

# Maryland State Retirement and Pension System

Actuarial Valuation Report  
As of June 30, 2021



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October 18, 2021

Board of Trustees  
Maryland State Retirement and Pension System  
120 East Baltimore Street, 16<sup>th</sup> Floor  
Baltimore, MD 21202

Dear Members of the Board:

The results of the **June 30, 2021 annual actuarial valuation** of the Maryland State Retirement and Pension System (“MSRPS”) are presented in this report.

This report was prepared at your request and is intended for use by the Maryland State Retirement Agency (“SRA”) and the Board of Trustees of the MSRPS and those designated or approved by the SRA or the Board. This report may be provided to other parties only in its entirety and only with the permission of the SRA or the Board. GRS is not responsible for unauthorized use of this report.

The purposes of the valuation are as follows:

- Measure the financial position of MSRPS with regard to funding,
- Provide the Board with State and Participating Governmental Unit (“PGU”) contribution rates for certification,
- Determine actuarial and statutory contribution rates with reinvested savings,
- Discuss some of the risks associated with achieving the funding objectives of MSRPS, and
- Analyze the aggregate experience of the State Systems over the past year.

Information required by Statements No. 67 and No. 68 of the Governmental Accounting Standards Board (“GASB”) for fiscal year 2021 is provided in a separate report.

The individual member data required for the valuations was furnished by the SRA, together with pertinent data on financial operations (unaudited). The cooperation and collaboration of SRA staff in furnishing these materials is acknowledged with appreciation. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the SRA.

Actuarial valuations are based upon assumptions regarding future activity in specific risk areas including the rates of investment return and payroll growth, eligibility for the various classes of benefits, and longevity among retired lives. The Board adopts these assumptions after considering the advice of the actuary and other professionals.

Each actuarial valuation considers all prior differences between actual and assumed experience in each risk area and adjusts the contribution rates as needed. GRS performed an experience study of MSRPS for the period 2014-2018 after completion of the June 30, 2018 valuations. Assumptions from the experience study including investment return, inflation, COLA increases, mortality rates, retirement rates, withdrawal rates, disability rates, and rates of salary increase were adopted by the Board for first use in the June 30, 2019 valuation. New economic assumptions (investment return, inflation, wage inflation, and COLA increases) were adopted by the Board for the June 30, 2021 valuation. In conjunction with the change in economic assumptions, the Board adopted a change to recognize 40% of the investment gain from FY 2021, rather than the 20% normally recognized, in the determination of the actuarial value of assets as of June 30, 2021, in order to partially offset the increase in the unfunded actuarial accrued liability from the economic assumption changes. It is our opinion that the actuarial assumptions used for the valuation are reasonable.

The computed contribution rates shown on page I-2 may be considered as minimum contribution rates that comply with the funding policy stated in the Statutes. Users of this report should be aware that contributions made at these rates do not guarantee benefit security. Given the importance of benefit security to any retirement system, we suggest that contributions to the System in excess of those presented in this report be considered. This report includes risk metrics on pages II-15 and II-16 but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

The benefit provisions valued in the actuarial valuation as of June 30, 2021 are the same as the provisions from the last actuarial valuation as of June 30, 2020. Portions of the savings from the 2011 pension reforms passed by the General Assembly are to be reinvested as additional contributions into the Systems. Legislation enacted in 2015 reduced the amount of reinvested savings to \$75 million per year beginning in fiscal year 2016 until the combined funded ratio of the Systems reaches 85% at which point the additional contributions cease.

This valuation assumes the continuing ability of the employer to make the contributions necessary to fund this system. A determination regarding whether or not the employer is actually able to do so is outside our scope of expertise. Consequently, we did not perform such an analysis.

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. The actuary did not perform an analysis of the potential range of such future measurements in this actuarial valuation report.



This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. We certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with Maryland's Annotated Code and generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice as promulgated by the Actuarial Standards Board.

This report should not be relied on for any purpose other than the purposes previously described. Determinations of the financial values associated with benefits described in this report for a purpose other than the intended purpose may produce results that differ significantly from those presented in this report.

This report does not fully reflect the recent and still developing impact of COVID-19, which is likely to influence demographic experience and economic expectations, at least in the short term. We will continue to monitor these developments and their impact.

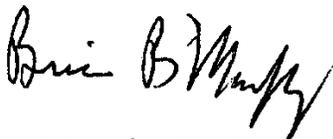
The signing actuaries are independent of the plan sponsor.

This is one of multiple documents comprising the actuarial report. Other documents comprising the actuarial report include the PowerPoint presentation presented to the Board in October 2021 and separately to the Joint Committee on Pensions in November 2021. Not all of these documents have been issued as of this date.

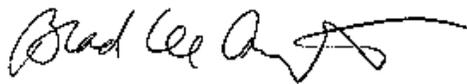
Brian B. Murphy, Brad L. Armstrong, and Jeffrey T. Tebeau are Members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,

Gabriel, Roeder, Smith & Company



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## SECTION I

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### BOARD SUMMARY

## Introduction

The funding valuation report presents the results of the June 30, 2021 annual actuarial valuation of the Maryland State Retirement and Pension System (MSRPS). The purposes of the annual funding valuations are as follows:

- Measure the financial position of MSRPS with regard to funding,
- Provide the Board with State and Participating Governmental Unit (“PGU”) contribution rates for certification,
- Determine actuarial and statutory contribution rates with reinvested savings,
- Discuss some of the risks associated with achieving the funding objectives of MSRPS, and
- Analyze the aggregate experience of the State Systems over the past year.

A summary of the primary funding valuation results as of June 30, 2021 is presented on the following page.

The Governmental Accounting Standards Board (GASB) No. 67 and No. 68 valuation report presents the results of the June 30, 2021 annual accounting valuation of the Maryland State Retirement and Pension System (MSRPS). The purpose of the annual accounting valuations is as follows:

- Provide actuarial reporting and disclosure information for the MSRPS and State’s financial report.

The accounting valuation results for the year ended June 30, 2021 are presented in a separate report.

# Summary of Valuation Results

## June 30, 2021

(\$ in Millions)  
(State and Municipal)

	2021						2020		% Change	
	TCS	ECS	State			LEOPS	CORS <sup>1</sup>	Total		Total
			Police	Judges	Total					
<b>A. Demographic Information</b>										
1. Active Number Counts	109,958	79,854	1,353	315	2,697	134	194,311	195,851	-0.8%	
2. Active Payroll	\$ 7,689	\$ 4,682	\$ 119	\$ 52	\$ 199	\$ 8	\$ 12,749	\$ 12,501	2.0%	
3. Retired Number Counts	81,515	82,537	2,559	442	2,264	51	169,368	167,644	1.0%	
4. Annual Benefits for Retired Members <sup>2</sup>	\$ 2,433	\$ 1,570	\$ 137	\$ 39	\$ 85	\$ 1	\$ 4,264	\$ 4,141	3.0%	
5. Deferred / Inactive Number Counts	23,733	23,925	86	7	293	7	48,051	48,902	-1.7%	
6. Total Number Counts	215,206	186,316	3,998	764	5,254	192	411,730	412,397	-0.2%	
<b>B. Assets</b>										
1. Market Value (MV)	\$ 41,121	\$ 22,536	\$ 1,907	\$ 614	\$ 1,385	\$ 41	\$ 67,604	\$ 54,586	23.8%	
2. Rate of Return on MV <sup>3</sup>							26.54 %	3.50 %		
3. Actuarial Value (AV)	\$ 38,216	\$ 20,932	\$ 1,772	\$ 570	\$ 1,290	\$ 38	\$ 62,818	\$ 56,247	11.7%	
4. Rate of Return on AV							14.15 %	5.78 %		
5. Ratio of AV to MV							92.9%	103.0%		
<b>C. Actuarial Results</b>										
1. Normal Cost as a % of Payroll	12.12%	10.75%	35.34%	39.11%	25.24%	14.09%	12.15%	11.23%		
2. Actuarial Accrued Liability (AAL)										
a. Active	\$ 19,959	\$ 10,023	\$ 604	\$ 192	\$ 639	\$ 21	\$ 31,436	\$ 28,738	9.4%	
b. Retired	26,352	17,787	1,909	427	1,199	22	47,695	45,382	5.1%	
c. Deferred/Inactive	1,324	1,224	15	4	39	1	2,607	2,351	10.9%	
d. Total	\$ 47,635	\$ 29,034	\$ 2,527	\$ 623	\$ 1,876	\$ 44	\$ 81,739	\$ 76,471	6.9%	
3. Unfunded AAL (UAAL)	\$ 9,419	\$ 8,101	\$ 756	\$ 52	\$ 586	\$ 6	\$ 18,921	\$ 20,224	-6.4%	
4. Funded Ratio	80.23 %	72.10 %	70.10 %	91.60 %	68.74 %	87.22 %	76.85 %	73.55 %		
<b>D. Contribution Rates<sup>4</sup></b>										
	STATE PORTION ONLY									
	FY 2023						FY 2022	FY 2021		
	TCS	ECS	State		LEOPS	Total	Total	Total		
			Police	Judges						
1. Pension Contributions										
a. Employer Normal Cost	5.12%	4.41%	27.49%	32.42%	18.48%	5.41%	4.47%	4.61%		
b. Member Contribution Rate	7.00%	6.74%	7.85%	6.69%	6.93%	6.93%	6.93%	6.93%		
c. UAAL Contribution Rate	<u>9.53%</u>	<u>16.27%</u>	<u>48.96%</u>	<u>7.60%</u>	<u>26.25%</u>	<u>12.14%</u>	<u>13.03%</u>	<u>13.14%</u>		
d. Total	21.65%	27.42%	84.30%	46.71%	51.66%	24.48%	24.43%	24.68%		
2. Total Actuarial Employer Rate (1.a + 1.c)	14.65%	20.68%	76.45%	40.02%	44.73%	17.55%	17.50%	17.75%		
3. Total Employer Budgeted Rate										
a. Employer Budgeted Rate	14.65%	20.68%	76.45%	40.02%	44.73%	17.55%	17.50%	17.75%		
b. Reinvested Savings Rate	<u>0.64%</u>	<u>0.62%</u>	<u>0.85%</u>	<u>0.00%</u>	<u>0.89%</u>	<u>0.66%</u>	<u>0.68%</u>	<u>0.71%</u>		
c. Total Employer Budgeted Rate	15.29%	21.30%	77.30%	40.02%	45.62%	18.21%	18.18%	18.46%		

<sup>1</sup> Includes CORS Municipal only. State CORS included in ECS.

<sup>2</sup> Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2021 and July 1, 2020, respectively.

<sup>3</sup> Actuarial estimation method used is expected to produce results that differ modestly from figures reported by the System.

<sup>4</sup> Contribution rates shown in the "Total" column are for informational purposes only and are not used for funding purposes.

Totals may not add due to rounding.



## Actuary's Comments

For the year ended June 30, 2021, the System's assets earned **26.54%** based on our estimate and **26.69%** as reported by the System (using a slightly different computation method) on a market value basis and **14.15%** on a smoothed or actuarial value basis (which includes additional recognition of the FY 2021 investment returns). The smoothed rate of return exceeded the 7.40% assumed rate of investment return for fiscal year 2021. Recognized asset gains from fiscal years 2017, 2018, and 2021 offset recognized asset losses from fiscal years 2019 and 2020 in the actuarial value of assets as of June 30, 2021. This resulted in a gain under the asset smoothing method.

### UAAL and Actuarial Gain/(Loss) (\$ in Millions)

	Municipal	State	Total SRPS
Unfunded Actuarial Accrued Liability (UAAL) as of June 30, 2020	\$ 1,120	\$ 19,104	\$ 20,224
Expected UAAL as of June 30, 2021 before changes	1,103	18,921	20,024
Changes in benefit provisions	-	-	-
Changes in methods and assumptions	105	1,262	1,367
Expected UAAL as of June 30, 2021 after changes	1,208	20,183	21,391
Actual UAAL as of June 30, 2021	1,024	17,896	18,920
Net actuarial gain/(loss)	184	2,287	2,471
Actuarial gain/(loss) by source			
Actuarial investment experience	149	1,539	1,688
Actuarial accrued liability experience	35	748	783

*Totals may not add due to rounding.*

*Changes in methods and assumptions includes an increase of about \$3.4 billion from the change in economic assumptions which was partially offset by a decrease of about \$1.2 billion due to the change in the recognition of the FY 2021 investment gain in the actuarial value of assets.*

In relative terms, the overall System funded ratio of actuarial value of assets to liabilities increased from 73.55% in 2020 to **76.85%** this year. If market value of assets were the basis for the measurements, the funded ratio would have increased from 71.38% to 82.71% funded.

The market value of assets exceeds the retiree liabilities by about 42% in total (or 22% if accumulated member contributions of about \$9.5 billion are netted out), an increase from 20% last year. This is referred to as a short condition test and is demonstrated in the chart at the bottom of this page. It is looking at the current retiree liabilities as the benefits that will be paid the soonest since these benefits are already in pay status. Active liabilities and deferred vested liabilities do not have associated immediate cash flow requirements. Although the market value of assets exceeds the current retiree liabilities in total, this is not true for all of the systems individually. For State Police, the market value of assets is slightly less than the retiree liabilities.

#### (\$ in Millions)

Short Condition Test	TCS	ECS	State Police	Judges	LEOPS	CORS	Total
Market Value of Assets (MVA)	\$ 41,121	\$ 22,536	\$ 1,907	\$ 614	\$ 1,385	\$ 41	\$ 67,604
Retiree Liability	26,352	17,787	1,909	427	1,199	22	47,695
MVA as % of Retiree Liability	156%	127%	100%	144%	116%	189%	142%



## Actuary's Comments

For the 2021 valuation, the Board adopted new economic assumptions (investment return, inflation, wage inflation and COLA increases). The investment return assumption was reduced from 7.40% to 6.80%, the inflation assumption from 2.60% to 2.25%, the wage inflation from 3.10% to 2.75% and the assumed COLA increases from 2.19% to 1.96% (increases capped at 3%) and from 1.42% to 1.30% (reformed COLA). Reducing these assumptions increased the liabilities of MSRPS by about \$3.4 billion. In conjunction with the change in economic assumptions, the Board adopted a change to recognize 40% of the investment gain from FY 2021, rather than the 20% normally recognized, in the determination of the actuarial value of assets as of June 30, 2021. The remaining 60% of the FY 2021 investment gain will be recognized equally over the next four valuations (15% each year). This change in the asset valuation method reduced the unfunded actuarial accrued liability of MSRPS by about \$2.1 billion, which offset a portion of the increase in the liabilities due to the assumption changes.

In the 2013 legislative session, the Legislature changed the method used to fund the State Systems of the MSRPS. The unfunded liability for each State System is being amortized over a single closed 25-year period beginning July 1, 2014 and ending June 30, 2039 (17 years remaining as of the June 30, 2021 valuation, which determines the fiscal year 2023 contribution). In addition, the corridor method used by the Teachers' Combined System and the State portion of the Employees' Combined System, which was established in 2001, was being phased-out over a 10-year period. In 2015, the Legislature removed the corridor funding method effective with the June 30, 2015 valuation.

The Teachers' Combined System (TCS) remained out of the corridor since the June 30, 2005 valuation and the State portion of the Employees Combined System (ECS) remained out of the corridor since the June 30, 2004 valuation resulting in contribution rates for TCS and ECS that were less than actuarial rates. With the elimination of the corridor effective with the June 30, 2015 valuation report, TCS and ECS began to contribute based on the actuarially determined rate beginning in fiscal year 2017.

Beginning in fiscal year 2012, employers pay a per-member fee to cover the Retirement Agency's operating expenses (i.e., administrative expenses). The State pays the fee for libraries.

In 2011, the General Assembly enacted pension reforms which were effective July 1, 2011, and affected both current actives and new hires. The member contribution rate was increased for members of the Teachers' Pension System and Employees' Pension System from 5% to 7%. The member contribution rate was increased from 4% to 7% for LEOPS. In addition, the benefit attributable to service on or after July 1, 2011 is subject to cost-of-living adjustments (COLAs) that are based on the increase in the Consumer Price Index and capped at 2.5% or 1.0%. The cap is 2.5% if the market value investment return from the preceding calendar year was higher or lower than the investment return assumption used in the previous valuation (7.40%) and in effect as of December 31 of the preceding fiscal year, and 1.0% otherwise. There were also reforms that affected only those members hired on or after July 1, 2011.

In addition to the benefit provision changes, a portion of the savings from the pension reforms is to be reinvested in certain State Systems (TCS, ECS, State Police, and LEOPS). Reinvested savings of \$191 million was contributed in fiscal year 2013. Legislation enacted in 2014 changed the amount of reinvested savings from \$300 million each year beginning in fiscal year 2014 to \$100 million each year for fiscal years 2014 and 2015, \$150 million for fiscal year 2016, \$200 million for fiscal year 2017, \$250 million for fiscal year 2018, \$300 million each year beginning in fiscal year 2019 and thereafter. The \$300 million would then continue until the later of the combined funded ratio of the Systems reaching 85%, and the corridor funding method being fully phased-out. Legislation enacted in 2015 further reduced the amount of reinvested savings to \$75 million per



## Actuary's Comments

year beginning in fiscal year 2016 until the combined funded ratio of the Systems reaches 85% at which point the reinvestment ceases. The allocation of reinvested savings by System is in proportion to the savings from the pension reforms as measured in the actuarial valuation as of June 30, 2011.

The actuarially determined rates are equal to the employer normal cost plus the Unfunded Actuarial Accrued Liability contribution rate. The unfunded actuarial contribution rate is equal to the payment resulting from amortizing the remaining unfunded liability as a level percentage of pay over a single 25-year closed period beginning July 1, 2014 and ending June 30, 2039 (17 years remaining as of the June 30, 2021 valuation). The utilization of the 25-year closed period will lead to greater volatility as the period shortens and will eventually need modification to manage contribution volatility. Each year after the current funding policy's adoption, we reminded the Board and the Joint Committee on Pensions (JCP) of this eventuality. The Board recently reviewed the amortization method and is pursuing action to modify the amortization method.

The fiscal year 2023 budgeted rates for TCS, ECS, State Police, and LEOPS are equal to the actuarially determined rate. The budgeted rates with reinvested savings are based on a projection of payroll. It is our understanding that the Retirement Agency will monitor contributions to ensure that the System receives the proper amount of reinvested dollar savings during fiscal year 2023. The fiscal year 2023 budgeted rate for Judges is equal to the actuarially determined contribution rate.

Beginning in fiscal year 2013, local employers contributed toward the normal cost for the Teachers Combined System. The required portion of normal cost contribution amounts for local employers for fiscal years 2013 through 2016 was defined by the Maryland statutes. Beginning in fiscal year 2017, local employers contribute the full normal cost contribution on behalf of their employees.

The schedules required under Government Accounting Standards Board (GASB) Statement No. 67 (beginning with fiscal year 2014) and No. 68 (beginning with fiscal year 2015) are provided in a separate report.

## Other Observations

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

Given the System's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the System earning 6.80% on the actuarial value of assets), it is expected that:

- (1) The employer normal cost as a percentage of pay will decrease to the level of the Reformed Benefit Plan's (i.e., plans for members hired after July 1, 2011) normal cost as time passes and the active population is comprised entirely of Reformed Plan members,
- (2) The unfunded actuarial accrued liabilities will be fully amortized after 17 years (June 30, 2039), and
- (3) The funded status of the plan will increase gradually towards a 100% funded ratio.

### Limitations of Funded Status Measurements

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

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

## Prior Year Asset Experience

### ASSETS (STATE AND MUNICIPAL)

Plan assets for this System are measured on both a market value and an actuarial or smoothed value basis. The actuarial smoothing method, described again on page Appendix A-16, annually recognizes 20%\* of the difference between (a) the expected investment return if the market value of assets had earned the assumed rate of 7.40% during FY 2021, and (b) the actual investment return. Bear in mind that the expected return for this purpose is based on the assumed return from the prior year's actuarial valuation. In addition, there is a market value collar that constrains the actuarial value to be within 20% of the market value of assets. In periods of high returns, this method defers the amount of asset gains above the assumed return. Conversely, in periods of returns below the assumed rate, recognition of the losses is deferred. This method limits the effect of temporary asset value fluctuations on contribution rates. The System does not immediately feel the full impact of lower (or higher) costs when asset values fluctuate dramatically.

For the year ended June 30, 2021, the System's assets earned **26.54%** based on our estimate and **26.69%** as reported by the System (using a slightly different computation method) on a market value basis and **14.15%** on an actuarial value basis (which includes additional recognition of the FY 2021 investment returns). The System experienced an investment gain of **\$10.3** billion on a market value basis and a gain of **\$1.7** billion on an actuarial basis. More detail can be found in Section III. Reconciliations of market value and actuarial value of assets are presented below:

**(STATE AND MUNICIPAL)**  
**(\$ in Millions)**

	<b>Market Value</b>	<b>Actuarial Value</b>
June 30, 2020 Value	\$ 54,586	\$ 56,247
Employer Contributions	2,204	2,204
Member Contributions	866	866
Benefit Payments and Other Disbursements	(4,367)	(4,367)
Expected Investment Earnings (7.40% in FY2021)	3,992	4,115
Expected Value June 30, 2021	\$ 57,281	\$ 59,065
<b>Investment Gain/(Loss)</b>	<b>10,324</b>	<b>1,689</b>
June 30, 2021 Value (before AVA method change*)	\$ 67,604	\$ 60,753
AVA Method Change		2,065
June 30, 2021 Value (after AVA method change*)		\$ 62,818

*Figures may not add exactly due to rounding*

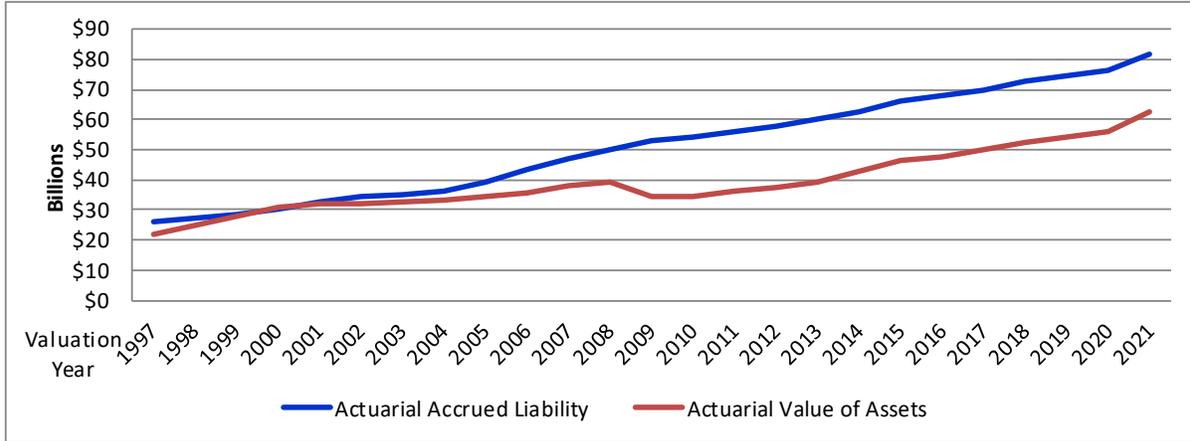
\*The 2021 valuation recognized 40% of the investment gain from FY 2021 in the determination of the actuarial value of assets rather than the 20% normally recognized. The remaining 60% will be recognized equally over the next four valuations.



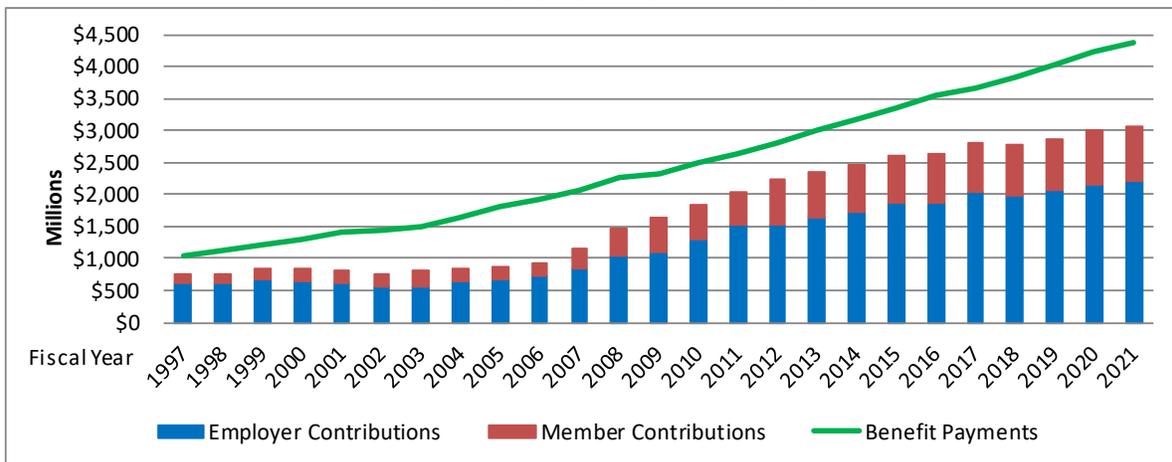
# Trends (State and Municipal)

One of the best ways to measure or evaluate the financial condition of a pension plan is to examine the historical trends that are evolving. Below are three charts which illustrate trend information from 1993 through the end of 2021, on the System’s assets and liabilities, annual cash flows in and out of the fund, and the State contribution rate. Our comments on each follow.

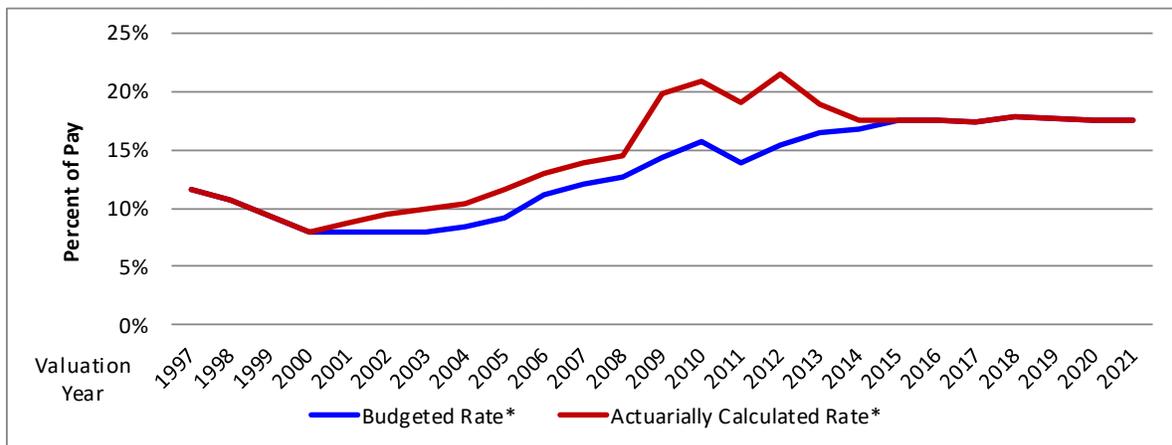
**Chart A: Assets/Liabilities**



**Chart B: Benefits vs. Contributions**



**Chart C: State Contribution Rate**



\* Excludes reinvested savings in valuation years after 2010. 2010 rates are prior to the 2011 General Assembly Reforms.



## Trends (State and Municipal)

Chart A displays a comparison of the actuarial value of assets and the Actuarial Accrued Liability (AAL). The difference between the actuarial value of assets and the AAL is the Unfunded Actuarial Accrued Liability. The Unfunded Actuarial Accrued Liability is about \$19 billion as of June 30, 2021, and decreased by about \$1,304 million since the last valuation as of June 30, 2020. As of June 30, 2021, the actuarial value of assets under the five-year asset smoothing method is 93% of the market value of assets, compared with 103% as of June 30, 2020.

Chart B presents non-investment cash flow trend information that can have investment implications. With the aging and retirements of the baby boom generation, MSRPS has seen increases in payments to retirees. This is expected for mature retirement systems such as MSRPS. Benefit payments, which are the total amount below the green line, exceeds the total contributions, which is the total amount below the top of the red bar. The amount needed to pay the excess of benefit payments over total contributions comes from either investment return or liquidation of current assets. If the difference between the total benefit payments and total contributions increases, a larger portion of investment return will be needed to pay benefits and may require a change in asset allocation. The corridor method increased the extent of negative cash flows. The corridor funding method was eliminated first effective with the June 30, 2015 valuation. The budgeted rates have been equal to the actuarial rates since fiscal year 2017.

Finally, Chart C looks at the composite actuarially determined and budgeted State contribution rates. The budgeted contribution rates by System determine the fiscal year State appropriation. It shows the impact of the 1990s sustained investment gains and a continuous lowering of the rate until 2000. Effective with the 2001 valuation, the State appropriations were performed under a corridor funding method for the two largest plans, TCS and ECS. The appropriation remained essentially level for a few years before increasing with the 2004 valuation. Legislation enacted in 2015 removed the corridor funding method for TCS and ECS beginning with the valuation as of June 30, 2015. The budgeted rate is now equal to the actuarial rate for TCS and ECS.

Chart C further illustrates that the corridor method consistently acted to reduce the State's contributions calculated in valuations between 2001 and 2015.

## **SECTION II**

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### **VALUATION RESULTS**

## State Systems (Excludes Municipalities) Valuation Results

The combined State System's (excluding PGU's) Unfunded Actuarial Accrued Liability (UAAL) decreased by \$1,208 million, from \$19,104 million as of June 30, 2020, to \$17,896 million as of June 30, 2021. There was an expected decrease in the Unfunded Actuarial Accrued Liability of \$183 million, if all actuarial assumptions had been realized. The unfunded liability is expected to decline under the current amortization policy

There was a decrease in the Unfunded Actuarial Accrued Liability of \$2,287 million due to favorable plan experience. The net gain due to plan experience of \$2,287 million is comprised of demographic gains on the liabilities of \$748 million and an asset gain (on the actuarial value of assets) of \$1,539 million. There was a net increase in the UAAL of \$1,262 million due to method and assumption changes. There was an increase in the UAAL of \$3,145 million due to economic assumption changes, which was partially offset by a decrease in the UAAL of \$1,883 million due to the change in the recognition of the FY 2021 investment gain (from 20% to 40%) in the actuarial value of assets (see the table below).

The combined State System's market value of assets earned 26.54%<sup>1</sup> for the year ended June 30, 2021, which exceeded the 7.40% assumed rate of investment return. The actuarial, or smoothed, rate of return measured from this past year was 14.15% (which includes additional recognition of the FY 2021 investment returns), which also exceeded the assumed rate of return on the actuarial value of assets, producing an asset gain. Partial recognition of asset gains from FYs 2017, 2018, and 2021 combined with losses from FYs 2019 and 2020 were recognized in the actuarial value of assets as of June 30, 2021, under the asset smoothing method, resulting in a recognized asset gain of \$1,539 million. Reconciliations of market value and actuarial value of assets are presented below:

**(STATE Only)  
(\$ in Millions)**

	Market Value	Actuarial Value
June 30, 2020 Value	\$ 49,789	\$ 51,305
Employer Contributions	2,048	2,048
Member Contributions	794	794
Benefit Payments and Other Disbursements	(4,021)	(4,021)
Expected Investment Earnings (7.40% in FY2021)	3,642	3,754
Expected Value June 30, 2021	\$ 52,252	\$ 53,880
<b>Investment Gain/(Loss)</b>	<b>9,414</b>	<b>1,539</b>
June 30, 2021 Value (before AVA method change)	\$ 61,666	\$ 55,419
AVA Method Change		1,883
June 30, 2021 Value (after AVA method change)		\$ 57,302

*Figures may not add exactly due to rounding*

Liability experience was favorable overall in part due to lower than assumed retiree COLA increases. COLA increases of 1.234% were granted to eligible retirees who have a COLA cap of 3.00%, 5.00%, and no COLA cap compared to the actuarial assumptions of 2.19%, 2.57%, and 2.60%, respectively. The same COLA increase of 1.234% was granted to benefits with the reformed cap compared to the actuarial assumption 1.42%.

Actual increases in individual salaries that were less than assumed contributed to gains on active liabilities for each System. In addition, there were experience gains on active member liabilities other than salary experience that partially offset the losses due to salary increases.

<sup>1</sup> The actuarially computed rate of return, excluding municipalities.



# State Systems (Excludes Municipalities)

## Valuation Results

The combined State System funded ratio increased from 72.9% at June 30, 2020 to 76.2% at June 30, 2021.

The actuarially determined contribution rate decreased for Judges and slightly decreased for TCS, and increased for the other Systems from those calculated in the June 30, 2020 valuation to those calculated in the June 30, 2021 valuation, which determines the FY 2022 and FY 2023 contributions, respectively.

