Pennsylvania Public School Employees' Retirement System

June 30, 2024 Valuation

Board Presentation | December 19, 2024

Gallagher

Insurance | Risk Management | Consulting

Disclosures

The information contained herein is developed for the Board of Trustees and Staff of the Pennsylvania Public School Employees' Retirement System (Retirement System or PSERS) by Gallagher using actuarial principles and techniques in accordance with all applicable Actuarial Standards of Practice (ASOPs). The purpose of this document is to provide key results of the June 30, 2024 actuarial valuation for discussion at the Board meeting attended by the actuaries. Interested parties may refer to the full June 30, 2024 Actuary's Report, which is scheduled to be released in 2025, for a detailed explanation regarding data, assumptions, methods, and Retirement System provisions that underlie the valuation results. In the interim, interested parties may refer to the full Actuary's Report on the June 30, 2023 actuarial valuation for a detailed explanation regarding assumptions, methods, Retirement System provisions, and certain risks that underlie the valuation.

The material contained herein is based on census and financial data, actuarial assumptions and methods, and Retirement System provisions applicable to the June 30, 2024 actuarial valuation of PSERS. Where presented, historical information is based on the parameters of the corresponding actuarial valuation.

Use of this presentation for any other purpose than as stated may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the presentation for that purpose. No third-party recipient of Gallagher's work product should rely upon Gallagher's work product absent involvement of Gallagher or without our approval.

Where presented, references to "funded ratio" and "unfunded accrued liability" are to measurements made on the basis of the actuarial value of assets. It should be noted that the same measurements made using the market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratios presented are appropriate for evaluating the need for and level of future contributions but provide no indication of the funded status of the Retirement System if the Retirement System were to settle (i.e., purchase annuities to cover) a portion or all of its liabilities.

Disclosures

Future actuarial measurements may differ significantly from current measurements due to Retirement System experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in Retirement System provisions or applicable law. An analysis of the potential range of future results is beyond the scope of this valuation.

Actuarial Standard of Practice No. 56 (“ASOP 56”) provides guidance to actuaries when performing actuarial services with respect to designing, developing, selecting, modifying, using, reviewing, or evaluating models. Gallagher uses:

Third-party software in the performance of annual actuarial valuations and projections to calculate the liabilities associated with the provisions of the Retirement System using data and assumptions as of the measurement date under the funding methods specified in this report. An internally developed model that applies applicable funding methods and policies to the liabilities derived from the output of the third-party software and other inputs, such as Retirement System assets and contributions, to generate many of the exhibits found in this report.

Gallagher has an extensive review process whereby the results of the liability calculations are checked using detailed sample output, changes from year to year are summarized by source, and significant deviations from expectations are investigated. Other outputs and the internal model are similarly reviewed in detail and at a high level for accuracy, reasonability and consistency with prior results. Gallagher also reviews the third-party model when significant changes are made to the software or model. The review is performed by experts within the company who are familiar with applicable funding methods as well as the manner in which the model generates its output. If significant changes are made to the internal model, extra checking and review are completed.

David L. Driscoll, Maria E. Simmers, and Matthew Staback are Fellows of the Society of Actuaries and Members of the American Academy of Actuaries. Salvador Nakar is a Member of the American Academy of Actuaries. We meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. We are available to answer any questions on the material contained herein, or to provide explanations or further details as may be appropriate.

Agenda

- Overview of 2023/2024 Fiscal Year
- Report on June 30, 2024 Valuation Results
- Risk Information
- Actuarial Standards of Practice Nos. 27 & 35

Overview of 2023/2024 Fiscal Year

- The time-weighted rate of return on the market value of assets was 8.14% (per Verus)
  - Expected return for the period July 1, 2023 to June 30, 2024 was 7.00%
  - Due to the asset smoothing method approach for determining the Actuarial Value of Assets (AVA), the AVA rate of return for the year was approximately 6.20%, which reflects continued recognition of past investment gains and losses
- The proportion of eligible participants who are assumed to elect Premium Assistance coverage for determination of the Premium Assistance contribution rate decreased from 60% to 59% for fiscal year 2024/2025 and thereafter.
- The assumed proportions of membership elections among new Retirement System members in fiscal year 2024/2025 and thereafter are:
  - 98% elect Class T-G membership,
  - 1% elect Class T-H membership and
  - 1% elect Class DC participation

Note: As discussed with PSERS staff, the new member class election assumptions is to remain the same as of June 30, 2023 valuation.

Overview of 2023/2024 Fiscal Year

- An overview of the economic assumptions since their adoption effective with the June 30, 2021 actuarial valuation
  - Expected rate of return on assets (EROA) of 7.0% - Based on Verus' Capital Market Assumptions, the expected return is 7.8%. Based on Gallagher's 2023 fourth quarter Capital Market Assumptions, an expected return of approximately 7.7% was developed. Both rates exceed the current 7.0% EROA.
  - Payroll growth assumption of 3.25% - The actual increase in the total payroll assumption for the last three valuation years are as follows:

Valuation Year	Contribution for Fiscal Year	Total Payroll	Increase
June 30, 2024	2025/2026	$16.152 Bil	3.6%
June 30, 2023	2024/2025	$15.590 Bil	2.2%
June 30, 2022	2023/2024	$15.260 Bil	5.3%
June 30, 2021	2022/2023	$14.497 Bil	

  - Salary increase assumption of an average of 4.5% - The actual average salary increase among full-time continuing actives for the fiscal year 2023/2024 was approximately 5.5%.
  - While we recognize the Retirement System's policy of completing an experience study every five years, we believe that these assumptions should continue to be monitored to determine that they do not significantly differ from what the actuary deems reasonable for the purpose of the measurement.
  - We have reviewed these assumptions along with recent experience and have determined that these assumptions do not significantly conflict with what, in our professional judgement, are reasonable for the purpose of the measurement and comply with the applicable standards. In our professional judgement, the combined effect of the assumptions is expected to have no significant bias.

