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Public School Retirement System of Missouri

Actuarial Valuation as of
June 30, 2023

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November 15, 2023

Board of Trustees
Public School Retirement System of Missouri
3210 W. Truman Blvd.
Jefferson City, MO 65109

Re: Certification of the Actuarial Valuation of the Public School Retirement System of Missouri as of June 30, 2023

Dear Board of Trustees:

An actuarial valuation is performed annually for the Public School Retirement System of Missouri ("PSRS") defined benefit pension plan ("Plan"). The results of the latest actuarial valuation were prepared as of June 30, 2023 and are presented herein pursuant to the engagement letter between PSRS and PwC US, dated July 11, 2019. This report is intended to provide the Board of Trustees ("Board") with information on the funded status of the Plan, development of the actuarially determined contribution rates, and certain financial statement disclosure information.

Financing Objectives and Funding Policy

Under Missouri statutes, contribution rates are adopted annually by the Board. The actuarially determined contribution presented herein was based on the funding policy, actuarial assumptions, and actuarial methods adopted by the Board.

In setting contribution rates, the principal objectives of the Board's funding policy are:

- To set contribution rates such that the funded ratio will reach 100% over a closed 30-year period.
- To set contribution rates such that they remain stable over time.
- To set contribution rates such that they promote intergenerational equity.
- To provide a reasonable margin for adverse experience to help offset risks of not meeting the above target.

Progress Toward Realization of Financing Objectives

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a measure of the Plan's funded status. Absent changes in plan provisions and actuarial assumptions and methods, it should increase over time until it reaches 100% under the current funding policy, though adverse experience could prevent this from being achieved. The funded ratio for the Plan is 85.9% as of June 30, 2023, compared to 85.2% as of June 30, 2022. The liabilities increased more than expected mainly due to salary increases being greater than assumed, but the actuarial value of assets also increased by more than the 7.3% expected return assumption because average returns over the last five years have exceeded the assumed returns. Over time, we expect the annual gains/losses to be offsetting.

In addition to these experience gains and losses, the enactment of Senate Bill 75 (HCS/SS/SB 75) resulted in a small gain on liabilities.

Benefit Provisions

The benefit provisions of PSRS reflected in our June 30, 2023 valuation include the amendments of Senate Bill 75 (HCS/SS/SB 75), which was passed prior to the June 30, 2023 valuation date and contained the following provisions that became effective on August 28, 2023:

- Provide a 2.55% benefit factor for PSRS members who have 32 or more years of service at retirement
- Increase the salary limit for PSRS retirees working in non-certificated positions to 133% of the annual Social Security earnings limit from August 28, 2023 to June 30, 2028, and then to 100% of the annual Social Security earnings limit thereafter
- Modify the Critical Shortage Employment provision to expand the allowed lifetime limit on time worked from two years to four years and increase the potential number of Critical Shortage positions available for PSRS retirees who are teaching
- Allow certain retirees who nominated a same-sex domestic partner as beneficiary for lifetime monthly benefits under a Joint-and-Survivor benefit option to have their monthly retirement benefit "pop-up" to the amount they would have received if they had not elected to receive reduced monthly benefits

All other benefit provisions are consistent with the June 30, 2022 valuation.

Assets and Member Data

The valuation was based on asset values of the trust funds and member census data as of June 30, 2023. All asset information and member data were provided by PSRS. While we performed certain checks for reasonableness relative to the prior year data, the data was used unaudited. The accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying asset and census information.

Actuarial Assumptions and Methods
The actuarial assumptions used in the June 30, 2023 valuations were adopted by the Board pursuant to an experience study completed in May 2021. All economic and demographic assumptions were reviewed and certain assumptions were updated, where appropriate, based on the results of the 2021 experience study. The assumptions were updated for the June 30, 2021 valuation based on the results of the experience study. The retirement rates assumption was updated for the June 30, 2023 valuation due to the passage of Senate Bill 75 (HCS/SS/SB 75). Otherwise the assumptions remain consistent with the June 30, 2021 and June 30, 2022 valuations. The next experience study is scheduled to be completed prior to the June 30, 2026 valuation.

We believe the actuarial assumptions and methods are reasonable for the purposes of this valuation report, were developed in accordance with the Actuarial Standards of Practice, and comply with the parameters set forth in Statements No. 67 and No. 68 (as amended) of the Governmental Accounting Standards Board ("GASB"). Different assumptions and methods may be reasonable for other purposes. As such, the results presented in the valuation reports should only be relied upon for the intended purpose.

Certification
We certify that the information presented herein is accurate and fairly portrays the actuarial position of the Plan administered by PSRS as of June 30, 2023 based on the underlying census data, asset information, and selected assumptions and methods.

This report contains certain accounting information required to be included in the System's Annual Comprehensive Financial Report. This information has been prepared in accordance with our understanding of GASB No. 67, as amended. This report also contains employer accounting information prepared in accordance with our understanding of GASB No. 68, as amended.

In preparing the results presented herein, we have used and evaluated actuarial models in accordance with Actuarial Standards of Practice ("ASOP") No. 56. PwC US uses the ProVal valuation system developed by Winklevoss Technologies, LLC in performing valuations of pension and postretirement benefit plans. We have utilized the ProVal software to prepare the valuation results presented herein. ProVal is used to value participant data through projecting retirement benefits and applying plan specific assumptions, methods, and plan provisions under applicable accounting and funding standards. We are not aware of any material limitations or known weaknesses in the ProVal software.

A range of results, different from those presented in this report, could be considered reasonable. Future actuarial measurements may differ significantly from the current measurement presented in this report due to a number of factors including but not limited to: plan experience differing from that anticipated by the economic and demographic assumptions; increases or decreases expected as part of the natural operation of the methods 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); rounding conventions; and changes in plan provisions or applicable law. Due to the limited scope of this report, an analysis of the potential range of such future measurements has not been performed.

To the best of our knowledge, this actuarial statement is complete and accurate and has been prepared in accordance with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Our calculations also reflect our understanding of the requirements of Missouri state law. The undersigned actuaries are members of the Society of Actuaries and other professional organizations, including the American Academy of Actuaries, and meet the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States relating to pension plans. There is no relationship between the PwC practitioners involved in this engagement and PSRS that may impair our objectivity.

The content of this document is limited to the matters specifically addressed herein and does not address any other potential tax consequences, or the potential application of tax penalties, to any matter other than as set forth herein. Our conclusions are not binding upon any taxing authority or the courts and there is no assurance that any relevant taxing authority will not successfully assert a contrary position. In addition, no exceptions (including the reasonable cause exception) are available for any federal or state penalties imposed if any portion of a transaction is determined to lack economic substance or fails to satisfy any similar rule of law, and our advice will not protect you from any such penalties. This document supersedes all prior written or oral advice with respect to the issues addressed in this document and all such prior communications should not be relied upon by any person for any purpose. This document has been prepared pursuant to an engagement letter between PSRS and PwC US, and is intended solely for the use and benefits of PSRS and not for reliance by any other person.

Respectfully submitted,

Cindy Fraterrigo

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TABLE OF CONTENTS

HIGHLIGHTS OF THE ACTUARY'S REPORT

This report presents the results of the actuarial valuation of the Public School Retirement System of Missouri ("PSRS") defined benefit pension plan ("Plan") as of June 30, 2023 and has been prepared to present the current funded status of the Plan, contribution requirements for fiscal year 2025 (July 1, 2024 through June 30, 2025), and certain financial statement disclosure information. The valuation was performed using census data for plan members as of June 30, 2023 provided by PSRS and summarized in Section IV of this report, asset information as of June 30, 2023 provided by PSRS and summarized in Sections II and III, the actuarial assumptions and methods approved by the Board and summarized in Section V, and our understanding of the plan provisions effective June 30, 2023 summarized in Section VI.

Contributions

The Board sets, at its discretion, but subject to certain statutory restrictions, the applicable employer and member contribution rates upon considering the results of the actuarial valuation and other analysis as appropriate. Based on the objectives of the Board's funding policy, the assumptions and methods approved by the Board, and our valuation of the Actuarially Determined Contribution Rate, the contribution rate approved by the Board is 29.00% (14.50% for employers and 14.50% for members) for fiscal year 2025. A contribution rate of 29.00% represents no change from the rate currently in effect for fiscal year 2024. The contribution rate approved by the Board becomes effective on July 1, 2024. Therefore, the dollar cost will depend on the actual payroll during fiscal year 2025.

Members of PSRS pay half of the total contribution rate, currently 14.50% of pay. If a member terminates employment with less than 5 years of service, their accumulated contributions with interest can be withdrawn as a lump sum, or the member may direct PSRS to make a direct rollover of the distribution amount. When a member becomes vested with at least 5 years of service, the member also has the option to leave their contributions in the Plan and select from various retirement annuity options commencing at retirement age.

Funded Status

The funded status of PSRS is measured as the ratio of assets available for benefits to a benefit liability measure for the System. While there are several such measures that could be appropriately used, the benefit liability measure that ties most closely to the funding strategy is the Actuarial Accrued Liability (“AAL”) computed in accordance with assumptions and methods summarized in Section V. The funded status is an indicator of future contribution requirements in that a funded status below 100% results in an Actuarially Determined Contribution rate that includes contributions towards the deficit. The funded status measured on this basis is not intended to represent the sufficiency of plan assets for settling the Plan's benefit obligations and should not be relied on for that purpose or any other purpose not mentioned above in isolation.

Using the Actuarial Value of Assets ("AVA"), a smoothed asset value that recognizes 20% of the total investment gain or loss on the AVA for each of the preceding five (5) years, the PSRS AAL funded ratio is 85.9% as of June 30, 2023, compared to the June 30, 2022 funded ratio of 85.2%. The liabilities increased more than expected mainly due to salary increases being greater than assumed, but the actuarial value of assets also increased by more than the 7.3% expected return because average returns over the last five years have exceeded the assumed returns. Over time, we expect the annual gains/losses to be offsetting. The funded status is 85.4% when based on the market value of assets rather than the actuarial value of assets.

In addition to these experience gains and losses, the passage of Senate Bill 75 (HCS/SS/SB 75) resulted in a small gain on liabilities.

Investment Experience

The market value of the assets available for benefits has increased from $47.7 billion as of June 30, 2022 to $48.8 billion as of June 30, 2023. The actuarial value of assets increased from $47.2 billion as of June 30, 2022, to $49.1 billion as of June 30, 2023. The actuarial value of assets is greater than the market value by $0.3 billion and the difference will be recognized over the next four years.

The assets of the Plan returned 6.2% (net of all expenses) for the year ended June 30, 2023. Based on the Actuarial Value of Assets, the approximate return for the same period was 7.8%. The return on actuarial value is different due to the smoothing of returns greater or less than expected returns over five years. For GASB accounting purposes, the money-weighted return, net of investment expenses only, was 6.1%.

HIGHLIGHTS OF THE ACTUARY'S REPORT (CONTINUED)

Funding Policy

The Board has adopted a formal funding policy with the objective of fully funding the system over a closed 30-year period while adhering to the applicable statutes of the State of Missouri, as well as sound financial principles, such as maintaining contribution rate stability and intergenerational equity. The policy sets forth certain actions, actuarial assumptions, and actuarial methods that are to be utilized in executing the funding strategy. Key principles and objectives of the funding policy are summarized in Section II.

The funding policy is updated every five years in conjunction with an experience study. Other changes to the funding policy may be considered in the interim as deemed appropriate by the Board or as recommended by the actuary. The funding policy was most recently amended at the October 30, 2023 Board meeting to revise the retirement rates assumption due to the passage of Senate Bill 75 (HCS/SS/SB 75), with all changes effective for the June 30, 2023 actuarial valuations.

Governmental Accounting Standards

This report contains certain financial statement information, including notes and required supplemental information, prepared in accordance with our understanding of Governmental Accounting Standards No. 67 and No. 68 ("GASB 67" and "GASB 68"), as amended. Information prepared in accordance with GASB 67 is intended to assist PSRS with the preparation of its Annual Comprehensive Financial Report. Information shown in this report prepared in accordance with GASB 68 are the collective amounts for all participating employers in aggregate. Further calculation is required to determine the proportionate share applicable to each participating employer. PSRS is responsible for confirming the accuracy and completeness of any financial reporting information contained herein.

Changes in Actuarial Assumptions

The retirement rates were updated to reflect the passage of Senate Bill 75 (HCS/SS/SB 75) which provides a 2.55% benefit formula multiplier for members that retire with 32 or more years of service, and is expected to impact retirement rates in the future. The remaining provisions of Senate Bill 75 (HCS/SS/SB 75), which are summarized below, aren't expected to impact future retirement rates or other demographic experience. All other assumptions are consistent with the June 30, 2022 valuation.

Since the actual increase in the CPI-U index from June 2022 to June 2023 was 2.97%, the Board approved an actual COLA as of January 1, 2024 of 2.00%, in accordance with the Board's funding policy and Missouri statutes, consistent with the assumed COLA of 2.00%. Since the actual COLA for January 1, 2024 is known, it has been reflected in the June 30, 2023 liability valuation.

Changes in Plan Provisions

The benefit provisions of PSRS reflected in our June 30, 2023 valuation include the amendments of Senate Bill 75 (HCS/SS/SB 75), which was passed prior to the June 30, 2023 valuation date and contained the following provisions that became effective on August 28, 2023:

- Provide a 2.55% benefit factor for PSRS members who have 32 or more years of service at retirement
- Increase the salary limit for PSRS retirees working in non-certificated positions to 133% of the annual Social Security earnings limit from August 28, 2023 to June 30, 2028, and then to 100% of the annual Social Security earnings limit thereafter
- Modify the Critical Shortage Employment provision to expand the allowed lifetime limit on time worked from two years to four years and increase the potential number of Critical Shortage positions available for PSRS retirees who are teaching
- Allow certain retirees who nominated a same-sex domestic partner as beneficiary for lifetime monthly benefits under a Joint-and-Survivor benefit option to have their monthly retirement benefit “pop-up” to the amount they would have received if they had not elected to receive reduced monthly benefits

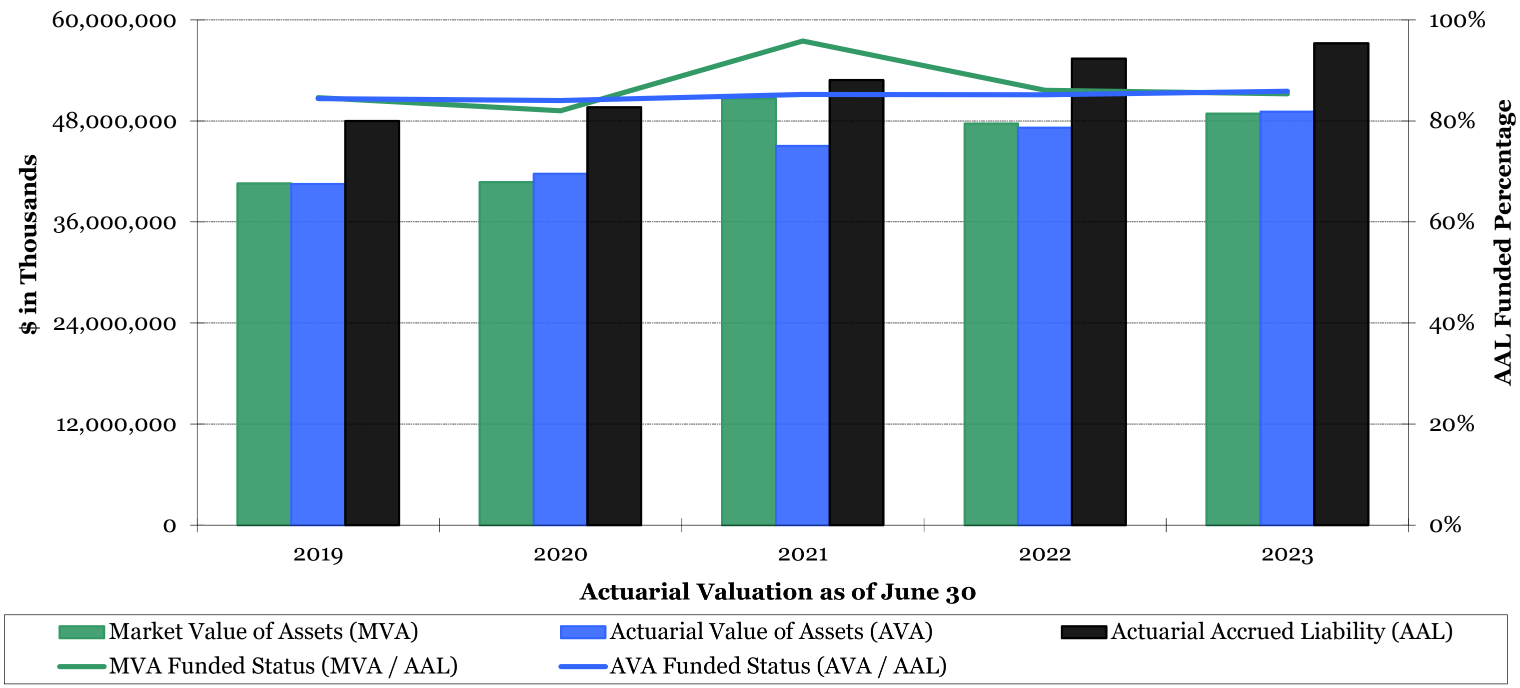
All other benefit provisions are consistent with the June 30, 2022 valuation.

