Commission on Government Forecasting and Accountability

Clayton Klenke, Executive Director · Laurie Eby, Deputy Director

Co-Chairs: Sen. Dave Koehler and Rep. C.D. Davidsmeyer

Senators: Omar Aquino · Win Stoller · Donald DeWitte · Elgie Sims · David Syverson

Representatives: Sonya Harper · Elizabeth Hernandez · Martin McLaughlin · Anna Moeller · Joe Sosnowski

MONTHLY BRIEFING

For the Month Ended: November 2023 (Revised)

PAGE 1: State Retirement Systems Overview

CGFA

COMMISSION ON GOVERNMENT FORECASTING & ACCOUNTABILITY

HTTPS://CGFA.ILGA.GOV/

PHONE: 217/782-5320

SPECIAL PENSION BRIEFING

STATE RETIRMENT SYSTEMS OVERVIEW

Zachary Hollinshead, Pension Analyst

The Commission has reviewed the State-funded retirement systems' FY 2023 preliminary actuarial reports, which were issued prior to November 1st, pursuant to P.A. 97-0694, the State Actuary Law. Under the State Actuary Law, the systems must annually submit a proposed certification for the following fiscal year prior to November 1st of the current calendar year. The State Actuary then must issue a preliminary report concerning the systems' proposed certification by January 1st. The State Actuary's report must identify any recommended changes in actuarial assumptions based upon the review of the retirement systems' actuarial assumptions. Further, the Commission has reviewed the final versions of the systems' FY 2023 actuarial reports and have updated this report accordingly.

Using the actuarial (smoothed) value of assets, the total unfunded liabilities of the State systems totaled $141.4 billion on June 30, 2023, led by the Teachers' Retirement System (TRS), whose unfunded liabilities amounted to $81.9 billion. As the largest of the State systems, TRS accounts for approximately 57.6% of the total assets and 57.8% of the total liabilities of the five State systems combined.

The State Employees' Retirement System (SERS) had unfunded liabilities of $29.8 billion, approximately 21.1% of the total unfunded liabilities of the five systems, followed by the State Universities Retirement System (SURS) with unfunded liabilities of $27.7 billion, which represents 19.6% of the total unfunded liabilities. Table 1 provides a summary of the financial condition of each of the five State retirement systems, showing their respective liabilities and assets as well as their accumulated unfunded liabilities and funded ratios.

TABLE 1

Summary of Financial Condition FY 2023 State Retirement Systems Combined Assets at Actuarial Value / With Asset Smoothing (P.A. 96-0043) ($ in Millions)				
System	Accrued Liability	Actuarial Assets	Unfunded Liability	Funded Ratio
TRS	$148,398.3	$66,502.3	$81,896.0	44.8%
SERS	$53,908.5	$24,072.1	$29,836.4	44.7%
SURS	$51,050.8	$23,381.2	$27,669.5	45.8%
JRS	$3,041.4	$1,357.1	$1,684.3	44.6%
GARS	$365.7	$85.8	$279.9	23.5%
TOTAL	**$256,764.7**	**$115,398.6**	**$141,366.1**	**44.9%**

A more realistic valuation of the true financial position of the State retirement systems would be based upon the market value of the assets, as shown in Table 2 on the following page. Utilizing the market value of assets, the combined unfunded liabilities of the State systems totaled $142.2 billion on June 30, 2023. TRS, whose unfunded liabilities amounted to $81.9 billion, represents approximately 57.6% of the combined total unfunded balance. Table 2 provides a summary of the financial condition of each of the five State retirement systems, showing their respective liabilities and assets as well as their accumulated unfunded liabilities and funded ratios.

TABLE 2

Summary of Financial Condition FY 2023 State Retirement Systems Combined Assets at Market Value / Without Asset Smoothing (P.A. 96-0043) ($ in Millions)				
System	Accrued Liability	Market Assets	Unfunded Liability	Funded Ratio
TRS	$148,398.3	$66,504.7	$81,893.6	44.8%
SERS	$53,908.5	$23,415.4	$30,493.1	43.4%
SURS	$51,050.8	$23,193.2	$27,857.5	45.4%
JRS	$3,041.4	$1,325.9	$1,715.5	43.6%
GARS	$365.7	$83.4	$282.3	22.8%
TOTAL	**$256,764.7**	**$114,522.7**	**$142,242.0**	**44.6%**

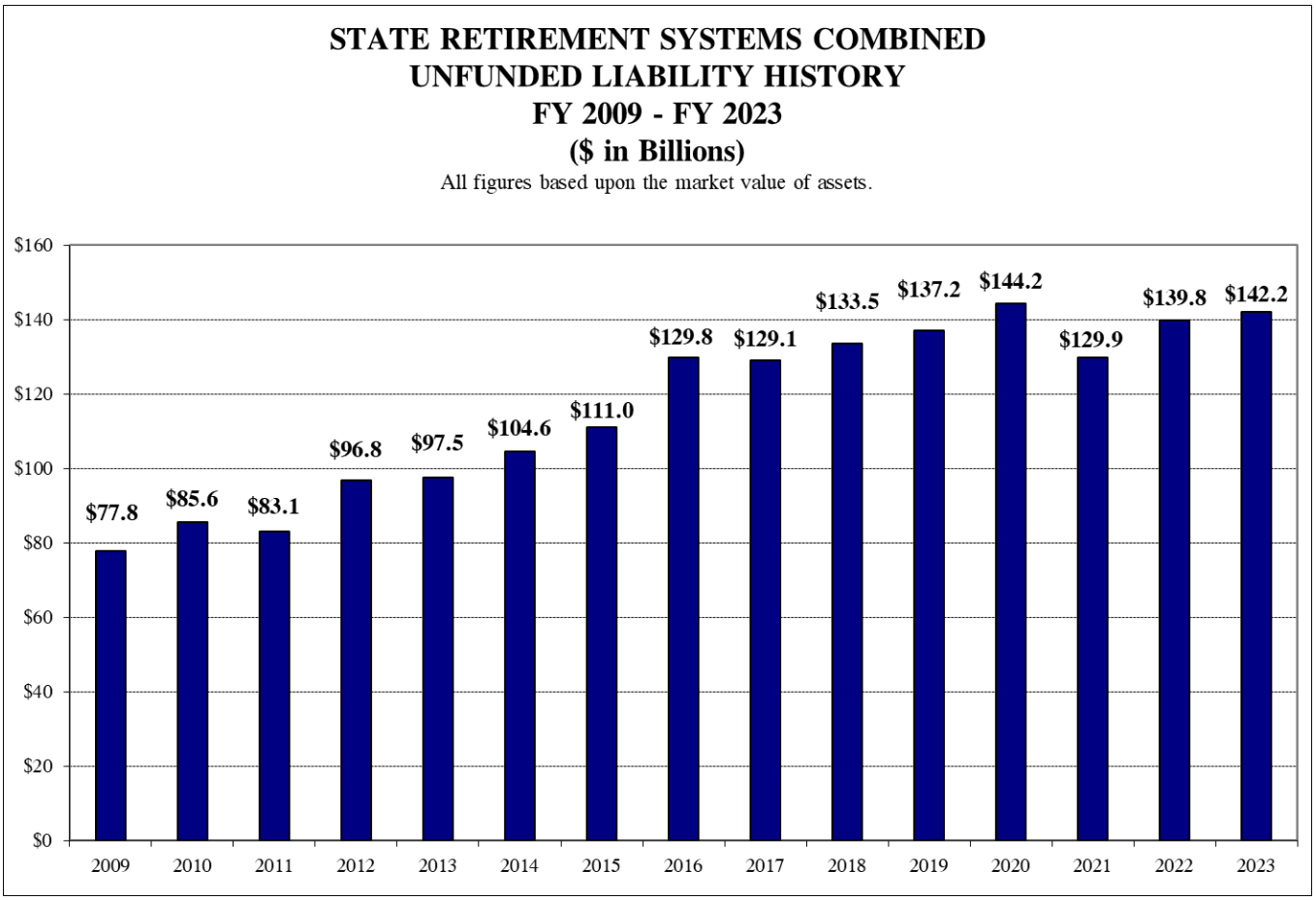
The funded ratios of the respective systems may be compared to the aggregate funded ratio. The combined funded ratios based on the actuarial and market value of assets for FY 2023 were 44.9% and 44.6%, respectively, as shown in Tables 1 and 2 (the 15-year history of the systems' cumulative funded ratio is shown in Chart 6). While the General Assembly Retirement System (GARS) had the poorest funded ratio, the ratios of the other four pension systems ranged between 43% and 46% funded.

