section 3: Supplemental Information

Local Employers' GFOA Funded Liability by Type as of June 30

Type	2024	2023
Actuarial accrued liability (AAL)		
Active member contributions ¹	\$3,736,146,569	\$3,667,556,030
Retirees and beneficiaries	31,249,540,905	30,082,691,090
Active and inactive members (employer-financed)	10,586,263,019	10,402,638,018
Total	\$45,571,950,493	\$44,152,885,138
Actuarial value of assets	32,817,602,791	31,560,308,528
Cumulative portion of AAL covered		
Active member contributions	100.00%	100.00%
Retirees and beneficiaries	93.06%	92.72%
Active and inactive members (employer-financed)	0.00%	0.00%

¹ Includes contributing and non-contributing actives

Section 2: Actuarial Valuation Results

Actuarial balance sheet

An overview of the System's funding is given by an Actuarial Balance Sheet. In this approach, first the amount and timing of all future payments that will be made by the System for current members is determined. Then these payments are discounted at the valuation interest rate to the date of the valuation, thereby determining the present value, referred to as the "liability" of the System.

Second, this liability is compared to the assets. The "assets" for this purpose include the net amount of assets already accumulated by the System, the present value of future member contributions, the present value of future employer normal cost contributions, and the present value of future employer amortization payments for the unfunded actuarial accrued liability.

Section 2: Actuarial Valuation Results

Actuarial Balance Sheet as of July 1, 2024

	State	Local Employers	Total
Liabilities			
• Payable from Retirement Fund Reserve (RFR) ¹	\$4,518,793,310	\$31,249,540,905 ²	\$35,768,334,215
• Payable from Members' Contributions Reserve (MCR) and Employers' Contributions Reserve (ECR) ³	1,926,643,295	14,322,409,588	16,249,052,883
Total liabilities	\$6,445,436,605	\$45,571,950,493	\$52,017,387,098
Assets			
Retirement Fund Reserve			
• Credited to Fund with Distribution of Income	\$4,256,093,513	\$30,771,678,724	\$35,027,772,236
• Add/(Deduct) reserve transferable from/(to) ECR ⁴	<u>262,699,797</u>	<u>477,862,181</u>	<u>740,561,979</u>
• Adjusted RFR	\$4,518,793,310	\$31,249,540,905	\$35,768,334,215
Members' Contributions Reserve ⁵	\$473,127,496	\$3,789,211,156	\$4,262,338,651
Employers' Contributions Reserve			
• Credited to Fund with Distribution of Income	(2,154,507,240)	(1,743,287,088)	(\$3,897,794,328)
• Add/(Deduct) reserve transferable from/(to) RFR	<u>(262,699,797)</u>	<u>(477,862,181)</u>	<u>(740,561,979)</u>
• Adjusted ECR ⁵	(2,417,207,037)	(2,221,149,270)	(4,638,356,307)
Special Asset Value as of July 1, 2024	\$147,074,459	\$0	\$147,074,459
Present Value of Prospective Contributions by State and Local employers to ECR	\$3,723,648,378	\$12,754,347,702	\$16,477,996,080
Total of current and future assets	<u>\$6,445,436,604</u>	<u>\$45,571,950,493</u>	<u>\$52,017,387,098</u>

Numbers may not add due to rounding.

¹ Retirees, disableds, and beneficiaries currently receiving benefits

² Includes the present value of ERI payments of \$2,572,735

³ Active and terminated vested members due a future benefit

⁴ It is recommended that the RFR is put into balance each year by transferring assets from the ECR to the RFR so that the RFR will contain sufficient assets to cover the retiree and beneficiary liability

⁵ Actuarial value of assets equals RFR + MCR + ECR

Section 2: Actuarial Valuation Results

Active Liability by Type

The tables on the following pages show the demographics, normal cost and actuarial liability by tier for contributing and non-contributing active members, respectively, for State and Local employers as of July 1, 2024

Contributing Actives by Tier

	Number of Members	Appropriation Payroll ¹	Average Age	Average Years of Service	Average Salary	Actuarial Liability	Gross Normal Cost
State							
• Tier 1	2,581	\$279,495,136	48.0	20.8	\$108,369	\$1,477,678,324	\$66,322,142
• Tier 2	200	20,400,083	40.7	13.4	102,000	55,257,582	4,037,461
• Tier 3	<u>2,547</u>	<u>205,498,507</u>	34.3	7.2	80,683	<u>306,262,099</u>	<u>40,003,224</u>
Total	5,328	\$505,393,726	41.2	14.0	94,895	\$1,839,198,004	\$110,362,826
Local Employers							
• Tier 1	14,451	\$2,070,356,946	47.3	21.4	\$143,444	\$11,304,677,172	\$482,657,498
• Tier 2	473	60,751,142	39.8	13.8	128,438	169,609,288	12,149,081
• Tier 3	<u>19,658</u>	<u>1,757,707,092</u>	33.1	6.6	89,423	<u>2,549,869,877</u>	<u>349,322,782</u>
Total	34,582	\$3,888,815,180	39.1	12.8	112,531	\$14,024,156,337	\$844,129,360

¹ Excludes pay for members who attain the mandatory retirement age of 65 prior to midyear for State (Pay is included for certain members working for Local Employers' for this year in order to estimate impact of Chapter 9, P.L. 2022). Tier 1 members limited to the 401(a)(17) pay limit. Tier 2 and Tier 3 members limited to the Social Security Wage Base