June 30, 2024 Actuarial Valuation Results

Employer contribution rate

- The fiscal year 2025/2026 actuarially required employer contribution rate is 34.00%
  - 32.96% Pension plus;
  - 0.62% Premium Assistance plus;
  - 0.42% Act 5 DC contribution*
- The Act 120 minimum employer pension rate is the employer normal cost rate of 5.45%
- The fiscal year 2024/2025 actuarially required employer contribution rate is 33.90%
  - 32.92% Pension plus;
  - 0.63% Premium Assistance plus;
  - 0.35% Act 5 DC contribution*

* Estimated average DC contribution rate. The actual employer DC contribution rate will be based on each employer's Class T-G, Class T-H and Class DC membership/participation.

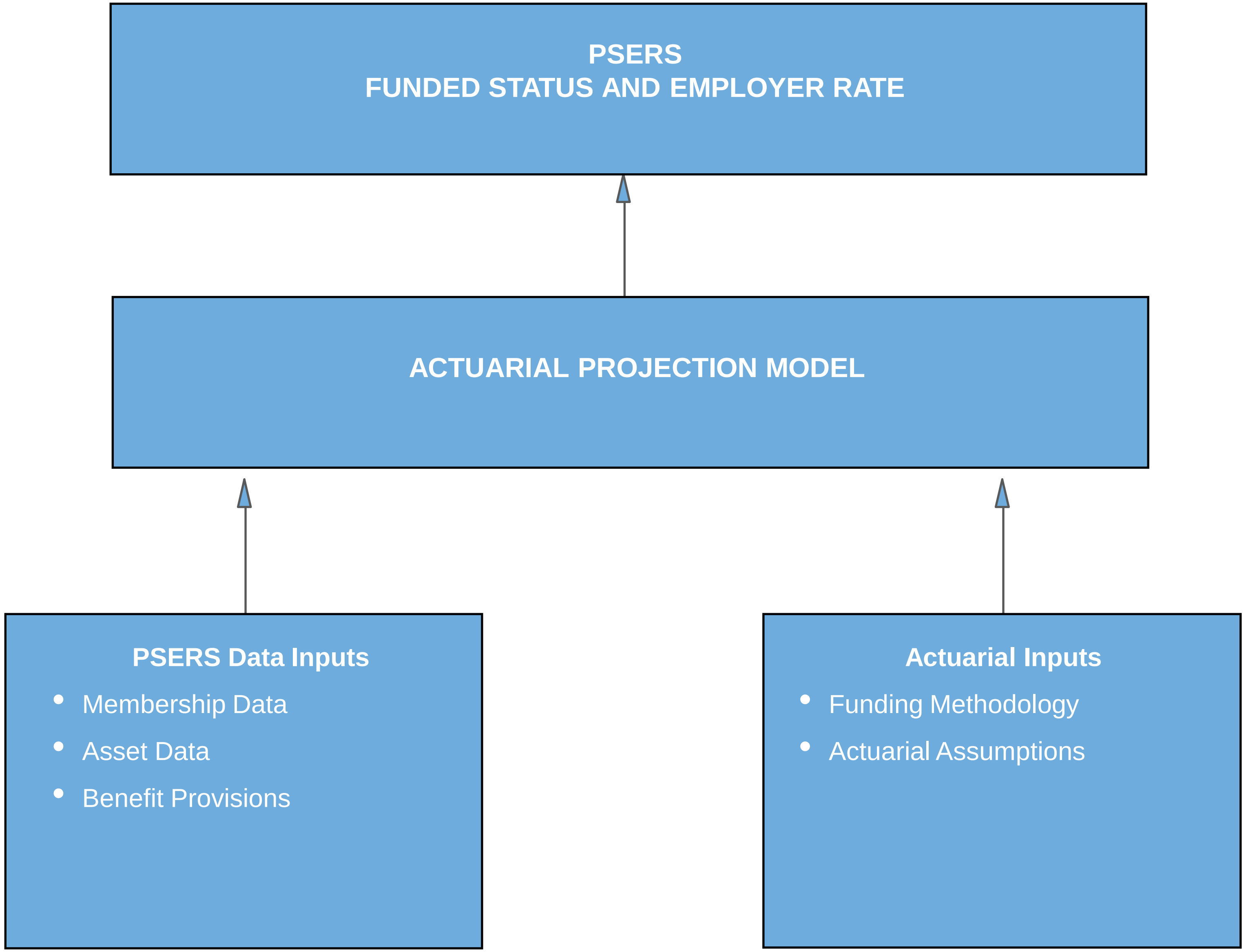
June 30, 2024 Actuarial Valuation Results

- Security of promised benefits
  - Accrued liability exceeds actuarial value of assets by $42.0 billion
    - As of June 30, 2023, the accrued liability exceeded actuarial value of assets by $42.3 billion
  - Funded status based on the Retirement System's actuarial value of assets is 64.8%
    - Funded status as of June 30, 2023 based on the Retirement System's actuarial value of assets was 63.6%

  Note: The above information have no relationship to the possible funded position on a settlement-of-liabilities basis.

- Unfunded Actuarial Accrued Liability decreased due to payment of the full fiscal year 2023/2024 actuarially determined contribution

- Retirement System actuarial experience is a net actuarial loss
  - Comparison of actual experience to expected
  - Experience loss for fiscal year ended June 30, 2024 is $0.833 billion
    - Actuarial value of assets loss of $0.587 billion
    - Actuarial liability loss of $0.523 billion
    - Greater than anticipated contribution amounts were credited to the Retirement System resulting in a gain of $0.277 billion.