Changes in Actuarial Methods

There were no changes in the actuarial methods for the June 30, 2023 valuation.

HISTORICAL SUMMARY

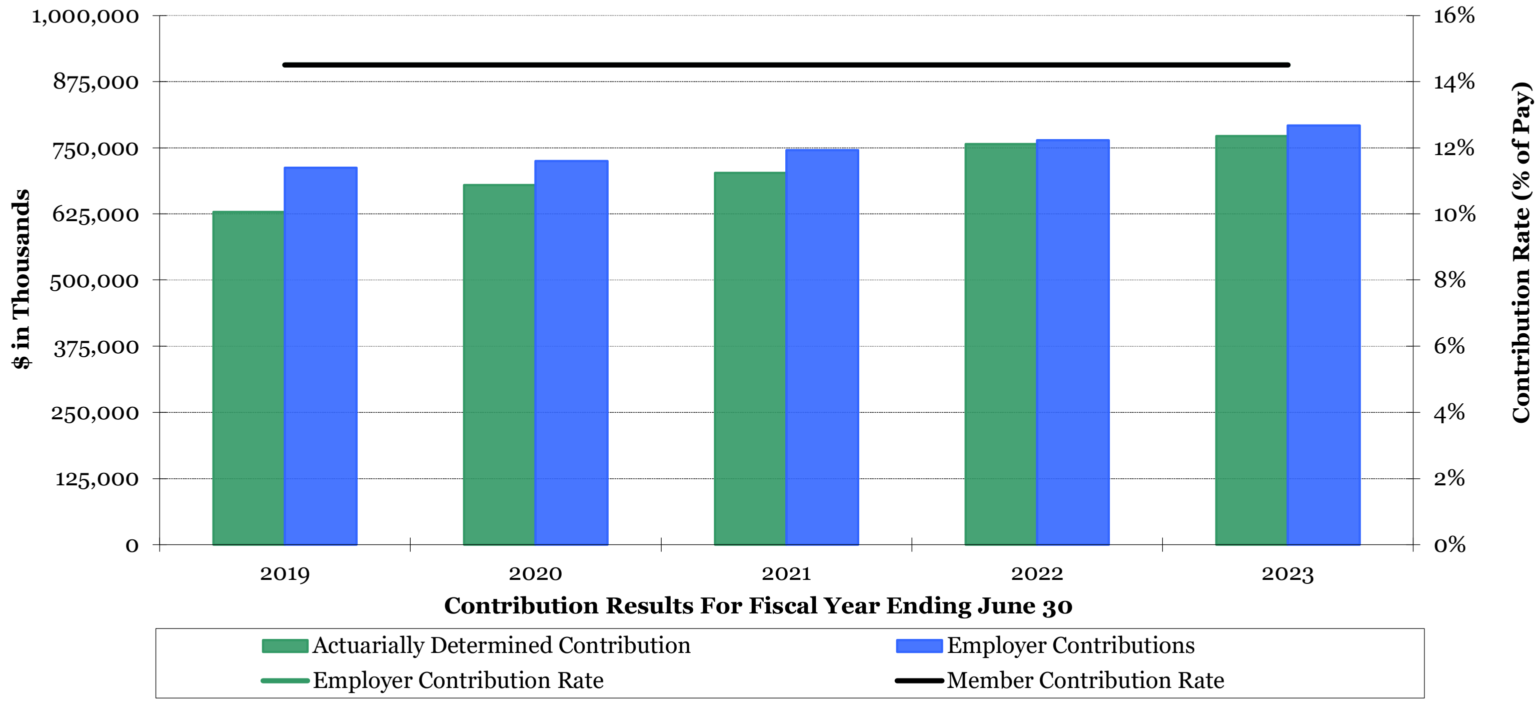
5-Year History of Funded Status



Actuarial Valuation as of June 30: ($ in '000's)	2019	2020	2021	2022	2023
Actuarial Accrued Liability (AAL)	$47,973,829	$49,641,020	$52,834,297	$55,405,260	$57,193,631
Actuarial Value of Assets (AVA)	$40,498,479	$41,705,059	$45,033,548	$47,185,300	$49,122,410
Market Value of Assets (MVA)	$40,593,759	$40,710,304	$50,620,519	$47,671,054	$48,833,108
Unfunded Liability (AAL - AVA)	$7,475,351	$7,935,962	$7,800,749	$8,219,960	$8,071,221
AVA Funded Status (AVA / AAL)	84.4%	84.0%	85.2%	85.2%	85.9%
MVA Funded Status (MVA / AAL)	84.6%	82.0%	95.8%	86.0%	85.4%

HISTORICAL SUMMARY (CONTINUED)

5-Year History of Contributions



Contribution Results For Fiscal Year: ($ in '000's)	2019	2020	2021	2022	2023
Actuarially Determined Contribution[1,2]	$628,514	$679,496	$702,443	$756,968	$771,874
Employer Contributions	$712,545	$724,995	$745,638	$764,348	$792,647
ADC % Contributed	113.4%	106.7%	106.1%	101.0%	102.7%
Employer ADC Rate	12.79%	13.59%	13.66%	14.36%	14.12%
Employer Contribution Rate	14.50%	14.50%	14.50%	14.50%	14.50%
Member Contribution Rate	14.50%	14.50%	14.50%	14.50%	14.50%

[1] Employer portion only.
[2] Actuarially Determined Contribution ("ADC") based on ADC percentage calculated in the prior fiscal year and payroll during the current year.

HISTORICAL SUMMARY (CONTINUED)

Summary of Valuation Results[1]

Valuation Date	June 30, 2019	June 30, 2020	June 30, 2021	June 30, 2022	June 30, 2023
Development of Actuarially Determined Contribution Rate:					
1. Anticipated Payroll[2]	$ 4,844,248,703	$ 4,919,286,103	$ 5,039,838,429	$ 5,140,286,466	$ 5,327,050,097
2. Total Normal Cost:[3]					
a. Amount	$ 845,283,640	$ 859,537,572	$ 859,683,772	$ 876,845,775	$ 899,291,188
b. Percentage of Payroll	17.45%	17.47%	17.06%	17.06%	16.88%
3. Total Unfunded Actuarial Accrued Liability Annual Amortizations:[4]					
a. Amount	$ 518,973,767	$ 560,501,741	$ 582,566,907	$ 624,905,808	$ 634,147,868
b. Percentage of Payroll	10.71%	11.39%	11.56%	12.16%	11.90%
4. Total Actuarially Determined Contribution Rate:					
a. Percentage of Payroll: (2)(b) + (3)(b)	**28.16%**	**28.86%**	**28.62%**	**29.22%**	**28.78%**
b. Effective UAAL Amortization Period	22.4 Years	21.7 Years	20.6 Years	20.0 Years	19.0 Years
5. Recommended Total Contribution Rate, Member + Employer:					
a. Percentage of Payroll	**29.00%**	**29.00%**	**29.00%**	**29.00%** [5]	**29.00%**
b. Effective UAAL Amortization Period	19.7 Years	21.3 Years	19.5 Years	20.6 Years	18.4 Years
c. Effective Date	July 1, 2020	July 1, 2021	July 1, 2022	July 1, 2023	July 1, 2024

[1] The contribution rates shown were developed on a funding basis only and do not reflect accounting requirements.

[2] Reflects two-thirds of the anticipated payroll for members covered by Social Security and expected to contribute two-thirds of the contribution rate.

[3] The Normal Cost is as of the beginning of the year and includes a 1.00% load for anticipated losses on service purchases for 2018 through 2020 and a 0.75% load for anticipated losses on service purchases for 2021 and thereafter.

[4] The UAAL Amortization is as of the beginning of the year.

[5] The recommendation of a contribution rate that is lower than the Actuarially Determined Contribution rate is generally based on the Board's funding policy to maintain stability in the contribution rate, the effective UAAL amortization period of the recommended rate being within 3 years of the effective UAAL amortization period of the Actuarially Determined Contribution rate, and the projected Actuarially Determined Contribution rate being below the current contribution rate again next year if all assumptions are met. Other information (e.g., margin in the Actuarially Determined Contribution rate for adverse experience, risks and sensitivities, known COLAs and investment returns, external forecasts, etc.) is also considered and presented to the Board when recommending actual contribution rates.

HISTORICAL SUMMARY (CONTINUED)

Summary of Valuation Results (Continued)

	June 30, 2019	June 30, 2020	June 30, 2021	June 30, 2022	June 30, 2023
Census Information					
Active					
Number[1]	78,863	78,848	78,944	78,973	78,437
Average Age	42.2	42.3	42.3	42.4	42.5
Average Years of Service	12.0	12.2	12.3	12.4	12.4
Anticipated Payroll of Actives ($ in 000's)[2]	$ 4,844,249	$ 4,919,286	$ 5,039,838	$ 5,140,286	$ 5,327,050
Inactive					
Vested					
Number[3]	9,076	9,272	9,472	10,045	10,835
Annual Deferred Annuities ($ in 000's)	$ 105,197	$ 109,645	$ 113,661	$ 123,261	$ 136,964
Non Vested					
Number	5,037	4,817	5,447	5,573	5,828
Account Balance ($ in 000's)	$ 62,531	$ 61,709	$ 70,809	$ 75,330	$ 83,118
Former Members					
Entitled to a Deferred Annuity					
Number	54	44	31	18	17
Annual Deferred Annuities ($ in 000's)	$ 744	$ 558	$ 237	$ 97	$ 77
Entitled to a Refund of Contributions					
Number	3,908	4,286	3,602	3,784	4,015
Account Balance ($ in 000's)	$ 33,766	$ 40,656	$ 31,611	$ 32,567	$ 36,318
Retiree/Beneficiary/Disabled					
Number	63,072	64,595	66,080	67,676	69,507
Annual Benefits Payable ($ in 000's)[4]	$ 2,642,949	$ 2,734,868	$ 2,888,581	$ 3,095,915	$ 3,278,649

[1] The number of active members as of June 30, 2023 includes 2,254 members who retired or became disabled effective July 1, 2023 and 80 members who were refund pending.

[2] Figures shown are the anticipated payroll for the one-year period following the valuation date. For the June 30, 2023 valuation, anticipated payroll excludes 2,254 members who retired or became disabled effective July 1, 2023 and 80 members who were refund pending. Reflects two-thirds of the anticipated payroll for members covered by Social Security and expected to contribute two-thirds of the contribution rate.

[3] The number of inactive vested members as of June 30, 2023 includes 34 members who retired effective July 1, 2023.

[4] Excludes $5,000 death benefits and tax sheltered annuities, but these amounts were included in the valuation. The annual benefits payable as of June 30, 2023 does not include 2,288 members who retired or became disabled effective July 1, 2023. The annual benefits payable for the 2,288 members who retired or became disabled effective July 1, 2023 are $109,561,531.

HISTORICAL SUMMARY (CONTINUED)

Summary of Valuation Results (Continued)

	June 30, 2019	June 30, 2020	June 30, 2021	June 30, 2022	June 30, 2023
Present Value of Future Benefits					
Member Contribution Balances[1]	$ 7,928,035,824	$ 8,268,226,449	$ 8,502,509,543	$ 8,674,301,369	$ 8,993,272,938
Retiree/Beneficiary	29,042,424,680	30,109,313,428	32,311,537,811	34,102,200,027	35,318,585,830
Disabled	387,568,147	406,249,791	429,181,162	439,713,728	440,933,436
Inactive	191,218,443	169,697,361	189,069,104	206,396,487	216,580,243
Active	18,371,091,887	18,716,214,677	19,236,714,894	19,943,421,813	20,496,482,025
Total	$ 55,920,338,981	$ 57,669,701,706	$ 60,669,012,514	$ 63,366,033,424	$ 65,465,854,472
Actuarial Accrued Liability (AAL)					
Member Contribution Balances[1]	$ 7,928,035,824	$ 8,268,226,449	$ 8,502,509,543	$ 8,674,301,369	$ 8,993,272,938
Retiree/Beneficiary	29,042,424,680	30,109,313,428	32,311,537,811	34,102,200,027	35,318,585,830
Disabled	387,568,147	406,249,791	429,181,162	439,713,728	440,933,436
Inactive	191,218,443	169,697,361	189,069,104	206,396,487	216,580,243
Active	10,424,582,142	10,687,533,378	11,401,999,211	11,982,648,145	12,224,258,625
Total	$ 47,973,829,236	$ 49,641,020,407	$ 52,834,296,831	$ 55,405,259,756	$ 57,193,631,072
Actuarial Value of Assets (AVA)					
Member Contribution Balances	$ 7,928,035,824	$ 8,268,226,449	$ 8,502,509,543	$ 8,674,301,369	$ 8,993,272,938
Retiree/Beneficiary	29,042,424,680	30,109,313,428	32,311,537,811	34,102,200,027	35,318,585,830
Disabled	387,568,147	406,249,791	429,181,162	439,713,728	440,933,436
Inactive	191,218,443	169,697,361	189,069,104	206,396,487	216,580,243
Active	2,949,231,468	2,751,571,637	3,601,250,367	3,762,688,025	4,153,037,485
Total	$ 40,498,478,562	$ 41,705,058,666	$ 45,033,547,987	$ 47,185,299,636	$ 49,122,409,932
Unfunded Actuarial Accrued Liability: AAL - AVA[2]					
Member Contribution Balances	$ -	$ -	$ -	$ -	$ -
Retiree/Beneficiary	-	-	-	-	-
Disabled	-	-	-	-	-
Inactive	-	-	-	-	-
Active	7,475,350,674	7,935,961,741	7,800,748,844	8,219,960,120	8,071,221,140
Total	$ 7,475,350,674	$ 7,935,961,741	$ 7,800,748,844	$ 8,219,960,120	$ 8,071,221,140
Funded Percentage: AVA / AAL[2]					
Member Contribution Balances	100.0%	100.0%	100.0%	100.0%	100.0%
Retiree/Beneficiary	100.0%	100.0%	100.0%	100.0%	100.0%
Disabled	100.0%	100.0%	100.0%	100.0%	100.0%
Inactive	100.0%	100.0%	100.0%	100.0%	100.0%
Active	28.3%	25.7%	31.6%	31.4%	34.0%
Total	84.4%	84.0%	85.2%	85.2%	85.9%
Market Value of Assets	$ 40,593,758,865	$ 40,710,304,168	$ 50,620,519,084	$ 47,671,054,492	$ 48,833,108,114
Summary of Assumptions					
Valuation Interest Rate	7.50%	7.50%	7.30%	7.30%	7.30%
Salary Increases	3.00% - 9.50%	3.00% - 9.50%	2.625% - 8.875%	2.625% - 8.875%	2.625% - 8.875%
Cost-of-Living Assumption[3]	1.30% - 1.65%	1.35% - 1.65%	1.35%	1.35%	1.35%

[1] Member contribution balances as of June 30, 2023 include $8,097,586,620 associated with active members and $895,686,318 associated with inactive members.

[2] In determining the funded percentage, the assets are allocated first to member contribution balances, then to the retiree/beneficiary/disabled liability, then to the inactive liability, and then to the active liability. This does not represent a legal allocation of assets.

[3] For the June 30, 2021 valuation, the COLA assumption is 2.00% for January 1, 2022, January 1, 2023, and January 1, 2024, and 1.35% thereafter. For the June 30, 2022 valuation, the COLA assumption is 2.00% for January 1, 2023 and January 1, 2024, and 1.35% thereafter. For the June 30, 2023 valuation, the COLA assumption is 2.00% for January 1, 2024, and 1.35% thereafter based on the long-term inflation assumption of 2.00%.