Section 2: Actuarial Valuation Results

Non-Contributing Actives by Tier

	Number of Members	Last Reported Payroll	Average Age	Average Years of Service	Average Last Reported Salary	Actuarial Liability	Gross Normal Cost
State							
• Tier 1	203	\$16,249,372	50.8	15.8	\$85,149	\$66,183,220	\$0
• Tier 2	14	1,287,199	42.0	12.0	91,943	3,009,829	0
• Tier 3	<u>236</u>	<u>15,412,747</u>	33.0	4.9	65,308	<u>16,631,539</u>	<u>0</u>
Total	453	\$32,949,318	41.3	10.0	75,022	\$85,824,588	\$0
Local							
• Tier 1	617	\$59,375,757	50.3	15.4	\$99,126	\$229,654,638	\$0
• Tier 2	15	1,646,002	41.3	11.0	109,733	3,473,856	0
• Tier 3	<u>691</u>	<u>47,939,015</u>	32.4	4.5	69,376	<u>50,908,640</u>	<u>0</u>
Total	1,323	\$108,960,774	40.8	9.6	83,708	\$284,037,134	\$0

Section 3: Supplemental Information

Exhibit A: Table of plan demographics for State

Category	Year Ended June 30, 2024	Year Ended June 30, 2023	Change
Contributing Active¹ members in valuation:			
• Number	5,328	5,502	-3.2%
• Average age	41.2	40.9	0.3
• Average years of service	14.0	13.8	0.2
• Projected total payroll for police	\$501,793,402	\$496,719,064	1.0%
• Projected average payroll for police	\$95,112	\$90,958	4.6%
• Projected total payroll for firefighters	\$3,600,324	\$3,021,771	19.1%
• Projected average payroll for firefighters	\$72,006	\$73,702	-2.3%
Non-Continuing Active members	453	508	-10.8%
Inactive members			
• Number	9	9	0.0%
• Average monthly allowance	\$1,612	\$1,841	-12.4%
Retired members:			
• Number in pay status	5,706	5,569	2.5%
• Average age	64.0	63.7	0.3
• Average monthly allowance	\$4,678	\$4,621	1.2%
Ordinary Disabled members:			
• Number in pay status	723	720	0.4%
• Average age	60.4	60.3	0.1
• Average monthly allowance	\$2,393	\$2,381	0.5%
Accidental Disabled members:			
• Number in pay status	415	394	5.3%
• Average age	55.4	55.6	-0.2
• Average monthly allowance	\$3,979	\$3,895	2.2%
Beneficiaries:			
• Number in pay status	1,034	1,002	3.2%
• Average age	69.9	68.6	1.3
• Average monthly allowance	\$2,912	\$2,860	1.8%

¹ See Section 2 for Tier breakouts for active demographics

Section 3: Supplemental Information

Exhibit B: Table of plan demographics for Local Employers

Category	Year Ended June 30, 2024	Year Ended June 30,	Change From Prior
Contributing Active¹ members in valuation:			
• Number	34,582	34,054	1.6%
• Average age	39.1	39.4	-0.3
• Average years of service	12.8	13.1	-0.3
• Projected total payroll for police	\$3,121,242,130	\$3,000,087,277	4.0%
• Projected average payroll for police	\$112,663	\$110,010	2.4%
• Projected total payroll for firefighters	\$767,573,050	\$738,512,736	3.9%
• Projected average payroll for firefighters	\$111,994	\$108,877	2.9%
Non-Continuing Active members	1,323	1,387	-4.6%
Inactive members			
• Number	58	57	1.8%
• Average monthly allowance	\$2,126	\$2,111	0.7%
Retired members:			
• Number in pay status	30,599	30,036	1.9%
• Average age	66.0	65.8	0.2
• Average monthly allowance	\$6,188	\$6,072	1.9%
Ordinary Disabled members:			
• Number in pay status	2,367	2,306	2.6%
• Average age	59.3	59.5	-0.2
• Average monthly allowance	\$2,983	\$2,826	5.6%
Accidental Disabled members:			
• Number in pay status	2,899	2,820	2.8%
• Average age	56.9	57.1	-0.2
• Average monthly allowance	\$4,900	\$4,815	1.8%
Beneficiaries:			
• Number in pay status	7,376	7,262	1.6%
• Average age	74.3	73.9	0.4
• Average monthly allowance	\$3,145	\$3,069	2.5%

¹ See Section 2 for Tier breakouts for active demographics

Section 3: Supplemental Information

Exhibit C: State Members in active service as of June 30, 2024 by age, years of service, and average compensation¹

Age	Total	Years of Service								
		0-4	5-9	10-14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	112	112	--	--	--	--	--	--	--	--
	\$54,631	\$54,631	--	--	--	--	--	--	--	--
25 - 29	423	274	147	2	--	--	--	--	--	--
	67,278	61,635	\$77,668	\$76,742	--	--	--	--	--	--
30 - 34	898	206	542	150	--	--	--	--	--	--
	80,141	64,186	82,101	94,973	--	--	--	--	--	--
35 - 39	1,018	93	353	410	158	4	--	--	--	--
	91,231	65,546	83,996	98,508	\$103,507	\$98,601	--	--	--	--
40 - 44	1,006	10	135	228	471	160	2	--	--	--
	103,039	66,654	85,312	99,684	107,584	111,489	\$107,152	--	--	--
45 - 49	913	--	13	87	300	469	44	--	--	--
	108,583	--	90,440	99,965	106,073	111,611	115,818	--	--	--
50 - 54	670	--	--	7	138	424	92	9	--	--
	108,055	--	--	105,834	104,863	107,717	114,517	\$108,591	--	--
55 - 59	266	--	--	--	21	180	47	17	1	--
	107,469	--	--	--	105,264	107,073	106,731	116,695	--	--
60 - 64	22	--	--	--	--	5	6	4	6	1
	109,872	--	--	--	--	112,762	108,518	125,808	\$99,344	--
Total	5,328	695	1,190	884	1,088	1,242	191	30	7	1
	\$94,895	\$61,858	\$82,571	\$98,363	\$106,185	\$109,571	\$112,635	\$115,479	\$99,862	\$102,973

¹ Compensation is annualized for those hired during the prior plan year

Section 3: Supplemental Information

Exhibit D: Local Members in active service as of June 30, 2024 by age, years of service, and average compensation¹

