GASB Statement No. 67 - Virginia Retirement System

GASB Statement No. 67 Plan Reporting and Accounting Schedules
June 30, 2023



Table of Contents

Section A: Executive Summary	1
Executive Summary	6
Discussion	7
Section B: Required Supplementary Information	11
Multiyear Schedule of Changes in Net Pension Liability/(Asset) and Related Ratios	12
Multiyear Schedule of the Net Pension Liability/(Asset)	18
Multiyear Schedule of Contributions	21
Notes to Schedule of Contributions	23
Section C: Notes to Financial Statements	24
Summary of Membership	25
Asset Allocation	26
Sensitivity of Total Pension Liability to the Single Discount Rate Assumption	27
Section D: Other Disclosures	28
Section F: Glossary of Terms	30





January 8, 2024

Board of Trustees Virginia Retirement System 1200 E. Main Street Richmond, VA 23219

Dear Board Members:

This report provides certain information requested by the Virginia Retirement System ("VRS") in connection with the Governmental Accounting Standards Board (GASB) Statement No. 67 "Accounting and Financial Reporting for Pension Plans."

The actuarial calculations in connection with this report were prepared for the purpose of complying with the requirements of GASB Statement No. 67. These calculations have been made on a basis that is consistent with our understanding of this Statement. The calculation of the plan's liability for this report is not applicable for funding purposes of the plan. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement No. 67 may produce significantly different results.

This report may be provided to parties other than the VRS only in its entirety and only with the permission of the VRS. GRS is not responsible for unauthorized use of this report.

The report was based upon information, provided by the VRS, concerning Retirement System benefits, financial transactions, and active members, terminated members, retirees and beneficiaries. We checked for internal consistency, but did not audit the data. We are not responsible for the accuracy or completeness of any data provided by the VRS.

This report complements the actuarial valuation report provided to the Board and should be considered in conjunction with that report. Please see the actuarial valuation reports as of June 30, 2022 for additional discussion of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

This report is intended to assist in preparation of the financial statements of VRS and its participating employers. Financial statements are the responsibility of the reporting entity and not the actuary. The statements are subject to an auditor's review. Please let us know if the plan's auditor recommends any changes.

Board of Trustees Virginia Retirement System January 8, 2024

Valuation results are developed through the use of multiple models.

Valuation liabilities were prepared using ProVal's valuation model, a software product of Winklevoss Technologies. We are relying on the ProVal model. We performed tests of the ProVal model with this assignment and made a reasonable attempt to understand the developer's intended purpose of, general operation of, major sensitivities and dependencies within, and key strengths and limitations of the ProVal model. In our professional judgment, the ProVal valuation model has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses.

Financial results were prepared using our financing model 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.

To the best of our knowledge, the information contained in this report is accurate, and fairly represents the actuarial position of VRS. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Rebecca L. Stouffer, James D. Anderson, and Richard C. Koch Jr. are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the Academy of Actuaries to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor.