FUNDING

A. Summary of Funding Policy

Introduction

The Board of Trustees (Board) for the Public School Retirement System of Missouri (PSRS) has adopted a funding policy to record the Board's funding objectives, including the systematic funding of future benefit payments for members of PSRS. The Board, through its funding policy, adopts the actuarial assumptions and methods to be used in performing the actuarial valuation, which is the basis for determining the annual contribution rate for both employers and members. The funding policy is updated every five years in conjunction with an experience study. Other changes to the funding policy may be considered in the interim as deemed appropriate by the Board or as recommended by the actuary. The funding policy was most recently amended at the October 30, 2023 Board meeting, to update the selected retirement rates assumption pursuant to the passage of Senate Bill 75 (HCS/SS/SB 75) for the June 30, 2023 actuarial valuations.

The "Funding" results presented in this section of the report were prepared in accordance with our understanding of the funding policy.

Funding Objective

The funding objective set by the Board is to achieve a funded ratio of 100% over a closed 30-year period. For this purpose, the funded ratio is defined as the Actuarial Value of Assets divided by the Actuarial Accrued Liability determined under the Entry Age Normal Level Percent cost method and the actuarial assumptions adopted by the Board.

Principles of Funding

The Board has identified the following principles to guide its funding policy:

1. Maintain adequate assets so that current plan assets plus future contributions and investment earnings should be sufficient to fund all benefits expected to be paid to members and their beneficiaries.
2. Maintain stability of contribution rates, consistent with other funding objectives.
3. Maintain public policy goals of accountability and transparency. Each policy element is clear in intent and effect, and each should allow an assessment of whether, how, and when the funding requirements of the Plan will be met.
4. Promote intergenerational equity. Each generation of members and employers should incur the cost of benefits for the employees who provide services to them, rather than deferring those costs to future members and employers.
5. Provide a reasonable margin for adverse experience to help offset risks.
6. Review the investment earning assumption in conjunction with the periodic asset liability study and in consideration of the Board’s risk profile.
7. Review demographic and economic assumptions in conjunction with an experience study performed by an actuary.
8. Continue progress of systematic reduction of the Unfunded Actuarial Accrued Liabilities ("UAAL") while keeping the member and employer contribution rates at or near 14.5% of pay, the contribution rate first paid during 2011-2012.

A. Summary of Funding Policy (Continued)

Annual Actuarial Valuation to Set Contribution Rates

In accordance with statute, annual actuarial valuations of the System's assets and liabilities shall be performed by an actuary. The contribution rate shall be established based on the results of these valuations. The funding policy requires that the Actuarially Determined Contribution ("ADC") Rate is equal to the sum of the employer Normal Cost Rate and the Unfunded Actuarial Accrued Liability ("UAAL") Amortization Rate. The Normal Cost Rate is the portion of the Present Value of Future Benefits allocated to the year following the Actuarial Valuation Date by the Actuarial Cost Method, expressed as a percentage of anticipated payroll. The Unfunded Actuarial Accrued Liability ("UAAL") Amortization Rate is the portion of difference between the Actuarial Accrued Liability and Actuarial Value of Assets as of the valuation date that is to be amortized, expressed as a percentage of anticipated payroll. The contribution rates shall be approved by the Board no later than December 31st for the upcoming school year.

The Board, at its discretion, but subject to certain statutory restrictions, may authorize a change in the member and employer contribution rates from one year to the next should the actuary determine that the contribution rates currently in effect are more or less than required to fully fund the Plan over the weighted-average period of the existing UAAL amortization bases established in accordance with the funding policy. The decision by the Board will be based on the expected number of years required to fully fund under the current contribution rates. By statute, the contribution rates cannot be increased by more than 1.0% (0.5% for employers and 0.5% for members) per year.

B. Development of Funded Status

		June 30, 2022	June 30, 2023
1.	Present Value of Future Benefits		
a.	Member Contribution Balances[1]	$ 8,674,301,369	$ 8,993,272,938
b.	Retirees, Beneficiaries, and Disableds	34,541,913,755	35,759,519,266
c.	Inactives	206,396,487	216,580,243
d.	Actives	19,943,421,813	20,496,482,025
e.	Total: (1)(a) + (1)(b) + (1)(c) + (1)(d)	$ 63,366,033,424	$ 65,465,854,472
2.	Actuarial Accrued Liability		
a.	Member Contribution Balances[1]	$ 8,674,301,369	$ 8,993,272,938
b.	Retirees, Beneficiaries, and Disableds	34,541,913,755	35,759,519,266
c.	Inactives	206,396,487	216,580,243
d.	Actives	11,982,648,145	12,224,258,625
e.	Total: (2)(a) + (2)(b) + (2)(c) + (2)(d)	$ 55,405,259,756	$ 57,193,631,072
3.	Actuarial Value of Assets[2]		
a.	Member Contribution Balances	$ 8,674,301,369	$ 8,993,272,938
b.	Retirees, Beneficiaries, and Disableds	34,541,913,755	35,759,519,266
c.	Inactives	206,396,487	216,580,243
d.	Actives	3,762,688,025	4,153,037,485
e.	Total: (3)(a) + (3)(b) + (3)(c) + (3)(d)	$ 47,185,299,636	$ 49,122,409,932
4.	Unfunded Actuarial Accrued Liability[2]		
a.	Member Contribution Balances: (2)(a) - (3)(a)	$ -	$ -
b.	Retirees, Beneficiaries, and Disableds: (2)(b) - (3)(b)	-	-
c.	Inactives: (2)(c) - (3)(c)	-	-
d.	Actives: (2)(d) - (3)(d)	8,219,960,120	8,071,221,140
e.	Total: (2)(e) - (3)(e)	$ 8,219,960,120	$ 8,071,221,140
5.	Funded Percentage[2]		
a.	Member Contribution Balances: (3)(a)/(2)(a)	100.0%	100.0%
b.	Retirees, Beneficiaries, and Disableds: (3)(b)/(2)(b)	100.0%	100.0%
c.	Inactives: (3)(c)/(2)(c)	100.0%	100.0%
d.	Actives: (3)(d)/(2)(d)	31.4%	34.0%
e.	Total: (3)(e)/(2)(e)	85.2%	85.9%

[1] Member contribution balances include $8,097,586,620 associated with active members and $895,686,318 associated with inactive members as of June 30, 2023.

[2] In determining the funded amount and percentage, the assets are allocated first to member contribution balances, then to the retiree/beneficiary/disabled liability, then to the inactive liability, and then to the active liability. This does not represent a legal allocation of assets.

C. Reconciliation of Unfunded Actuarial Accrued Liability

1.	June 30, 2022 Unfunded Actuarial Accrued Liability	$	8,219,960,120
2.	Normal Cost for 2022-2023 Plan Year		876,845,775
3.	Actuarially Determined Contribution (Employer + Member)		1,501,751,583
4.	Interest of 7.30% on (1) + (2) - (3)		554,438,965
5.	Expected June 30, 2023 Unfunded Actuarial Accrued Liability: (1) + (2) - (3) + (4)	$	8,149,493,277
6.	Actuarial Value of Assets Experience (Gain)/Loss[1]	$	(247,238,245)
7.	Actuarial Accrued Liability Experience (Gain)/Loss		
	a. Actuarial Accrued Liability Experience	$	411,250,055
	b. Additional Liability Due to Cost-of-living Adjustments		-
	c. Additional Liability Due to Changes in Actuarial Assumptions		-
	d. Total Actuarial Accrued Liability Experience (Gain)/Loss		411,250,055
8.	Total (Gain)/Loss due to Experience - New Amortization Base (6) + (7)(d)	$	164,011,810
9.	Additional Liability Due to Changes in Plan Provisions[2] - New Amortization Base	$	(242,283,947)
10.	Total (Gain)/Loss due to Experience and Changes in Plan Provisions (8) + (9)	$	(78,272,137)
11.	Actual June 30, 2023 Unfunded Actuarial Accrued Liability (5) + (10)	$	8,071,221,140

[1] Based on Actuarial (smoothed) Value of Assets. Includes a gain due to contributions made in excess of the Actuarially Determined Contribution.

[2] Legislation (HCS SS SB 75) passed during the 2022-2023 plan year enacted various changes to the provisions of PSRS effective August 28, 2023, which are reflected in the June 30, 2023 valuation. The impact to the Actuarial Accrued Liability is due to the addition of a 2.55% benefit formula multiplier for members that retire with 32 or more years of service and resulting change in assumed future retirement rates.

D. Reconciliation of Actuarial Accrued Liability

1.	June 30, 2022 Actuarial Accrued Liability	$	55,405,259,756
2.	Normal Cost for 2022-2023 Plan Year		876,845,775
3.	Actual Benefit Payments[1]		3,292,309,407
4.	Transfers, Purchases, and Reinstatements		42,793,462
5.	Interest of 7.30% on (1) + (2) - (3) + (4)[2]		3,992,075,378
6.	Expected June 30, 2023 Actuarial Accrued Liability: (1) + (2) - (3) + (4) + (5)	$	57,024,664,964

				Dollar Change in Liability	Percent Change in Liability
7.	(Gain)/Loss Components				
	a.	Inactive and Retired Member Mortality Experience	$	(198,261,081)	(0.3%)
	b.	Active Member Salary Experience		372,133,248	0.6%
	c.	Other Demographic Experience		237,377,888	0.4%
	d.	Additional Liability Due to Cost-of-Living Adjustment		-	0.0%
	e.	Additional Liability Due to Assumption Changes		-	0.0%
	f.	Additional Liability Due to Plan Provision Changes[3]		(242,283,947)	(0.4%)
	g.	Total: (7)(a) + (7)(b) + (7)(c) + (7)(d) + (7)(e) + (7)(f)	$	168,966,108	0.3%
8.	Actual June 30, 2023 Actuarial Accrued Liability: (6) + (7)(g)		**$**	**57,193,631,072**	

[1] Includes refunds of accumulated member contributions.

[2] Reflects a half year of interest on benefit payments and transfers, purchases, and reinstatements.

[3] Legislation (HCS SS SB 75) passed during the 2022-2023 plan year enacted various changes to the provisions of PSRS effective August 28, 2023, which are reflected in the June 30, 2023 valuation. The impact to the Actuarial Accrued Liability is due to the addition of a 2.55% benefit formula multiplier for members that retire with 32 or more years of service and resulting change in assumed future retirement rates.

E. Reconciliation of Market Value of Assets

		June 30, 2022	June 30, 2023
1.	Market Value of Assets, Prior June 30	$ 50,620,519,084	$ 47,671,054,492
2.	Operating Revenues (Receipts)		
	a. Employer Contributions	$ 764,348,407	$ 792,646,705
	b. Member Contributions	807,545,968	832,155,051
	c. Interest	178,696,613	207,530,770
	d. Dividends	211,506,999	235,193,576
	e. Net Income from Security Lending Activities	809,554	273,016
	f. Net Capital Appreciation/(Depreciation)	(1,082,520,262)	2,745,828,833
	g. Investment Expenses	(759,810,159)	(346,367,780)
	h. Other Income	53,588	64,028
	i. Total Receipts: (2)(a) + (2)(b) + (2)(c) + (2)(d) + (2)(e) + (2)(f) + (2)(g) + (2)(h)	$ 120,630,708	$ 4,467,324,199
3.	Operating Expenses (Disbursements)		
	a. Benefit Payments	$ 3,002,841,020	$ 3,229,699,884
	b. Refunds to Members	55,575,158	62,609,523
	c. Administrative Expenses	11,665,583	12,957,247
	d. Other Expenses	13,539	3,923
	e. Total Disbursements: (3)(a) + (3)(b) + (3)(c) + (3)(d)	$ 3,070,095,300	$ 3,305,270,577
4.	Excess of Revenues over Expenses: (2)(i) - (3)(e)	$ (2,949,464,592)	$ 1,162,053,622
5.	Market Value of Assets, Current June 30: (1) + (4)	**$ 47,671,054,492**	**$ 48,833,108,114**

F. Development of Actuarial Value of Assets

1.	Actuarial Value of Assets June 30, 2022				$	47,185,299,636
2.	Activity for the 2022-2023 Plan Year					
	a. Contributions				$	1,624,801,756
	b. Benefit Payments[1]					(3,292,309,407)
	c. Net Cash Flow				$	(1,667,507,651)
3.	Expected Returns[2]				$	3,384,734,829
4.	Assets Before Allocation of Gain/Loss: (1) + (2)(c) + (3)				$	48,902,526,814
5.	Actual Returns for 2023 (Net of Expenses)				$	2,829,561,273
6.	Excess Returns for 2023: (5) - (3)				$	(555,173,556)
7.	Recognized Excess Returns:					
		Year	Excess Return	% Unrecognized		
		2023	(555,173,556)	80%	$	(111,034,712)
		2022	(4,697,089,382)	60%		(939,417,877)
		2021	8,203,494,525	40%		1,640,698,905
		2020	(1,541,535,767)	20%		(308,307,153)
		2019	(310,280,225)	0%		(62,056,045)
	Total				$	219,883,118
8.	Actuarial Value of Assets, June 30, 2023: (4) + (7)				**$**	**49,122,409,932**

[1] Includes refunds of accumulated member contributions.

[2] Assumes cash flows occur at mid-year.

G. Contribution Rate

Development of Actuarially Determined Contribution Rate:	June 30, 2022	June 30, 2023
1. Anticipated Payroll	$ 5,140,286,466	$ 5,327,050,097 [1]
2. Normal Cost		
a. Amount	$ 876,845,775	$ 899,291,188
b. Percentage of Payroll	17.06%	16.88%
3. Unfunded Actuarial Accrued Liability (UAAL) Amortization		
a. Amount	$ 624,905,808	$ 634,147,868
b. Percentage of Payroll	12.16%	11.90%
4. Actuarially Determined Contribution Rate		
a. Percentage of Payroll: (2)(b) + (3)(b)	**29.22%**	**28.78%**
b. Effective UAAL Amortization Period	20.0 Years	19.0 Years
5. Recommended Total Contribution Rate, Member + Employer		
a. Percentage of Payroll	**29.00%**	**29.00%**
b. Effective UAAL Amortization Period	20.6 Years	18.4 Years
c. Effective Date	July 1, 2023	July 1, 2024

[1] Equal to $5,279,928,424 of anticipated payroll for members that are not covered by Social Security and two-thirds (2/3) of $70,682,509 of anticipated payroll for members that are covered by Social Security and expected to contribute two-thirds of the contribution rate.

H. Development of the Normal Cost Rate

	Dollar[1]	Rate
1. Active Members		
a. Retirement Benefits	$ 728,086,266	13.66%
b. Termination Benefits	148,559,170	2.79%
c. Death and Disability Benefits	22,645,751	0.43%
d. Total Normal Cost	$ 899,291,187	16.88%
2. Anticipated Member Payroll[2]	$ 5,327,050,097	

[1] Normal cost amounts include a 0.75% load for anticipated losses on service purchases.

[2] Equal to $5,279,928,424 of anticipated payroll for members that are not covered by Social Security and two-thirds (2/3) of $70,682,509 of anticipated payroll for members that are covered by Social Security and expected to contribute two-thirds of the contribution rate.

I. Development of the Unfunded Actuarial Accrued Liability Amortization Rate

	Date Base Established	Reason		Remaining Balance[1]	Remaining Period		Amortization Amount	Rate
1.	6/30/2007	Plan Amendment	$	15,341,918	4	$	4,117,121	0.08%
2.	6/30/2011	UAAL Fresh Start	$	5,288,109,572	18	$	429,030,719	8.04%
3.	6/30/2012	Actuarial Experience	$	1,591,650,263	19	$	124,878,292	2.34%
4.	6/30/2013	Actuarial Experience	$	737,791,429	20	$	56,123,957	1.05%
5.	6/30/2013	Plan Amendment	$	(66,045,299)	20	$	(5,024,080)	-0.09%
6.	6/30/2014	Actuarial Experience	$	(840,935,058)	21	$	(62,166,907)	-1.17%
7.	6/30/2015	Actuarial Experience	$	(203,045,356)	22	$	(14,617,663)	-0.27%
8.	6/30/2016	Actuarial Experience and Assumption Changes	$	(307,094,630)	23	$	(21,570,680)	-0.40%
9.	6/30/2017	Actuarial Experience and Assumption Changes	$	802,951,962	24	$	55,122,698	1.03%
10.	6/30/2018	Actuarial Experience and Assumption Changes	$	347,237,654	25	$	23,334,199	0.44%
11.	6/30/2019	Actuarial Experience	$	(32,981,625)	26	$	(2,172,603)	-0.04%
12.	6/30/2020	Actuarial Experience	$	467,884,720	27	$	30,252,029	0.57%
13.	6/30/2021	Actuarial Experience and Assumption Changes	$	(129,522,271)	28	$	(8,229,740)	-0.15%
14.	6/30/2022	Actuarial Experience	$	478,149,998	29	$	29,888,847	0.56%
15.	6/30/2023	Actuarial Experience	$	164,011,810	30	$	10,096,334	0.19%
16.	6/30/2023	Plan Amendment[3]	$	(242,283,947)	30	$	(14,914,655)	-0.28%
	Total		$	8,071,221,140		$	634,147,868	11.90%
17.	Anticipated Member Payroll[2]					$	5,327,050,097	

[1] In accordance with the funding policy, all remaining balances are amortized as a level percent of payroll assuming 2.25% payroll growth and a 7.30% discount rate.