Age	Years of Service									
	Total	0-4	5-9	10-14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	1,262	1,259	3	--	--	--	--	--	--	--
	\$56,020	\$55,972	\$76,267	--	--	--	--	--	--	--
25 - 29	4,658	3,291	1,359	8	--	--	--	--	--	--
	70,508	64,206	85,598	\$99,203	--	--	--	--	--	--
30 - 34	6,903	1,893	4,104	887	19	--	--	--	--	--
	90,953	65,949	96,666	117,328	\$116,786	--	--	--	--	--
35 - 39	6,643	645	2,118	2,593	1,249	36	--	--	--	--
	112,133	68,408	99,722	123,103	132,240	\$139,313	--	--	--	--
40 - 44	5,799	68	639	1,039	2,731	1,315	7	--	--	--
	130,279	74,838	101,539	120,676	135,085	144,617	\$152,567	--	--	--
45 - 49	4,604	1	93	344	1,283	2,409	471	--	--	--
	142,408	--	105,278	120,942	134,178	146,740	165,468	\$203,344	--	--
50 - 54	3,153	1	2	33	602	1,398	977	135	5	--
	147,135	--	81,926	118,116	128,334	141,362	163,781	176,997	\$179,613	--
55 - 59	1,261	2	1	--	63	492	415	213	75	--
	154,441	114,750	--	--	132,282	138,674	160,999	175,572	182,090	--
60 - 64	296	--	--	--	--	36	100	54	81	25
	166,402	--	--	--	--	141,782	158,568	158,523	185,575	\$188,084
65 - 69	5	--	--	1	--	--	1	--	2	1
	170,578	--	--	--	--	--	--	--	193,028	--
Total	34,582	7,160	8,319	4,905	5,947	5,686	1,971	405	163	26
	\$112,531	\$63,726	\$96,095	\$121,330	\$133,520	\$144,150	\$163,220	\$173,980	\$183,880	\$188,301

¹ Compensation is annualized for those hired during the prior plan year

Section 3: Supplemental Information

Exhibit E: Reconciliation of member data

	Contributing Actives	Non- Contributing Actives	Deferred Vested	Retired Members	Disableds	Beneficiaries	Total
Number as of July 1, 2023	39,556	1,895	66	35,605	6,240	8,264	91,626
New or previously unreported members	2,423	100	0	1	0	118	2,642
Terminations — with vested rights	(4)	(5)	9	N/A	N/A	N/A	0
Terminations — without vested rights	(131)	(273)	(1)	N/A	N/A	N/A	(405)
Retirements	(1,445)	(55)	(7)	1,507	0	N/A	0
New disabilities	(110)	(124)	0	(35)	269	N/A	0
Return to work	0	0	0	0	0	N/A	0
Died with beneficiary	(15)	(8)	0	(410)	(52)	485	0
Died without beneficiary	(9)	(4)	0	(363)	(53)	(377)	(806)
Active started contributing	272	(272)	N/A	N/A	N/A	N/A	0
Active stopped contributing	(627)	627	N/A	N/A	N/A	N/A	0
Certain period expired	N/A	N/A	N/A	N/A	N/A	(79)	(79)
Data adjustments	0	(105)	0	0	0	(1)	(106)
Number as of July 1, 2024	39,910	1,776	67	36,305	6,404	8,410	92,872

Section 4: Actuarial Valuation Basis

Exhibit I: Actuarial assumptions, methods and models

Rationale for assumptions

The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the Actuarial Experience Study for the period July 1, 2018 through June 30, 2021. Current data is reviewed in conjunction with each annual valuation. Based on professional judgment, no assumption changes are warranted at this time.

Net investment return

7.00%.

The assumed rate of return is set by the State Treasurer in consultation with the Chief Financial Officer and the Board of Trustees and is reflected in the Statutory and GASB valuations that are presented to the Board for their review and acceptance.

Salary increases

Years since Hire	Rate (%)
0	16.25
1	14.00
2 – 4	12.00
5	11.00
6	10.00
7	9.00
8	8.00
9	7.00
10	6.00

Section 4: Actuarial Valuation Basis

Years since Hire	Rate (%)
11 – 12	5.00
13 – 16	4.00
17+	3.25

Salary increases include an assumed inflation rate of 2.75% and assumed non-inflationary increases of 0.50%.

Payroll Limits:

401(a)(17) pay limit is assumed to increase 2.75% per year and social security wage base is assumed to increase 3.25% per year

Cost-of-living adjustments

No future COLAs are assumed. COLAs earned prior to the valuation date are included in the valuation data.

Mortality rates

Employee: Pub-2010 Safety Employee amount-weighted mortality tables, projected generationally from 2010 with Scale MP-2021. 5% of deaths are assumed to be accidental.

Healthy Annuitant: Pub-2010 Safety Retiree Below Median amount-weighted mortality tables, projected generationally from 2010 with Scale MP-2021

Disabled: 144.0% of Safety Disabled Retiree amount-weighted mortality table for males and 100.0% of Safety Disabled Retiree amount-weighted mortality table for females, projected generationally from 2010 with Scale MP-2021

Contingent Annuitant: Pub-2010 General Retiree Below-Median amount-weighted mortality tables projected generationally from 2010 with Scale MP-2021

Section 4: Actuarial Valuation Basis

Termination rates(%) before retirement

<u>Years since Hire</u>	<u>Withdrawal Rate¹</u>
0 - 4	2.00
5 - 6	1.60
7 - 9	1.00
10 - 11	0.60
12 - 13	0.25
14 - 24	0.20
25+	0.00

Age	Ordinary Disability²	Accidental Disability
20	0.010%	0.010%
30	0.050%	0.040%
40	0.320%	0.260%
50	0.150%	0.260%
60	0.050%	0.050%

No members are assumed to receive the involuntary disability retirement benefit.

