

Teachers' Retirement System of the State of Illinois

Summary Review of Preliminary June 30, 2025 Actuarial Valuation

October 24, 2025 / Matthew Strom, Senior Vice President and Actuary / Daniel Siblik, Vice President and Actuary

This document has been prepared by Segal for the benefit of the Board of Trustees of the Teachers' Retirement System of the State of Illinois and is not complete without the presentation provided at the October 24, 2025, meeting. The preliminary actuarial valuation report has information on the plan provisions, data, methods and assumptions used in the valuation. Use of the information in this presentation is subject to the caveats described in that document. The measurements in this presentation may not be appropriate for purposes other than those described in the actuarial valuation report. The actuarial calculations were completed under the supervision of Matt Strom, FSA, MAAA, EA and Tanya Dybal, FSA, MAAA, EA.

| Agenda

Overview of the Valuation Process

Summary of Valuation Highlights

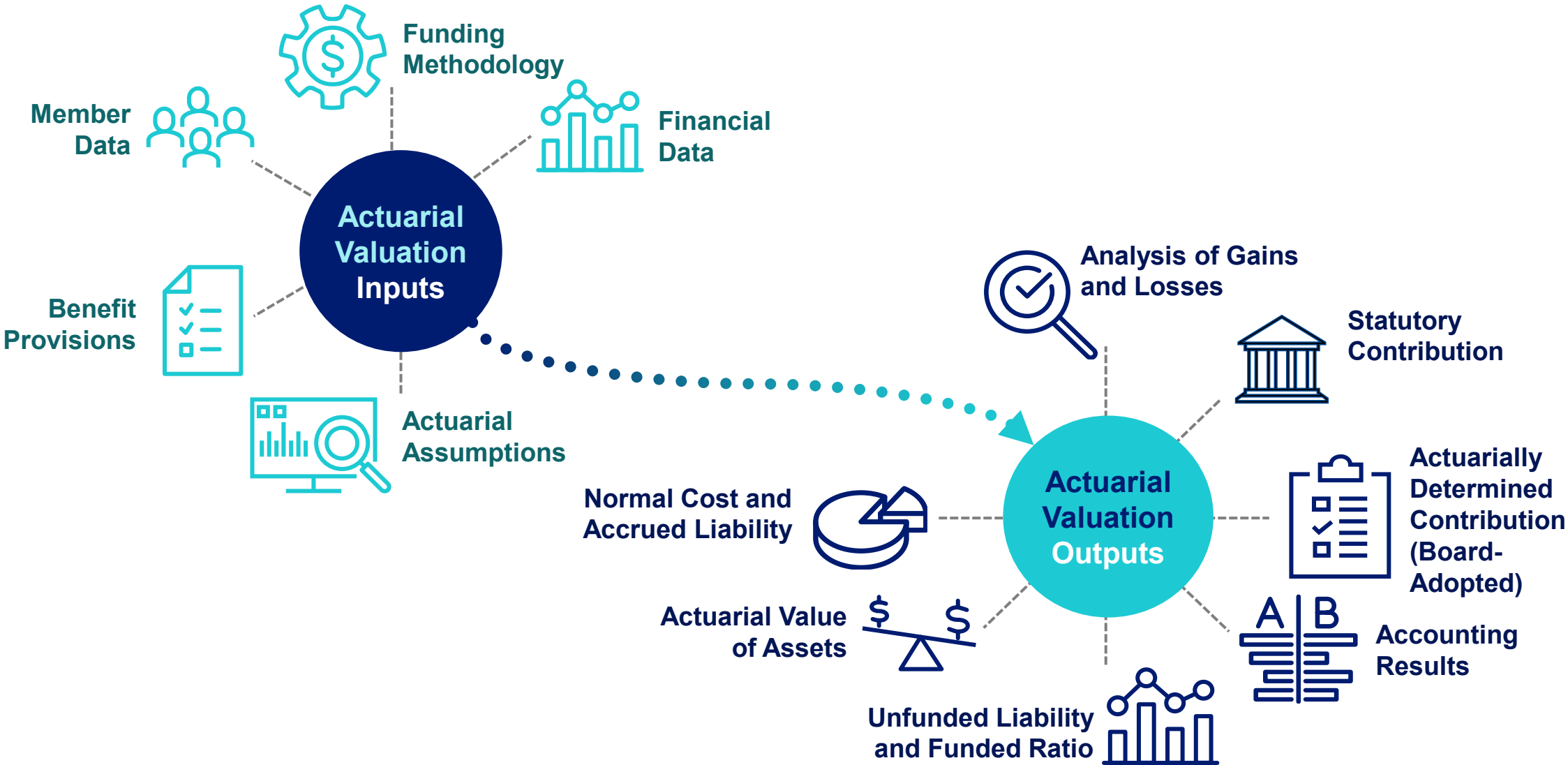
Membership and Demographics

Valuation Results

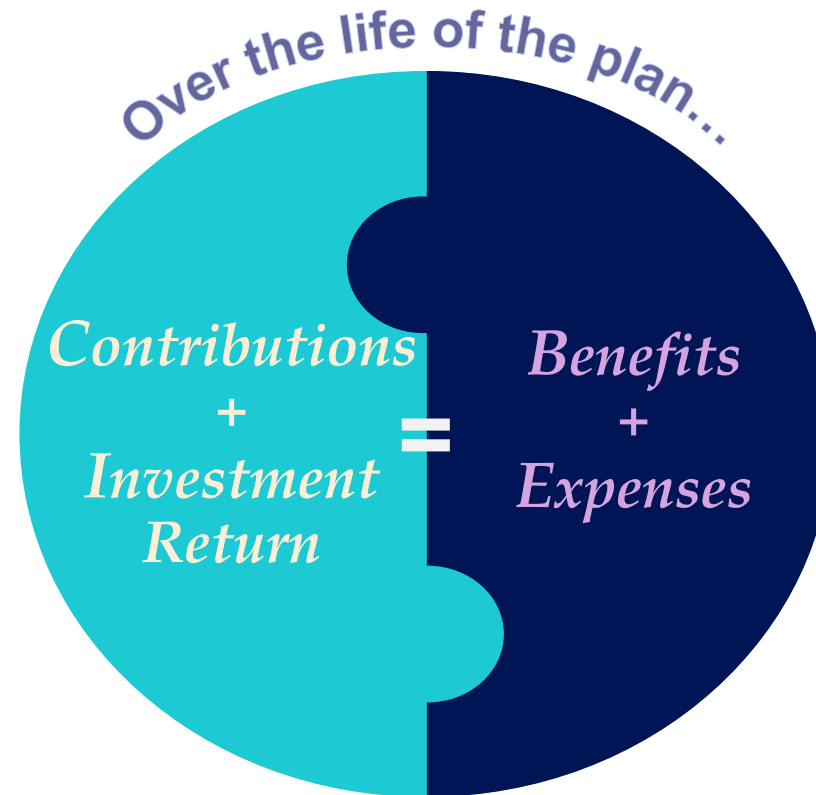
Sensitivity Projections

Appendix

Valuation Components



Actuarial Balance



Or: *Contributions* = *Benefits + Expenses* – *Investment Return*

Actuarial Assumptions

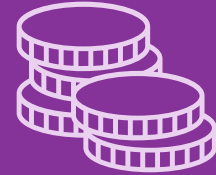
Demographic

- Retirement ages for active and deferred members
- Incidence of disability retirement
- Rates of withdrawal/turnover
- Mortality among actives and members in pay status



Economic

- Inflation: 2.50%
- Investment return: 7.00%
- Salary increases: 8.50% for new members to 4.00% for members with 20+ years of service
- Payroll growth: Based on open group projection with level active population and new entrant profile based on recently hired employees



Economic assumptions are reviewed annually, and demographic assumptions are reviewed every three years, most recently with the actuarial experience review for the period July 1, 2020, to June 30, 2023.

Actuarial Methods



Asset Valuation Details

- Investment gains and losses recognized over several years
- TRS recognizes 20% of the difference in expected and actual returns in a given year in equal amounts over a 5-year period

Cost Method Components

- Allocation of liability to past and future service
- TRS uses the Projected Unit Credit cost method for the **Statutory Contribution**
Current year's cost based on value of benefit earned that year, using projected salary, resulting in back-loading of normal cost
- Entry Age Normal used for the **Board-Adopted Actuarial Funding Policy**
Commonly used method that allocates cost of member's benefit over expected career as a level % of salary

Amortization Breakdown

- **Statutory Contribution**
No explicit method to amortize the UAAL; the total contribution less the normal cost is the payment toward the UAAL
- **Board-Adopted Actuarial Funding Policy**
Layered amortization with new UAAL amortized over 20 years
Amortization payments increase at the rate of expected future State revenue growth, assumed to be 2% per year

Actuarially Determined vs. Statutory Contribution

Actuarial Determined Contribution (Board-Adopted Actuarial Funding Policy)

Equal to the normal cost plus amortization of the unfunded actuarial accrued liability (UAAL)

Benefits:

- Entry age normal cost method
- 100% funding target
- Reflects appropriate tier of benefits of those currently in TRS

Statutory Contribution under Illinois Funding Policy

Equal to the amount determined as a level percentage of payroll necessary to achieve a projected funded percentage of 90% by 2045

Shortcomings:

- Projected unit credit cost method
- 90% funding target
- Reflects effect of Tier 2 provisions for members who have not yet been hired

Summary of Valuation Highlights

State Contribution

- Required State contribution for fiscal 2027 is **\$6.59 billion**, a 1.5% increase from the fiscal 2026 contribution of \$6.50 billion
- The fiscal 2027 State contribution under the **Board-Adopted Actuarial Funding Policy** is **\$11.18 billion**
 - Statutory contribution is approximately 59% of the Board funding policy amount
 - The \$4.59 billion contribution shortfall increases future contribution requirements

Asset Experience

- Fair value of assets returned **9.74%*** for year the ending June 30, 2025
 - Gradual recognition of deferred gains and losses resulted in a **9.16% return on actuarial assets**, compared to 7.00% expected
 - Gain on actuarial value of assets is \$1.52 billion
 - Total deferred investment gain as of June 30, 2025, is \$1.21 billion

Non-Investment Experience

- Demographic, liability, and administrative expense experience resulted in a loss of \$0.31 billion, or 0.2% of actuarial accrued liability

* Based on Segal's calculation, which involves simplified mid-year cash flow timing

Summary of Valuation Highlights (continued)