[2] Equal to $5,279,928,424 of anticipated payroll for members that are not covered by Social Security and two-thirds (2/3) of $70,682,509 of anticipated payroll for members that are covered by Social Security and expected to contribute two-thirds of the contribution rate.

[3] Legislation (HCS SS SB 75) passed during the 2022-2023 plan year enacted various changes to the provisions of PSRS effective August 28, 2023, which are reflected in the June 30, 2023 valuation. The impact to the Actuarial Accrued Liability is due to the addition of a 2.55% benefit formula multiplier for members that retire with 32 or more years of service and resulting change in assumed future retirement rates.

J. History of Contribution Rates

Valuation Date	Effective Date	Total Contribution Rate[1]
June 30, 2004	July 1, 2005	23.00%
June 30, 2005	July 1, 2006	24.00%
June 30, 2006	July 1, 2007	25.00%
June 30, 2007	July 1, 2008	26.00%
June 30, 2008	July 1, 2009	27.00%
June 30, 2009	July 1, 2010	28.00%
June 30, 2010	July 1, 2011	29.00%
June 30, 2011	July 1, 2012	29.00%
June 30, 2012	July 1, 2013	29.00%
June 30, 2013	July 1, 2014	29.00%
June 30, 2014	July 1, 2015	29.00%
June 30, 2015	July 1, 2016	29.00%
June 30, 2016	July 1, 2017	29.00%
June 30, 2017	July 1, 2018	29.00%
June 30, 2018	July 1, 2019	29.00%
June 30, 2019	July 1, 2020	29.00%
June 30, 2020	July 1, 2021	29.00%
June 30, 2021	July 1, 2022	29.00%
June 30, 2022	July 1, 2023	29.00%
June 30, 2023	July 1, 2024	29.00%

[1] Valuation results prior to June 30, 2009 were calculated by the prior actuary.

K. Historical Investment Experience

Year Ending June 30	Rate of Investment Return: Market Basis[1]	Rate of Investment Return: Actuarial Basis[2,3]	Actuarial Assumed Interest Rate
2008	(4.4%)	8.1%	8.00%
2009	(19.5%)	2.1%	8.00%
2010	12.8%	2.3%	8.00%
2011	21.6%	4.0%	8.00%
2012	1.7%	1.2%	8.00%
2013	12.4%	4.4%	8.00%
2014	16.7%	11.0%	8.00%
2015	4.3%	10.2%	8.00%
2016	1.6%	7.2%	8.00%
2017	12.3%	8.8%	7.75%
2018	8.7%	8.2%	7.60%
2019	6.9%	6.6%	7.50%
2020	3.7%	6.4%	7.50%
2021	28.5%	11.5%	7.50%
2022	(3.1%)	8.2%	7.30%
2023	6.2%	7.8%	7.30%

[1] Time-weighted returns as provided by PSRS. Net of all expenses and fees.

[2] Approximate return net of all expenses and fees and assuming all cash flows occurred at mid-year.

[3] Valuation results prior to June 30, 2009 were calculated by the prior actuary.

SECTION III - ACCOUNTING

ACCOUNTING

PLAN FINANCIAL STATEMENTS UNDER GASB #67

A. Statement of Fiduciary Net Position under GASB #67 as of June 30, 2023

1.	Assets			
	a.	Cash	$	495,589,441
	b.	Receivables		
		i. Contributions Receivable	$	192,222,588
		ii. Accrued Interest and Dividends		85,008,707
		iii. Investment Sales		831,773,312
		iv. Due from PEERS		778,610
		v. Other		11,011
		vi. Total Receivables	$	1,109,794,228
	c.	Total Investments		
		i. Short-Term Investments	$	1,038,225,594
		ii. US Treasuries and TIPS		7,045,770,339
		iii. US Public Equities		12,104,759,075
		iv. Global Equities		8,173,148,664
		v. Public Debt		-
		vi. Private Equity		8,765,896,846
		vii. Private Credit		2,569,959,757
		viii. Private Real Estate		4,987,599,428
		ix. Hedged Assets		3,785,590,445
		x. Total Investments	$	48,470,950,148
	d.	Invested Securities Lending Collateral		27,452
	e.	Prepaid Expenses		243,253
	f.	Fixed Assets, Net of Depreciation		33,007,317
	g.	Total Assets: (1)(a) + (1)(b)(vi) + (1)(c)(x) + (1)(d) + (1)(e) + (1)(f)	$	50,109,611,839
2.	Deferred Outflow of Resources			
	a.	Outflows Related to Other Post Employment Benefit Obligations	$	127,384
3.	Liabilities			
	a.	Accounts Payable	$	25,567,401
	b.	Interest Payable		1,261,350
	c.	Securities Lending Collateral		27,452
	d.	Investment Purchases		1,243,396,131
	e.	Due to PEERS		-
	f.	Total Lease Liability		902,698
	g.	Accrued Medical Claims[1]		143,960
	h.	OPEB Liability for System Employees[1]		1,921,097
	i.	Compensated Absences[1]		2,589,777
	j.	Total Liabilities: (3)(a) + (3)(b) + (3)(c) + (3)(d) + (3)(e) + (3)(f) + (3)(g) + (3)(h) + (3)(i)	$	1,275,809,866
4.	Deferred Inflow of Resources			
	a.	Inflows Related to Other Post Employment Benefit Obligations	$	821,243
5.	Fiduciary Net Position Restricted for Pensions: (1)(g) + (2)(a) - (3)(j) - (4)(a)		**$**	**48,833,108,114**

[1] Compensation and benefit costs related to System employees and paid from the Trust.

PLAN FINANCIAL STATEMENTS UNDER GASB #67

B. Statement of Changes in Fiduciary Net Position under GASB #67 for the Year Ended June 30, 2023

1.	Fiduciary Net Position as of June 30, 2022		$	47,671,054,492
2.	Additions			
	a.	Contributions		
		i. Member Contributions		832,155,051
		ii. Employer Contributions - Proportionate Share		790,025,521
		iii. Employer Contributions - Other		2,621,184
		iv. Non-Employer Contributing Entity Contributions		-
		v. Total Contributions	$	1,624,801,756
	b.	Investment Income/(Loss)		
		i. Net Appreciation/(Depreciation)	$	2,745,828,833
		ii. Net Interest and Dividend Income		442,724,346
		iii. Net Income from Security Lending Activities		273,016
		iv. Other Net Investment Income		-
		v. Investment Expenses and Rebates		(346,367,780)
		vi. Total Investment Income/(Loss)	$	2,842,458,415
	c.	Other Additions		
		i. Miscellaneous Income	$	64,028
		ii. Total Other Additions	$	64,028
	d.	Total Revenue (Additions): (2)(a)(v) + (2)(b)(vi) + (2)(c)(ii)	$	4,467,324,199
3.	Deductions			
	a.	Monthly Benefits	$	3,229,699,884
	b.	Refunds of Contributions		62,609,523
	c.	Administrative Expenses		12,957,247
	d.	Other Expenses		3,923
	e.	Total Expenses (Deductions): (3)(a) + (3)(b) + (3)(c) + (3)(d)	$	3,305,270,577
4.	Net Increase (Decrease) in Fiduciary Net Position: (2)(d) - (3)(e)		$	1,162,053,622
5.	Fiduciary Net Position as of June 30, 2023: (1) + (4)		**$**	**48,833,108,114**

EMPLOYER FINANCIAL STATEMENTS UNDER GASB #68

C. Net Pension Liability under GASB #68 for the Year Ended June 30, 2023

1.	Total Pension Liability		
	a. Total Pension Liability - Beginning of year		$ 55,405,259,756
	b. Total service cost		876,845,775
	c. Interest cost[1]		3,992,075,378
	d. Experience (gains)/losses		411,250,055
	e. Assumption changes		-
	f. Plan amendments		(242,283,947)
	g. Benefit payments[2]		(3,292,309,407)
	h. Transfers, Purchases, and Reinstatements		42,793,462
	i. Total Pension Liability - End of year		$ 57,193,631,072
2.	Plan Fiduciary Net Position		
	a. Plan Fiduciary Net Position - Beginning of year		$ 47,671,054,492
	b. Employer contributions		792,646,705
	c. Member contributions		832,155,051
	d. Non-employer contributing entity contributions		-
	e. Investment return		
	i. Expected investment return[3]	$ 3,420,194,934	
	ii. Investment gain/(loss)	(577,672,491)	
	iii. Net investment return		2,842,522,443
	f. Benefit payments[2]		(3,292,309,407)
	g. Administrative and Other Expenses		(12,961,170)
	h. Plan Fiduciary Net Position - End of year:		$ 48,833,108,114
3.	Net Pension Liability		
	a. Net Pension Liability: (1)(i) - (2)(h)		**$ 8,360,522,958**
	b. Plan Fiduciary Net Position as a Percentage of the Total Pension Liability: (2)(h) / (1)(i)		85.4%

[1] Reflects interest on total service cost and actual benefit payments.

[2] Includes refunds of accumulated member contributions.

[3] 7.30%, net of investment expenses and assuming cash flows occur at mid-year.

EMPLOYER FINANCIAL STATEMENTS UNDER GASB #68

D. Deferred Inflows and Outflows of Resources under GASB #68 for the Year Ended June 30, 2023

Fiscal Year Established	Reason	Remaining Balance At Beginning of Year	Remaining Period[1]	Annual Recognition	Remaining Balance At End of Year
1. Liability experience					
a. Inflows					
2019	Experience gain	$ 113,847,516	1.92	$ 59,295,584	$ 54,551,932
b. Outflows					
2017	Experience loss	$ (558,258)	0.14	$ (558,258)	$ -
2018	Experience loss	$ (18,634,917)	1.05	$ (17,747,545)	$ (887,372)
2020	Experience loss	$ (19,619,337)	2.82	$ (6,957,212)	$ (12,662,125)
2021	Experience loss	$ (597,880,199)	3.70	$ (161,589,243)	$ (436,290,956)
2022	Experience loss	$ (748,844,176)	4.57	$ (163,860,870)	$ (584,983,306)
2023	Experience loss	$ (411,250,055)	5.55	$ (74,099,109)	$ (337,150,946)
2. Assumption changes					
a. Inflows					
None					
b. Outflows					
2017	Assumption loss	$ (29,181,240)	0.14	$ (29,181,240)	$ -
2018	Assumption loss	$ (92,192,128)	1.05	$ (87,802,024)	$ (4,390,104)
2021	Assumption loss	$ (383,353,858)	3.70	$ (103,609,151)	$ (279,744,707)
3. Investment experience[2]					
a. Inflows					
2021	Investment gain	$ 4,973,351,839	3.00	$ 1,657,783,947	$ 3,315,567,892
b. Outflows					
2019	Investment loss	$ (60,512,156)	1.00	$ (60,512,156)	$ -
2020	Investment loss	$ (615,211,400)	2.00	$ (307,605,701)	$ (307,605,699)
2022	Investment loss	$ (4,074,607,320)	4.00	$ (1,018,651,830)	$ (3,055,955,490)
2023	Investment loss	$ (577,672,491)	5.00	$ (115,534,499)	$ (462,137,992)
4. Total deferred inflows / outflows: (1) + (2) + (3)					
a. Inflows					
	Total	**$ 5,087,199,355**		**$ 1,717,079,531**	**$ 3,370,119,824**
b. Outflows					
	Total	**$ (7,629,517,535)**		**$ (2,147,708,838)**	**$ (5,481,808,697)**

[1] The initial amortization period for liability experience gains/losses and assumption change gains/losses is equal to the expected future working lifetime of all members, active and inactive. The initial amortization period for investment gains/losses is five years.

[2] Net of investment expenses.

EMPLOYER FINANCIAL STATEMENTS UNDER GASB #68

D. Deferred Inflows and Outflows of Resources under GASB #68 for the Year Ended June 30, 2023 (Continued)

Amounts reported as collective deferred inflows / (outflows) of resources to be recognized in pension expense:

Year Ending June 30:		
2024	$	(244,849,212)
2025	$	14,734,328
2026	$	(1,557,785,185)
2027	$	(283,034,304)
2028	$	(40,754,500)
Thereafter	$	-

EMPLOYER FINANCIAL STATEMENTS UNDER GASB #68

E. Pension Expense under GASB #68 for the Year Ended June 30, 2023

1. Service cost		
a. Total service cost	$	876,845,775
b. Member contributions[1]		(790,028,542)
c. Administrative and other expenses[2]		11,006,939
d. Net employer service cost	$	97,824,172
2. Plan amendments	$	(242,283,947)
3. Interest cost	$	3,992,075,378
4. Expected return on assets	$	(3,420,194,934)
5. Recognition of deferred (inflows)/outflows of resources related to:		
a. Liability experience (gains)/losses	$	365,516,653
b. Assumption changes (gains)/losses		220,592,415
c. Investment (gains)/losses		(155,479,761)
d. Total: (5)(a) + (5)(b) + (5)(c)	$	430,629,307
6. Total collective pension expense: (1)(d) + (2) + (3) + (4) + (5)(d)	**$**	**858,049,976**

[1] Excludes $42,126,509 of member service purchases and reinstatements.

[2] Administrative expenses exclude $146,545 of contributions for system employees other than investment staff, but includes ($1,807,686) of interest and other adjustments to employer contributions.

NOTES TO THE FINANCIAL STATEMENTS UNDER GASB #67 AND #68

F. Selected Notes to the Financial Statements under GASB #67 and #68

1. The Public School Retirement System of Missouri is a cost-sharing multiple-employer plan for GASB accounting purposes.

2. Significant actuarial assumptions and other inputs used to measure the total pension liability:

- Measurement Date: June 30, 2023
- Valuation Date: June 30, 2023
- Experience Study: The Board of Trustees adopts actuarial assumptions, each of which individually represents a reasonable long-term estimate of anticipated experience under the System, derived from experience studies conducted every fifth year. The most recent comprehensive experience study was completed in May 2021. All economic and demographic assumptions were reviewed and updated, where appropriate, based on the results of the study and effective with the June 30, 2021 valuation. The next experience study is scheduled to be completed prior to the June 30, 2026 valuation.
- Long-term Inflation: 2.00% per annum
- Total Payroll Growth: 2.25% per annum, consisting of 2.00% inflation, 0.125% real wage growth due to the inclusion of active health care costs in pensionable earnings, and 0.125% of real wage growth due to productivity.
- Future Salary Increases: 2.625% - 8.875%, depending on service and including 2.00% inflation, 0.125% real wage growth due to the inclusion of active health care costs in pensionable earnings, and 0.125% of real wage growth due to productivity.
- Cost-of-Living Increases: Given that the actual increase in the CPI-U index from June 2022 to June 2023 was 2.97%, the Board approved an actual cost-of-living adjustment ("COLA") as of January 1, 2024 of 2.00%, in accordance with the Board's funding policy and Missouri statutes, consistent with the assumed COLA of 2.00%. Future COLAs assumed in the valuation are 1.35% each January 1. This COLA assumption is based on the 20-year stochastic analysis of inflation performed in the 2021 experience study and application of the Board's funding policy to those expectations. The assumption was re-evaluated for the June 30, 2022 valuation in light of the current inflationary environment, short- and long-term inflation assumptions reflected in the capital market forecasts from various investment advisors and analysts, and volatility of capital market assumptions in recent years. Based on this information, no change was made to the COLA assumption for the June 30, 2022 valuation. At June 30, 2023, the assumption was again revisited and given the current inflationary environment, and the current policy of the Board, no changes were made to the assumption for the current year. The current policy of the Board to grant a COLA on each January 1 is as follows:
    - If the June to June change in the CPI-U is less than 2% for consecutive one year periods, a cost-of-living increase of 2% will be granted when the cumulative increase is equal to or greater than 2%, at which point the cumulative increase in the CPI-U will be reset to zero. For the following year, the starting CPI-U will be based on the June value immediately preceding the January 1 at which the 2% cost-of-living increase is granted.
    - If the June to June change in the CPI-U is greater than or equal to 2%, but less than 5%, a cost-of-living increase of 2% will be granted.
    - If the June to June change in the CPI-U is greater than or equal to 5%, a cost-of-living increase of 5% will be granted.