PSERS
FUNDED STATUS AND EMPLOYER RATE
ACTUARIAL PROJECTION MODEL
PSERS Data Inputs
Membership Data
Asset Data
Benefit Provisions
Actuarial Inputs
Funding Methodology
Actuarial Assumptions

Active Membership Statistics

Item	June 2024	June 2023
Class T-C	1,923	2,128
Class T-D	124,664	131,841
Class T-E	47,191	49,771
Class T-F	12,046	12,528
Class T-G	68,628	54,281
Class T-H	366	271
Class DC participants	834	912
Total Number	255,652	251,732
	+ 1.56%	
Annualized salaries (in billions) (Total salaries)	$ 15.676	$ 15.031
	+ 4.29%	
Average compensation	$ 61,319	$ 59,709
	+ 2.70%	
Average age	45.3 Yrs.	45.4 Yrs.
Average service	11.8 Yrs.	11.9 Yrs.
Funding year	2025-2026	2024-2025
Total employer payroll (est. in billions)	$ 16.152	$ 15.590

Annuitant Membership Statistics

Item	June 2024	June 2023
Number		
Annuitants	231,420	227,671
Survivors and beneficiaries*	13,953	13,438
Disabled annuitants	8,523	8,615
Total	253,896	249,724
	+ 1.67 %	
Annual annuities		
Annuitants	$ 6.277 Bil	$ 6.132 Bil
Survivors and beneficiaries	0.234	0.221
Disabled annuitants	0.190	0.189
Total	$ 6.701 Bil	$ 6.542 Bil
	+ 2.43 %	
Average annuities		
Annuitants	$ 27,124	$ 26,934
Survivors and beneficiaries	$ 16,755	$ 16,429
Disabled annuitants	$ 22,276	$ 21,957
Total	$ 26,392	$ 26,197
	+ 0.74 %	

* Excludes 2,483 beneficiaries in 2024 and 2,433 beneficiaries in 2023 who are only entitled to a lump sum distribution.

Market Value of Assets

Item	June 2024	June 2023
Beginning of year	$ 72.253 Bil	$ 70.664 Bil
Contributions	6.563	6.538
Benefits	(7.841)	(7.694)
Investment income*	5.654	2.745
End of year	$ 76.629 Bil	$ 72.253 Bil
Rate of return**	8.14 %	3.54 %
Expected rate of return***	7.00 %	7.00 %

* Net of administrative and investment expenses
** Provided by the Retirement System’s investment advisor
*** Based on prior year’s valuation interest rate

Actuarial Value of Assets

Ten-year asset smoothing method

1. Market value of assets June 30, 2024 — $ 76.629 Bil

2. Determination of deferred gain (loss)

Fiscal Year	Gain (Loss)	Recognized Amount – FY23/24	Percent Deferred	Deferred Amount
2023/2024	$ 0.516 Bil	$ 0.051 Bil	90.00 %	$ 0.464 Bil
2022/2023	(2.160)	(0.216)	80.00	(1.728)
2021/2022	(4.985)	(0.499)	70.00	(3.490)
2020/2021	10.116	1.012	60.00	6.070
2019/2020	(3.440)	(0.344)	50.00	(1.720)
2018/2019	(0.600)	(0.060)	40.00	(0.240)
2017/2018	0.551	0.055	30.00	0.165
2016/2017	0.847	0.085	20.00	0.169
2015/2016	(3.794)	(0.379)	10.00	(0.379)
2014/2015	(2.918)	(0.292)	0.00	0.000
	$ (5.867) Bil	$ (0.587) Bil		$ (0.689) Bil

3. Preliminary actuarial value of assets June 30, 2024: (1) – (2) — $ 77.318 Bil

4. 70% of the market value of assets June 30, 2024: (1) x 70% — $ 53.640 Bil

5. 130% of the market value of assets June 30, 2024: (1) x 130% — $ 99.618 Bil

6. Actuarial value of assets June 30, 2024: (3) not less than (4) and not greater than (5) — $ 77.318 Bil

Notes:

- Per Act 5 of 2017, the Actuarial Value of Assets must be in a 30% range of the Market Value of Assets.
- The 30% corridor limits how far the 10-year asset smoothing method can depart from market value of assets.
- The corridor will (decrease)/increase the unfunded accrued liability contribution rate if the actuarial value of assets is (less than 70%)/greater than 130% of the market value of assets.

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Actuarial Cost Method

- PSERS Cost Method
  - Entry Age Normal
  - Required by Code

- Entry age normal method: allocation of reserve over members’ working lifetimes
  - Pension benefit earned during year (normal cost)
  - Payment toward unfunded accrued liability

- Goal: full reserve at retirement

Accrued Liability

	June 2024	June 2023
Annuitants and Inactives	$ 66.580 Bil	$ 65.482 Bil
Active Members	52.584	50.761
Pension Accrued Liability	$ 119.164 Bil	$ 116.243 Bil
Healthcare Payments	0.136	0.141
Total Accrued Liability	$ 119.300 Bil	$ 116.384 Bil

Unfunded Accrued Liability and Funded Status

Item	June 2024	June 2023
Pension Accrued Liability	$119.164 Bil	$116.243 Bil
Healthcare Payments	0.136	0.141
Total Accrued Liability	$119.300 Bil	$116.384 Bil
Assets		
Market value of assets	$76.629 Bil	$72.253 Bil
Actuarial value of assets	$77.318 Bil	$74.044 Bil
Unfunded accrued liability		
Market value of assets*	$42.671 Bil	$44.131 Bil
Actuarial value of assets	$41.982 Bil	$42.340 Bil
Funded status		
Market value of assets	64.2%	62.1%
Actuarial value of assets	64.8%	63.6%

* Similar to GASB 67 Net Pension Liability.

