



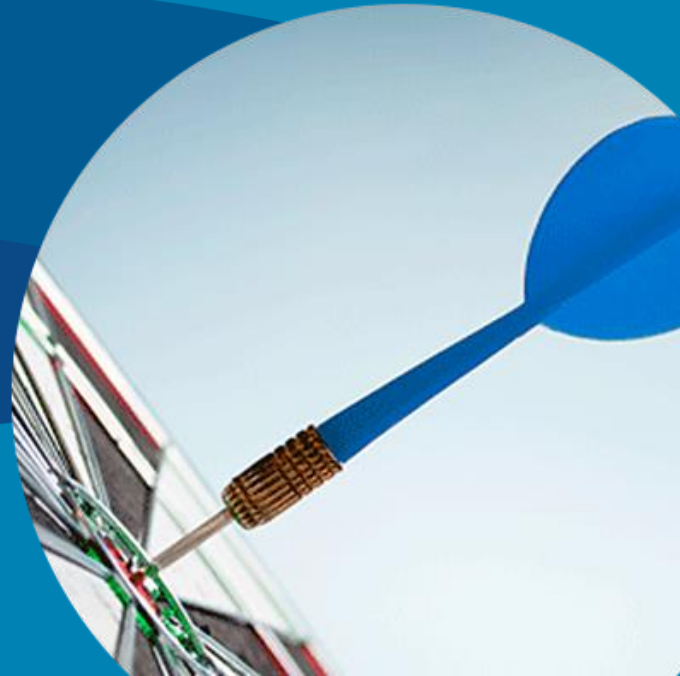
EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND

Actuarial Valuations as of June 30, 2023

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December 18, 2023



Actuarial Valuations as of June 30, 2023

- Purposes:
 - Measure the System's liabilities
 - Determine employer contribution rates for FY 2026
 - FY 2024 set by June 30, 2021 valuation
 - FY 2025 set by June 30, 2022 valuation
 - Provide other information for reporting
 - GASB #67/68 & ACFR
 - Explain changes in actuarial condition of ERSRI
 - Track changes over time

Actuarial Valuations as of June 30, 2023

- Prepared as of June 30, 2023, using
 - Member data provided by ERSRI Staff
 - Audited financial data
 - Current benefit and contribution provisions
 - Actuarial assumptions and methods approved by the Retirement Board in May 2023
- Plans covered today:
 - ERSRI (State Employees and Teachers)
 - MERS (General Employees and Police/Fire, Legacy Units)
 - JRBT (Judges)
 - SPRBT (State Police)
 - Teacher Survivor Benefits Plan (TSBP)
 - SPRFT (Formerly Paygo State Police)
 - RIJRFT (Contributing, Paygo Judges)

Changes from 2023 Experience Study

- In general, the assumption set was found to be reasonable.
 - The net impact is minor to the current contribution levels
 - But, the proposed combination of assumptions lowered the projected growth in the dollar amount of contributions
- The meaningful recommendations were:
 - Lower projected salary increases for most groups
 - Lower projected overall payroll growth for most groups
 - Increase rates of turnover for most groups

STATE AND TEACHERS PLAN



Actuarial Valuations as of June 30, 2023

Key Changes and Issues

- 8.4% market investment returns exceed the assumed 7%
 - Smoothing mechanism was still deferring some of the positive 2021 performance as well
 - Total impact was a net decrease in the UAAL from investment performance
- Aggregate UAAL decreased for the fifth year in a row!
 - this year decreased from \$4.77b to \$4.50b
- Aggregate funded ratio increased from 60.4% to 62.8%
- FY2026 projected employer contribution amounts are \$5m lower than previous projections
 - Now projected at \$548m vs previously projected \$553m