A reconciliation of the actuarial contribution rate (excluding reinvested savings) is shown below:

	(STATE ONLY)					
	Teachers' Combined System	Employees' Combined System	State Police	Judges	LEOPS	Total
<b>FY 2022 Actuarial Contribution Rate</b>	<b>14.67%</b>	<b>20.50%</b>	<b>75.30%</b>	<b>41.92%</b>	<b>42.28%</b>	<b>17.50%</b>
Change due to Investment Return	-1.09%	-1.05%	-3.34%	-2.43%	-1.52%	-1.11%
Change due to Demographic and Non-Inv. Exp.	-0.49%	-0.63%	-0.39%	-0.78%	-0.13%	-0.53%
Change due to Assumption Changes	3.09%	2.84%	8.92%	3.69%	5.84%	3.11%
Change due to Method Changes	-1.29%	-1.23%	-3.93%	-2.89%	-1.80%	-1.31%
Change due to Total Payroll Experience	0.04%	0.37%	0.34%	0.20%	0.20%	0.13%
Change due to Other	<u>-0.28%</u>	<u>-0.12%</u>	<u>-0.45%</u>	<u>0.31%</u>	<u>-0.14%</u>	<u>-0.24%</u>
<b>FY 2023 Actuarial Contribution Rate</b>	<b>14.65%</b>	<b>20.68%</b>	<b>76.45%</b>	<b>40.02%</b>	<b>44.73%</b>	<b>17.55%</b>

*Totals may not add due to rounding.*

Each System saw decreases in the contribution rates due to favorable investment experience. Demographic experience was favorable overall for the System.

The normal cost rate increased for each System as a result of the economic assumption changes and were slightly offset by decreases due to more active members being covered under the benefit provisions of the reformed benefit plans.

In addition, the increase in total payroll was different than expected under the actuarial assumptions (3.10% in FY 2021) for all the State Systems. Total payroll increased by 2.6% for TCS, 0.8% for ECS, 2.4% for State Police, 0.4% for Judges and 2.3% for LEOPS. Total payroll growth that was less than assumed puts upward pressure on the contribution rates because the unfunded liability contribution is spread over a smaller payroll base. The opposite is true when payroll grows more than assumed.

The change due to assumption changes shown in the table above is the effect of adopting new economic assumptions (investment return, inflation, wage inflation and COLA increases) for the 2021 valuation.

The change due to method changes shown in the table above is the effect of recognizing 40% of the investment gain from FY 2021 rather than the 20% normally recognized.

Funded ratios are expected to progress toward 100% at a slightly greater rate than a static amortization schedule of the current unfunded actuarial accrued liabilities as the deferred investment gains are recognized in the actuarial value of assets over the next four years.



## Summary of Valuation Results by System as of June 30, 2021 (State and Municipal)

State Sponsored Plans	Employees				LEOPS	Total State*	
	Teachers	(State)	State Police	Judges	(State)		
Actuarial Liability - Active Members	\$ 19,958,529,302	\$ 7,656,653,851	\$ 603,738,455	\$ 191,558,286	\$ 399,504,793	\$ 28,809,984,687	
Actuarial Liability - Retirees, Term. Vested, & Inactives	<u>27,676,825,282</u>	<u>15,456,858,069</u>	<u>1,923,491,607</u>	<u>431,074,957</u>	<u>899,971,533</u>	<u>46,388,221,448</u>	
Total Actuarial Liability	\$ 47,635,354,584	\$ 23,113,511,920	\$ 2,527,230,062	\$ 622,633,243	\$ 1,299,476,326	\$ 75,198,206,135	
Actuarial Value of Assets	<u>38,215,959,171</u>	<u>15,868,373,406</u>	<u>1,771,695,402</u>	<u>570,319,231</u>	<u>875,491,414</u>	<u>57,301,838,623</u>	
Unfunded Actuarial Accrued Liability (UAAL)	9,419,395,413	7,245,138,514	755,534,660	52,314,012	423,984,912	17,896,367,512	
Funded Ratio	80.23%	68.65%	70.10%	91.60%	67.37%	76.20%	
Active Member Payroll	\$ 7,688,846,359	\$ 3,425,931,907	\$ 119,048,457	\$ 52,073,208	\$ 125,116,369	\$ 11,411,016,300	
UAAL as a Percent-of-Payroll	122.5%	211.5%	634.6%	100.5%	338.9%	156.8%	
<i>Before Reinvested Savings</i>							
Employer Normal Cost Contribution	5.12%	4.41%	27.49%	32.42%	18.48%	5.41%	
UAAL Contribution	<u>9.53%</u>	<u>16.27%</u>	<u>48.96%</u>	<u>7.60%</u>	<u>26.25%</u>	<u>12.14%</u>	
Total Employer Contribution Without Reinvested Savings	14.65%	20.68%	76.45%	40.02%	44.73%	17.55%	
<i>After Reinvested Savings</i>							
Total Employer Contribution Without Reinvested Savings	14.65%	20.68%	76.45%	40.02%	44.73%	17.55%	
Reinvested Savings Rate	<u>0.64%</u>	<u>0.62%</u>	<u>0.85%</u>	<u>0.00%</u>	<u>0.89%</u>	<u>0.66%</u>	
Total Employer Contribution With Reinvested Savings	15.29%	21.30%	77.30%	40.02%	45.62%	18.21%	
<b>Municipal Plans</b>							
		Employees (Municipal)			LEOPS (Municipal)	CORS (Municipal)	Total Municipal
Actuarial Liability - Active Members		\$ 2,366,014,780			\$ 239,012,903	\$ 21,317,939	\$ 2,626,345,622
Actuarial Liability - Retirees, Term. Vested, & Inactives		<u>3,554,149,186</u>			<u>337,493,857</u>	<u>22,362,225</u>	<u>3,914,005,268</u>
Total Actuarial Liability		\$ 5,920,163,966			\$ 576,506,760	\$ 43,680,164	\$ 6,540,350,890
Actuarial Value of Assets		<u>5,063,985,912</u>			<u>414,016,807</u>	<u>38,096,583</u>	<u>5,516,099,302</u>
Unfunded Actuarial Accrued Liability (UAAL)		856,178,054			162,489,953	5,583,581	1,024,251,588
Funded Ratio		85.54%			71.81%	87.22%	84.34%
Active Member Payroll		\$ 1,255,933,619			\$ 74,344,078	\$ 7,952,640	\$ 1,338,230,337
UAAL as a Percent-of-Payroll		68.2%			218.6%	70.2%	76.5%
<b>State and Municipal Sponsored Plans</b>							
	Teachers	Employees	State Police	Judges	LEOPS	CORS	Total SRPS
Actuarial Liability - Active Members	\$ 19,958,529,302	\$ 10,022,668,631	\$ 603,738,455	\$ 191,558,286	\$ 638,517,696	\$ 21,317,939	\$ 31,436,330,309
Actuarial Liability - Retirees, Term. Vested, & Inactives	<u>27,676,825,282</u>	<u>19,011,007,255</u>	<u>1,923,491,607</u>	<u>431,074,957</u>	<u>1,237,465,390</u>	<u>22,362,225</u>	<u>50,302,226,716</u>
Total Actuarial Liability	\$ 47,635,354,584	\$ 29,033,675,886	\$ 2,527,230,062	\$ 622,633,243	\$ 1,875,983,086	\$ 43,680,164	\$ 81,738,557,025
Actuarial Value of Assets	<u>38,215,959,171</u>	<u>20,932,359,318</u>	<u>1,771,695,402</u>	<u>570,319,231</u>	<u>1,289,508,221</u>	<u>38,096,583</u>	<u>62,817,937,925</u>
Unfunded Actuarial Accrued Liability (UAAL)	9,419,395,413	8,101,316,568	755,534,660	52,314,012	586,474,865	5,583,581	18,920,619,100
Funded Ratio	80.23%	72.10%	70.10%	91.60%	68.74%	87.22%	76.85%
Active Member Payroll	\$ 7,688,846,359	\$ 4,681,865,526	\$ 119,048,457	\$ 52,073,208	\$ 199,460,447	\$ 7,952,640	\$ 12,749,246,637
UAAL as a Percent-of-Payroll	122.5%	173.0%	634.6%	100.5%	294.0%	70.2%	148.4%

\* Contribution rates shown in the "Total" column are for informational purposes only and are not used for funding purposes.



## Calculation of State Contribution Rates and Illustrated State Contributions (Including Reinvested Savings)

	Teachers	Employees (State)	State Police	Judges	LEOPS (State)	Total State
Percentage of Total Pension Reform Savings*	67.7%	29.4%	1.4%	0.0%	1.5%	100.0%
Reinvested Savings	\$ 50,772,568	\$ 22,019,803	\$ 1,050,207	\$ -	\$ 1,157,423	\$ 75,000,000
<b>FY 2023 Contributions</b>						
Employer Normal Cost Contribution	5.12%	4.41%	27.49%	32.42%	18.48%	5.41%
UAAL Contribution	9.53%	16.27%	48.96%	7.60%	26.25%	12.14%
Total Actuarial Employer Contribution	<u>14.65%</u>	<u>20.68%</u>	<u>76.45%</u>	<u>40.02%</u>	<u>44.73%</u>	<u>17.55%</u>
Total Employer Contribution	14.65%	20.68%	76.45%	40.02%	44.73%	17.55%
Reinvested Saving Rate	<u>0.64%</u>	<u>0.62%</u>	<u>0.85%</u>	<u>0.00%</u>	<u>0.89%</u>	<u>0.66%</u>
Estimated Total Employer Contribution	15.29%	21.30%	77.30%	40.02%	45.62%	18.21%
Projected Payroll	\$ 7,900,289,634	\$ 3,568,218,763	\$ 123,992,814	\$ 54,235,928	\$ 130,312,740	\$ 11,777,049,879
Illustrated Contribution Dollars						
Local Employers' Portion	\$ 373,031,817					\$ 373,031,817
State Portion	784,360,614	\$ 737,907,640	\$ 94,792,506	\$ 21,705,218	\$ 58,288,889	1,697,054,867
Dollar Reinvested Savings	<u>50,772,568</u>	<u>22,019,803</u>	<u>1,050,207</u>	<u>-</u>	<u>1,157,423</u>	<u>75,000,000</u>
Total Illustrated Contribution Dollars	\$ 1,208,164,999	\$ 759,927,443	\$ 95,842,713	\$ 21,705,218	\$ 59,446,312	\$ 2,145,086,684

\*Reinvested savings allocated among the State systems based on their proportionate share of the total savings measured as of June 30, 2011. The allocation percentages do not change.



## Summary of State Contributions – Including Reinvested Savings (State Portion Only)

		Teachers' Combined	Employees' Combined	State Police	Judges	LEOPS	Total State#
7/1/2021 Valuation Results (FY 2023)	Unfunded Actuarial Liability	\$ 9,419,395,413	\$ 7,245,138,514	\$ 755,534,660	\$ 52,314,012	\$ 423,984,912	\$ 17,896,367,512
	Illustrated Contribution Dollars	\$ 1,208,164,999	\$ 759,927,443	\$ 95,842,713	\$ 21,705,218	\$ 59,446,312	\$ 2,145,086,684
	Local Employers' Portion	373,031,817	NA	NA	NA	NA	\$ 373,031,817
	State Portion	\$ 835,133,182	\$ 759,927,443	\$ 95,842,713	\$ 21,705,218	\$ 59,446,312	\$ 1,772,054,867
	Projected Payroll	\$ 7,900,289,634	\$ 3,568,218,763	\$ 123,992,814	\$ 54,235,928	\$ 130,312,740	\$ 11,777,049,879
	Total Contributions as Percentage of Payroll	15.29%	21.30%	77.30%	40.02%	45.62%	18.21%
7/1/2020 Valuation Results (FY 2022)	Unfunded Actuarial Liability	\$ 10,227,774,907	\$ 7,600,814,591	\$ 780,365,345	\$ 77,262,906	\$ 417,911,525	\$ 19,104,129,275
	Illustrated Contribution Dollars	\$ 1,183,990,681	\$ 751,662,867	\$ 92,707,243	\$ 22,768,139	\$ 55,274,029	\$ 2,106,402,958
	Local Employers' Portion	296,510,845	NA	NA	NA	NA	\$ 296,510,845
	State Portion	\$ 887,479,836	\$ 751,662,867	\$ 92,707,243	\$ 22,768,139	\$ 55,274,029	\$ 1,809,892,113
	Projected Payroll	\$ 7,724,731,515	\$ 3,559,234,459	\$ 121,722,491	\$ 54,313,309	\$ 127,995,758	\$ 11,587,997,532
	Total Contributions as Percentage of Payroll	15.33%	21.12%	76.16%	41.92%	43.18%	18.18%

# Contribution rates shown in the "Total" column are for informational purposes only and are not used for funding purposes.



## State Budgeted Contribution Rates by System for the Fiscal Years 2010 to 2023 (State Portion Only)

Valuation Date June 30,	Fiscal Year	Teachers' Combined	Employees' Combined	State Police	Judges	LEOPS	Total State*
2021	2023 @	15.29%	21.30%	77.30%	40.02%	45.62%	18.21%
2021	2023 #	14.65%	20.68%	76.45%	40.02%	44.73%	17.55%
2020	2022 @	15.33%	21.12%	76.16%	41.92%	43.18%	18.18%
2020	2022 #	14.67%	20.50%	75.30%	41.92%	42.28%	17.50%
2019	2021 @	15.65%	21.36%	79.03%	40.27%	43.93%	18.46%
2019	2021 #	14.96%	20.71%	78.09%	40.27%	42.96%	17.75%
2018	2020 @	16.30%	20.22%	80.58%	44.44%	42.40%	18.54%
2018	2020 #	15.59%	19.56%	79.58%	44.44%	41.37%	17.82%
2017	2019 @	16.16%	19.23%	79.41%	44.53%	40.81%	18.15%
2017	2019 #	15.43%	18.58%	78.41%	44.53%	39.78%	17.42%
2016	2018 @	16.45%	19.22%	81.36%	46.45%	40.77%	18.34%
2016	2018 #	15.71%	18.56%	80.29%	46.45%	39.69%	17.60%
2015	2017 @	16.55%	18.93%	82.50%	46.56%	40.72%	18.32%
2015	2017 #	15.79%	18.28%	81.40%	46.56%	39.60%	17.58%
2014	2016 @^	16.49%	17.04%	80.08%	40.70%	40.95%	17.58%
2014	2016 @	17.27%	17.70%	81.24%	40.70%	42.14%	18.32%
2014	2016 #	15.71%	16.38%	78.91%	40.70%	39.77%	16.83%
2013	2015 @^	16.53%	16.45%	84.73%	42.74%	43.10%	17.44%
2013	2015 @	18.64%	18.30%	88.06%	42.74%	46.56%	19.48%
2013	2015 #	15.47%	15.53%	83.06%	42.74%	41.37%	16.41%
2012	2014 @	17.94%	16.84%	71.85%	50.92%	57.72%	18.54%
2012	2014 #	14.71%	14.05%	66.71%	50.92%	52.47%	15.43%
2011	2013 @	15.30%	14.05%	64.57%	61.18%	50.14%	15.80%
2011	2013 #	13.29%	12.29%	61.21%	61.18%	46.81%	13.85%
2010	2012	15.45%	13.40%	61.01%	60.37%	49.26%	15.67%
2009	2011	14.34%	11.69%	57.03%	59.07%	47.67%	14.33%
2008	2010	13.15%	9.93%	30.79%	48.89%	38.63%	12.62%

\* Contribution rates shown in the "Total" column are for informational purposes only and are not used for funding purposes.

@ Includes effect of reinvested savings.

# Excludes effect of reinvested savings.

^ Reflects the reduction of reinvested savings passed by the General Assembly from \$300 million to \$100 million for FY 2015 and from \$150 million to \$75 million beginning FY 2016.



# Detailed Actuarial Information

## Teachers' Combined System

	Actuarial Valuation Performed		% Change
	June 30, 2021 (for FY 2023)	June 30, 2020 (for FY 2022)	
<b>A. Demographic Information</b>			
1. Active Number Count	109,958	109,597	0.3%
2. Retired Member and Beneficiary Count	81,515	80,439	1.3%
3. Vested Former Member Count	23,733	24,026	-1.2%
4. Total Number Count	215,206	214,062	0.5%
5. Active Payroll	\$ 7,688,846,359	\$ 7,492,465,097	2.6%
6. Annual Benefits for Retired Members <sup>#</sup>	\$ 2,432,621,448	\$ 2,366,217,214	2.8%
<b>B. Actuarial Results</b>			
1. Present Value of Projected Benefits Attributable to:			
a. Retired and Disabled Members, and Beneficiaries	\$ 26,352,495,821	\$ 25,155,524,918	4.8%
b. Terminated Vested Members and Former Members Due Refunds of Employee Contributions	1,324,329,461	1,176,927,529	12.5%
c. Active Members	29,107,050,452	26,203,348,265	11.1%
d. Total Present Value	\$ 56,783,875,734	\$ 52,535,800,712	8.1%
2. Less Present Value Total Future Normal Costs	9,148,521,150	8,079,271,555	13.2%
3. Actuarial Accrued Liability (1d – 2)	\$ 47,635,354,584	\$ 44,456,529,157	7.2%
4. Less Actuarial Value of Assets	38,215,959,171	34,228,754,250	11.6%
5. Unfunded Actuarial Accrued Liability (UAAL) (3 - 4)	\$ 9,419,395,413	\$ 10,227,774,907	-7.9%
6. Funded Ratio	80.23%	76.99%	
7. Employer Normal Cost	\$ 404,494,829	\$ 322,121,304	25.6%
8. Total Projected Payroll	\$ 7,900,289,634	\$ 7,724,731,515	2.3%
9. Total Normal Cost Rate	12.12%	11.17%	
10. Employee Contribution Rate	7.00%	7.00%	
11. Employers' <sup>@</sup> Normal Cost Rate	5.12%	4.17%	
12. UAAL Projected to Contribution Period	\$ 9,254,351,442	\$ 10,175,093,450	
13. Amortization Payment	\$ 752,899,915	\$ 810,757,350	
14. UAAL Amortization Rate*	9.53%	10.50%	
15. Total Actuarial Employer Contribution Rate (11 + 14)	14.65%	14.67%	
16. Estimated Employer Rate after Reinvestment of Savings	15.29%	15.33%	

<sup>#</sup> Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2021 and July 1, 2020, respectively.

<sup>@</sup> Employers include the State and local Boards of Education.

<sup>\*</sup> Includes the effects of the one-year lag between the valuation date and the beginning of the contribution period.



# Detailed Actuarial Information

## Employees' Combined System (State)

	Actuarial Valuation Performed		% Change
	June 30, 2021 (for FY 2023)	June 30, 2020 (for FY 2022)	
<b>A. Demographic Information</b>			
1. Active Number Count	55,547	56,734	-2.1%
2. Retired Member and Beneficiary Count	63,313	63,054	0.4%
3. Vested Former Member Count	17,789	18,258	-2.6%
4. Total Number Count	136,649	138,046	-1.0%
5. Active Payroll	\$ 3,425,931,907	\$ 3,399,919,227	0.8%
6. Annual Benefits for Retired Members <sup>#</sup>	\$ 1,269,055,110	\$ 1,236,504,947	2.6%
<b>B. Actuarial Results</b>			
1. Present Value of Projected Benefits Attributable to:			
a. Retired and Disabled Members, and Beneficiaries	\$ 14,494,410,623	\$ 13,837,988,849	4.7%
b. Terminated Vested Members and Former Members Due Refunds of Employee Contributions	962,447,446	884,201,858	8.8%
c. Active Members	10,546,876,809	9,715,758,342	8.6%
d. Total Present Value	\$ 26,003,734,878	\$ 24,437,949,049	6.4%
2. Less Present Value Total Future Normal Costs	2,890,222,958	2,624,661,339	10.1%
3. Actuarial Accrued Liability (1d – 2)	\$ 23,113,511,920	\$ 21,813,287,710	6.0%
4. Less Actuarial Value of Assets	15,868,373,406	14,212,473,119	11.7%
5. Unfunded Actuarial Accrued Liability (UAAL) (3 - 4)	\$ 7,245,138,514	\$ 7,600,814,591	-4.7%
6. Funded Ratio	68.65%	65.16%	
7. Employer Normal Cost	\$ 153,146,908	\$ 124,279,768	23.2%
8. Total Projected Payroll	\$ 3,472,718,991	\$ 3,452,215,770	0.6%
9. Total Normal Cost Rate	11.15%	10.34%	
10. Employee Contribution Rate	6.74%	6.74%	
11. Employers' Normal Cost Rate	4.41%	3.60%	
12. UAAL Projected to Contribution Period	\$ 7,137,605,856	\$ 7,551,135,825	
13. Amortization Payment	\$ 580,689,298	\$ 601,678,884	
14. UAAL Amortization Rate*	16.27%	16.90%	
15. Total Actuarial Employer Contribution Rate (11 + 14)	20.68%	20.50%	
16. Estimated Employer Rate after Reinvestment of Savings	21.30%	21.12%	

\* Includes the effects of the one-year lag between the valuation date and the beginning of the contribution period.

# Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2021 and July 1, 2020, respectively.



# Detailed Actuarial Information

## State Police

	Actuarial Valuation Performed		
	June 30, 2021 (for FY 2023)	June 30, 2020 (for FY 2022)	% Change
<b>A. Demographic Information</b>			
1. Active Number Count	1,353	1,391	-2.7%
2. Retired Member and Beneficiary Count	2,559	2,517	1.7%
3. Vested Former Member Count	86	87	-1.1%
4. Total Number Count	3,998	3,995	0.1%
5. Active Payroll	\$ 119,048,457	\$ 116,274,059	2.4%
6. Annual Benefits for Retired Members <sup>#</sup>	\$ 136,552,155	\$ 131,773,601	3.6%
<b>B. Actuarial Results</b>			
1. Present Value of Projected Benefits Attributable to:			
a. Retired and Disabled Members, and Beneficiaries	\$ 1,908,514,934	\$ 1,796,059,592	6.3%
b. Terminated Vested Members and Former Members Due Refunds of Employee Contributions	14,976,673	14,625,384	2.4%
c. Active Members	962,529,271	868,208,694	10.9%
d. Total Present Value	\$ 2,886,020,878	\$ 2,678,893,670	7.7%
2. Less Present Value Total Future Normal Costs	358,790,816	316,150,122	13.5%
3. Actuarial Accrued Liability (1d – 2)	\$ 2,527,230,062	\$ 2,362,743,548	7.0%
4. Less Actuarial Value of Assets	1,771,695,402	1,582,378,203	12.0%
5. Unfunded Actuarial Accrued Liability (UAAL) (3 - 4)	\$ 755,534,660	\$ 780,365,345	-3.2%
6. Funded Ratio	70.10%	66.97%	
7. Employer Normal Cost	\$ 33,173,357	\$ 29,173,257	13.7%
8. Total Projected Payroll	\$ 120,674,272	\$ 118,062,552	2.2%
9. Total Normal Cost Rate	35.34%	32.57%	
10. Employee Contribution Rate	7.85%	7.86%	
11. Employers' Normal Cost Rate	27.49%	24.71%	
12. UAAL Projected to Contribution Period	\$ 746,201,972	\$ 772,800,397	
13. Amortization Payment	\$ 60,708,241	\$ 61,577,184	
14. UAAL Amortization Rate*	48.96%	50.59%	
15. Total Actuarial Employer Contribution Rate (11 + 14)	76.45%	75.30%	
16. Estimated Employer Rate after Reinvestment of Savings	77.30%	76.16%	

\* Includes the effects of the one-year lag between the valuation date and the beginning of the contribution period.

# Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2021 and July 1, 2020, respectively.



# Detailed Actuarial Information

## Judges

	Actuarial Valuation Performed		% Change
	June 30, 2021 (for FY 2023)	June 30, 2020 (for FY 2022)	
<b>A. Demographic Information</b>			
1. Active Number Count	315	324	-2.8%
2. Retired Member and Beneficiary Count	442	441	0.2%
3. Vested Former Member Count	7	8	-12.5%
4. Total Number Count	764	773	-1.2%
5. Active Payroll	\$ 52,073,208	\$ 51,882,186	0.4%
6. Annual Benefits for Retired Members <sup>#</sup>	\$ 39,054,084	\$ 37,534,671	4.0%
<b>B. Actuarial Results</b>			
1. Present Value of Projected Benefits Attributable to:			
a. Retired and Disabled Members, and Beneficiaries	\$ 427,059,173	\$ 406,650,164	5.0%
b. Terminated Vested Members and Former Members Due Refunds of Employee Contributions	4,015,784	4,484,238	-10.4%
c. Active Members	324,683,402	306,129,716	6.1%
d. Total Present Value	\$ 755,758,359	\$ 717,264,118	5.4%
2. Less Present Value Total Future Normal Costs	133,125,116	127,964,968	4.0%
3. Actuarial Accrued Liability (1d – 2)	\$ 622,633,243	\$ 589,299,150	5.7%
4. Less Actuarial Value of Assets	570,319,231	512,036,244	11.4%
5. Unfunded Actuarial Accrued Liability (UAAL) (3 - 4)	\$ 52,314,012	\$ 77,262,906	-32.3%
6. Funded Ratio	91.60%	86.89%	
7. Employer Normal Cost	\$ 17,112,689	\$ 16,083,272	6.4%
8. Total Projected Payroll	\$ 52,784,359	\$ 52,680,222	0.2%
9. Total Normal Cost Rate	39.11%	37.52%	
10. Employee Contribution Rate	6.69%	6.99%	
11. Employers' Normal Cost Rate	32.42%	30.53%	
12. UAAL Projected to Contribution Period	\$ 50,689,162	\$ 77,662,847	
13. Amortization Payment	\$ 4,123,883	\$ 6,188,221	
14. UAAL Amortization Rate*	7.60%	11.39%	
15. Total Actuarial Employer Contribution Rate (11 + 14)	40.02%	41.92%	

\*Includes the effects of the one-year lag between the valuation date and the beginning of the contribution period.

<sup>#</sup>Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2021 and July 1, 2020, respectively.



## Detailed Actuarial Information LEOPS (State)

	Actuarial Valuation Performed		
	June 30, 2021 (for FY 2023)	June 30, 2020 (for FY 2022)	% Change
<b>A. Demographic Information</b>			
1. Active Number Count	1,585	1,641	-3.4%
2. Retired Member and Beneficiary Count	1,712	1,647	3.9%
3. Vested Former Member Count	172	186	-7.5%
4. Total Number Count	3,469	3,474	-0.1%
5. Active Payroll	\$ 125,116,369	\$ 122,266,528	2.3%
6. Annual Benefits for Retired Members <sup>#</sup>	\$ 63,207,938	\$ 60,068,957	5.2%
<b>B. Actuarial Results</b>			
1. Present Value of Projected Benefits Attributable to:			
a. Retired and Disabled Members, and Beneficiaries	\$ 876,161,475	\$ 809,247,847	8.3%
b. Terminated Vested Members and Former Members Due Refunds of Employee Contributions	23,810,058	24,511,108	-2.9%
c. Active Members	655,620,575	582,852,342	12.5%
d. Total Present Value	\$ 1,555,592,108	\$ 1,416,611,297	9.8%
2. Less Present Value Total Future Normal Costs	256,115,782	229,798,556	11.5%
3. Actuarial Accrued Liability (1d – 2)	\$ 1,299,476,326	\$ 1,186,812,741	9.5%
4. Less Actuarial Value of Assets	875,491,414	768,901,216	13.9%
5. Unfunded Actuarial Accrued Liability (UAAL) (3 - 4)	\$ 423,984,912	\$ 417,911,525	1.5%
6. Funded Ratio	67.37%	64.79%	
7. Employer Normal Cost	\$ 23,437,270	\$ 20,434,628	14.7%
8. Total Projected Payroll	\$ 126,825,052	\$ 124,147,195	2.2%
9. Total Normal Cost Rate	25.41%	23.39%	
10. Employee Contribution Rate	6.93%	6.93%	
11. Employers' Normal Cost Rate	18.48%	16.46%	
12. UAAL Projected to Contribution Period	\$ 420,426,004	\$ 414,742,430	
13. Amortization Payment	\$ 34,204,310	\$ 33,046,917	
14. UAAL Amortization Rate*	26.25%	25.82%	
15. Total Actuarial Employer Contribution Rate (11 + 14)	44.73%	42.28%	
16. Estimated Employer Rate after Reinvestment of Savings	45.62%	43.18%	

\*Includes the effects of the one-year lag between the valuation date and the beginning of the contribution period.

<sup>#</sup>Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2021 and July 1, 2020, respectively.



## Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the System's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

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

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

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

## PLAN MATURITY MEASURES

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

	2021	2020	2019	2018
Ratio of market value of assets to total payroll	5.30	4.37	4.53	4.48
Ratio of actuarial accrued liability to total payroll	6.41	6.12	6.26	6.28
Ratio of actives to retirees and beneficiaries	1.15	1.17	1.17	1.20
Ratio of net cash flow to market value of assets	-1.9%	-2.2%	-2.2%	-2.0%
Approximate duration of the actuarial accrued liability	12.48	12.21	12.18	12.48
Approximate duration of the present value of benefits	15.67	15.22	15.18	15.55

### RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

### RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

### RATIO OF ACTIVES TO RETIREES AND BENEFICIARIES

A young plan with many active members and few retirees will have a high ratio of actives to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.



## **RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS**

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

## **DURATION OF ACTUARIAL ACCRUED LIABILITY**

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, a duration of 10 indicates that the liability would increase approximately 10% if the assumed rate of return were lowered 1%.

## **ADDITIONAL RISK ASSESSMENT**

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

## Risk Measures Summary

### State and Municipal

(\$ in Millions)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
			Market		Market				
	Accrued	Market	Value	Valuation	Funded	Retiree	RetLiab /	AAL /	Assets /
Valuation	Liabilities	Value of	Unfunded	Payroll	Ratio	Liabilities	AAL	Payroll	Payroll
Date (6/30)	(AAL)	Assets	AAL		(2)/(1)	(RetLiab)	(6)/(1)	(1)/(4)	(2)/(4)
2012	\$ 57,869	\$ 37,179	\$ 20,690	\$ 10,337	64.2%	\$ 32,779	56.6%	559.9%	359.7%
2013	60,060	40,363	19,697	10,478	67.2%	34,498	57.4%	573.2%	385.2%
2014	62,610	45,340	17,270	10,804	72.4%	36,077	57.6%	579.5%	419.7%
2015	66,282	45,790	20,492	11,064	69.1%	38,588	58.2%	599.1%	413.9%
2016	67,782	45,366	22,416	11,156	66.9%	39,785	58.7%	607.6%	406.7%
2017	69,987	48,987	20,999	11,419	70.0%	41,112	58.7%	612.9%	429.0%
2018	72,575	51,827	20,747	11,566	71.4%	43,237	59.6%	627.5%	448.1%
2019	74,526	53,943	20,583	11,905	72.4%	44,420	59.6%	626.0%	453.1%
2020	76,471	54,586	21,885	12,501	71.4%	45,382	59.3%	611.7%	436.6%
2021	81,739	67,604	14,134	12,749	82.7%	47,695	58.4%	641.1%	530.3%

(5). The Funded ratio is the most widely known measure of a plan's financial strength, but the trend in the funded ratio is much more important than the absolute ratio. The funded ratio should trend to 100%. As it approaches 100%, it is important to re-evaluate the level of investment risk in the portfolio and potentially to re-evaluate the assumed rate of return.

(6) and (7). The ratio of Retiree liabilities to total accrued liabilities gives an indication of the maturity of the system. As the ratio increases, cash flow needs increase, and the liquidity needs of the portfolio change. A ratio on the order of 50% indicates a maturing system.

(8) and (9). The ratios of liabilities and assets to payroll gives an indication of both maturity and volatility. Many systems have ratios between 500% and 700%. Ratios significantly above that range may indicate difficulty in supporting the benefit level as a level % of payroll.

## Risk Measures Summary

### State and Municipal

(\$ in Millions)

	(10)	(11)	(12)	(13)	(14)	(15)	(16)
				Non- Investment Cash Flow (NICF)	NICF / Assets (13)/(2)	Market Rate of Return	5-Year Trailing Average
Valuation Date (6/30)	Portfolio StdDev	Std Dev % of Pay	Unfunded / Payroll				
2012			200.2%	\$ (518)	-1.4%	0.3%	0.7%
2013			188.0%	(661)	-1.6%	10.4%	3.9%
2014			159.9%	(729)	-1.6%	14.3%	11.6%
2015	12.5%	51.7%	185.2%	(748)	-1.6%	2.7%	9.3%
2016	12.0%	48.8%	200.9%	(921)	-2.0%	1.1%	5.6%
2017	13.3%	57.1%	183.9%	(852)	-1.7%	10.0%	7.6%
2018	13.3%	59.6%	179.4%	(1,059)	-2.0%	8.1%	7.1%
2019	12.6%	57.1%	172.9%	(1,172)	-2.2%	6.4%	5.6%
2020	12.6%	55.0%	175.1%	(1,224)	-2.2%	3.5%	5.8%
2021	12.9%	68.4%	110.9%	(1,297)	-1.9%	26.5%	10.6%

- (10) and (11). The portfolio standard deviation measures the volatility of investment return. When multiplied by the ratio of assets to payroll it gives the effect of a one standard deviation asset move as a percent of payroll. This figure helps users understand the difficulty of dealing with investment volatility and the challenges volatility brings to sustainability. This ratio is likely to increase as the plan approaches full funding.
- (12). The ratio of unfunded liability to payroll gives an indication of the plan sponsor's ability to actually pay off the unfunded liability. A ratio above approximately 300% or 400% may indicate difficulty in discharging the unfunded liability within a reasonable time frame.
- (13) and (14). A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means benefits and expenses exceed contributions and existing funds may be used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super mature plan or a need for additional contributions.
- (15) and (16). Investment return is probably the largest single risk that most systems face. The year-by-year return and the 5-year geometric average both give an indication of the past relationship between actual return and the system's assumed return. Of course, past performance is not a guarantee of future results. Market rate shown is based on actuarial estimation method and differs modestly from figures reported by the System.