Employer Contribution Rate

Item	June 2024 (FY25/26)	June 2023 (FY24/25)
Normal cost rate	12.74%	13.05%
Member rate (average)	(7.29)	(7.37)
Employer normal cost rate	5.45%	5.68%
Unfunded accrued liability rate	27.51	27.24
Total pension rate*	32.96%	32.92%
Health insurance rate	0.62	0.63
Act 5 DC contribution rate**	0.42	0.35
Total***	34.00%	33.90%

* The total pension rate cannot be less than the employer normal cost rate.

** Estimated average DC contribution rate. The actual employer DC contribution rate will be based on each employer’s Class T-G, Class T-H and Class DC membership/participation.

*** The total employer contribution rate is the sum of the final pension rate, health insurance rate and Act 5 DC contribution rate.

Funding Methodology

Goal - Full Reserve at Retirement

Benefit	Annual Cost	Rate Component
Projected Retirement Benefit	Level % Pay	Normal Cost Rate
Accrued Benefit:		
(1) Unfunded accrued liability as of June 30, 2010	24-Year Amortization Level % Pay	Accrued Liability Rate
(2) Legislation that increases liability (e.g. COLAs or ERI windows)	10-Year Amortization Level % Pay	Supplemental Liability Rate
(3) Annual Actuarial Gains/Losses and Assumption Changes	24-Year Amortization Level % Pay	Experience Adjustment Factor

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Unfunded Accrued Liability Rate

Rate Component	June 2024 (FY25/26)	June 2023 (FY24/25)
Accrued liability rate	11.56%	11.60%
Supplemental liability rate	0.00	0.00
Experience adjustment factor	15.95	15.64
Unfunded accrued liability rate	27.51%	27.24%

2024 Net Actuarial Loss

1. Investment return loss[1]	$	587 Mil
2. Accrued liability experience (gains) and losses		
- New entrants, pickups, and rehires		323
- Individual salary increases		148
- Mortality		164
- Retirement/disability/terminations		46
- Miscellaneous		(158)
- Total	$	523 Mil
3. Actual contributions greater than expected	$	(277) Mil
4. Net actuarial experience loss[2]: (1) + (2) + (3)	$	833 Mil

1. 6.20% actual rate of return on the Actuarial Value of Assets vs. the assumed 7.00% rate of return.
2. Experience (gains) reduce the Retirement System's unfunded accrued liability and experience losses increase the Retirement System's unfunded accrued liability.

Health Insurance Account

2025/2026 Employer Rate

Estimated number of eligible annuitants in FY 2026/2027		161,200
Estimated number of eligible annuitants who elect coverage		95,108
1. Estimated balance at 6/30/2025	$	131.3 Mil
2. Disbursements FY 2025/2026	$	114.5
3. Disbursements FY 2026/2027	$	115.5
4. Required contribution: (2) + (3) – (1)	$	98.7
5. FY 2025/2026 membership payroll	$	16,152 Mil
6. Health insurance employer rate: (4) ÷ (5) (rounded up)		0.62%

Notes:

1. 59% of eligible annuitants are assumed to elect coverage.
2. Total OPEB Liability (Actuarial Accrued Liability) disclosed under GASB 74 as of June 30, 2024 is $1,913 million, based on a discount rate of 4.21%.
3. Estimated balance as of 6/30/2025 is based on a FY 2024/2025 total payroll of $16,032 Mil.

Risk Information

- **Investment risk** – Asset returns less than expected would lead to lower assets, higher unfunded liabilities and larger employer contributions
    - 10-year asset averaging helps to smooth out volatility due to the above-mentioned investment risk
    - Act 2020-128 requires annual Retirement System stress testing through 20-year projections, sensitivity analysis and simulations. Gallagher has performed the stress test since 2022. Previously, the Retirement System's investment advisor performed the annual testing.
    - ASOP 4 requires the actuary to disclose a Low-Default-Risk Obligation Measure ("LDROM") of Retirement System liabilities and provide commentary to help intended users of this report understand the significance of the measure with respect to funded status, contributions, and member benefit security.
        - LDROM –
            - Based on "discount rates derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of benefits expected to be paid in the future."
            - Represents what the Retirement System's liability would be if the Retirement System invested its assets solely in a portfolio of high-quality bonds whose cash flows approximately match future benefit payments.
            - The difference between the LDROM and the Actuarial Accrued Liability can be thought of as representing the expected taxpayer savings/(cost) from investing in the Retirement System's diversified portfolio compared to investing only in high-quality bonds; the cost of reducing investment risk.
            - Is not an indicator of the Retirement System's funded status or progress, nor does it provide information on necessary Retirement System contributions.
        - As of June 30, 2024, the LDROM is $139.7* billion and is based on a 5.53% discount rate.
            - The discount rate was determined by calculating a single equivalent discount rate using projected benefit payments and the Buck Standard Yield Curve as of June 30, 2024.
            - The discount rate is based on bond yields applicable at the time of the measurement and will therefore vary for different measurement dates.
            - All other assumptions are the same as those used for valuation.

* Excludes Health Insurance Premium Assistance.