Actuarial Valuations as of June 30, 2023

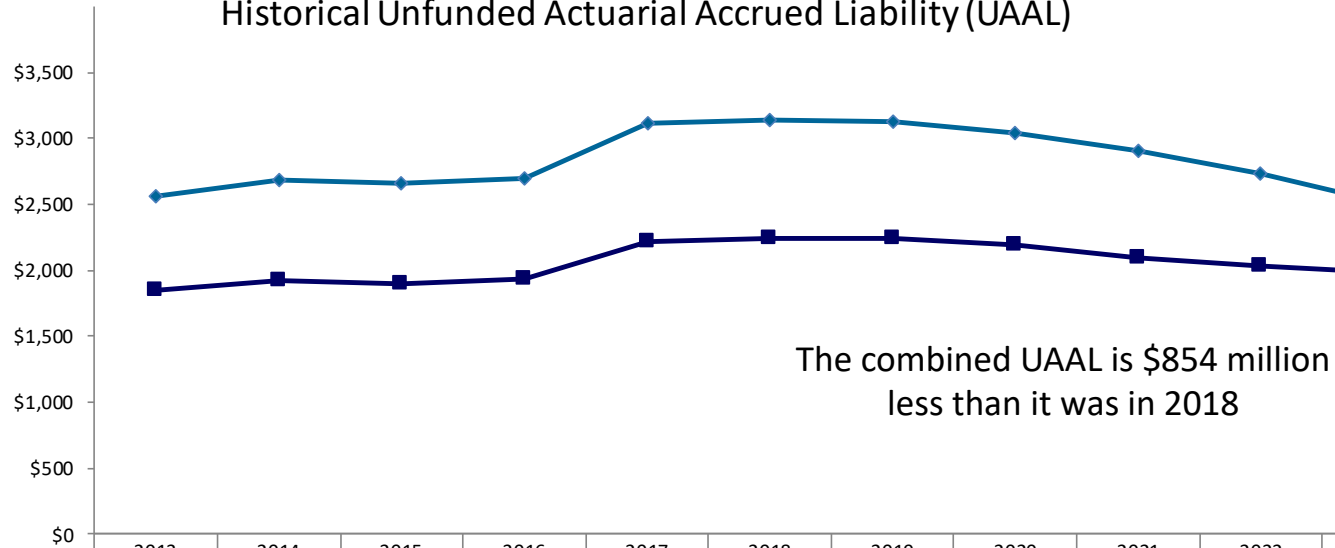
Financial Results and COLA Calculations

- 2024 COLA is 2.84%
 - 50% from change in CPI and 50% from investment performance
 - \$29,776 limit will also grow by 2.84% (\$30,622 in 2025)
- H5200Aaa Article 12: beginning in 2024 the benefit adjustments are reduced to twenty-five percent (25%) of the benefit adjustment payable each year while the plans remain less than 80% funded instead of being fully suspended.
 - Members in units less than 80% funded will received 25% of the COLA, or 0.71% in 2024 (on the first \$35,731 of annual benefit if retired before 6/30/2015)
- The probabilities continue to increase that COLAs are fully restored with or prior to the June 30, 2030 valuation
 - Calendar Year 2031 COLA
 - 54% estimated probability 80% funded as of June 30, 2030
 - 64% estimated probability 80% funded as of June 30, 2031

The UAAL for both groups continues to decrease. FY24 will be the first year the full contributions from the 2017 assumption changes will be made, so the decline should begin to accelerate

\$ in millions

Historical Unfunded Actuarial Accrued Liability (UAAL)

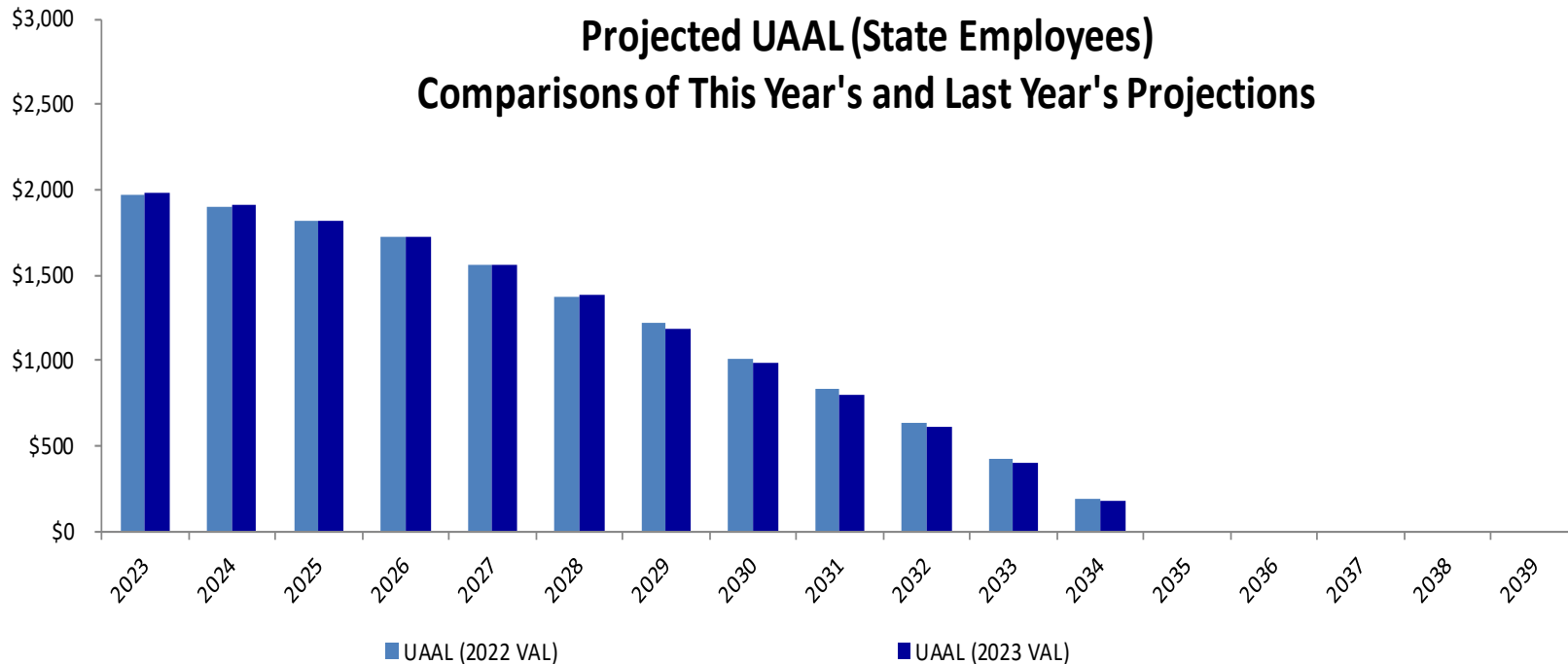


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
State Employees	\$1,855	\$1,920	\$1,895	\$1,936	\$2,213	\$2,239	\$2,244	\$2,196	\$2,100	\$2,032	\$1,984
Teachers	\$2,568	\$2,682	\$2,655	\$2,694	\$3,116	\$3,136	\$3,128	\$3,046	\$2,909	\$2,735	\$2,511