# SECTION III

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## ASSETS

## Assets

Pension plan assets play a key role in the financial operation of the plan and in the decisions the Trustees may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact benefit levels, negotiated contributions, and the ultimate security of participants' benefits.

In this section we present detailed information on plan assets including:

- **Disclosure** of plan assets at June 30, 2021 and June 30, 2020;
- Statement of the **changes** in market values during the year;
- Development of the Actuarial Value of Assets; and
- An assessment of **investment performance**.

### Disclosure

Market values represent "snapshot" or "cash-out" values which provide the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate. As a result, actuaries have traditionally smoothed market fluctuations when developing long range contribution rates.

Current methods employed by this Fund set the actuarial value equal to the expected adjusted market value plus one-fifth of the difference between the actual market value and the expected adjusted market value. In addition, there is a 20% collar limitation which keeps the actuarial value of assets within the range of 80% to 120% of the market value of assets.

## Disclosure of Plan Market Value of Assets (State and Municipal) (\$ in Thousands)

	June 30,	
	2021	2020
<b>Assets:</b>		
Cash & Cash Equivalents	\$ 2,407,235	\$ 1,539,742
<i>Receivables</i>		
Contributions		
Employers	29,583	40,079
Employers - Long Term	-	6,773
Members	9,909	10,424
Accrued Investment Income	333,628	208,963
Investment Sales Proceeds	655,713	727,468
Total Receivables	1,028,833	993,707
<i>Investments</i>		
U.S. Government Obligations	7,148,338	6,578,005
Domestic Corporate Obligations	4,503,886	4,264,696
International Obligations	2,576,397	2,184,755
Domestic Stocks	10,664,316	8,775,452
International Stocks	13,465,796	10,872,505
Mortgages & Mortgage Related Securities	1,235,094	1,152,454
Alternative Investments	26,241,154	19,943,124
Collateral For Loaned Securities	4,745,195	4,142,148
Total Investments	70,580,176	57,913,139
<b>Total Assets</b>	<b>74,016,244</b>	<b>60,446,588</b>
<b>Liabilities:</b>		
Accounts Payable & Accrued Expenses	66,355	64,565
Investment Commitments Payable	1,600,194	1,653,838
Obligation For Collateral For Loaned Securities	4,745,195	4,142,148
Other Liabilities	-	-
Total Liabilities	6,411,744	5,860,551
<b>Net Assets Held in Trust for Pension Benefits</b>	<b>\$ 67,604,500</b>	<b>\$ 54,586,037</b>

Totals may not add due to rounding.



## Changes in Market Values (State and Municipal)

	Teachers	Employees (State)	State Police	Judges	LEOPS (State)	Total State	
<b>State Sponsored Plans</b>							
Market Value of Assets as of 6/30/2020	\$ 33,215,010,088	\$ 13,794,738,415	\$ 1,536,121,254	\$ 496,849,225	\$ 745,998,354	\$ 49,788,717,336	
Employer Contributions	1,153,207,663	727,495,018	93,651,295	21,277,085	52,505,085	2,048,136,146	
Member Contributions	531,930,702	239,587,093	9,431,369	3,594,984	9,354,461	793,898,609	
Investment Returns	8,699,680,058	3,626,769,217	403,734,005	129,883,850	195,811,942	13,055,879,072	
Disbursements from the Trust	(2,485,957,489)	(1,297,703,644)	(135,711,059)	(37,943,823)	(63,272,532)	(4,020,588,547)	
Net Transfers	6,907,551	(7,126,754)	-	-	219,203	-	
Market Value of Assets as of 6/30/2021	\$ 41,120,778,573	\$ 17,083,759,345	\$ 1,907,226,864	\$ 613,661,321	\$ 940,616,513	\$ 61,666,042,616	
	Employees (Municipal)			LEOPS (Municipal)	CORS (Municipal)	Total Municipal	
<b>Municipal Plans</b>							
Market Value of Assets as of 6/30/2020	\$ 4,423,601,902			\$ 341,225,367	\$ 32,492,575	\$ 4,797,319,844	
Employer Contributions	127,811,438			26,662,961	913,485	155,387,884	
Member Contributions	67,084,015			4,358,739	396,331	71,839,085	
Investment Returns	1,159,991,662			91,247,265	8,644,049	1,259,882,976	
Disbursements from the Trust	(325,862,852)			(18,766,640)	(1,343,141)	(345,972,633)	
Net Transfers	-			-	-	-	
Market Value of Assets as of 6/30/2021	\$ 5,452,626,165			\$ 444,727,692	\$ 41,103,299	\$ 5,938,457,156	
	Teachers	Employees (State & Municipal)	State Police	Judges	LEOPS (State & Municipal)	CORS (Municipal)	Total State & Municipal
<b>State and Municipal Sponsored Plans</b>							
Market Value of Assets as of 6/30/2020	\$ 33,215,010,088	\$ 18,218,340,317	\$ 1,536,121,254	\$ 496,849,225	\$ 1,087,223,721	\$ 32,492,575	\$ 54,586,037,180
Employer Contributions	1,153,207,663	855,306,456	93,651,295	21,277,085	79,168,046	913,485	2,203,524,030
Member Contributions	531,930,702	306,671,108	9,431,369	3,594,984	13,713,200	396,331	865,737,694
Investment Returns	8,699,680,058	4,786,760,879	403,734,005	129,883,850	287,059,207	8,644,049	14,315,762,048
Disbursements from the Trust	(2,485,957,489)	(1,623,566,496)	(135,711,059)	(37,943,823)	(82,039,172)	(1,343,141)	(4,366,561,180)
Net Transfers	6,907,551	(7,126,754)	-	-	219,203	-	-
Market Value of Assets as of 6/30/2021	\$ 41,120,778,573	\$ 22,536,385,510	\$ 1,907,226,864	\$ 613,661,321	\$ 1,385,344,205	\$ 41,103,299	\$ 67,604,499,772

Totals may not add due to rounding.



# Summary of the Development of the Actuarial Value of Assets

## June 30, 2021

	Total State	Total Municipal	Total MSRPS
Beginning of Year:			
(1) Market Value of Assets	\$49,788,717,336	\$4,797,319,844	\$54,586,037,180
(2) Actuarial Value of Assets	51,304,543,031	4,942,350,958	56,246,893,989
End of Year:			
(3) Market Value of Assets	61,666,042,616	5,938,457,156	67,604,499,772
(4) Net of Contributions and Disbursements	(1,178,553,792)	(118,745,664)	(1,297,299,456)
(5) Total Investment Income			
=(3)-(1)-(4)	13,055,879,072	1,259,882,976	14,315,762,048
(6) Projected Rate of Return	7.40%	7.40%	7.40%
(7) Projected Investment Income			
=(1)x(6)+([1+(6)] <sup>.5</sup> -1)x(4)	\$ 3,641,536,776	\$ 350,686,486	\$ 3,992,223,262
(8) Beginning of Year Asset Adjustment	1	0	1
(9) Investment Income in Excess of Projected Income	9,414,342,296	909,196,490	10,323,538,786
(10) Excess Investment Income Recognized			
This Year (5-year recognition)			
(10a) From This Year	3,765,736,918	363,678,597	4,129,415,515
(10b) From One Year Ago	(379,693,262)	(36,445,195)	(416,138,457)
(10c) From Two Years Ago	(96,725,141)	(9,284,054)	(106,009,195)
(10d) From Three Years Ago	48,128,675	4,743,653	52,872,328
(10e) From Four Years Ago	196,865,417	19,114,521	215,979,938
(10f) Total Phase-ins	3,534,312,607	341,807,522	3,876,120,129
(11) Change in Actuarial Value of Assets			
=(4)+(7)+(8)+(10f)	5,997,295,592	573,748,344	6,571,043,936
End of Year:			
<b>(3) Market Value of Assets as of 6/30</b>	<b>61,666,042,616</b>	<b>5,938,457,156</b>	<b>67,604,499,772</b>
(12) Preliminary Actuarial Value of Assets = (2)+(11)	57,301,838,623	5,516,099,302	62,817,937,925
(12a) Upper Collar Limit 120% x (3)	73,999,251,140	7,126,148,587	81,125,399,727
(12b) Lower Collar Limit 80% x (3)	49,332,834,092	4,750,765,725	54,083,599,817
(13) Adjustment to Remain within 20% Collar	0	0	0
<b>(14) Final Actuarial Value of Assets as of 6/30</b>	<b>57,301,838,623</b>	<b>5,516,099,302</b>	<b>62,817,937,925</b>
(15) Difference Between Market & Actuarial Values	4,364,203,993	422,357,854	4,786,561,847
(16) Actuarial Value Rate of Return	14.15%	14.18%	14.15%
(17) Market Value Rate of Return	26.54%	26.59%	26.54%
(18) Ratio of Actuarial Value to Market Value	93%	93%	93%



# Summary of the Development of the Actuarial Value of Assets (State Portion Only)

## June 30, 2021

	TCS	ECS	State Police	Judges	LEOPS	Total State
Beginning of Year:						
(1) Market Value of Assets	\$33,215,010,088	\$13,794,738,415	\$ 1,536,121,254	\$496,849,225	\$745,998,354	\$49,788,717,336
(2) Actuarial Value of Assets	34,228,754,250	14,212,473,119	1,582,378,203	512,036,244	768,901,216	51,304,543,031
End of Year:						
(3) Market Value of Assets	41,120,778,573	17,083,759,345	1,907,226,864	613,661,321	940,616,513	61,666,042,616
(4) Net of Contributions and Disbursements	(793,911,573)	(337,748,287)	(32,628,395)	(13,071,754)	(1,193,783)	(1,178,553,792)
(5) Total Investment Income						
= (3)-(1)-(4)	\$ 8,699,680,058	\$3,626,769,217	\$ 403,734,005	\$ 129,883,850	\$ 195,811,942	\$ 13,055,879,072
(6) Projected Rate of Return	7.40%	7.40%	7.40%	7.40%	7.40%	7.40%
(7) Projected Investment Income						
= (1)x(6)+[(1+(6))^5-1]x(4)	\$ 2,429,060,228	\$ 1,008,536,967	\$ 112,487,266	\$ 36,291,819	\$ 55,160,496	\$ 3,641,536,776
(8) Beginning of Year Asset Adjustment	0	0	0	0	1	1
(9) Investment Income in Excess of Projected Income	\$ 6,270,619,830	\$ 2,618,232,250	\$ 291,246,739	\$ 93,592,031	\$ 140,651,446	\$ 9,414,342,296
(10) Excess Investment Income Recognized This Year (5-year recognition)						
(10a) From This Year	2,508,247,932	1,047,292,900	116,498,696	37,436,812	56,260,578	3,765,736,918
(10b) From One Year Ago	(253,503,010)	(105,092,630)	(11,596,672)	(3,763,697)	(5,737,253)	(379,693,262)
(10c) From Two Years Ago	(64,255,432)	(27,170,010)	(2,993,011)	(994,440)	(1,312,248)	(96,725,141)
(10d) From Three Years Ago	31,467,397	14,064,503	1,559,453	466,840	570,482	48,128,675
(10e) From Four Years Ago	130,099,379	56,016,844	5,989,862	1,917,407	2,841,925	196,865,417
(10f) Total Phase-ins	2,352,056,266	985,111,607	109,458,328	35,062,922	52,623,484	3,534,312,607
(11) Change in Actuarial Value of Assets = (4)+(7)+(8)+(10f)	3,987,204,921	1,655,900,287	189,317,199	58,282,987	106,590,198	5,997,295,592
End of Year:						
<b>(3) Market Value of Assets as of 6/30</b>	<b>41,120,778,573</b>	<b>17,083,759,345</b>	<b>1,907,226,864</b>	<b>613,661,321</b>	<b>940,616,513</b>	<b>61,666,042,616</b>
(12) Preliminary Actuarial Value of Assets = (2)+(11)	38,215,959,171	15,868,373,406	1,771,695,402	570,319,231	875,491,414	57,301,838,623
(12a) Upper Collar Limit 120% x (3)	49,344,934,288	20,500,511,214	2,288,672,237	736,393,585	1,128,739,816	73,999,251,140
(12b) Lower Collar Limit 80% x (3)	32,896,622,858	13,667,007,476	1,525,781,491	490,929,057	752,493,210	49,332,834,092
(13) Adjustment to Remain within 20% Collar	0	0	0	0	0	0
<b>(14) Final Actuarial Value of Assets as of 6/30</b>	<b>38,215,959,171</b>	<b>15,868,373,406</b>	<b>1,771,695,402</b>	<b>570,319,231</b>	<b>875,491,414</b>	<b>57,301,838,623</b>
(15) Difference Between Market & Actuarial Values	2,904,819,402	1,215,385,939	135,531,462	43,342,090	65,125,099	4,364,203,993
(16) Actuarial Value Rate of Return	14.13%	14.20%	14.17%	14.12%	14.03%	14.15%
(17) Market Value Rate of Return	26.51%	26.62%	26.56%	26.49%	26.27%	26.54%
(18) Ratio of Actuarial Value to Market Value	93%	93%	93%	93%	93%	93%



## Development of the Actuarial Value of Assets Teachers' Combined System

	2020	2021	2022	2023	2024	2025
Beginning of Year:						
(1) Market Value of Assets	\$32,802,924,135	\$33,215,010,088				
(2) Actuarial Value of Assets	33,060,345,745	34,228,754,250				
End of Year:						
(3) Market Value of Assets	33,215,010,088	41,120,778,573				
(4) Net of Contributions and Disbursements	(721,592,903)	(793,911,573)				
(5) Total Investment Income						
=(3)-(1)-(4)	1,133,678,856	8,699,680,058				
(6) Projected Rate of Return	7.40%	7.40%	6.80%			
(7) Projected Investment Income						
=(1)x(6)+[(1+(6)) <sup>5</sup> -1]x(4)	2,401,193,907	2,429,060,228				
(8) Beginning of Year Asset Adjustment	0	0				
(9) Investment Income in Excess of Projected Income	(1,267,515,051)	6,270,619,830				
(10) Excess Investment Income Recognized This Year (5-year recognition)						
(10a) From This Year	(253,503,010)	2,508,247,932				
(10b) From One Year Ago	(64,255,432)	(253,503,010)	\$ 940,592,975			
(10c) From Two Years Ago	31,467,397	(64,255,432)	(253,503,010)	\$ 940,592,975		
(10d) From Three Years Ago	130,099,381	31,467,397	(64,255,432)	(253,503,010)	\$ 940,592,975	
(10e) From Four Years Ago	(355,000,835)	130,099,379	31,467,398	(64,255,432)	(253,503,010)	\$ 940,592,973
(10f) Total Phase-ins	(511,192,499)	2,352,056,266	654,301,931	622,834,533	687,089,965	940,592,973
(11) Change in Actuarial Value of Assets						
=(4)+(7)+(8)+(10f)	1,168,408,505	3,987,204,921				
End of Year:						
<b>(3) Market Value of Assets</b>	<b>33,215,010,088</b>	<b>41,120,778,573</b>				
(12) Preliminary Actuarial Value of Assets = (2)+(11)	34,228,754,250	38,215,959,171				
(12a) Upper Collar Limit 120% x (3)	39,858,012,105	49,344,934,288				
(12b) Lower Collar Limit 80% x (3)	26,572,008,070	32,896,622,858				
(13) Adjustment to Remain within 20% Collar	0	0				
<b>(14) Final Actuarial Value of Assets as of 6/30</b>	<b>34,228,754,250</b>	<b>38,215,959,171</b>				
(15) Difference Between Market & Actuarial Values	(1,013,744,162)	2,904,819,402				
(16) Actuarial Value Rate of Return	5.78%	14.13%				
(17) Market Value Rate of Return	3.49%	26.51%				
(18) Ratio of Actuarial Value to Market Value	103%	93%				



## Development of the Actuarial Value of Assets Employees' Combined System (State)

	2020	2021	2022	2023	2024	2025
Beginning of Year:						
(1) Market Value of Assets	\$13,692,118,603	\$13,794,738,415				
(2) Actuarial Value of Assets	13,796,352,071	14,212,473,119				
End of Year:						
(3) Market Value of Assets	13,794,738,415	17,083,759,345				
(4) Net of Contributions and Disbursements	(371,628,924)	(337,748,287)				
(5) Total Investment Income						
=(3)-(1)-(4)	474,248,736	3,626,769,217				
(6) Projected Rate of Return	7.40%	7.40%	6.80%			
(7) Projected Investment Income						
=(1)x(6)+([1+(6)] <sup>5</sup> -1)x(4)	999,711,888	1,008,536,967				
(8) Beginning of Year Asset Adjustment	0	0				
(9) Investment Income in Excess of Projected Income	(525,463,152)	2,618,232,250				
(10) Excess Investment Income Recognized This Year (5-year recognition)						
(10a) From This Year	(105,092,630)	1,047,292,900				
(10b) From One Year Ago	(27,170,010)	(105,092,630)	\$ 392,734,838			
(10c) From Two Years Ago	14,064,503	(27,170,010)	(105,092,630)	\$ 392,734,838		
(10d) From Three Years Ago	56,016,846	14,064,503	(27,170,010)	(105,092,630)	\$ 392,734,838	
(10e) From Four Years Ago	(149,780,625)	56,016,844	14,064,502	(27,170,011)	(105,092,632)	\$ 392,734,836
(10f) Total Phase-ins	(211,961,916)	985,111,607	274,536,700	260,472,197	287,642,206	392,734,836
(11) Change in Actuarial Value of Assets						
=(4)+(7)+(8)+(10f)	416,121,048	1,655,900,287				
End of Year:						
<b>(3) Market Value of Assets</b>	<b>13,794,738,415</b>	<b>17,083,759,345</b>				
(12) Preliminary Actuarial Value of Assets = (2)+(11)	14,212,473,119	15,868,373,406				
(12a) Upper Collar Limit 120% x (3)	16,553,686,098	20,500,511,214				
(12b) Lower Collar Limit 80% x (3)	11,035,790,732	13,667,007,476				
(13) Adjustment to Remain within 20% Collar	0	0				
<b>(14) Final Actuarial Value of Assets as of 6/30</b>	<b>14,212,473,119</b>	<b>15,868,373,406</b>				
(15) Difference Between Market & Actuarial Values	(417,734,704)	1,215,385,939				
(16) Actuarial Value Rate of Return	5.79%	14.20%				
(17) Market Value Rate of Return	3.51%	26.62%				
(18) Ratio of Actuarial Value to Market Value	103%	93%				



## Development of the Actuarial Value of Assets State Police

	2020	2021	2022	2023	2024	2025
Beginning of Year:						
(1) Market Value of Assets	\$ 1,510,328,194	\$ 1,536,121,254				
(2) Actuarial Value of Assets	1,522,238,564	1,582,378,203				
End of Year:						
(3) Market Value of Assets	1,536,121,254	1,907,226,864				
(4) Net of Contributions and Disbursements	(27,006,461)	(32,628,395)				
(5) Total Investment Income						
=(3)-(1)-(4)	52,799,521	403,734,005				
(6) Projected Rate of Return	7.40%	7.40%	6.80%			
(7) Projected Investment Income						
=(1)x(6)+([1+(6)] <sup>5</sup> -1)x(4)	110,782,879	112,487,266				
(8) Beginning of Year Asset Adjustment	0	0				
(9) Investment Income in Excess of Projected Income	(57,983,358)	291,246,739				
(10) Excess Investment Income Recognized						
This Year (5-year recognition)						
(10a) From This Year	(11,596,672)	116,498,696				
(10b) From One Year Ago	(2,993,011)	(11,596,672)	\$ 43,687,011			
(10c) From Two Years Ago	1,559,453	(2,993,011)	(11,596,672)	\$ 43,687,011		
(10d) From Three Years Ago	5,989,864	1,559,453	(2,993,011)	(11,596,672)	\$ 43,687,011	
(10e) From Four Years Ago	(16,596,413)	5,989,862	1,559,453	(2,993,009)	(11,596,670)	\$ 43,687,010
(10f) Total Phase-ins	(23,636,779)	109,458,328	30,656,781	29,097,330	32,090,341	43,687,010
(11) Change in Actuarial Value of Assets						
=(4)+(7)+(8)+(10f)	60,139,639	189,317,199				
End of Year:						
<b>(3) Market Value of Assets</b>	<b>1,536,121,254</b>	<b>1,907,226,864</b>				
(12) Preliminary Actuarial Value of Assets = (2)+(11)	1,582,378,203	1,771,695,402				
(12a) Upper Collar Limit 120% x (3)	1,843,345,505	2,288,672,237				
(12b) Lower Collar Limit 80% x (3)	1,228,897,003	1,525,781,491				
(13) Adjustment to Remain within 20% Collar	0	0				
<b>(14) Final Actuarial Value of Assets as of 6/30</b>	<b>1,582,378,203</b>	<b>1,771,695,402</b>				
(15) Difference Between Market & Actuarial Values	(46,256,949)	135,531,462				
(16) Actuarial Value Rate of Return	5.78%	14.17%				
(17) Market Value Rate of Return	3.53%	26.56%				
(18) Ratio of Actuarial Value to Market Value	103%	93%				



## Development of the Actuarial Value of Assets Judges

	2020	2021	2022	2023	2024	2025
Beginning of Year:						
(1) Market Value of Assets	\$490,018,440	\$496,849,225				
(2) Actuarial Value of Assets	494,038,020	512,036,244				
End of Year:						
(3) Market Value of Assets	496,849,225	613,661,321				
(4) Net of Contributions and Disbursements	(10,239,979)	(13,071,754)				
(5) Total Investment Income						
=(3)-(1)-(4)	17,070,764	129,883,850				
(6) Projected Rate of Return	7.40%	7.40%	6.80%			
(7) Projected Investment Income						
=(1)x(6)+([1+(6)] <sup>5</sup> -1)x(4)	35,889,247	36,291,819				
(8) Beginning of Year Asset Adjustment	0	0				
(9) Investment Income in Excess of Projected Income	(18,818,483)	93,592,031				
(10) Excess Investment Income Recognized This Year (5-year recognition)						
(10a) From This Year	(3,763,697)	37,436,812				
(10b) From One Year Ago	(994,440)	(3,763,697)	\$ 14,038,805			
(10c) From Two Years Ago	466,840	(994,440)	(3,763,697)	\$ 14,038,805		
(10d) From Three Years Ago	1,917,407	466,840	(994,440)	(3,763,697)	\$ 14,038,805	
(10e) From Four Years Ago	(5,277,154)	1,917,407	466,840	(994,440)	(3,763,695)	\$ 14,038,804
(10f) Total Phase-ins	(7,651,044)	35,062,922	9,747,508	9,280,668	10,275,110	14,038,804
(11) Change in Actuarial Value of Assets						
=(4)+(7)+(8)+(10f)	17,998,224	58,282,987				
End of Year:						
<b>(3) Market Value of Assets</b>	<b>496,849,225</b>	<b>613,661,321</b>				
(12) Preliminary Actuarial Value of Assets = (2)+(11)	512,036,244	570,319,231				
(12a) Upper Collar Limit 120% x (3)	596,219,070	736,393,585				
(12b) Lower Collar Limit 80% x (3)	397,479,380	490,929,057				
(13) Adjustment to Remain within 20% Collar	0	0				
<b>(14) Final Actuarial Value of Assets as of 6/30</b>	<b>512,036,244</b>	<b>570,319,231</b>				
(15) Difference Between Market & Actuarial Values	(15,187,019)	43,342,090				
(16) Actuarial Value Rate of Return	5.78%	14.12%				
(17) Market Value Rate of Return	3.52%	26.49%				
(18) Ratio of Actuarial Value to Market Value	103%	93%				



## Development of the Actuarial Value of Assets LEOPS (State)

	2020	2021	2022	2023	2024	2025
Beginning of Year:						
(1) Market Value of Assets	\$725,210,573	\$745,998,354				
(2) Actuarial Value of Assets	730,534,135	768,901,216				
End of Year:						
(3) Market Value of Assets	745,998,353	940,616,513				
(4) Net of Contributions and Disbursements	(4,044,559)	(1,193,783)				
(5) Total Investment Income						
=(3)-(1)-(4)	24,832,339	195,811,942				
(6) Projected Rate of Return	7.40%	7.40%	6.80%			
(7) Projected Investment Income						
=(1)x(6)+([1+(6)] <sup>5</sup> -1)x(4)	53,518,604	55,160,496				
(8) Beginning of Year Asset Adjustment	0	1				
(9) Investment Income in Excess of Projected Income	(28,686,265)	140,651,446				
(10) Excess Investment Income Recognized						
This Year (5-year recognition)						
(10a) From This Year	(5,737,253)	56,260,578				
(10b) From One Year Ago	(1,312,248)	(5,737,253)	\$ 21,097,717			
(10c) From Two Years Ago	570,482	(1,312,248)	(5,737,253)	\$ 21,097,717		
(10d) From Three Years Ago	2,841,924	570,482	(1,312,248)	(5,737,253)	\$ 21,097,717	
(10e) From Four Years Ago	(7,469,869)	2,841,925	570,483	(1,312,246)	(5,737,252)	\$ 21,097,717
(10f) Total Phase-ins	(11,106,964)	52,623,484	14,618,699	14,048,218	15,360,465	21,097,717
(11) Change in Actuarial Value of Assets						
=(4)+(7)+(8)+(10f)	38,367,081	106,590,198				
End of Year:						
<b>(3) Market Value of Assets</b>	<b>745,998,353</b>	<b>940,616,513</b>				
(12) Preliminary Actuarial Value of Assets = (2)+(11)	768,901,216	875,491,414				
(12a) Upper Collar Limit 120% x (3)	895,198,024	1,128,739,816				
(12b) Lower Collar Limit 80% x (3)	596,798,682	752,493,210				
(13) Adjustment to Remain within 20% Collar	0	0				
<b>(14) Final Actuarial Value of Assets as of 6/30</b>	<b>768,901,216</b>	<b>875,491,414</b>				
(15) Difference Between Market & Actuarial Values	(22,902,863)	65,125,099				
(16) Actuarial Value Rate of Return	5.82%	14.03%				
(17) Market Value Rate of Return	3.43%	26.27%				
(18) Ratio of Actuarial Value to Market Value	103%	93%				



**SECTION IV**

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**GAIN/LOSS EXPERIENCE ANALYSIS**

**STATE ONLY**

# Gain/(Loss) Experience Analysis

## State Only

### Comments

#### ***Purpose of Gain/Loss Analysis***

Regular actuarial valuations provide valuable information about the composite change in unfunded actuarial accrued liabilities – whether or not the liabilities are increasing or decreasing, and by how much. However, valuations do not show the portion of the change attributable to each risk area within the retirement system financial mechanism: the rate of investment income on plan assets; the rates of withdrawal of active members who leave covered employment; the rates of mortality; the rates of disability; the rates of salary increase; and the assumed ages at actual retirement. In an actuarial valuation, assumptions are made as to what these rates will be for the next year and for decades in the future.

*The objective of a gain and loss analysis is to determine the portion of the change in unfunded actuarial accrued liabilities attributable to each risk area.*

The fact that actual experience differs from assumed experience is to be expected – the future cannot be predicted with precision. Changes in the valuation assumed experience for a risk area should be made when the differences between assumed and actual experience have been observed to be sizeable and persistent. One year's gain/loss analysis may or may not be indicative of *long-term trends, which are the basis of financial assumptions.*

The expected and actual numbers of retirements, disabilities, deaths, and terminations found on pages IV-5 through IV-11 reflect experience over the 12-month period from June 30, **2020** through June 30, **2021**.

## Derivation of Experience Gain/(Loss) Year Ended June 30, 2021 State Only (\$ in Millions)

Actual experience will never (except by coincidence) coincide exactly with assumed experience. Gains and losses often offset one another over a period of years, but sizable year-to-year fluctuations are common.

	Fiscal Year Ended June 30,	
	2021	2020
(1) UAAL* at start of year	\$19,104	\$19,053
(2) Normal cost from last valuation	1,301	1,292
(3) Actual contributions	2,842	2,786
(4) Interest accrual: $[(1) \times 0.0740 + \{(2) - (3)\} \times \{1.0740^{.5} - 1\}]$	1,358	1,356
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	18,921	18,915
(6) Change in benefit provisions	0	(0)
(7) Changes in methods and assumptions	1,262	0
(8) Expected UAAL after changes: (5) + (6) + (7)	20,183	18,915
(9) Actual UAAL at end of year	17,896	19,104
(10) Gain/(loss): (8) - (9)	2,287	(189)
(10a) Portion of gain/(loss) due to Assets	1,539	(794)
(10b) Portion of gain/(loss) due to Liabilities	748	605
(10c) Actuarial accrued liabilities at beginning of year	70,409	68,656
(11) Gain/(loss) as a percent of beginning accrued liabilities	3.2%	(0.3%)

\* *Unfunded Actuarial Accrued Liability.*  
*Numbers may not add due to rounding.*



**Summary of System Experience**  
**Year Ended June 30, 2021**  
**State Only**  
**(\$ in Millions)**

	2021	
	Total State	% of AAL
<b>Beginning of Year</b>		
1. Total Actuarial Accrued Liabilities (AAL)	\$70,408.67	100.0 %
2. Valuation Assets	51,304.54	72.9 %
3. Unfunded Actuarial Accrued Liabilities	\$19,104.13	27.1 %
<b>2021 Experience Gains (Losses)</b>		
4. Gains (losses) in economic risk areas		
a. Pay increases	\$ 221.72	0.3 %
b. Investment return	1,539.50	2.2 %
c. Total	\$ 1,761.22	2.5 %
5. Gains (losses) from active member decrement experience		
a. Service retirement	\$ 25.95	0.0 %
b. Disability retirement	50.89	0.1 %
c. Death-in-service	(9.14)	0.0 %
d. Other separations	19.13	0.0 %
e. Total	\$ 86.83	0.1 %
6. Gains (losses) from retiree experience		
a. Mortality	\$ 146.94	0.2 %
b. Benefit related/COLAs	404.40	0.6 %
c. Other/unexpected retirees & beneficiaries	(89.90)	(0.1)%
d. Total	\$ 461.44	0.7 %
7. Gains (losses) from other sources		
a. Actual vs. expected liability for members commencing receipt of benefits	\$ 90.55	0.1 %
b. Deferred members returning to work	(32.00)	0.0 %
c. Deferred mortality/actual vs. expected liability	9.85	0.0 %
d. Data related	(19.01)	0.0 %
e. All other sources	(72.58)	(0.1)%
f. Total	\$ (23.19)	0.0 %
<b>8. Total experience gains (losses)</b> <b>(4c) + (5e) + (6d) + (7f)</b>	<b>\$ 2,286.30</b>	<b>3.3 %</b>
<b>End of Year</b>		
9. Total Actuarial Accrued Liabilities*	\$72,053.34	100.0 %
10. Valuation Assets	55,418.97	76.9 %
11. Unfunded Actuarial Accrued Liabilities	\$16,634.37	23.1 %

\* Prior to reflecting changes in assumptions and/or benefit provisions.  
Totals may not add due to rounding.



## Historical Summary of System Experience State Only (\$ in Millions)

Year	Gain (Loss) During the Year Due To								Total Experience
	Service Retirement	Disability Retirement	Survivor Benefits	Other Turnover	Pay Increases	Investment Return	Retiree Experience	Other Sources	
2017	\$ 8.2	\$ 19.3	\$ (7.0)	\$ 115.6	\$ 185.8	\$ (254.0)	\$ 408.9	\$ (151.6)	\$ 325.1
2018	(44.1)	32.1	(12.3)	167.7	341.0	(305.4)	56.8	(318.1)	(82.3)
2019	(9.5)	30.6	(9.1)	118.5	115.6	(847.2)	(33.3)	(199.0)	(833.6)
2020	(4.4)	44.3	(7.6)	84.4	(204.5)	(793.9)	202.4	489.8	(189.4)
2021	26.0	50.9	(9.1)	19.1	221.7	1,539.5	461.4	(23.2)	2,286.3

## Active Members Population Development Year Ended June 30, 2021 State Only

	Total State	
	Actual	Expected
<b>Beginning Census</b>	169,687	
- Service Retirement	4,152	4,906
- Death	228	182
- Disability Retirement	165	459
- Other Separations	8,358	7,909
- Transfers Out	56	
+ Transfers In	56	
+ New Entrants	11,974	
<b>Ending Census</b>	168,758	

This page reconciles the active member populations reported in connection with the 2020 and 2021 valuations on an actual and expected basis. Assumptions related to population development are a primary focus of the gain/loss analysis. They generally tend to be more stable than economic assumptions, and therefore, measurements have more meaning.

