State Employees' Retirement System of Illinois

Annual Actuarial Valuation
as of June 30, 2024

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December 27, 2024

Board of Trustees
State Employees' Retirement System of Illinois
Springfield, Illinois

Re: State Employees' Retirement System of Illinois Actuarial Valuation as of June 30, 2024

Dear Board Members:

The results of the June 30, 2024, Annual Actuarial Valuation of the State Employees' Retirement System of Illinois ("SERS" or "System") are presented in this report. The purposes of the actuarial valuation are to measure the System's funding status and to determine the State's contribution rate for the fiscal year beginning July 1, 2025, and ending June 30, 2026. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with benefits described in this report for purposes other than those identified above, may be significantly different.

Gabriel, Roeder, Smith & Company ("GRS") has prepared this report exclusively for the Trustees of the State Employees' Retirement System of Illinois; GRS is not responsible for reliance upon this report by any other party. This report may be provided to parties other than SERS only in its entirety and only with the permission of the Trustees.

The State's contribution rate has been determined under Illinois statutes, in particular under 40 ILCS Section 5/14-131. Information required by GASB Statement Nos. 67 and 68 are provided in a separate report. The System's current contribution rate determined under the statutory funding policy may not conform to the Actuarial Standards of Practice. Therefore, the Board adopted an actuarial funding policy to be used to calculate the Actuarially Determined Contribution ("ADC") under GASB Statement Nos. 67 and 68 for financial reporting purposes.

Although the statutory contribution requirements were met, the statutory funding method generates a contribution requirement that is less than a reasonable actuarially determined contribution. Meeting the statutory requirement does not mean that the undersigned agree that adequate actuarial funding has been achieved. We recommend the adherence to a funding policy, such as the Board policy used to calculate the ADC under GASB Statement Nos. 67 and 68 that funds the normal cost of the plan, as well as an amortization payment that seeks to pay off any unfunded accrued liability over a closed-period of 25 years.

The contribution requirement in this report is determined using the actuarial assumptions and methods disclosed in Section E of this report. This report includes risk metrics beginning on page 16, but does not include a more robust assessment of the risks if future experience deviates from the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

This actuarial valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The findings in this report are based on data and other information through June 30, 2024. This actuarial valuation was based upon information furnished by SERS staff, concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees, and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by SERS staff.

This report was prepared using actuarial assumptions adopted by the Board as authorized under the Illinois Pension Code. The actuarial assumptions used for the June 30, 2024, actuarial valuation are based on a full experience review for the three-year period ended June 30, 2021. Pursuant to Public Act 99-0232, SERS is required to conduct an actuarial experience review once every three years. All actuarial assumptions used in this report are reasonable for the purposes of this actuarial valuation. The combined effect of the assumptions, excluding prescribed assumptions or methods set by law, is expected to have no significant bias (i.e. not significantly optimistic or pessimistic). All actuarial assumptions and methods used in the valuation follow the guidance in the applicable Actuarial Standards of Practice. Additional information about the actuarial assumptions is included in Section E of this report entitled "Actuarial Methods and Assumptions."

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

Public Act 100-0023, effective July 6, 2017, modified the State's funding policy beginning with fiscal year 2018, by phasing in contribution rate variances due to changes in actuarial assumptions over a five-year period. Additionally, Public Act 100-0023 created a new benefit plan option (Optional Hybrid Plan – "Tier 3") for certain current and future active members not covered by Social Security. The State's contribution requirements provided in this report are determined in accordance with Public Act 100-0023.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the SERS as of the actuarial valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

Alex Rivera, Heidi G. Barry, and Jeffrey T. Tebeau are Members of the American Academy of Actuaries and are independent of the plan sponsor and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions herein.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation and Report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,
Gabriel, Roeder, Smith & Company

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SECTION A

SUMMARY OF ACTUARIAL VALUATION RESULTS

Summary of the Actuarial Valuation Results

Introduction

The law governing the State Employees' Retirement System of Illinois ("SERS" or "System") requires the Actuary, as the technical advisor to the Board of Trustees to:

> "...make an annual valuation of the liabilities and reserves of the System, make an annual determination of the amount of contributions required from the State under this Article, and certify the results thereof to the board. (40 ILCS Section 5/14 - 138(c))."

Gabriel, Roeder, Smith & Company has been retained by the Board of Trustees to perform an actuarial valuation as of June 30, 2024. In this report, we present the results of the actuarial valuation and the appropriation requirements under Public Act 88-0593, Public Act 93-0002, Public Act 93-0839, Public Act 94-0004, Public Act 96-0043, and Public Act 100-0023 for the fiscal year ending June 30, 2026.

The actuarial valuation was completed based upon membership and financial data provided by the administrative staff of the System. The actuarial assumptions used for the June 30, 2024, actuarial valuation are based on a full experience review for the three-year period ended June 30, 2021. The cost method used to determine the benefit liabilities for statutory funding is the Projected Unit Credit Cost Method. For actuarial valuation purposes, as well as projection purposes, the actuarial value of assets is based on a five-year smoothing method.

Changes since the Last Actuarial Valuation

Recent Legislative Changes

The following recently passed Public Acts impact SERS as follows:

Public Act ("P.A.") 100-0023, effective July 6, 2017, modified the State's funding policy and created a new tier of benefits for certain current and future active members not covered by Social Security. The State's funding policy was amended to include smoothing State contribution rate increases or decreases due to changes in actuarial assumptions, including investment return assumptions, over a five-year period in equal annual amounts beginning in fiscal year 2018. In addition, changes in actuarial or investment assumptions that increased or decreased the State contribution rate in fiscal years 2014 through 2017 are to be smoothed over a five-year period in equal annual amounts, applying only to the portion of the five-year phase-in that is applicable to fiscal years on and after 2018. The fiscal year 2018 State contribution was recertified, pursuant to P.A. 100-0023.

P.A. 100-0023 created a Hybrid ("Tier 3") plan comprised of a defined benefit plan and a defined contribution plan to serve as an optional plan in lieu of the traditional Tier 2 defined benefit plan for current and future Tier 2 active members not covered by Social Security. The Tier 3 plan was made available to applicable members beginning in fiscal year 2020. The election process for current Tier 2 members will be developed by the System.

Public Act 100-0587, effective June 4, 2018, created two voluntary buyout programs (Accelerated Pension Benefit Payment Program) for eligible members beginning on the implementation date and ending on June 1, 2021. The two accelerated pension benefit payment options offered include: (1) for

vested inactive members, a payment equal to 60 percent of the present value of the member's pension benefit in lieu of receiving any pension benefit, and (2) for active Tier 1 members eligible for retirement, a payment equal to 70% of the difference between: (i) the present value of the automatic annual increases (AAI) to a Tier 1 member's retirement annuity under the current AAI provisions and (ii) the present value of the automatic annual increases to the Tier 1 member's retirement annuity under revised AAI provisions. The fiscal year 2024 State contribution rate was certified as 52.657% of payroll.

P.A. 101-0010 extended the Accelerated Pension Benefit Program from June 1, 2021 to June 1, 2024. The actuarial liability as of June 30, 2019, decreased by $241 million due to P.A. 100-0587 and $164 million due to P.A. 101-0010.

Under P.A. 101-0610, effective January 1, 2020, certain Tier 2 employees are eligible for coverage under the Tier 2 alternative formula plan, prospectively. Furthermore, these employees may convert up to eight (8) years of prior regular formula service to alternate formula service provided that the employee pays the difference between the employee contributions at the regular formula rate and employee contributions at the alternative formula rate, plus interest. Positions eligible under this act are Conservation Police Officers, Secretary of State Investigators, Commerce Commission Police Officers, Gaming Board Investigators, Dept of Revenue Investigators, and Arson Investigators subject to the Tier 2 plan. The actuarial liability as of June 30, 2021 increased by $2.5 million due to P.A. 101-0610.

P.A. 102-0718 extended the Accelerated Pension Benefit Program from June 1, 2024 to June 30, 2026. The actuarial liability as of June 30, 2022, decreased by $176 million due to P.A. 102-0718.

A summary of the SERS plan provisions is included in Section F of this report.

Actuarial Assumptions and Methods

The actuarial valuation results summarized in this report involve actuarial calculations that require assumptions about future events. Most of the actuarial assumptions used for the June 30, 2024, actuarial valuation are based on a full experience review for the three-year period ended June 30, 2021.

There have been changes to the actuarial assumptions and methods since the June 30, 2023, actuarial valuation. The assumptions for members electing a forfeiture of benefits under the Accelerated Pension Payment Program were updated based on analysis provided by the System as of June 2024. Under the Accelerated Pension Benefit Payment Program, eligible Alternative formula members assumed to elect the "COLA Buyout" was increased from 42 percent to 45 percent for members not covered by Social Security and increased from 38 percent to 40 percent for those covered by Social Security. Inactive members assumed to elect the "Total Buyout" was increased from 2 percent to 3 percent. The actuarial liability as of June 30, 2024, decreased by $21 million and the fiscal year 2026 statutory contribution rate decreased by 0.011% of pay due to the assumption changes.

Pursuant to Public Act 99-0232, SERS is required to conduct an actuarial experience review once every three years. Under this schedule, an experience review for the period from July 1, 2021 through

June 30, 2024, will be performed after completion of the June 30, 2024, actuarial valuation with expected implementation of the recommended assumptions beginning with the June 30, 2025, actuarial valuation.

Tier 3 Participation Assumptions for Funding Projections

As of June 30, 2024, the System has approximately 1,200 Tier 2 active members not covered by Social Security who may irrevocably elect the Tier 3 plan. Given the uncertainty of the election behavior and small population size of this group, we have assumed these members would remain in Tier 2. We will review emerging experience for future Tier 3 members in subsequent actuarial valuations and if necessary, will provide recommended assumptions.

In order to determine the State's contribution rate, open-group projections through fiscal year 2045 are performed. The open group includes current and future plan members. The active member population is assumed to remain level at its current state of 65,508 members over the 21-year projection period. Currently, there are approximately 2,500 active members not covered by Social Security. As these members leave the active population, they are assumed to be replaced by new entrants at the rate necessary to keep the population constant at 2,500 members. Future members of this group may elect to participate in either the Tier 2 or Tier 3 benefit plan. Given the uncertainty of Tier 3 participation, we have assumed all future members not covered by Social Security would participate in Tier 2.

Actuarial Valuation Results

The table on the following page provides a summary of the key actuarial valuation results for the current and prior plan years.

The statutory contribution rate and actuarially determined contribution (ADC) rate for fiscal year 2025 of 48.798 percent and 60.207 percent, respectively, were developed in the actuarial valuation as of June 30, 2023. The updated annual contribution amounts for fiscal year 2025 reflect updated projected capped payroll which increased from $5,221,481,386 in the 2023 valuation to $5,765,643,442 in the 2024 valuation and was primarily due to an increased in active plan members from 61,651 to 65,508.

It should be noted that, although the statutory contribution requirements are fulfilled, the statutory funding method generates a contribution requirement that is less than a reasonable actuarially determined contribution. Meeting the statutory requirement does not necessarily mean that adequate actuarial funding has been achieved. The current statutory policy tends to back-load and defer contributions, and therefore we advise strengthening the current statutory funding policy. Please see pages 11 through 14 for additional details and suggestions for strengthening the statutory funding policy.

Summary of the Actuarial Valuation Results

The following is a summary of the key actuarial valuation results for the current and prior plan years.

Actuarial Valuation Date:	June 30, 2024	June 30, 2023
Fiscal Year Ending:	**June 30, 2026**	**June 30, 2025**
Estimated Statutory Contributions:		
· Annual Amount[a]	$ 2,597,558,000	$ 2,813,519,000
· Percentage of Projected Capped Payroll for Fiscal Year	44.310%	48.798%
Actuarially Determined Contribution[b] (ADC):		
· Annual Amount[a]	$ 3,293,438,275	$ 3,471,324,137
· Percentage of Projected Capped Payroll for Fiscal Year	56.181%	60.207%
Membership		
· Number of		
- Active Members	65,508	61,651
- Inactives - Eligible for Deferred Vested Benefit	3,675	3,835
- Inactives - Eligible for Return of Contributions	31,736	29,134
- Members Receiving Payments	78,797	78,036
- Members Eligible for Deferred Benefits	153	153
- Total	179,869	172,809
· Covered Payroll Provided by the System	$ 5,641,862,499	$ 5,050,981,721
· Projected Capped Payroll for Fiscal Year[c]	$ 5,862,239,215	$ 5,765,643,442
· Annualized Benefit Payments	$ 3,284,418,398	$ 3,157,609,557
Assets		
· Market Value of Assets (MVA)	$ 25,396,815,011	$ 23,415,388,105
· Actuarial Value of Assets (AVA)	$ 25,528,760,746	$ 24,072,128,842
· Return on MVA	9.37%	6.32%
· Return on AVA	6.64%	6.09%
· Ratio – AVA to MVA	100.52%	102.80%
Actuarial Information		
· Employer Normal Cost Amount	$ 597,555,989	$ 582,583,985
· Actuarial Accrued Liability (AAL)	$ 55,696,890,736	$ 53,908,518,691
· Unfunded Actuarial Accrued Liability (UAAL)	$ 30,168,129,990	$ 29,836,389,849
· Funded Ratio based on AVA	45.84%	44.65%
· UAAL as % of Covered Payroll Provided by the System	534.72%	590.70%
· Funded Ratio based on MVA	45.60%	43.44%

[a] *The amounts for the estimated statutory contribution and ADC for fiscal years 2025 and 2026 are based on projected capped payrolls for fiscal years 2025 and 2026, respectively, using June 30, 2024, census data.*

[b] *For fiscal years ending on and after June 30, 2017, the Board adopted a recommended policy used to develop the Actuarially Determined Contribution (ADC) as defined in GASB Statement Nos. 67 and 68. The policy adopted by the Board calculates the ADC as the Normal Cost plus a 25-year level percent of capped payroll closed-period amortization of the Unfunded Accrued Liability. As of June 30, 2024, applicable for fiscal year 2026, the remaining amortization period is 16 years. The ADC is used for financial reporting purposes only.*

[c] *Based on June 30, 2024, census data.*

Appropriation Requirements under P.A. 88-0593, P.A. 93-0002, P.A. 93-0839, P.A. 94-0004, P.A. 96-0043, and P.A. 100-0023

The law governing the System under P.A. 88-0593 provides that:

For fiscal years 2011 through 2045, the minimum contribution to the System for each fiscal year shall be an amount determined to be sufficient to cause the total assets of the System to equal 90 percent of the total actuarial liabilities of the System by the end of fiscal year 2045. In making these determinations, the required contribution shall be calculated each year as a level-percentage-of-payroll over the years remaining to and including fiscal year 2045 and shall be determined under the projected unit credit actuarial cost method. For fiscal years 1997 through 2010, the minimum contribution to the System, as a percentage of the payroll, shall be increased in equal annual increments so that by fiscal year 2010, the contribution rate is at the same level as the contribution rate for fiscal years 2011 through 2045.

The above calculation provides the basis for calculating the appropriation requirements under P.A. 93-0002. For fiscal years 2005 and later, the contributions under P.A. 93-0002 start with a calculation of the contribution based upon the hypothetical asset value which assumes no infusion from the proceeds of the General Obligation Bond ("GOB") sale that were deposited July 1, 2003 (Table 4a). This contribution is then reduced by the debt service beginning in fiscal year 2005 to produce the maximum contribution. For fiscal years 2006 and 2007, the maximum contribution is equal to the contribution amounts stated in P.A. 94-0004 for each respective year. The contribution amounts stated in P.A. 94-0004 are $203,783,900 for fiscal year 2006 and $344,164,400 for fiscal year 2007. A second projection is performed to develop the P.A. 88-0593 formula rate, which includes the GOB deposit. The lower of this formula rate with the GOB assets included and the maximum contribution is the required state appropriation (Table 4b).

Pursuant to Public Act 96-0043, $723,703,100 of the total required State contribution for fiscal year 2010 will be paid from the proceeds of a GOB sale.

Pursuant to Public Act 96-0043, for the calculation of the fiscal year 2011 contribution and beyond, the value of the System's assets shall be equal to the actuarial value of the System's assets. As of June 30, 2008, the actuarial value of the System's assets shall be equal to the market value of the assets as of that date. In determining the actuarial value of the System's assets for fiscal years after June 30, 2008, any actuarial gains or losses from investment return incurred in a fiscal year shall be recognized in equal annual amounts over the five-year period following that fiscal year. Furthermore, for purposes of determining the required State contribution to the System for a particular year, the projected actuarial value of assets shall be assumed to earn a rate of return equal to the System's actuarially assumed rate of return.

Public Act ("P.A.") 100-0023, effective July 6, 2017, modified the State's funding policy to include smoothing State contribution rate increases or decreases due to changes in actuarial assumptions, including investment return assumptions, over a five-year period in equal annual amounts beginning in fiscal year 2018. In addition, changes in actuarial or investment assumptions that increased or decreased the State contribution rate in fiscal years 2014 through 2017 are to be smoothed over a five-year period in equal annual amounts, applying only to the portion of the five-year phase-in that is applicable to fiscal years on and after 2018. The development of the contribution rate phase-in schedule that applies to State contribution rates determined on and after fiscal year 2018 is provided on page 57.

Development of the Actuarial Value of Assets Based upon the Market Value of Assets

The following tables outline the reconciliation of the market value of assets and the development of the hypothetical asset value as of June 30, 2024. Also, the tables show the development of the actuarial value of assets under both the market value and the hypothetical value of assets.

1.	Market Value of Assets 6/30/2023	$ 23,415,388,105
2.	Market Value Adjustment	(62,710,369)
3.	Market Value of Assets 6/30/2023 - Adjusted	23,352,677,736
4.	Actual State Contribution Amount[a]	2,840,015,050
5.	Employee Contribution Amount	323,158,400
6	Benefit Payouts and Refunds	(3,279,350,692)
7.	Administrative Expenses	(20,317,592)
8.	Investment Income	2,180,632,109
9.	Market Value of Assets 6/30/2024	$ 25,396,815,011
10.	Expected Investment Return at 6.75%	1,571,774,267
11.	Investment Gain/(Loss) Current Year	608,857,842
12.	Deferred Investment Gains and (Losses) All Years	(131,945,735)
13.	Actuarial Value of Assets 6/30/2024 (9. - 12.)	$ 25,528,760,746

[a] *The fiscal year 2024 State contribution rate is 50.276% without debt service and 52.657 percent with debt service.*

Development of the Actuarial Value of Assets Based upon the Hypothetical Value of Assets

The hypothetical asset value assumes no infusion from the proceeds of the GOB sale that were deposited July 1, 2003.

1.	Hypothetical Value of Assets 6/30/2023	$ 21,953,888,591
2.	State Contribution Amount[a]	3,019,073,461
3.	Employee Contribution Amount	323,158,400
4.	Benefit Payouts and Refunds	(3,279,350,692)
5.	Administrative Expenses	(20,317,592)
6.	Investment Income[b]	2,059,028,821
7.	Hypothetical Value of Assets 6/30/2024	$ 24,055,480,989
8.	Expected Investment Return at 6.75%	1,483,300,545
9.	Investment Gain/(Loss) Current Year	575,728,276
10.	Deferred Investment Gains and (Losses) All Years	(117,944,300)
11.	Hypothetical Actuarial Value of Assets 6/30/2024 (7. - 10.)	$ 24,173,425,289

[a] *Represents 53.512 percent of covered payroll provided by the System for the basic contribution. This rate was determined as part of the June 30, 2022 actuarial valuation, and is based upon the hypothetical asset value which assumes no infusion from the proceeds of the GOB sale that were deposited July 1, 2003.*

[b] *Investment income assumes hypothetical value of assets earns the Fund's actual rate of return for fiscal year 2024 of 9.37 percent.*

The development of the actuarial smoothed value of assets with GOB proceeds and the hypothetical smoothed value of assets without GOB proceeds are provided in each respective historical actuarial valuation report since the GOB proceeds were deposited into the trust.

State Contribution Requirement for Fiscal Year 2026

The fiscal years ending June 30, 2025, and June 30, 2026, certified contribution requirements and projected future year required State contribution rates and amounts, assuming deferred investments gains and losses are recognized in the assets, are as follow:

Fiscal Year Ending June 30,	Base Contribution	Debt Service Contribution	Total Contribution	Assumed Payroll (Billions)	Total Required Contribution	Total Required Contribution Including Debt Service
2025	**48.798%**	**2.382%**	**51.180%**	**$5.766**	**$2,813,519,000**	**$2,950,856,000**
2026	**44.310%**	**2.176%**	**46.486%**	**5.862**	**2,597,558,000**	**2,725,121,000**
2027	43.748%	2.188%	45.936%	5.963	2,608,555,000	2,739,018,000
2028	44.074%	2.250%	46.324%	6.065	2,672,911,000	2,809,365,000
2029	43.836%	2.300%	46.136%	6.173	2,705,956,000	2,847,933,000
2030	43.522%	2.393%	45.915%	6.286	2,735,687,000	2,886,105,000
2031	43.418%	2.469%	45.887%	6.404	2,780,393,000	2,938,502,000
2032	43.407%	2.477%	45.884%	6.525	2,832,477,000	2,994,111,000
2033	43.480%	2.423%	45.903%	6.650	2,891,375,000	3,052,502,000
2034	46.719%	0.000%	46.719%	6.781	3,167,961,000	3,167,961,000

Assumed projected payroll is based on census data as of June 30, 2024.

For fiscal years 2026 through 2033, the base contribution is limited by the maximum contribution determined under the assumption that the proceeds of the GOB sale were not deposited; therefore, the contribution rate is not level as a percent of pay.

Pursuant to Public Act 96-0043, the fiscal year 2026 contribution rate is calculated assuming the actuarial value of assets as of July 1, 2024, earns a rate of return equal to the System's actuarially assumed rate of return. Pursuant to Public Act 100-0023, contribution rates for fiscal years 2025 through 2030 include smoothing of contribution rate variances due to changes in actuarial assumptions.

The contributions for fiscal years 2027 and beyond, as presented above, are developed in Tables 4c and 4d in this report. In those projections, the actuarial valuations as of June 30 for years 2025 through 2028 have been projected as though an actuarial valuation in each of those years was performed. At each projected actuarial valuation, an additional 20 percent of the investment gains and losses are recognized. The market value of assets at June 30, 2024, is assumed to earn a rate of return equal to the actuarial valuation interest rate going forward. Therefore, the actuarial value of assets is calculated by adjusting the market value at each respective actuarial valuation date by the remaining percentage of the investment gains and losses. The actuarial value of assets converges to market value in 2028, when all remaining investment gains and losses have been recognized. Because the deferred asset gains and losses are incorporated into the projections, the projections found in Tables 4c and 4d do not show a stable contribution rate until the impact of the five-year asset smoothing has been fully realized.

Method of Calculation for Appropriation Requirements

The results are based on the projected unit credit actuarial cost method, the data provided, and assumptions used for the June 30, 2024, actuarial valuation. In order to determine projected contribution rates and amounts, the following additional assumptions were used:

- Projected annualized payroll of $5,765,600,000 for fiscal year 2025.
- Total employer contributions of $2,813,519,000 (including no payments from the unclaimed property fund) for fiscal year 2025.
- Administrative expenses of $23,672,615 for fiscal year 2025, as provided by the System.
- New entrants whose average age is 36.48 and average pay is $65,026 (2024 dollars). These values are based on the average age and average pay of new entrants over the last 15 years.
- The active member population is assumed to remain level at 65,508 for all years of the 21-year projection.
- Current and future members not covered by Social Security are assumed to participate in Tier 2.
- Projected benefits for members hired on or after January 1, 2011, are based on the provisions established in P.A. 96-0889.

The average increase in total uncapped payroll for the 21-year projection period is approximately 2.75 percent per year. It is important to note that benefits for new hires are based on capped payroll which is ultimately projected to grow at 1.125 percent per year. All results in this actuarial valuation assume that State contributions will be made on capped pay.

Method of Calculation for Appropriation Requirements

To determine the contribution rates, the expected 2025 appropriation was converted to a percentage of the expected 2025 payroll. An amortization schedule was then determined on the assumption that:

- The ratio of total assets to total actuarial liabilities will be 90 percent by June 30, 2045.
- The actuarial value of assets shall be assumed to earn a rate of return equal to the System's actuarially assumed rate of return.
- The contribution rates for fiscal years 2010 through 2033 will not be uniform, but the rate for any one of these years will be the minimum of the difference between the "without-GOB" contribution and the debt service, and the underlying formula rate as determined by Public Act 88-0593.
- The contribution rate for fiscal year 2025 will be 48.798 percent based on the certification of the June 30, 2023, actuarial valuation results issued December 22, 2023.
- The contribution rates for fiscal years 2034 through 2045 will be a uniform percentage of capped payroll.
- The contribution rates for fiscal years 2025 through 2030 are reduced or increased according to the phase-in schedule provided on page 57.

Finally, the certified fiscal year 2026 contribution rate of 44.310 percent is applied to actual fiscal year 2026 capped payroll.

Observations on Actuarial Funding and Statutory Funding

GASB Statement Nos. 25, 27, 67, and 68 provide guidance for retirement plans and plan sponsors on the development of an annual expense requirement to be reported in their annual financial statements. Under the prior rules established by GASB Statement Nos. 25 and 27, this expense requirement is based on the Annual Required Contribution ("ARC"). The ARC is the sum of the normal cost and amortization of the unfunded accrued liability and represents the annual employer contributions that are projected to finance benefits for current plan members over a period not to exceed 30 years.

GASB Statement Nos. 67 and 68, which replaced GASB Statement Nos. 25 and 27, no longer use the ARC. However, measuring the Statutory Contribution against a policy such as the ARC helps evaluate the funding adequacy of the current statutory funding method. Thus, the Board adopted a policy to calculate the Actuarially Determined Contribution ("ADC"). Under this policy, the ADC is calculated as the Normal Cost plus a 25-year level percent of capped payroll closed-period amortization, as of June 30, 2015, of the Unfunded Accrued Liability.

The ADC for fiscal years 2025 and 2026, as well as the statutory contribution for fiscal years 2025 and 2026, are shown below as a percentage of projected capped payroll. The ADC and statutory contribution rates for 2025 are based on the results of the June 30, 2023, actuarial valuation. The dollar contributions for 2025 reflect updated payroll based on the 2024 valuation. The dollar amount of the ADC for 2025 and 2026 and the statutory contribution for 2025 and 2026 will be the product of the actual payroll for 2025 and 2026 and the percentages shown.