Investment Return Assumption lowered from 7.5% to 7.0% in 2017

The projections of the UAAL remain consistent with previous projections

\$ in Millions

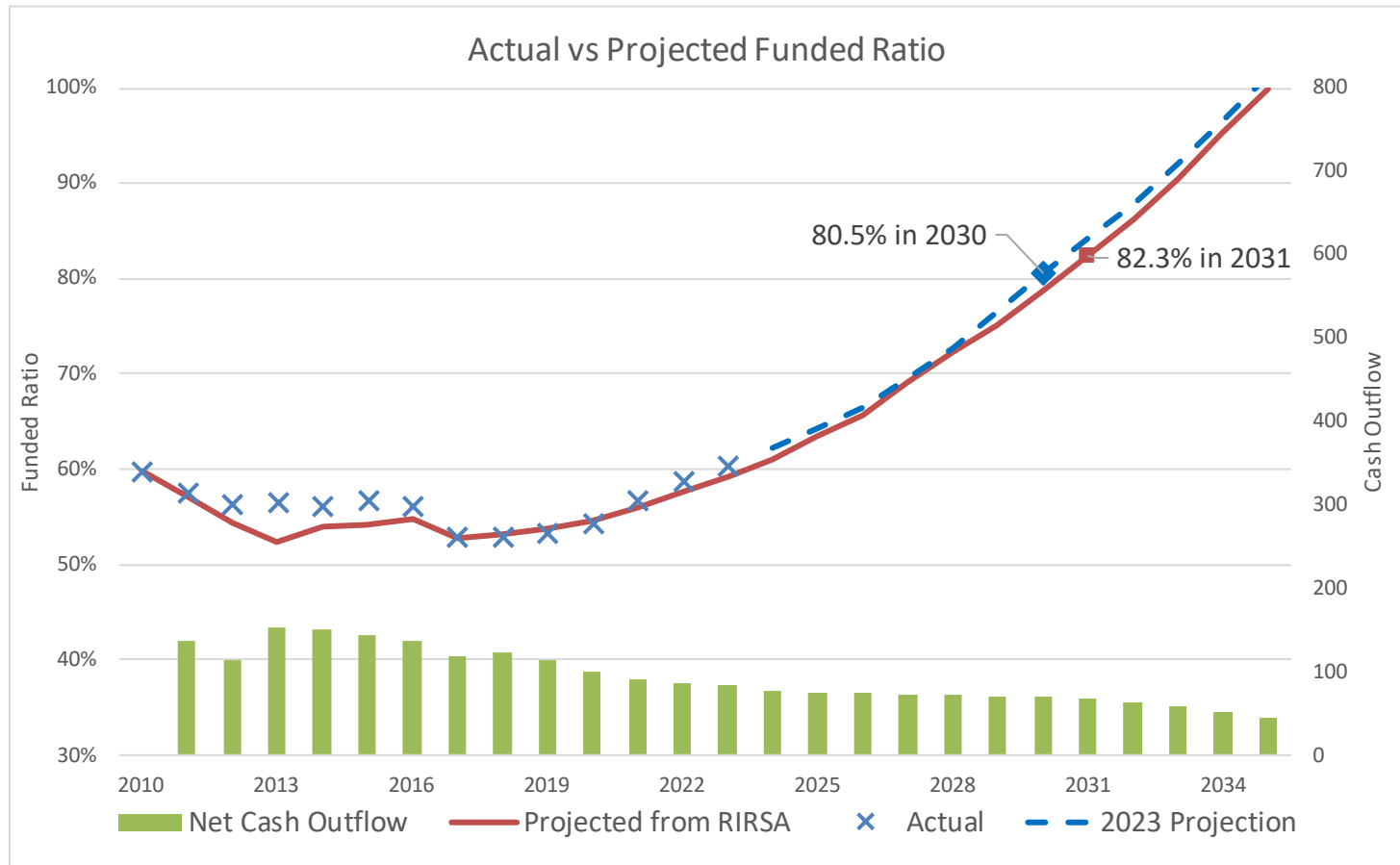


These projections assume all assumptions are met

The actual benefit adjustments are determined based on the funded ratio for the plan at a given valuation date with the corresponding gains or losses