Chart 1 on the following page shows a 15-year history of the cumulative unfunded State pension liability and is based upon calculations performed by the retirement systems' actuaries using the *market value* of assets for all years, including FY 2023. Overall, the aggregate unfunded liability has grown significantly over the past 15 years from $77.8 billion in FY 2009 to $142.2 billion in FY 2023.

The primary driver behind the growth in the combined unfunded liability has been actuarially insufficient State contributions determined by the current pension funding policy under P.A. 88-0593. As the actuaries for the State retirement systems have noted in their respective annual actuarial valuation reports, the funding plan under P.A. 88-0593 produces employer (State) contributions that are actuarially insufficient, meaning if all other actuarial assumptions are met, unfunded liabilities will still increase due to the State contributing an amount that is not sufficient to stop the growth in the unfunded liability. Hence, there is a distinction between contributions that are statutorily sufficient and contributions that are considered actuarially sufficient. The annual reports of the State Actuary have noted this distinction as well.

Further details on the main factors affecting the unfunded liability can be found in Charts 4 and 5.

CHART 1



Over the course of the past five years, the cumulative unfunded liability peaked at $144.2 billion in FY 2020, until FY 2021 saw a significant improvement, due in large part to exceptional investment returns. As mentioned above, actuarially insufficient state contributions under the statutory funding plan were the main cause of the upward pressure on the unfunded liability.

In FY 2023 the unfunded liability based upon market value of assets increased by approximately $2.4 billion, a 1.8% increase from the previous year, due mainly to larger than expected salary increases in all five systems. Details on the factors affecting the change in the actuarial unfunded liability in FY 2023 can be found in Chart 4.

CHART 2

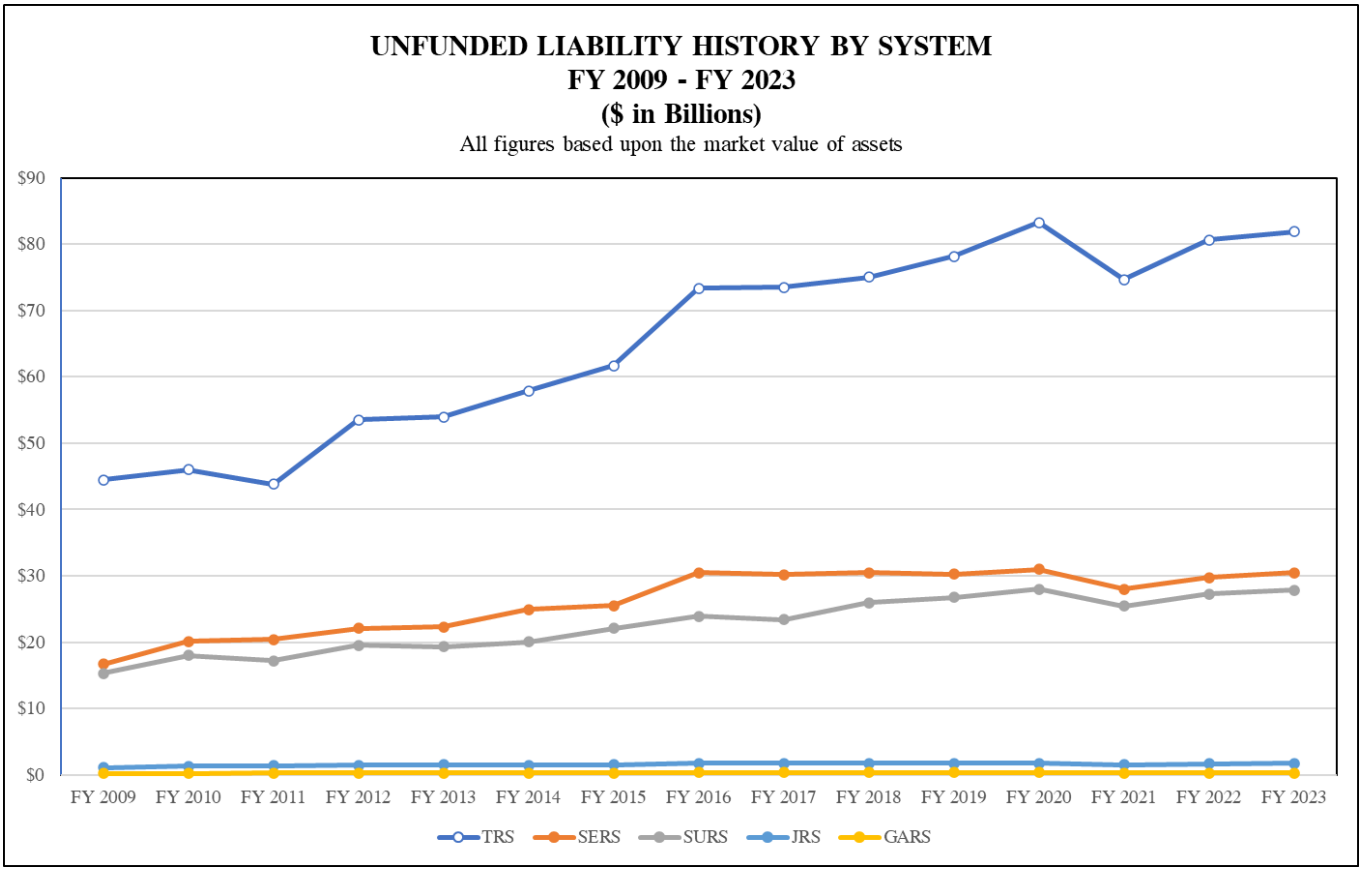


Chart 2 above presents the unfunded liability history of the five systems over the last 15 years but provides a more detailed picture of how the unfunded liability of the respective systems has changed during the same time period. As shown, the three biggest systems, TRS, SERS, and SURS, make up the majority of the aggregate unfunded liability. Due in part to TRS having the largest portfolio of the "Big 3" systems, TRS' changes in unfunded liability tend to be greater in nominal terms than the other Big 3 systems. One of the steepest rises in the TRS trend line can be seen between FY 2008 and FY 2009, which can be explained by unprecedented investment losses that occurred during the Great Recession. TRS was especially hard hit and suffered investment losses of more than 20% in FY 2009. In addition, TRS experienced one of its largest hikes in the unfunded liability in FY 2012 and FY 2016 as TRS reduced its assumed investment rate by 0.5% in each respective year. In FY 2023, TRS' market value unfunded liability increased to $81.9 billion from $80.7 billion in FY 2022, due in large part to greater than assumed salary increases and actuarial programming enhancements (valuation software enhancements). TRS says that actuarial programmatic changes occur annually. This year's most significant change centered around an actuarial assessment of COLA start dates, in an effort to better reflect actual experience vis-à-vis prior assumptions.