Assumptions used for the pension valuation were established on a population-weighted basis with the exception of the withdrawal assumptions. Therefore, the expected "Other Separations" presented above for these divisions are based upon liability-weighted assumptions. If population-weighted assumptions were used, the expected numbers would be different and probably closer to the actual count than the figure shown.

**Salary Increases**  
**for Member Actives Both at Beginning and End of Year**  
**During the Year Ended June 30, 2021**  
**State Only**

Service Beginning of Year	Number	Salary Increases	
		Actual	Expected
0	610	8.47%	7.56%
1	12,741	5.78%	6.91%
2	10,361	5.06%	6.02%
3	8,741	4.97%	5.78%
4	8,044	5.01%	5.63%
5	7,189	4.67%	5.54%
6	7,198	4.65%	5.52%
7	6,639	4.45%	5.38%
8	5,993	4.32%	5.38%
9	4,891	4.18%	5.26%
Total	72,407		

Age Group	Number	Salary Increases for More than 10 Years of Service	
		Actual	Expected
25-29	29	7.39%	5.69%
30-34	2,565	4.71%	5.32%
35-39	9,970	4.47%	5.05%
40-44	12,077	4.03%	4.57%
45-49	13,636	3.62%	4.21%
50-54	15,325	3.03%	3.98%
55-59	14,096	2.74%	3.90%
60-64	10,735	2.68%	3.85%
65 & Over	5,888	2.44%	3.75%
Total	84,321		

Total Payroll Growth			
	2021	2020	2019
Actual	2.04%	4.95%	2.83%
Assumed	3.10%	3.10%	3.10%

**Active Members Who Retired with  
Retirement Benefits (Unreduced or Reduced)  
During the Year Ended June 30, 2021  
State Only**

Ages	Male		Female		Total	
	Actual	Expected	Actual	Expected	Actual	Expected
Under 50	68	78	16	35	84	113
50	18	16	8	10	26	26
51	9	14	10	12	19	26
52	17	17	18	23	35	40
53	9	21	38	35	47	56
54	16	18	46	42	62	60
55	32	35	77	81	109	116
56	21	31	86	87	107	118
57	28	36	104	86	132	122
58	31	33	110	95	141	128
59	26	34	110	110	136	144
60	39	41	123	146	162	187
61	50	52	168	166	218	218
62	109	132	422	430	531	562
63	67	95	256	312	323	407
64	56	76	233	250	289	326
65	57	77	240	243	297	320
66	113	88	296	256	409	344
67	56	65	182	179	238	244
68	47	46	126	121	173	167
69	37	40	106	104	143	144
70	45	56	90	81	135	137
71	29	33	40	58	69	91
72	25	34	41	43	66	77
73	16	20	38	37	54	57
74	12	18	24	26	36	44
75 & Over	42	261	69	371	111	632
<b>Totals</b>	<b>1,075</b>	<b>1,467</b>	<b>3,077</b>	<b>3,439</b>	<b>4,152</b>	<b>4,906</b>

Beginning of Year Average for Those Who Retired						
	Male		Female		Total	
Age	62.5	years	63.2	years	63.0	years
Service	26.3	years	26.0	years	26.0	years

**Active Members Who Retired with  
Disability Benefits  
During the Year Ended June 30, 2021  
State Only**

Ages	Male		Female		Total	
	Actual	Expected	Actual	Expected	Actual	Expected
Under 25	0	1	0	0	0	1
25-29	0	3	0	2	0	5
30-34	0	6	1	6	1	12
35-39	2	9	2	11	4	20
40-44	4	13	11	20	15	33
45-49	7	18	14	35	21	53
50-54	12	27	23	65	35	92
55-59	8	30	32	87	40	117
60-64	10	24	29	64	39	88
65-69	2	10	4	19	6	29
70-74	2	3	1	5	3	8
75 and over	1	0	0	0	1	1
<b>Totals</b>	<b>48</b>	<b>144</b>	<b>117</b>	<b>314</b>	<b>165</b>	<b>459</b>

Beginning of Year Average for Those Who Became Disabled						
	Male		Female		Total	
Age	53.8	years	53.8	years	53.8	years
Service	17.2	years	19.5	years	18.9	years

**Active Members Who Left Active Status with a  
Deferred Benefit (Payments Beginning at a Later Age)  
During the Year Ended June 30, 2021  
State Only**

Ages	Male		Female		Total	
	Actual	Expected	Actual	Expected	Actual	Expected
Under 25	0	0	0	0	0	0
25-29	1	1	0	0	1	1
30-34	25	21	80	59	105	80
35-39	70	63	215	174	285	237
40-44	75	63	193	155	268	218
45-49	74	68	270	173	344	241
50-54	86	68	337	186	423	254
55-59	65	25	209	85	274	110
60-64	58	10	114	32	172	42
65-69	17	0	52	0	69	0
70-74	12	0	12	0	24	0
75 and over	3	0	4	0	7	0
<b>Totals</b>	<b>486</b>	<b>319</b>	<b>1,486</b>	<b>864</b>	<b>1,972</b>	<b>1,183</b>

Beginning of Year Average for Those Who Terminated With a Deferred Benefit						
	Male		Female		Total	
Age	49.3	years	48.6	years	48.8	years
Service	13.8	years	12.2	years	12.6	years

**Active Members Who Left Active Status with  
No Benefit Payable (Contributions Refunded)  
During the Year Ended June 30, 2021  
State Only**

Ages	Male		Female		Total	
	Actual	Expected	Actual	Expected	Actual	Expected
Under 25	112	91	257	241	369	332
25-29	354	351	972	927	1,326	1,278
30-34	382	368	1,086	930	1,468	1,298
35-39	246	272	667	690	913	962
40-44	169	202	416	528	585	730
45-49	142	172	338	471	480	643
50-54	124	165	296	446	420	611
55-59	95	124	220	321	315	445
60-64	90	93	194	191	284	284
65-69	44	42	101	68	145	110
70-74	19	14	41	19	60	33
75 and over	5	0	16	0	21	0
<b>Totals</b>	<b>1,782</b>	<b>1,894</b>	<b>4,604</b>	<b>4,832</b>	<b>6,386</b>	<b>6,726</b>

Beginning of Year Average for Those Who Terminated and Refunded						
	Male		Female		Total	
Age	38.6	years	38.0	years	38.1	years
Service	3.7	years	3.7	years	3.7	years

Does not include members that died while in active status.

**Comparison of Actual to Expected Deaths  
Among Retired Lives  
During the Year Ended June 30, 2021  
State Only**

Ages	Male			Female			Total		
	Actual	Expected	Exposure	Actual	Expected	Exposure	Actual	Expected	Exposure
Under 50	3	3	694	6	5	713	9	8	1,407
50-54	9	7	1,195	8	10	1,052	17	17	2,247
55-59	32	18	2,129	27	29	3,229	59	47	5,358
60-64	63	44	4,120	89	67	8,944	152	111	13,064
65-69	158	110	8,478	248	176	22,197	406	286	30,675
70-74	280	208	11,206	388	305	25,051	668	513	36,257
75-79	305	230	7,530	393	348	15,895	698	578	23,425
80-84	293	235	4,283	415	366	8,955	708	601	13,238
85-89	308	241	2,458	478	397	5,237	786	638	7,695
90-94	202	154	929	431	345	2,567	633	499	3,496
95-99	57	48	192	225	179	821	282	226	1,013
100 & Over	10	8	22	39	42	128	49	50	150
<b>Totals</b>	<b>1,720</b>	<b>1,305</b>	<b>43,236</b>	<b>2,747</b>	<b>2,268</b>	<b>94,789</b>	<b>4,467</b>	<b>3,573</b>	<b>138,025</b>

## SECTION V

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### **HISTORICAL GASB No. 25 AND No. 27 INFORMATION**

GASB Statements No. 67 and No. 68 are the accounting standards which replaced GASB Statements No. 25 and 27. GASB Statement No. 67 is first effective for fiscal year 2014 and GASB Statement No. 68 is first effective for fiscal year 2015. A separate GASB Statements No. 67 and No. 68 report has been issued outside of this report. This section contains historical GASB Statements No. 25 and No. 27 reporting information for prior fiscal years and illustrative information for fiscal year 2015 and after.

## Schedule of Funding Progress (State and Municipal) (\$ in Thousands)

Actuarial Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Payroll (c)	UAAL as a Percentage of Payroll [(b - a) / c]
2011	\$ 36,177,656	\$ 55,917,543	\$ 19,739,887	64.70%	\$ 10,478,800	188%
2012	37,248,401	57,869,145	20,620,745	64.37%	10,336,537	199%
2013	39,350,969	60,060,091	20,709,122	65.52%	10,477,544	198%
2014	42,996,957	62,610,194	19,613,237	68.67%	10,803,632	182%
2015	46,170,624	66,281,781	20,111,157	69.66%	11,063,962	182%
2016	47,803,679	67,781,924	19,978,245	70.53%	11,155,924	179%
2017	50,250,465	69,986,576	19,736,111	71.80%	11,418,973	173%
2018	52,586,536	72,574,689	19,988,153	72.46%	11,566,220	173%
2019	54,361,969	74,526,000	20,164,031	72.94%	11,905,463	169%
2020	56,246,894	76,471,035	20,224,141	73.55%	12,501,422	162%
2021	62,817,938	81,738,557	18,920,619	76.85%	12,749,247	148%

*The figures for fiscal years prior to 2015 were applicable for both funding and accounting purposes under GASB Statements No. 25 and No. 27. The figures shown for fiscal year 2015 and after are applicable for funding purposes only. Accounting figures under GASB Statements No. 67 and No. 68 for fiscal year 2015 and after are shown in a separate report.*



## Schedule of Funding Progress (\$ in Thousands)

### Teachers' Combined System

Actuarial Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Payroll (c)	UAAL as a Percentage of Payroll [(b - a) / c]
2005	\$ 20,801,529	\$ 23,305,198	\$ 2,503,669	89.26%	\$ 4,867,396	51%
2006	21,575,451	25,617,484	4,042,033	84.22%	5,269,185	77%
2007	22,814,760	28,122,575	5,307,815	81.13%	5,709,765	93%
2008	23,784,404	29,868,705	6,084,301	79.63%	6,117,590	99%
2009	20,605,618	31,172,917	10,567,299	66.10%	6,194,734	171%
2010	20,908,149	31,963,421	11,055,272	65.41%	6,254,648	177%
2011	21,868,875	32,985,145	11,116,270	66.30%	6,196,976	179%
2012	22,523,978	34,252,715	11,728,737	65.76%	6,080,603	193%
2013	23,845,618	35,530,441	11,684,823	67.11%	6,185,176	189%
2014	26,067,577	36,882,587	10,815,010	70.68%	6,310,253	171%
2015	27,995,476	38,934,459	10,938,983	71.90%	6,470,706	169%
2016	29,020,809	39,934,125	10,913,316	72.67%	6,611,038	165%
2017	30,500,873	41,198,985	10,698,113	74.03%	6,780,838	158%
2018	31,945,910	42,739,562	10,793,652	74.75%	6,941,097	156%
2019	33,060,346	43,372,437	10,312,091	76.22%	7,153,063	144%
2020	34,228,754	44,456,529	10,227,775	76.99%	7,492,465	137%
2021	38,215,959	47,635,355	9,419,395	80.23%	7,688,846	123%

*The figures for fiscal years prior to 2015 were applicable for both funding and accounting purposes under GASB Statements No. 25 and No. 27. The figures shown for fiscal year 2015 and after are applicable for funding purposes only. Accounting figures under GASB Statements No. 67 and No. 68 for fiscal year 2015 and after are shown in a separate report.*



## Schedule of Funding Progress (\$ in Thousands)

### Employees' Combined System (State and Municipal)

Actuarial Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Payroll (c)	UAAL as a Percentage of Payroll [(b - a) / c]
2005	\$ 11,855,673	\$ 13,671,756	\$ 1,816,083	86.72%	\$ 3,537,602	51%
2006	12,287,942	15,291,091	3,003,149	80.36%	3,793,125	79%
2007	13,026,321	16,385,823	3,359,502	79.50%	4,016,221	84%
2008	13,599,717	17,609,769	4,010,052	77.23%	4,165,013	96%
2009	11,839,115	18,517,486	6,678,371	63.93%	4,249,536	157%
2010	11,937,944	19,009,788	7,071,844	62.80%	4,137,474	171%
2011	12,387,810	19,722,264	7,334,453	62.81%	4,027,810	182%
2012	12,667,592	20,283,028	7,615,436	62.45%	3,998,475	190%
2013	13,326,586	21,046,733	7,720,147	63.32%	4,030,261	192%
2014	14,547,390	22,059,765	7,512,375	65.95%	4,214,981	178%
2015	15,615,327	23,402,850	7,787,524	66.72%	4,300,748	181%
2016	16,130,438	23,817,251	7,686,814	67.73%	4,245,333	181%
2017	16,939,887	24,579,830	7,639,943	68.92%	4,319,053	177%
2018	17,679,888	25,462,497	7,782,609	69.44%	4,301,247	181%
2019	18,207,410	26,641,367	8,433,957	68.34%	4,409,941	191%
2020	18,769,843	27,323,459	8,553,616	68.69%	4,638,197	184%
2021	20,932,359	29,033,676	8,101,317	72.10%	4,681,866	173%

*The figures for fiscal years prior to 2015 were applicable for both funding and accounting purposes under GASB Statements No. 25 and No. 27. The figures shown for fiscal year 2015 and after are applicable for funding purposes only. Accounting figures under GASB Statements No. 67 and No. 68 for fiscal year 2015 and after are shown in a separate report.*



## Schedule of Funding Progress (\$ in Thousands)

### State Police

Actuarial Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Payroll (c)	UAAL as a Percentage of Payroll [(b - a) / c]
2005	\$ 1,289,345	\$ 1,284,950	\$ (4,395)	100.34%	\$ 76,463	-6%
2006	1,301,877	1,325,875	23,998	98.19%	80,649	30%
2007	1,334,375	1,516,935	182,560	87.97%	83,191	219%
2008	1,343,208	1,601,576	258,367	83.87%	86,464	299%
2009	1,119,766	1,710,356	590,591	65.47%	85,586	690%
2010	1,085,281	1,722,564	637,283	63.00%	81,705	780%
2011	1,090,383	1,759,676	669,293	61.96%	75,551	886%
2012	1,134,511	1,826,546	692,035	62.11%	77,690	891%
2013	1,164,217	1,882,501	718,284	61.84%	79,848	900%
2014	1,241,758	1,966,572	724,814	63.14%	85,660	846%
2015	1,314,315	2,103,134	788,819	62.49%	91,050	866%
2016	1,344,163	2,124,786	780,623	63.26%	93,491	835%
2017	1,408,754	2,198,337	789,583	64.08%	100,384	787%
2018	1,468,641	2,250,699	782,058	65.25%	100,325	780%
2019	1,522,239	2,300,933	778,694	66.16%	106,978	728%
2020	1,582,378	2,362,744	780,365	66.97%	116,274	671%
2021	1,771,695	2,527,230	755,535	70.10%	119,048	635%

*The figures for fiscal years prior to 2015 were applicable for both funding and accounting purposes under GASB Statements No. 25 and No. 27. The figures shown for fiscal year 2015 and after are applicable for funding purposes only. Accounting figures under GASB Statements No. 67 and No. 68 for fiscal year 2015 and after are shown in a separate report.*



## Schedule of Funding Progress (\$ in Thousands)

### Judges

Actuarial Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Payroll (c)	UAAL as a Percentage of Payroll [(b - a) / c]
2005	\$ 260,125	\$ 328,033	\$ 67,908	79.30%	\$ 33,074	205%
2006	273,679	352,537	78,858	77.63%	35,939	219%
2007	293,052	371,987	78,936	78.78%	37,638	210%
2008	306,716	406,782	100,066	75.40%	37,943	264%
2009	270,870	421,039	150,169	64.33%	40,266	373%
2010	276,643	426,215	149,572	64.91%	39,961	374%
2011	293,801	433,240	139,439	67.81%	38,810	359%
2012	330,154	421,286	91,132	78.37%	39,955	228%
2013	354,900	438,836	83,937	80.87%	40,001	210%
2014	389,072	459,447	70,375	84.68%	42,313	166%
2015	416,547	511,390	94,844	81.45%	44,613	213%
2016	430,563	523,929	93,365	82.18%	44,711	209%
2017	453,134	535,902	82,768	84.56%	46,876	177%
2018	477,006	556,746	79,740	85.68%	47,498	168%
2019	494,038	560,310	66,272	88.17%	48,935	135%
2020	512,036	589,299	77,263	86.89%	51,882	149%
2021	570,319	622,633	52,314	91.60%	52,073	100%

*The figures for fiscal years prior to 2015 were applicable for both funding and accounting purposes under GASB Statements No. 25 and No. 27. The figures shown for fiscal year 2015 and after are applicable for funding purposes only. Accounting figures under GASB Statements No. 67 and No. 68 for fiscal year 2015 and after are shown in a separate report.*



## Schedule of Funding Progress (\$ in Thousands)

### LEOPS (State and Municipal)

Actuarial Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Payroll (c)	UAAL as a Percentage of Payroll [(b - a) / c]
2005	\$ 310,087	\$ 537,736	\$ 227,648	57.67%	\$ 87,220	261%
2006	352,416	649,826	297,410	54.23%	106,669	279%
2007	414,153	738,549	324,396	56.08%	122,015	266%
2008	465,386	748,005	282,619	62.22%	133,445	212%
2009	441,827	895,099	453,273	49.36%	140,071	324%
2010	471,728	950,236	478,508	49.64%	140,199	341%
2011	526,807	1,002,708	475,900	52.54%	135,177	352%
2012	580,826	1,070,087	489,261	54.28%	135,185	362%
2013	642,678	1,143,154	500,476	56.22%	137,613	364%
2014	732,333	1,222,137	489,804	59.92%	145,673	336%
2015	808,436	1,308,633	500,197	61.78%	151,955	329%
2016	855,997	1,359,432	503,434	62.97%	156,396	322%
2017	924,705	1,449,365	524,660	63.80%	166,561	315%
2018	990,564	1,539,168	548,604	64.36%	170,555	322%
2019	1,052,205	1,623,133	570,928	64.83%	180,963	315%
2020	1,120,507	1,700,101	579,594	65.91%	194,667	298%
2021	1,289,508	1,875,983	586,475	68.74%	199,460	294%

*The figures for fiscal years prior to 2015 were applicable for both funding and accounting purposes under GASB Statements No. 25 and No. 27. The figures shown for fiscal year 2015 and after are applicable for funding purposes only. Accounting figures under GASB Statements No. 67 and No. 68 for fiscal year 2015 and after are shown in a separate report.*



## Schedule of Funding Progress (\$ in Thousands)

### CORS

Actuarial Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Payroll (c)	UAAL as a Percentage of Payroll [(b - a) / c]
2010	\$ 8,601	\$ 12,858	\$ 4,257	66.89%	\$ 3,956	108%
2011	9,980	14,511	4,531	68.78%	4,475	101%
2012	11,341	15,483	4,143	73.24%	4,628	90%
2013	16,971	18,426	1,456	92.10%	4,646	31%
2014	18,827	19,685	859	95.64%	4,752	18%
2015	20,523	21,313	790	96.29%	4,890	16%
2016	21,709	22,401	692	96.91%	4,954	14%
2017	23,112	24,157	1,044	95.68%	5,262	20%
2018	24,527	26,017	1,490	94.27%	5,498	27%
2019	25,732	27,820	2,088	92.49%	5,583	37%
2020	33,376	38,904	5,528	85.79%	7,937	70%
2021	38,097	43,680	5,584	87.22%	7,953	70%

*The figures for fiscal years prior to 2015 were applicable for both funding and accounting purposes under GASB Statements No. 25 and No. 27. The figures shown for fiscal year 2015 and after are applicable for funding purposes only. Accounting figures under GASB Statements No. 67 and No. 68 for fiscal year 2015 and after are shown in a separate report.*



## Schedule of Employer Contributions (State and Municipal)

(\$ in Thousands)

Fiscal Year Ended June 30,	Annual Required Contributions	Actual Contributions	Percentage Contributed
2011	\$ 2,035,401	\$ 1,512,473	74%
2012	2,146,624	1,521,761	71%
2013	2,149,985	1,643,101	76%
2014	2,320,991	1,733,652	75%
2015	2,107,731	1,858,613	88%
2016	1,948,082	1,870,655	96%
2017	2,033,311	2,033,311	100%
2018	1,995,018	1,995,018	100%
2019	2,054,092	2,054,092	100%
2020	2,144,269	2,144,269	100%
2021	2,203,524	2,203,524	100%

*The Annual Required Contribution "ARC" was an accounting term defined in GASB Statements No. 25 and No. 27 and is no longer applicable for fiscal year 2015 and after. The amounts for fiscal year 2015 and 2016 were calculated in the same manner as the previous years, but are not used under the current accounting standards GASB Statements No. 67 and No. 68. For Fiscal Years 2017 and after the employer contribution is based on the actuarially determined contribution as a percent of payroll, therefore, the required and actual contributions are equal.*



## Schedule of Employer Contributions by System (State and Municipal) (\$ in Thousands)

	Fiscal Year Ended June 30,	Annual Required Contributions	Actual Contributions	Percentage Contributed
<b>Teachers' Combined System</b>	2017	\$ 1,137,472	\$ 1,137,472	100%
	2018	1,122,986	1,122,986	100%
	2019	1,143,586	1,143,586	100%
	2020	1,170,248	1,170,248	100%
	2021	1,153,208	1,153,208	100%
<b>Employees' Combined System</b>	2017	730,028	730,028	100%
	2018	706,693	706,693	100%
	2019	736,742	736,742	100%
	2020	788,280	788,280	100%
	2021	855,306	855,306	100%
<b>State Police</b>	2017	83,000	83,000	100%
	2018	80,241	80,241	100%
	2019	86,173	86,173	100%
	2020	91,390	91,390	100%
	2021	93,651	93,651	100%
<b>Judges</b>	2017	21,861	21,861	100%
	2018	22,465	22,465	100%
	2019	21,737	21,737	100%
	2020	22,708	22,708	100%
	2021	21,277	21,277	100%
<b>LEOPS</b>	2017	60,472	60,472	100%
	2018	62,131	62,131	100%
	2019	65,314	65,314	100%
	2020	71,070	71,070	100%
	2021	79,168	79,168	100%
<b>CORS (Muni)</b>	2017	478	478	100%
	2018	501	501	100%
	2019	542	542	100%
	2020	573	573	100%
	2021	913	913	100%
<b>Total State</b>	2017	1,924,203	1,924,203	100%
	2018	1,879,141	1,879,141	100%
	2019	1,928,499	1,928,499	100%
	2020	2,008,467	2,008,467	100%
	2021	2,048,136	2,048,136	100%
<b>Total Municipal</b>	2017	109,108	109,108	100%
	2018	115,876	115,876	100%
	2019	125,593	125,593	100%
	2020	135,802	135,802	100%
	2021	155,388	155,388	100%

*The Annual Required Contribution "ARC" was an accounting term defined in GASB Statements No. 25 and No. 27 and is no longer applicable for fiscal year 2015 and after. The amount for fiscal year 2015 and after was calculated in the same manner as the previous years, but is not used under the current accounting standards GASB Statements No. 67 and No. 68. For Fiscal Years 2017 and after the employer contribution is based on the actuarially determined contribution as a percent of payroll, therefore, the required and actual contributions are equal.*



**APPENDIX A**

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**ACTUARIAL ASSUMPTIONS AND METHODS**

# Brief Summary of Actuarial Assumptions and Methods

Valuation date	June 30, 2021
Contribution Fiscal Year Ended	June 30, 2023
Actuarial cost method	Individual entry age
Amortization method for Unfunded Actuarial Accrued Liabilities (UAAL)	Level percent closed
Amortization period	25-year closed schedule ending June 30, 2039; 17 years remaining
Asset valuation method	5-year smoothed market (max. 120% and min. 80% of market value)
Actuarial assumptions:	
Investment rate of return	6.80%
Inflation	2.25% price; 2.75% wage
Projected salary increases	2.75% - 11.25%
Cost-of-living adjustments	1.96% - 2.75% for service prior to July 1, 2011.* 1.30% - 2.75% for service after June 30, 2011.*
	<i>* Based on System and provisions. See page A-2 and Appendix C for details.</i>
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2019 valuation pursuant to the 2018 Experience Study for the period July 1, 2014 to June 30, 2018.
Mortality	Various versions of the Pub-2010 Mortality Tables with projected generational mortality improvements based on the MP-2018 fully generational mortality improvement scale. Please see pages A-6 and A-7 for details.



## Actuarial Assumptions and Methods

Actuarial assumptions were developed in connection with a study of 2014-2018 experience in the Experience Study report dated August 16, 2019, which includes the rationale for the assumptions. The assumptions were adopted by the Board on August 20, 2019. Economic assumptions were updated for the June 30, 2021 valuation. Actuarial assumptions are based on a combination of future expectations and historical data. Specific assumptions are shown below.

### A. ACTUARIAL ASSUMPTIONS

	1. Valuation Interest Rate	2. Annual Rate of Increase in Cost of Living			3. Aggregate Payroll Growth
		Service Before 7/1/11	Service After 7/1/11		
Teachers' Retirement	6.80%	2.25%	2.25%	#	2.75%
Teachers' Pension	6.80%	1.96%	1.30%	***	2.75%
Employees' Retirement					
Regular	6.80%	2.25%	2.25%	#	2.75%
Correctional	6.80%	2.25%	1.30%	***	2.75%
Legislative	6.80%	2.75%	2.75%		2.75%
Employees' Pension	6.80%	1.96%	1.30%	*,***	2.75%
State Police Retirement	6.80%	2.25%	1.30%	***	2.75%
Judges Pension	6.80%	2.75%	2.75%		2.75%
LEOPS	6.80%	1.96%	1.30%	**,***,#	2.75%
CORS Municipal	6.80%	2.25%	1.30%	***	2.75%

\* A 2.25% simple rate is applicable for municipal members of these Systems, who do not elect to be covered under the Contributory plan.

\*\* A 2.25% simple rate is applicable for former EPS members.

\*\*\* The increase is capped at the lesser of 2.5% and increase in CPI if the most recent calendar year market value rate of return was greater than or equal to the assumed rate (currently 6.80% as approved by the Board of Trustees). The increase is capped at the lesser of 1% and increase in CPI if the market value return was less than the assumed rate of 6.80%.

# For groups whose COLA is capped at 5%, a 2.24% COLA was assumed. A 2.25% COLA was assumed for groups with an unlimited COLA, 1.96% is assumed for groups that are capped at 3%.

The valuation interest rate is net of investment expenses. Administrative expenses are assumed to be paid directly by employers external to the plan assets. Price inflation is assumed to be 2.25% and wage inflation (i.e., aggregate payroll growth) is assumed to be 2.75%.



# Actuarial Assumptions and Methods

## A. ACTUARIAL ASSUMPTIONS

### Rates of Salary Increases

Years of Service	Annual Rates of Salary Increases							
	Teachers' Retirement & Pension	Employees' Retirement			Employees' Pension	State Police	Judges	LEOPS
		Regular	Correctional	Legislative*				
0	9.25%	6.50%	8.00%	2.75%	6.50%	11.25%	2.75%	7.00%
1	6.75%	6.25%	7.00%	2.75%	6.25%	9.75%	2.75%	7.00%
2	5.75%	5.75%	3.50%	2.75%	5.75%	9.25%	2.75%	6.75%
3	5.75%	5.00%	3.00%	2.75%	5.00%	9.00%	2.75%	5.25%
4	5.75%	4.50%	3.00%	2.75%	4.50%	6.25%	2.75%	5.25%
5	5.75%	4.25%	3.00%	2.75%	4.25%	6.25%	2.75%	5.25%
6	5.75%	4.25%	3.00%	2.75%	4.25%	6.25%	2.75%	5.25%
7	5.50%	4.25%	2.75%	2.75%	4.25%	6.25%	2.75%	5.25%
8	5.50%	4.25%	2.75%	2.75%	4.25%	6.25%	2.75%	5.25%
9	5.50%	4.00%	2.75%	2.75%	4.00%	6.25%	2.75%	5.25%
10	5.50%	4.00%	2.75%	2.75%	4.00%	5.75%	2.75%	5.25%
11	5.25%	4.00%	2.75%	2.75%	4.00%	5.75%	2.75%	5.25%
12	5.25%	4.00%	2.75%	2.75%	4.00%	5.75%	2.75%	5.25%
13	4.75%	4.00%	2.75%	2.75%	4.00%	5.75%	2.75%	5.25%
14	4.75%	3.75%	2.75%	2.75%	3.75%	5.75%	2.75%	5.25%
15	4.75%	3.75%	2.75%	2.75%	3.75%	5.75%	2.75%	5.25%
16	4.75%	3.25%	2.75%	2.75%	3.25%	5.75%	2.75%	5.25%
17	4.25%	3.25%	2.75%	2.75%	3.25%	5.75%	2.75%	5.25%
18	4.25%	3.25%	2.75%	2.75%	3.25%	5.75%	2.75%	5.25%
19	3.75%	3.25%	2.75%	2.75%	3.25%	5.75%	2.75%	5.25%
20	3.75%	3.25%	2.75%	2.75%	3.25%	4.75%	2.75%	4.75%
21	3.75%	3.25%	2.75%	2.75%	3.25%	4.75%	2.75%	4.75%
22	3.75%	3.25%	2.75%	2.75%	3.25%	4.75%	2.75%	4.75%
23	3.25%	3.25%	2.75%	2.75%	3.25%	4.75%	2.75%	4.75%
24	3.25%	3.25%	2.75%	2.75%	3.25%	4.75%	2.75%	4.75%
25	3.25%	3.25%	2.75%	2.75%	3.25%	4.75%	2.75%	4.75%
26	3.25%	3.25%	2.75%	2.75%	3.25%	4.75%	2.75%	4.75%
27	3.25%	3.25%	2.75%	2.75%	3.25%	4.75%	2.75%	4.75%
28	2.75%	3.25%	2.75%	2.75%	3.25%	4.75%	2.75%	4.75%
29	2.75%	3.25%	2.75%	2.75%	3.25%	4.75%	2.75%	4.75%
30+	2.75%	2.75%	2.75%	2.75%	2.75%	3.25%	2.75%	3.25%

CORS Municipal assumptions were the same as shown for Employees' Retirement Correctional.

\* Total increase is scheduled to be 0.0% through 2022 and wage inflation after.



# Actuarial Assumptions and Methods

## A. ACTUARIAL ASSUMPTIONS

### Rates of Withdrawal

Sample Ages	Years of Service	Annual Rates of Withdrawal from Active Service														
		Teachers' Retirement & Pension		Employees' Retirement						Employees' Pension		State Police		Judges	LEOPS	
		Male	Female	Regular		Correctional		Legislative	Male	Female	Male	Female	Male		Female	
				Male	Female	Male	Female									
All	0	19.00%	16.00%	19.00%	19.00%	14.00%	14.00%	*	19.00%	19.00%	14.00%	14.00%	0.00%	14.00%	14.00%	
	1	14.50%	10.50%	14.50%	15.00%	10.00%	14.00%	*	14.50%	15.00%	8.50%	8.50%	0.00%	9.50%	9.50%	
	2	12.00%	10.50%	12.00%	12.50%	8.00%	12.00%	*	12.00%	12.50%	6.00%	6.00%	0.00%	8.00%	8.00%	
	3	10.00%	9.00%	10.50%	11.00%	7.50%	10.00%	*	10.50%	11.00%	4.25%	4.25%	0.00%	8.00%	8.00%	
	4	7.50%	7.75%	9.00%	9.50%	7.00%	10.00%	*	9.00%	9.50%	4.00%	4.00%	0.00%	6.50%	6.50%	
	5	7.00%	6.50%	7.25%	7.00%	5.50%	8.50%	*	7.25%	7.00%	3.00%	3.00%	0.00%	5.00%	5.00%	
	6	6.25%	5.75%	6.50%	7.00%	5.00%	8.50%	*	6.50%	7.00%	2.50%	2.50%	0.00%	4.50%	4.50%	
	7	5.00%	4.75%	6.00%	6.00%	4.00%	6.00%	*	6.00%	6.00%	2.00%	2.00%	0.00%	3.75%	3.75%	
	8	4.00%	4.00%	5.50%	5.50%	3.50%	6.00%	*	5.50%	5.50%	2.00%	2.00%	0.00%	3.50%	3.50%	
	9	3.50%	3.50%	4.50%	4.50%	3.50%	5.00%	*	4.50%	4.50%	1.50%	1.50%	0.00%	3.50%	3.50%	
25	10 & Over	4.00%	3.50%	4.50%	4.50%	3.50%	5.00%	*	4.50%	4.50%	1.00%	1.00%	0.00%	3.50%	3.50%	
30		2.50%	3.00%	4.00%	4.50%	3.00%	4.00%	*	4.00%	4.50%	1.00%	1.00%	0.00%	2.10%	2.10%	
35		2.00%	2.25%	3.50%	3.75%	2.00%	3.50%	*	3.50%	3.75%	1.00%	1.00%	0.00%	1.90%	1.90%	
40		1.50%	1.50%	3.00%	3.00%	2.00%	3.25%	*	3.00%	3.00%	1.00%	1.00%	0.00%	1.75%	1.75%	
45		1.50%	1.50%	3.00%	2.75%	2.00%	3.25%	*	3.00%	2.75%	1.00%	1.00%	0.00%	1.00%	1.00%	
50		1.50%	1.50%	2.50%	2.50%	2.00%	3.25%	*	2.50%	2.50%	1.00%	1.00%	0.00%	1.00%	1.00%	
55		3.00%	3.00%	5.00%	5.00%	2.00%	3.25%	*	5.00%	5.00%	1.00%	1.00%	0.00%	1.00%	1.00%	
60		3.00%	3.00%	5.00%	5.00%	2.00%	3.25%	*	5.00%	5.00%	1.00%	1.00%	0.00%	1.00%	1.00%	
65	3.00%	3.00%	5.00%	5.00%	2.00%	3.25%	*	5.00%	5.00%	1.00%	1.00%	0.00%	1.00%	1.00%		

CORS Municipal assumptions were the same as shown for Employees' Retirement Correctional.