Respectfully submitted, Gabriel, Roeder, Smith & Company

Rebecca L. Stouffer, ASA/FCA, MAAA

James D. Anderson, FSA, EA, FCA, MAAA

Richard C. Koch J. Richard C. Koch Jr., FSA, EA, MAAA

RLS/JDA/RCK:sc



SECTION A

EXECUTIVE SUMMARY

Executive Summary as of June 30, 2023

Actuarial Valuation Date Measurement Date of the Net Pension Liability June 30, 2022 June 30, 2023 June 30, 202 June 30, 20 June 30, 202 June 30, 202 June		State Employees	Teachers	State Police	Judicial	Virginia Law Officers	Political Subdivisions
Measurement Date of the Net Pension Liability June 30, 2023 June 30	Actuarial Valuation Date	. ,			****	1 11 1	June 30, 2022
Number of - Retirees and Beneficiaries - Inactive Vested Members - Inactive Vested Members - Inactive Nonvested		•	1	1	,	,	
Number of - Retirees and Beneficiaries - Inactive Vested Members - Inactive Vested Members - Inactive Nonvested							
- Retires and Beneficiaries 71,374 108,579 1,774 580 6,545 83 - Inactive Vested Members 15,387 32,031 199 9 1,494 22 - Inactive Nonvested Members 33,016 46,596 271 1 6,554 50 - Long-Term Disability 2,380 41 28 0 489 - Active Elsewhere in VRS 9,393 6,218 252 4 3,736 37 - Active Employees 74,048 153,356 1,885 461 7,289 109 - Total 205,598 346,821 4,409 1,055 26,107 304 Covered-Employee Payroll \$5,069,434,611 \$9,970,623,246 \$156,706,588 \$84,059,592 \$369,141,771 \$6,337,773 \$Single Discount Rate (SDR)	Membership (as of the valuation date)						
- Inactive Vested Members - Inactive Vested Members - Inactive Nonvested Nembers - Inactive Nonvested Members - Inactive Nonvested Members - Inactive Nonvested Members - Inactive Nonvested Members - Inactive Nonvested Nembers - Inactive Nonvested New 9 - Inactive	Number of						
- Inactive Nonvested Members 33,016 46,596 271 1 6,554 50	- Retirees and Beneficiaries	71,374	108,579	1,774	580	6,545	83,667
- Long-Term Disability - Active Elsewhere in VRS - Active Employees - Active Employees - Active Employees - Active Employees - Total - Total - Covered-Employee Payroll¹ Single Discount Rate (SDR) Long-Term Expected Rate of Return Municipal Bond Index Rate at Prior Measurement Date² Municipal Bond Index Rate at Measurement Date² Municipal Bond Index Rate at Measurement Date² Fiscal year in which Plan's Fiduciary Net Position is projected to be depleted from future benefit payments for current members Single Discount Rate at Prior Measurement Date - Long-Term Disability - 2,380 - 41 - 28 - 0 - 489 - 3,736 - 37 - 37 - 37 - 37 - 37 - 37 - 38 - 38 - 37 - 38 - 37 - 38 - 38 - 38 - 38 - 38 - 38 - 38 - 38	- Inactive Vested Members	15,387	32,031	199	9	1,494	22,746
- Active Elsewhere in VRS - Active Employees - Active Employees - Active Employees - Total - Total - Total - Total - Total - Covered-Employee Payroll¹ - Single Discount Rate (SDR) Long-Term Expected Rate of Return - Municipal Bond Index Rate at Prior Measurement Date² - Municipal Bond Index Rate at Measurement Date² - Municipal Bond Index Rate at Measurement Date² - Municipal Bond Index Rate at Measurement Date² - N/A - Fiscal year in which Plan's Fiduciary Net Position is projected to be depleted from future benefit payments for current members - Active Elsewhere in VRS - 9,393 - 6,218 - 252 - 4 - 3,736 - 37 - 461 - 7,289 - 109 - 304 - 5,069,434,611 - \$9,970,623,246 - \$156,706,588 - \$84,059,592 - \$369,141,771 - \$6,337,773 - \$6,75% - 6.75% - 7.75% - 7.75% - 7.75% - 7.75% - 7.75% - 7.75% - 7.75% - 7.75% - 7.75% - 7.75% - 7.75% - 7.75% - 7.75% - 7.75% - 7.75% - 7.75%	- Inactive Nonvested Members	33,016	46,596	271	1	6,554	50,565
- Active Employees	- Long-Term Disability	2,380	41	28	0	489	91
- Total Covered-Employee Payroll Single Discount Rate (SDR) Long-Term Expected Rate of Return Municipal Bond Index Rate at Prior Measurement Date Municipal Bond Index Rate at Measurement Date N/A	- Active Elsewhere in VRS	9,393	6,218	252	4	3,736	37,906
Covered-Employee Payroll 1 \$ 5,069,434,611 \$ 9,970,623,246 \$ 156,706,588 \$ 84,059,592 \$ 369,141,771 \$ 6,337,773, \$ Single Discount Rate (SDR) Long-Term Expected Rate of Return 6.75% 6.7	- Active Employees	74,048	153,356	1,885	461	7,289	109,906
Single Discount Rate (SDR) Long-Term Expected Rate of Return 6.75%	- Total	205,598	346,821	4,409	1,055	26,107	304,881
Long-Term Expected Rate of Return 6.75%	Covered-Employee Payroll ¹	\$ 5,069,434,611	\$ 9,970,623,246	\$ 156,706,588	\$ 84,059,592	\$ 369,141,771	\$ 6,337,773,895
Long-Term Expected Rate of Return 6.75%							
Municipal Bond Index Rate at Prior Measurement Date ² Municipal Bond Index Rate at Measurement Date ² Municipal Bond Index Rate at Measurement Date ² N/A N/A N/A N/A N/A N/A N/A N/	Single Discount Rate (SDR)						
Municipal Bond Index Rate at Measurement Date ² Fiscal year in which Plan's Fiduciary Net Position is projected to be depleted from future benefit payments for current members Single Discount Rate at Prior Measurement Date N/A N/A N/A N/A N/A N/A N/A N/	Long-Term Expected Rate of Return	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%
Fiscal year in which Plan's Fiduciary Net Position is projected to be depleted from future benefit payments for current members N/A N/A N/A N/A N/A N/A N/A Single Discount Rate at Prior Measurement Date 6.75% 6.75% 6.75% 6.75% 6.75% 6.75% 6.75%	Municipal Bond Index Rate at Prior Measurement Date ²	N/A	N/A	N/A	N/A	N/A	3.69%
depleted from future benefit payments for current members N/A N/A N/A N/A N/A N/A N/A Single Discount Rate at Prior Measurement Date 6.75% 6.75% 6.75% 6.75% 6.75% 6.75% 6.75%	Municipal Bond Index Rate at Measurement Date ²	N/A	N/A	N/A	N/A	N/A	3.86%
Single Discount Rate at Prior Measurement Date 6.75% 6.75% 6.75% 6.75% 6.75% 6.75%	Fiscal year in which Plan's Fiduciary Net Position is projected to be						
	depleted from future benefit payments for current members	N/A	N/A	N/A	N/A	N/A	N/A
Single Discount Rate ³ 6.75% 6.75% 6.75% 6.75% 6.75% 6.75%	Single Discount Rate at Prior Measurement Date	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%
	Single Discount Rate ³	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%
Net Pension Liability/(Asset)	Net Pension Liability/(Asset)						
Total Pension Liability (TPL) \$ 28,411,528,461 \$ 57,574,609,485 \$ 1,462,948,004 \$ 767,857,162 \$ 2,577,980,717 \$ 29,704,278	Total Pension Liability (TPL)	\$ 28,411,528,461	\$ 57,574,609,485	\$ 1,462,948,004	\$ 767,857,162	\$ 2,577,980,717	\$ 29,704,278,390
Plan Fiduciary Net Position (PFNP) <u>23,351,827,481</u> <u>47,467,404,711</u> <u>1,079,754,981</u> <u>677,958,301</u> <u>1,931,060,670</u> <u>27,308,037</u>	Plan Fiduciary Net Position (PFNP)	23,351,827,481	47,467,404,711	1,079,754,981	677,958,301	1,931,060,670	27,308,037,669
Net Pension Liability/(Asset) (NPL = TPL - PFNP) \$ 5,059,700,980 \$ 10,107,204,774 \$ 383,193,023 \$ 89,898,861 \$ 646,920,047 \$ 2,396,240	Net Pension Liability/(Asset) (NPL = TPL - PFNP)	\$ 5,059,700,980	\$ 10,107,204,774	\$ 383,193,023	\$ 89,898,861	\$ 646,920,047	\$ 2,396,240,721
PFNP as a percentage of TPL/(Asset) (=PFNP/TPL) 82.19% 82.45% 73.81% 88.29% 74.91% 91.9	PFNP as a percentage of TPL/(Asset) (=PFNP/TPL)	82.19%	82.45%	73.81%	88.29%	74.91%	91.93%