Funded Percentage

- **Funded ratio** based on the actuarial value of assets increased from 45.8% in 2024 to **47.8%** in 2025

Unfunded Actuarial Accrued Liability (UAAL)

- The **actuarial accrued liability** increased from \$154.3 billion (as of June 30, 2024) to **\$159.1 billion** (as of June 30, 2025)
- The **actuarial value of assets** increased from \$70.7 billion (as of June 30, 2024) to **\$76.1 billion** (as of June 30, 2025)
- The **UAAL** decreased from \$83.6 billion to **\$83.1 billion**
 - \$0.5 billion decrease results from net experience gain (\$1.2 billion) offset by loss from Statutory contribution being inadequate to cover normal cost and interest on UAAL (\$0.7 billion)

Buyout Experience

- Based on the September 29, 2025, report provided by TRS staff, there have been approximately **\$1.23 billion** of **buyout payments** paid since the commencement of the AAI and IV buyout programs*
- Approximately \$1.25 billion and \$0.59 billion of liability has been settled as a result of the AAI and IV buyout experience, respectively
- The estimated State contribution for fiscal 2027 is approximately \$125 million lower because of the buyout programs**

* Total IV buyout information only available through FY2024 due to lag in reporting

** Based on hypothetical 2019 – 2025 valuation results as if the buyout programs were never enacted using reasonable estimation techniques

Membership

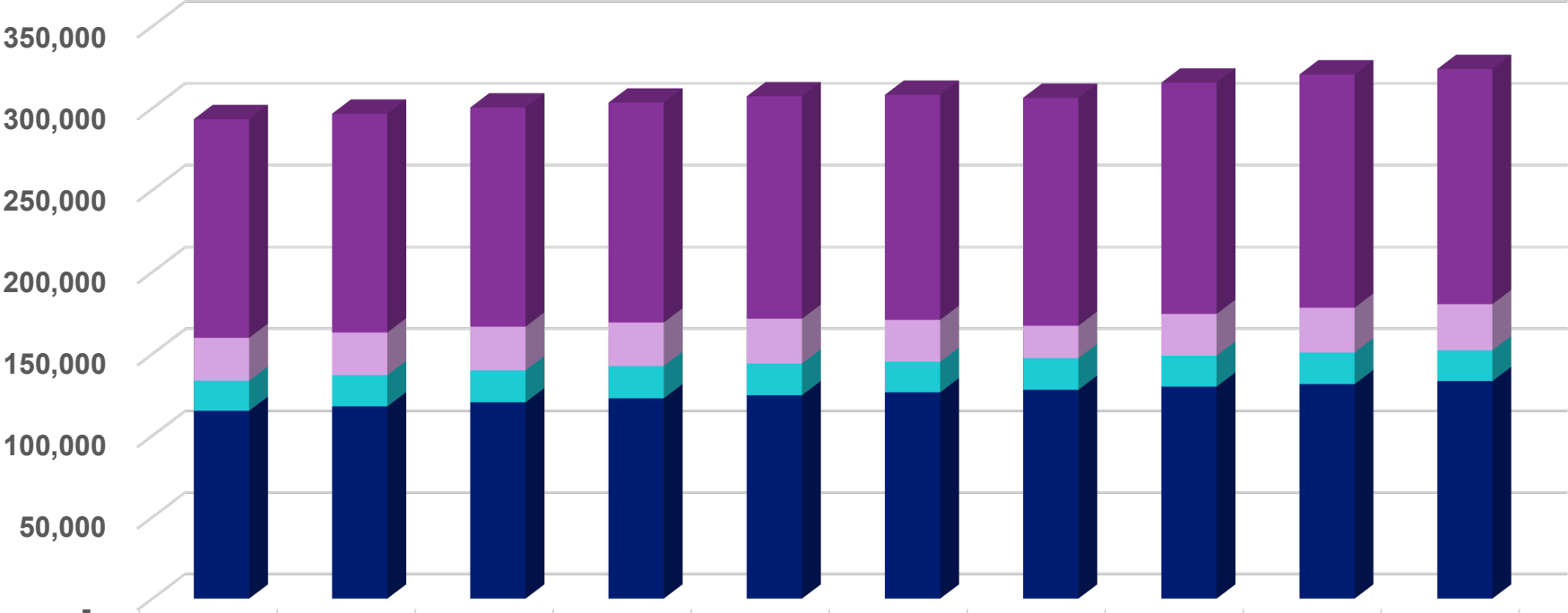
June 30 Valuation Date	2025	2024	Change
Total Actives			
<u>Tier 1</u>			
• Number	97,319	100,964	−3.6%
• Payroll (annualized)	\$8.716 bil	\$8.640 bil	+0.9%
• Average Age	49.0 years	48.4 years	+0.6 years
• Average Service	17.5 years	17.0 years	+0.5 years
<u>Tier 2</u>			
• Number	74,362	68,788	+8.1%
• Payroll (annualized)	\$3.782 bil	\$3.301 bil	+14.6%
• Average Age	35.9 years	35.4 years	+0.5 years
• Average Service	4.4 years	4.1 years	+0.3 years
Retirees and Beneficiaries			
• Number	133,431	131,568	+1.4%
• Total Annual Benefits	\$8.388 bil	\$8.062 bil	+4.0%
• Average Monthly Benefit	\$5,239	\$5,106	+2.6%

Member data used in the valuation is as of the prior valuation date.

Active and Retired Membership

Years shown in the graph on the right are the June 30 valuation dates and data used in the valuation is as of the prior valuation date.

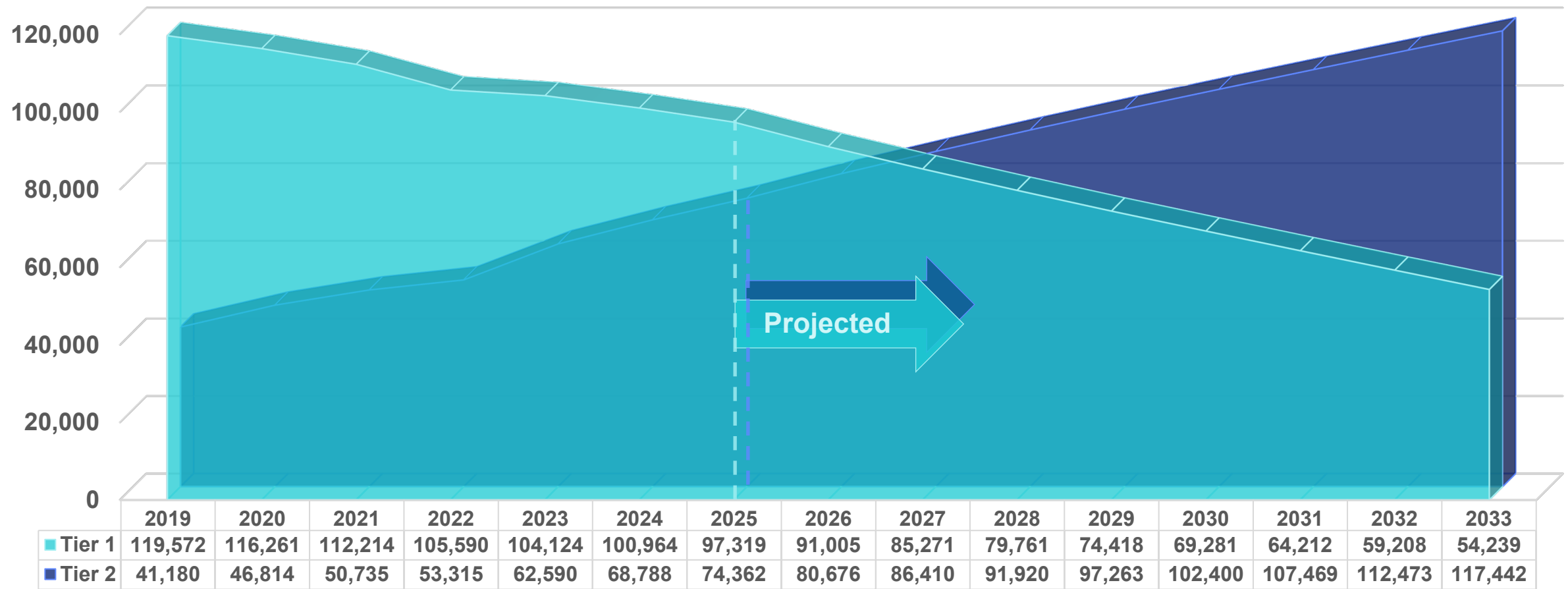
Excludes non-vested members only eligible for a refund of contributions.



	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Active Members (Full Time)	133,478	133,505	133,761	134,160	135,752	137,394	139,144	141,155	142,390	143,547
Active Members (Part Time)	26,206	26,080	26,664	26,592	27,323	25,555	19,761	25,559	27,362	28,134
Inactive Members with Deferred Benefits	18,362	19,038	19,531	19,726	19,363	18,632	19,308	18,808	19,265	18,799
Retirees and Beneficiaries	115,273	117,990	120,453	122,895	124,791	126,594	128,116	130,051	131,568	133,431