¹ Withdrawal rates do not apply at or beyond early retirement age. All future terminating members assumed to elect a refund of contributions

² No ordinary disability is assumed prior to ordinary disability eligibility at four years of service

Section 4: Actuarial Valuation Basis

Retirement rates

For those with less than 25 years of service:

Age	Retirement Probability
40-43	1.00%
44-46	2.50
47	3.75
48	4.00
49	5.00
50	6.00
51-56	7.00
57-61	8.00
62-64	13.00
65 and older	100.00

For those with 25 years of service:

Age	Retirement Probability
54 and younger	45.00%
55-57	50.00
58-61	55.00
62-63	70.00
64	90.00
65 and older	100.00

For those with 26 or more years of service:

Age	Retirement Probability
53 and younger	22.00%
54-60	24.00
61	28.00
62	30.00
63	20.00
64	60.00
65 and older	100.00

Rates shown do not reflect adjustments for early retirement window under Chapter 52, P.L. 2021 (10% retirement at first eligibility for early retirement window and 5% each year thereafter until window closes) or delayed mandatory retirement available to certain chiefs under Chapter 9, P.L. 2022 (all contributing actives from local employers at or over mandatory retirement age at valuation date assumed to defer retirement to age 68)

Section 4: Actuarial Valuation Basis

Weighted average retirement age

Age 54, determined as follows: The weighted average retirement age for each participant is calculated as the sum of the product of each potential current or future retirement age times the probability of surviving from current age to that age and then retiring at that age, assuming no other decrements. The overall weighted retirement age is the average of the individual retirement ages based on all the active members included in the July 1, 2024 actuarial valuation.

Retirement rates for inactive vested members

55

Non-Contributory Group Insurance

All benefits paid as lump sums

Unknown data for participants

Same as those exhibited by participants with similar known characteristics. If not specified, participants are assumed to be male.

Percent married

90%

Age of spouse

Spouses of male participants are female and three years younger and spouses of female participants are male and three years older.

Family composition

Retirees with a beneficiary allowance reported in the data are assumed to be married. None are assumed to have dependent children or parents.

Current dependents receiving a pre-retirement accidental death benefit under age 24 are assumed to receive a benefit until age 24 while those over age 24 are assumed to receive a benefit for their lifetime.

Current dependents receiving a benefit other than a pre-retirement accidental benefit under age 19 are assumed to receive a benefit until age 19 while those over age 19 are assumed to receive a benefit for their lifetime.

Section 4: Actuarial Valuation Basis

Actuarial value of assets

Sum of actuarial value at beginning of year and increase in cost value during year excluding realized appreciation or losses plus 20 percent of market value at end of year in excess of that preliminary value. The asset method provides a degree of conservatism to increase the likelihood that benefits are funded.

Actuarial cost method

Projected Unit Credit Actuarial Cost Method. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and allocated linearly by service.

Administrative Expense

None

Contribution Timing

State contributions are assumed to be made on a quarterly basis with the first contribution 15 months after the associated valuation date, in line with the requirements of Chapter 83, P.L. 2016 which requires the State to pay at least 25% by September 30, at least 50% by December 31, at least 75% by March 31, and at least 100% by June 30.

Local employers' contributions are expected to be paid on April 1st, 21 months after the valuation date.

Member's contributions and lottery revenue are expected to be received monthly

Contributions payable in the fiscal year starting on the valuation date are included in the actuarial value of assets as receivable contributions, discounted by the applicable valuation interest rate.

Models

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.

Section 4: Actuarial Valuation Basis

Exhibit II: Summary of plan provisions

This exhibit summarizes the major provisions of the System included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan year

July 1 through June 30

Plan status

Ongoing

Membership Tiers:

Tier 1: Hired on or before May 21, 2010

Tier 2: Hired between May 21, 2010 and June 28, 2011

Tier 3: Hired after June 28, 2011

Compensation

Base salary upon which contributions by a Member were made to the Annuity Savings Fund in the last year of service limited to the compensation limit under IRC Section 401(a)(17) for Tier 1 members and the annual maximum wage base for Social Security for Tier 2 and Tier 3 members

Final Compensation

Tier 1 members: Annual compensation received by the Member in the last 12 months of Creditable Service preceding their retirement.

Tier 2 and Tier 3 members: Average annual compensation for the three fiscal years of membership providing the largest benefit

Dependent Children and Parents

Parents receiving at least one-half support from member in the year preceding death or accident that led to death in the case of accidental death benefit and children who meet any one of the four following conditions:

Section 4: Actuarial Valuation Basis

1. Under the age of 18
2. 18 years of age or older and enrolled in high school
3. Any age and, at the time of member's death, is disabled because of mental or physical incapacity and is incapable of substantial future gainful employment because of the impairment. Incapacity must last or be expected to last for a continuous period of not less than 12 months as determined by the Medical Review board
4. In the case of an accidental death benefit, unmarried and under the age of 24 if enrolled in college in a degree program for at least 12 hours per semester

Service Retirement

Requirement for Members enrolled as of January 18, 2000: Age 55 or 20 Years of Creditable Service

Requirement for Members enrolled after January 18, 2000: Age 55

Base Amount: 2% of Final Compensation for each year of creditable service up to 30 years plus 1% of Final Compensation for each year of Creditable Service over 30 years

20-Year Amount: In lieu of the base amount, 50% of Final Compensation if the member has 20 or more years of Creditable Service

Special Catch-up Amount: In lieu of the amounts above, members enrolled as of January 18, 2000 who reach mandatory retirement age of 65 and have between 20 and 25 years of Creditable Service will receive 50% of Final Compensation plus 3% of Final Compensation for each year of Creditable Service over 20 years.

Special Retirement

Service Requirement: 25 Years of Creditable Service

Amount for Tier 1 and Tier 2 members: 65% of Final Compensation plus 1% of Final Compensation for each year of Creditable Service in excess of 25 years with a maximum of 70% of Final Compensation, unless the member had 30 or more years of Creditable Service on June 30, 1979

Amount for Tier 3 members: 60% of Final Compensation plus 1% of Final Compensation for each year of Creditable Service in excess of 25 years with a maximum of 65% of Final Compensation

Deferred Retirement

Age Requirement: 55 and terminated service prior to age 55

Section 4: Actuarial Valuation Basis

Service Requirement: 10 Years of Creditable Service

Amount: At member's election the choice of a refund of aggregate member contributions paid at termination or 2% of Final Compensation for each year of creditable service up to 30 years plus 1% of Final Compensation for each year of Creditable Service over 30 years.