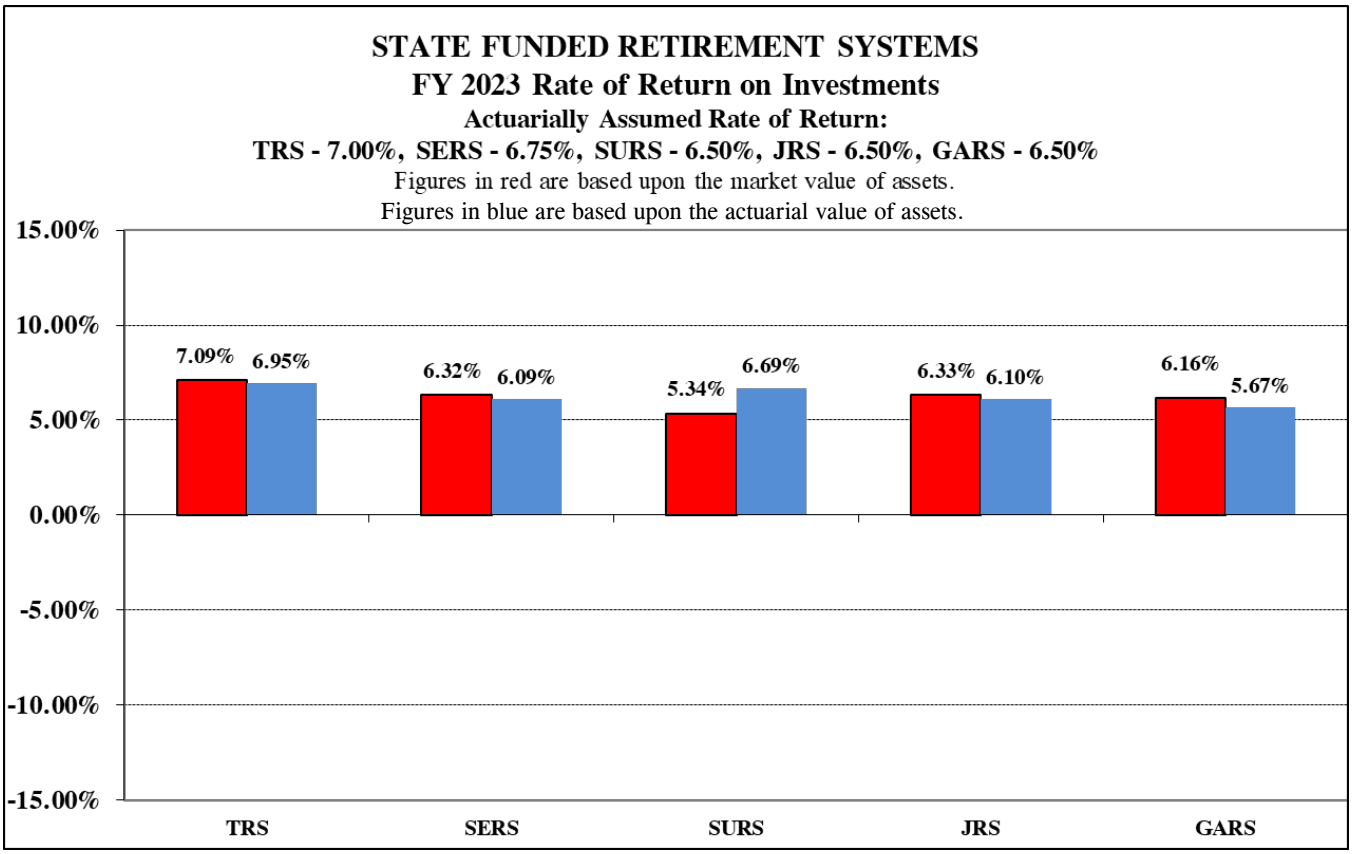
Table 3 on the following page shows the historical changes in the investment return assumptions for each of the five State systems. All five systems left their respective investment return rate assumptions unchanged in FY 2023.

TABLE 3

Historical Change in Investment Rate Assumptions												
System	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
TRS	8.00%		7.50%		7.00%							
SERS	7.75%		7.25%		7.00%			6.75%				
SURS	7.75%		7.25%				6.75%			6.50%		
JARS	7.00%				6.75%			6.50%				
GARS	7.00%				6.75%			6.50%				
NOTE: The years associated with investment rate assumption changes above reflect the actuarial valuation year, not the fiscal year in which the State contribution was calculated using the new rate.												

Chart 3 presents investment returns experienced by each of the systems in FY 2023 based upon both the actuarial (smoothed) value, shown in blue, and market value, depicted in red.