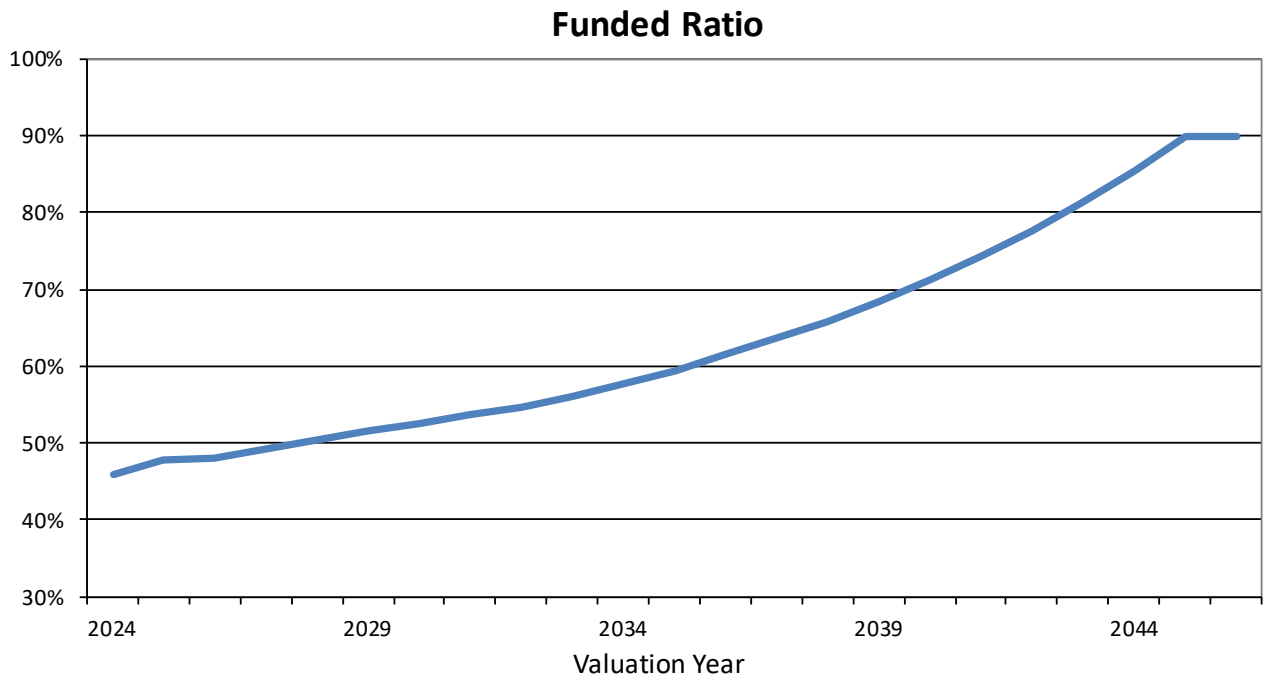
Actuarial Valuation Date:	June 30, 2024	June 30, 2023
Actuarially Determined Contributions for Fiscal Year Ending:	**June 30, 2026**	**June 30, 2025**
1. Employer normal cost	$ 597,555,989	$ 643,298,575
2. Initial Amount to amortize the unfunded liability over a 25-year closed-period, beginning July 1, 2015, as a level percentage of capped payroll	2,695,882,286	2,828,025,562
3. ADC [(1) + (2)]	$ 3,293,438,275	$ 3,471,324,137
4. Projected capped payroll for fiscal year[a]	$ 5,862,239,215	$ 5,765,643,442
5. ADC as a percentage of projected capped payroll	56.181%	60.207%
6. Estimated statutory contribution	$ 2,597,558,000	$2,813,519,000
7. Estimated statutory contribution as a percentage of projected capped payroll	44.310%	48.798%
8. Estimated statutory contribution as a percentage of ADC [(6) / (3)]	78.871%	81.050%

[a] *Projected capped payroll for each fiscal year is based on census data as of June 30, 2024.*

A key objective of the ADC is to accrue costs over the working lifetime of plan members to ensure that benefit obligations are satisfied, and intergenerational equity is promoted. Although the ADC is solely an accounting provision, in certain circumstances it could represent a reasonable annual funding target and, therefore, is used by some plan sponsors as their "de facto" funding requirement. Given there is no requirement that the accounting provision for pension expense must equal the annual funding requirement, some plan sponsors adopt funding policies that differ from the ADC. However, a funding policy that differs significantly from the ADC approach could result in a potential "back-loading,"

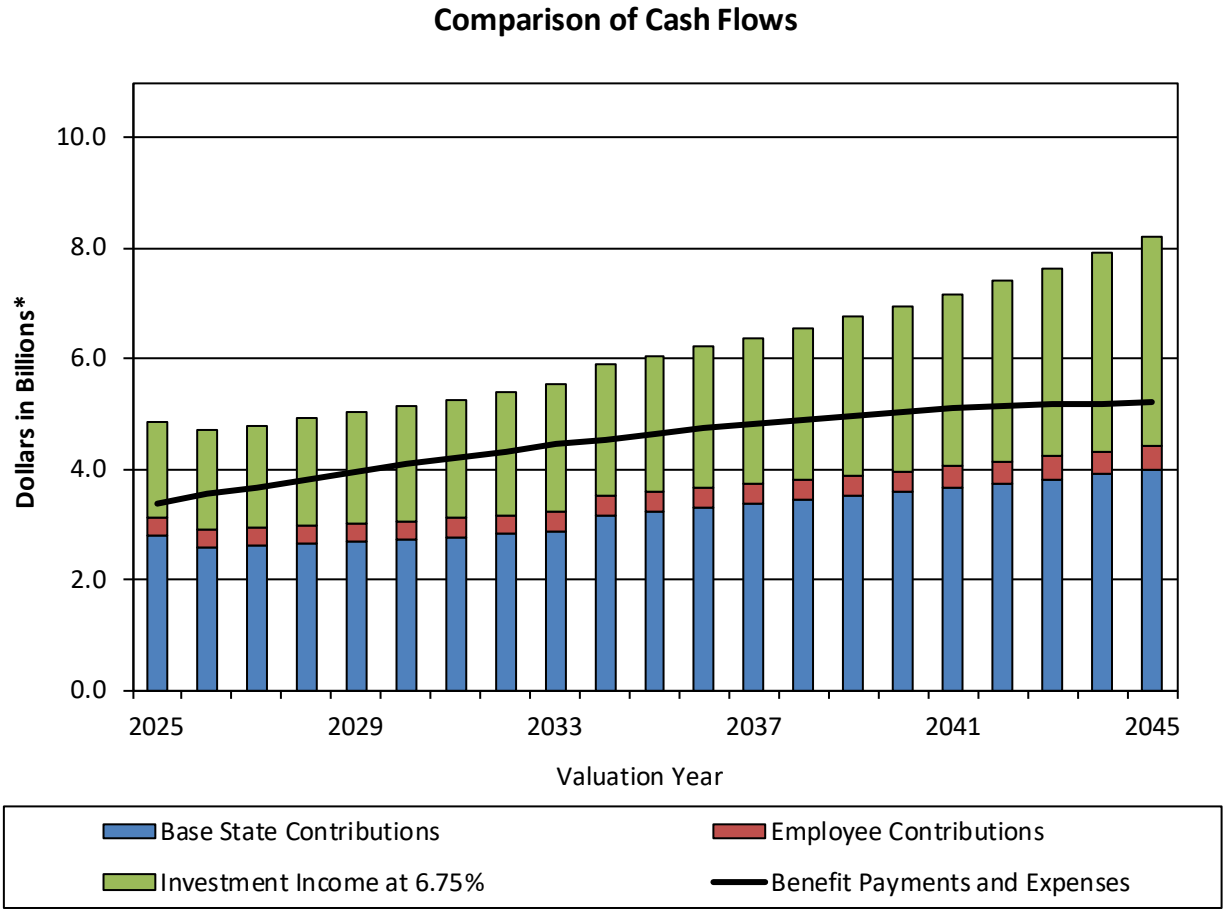
meaning contributions are deferred into the future. Back-loading could result in an underfunding of the System.

The statutory funding policy adopted for SERS provides for level percent of pay funding that produces a funding target of 90 percent by 2045, assuming an open group projection. The following graph shows the projected funded ratio. A key observation is that the funded ratio does not grow markedly until after 2033. That is, a majority of the funding occurs between 2034 and 2045. This illustrates how significantly the current funding policy defers or back-loads contributions into the future.



Observations on Actuarial Funding and Statutory Funding

The following graph compares the projected benefits and expenses against employer contributions, employee contributions, and investment income. Benefits and expenses will continue to exceed State and employee contributions through 2045. From 2025 to 2033, the percentage of investment income needed to pay ongoing benefits increases from approximately 15.4 percent to 52.6 percent. This implies that a lower level of investment income is projected to be available for potential asset growth. After 2033, the percentage of investment income needed to pay ongoing benefits is projected to decrease from approximately 43.5 percent in 2034 to 21.1 percent in 2045, which is projected to cause assets to grow at a faster rate.



* *Future dollar amounts are based on assumed inflationary increases.*

The provisions of P.A. 96-0043 develop a theoretical value of assets that do not recognize deferred investment gains and losses in the projection of assets used to develop the statutory contribution. This policy tends to defer contributions when plan assets experience a loss.

Given that the SERS funded ratio as of June 30, 2024, is only 46 percent on a market value of assets basis, and because the current statutory policy tends to back-load and defer contributions, we advise strengthening the current statutory funding policy. The Board has taken steps to strengthen the current statutory funding policy by adopting a lower assumed rate of return and more conservative

assumptions. Examples of other methods to strengthen the current funding policy include:

1. Increasing the 90 percent funding target to 100 percent;
2. Reducing the projection period needed to reach the funding target;
3. Eliminating the maximum contribution cap; and
4. Changing the actuarial cost method for calculating liabilities from the Projected Unit Credit cost method to the Entry Age Normal cost method.

The statutory contribution policy could also be strengthened by changing to an ADC based funding approach with an appropriate amortization policy for each respective tiered benefit structure.

At the April 21, 2015, Board meeting, the Board adopted a policy, for purposes of financial reporting under GASB Statement Nos. 67 and 68, which provides for the annual payment of SERS' normal cost and amortizing the unfunded liability over a 25-year closed-period, beginning July 1, 2015, as a level percent of capped payroll.

Number of Projected Future Active Members

The statutory contribution is based on performing an open group projection through the year 2045. The projection is based on assuming that new active members are hired to replace the current members who leave active membership (through termination, retirement, or death). In general, the number of active members declined slightly between 2014 and 2023. The number of active members increased significantly between 2023 and 2024 marking a reversal in the slight downward trend observed in the 9 preceding years.

Currently, the actuarial valuation assumes that the total number of active members in the future will be equal to the number active in the current actuarial valuation. We recommend to continue to assume that the total number of active members remains constant in future years. If a general trend in active membership arises, up or down, the Board may wish to consider an update to the population projection assumption to reflect an increasing or decreasing population in the near term before reaching an equilibrium in the long term.

Active Membership				
Fiscal Year Ending June 30,	Total	Annual Change in Membership	% Annual Change in Membership	Covered Payroll ($ in Millions)
2014	62,844			$4,416.15
2015	63,273	429	0.68%	4,453.68
2016	61,317	(1,956)	-3.09%	4,284.36
2017	60,612	(705)	-1.15%	4,195.78
2018	61,397	785	1.30%	4,243.74
2019	62,026	629	1.02%	4,601.38
2020	62,621	595	0.96%	4,523.88
2021	62,253	(368)	-0.59%	4,705.25
2022	61,056	(1,197)	-1.92%	4,820.28
2023	61,651	595	0.97%	5,050.98
2024	65,508	3,857	6.26%	5,641.86
Total Change		**2,664**	**0.44%**	

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected Plan Contributions and Funded Status

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 6.75 percent on the actuarial value of assets), it is expected that:

1. The State contribution rate will be level as a percentage of payroll beginning in 2033 through 2045 (after all deferred asset gains and losses are fully recognized);
2. The unfunded liability decreases in dollar amount through 2045 before it begins to increase;
3. The unfunded actuarial accrued liabilities will never be fully amortized; and
4. The funded status of the plan will increase gradually towards a 90 percent funded ratio in 2045.

Limitations of Funded Status Measurements

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

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

Limitation of Project Scope

Actuarial standards do not require the actuary to evaluate the ability of the plan sponsor or other contributing entity to make required contributions to the plan when due. Such an evaluation was not within the scope of this project and is not within the actuary's domain of expertise. Consequently, the actuary performed no such evaluation.

Risk Associated with Measuring the Accrued Liability and Contributions

The determination of the accrued liability and the statutory contribution requires the use of actuarial assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the actuarial assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the total required employer contribution that result from the differences between actual experience and the actuarial assumptions.

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 due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Fund's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the Fund's future financial condition include:

1. **Investment Risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability Mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. **Contribution Risk** – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the Fund's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. **Salary and Payroll Risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. **Longevity Risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
6. **Other Demographic Risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The statutory contribution for fiscal year 2026 shown on page 8 should be considered as the minimum contribution that complies with the funding policy governed by State statute. The timely receipt of the statutory contribution is critical to support the financial health of the System. Users of this report should be aware that contributions made at the statutorily determined amount do not necessarily guarantee benefit security.

Risk Associated with Measuring the Accrued Liability and Contributions

The statutory funding policy provides for a projected funded ratio target of 90 percent at plan year end 2045. Employer contributions are based on a level percentage of projected payroll. This policy spreads investment and demographic gains over the entire projection period. Consequently, statutory contributions depend primarily on the assumptions and methods used to project assets and open group liabilities. The System funded ratio is only 46 percent as of June 30, 2024. For fiscal year 2026, the statutory contribution rate is 44.3 percent of payroll and the pro forma actuarial determined contribution rate is 56.2 percent of payroll.

Section J of the report identifies and discusses the key risks facing the System and contains stress and sensitivity analysis of those key risks.

Risk Associated with Measuring the Accrued Liability and Contributions

Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

Valuation Year	Ratio of the Market Value of Assets to Covered Payroll	Ratio of Actuarial Accrued Liability to Covered Payroll	Ratio of Unfunded Accrued Liability to Covered Payroll	Funded Ratio Market Value Basis
2017	3.94	11.13	7.19	35.40%
2018	4.12	11.29	7.18	36.44%
2019	4.02	10.59	6.57	37.95%
2020	4.24	11.08	6.84	38.27%
2021	5.06	11.02	5.95	45.97%
2022	4.62	10.80	6.18	42.79%
2023	4.64	10.67	6.04	43.44%
2024	4.50	9.87	5.37	45.60%

Valuation Year	Ratio of Actives to Retirees and Beneficiaries	Ratio of Retiree Accrued Liability to Total Accrued Liability	Approximate Duration of Actuarial Accrued Liability	Ratio of Net Cash Flow to Market Value of Assets	Ratio Benefits and Expenses to Contributions
2017	0.84	68.37%	12.7	-1.94%	1.16
2018	0.84	70.05%	12.5	-1.85%	1.15
2019	0.83	70.74%	12.3	-0.49%	1.04
2020	0.83	71.34%	12.3	-0.65%	1.05
2021	0.82	71.41%	12.4	-0.54%	1.05
2022	0.79	73.27%	11.7	-0.37%	1.03
2023	0.79	73.66%	11.7	-0.89%	1.07
2024	0.83	73.53%	11.6	-0.54%	1.04

Ratio of Market Value of Assets to Payroll

For funding policies that are based on actuarially determined contributions, which are expressed as a percentage of payroll, the ratio of market value of assets to payroll may provide an indicator of the sensitivity in contribution rates due to recent investment experience. However, this sensitivity indicator generally depends on the relative level of liabilities and the funded ratio of the plan.

For example, better funded plans will have lower contribution rates when compared to worst funded plans. However, investment loss will generally have a greater impact on the contribution rates of better funded plans when compared to worst funded plans.

Consequently, as assets increase and the funding ratio improves, investment experience will generally have a greater marginal impact on contribution rates, even though contribution rates may be decreasing.

Risk Associated with Measuring the Accrued Liability and Contributions

Ratio of Actuarial Accrued Liability to Payroll

The ratio of actuarial liability to payroll may indicate the maturity of a plan. For example, a closed plan comprised primarily of retired members will generally have a high ratio of liability to payroll. However, for open plans it is important to also measure the unfunded liability relative to payroll.

Ratio of Unfunded Actuarial Liability to Payroll

Plans with high unfunded liabilities relative to payroll could result in unsustainable contribution rates even though the plan is open. This may indicate the need to express contributions in terms of a dollar amount instead of as a percentage of payroll. It may also indicate the need to strengthen the funding policy, for example by amortizing unfunded liabilities on a level dollar instead of a level percentage of pay basis or by reducing the amortization period. The ratio of unfunded actuarial liability to payroll has decreased from 7.19 to 5.37 which indicates some progress towards financing the unfunded actuarial liability.

A decrease in the ratio of unfunded liability to payroll is an indicator that the System is making some progress towards funding the program; however, it could still produce an increasing unfunded liability. This is typical of systems that have backloaded funding policies. As shown in Section B Table 4d, the projected unfunded actuarial liability decreases from $29.76 billion in 2025, to $28.00 billion in 2033. During this period, a moderate portion of the existing unfunded liability at 2025 is funded by 2033.

Funded Ratio

The ratio of actuarial accrued liability to market value of assets provides another metric of progress towards funding. The System has experienced a positive trend in the funded ratio. The funded ratio has increased from 35.4 percent in 2017 to 45.6 percent in 2024. However, over the statutory projection period, the funded ratio increases at a very slow rate, from 46 percent in 2024, to 53 percent in 2030, to 71 percent in 2040, and to 90 percent in 2045. Consequently, most of the growth in the funded ratio occurs during the last ten years of the projection period. See Section B Table 4d for additional details on the statutory funded projections.

Ratio of Active to Retired Members

A newly established plan, that does not grant past service credits, will have a high ratio of active to retired members. As the plan matures the ratio approaches 1.0. A very mature plan may have more retired members relative to active members which produce a ratio under 1.0. Very mature plans that have not been adequately funded could produce intergenerational inequities.

The System's ratio of active to retired members has ranged from 0.79 (2022 and 2023) to 0.84 (2017 and 2018) during the past eight years. However, this ratio does not consider that the System is providing a different level of benefits to Tier 1 and Tier 2 members.

Risk Associated with Measuring the Accrued Liability and Contributions

Ratio of Retiree Actuarial Accrued Liability to Total Actuarial Accrued Liability

The ratio of retiree actuarial accrued liability to total actuarial accrued liability also provides a measure of the maturity of the plan relative to the level of plan benefits that have been earned to date. This ratio has increased from 68 percent in 2017 to 73 percent for 2024. An increasing ratio could indicate a maturing plan. Some of the reasons for this trend include changes in assumptions, the relative level of Tier 1 to Tier 2 benefits, and the ratio of retired to active members.

As the program matures, it is important to consider the matching of assets to liabilities to ensure intergenerational equity. For example, retiree liabilities that have not been pre-funded during the working lifetime of the retired member could produce intergenerational inequities.

Duration of Actuarial Accrued Liability

The duration of the actuarial accrued liability may be used to approximate the sensitivity of a one percentage point change in the assumed discount rate. For example, a duration of 10 indicates that the liability could increase by approximately 10 percent if the assumed discount rate was lowered by one percentage point. The duration for active member liabilities is generally higher when compared to the duration for retired members. Consequently, a lower duration generally indicates a greater proportion of retired member liability. Changes to the discount rate assumption could also cause the duration factor to change. For the System, the duration factors have decreased from 12.7 in 2017 to 11.6 in 2024, which suggests a maturing group. Other factors such as emerging experience or changes in assumptions could also impact the year-to-year change in duration.

Percentage of Net Cash Flow to Market Value of Assets, and Ratio of Benefit Payments and Expenses to Contributions

Net cash flow is defined as the difference between total contributions, and benefits and expenses made during the plan year. If benefits and expenses are greater than contributions, a portion of either investment return or principal will be used to pay benefits and expenses during the year. A negative percentage means a decrease in assets, whereas a positive ratio means an increase in assets.

For underfunded plans, it is preferable for this ratio to be positive. This would imply that investment income is maintained in the trust, which helps the growth in assets. For the System, the percentage has ranged from -1.94 percent to -0.37 percent during the last eight years.

For sufficiently well-funded plans, it is appropriate for a portion of investment income to be used to pay benefits. In this case, a negative ratio means that assets have grown to a reasonably sufficient level and can be used to pay benefits.

The ratio of benefit payments and expenses to contributions is closely related to the percentage of net cash flows to the market value of assets. For underfunded plans, it is preferable for contributions to exceed benefit payments, which implies a ratio less than 1.0. During the last eight years the ratio has ranged from 1.16 to 1.03.

Risk Associated with Measuring the Accrued Liability and Contributions

Additional Risk Assessment

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability. At the Board's request, we conducted additional risk assessment of investment, and contribution risk through sensitivity and stress testing the investment return assumption, future active population growth and changes in the wage inflation assumption. Please see Section J for additional details.

Low-Default-Risk Obligation Measure

Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the "Low-Default-Risk Obligation Measure" (LDROM).

What is the LDROM?

The LDROM is a particular measure of the benefits earned (or costs accrued if appropriate under the actuarial cost method used for this purpose) as of the measurement date.

How is the LDROM Calculated?

The LDROM is calculated using an immediate gain actuarial cost method, one in which gains and losses become part of the unfunded actuarial accrued liabilities. Examples would be Entry Age Normal Cost, Projected Unit Credit, and Traditional Unit Credit. It is based upon a discount rate or discount rates 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.

What Does the LDROM Tell Me?

The LDROM gives an approximate measure of the cost as of the measurement date of securing benefits by constructing a hypothetical Low Default Risk Bond portfolio whose cash flows match the pattern of benefits expected to be paid in the future. The LDROM is very dependent upon market interest rates at the time of the LDROM measurement. The lower the market interest rates, the higher the LDROM, and vice versa.

Is the LDROM the "right" liability that should be reported?

No single number, including the LDROM, can provide all of the information necessary to understand the financial condition of a pension plan. The rationale that the ASB cited for the calculation and disclosure of the LDROM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

> The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan**. The calculation and disclosure of this additional measure is **not intended to suggest that this is the "right" liability measure** for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan's funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.**

Comparing the Accrued Liabilities and the LDROM

The LDROM results presented in this report are based on the Projected Unit Credit (PUC) actuarial cost method and discount rates based upon the June 2024 (end of month) FTSE Pension Discount Curve (PDC). The PDC is calculated based on a universe of AA rated corporate bonds from the FTSE US Broad Investment-Grade Bond Index (USBIG®) of varying maturities and the yields of the Treasury model curve.

Low-Default-Risk Obligation Measure

Representative 1-, 5-, 10-, 20- and 30-year annual spot rates as of June 30, 2024 are: 5.50%, 4.86%, 5.09%, 5.59% and 5.33%, respectively.

The statutory funding actuarial accrued liability is based on the PUC actuarial cost method and discount rate (the expected long-term rate of return on assets) of 6.75%.

Presented below is a comparison of the statutory funding actuarial accrued liability and the LDROM as of June 30, 2024, for SERS:

$ in millions		
Funding Valuation Actuarial Accrued Liability (PUC)	$	55,697
LDROM (PUC)		66,567
Difference		(10,870)

The difference between the statutory funding actuarial accrued liability and the LDROM illustrates the potential present value of future contribution savings due to investing in a well-diversified portfolio, consistent with the long-term investment return assumption, instead of a hypothetical low-default-risk bond portfolio.

Since plan assets are actually invested in a well-diversified portfolio and not a low-default-risk fixed bond portfolio, LDROM does not provide relevant information on the funded status or statutory contribution requirements. Benefit security for members of the plan relies on a combination of the current assets in the plan, the future investment returns generated on those assets, and the promise of future contributions from the plan sponsor.

The LDROM liability contained in this report was provided solely to comply with the requirements of ASOP No. 4 Section 3.11 and should not be used for any other purpose. This measure is not appropriate for assessing the need for or amount of future contributions. This measure is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligation.

SECTION B

FUNDING RESULTS

Table 1
Results of Actuarial Valuation as of June 30, 2024

1	Number of Members	
	a. Active	65,508
	b. Inactive:	
	i. Eligible for deferred vested pension benefits (3,076 based on SERS service alone. An additional 599 are eligible when reciprocal service is added to SERS service)	3,675
	ii. Eligible for return of contributions only	31,736
	c. Current Benefit Recipients:	
	i. Retirement annuities	64,915
	ii. Survivor annuities	12,483
	iii. Disability annuities	1,399
	d. Eligible for Deferred Benefits:	
	i. Retirement annuities	43
	ii. Survivor annuities	110
	e. Total	179,869
2	Covered Payroll Provided by System	$ 5,641,862,499
3	Annualized Benefit Payments Currently Being Made	
	a. Retirement (Includes those eligible for deferred benefits)	$ 3,007,255,017
	b. Survivor (Includes those eligible for deferred benefits)	230,443,751
	c. Disability	46,719,630
	d. Total	$ 3,284,418,398
4	Actuarial Liability—Annuitants	
	a. Current Benefit Recipients:	
	i. Retirement annuities	$ 38,243,488,758
	ii. Survivor annuities	2,304,472,619
	iii. Disability annuities	390,284,273
	b. Eligible for Deferred Benefits:	
	i. Retirement annuities	6,907,072
	ii. Survivor annuities	6,649,214
	c. Total	$ 40,951,801,936
5	Actuarial Liability—Inactive Members	
	a. Eligible for Deferred Vested Pension Benefits	$ 765,026,868
	b. Eligible for Return of Contributions Only	91,848,750
	c. Total	$ 856,875,618

Table 1 (Concluded)
Results of Actuarial Valuation as of June 30, 2024

		Normal Cost	Actuarial Liability
6	Active Members		
	a. Pension Benefits	$ 565,552,817	$ 9,556,122,036
	b. Cost-of-Living Adjustments	185,237,754	3,669,303,642
	c. Death Benefits		
	i. Occupational	$ 1,486,787	$ 12,192,351
	ii. Non-occupational	10,359,844	105,976,010
	iii. Refund	16,841,165	54,680,592
	iv. Total	$ 28,687,796	$ 172,848,953
	d. Disability		
	i. Occupational	$ 9,253,858	$ -
	ii. Non-occupational	52,438,527	-
	iii. Total	$ 61,692,385	$ -
	e. Withdrawal	49,604,419	489,938,551
	f. Expenses	23,672,615	-
	g. Total	$ 914,447,786	$ 13,888,213,182
7	Total Actuarial Liability (4 + 5 + 6)		$ 55,696,890,736
8	Market Value of Assets (MVA)		$ 25,396,815,011
9	Unfunded Actuarial Liability Based on MVA (7 – 8)		$ 30,300,075,725
10	Funded Percentage Based on MVA (8 ÷ 7)[a]		45.60%
11	Actuarial Value of Assets (AVA)		$ 25,528,760,746
12	Unfunded Actuarial Liability Based on AVA (7 – 11)		$ 30,168,129,990
13	Funded Percentage Based on AVA (11 ÷ 7) [a]		45.84%
14	Total Normal Cost	$ 914,447,786	
15	Employee Contributions	$ 316,891,797	
16	Annual Employer Normal Cost	$ 597,555,989	
	(% covered payroll provided by the System)	10.59%	

[a] *The funded status measure is appropriate for assessing the need for future contributions. The funded status is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.*

Table 2
Analysis of Change in Unfunded Accrued Actuarial Liability

In addition to the expected change in the unfunded accrued actuarial liability, changes in membership demographics, investment performance, plan provisions, and assumptions have affected the actuarial valuation results. The increase (decrease) in the Unfunded Actuarial Accrued Liability (UAAL) of $331,740,141 was due to the following:

1	UAAL at 06/30/2023	$	29,836,389,849
2	Contributions		
	a. Contributions due (Normal Cost plus Interest on UAAL)		
	i interest on 1	$	2,013,956,315
	ii members contributions		323,158,400
	iii employer normal cost		582,583,986
	iv interest on ii and iii		30,069,665
	v total due	$	2,949,768,366
	b. Contributions paid (Actual)		
	i member contributions	$	323,158,400
	ii state agencies		2,840,015,050
	iii interest on i and ii		105,013,930
	iv total paid	$	3,268,187,380
	c. Expected increase in UAAL	$	(318,419,014)
3	Expected UAAL at 06/30/2024	$	29,517,970,835
4	(Gains)/Losses		
	a. investment income	$	27,210,479
	b. salary increases		674,263,499
	c. demographic		(30,680,631)
	d. total	$	670,793,347
5	Plan Provision Changes	$	-
6	Assumption Changes	$	(20,634,192)
7	Total Change in UAAL	$	331,740,141
8	UAAL at 06/30/2024	$	30,168,129,990

Table 3
Analysis of Financial Gains and Losses in Unfunded Accrued Actuarial Liability for Fiscal Year Ended June 30, 2024

	Activity		(Gain)/Loss	% of 06/30/2023 AAL
1	Actuarial (Gain)/Loss			
	a. Retirements	$	(5,530,082)	-0.01%
	b. In-Service Mortality		453,158	0.00%
	c. Retiree Mortality and Benefit Changes		(143,986,061)	-0.27%
	d. Salary Increases		674,263,499	1.25%
	e. Terminations		(25,186,205)	-0.05%
	f. Investment		27,210,479	0.05%
	g. New Entrant Liability		44,537,198	0.08%
	h. New Retiree Liability (for those not reported in prior year's data)		84,034,750	0.16%
	i. Other (non-recurring items such as data changes)		14,996,611	0.03%
	j. Total Actuarial (Gain)/Loss	$	670,793,347	1.24%
2	Plan Provision Changes	$	-	0.00%
3	Assumption Changes	$	(20,634,192)	-0.04%
4	Contribution (Excess)/Shortfall [a]	$	(318,419,014)	-0.59%
5	Total Financial (Gain)/Loss	$	331,740,141	0.61%

[a] *Represents the decrease in the Unfunded Actuarial Accrued Liability due to actual contributions being greater than the Normal Cost plus interest on the beginning of year Unfunded Actuarial Accrued Liability.*

Table 4a

Baseline Projections — State Contributions Determined under Public Act 88-0593, Public Act 90-0065, Public Act 94-004, Public Act 96-0043, and Public Act 100-0023

Maximum Contribution Calculation: Without GOB Proceeds

Investment Return of 6.75% Each Year ($ in Millions)

Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Annual Normal Cost				State Contribution		Total Expenses
							Total	Employee Cont.	Employer Normal Cost	Percent of Pay	Amount	Percent of Pay	
2025	65,508	$ 56,894	$ 25,725	$ 31,169	45.22%	$ 5,766	$ 914	$ 317	$ 598	10.36%	$ 2,982	52.03%	$ 3,395
2026	65,508	58,013	26,994	31,019	46.53%	5,862	909	320	589	10.06%	2,771	47.27%	3,543
2027	65,508	59,054	28,235	30,819	47.81%	5,963	901	323	578	9.70%	2,799	46.94%	3,684
2028	65,508	60,012	29,449	30,563	49.07%	6,065	892	326	566	9.33%	2,827	46.61%	3,823
2029	65,508	60,888	30,662	30,227	50.36%	6,173	885	330	555	8.99%	2,877	46.61%	3,957
2030	65,508	61,685	31,881	29,804	51.68%	6,286	879	334	545	8.67%	2,929	46.60%	4,087
2031	65,508	62,401	33,115	29,286	53.07%	6,404	875	339	536	8.37%	2,984	46.60%	4,211
2032	65,508	63,035	34,371	28,664	54.53%	6,525	869	344	526	8.06%	3,041	46.60%	4,332
2033	65,508	63,592	35,661	27,931	56.08%	6,650	865	348	517	7.77%	3,099	46.60%	4,445
2034	65,508	64,074	36,996	27,078	57.74%	6,781	863	353	510	7.51%	3,160	46.60%	4,550
2035	65,508	64,494	38,400	26,094	59.54%	6,917	860	358	502	7.26%	3,224	46.60%	4,640
2036	65,508	64,838	39,870	24,969	61.49%	7,056	858	363	495	7.01%	3,288	46.60%	4,737
2037	65,508	65,115	41,421	23,693	63.61%	7,199	857	368	489	6.80%	3,355	46.60%	4,826
2038	65,508	65,328	43,072	22,256	65.93%	7,348	859	374	486	6.61%	3,424	46.60%	4,907
2039	65,508	65,486	44,840	20,646	68.47%	7,503	863	379	484	6.45%	3,496	46.60%	4,979

Normal cost rate includes administrative expenses.
State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 94-0004, Public Act 96-0043 and Public Act 100-0023.
Total expenses shown include benefit payments, refunds and administrative expenses.
Actuarial accrued liability and assets are measured at Plan Year End.
Total payroll is capped for members hired after December 31, 2010, as defined in Public Act 96-0889.