Ordinary Disability:

Service Requirement: Four years of Creditable Service

Other Requirement: Totally and permanently incapacitated from the performance of usual or available duties

Amount: Greater of 40% of Final Compensation or 1.5% of Final Compensation for each year of Creditable Service

Involuntary Ordinary Disability

Requirement: Same as Ordinary Disability except retirement applied for by employer

Amount: Same as Ordinary Disability unless the member has between 20 and 25 years of Creditable Service, in which case, 50% of Final Compensation plus 3% of Final Compensation for each year of Creditable Service over 20 years.

Accidental Disability

Requirement: Totally and permanently disabled as a direct result of a traumatic event occurring during and a result of regular or assigned duties and such member is mentally or physically incapacitated for the performance of his usual duties. Special rules may apply to duties regarding World Trade Center rescue, recovery, or cleanup operations.

Amount: 2/3 of annual compensation at the time of the traumatic event (or at the time of retirement if greater)

Special Disability

Age Requirement: Under age 55

Service Requirement: 5 Years of Creditable Service

Other Requirement: Received heart transplant

Amount: 50% of Final Compensation

Section 4: Actuarial Valuation Basis

Ordinary Pre-Retirement Death Benefits (active members or inactive vested members who elected a deferred pension during deferral period)

Non-Contributory Group Life Insurance Benefit: Lump sum of 350% of Compensation

Pension Amount: 50% of Final Compensation payable to surviving spouse or dependent children in equal shares. If no surviving spouse or dependent children, 25% payable to a dependent parent (or 40% payable to two dependent parents). If no surviving spouse, dependent children, or dependent parents, refund of aggregate contributions. Inactive vested participants who die during the deferral period for a deferred pension are only entitled to a refund of aggregate contributions.

Accidental Pre-Retirement Death Benefits (active member who dies in or from performance of duties)

Non-Contributory Group Life Insurance Benefit: Lump sum of 350% of Compensation

Pension Amount: The greater of \$50,000 or 70% of Compensation payable to surviving spouse. If no surviving spouse, 70% of Compensation payable to dependent children in equal shares. If no surviving spouse or dependent children, 25% payable to a dependent parent (or 40% payable to two dependent parents). If no surviving spouse, dependent children, or dependent parents, refund of aggregate contributions

Post-Retirement Death Benefits:

Non-Contributory Group Life Insurance Benefit: Lump sum of 50% of Compensation except for disabled retirees who die before age 55 in which case a lump sum of 350% of Compensation

Pension Amount: The greater of \$4,500 per year or 50% of Final Compensation plus 15% of Final Compensation for one dependent child (or plus 25% of Final Compensation for two dependent children) payable to surviving spouse. If no surviving spouse, 20% of Final Compensation payable to one dependent child (or 35% for two children or 50% for three children). Previously granted COLAs also apply.

Changes in plan provisions

There have been no changes in plan provisions since the last valuation.

Section 4: Actuarial Valuation Basis

Exhibit III: Contribution rates

Member contribution rate

10% of base salary

Employer contribution rate

Statutory pension contribution as determined in Section 2 of this report

Section 4: Actuarial Valuation Basis

Exhibit IV: Legislation History

Early Retirement Incentive Program

Chapter 59, P.L. 1999, Chapter 126, P.L. 2000 and Chapter 130, P.L. 2003 provided additional retirement benefits to certain employees of Local employers. These enhanced benefits are funded by the Local employer that elects to participate based on an amortization period elected by that Local employer so long as it is in accordance with New Jersey Statute.

Chapter 59, P.L. 1999 allowed municipalities, counties and other local units of government to offer incentive programs for retirement or termination for employees affected by consolidation agreements. Consolidation agreements are the result of these municipalities, counties and other local units of government who merge together.

County ERI Section 44 of Chapter 126, P.L. 2000 allowed local early retirement or termination incentive programs to certain employees of county governing bodies.

Chapter 130, P.L. 2003 extended the Early Retirement Incentive Program offered by the State under Chapter 23, P.L. 2002 to members of Local employer locations.

Section 5 lists all applicable locations and summarizes the contribution requirements under Chapter 59, Chapter 126 and Chapter 130.

Chapter 109, P.L. 1979

Chapter 109, P.L. 1979: For members who retire with 25 years of service the special retirement benefit increased from 50% to 60% of average final compensation. The State is liable for funding the cost of the increase in the normal contribution through an additional State contribution of 1.1% of covered salary in accordance with Chapter 109.

Chapter 204, P.L. 1989

Chapter 204 extended membership in PFRS to certain members who were previously excluded on the basis of their job. The unfunded actuarial accrued liability associated with this legislation must be funded by the Employers of these employees.

This valuation reflects the additional actuarial liability for three State locations and fifteen Municipality and Local Group locations who have members participating in the System under the provisions of this legislation. Section 2 lists all applicable locations and the required contributions.

Section 4: Actuarial Valuation Basis

Chapter 511, P.L. 1991

Chapter 511 provided the following additional benefits:

- The benefit payable to the surviving spouse of a retiree was increase from 35% to 50% of the retiree's average final compensation.
- The minimum annual spouse's benefit increased from \$1,600 to \$4,500 for benefits granted prior to January 14, 1992.

In accordance with Chapter 511 the normal cost and actuarial liability contribution attributable to this chapter are required to be separately determined. The actuarial liability contribution was eliminated with Chapter 115 P.L. 1997. However, because the required State contributions was not fully appropriated for fiscal years 2004 through 2021 the remaining statutory contributions not appropriated made are reflected as an unfunded actuarial liability attributable to Chapter 511.