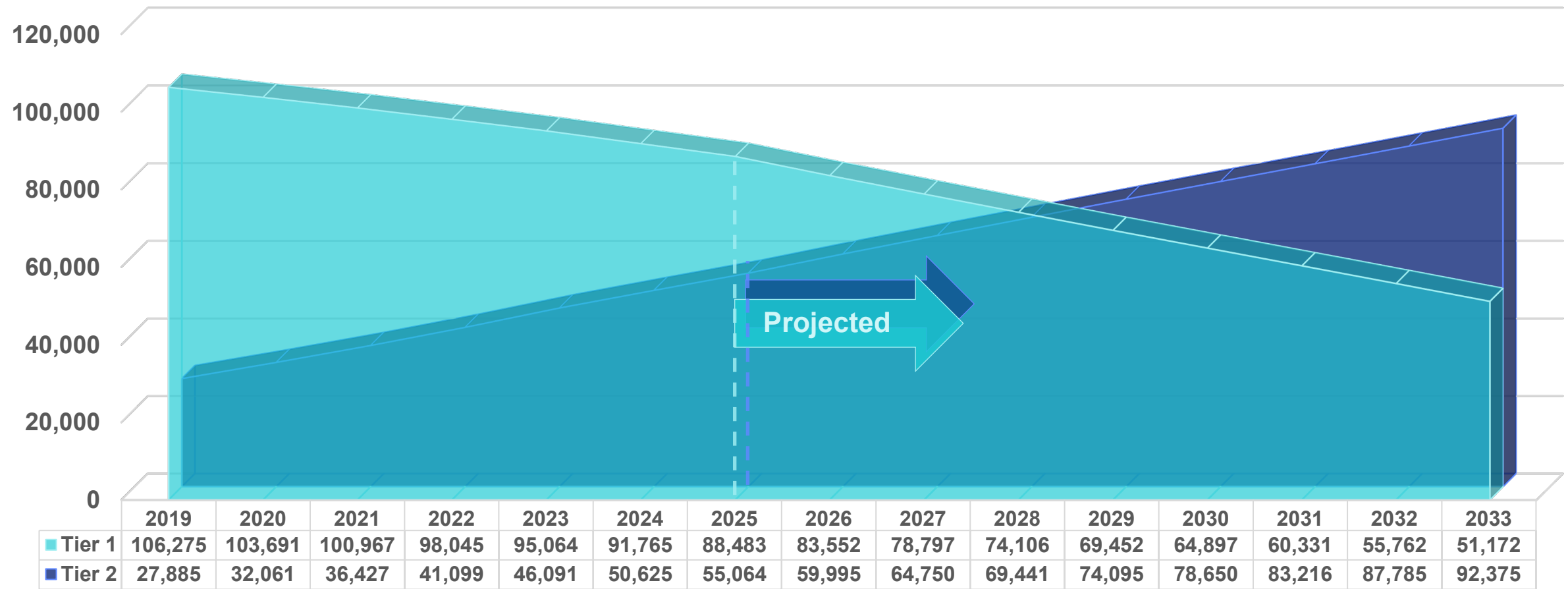
Full Time active membership has been steadily increasing since 2019 (1.1% average per year).
Retired membership has grown at a relatively consistent pace over the past ten years (1.3% average per year).

Projection of Active Membership by Tier



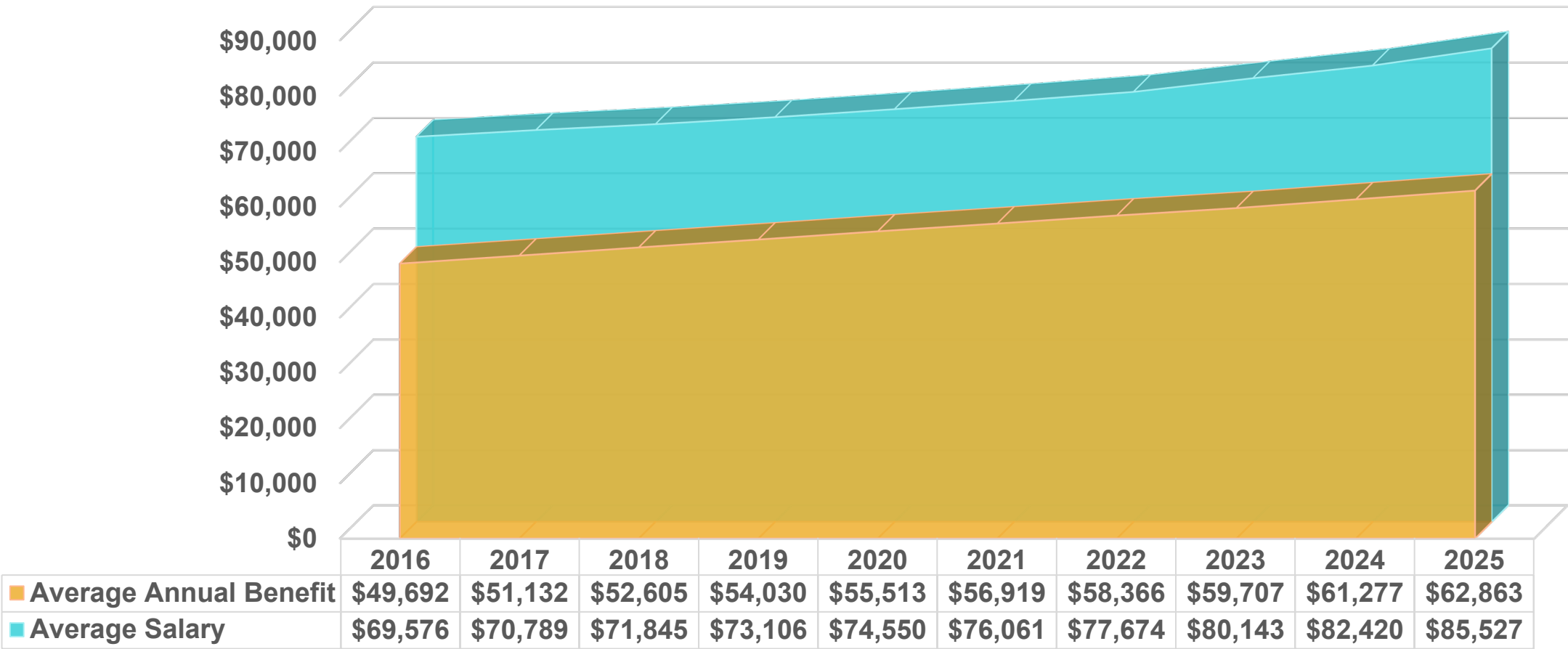
Based on the demographic assumptions and assuming a level total active headcount of 171,681, Tier 2 membership is projected to exceed Tier 1 membership in about two years.

Projection of Full-Time Active Membership by Tier



Based on the demographic assumptions and assuming a level full-time active headcount of 143,547, full-time Tier 2 membership is projected to exceed full-time Tier 1 membership in about four years.

Average Annual Benefit and Average Salary



The average annual salary for Full Time employees has increased by approximately 2.3% per year.
The average annual benefit for all benefit recipients has increased by approximately 2.6% per year.

Average salaries shown are for full-time / regular part-time employees only

Assets

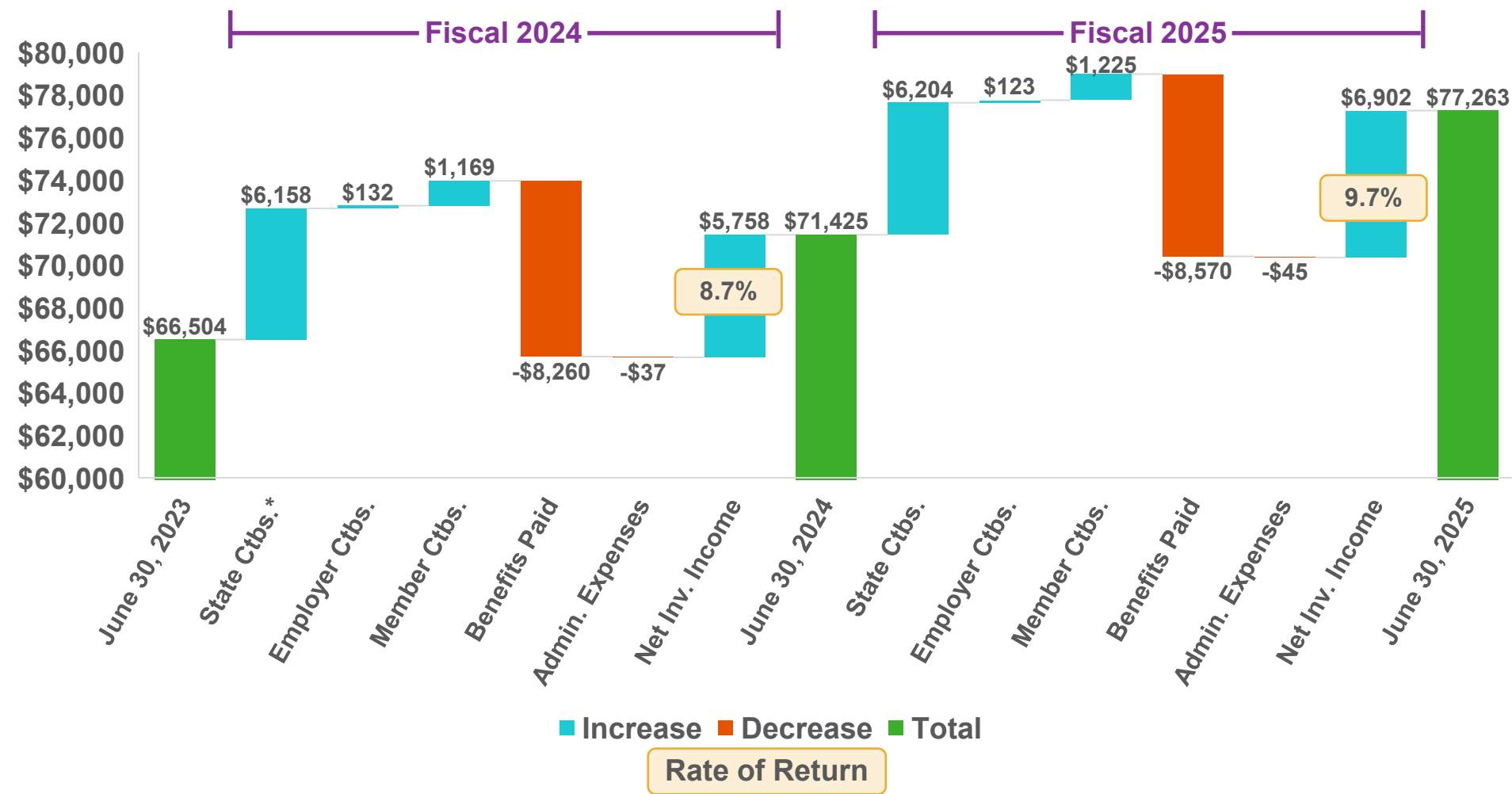
- The **fair value of assets** increased from \$71.4 billion (as of June 30, 2024) to **\$77.3 billion** (as of June 30, 2025)
 - Segal determined the investment return was 9.74%, net of investment expenses
- The **actuarial value of assets** – which smoothes unexpected investment gains and losses over five years – increased from \$70.7 billion (as of June 30, 2024) to **\$76.1 billion** (as of June 30, 2025)
 - Return of 9.16%, net of investment expenses
 - Actuarial value is 98.4% of fair value
 - There is a total of \$1.2 billion of deferred investment gains that will be recognized in future years
- Average annual returns are:

	Fair Value	Actuarial Value
5-year average	9.6%	8.2%
10-year average	7.3%	7.4%
15-year average	8.6%	7.2%
20-year average	6.9%	6.8%

As noted in our June 18, 2025, presentation, the current investment return assumption of 7.00% results in a confidence level greater than 50% of meeting or exceeding 7.00%.