Covered-Employee Payroll is for the year ending June 30, 2023 and was provided by VRS.

Note: There was a change in actuarial service providers during calendar year 2022. Throughout this report, information prior to 2022 was provided by the prior actuarial service provider.



Source: Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-year Municipal GO AA Index" as of June 30, 2022 (for the Prior Measurement Date) and as of June 30, 2023 (for the Measurement Date). In describing this index, Fidelity notes that the Municipal Curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax-exempt securities. The municipal bond rate is used as the discount rate in years where assets are not projected to be sufficient to meet benefit payments.

³ The Single Discount Rate for two Political Subdivision Plans – Upper Valley Regional Park Authority (55490) and Town of Pound (55238) – was the municipal bond index rate.

Discussion

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67, "Financial Reporting for Pension Plans," replaces the requirements of GASB Statement No. 25, "Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans," and GASB Statement No. 50, "Pension Disclosures." GASB Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability of employers and non-employer contributing entities for benefits provided through the pension plan.

The following discussion provides a summary of the information that is required to be disclosed under this accounting standard. A number of these disclosure items are provided in this report. However, certain information, such as notes regarding accounting policies and investments, is not included in this report, and your internal staff will be responsible for preparing that information to comply with this accounting standard.

Financial Statements

GASB Statement No. 67 requires defined benefit pension plans to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position.

The *statement of fiduciary net position* presents the following items as of the end of the pension plan's reporting period, such as:

- Assets;
- Deferred inflows and outflows of resources;
- Liabilities; and
- Fiduciary net position (assets, plus deferred outflows, minus liabilities, minus deferred inflows).