Chapter 247, P.L. 1993 and Chapter 201, P.L. 2001

Chapter 247 requires the State to fund the difference in the normal cost contribution between PFRS and PERS for select members who transferred into PFRS on January 1, 1992 or later.

Chapter 201, P.L. 2001 Although the increase in liability as a result of Chapter 247 was paid for by market investment gains, because the State paid less than the full statutory pension contribution for fiscal years 2001 through 2004, the unpaid liability as a result of Chapter 247 is added to future State statutory pension contributions.

Chapter 428, P.L. 1999

Chapter 428, P.L. 1999 provided for the following enhanced benefits.

- Compensation for purposes of determining member benefits for service retirements was revised from 3-year average to final compensation.
- Service retirement was enhanced to include a benefit of 3% of final compensation per year of service greater than 20 years if the member retires with less than 25 years of service.
- For members as of the date of enactment who retire with 20 years of service and for all other members at age 55 with 20 years of service a Service retirement benefit of 50% of final compensation was added.
- The service requirement for ordinary disability retirement was decreased from 5 years to 4 years.
- Added the special involuntary disability benefit
- The preretirement death benefit was revised from a refund of contributions to an annuity payable to the spouse of 50% of final compensation.

Section 4: Actuarial Valuation Basis

Chapter 8, P.L. 2000 requires the State to fund the cost of the enhanced benefits if assets are insufficient to fund additional normal cost and actuarial liability costs as a result of Chapter 428, P.L. 1999. For the current valuation, valuation assets were not sufficient to fund the costs attributable to Chapter 428. In addition, because the State paid less than the full statutory pension contribution for fiscal years 2001 through 2004, the remaining required contributions which were not paid have been added to future State contributions.

Chapter 86, P.L. 2001 revised the active death benefits provided to a beneficiary of a member who died in active duty on or after January 1, 1998 and before January 18, 2000. The eligible beneficiary was required to apply for the increased benefits within 90 days of enactment and return the member's aggregate contributions to the System. The State is required to fund these costs.

Chapter 318, P.L. 2001 amended the active death benefits provided to a beneficiary of a member with 10 or more years of service who died in active service between June 1, 1995 and January 1, 1998 and whose beneficiary had, on May 1, 2001, an appeal of a denial of a benefit related to death in the line of duty pending before the Board of Trustees the benefits provided to that beneficiary were revised. The State is required to fund these costs.

Chapter 19, P.L. 2009

Chapter 19 reduced for certain Local employers the normal and actuarial liability contributions to 50% of the amount determined for fiscal year 2009. The unpaid 50% is paid by that Local employer over a period of 15 years beginning with the fiscal year ended June 20, 2012. A Local employer could opt to pay 100% of the fiscal year 2009 contribution. Those Local employers who paid the full fiscal year 2009 contribution were eligible to elect to pay 50% of their fiscal year 2010 contribution. The remaining 50% of unpaid contribution will be paid off with the same method as those who chose to pay 50% of their 2009 fiscal year contribution.

Section 5: Additional Required Exhibits

Exhibit 1: Early Retirement Incentive Program ERI 1 Contribution Schedules

Payment amounts calculated assuming a payment date 21 months after the valuation date. The present value as of July 1, 2024 excludes expected payments for 2025 fiscal year.

Location	Location Name	Fiscal Year 2026 Payment	Present Value as of 7/1/2024
22100	East Rutherford Borough	\$96,158	\$595,545
25500	Glen Ridge Borough	69,142	428,231
34600	Wallington Borough	45,205	279,979
38800	Phillipsburg Town	13,532	83,807
43400	Bound Brook Borough	40,181	248,845
54400	Linwood City	63,001	390,205
57100	Mine Hill Township	21,964	136,036
61200	Raritan Township	66,213	410,087
	Total	\$415,396	\$2,572,735

Section 5: Additional Required Exhibits

Exhibit 2: Chapter 19, P.L. 2009 Deferral and Payment Schedules

Payment amounts calculated assuming a payment date 21 months after the valuation date. The present value as of July 1, 2024 excludes expected payments for 2025 fiscal year.

Location	Location Name	Fiscal Year 2026 Payment	Present Value as of 7/1/2024
20300	Bayonne City	\$620,249	\$550,991
20400	Salem City	24,480	21,747
20600	Plainfield City	354,742	315,131
21001	Elizabeth City	495,546	440,212
21002	Elizabeth City	354,732	315,122
21101	Newark City	1,851,216	1,644,506
21102	Newark City	903,900	802,969
21202	Camden City	307,810	273,440
21300	North Plainfield Borough	110,553	98,208
21600	Somerville Borough	43,751	38,865
21800	Roselle Borough	142,372	126,474
22000	Freehold Borough	52,804	46,908
22400	Union City	301,137	267,512
22501	Passaic City	268,661	238,662
22502	Passaic City	178,255	158,351
22800	Metuchen Borough	38,715	34,392
23000	West New York Town	174,808	155,288
23200	Oradell Borough	34,697	30,822
23301	Hoboken City	218,657	194,241
23302	Hoboken City	210,310	186,826
23400	Audubon Borough	25,302	22,476
23800	East Orange City	545,178	484,302
23900	Maplewood Township	157,451	139,870
24100	Hightstown Borough	19,896	17,675
24200	West Milford Township	79,695	70,796