Market Value of Assets (\$ in millions)

For Fiscal Years Ending June 30, 2024, and June 30, 2025



Asset returns on a market value basis have exceeded the assumed return for the two most recent fiscal years.

Total contributions have increased by 1.2% while benefits and refunds combined have increased 3.8%.

* Includes additional, one-time contributions of \$115,215,500 appropriated to TRS per Public Acts 102-0698 and 103-0006.
Note: numbers may not add due to rounding

Actuarial Value of Assets

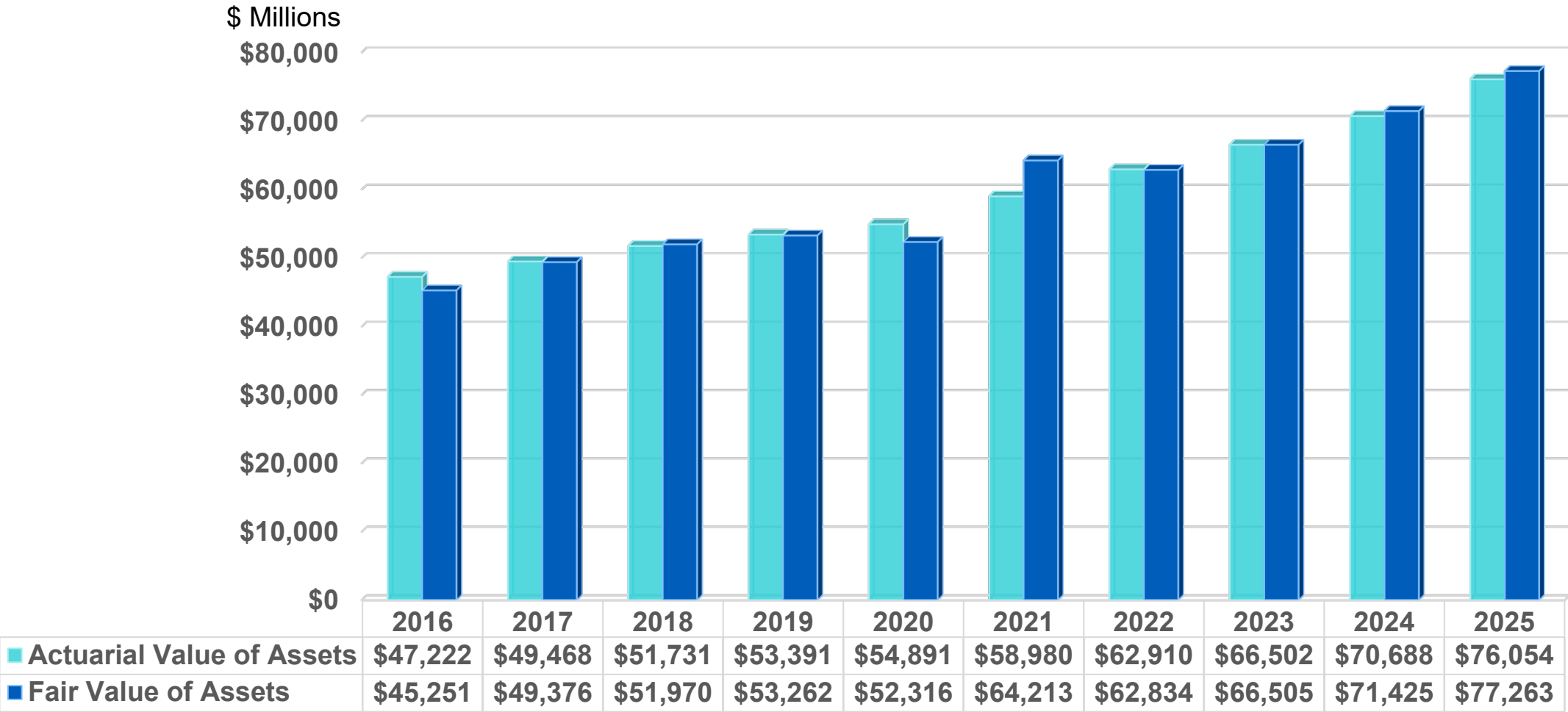
Actuarial Value of Pension Assets* (in \$ millions)

Fair Value of Pension Assets as of June 30, 2025			\$77,263
Gain or (Loss) on Assets	Original Amount	% Deferred	Deferred Amount
Year Ended June 30, 2025	\$1,940	80%	\$1,552
Year Ended June 30, 2024	1,132	60%	679
Year Ended June 30, 2023	55	40%	22
Year Ended June 30, 2022	(5,216)	20%	(1,043)
Year Ended June 30, 2021	9,424	0%	<u>0</u>
Total			\$1,210
Actuarial Value as of June 30, 2025			\$76,054
Actuarial Value as a Percent of Fair Value			98.4%
Rate of Return			9.2%

* Includes value of Pension Obligation Bonds (POB)

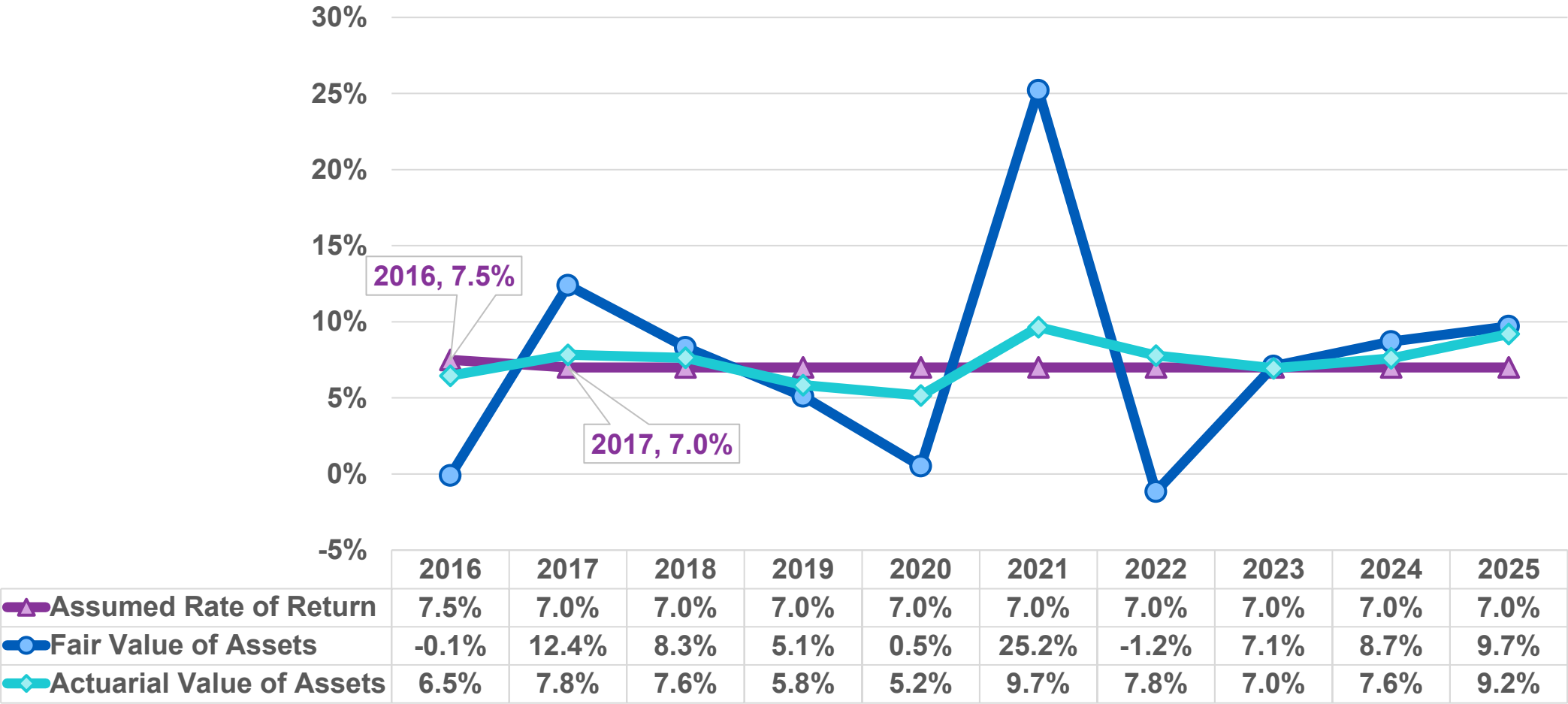
Note: Totals may not add exactly due to rounding

Fair and Actuarial Values of Assets



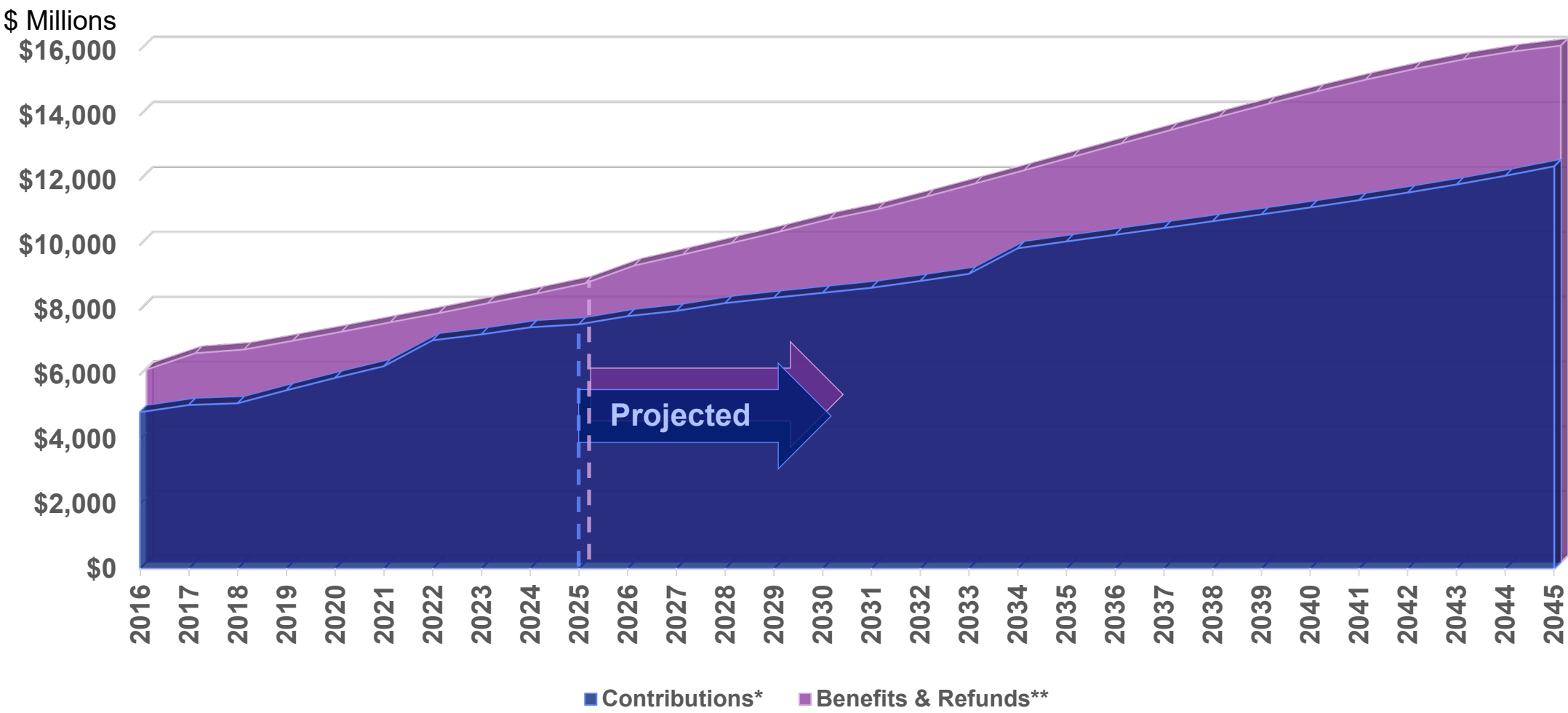
The actuarial value of assets smooths investment gains and losses over a five-year period, reducing volatility and resulting in more level and predictable plan costs from one year to the next.