Risk Information

- **Security of member benefits**
  - If the Retirement System were to be funded on an LDROM basis, member benefits currently accrued as of the measurement date may be considered more secure as investment risk may be significantly reduced.
  - Assets being invested in a diversified portfolio does not mean the member benefits are not secure. Security of member benefits relies on a combination of the assets in the Retirement System, the investment returns generated on those assets, and employers contributing Actuarially Determined Contributions.
  - Reducing investment risk by investing solely in bonds may significantly increase Actuarially Determined Contributions and therefore increase contribution risk by decreasing the ability of employers to make necessary contributions to fund the benefits. Unnecessarily high contribution requirements in the near term may not be affordable and could imperil Retirement System sustainability and benefit security.
  - Member benefits will remain secure if reasonable and appropriate contributions, with managed risk, are calculated and paid.
- **Salary increases** – In general, salaries greater than expected would lead to higher liabilities, larger unfunded liabilities and larger employer contributions. Conversely, salaries less than expected would lead to lower liabilities but may increase employer contribution rates due to lower employer payroll.
- **Longevity risks** – Members living longer than expected would increase the Retirement System's liabilities, the unfunded liability and the employer contributions.
  - The mortality assumption uses a mortality improvement scale that mitigates some of the risk associated with members living longer.

Risk Information

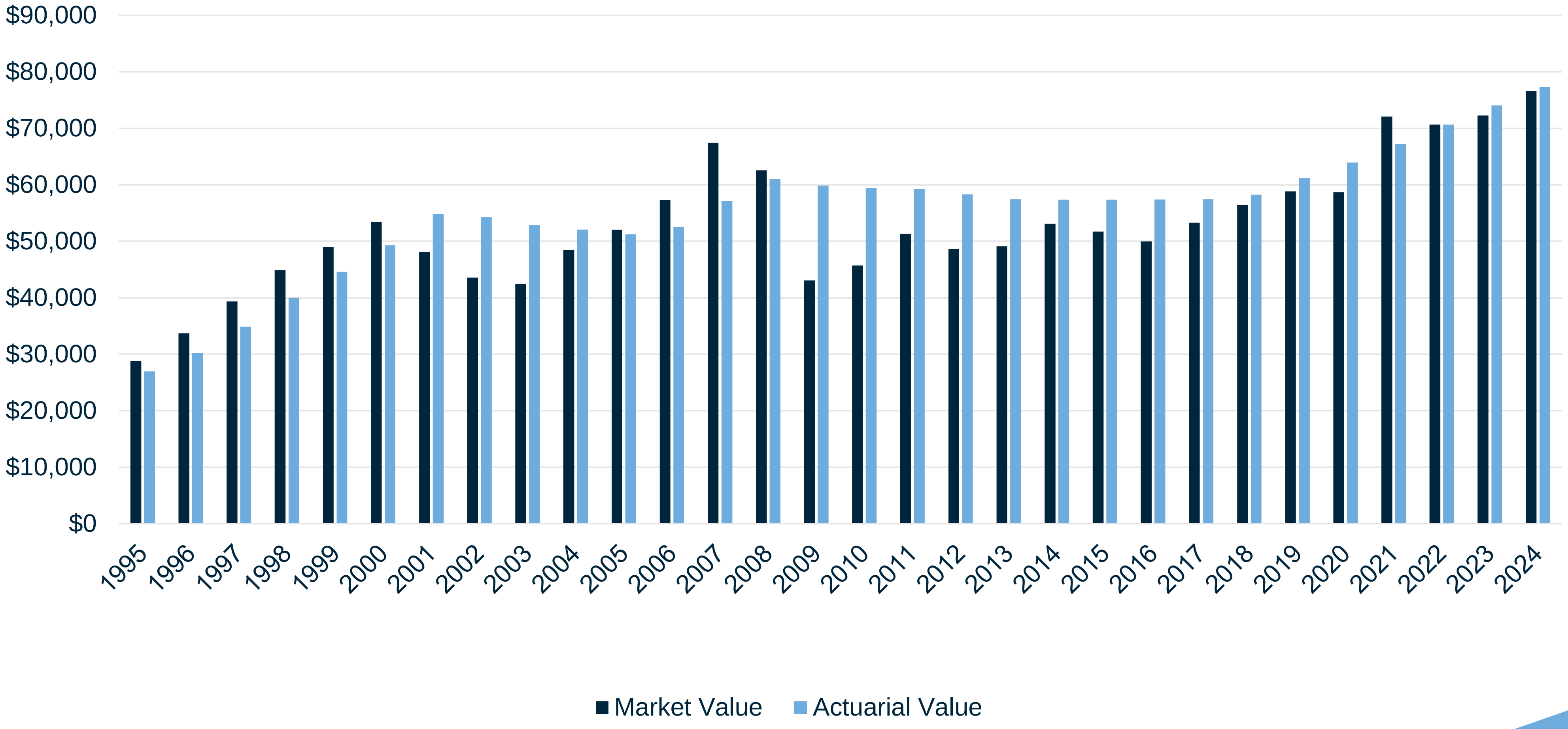
- **Declining active workforce -** Employer contributions are based on a percentage of members' and Class DC participants' salaries. If the required dollar amount of contributions remain level or increase, a declining active workforce will result in higher contribution rates in order to meet required contribution levels.
- **Contribution risk** – Risk of not contributing an actuarially determined contribution. If future contributions are at levels below those presented in this report, the Retirement System may not be expected to achieve a fully funded position over the 24-year time horizon as contemplated in the statute based on the data, assumptions and methods used in the valuation.