Section 5: Additional Required Exhibits

Location	Location Name	Fiscal Year 2026 Payment	Present Value as of 7/1/2024
24400	Saddle Brook Township	67,073	59,583
24500	Perth Amboy City	271,537	241,217
24600	Secaucus Town	103,520	91,961
24800	Lyndhurst Township	89,473	79,482
24900	Orange City	250,589	222,608
25500	Glen Ridge Borough	36,953	32,827
25600	Guttenberg Town	30,509	27,103
25801	Collingswood Borough	43,577	38,711
25802	Collingswood Borough	18,676	16,590
26100	Dunellen Borough	18,668	16,583
26600	Fairview Borough	53,172	47,234
26700	Keansburg Borough	44,436	39,475
27300	New Milford Borough	57,449	51,034
27400	Paramus Borough	185,849	165,097
27600	South Amboy City	37,605	33,406
27700	Weehawken Township	91,340	81,141
28000	Hackensack City	385,874	342,787
28500	Penns Grove Borough	18,650	16,567
28600	Matawan Borough	33,447	29,712
28700	Cedar Grove Township	50,745	45,079
28900	Bogota Borough	21,571	19,163
29100	Irvington Township	448,620	398,526
29200	Cinnaminson Township	64,137	56,975
29500	Little Ferry Borough	28,759	25,548
29700	Garwood Borough	23,167	20,581
30701	Paterson City	485,667	431,437
30702	Paterson City	384,327	341,412
30801	Atlantic City	476,210	423,036
30802	Atlantic City	352,991	313,576
31100	Fanwood Borough	28,200	25,052
31300	East Hanover Township	61,810	54,908

Section 5: Additional Required Exhibits

Location	Location Name	Fiscal Year 2026 Payment	Present Value as of 7/1/2024
31600	Rutherford Borough	70,757	62,856
31800	Harrison Township	161,963	143,878
32200	Gloucester City	73,087	64,926
32600	Union Township	355,431	315,743
32700	Bloomfield Township	334,688	297,316
32900	Morristown Town	124,492	110,591
33200	Asbury Park City	186,368	165,558
33401	Trenton City	472,610	419,837
33402	Trenton City	352,905	313,499
33800	Lakewood Township	191,968	170,532
34100	Rahway City	206,303	183,267
34200	Verona Township	48,890	43,431
34301	Hillside Township	109,718	97,467
34302	Hillside Township	75,903	67,427
34600	Wallington Borough	39,723	35,287
34700	East Newark Borough	6,973	6,195
34800	Clifton City	471,257	418,636
34900	Wildwood City	79,538	70,657
35000	Palisades Park Borough	54,000	47,970
35100	Pleasantville City	160,478	142,559
35400	Belleville Township	286,557	254,560
35500	Dover Town	62,705	55,703
35600	South Orange Village	148,654	132,055
35800	Garfield City	107,935	95,882
35900	Linden City	391,704	347,965
36200	Bridgeton City	87,115	77,387
36400	Washington Borough	17,504	15,549
36700	Fairfield Township	58,430	51,906
36900	Middlesex Borough	46,760	41,539
37000	Middletown Township	167,753	149,022
37400	Maywood Borough	45,156	40,114

Section 5: Additional Required Exhibits

Location	Location Name	Fiscal Year 2026 Payment	Present Value as of 7/1/2024
38101	Jersey City	1,247,618	1,108,307
38102	Jersey City Fire Dept.	945,879	840,261
38500	Runnemede Borough	28,220	25,069
39500	Mountainside Borough	36,104	32,073
39900	Long Branch City	168,260	149,472
40400	Wanaque Borough	36,472	32,399
41000	Manville Borough	36,441	32,372
41400	Oceanport Borough	24,026	21,343
41500	Haworth Borough	19,389	17,224
41600	Little Falls Twp	32,639	28,995
41900	North Haledon Borough	25,994	23,092
42000	Haledon Borough	26,803	23,810
42500	Wharton Borough	30,637	27,216
43000	West Paterson Borough	39,103	34,737
43100	Ewing Township	141,412	125,622
43400	Bound Brook Borough	34,535	30,679
43500	Emerson Borough	34,126	30,315
43600	Roseland Borough	41,255	36,648
43700	Norwood Borough	23,539	20,910
43800	Prospect Park Borough	22,823	20,275
44100	Englewood Cliffs Borough	59,654	52,993
44800	Englishtown Borough	5,490	4,877
44900	Ringwood Borough	33,932	30,143
46300	Borough of Lake Como	13,888	12,337
46400	Aberdeen Township	46,902	41,665
46600	West Long Branch Borough	26,836	23,839
46700	Pt Pleasant Beach Borough	39,167	34,793
47300	Brooklawn Borough	6,095	5,414
47800	Hopatcong Borough	40,451	35,935
47900	West Deptford Township	54,450	48,370
48200	South Bound Brook Borough	19,670	17,473

Section 5: Additional Required Exhibits

Location	Location Name	Fiscal Year 2026 Payment	Present Value as of 7/1/2024
48600	Gloucester Township	151,809	134,858
48800	Upper Saddle River Boro	33,092	29,397
49100	Willingboro Township	114,433	101,655
50000	Brielle Borough	25,285	22,461
50700	South Brunswick Township	126,381	112,269
51100	Jefferson Township	58,850	52,279
51600	Wall Township	128,123	113,817
52800	Berlin Borough	23,627	20,988
53500	Winslow Township	109,958	97,680
53900	Berkeley Township Municipal Bld	122,954	109,224
54100	Mansfield Township	17,190	15,271
54300	Lebanon Township	11,615	10,318
54700	Seaside Heights Borough	32,149	28,560
54800	Manchester Township	89,489	79,496
55100	Pine Hill Borough	26,635	23,661
55300	Lindenwold Borough	56,469	50,163
55700	Bloomington Borough	25,012	22,219
56000	Howell Township	156,555	139,074
56200	Plainsboro Township	58,243	51,739
56300	Marlboro Township	131,409	116,736
56500	Franklin Township	34,677	30,805
58200	Egg Harbor Township	121,834	108,229
58400	Holmdel Township	71,287	63,327
58500	Milltown Borough	22,644	20,116
58900	Buena Borough	7,041	6,255
59000	Eastampton Township	22,443	19,937
59800	Chesilhurst Borough	8,366	7,432
59900	Egg Harbor City	14,785	13,135
60000	Harrison Township	17,000	15,101
60100	Woodbury Heights Borough	7,762	6,895
60600	Waterfront Comm of NY Harbor	1,917	1,703