Table 4a (Concluded)
Baseline Projections — State Contributions Determined under Public Act 88-0593, Public Act 90-0065, Public Act 94-0004, Public Act 96-0043, and Public Act 100-0023
Maximum Contribution Calculation: Without GOB Proceeds
Investment Return of 6.75% Each Year ($ in Millions)

							Annual Normal Cost				State Contribution		
Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Total	Employee Cont.	Employer Normal Cost	Percent of Pay	Amount	Percent of Pay	Total Expenses
2040	65,508	$ 65,597	$ 46,747	$ 18,850	71.26%	$ 7,664	$ 870	$ 385	$ 485	6.32%	$ 3,572	46.60%	$ 5,041
2041	65,508	65,672	48,816	16,855	74.33%	7,833	880	392	488	6.23%	3,650	46.60%	5,093
2042	65,508	65,720	51,073	14,647	77.71%	8,008	892	398	493	6.16%	3,732	46.60%	5,135
2043	65,508	65,751	53,541	12,210	81.43%	8,190	906	405	501	6.11%	3,817	46.60%	5,170
2044	65,508	65,772	56,246	9,526	85.52%	8,379	922	413	510	6.08%	3,905	46.60%	5,197
2045	65,508	65,790	59,211	6,579	90.00%	8,572	940	420	520	6.06%	3,995	46.60%	5,219

Normal cost rate includes administrative expenses.
State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 94-0004, Public Act 96-0043 and Public Act 100-0023.
Total expenses shown include benefit payments, refunds and administrative expenses.
Actuarial accrued liability and assets are measured at Plan Year End.
Total payroll is capped for members hired after December 31, 2010, as defined in Public Act 96-0889.

Table 4b
Baseline Projections — State Contributions Determined under Public Act 88-0593, Public Act 90-0065, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043, and Public Act 100-0023
Investment Return of 6.75% Each Year ($ in Millions)

							Annual Normal Cost				Required State Contribution						
Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Total	Employee Cont.	Employer Normal Cost	Percent of Pay	(a) Without GOB Cont.	(b) Debt Service	(c)=(a)-(b) Maximum Cont.	(d) Formula Rate With GOB	Minimum of (c) and (d) Required Cont.	Minimum of (c) and (d) Percent of Pay	Total Expenses
2025	65,508	$ 56,894	$ 26,979	$ 29,915	47.42%	$ 5,766	$ 914	$ 317	$ 598	10.36%	$ 2,982	$ 169	$ 2,813	$ 2,977	$ 2,813	48.80%	$ 3,395
2026	65,508	58,013	28,154	29,859	48.53%	5,862	909	320	589	10.06%	2,771	173	2,598	2,765	2,598	44.31%	3,543
2027	65,508	59,054	29,290	29,764	49.60%	5,963	901	323	578	9.70%	2,799	177	2,621	2,793	2,621	43.96%	3,684
2028	65,508	60,012	30,383	29,629	50.63%	6,065	892	326	566	9.33%	2,827	185	2,641	2,821	2,641	43.55%	3,823
2029	65,508	60,888	31,460	29,429	51.67%	6,173	885	330	555	8.99%	2,877	193	2,684	2,871	2,684	43.48%	3,957
2030	65,508	61,685	32,522	29,163	52.72%	6,286	879	334	545	8.67%	2,929	204	2,725	2,923	2,725	43.35%	4,087
2031	65,508	62,401	33,577	28,824	53.81%	6,404	875	339	536	8.37%	2,984	215	2,769	2,978	2,769	43.25%	4,211
2032	65,508	63,035	34,637	28,398	54.95%	6,525	869	344	526	8.06%	3,041	220	2,821	3,035	2,821	43.24%	4,332
2033	65,508	63,592	35,719	27,873	56.17%	6,650	865	348	517	7.77%	3,099	219	2,880	3,093	2,880	43.31%	4,445
2034	65,508	64,074	37,052	27,023	57.83%	6,781	863	353	510	7.51%	3,160	-	N/A	3,154	3,154	46.51%	4,550
2035	65,508	64,494	38,452	26,041	59.62%	6,917	860	358	502	7.26%	3,224	-	N/A	3,217	3,217	46.51%	4,640
2036	65,508	64,838	39,919	24,920	61.57%	7,056	858	363	495	7.01%	3,288	-	N/A	3,281	3,281	46.51%	4,737
2037	65,508	65,115	41,467	23,648	63.68%	7,199	857	368	489	6.80%	3,355	-	N/A	3,348	3,348	46.51%	4,826
2038	65,508	65,328	43,113	22,215	65.99%	7,348	859	374	486	6.61%	3,424	-	N/A	3,418	3,418	46.51%	4,907
2039	65,508	65,486	44,877	20,609	68.53%	7,503	863	379	484	6.45%	3,496	-	N/A	3,489	3,489	46.51%	4,979

Normal cost rate includes administrative expenses.
State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043 and Public Act 100-0023.
Total expenses shown include benefit payments, refunds and administrative expenses.
Actuarial accrued liability and assets are measured at Plan Year End.
Total payroll is capped for members hired after December 31, 2010, as defined in Public Act 96-0889.

Table 4b (Concluded)
Baseline Projections — State Contributions Determined under Public Act 88-0593, Public Act 90-0065, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043, and Public Act 100-0023
Investment Return of 6.75% Each Year ($ in Millions)

							Annual Normal Cost				Required State Contribution					
									Employer		(a)	(b)	(c)=(a)-(b)	(d)	Minimum of (c) and (d)	
Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Total	Employee Cont.	Normal Cost	Percent of Pay	Without GOB Cont.	Debt Service	Maximum Cont.	Formula Rate With GOB	Required Cont.	Percent of Pay	Total Expenses
2040	65,508	$ 65,597	$ 46,778	$ 18,818	71.31%	$ 7,664	$ 870	$ 385	$ 485	6.32%	$ 3,572	$ -	N/A	$ 3,564	$ 3,564	46.51%	$ 5,041
2041	65,508	65,672	48,843	16,829	74.37%	7,833	880	392	488	6.23%	3,650	-	N/A	3,643	3,643	46.51%	5,093
2042	65,508	65,720	51,094	14,627	77.74%	8,008	892	398	493	6.16%	3,732	-	N/A	3,724	3,724	46.51%	5,135
2043	65,508	65,751	53,555	12,196	81.45%	8,190	906	405	501	6.11%	3,817	-	N/A	3,809	3,809	46.51%	5,170
2044	65,508	65,772	56,253	9,519	85.53%	8,379	922	413	510	6.08%	3,905	-	N/A	3,897	3,897	46.51%	5,197
2045	65,508	65,790	59,210	6,580	90.00%	8,572	940	420	520	6.06%	3,995	-	N/A	3,987	3,987	46.51%	5,219

Normal cost rate includes administrative expenses.

State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043 and Public Act 100-0023.

Total expenses shown include benefit payments, refunds and administrative expenses.

Actuarial accrued liability and assets are measured at Plan Year End.

Total payroll is capped for members hired after December 31, 2010, as defined in Public Act 96-0889.

Table 4c
Baseline Projections — State Contributions Determined under Public Act 88-0593, Public Act 90-0065, Public Act 94-0004, Public Act 96-0043, and Public Act 100-0023
Maximum Contribution Calculation: Without GOB Proceeds
Investment Return of 6.75% Each Year ($ in Millions)

Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Annual Normal Cost				State Contribution		Total Expenses
							Total	Employee Cont.	Employer Normal Cost	Percent of Pay	Amount	Percent of Pay	
2025	65,508	$ 56,894	$ 25,874	$ 31,020	45.48%	$ 5,766	$ 914	$ 317	$ 598	10.36%	$ 2,982	52.03%	$ 3,395
2026	65,508	58,013	26,647	31,366	45.93%	5,862	909	320	589	10.06%	2,771	47.27%	3,543
2027	65,508	59,054	27,963	31,091	47.35%	5,963	901	323	578	9.70%	2,786	46.72%	3,684
2028	65,508	60,012	29,314	30,698	48.85%	6,065	892	326	566	9.33%	2,858	47.13%	3,823
2029	65,508	60,888	30,541	30,348	50.16%	6,173	885	330	555	8.99%	2,899	46.96%	3,957
2030	65,508	61,685	31,763	29,922	51.49%	6,286	879	334	545	8.67%	2,940	46.77%	4,087
2031	65,508	62,401	33,001	29,400	52.88%	6,404	875	339	536	8.37%	2,995	46.77%	4,211
2032	65,508	63,035	34,260	28,775	54.35%	6,525	869	344	526	8.06%	3,052	46.77%	4,332
2033	65,508	63,592	35,554	28,037	55.91%	6,650	865	348	517	7.77%	3,110	46.77%	4,445
2034	65,508	64,074	36,895	27,180	57.58%	6,781	863	353	510	7.51%	3,172	46.77%	4,550
2035	65,508	64,494	38,304	26,190	59.39%	6,917	860	358	502	7.26%	3,235	46.77%	4,640
2036	65,508	64,838	39,780	25,059	61.35%	7,056	858	363	495	7.01%	3,300	46.77%	4,737
2037	65,508	65,115	41,338	23,777	63.48%	7,199	857	368	489	6.80%	3,367	46.77%	4,826
2038	65,508	65,328	42,996	22,333	65.81%	7,348	859	374	486	6.61%	3,437	46.77%	4,907
2039	65,508	65,486	44,772	20,714	68.37%	7,503	863	379	484	6.45%	3,509	46.77%	4,979

Normal cost rate includes administrative expenses.
State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 94-0004, Public Act 96-0043 and Public Act 100-0023.
Total expenses shown include benefit payments, refunds and administrative expenses.
Actuarial accrued liability and assets are measured at Plan Year End.
Total payroll is capped for members hired after December 31, 2010, as defined in Public Act 96-0889.

Table 4c (Concluded)
Baseline Projections — State Contributions Determined under Public Act 88-0593, Public Act 90-0065, Public Act 94-0004, Public Act 96-0043, and Public Act 100-0023
Maximum Contribution Calculation: Without GOB Proceeds
Investment Return of 6.75% Each Year ($ in Millions)

Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Annual Normal Cost				State Contribution		Total Expenses
							Total	Employee Cont.	Employer Normal Cost	Percent of Pay	Amount	Percent of Pay	
2040	65,508	$ 65,597	$ 46,688	$ 18,909	71.17%	$ 7,664	$ 870	$ 385	$ 485	6.32%	$ 3,585	46.77%	$ 5,041
2041	65,508	65,672	48,767	16,905	74.26%	7,833	880	392	488	6.23%	3,664	46.77%	5,093
2042	65,508	65,720	51,035	14,685	77.65%	8,008	892	398	493	6.16%	3,746	46.77%	5,135
2043	65,508	65,751	53,515	12,236	81.39%	8,190	906	405	501	6.11%	3,831	46.77%	5,170
2044	65,508	65,772	56,232	9,539	85.50%	8,379	922	413	510	6.08%	3,919	46.77%	5,197
2045	65,508	65,790	59,212	6,578	90.00%	8,572	940	420	520	6.06%	4,010	46.77%	5,219

Normal cost rate includes administrative expenses.
State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 94-0004, Public Act 96-0043 and Public Act 100-0023.
Total expenses shown include benefit payments, refunds and administrative expenses.
Actuarial accrued liability and assets are measured at Plan Year End.
Total payroll is capped for members hired after December 31, 2010, as defined in Public Act 96-0889.

Table 4d
Baseline Projections — State Contributions Determined under Public Act 88-0593, Public Act 90-0065, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043, and Public Act 100-0023
Investment Return of 6.75% Each Year
Phase-In of Deferred Investment Gains and Losses Recognized in the Projected Actuarial Value of Assets ($ in Millions)

							Annual Normal Cost				Required State Contribution						
											(a)	(b)	(c)=(a)-(b)	(d)	Minimum of (c) and (d)		
Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Total	Employee Cont.	Employer Normal Cost	Percent of Pay	Without GOB Cont.	Debt Service	Maximum Cont.	Formula Rate With GOB	Required Cont.	Percent of Pay	Total Expenses
2025	65,508	$ 56,894	$ 27,138	$ 29,756	47.70%	$ 5,766	$ 914	$ 317	$ 598	10.36%	$ 2,982	$ 169	$ 2,813	$ 2,977	$ 2,813	48.80%	$ 3,395
2026	65,508	58,013	27,779	30,234	47.88%	5,862	909	320	589	10.06%	2,771	173	2,598	2,765	2,598	44.31%	3,543
2027	65,508	59,054	28,994	30,060	49.10%	5,963	901	323	578	9.70%	2,786	177	2,609	2,779	2,609	43.75%	3,684
2028	65,508	60,012	30,230	29,782	50.37%	6,065	892	326	566	9.33%	2,858	185	2,673	2,857	2,673	44.07%	3,823
2029	65,508	60,888	31,319	29,569	51.44%	6,173	885	330	555	8.99%	2,899	193	2,706	2,897	2,706	43.84%	3,957
2030	65,508	61,685	32,383	29,302	52.50%	6,286	879	334	545	8.67%	2,940	204	2,736	2,937	2,736	43.52%	4,087
2031	65,508	62,401	33,441	28,960	53.59%	6,404	875	339	536	8.37%	2,995	215	2,780	2,992	2,780	43.42%	4,211
2032	65,508	63,035	34,503	28,532	54.74%	6,525	869	344	526	8.06%	3,052	220	2,832	3,049	2,832	43.41%	4,332
2033	65,508	63,592	35,587	28,005	55.96%	6,650	865	348	517	7.77%	3,110	219	2,891	3,107	2,891	43.48%	4,445
2034	65,508	64,074	36,926	27,148	57.63%	6,781	863	353	510	7.51%	3,172	-	N/A	3,168	3,168	46.72%	4,550
2035	65,508	64,494	38,333	26,161	59.44%	6,917	860	358	502	7.26%	3,235	-	N/A	3,232	3,232	46.72%	4,640
2036	65,508	64,838	39,807	25,032	61.39%	7,056	858	363	495	7.01%	3,300	-	N/A	3,296	3,296	46.72%	4,737
2037	65,508	65,115	41,363	23,752	63.52%	7,199	857	368	489	6.80%	3,367	-	N/A	3,363	3,363	46.72%	4,826
2038	65,508	65,328	43,018	22,310	65.85%	7,348	859	374	486	6.61%	3,437	-	N/A	3,433	3,433	46.72%	4,907
2039	65,508	65,486	44,792	20,694	68.40%	7,503	863	379	484	6.45%	3,509	-	N/A	3,505	3,505	46.72%	4,979

Normal cost rate includes administrative expenses.
State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043 and Public Act 100-0023.
Total expenses shown include benefit payments, refunds and administrative expenses.
Actuarial accrued liability and assets are measured at Plan Year End.
Total payroll is capped for members hired after December 31, 2010, as defined in Public Act 96-0889.

Table 4d (Concluded)
Baseline Projections — State Contributions Determined under Public Act 88-0593, Public Act 90-0065, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043, and Public Act 100-0023
Investment Return of 6.75% Each Year
Phase-In of Deferred Investment Gains and Losses Recognized in the Projected Actuarial Value of Assets ($ in Millions)

							Annual Normal Cost				Required State Contribution					
											(a)	(b)	(c)=(a)-(b)	(d)	Minimum of (c) and (d)	
Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Total	Employee Cont.	Employer Normal Cost	Percent of Pay	Without GOB Cont.	Debt Service	Maximum Cont.	Formula Rate With GOB	Required Cont.	Percent of Pay	Total Expenses
2040	65,508	$ 65,597	$ 46,705	$ 18,892	71.20%	$ 7,664	$ 870	$ 385	$ 485	6.32%	$ 3,585	$ -	N/A	$ 3,581	$ 3,581	46.72%	$ 5,041
2041	65,508	65,672	48,781	16,891	74.28%	7,833	880	392	488	6.23%	3,664	-	N/A	3,659	3,659	46.72%	5,093
2042	65,508	65,720	51,045	14,675	77.67%	8,008	892	398	493	6.16%	3,746	-	N/A	3,741	3,741	46.72%	5,135
2043	65,508	65,751	53,522	12,229	81.40%	8,190	906	405	501	6.11%	3,831	-	N/A	3,826	3,826	46.72%	5,170
2044	65,508	65,772	56,235	9,537	85.50%	8,379	922	413	510	6.08%	3,919	-	N/A	3,915	3,915	46.72%	5,197
2045	65,508	65,790	59,210	6,580	90.00%	8,572	940	420	520	6.06%	4,010	-	N/A	4,005	4,005	46.72%	5,219

Normal cost rate includes administrative expenses.

State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043 and Public Act 100-0023.

Total expenses shown include benefit payments, refunds and administrative expenses.

Actuarial accrued liability and assets are measured at Plan Year End.

Total payroll is capped for members hired after December 31, 2010, as defined in Public Act 96-0889.

SECTION C

FUND ASSETS

Table 5
Statement of Fiduciary Net Position
for Years Ended June 30, 2024, and 2023

	2024	2023
Assets		
Cash	$ 285,154,857	$ 292,553,335
Receivables:		
Contributions:		
Participants	$ 19,802,659	$ 15,625,795
Employing state agencies	318,099,009	125,120,581
Other accounts	28,697,219	5,729,394
	$ 366,598,887	$ 146,475,770
Investments - held in the Illinois State Board of Investment Commingled Fund at fair value	$ 24,751,123,684	$ 22,913,427,301
Securities lending collateral with State Treasurer	53,600,000	38,458,000
Capital Assets, net of accumulated depreciation	$ 16,144,407	$ 15,401,071
Total Assets	$ 25,472,621,835	$ 23,406,315,477
Liabilities		
Benefits payable	$ 11,257,867	$ 6,700,516
Refunds payable	1,865,467	1,179,241
Administrative expenses payable	2,119,484	2,236,312
Participants' deferred service credit accounts	703,442	512,175
Due to State of Illinois	6,260,564	4,551,498
Securities lending collateral with State Treasurer	53,600,000	38,458,000
Total Liabilities	$ 75,806,824	$ 53,637,742
Net assets held in trust for pension benefits	$ 25,396,815,011	$ 23,352,677,735

Assets were updated subsequent to the delivery of the actuarial valuation report which was presented to the Board on October 24, 2024. The updates did not significantly impact the certified contribution rate which was approved by the Board on October 24, 2024. The asset update decreased investments from $24,751,123,684 to $24,657,335,892. This change decreased the market value of assets at June 30, 2024, from $25,396,815,011 to $25,303,027,219.

Table 6
Statement of Changes in Fiduciary Net Position
for Years Ended June 30, 2024, and 2023

	2024	2023
Additions:		
Contributions:		
Participants	$ 323,158,400	$ 297,411,268
Employing state agencies and appropriations	2,840,015,050	2,666,685,015
Total Contributions revenue	$ 3,163,173,450	$ 2,964,096,283
Investments income:		
Net investments income	$ 258,654,784	$ 272,359,511
Interest earned on cash balances	12,935,726	7,689,678
Net appreciation in fair value of investments	1,909,041,599	1,055,827,394
Total Investments income	$ 2,180,632,109	$ 1,335,876,583
Total Additions	$ 5,343,805,559	$ 4,299,972,866
Deductions:		
Benefits:		
Retirement annuities	$ 2,973,466,310	$ 2,855,271,544
Survivors' annuities	207,239,943	194,578,749
Disability benefits	55,955,451	61,328,489
Lump-sum benefits	18,344,417	17,133,462
Total Benefits	$ 3,255,006,121	$ 3,128,312,244
Refunds	24,344,571	24,968,832
Administrative	20,317,592	18,516,803
Total Deductions	$ 3,299,668,284	$ 3,171,797,879
Net increase	$ 2,044,137,275	$ 1,128,174,987
Net assets held in trust for pension benefits:		
Beginning of year	$ 23,352,677,736	$ 22,224,502,748
End of year	$ 25,396,815,011	$ 23,352,677,735

Assets were updated subsequent to the delivery of the actuarial valuation report which was presented to the Board on October 24, 2024. The updates did not significantly impact the certified contribution rate which was approved by the Board on October 24, 2024. The asset updates include:

i. increasing the net investment income from $258,654,784 to $258,703,010; and
ii. decreasing the net appreciation in fair value of investments from $1,909,041,599 to $1,815,205,581.

This change decreased the market value of assets at June 30, 2024, from $25,396,815,011 to $25,303,027,219.

Table 7
Development of the Actuarial Value of Assets — Actual Assets

Year Ending June 30	2024	2025	2026	2027	2028
Beginning of Year:					
(1) Market Value of Assets	$ 23,415,388,105				
(1a) Market Value Adjustment	(62,710,369)				
(1b) Market Value of Assets - Adjusted	23,352,677,736				
(2) Actuarial Value of Assets	24,072,128,842				
End of Year:					
(3) Market Value of Assets	25,396,815,011				
(4) Contributions and Disbursements					
(4a) Actual State Contribution Amount	2,840,015,050				
(4b) Employee Contribution Amount	323,158,400				
(4c) Benefit Payouts & Refunds	(3,279,350,692)				
(4d) Administrative Expenses	(20,317,592)				
(4e) Net of Contributions and Disbursements	(136,494,834)				
(5) Total Investment Income =(3)-(1b)-(4e)	2,180,632,109				
(6) Projected Rate of Return	6.75%				
(7) Projected Investment Income =(1b)x(6)+([1+(6)]^.5-1)x(4e)	1,571,774,267				
(8) Investment Income in Excess of Projected Income	608,857,842				
(9) Excess Investment Income Recognized This Year (5-year recognition)					
(9a) From This Year	$ 121,771,568				
(9b) From One Year Ago	(18,934,303)	$ 121,771,568			
(9c) From Two Years Ago	(627,574,350)	(18,934,303)	$ 121,771,568		
(9d) From Three Years Ago	692,919,601	(627,574,350)	(18,934,303)	$ 121,771,568	
(9e) From Four Years Ago	(84,119,676)	692,919,601	(627,574,351)	(18,934,303)	$ 121,771,570
(9f) Total Recognized Investment Gain	84,062,840	168,182,516	(524,737,086)	102,837,265	121,771,570
(10) Change in Actuarial Value of Assets =(1a)+(4e)+(7)+(9f)	$ 1,456,631,904				
End of Year:					
(3) Market Value of Assets	**$ 25,396,815,011**				
(11) Actuarial Value of Assets =(2)+(10)	**$ 25,528,760,746**				

Table 8
Development of the Actuarial Value of Assets — Hypothetical Assets

Year Ending June 30	2024	2025	2026	2027	2028
Beginning of Year:					
(1) Hypothetical Value of Assets	$ 21,953,888,591				
(2) Hypothetical Actuarial Value of Assets	22,568,288,981				
End of Year:					
(3) Hypothetical Value of Assets	24,055,480,989				
(4) Contributions and Disbursements					
(4a) State Contribution Amount [a]	3,019,073,461				
(4b) Employee Contribution Amount	323,158,400				
(4c) Benefit Payouts & Refunds	(3,279,350,692)				
(4d) Administrative Expenses	(20,317,592)				
(4e) Net of Contributions and Disbursements	42,563,577				
(5) Total Investment Income[b]					
=(3)-(1)-(4e)	2,059,028,821				
(6) Projected Rate of Return	6.75%				
(7) Projected Investment Income					
=(1)x(6)+([1+(6)]^.5-1)x(4e)	1,483,300,545				
(8) Investment Income in					
Excess of Projected Income	575,728,276				
(9) Excess Investment Income Recognized					
This Year (5-year recognition)					
(9a) From This Year	$ 115,145,655				
(9b) From One Year Ago	(17,818,025)	$ 115,145,655			
(9c) From Two Years Ago	(584,631,600)	(17,818,025)	$ 115,145,655		
(9d) From Three Years Ago	644,190,355	(584,631,600)	(17,818,025)	$ 115,145,655	
(9e) From Four Years Ago	(77,614,199)	644,190,356	(584,631,602)	(17,818,025)	$ 115,145,656
(9f) Total Recognized Investment Gain	79,272,186	156,886,386	(487,303,972)	97,327,630	115,145,656
(10) Change in Hypothetical Actuarial Value of Assets					
=(4e)+(7)+(9f)	$ 1,605,136,308				
End of Year:					
(3) Hypothetical Market Value of Assets	**$ 24,055,480,989**				
(11) Hypothetical Actuarial Value of Assets					
=(2)+(10)	**$ 24,173,425,289**				

[a] *Represents 53.512 percent of covered payroll provided by the System for the basic contribution. This rate was determined as part of the June 30, 2022 actuarial valuation, and is based upon the hypothetical asset value which assumes no infusion from the proceeds of the GOB sale that were deposited July 1, 2003.*

[b] *Investment income assumes hypothetical value of assets earns the Fund's actual rate of return for fiscal year 2024 of 9.37 percent.*