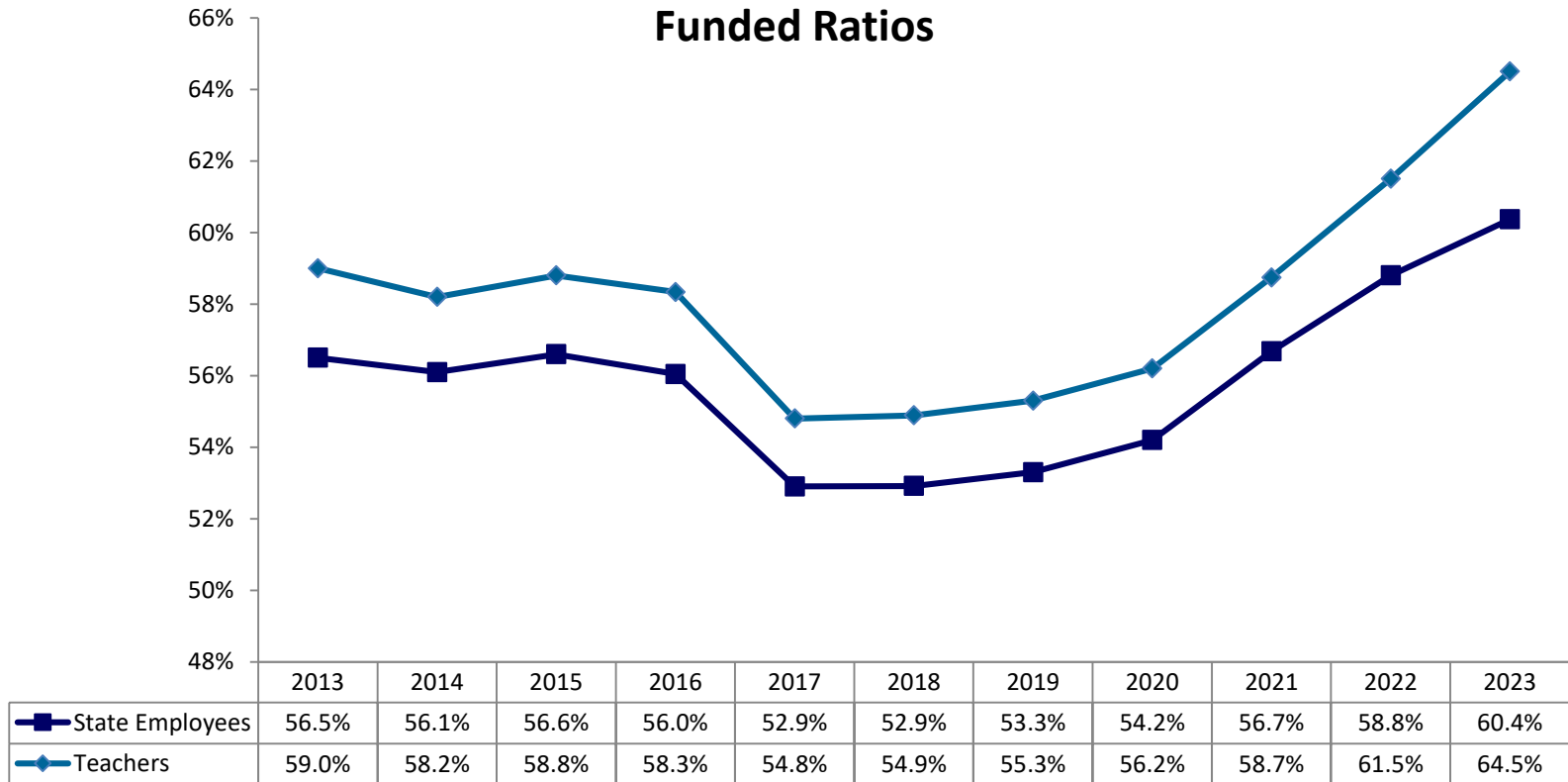


The funded ratio continues to track well with the Original RIRSA Projections (State Employees shown below)



Original Projections from the RIRSA Impact Statement, adjusted for Mediation changes in 2016 (-1.4%) and change to investment return assumption in 2017 (-2.7%)

When zoomed in, the improvement becomes clearer. Teachers funded ratio has increased 10% since 2017, with State increasing by 8%



Actuarial Valuations as of June 30, 2023

Employer Contribution Rates – State Employees

Item	2022 Actual Results	2023 Actual Results
Total Normal Cost %	7.87%	7.63%
Member Contribution	<u>4.21%</u>	<u>4.24%</u>
Employer Normal Cost%	3.66%	3.39%
Amortization rate	<u>24.88%</u>	<u>25.31%</u>
Total Employer Contribution	28.54%	28.70%
FY ending June 30,	2025	2026
Payroll Projected 2 Years	\$834.0	\$867.0
Projected Contribution	\$238.0	\$248.8