ASOPs 27 & 35 Disclosures

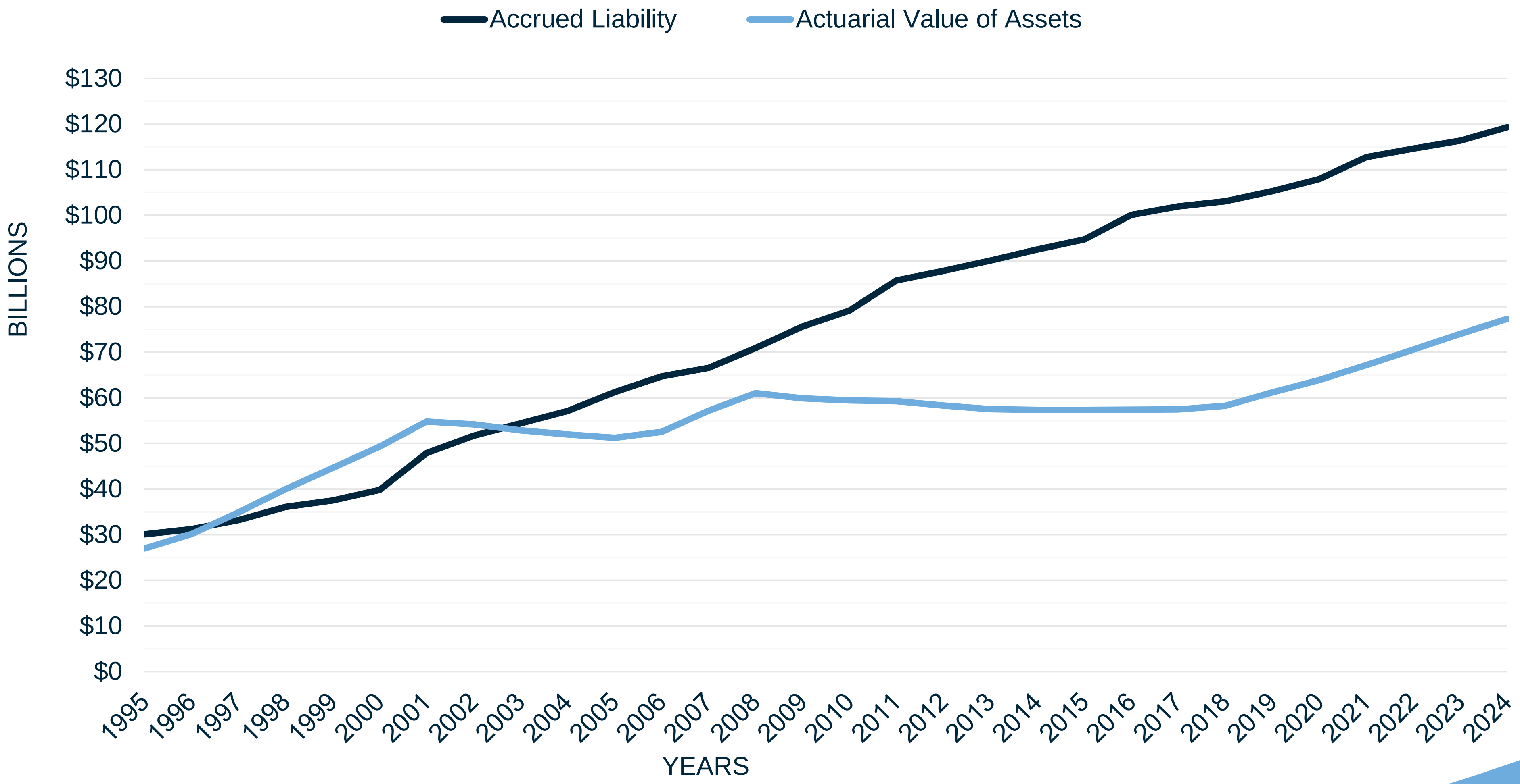
- Actuarial Standards of Practice Nos. 27 and 35 require the actuary to identify the economic and demographic assumptions that have a significant effect on the measurement and, for those that the actuary has not selected, to provide the information and analysis the actuary performed to determine that the assumption does not significantly differ from what the actuary deems reasonable for the purpose of the measurement.
- The material demographic assumptions were based on the recommendations outlined in our five-year experience study for the period July 1, 2015 to June 30, 2020, which were adopted by the Board effective with the June 30, 2021 actuarial valuation. We reviewed the assumptions along with recent experience and the assumptions are still reasonable for the current measurement.
- The material economic assumptions include the salary scale, payroll growth and expected return on assets (“EROA”). The current assumptions were based on the recommendations outlined in our five-year experience study for the period July 1, 2015 to June 30, 2020, which were adopted by the Board effective with the June 30, 2021 actuarial valuation.
  - We reviewed the salary scale and payroll growth assumptions along with recent experience and the assumptions are still reasonable for the current measurement.
  - In the case of the EROA:
    - We reviewed the analysis provided by Verus, the Retirement System’s investment advisor
    - We analyzed the economic information using tools provided by Gallagher’s Financial Risk Management (“FRM”) practice
    - We have determined the EROA assumption is reasonable for the current measurement
- Effective January 1, 2025, ASOP 27 and 35 will be consolidated into a single standard (which will be known as ASOP 27).

Appendices

Comparison of Asset Values ($ Millions)