Asset Returns



The goal of the actuarial asset valuation method is to stabilize the actuarial rate of return and produce more level pension plan costs.

Contributions vs Disbursements



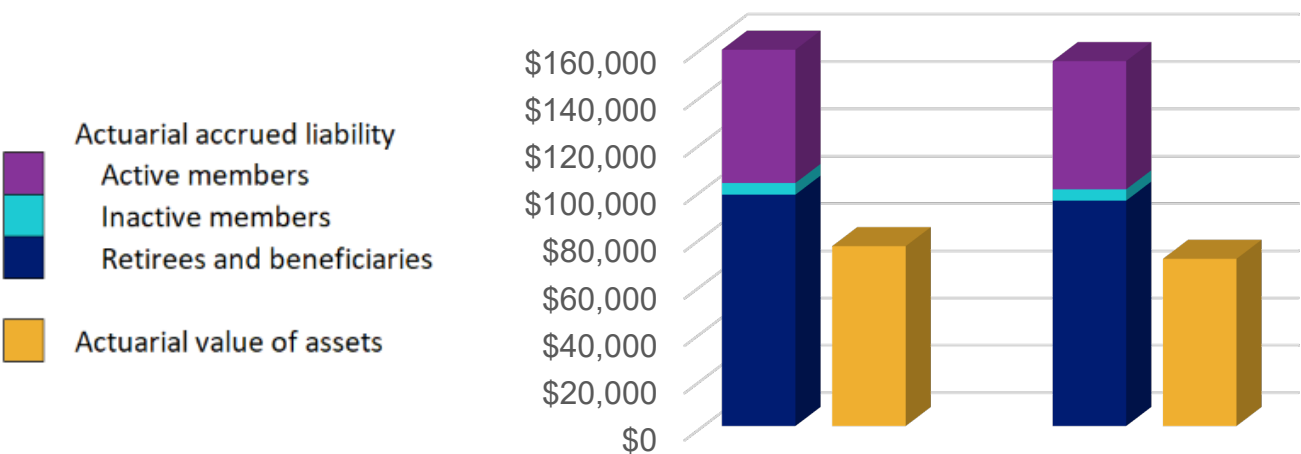
Total projected contributions and benefits & refunds from July 1, 2025 through June 30, 2045 are approximately \$200 billion and \$250 billion, respectively. Investment return is needed to make up the \$50 billion difference.

* Includes member, employer and state contributions
** Includes benefit payments, refunds and administrative expenses

Valuation Results

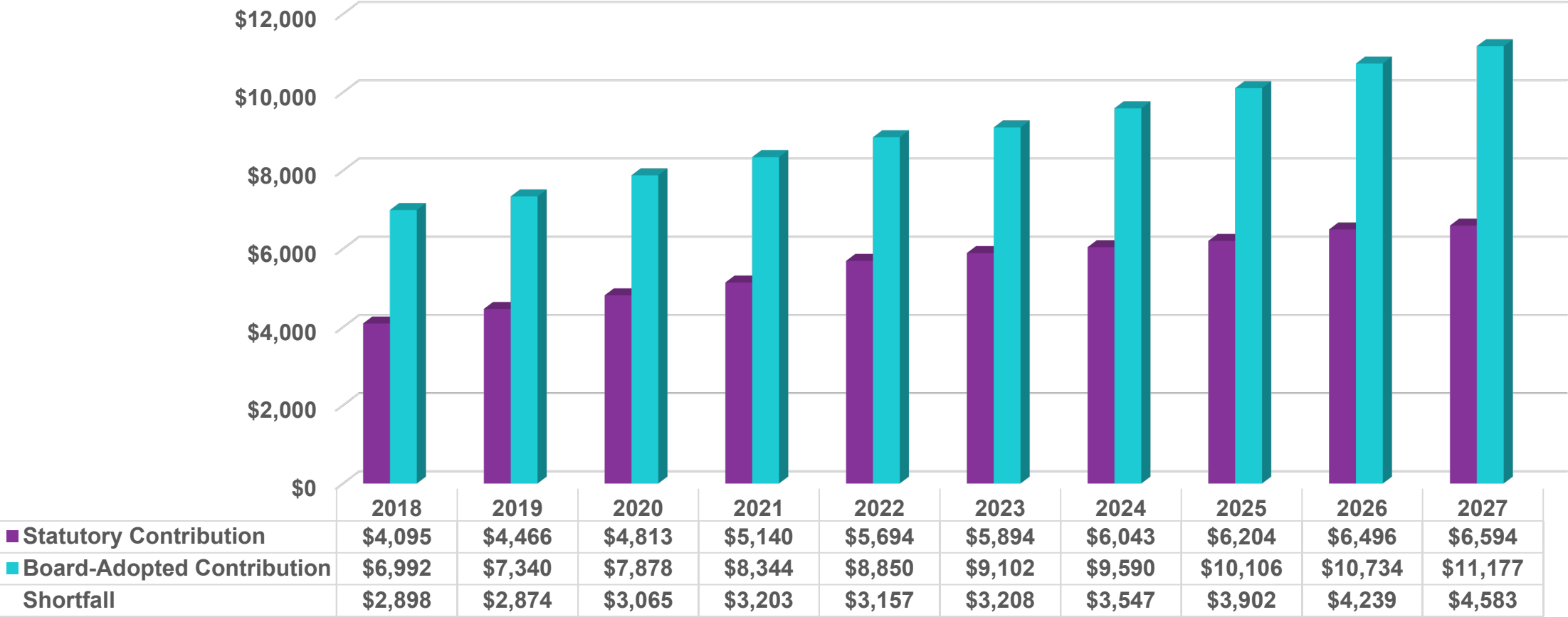
Comparison of current year to prior year (in \$ millions)

	June 30, 2025	June 30, 2024
Actuarial Accrued Liability:		
• Active Members	\$56,352	\$54,224
• Inactive Members	4,931	4,779
• Retirees and Beneficiaries	<u>97,841</u>	<u>95,322</u>
Total	\$159,124	\$154,325
Actuarial Assets	<u>76,054</u>	<u>70,688</u>
Unfunded Actuarial Accrued Liability	\$83,070	\$83,637
Funded Ratio	47.8%	45.8%



Valuation Results

Summary of State Contribution by Fiscal Year (in \$ millions)



The shortfall between the Statutory and Board-Adopted contributions has increased from \$2.9 billion for FY2018 to \$4.6 billion for FY2027. The Statutory as a percent of the Board-Adopted has kept relatively level (59%-65%).

Valuation Results

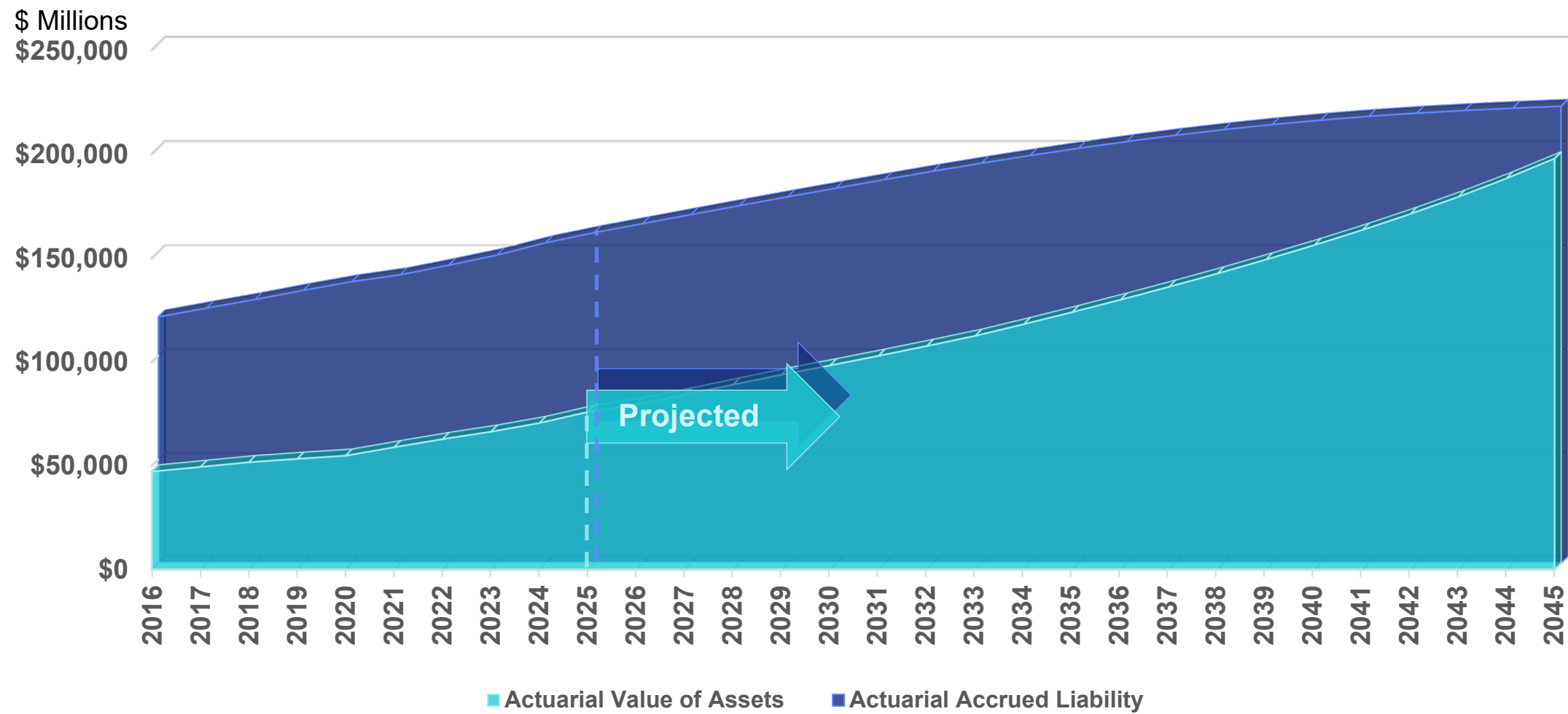
Reconciliation of State Statutory Funding Plan Contribution from Fiscal Year 2026 to 2027 (in \$ millions)