\* 20% of legislative members are assumed to withdraw after 8 years and each fourth year thereafter.

*For active members of the Teachers Retirement and Pension Systems and Employees' Retirement (Regular) and Pension Systems, the probability of electing a refund upon withdrawal (if eligible for a vested benefit) is 15% upon first becoming vested, grading down to 0% upon reaching first eligibility for retirement. Active members that terminate from the other Systems that are eligible for a deferred vested benefit are assumed to leave their contributions in the plan and 100% are assumed to elect a deferred benefit.*



# Actuarial Assumptions and Methods

## A. ACTUARIAL ASSUMPTIONS

### Summary of Mortality Assumptions

Group	Status and Gender	Base Mortality Table	Scale / Multiplier	Set Forward	Projection Base Year	Projection Scale
TCS	Healthy Male Retirees	PubT-2010 Male Healthy Retiree	105%	0	2010	MP-2018
	Healthy Female Retirees	PubT-2010 Female Healthy Retiree	110%	0	2010	MP-2018
	Disabled Male Retirees	PubT-2010 Male Disabled Retiree	105%	0	2010	MP-2018
	Disabled Female Retirees	PubT-2010 Female Disabled Retiree	113%	0	2010	MP-2018
	Active Males	PubT-2010 Male Employee	100%	0	2010	MP-2018
	Active Females	PubT-2010 Female Employee	100%	0	2010	MP-2018
ECS (excluding CORS)	Healthy Male Retirees	PubG-2010 Male Healthy Retiree	111%	0	2010	MP-2018
	Healthy Female Retirees	PubG-2010 Female Healthy Retiree	109%	0	2010	MP-2018
	Disabled Male Retirees	PubG-2010 Male Disabled Retiree	134%	0	2010	MP-2018
	Disabled Female Retirees	PubG-2010 Female Disabled Retiree	99%	0	2010	MP-2018
	Active Males	PubG-2010 Male Employee	100%	0	2010	MP-2018
	Active Females	PubG-2010 Female Employee	100%	0	2010	MP-2018
Judges	Healthy Male Retirees	PubG-2010 Male Above Median Healthy Retiree	97%	0	2010	MP-2018
	Healthy Female Retirees	PubG-2010 Female Above Median Healthy Retiree	99%	0	2010	MP-2018
	Disabled Male Retirees	PubG-2010 Male Above Median Healthy Retiree	97%	0	2010	MP-2018
	Disabled Female Retirees	PubG-2010 Female Above Median Healthy Retiree	99%	0	2010	MP-2018
	Active Males	PubG-2010 Male Above Median Employee	100%	0	2010	MP-2018
	Active Females	PubG-2010 Female Above Median Employee	100%	0	2010	MP-2018
State Police, LEOPS, and CORS	Healthy Male Retirees	PubS-2010 Male Healthy Retiree	108%	0	2010	MP-2018
	Healthy Female Retirees	PubS-2010 Female Healthy Retiree	103%	0	2010	MP-2018
	Disabled Male Retirees	PubS-2010 Male Disabled Retiree	122%	0	2010	MP-2018
	Disabled Female Retirees	PubS-2010 Female Disabled Retiree	121%	0	2010	MP-2018
	Active Males	PubS-2010 Male Employee	100%	0	2010	MP-2018
	Active Females	PubS-2010 Female Employee	100%	0	2010	MP-2018



# Actuarial Assumptions and Methods

## A. ACTUARIAL ASSUMPTIONS

### Healthy Retired Mortality

Sample Ages in 2021	Actuarial Present Value of \$1 Monthly for Life (Without COLA)											
	Teachers' Retirement & Pension		Employees' Retirement & Pension		Employees' Retirement Correctional & Legislative		State Police		Judges		LEOPS	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
50	\$162.00	\$164.34	\$156.23	\$161.31	\$157.78	\$160.92	\$157.78	\$160.92	\$159.44	\$162.79	\$157.78	\$160.92
55	154.69	157.78	148.29	154.66	149.41	153.40	149.41	153.40	152.22	156.47	149.41	153.40
60	145.45	149.59	138.48	145.95	138.85	143.97	138.85	143.97	143.16	148.18	138.85	143.97
65	133.85	139.12	126.51	134.92	126.13	132.63	126.13	132.63	131.93	137.62	126.13	132.63
70	119.50	125.80	111.97	121.40	111.13	119.18	111.13	119.18	118.07	124.59	111.13	119.18
75	102.41	109.46	95.07	105.29	93.93	103.50	93.93	103.50	101.67	108.92	93.93	103.50
80	83.42	90.76	76.67	87.00	75.46	86.11	75.46	86.11	83.45	90.94	75.46	86.11

Sample Ages in 2021	Future Life Expectancy (Years)											
	Teachers' Retirement & Pension		Employees' Retirement & Pension		Employees' Retirement Correctional & Legislative		State Police		Judges		LEOPS	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
50	37.78	39.76	34.76	38.06	35.09	37.65	35.09	37.65	36.87	39.22	35.09	37.65
55	32.62	34.58	29.88	33.07	30.02	32.52	30.02	32.52	31.90	34.19	30.02	32.52
60	27.64	29.58	25.19	28.18	25.15	27.57	25.15	27.57	27.10	29.25	25.15	27.57
65	22.86	24.74	20.74	23.46	20.56	22.91	20.56	22.91	22.50	24.47	20.56	22.91
70	18.32	20.07	16.54	18.98	16.31	18.57	16.31	18.57	18.13	19.93	16.31	18.57
75	14.11	15.67	12.68	14.81	12.45	14.56	12.45	14.56	14.07	15.67	12.45	14.56
80	10.38	11.70	9.28	11.05	9.08	10.98	9.08	10.98	10.46	11.80	9.08	10.98

CORS Municipal assumptions were the same as shown for Employees' Retirement Correctional.



# Actuarial Assumptions and Methods

## A. ACTUARIAL ASSUMPTIONS

### Disabled Retired Mortality

Sample Ages in 2021	Actuarial Present Value of \$1 Monthly for Life (Without COLA)											
	Teachers' Retirement & Pension		Employees' Retirement & Pension		Employees' Retirement Correctional & Legislative		State Police		Judges		LEOPS	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
50	\$131.80	\$135.95	\$123.56	\$139.46	\$152.03	\$154.86	\$152.03	\$154.86	\$159.03	\$162.68	\$152.03	\$154.86
55	123.60	129.21	114.71	132.98	143.03	146.69	143.03	146.69	151.72	156.33	143.03	146.69
60	115.46	121.90	106.23	125.84	131.93	137.00	131.93	137.00	142.56	148.01	131.93	137.00
65	106.76	113.37	97.41	117.44	119.17	125.99	119.17	125.99	131.20	137.41	119.17	125.99
70	96.63	102.42	87.32	106.63	104.53	113.24	104.53	113.24	117.23	124.34	104.53	113.24
75	84.34	88.89	75.16	93.26	87.75	98.18	87.75	98.18	100.73	108.63	87.75	98.18
80	70.43	73.89	61.56	78.31	70.39	80.77	70.39	80.77	82.44	90.62	70.39	80.77

Sample Ages in 2021	Future Life Expectancy (Years)											
	Teachers' Retirement & Pension		Employees' Retirement & Pension		Employees' Retirement Correctional & Legislative		State Police		Judges		LEOPS	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
50	25.77	27.70	22.52	29.33	32.34	34.60	32.34	34.60	36.57	39.12	32.34	34.60
55	22.30	24.27	19.34	25.76	27.54	29.77	27.54	29.77	31.61	34.10	27.54	29.77
60	19.22	21.05	16.58	22.39	22.96	25.21	22.96	25.21	26.83	29.16	22.96	25.21
65	16.37	17.95	14.06	19.13	18.74	20.99	18.74	20.99	22.25	24.39	18.74	20.99
70	13.63	14.83	11.64	15.87	14.86	17.06	14.86	17.06	17.89	19.85	14.86	17.06
75	10.93	11.77	9.24	12.68	11.31	13.38	11.31	13.38	13.86	15.60	11.31	13.38
80	8.41	8.99	7.01	9.77	8.28	9.99	8.28	9.99	10.27	11.74	8.28	9.99

CORS Municipal assumptions were the same as shown for Employees' Retirement Correctional.



# Actuarial Assumptions and Methods

## ACTUARIAL ASSUMPTIONS

Accidental Death Mortality Rates		
State Police and LEOPS		
Sample Ages in 2021	Male	Female
20	0.0120%	0.0050%
25	0.0122%	0.0068%
30	0.0155%	0.0101%
35	0.0186%	0.0137%
40	0.0208%	0.0166%
45	0.0241%	0.0196%
50	0.0328%	0.0261%
55	0.0504%	0.0384%
60	0.0815%	0.0530%
65	0.1241%	0.0656%
70	0.2156%	0.1225%
75	0.3878%	0.2441%
80	0.7230%	0.4988%

Additional margin for future mortality improvements are included in the projection scale.

# Actuarial Assumptions and Methods

## A. ACTUARIAL ASSUMPTIONS

### Rates of Disability

Sample Ages	Annual Rates of Disability															
	Teachers' Retirement				Teachers' Pension				Employees' Retirement							
	Ordinary		Accidental		Ordinary		Accidental		Ordinary				Accidental			
									Regular		Correctional		Regular		Correctional	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
25	0.0252%	0.0352%	0.0015%	0.0016%	0.0252%	0.0352%	0.0015%	0.0016%	0.1131%	0.0703%	0.0817%	0.1040%	0.0360%	0.0172%	0.0595%	0.0780%
30	0.0252%	0.0352%	0.0015%	0.0016%	0.0252%	0.0352%	0.0015%	0.0016%	0.1450%	0.0695%	0.1047%	0.1081%	0.0378%	0.0180%	0.0714%	0.0780%
35	0.0252%	0.0447%	0.0015%	0.0020%	0.0252%	0.0447%	0.0015%	0.0020%	0.1812%	0.1202%	0.1308%	0.1868%	0.0528%	0.0252%	0.0901%	0.0780%
40	0.0828%	0.0779%	0.0051%	0.0035%	0.0828%	0.0779%	0.0051%	0.0035%	0.2400%	0.2219%	0.1734%	0.3452%	0.0693%	0.0323%	0.1139%	0.0867%
45	0.1656%	0.1482%	0.0102%	0.0066%	0.1656%	0.1482%	0.0102%	0.0066%	0.3219%	0.3285%	0.2325%	0.5110%	0.0615%	0.0335%	0.1428%	0.0997%
50	0.2475%	0.2499%	0.0153%	0.0112%	0.2475%	0.2499%	0.0153%	0.0112%	0.4650%	0.5652%	0.3325%	0.7327%	0.0548%	0.0353%	0.2023%	0.1301%
55	0.3303%	0.4199%	0.0204%	0.0188%	0.3303%	0.4199%	0.0204%	0.0188%	0.6571%	0.7241%	0.4275%	1.0148%	0.0516%	0.0345%	0.2499%	0.1821%
60	0.3564%	0.3591%	0.0255%	0.0161%	0.3564%	0.3591%	0.0255%	0.0161%	0.6662%	0.8123%	0.5245%	1.4024%	0.0528%	0.0374%	0.2499%	0.1821%

Sample Ages	Annual Rates of Disability													
	Employees' Pension				State Police				Judges		LEOPS			
	Ordinary		Accidental		Ordinary		Accidental				Ordinary		Accidental	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
	25	0.1131%	0.0703%	0.0360%	0.0172%	0.1175%	0.1762%	0.3915%	0.2936%	0.0060%	0.0111%	0.1428%	0.6452%	0.3094%
30	0.1450%	0.0695%	0.0378%	0.0180%	0.1497%	0.2246%	0.4158%	0.3119%	0.0060%	0.0111%	0.1831%	0.6912%	0.3305%	0.3491%
35	0.1812%	0.1202%	0.0528%	0.0252%	0.1883%	0.2824%	0.5098%	0.3823%	0.0060%	0.0260%	0.2288%	0.6975%	0.4028%	0.3434%
40	0.2400%	0.2219%	0.0693%	0.0323%	0.2499%	0.3748%	0.5900%	0.4425%	0.0190%	0.0520%	0.3031%	0.8179%	0.4652%	0.3510%
45	0.3219%	0.3285%	0.0615%	0.0335%	0.3349%	0.5024%	0.6541%	0.4906%	0.0379%	0.0891%	0.4065%	0.9917%	0.5161%	0.3523%
50	0.4650%	0.5652%	0.0548%	0.0353%	0.4787%	0.7181%	0.9140%	0.6855%	0.0569%	0.1300%	0.5482%	1.2280%	0.7213%	0.4521%
55	0.6571%	0.7241%	0.0516%	0.0345%	0.6154%	0.9231%	1.1924%	0.8943%	0.0757%	0.2228%	0.5482%	1.2280%	0.9412%	0.7003%
60	0.6662%	0.8123%	0.0528%	0.0374%	0.7549%	1.1323%	1.4739%	1.1054%	0.0947%	0.2228%	0.5482%	1.2280%	1.1637%	1.2383%

CORS Municipal assumptions were the same as shown for Employees' Retirement Correctional.



# Actuarial Assumptions and Methods

## A. ACTUARIAL ASSUMPTIONS

### Rates of Normal Retirement

Ages	Annual Rates of Normal Retirement													
	Teachers' Retirement		Teachers' Pension				Employees' Retirement		Legislators*		Employees' Pension			
	All Years of Service		At Least 30 Years		Less Than 30 Years		All Years of Service		All Years of Service		At Least 30 Years		Less Than 30 Years	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
45	15.0%	15.0%	12.0%	10.0%			17.0%	16.0%			12.0%	11.0%		
46	15.0%	15.0%	12.0%	10.0%			17.0%	16.0%			12.0%	11.0%		
47	15.0%	15.0%	12.0%	10.0%			17.0%	16.0%			12.0%	11.0%		
48	15.0%	15.0%	12.0%	10.0%			17.0%	16.0%			12.0%	13.0%		
49	15.0%	15.0%	12.0%	10.0%			17.0%	16.0%			10.0%	11.0%		
50	15.0%	15.0%	12.0%	10.0%			10.0%	11.0%			10.0%	11.0%		
51	15.0%	15.0%	12.0%	10.0%			10.0%	11.0%			10.0%	11.0%		
52	15.0%	15.0%	12.0%	10.0%			10.0%	11.0%			10.0%	11.0%		
53	15.0%	15.0%	12.0%	10.0%			10.0%	10.0%			10.0%	11.0%		
54	15.0%	20.0%	12.0%	10.0%			8.0%	10.0%			10.0%	11.0%		
55	15.0%	20.0%	12.0%	11.0%			13.0%	10.0%			10.0%	11.0%		
56	15.0%	20.0%	12.0%	11.0%			8.0%	10.0%			10.0%	11.0%		
57	15.0%	15.0%	12.0%	11.0%			8.0%	10.0%			10.0%	11.0%		
58	20.0%	15.0%	12.0%	11.0%			8.0%	13.0%			10.0%	11.0%		
59	10.0%	18.0%	12.0%	13.0%			11.0%	13.0%			10.0%	11.0%		
60	15.0%	20.0%	13.0%	16.0%			13.0%	13.0%	20.0%	20.0%	10.0%	14.0%		
61	20.0%	18.0%	16.0%	19.0%			11.0%	13.0%	20.0%	20.0%	13.0%	14.0%		
62	20.0%	25.0%	28.0%	26.0%	16.0%	20.0%	27.0%	25.0%	20.0%	20.0%	23.0%	26.0%	16.0%	18.0%
63	20.0%	25.0%	21.0%	23.0%	13.0%	17.0%	23.0%	22.0%	20.0%	20.0%	23.0%	22.0%	13.0%	16.0%
64	20.0%	20.0%	19.0%	21.0%	13.0%	16.0%	19.0%	22.0%	20.0%	20.0%	18.0%	20.0%	13.0%	14.0%
65	25.0%	25.0%	25.0%	25.0%	16.0%	19.0%	20.0%	22.0%	30.0%	30.0%	17.0%	20.0%	13.0%	16.0%
66	25.0%	30.0%	25.0%	30.0%	20.0%	24.0%	25.0%	22.0%	35.0%	35.0%	25.0%	25.0%	18.0%	19.0%
67	25.0%	25.0%	22.0%	27.0%	20.0%	22.0%	25.0%	25.0%	35.0%	35.0%	25.0%	25.0%	16.0%	19.0%
68	20.0%	25.0%	20.0%	27.0%	17.0%	19.0%	18.0%	25.0%	35.0%	35.0%	20.0%	22.0%	16.0%	18.0%
69	20.0%	25.0%	22.0%	25.0%	15.0%	18.0%	18.0%	25.0%	35.0%	35.0%	18.0%	22.0%	16.0%	18.0%
70	20.0%	25.0%	25.0%	27.0%	20.0%	20.0%	20.0%	20.0%	35.0%	35.0%	22.0%	22.0%	16.0%	18.0%
71	20.0%	25.0%	22.0%	27.0%	16.0%	19.0%	20.0%	20.0%	35.0%	35.0%	20.0%	22.0%	16.0%	18.0%
72	20.0%	25.0%	30.0%	22.0%	16.0%	17.0%	20.0%	20.0%	35.0%	35.0%	25.0%	22.0%	17.0%	18.0%
73	20.0%	25.0%	22.0%	25.0%	20.0%	17.0%	20.0%	20.0%	50.0%	50.0%	22.0%	25.0%	17.0%	18.0%
74	15.0%	18.0%	22.0%	27.0%	18.0%	15.0%	20.0%	20.0%	50.0%	50.0%	22.0%	25.0%	17.0%	18.0%
75	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	18.0%	18.0%
76													18.0%	18.0%
77 & Over													100.0%	100.0%

\* Retirement rates for Legislative members are assumed to apply every four years to members eligible for retirement (beginning with the year ending June 30, 2015, and each fourth year thereafter).



# Actuarial Assumptions and Methods

## A. ACTUARIAL ASSUMPTIONS

### Rates of Normal Retirement

Ages	Annual Rates of Normal Retirement													
	Correctional Officers				State Police *				Judges		LEOPS			
	At Least 20 Years		Less Than 20 Years		At Least 22 Years		Less Than 22 Years		All Years of Service		At Least 25 Years		Less Than 25 Years	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
40	25.0%	25.0%			10.0%	10.0%					40.0%	40.0%		
41	18.0%	18.0%			15.0%	15.0%					40.0%	40.0%		
42	18.0%	18.0%			20.0%	20.0%					40.0%	40.0%		
43	18.0%	18.0%			25.0%	25.0%					40.0%	40.0%		
44	18.0%	18.0%			20.0%	20.0%					40.0%	40.0%		
45	15.0%	15.0%			30.0%	30.0%					40.0%	40.0%		
46	15.0%	15.0%			25.0%	25.0%					40.0%	40.0%		
47	15.0%	15.0%			25.0%	25.0%					40.0%	40.0%		
48	13.0%	13.0%			25.0%	25.0%					40.0%	40.0%		
49	13.0%	13.0%			30.0%	30.0%					40.0%	40.0%		
50	13.0%	13.0%			35.0%	35.0%	7.0%	7.0%			25.0%	25.0%	5.0%	5.0%
51	12.0%	12.0%			20.0%	20.0%	7.0%	7.0%			25.0%	25.0%	5.0%	5.0%
52	12.0%	12.0%			20.0%	20.0%	7.0%	7.0%			25.0%	25.0%	5.0%	5.0%
53	12.0%	12.0%			35.0%	35.0%	7.0%	7.0%			20.0%	20.0%	4.0%	4.0%
54	12.0%	12.0%			20.0%	20.0%	7.0%	7.0%			30.0%	30.0%	4.0%	4.0%
55	12.0%	12.0%	3.0%	3.0%	40.0%	40.0%	7.0%	7.0%			30.0%	30.0%	4.0%	4.0%
56	11.0%	11.0%	3.0%	3.0%	35.0%	35.0%	15.0%	15.0%			30.0%	30.0%	5.0%	5.0%
57	11.0%	11.0%	3.0%	3.0%	35.0%	35.0%	15.0%	15.0%			20.0%	20.0%	5.0%	5.0%
58	11.0%	11.0%	3.0%	3.0%	35.0%	35.0%	15.0%	15.0%			20.0%	20.0%	5.0%	5.0%
59	11.0%	11.0%	3.0%	3.0%	50.0%	50.0%	15.0%	15.0%			20.0%	20.0%	5.0%	5.0%
60	11.0%	11.0%	3.0%	3.0%	100.0%	100.0%	100.0%	100.0%	7.0%	10.0%	25.0%	25.0%	6.0%	6.0%
61	13.0%	13.0%	3.0%	3.0%					7.0%	10.0%	25.0%	25.0%	6.0%	6.0%
62	35.0%	35.0%	10.0%	10.0%					7.0%	15.0%	30.0%	30.0%	15.0%	15.0%
63	25.0%	25.0%	5.0%	5.0%					7.0%	10.0%	30.0%	30.0%	15.0%	15.0%
64	25.0%	25.0%	12.0%	12.0%					7.0%	10.0%	30.0%	30.0%	15.0%	15.0%
65	30.0%	30.0%	12.0%	12.0%					7.0%	10.0%	30.0%	30.0%	30.0%	30.0%
66	30.0%	30.0%	20.0%	20.0%					7.0%	10.0%	50.0%	50.0%	30.0%	30.0%
67	30.0%	30.0%	15.0%	15.0%					7.0%	10.0%	50.0%	50.0%	30.0%	30.0%
68	30.0%	30.0%	10.0%	10.0%					10.0%	15.0%	70.0%	70.0%	30.0%	30.0%
69	35.0%	35.0%	20.0%	20.0%					10.0%	15.0%	70.0%	70.0%	30.0%	30.0%
70 & Over	100.0%	100.0%	100.0%	100.0%					100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

\* 50% of participants are expected to elect DROP participation.



# Actuarial Assumptions and Methods

## A. ACTUARIAL ASSUMPTIONS

### Rates of Normal Retirement

Ages	Additional Rates to Add to Annual Rates of Normal Retirement at Age of First Eligibility							
	Teachers' Pension Reformed				Employees' Pension Reformed			
	At Least 30 Years		Less Than 30 Years		At Least 30 Years		Less Than 30 Years	
	Male	Female	Male	Female	Male	Female	Male	Female
55 and Under	39.0%	33.0%			35.0%	35.0%		
56	32.0%	26.0%			28.0%	28.0%		
57	24.0%	19.0%			21.0%	21.0%		
58	15.0%	11.0%			14.0%	14.0%		
59	4.0%	2.0%			7.0%	7.0%		
60	0.0%	0.0%			0.0%	0.0%		
61	0.0%	0.0%			0.0%	0.0%		
62	0.0%	0.0%			0.0%	0.0%		
63	0.0%	0.0%			0.0%	0.0%		
64	0.0%	0.0%			0.0%	0.0%		
65+	0.0%	0.0%	20.0%	16.0%	0.0%	0.0%	25.0%	25.0%

**State Police Reformed:** Add additional 20% to annual rate at age of first eligibility if under age 50.

# Actuarial Assumptions and Methods

## A. ACTUARIAL ASSUMPTIONS

### Rates of Early Retirement

Ages	Annual Rates of Early Retirement *											
	Teachers' Retirement		Teachers' Pension				Employees' Retirement		Employees' Pension			
			Non-Reformed		Reformed				Non-Reformed		Reformed	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
40	5.0%	5.0%					5.0%	5.0%				
41	5.0%	5.0%					5.0%	5.0%				
42	5.0%	5.0%					5.0%	5.0%				
43	5.0%	5.0%					5.0%	5.0%				
44	5.0%	5.0%					5.0%	5.0%				
45	5.0%	5.0%					5.0%	5.0%				
46	5.0%	5.0%					5.0%	5.0%				
47	5.0%	5.0%					5.0%	5.0%				
48	5.0%	5.0%					5.0%	5.0%				
49	5.0%	5.0%					5.0%	5.0%				
50	5.0%	5.0%					5.0%	5.0%				
51	5.0%	5.0%					5.0%	5.0%				
52	5.0%	5.0%					5.0%	5.0%				
53	5.0%	5.0%					5.0%	5.0%				
54	5.0%	5.0%					5.0%	5.0%				
55	10.0%	10.0%	2.0%	2.5%			5.0%	5.0%	1.8%	2.2%		
56	5.0%	5.0%	2.0%	2.5%			5.0%	5.0%	1.5%	2.5%		
57	5.0%	5.0%	2.5%	2.5%			5.0%	5.0%	1.5%	2.5%		
58	5.0%	5.0%	2.0%	3.0%			5.0%	5.0%	1.5%	3.5%		
59	5.0%	5.0%	4.0%	4.0%			5.0%	5.0%	2.0%	3.0%		
60			3.5%	6.0%	10.0%	13.5%			3.0%	4.5%	7.8%	11.7%
61			6.5%	7.0%	6.5%	7.0%			5.0%	5.0%	5.0%	5.0%
62					7.0%	7.5%					5.5%	5.5%
63					7.5%	8.0%					6.0%	6.0%
64					8.0%	8.5%					6.5%	6.5%

\* Divisions without early retirement eligibility are not shown.



# Actuarial Assumptions and Methods

## A. ACTUARIAL ASSUMPTIONS

### Social Security Covered Compensation

Teachers' Retirement	Not applicable
Teachers' Pension	Future covered compensation levels, used to estimate member contributions and retirement allowances, were calculated using a 2.75% per annum compounded increase in the 2021 Social Security Maximum Taxable Wage Base.
Employees' Retirement	Not applicable
Employees' Pension	Future covered compensation levels, used to estimate member contributions and retirement allowances, were calculated using a 2.75% per annum compounded increase in the 2021 Social Security Maximum Taxable Wage Base.
State Police Retirement	Not applicable
Judges' Pension	Not applicable
LEOPS	Future covered compensation levels, used to estimate member contributions and retirement allowances, were calculated using a 2.75% per annum compounded increase in the 2021 Social Security Maximum Taxable Wage Base.
Correctional Officers' Retirement System	Not applicable



# Actuarial Assumptions and Methods

## B. ACTUARIAL PROCEDURES

### 1. Asset Valuation Method

All six Systems use a method based on the principle that the difference between actual and expected investment returns should be subject to partial recognition to smooth out fluctuations in the total return achieved by the fund from year to year. Under this method, the actuarial value of assets reflects annually one-fifth of the market value gains or losses for the five prior years. The resulting value is restricted to be not less than 80% of market value nor greater than 120% of market value. For the 2021 valuation 40% of the investment gain from FY 2021 is recognized in the determination of the actuarial asset valuation rather than the 20% normally recognized. The remaining 60% will be recognized equally over the next four valuations (15% per year).

For the Employees' Retirement and Pension System and for LEOPS, assets must be allocated between State and Municipal Corporation members. Beginning July 1, 1984, this allocation is based upon actual cash flows and shared investment results.

# Actuarial Assumptions and Methods

## B. ACTUARIAL PROCEDURES

### 2. Funding Method

All six Systems use the individual entry age normal method to determine costs. Under this funding method, a total contribution rate is determined which consists of two elements, the normal cost rate and the Unfunded Actuarial Liability (UAL) rate.

The individual Entry Age Normal cost rate is determined as the value, as of age at entry into the plan, of the member's projected future benefits, and divided by the value, also as of the member's entry age, of the member's expected future salary. For purposes of calculating the normal cost rate, the same benefit accrual rates used to calculate the present value of future benefits are used to calculate the normal cost. The benefit provisions applicable to each member are used in developing his/her individual normal cost rate.

In addition to contributions required to meet the System's normal cost, contributions will be required to fund the System's unfunded actuarial liability. Actuarial liability is defined as the present value of future benefits less the present value of future normal costs. The unfunded actuarial liability for all members is the actuarial liability less the actuarial value of the System's assets.

The System's unfunded actuarial liability is funded over a 25-year closed amortization period ending June 30, 2039 (17 years remaining as of the June 30, 2021 valuation date) as a level percentage of payroll.

There is an additional component in the Unfunded Actuarial Accrued Liability amortization contribution rate that accounts for the effects of the lag between the valuation date and when the contribution is made. This calculation assumes the contributions that would be received in fiscal year 2022 are equal to the budgeted contributions developed in the valuation as of June 30, 2020, plus the proportionate share of reinvested savings allocated to each System for fiscal year 2022 under the pension reforms.

A portion of the savings from the 2011 pension reforms passed by the General Assembly are to be reinvested as additional contributions into the Systems. Beginning in fiscal year 2016, \$75 million of additional contributions are to be reinvested each year until the combined System reaches 85% funded.



# Summary of Assumptions Used

## June 30, 2021

### Miscellaneous and Technical Assumptions

<b>Marriage Assumption:</b>	100% of males and females are assumed to be married for purposes of death-in-service benefits; 80% of healthy males and females, and 65% of disabled males and females, are assumed to be married for purposes of post-retirement death benefits.
<b>Pay Increase Timing:</b>	Teachers' Systems assume beginning of (Fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date. All other Systems assume middle of (Fiscal) year. This is equivalent to assuming that reported pays represent the annualized rate of pay at the beginning of the (Fiscal) year.
<b>Decrement Timing:</b>	Decrements of all types are assumed to occur mid-year, except for Teachers' Systems which assumed beginning of year (i.e., July 1) for retirement and termination.
<b>Eligibility Testing:</b>	Eligibility for benefits is determined based upon the age nearest birthday and rounded integer service on the date the decrement is assumed to occur.
<b>Benefit Service:</b>	Exact fractional service is used to determine the amount of benefit payable.
<b>Decrement Operation:</b>	Mortality and disability operate during retirement eligibility.
<b>Incidence of Contributions:</b>	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.
<b>Unused Sick Leave:</b>	Each member is assumed to have the following months of service at retirement attributable to sick leave.  Correctional Officers: 2 months Employees' and Teachers' Retirement: 10 months Judges and Legislators: 0 months Employees' and Teachers' Pension: 4 and 5 months, respectively LEOPS and State Police: 6 months and 7 months, respectively
<b>Unknown Data for Participants:</b>	Average characteristics of the group as a whole are used to fill in the unknown data.
<b>Age of Spouse:</b>	In the absence of complete data, female retirees are assumed to be 2 years younger than male spouses, and male retirees are assumed to be 3 years older than female spouses.



# Summary of Assumptions Used

## June 30, 2021

### Miscellaneous and Technical Assumptions

- Option Elections:** It was assumed optional forms of payment were actuarially equivalent to the normal form of payment.
- Actuarial Equivalence:**  
TCS, ECS, & Judges 5.85% interest, RP 2014 Combined Annuitant Mortality, 50% Unisex, 2.29% COLA pre-reform, 1.49% COLA post-reform.
- State Police & LEOPS 5.85% interest, RP 2014 Combined Annuitant Mortality, 85% Unisex, 2.46% COLA pre-reform, 1.49% COLA post-reform.
- Reinvested Savings Allocation:** Total savings from the 2011 pension reforms that are to be reinvested in each of the Systems as additional contributions are allocated between the Systems in proportion to the savings as measured in the actuarial valuation as of June 30, 2011.
- Vested Deferred Benefit Commencement:** Active members assumed to terminate with a vested benefit, current vested deferred, and inactive members are assumed to commence receiving benefits at the following ages:
- Correctional Officers: Age 55*  
*Employees' and Teachers' Retirement, Judges, and Legislators: Age 60*  
*Employees' and Teachers' Pension: Age 62 or age 55 if the member has at least 15 years of service*  
*Employees' and Teachers' Pension Reformed: Age 65 or age 60 if the member has at least 15 years of service*  
*LEOPS and State Police: Age 50*
- Liability Adjustments:** For State Police and LEOPS, the value of the 4% DROP interest credits compared to the valuation interest rate of 6.80% was accounted for through the use of certain load factors as shown in the table below. The assumed length of time members would stay in the DROP was 4.61 years for State Police and 4.84 years for LEOPS, based on the average projected DROP period of DROP members in the valuation data provided by the SRA.