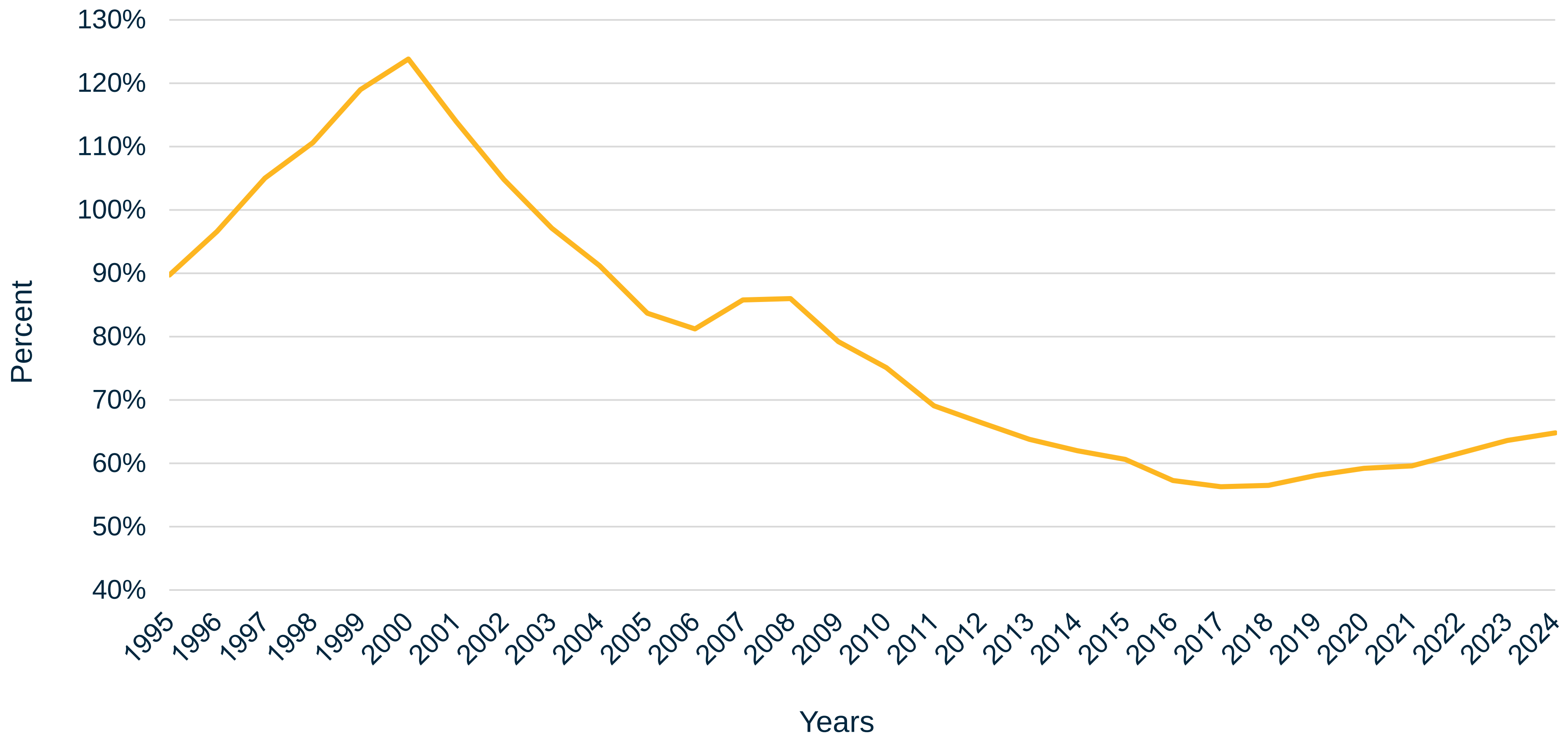


Accrued Liability and Actuarial Value of Assets: 1995 – 2024



Financial Position Funded Status

Actuarial Value of Assets as a % of Accrued Liability: 1995 - 2024

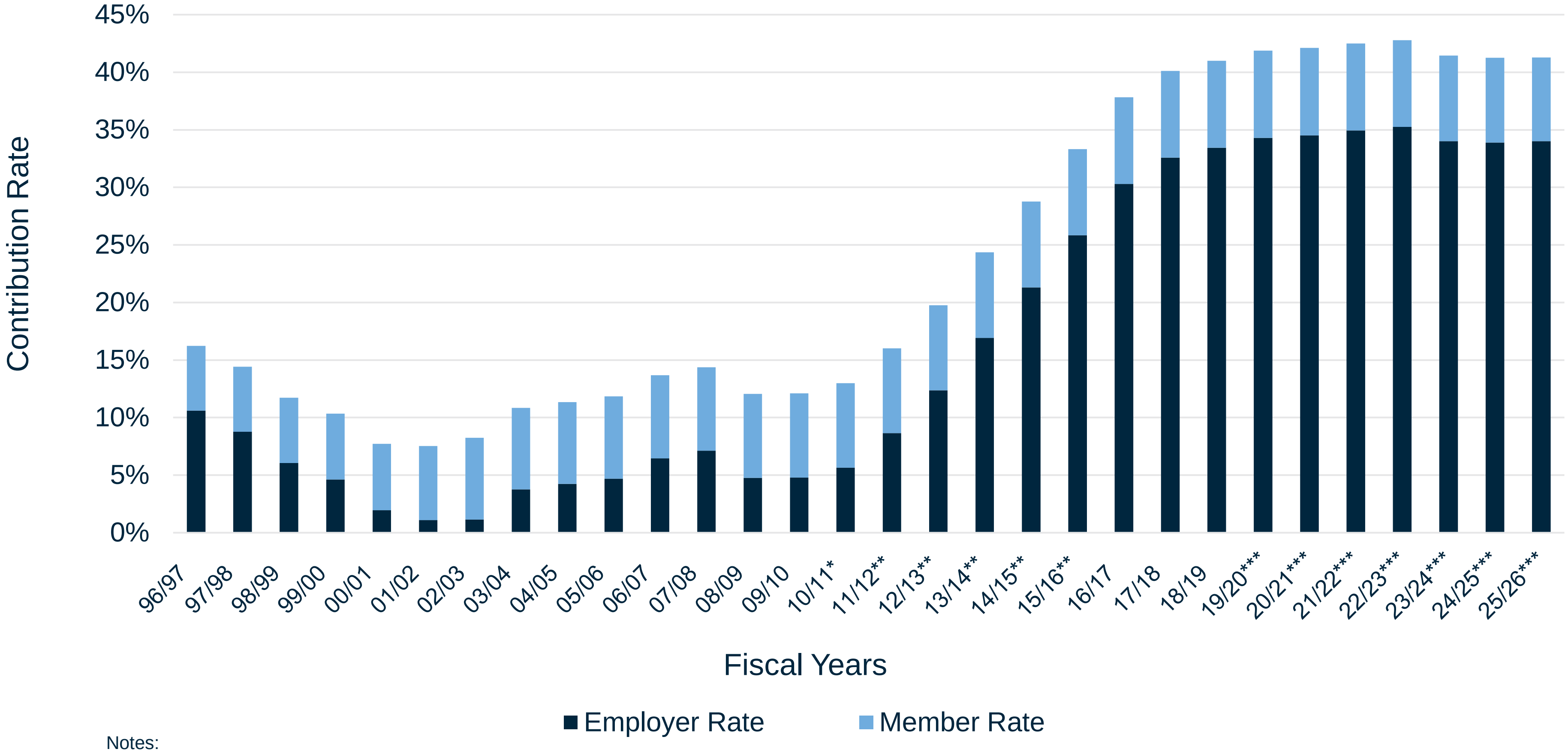


Total Contribution Rate

Fiscal Year	Normal Cost	Unfunded Accrued Liability	Health Care Contribution	DC Contribution (Average)[4]	Total Employer	Member Contribution (Average)[1]	Total Contribution Rate
25/26	5.45%	27.51%	.62%	.42%	34.00%	7.29%	41.29%
24/25	5.68	27.24	.63	.35	33.90	7.37	41.27
23/24	5.86	27.23	.64	.27	34.00	7.44	41.44
22/23	6.07	28.24	.75	.20	35.26	7.52	42.78
21/22	7.20	26.79	.80	.15	34.94	7.56	42.50
20/21	7.37	26.14	.82	.18	34.51	7.61	42.12
19/20	7.49	25.87	.84	.09	34.29	7.59	41.88
18/19	7.59	25.01	.83	N/A	33.43	7.57	41.00
17/18	7.70	24.04	.83	N/A	32.57	7.54	40.11
16/17	8.31	20.89	.83	N/A	30.03	7.52	37.55
15/16	8.38	19.44	.84	N/A	25.84[2]	7.49	33.33
14/15	8.46	17.51	.90	N/A	21.40[2]	7.46	28.86
13/14	8.57	15.25	.93	N/A	16.93[2]	7.43	24.36
12/13	8.66	12.99	.86	N/A	12.36[2]	7.40	19.76
11/12	8.12	10.15	.65	N/A	8.65[2]	7.37	16.02
10/11	8.08	(0.50)	.64	N/A	5.64[3]	7.34	12.98
09/10	7.35	(3.72)	.78	N/A	4.78	7.32	12.10
08/09	6.68	(3.37)	.76	N/A	4.76	7.29	12.05
07/08	6.68	(.24)	.69	N/A	7.13	7.25	14.38
06/07	6.62	(.95)	.74	N/A	6.46	7.21	13.67
05/06	7.61	(4.28)	.69	N/A	4.69	7.16	11.85
04/05	7.48	(7.10)	.23	N/A	4.23	7.12	11.35
03/04	7.25	(4.27)	.79	N/A	3.77	7.08	10.85
02/03	7.20	(10.03)	.97	N/A	1.15	7.10	8.25
01/02	5.63	(6.05)	1.09	N/A	1.09	6.43	7.52
00/01	6.29	(4.65)	.30	N/A	1.94	5.77	7.71
99/00	6.40	(2.04)	.25	N/A	4.61	5.72	10.33
98/99	6.33	(.44)	.15	N/A	6.04	5.69	11.73

1. Act 9 member rate change took effect January 1, 2002. Act 120 member rate change took effect July 1, 2011. Act 5 member rate change took effect July 1, 2019.