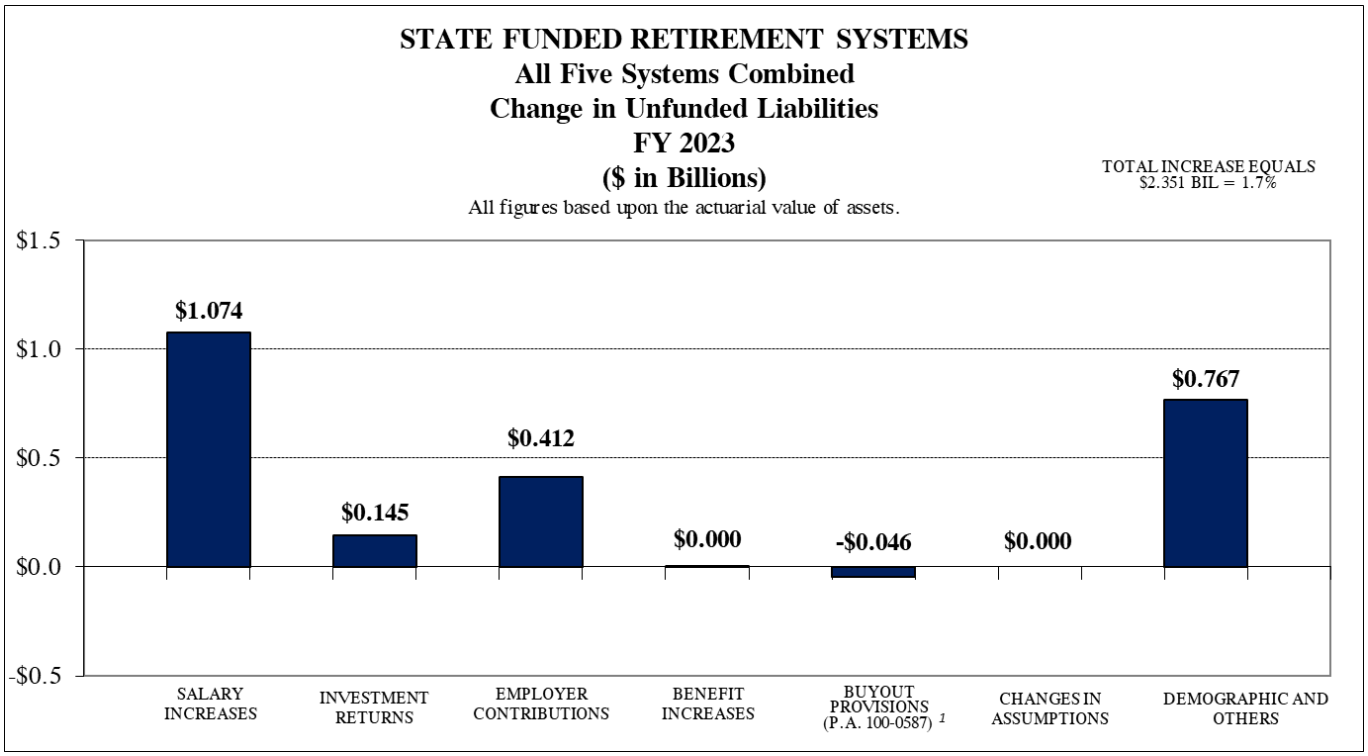
CHART 3



To reduce the impact of volatile investment performance from year to year, asset smoothing was implemented beginning with the FY 2009 actuarial valuation reports of the State systems with the adoption of P.A. 96-0043, which took effect on July 15, 2009. Asset smoothing is a technique that averages the annual fluctuation in investment performance over a period of five years.

Chart 4 on the following page outlines the factors that have caused the unfunded liability to change for FY 2023 only.

CHART 4

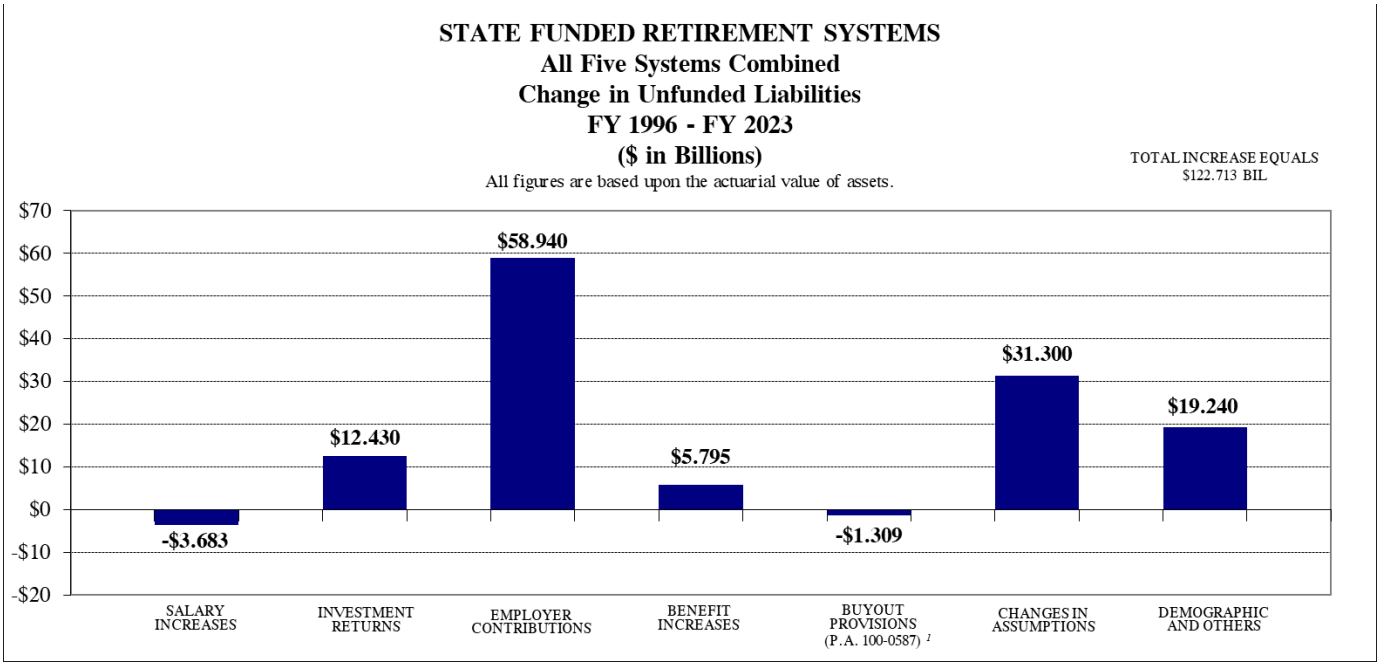


[1] P.A. 100-0587, effective June 4, 2018, created the two voluntary Accelerated Pension Benefit Payment Programs (the pension buyout programs) for TRS, SURS, and SERS. P.A. 101-0010, effective June 5, 2019, extended the buyout programs by 3 more years to June 30th, 2024. P.A. 102-0718, effective May 5, 2022, extended the programs further, until June 30, 2026. While SERS did not report data from the buyout programs, TRS reported an actuarial gain of $35.5 million and SURS reported an actuarial gain of $10.9 million in FY 2023.

As shown in Chart 4, the primary contributor to this increase was due to salary increases for active members and demographic experience losses across all five systems. The unfunded liability increased by a total of $1.074 billion in salary increases for FY 2023, with SERS adding $528.8 million, SURS adding $293.9 million and TRS adding $237.2 million. Demographic and other miscellaneous changes to the five systems increased the collective unfunded liability by $767.6 million, with TRS increased by $486.3 million, SERS adding $182.6 million, and SURS adding $61.5 million. Examples of demographic and other miscellaneous changes include other actuarial experiences such as deviations between actual and expected benefit payments and refunds that were not easily attributable to one of the categories already addressed.

Chart 5 below shows the change in the unfunded liability since the enactment of P.A. 88-0593 in FY 1996, commonly known as the "1995 pension funding law," or "the ramp," which created the 50-year funding policy that governs annual State contributions to the five State systems.

CHART 5



[1] *P.A. 100-0587, effective June 4, 2018, created the two voluntary Accelerated Pension Benefit Payment Programs (the pension buyout programs) for TRS, SERS, and SURS. P.A. 101-0010, effective June 5, 2019, extended the buyout programs by 3 more years to June 30th, 2024. P.A. 102-0718, effective May 5, 2022, extended the programs further, until June 30, 2026.*

From FY 1996 through FY 2023, the unfunded liability increased by $122.7 billion to $142.2 billion. Actuarially insufficient State contributions have contributed the most to the increase in unfunded liability, accounting for approximately 48.0% of the total increase. Actuarial assumption changes caused a $31.30 billion increase, accounting for 25.5% of the total increase. Demographic changes and other factors and investment returns that did not meet assumed rates have augmented the increase in unfunded liability over time.