<u>Load Applied to</u>	<u>Load Factor</u>	
	<u>State Police</u>	<u>LEOPS</u>
Active Normal Retirement Decrement	0.9919	0.9910
Liabilities for Members in the DROP	0.9928	0.9923
DROP Account Balances	0.9223	0.9325



# Definitions of Technical Terms

## Accrued Service

Service credited under the system which was rendered before the date of the actuarial valuation.

## Actuarial Accrued Liability

The difference between the actuarial present value of system benefits and the actuarial present value of future normal costs. Also referred to as "past service liability."

## Actuarial Assumptions

Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

## Actuarial Cost Method

A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future benefits" between future normal costs and Actuarial Accrued Liability. Sometimes referred to as the "actuarial funding method."

## Actuarial Equivalent

One series of payments is said to be actuarially equivalent to another series of payments if the two series have the same actuarial present value.

## Actuarial Gain (Loss)

The difference between actual unfunded actuarial accrued liabilities and anticipated unfunded actuarial accrued liabilities -- during the period between two valuation dates. It is a measurement of the difference between actual and expected experience.

## Actuarial Present Value

The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payments.

## Amortization

Paying off an interest-discounted amount with periodic payments of interest and (generally) principal -- as opposed to paying off with a lump sum payment.



# Definitions of Technical Terms

## Normal Cost

The portion of the actuarial present value of future benefits that is assigned to the current year by the actuarial cost method. Sometimes referred to as "current service cost."

## Projected Benefit Obligation

The portion of a member's projected benefit attributable to service before the valuation date - allocated based on the ratio of accrued service to projected total service and based on anticipated future compensation.

## Unfunded Actuarial Accrued Liabilities

The difference between actuarial accrued liabilities and valuation assets. Sometimes referred to as "unfunded past service liability" or "unfunded supplemental present value."

Most retirement systems have unfunded actuarial accrued liabilities. They arise each time new benefits are added and each time an actuarial loss occurs.

The existence of unfunded actuarial accrued liabilities is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial accrued liabilities do not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liabilities and the trend in their amount (after due allowance for devaluation of the dollar).

# APPENDIX B

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## MEMBERSHIP INFORMATION

## State Retirement and Pension System Summary of Membership Data as of June 30, 2021 (State and Municipal)

		Active Members		Retirees and Beneficiaries					Vested Former Members (Includes Inactives)	Total
		Number	Salary	Number	Benefits#	Avg. Monthly Benefit	Avg. Age	Avg. Age at Ret.*		
Teachers' Retirement - STATE	Total	66	\$ 8,810,707							
	Vested	66	\$ 8,810,707							
	Non-vested	0	\$ -	3,080	\$ 126,589,700	\$ 3,425	81.6	62.1	39	3,185
Teachers' Pension - STATE	Total	8,878	\$ 589,254,461							
	Vested	4,306	\$ 323,373,460							
	Non-vested	4,572	\$ 265,881,001	6,639	\$ 126,399,765	\$ 1,587	73.9	63.6	2,874	18,391
Teachers' Retirement - LOCAL	Total	133	\$ 12,981,753							
	Vested	133	\$ 12,981,753							
	Non-vested	0	\$ -	19,710	\$ 845,137,439	\$ 3,573	78.9	58.2	62	19,905
Teachers' Pension - LOCAL	Total	100,881	\$ 7,077,799,438							
	Vested	55,647	\$ 4,595,336,234							
	Non-vested	45,234	\$ 2,482,463,204	52,086	\$ 1,334,494,544	\$ 2,135	71.7	62.0	20,758	173,725
Employees' Retirement^	Total	7,968	\$ 436,295,102							
	Vested	4,658	\$ 276,499,360							
	Non-vested	3,310	\$ 159,795,742	18,832	\$ 495,353,964	\$ 2,192	73.5	56.7	782	27,582
Employees' Pension	Total	71,886	\$ 4,245,570,424							
	Vested	34,958	\$ 2,300,519,448							
	Non-vested	36,928	\$ 1,945,050,976	63,705	\$ 1,074,190,026	\$ 1,405	71.3	62.2	23,143	158,734
State Police	Total	1,353	\$ 119,048,457							
	Vested	774	\$ 80,280,235							
	Non-vested	579	\$ 38,768,222	2,559	\$ 136,552,155	\$ 4,447	65.2	47.8	86	3,998
Judges	Total	315	\$ 52,073,208							
	Vested	204	\$ 33,833,445							
	Non-vested	111	\$ 18,239,763	442	\$ 39,054,084	\$ 7,363	77.8	65.5	7	764
LEOPS	Total	2,697	\$ 199,460,447							
	Vested	1,357	\$ 116,378,828							
	Non-vested	1,340	\$ 83,081,619	2,264	\$ 84,571,209	\$ 3,113	62.2	53.1	293	5,254
CORS Municipal	Total	134	\$ 7,952,640							
	Vested	66	\$ 4,484,331							
	Non-vested	68	\$ 3,468,309	51	\$ 1,493,319	\$ 2,440	61.0	56.7	7	192
Total Systems	Total	194,311	\$ 12,749,246,637							
	Vested	102,169	\$ 7,752,497,801							
	Non-vested	92,142	\$ 4,996,748,836	169,368	\$ 4,263,836,205	\$ 2,098	72.6	60.9	48,051	411,730

^ Includes CORS (State) and Legislators. See page B-3 for the summary for each subgroup.

\* Includes normal and early service retirees only.

# Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2021.



## State Retirement and Pension System Summary of Membership Data as of June 30, 2021 (State Only)

		Active Members		Retirees and Beneficiaries				Vested Former Members (Includes Inactives)		Total Number
		Number	Salary	Number	Benefits#	Avg. Monthly Benefit	Avg. Age	Avg. Age at Ret.*	Number	
Teachers' Retirement - STATE	Total	66	\$ 8,810,707							
	Vested	66	\$ 8,810,707							
	Non-vested	0	\$ -	3,080	\$ 126,589,700	\$ 3,425	81.6	62.1	39	3,185
Teachers' Pension - STATE	Total	8,878	\$ 589,254,461							
	Vested	4,306	\$ 323,373,460							
	Non-vested	4,572	\$ 265,881,001	6,639	\$ 126,399,765	\$ 1,587	73.9	63.6	2,874	18,391
Teachers' Retirement - LOCAL	Total	133	\$ 12,981,753							
	Vested	133	\$ 12,981,753							
	Non-vested	0	\$ -	19,710	\$ 845,137,439	\$ 3,573	78.9	58.2	62	19,905
Teachers' Pension - LOCAL	Total	100,881	\$ 7,077,799,438							
	Vested	55,647	\$ 4,595,336,234							
	Non-vested	45,234	\$ 2,482,463,204	52,086	\$ 1,334,494,544	\$ 2,135	71.7	62.0	20,758	173,725
Employees' Retirement^	Total	7,941	\$ 434,520,591							
	Vested	4,631	\$ 274,724,849							
	Non-vested	3,310	\$ 159,795,742	16,516	\$ 438,212,589	\$ 2,211	72.6	56.3	770	25,227
Employees' Pension	Total	47,606	\$ 2,991,411,316							
	Vested	23,588	\$ 1,616,339,963							
	Non-vested	24,018	\$ 1,375,071,353	46,797	\$ 830,842,521	\$ 1,480	71.3	61.9	17,019	111,422
State Police	Total	1,353	\$ 119,048,457							
	Vested	774	\$ 80,280,235							
	Non-vested	579	\$ 38,768,222	2,559	\$ 136,552,155	\$ 4,447	65.2	47.8	86	3,998
Judges	Total	315	\$ 52,073,208							
	Vested	204	\$ 33,833,445							
	Non-vested	111	\$ 18,239,763	442	\$ 39,054,084	\$ 7,363	77.8	65.5	7	764
LEOPS	Total	1,585	\$ 125,116,369							
	Vested	803	\$ 72,630,788							
	Non-vested	782	\$ 52,485,581	1,712	\$ 63,207,938	\$ 3,077	63.4	53.2	172	3,469
Total Systems	Total	168,758	\$ 11,411,016,300							
	Vested	90,152	\$ 7,018,311,434							
	Non-vested	78,606	\$ 4,392,704,866	149,541	\$ 3,940,490,734	\$ 2,196	72.7	60.7	41,787	360,086

^ Includes CORS (State) and Legislators. See page B-3 for the summary for each subgroup.

\* Includes normal and early service retirees only.

#Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2021.



## State Retirement and Pension System Summary of Membership Data as of June 30, 2021 (State Only - Employees' Retirement Subgroups)

		Active Members		Retirees and Beneficiaries					Vested Former Members (Includes Inactives)	Total
		Number	Salary	Number	Benefits#	Avg. Monthly Benefit	Avg. Age	Avg. Age at Ret.*	Number	Number
Employees' Retirement	Total	153	\$ 12,544,371							
	Vested	153	\$ 12,544,371							
	Non-vested	0	\$ -	9,740	\$ 282,328,271	\$ 2,416	78.8	58.4	82	9,975
Legislators	Total	188	\$ 9,492,122							
	Vested	69	\$ 3,502,852							
	Non-vested	119	\$ 5,989,270	313	\$ 5,780,690	\$ 1,539	76.2	63.0	42	543
CORS State	Total	7,600	\$ 412,484,098							
	Vested	4,409	\$ 258,677,626							
	Non-vested	3,191	\$ 153,806,472	6,463	\$ 150,103,628	\$ 1,935	63.2	52.5	646	14,709
Total Employees' Retirement State	Total	7,941	\$ 434,520,591							
	Vested	4,631	\$ 274,724,849							
	Non-vested	3,310	\$ 159,795,742	16,516	\$ 438,212,589	\$ 2,211	72.6	56.3	770	25,227

\* Includes normal and early service retirees only.

# Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2021.



## State Retirement and Pension System Summary of Membership Data as of June 30, 2021 (Municipal Only)

		Active Members		Retirees and Beneficiaries				Vested Former Members (Includes Inactives)	Total	
		Number	Salary	Number	Benefits#	Avg. Monthly Benefit	Avg. Age	Avg. Age at Ret.*	Number	Number
Employees' Retirement	Total	27	\$ 1,774,511							
	Vested	27	\$ 1,774,511							
	Non-vested	0	\$ -	2,316	\$ 57,141,376	\$ 2,056	79.9	59.5	12	2,355
Employees' Pension	Total	24,280	\$ 1,254,159,108							
	Vested	11,370	\$ 684,179,485							
	Non-vested	12,910	\$ 569,979,623	16,908	\$ 243,347,505	\$ 1,199	71.3	63.2	6,124	47,312
LEOPS	Total	1,112	\$ 74,344,078							
	Vested	554	\$ 43,748,040							
	Non-vested	558	\$ 30,596,038	552	\$ 21,363,271	\$ 3,225	58.3	52.9	121	1,785
CORS Municipal	Total	134	\$ 7,952,640							
	Vested	66	\$ 4,484,331							
	Non-vested	68	\$ 3,468,309	51	\$ 1,493,319	\$ 2,440	61.0	56.7	7	192
Total Systems	Total	25,553	\$ 1,338,230,337							
	Vested	12,017	\$ 734,186,367							
	Non-vested	13,536	\$ 604,043,970	19,827	\$ 323,345,471	\$ 1,359	72.0	62.5	6,264	51,644

\* Includes normal and early service retirees only.

#Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2021.



## Active Membership Information

Maryland State Retirement and Pension System Active Membership Statistics June 30, 2021				
System	Number	Average Age	Average Credited Service	Average Salary
Teachers' Retirement	199	70.4	44.8	\$ 109,510
Teachers' Pension	109,759	45.1	12.1	69,854
Employees' Retirement – State	153	68.6	45.3	81,989
Employees' Retirement – Municipal	27	65.2	44.3	65,723
Employees' Retirement – Legislators	188	54.0	8.5	50,490
Employees' Retirement – Correctional Officers	7,600	45.0	12.3	54,274
Employees' Retirement – Total	7,968	45.7	13.0	54,756
Employees' Pension – State	47,606	48.5	12.0	62,837
Employees' Pension – Municipal	24,280	49.5	10.7	51,654
Employees' Pension – Total	71,886	48.8	11.6	59,060
State Police	1,353	36.5	12.3	87,989
Judges	315	57.8	8.3	165,312
LEOPS – State	1,585	42.7	11.1	78,938
LEOPS – Municipal	1,112	39.2	10.6	66,856
LEOPS – Total	2,697	41.2	10.9	73,956
CORS – Municipal	134	41.8	11.5	59,348
<b>TOTAL SYSTEMS</b>	<b>194,311</b>	<b>46.4</b>	<b>11.9</b>	<b>65,613</b>
	Teachers' Retirement		Employees' Retirement	
	Number	Earnings	Number	Earnings
Unlimited COLA	125	\$ 14,574,520	115	\$ 9,086,292
5% COLA Cap	40	4,095,982	46	3,915,867
Bifurcate	34	3,121,958	19	1,316,723
	<u>199</u>	<u>\$ 21,792,460</u>	<u>180</u>	<u>\$ 14,318,882</u>



# Active Membership – Age & Service Distribution

## June 30, 2021

### Teachers' Combined System

Age Nearest Birthday	Nearest Whole Years of Service on the Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	6							6	\$ 128,316
20-24	1,956	8						1,964	86,536,144
25-29	7,306	2,509	3					9,818	497,076,617
30-34	5,307	6,567	1,551	11				13,436	767,640,848
35-39	3,126	3,334	5,028	2,324	10			13,822	940,782,236
40-44	2,738	2,444	2,471	5,171	1,652	3		14,479	1,089,225,285
45-49	2,416	2,304	1,855	2,692	4,099	893	4	14,263	1,134,182,455
50-54	2,199	2,427	2,053	2,331	2,847	2,944	705	15,506	1,230,454,606
55-59	1,406	1,756	1,804	2,057	2,006	1,389	1,684	12,102	902,904,776
60	226	267	333	433	385	225	302	2,171	157,457,735
61	167	239	301	394	389	241	301	2,032	145,249,957
62	141	172	241	369	395	227	277	1,822	131,120,957
63	151	184	241	274	317	168	264	1,599	112,474,478
64	117	154	184	294	255	156	243	1,403	99,528,148
65	103	151	141	211	229	118	241	1,194	87,543,531
66	88	98	138	188	171	105	173	961	67,214,252
67	50	79	82	137	116	86	128	678	48,857,507
68	55	81	66	119	106	66	118	611	42,804,687
69	39	58	49	79	68	55	117	465	34,879,150
70	29	48	44	72	60	43	93	389	27,709,194
71	30	41	35	50	36	23	62	277	19,815,254
72	16	37	30	38	33	19	57	230	14,768,257
73	9	26	15	27	30	15	51	173	12,499,320
74	18	24	19	27	21	8	43	160	10,168,461
75	11	13	9	17	18	8	20	96	6,367,263
76	13	7	9	9	9	4	22	73	4,704,899
77	7	5	9	13	8	3	17	62	4,411,094
78	1	9	7	7	6	1	20	51	3,965,995
79+		15	12	17	15	9	47	115	8,374,937
<b>Totals</b>	<b>27,731</b>	<b>23,057</b>	<b>16,730</b>	<b>17,361</b>	<b>13,281</b>	<b>6,809</b>	<b>4,989</b>	<b>109,958</b>	<b>\$7,688,846,359</b>



# Active Membership – Age & Service Distribution

## June 30, 2021

### Employees' Combined System

Age Nearest Birthday	Nearest Whole Years of Service on the Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	28							28	\$ 894,975
20-24	1,026	26						1,052	40,015,030
25-29	3,475	738	9					4,222	192,319,885
30-34	4,200	2,550	666	46				7,462	381,037,506
35-39	4,101	2,466	1,826	763	24			9,180	505,515,754
40-44	2,733	2,159	1,591	1,494	557	20		8,554	511,500,670
45-49	2,276	1,794	1,533	1,469	1,476	320	16	8,884	544,408,516
50-54	2,403	2,051	1,671	1,630	1,860	1,076	568	11,259	697,207,866
55-59	2,065	1,916	1,837	1,745	1,863	1,150	1,663	12,239	758,591,188
60	374	360	346	339	368	197	410	2,394	149,026,252
61	302	333	356	305	318	244	406	2,264	140,569,549
62	319	339	308	274	302	203	438	2,183	136,162,814
63	243	327	269	236	275	122	389	1,861	115,816,998
64	201	262	267	221	217	125	317	1,610	100,717,836
65	157	259	212	190	193	93	273	1,377	86,516,757
66	106	181	150	161	162	73	233	1,066	67,847,996
67	98	149	134	138	98	54	201	872	55,903,565
68	78	122	99	94	63	45	157	658	40,662,806
69	76	94	94	71	59	34	104	532	33,503,613
70	62	74	73	82	54	36	98	479	29,693,548
71	35	58	60	36	51	17	84	341	20,258,542
72	34	53	45	54	23	24	59	292	15,924,956
73	26	43	38	34	32	9	50	232	13,618,319
74	13	27	25	25	37	11	38	176	10,400,266
75	27	31	19	24	13	10	31	155	8,866,438
76	25	14	12	14	7	9	32	113	6,302,414
77	8	15	18	18	14	7	12	92	4,772,227
78	11	10	12	7	9	6	11	66	3,409,502
79+	4	51	29	35	30	8	54	211	10,399,738
<b>Totals</b>	<b>24,506</b>	<b>16,502</b>	<b>11,699</b>	<b>9,505</b>	<b>8,105</b>	<b>3,893</b>	<b>5,644</b>	<b>79,854</b>	<b>\$4,681,865,526</b>



# Active Membership – Age & Service Distribution

## June 30, 2021

### State Police

Age Nearest Birthday	Nearest Whole Years of Service on the Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	6							6	\$ 166,458
20-24	89	5						94	4,486,032
25-29	127	92	8					227	15,045,232
30-34	30	143	100	3				276	22,143,636
35-39	10	44	103	101	6			264	24,514,489
40-44	6	22	28	70	89	2		217	22,231,995
45-49	1	5	10	38	72	20		146	16,529,697
50-54	1	6	8	18	33	19	7	92	10,422,897
55-59			1	11	6	3	9	30	3,400,655
60				1				1	107,366
<b>Totals</b>	<b>270</b>	<b>317</b>	<b>258</b>	<b>242</b>	<b>206</b>	<b>44</b>	<b>16</b>	<b>1,353</b>	<b>\$119,048,457</b>



# Active Membership – Age & Service Distribution

## June 30, 2021

### Judges

Age Nearest Birthday	Nearest Whole Years of Service on the Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
35-39								0	\$ 0
40-44	8	1						9	1,446,297
45-49	29	12	1					42	6,849,086
50-54	26	16	5	1				48	7,844,584
55-59	23	18	9	13				63	10,409,779
60	7	10	6	3				26	4,297,958
61	5	6	3	5				19	3,138,427
62	2	2	1	3				8	1,360,464
63	3	6	4	7				20	3,319,260
64	1	5	3	8				17	2,837,161
65	4	5	1	4				14	2,328,862
66	2	4	3	7				16	2,606,128
67		2	3	5				10	1,703,230
68		1	2	3				6	1,012,698
69		4	4	4				12	2,037,896
70	1	2		1				4	718,732
72				1				1	162,646
<b>Totals</b>	<b>111</b>	<b>94</b>	<b>45</b>	<b>65</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>315</b>	<b>\$52,073,208</b>



# Active Membership – Age & Service Distribution

## June 30, 2021

### LEOPS

Age Nearest Birthday	Nearest Whole Years of Service on the Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	101	3						104	\$ 5,367,404
25-29	227	105	7					339	19,437,828
30-34	158	207	116	5				486	31,933,666
35-39	74	90	147	73	3			387	28,221,607
40-44	31	47	74	115	66	3		336	26,620,423
45-49	41	38	44	81	96	20		320	25,976,437
50-54	50	52	48	58	100	44	9	361	31,019,984
55-59	42	45	34	30	28	16	19	214	17,848,878
60	3	7	6	5	3	2		26	2,395,478
61	2	9	3	3	3		2	22	1,737,914
62	1	4	3	4	1	1	3	17	1,525,693
63	2	5	5	3	1	2	2	20	1,632,477
64		1	3	2	1	2	1	10	931,498
65	1	2	1	6	1		2	13	1,266,664
66	1		5	3		2	1	12	996,327
67		1	1	4	1			7	679,588
68		2	1	1			1	5	402,556
69				2				2	166,616
70	1		1	2			1	5	480,241
71			1		2		1	4	432,689
72		2						2	98,668
73	1	1			1			3	152,734
74				1		1		2	135,077
<b>Totals</b>	<b>736</b>	<b>621</b>	<b>500</b>	<b>398</b>	<b>307</b>	<b>93</b>	<b>42</b>	<b>2,697</b>	<b>\$199,460,447</b>



# Active Membership – Age & Service Distribution

## June 30, 2021

### CORS

Age Nearest Birthday	Nearest Whole Years of Service on the Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	4							4	\$ 176,967
25-29	16	3						19	930,927
30-34	6	9	3					18	983,015
35-39	7	6	7	3				23	1,272,093
40-44	3	2	4	5	1			15	925,988
45-49	4	3	5	1	5	1		19	1,204,974
50-54	3		1	6	2	1	1	14	862,357
55-59	1		2	2	2	1	1	9	536,023
60						2	2	4	344,875
61					1			1	73,278
62				2				2	128,128
63		1	1				2	4	295,068
64						1		1	66,963
70							1	1	151,984
<b>Totals</b>	<b>44</b>	<b>24</b>	<b>23</b>	<b>19</b>	<b>11</b>	<b>6</b>	<b>7</b>	<b>134</b>	<b>\$7,952,640</b>



## Retired Membership Statistics June 30, 2021 (State and Municipal)

System	Number	Average Age	Average Credited Service*	Average Final Average Salary*	Average Benefit
Teachers' Retirement	22,790	79.3	29.6	\$ 55,802	\$ 42,638
Teachers' Pension	58,725	71.9	22.1	61,466	24,877
Employees' Retirement – State	16,516	72.6	24.8	43,231	26,533
Employees' Retirement – Municipal	2,316	79.9	25.6	35,041	24,672
Employees' Retirement – Total	18,883	73.5	24.9	42,291	26,312
Employees' Pension – State	46,797	71.3	21.2	47,919	17,754
Employees' Pension – Municipal	16,908	71.3	18.1	41,877	14,392
Employees' Pension – Total	63,705	71.3	20.4	46,315	16,862
State Police	2,559	65.2	23.4	57,241	53,362
Judges	442	77.8	14.0	169,590	88,358
LEOPS – State	1,712	63.4	22.2	62,276	36,921
LEOPS – Municipal	552	58.3	22.0	67,004	38,702
LEOPS – Total	2,264	62.2	22.2	63,429	37,355
CORS – Municipal	51	61.0	20.9	67,261	29,281
Total - State	149,541	72.7	23.3	54,606	26,351
Total - Municipal	19,827	72.0	19.1	41,843	16,308
TOTAL SYSTEMS	169,368	72.6	22.8	53,112	25,175

\* Only non-zero values included in averages.



## Retired Membership Statistics –by Type

### June 30, 2021

### (State and Municipal)

System	Service Retirees		Disabilities		Beneficiaries	
	Number	Average Age	Number	Average Age	Number	Average Age
Teachers' Retirement	19,815	79.1	527	78.4	2,448	80.9
Teachers' Pension	52,749	72.4	4,015	65.4	1,961	73.3
Employees' Retirement – State	12,602	73.0	1,572	61.8	2,342	78.0
Employees' Retirement – Municipal	<u>1,689</u>	80.1	<u>136</u>	78.7	<u>491</u>	79.9
Employees' Retirement – Total	14,291	73.8	1,708	63.2	2,833	78.3
Employees' Pension – State	38,557	72.0	5,295	65.3	2,945	73.0
Employees' Pension – Municipal	<u>13,283</u>	72.6	<u>2,652</u>	64.6	<u>973</u>	72.6
Employees' Pension – Total	51,840	72.1	7,947	65.1	3,918	72.9
State Police	1,576	65.3	614	59.2	369	74.8
Judges	334	76.3	4	70.5	104	82.9
LEOPS – State	1,236	64.9	345	56.5	131	67.8
LEOPS – Municipal	<u>406</u>	60.4	<u>121</u>	52.2	<u>25</u>	52.7
LEOPS – Total	1,642	63.8	466	55.4	156	65.4
CORS – Municipal	40	62.2	9	55.3	2	64.3
Total - State	126,869	73.2	12,372	64.9	10,300	76.2
Total - Municipal	<u>15,418</u>	73.1	<u>2,918</u>	64.8	<u>1,491</u>	74.6
TOTAL SYSTEMS	142,287	73.2	15,290	64.9	11,791	76.0



## Retired Membership – Attained Age June 30, 2021 (State and Municipal)

Age at Valuation Date	Teachers'		Employees		State Police		Judges		LEOPS		CORS (Municipal)		Total	
	Number	Annual Benefits#	Number	Annual Benefits#	Number	Annual Benefits#	Number	Annual Benefits#	Number	Annual Benefits#	Number	Annual Benefits#	Annual Benefits	
Under 30	9	\$ 86,334	31	\$ 286,063	4	\$ 123,111	-	-	5	\$ 113,408	-	-	49	\$ 608,917
30-34	15	226,499	61	1,104,765	7	270,485	-	-	6	233,821	-	-	89	1,835,569
35-39	59	1,764,781	117	2,506,411	19	829,358	-	-	21	796,614	-	-	216	5,897,164
40-44	99	3,531,614	280	6,150,631	45	2,120,039	-	-	49	1,826,130	1	\$ 31,156	474	13,659,570
45-49	201	6,705,147	670	16,068,189	162	9,402,100	1	29,934	119	4,941,997	4	90,131	1,157	37,237,497
50-54	517	19,491,359	1,731	43,786,827	336	19,125,839	-	-	343	13,547,565	4	55,070	2,931	96,006,660
55-59	1,983	68,630,183	4,307	109,001,693	388	21,417,335	-	-	420	16,345,242	9	336,558	7,107	215,731,010
60-64	6,440	193,173,393	9,884	222,395,847	313	17,640,491	18	1,553,945	418	16,006,782	21	665,931	17,094	451,436,389
65-69	16,491	491,004,626	18,388	357,719,975	326	18,336,489	44	4,398,847	384	14,191,450	6	116,758	35,639	885,768,145
70-74	22,739	697,912,048	19,514	365,292,938	374	19,515,448	126	11,985,718	294	10,164,845	5	116,830	43,052	1,104,987,827
75-79	15,518	455,361,575	12,716	220,645,314	287	14,089,600	86	7,640,859	129	4,097,304	1	80,885	28,737	701,915,538
80-84	8,936	253,215,357	7,830	121,023,122	186	8,344,539	75	6,609,008	49	1,569,924	-	-	17,076	390,761,951
85-89	5,305	151,556,729	4,487	66,588,704	81	3,706,261	54	4,227,159	22	620,522	-	-	9,949	226,699,375
90-94	2,444	69,508,515	1,901	28,260,175	22	975,846	31	2,066,807	5	115,605	-	-	4,403	100,926,948
95-99	653	17,618,057	545	7,808,971	7	487,231	7	541,808	-	-	-	-	1,212	26,456,067
100-104	100	2,627,397	70	862,104	1	75,518	-	-	-	-	-	-	171	3,565,019
105-110+	6	207,833	5	42,262	1	92,464	-	-	-	-	-	-	12	342,559
	<b>81,515</b>	<b>\$ 2,432,621,448</b>	<b>82,537</b>	<b>\$ 1,569,543,990</b>	<b>2,559</b>	<b>\$ 136,552,155</b>	<b>442</b>	<b>\$ 39,054,084</b>	<b>2,264</b>	<b>\$ 84,571,209</b>	<b>51</b>	<b>\$ 1,493,319</b>	<b>169,368</b>	<b>\$ 4,263,836,205</b>

# Retiree benefit amounts include the cost-of-living-adjustment granted July 1, 2021.



# Retired Membership\* – By Calendar Year of Retirement

## June 30, 2021

### (State and Municipal)

Year of Retirement	Teachers'		Employees		State Police		Judges		LEOPS		CORS (Municipal)		Total	
	Number	Annual Benefits#	Number	Annual Benefits#	Number	Annual Benefits#	Number	Annual Benefits#	Number	Annual Benefits#	Number	Annual Benefits#	Annual Benefits	
Before 1991	3,827	\$ 111,868,631	3,394	\$ 58,710,915	449	\$ 18,566,167	38	\$ 2,015,712	8	\$ 199,593	-	-	7,716	\$ 191,361,017
1991	775	26,303,864	671	12,559,482	43	2,141,878	2	94,550	13	326,790	-	-	1,504	41,426,563
1992	1,194	42,195,969	810	14,192,309	92	4,619,068	5	263,630	18	586,805	-	-	2,119	61,857,781
1993	954	30,048,646	794	13,357,339	60	2,913,782	4	183,183	12	373,928	-	-	1,824	46,876,876
1994	1,086	31,964,807	903	14,694,680	67	3,289,773	5	423,467	11	346,547	-	-	2,072	50,719,275
1995	1,260	35,963,375	1,085	17,765,414	58	2,827,799	11	871,270	12	361,471	-	-	2,426	57,789,328
1996	1,448	42,939,439	2,047	39,422,044	73	3,579,365	11	747,699	13	382,175	-	-	3,592	87,070,721
1997	1,546	46,348,077	1,425	25,509,750	56	2,741,261	6	439,760	15	354,246	-	-	3,048	75,393,093
1998	1,773	55,217,168	1,322	20,362,937	56	2,785,583	9	554,032	22	541,495	-	-	3,182	79,461,215
1999	2,266	70,693,624	1,424	23,026,495	59	3,417,411	9	895,783	31	742,864	-	-	3,789	98,776,177
2000	2,234	68,397,877	1,571	24,093,126	132	7,632,995	11	1,054,788	71	2,213,908	-	-	4,019	103,392,693
2001	2,234	68,306,967	1,693	27,745,755	90	5,422,219	13	991,213	96	3,567,052	-	-	4,126	106,033,206
2002	2,359	70,134,712	1,980	32,729,764	84	5,282,098	15	1,236,499	84	3,209,807	-	-	4,522	112,592,880
2003	2,425	73,082,382	2,381	42,647,329	100	6,488,353	8	647,047	87	3,702,113	-	-	5,001	126,567,224
2004	2,775	84,675,701	2,698	50,105,142	95	5,665,252	12	1,099,219	78	3,083,448	-	-	5,658	144,628,762
2005	2,837	81,778,381	2,930	54,133,794	105	6,112,136	13	1,200,020	92	3,627,147	-	-	5,977	146,851,479
2006	2,529	73,474,412	2,634	48,409,103	82	4,590,800	15	1,352,896	78	3,027,914	-	-	5,338	130,855,124
2007	2,829	85,711,271	2,992	57,097,531	91	4,846,116	22	2,110,732	87	3,187,357	-	-	6,021	152,953,007
2008	2,912	85,272,729	3,148	58,831,320	78	4,106,130	13	1,295,835	99	3,764,009	-	-	6,250	153,270,023
2009	2,845	76,976,426	3,268	58,156,678	67	3,739,400	16	1,426,233	116	4,585,455	1	\$ 15,049	6,313	144,899,241
2010	3,361	102,600,381	3,860	75,720,485	74	4,679,899	16	1,534,763	97	3,950,643	6	207,856	7,414	188,694,026
2011	4,143	131,416,216	4,131	82,877,865	77	4,114,694	17	1,515,224	119	4,621,658	3	196,847	8,490	224,742,505
2012	3,505	102,231,568	3,510	63,262,644	51	2,794,158	13	1,422,122	115	4,421,162	3	107,412	7,197	174,239,066
2013	3,687	106,463,013	3,970	73,170,226	60	3,206,338	21	1,836,837	114	4,316,313	6	184,644	7,858	189,177,371
2014	3,814	108,642,820	3,586	63,023,842	42	2,265,294	16	1,717,481	82	2,943,377	5	75,313	7,545	178,668,128
2015	3,946	110,261,165	4,722	93,084,286	50	2,758,408	17	1,700,293	112	4,121,062	3	37,555	8,850	211,962,770
2016	3,626	102,214,083	4,041	75,804,356	41	2,086,508	16	1,548,278	102	3,912,248	3	45,096	7,829	185,610,569
2017	3,398	101,548,848	4,066	85,529,411	54	2,909,801	21	1,988,460	89	3,014,743	3	99,332	7,631	195,090,596
2018	3,171	98,296,118	3,693	83,253,021	42	2,594,892	27	2,854,800	122	5,141,986	2	49,609	7,057	192,190,426
2019	3,075	94,651,038	3,643	84,444,444	46	2,564,735	17	1,825,822	112	3,845,013	6	116,270	6,899	187,447,321
2020	2,887	90,238,826	2,815	64,414,605	59	3,936,133	14	1,395,010	110	4,306,078	7	162,682	5,892	164,453,333
2021	794	22,702,916	1,330	31,407,903	26	1,873,711	9	811,426	47	1,792,801	3	195,654	2,209	58,784,411
	<b>81,515</b>	<b>\$ 2,432,621,448</b>	<b>82,537</b>	<b>\$ 1,569,543,990</b>	<b>2,559</b>	<b>\$ 136,552,155</b>	<b>442</b>	<b>\$ 39,054,084</b>	<b>2,264</b>	<b>\$ 84,571,209</b>	<b>51</b>	<b>\$ 1,493,319</b>	<b>169,368</b>	<b>\$ 4,263,836,205</b>

\* Retiree benefit amounts include the cost-of-living-adjustment granted July 1, 2021.