Above dollar amounts in millions



Actuarial Valuations as of June 30, 2022

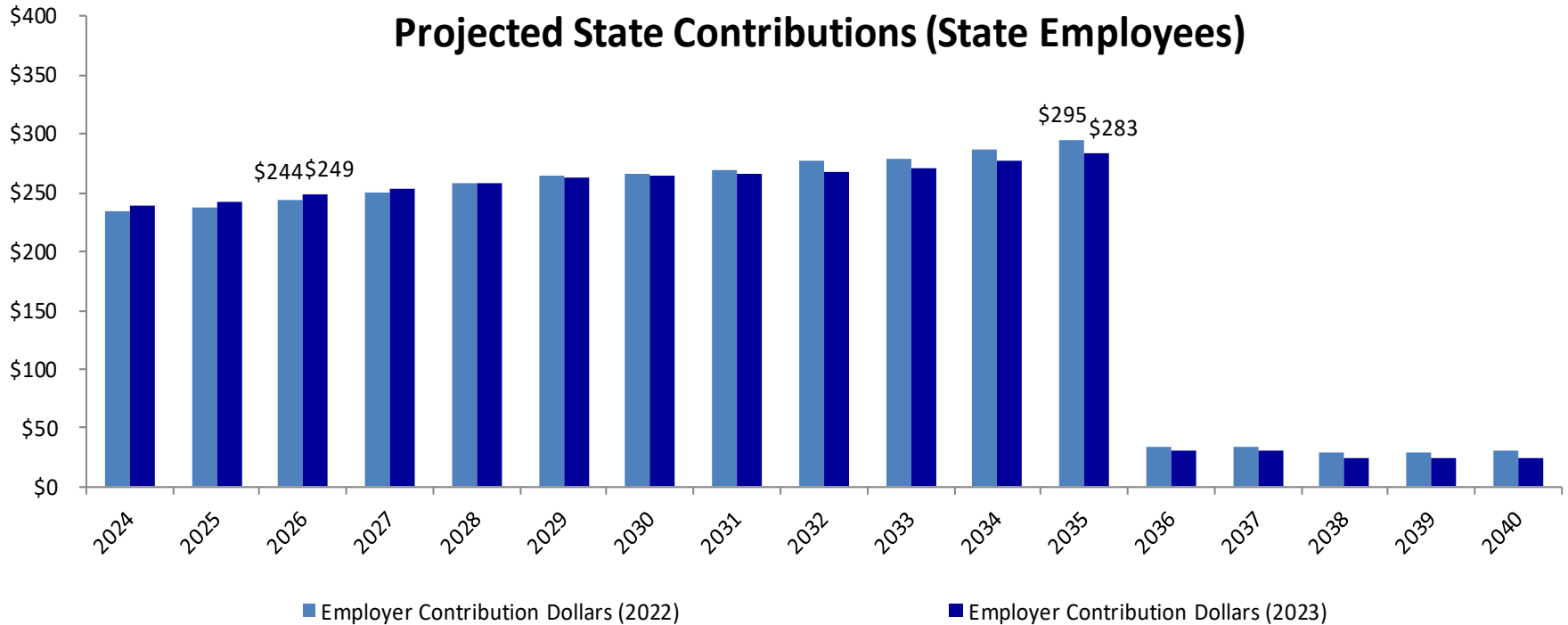
Employer Contribution Rates – Teachers

Item	2022 Actual Results	2023 Actual Results
Total Normal Cost %	7.31%	7.01%
Member Contribution	<u>3.75%</u>	<u>3.75%</u>
Employer Normal Cost%	3.56%	3.26%
Amortization rate	<u>21.56%</u>	<u>21.09%</u>
Total Employer Contribution	25.12%	24.35%
FY ending June 30,	2025	2026
Payroll Projected 2 Years	\$1,204.6	\$1,229.8
Projected Contribution	\$302.6	\$299.5

Above dollar amounts in millions



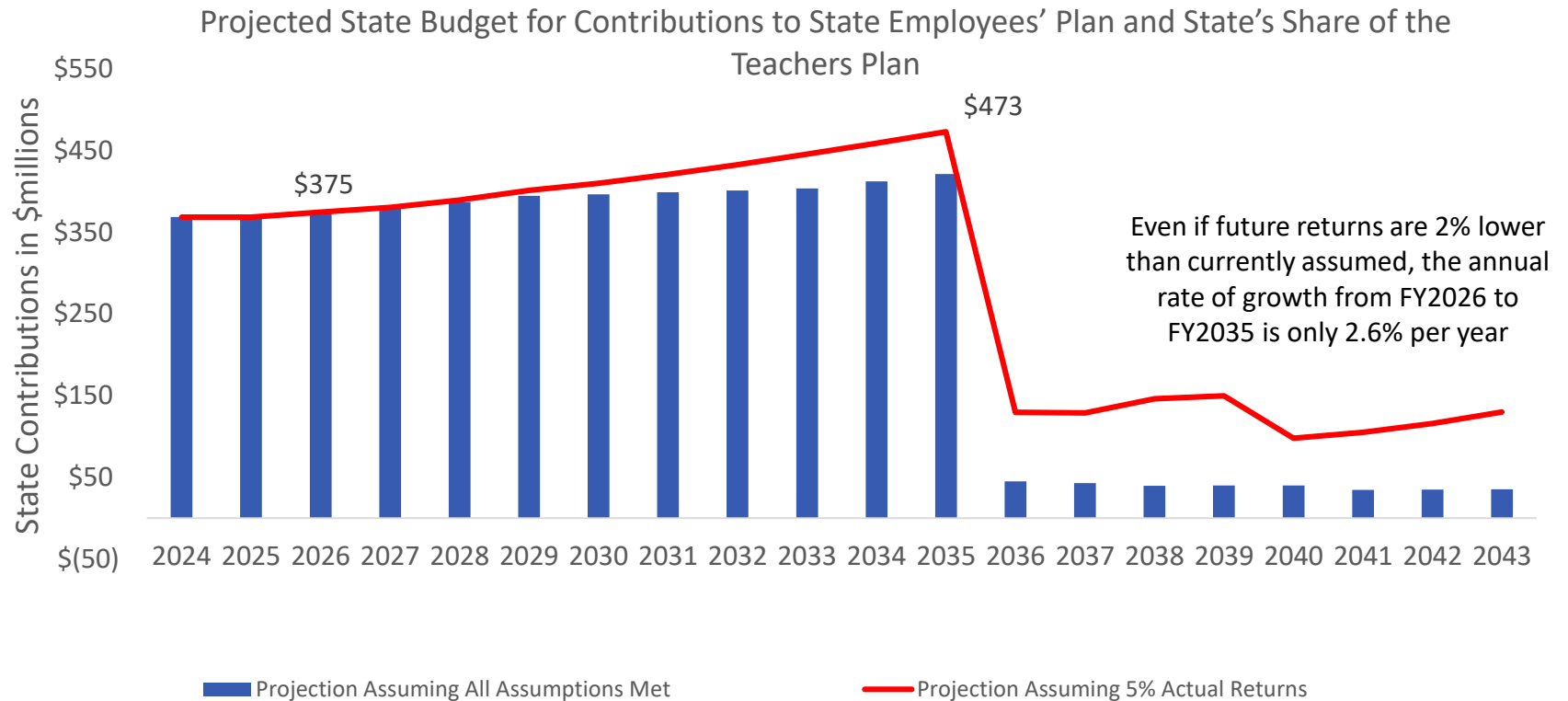
The projected State contribution for FY2026 is slightly higher due to payroll being higher, but the projected growth is lower over the remaining amortization period due to the lowering of the payroll growth assumption used for setting the amortization schedules from 3.0% to 2.5% in the experience study