Chart 6 on the following page shows the systems' funded ratio based on the market value of assets. The funded ratio at any single point in time is less important than the trend over time. While both the unfunded liability (Chart 1) and funded ratio (Chart 6) illustrate the financial condition of the pension systems, the two are negatively correlated by nature—when one rises, the other falls.

CHART 6

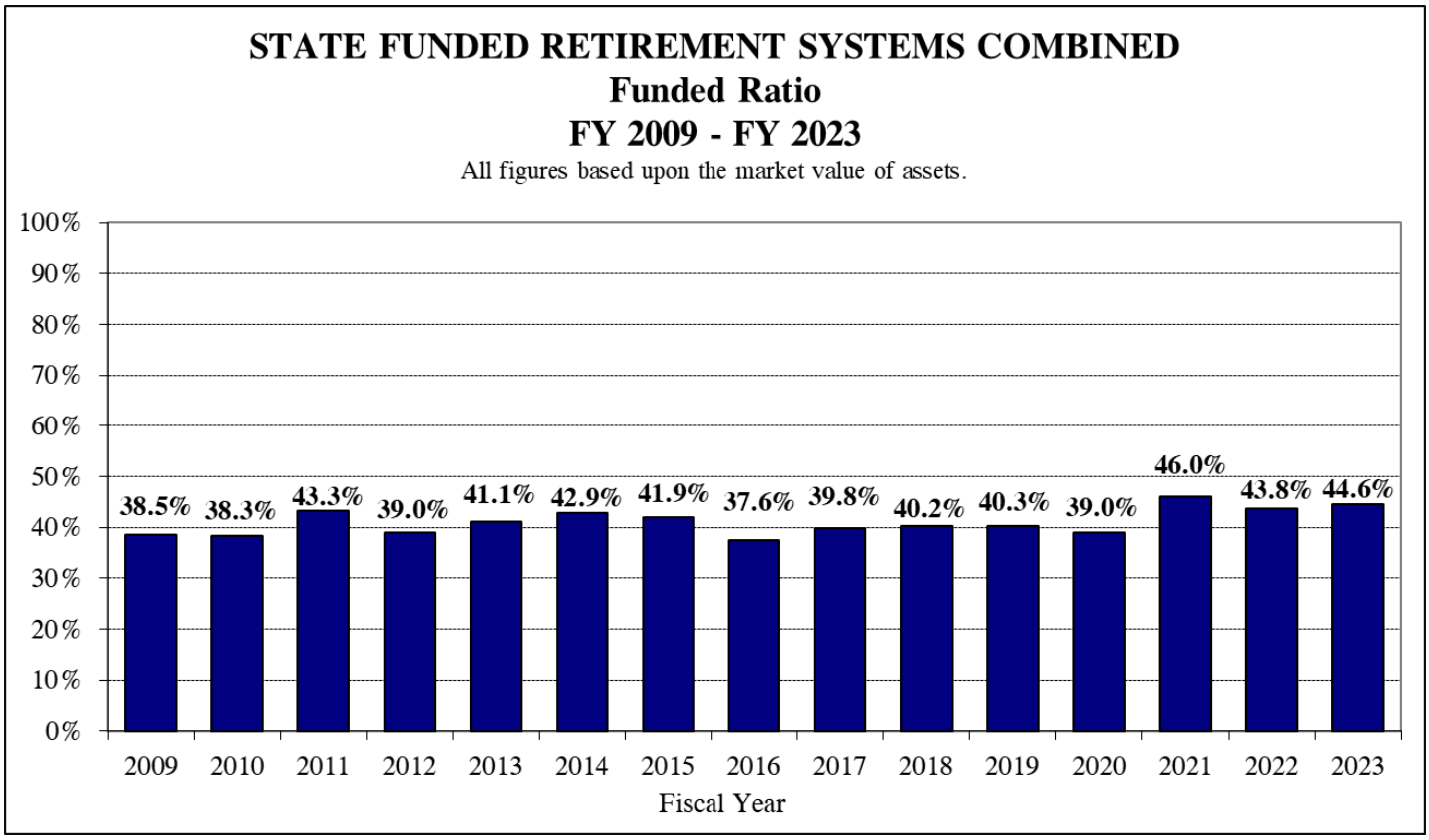


Table 4 on the next page shows the FY 2025 employer normal cost for the five State systems. The normal cost is, in essence, the present value cost of the benefits accrued in a given fiscal year. Put differently, if the respective systems were 100% funded, the State of Illinois would be obligated to pay the employer normal cost only, meaning there would be no amortization payments of the unfunded liability. The FY 2025 employer normal cost accounts for approximately 20% of the preliminarily-certified FY 2025 State contributions to TRS ($1.32 B), SERS ($574.0 M), SURS ($461.1 M), JRS ($27.2 M), and GARS ($1.7 M).

TABLE 4

FY 2025 Employer Normal Cost ($ in Millions)					
TRS	**SERS**	**SURS**	**JRS**	**GARS**	**Total**
$1,323.4	$574.0	$461.1	$27.2	$1.7	$2,387.3

Table 5 compares FY 2025 Actuarially Determined Contributions (ADC) and FY 2025 State contributions under P.A. 88-0593. While the Statutory contributions are determined by the current funding policy under the Illinois Pension Code, ADCs are calculated by each respective systems' actuary pursuant to the Governmental Accounting Standards Board Statements (GASB) 67 and 68. GASB 67 and 68 allow each system to determine their own respective amortization periods.

TABLE 5

Comparision of FY 2025 Actuarially Determined Contribution (ADC) and FY 2025 State Contributions under P.A. 88-0593 ($ in Millions)						
System	**TRS**	**SERS**	**SURS**	**JRS**	**GARS**	**Total**
ADC*	$10,105.9	$3,143.7	$2,617.8	$178.6	$33.8	$16,079.8
State Contributions	$6,203.9	$2,548.0	$2,268.0	$148.9	$26.2	$11,195.0
Difference	$3,902.0	$595.7	$349.8	$29.7	$7.6	$4,884.8

**ADCs under the respective systems' funding policy that meets requirements of GASB Statements 67 and 68 may be calculated differently by each system, i.e., the amortization periods in which the unfunded liability is amortized may differ. For example, TRS uses a closed 20-year period, SERS uses a 25-year closed period, and SURS uses a 30-year closed period.*

Table 6 on the following page shows the FY 2024 State contributions pursuant to P.A. 103-0006 and the FY 2025 estimated State contributions based on the systems' preliminary certification letters for FY 2025. FY 2025 estimated State contributions were certified by the Boards of trustees of the five systems. FY 2024 State contributions to the five systems were $10.94 billion. The FY 2025 State contributions are estimated to be $11.14 billion, an increase of $203.06 million or 1.9% over FY 2024.