## APPENDIX C

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### SUMMARY OF PLAN PROVISIONS

This guide provides a general summary of certain features of the Maryland State Retirement and Pension System (“MSRPS”). The MSRPS is governed by law, including Division II of the State Personnel and Pensions Article of the Annotated Code of Maryland, and Title 22 of the Code of Maryland Regulations. If there is a conflict between the law and this guide, the law prevails.

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## CITATIONS

All citations "SPP" are to the State Personnel and Pensions Article of the Annotated Code of Maryland.



# Teachers' Retirement System of the State of Maryland

## 1. Membership

System closed to new members hired on or after January 1, 1980. Members on December 31, 1979 continue to be members unless they elected to transfer into the Teachers' Pension System (established January 1, 1980) prior to January 1, 2005.

Membership generally includes any teacher, helping teacher, principal, supervisor, superintendent, attendance officer or clerk employed in public day school within the State of Maryland, or supported and controlled by the State; any librarian or clerical employee of a library established or operated under the Education Article; any professional or clerical employee of a community college established or operated under the Education Article; or staff employee of the University System of Maryland, Morgan State University or St. Mary's College who is a member as of January 1, 1998.

## 2. Member Contributions

Retirement System members participate under one of three elections (effective July 1, 1984):

- Plan A: Generally, 7% of earnable compensation to maintain all benefits, including unlimited compounded cost-of-living adjustments.
- Plan B: Generally, 5% of earnable compensation to maintain all benefits, except the compounded cost-of-living adjustments which are capped at 5%.
- Plan C: 5% of earnable compensation as determined under the employee contribution for the Teachers' Pension System (Plan C provides a two-part benefit based on benefits of the Teachers' Retirement System and the Teachers' Pension System).

Interest earned on all employee contributions is 4% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

## 3. Normal Retirement Age

Normal retirement age is age 60.

## 4. Normal Service Retirement Allowance

Eligibility: 30 years of eligibility service or attainment of age 60.

Allowance:  $1/55^{\text{th}}$  of average final compensation for the three highest years as a member for each year of creditable service. Creditable service is based on a full normal working time for teachers – 10 months equals one year.

Plan C: For creditable service before election date, the amount determined by the service retirement formula for Teachers' Retirement System; for creditable service after election date, the amount determined by the service retirement formula for the applicable component of the Teachers' Pension System.



# Teachers' Retirement System of the State of Maryland

## 5. Early Retirement Allowance

Eligibility: 25 years of eligibility service and less than 60 years old.

Allowance: Service Retirement allowance reduced by 0.5% for each month that date of retirement precedes the earlier of age 60 or the date the member would have completed 30 years of eligibility service (maximum reduction of 30%).

Plan C: For creditable service before election date, the amount determined by the service retirement formula for Teachers' Retirement System (maximum reduction of 30%); for creditable service after election date, the amount determined by the service retirement formula for the applicable component of the Teachers' Pension System for each month retirement occurs prior to age 62 (maximum reduction of 42%).

## 6. Disability Retirement Allowance

### Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is permanent.

Allowance: The benefit is  $1/55^{\text{th}}$  of average final compensation for the three highest years as a member for each year of creditable service. The minimum benefit is 25% of average final compensation; the maximum benefit can be no greater than  $1/55^{\text{th}}$  of average final compensation for each year of creditable service the member would have accrued if employment continued to age 60.

Plan C: The benefit is the greater of the Teachers' Retirement System allowance noted above, or the ordinary disability benefit of the Teachers' Pension System.

### Accidental

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty at a definite time and place without willful negligence by the member.

Allowance: The benefit is 66.67% of average final compensation for the three highest years as a member, plus the annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation, including any annuitized accumulated contributions.



# Teachers' Retirement System of the State of Maryland

## 7. Death Benefits

### **Ordinary Death Benefit for Active Member with Less Than One Year of Service**

Eligibility: Less than one year of eligibility service and not eligible for a special death benefit

Benefit: Return of accumulated contributions

### **Ordinary Death Benefit for Active Member with One Or More Years of Service**

Eligibility: One or more years of eligibility service and not eligible for a special death benefit

Benefit:

*Members who at the time of death are younger than age 55 or have less than 15 years of service.*  
One-time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions to the member's designated beneficiary.

*Members who at the time of death are eligible to retire and are age 55 or older with at least 15 years of service.*

The surviving spouse of a deceased member may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) a monthly allowance under Option 2 (100% survivor benefit). In cases where a deceased member is not survived by a spouse, the decedent's children may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) an allowance equal to 50% of the basic allowance that would have been paid to the deceased member, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. If any child is disabled, the benefit will continue for that child as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, the member's designated beneficiary shall receive a one-time lump sum payment consisting of the member's accumulated contributions and the member's annual compensation at the time of death.

### **Special Death Benefit for Active Member**

Eligibility: Death arising out of or in the course of the actual performance of duty without willful negligence by the member.

Benefit: 66.67% of average final compensation for the three highest years as a member payable to a surviving spouse, decedent's children or dependent parents. Accumulated member contributions are paid to the designated beneficiary. Children of deceased members receiving a special death benefit will continue to receive this benefit, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. Disabled children receiving a special death benefit may receive a special death benefit as long as they remain disabled, regardless of age.



# Teachers' Retirement System of the State of Maryland

## Death Benefit for Vested Former Member

If member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

## 8. Vested Allowance

Eligibility: Five years of eligibility service and separation from employment other than by death or retirement.

Allowance: Vested allowance payable at normal retirement age, provided member does not withdraw accumulated contributions.

If member dies before payment of the vested allowance starts, only accumulated member contributions are returned.

## 9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1 for all allowances which have been in payment for one year.

- Selection A (Additional Member Contributions): Uncapped and compounded.
- Selection B (Limited COLA): Capped at 5% and compounded.
- Selection C (Combination Formula): For creditable service on or after the effective date of Selection C, generally, with limited exceptions, COLA is capped at 3% and compounded. For creditable service before the effective date of Selection C, COLA is calculated based on the applicable component (A or B) to which the member was subject prior to electing Section C.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

## 10. Optional Forms of Payment

Basic service allowance is a single life annuity.

- Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.



# Teachers' Retirement System of the State of Maryland

- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 6: 50% "pop-up" joint and survivor annuity, which pays the designated beneficiary 50% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

Vested former members who are eligible to receive a vested allowance of less than \$50 a month may elect to receive a lump-sum payment equal to the present value in lieu of a monthly benefit.

## 11. Reduction for Benefits Payable under Workers' Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers' compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Teachers' Retirement System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers' compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers' compensation payments are subject to an offset by the Workers' Compensation Commission if a recipient is receiving an ordinary disability payment from the Teachers' Retirement System for the same injury or illness. Any offset taken for an accidental disability from the Teachers' Retirement System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree's employer by the Workers' Compensation Commission.



# Teachers' Pension System of the State of Maryland

## 1. Membership

Membership is generally a condition of employment for those teachers, faculty members, and educational employees, specified in SPP § 23-206 of the Annotated Code of Maryland, hired on or after January 1, 1980. Certain eligible higher education employees may elect to join an optional defined contribution retirement program provided by the State, known as the Optional Retirement Program (ORP). The ORP is separate and distinctive from the supplemental program administered by the Maryland Supplemental Retirement Plan.

All individuals who are members of the Teacher's Pension System on or before June 30, 2011, participate in the Alternate Contributory Pension Selection (ACPS) except for the members who transferred from the Teachers' Retirement System after April 1, 1998 or former vested members who terminated employment prior to July 1, 1998.

All individuals who enroll in the Teachers' Pension System on or after July 1, 2011, participate in the Reformed Contributory Pension Benefit (RCPB).

## 2. Member Contributions

Members of both the ACPS and the RCPB are required to make contributions of 7% of earnable compensation.

Contributions earn interest at 5% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

## 3. Normal Retirement Age

For members of the Alternate Contributory Pension Selection, normal retirement age is age 62.

For members of the Reformed Contributory Pension Benefit, normal retirement age is age 65.

## 4. Normal Service Retirement Allowance

ACPS Eligibility - 30 years of eligibility service or attainment of one of the following:

- Age 62 with five years of eligibility service.
- Age 63 with four years of eligibility service.
- Age 64 with three years of eligibility service.
- Age 65 and older with two years of eligibility service.

ACPS Allowance - The greater of (i) or (ii), plus (iii), as described below:

- (i) 1.2% of average final compensation for the three highest consecutive years as a member for each year of creditable service on or before June 30, 1998;



# Teachers' Pension System of the State of Maryland

- (ii) 0.8% of average final compensation for the three highest consecutive years as a member up to the Social Security Integration Level (SSIL) plus 1.5% of average final compensation over the integration level for each year of creditable service on or before June 30, 1998;
- (iii) the number of years of the member's creditable service on or after July 1, 1998 multiplied by 1.8% of the member's average final compensation for the three highest consecutive years as a member.

RCPB Eligibility: Combined age and eligibility service of at least 90 years or age 65 after 10 years of eligibility service.

RCPB Allowance: 1.5% of average final compensation for the five highest consecutive years as a member for each year of creditable service on or after July 1, 2011.

The SSIL is the average of all Social Security Wage Bases over the 35 calendar years prior to your retirement.

Note: Members who transferred into the Teachers' Pension System, on or after April 1, 1998, receive benefits based on the provisions of the NCPS (refer to page C-28) in effect as of January 1, 1980, except for COLA benefits.

## 5. Early Retirement Allowance

ACPS Eligibility: Age 55 with at least 15 years of eligibility service.

ACPS Allowance: Service retirement allowance computed as of early retirement date, reduced by 0.5% for each month that early retirement date precedes age 62 (maximum reduction of 42%).

RCPB Eligibility: Age 60 with at least 15 years of eligibility service.

RCPB Allowance: Service retirement allowance computed as of early retirement date, reduced by 0.5% for each month that early retirement date precedes age 65 (maximum reduction of 30%).

## 6. Disability Retirement Allowance

### Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is likely to be permanent.

Allowance: The benefit is the service retirement allowance computed on the basis that service continues until normal retirement age. If disability occurs after age 62 (age 65 for RCPB), the benefit is based on creditable service at time of retirement.



# Teachers' Pension System of the State of Maryland

## Accidental

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty without willful negligence by the member.

Allowance: The benefit is 66.67% of average final compensation for the three highest consecutive years (five highest for RCPB) as a member plus the annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation including any annuitized accumulated contributions.

## 7. Death Benefits

### Ordinary Death Benefit for Active Member with Less Than One Year of Service

Eligibility: Less than one year of eligibility service and not eligible for a special death benefit.

Benefit: Return of accumulated contributions

### Ordinary Death Benefit for Active Member with One Or More Years of Service

Eligibility: One or more years of eligibility service and not eligible for a special death benefit

Benefit:

*Members who at the time of death are not members of the Reformed Contributory Pension Benefit, are younger than age 55 and have less than 15 years of service or are members of the Reformed Contributory Pension Benefit, are younger than age 60 and have less than 15 years of service.*

One-time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions to the member's designated beneficiary.

*Members who at the time of death: (1) are eligible to retire; (2) have accrued at least 25 years of eligibility service; (3) are not members of the Reformed Contributory Pension Benefit and are age 55 or older with at least 15 years of service; or (4) are members of the Reformed Contributory Pension Benefit and are age 60 or older with at least 15 years of service.*

The surviving spouse of a deceased member may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) a monthly allowance under Option 2 (100% survivor benefit). In cases where a deceased member is not survived by a spouse, the decedent's children may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) an allowance equal to 50% of the basic allowance that would have been paid to the deceased member, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. If any child is disabled, the benefit will continue for that child as long as the child remains disabled, regardless of age. In cases where a deceased member is not



# Teachers' Pension System of the State of Maryland

survived by a spouse or children, the member's designated beneficiary shall receive a one-time lump sum payment consisting of the member's accumulated contributions and the member's annual compensation at the time of death.

## Special Death Benefit for Active Member

Eligibility: Death arising out of or in the course of the actual performance of duty without willful negligence by the member.

Benefit: 66.67% of average final compensation for the three highest consecutive years as a member, except for member's participating in the RCPB component for which the average final compensation is the five highest consecutive years as a member, payable to a surviving spouse, decedent's children or dependent parents. Accumulated contributions are paid to the designated beneficiary. Children of deceased members receiving a special death benefit will continue to receive this benefit prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. Disabled children receiving a special death benefit may receive a special death benefit as long as they remain disabled, regardless of age.

## Death Benefit for Vested Former Member

If a member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

## 8. Vested Allowance

ACPS Eligibility: Five years of eligibility service and separation from employment other than by death or retirement.

ACPS Allowance: Accrued retirement allowance payable at age 62 provided member does not withdraw accumulated contributions. A member who has completed 15 years of eligibility service may begin to receive benefit payments at any time on or after attainment of age 55, reduced by 0.5% for each month that benefit commencement date precedes age 62 (maximum reduction of 42%.)

If member dies before payment of the vested allowance starts, only accumulated member contributions are returned.

RCPB Eligibility: 10 years of eligibility service and separation from employment other than by death or retirement

RCPB Allowance: Accrued retirement allowance payable at age 65 provided member does not withdraw accumulated contributions. A member who has completed 15 years of eligibility service may begin to receive benefit payments at any time on or after attainment of age 60, reduced by 0.5% for each month that benefit commencement date precedes age 65 (maximum reduction of 30%.)



# Teachers' Pension System of the State of Maryland

If member dies before payment of the vested allowance starts, only accumulated member contributions are returned.

## 9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Effective July 1, 1998, and for an allowance based on creditable service before July 1, 2011, the adjustment is capped at a maximum of 3% compounded and is applied to all allowances which have been in payment for one year.

For an allowance based on creditable service earned on or after July 1, 2011, the COLA adjustment is capped at 2.5% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was greater than or equal to the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year. The adjustment is capped at 1% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was less than the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

Any adjustments are effective July 1.

## 10. Optional Forms of Payment

Basic service allowance is a single life annuity.

- Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.
- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.



# Teachers' Pension System of the State of Maryland

- Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 6: 50% "pop-up" joint and survivor annuity, which pays the designated beneficiary 50% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

Vested former members who are eligible to receive a vested allowance of less than \$50 a month may elect to receive a lump-sum payment equal to the present value in lieu of a monthly benefit.

## 11. Reduction for Benefits Payable under Workers' Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers' compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Teachers' Pension System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers' compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers' compensation payments are subject to an offset by the Workers' Compensation Commission if a recipient is receiving an ordinary disability payment from the Teachers' Pension System for the same injury or illness. Any offset taken for an accidental disability from the Teachers' Pension System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree's employer by the Workers' Compensation Commission.

# Employees' Retirement System of the State of Maryland

## 1. Membership

System closed to new members hired on or after January 1, 1980. Members on December 31, 1979 continue to be members unless they elected to transfer into the Employees' Pension System (established January 1, 1980) prior to January 1, 2005.

Membership generally includes employees of the State and other eligible participating employers.

## 2. Member Contributions

- Plan A: Generally, 7% of earnable compensation to maintain all benefits, including unlimited compounded cost-of-living adjustments.
- Plan B: Generally, 5% of earnable compensation to maintain all benefits, except the compounded cost-of-living adjustments which are capped at 5%.
- Plan C: Provides a two-part benefit based on benefits of the Employees' Retirement System and the Employees' Pension System. Employee contributions, if any, are based on participation of the employer in the applicable component of the Employees' Pension System. (refer to summary of Employees' Pension System).

Interest earned on all employee contributions is 4% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

## 3. Normal Retirement Age

Normal retirement age is age 60.

## 4. Normal Service Retirement Allowance

Eligibility: 30 years of eligibility service or attainment of age 60.

Allowance: 1/55th of average final compensation for the three highest years as a member for each year of creditable service.

Plan C: For creditable service before election date, the amount determined by the service retirement formula for Employees' Retirement System; for creditable service after election date, the amount determined by the service retirement formula for the applicable component of the Employees' - Pension System under which the employer and member participates.

## 5. Early Retirement Allowance

Eligibility: 25 years of eligibility service and less than 60 years old.



# Employees' Retirement System of the State of Maryland

Allowance: Service retirement allowance reduced by 0.5% for each month that date of retirement precedes the earlier of age 60 or the date the member would have completed 30 years of eligibility service (maximum reduction of 30%).

Plan C: For creditable service before election date, the amount determined by the service retirement formula for Employees' Retirement System with a maximum reduction of 30%; for creditable service after election date, the amount determined by the service retirement formula for the applicable component of the Employees' Pension System under which the employer participates with a 0.5% reduction for each month retirement occurs prior to age 62 (maximum reduction of 42%).

## 6. Disability Retirement Allowance

### Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is permanent.

Allowance: The benefit is  $1/55^{\text{th}}$  of average final compensation for the three highest years as a member for each year of creditable service. The minimum benefit is 25% of average final compensation; the maximum benefit can be no greater than  $1/55^{\text{th}}$  of average final compensation for each year of creditable service the member would have accrued if employment continued to age 60.

Plan C: The benefit is the greater of the Employees' Retirement System allowance noted above, or the ordinary disability benefit of the Employees' Pension System.

### Accidental

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty at a definite time and place without willful negligence by the member.

Allowance: The benefit is 66.67% of average final compensation for the three highest years as a member, plus the annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation, including any annuitized accumulated contributions.

## 7. Death Benefits

### Ordinary Death Benefit for Active Member with Less Than One Year of Service

Eligibility: Less than one year of eligibility service and not eligible for a special death benefit.



# Employees' Retirement System of the State of Maryland

Benefit: Return of accumulated contributions

## **Ordinary Death Benefit for Active Member with One or More Years of Service**

Eligibility: One or more years of eligibility service and not eligible for a special death benefit.

Benefit:

*Members who at the time of death are younger than age 55 or have less than 15 years of service.*

One-time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions to the member's designated beneficiary.

*Members who at the time of death are eligible to retire and are age 55 or older with at least 15 years of service.*

The surviving spouse of a deceased member may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) a monthly allowance under Option 2 (100% survivor benefit). In cases where a deceased member is not survived by a spouse, the decedent's children may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) an allowance equal to 50% of the basic allowance that would have been paid to the deceased member, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. If any child is disabled, the benefit will continue for that child as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, the member's designated beneficiary shall receive a one-time lump sum payment consisting of the member's accumulated contributions and the member's annual compensation at the time of death.

## **Special Death Benefit for Active Member**

Eligibility: Death arising out of or in the course of the actual performance of duty without willful negligence by the member.

Benefit: 66.67% of average final compensation for the three highest years as a member payable to a surviving spouse, decedent's children or dependent parents. Accumulated member contributions are paid to the designated beneficiary. Children of deceased members receiving a special death benefit will continue to receive this benefit, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. Disabled children receiving a special death benefit may receive a special death benefit as long as they remain disabled, regardless of age.

## **Death Benefit for Vested Former Member**

If member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.



# Employees' Retirement System of the State of Maryland

## 8. Vested Allowance

Eligibility: Five years of eligibility service and separation from employment other than by death or retirement.

Allowance: Vested allowance payable at normal retirement age, provided member does not withdraw accumulated member contributions.

## 9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1 for all allowances which have been in payment for one year.

- Selection A (Additional Member Contributions): Uncapped and compounded.
- Selection B (Limited COLA): Capped at 5% and compounded.
- Selection C (Combination Formula): For creditable service on or after the effective date of Selection C, generally, with limited exceptions, COLA is capped at 3% and compounded. For creditable service before the effective date of Selection C, COLA is calculated based on the applicable component (A or B) to which the member was subject prior to electing Selection C.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

## 10. Optional Forms of Payment

Basic service allowance is a single life annuity.

Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.

Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.

Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.

Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.



## Employees' Retirement System of the State of Maryland

- Option 5: 100% “pop-up” joint and survivor annuity, which pays the designated beneficiary 100% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree’s spouse or disabled child.
- Option 6: 50% “pop-up” joint and survivor annuity, which pays the designated beneficiary 50% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

Vested former members who are eligible to receive a vested allowance of less than \$50 a month may elect to receive a lump-sum payment equal to the present value in lieu of a monthly benefit.

### **11. Reduction for Benefits Payable Under Workers’ Compensation**

Disability retirement allowances, excluding annuity reserves, are reduced for workers’ compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers’ compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Employees’ Retirement System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers’ compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers’ compensation payments are subject to an offset by the Workers’ Compensation Commission if a recipient is receiving an ordinary disability payment from the Employees’ Retirement System for the same injury or illness. Any offset taken for an accidental disability from the Employees’ Retirement System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree’s employer by the Workers’ Compensation Commission.



# Correctional Officers Retirement System

## 1. Membership

Membership is generally a condition of employment for correctional officers serving in the first six job classifications, individuals serving as a security chief, a facility administrator, and assistant warden or a warden, maximum security attendants at Clifton T. Perkins Hospital Center, and employees of the State as provided in SPP § 25-201. This includes participating governmental units who elect to have their detention center officers participate in the Correctional Officers' Retirement System.

## 2. Member Contributions

Members are required to make contributions of 5% of earnable compensation.

Interest earned on all employee contributions is 4% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

## 3. Normal Retirement Age

Normal retirement age is age 55 for service retirement, age 60 for disability retirement.

## 4. Normal Service Retirement Allowance

Eligibility: For individuals who are members on or before June 30, 2011, either age 55 with at least 5 years of eligibility service credit or 20 years of eligibility service, regardless of age. For individuals who are members on or after July 1, 2011, either age 55 with at least 10 years of eligibility service credit, or 20 years of eligibility service, regardless of age.

Allowance: For individuals who are members on or before June 30, 2011, 1/55th of average final compensation for the three highest years as a member for each year of creditable service. For individuals who are members on or after July 1, 2011, 1/55th of average final compensation for the five highest years as a member for each year of creditable service.

## 5. Early Retirement Allowance

Not applicable to the Correctional Officers' Retirement System, except for certain Baltimore City Jail employees who may retire with 10 years of creditable service., as specified in SPP § 25-401.1.

## 6. Disability Retirement Allowance

### Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is likely to be permanent.



## Correctional Officers Retirement System

Allowance: The benefit is 1/55<sup>th</sup> of the average final compensation for the three highest years as a member (five highest for members enrolled on or after July 1, 2011). The minimum benefit is 25% of average final compensation; the maximum benefit can be no greater than 1/55<sup>th</sup> of average final compensation for each year of creditable service the member would have accrued if employment continued to age 60.

### **Accidental**

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty at a definite time and place without willful negligence by the member.

Allowance: The benefit is 66.67% of average final compensation for the three highest years as a member (five highest for members enrolled on or after July 1, 2011), plus the annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation, including any annuitized accumulated contributions.

## 7. Death Benefits

### **Ordinary Death Benefit for Active Member with Less Than One Year of Service**

Eligibility: Less than one year of eligibility service and not eligible for a special death benefit.

Benefit: Return of accumulated contributions

### **Ordinary Death Benefit for Active Members with One Or More Years of Service**

Eligibility: One or more years of eligibility service and not eligible for a special death benefit.

Benefit:

*Members who at the time of death are younger than age 55 or have less than 15 years of service*

One-time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions to the member's designated beneficiary.

*Members who at the time of death are eligible to retire and are age 55 or older with at least 15 years of service*

The surviving spouse of a deceased member may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) a monthly allowance under Option 2 (100% survivor benefit). In cases where a deceased member is not survived by a spouse, the decedent's children may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) an allowance equal to 50% of the basic allowance that would have been paid to the deceased member, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated



# Correctional Officers Retirement System

among the remaining eligible children. If any child is disabled, the benefit will continue for that child past age 26 as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, the member's designated beneficiary shall receive a one-time lump sum payment consisting of the member's accumulated contributions and the member's annual compensation at the time of death.

## **Special Death Benefit for Active Member**

Eligibility: Death arising out of or in the course of the actual performance of duty without willful negligence by the member.

Benefit: 66.67% of average final compensation for the three highest years as a member payable to a surviving spouse, the decedent's children or dependent parents. Accumulated member contributions are paid to the designated beneficiary. Children of deceased members receiving a special death benefit will continue to receive this benefit, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. Disabled children receiving a special death benefit may receive a special death benefit as long as they remain disabled, regardless of age.

## **Death Benefit for Vested Former Member**

If member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

## **8. Vested Allowance**

Eligibility: For individuals who are members on or before June 30, 2011, five years of eligibility service. For individuals who become member on or after July 1, 2011, 10 years of eligibility service. Member must also be separated from employment other than by death or retirement.

Allowance: Service retirement allowance payable at age 55 provided the member does not withdraw the member's accumulated contributions.

## **9. Cost-of-Living Adjustments (COLA)**

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1 for all allowances which have been in payment for one year.

Uncapped compounded COLAs are applied to all benefits attributable to creditable service earned on or before June 30, 2011.

For an allowance based on creditable service earned on or after July 1, 2011, the COLA is capped at 2.5% if, for the calendar year ending December 31 in the previous fiscal year the several systems' total investment performance was greater than or equal to the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year. The adjustment is capped at 1% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was less than the assumed rate of investment



# Correctional Officers Retirement System

return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

## 10. Optional Forms of Payment

Basic service allowance is a single life annuity.

Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.

Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.

Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.

Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.

Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.

Option 6: 50% "pop-up" joint and survivor annuity, which pays the designated beneficiary 50% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.



# Correctional Officers Retirement System

Vested former members who are eligible to receive a vested allowance of less than \$50 a month may elect to receive a lump-sum payment equal to the present value in lieu of a monthly benefit.

## 11. Reduction for Benefits Payable Under Workers' Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers' compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Correctional Officers' Retirement System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers' compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers' compensation payments are subject to an offset by the Workers' Compensation Commission if a recipient is receiving an ordinary disability payment from the Correctional Officers' Retirement System for the same injury or illness. Any offset taken for an accidental disability from the Correctional Officers' Retirement System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree's employer by the Workers' Compensation Commission.

# Legislative Pension Plan

## 1. Membership

Membership is generally a condition of employment for members of the Maryland General Assembly during the 2019-2022 term of office.

## 2. Member Contributions

Members are required to contribute 7% of annual salary up to 22 years and three months of creditable service.

Interest earned on all employee contributions is 4% per year, compounded annually, until retirement or withdrawal of accumulated contributions.

## 3. Normal Retirement Age

For members who have creditable service prior to January 14, 2015, normal retirement age is age 60.

For members who do not have creditable service prior to January 14, 2015, normal retirement age is age 62.

## 4. Service Retirement Allowance

Eligibility: For individuals who have creditable service in the Legislative Pension Plan before January 14, 2015, age 60 with eight years of creditable service. For individuals who have no creditable service in the Legislative Pension Plan before January 14, 2015, age 62 with eight years of creditable service.

Allowance: 3% of salary of an active legislator for each year of service, multiplied by the number of years of creditable service. The maximum benefit available for a member is 66.67% of salary payable to an active legislator.

## 5. Reduced Service Retirement Allowance

Eligibility: For individuals who have creditable service in the Legislative Pension Plan before January 14, 2015, age 50 with eight years of creditable service. For individuals who have no creditable service in the Legislative Pension Plan before January 14, 2015, age 55 with eight years of creditable service.

Allowance: For individuals who have creditable service in the Legislative Pension Plan before January 14, 2015, a service retirement allowance computed as of early retirement date, reduced by 0.5% for each month under age 60 (maximum reduction of 60%). For individuals who have no creditable service in the Legislative Pension Plan before January 14, 2015, a service retirement allowance computed as of early retirement date, reduced by 0.5% for each month under age 62 (maximum reduction of 42%).



# Legislative Pension Plan

## 6. Disability Retirement Allowance

Eligibility: Eight years of creditable service, regardless of age, and certification of the medical board designated by the Board of Trustees that the member is mentally or physically incapacitated from further performance of duty as a legislator, and that incapacity is likely to be permanent.

Allowance: Service retirement allowance, regardless of age.

## 7. Death Benefits

### **Death of A Member With At Least Eight Years of Creditable Service**

Eligibility: At least eight years of creditable service

Beneficiary: Payment of the benefit shall be made to the member's surviving spouse. If there is no surviving spouse at the time of the member's death, the benefit shall be prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If any child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment will be made to the member's designated beneficiary.

Benefit: The member's beneficiary (surviving spouse, children, or designated beneficiary) may elect to receive: (1) a return of the member's accumulated contributions plus the member's annual salary, if any, at the time of death; or (2) an annuity equal to 50% of the retirement allowance that would have been paid at the member's death, regardless of the member's age. The surviving spouse or children will begin receiving the death benefit at the time of the member's death. A designated beneficiary who elects to receive the annuity may not begin receiving the benefit until the beneficiary reaches age 60, if the deceased member had creditable service in the Legislative Pension Plan before January 14, 2015, or age 62, if the deceased member did not have creditable service before January 14, 2015. The designated beneficiary may elect to begin receiving a reduced annuity at age 50, if the deceased member had creditable service before January 14, 2015, or age 55 if the deceased member did not have creditable service before January 14, 2015.

### **Death of A Member with Less Than Eight Years of Creditable Service**

Eligibility: A member currently serving in the legislature with less than eight years of creditable service

Beneficiary: Payment of the benefit shall be made to the member's surviving spouse. If there is no surviving spouse at the time of the member's death, the benefit shall be prorated equally among the eligible children. A child is eligible for a prorated share if the child is under age 26 or the child is disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment will be made to the member's designated beneficiary. If a member designates more than one beneficiary, the benefit shall be prorated equally among each beneficiary.



# Legislative Pension Plan

Benefit: A lump-sum benefit equal to the member's accumulated contributions plus the member's annual salary at the time of death.

## **Death of A Member with No Beneficiary**

On death of a member who is not survived by a spouse, children, or designated beneficiary, the Board of Trustees shall pay the member's accumulated contributions to the estate of the member.

## **Death of Retiree**

Upon the death of a retiree, a survivor allowance equal to 50% of the retiree's retirement allowance is payable to the retiree's surviving spouse for the spouse's life. If the retiree has no surviving spouse and the retiree has creditable service before January 14, 2015, the full survivor allowance is payable to the designated beneficiary for life beginning at age 60 or an optional reduced survivor allowance is payable to the designated beneficiary for life beginning at age 50. If the retiree has no surviving spouse and the retiree has no creditable service before January 14, 2015, the full survivor allowance is payable to the designated beneficiary for life beginning at age 62 or an optional reduced survivor allowance is payable to the designated beneficiary for life beginning at age 55.

## **8. Vested Allowance**

Eligibility: Eight years of creditable service and separation from employment other than by death or retirement.

Allowance: For individuals who have creditable service in the Legislative Pension Plan before January 14, 2015, a service retirement allowance payable at age 60, provided the member has not withdrawn the member's accumulated contributions. For individuals who have no creditable service in the Legislative Pension Plan before January 14, 2015, a service retirement allowance payable at age 62, provided the member has not withdrawn the member's accumulated contributions.

## **9. Cost-of-Living Adjustments**

Generally, allowances are recalculated each time the salary for a sitting legislator increases.

## **10. Optional Forms of Payment**

Basic Allowance: Normal service allowance with a 50% joint and survivor annuity to the retiree's surviving spouse. If there is no surviving spouse, to the retiree's designated beneficiary. A surviving spouse will begin receiving the death benefit at the time of the retiree's death. A designated beneficiary may not begin receiving the benefit until the beneficiary reaches age 60, if the deceased retiree had creditable service in the Legislative Pension Plan before January 14, 2015, or age 62, if the deceased retiree did not have creditable service before January 14, 2015. The designated beneficiary may elect to begin receiving a reduced annuity at age 50, if the deceased retiree had creditable service before January 14, 2015, or age 55 if the deceased retiree did not have creditable service before January 14, 2015.



## Legislative Pension Plan

Option 1: 100% joint and survivor annuity. If, at the time of retirement the member is married and elects to receive Option 1, the member's spouse must be the designated beneficiary. The designated beneficiary may not be more than 10 years younger than the member unless the beneficiary is the member's spouse or disabled child.