\$ in Millions



The plan continues to be expected to perform well under stressed scenarios. The scenario below assumes 5% annual returns. As shown, the total budget outlay for the State to State Employees and Teachers only grows at 2.6% per year in this scenario, and the contributions still drop significantly in FY2036.



The probability metrics continue to improve as well, especially the probability of the UAAL declining

Monte Carlo Simulation: Prospective Probabilities of Certain Events

	From 2020	From 2021	From 2022	From 2023
Probability UAAL is smaller in 5 Years	79.4%	82.3%	87.9%	91.9%
Probability 80% Funded Ratio by 2030	49.1%	51.4%	52.4%	54.1%
Probability 100% Funded Ratio by 2040	67.4%	68.0%	68.3%	68.2%

All simulations based on a 7% mean and 11.6% standard deviation, projected based on the actuarial value of assets from the valuation date



Low-Default Risk Obligation Measure

- New Actuarial Standard of Practice Requirement
- Lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits
 - 4.90% discount rate
- Difference = Cost to De-risk

	State Employees	Teachers
LDRM measure of benefits earned as of the measurement date:	\$5,887 million	\$8,405 million
Valuation liability (IEAN) at 7% on measurement date:	<u>5,005 million</u>	<u>7,073 million</u>
Cost to mitigate investment risk in the System's portfolio:	\$ 882 million	\$1,332 million

- ERSRI benefit structure has risk sharing provisions that are contingent on the investment returns
- If these provisions were not contingent on the investment performance, it would have increased the LDRM by another \$286 million for State Employees and \$420 for Teachers

Summary – ERSRI

- 2026 employer contribution dollars are projected slightly lower than previously expected between the 2 plans
- The UAAL should continue to decline year over year going forward
- The contribution rates should slowly decline year over year, but will be based on how active headcount and payroll grows

MERS PLAN



Actuarial Valuations as of June 30, 2023

Benefit Changes – MERS

- Five new Legacy Units
 - Town of West Warwick (Legacy)
 - West Warwick School NC (Legacy)
 - Town of West Warwick Library (Legacy)
 - West Warwick Police Dept (Legacy)
 - West Warwick Fire Dept (Legacy)
- No closed Units
- No merged Units
- No new COLA elections
- Full results can be found in the report

Actuarial Valuations as of June 30, 2023

Actuarial Results – MERS (Excluding Legacy Units)

- For MERS, the unfunded actuarial accrued liability (UAAL) excluding the Legacy Units is \$286 million, compared to \$298 million last year
- The aggregate funded ratio (actuarial assets divided by actuarial accrued liability) for all units combined improved to 87.8%
- Results for individual units are shown in Table 7 of the actuarial valuation report
 - 39 units have funded ratios over 100%, 36 last year
 - 100 units have funded ratios over 80%, 92 last year
- COLA Changes
 - One Unit dropped below 80% funded (West Warwick Fire Dept)
 - Seven Units moved from under 80% funded to over 80% funded