SECTION D

PARTICIPANT DATA

Table 9
Active Age and Service Distribution as of June 30, 2024, and Inactive Member Statistics

Age Group	Years of Service 0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Up	Total	Percentage of Total
Under 20	117	24								141	0.2%
20-24	620	1,127	20							1,767	2.7%
25-29	641	2,833	911	7	1					4,393	6.7%
30-34	547	2,801	2,984	631	3					6,966	10.6%
35-39	485	2,399	2,762	2,237	332	9				8,224	12.6%
40-44	503	2,143	2,236	2,044	1,091	582	25			8,624	13.2%
45-49	477	1,875	1,829	1,459	903	1,654	919	21		9,137	13.9%
50-54	523	1,651	1,657	1,353	871	1,532	1,525	387	18	9,517	14.5%
55-59	450	1,353	1,385	1,091	723	1,069	933	638	256	7,898	12.1%
60-64	297	846	1,065	856	555	662	501	407	419	5,608	8.6%
65-69	128	263	442	423	266	227	145	120	227	2,241	3.4%
70 & Over	68	102	134	158	123	125	86	65	131	992	1.5%
Total	**4,856**	**17,417**	**15,425**	**10,259**	**4,868**	**5,860**	**4,134**	**1,638**	**1,051**	**65,508**	**100.0%**
Percentage of Total	**7.4%**	**26.6%**	**23.5%**	**15.7%**	**7.4%**	**8.9%**	**6.3%**	**2.5%**	**1.6%**	**100.0%**	

	Previous Valuation	Current Valuation
Average Annual Pay	$81,929	$86,125
Average Service	11.6	10.9

Inactive Member Statistics

	Previous Valuation	Current Valuation
Average Annual Pay	$70,980	$72,313
Average Service	14.6	14.2

Table 10
Retirees and Beneficiaries by Type of Benefit Being Paid as of June 30, 2024

Type of Benefit Being Paid	Count	Monthly Payment	Annual Payment	Average Annual Payment
Retirement Annuity	64,915	$ 250,571,404	$ 3,006,856,853	$ 46,320
Survivors	11,174	17,220,568	206,646,812	18,494
Widows	11	22,447	269,369	24,488
Occupational Death	50	81,457	977,479	19,550
QILDRO	1,197	1,761,365	21,136,382	17,658
Reversionary Annuity	51	98,581	1,182,967	23,195
Non-Occupational Disability	639	$ 1,622,134	$ 19,465,608	$ 30,463
Occupational Disability	503	1,922,065	23,064,781	45,854
Temporary Disability	198	182,046	2,184,548	11,033
Total Temporary Disability - Occupational	59	167,058	2,004,693	33,978
Eligible for Deferred Retirement Annuity	43	33,180	398,164	9,260
Eligible for Deferred Survivor Annuity	110	19,228	230,742	2,098
Total	**78,950**	**$ 273,701,533**	**$ 3,284,418,398**	**$ 41,601**

Table 11
Status Reconciliation as of June 30, 2024

	Actives	Retirees	QILDRO	Beneficiaries	Inactive Members[a]	Totals
Total Participants as of June 30, 2023:	**61,651**	**64,331**	**1,158**	**11,130**	**3,835**	**142,105**
New Entrants and Rehires	9,259	(4)			(193)	**9,062**
Net Transfers						**0**
Data Corrections/Other Changes		199			22	**221**
Vested Terminations	(586)				586	**0**
Non-Vested Terminations	(2,883)					**(2,883)**
Retirements	(1,933)	2,389			(456)	**0**
Deaths with Beneficiary		(969)		969		**0**
Deaths w/o Beneficiary		(983)	(38)	(648)		**(1,669)**
New QILDRO			77			**77**
Expired Annuity or Refunded		(5)		(55)	(119)	**(179)**
Continuing	56,249	62,370	1,120	10,427	3,067	**133,233**
Net Changes	3,857	627	39	266	(160)	**4,629**
Total Participants as of June 30, 2024:	**65,508**	**64,958**	**1,197**	**11,396**	**3,675**	**146,734**

[a] *Does not include members eligible for return of contributions only.*

SECTION E

ACTUARIAL METHODS AND ASSUMPTIONS

Actuarial Methods and Assumptions (Most Adopted Effective with the June 30, 2022, Actuarial Valuation)

Actuarial Cost Method as Mandated by 40 ILCS 5/14-131, Adopted June 30, 1989

The projected unit credit normal cost method is used. Under this method, the projected pension at retirement age is first calculated and the present value at the individual member's current or attained age is determined. The normal cost for the member for the current year is equal to the actuarial present value divided by the member's projected service at retirement. The normal cost for the plan for the year is the sum of the individual normal costs.

The actuarial liability at any point in time is the present value of the projected pensions at that time less the present value of future normal costs.

For ancillary benefits for active members, in particular death and survivor benefits, termination benefits and the postretirement increases, the same procedure as outlined above is followed.

Estimated annual administrative expenses are added to the normal cost.

For actuarial valuation purposes, as well as projection purposes, an actuarial value of assets is used.

Most Actuarial Assumptions Adopted June 30, 2022

Actuarial assumptions are set by the Board of Trustees. The actuarial assumptions used for the June 30, 2024, actuarial valuation are based on a full experience review for the three-year period ended June 30, 2021. Please see the 2021 Actuarial Experience Study dated July 15, 2023 for additional details. All actuarial assumptions are expectations of future experience, not market measures.

Mortality

Mortality assumptions for general employees and retirees covered under the Regular Benefit Formula are shown in the following table:

General Employees and Retirees	Proposed Mortality Table	Male Scaling Factor	Female Scaling Factor
Pre-retirement	Pub-2010 General Employee, sex distinct	84%	92%
Post-retirement	Pub-2010 Below-Median Income General Healthy Retiree sex distinct	91%	115%

Actuarial Methods and Assumptions (Most Adopted Effective with the June 30, 2022, Actuarial Valuation)

Mortality assumptions for Public Safety employees and retirees covered under the Alternative Benefit Formula are shown in the following table:

Public Safety Employees and Retirees	Proposed Mortality Table	Male Scaling Factor	Female Scaling Factor
Pre-retirement	Pub-2010 Public Safety Employee, sex distinct	90%	100%
Post-retirement	Pub-2010 Below-Median Income Public Safety Healthy Retiree, sex distinct	97%	103%

Our analysis of the SERS mortality experience indicated the Below-Median income tables matched more closely to the experience (required less adjustment to the base table). Future mortality improvements are reflected by projecting the base mortality tables forward from the year 2010 using the fully generational MP-2021 projection scale. This assumption provides a margin for future mortality improvements.

Interest

6.75 percent per year, compounded annually, net of investment expenses.

General Inflation

2.25 percent per year, compounded annually.

This assumption serves as the basis for the determination of Tier 2 annual increases that are equal to the lesser of 3.0 percent or one-half of the annual increase in the consumer price index-u during the preceding 12-month calendar year and are not compounded.

Marriage Assumption

85.0 percent of active male participants and 65.0 percent of active female participants are assumed to be married. Actual marital status at benefit commencement is used for retirees, if available; otherwise the active marriage assumptions are used for retirees.

Social Security Offset for Survivor Benefits

No offset assumption for male surviving spouses because it is assumed their own PIA is as great as their spouses' PIA. Sixty percent of married male members are assumed to have a dual income household. For the dual income household, it is assumed the offset at age 60 is 45.0 percent of the original survivor benefit. It is assumed the offset at age 62 is 10.0 percent of the original survivor benefit. Furthermore, it is assumed that 50 percent of retirees on or after July 1, 2009, will elect to remove the offset provision. In exchange for the removal, the member's retirement annuity is reduced by 3.825 percent monthly as mandated by Statutes.

Termination

Illustrative rates of withdrawal from the plan are as follows for Tier 1 members:

Service Based Withdrawal				
	Regular Formula Employees		Alternate Formula Employees	
Service (Beginning of Year)	Males	Females	Males	Females
0	0.2400	0.2200	0.0300	0.0700
1	0.0900	0.0900	0.0300	0.0700
2	0.0700	0.0550	0.0300	0.0650
3	0.0600	0.0550	0.0300	0.0600
4	0.0600	0.0450	0.0300	0.0600
5	0.0410	0.0400	0.0300	0.0500
6	0.0450	0.0350	0.0300	0.0400
7	0.0400	0.0350	0.0300	0.0300
8	0.0300	0.0350	0.0200	0.0200
9	0.0300	0.0350	0.0200	0.0200
10	0.0300	0.0300	0.0150	0.0200
11	0.0250	0.0300	0.0150	0.0175
12	0.0250	0.0250	0.0150	0.0175
13	0.0250	0.0250	0.0150	0.0175
14	0.0250	0.0250	0.0150	0.0175
15	0.0225	0.0250	0.0150	0.0175
16	0.0200	0.0200	0.0150	0.0150
17	0.0200	0.0200	0.0150	0.0150
18	0.0200	0.0200	0.0150	0.0150
19	0.0200	0.0200	0.0150	0.0125
20	0.0200	0.0175	0.0150	0.0125
21	0.0200	0.0175	0.0150	0.0125
22	0.0200	0.0175	0.0150	0.0125
23	0.0200	0.0175	0.0150	0.0125
24	0.0200	0.0175	0.0150	0.0100
25	0.0200	0.0150	0.0150	0.0100
26	0.0200	0.0150	0.0150	0.0100
27	0.0200	0.0150	0.0150	0.0100
28	0.0200	0.0150	0.0150	0.0100
29	0.0200	0.0150	0.0150	0.0100
30+	0.0200	0.0150	0.0150	0.0100

It is assumed that terminated employees will not be rehired. The rates apply only to employees who have not fulfilled the service requirement necessary for retirement at any given age.

Disability

Because members who receive disability benefits typically spend less than one year on disability, they are considered active members. Therefore, a load of 1.07 percent of pay on the normal cost is applied to reflect the near-term cash flow. This assumption is based on 110 percent of the most recent disability benefit payment information as a percent of payroll and will be updated at each actuarial valuation date as experience emerges.

Actuarial Methods and Assumptions (Most Adopted Effective with the June 30, 2022, Actuarial Valuation)

Salary Increases and Wage Inflation

Illustrative rates of increase per individual employee per year, compounded annually:

Age	Annual Increase
25	7.41%
30	6.29%
35	5.19%
40	4.36%
45	3.79%
50	3.38%
55	3.08%
60	2.84%
65	2.60%
70	2.50%

The underlying salary increase assumption is based on a wage inflation assumption of 2.75 percent per year, comprised of 2.25 percent for general inflation plus 0.50 percent for productivity increases. The rates shown above include wage inflation plus an age-based component for merit, promotion and longevity. The total annual increase on and after age 80 equals 2.25 percent.

415(b) and 401(a)(17) Limits

No explicit assumption is made with respect to these items.

Accelerated Pension Benefit Payment Program Election Assumption

In accordance with Public Act 100-0587, Public Act 101-0010 and Public Act 102-0718,

- Eligible Tier 1 active members may elect the "COLA Buyout", through June 30, 2026, in which the member receives reduced and delayed COLA benefits at retirement and an accelerated pension benefit payment.
- Eligible inactive Tier 1 and Tier 2 members may elect the "Total Buyout", through June 30, 2026, in which the member receives an accelerated pension benefit payment in lieu of an annuity at retirement.

With respect to the COLA Buyout, 20 percent of Regular Formula members, 45 percent of Alternative Formula members not covered by Social Security, and 40 percent of Alternative Formula members covered by Social Security, are assumed to elect the COLA Buyout. The election percentages are based on experience through June 2024 as provided by SERS. With respect to the Total Buyout, 3 percent are assumed to elect the Total Buyout. The election percentages apply until the end of each Buyout Program; i.e., June 30, 2026. The following table shows Accelerated Pension Benefit Payments available experience through June 2024, and updated assumptions:

Group	Observed Rate	Prior Assumption	Current Assumption
COLA Buyout			
Regular Formula	21%	20%	20%
Alternate Formula - Coordinated with SS	43%	38%	40%
Alternate Formula - Not Coord. with SS	47%	42%	45%
Total Buyout	4%	2%	3%

Actuarial Methods and Assumptions
(Most Adopted Effective with the June 30, 2022, Actuarial Valuation)

Population Projection

For purposes of determining annual appropriation as a percent of total covered payroll, the size of the active group is assumed to remain level at the number of actives as of the actuarial valuation date. New entrants are assumed to enter with an average age and an average pay as disclosed below. New entrants are assumed to have the same demographic profile as new entrants in the 15 years prior to the actuarial valuation date. The average increase in uncapped payroll for the projection period is 2.75 percent per year. New entrants not covered by Social Security are assumed to participate in the Tier 2 defined benefit plan.

New Entrant Benefit Groups																
Age Group	New Entrants Eligible for Regular Formula Benefits who are Covered by Social Security		New Entrants Eligible for Regular Formula Benefits who are not Covered by Social Security		New Entrants in Positions Formerly Eligible for Alternate Formula Benefits who are Covered by Social Security and are now Eligible for Regular Formula Benefits		New Entrants Eligible for Alternate Formula Benefits who are Covered by Social Security		New Entrants in Positions Formerly Eligible for Alternate Formula Benefits who are not Covered by Social Security and are now Eligible for Regular Formula Benefits		New Entrants Eligible for Alternate Formula Benefits who are not Covered by Social Security		Total	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
Under 20	172	$ 7,252,018			174	$ 9,436,778	9	$ 478,744					355	$ 17,167,540
20-24	3,122	151,375,019	1	$ 51,263	1,910	113,156,843	228	13,188,175	357	$ 26,461,178	2	$ 94,606	5,620	304,327,084
25-29	5,403	303,839,403			2,089	133,362,904	288	19,194,617	479	37,902,568	1	59,351	8,260	494,358,843
30-34	5,018	313,341,529			1,230	84,347,110	257	18,950,338	277	22,745,610	1	84,648	6,783	439,469,235
35-39	4,326	288,863,583			821	60,318,200	224	16,740,221	93	7,968,373			5,464	373,890,377
40-44	4,159	289,228,710	2	141,763	658	50,461,803	189	15,323,818	54	4,787,047			5,062	359,943,141
45-49	3,555	250,009,557	2	158,825	465	35,860,590	165	13,411,448	29	2,481,737			4,216	301,922,157
50-54	3,015	213,195,286	13	1,036,046	296	22,458,727	119	9,680,684	51	4,706,768			3,494	251,077,511
55-59	1,949	132,183,111	3	252,074	154	11,465,417	60	4,638,129	26	2,549,481			2,192	151,088,212
60-64	724	48,616,318	1	78,516	56	4,132,358	18	1,179,175	2	240,696			801	54,247,063
65-69	62	3,654,108			3	206,176	6	414,920					71	4,275,204
70 & Over														
Total	31,505	$ 2,001,558,642	22	$ 1,718,487	7,856	$ 525,206,906	1,563	$ 113,200,269	1,368	$ 109,843,458	4	$ 238,605	42,318	$ 2,751,766,367
Avg. Salary		$ 63,531		$ 78,113		$ 66,854		$ 72,425		$ 80,295		$ 59,651		$ 65,026
Avg. Age		37.99		49.94		31.63		35.99		30.05		27.27		36.48
Percent Male		41%		86%		72%		63%		90%		100%		49%

Retirement – Tier 1

Employees are assumed to retire in accordance with the rates shown below. The rates apply only to employees who have fulfilled the service requirement necessary for retirement at any given age.

Retirement Rates for Regular Formula Employees		
Age	Males	Females
50	15.00%	30.00%
51	24.00%	30.00%
52	24.00%	30.00%
53	24.00%	27.50%
54	24.00%	25.00%
55	24.00%	25.00%
56	18.00%	24.00%
57	18.00%	18.00%
58	18.00%	18.00%
59	18.00%	18.00%
60	13.00%	16.00%
61	12.00%	12.50%
62	19.00%	22.00%
63	16.50%	18.00%
64	16.50%	19.00%
65	22.50%	25.00%
66	22.50%	27.00%
67	22.50%	25.00%
68	22.50%	25.00%
69	22.50%	22.00%
70	22.50%	22.00%
71	20.00%	22.00%
72	20.00%	22.00%
73	20.00%	22.00%
74	20.00%	22.00%
75	100.00%	100.00%

Early Retirement Rates for Regular Formula Employees		
Age	Males	Females
55	3.50%	2.50%
56	3.50%	2.50%
57	3.50%	3.50%
58	6.00%	4.00%
59	6.50%	5.00%

Actuarial Methods and Assumptions (Most Adopted Effective with the June 30, 2022, Actuarial Valuation)

Retirement Rates for Alternate Formula Employees				
	Eligible for Alternate Formula Benefits Only		Eligible for Regular Formula Benefits Only	
Age	Males	Females	Males	Females
50	60.00%	41.50%	N/A	N/A
51	50.00%	31.00%	N/A	N/A
52	35.00%	25.00%	N/A	N/A
53	35.00%	25.00%	N/A	N/A
54	35.00%	25.00%	N/A	N/A
55	40.00%	40.00%	N/A	N/A
56	30.00%	25.00%	N/A	N/A
57	25.00%	25.00%	N/A	N/A
58	27.00%	25.00%	N/A	N/A
59	27.00%	25.00%	N/A	N/A
60	30.00%	30.00%	4.00%	5.00%
61	30.00%	30.00%	4.00%	5.00%
62	30.00%	30.00%	8.00%	10.00%
63	35.00%	30.00%	10.00%	10.00%
64	35.00%	30.00%	11.00%	15.00%
65	35.00%	50.00%	14.00%	20.00%
66	40.00%	50.00%	25.00%	20.00%
67	40.00%	50.00%	20.00%	25.00%
68	45.00%	50.00%	17.50%	30.00%
69	45.00%	50.00%	17.50%	30.00%
70	50.00%	50.00%	17.50%	30.00%
71	50.00%	50.00%	17.50%	30.00%
72	100.00%	100.00%	100.00%	100.00%

Assets

Assets available for benefits are determined as described on page 55. The asset valuation method is prescribed by statute, and does not appear to allow a corridor; therefore, a corridor has not been established.

Expenses

As estimated and advised by SERS staff, based on current expenses and are expected to increase in relation to the projected capped payroll.

Spouse's Age

The female spouse is assumed to be three years younger than the male spouse.

Children

It is assumed that married members have 2.2 children, one year apart in age.

The age of the youngest child of a deceased employee at his date of death is assumed to be as follows:

Age at Death of Employee	Age of Youngest Child	Age at Death of Employee	Age of Youngest Child
20	2	40	6
25	3	45	8
30	4	50	10
35	5	55	12
		60	14

Overtime and Shift Differentials

Reported earnings include base pay alone. It is assumed that overtime and shift differentials will increase total payroll by 3.5 percent over reported earnings.

Load for Inactive Members Eligible for Deferred Vested Pension Benefits

Load of 15 percent for Regular Formula members and 13 percent for Alternative Formula members. The load reflects a liability attributable to inactive members eligible for deferred vested pension benefits for potential increases in final average salary due to participation in a reciprocal system after termination.

Unused Sick Leave and Optional Service Purchases

Current and future active member's service is increased 5.0 months to account for increases of service at retirement due to converting unused sick leave and vacation days and purchasing applicable optional service.

Missing Data

If year-to-date earnings were not available, then the monthly pay rate is used. If both year-to-date earnings and the monthly pay rate are not available, the annual rate of pay is assumed to be the rate of pay for the population as a whole on the actuarial valuation date. For members with less than a year of service, the annual rate of pay is based on the greater of year-to-date earnings or annualized pay rate. If a birth date was not available, the member was assumed to be age 35.

Actuarial Methods and Assumptions (Most Adopted Effective with the June 30, 2022, Actuarial Valuation)

Decrement Timing

All decrements are assumed to occur mid-year.

Decrement Relativity

Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.

Decrement Operation

Disability and turnover decrements do not operate after a member reaches retirement eligibility.

Eligibility Testing

Eligibility for benefits is determined based upon the age nearest birthday and service on the date the decrement is assumed to occur.

Assumptions as a Result of Public Act 96-0889 Adopted June 30, 2016

Members hired after December 31, 2010, are assumed to make contributions on salary up to the final average compensation cap in a given year until this plan provision or administrative procedure is clarified.

State contributions, expressed as a percentage of pay, are calculated based upon capped pay.

Members hired after December 31, 2010, eligible for the regular formula benefits will retire according to the following age-based retirement rates:

Retirement Rates for Regular Formula Employees - Tier 2 Members			
Age	Employees Eligible For Normal Retirement	Age	Employees Eligible For Early Retirement
67	50.00%	62	30.00%
68	32.50%	63	15.00%
69	32.50%	64	15.00%
70	32.50%	65	15.00%
71	20.00%	66	15.00%
72	20.00%		
73	20.00%		
74	20.00%		
75	100.00%		

Members hired after December 31, 2010, eligible for the alternate formula benefits will retire according to the following age-based retirement rates:

Retirement Rates for Alternate Formula Employees		
Age	Males	Females
60	50.00%	50.00%
61	25.00%	30.00%
62	25.00%	35.00%
63	30.00%	30.00%
64	30.00%	35.00%
65	30.00%	50.00%
66	30.00%	50.00%
67	30.00%	50.00%
68	30.00%	50.00%
69	40.00%	50.00%
70	45.00%	50.00%
71	45.00%	50.00%
72	100.00%	100.00%

Actuarial Methods and Assumptions (Most Adopted Effective with the June 30, 2022, Actuarial Valuation)

Illustrative rates of withdrawal from the plan are as follows for members hired after December 31, 2010:

Service Based Withdrawal				
	Regular Formula Employees		Alternate Formula Employees	
Service (Beginning of Year)	Males	Females	Males	Females
0	0.3300	0.2800	0.1000	0.1100
1	0.1650	0.1500	0.0800	0.0800
2	0.0600	0.0800	0.0625	0.0750
3	0.0600	0.0700	0.0550	0.0625
4	0.0575	0.0650	0.0425	0.0525
5	0.0500	0.0550	0.0300	0.0500
6	0.0450	0.0500	0.0250	0.0500
7	0.0450	0.0400	0.0225	0.0325
8	0.0300	0.0300	0.0150	0.0200
9	0.0300	0.0350	0.0150	0.0200
10	0.0300	0.0300	0.0150	0.0200
11	0.0250	0.0300	0.0150	0.0175
12	0.0250	0.0250	0.0150	0.0175
13	0.0250	0.0250	0.0150	0.0175
14	0.0200	0.0250	0.0150	0.0175
15	0.0200	0.0250	0.0150	0.0175
16	0.0200	0.0200	0.0150	0.0150
17	0.0200	0.0200	0.0150	0.0150
18	0.0200	0.0200	0.0150	0.0150
19	0.0200	0.0200	0.0150	0.0125
20	0.0250	0.0150	0.0150	0.0125
21	0.0250	0.0150	0.0150	0.0125
22	0.0250	0.0150	0.0150	0.0125
23	0.0250	0.0150	0.0150	0.0125
24	0.0200	0.0150	0.0150	0.0100
25	0.0200	0.0150	0.0150	0.0100
26	0.0200	0.0150	0.0150	0.0100
27	0.0200	0.0150	0.0150	0.0100
28	0.0200	0.0150	0.0150	0.0100
29	0.0200	0.0150	0.0150	0.0100
30+	0.0200	0.0150	0.0150	0.0100

Projection Methodology and Appropriation Requirements Under P.A. 93-0002, P.A. 94-0004, P.A. 96-0043 and P.A. 100-0023

State Contributions under P.A. 93-0002

In general, for each year during the life of the GOB program, the state contributions to the System are to be calculated as follows:

a Calculation of the contribution maximum

a. A projection of contributions will be made from the actuarial valuation date to June 30, 2045. Such projection will be based on hypothetical asset values determined using the following assumptions:

i) That the System had received no portion of the general obligation bond proceeds in excess of the scheduled contributions for the remainder of fiscal 2003 and for the entirety of 2004,

ii) That hypothetical state contributions had been made each fiscal year from 2005 through the actuarial valuation date, based on the funding process in place prior to P.A. 93-0002 (without regard to prior state minimum requirements),

iii) That the actual amounts of member contributions and the actual cash outflows (benefit payments, refunds and administrative expenses) for each year prior to the actuarial valuation date were realized, and

iv) That the hypothetical fund earned returns in each prior fiscal year equal to the rate of total return actually earned by the retirement fund in that year.

b. The hypothetical asset values developed in a., above, will not exceed the actual assets of the fund.

c. A projection of maximum contributions for each year of the GOB program will be performed each year, by reducing the contributions produced in a., above, by the respective amount of debt service allocated to the System for each year.

b Calculation of the contribution with GOB proceeds

a. The basic projection of state contributions from the actuarial valuation date through June 30, 2045, will be made, taking into account all assets of the System, including the GOB proceeds.

b. State contribution rates (expressed as a percentage of covered pay), in the pattern required by the funding sections of the statutes, are calculated.

c. In those projections, the dollars of state contributions which are added to assets each year during the GOB program are limited by the contribution maximum. Because the bonds are to be liquidated by the end of fiscal 2033, there is no contribution maximum thereafter.

State Contributions under P.A. 94-0004

The following is an excerpt from the Illinois Compiled statutes 40 ILCS 5/14-108.3 (f)-(g):

> (f) The System shall determine the amount of the increase in the present value of future benefits resulting from the granting of early retirement incentives under this Section and shall report that amount to the Governor and the Commission on Government Forecasting and Accountability on or after the effective date of this amendatory Act of the 93rd General Assembly and on or before November 15, 2004. Beginning with State fiscal year 2008, the increase reported under this subsection (f) shall be included in the calculation of the required State contribution under Section 14-131.
>
> (g) In addition to the contributions otherwise required under this Article, the State shall appropriate and pay to the System an amount equal to $70,000,000 in State fiscal years 2004 and 2005.

State Contributions under P.A. 96-0043

The following is an excerpt from the Illinois Compiled statutes 40 ILCS 5/14-131:

> (g) For purposes of determining the required State contribution to the System, the value of the System's assets shall be equal to the actuarial value of the System's assets, which shall be calculated as follows:
>
> > As of June 30, 2008, the actuarial value of the System's assets shall be equal to the market value of the assets as of that date. In determining the actuarial value of the System's assets for fiscal years after June 30, 2008, any actuarial gains or losses from investment return incurred in a fiscal year shall be recognized in equal annual amounts over the five-year period following that fiscal year.
>
> (h) For purposes of determining the required State contribution to the System for a particular year, the actuarial value of assets shall be assumed to earn a rate of return equal to the System's actuarially assumed rate of return.

Projection Methodology and Appropriation Requirements Under P.A. 93-0002, P.A. 94-0004, P.A. 96-0043 and P.A. 100-0023

State Contributions under P.A. 100-0023

Public Act ("P.A.") 100-0023, effective July 6, 2017, modified the State's funding policy to include smoothing State contribution rate increases or decreases due to changes in actuarial assumptions, including investment return assumptions, over a five-year period in equal annual amounts beginning in fiscal year 2018. In addition, changes in actuarial or investment assumptions that increased or decreased the State contribution rate in fiscal years 2014 through 2017 are to be smoothed over a five-year period in equal annual amounts, applying only to the portion of the five-year phase-in that is applicable to fiscal years on and after 2018.

Following the preceding legislation, we have calculated the required contribution and the results are shown in the summary section of this report.

Phase-in of the Financial Impact of Assumption Changes

Following is a table with the recognition schedule for the phase-in of actuarial assumption changes required under Public Act 100-0023. The following actuarial assumption changes were made:

1. Beginning with the June 30, 2016, actuarial valuation, there were changes to the economic and demographic assumptions.
2. Beginning with the June 30, 2018, actuarial valuation, there were changes to the economic assumptions.
3. Beginning with the June 30, 2019, actuarial valuation, there were changes to the economic and demographic assumptions.
4. Beginning with the June 30, 2021, actuarial valuation, there were changes to the demographic assumptions.
5. Beginning with the June 30, 2022, actuarial valuation, there were changes to the economic and demographic assumptions.
6. Beginning with the June 30, 2024, actuarial valuation, there were changes to the demographic assumptions.