TABLE 6

FY 2024 Pension Appropriation by Fund via P.A. 103-0006

($ in Millions)

System	General Funds	Other State Funds	Total
TRS	$6,043.45	$0.00	$6,043.45
SURS	$1,923.33	$215.00	$2,138.33
SERS [1]	$1,731.37	$852.76	$2,584.13
GARS	$26.47	$0.00	$26.47
JRS	$147.84	$0.00	$147.84
Total	**$9,872.46**	**$1,067.76**	**$10,940.22**

FY 2025 Estimated Pension Appropriation by Fund [2]

($ in Millions)

System	General Funds	Other State Funds [3]	Total
TRS	$6,203.92	$0.00	$6,203.92
SURS	$2,001.28	$215.00	$2,216.28
SERS	$1,707.15	$840.83	$2,547.98
GARS	$26.21	$0.00	$26.21
JRS	$148.89	$0.00	$148.89
Total	**$10,087.45**	**$1,055.83**	**$11,143.28**

[1] SERS' FY 2024 appropriation includes a total of $117.1 million in 2003 POB debt service. Of this amount, according to SERS, $77.2 million comes from the General Revenue Fund (GRF) and $39.8 million comes from "Other State Funds." The SERS appropriation breakdown is based upon SERS' assumption that 67% of the SERS appropriation will come from GRF, while 33% will come from "Other State Funds."

[2] This chart is meant to be an estimate only insofar as the FY 2025 appropriation by fund is concerned. Pursuant to P.A. 97-0694, the State Actuary Law, the State Actuary has reviewed the State systems' preliminary FY 2025 certifications and determined them reasonable. Also, pursuant to P.A. 97-0694, the State Actuary is required to conduct a review of the systems' actuarial assumptions/methods that are used to perform actuarial valuations and to determine the State contributions. The State Actuary is required to recommend changes in the assumptions/methods before the State systems finalize certifications of the annual State contributions.

[3] The SURS "Other State Funds" amount assumes that SURS will receive a FY 2025 appropriation from the State Pension Fund in the same amount that SURS is expected to receive from the State Pension Fund in FY 2024. SURS' historical appropriation from the State Pension Fund varies from year to year.

Total FY 2024 Pension Appropriation: $10.94 Billion

Total FY 2025 Pension Appropriation: $11.14 Billion

Total Increase, FY 2024 to FY 2025: $203.06 Million

Total GF Increase, FY 2024 to FY 2025: $214.99 Million

The following pages include pension funding projections for the five State retirement systems based on the respective retirement systems' FY 2023 actuarial valuations. These projections were generated by the retirement systems' respective actuaries.

FUNDING PROJECTIONS FOR THE STATE RETIREMENT SYSTEMS
All Five Systems Combined
Projections Based on the Retirement Systems' FY 2023 Final Actuarial Valuations
($ in Millions)

Fiscal Year	Annual Payroll	Total State Contribution	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2024	$22,822.4	$10,940.2	47.9%	$1,718.2	$262,779.5	$120,881.3	$141,898.2	46.0%
2025	**$23,702.4**	**$11,143.3**	**47.0%**	**$1,785.2**	**$268,663.8**	**$127,364.0**	**$141,299.8**	**47.4%**
2026	$24,297.8	$11,418.3	47.0%	$1,825.8	$274,400.2	$130,675.7	$143,724.5	47.6%
2027	$24,899.5	$11,644.9	46.8%	$1,866.6	$280,109.0	$136,218.0	$143,890.9	48.6%
2028	$25,504.3	$12,063.6	47.3%	$1,907.4	$285,693.2	$142,127.0	$143,566.2	49.7%
2029	$26,091.7	$12,328.6	47.3%	$1,946.9	$291,062.7	$148,157.1	$142,905.6	50.9%
2030	$26,687.4	$12,573.8	47.1%	$1,987.1	$296,199.9	$154,296.5	$141,903.4	52.1%
2031	$27,292.0	$12,899.3	47.3%	$2,027.6	$301,087.9	$160,565.4	$140,522.6	53.3%
2032	$27,903.8	$13,188.9	47.3%	$2,068.8	$305,704.2	$167,008.9	$138,695.3	54.6%
2033	$28,518.8	$13,507.7	47.4%	$2,109.7	$310,025.7	$173,670.7	$136,355.0	56.0%
2034	$29,142.3	$14,660.0	50.3%	$2,150.7	$314,050.6	$181,450.8	$132,599.8	57.8%
2035	$29,771.2	$14,975.2	50.3%	$2,191.8	$317,745.4	$189,553.7	$128,191.7	59.7%
2036	$30,408.5	$15,294.9	50.3%	$2,233.1	$321,096.0	$198,017.0	$123,078.9	61.7%
2037	$31,060.3	$15,622.7	50.3%	$2,275.3	$324,097.6	$206,896.2	$117,201.4	63.8%
2038	$31,733.2	$15,961.1	50.3%	$2,319.0	$326,732.8	$216,240.9	$110,491.9	66.2%
2039	$32,422.3	$16,306.8	50.3%	$2,363.6	$329,090.9	$226,214.3	$102,876.6	68.7%
2040	$33,125.0	$16,660.2	50.3%	$2,408.8	$331,073.6	$236,791.5	$94,282.2	71.5%
2041	$33,858.9	$17,029.4	50.3%	$2,456.4	$332,697.6	$248,072.3	$84,625.3	74.6%
2042	$34,620.7	$17,412.8	50.3%	$2,506.1	$333,985.3	$260,164.2	$73,821.1	77.9%
2043	$35,416.8	$17,813.0	50.3%	$2,558.2	$334,981.4	$273,196.6	$61,784.8	81.6%
2044	$36,253.9	$18,235.9	50.3%	$2,613.7	$335,743.4	$287,324.6	$48,418.8	85.6%
2045	$37,123.2	$18,675.4	50.3%	$2,671.7	$336,332.2	$302,697.9	$33,634.3	90.0%

FUNDING PROJECTIONS FOR THE TEACHERS' RETIREMENT SYSTEM
Projections Based on the Retirement System's FY 2023 Final Actuarial Valuation
Actuarially Assumed Rate of Return: 7.00%
($ in Millions)