2. Act 120 limited the employer pension contribution of 27.82% to 25.00% for Fiscal Year 15/16 (prior rate of 20.50% + 4.50% collar), 25.97% to 20.50% for Fiscal Year 14/15 (prior rate of 16.00% + 4.50% collar), 23.82% to 16.00% for Fiscal Year 13/14 (prior rate of 11.50% + 4.50% collar), 21.65% to 11.50% for Fiscal Year 12/13 (prior rate of 8.00% + 3.50% collar) and18.27% to 8.00% for Fiscal Year 11/12 (prior rate of 5.00% + 3.00% collar).
3. Act 46 reduced the employer pension contribution from 7.58% to 5.00% for Fiscal Year 10/11.
4. Under Act 5, employers contribute 2.25% of pay for Class T-G members, 2.00% of pay for Class T-H members and 2.00% of pay for Class DC participants to the DC plan.

30-Year History of Member and Employer Contribution Rates



Notes:

* Act 46 reduced the employer pension contribution from 7.58% to 5.00% for Fiscal Year 10/11.

** Act 120 limited the employer pension contribution of 27.82% to 25.00% for Fiscal Year 15/16 (prior rate of 20.50% + 4.50 collar), 25.97% to 20.50% for Fiscal Year 14/15 (prior rate of 16.00% + 4.50% collar), 23.82% to 16.00% for Fiscal Year 13/14 (prior rate of 11.50% + 4.50% collar), 21.65% to 11.50% for Fiscal Year 12/13 (prior rate of 8.00% + 3.50% collar) and 18.27% to 8.00% for Fiscal Year 11/12 (prior rate of 5.00% + 3.00% collar).

*** Fiscal Years 2019/2020 and 2020/2021 include the anticipated Act 5 DC contribution based on the following new System Act 5 membership election: 65% elect Class T-G membership, 30% elect Class T-H membership and 5% elect Class DC participation. Fiscal Years 2021/2022 through 2025/2026 include the anticipated Act 5 DC contribution based on the following new Retirement System Act 5 membership election: 98% elect Class T-G membership, 1% elect Class T-H membership and 1% elect Class DC participation.

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