Valuation Year Ending June 30,	2020	2021	2022	2023	2024	2025	2026	2027	2028
Applicable Fiscal Year Ending June 30,	2022	2023	2024	2025	2026	2027	2028	2029	2030
					$ in Millions After Impact of GOB Proceeds				
Contribution Before Assumption Change									
(1) Contribution Dollar	$ -	$ 2,485.315	$ 2,517.699	$ -	$ 2,598.201				
(2) Contribution Rate	0.000%	51.030%	51.117%	0.000%	44.321%				
Contribution After Assumption Change									
(3) Contribution Dollar	$ -	$ 2,483.184	$ 2,435.839	$ -	$ 2,596.542				
(4) Contribution Rate	0.000%	50.986%	49.527%	0.000%	44.293%				
(5) Assumption Change Impact as a Percentage of Capped Payroll [(4) - (2)]	0.000%	-0.044%	-1.590%	0.000%	-0.028%				
(6) Assumption Change Impact Recognized This Year (5-year Recognition)									
(6a) From This Year	0.000%	-0.009%	-0.318%	0.000%	-0.006%				
(6b) From One Year Ago	-0.015%	0.000%	-0.009%	-0.318%	0.000%	-0.006%			
(6c) From Two Years Ago	0.077%	-0.015%	0.000%	-0.009%	-0.318%	0.000%	-0.006%		
(6d) From Three Years Ago	0.000%	0.077%	-0.015%	0.000%	-0.009%	-0.318%	0.000%	-0.006%	
(6e) From Four Years Ago	1.412%	0.000%	0.077%	-0.014%	0.000%	-0.008%	-0.318%	0.000%	-0.004%
(6f) Total Recognized Assumption Change Impact	1.474%	0.053%	-0.265%	-0.341%	-0.333%	-0.332%	-0.324%	-0.006%	-0.004%

SECTION F

SUMMARY OF PLAN PROVISIONS

Summary of Plan Provisions
(as of June 30, 2024)

Purpose

The State Employees' Retirement System of Illinois, a State Agency, provides an orderly means whereby aged or disabled employees may be retired from active service without prejudice or hardship and enables the employees to accumulate reserves for old age, disability, death and termination of employment.

Administration

Responsibility for the operation of the System and the direction of its policies is vested in a Board of Trustees of seven members. The administration of the detailed affairs of the System is the responsibility of the Executive Secretary who is appointed by the Board of Trustees. Administrative policies and procedures are designed to ensure an accurate accounting of funds of the System and prompt payment of claims for benefits within the applicable statute.

Membership

All persons entering State service on or after January 1, 1984, become members upon completion of six months of continuous service except that, beginning July 1, 1991, employees in police positions become members on their first day of employment. Persons entering State service from January 1, 1972 to January 1, 1984, became members on their first day of employment. Excluded from membership are: any employee whose position is subject to membership under another State-supported system, any person who becomes an employee after June 30, 1979, as a public service employment program participant under the federal CETA program or any enrollee of the Young Adult Conservation Corps. Prior to January 1, 1984, emergency and temporary employees were excluded from membership. Persons appointed by the Governor with the advice and consent of the Senate may elect to become members of the System. Other exceptions are identified in State law.

Membership Service

Membership service includes all service rendered while a member of the System for which credit is allowable. Persons entering service on or after January 1, 1984, or after July 1, 1982, in the case of emergency or temporary employees, may also receive membership service credit for periods of employment prior to membership by making contributions for such periods.

Member Contributions

Members are required to contribute a percentage of salary as their share of meeting the cost of the various benefits. Contribution rates are as shown below:

- Members covered by Social Security – 4.0 percent of Salary.
- Members not covered by Social Security – 8.0 percent of Salary.
- Members covered by Social Security who are serving in a position in which service toward the Alternative Retirement Annuity may be earned – 8.5 percent of Salary.
- Members not covered by Social Security who are serving in a position in which service toward the Alternative Retirement Annuity may be earned – 12.5 percent of Salary.

Members covered by Social Security also pay the current Social Security tax rate.

Credit for regular interest each fiscal year on a member's individual contribution account is computed on the accumulated balance in the account at the beginning of each fiscal year.

Retirement Pension

Qualification of Member

Upon termination of State service, a member is eligible for a pension at age 60 with at least eight years of pension credit or at any age with 35 or more years of credit.

General formula members are eligible for a retirement annuity if the sum of the member's age plus years (and whole months) of pension credit equals or exceeds 85. General formula members between ages 55 and 60 with at least 25 years of pension credit are eligible for a retirement annuity reduced by one-half of 1 percent for each month the member is under age 60. Certain positions in the Department of Corrections were placed under the general formula effective July 1, 2005.

Members serving in a position in which service toward the Alternative Retirement Annuity may be earned are eligible to receive the alternative retirement annuity at age 50 with at least 25 years of pension credit or at age 55 with at least 20 years of pension credit in such a position. Security employees of the Department of Human Services were placed under the alternative formula effective January 1, 2001. Certain members of the Department of Transportation and the Toll Highway Authority were placed under the alternative formula effective August 1, 2001.

Amount of Pension

The pension is based on the member's final average compensation and the number of years of pension credit that has been established.

Final Average Compensation is the average of the highest 48 consecutive months in the last 10 years. All employees whose benefit is calculated under the alternative formula will have their benefit based on the greater of (i) the salary rate in effect on their last day of service, provided the last day salary does not exceed 115 percent of the average monthly compensation received by the member for the last 24 months of service, or (ii) the average monthly compensation for the last 48 months prior to retirement.

The general formula for members retiring on or after January 1, 1998, (regardless of termination date) is as follows:

- 1.67 percent of final average salary per year of credited service for members covered by Social Security.
- 2.20 percent of final average salary per year of credited service for members not covered by Social Security.

The alternative formula for members retiring on or after January 1, 2001 (regardless of termination date) is as follows:

- 2.50 percent of final average salary per year of credited service for members covered by Social Security.
- 3.00 percent of final average salary per year of credited service for members not covered by Social Security.

The maximum pension payable is 75 percent of final average compensation for general formula members and 80 percent of final average compensation for alternative formula members.

Optional Forms of Payment

Reversionary Annuity—A member may elect to receive a smaller pension during his lifetime in order to provide a spouse or a designated dependent with a lifetime income. That payment would be in addition to any other benefit payable by the System.

Level Income—A member who contributes to Social Security as a State employee may elect to have his pension payments increased before Social Security Normal Retirement Age and reduced thereafter. To be eligible for this election the member must have established eligibility for a Social Security pension.

Annual Increases in Pension

Postretirement increases of 3.0 percent of the current pension (i.e., increases are compounded) are granted to members effective each January 1 occurring on or after the first anniversary of the pension.

Survivors Annuity

Qualification of Survivor

If death occurs while in State employment, the member must have established at least 18 months of pension credit. If death occurs after termination of State service and the member was not receiving a retirement pension, the member must have established at least eight years of pension credit.

An eligible spouse qualifies at age 50 or at any age if there is, in the care of the spouse, any unmarried children of the member under age 18 (age 22 if full-time student); unmarried children under age 18 (age 22 if full-time student) qualify if no spouse survives; dependent parents at age 50 qualify if neither an eligible spouse nor children survive the member.

Amount of Payment

If the member's death occurs before retirement, the named beneficiary receives a lump sum refund of all of the member's pension contributions plus interest, excluding contributions for widows and survivors benefits. A single lump sum payment of $1,000 is also made immediately to the survivor beneficiary of the member.

An eligible spouse receives a monthly annuity equal to 30 percent of the member's final average compensation subject to a maximum of $400. If children of the member are under the care of the spouse, the annuity is increased for each child, subject to a monthly maximum of $600 or 80 percent of final average compensation. If only eligible children survive, the monthly annuity may not exceed the lesser of $600 or 80 percent of final average compensation. The maximum combined monthly payment to parents may not exceed $400. If the member's death occurs after retirement or after termination of State employment but before the member receives a pension, the monthly benefit is further limited to 80 percent of the pension received or earned by the member. Monthly benefits payable to survivors of a member who was covered by Social Security as a State employee are reduced by one-half of the Social Security benefits for which the survivors are eligible. For benefits granted on or after January 1, 1992, the reduction may not exceed 50 percent of the amount of survivor's annuity otherwise payable. If death of the member occurs on or after January 1, 1984, the minimum total survivor's annuity benefit payable (before any reduction for Social Security benefits) is equal to 50 percent of the member's earned pension without regard to the member's age at death. Any member who retires on or after July 1, 2009, will have the option at the time of retirement to remove the offset provision. In exchange for the removal, SERS will reduce the member's retirement annuity by 3.825 percent.

Duration of Payment

The monthly annuity payable to a spouse continues for his/her lifetime without regard to remarriage. The monthly annuity to children terminates upon death, marriage or attainment of age 18 (age 22 if full-time student). However, the monthly annuity will continue for a child who, at age 18, is physically or mentally disabled and unable to accept gainful employment.

Annual Increases in Annuity

If the member's death occurs before retirement, increases of 3.0 percent of the current annuity are granted to survivors effective each January 1 occurring on or after the first anniversary of the annuity (i.e., increases are compounded). If the member's death occurs after retirement, the initial 3.0 percent increase applies on the January 1 on or after the survivor annuity begins.

Widow's Annuity Option

The widow of a male member who was a participant in the System prior to July 19, 1961, may have the option of taking a Widow's Annuity rather than the Survivor's Annuity.

Qualification of Widow

An eligible widow receives a Widow's Annuity if she is age 50 or over or has in her care any of the member's unmarried children under age 18. If she is not age 50 and has no such children in her care, she becomes eligible at age 50.

Amount of Payment

The Widow's Annuity consists of a lump sum payment of $500, plus a monthly annuity equal to 50 percent of the pension earned or received by the member at the date of death. If the widow has in her care eligible children of the member, the monthly annuity is increased because of each child, subject to a maximum payment equal to 66-2/3 percent of the earned pension. Monthly benefits payable to a widow of a member who was covered by Social Security as a State employee are reduced by one-half of the amount of benefits she is entitled to as a widow from Social Security (reduced by one-half of the amount of benefits she is entitled to based on her own Primary Insurance Amount). For benefits granted on or after January 1, 1992, the reduction may not exceed 50 percent of the amount of widow's annuity otherwise payable. Any member who retires on or after July 1, 2009, will have the option at the time of retirement to remove the offset provision. In exchange for the removal, SERS will reduce the member’s retirement annuity by 3.825 percent.

Duration of Payment

The monthly payment to the widow continues for her lifetime whether or not she remarries. If the amount of benefit was increased because of eligible children, it is adjusted downward as these children's benefits are terminated (death, marriage or attainment of age 18 or 22).

Annual Increases in Annuity

If the member's death occurs before retirement, increases of 3.0 percent of the current annuity are granted to widows effective each January 1 occurring on or after the first anniversary of the annuity (i.e., increases are compounded). If the member's death occurs after retirement, the initial 3.0 percent increase applies on the January 1 on or after the widow's annuity begins.

Occupational Death Benefit

Qualification of Survivors

If a member's death results from an injury on the job or a job-related cause, the spouse may be eligible for an Occupational Death benefit. If only unmarried children under age 18 (age 22 if full-time student) survive, they would be eligible for the benefit. If neither a spouse nor eligible children survive, a dependent father or mother would be eligible.

Amount and Duration of Payment

The nominated beneficiary receives a lump sum payment consisting of all contributions made by the member plus interest credited to his account.

A surviving spouse is entitled to a monthly benefit equal to 50 percent of the member's final average compensation. The benefit is payable for the remaining lifetime of the spouse without regard to remarriage. If children under age 18 (age 22 if full-time student) also survive, the annuity is increased by 15 percent of such average because of each child, subject to a maximum of 75 percent. If there is no spouse, or if the spouse dies before all children have attained age 18 (age 22 if full-time student), each child receives a monthly allowance of 15 percent of final average compensation.

The combined payment to children may not exceed 50 percent of the member's final average compensation. Payments to or on account of children terminate upon their death, marriage or attainment of age 18 (age 22 if full-time student).

If there is no spouse or eligible children, a benefit of 25 percent of final average compensation is payable to each surviving dependent parent for life.

Annual Increases in Annuity

Increases of 3.0 percent of the current annuity are granted effective each January 1 occurring on or after the first anniversary of the annuity (i.e., increases are compounded).

Reductions

The monthly benefit is reduced by any payments awarded under the Workmen's Compensation or Occupational Diseases Acts.

Other Death Benefits

If the survivor beneficiaries of the member do not qualify for any of the previously described death benefits, one of the following benefits is payable to the nominated beneficiary on file with the System at the date of death.

Before Retirement

If the member's death occurred while in State service the benefit consists of: (1) a refund of all contributions plus interest credited to the member's account; and (2) a payment equal to one month's

salary for each full year of pension credit not to exceed six month's salary. The minimum payment is equal to one month's salary.

If the member had terminated State service but not yet qualified for a pension, the benefit consists of a refund of all of the member's contributions to the System plus the interest credited to the member's account.

After Retirement

The benefit consists of a lump sum payment equal to the excess of contributions plus interest credited to the member's account over the total amount of pension payments made to the member. The minimum payment is $500.00.

Non-Occupational Disability Benefits

Qualification and Amount of Payment

Available to any member who has established at least one and one-half years of creditable service and who has been granted a disability leave of absence by his employing agency. The benefit is 50 percent of the member's final average compensation plus a credit to the member's account of service and contributions. It begins on the 31st day of absence from service on account of disability.

If the member has Social Security coverage as a State employee, the benefit payable by the System is reduced by the amount of any disability payment to which he is entitled under Social Security.

Duration of Payment

The member is eligible for the monthly benefit until the occurrence of any of the following events: (1) disability ceases; (2) resumption of gainful employment; (3) payments are made for a period of time equal to one-half of the service credit established as of the date disability began; or (4) attainment of age 65 if the benefit commences prior to age 60, or payment for 5 years if benefit commences after age 60.

If termination of the benefit is due to the member receiving benefits for a period of time equal to one-half of the service credit established at the date of disability, he shall be eligible for a retirement annuity if he has attained age 55 and has 15 years of service, or if he has attained age 50 and has 20 years of service.

Annual Increases in Annuity

A one-time increase of 7.0 percent of the original annuity is granted to members on the January 1 following the fourth anniversary of the annuity. Increases of 3.0 percent of the current annuity are then granted to members each January 1 following the 7.0 percent increase (i.e., the 3.0 percent increases are compounded).

Occupational Disability Benefit

Qualification and Amount of Payment

Provided for any member who becomes disabled as the direct result of injury or diseases arising out of and in the course of State employment.

The benefit is 75 percent of final average compensation plus a credit to the member's account of service and contributions. The cash benefit is reduced by any payment received under the Workmen's Compensation or Occupational Diseases Acts.

Duration of Payment

Monthly benefits are payable until the occurrence of any of the following events: (1) disability ceases; (2) resumption of gainful employment; or (3) attainment of age 65 if the benefit commences prior to age 60, or payment for five years if the benefit commences after age 60.

If termination of the benefit is due to the member having attained age 65 or having received benefits for five years after age 60, the member is entitled to a retirement pension based upon service credit established as of that date.

Annual Increases in Annuity

A one-time increase of 7.0 percent of the original annuity is granted to members on the January 1 following the fourth anniversary of the annuity. Increases of 3.0 percent of the current annuity are then granted to members each January 1 following the 7.0 percent increase (i.e., the 3.0 percent increases are compounded).

Temporary Disability Benefit

A member who is initially denied Workers' Compensation benefits and is appealing the denial may receive payment at the non-occupational rate, 50 percent of pay, providing all eligibility requirements for the non-occupational benefit are met, until the determination is made.

Separation Benefits

Upon termination of State employment by resignation, discharge, dismissal or layoff, a member may obtain a refund of the contributions made to the System. By accepting a refund, a member forfeits all accrued rights and benefits in the System for himself and his beneficiaries.

Provisions Applicable to Members Hired after December 31, 2010, as a result of Public Act 96-0889 ("Tier 2")

Final Average Compensation

Based on last eight years of service and may not exceed $106,800, as automatically increased by the lesser of 3 percent or one-half of the annual increase in the consumer price index-u during the preceding 12-month calendar year.

Retirement Eligibility – All Members Except State policemen, fire fighters in the fire protection service of a department or security employees of the Department of Corrections or the Department of Juvenile Justice

Normal retirement – 67 years old with 10 years of service.

Early Retirement – 62 years old with 10 years of service with a 6.0 percent per year reduction in benefit for each year age is under 67.

Retirement Eligibility – State policemen, fire fighters in the fire protection service of a department or security employees of the Department of Corrections or the Department of Juvenile Justice

Normal retirement – 60 years old with 20 years of service.

Annual Increases in Annuity

Annual increases begin at the later of the first anniversary of retirement or age 67. The annual increases are equal to the lesser of 3.0 percent or one-half of the annual increase in the consumer price index-u during the preceding 12-month calendar year and are not compounded.

Survivor Benefits

Benefit equal to 66.67 percent of the earned retirement benefit at death. Survivor benefits are increased by the lesser of 3.0 percent or one-half of the annual increase in the consumer price index-u during the preceding 12-month calendar year and are not compounded.

Miscellaneous

State policeman, a fire fighter in the fire protection service of a department or a security employee of the Department of Corrections or the Department of Juvenile are still eligible for Alternate formula benefits as defined in Section 14-110 of the Illinois Pension Code.

Salary and COLA Development for Members Hired on or After January 1, 2011

Year Ending	CPI-U	1/2 CPI-U	COLA	Maximum Annual Pensionable Earnings
2011			3.00%	$106,800.00
2012	3.90%	1.95%	1.95%	$108,882.60
2013	2.00%	1.00%	1.00%	$109,971.43
2014	1.20%	0.60%	0.60%	$110,631.26
2015	1.70%	0.85%	0.85%	$111,571.63
2016	0.00%	0.00%	0.00%	$111,571.63
2017	1.50%	0.75%	0.75%	$112,408.42
2018	2.20%	1.10%	1.10%	$113,644.91
2019	2.30%	1.15%	1.15%	$114,951.83
2020	1.70%	0.85%	0.85%	$115,928.92
2021	1.40%	0.70%	0.70%	$116,740.42
2022	5.40%	2.70%	2.70%	$119,892.41
2023	8.20%	4.10%	3.00%	$123,489.18
2024	3.70%	1.85%	1.85%	$125,773.73

Provisions Applicable to Certain Current and Future Members not covered by Social Security, as a result of Public Act 100-0023 ("Tier 3")

Defined Benefit Provisions

Final Average Compensation

Based on last 10 years of service and may not exceed the federal Social Security Wage Base, currently $168,600 for calendar year 2024.

Retirement Eligibility

The greater of Normal Retirement Age under Social Security or age 67 years old with 10 years of service.

Benefit Formula

The member's benefit is equal to 1.25 percent for each year of service.

Annual Increases in Annuity

Annual increases begin on the first anniversary of retirement. The annual increases are equal to the one-half of the annual increase in the consumer price index-w during the preceding 12-month calendar year and are not compounded.

Survivor Benefits

Benefit equal to 66.67 percent of the earned retirement benefit at death. Survivor benefits are increased by one-half of the annual increase in the consumer price index-w during the preceding 12-month calendar year and are not compounded.

Member Contributions

Members contribute the lesser of 6.2 percent of pensionable compensation and the total normal cost rate for the Tier 3 plan.

Defined Contribution Provisions

Plan consists of employee and employer contributions and investment income earned on such contributions.

Administrative fees will be deducted as a uniform percentage of each participating member's employee contributions.

Employer Contributions

Employer contributions are at a rate between 2.0 percent and 6.0 percent of salary.

Employer contributions vest immediately.

Member Contributions

Member contribution rate equals 4.0 percent of salary.

Provisions Applicable to the Accelerated Pension Benefit Payment Program, as a result of Public Act 100-0587, Public Act 101-0010, and Public Act 102-0718

Vested Inactive Accelerated Pension Benefit Payment Option – Tiers 1 and 2

Eligibility requirements for an accelerated pension benefit payment:

- Member must have terminated service;
- Member must have enough service credit to qualify for a retirement annuity; and
- Member cannot have received a retirement annuity.

Members who elect this option will forfeit all rights to future benefit payments, but retain access to state retiree healthcare. The payment will equal 60 percent of the present value of the retirement benefits which the member is entitled to at the date they elect this payment, including automatic annual increases (AAI), survivor benefits and disability benefits. The System will calculate the present value of the benefit using actuarial factors.

Members forfeit all service credit for all purposes under the Illinois Pension Code, including benefits provided under the Illinois Reciprocal Act. However, the years of service credit may be considered when determining eligibility for retiree healthcare benefits and the member's share of retiree healthcare premiums.

This election is irrevocable and any member who elects this option and later returns to service will be eligible for a benefit based solely on future service and will not have the option to repay the amount received under this program to reestablish the previous service credit.

Accelerated Pension Benefit Payment at Retirement Option – Tier 1 Only

Eligibility requirements for this payment option:

- Member must have terminated service;
- Member must be eligible for a retirement annuity; and
- Member cannot have received a retirement annuity.

At retirement, Tier 1 members could elect to forfeit the Tier 1, 3 percent compounded AAI and instead receive 1.5 percent non-compounded AAIs, beginning the January 1st following the 1st anniversary of retirement or the 67th birthdate, whichever is later. Survivors of members that elect this option will also receive 1.5 percent non-compounded AAIs beginning on the January 1st following the anniversary of the start of the survivor annuity.

Members who elect to forego the Tier 1 AAIs will receive a lump sum payment equal to 70 percent of the difference in the present value of the Tier 1 AAI and the 1.5 percent non-compounded AAI, as calculated by the System. In the calculation, the System will use current actuarial assumptions and all relevant member information. Buyout payments are subject to applicable withholding and taxation provisions and must be transferred to a qualified retirement plan authorized by the IRS.

Accelerated Pension Benefit Program expires June 30, 2026, or if earlier, the date funds are no longer available. The State finances the program by issuing bonds up to certain limits. Lump sum payments will be made directly from the bond proceeds.

SECTION G

GLOSSARY OF TERMS

Glossary of Terms

Actuarial Accrued Liability ("AAL")	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
Actuarial Assumptions	Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members; and other items.
Actuarial Cost Method	A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of future Normal Costs and the Actuarial Accrued Liability.
Actuarial Equivalent	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial Present Value ("APV")	The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.
Actuarial Present Value of Future Benefits ("APVFB")	The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits and inactive, nonretired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the actuarial 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 an actuarial valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB No. 67, such as the Funded Ratio and the Actuarially Determined Contribution ("ADC").
Actuarial Value of Assets	The value of the assets as of a given date, used by the actuary for actuarial valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio, or contribution requirement.

Glossary of Terms

Actuarially Determined Contribution ("ADC")	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The ADC consists of the Employer Normal Cost and 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 UAAL. 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 UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase.
Amortization Payment	That portion of the plan contribution or ADC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
Amortization Period	The period used in calculating the Amortization Payment.
Closed Amortization Period	A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example, if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc.
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.
Equivalent Single Amortization Period	For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.
Experience Gain/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 valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge which may be larger or smaller than projected. Gains are due to favorable experience; e.g., the assets earn more than projected, salaries do not increase as fast as 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, losses are the result of unfavorable experience; i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.

Glossary of Terms

Funded Ratio	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.
GASB	Governmental Accounting Standards Board.
GASB Statement No. 67 and GASB Statement 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. GASB Statement No. 68, which replaced GASB Statement No. 27 effective with the fiscal year ending June 30, 2015, sets the accounting rules for the employers that sponsor or contribute to public retirement systems. GASB Statement No. 67, which replaced GASB Statement No. 25 effective with fiscal year ending June 30, 2014, sets the rules for the systems themselves.
Normal Cost	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.
Open Amortization Period	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.
Unfunded Actuarial Accrued Liability	The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.
Valuation Date	The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.