Fiscal Year	Annual Payroll	Total State Contribution	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2024	$12,136.0	$6,043.5	49.8%	$1,092.2	$152,470.8	$70,119.6	$82,351.2	46.0%
2025	**$12,798.5**	**$6,203.9**	**48.5%**	**$1,151.9**	**$156,553.9**	**$74,578.0**	**$81,975.9**	**47.6%**
2026	$13,162.8	$6,419.3	48.8%	$1,184.7	$160,640.8	$77,348.0	$83,292.8	48.1%
2027	$13,523.8	$6,578.9	48.6%	$1,217.1	$164,854.9	$81,304.9	$83,550.0	49.3%
2028	$13,878.4	$6,814.8	49.1%	$1,249.1	$169,103.7	$85,530.2	$83,573.4	50.6%
2029	$14,208.4	$6,966.4	49.0%	$1,278.8	$173,301.9	$89,883.9	$83,418.0	51.9%
2030	$14,540.9	$7,107.7	48.9%	$1,308.7	$177,435.1	$94,358.7	$83,076.4	53.2%
2031	$14,872.5	$7,251.6	48.8%	$1,338.5	$181,484.3	$98,956.7	$82,527.6	54.5%
2032	$15,204.7	$7,413.6	48.8%	$1,368.4	$185,428.4	$103,696.6	$81,731.8	55.9%
2033	$15,531.8	$7,590.0	48.9%	$1,397.9	$189,235.1	$108,586.1	$80,649.0	57.4%
2034	$15,857.0	$8,374.1	52.8%	$1,427.1	$192,881.7	$114,258.9	$78,622.8	59.2%
2035	$16,178.4	$8,543.8	52.8%	$1,456.1	$196,343.4	$120,126.6	$76,216.7	61.2%
2036	$16,505.4	$8,716.5	52.8%	$1,485.5	$199,603.2	$126,206.8	$73,396.4	63.2%
2037	$16,839.0	$8,892.7	52.8%	$1,515.5	$202,647.6	$132,522.9	$70,124.6	65.4%
2038	$17,184.2	$9,075.0	52.8%	$1,546.6	$205,451.9	$139,095.5	$66,356.4	67.7%
2039	$17,534.3	$9,259.9	52.8%	$1,578.1	$207,989.6	$145,946.1	$62,043.5	70.2%
2040	$17,887.6	$9,446.4	52.8%	$1,609.9	$210,234.8	$153,097.3	$57,137.5	72.8%
2041	$18,259.2	$9,642.7	52.8%	$1,643.3	$212,180.9	$160,598.7	$51,582.2	75.7%
2042	$18,647.6	$9,847.8	52.8%	$1,678.3	$213,827.9	$168,506.3	$45,321.6	78.8%
2043	$19,058.1	$10,064.6	52.8%	$1,715.2	$215,196.9	$176,897.3	$38,299.5	82.2%
2044	$19,500.7	$10,298.4	52.8%	$1,755.1	$216,326.5	$185,873.2	$30,453.3	85.9%
2045	$19,969.0	$10,545.6	52.8%	$1,797.2	$217,261.7	$195,535.5	$21,726.2	90.0%
2046	$20,475.4	$1,396.8	6.8%	$1,842.8	$218,074.6	$196,267.1	$21,807.5	90.0%

FUNDING PROJECTIONS FOR THE STATE EMPLOYEES' RETIREMENT SYSTEM
Projections Based on the Retirement System's FY 2023 Final Actuarial Valuation
Actuarially Assumed Rate of Return: 6.75%
($ in Millions)

Fiscal Year	Annual Payroll	Total State Contribution	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2024	$5,139.9	$2,584.1	50.3%	$287.0	$55,071.0	$25,206.0	$29,865.0	45.8%
2025	**$5,221.5**	**$2,548.0**	**48.8%**	**$289.5**	**$56,156.0**	**$26,319.0**	**$29,837.0**	**46.9%**
2026	$5,308.7	$2,578.0	48.6%	$292.4	$57,170.0	$26,707.0	$30,463.0	46.7%
2027	$5,396.7	$2,602.0	48.2%	$295.4	$58,104.0	$27,681.0	$30,423.0	47.6%
2028	$5,488.7	$2,680.0	48.8%	$298.5	$58,956.0	$28,689.0	$30,267.0	48.7%
2029	$5,587.3	$2,726.0	48.8%	$302.1	$59,724.0	$29,683.0	$30,041.0	49.7%
2030	$5,690.1	$2,768.0	48.6%	$306.0	$60,411.0	$30,665.0	$29,746.0	50.8%
2031	$5,798.2	$2,814.0	48.5%	$310.4	$61,016.0	$31,642.0	$29,374.0	51.9%
2032	$5,909.3	$2,868.0	48.5%	$314.7	$61,539.0	$32,627.0	$28,912.0	53.0%
2033	$6,023.8	$2,928.0	48.6%	$319.1	$61,984.0	$33,636.0	$28,348.0	54.3%
2034	$6,144.9	$3,194.0	52.0%	$323.7	$62,365.0	$34,901.0	$27,464.0	56.0%
2035	$6,270.1	$3,259.0	52.0%	$328.4	$62,670.0	$36,225.0	$26,445.0	57.8%
2036	$6,397.0	$3,325.0	52.0%	$333.1	$62,901.0	$37,618.0	$25,283.0	59.8%
2037	$6,529.1	$3,394.0	52.0%	$337.9	$63,063.0	$39,097.0	$23,966.0	62.0%
2038	$6,667.3	$3,466.0	52.0%	$343.2	$63,163.0	$40,680.0	$22,483.0	64.4%
2039	$6,810.7	$3,540.0	52.0%	$348.6	$63,208.0	$42,387.0	$20,821.0	67.1%
2040	$6,960.7	$3,618.0	52.0%	$354.3	$63,207.0	$44,240.0	$18,967.0	70.0%
2041	$7,117.7	$3,700.0	52.0%	$360.4	$63,170.0	$46,263.0	$16,907.0	73.2%
2042	$7,281.2	$3,785.0	52.0%	$366.9	$63,107.0	$48,482.0	$14,625.0	76.8%
2043	$7,451.9	$3,873.0	52.0%	$373.6	$63,029.0	$50,922.0	$12,107.0	80.8%
2044	$7,628.5	$3,965.0	52.0%	$380.5	$62,944.0	$53,611.0	$9,333.0	85.2%
2045	$7,808.6	$4,059.0	52.0%	$387.8	$62,859.0	$56,572.0	$6,287.0	90.0%

FUNDING PROJECTIONS FOR THE STATE UNIVERSITIES RETIREMENT SYSTEM
Projections Based on the Retirement System's FY 2023 Final Actuarial Valuation
Actuarially Assumed Rate of Return: 6.50%
($ in Millions)

Fiscal Year	Annual Payroll*	Total State Contribution**	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2024	$5,382.1	$2,138.3	39.7%	$323.5	$51,806.6	$24,070.4	$27,736.2	46.5%
2025	**$5,515.2**	**$2,216.3**	**40.2%**	**$327.9**	**$52,506.3**	**$24,938.2**	**$27,568.2**	**47.5%**
2026	$5,658.8	$2,246.5	39.7%	$332.6	$53,133.5	$25,097.1	$28,036.4	47.2%
2027	$5,810.8	$2,290.3	39.4%	$338.1	$53,695.2	$25,682.7	$28,012.5	47.8%
2028	$5,968.4	$2,393.1	40.1%	$344.2	$54,187.9	$26,335.5	$27,852.4	48.6%
2029	$6,126.0	$2,460.3	40.2%	$350.2	$54,608.8	$27,000.1	$27,608.7	49.4%
2030	$6,285.1	$2,522.3	40.1%	$356.4	$54,951.3	$27,669.5	$27,281.7	50.4%
2031	$6,448.4	$2,657.7	41.2%	$362.7	$55,217.7	$28,354.0	$26,863.7	51.3%
2032	$6,615.2	$2,730.2	41.3%	$369.1	$55,406.8	$29,065.7	$26,341.1	52.5%
2033	$6,786.8	$2,810.5	41.4%	$375.6	$55,522.2	$29,821.9	$25,700.3	53.7%
2034	$6,961.7	$2,904.8	41.7%	$382.3	$55,570.7	$30,650.6	$24,920.1	55.2%
2035	$7,141.6	$2,982.8	41.8%	$389.0	$55,554.8	$31,545.7	$24,009.1	56.8%
2036	$7,322.3	$3,061.2	41.8%	$395.8	$55,474.2	$32,515.9	$22,958.3	58.6%
2037	$7,505.4	$3,140.7	41.8%	$402.6	$55,332.4	$33,574.7	$21,757.7	60.7%
2038	$7,691.9	$3,221.7	41.9%	$409.4	$55,128.9	$34,732.3	$20,396.6	63.0%
2039	$7,884.0	$3,305.1	41.9%	$416.5	$54,971.5	$36,108.1	$18,863.4	65.7%
2040	$8,079.9	$3,390.2	42.0%	$423.7	$54,777.9	$37,631.3	$17,146.7	68.7%
2041	$8,281.5	$3,477.7	42.0%	$431.2	$54,560.2	$39,326.2	$15,234.0	72.1%
2042	$8,487.5	$3,566.9	42.0%	$438.9	$54,330.3	$41,216.8	$13,113.5	75.9%
2043	$8,698.4	$3,658.3	42.1%	$446.9	$54,100.1	$43,328.4	$10,771.7	80.1%
2044	$8,911.9	$3,750.8	42.1%	$455.0	$53,879.3	$45,684.5	$8,194.8	84.8%
2045	$9,128.5	$3,844.6	42.1%	$463.0	$53,676.8	$48,309.1	$5,367.7	90.0%