	Statutory Funding Contribution
FY 2026 State Contribution	\$6,496
Expected Increase	156
Investment Gain (FVA Basis)	(31)
All Other Net Actuarial Factors*	<u>(27)</u>
FY 2027 State Contribution	\$6,594

* The net impact of changes in active counts, projected payroll pattern, and new entrant profile

Note that results in the table above could be observed to be slightly different based upon the order that the factors are observed. For this purpose, we have performed this reconciliation in the order as shown above.

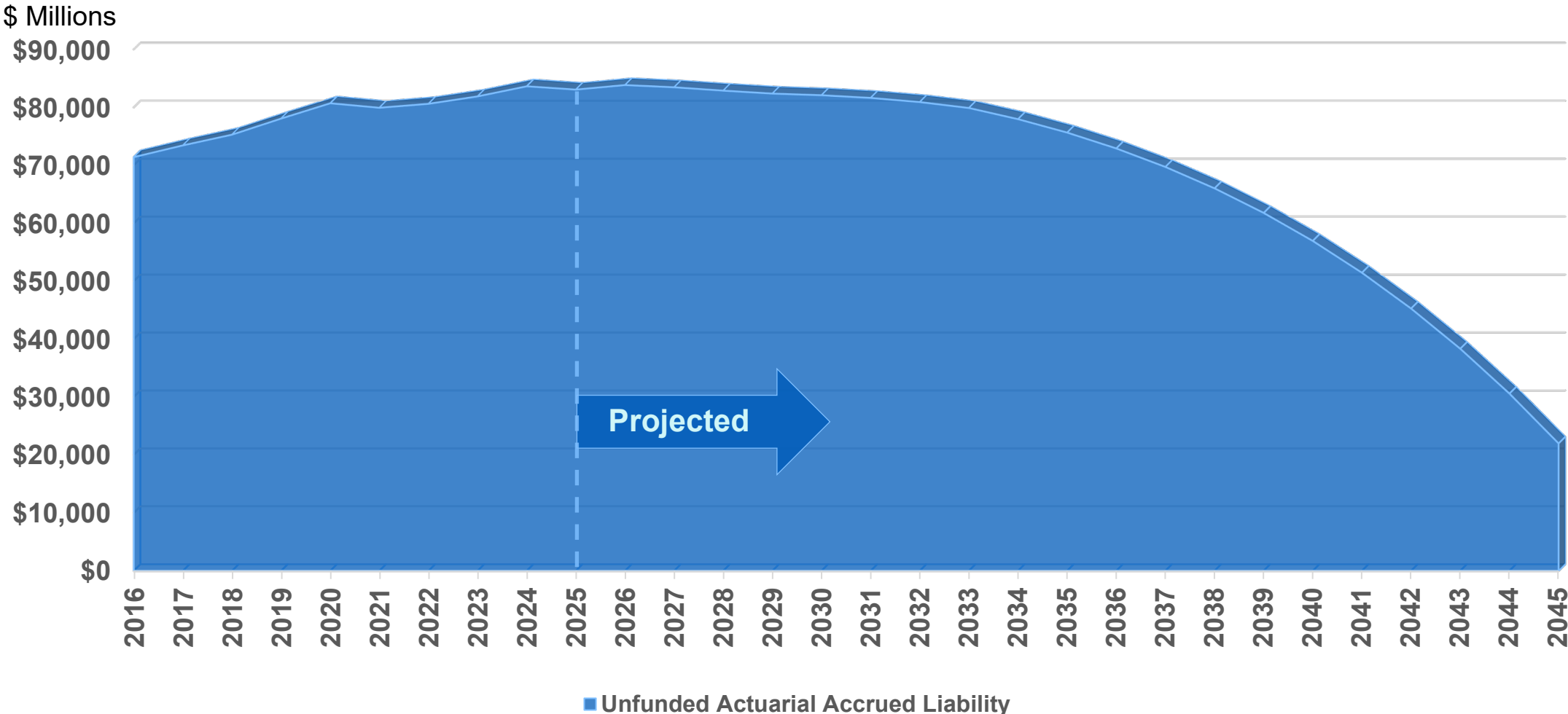
Assets and Liabilities



Based on current law, the required State contributions steadily increase through 2045 resulting in a faster growth of projected assets compared to projected liabilities.

Projected results are based on current assumptions used for the June 30, 2025, valuation, including a level active population.

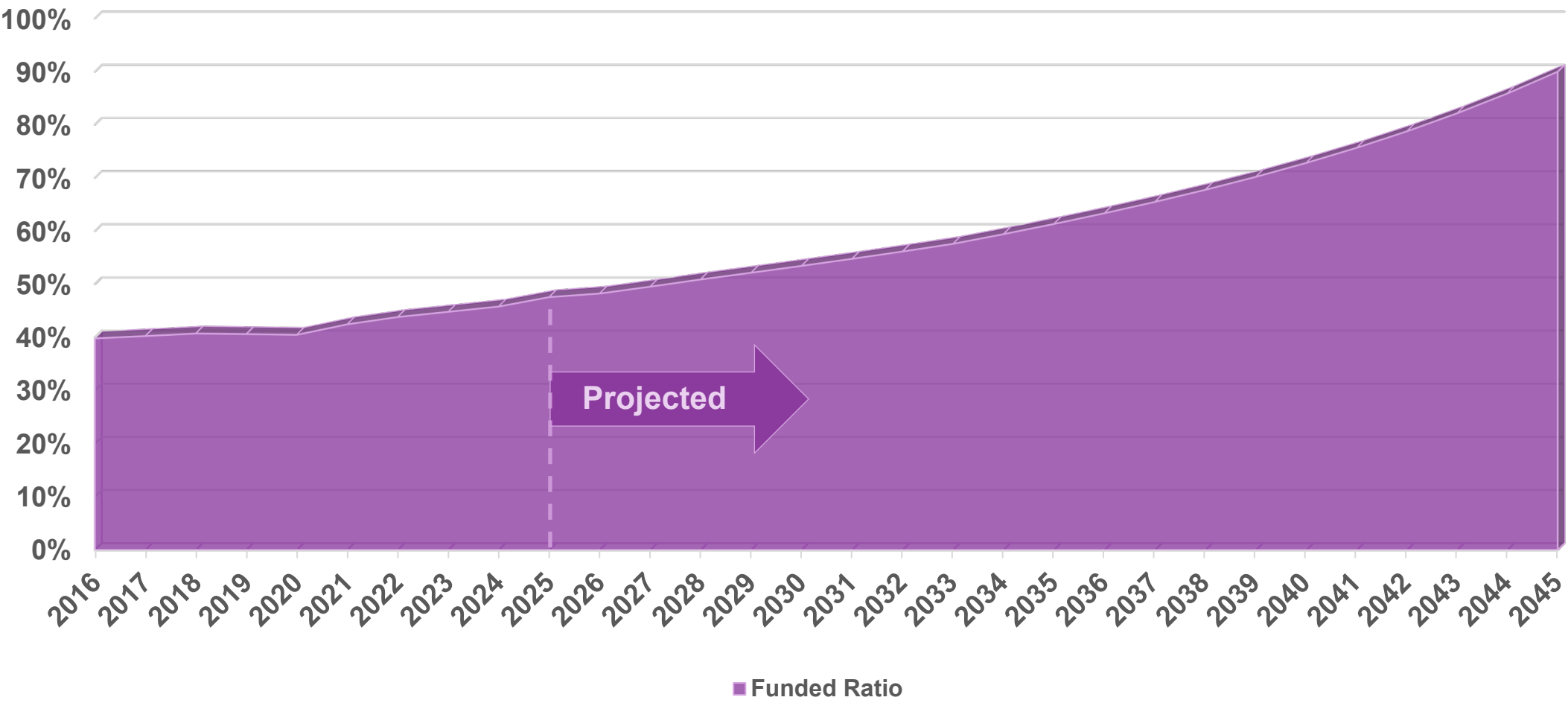
Unfunded Actuarial Accrued Liability



Based on current law, the reduction in the projected unfunded actuarial accrued liability accelerates as it approaches 2045 due to corresponding increases in State contribution requirements.

Projected results are based on current assumptions used for the June 30, 2025, valuation, including a level active population.