SECTION H

ADDITIONAL PROJECTION DETAILS

Table 11
Additional Projection Details — Actuarial Accrued Liability
($ in Millions)

Valuation Date June 30,	Current Inactives		Actives (Including Disabilities)			Grand Totals		
	Retirees & Beneficiaries	Deferreds	Tier 1	Current Tier 2	Future Tier 2	Current Retirees, Beneficiaries & Deferreds	Actives	Total
2024	$ 40,561.52	$ 856.88	$ 12,863.47	$ 1,415.02	$ -	$ 41,418.39	$ 14,278.50	$ 55,696.89
2025	39,983.21	892.33	14,306.81	1,711.52	-	40,875.54	16,018.34	56,893.88
2026	39,334.61	918.38	15,711.36	2,031.55	17.20	40,253.00	17,760.12	58,013.11
2027	38,616.53	941.60	17,066.97	2,377.43	51.31	39,558.13	19,495.72	59,053.85
2028	37,830.09	962.17	18,363.68	2,751.30	104.46	38,792.26	21,219.44	60,011.70
2029	36,976.77	979.74	19,599.37	3,154.78	177.79	37,956.51	22,931.94	60,888.46
2030	36,058.53	993.78	20,770.76	3,588.52	273.22	37,052.31	24,632.51	61,684.81
2031	35,077.82	1,004.15	21,872.49	4,053.59	393.02	36,081.98	26,319.10	62,401.08
2032	34,037.65	1,010.94	22,896.68	4,550.05	539.82	35,048.59	27,986.55	63,035.14
2033	32,941.52	1,014.33	23,839.70	5,076.88	719.33	33,955.85	29,635.91	63,591.76
2034	31,793.53	1,014.25	24,699.43	5,632.08	935.02	32,807.78	31,266.53	64,074.31
2035	30,598.31	1,023.56	25,468.93	6,213.00	1,189.96	31,621.87	32,871.89	64,493.76
2036	29,361.00	1,030.07	26,140.70	6,819.98	1,486.71	30,391.07	34,447.39	64,838.47
2037	28,087.27	1,033.82	26,713.26	7,452.51	1,827.75	29,121.09	35,993.53	65,114.61
2038	26,783.15	1,034.75	27,186.10	8,108.82	2,215.49	27,817.90	37,510.40	65,328.30
2039	25,455.07	1,032.81	27,558.50	8,786.71	2,652.78	26,487.88	38,998.00	65,485.87
2040	24,109.87	1,027.97	27,831.69	9,484.88	3,142.50	25,137.84	40,459.08	65,596.92
2041	22,754.58	1,020.39	28,007.42	10,201.84	3,687.57	23,774.97	41,896.83	65,671.80
2042	21,396.34	1,010.16	28,088.94	10,933.71	4,291.03	22,406.49	43,313.68	65,720.17
2043	20,042.32	997.19	28,079.42	11,675.74	4,956.16	21,039.51	44,711.31	65,750.82
2044	18,699.65	981.52	27,981.60	12,422.71	5,686.33	19,681.18	46,090.63	65,771.81
2045	17,375.32	963.33	27,798.62	13,169.84	6,482.82	18,338.64	47,451.28	65,789.92

Table 12
Additional Projection Details — Present Value of Future Benefits
($ in Millions)

Valuation Date June 30,	Current Inactives		Actives (Including Disabilities)			Grand Totals		
	Retirees & Beneficiaries	Deferreds	Tier 1	Current Tier 2	Future Tier 2	Current Retirees, Beneficiaries & Deferreds	Actives	Total
2024	$ 40,561.52	$ 856.88	$ 17,330.04	$ 5,337.23	$ -	$ 41,418.39	$ 22,667.28	$ 64,085.67
2025	39,983.21	892.33	18,398.11	5,630.44	322.46	40,875.54	24,351.02	65,226.56
2026	39,334.61	918.38	19,436.59	5,942.59	677.30	40,253.00	26,056.48	66,309.48
2027	38,616.53	941.60	20,439.01	6,273.93	1,066.46	39,558.13	27,779.41	67,337.54
2028	37,830.09	962.17	21,398.50	6,625.69	1,477.99	38,792.26	29,502.17	68,294.44
2029	36,976.77	979.74	22,312.57	6,998.75	1,917.90	37,956.51	31,229.22	69,185.73
2030	36,058.53	993.78	23,178.13	7,393.09	2,383.20	37,052.31	32,954.41	70,006.72
2031	35,077.82	1,004.15	23,990.89	7,809.25	2,880.18	36,081.98	34,680.32	70,762.30
2032	34,037.65	1,010.94	24,745.29	8,247.26	3,408.49	35,048.59	36,401.04	71,449.63
2033	32,941.52	1,014.33	25,438.05	8,706.54	3,972.72	33,955.85	38,117.32	72,073.17
2034	31,793.53	1,014.25	26,066.78	9,185.68	4,575.76	32,807.78	39,828.22	72,636.00
2035	30,598.31	1,023.56	26,626.29	9,681.99	5,222.36	31,621.87	41,530.64	73,152.51
2036	29,361.00	1,030.07	27,111.11	10,195.24	5,910.92	30,391.07	43,217.27	73,608.34
2037	28,087.27	1,033.82	27,519.13	10,724.65	6,639.63	29,121.09	44,883.41	74,004.50
2038	26,783.15	1,034.75	27,848.69	11,268.69	7,415.97	27,817.90	46,533.36	74,351.26
2039	25,455.07	1,032.81	28,098.34	11,825.64	8,239.39	26,487.88	48,163.37	74,651.25
2040	24,109.87	1,027.97	28,267.70	12,394.24	9,110.01	25,137.84	49,771.95	74,909.80
2041	22,754.58	1,020.39	28,356.77	12,972.97	10,030.71	23,774.97	51,360.45	75,135.41
2042	21,396.34	1,010.16	28,366.58	13,558.77	11,006.78	22,406.49	52,932.13	75,338.62
2043	20,042.32	997.19	28,298.24	14,148.06	12,041.05	21,039.51	54,487.35	75,526.86
2044	18,699.65	981.52	28,152.80	14,736.81	13,136.46	19,681.18	56,026.07	75,707.25
2045	17,375.32	963.33	27,931.61	15,321.13	14,297.44	18,338.64	57,550.18	75,888.83

Table 13
Additional Projection Details — Benefit Payments Including Administrative Expenses and Disability Payments
($ in Millions)

Valuation Date June 30,	Current Inactives		Actives (Including Disabilities)			Grand Totals		
	Retirees & Beneficiaries	Deferreds	Tier 1	Current Tier 2	Future Tier 2	Current Retirees, Beneficiaries & Deferreds	Actives	Total
2024	$ 3,209.65	$ 21.67	$ 98.44	$ 64.90	$ 0.00	$ 3,231.32	$ 163.34	$ 3,394.66
2025	3,239.91	33.08	196.86	65.72	7.42	3,272.98	270.01	3,542.99
2026	3,264.78	37.53	299.60	67.54	14.60	3,302.31	381.75	3,684.06
2027	3,284.03	41.60	406.65	69.43	21.41	3,325.64	497.49	3,823.12
2028	3,297.38	45.86	513.29	71.79	28.63	3,343.24	613.70	3,956.94
2029	3,304.47	50.42	619.96	75.57	36.13	3,354.89	731.65	4,086.55
2030	3,304.94	54.88	727.61	80.21	43.68	3,359.82	851.50	4,211.31
2031	3,298.43	59.03	837.19	86.25	51.50	3,357.46	974.94	4,332.40
2032	3,284.62	62.77	946.13	94.28	56.72	3,347.39	1,097.14	4,444.53
2033	3,263.21	66.34	1,053.37	105.07	62.04	3,329.55	1,220.48	4,550.03
2034	3,233.92	57.25	1,161.44	119.74	67.71	3,291.17	1,348.90	4,640.07
2035	3,196.57	60.57	1,270.28	135.77	74.18	3,257.14	1,480.24	4,737.38
2036	3,150.99	63.67	1,376.29	153.67	81.50	3,214.66	1,611.46	4,826.12
2037	3,097.19	66.63	1,478.88	174.09	89.77	3,163.82	1,742.74	4,906.57
2038	3,035.17	69.49	1,577.76	197.15	99.08	3,104.66	1,873.99	4,978.64
2039	2,964.98	72.16	1,671.78	222.25	109.48	3,037.14	2,003.51	5,040.65
2040	2,886.87	74.50	1,760.55	249.60	121.05	2,961.37	2,131.19	5,092.56
2041	2,801.18	76.56	1,843.09	280.56	133.93	2,877.75	2,257.57	5,135.32
2042	2,708.35	78.55	1,919.36	315.45	148.29	2,786.90	2,383.10	5,170.01
2043	2,608.91	80.31	1,989.52	354.48	164.28	2,689.22	2,508.28	5,197.50
2044	2,503.45	81.73	2,053.34	397.22	183.36	2,585.19	2,633.92	5,219.11
2045	2,392.67	82.95	2,110.75	443.95	206.33	2,475.62	2,761.03	5,236.64

Table 14
Additional Projection Details — Active Population, Covered Payroll, Employee Contributions and Normal Costs ($ in Millions)

Valuation Date June 30,	Tier 1 Active Members				Current Tier 2 Active Members				Future Tier 2 Active Members			
	Population	Covered Payroll	Employee Contributions	Normal Cost	Population	Covered Payroll	Employee Contributions	Normal Cost	Population	Covered Payroll	Employee Contributions	Normal Cost
2024	27,442	$ 2,835.47	$ 159.41	$ 655.02	38,066	$ 2,930.17	$ 157.48	$ 259.43	-	$ 0.00	$ 0.00	$ 0.00
2025	24,772	2,640.76	148.18	621.60	35,264	2,855.17	154.81	263.65	5,473	366.31	16.86	24.07
2026	22,439	2,463.92	137.56	585.22	33,416	2,827.25	154.16	269.58	9,653	671.51	31.34	46.49
2027	20,245	2,287.72	126.91	546.69	31,838	2,807.86	153.94	275.96	13,426	969.02	45.50	69.49
2028	18,231	2,119.82	116.96	509.55	30,424	2,791.77	153.88	282.56	16,854	1,261.32	59.29	92.78
2029	16,349	1,955.85	107.32	473.26	29,139	2,776.97	153.87	289.27	20,020	1,552.93	73.08	116.88
2030	14,588	1,796.53	98.28	436.96	27,955	2,762.18	153.84	295.89	22,965	1,845.07	86.76	141.78
2031	12,911	1,637.06	89.18	399.51	26,847	2,746.32	153.66	301.94	25,750	2,142.00	100.67	167.91
2032	11,366	1,482.59	80.24	362.99	25,768	2,724.43	153.12	306.92	28,373	2,442.87	114.74	195.20
2033	9,963	1,336.53	71.91	328.00	24,657	2,693.55	152.11	310.76	30,888	2,750.81	129.01	223.80
2034	8,685	1,197.44	63.89	292.58	23,554	2,655.97	150.64	314.04	33,269	3,063.89	143.55	253.38
2035	7,486	1,059.17	55.76	256.56	22,534	2,617.61	148.99	317.35	35,488	3,378.94	158.29	283.65
2036	6,401	927.86	47.99	222.65	21,563	2,576.54	147.10	320.32	37,544	3,694.39	173.07	314.46
2037	5,439	807.88	41.12	191.31	20,629	2,531.22	144.86	322.43	39,440	4,009.14	187.70	345.64
2038	4,569	694.98	34.70	162.10	19,709	2,480.21	142.16	323.51	41,230	4,327.60	202.47	377.58
2039	3,807	592.81	29.01	135.77	18,803	2,423.94	139.06	323.94	42,898	4,647.29	217.21	410.16
2040	3,137	500.13	23.99	112.36	17,934	2,365.76	135.80	323.86	44,438	4,966.81	231.87	443.30
2041	2,564	418.21	19.68	92.22	17,072	2,302.56	132.25	322.42	45,872	5,287.35	246.47	477.08
2042	2,079	347.29	16.07	75.06	16,197	2,231.32	128.16	319.32	47,233	5,611.78	261.13	511.72
2043	1,666	285.33	12.98	60.39	15,320	2,154.90	123.70	314.66	48,522	5,938.62	275.83	547.19
2044	1,323	232.39	10.38	48.17	14,429	2,071.56	118.79	308.77	49,757	6,268.37	290.63	582.77
2045	1,042	187.86	8.26	38.19	13,575	1,987.09	113.85	301.95	50,891	6,593.89	305.17	617.97

Total payroll is capped for members hired after December 31, 2010, as defined in Public Act 96-0889.
Active member population includes disabilities.

SECTION I

HISTORICAL VALUATION INFORMATION AND RESULTS

Key Historical Valuation Results

Historical Actuarial Valuation Information and Results ($ In Millions)												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
Valuation Year	Member Counts Active	Inactive	Retiree	Covered Uncapped Payroll	Benefits and Expenses	Net Investment Income	Actual State Contributions	Employee Contributions	Actuarially Determined Contribution	ADC Contribution Shortfall	Total Normal Cost[a]	
2017	60,612	24,759	72,004	$ 4,195.8	$ 2,371.2	$ 1,812.9	$ 1,798.3	$ 251.6	$ 2,129.5	$ 331.1	$ 896.8	
2018	61,397	24,742	73,380	4,243.7	2,507.6	1,257.0	1,929.2	254.4	2,739.4	810.2	875.9	
2019	62,026	25,525	74,770	4,626.4	2,647.5	1,118.4	2,274.9	275.7	2,979.8	704.8	869.1	
2020	62,621	27,252	75,527	4,523.9	2,764.6	823.5	2,368.9	271.7	2,913.6	544.7	877.6	
2021	62,253	28,322	76,113	4,705.2	2,887.2	4,756.1	2,478.2	280.6	3,075.9	597.7	900.5	
2022	61,056	30,644	77,070	4,820.3	3,036.5	(1,528.5)	2,665.7	288.8	3,130.1	464.4	856.0	
2023	61,651	32,969	78,189	5,051.0	3,171.8	1,398.6	2,666.7	297.4	3,171.0	504.3	869.6	
2024	65,508	35,411	78,950	5,641.9	3,299.7	2,180.6	2,840.0	323.2	3,435.6	595.5	914.4	

[a] *Includes load for Administrative Expense Contribution.*

(1) and (3). The number of retirees has increased from 72,004 in 2017 to 78,950 in 2024 and the number of actives has increased from 60,612 in 2017 to 65,508 in 2024. The trend shown in the table suggests that the System in maturing.

(5), (7), and (8). Benefits and expenses have exceeded contributions during the last five years, which implies that a portion of net investment income was used to pay benefits. For underfunded plans, it is preferable for contributions to exceed benefits and expenses; otherwise, assets may not grow at an adequate rate.

(9). The actuarially determined contribution (ADC) has increased from $2.1 billion in 2017 to $3.5 billion in 2024, an increase of 67 percent over the period. Typically, the ADC is expected to increase each year by the wage inflation assumption, which has ranged from 2.75 percent to 3.00 percent per year. The slow growth in assets, due mainly to the current statutory funding policy, is one of the primary reasons why the ADC has grown at a significantly higher rate than wage inflation.

(10). ADC less Actual State Contributions. Represents additional employer contribution needed to finance normal cost and existing unfunded actuarial liability over a 25-year closed period as of July 1, 2015, expressed as a level percentage of capped payroll.

(11). The total normal cost has increased from $897 million in 2017 to $914 million in 2024. The increase in 2024 is due to increased active membership and a corresponding increase in payroll. The upward trend during 2020 and 2021 is due to the impact of retroactive pay increases. Otherwise, the decreases are mainly due to the growing proportion of active members with Tier 2 benefits.

Key Historical Valuation Results

Historical Actuarial Valuation Information and Results ($ In Millions)											
	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
Valuation Year	Actuarial Value of Assets	Actuarial Accrued Liability (AAL) Active	Inactive	Retiree	Total	Funded Ratio (AVA/AAL)	Demographic (Gain)/Loss	Investment (Gain)/Loss	Impact of Plan Changes	Impact of Assumption Changes	Contribution (Excess)/Shortfall
2017	$ 16,558.9	$ 14,094.8	$ 678.9	$ 31,927.6	$ 46,701.3	35.46%	$ (509.4)	$ (164.3)	$ -	$ -	$ 933.4
2018	17,478.1	13,612.0	743.7	33,570.0	47,925.7	36.47%	(191.9)	(95.2)	-	(214.0)	806.1
2019	18,429.2	13,543.1	715.9	34,472.4	48,731.4	37.82%	(49.2)	164.4	(404.7)	(293.9)	438.0
2020	19,389.5	13,631.0	740.3	35,774.6	50,145.8	38.67%	56.6	158.9	-	-	238.6
2021	21,323.6	13,953.0	864.6	37,010.8	51,828.5	41.14%	385.8	(771.4)	2.5	(26.6)	158.3
2022	22,892.7	13,096.8	818.0	38,134.9	52,049.7	43.98%	(205.5)	(45.6)	(176.0)	(876.8)	(44.0)
2023	24,072.1	13,243.8	955.6	39,709.2	53,908.5	44.65%	711.4	151.3	-	-	(183.3)
2024	25,528.8	13,888.2	856.9	40,951.8	55,696.9	45.84%	643.6	27.2	-	(20.6)	(318.4)

(13) and (15). The actuarial liability for active members has decreased whereas the actuarial liability for retired members has increased. This is mostly due to the relative level of Tier 1 and Tier 2 benefits. The actuarial liability for retired members is comprised primarily of Tier 1 benefits, whereas the actuarial liability for active members is comprised of both Tier 1 and Tier 2 benefits. The level of Tier 2 benefits for active members increases as newly retired Tier 1 members are effectively replaced with newly hired Tier 2 members.

(17). The funded ratio has grown marginally from 35.46 percent at 2017 to 45.84% percent at 2024. One of the key reasons for the slow growth in the funded ratio is due to the statutory funding policy.

(20). The 2019 change in actuarial liability due to plan changes reflects the Accelerated Pension Benefit Program. The 2022 change in actuarial liability due to plan changes reflects the Accelerated Pension Benefit Program being extended by two years and being set to expire June 30, 2026.

(21). An Experience Study was performed in 2022 and assumptions were modified to be more consistent with observed experience. The decrease in liabilities was due to the impact of updated demographic assumptions.

(22). Contribution shortfall reflects the additional contributions needed to *maintain* the current level of unfunded actuarial liability. Note that this measure does not address the additional contributions needed to *reduce* the unfunded actuarial liability.

SECTION J

STRESS TESTING SCENARIOS

P: 312.456.9800 | www.grsconsulting.com

December 20, 2024

Board of Trustees
State Employees' Retirement System of Illinois
2101 South Veterans Parkway
P.O. Box 19255
Springfield, Illlinois 62794-9255

Re: Stress Testing Scenarios Based on Actuarial Valuation Results as of June 30, 2024

Dear Members of the Board:

At your request, we have performed stress testing of the required statutory contributions and funded ratio for the State Employees' Retirement System of Illinois ("SERS") based on the results of the June 30, 2024, actuarial valuation. This stress testing was performed to illustrate the potential impact on actuarial valuation results (including the annual contribution requirement and funded ratio) due to the risks that may reasonably be anticipated to significantly affect the System (e.g., significant market downturn or significant volatility in investment returns, volatility in future active population, or volatility in salary growth).

Gabriel, Roeder, Smith & Company (GRS) has prepared this analysis exclusively for the Trustees of the State Employees' Retirement System; GRS is not responsible for reliance upon this report by any other party. This report may be provided to parties other than SERS only in its entirety and only with the permission of the Board.

The assessment of the financial impact on the System first requires the identification of the key risks that impact the System. Actuarial Standard of Practice (ASOP) 51 Section 3.2 states, "The actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition."

The areas of risk that may reasonably be anticipated to significantly affect the future financial condition of SERS include:

- Investment risk;
- Assumption change risk including a change in interest rate assumption;
- Contribution risk; and
- Demographic risks.

The stress test scenarios in this analysis were designed to assess the impact of the risks listed above. There may be other risks not included in the above list that could significantly affect the System.

Historical Analysis

One method of identifying significant risks to SERS is to analyze historical data related to changes in the Unfunded Actuarial Accrued Liability (UAAL) over time by source. The following table shows changes in the UAAL by source over the past several years, in terms of dollars and percent of the beginning of year AAL.

Historical Actuarial Valuation Information and Results ($ in Millions)								
	Demographic (Gain)/Loss		Investment (Gain)/Loss		Impact of Plan Changes		Impact of Assumption Changes	
Valuation Year	$	% of BOY AAL	$	% of BOY AAL	$	% of BOY AAL	$	% of BOY AAL
2017	$ (509.4)	-1.1%	$ (164.3)	-0.4%	$ -	0.0%	$ -	0.0%
2018	(191.9)	-0.4%	(95.2)	-0.2%	-	0.0%	(214.0)	-0.5%
2019	(49.2)	-0.1%	164.4	0.3%	(404.7)	-0.8%	(293.9)	-0.6%
2020	56.6	0.1%	158.9	0.3%	-	0.0%	-	0.0%
2021	385.8	0.8%	(771.4)	-1.5%	2.5	0.0%	(26.6)	-0.1%
2022	(205.5)	-0.4%	(45.6)	-0.1%	(176.0)	-0.3%	(876.8)	-1.7%
2023	711.4	1.4%	151.3	0.3%	-	0.0%	-	0.0%
2024	643.6	1.2%	27.2	0.1%	-	0.0%	(20.6)	0.0%
Total	$ 841.4		$ (574.7)		$ (578.2)		$ (1,431.9)	

As shown in the above table, changes in assumptions have been the most significant experience factor contributing to the change in the UAAL of SERS. Demographic gains and losses are the next significant, trailed by the impact of plan changes and investment gains and losses. SERS will be increasingly impacted by investment risk as the assets and funded ratio are projected to increase through 2045. In addition, the use of asset smoothing helps dampen the annual volatility due to this risk.

Baseline Projections

Under the projected results from the actuarial valuation as of June 30, 2024, in which all future actuarial assumptions are realized, the statutory dollar contribution increases by an average rate of approximately 2.2 percent per year beginning with fiscal year 2035, once the statutory contributions are no longer limited by the maximum contribution. The funded ratio does not grow markedly until after 2033, when it increases from 56.0 percent to 90.0 percent in 2045.

A baseline projection of cash flows, accrued liabilities, and market value of assets can be found in Exhibit C-9. The accrued liability is projected to increase through 2045 at a decreasing rate due to the preponderance of Tier 2 members in the System. The market value of assets is projected to increase, at a slightly decreasing rate from 2024 to 2033, primarily due to the GOB contribution limit. After 2033, the market value of assets increases, at a slightly increasing rate, since contributions are not impacted by the

GOB contribution limit. The funded ratio grows marginally from 46 percent at 2024 to 68 percent at 2039 at a rate of about one to two percentage points per year. The funded ratio grows from 68 percent at 2039 to 90 percent at 2045 at a rate of about three to four percentage points per year.

Investment Risk

Investment risk is the potential that investment returns will be different than expected. In general, the chief concern is that investment returns will be lower than expected, leading to increases in the Unfunded Actuarial Accrued Liability (UAAL), which leads to additional contributions to make up the investment return shortfall.

Stress Testing Scenarios for Investment Risk

Exhibit B-1 contain the rates of return used for the investment return stress test. The investment return stress test analysis projects the actuarial valuation results assuming that the plan assets earn 6.75 percent, the 25th percentile return of 4.29 percent, and the 40th percentile return of 5.89 percent. In order to demonstrate the risk and volatility of the returns, we are providing results assuming both static returns of 6.75 percent, 4.29 percent, or 5.89 percent and volatile returns that produce 21-year geometric average returns of approximately 6.75 percent, 4.29 percent, or 5.89 percent. In the baseline scenario and Scenarios 1 through 5, the discount rate used to determine liabilities remains at 6.75 percent, average future uncapped salary growth or wage inflation remains at 2.75 percent per year and the future active population remains constant at 65,508 members.

Please note that each volatility scenario represents one possible trial that generates the targeted average geometric return, and that another equally likely trial that produces the same targeted average geometric return could produce significantly different contribution and funded ratio patterns. The 25th and 40th percentile returns used in Scenarios 2 through 5 were determined based on the expected investment return and the current target asset allocation of the System as of the most recent experience review issued to the System on July 15, 2024.

GRS believes that these scenarios provide a reasonable illustration of potential future volatility of investment returns, population, salary growth and the resulting actuarial valuation results. These scenarios are not intended to represent the full range of all possible outcomes. Annual returns will likely be significantly different from the returns shown in Exhibit B-1 and the 21-year geometric average of actual returns may be either higher or lower than the assumption of 6.75 percent.

Exhibits C-1 through C-4 contain the numerical results of the investment risk stress testing. Exhibit A-1 shows a graphical representation as well. The following summarizes the results of the investment return stress testing results.

Scenario 1 – Volatile 6.75 Percent

In Scenario 1, which is based on the assumption that the 21-year geometric average of the returns is equal to 6.75 percent but with volatility in the year-to-year rate of return, the annual contribution is not as stable as the baseline scenario. Relative to the baseline, the contribution requirement is higher from 2027 through 2043 and lower thereafter. The System is projected to be more than 90 percent funded in 2045.

Scenario 2 – Static 4.29 Percent

In Scenario 2, which is based on the assumption that the annual rate of return is equal to 4.29 percent, the annual contribution requirement steadily increases at an increasing rate. Relative to the baseline, the contribution requirement is higher in all years.

Scenario 3 – Volatile 4.29 Percent

In Scenario 3, which is based on the assumption that the 21-year geometric average of the returns is equal to 4.29 percent but with volatility in the year-to-year rate of return, the annual contribution requirement relative to the baseline is higher in all years. In this scenario, the unfunded liability generally increases through 2029, then decreases significantly through 2045. This scenario demonstrates that while the long-term geometric average may be the same as Scenario 2, the pattern of contributions can be significantly different.

Scenario 4 – Static 5.89 Percent

In Scenario 4, which is based on the assumption that the annual rate of return is equal to 5.89 percent, the annual contribution requirement steadily increases at an increasing rate. Relative to the baseline, the contribution requirement is higher in all years. Relative to Scenario 2, the rate of increase is lower because more investment income is available to fund benefits.

Scenario 5 – Volatile 5.89 Percent

In Scenario 5, which is based on the assumption that the 21-year geometric average of the returns is equal to 5.89 percent but with volatility in the year-to-year rate of return, the annual contribution requirement increases through 2032, generally decreases through 2039, and increases again through 2045. Relative to the baseline, the contribution requirement is lower in all years except 2029 through 2030 and 2043 through 2045. Again, this scenario demonstrates that while the long-term geometric average may be the same as Scenario 4, the pattern of contributions can be drastically different.

Assumption Change Risk

Assumption change risk is the potential that assumptions will need to change from what they are currently to reflect the circumstances surrounding future actuarial valuations. One example of this risk is that a significant shift in capital market expectations could require a reduction in the investment return assumption.

Stress Testing Scenarios for Assumption Change Risk

In Scenario 6, the discount rate used to determine liabilities was reduced to 6.25 percent.

Exhibits C-1 through C-4 contain the numerical results of the assumption change risk stress testing. Exhibit A-1 shows a graphical representation as well.

Scenario 6 – Static 6.25 Percent with Liabilities Based on 6.25 Percent

In Scenario 6, which is based on the assumption that the annual rate of return is equal to 6.25 percent and liabilities are based on a discount rate of 6.25 percent, the annual contribution requirement increases at a rate of 1.0 percent to 2.0 percent through 2033. The contribution increases at an increasing rate beginning in year 2034, once the statutory contributions are no longer limited by the maximum contribution. As expected, relative to the baseline, the contribution requirement is higher in all years after 2026. When compared to the baseline, projected contributions increase by approximately 8.7 percent.

Contribution Risk

Contribution risk is the potential that actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant factor that determines the amount of contributions the System will receive. Due to the current funded status and statutory contribution policy, SERS is subject to higher contribution risk than many plans. Under the statutory contribution policy, contributions are calculated as a level percentage of payroll such that the funded ratio is projected to be 90 percent in 2045. This policy produces backloaded contributions.

There is also contribution risk for SERS associated with the assumptions related to projecting the actuarial accrued liability, benefits, and payroll to 2045 (as required under the statutory funding policy). To the extent that certain assumptions differ from actual experience, significant changes in contributions could occur. The analysis of risks related to changes in the actuarial assumptions are dealt with in the Assumption Change Risk and Demographic Risk sections.

Stress Testing Scenarios for Contribution Risk

Scenario 7 compares the required statutory contributions and funded ratio to those based on a funding target of 100 percent by 2045, under baseline assumptions, rather than the current target of 90 percent by 2045 required in the Statute.

Exhibits C-1 through C-4 contain the numerical results of the contribution risk stress testing. Exhibit A-1 shows a graphical representation as well.

Scenario 7 – 100 Percent Funded Ratio in 2045

In Scenario 7, which is based on achieving a funded ratio of 100 percent in 2045, the statutory dollar contributions are relatively stable until 2028 and then begin to increase. The increases are relatively small until 2034 and then increase substantially, once the statutory contributions are no longer limited by the maximum contribution. Increasing the baseline projected contributions by approximately 2 percent increases the projected funded ratio at 2045 from 90 percent to 100 percent.

Demographic Risk

Demographic risk is the potential for demographic experience, or experience related to the activity of the covered members, to differ from what the actuarial valuation assumes. For example, members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and members may terminate, retire, or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

As mentioned earlier, there is a good deal of risk for SERS associated with the assumptions related to projecting the actuarial accrued liability, benefits, and payroll to 2045 (as required under the statutory funding policy).

Stress Testing Scenarios for Demographic Risk

In order to demonstrate the risk and volatility associated with changes to the future active population and uncapped salary growth, we are providing results under the following scenarios: Scenario 8 – future active population increases 1,000 members per year for five years and then remains static; Scenario 9 – future active population decreases 1,000 members per year for five years and then remains static; Scenario 10 – wage inflation increases by one percentage point from the assumed rate of 2.75 percent per year to 3.75 percent per year; and Scenario 11 – wage inflation decreases by one percentage point from the assumed rate of 2.75 percent per year to 1.75 percent per year. In Scenarios 8 through 11, the investment return assumption and discount rate used to determine the liabilities remain at 6.75 percent.

Exhibits C-5 through C-8 contain the numerical results of the demographic risk stress testing. Exhibits A-2 through A-3 show a graphical representation as well.

Scenario 8 – Increases in Active Population

Scenario 8 is based on the assumption that the active population will increase by 1,000 members each year for five years from 65,508 members in 2025 to 70,508 in 2030 and then remain constant for years on and after 2030. Under this scenario, the statutory dollar contribution increases by an average rate of approximately 2.2 percent per year beginning with the fiscal year 2035 once the statutory contributions are no longer limited by the maximum contribution. Relative to the baseline, the contribution requirement is generally lower from 2027 through 2029 of the projection as the payroll base increases with incremental increases in population. Beginning in 2030, the annual contribution requirement is slightly higher through 2045 with increases relative to the baseline at an average rate of 1.3 percent per year beginning in year 2030, after the population stabilizes at 5,000 members greater than the baseline.

Scenario 9 – Decreases in Active Population

Scenario 9 is based on the assumption that the active population will decrease by 1,000 members each year for five years from 65,508 members in 2025 to 60,508 in 2030 and then remain constant for years on and after 2030. Under this scenario, the statutory contribution increases by an average rate of approximately 2.1 percent per year beginning in year 2035 once the statutory contributions are no longer limited by the maximum contribution. Relative to the baseline, the contribution requirement is higher in years 2027 through 2029 as the payroll base decreases with incremental decreases in population. Beginning in 2030, the annual contribution requirement is slightly lower through 2045 with decreases relative to the baseline at an average rate of 1.3 percent per year beginning in year 2030, after the population stabilizes at 5,000 members less than the baseline.

Scenario 10 – Increased Salary Growth

Scenario 10 is based on the assumption that uncapped salary growth for active members will increase from the baseline assumption of 2.75 percent per year to 3.75 percent per year, limited by the statutory cap. Under this scenario, the statutory contribution increases by an average rate of approximately 2.5 percent per year beginning in year 2035 once the statutory contributions are no longer limited by the maximum contribution. Relative to the baseline, beginning in 2029, the contribution requirement is higher for all years through 2045.