* The Self-Manged Plan (SMP) has been renamed the Retirement Savings Plan (RSP), effective September 1, 2020. Payroll projections include RSP payroll. 45% of academic and 25% of non-academic new SURS members are assumed to enter RSP.

** Includes RSP Contributions, but does not include Excess Benefit Arrangement (EBA) contributions.

FUNDING PROJECTIONS FOR THE JUDGES' RETIREMENT SYSTEM
Projections Based on the Retirement System's FY 2023 Final Actuarial Valuation
Actuarially Assumed Rate of Return: 6.50%
($ in Millions)

Fiscal Year	Annual Payroll	Total State Contribution	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2024	$154.6	$147.8	95.6%	$14.3	$3,068.8	$1,396.1	$1,672.7	45.5%
2025	**$155.3**	**$148.9**	**95.9%**	**$14.5**	**$3,088.9**	**$1,435.8**	**$1,653.1**	**46.5%**
2026	$155.8	$148.9	95.6%	$14.7	$3,101.5	$1,429.7	$1,671.8	46.1%
2027	$156.7	$148.9	95.0%	$14.6	$3,105.3	$1,453.1	$1,652.2	46.8%
2028	$157.5	$151.4	96.1%	$14.4	$3,101.7	$1,474.2	$1,627.4	47.5%
2029	$158.8	$152.0	95.7%	$14.5	$3,090.1	$1,490.9	$1,599.2	48.2%
2030	$160.2	$152.4	95.1%	$14.8	$3,071.3	$1,503.4	$1,567.9	49.0%
2031	$161.8	$153.0	94.6%	$14.8	$3,045.6	$1,512.2	$1,533.4	49.7%
2032	$163.6	$154.4	94.4%	$15.3	$3,013.0	$1,518.8	$1,494.2	50.4%
2033	$165.4	$156.5	94.6%	$15.9	$2,974.9	$1,525.0	$1,449.9	51.3%
2034	$167.7	$163.4	97.5%	$16.4	$2,931.5	$1,536.6	$1,394.9	52.4%
2035	$170.1	$165.8	97.5%	$17.0	$2,883.8	$1,550.3	$1,333.5	53.8%
2036	$172.9	$168.5	97.5%	$17.5	$2,832.2	$1,567.1	$1,265.1	55.3%
2037	$175.7	$171.3	97.5%	$18.0	$2,777.4	$1,588.2	$1,189.3	57.2%
2038	$178.8	$174.3	97.5%	$18.6	$2,720.2	$1,614.8	$1,105.3	59.4%
2039	$182.0	$177.4	97.5%	$19.1	$2,661.2	$1,648.6	$1,012.6	61.9%
2040	$185.5	$180.8	97.5%	$19.6	$2,601.4	$1,690.9	$910.5	65.0%
2041	$189.1	$184.3	97.5%	$20.1	$2,541.8	$1,743.5	$798.3	68.6%
2042	$192.9	$188.0	97.5%	$20.7	$2,483.0	$1,807.8	$675.2	72.8%
2043	$196.8	$191.8	97.5%	$21.2	$2,425.8	$1,885.5	$540.3	77.7%
2044	$200.9	$195.8	97.5%	$21.7	$2,370.9	$1,978.0	$392.9	83.4%
2045	$205.1	$199.9	97.5%	$22.3	$2,318.7	$2,086.8	$231.8	90.0%

FUNDING PROJECTIONS FOR THE GENERAL ASSEMBLY RETIREMENT SYSTEM
Projections Based on the Retirement System's FY 2023 Final Actuarial Valuation
Actuarially Assumed Rate of Return: 6.50%
($ in Millions)

Fiscal Year	Annual Payroll	Total State Contribution	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2024	$9.9	$26.5	267.7%	$1.1	$362.3	$89.2	$273.1	24.6%
2025	**$11.9**	**$26.2**	**220.4%**	**$1.4**	**$358.7**	**$93.0**	**$265.7**	**25.9%**
2026	$11.7	$25.5	218.4%	$1.3	$354.4	$94.0	$260.5	26.5%
2027	$11.5	$24.9	216.0%	$1.3	$349.5	$96.3	$253.3	27.5%
2028	$11.4	$24.4	214.0%	$1.3	$344.0	$98.0	$246.0	28.5%
2029	$11.2	$23.8	212.2%	$1.3	$337.8	$99.1	$238.8	29.3%
2030	$11.2	$23.4	209.9%	$1.3	$331.2	$99.9	$231.4	30.1%
2031	$11.1	$23.0	207.9%	$1.3	$324.3	$100.4	$223.9	31.0%
2032	$11.0	$22.7	206.7%	$1.3	$317.1	$100.9	$216.2	31.8%
2033	$11.0	$22.8	207.0%	$1.3	$309.5	$101.7	$207.8	32.9%
2034	$10.9	$23.7	216.9%	$1.3	$301.6	$103.6	$198.0	34.4%
2035	$10.9	$23.7	217.0%	$1.3	$293.6	$106.1	$187.4	36.2%
2036	$11.0	$23.8	217.0%	$1.3	$285.4	$109.3	$176.1	38.3%
2037	$11.1	$24.1	216.8%	$1.3	$277.1	$113.4	$163.8	40.9%
2038	$11.0	$24.1	219.0%	$1.3	$268.8	$118.3	$150.6	44.0%
2039	$11.3	$24.4	216.9%	$1.3	$260.7	$124.5	$136.2	47.8%
2040	$11.4	$24.7	216.9%	$1.3	$252.5	$132.0	$120.5	52.3%
2041	$11.4	$24.7	216.9%	$1.3	$244.6	$140.8	$103.9	57.5%
2042	$11.5	$25.0	216.9%	$1.3	$237.0	$151.2	$85.8	63.8%
2043	$11.7	$25.3	216.9%	$1.3	$229.6	$163.4	$66.3	71.1%
2044	$12.0	$26.0	217.0%	$1.4	$222.7	$177.9	$44.8	79.9%
2045	$12.1	$26.3	216.8%	$1.4	$216.0	$194.4	$21.6	90.0%