Section 5: Additional Required Exhibits

Location	Location Name	Fiscal Year 2026 Payment	Present Value as of 7/1/2024
61000	Somerdale Borough	14,755	13,107
61200	Raritan Township	55,106	48,953
62300	NJ Transit Corporation	266,022	236,318
63100	Allentown Borough	7,081	6,291
63300	Barneget Township	39,133	34,763
67700	Lambertville City	9,932	8,823
68000	Lawnside Borough	7,811	6,939
68800	Mount Arlington Borough	13,769	12,232
69000	National Park Borough	4,453	3,956
70404	Camden County Regional	541,031	480,619
71600	Passaic County	896,584	796,470
71603	Passaic County	128,209	113,893
72000	Union County	418,517	371,784
72001	Union County	68,869	61,179
72003	Union County	322,387	286,389
72700	South Toms River Borough	7,407	6,580
73500	Union Beach Borough	12,578	11,174
74000	West Amwell Township	3,375	2,998
74100	Winfield Township	5,981	5,313
74400	Hamilton Twp Fire Comm Dist	10,308	9,157
75000	Lakewood Twp Fire District #1	5,038	4,475
75900	Gloucester Twp Fire District #2	3,424	3,042
79000	North Hudson Reg Fire & Rescue	519,448	461,445
Total		\$ 25,308,907	\$ 22,482,872

Note: Figures may not add due to rounding

Appendix A: Definition of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Term	Definition
Actuarial accrued liability for actives	The equivalent of the accumulated normal costs allocated to the years before the valuation date.
Actuarial accrued liability for retirees and beneficiaries	Actuarial Present Value of lifetime benefits to existing retirees and beneficiaries. This sum takes account of life expectancies appropriate to the ages of the annuitants and the interest that the sum is expected to earn before it is entirely paid out in benefits.
Actuarial cost method	A procedure allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability that are used to determine the actuarially determined contribution.
Actuarial gain or loss	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., assets earn more than projected, salary increases are less than assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results yield actuarial liabilities that are larger than projected.
Actuarially equivalent	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial present value	<p>The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. Each such amount or series of amounts is:</p> <p>Adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.)</p> <p>Multiplied by the probability of the occurrence of an event (such as survival, death, disability, withdrawal, etc.) on which the payment is conditioned, and</p> <p>Discounted according to an assumed rate (or rates) of return to reflect the time value of money.</p>

Appendix A: Definition of Pension Terms

Term	Definition
Actuarial present value of future benefits	The Actuarial Present Value of benefit amounts expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age, anticipated future compensation, and future service credits. The Actuarial Present Value of Future Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund of member contributions or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
Actuarial valuation	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan, as well as Actuarially Determined Contributions.
Actuarial value of assets	The value of the System's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly plans use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the Actuarially Determined Contribution.
Actuarially determined	Values that have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the System.
Actuarially determined contribution	The employer's contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under the System's funding policy. The ADC consists of the Employer Normal Cost and the Amortization Payment.
Amortization method	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the Unfunded Actuarial Accrued Liability. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the Unfunded Actuarial Accrued Liability. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.
Amortization payment	The portion of the pension plan contribution, or ADC, that is intended to pay off the Unfunded Actuarial Accrued Liability.
Assumptions or actuarial assumptions	<p>The estimates upon which the cost of the System is calculated, including:</p> <p>Investment return — the rate of investment yield that the System will earn over the long-term future;</p> <p>Mortality rates — the rate or probability of death at a given age for employees and retirees;</p> <p>Retirement rates — the rate or probability of retirement at a given age or service;</p> <p>Disability rates — the rate or probability of disability retirement at a given age;</p> <p>Withdrawal rates — the rate or probability at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement;</p> <p>Salary increase rates — the rates of salary increase due to inflation, real wage growth and merit and promotion increases.</p>

Appendix A: Definition of Pension Terms

Term	Definition
Closed amortization period	A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 20 years, it is 19 years at the end of one year, 18 years at the end of two years, etc. See Open Amortization Period.
Decrements	Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or withdrawal.
Defined benefit plan	A retirement plan in which benefits are defined by a formula based on the member's compensation, age and/or years of service.
Defined contribution plan	A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.
Employer normal cost	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
Experience study	A periodic review and analysis of the actual experience of the System that may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified based on recommendations from the Actuary.
Funded ratio	The ratio of the Actuarial Value of Assets (AVA) to the Actuarial Accrued Liability (AAL). Plans sometimes also calculate a market funded ratio, using the Market Value of Assets (MVA), rather than the AVA.
GASB 67 and GASB 68	Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.
Investment return	The rate of earnings of the System from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.
Net Pension Liability (NPL)	The Net Pension Liability is equal to the Total Pension Liability minus the Plan Fiduciary Net Position.
Normal cost	The portion of the Actuarial Present Value of Future Benefits and expenses, if applicable, allocated to a valuation year by the Actuarial Cost Method. Any payment with respect to an Unfunded Actuarial Accrued Liability is not part of the Normal Cost (see Amortization Payment). For pension plan benefits that are provided in part by employee contributions, Normal Cost refers to the total of member contributions and employer Normal Cost unless otherwise specifically stated.
Open amortization period	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. If the initial period is set as 30 years, the same 30-year period is used in each future year in determining the Amortization Period.

Appendix A: Definition of Pension Terms

Term	Definition
Plan Fiduciary Net Position	Market value of assets.
Service costs	The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.
Total Pension Liability (TPL)	The actuarial accrued liability under the entry age normal cost method and based on the blended discount rate as described in GASB 67 and 68.
Unfunded actuarial accrued liability	The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative, in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus or an Overfunded Actuarial Accrued Liability.
Valuation date or actuarial valuation date	The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Benefits is determined. The expected benefits to be paid in the future are discounted to this date.

10096468v3/16643.001