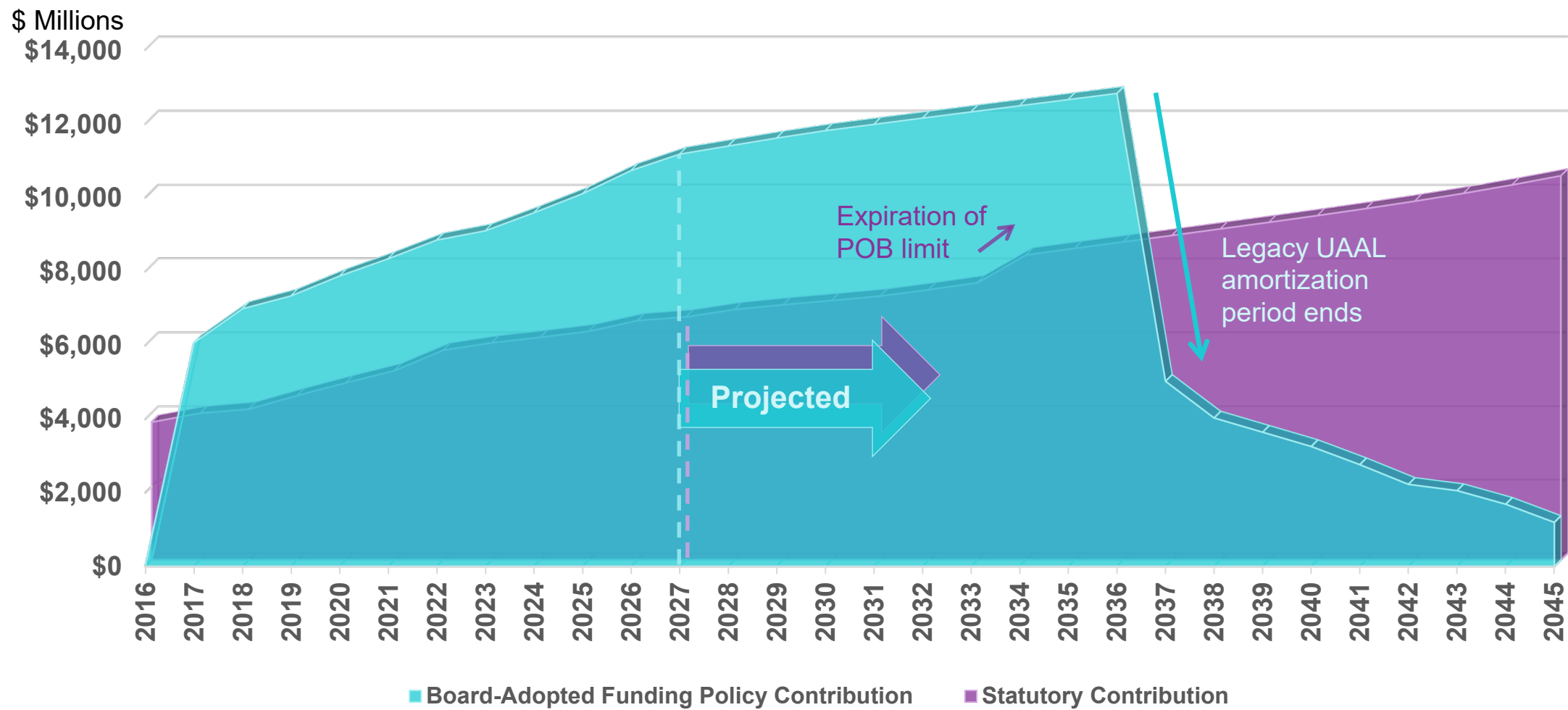
Funded Ratio



Based on current law, the System is projected to only attain 90% funded by 2045.

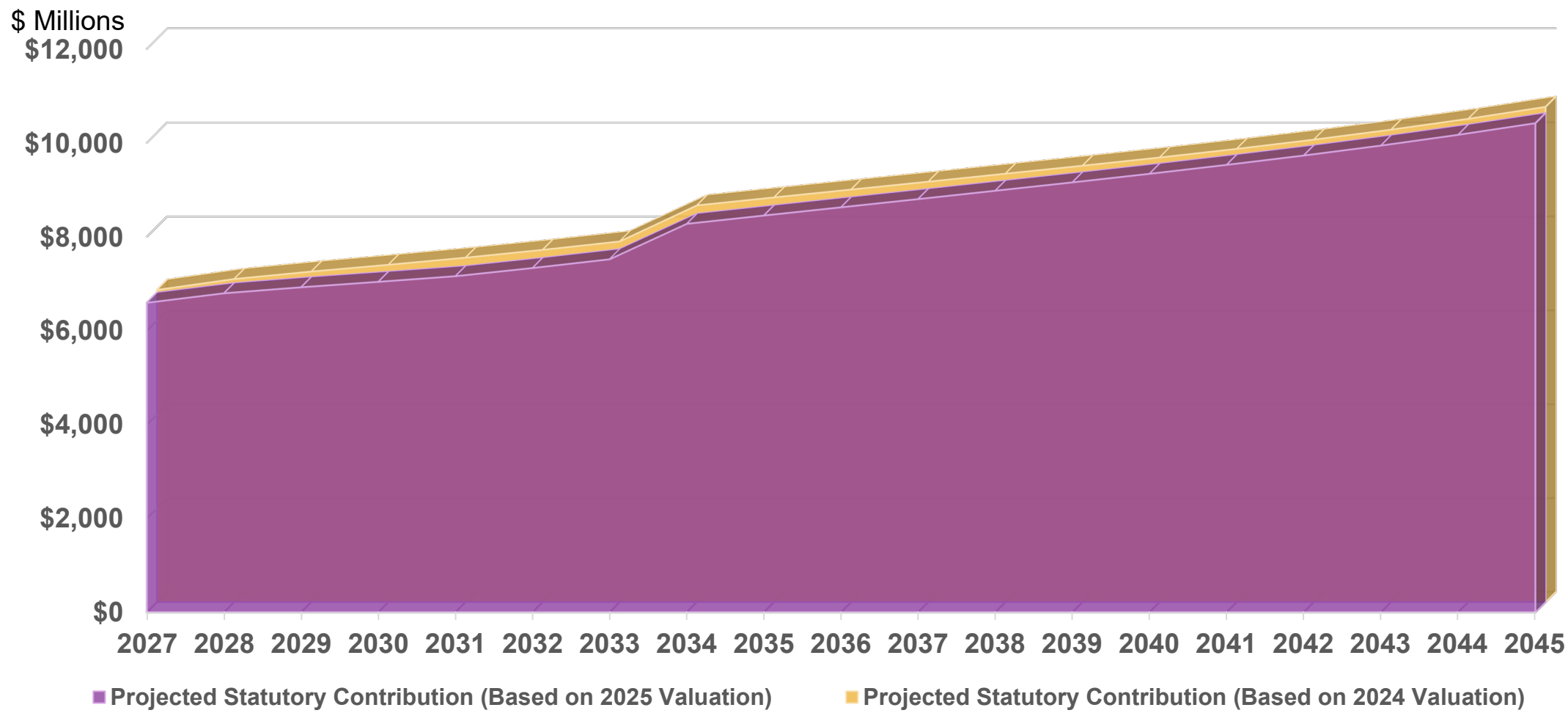
Projected results are based on current assumptions used for the June 30, 2025, valuation, including a level active population.

State Contributions



The cumulative Statutory contribution from FY 2027 through FY 2045 is \$161 billion.
The cumulative Board-Adopted contribution from FY 2027 through FY 2045 is \$146 billion.

Current Year vs. Prior Year Valuation



Based on the 2024 valuation, the cumulative Statutory contribution from FY2027 through FY2045 is \$163 billion.
Based on the 2025 valuation, the cumulative Statutory contribution from FY2027 through FY2045 is \$161 billion.

Summary of GASB Accounting Results

GASB Information as of June 30 (in millions)

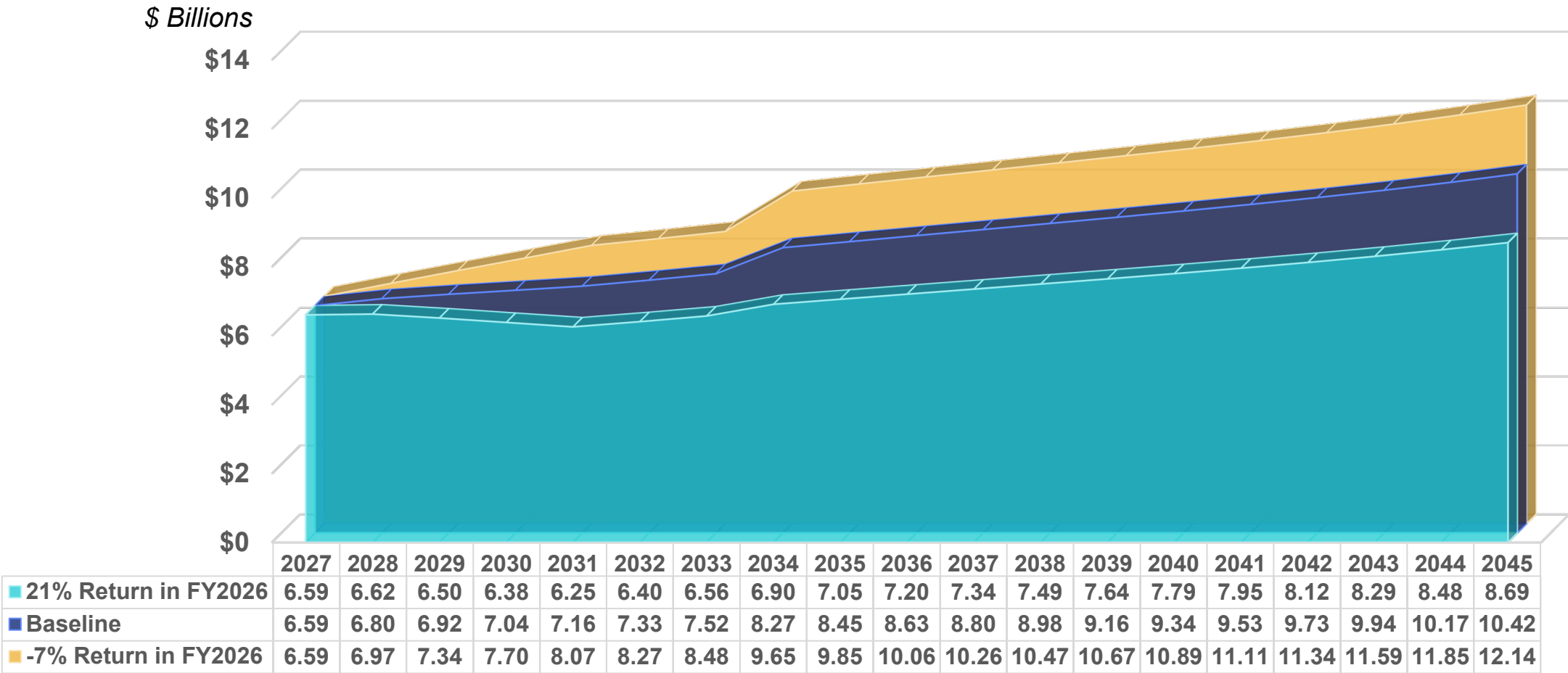
	2025	2024
Long-Term Expected Rate of Return	7.00%	7.00%
Municipal Bond Index	5.20%	3.93%
Single Equivalent Discount Rate	7.00%	7.00%
Total Pension Liability	\$162,015	\$157,290
Plan Fiduciary Net Position	<u>77,263</u>	<u>71,425</u>
Net Pension Liability	\$84,752	\$85,866
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	47.7%	45.4%
Total Pension Expense	\$5,959	\$6,899