  The COLA is effective each January 1, beginning on the second January after retirement, and capped at 80% lifetime increase.
- Mortality Assumption
    - Actives: Experience-adjusted PubT-2010 (Teachers) base mortality table for employees with generational projection using the MP-2020 improvement scale.
    - Non-Disabled Retirees: Experience-adjusted PubT-2010 (Teachers) base mortality table for retirees with generational projection using the MP-2020 improvement scale.

NOTES TO THE FINANCIAL STATEMENTS UNDER GASB #67 AND #68

F. Selected Notes to the Financial Statements under GASB #67 and #68 (Continued)

- Mortality Assumption (Continued)

Non-Disabled Beneficiaries and Survivors:	Experience-adjusted PubT-2010 (Teachers) base mortality table for contingent survivors with generational projection using the MP-2020 improvement scale.
Disabled Retirees:	Experience-adjusted PubT-2010 (Teachers) base mortality table for disabled participants with generational projection using the MP-2020 improvement scale.
	A summary of mortality rates are shown in Section V of the report.

- Discount Rate: The discount rate used to measure the total pension liability was 7.30% as of June 30, 2023, and is equal to the long-term expected return on plan investments. Consistent with the Board's funding policy, we have assumed that the employer contributions would be made at a rate consistent with the actuarially determined rate, computed in accordance with assumptions and methods stated in the funding policy. The funding policy requires payment of the normal cost and amortization of the unfunded actuarially accrued liability as a level percent of employee payroll in installments over 30 years utilizing a closed period, layered approach. Based on this policy, which has been followed for the past several years, the pension plan's fiduciary net position would be sufficient to make all projected future benefit payments of current plan members.

- Discount Rate Sensitivity

	1% Decrease (6.30%)	Current Rate (7.30%)	1% Increase (8.30%)
Net Pension Liability (Asset)	$ 15,559,104,792	$ 8,360,522,958	$ 2,399,709,372

3. Classes of plan members covered:

- Retired members, beneficiaries and disabled members receiving benefits:	69,507
- Inactive members (vested and non-vested):	16,663
- Former members:	4,032
- Active Plan Members:	78,437
- Total membership:	168,639

4. Money-weighted rate of return:
The money-weighted rate of return equals the investment performance, net of pension plan investment expenses, and adjusted for the changing amounts actually invested. For the fiscal year ending June 30, 2023, the money-weighted return on the plan assets, as provided by PSRS, is 6.1%.

5. The components of the Net Pension Liability for the Public School Retirement System of Missouri as of June 30, 2023, are as follows:

- Total Pension Liability	$ 57,193,631,072
- Plan Fiduciary Net Position	48,833,108,114
- Net Pension Liability	$ 8,360,522,958
- Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	85.4%

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #67 AND #68

G. Schedule of Changes in the Net Pension Liability and Plan Fiduciary Net Position under GASB #67 and #68

Year Ending June 30:	2014	2015	2016	2017	2018
1. Total Pension Liability					
a. Total Pension Liability - Beginning of year	$ 36,758,165,411	$ 38,483,183,932	$ 40,610,539,616	$ 41,744,618,662	$ 44,501,771,291
b. Total service cost[1]	849,712,130	836,085,151	842,548,463	740,176,751	792,276,388
c. Interest cost[2]	2,885,182,982	3,019,050,250	3,263,288,365	3,198,060,384	3,346,220,624
d. Experience (gains)/losses	226,591,816	598,022,063	(677,213,633)	24,483,828	107,372,642
e. Assumption changes	-	-	100,247,551	1,279,805,826	531,202,248
f. Plan amendments	-	-	-	-	-
g. Benefit payments[3]	(2,236,468,407)	(2,326,196,773)	(2,430,906,732)	(2,521,832,399)	(2,606,985,013)
h. Transfers, Purchases, and Reinstatements	-	394,993	36,115,032	36,458,239	30,143,693
i. Total Pension Liability - End of year	$ 38,483,183,932	$ 40,610,539,616	$ 41,744,618,662	$ 44,501,771,291	$ 46,702,001,872
2. Plan Fiduciary Net Position					
a. Plan Fiduciary Net Position - Beginning of year	$ 30,375,416,792	$ 34,380,608,561	$ 34,837,679,504	$ 34,303,969,835	$ 37,280,246,064
b. Employer contributions	643,989,869	656,924,899	670,794,045	684,857,718	696,970,397
c. Member contributions	679,390,918	689,187,215	704,785,734	719,625,373	726,996,161
d. Non-employer contributing entity contributions	-	-	-	-	-
e. Net investment return	4,927,198,588	1,447,169,203	533,180,246	4,104,123,249	3,173,735,919
f. Benefit payments[3]	(2,236,468,407)	(2,326,196,773)	(2,430,906,732)	(2,521,832,399)	(2,606,985,013)
g. Administrative and Other Expenses	(8,919,199)	(10,013,601)	(11,562,962)	(10,497,712)	(11,418,118)
h. Plan Fiduciary Net Position - End of year	$ 34,380,608,561	$ 34,837,679,504	$ 34,303,969,835	$ 37,280,246,064	$ 39,259,545,410

[1] The service cost shown for fiscal years ending on or before June 30, 2016 is mid-year and includes a 1.00% load for anticipated losses on service purchases. The service cost shown for fiscal years ending on or after June 30, 2017 is as of the beginning of the year and includes a 1.00% load for anticipated losses on service purchases. As a suggestion noted in the 2016 actuarial audit, this methodology was refined beginning with the June 30, 2016 valuation and approved by PSRS. Beginning with the fiscal year ending June 30, 2021, the load applied to the service cost was decreased to 0.75% based on the 2021 experience study.

[2] Reflects actual benefit payments. The interest cost shown for fiscal year ending June 30, 2016 includes an adjustment due to changes from mid-year to beginning-of-year and from simple to compound interest. As a suggestion noted in the 2016 actuarial audit, this methodology was refined beginning with the June 30, 2016 valuation and approved by PSRS.

[3] Includes refunds of accumulated member contributions and other interfund transfers.

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #67 AND #68

G. Schedule of Changes in the Net Pension Liability and Plan Fiduciary Net Position under GASB #67 and #68 (Continued)

Year Ending June 30:	2019	2020	2021	2022	2023
1. Total Pension Liability					
a. Total Pension Liability - Beginning of year	$ 46,702,001,872	$ 47,973,829,236	$ 49,641,020,407	$ 52,834,296,831	$ 55,405,259,756
b. Total service cost[1]	830,084,321	845,283,640	859,537,572	859,683,772	876,845,775
c. Interest cost[2]	3,466,455,927	3,559,151,521	3,682,226,376	3,811,621,348	3,992,075,378
d. Experience (gains)/losses	(351,029,852)	40,490,973	921,058,685	912,705,046	411,250,055
e. Assumption changes	-	-	590,572,160	-	-
f. Plan amendments	-	-	-	-	(242,283,947)
g. Benefit payments[3]	(2,710,273,502)	(2,813,232,110)	(2,896,159,765)	(3,058,416,178)	(3,292,309,407)
h. Transfers, Purchases, and Reinstatements	36,590,470	35,497,147	36,041,396	45,368,937	42,793,462
i. Total Pension Liability - End of year	$ 47,973,829,236	$ 49,641,020,407	$ 52,834,296,831	$ 55,405,259,756	$ 57,193,631,072
2. Plan Fiduciary Net Position					
a. Plan Fiduciary Net Position - Beginning of year	$ 39,259,545,410	$ 40,593,758,865	$ 40,710,304,168	$ 50,620,519,084	$ 47,671,054,492
b. Employer contributions	712,545,096	724,995,473	745,638,245	764,348,407	792,646,705
c. Member contributions	747,402,726	757,916,937	779,834,058	807,545,968	832,155,051
d. Non-employer contributing entity contributions	-	-	-	-	-
e. Net investment return	2,595,865,533	1,457,518,290	11,291,720,999	(1,451,263,667)	2,842,522,443
f. Benefit payments[3]	(2,710,273,502)	(2,813,232,110)	(2,896,159,765)	(3,058,416,178)	(3,292,309,407)
g. Administrative and Other Expenses	(11,326,398)	(10,653,287)	(10,818,621)	(11,679,122)	(12,961,170)
h. Plan Fiduciary Net Position - End of year	$ 40,593,758,865	$ 40,710,304,168	$ 50,620,519,084	$ 47,671,054,492	$ 48,833,108,114

[1] The service cost shown for fiscal years ending on or before June 30, 2016 is mid-year and includes a 1.00% load for anticipated losses on service purchases. The service cost shown for fiscal years ending on or after June 30, 2017 is as of the beginning of the year and includes a 1.00% load for anticipated losses on service purchases. As a suggestion noted in the 2016 actuarial audit, this methodology was refined beginning with the June 30, 2016 valuation and approved by PSRS. Beginning with the fiscal year ending June 30, 2021, the load applied to the service cost was decreased to 0.75% based on the 2021 experience study.

[2] Reflects actual benefit payments. The interest cost shown for fiscal year ending June 30, 2016 includes an adjustment due to changes from mid-year to beginning-of-year and from simple to compound interest. As a suggestion noted in the 2016 actuarial audit, this methodology was refined beginning with the June 30, 2016 valuation and approved by PSRS.

[3] Includes refunds of accumulated member contributions and other interfund transfers.

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #67 AND #68

H. Schedule of Net Pension Liability and Related Ratios under GASB #67 and #68

1. Year Ending	2. Total Pension Liability	3. Plan Fiduciary Net Position	4. Net Pension Liability (2) - (3)	5. Fiduciary Net Position as a Percentage of Total Pension Liability (3)/(2)	6. Anticipated Covered Employee Payroll[1]	7. Net Pension Liability as a Percentage of Covered Payroll (4)/(6)
6/30/2014	$ 38,483,183,932	$ 34,380,608,561	$ 4,102,575,371	89.3%	$ 4,425,567,630	92.7%
6/30/2015	$ 40,610,539,616	$ 34,837,679,504	$ 5,772,860,112	85.8%	$ 4,508,241,581	128.1%
6/30/2016	$ 41,744,618,662	$ 34,303,969,835	$ 7,440,648,827	82.2%	$ 4,556,137,282	163.3%
6/30/2017	$ 44,501,771,291	$ 37,280,246,064	$ 7,221,525,227	83.8%	$ 4,655,169,121	155.1%
6/30/2018	$ 46,702,001,872	$ 39,259,545,410	$ 7,442,456,462	84.1%	$ 4,759,665,456	156.4%
6/30/2019	$ 47,973,829,236	$ 40,593,758,865	$ 7,380,070,371	84.6%	$ 4,844,248,703	152.3%
6/30/2020	$ 49,641,020,407	$ 40,710,304,168	$ 8,930,716,239	82.0%	$ 4,919,286,103	181.5%
6/30/2021	$ 52,834,296,831	$ 50,620,519,084	$ 2,213,777,747	95.8%	$ 5,039,838,429	43.9%
6/30/2022	$ 55,405,259,756	$ 47,671,054,492	$ 7,734,205,264	86.0%	$ 5,140,286,466	150.5%
6/30/2023	$ 57,193,631,072	$ 48,833,108,114	$ 8,360,522,958	85.4%	$ 5,327,050,097	156.9%

[1] Pensionable pay as provided by PSRS. Gross member compensation, which may include components of compensation not included in pensionable compensation, was not made available to PwC US. Reflects two-thirds of the anticipated payroll for members covered by Social Security and expected to contribute two-thirds of the contribution rate.

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #67 AND #68

I. Schedule of Contributions under GASB #67 and #68

1. Year Ending	2. Actuarially Determined Contribution[1]	3. Actual Employer Contributions	4. Contribution Excess / (Deficiency) (3) - (2)	5. Actual Covered Member Payroll	6. Contributions as a Percentage of Covered Payroll (3)/(5)
6/30/2014	608,459,393	643,989,869	35,530,476	4,441,309,441	14.50%
6/30/2015	666,438,984	656,924,899	(9,514,085)	4,530,516,545	14.50%
6/30/2016	643,155,536	669,953,683	26,798,147	4,620,370,228	14.50%
6/30/2017	642,821,624	684,857,718	42,036,094	4,723,156,676	14.50%
6/30/2018	533,062,186	696,970,397	163,908,211	4,806,692,393	14.50%
6/30/2019	628,513,916	712,545,096	84,031,180	4,914,104,110	14.50%
6/30/2020	679,495,757	724,995,473	45,499,716	4,999,968,779	14.50%
6/30/2021	702,442,650	745,638,245	43,195,595	5,142,332,724	14.50%
6/30/2022	756,968,491	764,348,407	7,379,916	5,271,368,324	14.50%
6/30/2023	771,873,895 [2]	792,646,705	20,772,810	5,466,529,000	14.50%

[1] Employer portion of the Actuarially Determined Contribution, net of member contributions.

[2] The actuarially determined contribution rate for employers for the year ending June 30, 2023 is 14.12%. This consists of an employer normal cost rate of 2.56%, which is net of the 14.50% contribution rate for members, and a UAAL amortization rate of 11.56%. Based on these percentages, the actuarial determined contribution amount for employers consists of $139,943,142 for normal cost and $631,930,753 for UAAL amortization.

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #67 AND #68

J. Schedule of Money-Weighted Returns under GASB #67 and #68

1. Year Ending	2. Money-Weighted Rate of Return[1]
6/30/2014	16.7%
6/30/2015	4.3%
6/30/2016	1.6%
6/30/2017	12.3%
6/30/2018	8.7%
6/30/2019	6.9%
6/30/2020	3.7%
6/30/2021	28.4%
6/30/2022	(3.0%)
6/30/2023	6.1%

[1] As provided by PSRS. Net of all expenses and fees.

CENSUS DATA

SECTION IV - CENSUS DATA

A. Reconciliation of Member Counts

	Actives[1]	Former Members[2]	Inactive Members[3]	Disabled Retirements	Service Retirements[4]	Beneficiary[5]	Total
Total as of June 30, 2022	78,973	3,802	15,618	1,032	61,604	5,040	166,069
New Memberships	5,420	3	237	0	0	0	5,660
Terminated Members Reinstated	852	0	(849)	(3)	0	0	0
Refunds	(680)	(385)	(741)	0	0	0	(1,806)
Other Terminations	(3,383)	604	2,779	0	0	0	0
Service Retirements	(2,653)	0	(324)	0	2,977	0	0
Disabled Retirements	(27)	0	(5)	32	0	0	0
Death with Beneficiary	(18)	(2)	(11)	(25)	(372)	447	19
Death without Beneficiary	(24)	(9)	(18)	(8)	(942)	(251)	(1,252)
Voided memberships	(16)	(1)	(3)	0	0	0	(20)
Refund Pending	(7)	24	(17)	0	0	0	0
Benefit Expirations	0	0	0	0	0	(14)	(14)
Death Pending	0	0	0	(2)	(5)	(3)	(10)
Data Adjustments	0	(4)	(3)	0	0	0	(7)
Total as of June 30, 2023	78,437	4,032	16,663	1,026	63,262	5,219	168,639

1 The number of active members as of June 30, 2023 includes 2,254 members who retired or became disabled effective July 1, 2023 and 80 members who were refund pending.

2 Terminated and deceased former members whose contributions had yet to be distributed as of the valuation date.

3 The number of inactive members as of June 30, 2023 includes 34 members who retired effective July 1, 2023 and 31 members who were refund pending.

4 Includes members with benefits on hold that will be re-started at a future date.

5 Includes 241 dependent children whose payment accounts were consolidated with a spouse survivor.

6 There are 10 death pending members included as beneficiaries in 2022 that started receiving payments as a beneficiary in 2023. These members were removed from the "Death Pending" line item and added to the "Death with Beneficiary" line item to indicate that they received a new payment account ID and commenced benefits (no longer counted as a death pending placeholder).

B. Member Census Statistics as of June 30, 2023

	Male	Female	Total
1. Active			
Number[1]	17,761	60,676	78,437
Average Age	43.1	42.3	42.5
Average Years of Service	12.7	12.3	12.4
Anticipated Payroll of Actives[2]	$ 1,330,115,765	$ 3,996,934,331	$ 5,327,050,097
2. Inactive			
Vested			
Number[3]	2,087	8,748	10,835
Annual Deferred Annuities	$ 30,621,600	$106,342,164	$ 136,963,764
Non Vested			
Number	1,203	4,625	5,828
Account Balance	$ 17,074,847	$66,043,569	$ 83,118,416
3. Former Members Entitled to a Deferred Annuity			
Number	4	13	17
Annual Deferred Annuities	$ 43,365	$ 33,242	$ 76,607
Former Members Entitled to a Refund of Contributions			
Number	831	3,184	4,015
Account Balance	$ 7,192,134	$ 29,126,263	$ 36,318,397
4. Retiree/Beneficiary/Disabled			
Number[4]	19,007	50,500	69,507
Average Age	73.1	70.9	71.5
Annual Benefits Payable[5]	$ 1,009,919,540	$ 2,268,729,615	$ 3,278,649,155

[1] Includes 2,254 members who retired or became disabled effective July 1, 2023 and 80 members who were refund pending.