Scenario 11 – Decreased Salary Growth

Scenario 11 is based on the assumption that uncapped salary growth for active members will decrease from the baseline assumption of 2.75 percent per year to 1.75 percent per year, limited by the statutory cap. Under this scenario, the statutory contribution increases by an average rate of approximately 1.1 percent per year beginning in year 2035 once the statutory contributions are no longer limited by the maximum contribution. Relative to the baseline, the contribution requirement is lower in all years beginning in 2031 through 2045.

Other Observations

In all scenarios, it is apparent that based on the funding policy of attaining 90 percent funding in 2045, market volatility will have a larger impact on the statutory contribution as the number of years until 2045 becomes shorter.

In Scenario 1, the funded ratio is greater than 90 percent in year 2045 due to favorable investment returns at the end of the projection period. In Scenarios 2 through 5, the funded ratio is not 90 percent in the year 2045 because of deferred asset gains and losses that have not been fully recognized in the actuarial value of assets. This is a result of the fact that the assumed investment return in each of these scenarios is not equal to the valuation assumption of 6.75 percent.

In each projection scenario, the actuarial valuations in each year have been projected as though an actuarial valuation in each of those years were performed. The market value of assets at each projected actuarial valuation is assumed to have a rate of return according to the scenario being modeled for that one year and the valuation interest rate going forward. At each projected actuarial valuation, an additional 20 percent of the investment gains and losses are recognized. This iterative process is followed for each projection year through 2045.

Statutory contributions in each projection scenario were determined in accordance with Public Act 100-0023, which modified the State's funding policy beginning in fiscal year 2018, by phasing in contribution rate variances due to changes in actuarial assumptions over a five-year period. The phase-in schedule used to determine the statutory contributions can be found in the June 30, 2024, draft actuarial valuation report.

It is important to note that the scenarios presented in this letter represent an extremely small sample of possibilities.

In each scenario, we have assumed that the plan sponsor will make the statutory contribution when due. However, some scenarios result in very high contribution rates for extended periods of time and may jeopardize the sustainability of the System. We are not qualified to opine on the sponsor's ability to pay the statutory contribution when due.

Other Risks and Factors Considered

An additional risk area that was not analyzed using stress testing was *asset/liability mismatch risk*. This is the risk that potential changes in the assets are not matched by changes in the liabilities. This risk is closely related to many of the risks that were previously discussed. For example, asset/liability mismatch occurs in SERS because the discount return is linked to the expected return on assets. If the investment return assumption decreases, there is an immediate increase in the liabilities and a decrease in future expected returns on the assets. Therefore, asset/liability mismatch risk is also related to assumption change risk. Asset/liability mismatch risk can also be related to demographic risk since future changes in demographics will influence the liabilities to a greater extent than the assets. Asset/liability mismatch risk is common in public sector plans for the reasons stated above. Relatively well funded plans that utilize Liability Driven Investing or other significant hedging strategies are generally less exposed to asset/liability mismatch risk.

In performing the risk assessments in this report, we considered a number of factors, including: the funded status of SERS, the asset allocation, and the statutory funding policy. The low funded ratio (46 percent in 2024) coupled with the statutory funding policy means that there is significant contribution risk near the end of the funding period. The asset allocation was considered when determining the investment return scenarios.

Additional Disclosures

To the best of our knowledge, this actuarial statement is complete and accurate, fairly presents the actuarial position of SERS as of June 30, 2024, based on the stress testing scenarios, and has been prepared in accordance with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and with applicable statutes.

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 (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions, contribution amounts, or applicable law. Due to the

limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements in this report.

This letter is part of the actuarial valuation as of June 30, 2024, and is subject to the same actuarial assumptions and disclosures as used in the presentation and annual actuarial valuation report. The investment return stress testing scenarios used future investment returns as shown in Exhibit B-1 and the population and salary growth stress testing scenarios used future populations and wage inflation assumptions as shown in Exhibits B-2 and B-3. All other assumptions and methods were the same as the actuarial valuation.

The statutory funding method generates a contribution requirement that is less than a reasonable actuarially determined contribution. Meeting the statutory requirement does not mean that the undersigned agree that adequate actuarial funding has been achieved. We recommend adherence to a funding policy, such as the Board policy used to calculate the ADC under GASB Statement Nos. 67 and 68, that funds the normal cost of the plan, as well as an amortization payment that seeks to pay off any unfunded accrued liability over a closed period of 25 years beginning July 1, 2015.

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

The signing actuaries are independent of the plan sponsor.

Alex Rivera, Heidi Barry, and Jeffrey Tebeau are Members of the American Academy of Actuaries ("MAAA") and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

This communication shall not be construed to provide tax advice, legal advice, or investment advice.

Respectfully submitted,
Gabriel, Roeder, Smith & Company

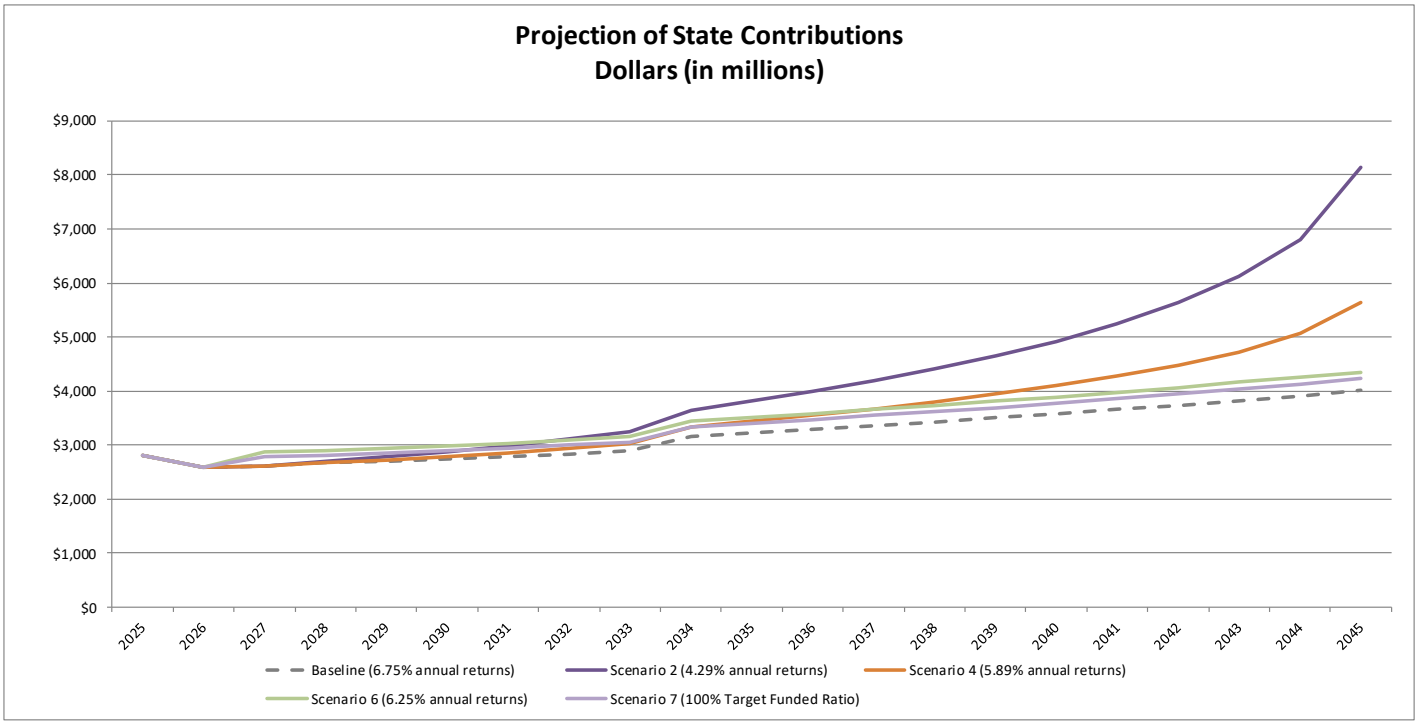
Alex Rivera, FSA, EA, MAAA, FCA
Senior Consultant

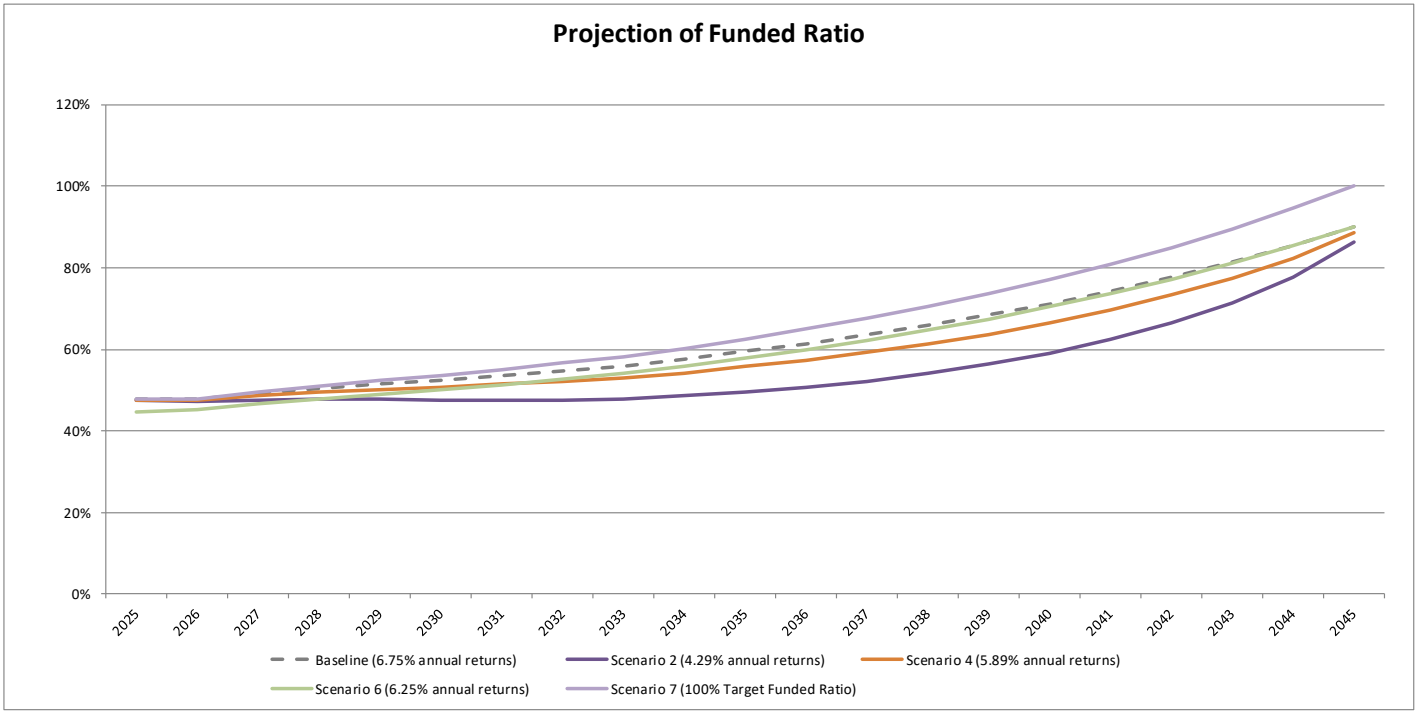
Heidi G. Barry, ASA, MAAA, FCA
Senior Consultant

Jeffrey T. Tebeau, FSA, EA, MAAA, FCA
Senior Consultant

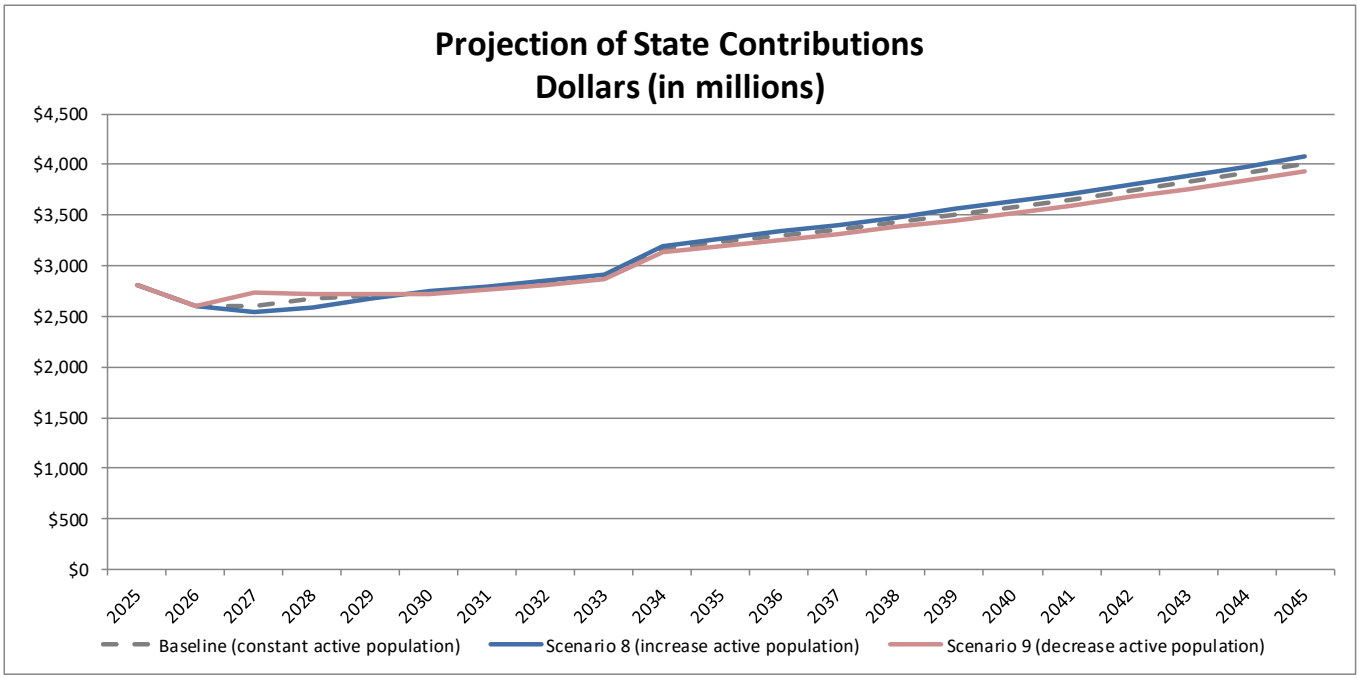
AR/HGB/JTT:sc
Enclosure

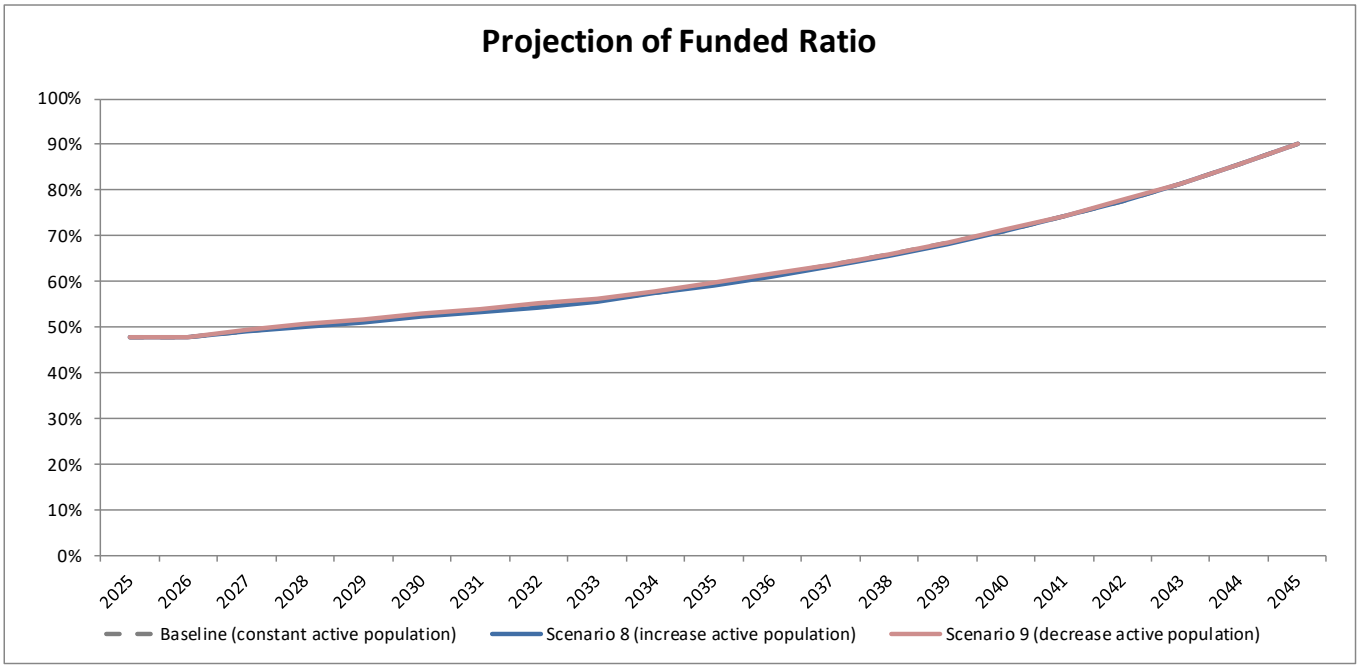
State Employees' Retirement System of Illinois
Comparison of Actuarial Valuation Results and Stress Testing Scenarios
Projection of Statutory Contribution Dollars and Funded Ratios
Based on Actuarial Valuation as of June 30, 2024



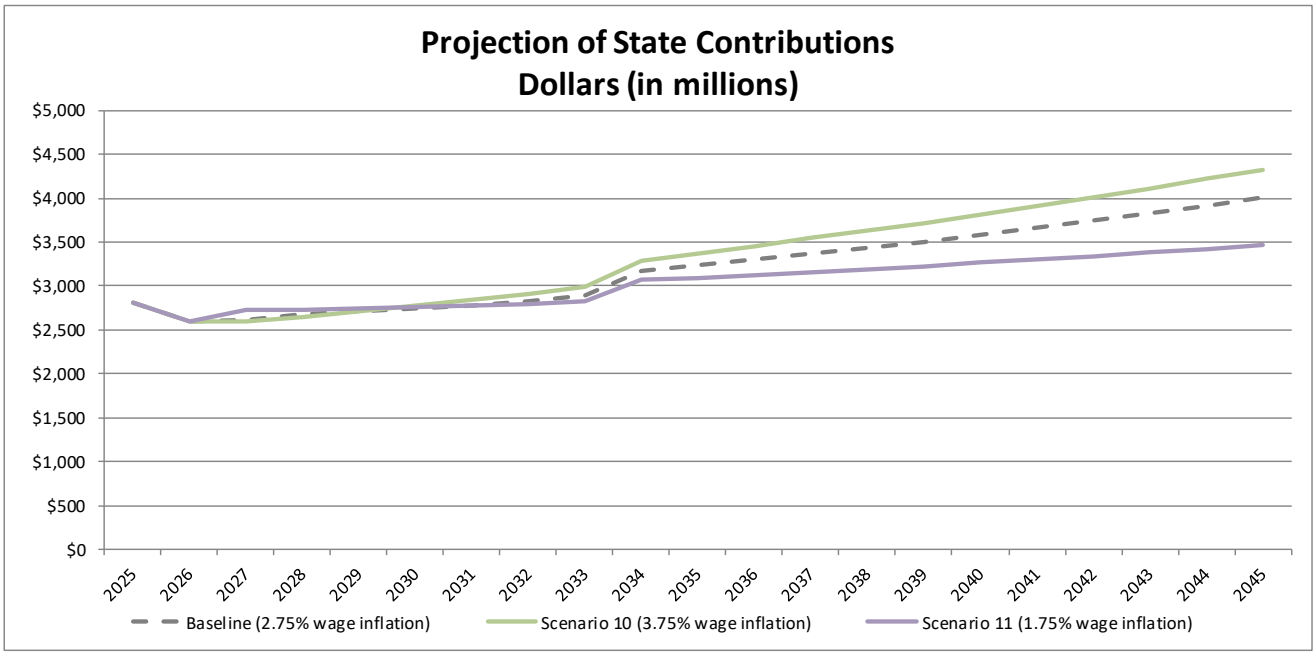


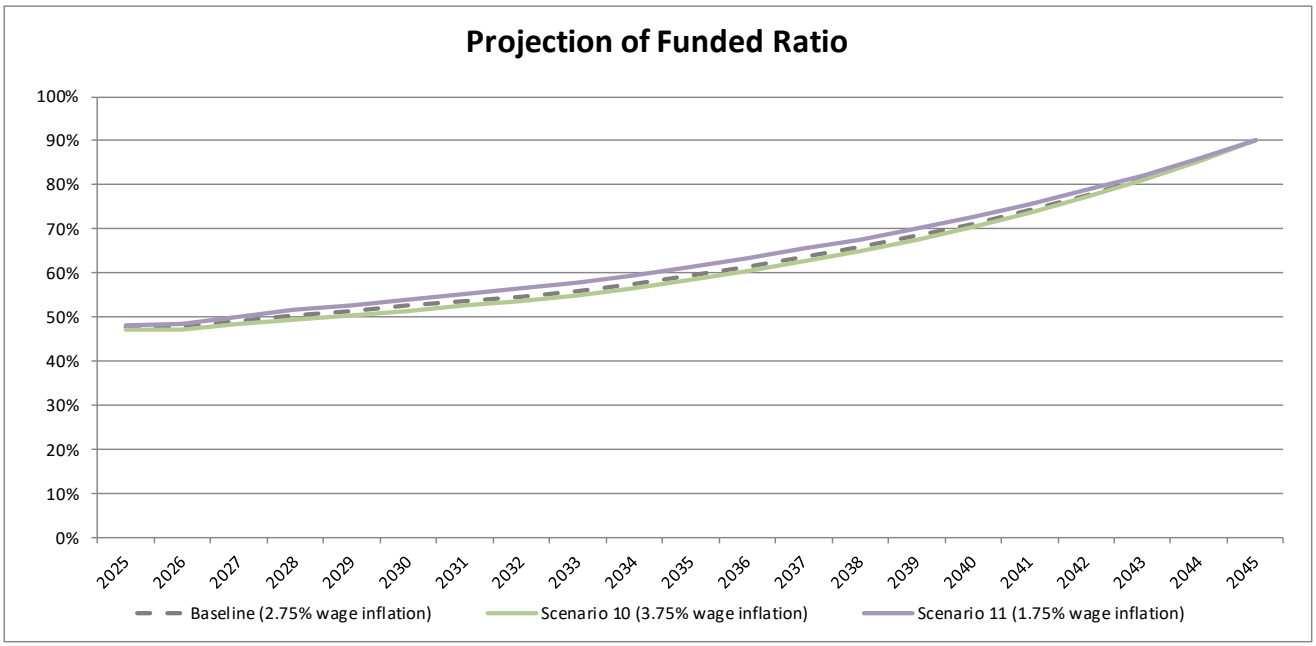
State Employees' Retirement System of Illinois
Comparison of Actuarial Valuation Results and Stress Testing Scenarios
Projection of Statutory Contribution Dollars and Funded Ratios
Based on Actuarial Valuation as of June 30, 2024





State Employees' Retirement System of Illinois
Comparison of Actuarial Valuation Results and Stress Testing Scenarios
Projection of Statutory Contribution Dollars and Funded Ratios
Based on Actuarial Valuation as of June 30, 2024





State Employees' Retirement System of Illinois
Comparison of Actuarial Valuation Results and Stress Testing Scenarios
Assumed Rates of Investment Return
Based on Actuarial Valuation as of June 30, 2024

Illinois SERS							
Scenario	**Baseline; 7**	**1**	**2**	**3**	**4**	**5**	**6**
Investment Return Assumption	6.75% per year	Varying Rates for the first 21 years, 6.75% per year thereafter	4.29% per year for the first 21 years, 6.75% per year thereafter	Varying Rates for the first 21 years, 6.75% per year thereafter	5.89% per year for the first 21 years, 6.75% per year thereafter	Varying Rates for the first 21 years, 6.75% per year thereafter	6.25% per year
21-Year Geometric Return	6.75%	6.75%	4.29%	4.29%	5.89%	5.89%	6.25%
Summary of Investment Returns Included in the Scenario	N/A	Investment returns during the first 21 years with volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 25th percentile return with no volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 25th percentile return with volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 40th percentile return with no volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 40th percentile return with volatility, based on the System's asset allocation policy	N/A
Fiscal Year	**Rates of Investment Returns**						
2025	6.75%	3.37%	4.29%	-16.03%	5.89%	19.56%	6.25%
2026	6.75%	-6.50%	4.29%	2.51%	5.89%	-7.95%	6.25%
2027	6.75%	8.55%	4.29%	-6.11%	5.89%	0.63%	6.25%
2028	6.75%	-0.28%	4.29%	19.13%	5.89%	20.36%	6.25%
2029	6.75%	-0.84%	4.29%	15.23%	5.89%	9.47%	6.25%
2030	6.75%	1.38%	4.29%	18.27%	5.89%	15.63%	6.25%
2031	6.75%	15.89%	4.29%	7.72%	5.89%	-1.37%	6.25%
2032	6.75%	6.20%	4.29%	9.94%	5.89%	24.34%	6.25%
2033	6.75%	28.22%	4.29%	-10.23%	5.89%	12.35%	6.25%
2034	6.75%	15.11%	4.29%	16.71%	5.89%	3.15%	6.25%
2035	6.75%	-15.62%	4.29%	3.87%	5.89%	5.87%	6.25%
2036	6.75%	3.88%	4.29%	18.23%	5.89%	6.35%	6.25%
2037	6.75%	17.28%	4.29%	-11.52%	5.89%	16.73%	6.25%
2038	6.75%	5.41%	4.29%	18.65%	5.89%	0.57%	6.25%
2039	6.75%	12.52%	4.29%	-15.71%	5.89%	-2.74%	6.25%
2040	6.75%	1.76%	4.29%	15.50%	5.89%	-14.01%	6.25%
2041	6.75%	8.83%	4.29%	-3.58%	5.89%	-4.29%	6.25%
2042	6.75%	12.81%	4.29%	14.99%	5.89%	12.08%	6.25%
2043	6.75%	10.12%	4.29%	1.85%	5.89%	6.36%	6.25%
2044	6.75%	4.80%	4.29%	4.99%	5.89%	1.44%	6.25%
2045	6.75%	17.27%	4.29%	-0.18%	5.89%	8.48%	6.25%

State Employees' Retirement System of Illinois
Comparison of Actuarial Valuation Results and Stress Testing Scenarios
Projection of Population
Based on Actuarial Valuation as of June 30, 2024

Illinois SERS					
Scenario	**Baseline; 1-7**	**8**	**9**	**10**	**11**
Investment Return Assumption	6.75% per year	6.75% per year	6.75% per year	6.75% per year	6.75% per year
Wage Inflation Assumption	2.75%	2.75%	2.75%	3.75%	1.75%
Population Growth Assumption	Active population remains constant at 65,508 members through the projection period	Active population increases 1,000 members each year for 5 years and then remains constant at 70,508 members for fiscal years on and after fiscal year 2030	Active population decreases 1,000 members each year for 5 years and then remains constant at 60,508 members for fiscal years on and after fiscal year 2030	Active population remains constant at 65,508 members through the projection period	Active population remains constant at 65,508 members through the projection period
Fiscal Year	**Population**				
2025	65,508	65,508	65,508	65,508	65,508
2026	65,508	66,508	64,508	65,508	65,508
2027	65,508	67,508	63,508	65,508	65,508
2028	65,508	68,508	62,508	65,508	65,508
2029	65,508	69,508	61,508	65,508	65,508
2030	65,508	70,508	60,508	65,508	65,508
2031	65,508	70,508	60,508	65,508	65,508
2032	65,508	70,508	60,508	65,508	65,508
2033	65,508	70,508	60,508	65,508	65,508
2034	65,508	70,508	60,508	65,508	65,508
2035	65,508	70,508	60,508	65,508	65,508
2036	65,508	70,508	60,508	65,508	65,508
2037	65,508	70,508	60,508	65,508	65,508
2038	65,508	70,508	60,508	65,508	65,508
2039	65,508	70,508	60,508	65,508	65,508
2040	65,508	70,508	60,508	65,508	65,508
2041	65,508	70,508	60,508	65,508	65,508
2042	65,508	70,508	60,508	65,508	65,508
2043	65,508	70,508	60,508	65,508	65,508
2044	65,508	70,508	60,508	65,508	65,508
2045	65,508	70,508	60,508	65,508	65,508
2046	65,508	70,508	60,508	65,508	65,508