# Employees' Pension System of the State of Maryland

## 1. Membership

Membership is generally a condition of employment for all regular employees of the State of Maryland hired on or after January 1, 1980, excluding those eligible for the Teachers' Retirement System, Teachers' Pension System, State Police Retirement System, certain judges, correctional officers, Law Enforcement Officers Pension System, and members of the General Assembly. Certain governmental units also have elected to participate in the System.

There are four plans under the Employees' Pension System.

- Noncontributory Pension System (**NCPS**) - The original pension system established on January 1, 1980 that only applies to certain participating governmental units that did not elect to participate in the Contributory Pension System, Alternate Contributory Pension Selection, or Reformed Contributory Pension Benefit.
- Employees' Contributory Pension System (**ECPS**) – The ECPS established July 1, 1998 that only applies to certain participating governmental units that elected the ECPS but did not elect to participate in the Alternate Contributory Pension Selection, or Reformed Contributory Pension Benefit.
- Alternate Contributory Pension Selection (**ACPS**) - Applies to all State employees and employees of participating governmental units that are members of the ACPS on or before June 30, 2011.
- Reformed Contributory Pension Benefit (**RCPB**) – Applies to all State employees and employees of participating governmental units enrolling in the Employees' Pension System on or after July 1, 2011. It does not apply to employees of participating governmental units that did not elect to participate in the ACPS or RCPB.

## 2. Member Contributions

NCPS: Members are only required to make contributions of 5% on earnable compensation that exceeds the Social Security Taxable Wage Base.

ECPS: Members are required to make contributions of 2% of earnable compensation.

ACPS: Members are required to make contributions of 7% of earnable compensation.

RCPB: Members are required to make contributions of 7% of earnable compensation.

Contributions earn interest at 5% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.



# Employees' Pension System of the State of Maryland

## 3. Normal Retirement Age

For members of the Non-Contributory, Contributory, or Alternate Contributory Pension Selection, normal retirement age is age 62.

For members of the Reformed Contributory Pension Benefit, normal retirement age is age 65.

## 4. Normal Service Retirement Allowance

NCPS, ECPS, and ACPS Eligibility - 30 years of eligibility service or attainment of one of the following:

- Age 62 with five years of eligibility service
- Age 63 with four years of eligibility service
- Age 64 with three years of eligibility service
- Age 65 or older with two years of eligibility service

NCPS Allowance:

0.8% of average final compensation up to the Social Security Integration Level (SSIL) for the three highest consecutive years as a member plus 1.5% of average final compensation over the SSIL for each year of creditable service;

ECPS Allowance: The greater of (i) or (ii), plus (iii), as described below:

- (i) 1.2% of average final compensation for the three highest consecutive years as a member for each year of creditable service on or before June 30, 1998;
- (ii) 0.8% of average final compensation up to the SSIL for the three highest consecutive years as a member plus 1.5% of average final compensation over the SSIL for each year of creditable service on or before June 30, 1998;
- (iii) 1.4% of average final compensation for the three highest consecutive years as a member for each year of creditable service after June 30, 1998.

ACPS Allowance: The greater of (i) or (ii), plus (iii), as described below:

- (i) 1.2% of average final compensation for the three highest consecutive years as a member for each year of creditable service on or before June 30, 1998;
- (ii) 0.8% of average final compensation up to the SSIL for the three highest consecutive years as a member plus 1.5% of average final compensation over the SSIL for each year of creditable service on or before June 30, 1998;
- (iii) 1.8% of average final compensation for the three highest consecutive years as a member for each year of creditable service after June 30, 1998.



# Employees' Pension System of the State of Maryland

RCPB Eligibility - Combined age and eligibility service of at least 90 years or age 65 with 10 or more years of eligibility service.

RCPB Allowance: 1.5% of average final compensation for the five highest consecutive years as a member for each year of creditable service on or after July 1, 2011.

SSIL is the average of all Social Security Wage Bases over the 35 calendar years prior to your retirement.

Note: Members who transferred into the Employees' Pension System, on or after April 1, 1998, receive benefits based on the provisions of the NCPS as in effect on January 1, 1980 except for COLA benefits.

## 5. Early Retirement Allowance

NCPS, ECPS, and ACPS Eligibility: Age 55 and at least 15 years of eligibility service.

NCPS, ECPS, and ACPS Allowance: Service retirement allowance computed as of early retirement date, reduced by 0.5% for each month that early retirement date precedes age 62 (maximum reduction is 42%).

RCPB Eligibility: Age 60 with at least 15 years of eligibility service.

RCPB Allowance: Service retirement allowance computed as of early retirement date, reduced by 0.5% for each month that early retirement date precedes age 65 (maximum reduction is 30%).

## 6. Disability Retirement Allowance

### Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is likely to be permanent.

Allowance: The benefit is the service retirement allowance computed on the basis that service continues until normal retirement age. If disability occurs on or after age 62 (age 65 for RCPB), the benefit is based on creditable service at time of retirement.

### Accidental

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty without willful negligence by the member.



# Employees' Pension System of the State of Maryland

Allowance: The benefit is 66.67% of average final compensation for the three highest consecutive years (five highest for RCPB) as a member, plus the annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation including any annuitized accumulated contributions.

## 7. Death Benefits

### **Ordinary Death Benefit for Active Member with Less Than One Year of Service**

Eligibility: Less than one year of eligibility service and not eligible for a special death benefit.

Benefit: Return of accumulated contributions

### **Ordinary Death Benefit for Active Member with One Or More Years of Service**

Eligibility: One or more years of eligibility service and not eligible for a special death benefit.

Benefit:

*Members who at the time of death are not members of the Reformed Contributory Pension Benefit, are younger than age 55, and have less than 15 years of service or are members of the Reformed Contributory Pension Benefit, are younger than age 60, and have less than 15 years of service.*

One-time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions to the member's designated beneficiary.

*Members who at the time of death: (1) are eligible to retire; (2) have accrued at least 25 years of eligibility service; (3) are not members of the Reformed Contributory Pension Benefit and are age 55 or older with at least 15 years of service; or (4) are members of the Reformed Contributory Pension Benefit and are age 60 or older with at least 15 years of service.*

The surviving spouse of a deceased member may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) a monthly allowance under Option 2 (100% survivor benefit). In cases where a deceased member is not survived by a spouse, the decedent's children may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) an allowance equal to 50% of the basic allowance that would have been paid to the deceased member, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. If any child is disabled, the benefit will continue for that child as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, the member's designated beneficiary shall receive a one-time lump sum payment consisting of the member's accumulated contributions and the member's annual compensation at the time of death.

### **Special Death Benefit for Active Member**

Eligibility: Death arising out of or in the course of the actual performance of duty without willful negligence by the member.



# Employees' Pension System of the State of Maryland

Benefit: 66.67% of average final compensation for the three highest consecutive years as a member, except for member's participating in the RCPB component for which the average final compensation is the five highest consecutive years as a member, payable to a surviving spouse, the decedent's children or dependent parents. Accumulated member contributions are paid to the designated beneficiary. Children of deceased members receiving a special death benefit will continue to receive this benefit, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. Disabled children receiving a special death benefit may receive a special death benefit as long as they remain disabled, regardless of age.

## **Death Benefit for Vested Former Member**

If a member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

## **8. Vested Allowance**

NCPS, ECPS, and ACPS Eligibility: Five years of eligibility service and separation from employment other than by death or retirement.

NCPS, ECPS, and ACPS Allowance: Accrued retirement allowance payable at age 62. A member who has completed 15 years of eligibility service may begin to receive benefit payments at any time on or after attainment of age 55, reduced by 0.5% for each month that benefit commencement date precedes age 62 (maximum reduction of 42%).

If member dies before payment of the vested allowance starts, only accumulated member contributions are returned.

RCPB Eligibility: 10 years of eligibility service and separation from employment other than by death or retirement.

RCPB Allowance: Accrued retirement allowance payable at age 65 provided member does not withdraw accumulated contributions. A member who has completed 15 years of eligibility service may begin to receive benefit payments at any time on or after attainment of age 60, reduced by 0.5% for each month that benefit commencement date precedes age 65 (maximum reduction of 30%).

If member dies before payment of the vested allowance starts, only accumulated member contributions are returned.

## **9. Cost-of-Living Adjustments (COLA)**

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Generally, effective July 1, 1998, and for an allowance based on creditable service earned before July 1, 2011, the adjustment is capped at a maximum of 3% compounded and is applied to all allowances which have been in payment for one year.



# Employees' Pension System of the State of Maryland

Generally, for an allowance based on creditable service earned on or after July 1, 2011, the COLA is capped at 2.5% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was greater than or equal to the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year. The adjustment is capped at 1% if, for the calendar year ending December 31 in the previous fiscal year the several systems' total investment performance was less than the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year.

For certain individuals, such as employees of a participating governmental unit that has not elected the contributory pension benefit or the Alternate Contributory Pension Selection for its members, or their surviving beneficiaries, the allowance is subject to a simple COLA capped at 3%.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

## 10. Optional Forms of Payment

Basic service allowance is in a single life annuity.

- Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.
- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.



# Employees' Pension System of the State of Maryland

Option 6: 50% “pop-up” joint and survivor annuity, which pays the designated beneficiary 50% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

Vested former members who are eligible to receive a vested allowance of less than \$50 a month may elect to receive a lump-sum payment equal to the present value in lieu of a monthly benefit.

## 11. Reduction for Benefits Payable Under Workers’ Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers’ compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers’ compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Employees’ Pension System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers’ compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers’ compensation payments are subject to an offset by the Workers’ Compensation Commission if a recipient is receiving an ordinary disability payment from the

Employees’ Pension System for the same injury or illness. Any offset taken for an accidental disability from the Employees’ Pension System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree’s employer by the Workers’ Compensation Commission.

# State Police Retirement System of the State of Maryland

## 1. Membership

Membership is a condition of employment for all officers of the Maryland State Police.

## 2. Member Contributions

Members are required to contribute 8% of earnable compensation, up to 28 years of service.

Contributions earn interest at 4% per year, compounded annually, until retirement, withdrawal of the accumulated contributions, or the end of membership for former members who are not entitled to receive a vested allowance.

## 3. Normal Retirement Age

Normal retirement age is age 50.

## 4. Normal Service Retirement Allowance

Eligibility: For individuals who are members on or before June 30, 2011, 22 years of eligibility service or attainment of age 50. For individuals who become members on or after July 1, 2011, 25 years of eligibility service or attainment of age 50. Retirement at age 60 is mandatory for all but the Secretary of State Police.

Allowance: For individuals who are members on or before June 30, 2011, 2.55% of average final compensation for the three highest years as a member. For individuals who become members on or after July 1, 2011, 2.55% of average final compensation for the five highest years as a member. Maximum benefit is 71.4% of average final compensation.

## 5. Early Retirement Allowance

Not applicable to the State Police Retirement System.

## 6. Disability Retirement Allowance

### Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is likely to be permanent.

Allowance: The allowance is the greater of a normal service retirement allowance (as described above) or 35% of the member's average final compensation.



# State Police Retirement System of the State of Maryland

## **Special (Accidental)**

Eligibility: Total and permanent incapacity for duty as certified by the medical board arising out of or in the course of the actual performance of duty without willful negligence by the member.

Allowance: For members who are under normal retirement age, the benefit is the lesser of either the member's average final compensation, or the sum of 66.67% of the member's average final compensation and an annuity that is actuarially equivalent to the member's accumulated contributions. Members who are at least normal retirement age are entitled either to the benefit as calculated for members under normal retirement age, or a normal service retirement allowance, whichever is greater.

## **7. Death Benefits**

### **Normal Death Benefit – Return of Accumulated Contributions**

Eligibility: Death while employed as a member and less than one year of eligibility service. A normal death benefit may be not paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated member contributions to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

### **Normal Death Benefit – Return of Accumulated Contributions and Annual Earnable Compensation**

Eligibility: Death while employed as a member and at least one year of eligibility service. A normal death benefit may not be paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated contributions and an amount equal to the member's annual earnable compensation at the time of death to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

### **Special Death Benefit for Death While Employed and Not in Performance of Duty**

Eligibility: Death while employed as a member, without member's willful negligence, and not in the performance of duty. Member has more than two years of eligibility service. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

Benefit: Accumulated member contributions plus an allowance equal to 50% of the member's average final compensation.

Beneficiary: Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 50% of the member's average final compensation shall be made to the surviving spouse; however, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 50% of average final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as



# State Police Retirement System of the State of Maryland

the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.

## **Special Death Benefit for Death in The Performance of Duty**

**Eligibility:** Death while employed as a member, without member's willful negligence, and in the performance of duty. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

**Benefit:** Accumulated member contributions plus an allowance equal to 66.67% of the member's average final compensation.

**Beneficiary:** Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 66.67% of the member's average final compensation shall be made to the surviving spouse; however, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 66.67% of average final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.

## **Waiver of Special Death Benefit**

Before the payment of any special death benefit is made under this section, if all individuals eligible for a special death benefit elect to waive the payment of the special death benefit, a normal death benefit is paid to the member's designated beneficiary, or otherwise to the member's estate.

## **Death Benefit for Vested Former Member**

If a member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

## **8. Vested Allowance**

**Eligibility:** For individuals who became members on or before June 30, 2011, five years of eligibility service and separation from employment other than by death or retirement. For individuals who become members on or after July 1, 2011, 10 years of eligibility service and separation from employment other than by death or retirement.

**Allowance:** Service retirement allowance payable at normal retirement age, provided the member does not withdraw the member's accumulated contributions.



# State Police Retirement System of the State of Maryland

## 9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1, for all allowances which have been in payment for one year.

Uncapped compounded COLAs are applied to all benefits attributable to creditable service earned on or before June 30, 2011.

For an allowance based on creditable service earned on or after July 1, 2011, the COLA adjustment is capped at 2.5% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was greater than or equal to the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year. The adjustment is capped at 1% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was less than the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

Retirees and beneficiaries receiving a retirement allowance on or before June 30, 1999, who receive an annual adjustment to their benefit ranging from \$1,200 to \$2,100 receive separate COLAs on this adjustment commencing effective July 1, 2000.

## 10. Optional Forms of Payment

If, at the time of death, the retiree is married, the retiree's spouse is entitled to receive a survivor benefit consisting of 80% of the retiree's retirement allowance. If there is no surviving spouse or upon the death of the surviving spouse, payment of the survivor benefit is divided equally among any children of the deceased retiree under the age of 18 years, until each child dies or becomes age 18. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. If there is no spouse at time of retirement, member may select an optional allowance.

**Option 1:** Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.

**Option 2:** 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.

**Option 3:** 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.



# State Police Retirement System of the State of Maryland

- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 5: 100% “pop-up” joint and survivor annuity, which pays the designated beneficiary 100% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree’s spouse or disabled child.
- Option 6: 50% “pop-up” joint and survivor annuity, which pays the designated beneficiary 50% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

## 11. Reduction for Benefits Payable Under Workers’ Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers’ compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers’ compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. State Police Retirement System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers’ compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers’ compensation payments are subject to an offset by the Workers’ Compensation Commission if a recipient is receiving an ordinary disability payment from the State Police Retirement System for the same injury or illness. Any offset taken for an accidental disability from the State Police Retirement System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree’s employer by the Workers’ Compensation Commission.

## 12. Deferred Retirement Option Program (DROP)

Eligibility: Members who joined the State Police Retirement System on or before June 30, 2011 are eligible to participate in the DROP if they are less than 60 years old and have at least 22 but less than 30 years of eligibility service. Members who join the State Police System on or after July 1, 2011 are eligible to participate in the DROP if they are less than 60 years old and have at least 25 but less than 30 years of eligibility service.



## State Police Retirement System of the State of Maryland

**Participation:** An eligible member may participate in the DROP for the lesser of 5 years, the difference between 30 years and the member's creditable service, the difference between 60 years and the member's age on date of election to participate, or a term selected by the member. Participation also ends if the participant dies, is terminated from employment, accepts a special disability retirement allowance, or submits a binding letter of resignation or notice of intent to terminate employment. Members who participate in the DROP are retired and cease making member contributions, and cease accruing service credit and additional benefits.

**Allowance:** For members who entered the DROP on or before June 30, 2011, the service retirement allowance, with COLAs, is credited to an account earning interest at the rate of 6% per year, compounded monthly. For members who enter DROP on or after July 1, 2011, the service retirement allowance, with COLAs, is credited to an account earning interest at the rate of 4% per year, compounded annually. When the DROP period ends, members terminate employment and begin receiving their monthly allowance plus the lump sum payment from their DROP account. During the DROP period, members remain eligible for Special Disability benefits if incapacitated while in DROP.

# Judges' Retirement System of the State of Maryland

## 1. Membership

Membership is a condition of employment for a judge of the Court of Appeals, Court of Special Appeals, Circuit Court, or District Court of Maryland and members of the State Workers' Compensation Commission. Membership ends if the member is separated from employment for more than four years, withdraws the member's accumulated contributions, retires, or dies.

## 2. Member Contributions

Members are required to make contributions of 8% of salary until they have completed 16 years of service as a member.

Contributions earn interest at 4% per year, compounded annually, until retirement or withdrawal of accumulated contributions. Non-vested members who became members of the Judges' Retirement System on or after July 1, 2012 shall not receive interest after membership ends.

## 3. Normal Retirement Age

Normal retirement age is age 60.

## 4. Retirement Allowance

Eligibility: An individual who is a member of the Judges' Retirement System before July 1, 2012 is entitled to a retirement allowance: (1) on termination of service if the member is at least age 60; (2) on resignation for disability and recommendation of the medical board, (3) when retired by order of the Court of Appeals, or (4) at the age of 60 years. An individual who becomes a member of the Judges' Retirement System on or after July 1, 2012 is entitled to a retirement allowance: (1) on termination of service if the member is at least 60 and has at least 5 years of eligibility service; (2) on resignation for disability and recommendation of the medical board, (3) when retired by order of the Court of Appeals if the member has at least 5 years of eligibility service; (4) at the mandatory retirement age required by the Maryland Constitution with less than five years of service, if the member has eligibility service equal to the mandatory retirement age minus the member's age when the member joined the Judges' Retirement System; or (5) at the age of 60, if the former member's termination of service occurred earlier and the former member had at least five years of eligibility service when the former member terminated service.

Allowance: Generally, the retirement allowance equals 66.67% of salary payable in that fiscal year to member holding same level of judicial position that retiree held on termination of service. For members with less than 16 years of service credit, the benefit is reduced based on the ratio of years of service credit to 16.

## 5. Early Retirement Allowance

Not applicable to the Judges' Retirement System.



# Judges' Retirement System of the State of Maryland

## 6. Disability Retirement Allowance

Eligibility: Certification of the medical board designated by the Board of Trustees that member is incapacitated for the performance of duty, and that incapacity is likely to be permanent.

Allowance: A retirement allowance payable immediately. However, if a judge has at least three years of service credit as a member, the allowance will be at least .333% of the judge's salary at the time of retirement.

## 7. Death Benefits

### Monthly Allowance

Eligibility: Death of a judge or former judge at any age, leaving a surviving spouse or children under the age of 26, or a child who is disabled, regardless of age.

Allowance: 50% of the pension that would have been payable to the judge or former judge as of the date of death, as if the judge or former judge was eligible to receive a retirement allowance, is payable to surviving spouse. If there is no spouse, payment is divided equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age.

### Lump Sum

On death of a member who is not survived by a spouse or children, the Board of Trustees shall pay the member's accumulated contributions and an amount equal to the member's annual salary at time of death to the member's designated beneficiary. If the member has designated more than one beneficiary, this lump-sum death benefit shall be divided equally among the beneficiaries. If a member's service is terminated by death and the member leaves no spouse, child under the age of 18 years, or designated beneficiary, the member's accumulated contributions shall be paid to the member's estate.

## 8. Vested Allowance

Eligibility: Individuals who became members before July 1, 2012, are eligible once they have both separated from service and reached age 60 years. Individuals who become members on or after July 1, 2012, are eligible once they have separated from service, reached age 60 years, and earned five years of eligibility service. Also eligible are individuals who became members on or after July 1, 2012 who are required to retire due to mandatory retirement and have less than 5 years of service at that time, if they have an amount of eligibility service equal to constitutional mandatory retirement age minus the member's age when the individuals first become members of the System.

Allowance: Same as allowance payable at age 60.



# Judges' Retirement System of the State of Maryland

In lieu of a deferred vested allowance pension, a former judge may elect to withdraw accumulated contributions following the judge's termination of service.

## 9. Cost-of-Living Adjustments (COLA)

Generally, allowances are recalculated each time the salary for a sitting judge from the Court from which the judge retired increases.

NOTE: Magistrates who retire from the Judges' Retirement System receive COLA allowances equal to the percentage increase in salary provided to judges of the Circuit Court.

## 10. Optional Forms of Payment

For survivor allowance payable to a member's surviving spouse, children under age 26, or disabled children, see Death Benefits section above. A judge or former judge, who at the time of retirement, does not have a spouse or child under the age of 18 years, may elect one of the following optional forms of payment:

- Option 1: Lump-sum equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.
- Option 4: Lump-sum equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 6: 50% "pop-up" joint and survivor annuity, which pays the designated beneficiary 50% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.

A retiree who has elected one of these optional forms of allowance may not change the designated beneficiary.



# Law Enforcement Officers' Pension System of the State of Maryland

## A. Pension Provisions

### 1. Membership

Membership generally is a condition of employment for all law enforcement officers who are employees of the State as provided in SPP § 26-201, or whose employers are participating governmental units who elect to have their law enforcement officers or firefighters/paramedics participate in the Law Enforcement Officers' Pension System.

### 2. Member Contributions

Members are required to contribute 7% of earnable compensation, up to 32 years and six months of service.

Contributions earn interest at 5% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

### 3. Normal Retirement Age

Normal retirement age is age 50.

### 4. Normal Service Retirement Allowance

Eligibility: 25 years of eligibility service or attainment of age 50.

Allowance: For individuals who became members on or before June 30, 2011, 2.0% of average final compensation for the three highest consecutive years as a member. For individuals who became members on or after July 1, 2011, 2.0% of average compensation for the five highest consecutive years as a member. For members who retired before July 1, 2018, the maximum benefit was 60% of average final compensation. For members who retire on or after July 1, 2018, the maximum benefit is 65% of average final compensation.

### 5. Early Retirement Allowance

Not applicable to the Law Enforcement Officers' Retirement System.

### 6. Disability Retirement Allowance

#### Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is incapacitated for the performance of duty, and that incapacity is likely to be permanent.



# Law Enforcement Officers Pension System of the State of Maryland

Allowance: Service retirement allowance computed on the basis that service continues until age 50 without any change in rate of earnable compensation. If disability occurs after age 50, the benefit is based on creditable service at time of retirement.

## **Accidental**

Eligibility: Total and permanent incapacity for duty as certified by the medical board arising out of or in the course of the actual performance of duty, without willful negligence.

Allowance: The benefit is 66.7% of average final compensation plus an annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation.

## **7. Death Benefits**

### **Normal Death Benefit – Return of Accumulated Contributions**

Eligibility: Death while employed as a member and less than one year of eligibility service. A normal death benefit may not be paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated member contributions to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

### **Normal Death Benefit – Return of Accumulated Contributions and Annual Earnable Compensation**

Eligibility: Death while employed as a member and at least one year of eligibility service. A normal death benefit may not be paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated member contributions and an amount equal to the member's annual earnable compensation at the time of death to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

### **Special Death Benefit for Death While Employed and Not in Performance of Duty**

Eligibility: Death while employed as a member, without the member's willful negligence, and not in the performance of duty. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

Benefit: Accumulated member contributions plus an allowance equal to 50% of the ordinary disability allowance the member would have received at the time of the member's death.



# Law Enforcement Officers Pension System of the State of Maryland

**Beneficiary:** Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 50% of the ordinary disability allowance the member would have received at the time of the member's death shall be made to the surviving spouse; however, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 50% of average final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.

## **Special Death Benefit for Death in The Performance of Duty**

**Eligibility:** Death while employed as a member, without the member's willful negligence, and not in the performance of duty. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

**Benefit:** Accumulated member contributions plus an allowance equal to 66.67% of the member's average final compensation.

**Beneficiary:** Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 66.67% of the member's average final compensation be made to the surviving spouse; however, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 66.67% of average final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.

## **Waiver of Special Death Benefit**

Before the payment of any special death benefit is made under this section, if all individuals eligible for a special death benefit elect to waive the payment of the special death benefit, a normal death benefit is paid to the member's designated beneficiary, or otherwise to the member's estate.

## **Death Benefit for Vested Former Member**

If a member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.



# Law Enforcement Officers Pension System of the State of Maryland

## 8. Vested Allowance

Eligibility: For individuals who are members on or before June 30, 2011, five years of eligibility service. For individuals who become members on or after July 1, 2011, 10 years of eligibility service.

Allowance: Accrued retirement allowance payable at age 50 if the member does not withdraw the member's accumulated member contributions.

## 9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1, for allowances which have been in payment for one year. Effective July 1, 2000, for an allowance based on creditable service earned before July 1, 2011, the adjustment is capped at a maximum 3% compounded and is applied to all allowances which have been in payment for one year.

For an allowance based on creditable service earned on or after July 1, 2011, the COLA adjustment is capped at 2.5% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was greater than or equal to the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year. The adjustment is capped at 1% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was less than the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have been applied and the zero COLA is fully recovered.

## 10. Optional Forms of Payment

If, at the time of death, the retiree is married, the retiree's spouse is entitled to receive a survivor benefit consisting of 50% of the retiree's basic allowance. If there is no surviving spouse or upon the death of the surviving spouse, payment of the survivor benefit is divided equally among any children of the deceased retiree under the age of 26 years, until each child dies or becomes age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. If there is no spouse at time of retirement, member may select an optional allowance.

Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.



## Law Enforcement Officers Pension System of the State of Maryland

- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.
- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 6: 50% "pop-up" joint and survivor annuity, which pays the designated beneficiary 50% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

### 11. Reduction for Benefits Payable under Workers' Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers' compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Law Enforcement Officers' Pension System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers' compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers' compensation payments are subject to an offset by the Workers' Compensation Commission if a recipient is receiving an ordinary disability payment from the Law Enforcement Officers' Pension System for the same injury or illness. Any offset taken for an accidental disability



# Law Enforcement Officers Pension System of the State of Maryland

from the Law Enforcement Officers' Pension System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree's employer by the Workers' Compensation Commission.

## 12. Deferred Retirement Option Plan (DROP)

**Eligibility:** Members are eligible to participate in the DROP if they have at least 25 and less than 30 years of creditable service.

**Participation:** An eligible member may participate in the DROP for the lesser of 5 years, the difference between 30 years and the member's creditable service, or a term selected by the member. Participation also ends if the participant dies, is terminated from employment, accepts an accidental disability retirement allowance, or submits a binding letter of resignation or notice of intent to terminate employment. Members who participate in the DROP are retired and cease making member contributions, and cease accruing service credit and additional benefits.

**Allowance:** For members who entered the DROP on or before June 30, 2011, the service retirement allowance, with annual COLAs, is credited to an account earning interest at the rate of 6% per year, compounded monthly. For members who enter DROP on or after July 1, 2011, the service retirement allowance, with annual COLAs, is credited to an account earning interest at the rate of 4% per year, compounded annually. When the DROP period ends, members terminate employment and begin receiving their monthly allowance plus the lump sum payment from their DROP account. During the DROP period, members remain eligible for accidental disability benefits if incapacitated while in DROP.

## B. Members Transferring from the Employees' Retirement System<sup>1</sup>

### 1. Membership

The retirement tier was closed to new participants effective January 1, 2005.

### 2. Member Contributions

Members who transferred from Employees' Retirement System (Plan A) are required to contribute 7% of earnable compensation. Members who transferred from the Employees' Retirement System (Plan B) contribute 5% of earnable compensation.

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<sup>1</sup> This Section B outlines the provisions applicable to members of LEOPS who transferred from the Employees' Retirement System before January 1, 2005 and were subject to Selection A or Selection B and did not elect to participate in the contributory law enforcement officers' modified benefit.



# Law Enforcement Officers' Pension System of the State of Maryland

Contributions earn interest at 4% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

## 3. Normal Retirement Age

Normal retirement age is age 50.

## 4. Normal Service Retirement Allowance

Eligibility: 25 years of eligibility service or attainment of age 50.

Allowance: 2.3% of average final compensation for the three highest years as a member for each of the first 30 years of creditable service, plus 1.0% of average final compensation for each additional year.

## 5. Early Retirement Allowance

Not applicable to this System.

## 6. Disability Retirement Allowance

### Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is incapacitated for the performance of duty, and that incapacity is likely to be permanent.

Allowance: The greater of normal service retirement allowance or 25% of average final compensation.

### Accidental

Eligibility: Total and permanent incapacity for duty as certified by the medical board arising out of or in the course of the actual performance of duty, without willful negligence.

Allowance: The benefit is 66.7% of average final compensation plus an annuity that is the actuarial equivalent of accumulated contributions. The maximum benefit cannot be greater than the average final compensation.



# Law Enforcement Officers' Pension System of the State of Maryland

## 7. Death Benefits

### **Normal Death Benefit – Return of Accumulated Contributions**

Eligibility: Death while employed as a member and less than one year of eligibility service. A normal death benefit may not be paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated member contributions to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

### **Normal Death Benefit – Return of Accumulated Contributions and Annual Earnable Compensation**

Eligibility: Death while employed as a member and at least one year of eligibility service. A normal death benefit may not be paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated member contributions and an amount equal to the member's annual earnable compensation at the time of death to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

### **Special Death Benefit for Death While Employed and Not in Performance of Duty**

Eligibility: Death while employed as a member, without the member's willful negligence, and not in the performance of duty. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

Benefit: Accumulated member contributions plus an allowance equal to 50% of the ordinary disability allowance the member would have received at the time of the member's death.

Beneficiary: Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 50% of the ordinary disability allowance the member would have received at the time of the member's death shall be made to the surviving spouse; however, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 50% of average final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.



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## **Special Death Benefit for Death in The Performance of Duty**

Eligibility: Death while employed as a member, without the member's willful negligence, and not in the performance of duty. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

Benefit: Accumulated member contributions paid plus an allowance equal to 66.67% of the member's average final compensation.

Beneficiary: Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 66.67% of the member's average final compensation be made to the surviving spouse; however, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 66.67% of average final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.

## **Waiver of Special Death Benefit**

Before the payment of any special death benefit is made under this section, if all individuals eligible for a special death benefit elect to waive the payment of the special death benefit, a normal death benefit is paid to the member's designated beneficiary, or otherwise to the member's estate.

## **Death Benefit for Vested Former Member**

If a member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

## **8. Vested Allowance**

Eligibility: Five years of eligibility service and separation from employment other than by death or retirement.

Allowance: Service retirement allowance payable at normal retirement age if the member does not withdraw the member's accumulated member contributions.



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## 9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1, for all allowances which have been in payment for one year.

For an allowance for members that elected Selection A (contributing 7% of earnable compensation), uncapped COLA is compounded annually. For an allowance for members that elected Selection B (contributing 5% of earnable compensation), the COLA is capped at a maximum 5% compounded annually.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

## 10. Optional Forms of Payment

If, at the time of death, the retiree is married, the retiree's spouse is entitled to receive a survivor benefit consisting of 50% of the retiree's basic allowance. If there is no surviving spouse or upon the death of the surviving spouse, payment of the survivor benefit is divided equally among any children of the deceased retiree under the age of 26 years, until each child dies or becomes age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. If there is no spouse at time of retirement, member may select an optional allowance.

- Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.
- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.



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The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.

Option 6: 50% "pop-up" joint and survivor annuity, which pays the designated beneficiary 50% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

## 11. Reduction for Benefits Payable under Workers' Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers' compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Law Enforcement Officers' Pension System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers' compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers' compensation payments are subject to an offset by the Workers' Compensation Commission if a recipient is receiving an ordinary disability payment from the Law Enforcement Officers' Pension System for the same injury or illness. Any offset taken for an accidental disability from the Law Enforcement Officers' Pension System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree's employer by the Workers' Compensation Commission.

## 12. Deferred Retirement Option Program (DROP)

**Eligibility:** Members are eligible to participate in the DROP if they have at least 25 and less than 30 years of creditable service.

**Participation:** An eligible member may participate in the DROP for the lesser of 5 years, the difference between 30 years and the member's creditable service, or a term selected by the member. Participation also ends if the participant dies, is terminated from employment, accepts an accidental disability retirement allowance, or submits a binding letter of resignation or notice of intent to terminate employment. Members who participate in the DROP are retired and cease making member contributions, and cease accruing service credit and additional benefits.



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Allowance: For members who entered the DROP on or before June 30, 2011, the service retirement allowance, with annual COLAs, is credited to an account earning interest at the rate of 6% per year, compounded monthly. For members who enter DROP on or after July 1, 2011, the service retirement allowance, with annual COLAs, is credited to an account earning interest at the rate of 4% per year, compounded annually. When the DROP period ends, members terminate employment and begin receiving their monthly allowance plus the lump sum payment from their DROP account. During the DROP period, members remain eligible for Accidental Disability benefits if incapacitated while in DROP.