[2] Figures shown are the anticipated pay for the one-year period following the valuation date; excludes 2,254 members who retired or became disabled effective July 1, 2023 and 80 members who were refund pending. Reflects two-thirds of the anticipated payroll for members covered by Social Security and expected to contribute two-thirds of the contribution rate.

[3] Includes 34 members who retired effective July 1, 2023 and 31 members who were refund pending.

[4] Does not include 2,288 members who retired or became disabled effective July 1, 2023. Of these 2,288 members, 2,254 members are included in the active members and 34 members are included in the inactive members.

[5] Excludes $5,000 death benefits and tax sheltered annuities, but these amounts were included in the valuation. The annual benefits payable as of June 30, 2023 does not include 2,288 members who retired or became disabled effective July 1, 2023. The annual benefits payable for the 2,288 members who retired or became disabled effective July 1, 2023 are $109,561,531.

C. History of Active Member Average Pay, Age, and Service[1]

1. Valuation Date	2. Active Members	3. Covered Payroll ($ in Thousands)	4. Average Pay (3)/(2)	5. Annual Percent Change	6. Average Attained Age	7. Average Years of Service
6/30/2004	73,797	3,408,230	46,184	1.8%	42.5	11.4
6/30/2005	73,850	3,540,649	47,944	3.8%	42.5	11.4
6/30/2006	75,540	3,775,752	49,983	4.3%	42.4	11.2
6/30/2007	77,121	3,980,698	51,616	3.3%	42.3	11.1
6/30/2008	78,436	4,209,417	53,667	4.0%	42.2	11.1
6/30/2009	79,335	4,439,381	55,957	4.3%	42.2	11.1
6/30/2010	79,256	4,493,865	56,701	1.3%	42.3	11.3
6/30/2011	77,708	4,338,976	55,837	-1.5%	42.3	11.5
6/30/2012	77,529	4,379,060	56,483	1.2%	42.2	11.4
6/30/2013	78,076	4,460,872	57,135	1.2%	42.1	11.4
6/30/2014	75,168	4,425,568	58,876	3.0%	42.2	11.8
6/30/2015	78,314	4,508,242	59,177	0.5%	42.0	11.5
6/30/2016	78,129	4,556,137	59,933	1.3%	42.0	11.6
6/30/2017	78,274	4,655,169	60,928	1.7%	42.0	11.7
6/30/2018	78,700	4,759,665	62,064	1.9%	42.1	11.8
6/30/2019	78,863	4,844,249	63,017	1.5%	42.2	12.0
6/30/2020	78,848	4,919,286	64,005	1.6%	42.3	12.2
6/30/2021	78,944	5,039,838	65,629	2.5%	42.3	12.3
6/30/2022	78,973	5,140,286	67,154	2.3%	42.4	12.4
6/30/2023	78,437 [2]	5,327,050 [3]	69,998 [3]	4.2%	42.5	12.4

[1] Valuation results prior to June 30, 2009 were calculated by the prior actuary.

[2] Includes 2,254 members who retired or became disabled effective July 1, 2023 and 80 members who were refund pending.

[3] Excludes pay for the 2,254 members who retired or became disabled effective July 1, 2023 and 80 members who were refund pending. Reflects two-thirds of the anticipated payroll for members covered by Social Security and expected to contribute two-thirds of the contribution rate.

D. Distribution of Active Members by Salary[1]

Annual Salary	Number	Percent
Under $20,000	716	0.94%
$20,000 - 24,999	368	0.49%
$25,000 - 29,999	490	0.65%
$30,000 - 34,999	497	0.65%
$35,000 - 39,999	1,002	1.32%
$40,000 - 44,999	2,460	3.23%
$45,000 - 49,999	6,436	8.46%
$50,000 - 54,999	8,921	11.72%
$55,000 - 59,999	9,221	12.12%
$60,000 - 64,999	8,450	11.10%
$65,000 - 69,999	7,332	9.63%
$70,000 - 74,999	6,447	8.47%
$75,000 - 79,999	5,024	6.60%
$80,000 - 84,999	4,124	5.42%
$85,000 - 89,999	3,198	4.20%
$90,000 - 94,999	2,604	3.42%
$95,000 - 99,999	2,159	2.84%
$100,000 & Over	6,654	8.74%
Total	76,103	100.00%

[1] Excludes 2,254 members who retired or became disabled effective July 1, 2023 and 80 members who were refund pending.

E. Distribution of Active Members by Age and Service[1]

Attained Age	Distribution of Active Members by Age and Service as of June 30, 2023							
	0 to 4 years	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	Over 30	Total
<25	1,985							1,985
25-29	6,262	1,795						8,057
30-34	2,621	5,697	1,454					9,772
35-39	1,939	2,840	5,150	1,385	1			11,315
40-44	1,767	2,026	2,563	5,697	1,360	5		13,418
45-49	1,305	1,501	1,597	2,564	4,766	1,169	3	12,905
50-54	933	1,146	1,256	1,833	2,268	3,403	394	11,233
55-59	589	623	777	1,181	1,327	876	461	5,834
60-64	387	398	385	645	502	318	132	2,767
>=65	245	210	159	189	152	112	84	1,151
Total	18,033	16,236	13,341	13,494	10,376	5,883	1,074	78,437

[1] Includes 2,254 members who retired or became disabled effective July 1, 2023 and 80 members who were refund pending.

F. Distribution of Inactive Members by Age and Service[1]

Attained Age	Distribution of Inactive Members by Age and Service as of June 30, 2023							
	0 to 4 years	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	Over 30	Total
<25	112							112
25-29	1,734	90						1,824
30-34	1,466	1,110	24					2,600
35-39	711	1,355	394	17				2,477
40-44	504	1,308	598	185	10			2,605
45-49	410	1,110	529	252	57	1		2,359
50-54	337	1,052	495	292	87	8		2,271
55-59	243	764	411	215	72			1,705
60-64	170	187	81	39	3	1		481
>=65	143	59	19	4	3	1		229
Total	5,830	7,035	2,551	1,004	232	11		16,663

[1] Includes 34 members who retired effective July 1, 2023 and 31 members who were refund pending.

G. Distribution of Retired Members, Beneficiaries, and Disabled Members by Age and Number of Years Retired[1]

Attained Age	Distribution of Retired Members, Beneficiaries, and Disabled Members by Age and Number of Years Retired as of June 30, 2023							
	0 to 4 years	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	Over 30	Total
<50	238	133	77	43	25	11	8	535
50-54	1,315	187	51	22	15	6	9	1,605
55-59	3,307	1,311	177	25	24	16	11	4,871
60-64	3,882	3,594	1,413	152	25	12	15	9,093
65-69	1,981	4,598	3,960	1,493	204	25	29	12,290
70-74	550	2,508	5,351	4,747	1,995	241	60	15,452
75-79	110	581	2,267	4,142	4,139	1,273	79	12,591
80-84	26	93	369	1,210	2,737	2,227	450	7,112
85-89	7	15	51	165	704	1,497	1,226	3,665
>=90	5	4	9	17	113	478	1,667	2,293
Total	11,421	13,024	13,725	12,016	9,981	5,786	3,554	69,507

[1] Does not include 2,288 (2,254 active and 34 inactive) members who retired or became disabled effective July 1, 2023.

H. History of Retirees, Beneficiaries, and Disabled Members[1,2]

	Service Retirees			Disability Retirees			Beneficiaries		
Valuation Date	Added	Removed	End of Year	Added	Removed	End of Year	Added	Removed	End of Year
6/30/2004	2,458	829	31,052	54	28	630	482	156	2,548
6/30/2005	2,639	690	33,001	59	25	664	236	128	2,656
6/30/2006	2,441	811	34,631	41	34	671	279	127	2,808
6/30/2007	2,396	770	36,257	41	29	683	241	161	2,888
6/30/2008	2,596	808	38,045	45	37	691	289	175	3,002
6/30/2009	2,711	797	39,959	39	32	698	382	139	3,245
6/30/2010	2,443	873	41,529	49	25	722	297	161	3,381
6/30/2011	3,141	891	43,779	77	36	763	336	194	3,523
6/30/2012	2,926	810	45,895	70	30	803	304	181	3,646
6/30/2013	2,642	891	47,646	68	28	843	332	161	3,817
6/30/2014	2,868	807	49,707	52	36	859	276	173	3,920
6/30/2015	2,565	927	51,345	66	29	896	333	369	3,884
6/30/2016	2,607	883	53,069	84	23	957	311	201	3,994
6/30/2017	2,602	1,042	54,629	57	33	981	372	204	4,162
6/30/2018	2,406	1,105	55,930	50	40	991	425	213	4,374
6/30/2019	2,507	935	57,502	44	15	1,020	367	191	4,550
6/30/2020	2,473	1,120	58,855	56	44	1,032	396	238	4,708
6/30/2021	2,587	1,320	60,122	44	33	1,043	480	273	4,915
6/30/2022	2,731	1,249	61,604	26	37	1,032	436	311	5,040
6/30/2023	2,977	1,319	63,262	32	38	1,026	447	268	5,219 [3]

[1] Valuation results prior to June 30, 2009 were calculated by the prior actuary.

[2] Does not include 2,288 (2,254 active and 34 inactive) members who retired or became disabled effective July 1, 2023.

[3] Includes 241 dependent children whose payment accounts were consolidated with a spouse survivor.

I. History of Cost of Living Increases to Retired Members

Retirement In Calendar Year	Effective Date of First COLA[1]	First COLA Percentage Increase	Total Increases Through January 2023[2]	January 2024 Increase Based on Proposal	Total Increases Through January 2024[2]	Number of Retired Members at 6/30/2023[3]
1993 & Earlier	Various	Various	80.00%	0.00%	80.00%	2,361
1994	Jan. 1998	2.30%	79.85%	0.09%	80.00%	551
1995	Jan. 1999	1.70%	75.81%	2.00%	79.33%	700
1996	Jan. 2000	2.00%	72.85%	2.00%	76.31%	1,153
1997	Jan. 2001	3.70%	69.48%	2.00%	72.87%	1,098
1998	Jan. 2002	3.30%	63.44%	2.00%	66.71%	1,350
1999-2001 [4]	Jan. 2003	1.10%	58.22%	2.00%	61.38%	5,211
2000-2002 [5]	Jan. 2004	2.10%	56.49%	2.00%	59.62%	1,860
2003	Jan. 2005	3.30%	53.27%	2.00%	56.34%	1,998
2004	Jan. 2006	2.50%	48.40%	2.00%	51.37%	2,293
2005	Jan. 2007	4.30%	44.76%	2.00%	47.66%	2,110
2006	Jan. 2008	2.70%	38.79%	2.00%	41.57%	2,108
2007	Jan. 2009	5.00%	35.14%	2.00%	37.84%	2,262
2008	Jan. 2010	0.00%	28.70%	2.00%	31.27%	2,480
2009	Jan. 2011	0.00%	28.70%	2.00%	31.27%	2,056
2010	Jan. 2012	2.00%	28.70%	2.00%	31.27%	2,927
2011	Jan. 2013	2.00%	26.17%	2.00%	28.69%	2,811
2012	Jan. 2014	2.00%	23.70%	2.00%	26.17%	2,565
2013	Jan. 2015	2.00%	21.29%	2.00%	23.72%	2,776
2014	Jan. 2016	2.00%	18.90%	2.00%	21.28%	2,498
2015	Jan. 2017	0.00%	16.57%	2.00%	18.90%	2,571
2016	Jan. 2018	1.63%	16.57%	2.00%	18.90%	2,562
2017	Jan. 2019	2.00%	14.70%	2.00%	16.99%	2,389
2018	Jan. 2020	0.00%	12.46%	2.00%	14.71%	2,534
2019	Jan. 2021	2.00%	12.46%	2.00%	14.71%	2,501
2020	Jan. 2022	5.00%	10.25%	2.00%	12.46%	2,555
2021	Jan. 2023	5.00%	5.00%	2.00%	7.10%	2,704
2022	Jan. 2024	2.00%		2.00%	2.00%	3,056
2023						248
Total						**64,288**

[1] The COLA is effective each January 1, beginning the second January after retirement.

[2] Cumulative lifetime COLA increases are limited to 80%.

[3] Includes Service Retirees and Disabled Retirees only (beneficiaries of deceased members have been excluded) as of June 30, 2023; does not include 2,288 (2,254 active and 34 inactive) members who retired or became disabled effective July 1, 2023, or any additional members who have retired since.

[4] Includes all retirements in 1999, and, because of legislation in 2000 and 2001, all persons retiring between July 1, 2000 and December 31, 2000, and between July 1, 2001 and December 31, 2001.

[5] Includes all retirements in 2002, and, because of legislation in 2000 and 2001, all persons retiring between January 1, 2000 and June 30, 2000, and between January 1, 2001 and June 30, 2001.

J. Distribution of Retired Members by Type and Monthly Amount[1]

Monthly	Service	Disability	Retirement Based Survivor	Dependent Based Survivor	Total
Less than $500	1,502	0	171	68	1,741
$500 - 999	3,540	13	368	425	4,346
$1,000 - 1,499	3,308	49	419	1	3,777
$1,500 - 1,999	3,041	152	439	0	3,632
$2,000 - 2,499	3,655	282	473	0	4,410
$2,500 - 2,999	4,862	228	478	0	5,568
$3,000 - 3,499	6,113	145	471	0	6,729
$3,500 - 3,999	6,517	82	416	0	7,015
$4,000 - 4,499	6,463	45	339	0	6,847
$4,500 - 4,999	5,925	17	306	0	6,248
$5,000 - 5,499	4,928	8	235	0	5,171
$5,500 - 5,999	3,879	2	200	0	4,081
$6,000 & Over	9,529	3	410	0	9,942
Total	63,262	1,026	4,725	494	69,507

[1] Does not include 2,288 (2,254 active and 34 inactive) members who retired or became disabled effective July 1, 2023.

K. Distribution of Retired Members by Type of Benefit[1,2]

Type of Benefit	Number	Annual Benefit
Service Retirees		
Options 1 & 10 (Life Only)	33,913	$ 1,592,279,395
Options 2 & 21 (100% J&S with Pop-Up)	16,453	787,916,676
Options 3 & 31 (75% J&S with Pop-Up)	3,871	208,414,938
Options 4 & 41 (50% J&S with Pop-Up)	6,215	330,599,692
Option 5 (10 Years Certain & Life)	2,134	100,626,811
Option 6 (5 Years Certain & Life)	403	20,743,839
Options 20 (100% J&S)	216	10,662,849
Options 30 (75% J&S)	8	568,702
Options 40 (50% J&S)	49	2,628,601
Total	63,262	$ 3,054,441,503
Disability Retirees	1,026	$ 32,908,815
Beneficiaries	5,219	$ 191,298,837

[1] Does not include 2,288 (2,254 active and 34 inactive) members who retired or became disabled effective July 1, 2023. The annual benefits payable for the 2,288 members who retired or became disabled effective July 1, 2023 are $109,561,531.

[2] Excludes $5,000 death benefits and tax sheltered annuities.

ACTUARIAL ASSUMPTIONS AND METHODS, ASSESSMENT OF RISKS, AND LDROM

A. Actuarial Assumptions

The assumptions used in the valuation were selected and approved by the PSRS Board of Trustees. The demographic assumptions are reviewed every five years through a study of actual experience. In this way, the actuary provides guidance to the Board in selecting the assumptions. The actuary and other economic and investment professionals also provide advice for selecting the economic assumptions as determined by the Board.

There was a comprehensive experience study completed in May 2021. All economic and demographic assumptions were reviewed and certain assumptions were updated, where appropriate, based on the results of the study and effective with the June 30, 2021 valuation. The retirement rates assumption was updated for the June 30, 2023 valuation due to the passage of Senate Bill 75 (HCS/SS/SB 75). In our opinion, the assumptions used are reasonable for purposes of this valuation as of June 30, 2023.

It is noted that for the June 30, 2023 valuation, the long-term inflation assumption was again reviewed in light of the current high inflationary environment. Capital market forecasts of both short- and long-term inflation from various sources, the wide range of those forecasts, the volatility of recent observed inflation, and the efforts of the Federal Reserve Open Market Committee to reduce inflation were considered. Based on this information, the current long-term inflation assumption and COLA assumption were not adjusted. We will continue to monitor these data sources and the effectiveness of the Fed's actions in reducing inflation in determining whether the long-term inflation assumption or COLA assumption should be updated before the next experience study.