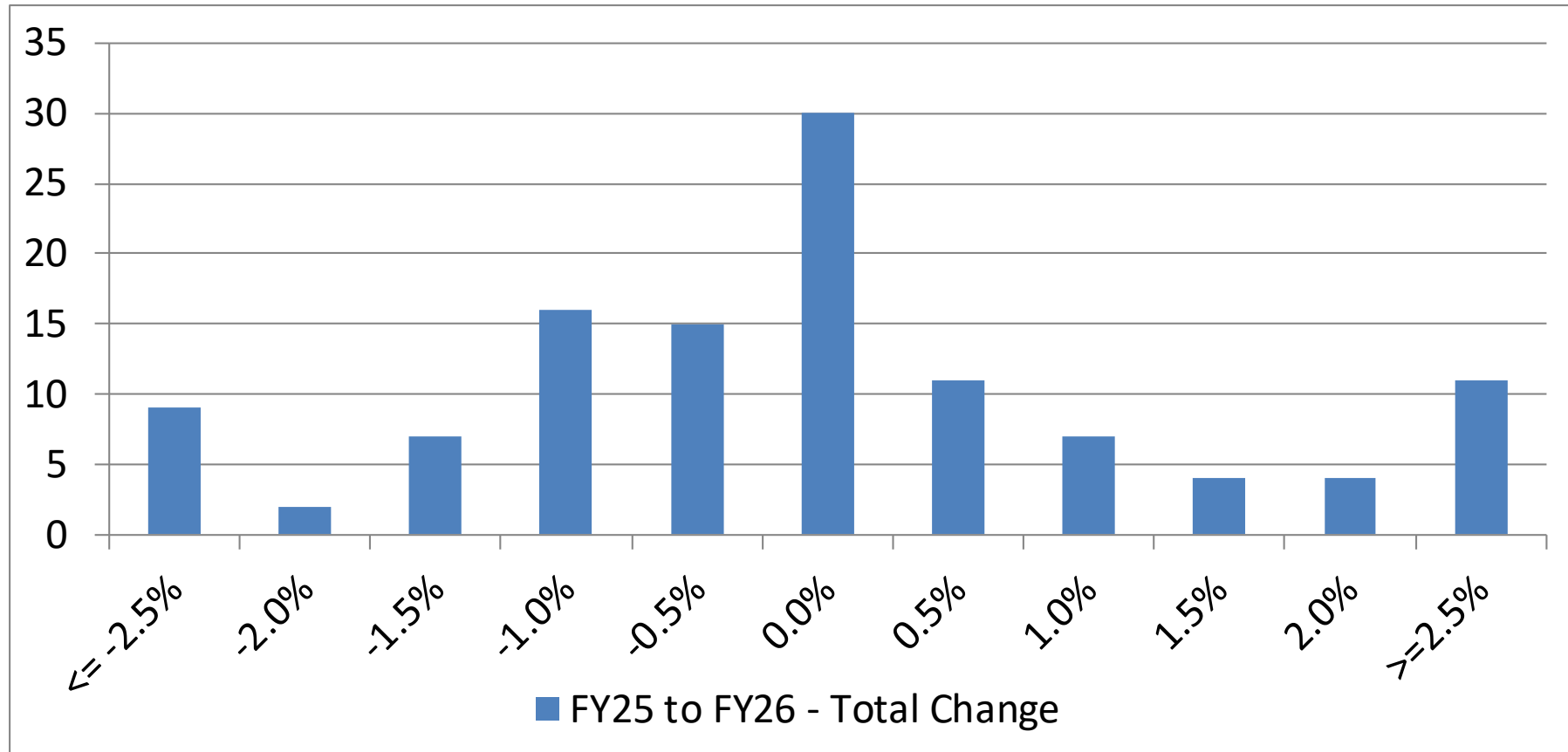
Actuarial Valuations as of June 30, 2023

Summary of MERS Results in Aggregate

	MERS General	MERS P&F	Total
FY2025 Employer Rate	11.25%	17.33%	13.25%
Change due to:			
Suspension of 2023 COLA for those <80%	-0.20%	-0.27%	-0.23%
Asset Performance	-0.21%	-0.33%	-0.25%
Actual 2024 COLA (2.84%)	0.11%	0.11%	0.11%
Individual salary increases	0.30%	1.07%	0.56%
Overall payroll growth	-0.15%	-0.27%	-0.19%
Noneconomic liability growth	-0.16%	0.24%	-0.02%
Benefit Tier Turnover	-0.13%	-0.05%	-0.10%
Recognition of Assumption Changes	<u>0.18%</u>	<u>0.21%</u>	<u>0.19%</u>
Total Change	-0.26%	0.71%	0.07%
FY2026 Employer Rate	10.99%	18.04%	13.32%

Actuarial Valuations as of June 30, 2023

Distribution of Changes in Contribution Rate By Unit



Rounded to nearest 0.5% change in rate as a percentage of payroll



Actuarial Valuations as of June 30, 2023

Actuarial Results – MERS Legacy Units

- There are now six Units that entered MERS via the Pathway to MERS Legislation

Old Unit Number	New Unit Number	Unit	Market Value of Assets	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Legacy Units							
1055	1055	Central Falls Police & Fire Legacy	\$ 20,250,032	\$ 19,919,479	\$ 43,852,670	\$ 23,933,191	45.4%
1609	1609	Town of West Warwick (Legacy)	\$ 9,453,717	\$ 9,299,398	\$ 50,166,791	\$ 40,867,393	18.5%
1610	1610	West Warwick School NC (Legacy)	13,409,407	13,190,518	33,543,047	20,352,529	39.3%
1619	1619	Town of West Warwick Library (Legacy)	975,259	959,339	3,126,220	2,166,881	30.7%
1617	1617	West Warwick Police Dept (Legacy)	13,246,857	13,030,621	53,181,343	40,150,722	24.5%
1618	1618	West Warwick Fire Dept (Legacy)	17,121,167	16,841,688	59,064,262	42,222,574	28.5%
		West Warwick Legacy Units Subtotal	\$ 54,206,407	\$ 53,321,564	\$ 199,081,664	\$ 145,760,100	26.8%
		Legacy Units Subtotal	\$ 74,456,439	\$ 73,241,043	\$ 242,934,334	\$ 169,693,291	30.1%