State Employees' Retirement System of Illinois
Comparison of Actuarial Valuation Results and Stress Testing Scenarios
Projection of Capped Payroll
Based on Actuarial Valuation as of June 30, 2024

Illinois SERS					
Scenario	**Baseline; 1-7**	**8**	**9**	**10**	**11**
Investment Return Assumption	6.75% per year	6.75% per year	6.75% per year	6.75% per year	6.75% per year
Wage Inflation Assumption	2.75%	2.75%	2.75%	3.75%	1.75%
Population Growth Assumption	Active population remains constant at 65,508 members through the projection period	Active population increases 1,000 members each year for 5 years and then remains constant at 70,508 members for fiscal years on and after fiscal year 2030	Active population decreases 1,000 members each year for 5 years and then remains constant at 60,508 members for fiscal years on and after fiscal year 2030	Active population remains constant at 65,508 members through the projection period	Active population remains constant at 65,508 members through the projection period
Fiscal Year	**Capped Payroll ($ in millions)**				
2025	$5,766	$5,766	$5,766	$5,766	$5,766
2026	5,862	5,929	5,795	5,916	5,807
2027	5,963	6,102	5,824	6,070	5,849
2028	6,065	6,281	5,849	6,227	5,891
2029	6,173	6,471	5,875	6,390	5,938
2030	6,286	6,672	5,900	6,558	5,987
2031	6,404	6,807	6,001	6,729	6,039
2032	6,525	6,945	6,106	6,903	6,092
2033	6,650	7,087	6,213	7,078	6,147
2034	6,781	7,235	6,326	7,258	6,205
2035	6,917	7,389	6,445	7,442	6,267
2036	7,056	7,545	6,566	7,626	6,329
2037	7,199	7,706	6,691	7,813	6,393
2038	7,348	7,873	6,823	8,008	6,461
2039	7,503	8,046	6,960	8,208	6,531
2040	7,664	8,225	7,104	8,415	6,605
2041	7,833	8,411	7,255	8,630	6,683
2042	8,008	8,604	7,412	8,850	6,764
2043	8,190	8,804	7,577	9,075	6,846
2044	8,379	9,010	7,748	9,303	6,932
2045	8,572	9,221	7,924	9,534	7,019

State Employees' Retirement System of Illinois
Comparison of Actuarial Valuation Results and Stress Testing Scenarios
Projection of Statutory Contribution Dollars
Based on Actuarial Valuation as of June 30, 2024

Illinois SERS								
Scenario	**Baseline**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Investment Return Assumption	6.75% per year	Varying Rates for the first 21 years, 6.75% per year thereafter	4.29% per year for the first 21 years, 6.75% per year thereafter	Varying Rates for the first 21 years, 6.75% per year thereafter	5.89% per year for the first 21 years, 6.75% per year thereafter	Varying Rates for the first 21 years, 6.75% per year thereafter	6.25% per year	6.75% per year
21-Year Geometric Return	6.75%	6.75%	4.29%	4.29%	5.89%	5.89%	6.25%	6.75%
Summary of Investment Returns Included in the Scenario	N/A	Investment returns during the first 21 years with volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 25th percentile return with no volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 25th percentile return with volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 40th percentile return with no volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 40th percentile return with volatility, based on the System's asset allocation policy	N/A	N/A
Target Funded Ratio	90%	90%	90%	90%	90%	90%	90%	100%
Fiscal Year	**Contribution Dollar Amount ($ in millions)**							
2025	$2,813	$2,813	$2,813	$2,813	$2,813	$2,813	$2,813	$2,813
2026	2,598	2,598	2,598	2,598	2,598	2,598	2,598	2,598
2027	2,609	2,621	2,619	2,702	2,612	2,556	2,871	2,784
2028	2,673	2,762	2,707	2,905	2,685	2,624	2,895	2,807
2029	2,706	2,883	2,780	3,129	2,732	2,715	2,943	2,852
2030	2,736	3,030	2,864	3,322	2,781	2,747	2,988	2,896
2031	2,780	3,238	2,981	3,481	2,852	2,756	3,038	2,944
2032	2,832	3,474	3,112	3,462	2,933	2,772	3,095	2,999
2033	2,891	3,613	3,256	3,404	3,026	2,745	3,159	3,061
2034	3,168	4,012	3,648	3,534	3,343	2,768	3,443	3,341
2035	3,232	3,977	3,817	3,577	3,444	2,560	3,512	3,409
2036	3,296	3,766	3,998	3,641	3,557	2,386	3,582	3,477
2037	3,363	3,729	4,194	3,790	3,675	2,315	3,655	3,547
2038	3,433	3,877	4,411	3,843	3,802	2,153	3,731	3,621
2039	3,505	3,918	4,652	4,142	3,942	2,038	3,809	3,697
2040	3,581	4,164	4,924	4,164	4,095	2,061	3,891	3,777
2041	3,659	4,470	5,245	4,686	4,271	2,300	3,977	3,860
2042	3,741	4,396	5,632	5,228	4,473	3,210	4,066	3,946
2043	3,826	4,187	6,127	6,427	4,722	4,885	4,158	4,036
2044	3,915	3,898	6,808	7,050	5,072	7,708	4,254	4,129
2045	4,005	2,567	8,143	9,264	5,637	12,060	4,352	4,224
Total Cont. Through 2045	**$67,362**	**$73,993**	**$87,329**	**$87,162**	**$75,065**	**$70,770**	**$72,830**	**$70,818**
Present Value of Total Cont.	**$34,741**	**$38,246**	**$41,746**	**$42,074**	**$37,422**	**$34,295**	**$39,014**	**$36,410**

State Employees' Retirement System of Illinois
Comparison of Actuarial Valuation Results and Stress Testing Scenarios
Projection of Statutory Contribution as a Percent of Pay
Based on Actuarial Valuation as of June 30, 2024

Illinois SERS								
Scenario	**Baseline**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Investment Return Assumption	6.75% per year	Varying Rates for the first 21 years, 6.75% per year thereafter	4.29% per year for the first 21 years, 6.75% per year thereafter	Varying Rates for the first 21 years, 6.75% per year thereafter	5.89% per year for the first 21 years, 6.75% per year thereafter	Varying Rates for the first 21 years, 6.75% per year thereafter	6.25% per year	6.75% per year
21-Year Geometric Return	6.75%	6.75%	4.29%	4.29%	5.89%	5.89%	6.25%	6.75%
Summary of Investment Returns Included in the Scenario	N/A	Investment returns during the first 21 years with volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 25th percentile return with no volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 25th percentile return with volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 40th percentile return with no volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 40th percentile return with volatility, based on the System's asset allocation policy	N/A	N/A
Target Funded Ratio	90%	90%	90%	90%	90%	90%	90%	100%
Fiscal Year	**Contribution as a Percent of Payroll**							
2025	48.80%	48.80%	48.80%	48.80%	48.80%	48.80%	48.80%	48.80%
2026	44.31%	44.31%	44.31%	44.31%	44.31%	44.31%	44.31%	44.31%
2027	43.75%	43.96%	43.92%	45.31%	43.81%	42.87%	48.15%	46.69%
2028	44.07%	45.55%	44.64%	47.90%	44.27%	43.27%	47.74%	46.28%
2029	43.84%	46.70%	45.04%	50.70%	44.26%	43.97%	47.67%	46.21%
2030	43.52%	48.20%	45.56%	52.84%	44.25%	43.69%	47.54%	46.08%
2031	43.42%	50.57%	46.55%	54.36%	44.54%	43.03%	47.44%	45.97%
2032	43.41%	53.24%	47.69%	53.06%	44.94%	42.47%	47.42%	45.96%
2033	43.48%	54.33%	48.97%	51.20%	45.50%	41.28%	47.50%	46.04%
2034	46.72%	59.17%	53.80%	52.11%	49.30%	40.82%	50.77%	49.28%
2035	46.72%	57.50%	55.18%	51.71%	49.79%	37.01%	50.77%	49.28%
2036	46.72%	53.37%	56.66%	51.60%	50.42%	33.82%	50.77%	49.28%
2037	46.72%	51.81%	58.26%	52.65%	51.04%	32.16%	50.77%	49.28%
2038	46.72%	52.75%	60.02%	52.30%	51.75%	29.30%	50.77%	49.28%
2039	46.72%	52.23%	62.00%	55.21%	52.54%	27.16%	50.77%	49.28%
2040	46.72%	54.33%	64.25%	54.33%	53.43%	26.89%	50.77%	49.28%
2041	46.72%	57.07%	66.96%	59.83%	54.53%	29.36%	50.77%	49.28%
2042	46.72%	54.89%	70.32%	65.28%	55.86%	40.08%	50.77%	49.28%
2043	46.72%	51.12%	74.81%	78.47%	57.65%	59.65%	50.77%	49.28%
2044	46.72%	46.52%	81.26%	84.15%	60.53%	91.99%	50.77%	49.28%
2045	46.72%	29.94%	95.00%	108.07%	65.76%	140.69%	50.77%	49.28%

State Employees' Retirement System of Illinois
Comparison of Actuarial Valuation Results and Stress Testing Scenarios
Projection of Funded Ratio
Based on Actuarial Valuation as of June 30, 2024

Illinois SERS								
Scenario	**Baseline**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Investment Return Assumption	6.75% per year	Varying Rates for the first 21 years, 6.75% per year thereafter	4.29% per year for the first 21 years, 6.75% per year thereafter	Varying Rates for the first 21 years, 6.75% per year thereafter	5.89% per year for the first 21 years, 6.75% per year thereafter	Varying Rates for the first 21 years, 6.75% per year thereafter	6.25% per year	6.75% per year
21-Year Geometric Return	6.75%	6.75%	4.29%	4.29%	5.89%	5.89%	6.25%	6.75%
Summary of Investment Returns Included in the Scenario	N/A	Investment returns during the first 21 years with volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 25th percentile return with no volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 25th percentile return with volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 40th percentile return with no volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 40th percentile return with volatility, based on the System's asset allocation policy	N/A	N/A
Target Funded Ratio	90%	90%	90%	90%	90%	90%	90%	100%
Fiscal Year	**Funded Ratio**							
2025	47.70%	47.40%	47.48%	45.68%	47.62%	48.84%	44.49%	47.70%
2026	47.88%	46.02%	47.16%	42.94%	47.63%	48.98%	45.34%	47.88%
2027	49.10%	45.50%	47.61%	40.46%	48.57%	49.04%	46.55%	49.40%
2028	50.37%	44.67%	47.89%	38.82%	49.49%	50.19%	47.72%	50.93%
2029	51.44%	43.02%	47.74%	38.18%	50.12%	51.87%	48.90%	52.27%
2030	52.50%	41.28%	47.61%	40.81%	50.74%	53.51%	50.11%	53.64%
2031	53.59%	41.49%	47.56%	44.32%	51.41%	55.89%	51.35%	55.07%
2032	54.74%	42.09%	47.61%	48.93%	52.13%	60.41%	52.65%	56.57%
2033	55.96%	45.22%	47.80%	51.02%	52.96%	65.10%	54.04%	58.18%
2034	57.63%	51.02%	48.54%	53.08%	54.26%	69.28%	55.86%	60.26%
2035	59.44%	54.82%	49.51%	54.36%	55.72%	72.00%	57.82%	62.51%
2036	61.39%	56.57%	50.72%	56.80%	57.37%	75.29%	59.93%	64.94%
2037	63.52%	59.34%	52.23%	57.45%	59.23%	78.05%	62.22%	67.59%
2038	65.85%	60.87%	54.08%	60.53%	61.34%	79.37%	64.71%	70.47%
2039	68.40%	62.37%	56.33%	60.99%	63.75%	79.29%	67.42%	73.62%
2040	71.20%	66.61%	59.06%	61.93%	66.49%	75.97%	70.39%	77.08%
2041	74.28%	71.88%	62.39%	61.75%	69.64%	70.86%	73.64%	80.86%
2042	77.67%	77.18%	66.44%	65.35%	73.26%	65.87%	77.19%	85.01%
2043	81.40%	83.41%	71.43%	69.54%	77.46%	64.70%	81.09%	89.57%
2044	85.50%	88.62%	77.70%	77.40%	82.44%	69.00%	85.35%	94.55%
2045	90.00%	94.45%	86.34%	87.22%	88.59%	83.67%	90.00%	100.00%

State Employees' Retirement System of Illinois
Comparison of Actuarial Valuation Results and Stress Testing Scenarios
Unfunded Actuarial Accrued Liability
Based on Actuarial Valuation as of June 30, 2024

Illinois SERS								
Scenario	**Baseline**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Investment Return Assumption	6.75% per year	Varying Rates for the first 21 years, 6.75% per year thereafter	4.29% per year for the first 21 years, 6.75% per year thereafter	Varying Rates for the first 21 years, 6.75% per year thereafter	5.89% per year for the first 21 years, 6.75% per year thereafter	Varying Rates for the first 21 years, 6.75% per year thereafter	6.25% per year	6.75% per year
21-Year Geometric Return	6.75%	6.75%	4.29%	4.29%	5.89%	5.89%	6.25%	6.75%
Summary of Investment Returns Included in the Scenario	N/A	Investment returns during the first 21 years with volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 25th percentile return with no volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 25th percentile return with volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 40th percentile return with no volatility, based on the System's asset allocation policy	Investment returns during the first 21 years represent the 40th percentile return with volatility, based on the System's asset allocation policy	N/A	N/A
Target Funded Ratio	90%	90%	90%	90%	90%	90%	90%	100%
Fiscal Year	**Unfunded Accrued Liability ($ in millions)**							
2025	$29,756	$29,926	$29,880	$30,907	$29,799	$29,108	$33,505	$29,756
2026	30,234	31,313	30,652	33,101	30,381	29,596	33,620	30,234
2027	30,060	32,183	30,937	35,163	30,369	30,092	33,449	29,879
2028	29,782	33,207	31,273	36,718	30,311	29,889	33,227	29,450
2029	29,569	34,694	31,817	37,643	30,372	29,304	32,931	29,063
2030	29,302	36,220	32,314	36,509	30,385	28,676	32,558	28,597
2031	28,960	36,508	32,722	34,746	30,324	27,523	32,101	28,038
2032	28,532	36,505	33,022	32,191	30,172	24,953	31,547	27,375
2033	28,005	34,835	33,193	31,144	29,913	22,197	30,882	26,595
2034	27,148	31,381	32,971	30,061	29,307	19,681	29,875	25,463
2035	26,161	29,139	32,564	29,437	28,558	18,060	28,725	24,180
2036	25,032	28,158	31,949	28,011	27,641	16,022	27,422	22,730
2037	23,752	26,474	31,106	27,708	26,548	14,291	25,959	21,105
2038	22,310	25,562	30,000	25,785	25,255	13,474	24,322	19,290
2039	20,694	24,641	28,597	25,544	23,742	13,564	22,501	17,272
2040	18,892	21,900	26,852	24,974	21,982	15,763	20,482	15,037
2041	16,891	18,469	24,701	25,118	19,941	19,137	18,253	12,568
2042	14,675	14,996	22,056	22,774	17,575	22,431	15,800	9,849
2043	12,229	10,908	18,785	20,028	14,820	23,208	13,108	6,861
2044	9,537	7,482	14,666	14,865	11,547	20,388	10,159	3,585
2045	6,580	3,649	8,985	8,411	7,506	10,746	6,936	0

State Employees' Retirement System of Illinois
Comparison of Actuarial Valuation Results and Stress Testing Scenarios
Projection of Statutory Contribution Dollars
Based on Actuarial Valuation as of June 30, 2024

Illinois SERS					
Scenario	**Baseline**	**8**	**9**	**10**	**11**
Investment Return Assumption	6.75% per year	6.75% per year	6.75% per year	6.75% per year	6.75% per year
Wage Inflation Assumption	2.75%	2.75%	2.75%	3.75%	1.75%
Population Growth Assumption	Active population remains constant at 65,508 members through the projection period	Active population increases 1,000 members each year for 5 years and then remains constant at 70,508 members for fiscal years on and after fiscal year 2030	Active population decreases 1,000 members each year for 5 years and then remains constant at 60,508 members for fiscal years on and after fiscal year 2030	Active population remains constant at 65,508 members through the projection period	Active population remains constant at 65,508 members through the projection period
Fiscal Year	**Contribution Dollar Amount ($ in millions)**				
2025	$2,813	$2,813	$2,813	$2,813	$2,813
2026	2,598	2,598	2,598	2,598	2,598
2027	2,609	2,543	2,733	2,598	2,735
2028	2,673	2,595	2,718	2,641	2,729
2029	2,706	2,671	2,724	2,707	2,744
2030	2,736	2,748	2,724	2,772	2,756
2031	2,780	2,797	2,764	2,839	2,771
2032	2,832	2,854	2,811	2,913	2,793
2033	2,891	2,917	2,865	2,993	2,821
2034	3,168	3,199	3,137	3,290	3,065
2035	3,232	3,267	3,196	3,373	3,095
2036	3,296	3,336	3,256	3,457	3,126
2037	3,363	3,407	3,318	3,542	3,158
2038	3,433	3,481	3,383	3,630	3,191
2039	3,505	3,557	3,451	3,721	3,226
2040	3,581	3,636	3,522	3,815	3,262
2041	3,659	3,718	3,597	3,912	3,301
2042	3,741	3,804	3,675	4,012	3,341
2043	3,826	3,892	3,757	4,114	3,381
2044	3,915	3,983	3,841	4,217	3,424
2045	4,005	4,076	3,929	4,322	3,467
Total Cont. Through 2045	**$67,362**	**$67,892**	**$66,812**	**$70,279**	**$63,797**
Present Value of Total Cont.	**$34,741**	**$34,875**	**$34,609**	**$35,847**	**$33,585**

State Employees' Retirement System of Illinois
Comparison of Actuarial Valuation Results and Stress Testing Scenarios
Projection of Statutory Contribution as a Percent of Pay
Based on Actuarial Valuation as of June 30, 2024

Illinois SERS					
Scenario	**Baseline**	**8**	**9**	**10**	**11**
Investment Return Assumption	6.75% per year	6.75% per year	6.75% per year	6.75% per year	6.75% per year
Wage Inflation Assumption	2.75%	2.75%	2.75%	3.75%	1.75%
Population Growth Assumption	Active population remains constant at 65,508 members through the projection period	Active population increases 1,000 members each year for 5 years and then remains constant at 70,508 members for fiscal years on and after fiscal year 2030	Active population decreases 1,000 members each year for 5 years and then remains constant at 60,508 members for fiscal years on and after fiscal year 2030	Active population remains constant at 65,508 members through the projection period	Active population remains constant at 65,508 members through the projection period
Fiscal Year	**Contribution as a Percent of Payroll**				
2025	48.80%	48.80%	48.80%	48.80%	48.80%
2026	44.31%	43.81%	44.82%	43.91%	44.73%
2027	43.75%	41.68%	46.93%	42.79%	46.76%
2028	44.07%	41.31%	46.48%	42.41%	46.31%
2029	43.84%	41.28%	46.36%	42.36%	46.21%
2030	43.52%	41.19%	46.18%	42.26%	46.04%
2031	43.42%	41.10%	46.06%	42.19%	45.89%
2032	43.41%	41.09%	46.04%	42.20%	45.85%
2033	43.48%	41.16%	46.12%	42.29%	45.89%
2034	46.72%	44.21%	49.58%	45.33%	49.39%
2035	46.72%	44.21%	49.58%	45.33%	49.39%
2036	46.72%	44.21%	49.58%	45.33%	49.39%
2037	46.72%	44.21%	49.58%	45.33%	49.39%
2038	46.72%	44.21%	49.58%	45.33%	49.39%
2039	46.72%	44.21%	49.58%	45.33%	49.39%
2040	46.72%	44.21%	49.58%	45.33%	49.39%
2041	46.72%	44.21%	49.58%	45.33%	49.39%
2042	46.72%	44.21%	49.58%	45.33%	49.39%
2043	46.72%	44.21%	49.58%	45.33%	49.39%
2044	46.72%	44.21%	49.58%	45.33%	49.39%
2045	46.72%	44.21%	49.58%	45.33%	49.39%

State Employees' Retirement System of Illinois
Comparison of Actuarial Valuation Results and Stress Testing Scenarios
Projection of Funded Ratio
Based on Actuarial Valuation as of June 30, 2024

Illinois SERS					
Scenario	**Baseline**	**8**	**9**	**10**	**11**
Investment Return Assumption	6.75% per year	6.75% per year	6.75% per year	6.75% per year	6.75% per year
Wage Inflation Assumption	2.75%	2.75%	2.75%	3.75%	1.75%
Population Growth Assumption	Active population remains constant at 65,508 members through the projection period	Active population increases 1,000 members each year for 5 years and then remains constant at 70,508 members for fiscal years on and after fiscal year 2030	Active population decreases 1,000 members each year for 5 years and then remains constant at 60,508 members for fiscal years on and after fiscal year 2030	Active population remains constant at 65,508 members through the projection period	Active population remains constant at 65,508 members through the projection period
Fiscal Year	**Funded Ratio**				
2025	47.70%	47.70%	47.70%	47.13%	48.26%
2026	47.88%	47.88%	47.88%	47.25%	48.51%
2027	49.10%	48.98%	49.32%	48.36%	50.04%
2028	50.37%	50.12%	50.68%	49.49%	51.52%
2029	51.44%	51.11%	51.79%	50.45%	52.78%
2030	52.50%	52.17%	52.85%	51.45%	54.01%
2031	53.59%	53.27%	53.94%	52.51%	55.25%
2032	54.74%	54.42%	55.08%	53.65%	56.52%
2033	55.96%	55.66%	56.30%	54.89%	57.82%
2034	57.63%	57.35%	57.95%	56.58%	59.55%
2035	59.44%	59.18%	59.73%	58.43%	61.39%
2036	61.39%	61.17%	61.66%	60.44%	63.34%
2037	63.52%	63.33%	63.76%	62.63%	65.43%
2038	65.85%	65.68%	66.05%	65.04%	67.68%
2039	68.40%	68.27%	68.56%	67.68%	70.11%
2040	71.20%	71.10%	71.33%	70.58%	72.75%
2041	74.28%	74.22%	74.37%	73.77%	75.62%
2042	77.67%	77.63%	77.73%	77.28%	78.76%
2043	81.40%	81.39%	81.43%	81.14%	82.18%
2044	85.50%	85.50%	85.51%	85.37%	85.92%
2045	90.00%	90.00%	90.00%	90.00%	90.00%

State Employees' Retirement System of Illinois
Comparison of Actuarial Valuation Results and Stress Testing Scenarios
Unfunded Actuarial Accrued Liability
Based on Actuarial Valuation as of June 30, 2024

Illinois SERS					
Scenario	**Baseline**	**8**	**9**	**10**	**11**
Investment Return Assumption	6.75% per year	6.75% per year	6.75% per year	6.75% per year	6.75% per year
Wage Inflation Assumption	2.75%	2.75%	2.75%	3.75%	1.75%
Population Growth Assumption	Active population remains constant at 65,508 members through the projection period	Active population increases 1,000 members each year for 5 years and then remains constant at 70,508 members for fiscal years on and after fiscal year 2030	Active population decreases 1,000 members each year for 5 years and then remains constant at 60,508 members for fiscal years on and after fiscal year 2030	Active population remains constant at 65,508 members through the projection period	Active population remains constant at 65,508 members through the projection period
Fiscal Year	**Unfunded Accrued Liability ($ in millions)**				
2025	$29,756	$29,756	$29,756	$30,449	$29,089
2026	30,234	30,236	30,233	31,022	29,476
2027	30,060	30,131	29,926	30,960	29,069
2028	29,782	29,945	29,587	30,826	28,615
2029	29,569	29,787	29,336	30,735	28,230
2030	29,302	29,532	29,054	30,563	27,795
2031	28,960	29,201	28,700	30,300	27,303
2032	28,532	28,781	28,262	29,935	26,744
2033	28,005	28,259	27,728	29,453	26,107
2034	27,148	27,406	26,868	28,624	25,166
2035	26,161	26,418	25,879	27,646	24,120
2036	25,032	25,287	24,753	26,508	22,963
2037	23,752	24,002	23,479	25,200	21,687
2038	22,310	22,552	22,046	23,708	20,286
2039	20,694	20,924	20,443	22,021	18,749
2040	18,892	19,108	18,658	20,123	17,070
2041	16,891	17,088	16,677	17,999	15,237
2042	14,675	14,851	14,485	15,636	13,243
2043	12,229	12,382	12,068	13,016	11,075
2044	9,537	9,662	9,407	10,122	8,722
2045	6,580	6,674	6,485	6,937	6,172

State Employees' Retirement System of Illinois
Baseline Valuation
Projection of Cashflows, Accrued Liability, and Market Value of Assets
Based on Actuarial Valuation as of June 30, 2024

Baseline Valuation Projection ($ in Millions)								
Fiscal Year	Employer Contribution	Benefits and Administrative Expenses	Employer Normal Cost	Actuarial Accrued Liability (AAL)	Annual Change in AAL (%)	Market Value of Assets (MVA)	Annual Change in MVA (%)	Funded Ratio
2025	$2,813.50	$3,394.66	$597.56	$56,893.88		$26,838.05		47%
2026	2,597.55	3,542.99	589.47	58,013.11	1.97%	28,003.27	4.34%	48%
2027	2,608.57	3,684.06	578.23	59,053.85	1.79%	29,116.08	3.97%	49%
2028	2,672.91	3,823.12	565.80	60,011.70	1.62%	30,230.20	3.83%	50%
2029	2,705.95	3,956.94	554.76	60,888.46	1.46%	31,319.32	3.60%	51%
2030	2,735.68	4,086.55	545.13	61,684.81	1.31%	32,383.03	3.40%	52%
2031	2,780.40	4,211.31	535.76	62,401.08	1.16%	33,440.59	3.27%	54%
2032	2,832.49	4,332.40	525.85	63,035.14	1.02%	34,503.04	3.18%	55%
2033	2,891.40	4,444.53	517.00	63,591.76	0.88%	35,586.97	3.14%	56%
2034	3,167.97	4,550.03	509.53	64,074.31	0.76%	36,925.89	3.76%	58%
2035	3,231.70	4,640.07	501.92	64,493.76	0.65%	38,333.23	3.81%	59%
2036	3,296.37	4,737.38	494.52	64,838.47	0.53%	39,806.96	3.84%	61%
2037	3,363.21	4,826.12	489.26	65,114.61	0.43%	41,362.84	3.91%	64%
2038	3,433.04	4,906.57	485.70	65,328.30	0.33%	43,018.48	4.00%	66%
2039	3,505.24	4,978.64	483.86	65,485.87	0.24%	44,791.83	4.12%	68%
2040	3,580.57	5,040.65	484.59	65,596.92	0.17%	46,704.79	4.27%	71%
2041	3,659.37	5,092.56	487.85	65,671.80	0.11%	48,781.26	4.45%	74%
2042	3,741.33	5,135.32	493.33	65,720.17	0.07%	51,045.35	4.64%	78%
2043	3,826.48	5,170.01	500.74	65,750.82	0.05%	53,521.60	4.85%	81%
2044	3,914.52	5,197.50	509.73	65,771.81	0.03%	56,234.95	5.07%	86%
2045	4,004.91	5,219.11	519.90	65,789.92	0.03%	59,210.03	5.29%	90%