Long-term Inflation — 2.00% per annum

Payroll Growth — 2.25% per annum, consisting of 2.00% inflation, 0.125% real wage growth due to the inclusion of active health care costs in pensionable earnings, and 0.125% of real wage growth due to productivity.

Salary and Payroll Increases

Service	Inflation	Health Care Cost	Productivity	Merit, Promotion, Seniority	Total Individual Salary Growth
0	2.000%	0.125%	0.125%	6.625%	8.875%
1	2.000%	0.125%	0.125%	3.325%	5.575%
2	2.000%	0.125%	0.125%	2.775%	5.025%
3	2.000%	0.125%	0.125%	2.666%	4.916%
4	2.000%	0.125%	0.125%	2.557%	4.807%
5	2.000%	0.125%	0.125%	2.447%	4.697%
6	2.000%	0.125%	0.125%	2.338%	4.588%
7	2.000%	0.125%	0.125%	2.229%	4.479%
8	2.000%	0.125%	0.125%	2.120%	4.370%
9	2.000%	0.125%	0.125%	2.010%	4.260%
10	2.000%	0.125%	0.125%	1.901%	4.151%
11	2.000%	0.125%	0.125%	1.792%	4.042%
12	2.000%	0.125%	0.125%	1.683%	3.933%
13	2.000%	0.125%	0.125%	1.573%	3.823%
14	2.000%	0.125%	0.125%	1.464%	3.714%
15	2.000%	0.125%	0.125%	1.355%	3.605%
16	2.000%	0.125%	0.125%	1.285%	3.535%
17	2.000%	0.125%	0.125%	1.215%	3.465%
18	2.000%	0.125%	0.125%	1.145%	3.395%
19	2.000%	0.125%	0.125%	1.075%	3.325%
20	2.000%	0.125%	0.125%	1.005%	3.255%
21	2.000%	0.125%	0.125%	0.935%	3.185%
22	2.000%	0.125%	0.125%	0.865%	3.115%
23	2.000%	0.125%	0.125%	0.795%	3.045%
24	2.000%	0.125%	0.125%	0.725%	2.975%
25	2.000%	0.125%	0.125%	0.655%	2.905%
26	2.000%	0.125%	0.125%	0.585%	2.835%
27	2.000%	0.125%	0.125%	0.515%	2.765%
28	2.000%	0.125%	0.125%	0.445%	2.695%
29	2.000%	0.125%	0.125%	0.375%	2.625%
30+	2.000%	0.125%	0.125%	0.375%	2.625%

A. Actuarial Assumptions (Continued)

Investment Returns	
Funding	7.30% per annum (net of investment and administrative expenses)
Accounting	7.30% per annum (net of investment expenses)

Cost of Living Adjustments (COLA)

Given that the actual increase in the CPI-U index from June 2022 to June 2023 was 2.97%, the Board approved an actual cost-of-living adjustment ("COLA") as of January 1, 2024 of 2.00%, in accordance with the Board's funding policy and Missouri statutes, consistent with the assumed COLA of 2.00%. Future COLAs assumed in the valuation are 1.35% each January 1. This COLA assumption is based on the 20-year stochastic analysis of inflation performed in the 2021 experience study and application of the Board's funding policy to those expectations. The assumption was re-evaluated for the June 30, 2022 valuation in light of the current inflationary environment, short- and long-term inflation assumptions reflected in the capital market forecasts from various investment advisors and analysts, and volatility of capital market assumptions in recent years. Based on this information, no change was made to the COLA assumption for the June 30, 2022 valuation. At June 30, 2023, the assumption was again revisited and given the current inflationary environment, and the current policy of the Board, no changes were made to the assumption for the current year. The current policy of the Board to grant a COLA on each January 1 is as follows:

- If the June to June change in the CPI-U is less than 2% for consecutive one year periods, a cost-of-living increase of 2% will be granted when the cumulative increase is equal to or greater than 2%, at which point the cumulative increase in the CPI-U will be reset to zero. For the following year, the starting CPI-U will be based on the June value immediately preceding the January 1 at which the 2% cost-of-living increase is granted.
- If the June to June change in the CPI-U is greater than or equal to 2%, but less than 5%, a cost-of-living increase of 2% will be granted.
- If the June to June change in the CPI-U is greater than or equal to 5%, a cost-of-living increase of 5% will be granted.

The COLA is effective each January 1, beginning on the second January after retirement, and capped at 80% lifetime increase.

The COLA assumption applies to service retirements, disability retirements, and beneficiary annuities. The COLA does not apply to the dependent-based survivor benefits payable to a qualified spouse, a qualified spouse with children, dependent children, or dependent parents. Future COLAs for current benefit recipients reflect actual cumulative adjustments granted at the time of the valuation.

Mortality Rates

Actives: Experience-adjusted PubT-2010 (Teachers) base mortality table for employees with generational projection using the MP-2020 improvement scale. The Plan-specific experience adjustments are equivalent to the experience adjustment factors used for the retiree mortality rates and are as follows:

Male	Female
1.10	1.04

A. Actuarial Assumptions (Continued)

Mortality Rates (Continued)

Illustrative rates for 2018, the base year of the PubT-2010 tables, after the application of the experience adjustments per 1,000 members at various ages are shown below. Those rates are projected generationally to each subsequent year using the MP-2020 improvement scale.

Age	Male	Female
20	0.380	0.144
30	0.314	0.186
40	0.543	0.356
50	1.150	0.729
60	3.031	1.758
70	7.345	4.608

Retirees: Experience-adjusted PubT-2010 (Teachers) base mortality table for retirees with generational projection using the MP-2020 improvement scale. The Plan-specific experience adjustments are as follows:

Male	Female
1.10	1.04

Illustrative rates for 2018, the base year of the PubT-2010 tables, after the application of the experience adjustments per 1,000 members at various ages are shown below. Those rates are projected generationally to each subsequent year using the MP-2020 improvement scale.

Age	Male	Female
40	0.543	0.346
50	1.150	0.729
60	4.098	3.134
70	11.085	7.316
80	39.441	27.929
90	139.533	101.816
100	346.404	285.220
110	543.543	491.628

Beneficiaries: Experience-adjusted PubT-2010 (Teachers) base mortality table for contingent survivors with generational projection using the MP-2020 improvement scale. The Plan-specific experience adjustments are as follows:

Male	Female
1.18	1.07

A. Actuarial Assumptions (Continued)

Mortality Rates (Continued)

Illustrative rates for 2018, the base year of the PubT-2010 tables, after the application of the experience adjustments per 1,000 members at various ages are shown below. Those rates are projected generationally to each subsequent year using the MP-2020 improvement scale.

Age	Male	Female
40	0.583	0.366
50	7.788	3.287
60	12.460	6.987
70	23.659	13.226
80	58.963	36.434
90	162.753	117.627
100	371.597	293.448
110	583.073	505.809

Disabled Retirees: Experience-adjusted PubT-2010 (Teachers) base mortality table for disabled participants with generational projection using the MP-2020 improvement scale. The Plan-specific experience adjustments are equivalent to the experience adjustment factors used for the retiree mortality rates and are as follows:

Male	Female
1.10	1.04

Illustrative rates for 2018, the base year of the PubT-2010 tables, after the application of the experience adjustments per 1,000 members at various ages are shown below. Those rates are projected generationally to each subsequent year using the MP-2020 improvement scale.

Age	Male	Female
40	8.348	7.221
50	16.622	14.806
60	28.728	21.355
70	40.412	27.194
80	75.352	59.536
90	171.028	137.904
100	346.404	285.220
110	543.543	491.628

A. Actuarial Assumptions (Continued)

Withdrawal Rates

Termination of membership prior to eligibility for retirement from all causes other than death, disability or retirement, whether resulting in a refund or a deferred benefit, is assumed in accordance with the following illustrative rates per 1,000 members:

Years of Service	Rate
0	240
1	115
2	100
3	80
4	70
5	60
10	28
15	15
20	10
25+	0

Disability Rates

Retirement for disability prior to age 60 is assumed in accordance with the following illustrative rates per 1,000 eligible members:

Age	Male and Female Rates
25	0.017
30	0.080
35	0.220
40	0.480
45	0.880
50	1.290
55	1.660

A. Actuarial Assumptions (Continued)

Retirement Rates

Retirement is assumed in accordance with the following rates per 1,000 eligible members:

	Service												
Age	<=20	21	22	23	24	25	26	27	28	29	30	31	> = 32
<=50	0	0	0	0	0	50	30	30	30	30	300	150	400
51	0	0	0	0	0	50	30	30	30	150	300	150	400
52	0	0	0	0	0	50	30	30	160	150	300	150	400
53	0	0	0	0	0	50	30	270	160	150	300	150	400
54	0	0	0	0	0	50	280	170	160	150	300	150	400
55	50	30	30	30	30	390	180	170	160	150	300	150	400
56	50	30	30	30	400	190	180	170	160	150	300	150	400
57	50	30	30	400	200	190	180	170	160	150	300	150	400
58	50	30	400	200	200	190	180	170	160	150	300	150	400
59	50	400	200	200	200	190	180	170	160	150	300	150	400
60	200	200	200	200	200	250	250	250	250	250	300	150	400
61	200	200	200	200	200	250	250	250	250	250	300	150	400
62	200	200	200	200	200	250	250	250	250	250	300	150	400
63	200	200	200	200	200	250	250	250	250	250	300	150	400
64	200	200	200	200	200	250	250	250	250	250	300	150	400
65	300	300	300	300	300	450	450	450	450	450	300	150	400
66	250	250	250	250	250	300	300	300	300	300	300	150	400
67	250	250	250	250	250	300	300	300	300	300	300	150	400
68	250	250	250	250	250	300	300	300	300	300	300	150	400
69	250	250	250	250	250	300	300	300	300	300	300	150	400
>=70	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

A. Actuarial Assumptions (Continued)

Refund of Contributions	For active members assumed to terminate employment with less than five years of service, regardless of age, 100% are assumed to take an immediate refund of their contributions. For active members assumed to terminate employment with five or more years of service, but prior to satisfying the age and service requirements for service retirement, 100% are assumed to select the option that has the greater present value between an immediate refund and a deferred annuity commencing at age 60. For active members assumed to terminate employment with five or more years of service and satisfy the age and service requirements for service retirement upon termination, 100% are assumed to elect an immediate lifetime annuity benefit. For inactive members with less than five years of service, regardless of age, 100% are assumed to take an immediate refund of their contributions. For inactive members with five or more years of service, 100% are assumed to select the option that has the greater present value between an immediate refund and a deferred annuity commencing at age 60.
Interest on Member Accounts	1.00% per annum.
Service Purchases	A 0.75% load is added to the Normal Cost to account for anticipated losses resulting from service purchases and reinstatements.
Provisions for Expenses	There is no specific provision for expenses. The implicit assumption for funding purposes is that investment and administrative expenses are paid from investment income in excess of 7.30% per annum. For accounting purposes the expected return is assumed to be net of investment expenses. Administrative expenses are included in the current year expense.
Dependent Assumptions (Pre-Retirement)	70% of male and female members are assumed to be married. Beneficiaries are assumed to be of the opposite sex from the member. Male spouses are assumed to be 2 years older than female spouses.
Beneficiary Age (Post-Retirement)	Members are assumed to be 3 years older than their joint annuitant.
Dependent/Survivor Benefits (Pre-Retirement)	All active members under age 50 are assumed to receive a dependent-based survivor benefit for a spouse and 2 dependent children. The spouse is assumed to receive payments of $860 per month for life, and each child is assumed to receive payments of $860 per month for 18 years if the member is under age 32, and grading down to 0 years if the member is age 50. All active members age 50 or older are assumed to receive a retirement-based survivor benefit for life.
Return of Unused Member Account Balance	The cash refund is explicitly valued.

A. Actuarial Assumptions (Continued)

Form of Payment	For active members assumed to terminate employment with five or more years of service, benefits are assumed to be paid in the form of a single life annuity since all optional forms are actuarially equivalent using the same interest and mortality assumptions that are used in the valuation.
Data Assumptions	Active and inactive members without a date of birth provided are assumed to be 30 years old. Pensionable pay for members who did not earn service during the past year is assumed to be the greater of the current year's salary, the previous year's salary and $10,000. Pensionable pay for other active members is assumed to be the greater of annualized pay and $10,000.
Social Security Coverage	It is assumed that members who are currently employed in positions covered by Social Security will continue to be employed in Social Security covered positions for the remainder of their PSRS tenure and receive 2/3 PSRS membership credit for each year of future service. All others are assumed to continue to be employed in a position that is not covered by Social Security and receive full PSRS membership credit for future service.
Assumption Changes Since the Prior Valuation	The retirement rates were updated to reflect the passage of Senate Bill 75 (HCS/SS/SB 75) which provided a 2.55% benefit formula multiplier for members that retire with 32 or more years of service along with other changes summarized in Section VI.

B. Assumptions Rationale

Investment Return

The investment return assumption is based on analysis completed by the PSRS investment advisor and an independent, high-level analysis completed by PwC US as part of the 2021 experience study using a "building block" approach that considered the target asset allocation from the Board's investment policy and capital market forecasts from various investment professionals.

Cost of Living Adjustments

Given that the actual increase in the CPI-U index from June 2022 to June 2023 was 2.97%, the Board approved an actual cost-of-living adjustment ("COLA") as of January 1, 2024 of 2.00%, in accordance with the Board's funding policy and Missouri statutes, consistent with the assumed COLA of 2.00%. Future COLAs assumed in the valuation are 1.35% each January 1. This COLA assumption is based on the 20-year stochastic analysis of inflation performed in the 2021 experience study and application of the Board's funding policy to those expectations. The assumption was re-evaluated for the June 30, 2022 valuation in light of the current inflationary environment, short- and long-term inflation assumptions reflected in the capital market forecasts from various investment advisors and analysts, and volatility of capital market assumptions in recent years. Based on this information, no change was made to the COLA assumption for the June 30, 2022 valuation. At June 30, 2023, the assumption was again revisited and given the current inflationary environment, and the current policy of the Board, no changes were made to the assumption for the current year. The current policy of the Board to grant a COLA on each January 1 is as follows:

- If the June to June change in the CPI-U is less than 2% for consecutive one year periods, a cost-of-living increase of 2% will be granted when the cumulative increase is equal to or greater than 2%, at which point the cumulative increase in the CPI-U will be reset to zero. For the following year, the starting CPI-U will be based on the June value immediately preceding the January 1 at which the 2% cost-of-living increase is granted.
- If the June to June change in the CPI-U is greater than or equal to 2%, but less than 5%, a cost-of-living increase of 2% will be granted.
- If the June to June change in the CPI-U is greater than or equal to 5%, a cost-of-living increase of 5% will be granted.

Other Assumptions

The Board of Trustees adopts actuarial assumptions, each of which individually represents a reasonable long-term estimate of anticipated experience under the System, derived from experience studies conducted every fifth year. The most recent comprehensive experience study was completed in May 2021. All economic and demographic assumptions listed in this report were reviewed and certain assumptions were updated as of June 30, 2021, where appropriate, based on the historical experience observed during the 2021 experience study and expectations for the future. The retirement rates were updated as of June 30, 2023 due to the passage of Senate Bill 75 (HCS/SS/SB 75). The updated retirement rates were based on a blend of the experience study retirement rates and the retirement rates that were in effect prior to July 1, 2014 when the 2.55% benefit formula multiplier was previously available to members after 31 years of service since we expect a larger percentage of active members to continue working and delay retirement until they earn 32 years of service. In our opinion, the assumptions used are reasonable for purposes of this valuation as of June 30, 2023.

C. Actuarial Methods

The actuarial methods used in the valuation for funding purposes and noted below were selected and approved by the PSRS Board of Trustees. The actuarial methods are generally reviewed in conjunction with experience studies of the assumptions. In this way, the actuary provides guidance to the Board in selecting the methods. The actuarial methods used for financial reporting purposes and noted below are prescribed by GASB 67 and 68.