- FY2026 Contribution rates
 - Central Falls Police & Fire Legacy
 - 70.2% of payroll (projected dollar amount: \$2,249,910)
 - Combined West Warwick Legacy Units
 - 79.35% of payroll (projected dollar amount: \$11,740,313)



OTHER PLANS

Actuarial Valuations as of June 30, 2023

Actuarial Results – Judges (JRBT)

	<u>June 30, 2022</u>	<u>June 30, 2023</u>
	(1)	(2)
1. Actuarial accrued liability		
a. Actives & Inactives	\$ 51,069,954	\$ 48,898,481
b. Annuitants	42,105,638	52,100,591
2. Total actuarial accrued liability (1a +1b)	\$ 93,175,592	\$ 100,999,072
3. Actuarial value of assets	96,946,030	103,344,499
4. UAAL (2 - 3)	\$ (3,770,438)	\$ (2,345,427)
5. Funded ratio (3 / 2)	104.0%	102.3%
6. UAAL/Payroll	-31.3%	-19.0%
Weighted Average Contribution Rate for Applicable Fiscal Year		
7. Full retirement rate		
a. Applicable Fiscal Year	2025	2026
b. Normal cost	19.80%	18.67%
c. Prior service	-1.60%	-0.92%
d. Full retirement rate	18.20%	17.75%



Actuarial Valuations as of June 30, 2023

Actuarial Results – State Police (SPRBT)

	<u>June 30, 2022</u>	<u>June 30, 2023</u>
	(1)	(2)
1. Actuarial accrued liability		
a. Actives & Inactives	\$ 96,517,567	\$ 108,756,600
b. Annuitants	<u>113,470,444</u>	<u>128,352,052</u>
2. Total actuarial accrued liability (1a +1b)	\$ 209,988,011	\$ 237,108,652
3. Actuarial value of assets	<u>189,031,357</u>	<u>202,820,349</u>
4. UAAL (2 - 3)	\$ 20,956,654	\$ 34,288,303
5. Funded ratio (3 / 2)	90.0%	85.5%
6. UAAL/Payroll	78.9%	115.5%
Weighted Average Contribution Rate for Applicable Fiscal Year		
7. Full retirement rate		
a. Applicable Fiscal Year	2025	2026
b. Normal cost	12.78%	12.59%
c. Prior service	<u>6.87%</u>	<u>10.39%</u>
d. Full retirement rate	19.65%	22.98%



Actuarial Valuations as of June 30, 2023

Actuarial Results – Teachers’ Survivors Benefit Plan (TSBP)

	June 30, 2022 (1)	June 30, 2023 (2)
1. Actuarial accrued liability		
a. Actives & Inactives	\$ 47,682,440	\$ 48,898,087
b. Annuitants	177,919,318	183,559,544
2. Total actuarial accrued liability (1a +1b)	\$ 225,601,758	\$ 232,457,631
3. Market value of assets	401,796,557	423,914,539
4. UAAL (2 - 3)	\$ (176,194,799)	\$ (191,456,908)
5. Funded ratio (3 / 2)	178.1%	182.4%
6. UAAL/Payroll	-28.8%	-30.3%

Weighted Average Contribution Rate for Applicable Fiscal Year

7. Full retirement rate		
a. Applicable Fiscal Year	2025	2026
b. Normal cost	\$ 1,644,800	\$ 1,267,332
c. Amortization of UAAL	(13,762,744)	(14,954,882)
d. Total (7a plus 7b, not less than zero)	\$ -	\$ -



Actuarial Valuations as of June 30, 2023

Actuarial Results – SPRFT (Formerly Paygo State Police)

- Article 12
 - Trust was established with ERSRI
 - Used to advance fund the benefits
 - Initial deposit of \$15 million
- Annual contributions of \$16,387,092 until UAL is fully funded
- Expected to be fully funded by 2035

	<u>June 30, 2022</u>	<u>June 30, 2023</u>
1. Accrued Liability	\$ 160,820,268	\$ 153,657,806
2. Market Value of Assets	<u>23,894,678</u>	<u>27,140,186</u>
3. Unfunded Accrued Liability	\$ 136,925,590	\$ 126,517,620
4. Funded Ratio (2 / 1)	14.9%	17.7%



Actuarial Valuations as of June 30, 2023

Actuarial Results - RIJRFT (Contributing, Paygo Judges)

- Pay-as-you-go plan
 - No advanced funding
- Uses a discount rate of 3.86% (3.69% last year)
 - Municipal Bond Rate used because there is no advanced funding

	<u>June 30, 2022</u>	<u>June 30, 2023</u>
1. Accrued Liability	\$ 19,331,534	\$ 18,196,432
2. Market Value of Assets	<u>1,425,241</u>	<u>1,493,278</u>
3. Unfunded Accrued Liability	\$ 17,906,293	\$ 16,703,154
4. Funded Ratio (2 / 1)	7.4%	8.2%

Wrap up and Next Year?

- The current ERSRI funding and benefit policies are proving themselves in real time
- Our strongest recommendation would be to stay the course and let the process continue to work