Note: Totals may not add to the dollar due to rounding

Sensitivity Projections

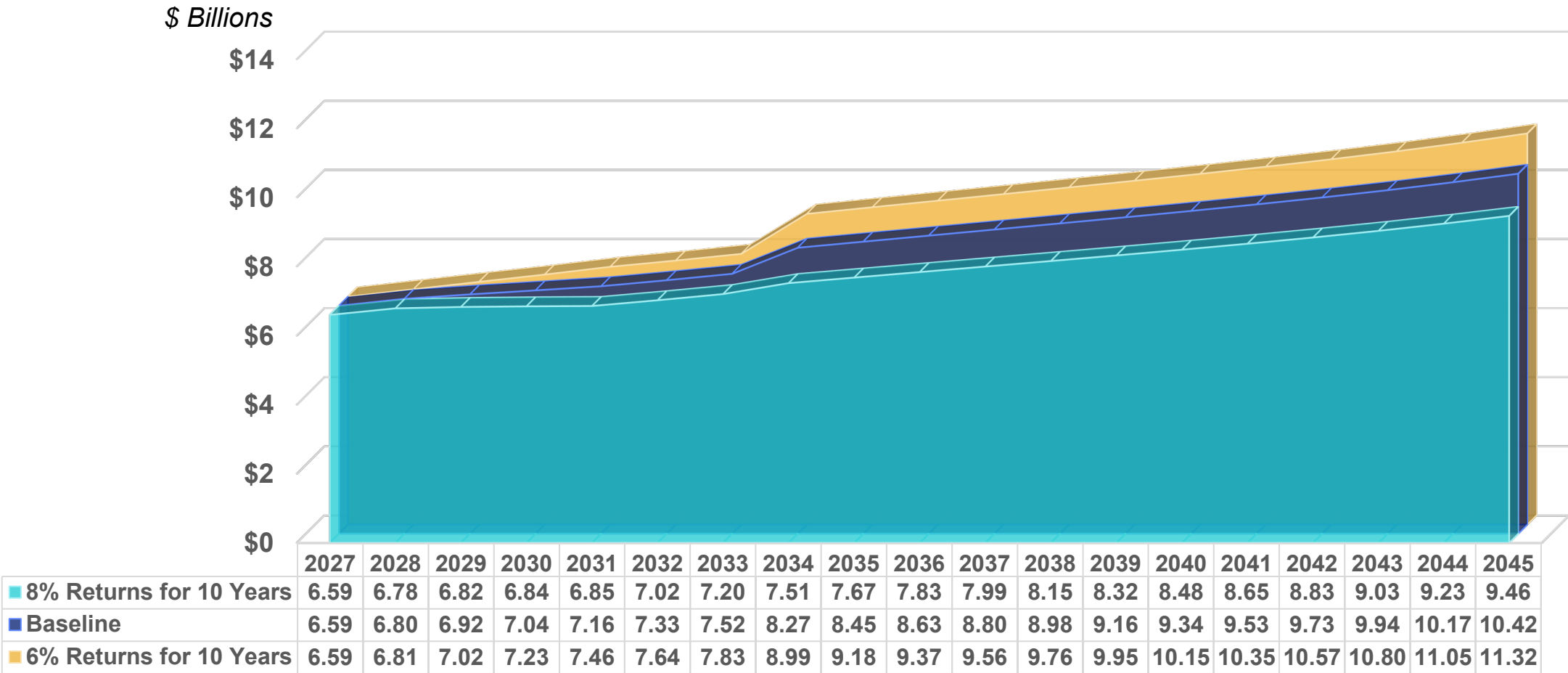
- The projected Statutory State contributions are determined based on an underlying assumption that the State will contribute the required amounts for all future years
 - Baseline projections of State contributions are also based on future investment returns of 7.0% per year
- To test the sensitivity of this assumption, we created projections based on the following scenarios:
 - Asset shock during FY 2026 (+14% / -14% return compared to baseline)
 - 10-year period of lower and higher asset return (+1% / -1% return each year compared to baseline)
- Projected results reflect an assumed level active population through FY 2045

Sensitivity Projection of State Contributions – Scenario #1



- The cumulative FY2027-FY2045 State contribution amounts would change by approximately \$23 billion if the FY2026 asset return differed by 14% compared to the baseline. Total contributions through 2045 are as follows:
 - 21% Return in FY2026, 7% thereafter: **\$138.24B**
 - Baseline (7% Return for all years): **\$160.77B**
 - -7% Return in FY 2026, 7% thereafter: **\$183.30B**

Sensitivity Projection of State Contributions – Scenario #2



- The cumulative FY2027-FY2045 State contribution amounts would change by approximately \$11 billion if the 10-year asset returns differed by 1% compared to the baseline. Total contributions through 2045 are as follows:
 - 8% Returns for 10 Years, 7% thereafter: **\$149.28B**
 - Baseline (7% Return for all years): **\$160.77B**
 - 6% Returns for 10 Years, 7% thereafter: **\$171.65B**

Appendix

- FY 2027 State Contribution Certification Exhibit A
- FY 2027 THIS Fund Certification Exhibit B
- Summary of Buyout Experience
- Caveats

FY 2027 State Contribution Certification Exhibit A

Summary of State Contributions under Illinois Pension Code and Board-Adopted Actuarial Funding Policy		Fiscal Year 2027
Based on Statutory Funding Plan		
• Benefit trust reserve		
– 48.48% of membership payroll ¹		\$6,741,568,056
– Less school districts contributions		
• (0.58% of membership payroll)		(80,661,372)
• (6.00% final average salary cap increases)		(10,162,900)
• (10.00% of membership payroll above the governor's salary)		(1,809,276)
– Less federal funds contribution		
• (10.00% of membership payroll from federal funds)		(27,814,266)
– Less phase-in of the effect of assumption changes		(27,258,006)
– State contribution		6,593,862,236
• Plus guaranteed minimum annuity reserve		200,000
• Total State contribution (current law)		\$6,594,062,236
Based on Board-Adopted Actuarial Funding Policy²		
• Benefit trust reserve		
– Normal cost plus amortization		\$11,297,714,512
– Less school districts contributions		
• (0.58% of membership payroll)		(80,661,372)
• (6.00% final average salary cap increases)		(10,162,900)
• (10.00% of membership payroll above the governor's salary)		(1,809,276)
– Less federal funds contribution		
• (10.00% of membership payroll from federal funds)		(27,814,266)
– Board-Adopted Actuarial Funding Policy contribution		\$11,177,266,698
• Less guaranteed minimum annuity reserve		200,000
• Total Board-Adopted Actuarial Funding Policy contribution		\$11,177,466,698
Total normal cost and employer normal cost rate and federal contribution rate		
• Total normal cost rate (including administrative expenses)		19.00%
• Less member contribution rate		(9.00%)
• Employer normal cost rate		10.00%
• Federal contribution rate (employer normal cost rate, per Public Act 100-0340)		10.00%

¹ Expected Fiscal Year 2027 membership payroll is \$13,907,133,095

² Board-Adopted Actuarial Funding Policy is based on the entry age normal actuarial cost method, current asset valuation method and amortization policy as follows:

- 20-year closed amortization of the UAAL beginning Fiscal Year 2017
- Use layered amortization with new UAAL after FY 2017 being amortized over 20 years regardless of source
- Amortization payment increase at the rate of future State revenue growth (assumed to be 2.00%)
- Minimum total contribution is no less than the normal cost in any given year

FY 2027 THIS Fund Certification Exhibit B

Teacher Health Insurance Security (THIS) Fund Contribution Amount to be Certified by the Board		Fiscal Year 2027
Expected State Contribution to THIS Fund		
• Membership payroll		
– Total		\$13,907,133,095
– Less members who do not contribute to THIS Fund		(83,258,810)
– Members who do contribute to THIS Fund		13,823,874,285
• Member contribution rate (actual, from CMS)		0.90%
• Matching state contribution		\$124,414,869
• Adjustment for underestimating fiscal year 2025 THIS Fund member contributions		17,386,888
• Total THIS Fund state contribution¹		141,801,757

¹ This certification does not include other state contributions to THIS Fund which are not part of the statutory certification requirement

- Illinois Statute requires the TRS Board to certify the THIS Fund State contribution amount by November 15 each year
- State contribution amount is based on the projected 2027 payroll from the June 30, 2025 valuation

Summary of Buyout Experience

Automatic Annual Increase (AAI) Buyouts*

Fiscal Year	Total AAI Buyout Amount	Total AAI Buyout Counts	AAI Buyout Liability Savings
2019	\$76,930,303	609	\$109,900,433
2020	106,172,856	881	151,675,509
2021	125,628,541	917	179,469,345
2022	134,035,676	926	191,479,538
2023	120,797,423	817	172,567,747
2024	177,477,163	1,046	253,538,804
2025	131,235,409	805	187,479,155
Total	\$872,277,371	6,001	\$1,246,110,531

Inactive Vested (IV) Buyouts*

Fiscal Year	Total IV Buyout Amount	Total IV Buyout Counts	IV Buyout Liability Savings
2019	\$185,925,087	1,537	\$309,875,146
2020	26,554,195	189	44,256,991
2021	18,187,976	138	30,313,293
2022	16,702,804	124	27,838,007
2023	79,114,098	580	131,856,831
2024	28,678,864	189	47,798,107
Total	\$355,163,025	2,757	\$591,938,375

* Based on the September 29, 2025, report provided by TRS staff

Caveats

This presentation is based on the preliminary results of the June 30, 2025, actuarial valuation performed for the Board of Trustees of the Teachers' Retirement System of the State of Illinois . The preliminary actuarial valuation report has information on the plan provisions, data, methods and assumptions used in the valuation. Use of the information in this presentation is subject to the caveats described in that document. The measurements in this presentation may not be appropriate for purposes other than those described in the actuarial valuation report.

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 our 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.