Actuarial Cost Method	The actuarial cost method is Entry Age Normal - Level Percent of Payroll. The Normal Cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The Actuarial Accrued Liability on any valuation date is the accumulated value of such Normal Costs from entry age to the valuation date.
Amortization of Unfunded Actuarial Accrued Liability	For funding, gains and losses occurring from census experience different than assumed and assumption changes are amortized over a 30-year period as a level percent of payroll. A new gain or loss base is established each year based on the additional gain or loss during that year and that base is amortized over a new 30-year period. The purpose of the method is to give a smooth progression of the costs from year to year and, at the same time, provide for an orderly funding of the unfunded liabilities. Increases in the Actuarial Accrued Liability caused by changes in the benefit provisions are amortized over 20 years and decreases in the Actuarial Accrued Liability caused by changes in the benefit provisions are amortized over 30 years. For accounting, gains and losses occurring from census experience different than assumed and assumption changes are amortized into expense over the average expected future service of all plan participants (actives and inactives). Gains and losses occurring from investment experience different than assumed are amortized into expense over a 5-year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.
Asset Valuation Method	The Actuarial Value of Assets is a smoothed value of assets. The actuarial value at June 30, 2022 was projected by increasing the amount with 7.30% interest, adding contributions made during the year with 7.30% interest for half the year, and subtracting benefit payments made during the year with 7.30% interest for half the year to arrive at a preliminary June 30, 2023 Actuarial Value of Assets. 20% of the difference between the actual returns on market value for the year and the expected 7.30% return from the projection of the prior year Actuarial Value, along with corresponding amounts from each of the prior four years, is added to the preliminary value to arrive at the final June 30, 2023 Actuarial Value of Assets. For accounting purposes, market value was used as required under GASB 67 and 68.
Changes Since the Prior Valuation	There have been no changes in the actuarial methods since the June 30, 2022 valuation.

D. Assessment of Risk Associated with Measurement of Pension Liability and Contributions

The actuarial valuation results presented herein are based on a single set of actuarial assumptions; however, there is a risk that emerging results may differ significantly if actual experience proves to be different than expected by the current assumptions.

In accordance with Actuarial Standard of Practice No. 51 we have assessed the risks related to the measurement of the Plan's obligations and determination of contributions, and have identified the following as being the most significant risks:

- Investment risk
- Interest rate risk
- Inflation / COLA risk
- Asset/Liability mismatch risk
- Longevity and other demographic risks
- Contribution risk

Investment risk: *The potential that investment returns will be different than expected.*

Poor investment performance decreases the Plan's funded position and could increase the funding deficiency and future contribution amounts.

Interest rate risk: *The potential that interest rates will be different than expected.*

The risk that future interest rates negatively affect investment returns. This risk is linked to investment risk as both accounting and funding results use a discount rate that is equal to the expected investment return.

Inflation / COLA risk: *The potential that inflation will be different than expected resulting in cost of living adjustments, wages, and investment returns different than expected.*

All economic assumptions used in the actuarial valuation including payroll growth, individual salary growth, and investment return assumptions are directly impacted by inflation. Based on the current Board policy, the COLA assumption is also directly impacted by the annual June-to-June inflation change as indicated by the CPI-U index. To the extent future inflation is higher than expected, this could result in higher than expected COLAs being provided which could decrease the funded status and increase the unfunded actuarial accrued liability.

Asset/Liability mismatch risk: *The potential that changes in asset values are not matched by changes in the value of liabilities.*

Asset/Liability mismatch exists to the extent that market fluctuations do not have the same impact on assets and liabilities. This impacts the funded status of the plan and the unfunded actuarial accrued liability that needs to be funded in the future.

Longevity and other demographic risks: *The potential that mortality or other demographic experience will be different than expected.*

For participants whose benefits are paid as lifetime annuities, living longer than expected could increase the unfunded actuarial accrued liability. Similarly, turnover, retirement, and other demographic experience different than assumed could result in an increase in the unfunded actuarial accrued liability.

D. Assessment of Risk Associated with Measurement of Pension Liability and Contributions (Continued)

As the population ages and the plan matures, the level of risk associated with funding the plan increases. Below are some plan maturity measures that are significant to understanding the risks associated with the plan.

Ratio of Market Value of Assets to Active Participant Payroll: The amount of plan assets relative to covered payroll is an indicator of contribution risk for the plan since the plan is funded by contributions that are a function of covered payroll of the active members. A higher ratio means that the PSRS contribution rate would be more sensitive to investment returns that are higher or lower than expected.

Valuation Date	Market Value of Assets (a)	Covered Payroll (b)	Ratio (c) = (a)/(b)
6/30/2019	$ 40,593,758,865	$ 4,844,248,703	8.38
6/30/2020	$ 40,710,304,168	$ 4,919,286,103	8.28
6/30/2021	$ 50,620,519,084	$ 5,039,838,429	10.04
6/30/2022	$ 47,671,054,492	$ 5,140,286,466	9.27
6/30/2023	$ 48,833,108,114	$ 5,327,050,097	9.17

Ratio of Retired Life Actuarial Accrued Liability to Total Actuarial Accrued Liability: As the plan matures, the percentage of the liability attributable to retirees will grow. When more of the total liability is associated with retirees, volatility of investment returns can have an impact on the funding of PSRS as it becomes more costly to recoup investment losses through contributions from active members and their employers. A higher retiree AAL percentage means that the PSRS contribution rate would be more sensitive to investment returns that are higher or lower than expected.

Valuation Date	Retiree AAL (a)	Total AAL (b)	Retiree AAL Percentage (c) = (a)/(b)
6/30/2019	$ 29,429,992,827	$ 47,973,829,236	61.35%
6/30/2020	$ 30,515,563,219	$ 49,641,020,407	61.47%
6/30/2021	$ 32,740,718,973	$ 52,834,296,831	61.97%
6/30/2022	$ 34,541,913,755	$ 55,405,259,756	62.34%
6/30/2023	$ 35,759,519,266	$ 57,193,631,072	62.52%

Ratio of Net Cash Flow (Contributions Less Benefit Payments) to Market Value of Assets: The ratio of net cash flow to assets is an indicator of investment risk. When a plan has negative cash flows, meaning benefit payments are greater than contributions, and has a year with lower than expected investment returns, there will then be less total assets invested to recover those losses in future years.

Year-Ending / Valuation Date	Contributions (a)	Benefit Payments (b)	Net Cash Flow (c) = (a) - (b)	Market Value of Assets (d)	Ratio (e) = (c)/(d)
6/30/2019	$ 1,459,947,822	$ 2,710,273,502	$ (1,250,325,680)	$ 40,593,758,865	-3.08%
6/30/2020	$ 1,482,912,410	$ 2,813,232,110	$ (1,330,319,700)	$ 40,710,304,168	-3.27%
6/30/2021	$ 1,525,472,303	$ 2,896,159,765	$ (1,370,687,462)	$ 50,620,519,084	-2.71%
6/30/2022	$ 1,571,894,375	$ 3,058,416,178	$ (1,486,521,803)	$ 47,671,054,492	-3.12%
6/30/2023	$ 1,624,801,756	$ 3,292,309,407	$ (1,667,507,651)	$ 48,833,108,114	-3.41%

D. Assessment of Risk Associated with Measurement of Pension Liability and Contributions (Continued)

Contribution risk: *The potential of actual future contributions deviating from expected future contributions.*

The Board has adopted a formal funding policy with the objective of fully funding the system over a closed 30-year period while adhering to the applicable statutes of the State of Missouri, as well as sound financial principles, such as maintaining contribution rate stability and intergenerational equity.
The risks noted above could trigger changes in the UAAL of the Plan, thus requiring additional funding. In addition, the financial viability and cash position, as well as applicable law of the State of Missouri, could change over time. Finally, the funding method currently assumes a stable payroll growth into the future. To the extent future covered payroll declines, this would lead to a higher contribution rate. For the reasons noted, there is risk that the Actuarially Determined Contribution could increase and/or that some/all employers and members may not fully contribute at the rates established by the Board.

A numerical assessment of investment and inflation risk is presented below. A numerical assessment of the other risks identified was beyond the scope of this engagement, though we encourage such an assessment be performed to better understand exposure to these risks.

	Impact of 0.5% Increase in COLA Assumption	Impact of One-time 1.0% COLA Greater than Assumed	Impact of 0.5% Decrease in Investment Return Assumption	Impact of One-time 1.0% Investment Return Less Than Assumed
UAAL ($)	$2.2B	$291M	$3.6B	$491M
Funded %	(3.16%)	(0.43%)	(5.09%)	(0.73%)
ADC Rate	3.29%	0.34%	6.49%	0.57%

E. Low-Default-Risk Obligation Measure (LDROM)

Actuarial Standard of Practice No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions* ("ASOP 4") requires actuaries to annually compute and disclose a liability measure that utilizes a discount rate that assumes the pension plan assets are invested solely in high quality (i.e., low default risk) bonds. The Plan assets are actually invested in a diversified portfolio of investments that includes stocks, bonds, real estate, and private equity with the objective of maximizing investment returns at a reasonable level of risk. As mentioned above, the potential for investment returns to be different than expected is a key risk for the Plan.

The "Low-Default-Risk Obligation Measure" ("LDROM") represents what the Actuarial Accrued Liability would be if the plan invested its assets solely in a portfolio of high-quality bonds whose cash flows approximately match future benefit payments. The LDROM therefore helps to illustrate the cost of mitigating the investment risk by investing in an all-bond portfolio and significantly lowering expected long-term investment returns. Consequently, the difference between the plan's Actuarial Accrued Liability and the LDROM can be thought of as representing the expected employer and member savings from investing in the plan's diversified portfolio compared to investing only in high quality bonds.

To calculate the LDROM, the 20-year U.S. Treasury Yield as of June 30, 2023 of 4.06% was selected as the discount rate. All other actuarial assumptions are the same as those used in computing the Actuarial Accrued Liability for funding purposes and summarized in Section V. The table below presents the Actuarial Accured Liability and LDROM.

	Investment Return	AAL
Plan	7.30%	$ 57,193,631,072
LDROM	4.06%	$ 86,949,101,750

The assets are not invested in an all-bond portfolio, so the LDROM is not indicative of the funding status or progress, nor does it provide information on necessary plan contributions or the security of participant benefits.

SUMMARY OF BENEFIT PROVISIONS

A. Summary of Benefit Provisions

Below is a summary of the plan provisions that are pertinent to the valuation herein and may exclude certain provisions that are not deemed relevant to our calculations. This summary is based on our understanding of the plan provisions set forth in the applicable statutes of the State of Missouri. If there is a discrepancy between the summary below and the applicable statutes, the applicable statutes shall govern.

Member Contributions	Half the total PSRS contribution rate. For fiscal year 2023, the total PSRS contribution rate was 29.00%.
Normal (Unreduced) Retirement	
Eligibility	Attainment of age 60 with at least five years of creditable service, or at any age after completion of 30 years of creditable service, or at any age when age plus creditable service is at least 80.
Benefit	2.50% of final average salary for each year of membership service. The multiplier increases to 2.55% (for all years of service) for members that retire with 32 or more years of service. A minimum benefit applies for members with at least 15 years of creditable service and varies from $600/month at 15 years of creditable service to $1,200/month at 30 years of creditable service. Benefits are also subject to a maximum equal to 100% of the member's final average salary at the time of retirement.
Compensation	All regular earnings as an employee of a PSRS-covered employer. Compensation or salary includes, but is not limited to, payments for extra duties, overtime payments, career ladder payments, payments for overloads (e.g. extra hours taught) and additional courses, and employer-paid medical, dental and vision insurance premiums for the member.
Final Average Salary	Average monthly salary over the member’s three highest consecutive years of service. Effective August 28, 2007, the maximum increase in the annual compensation used for the final average salary shall not exceed ten percent.
Membership Service	Service while a participating member of PSRS. Service is measured each year in relation to full contract salary for that year. Members employed in positions that are covered by Social Security receive two-thirds for each year of membership service earned in those positions.
Prior Service	Service in a covered position prior to July 1, 1946. A year of prior service is the equivalent of 0.6 years of membership service.
Creditable Service	Membership service plus any prior service.

A. Summary of Benefit Provisions (Continued)

Normal Form of Benefit — Single life annuity

Options available include joint and survivor (50%, 75%, or 100%), term certain (60 or 120 months) and life thereafter, and partial lump sum option (PLSO).

Early (Age Reduced) Retirement

Eligibility — Attainment of age 55 and under age 60 with at least five years of creditable service.

Benefit — Normal retirement benefit accrued to the date of early retirement, actuarially reduced from age 60.

Special Early Retirement Under Modified Formula

Eligibility — Retirement at an age under 55 and with at least 25 years of creditable service but not eligible for the Rule of 80.

Benefit — Based on a percentage of final average salary per year of creditable service. Percentages are as follows:

Years of Service	Benefit Percentage
25-25.9	2.20%
26-26.9	2.25%
27-27.9	2.30%
28-28.9	2.35%
29-29.9	2.40%

Post-Retirement Death Benefit — Regardless of the form of benefit selected, a lump sum benefit of $5,000 is paid at the death of the retiree.

COLA Adjustments — Applicable statutes provide the Board with limited discretion in granting COLAs. The Board has established a policy of granting a COLA on each January 1 as follows, which is compliant with current statutes:

- If the June to June change in the CPI-U is less than 2% for consecutive one year periods, a cost-of-living increase of 2% will be granted when the cumulative increase is equal to or greater than 2%, at which point the cumulative increase in the CPI-U will be reset to zero. For the following year, the starting CPI-U will be based on the June value immediately preceding the January 1 at which the 2% cost-of-living increase is granted.
- If the June to June change in the CPI-U is greater than or equal to 2%, but less than 5%, a cost-of-living increase of 2% will be granted.
- If the June to June change in the CPI-U is greater than or equal to 5%, a cost-of-living increase of 5% will be granted.

For any member retiring on or after July 1, 2001, such adjustments commence in the second January after commencement of benefits. The total of such increases may not exceed 80% of the original benefit for any member.

A. Summary of Benefit Provisions (Continued)

Disability Benefits	
Definition of Disability	Incapacity for performance of gainful employment after completion of five years of creditable service and before age 60.
Benefit	Lifetime benefit equal to 90% of accrued normal retirement benefit. This benefit level is subject to a minimum of 50% salary in the last full year of membership but not greater than the member's accrued normal retirement benefit assuming continuous employment to age 60 at current pay. COLA adjustments similar to those provided to retirees are provided on this benefit.
Form of Benefit	If eligible, surviving designated spouse or dependent child or parent may elect a monthly survivor benefit.
Vesting	
Eligibility	Accrual of five years of creditable service.
Benefit	Accrued normal retirement benefit payable at earliest retirement age based on service at date of termination. Benefit is based on formula in effect at commencement of benefit.
Death/Survivor Benefits	
Refund	Refund of accumulated member contributions with interest.
Dependent-Based Survivor Benefits	In lieu of the refund, survivors of a member with at least 2 years of service at death may elect the following survivor benefit package:

1. Spouse who was married to the deceased member for at least three years and with no dependent children - up to $860 per month payable after spouse age 60 (immediately if spouse is disabled) and prior to remarriage.

2. Spouse with dependent children

   a. Up to $860 per month payable to spouse with at least one dependent child under age 18.

   b. Up to an additional $430 per month payable for each child under age 18. Benefits continue to the spouse after the child reaches age 18, up to age 24, if the child is a full-time student.

   c. Family maximum - $2,160 per month.

A. Summary of Benefit Provisions (Continued)

Death/Survivor Benefits (Continued)

Dependent-Based Survivor Benefits (Continued)

3. If no surviving spouse, each eligible child receives up to $720 per month payable as in 2.b. above, subject to a family maximum of $2,160.

4. If no surviving spouse or children, a benefit of up to $720 per month is payable to a dependent parent over age 65, subject to a maximum of $1,440.

No COLA adjustments apply to this benefit.

Retirement-Based Survivor Benefits

In lieu of the benefits described above, if the member has at least 5 years of membership service at date of death, the designated spouse may receive a survivor benefit based on 100% J&S equivalent of the benefit accrued to date of death. The benefit may commence:

1. immediately if member is eligible to retire at date of death, or

2. at a future retirement date of the deceased member.

The benefit may be reduced for early commencement if the deceased member would not have been eligible for unreduced retirement at that date based on service to date of death.

COLA adjustments similar to those provided to retirees are provided on these benefits.

Changes in Benefit Provisions

Senate Bill 75 (HCS/SS/SB 75) was passed since the prior valuation which contained the following provisions effective August 28, 2023:

- Restore the 2.55% benefit factor for PSRS members who have 32 or more years of service at retirement
- Increase the salary limit for PSRS retirees working in non-certificated positions to 133% of the annual Social Security earnings limit from August 28, 2023 to June 30, 2028, and then to 100% of the annual Social Security earnings limit thereafter
- Modify the Critical Shortage Employment provision to expand the allowed lifetime limit on time worked from two years to four years and increase the potential number of Critical Shortage positions available for PSRS retirees who are teaching
- Allow certain retirees who nominated a same-sex domestic partner as beneficiary for lifetime monthly benefits under a Joint-and-Survivor benefit option to have their monthly retirement benefit "pop-up" to the amount they would have received if they had not elected to receive reduced monthly benefits

It is our understanding that all other provisions are the same as the prior year.