The statement of changes in fiduciary net position presents the following for the plan's reporting period:

- Additions, such as contributions and investment income;
- Deductions, such as benefit payments and expenses; and
- Net increase or decrease in the fiduciary net position (the difference between additions and deductions).



Notes to Financial Statements

GASB Statement No. 67 also requires the notes of the plan's financial statements to include additional disclosure information. This disclosure information should include:

- A description of the types of benefits provided by the plan, as well as automatic or ad hoc COLAs;
- The number and classes of employees covered by the benefit terms;
- The composition of the pension plan's Board and the authority under which benefit terms may be amended;
- A description of the plan's funding policy, which includes member and employer contribution requirements;
- The pension plan's investment policies;
- A description of how fair value is determined;
- Concentrations of investments greater than or equal to 5%;
- Annual money-weighted rate of return on pension plan investments;
- The portion of the present value of benefits to be provided through the pension plan to current active and inactive plan members;
- The pension plan's fiduciary net position;
- The net pension liability/(asset);
- The pension plan's fiduciary net position as a percentage of the total pension liability;
- Significant assumptions and methods used to calculate the total pension liability;
- Inputs to the discount rates; and
- Certain information about mortality assumptions and the dates of experience studies.

Required Supplementary Information

GASB Statement No. 67 requires a 10-year fiscal history of:

- Sources of changes in the net pension liability/(asset);
- Information about the components of the net pension liability/(asset) and related ratios, including the pension plan's fiduciary net position as a percentage of the total pension liability, and the net pension liability/(asset) as a percent of covered-employee payroll;
- Comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy; and
- The annual money-weighted rate of return on pension plan investments for each year.

Measurement of the Net Pension Liability/(Asset)

The net pension liability/(asset) is to be measured as the total pension liability, less the amount of the pension plan's fiduciary net position. In actuarial terms, this will be the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).



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

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 6.75% 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 future service normal cost as time passes.
- 2. The unfunded liability is expected to decrease in dollar amount until it is fully funded.
- 3. The funded status of the plan will move toward a 100% funded ratio.

The projections to satisfy GASB No. 67 are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

Limitations of Funded Status Measurements

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

- 1. The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations; in other words, of transferring the obligations to an unrelated third party in an arm's length market value type transaction.
- 2. The measurement is dependent upon the actuarial cost method which, in combination with the plan's 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 plan would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit).
- 3. The measurement would produce a different result if the actuarial value of assets were used instead of the market value of assets.

Limitation of Project Scope

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



Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. If the actuarial valuation is not calculated as of the plan's fiscal year end, the total pension liability is required to be rolled forward from the actuarial valuation date to the pension plan's fiscal year end.

The total pension liability shown in this report is based on an actuarial valuation performed as of June 30, 2022 and a measurement date of June 30, 2023.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a single discount rate that reflects (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 6.75%; the municipal bond rate is 3.86% (based on the weekly rate closest to but not later than the measurement date of the Fidelity "20-Year Municipal GO AA Index"); and the resulting single discount rate is 6.75%, except as noted in the Executive Summary.





REQUIRED SUPPLEMENTARY INFORMATION

Schedules of Required Supplementary Information Multiyear Schedule of Changes in Net Pension Liability/(Asset)

State Employees

Fiscal year ending June 30,	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability										
Service Cost	\$ 425,232,852	\$ 413,902,578	\$ 404,703,462	\$ 406,776,003	\$ 379,359,288	\$ 375,965,000	\$ 370,235,000	\$ 369,779,000	\$ 375,149,000	\$ 369,120,000
Interest on the Total Pension Liability	1,803,757,917	1,779,932,926	1,704,841,881	1,666,047,947	1,627,636,919	1,606,772,000	1,562,819,000	1,533,764,000	1,482,951,000	1,436,064,000
Benefit Changes	-	-	-	-	-	-	-	-	-	-
Difference between expected and actual										
experience of the Total Pension Liability	706,070,610	(247,390,730)	(281,382,363)	(12,440,702)	181,189,928	(327,289,000)	(85,975,000)	(245,642,000)	59,923,000	-
Assumption Changes	-	-	412,575,352	-	663,564,653	-	76,965,000	-	-	-
Benefit Payments	(1,610,265,651)	(1,536,664,842)	(1,486,951,352)	(1,427,873,034)	(1,360,832,374)	(1,296,803,000)	(1,234,388,000)	(1,195,198,000)	(1,136,102,000)	(1,081,866,000)
Refunds of Contributions	(31,013,508)	(31,680,440)	(29,065,328)	(27,426,881)	(26,897,650)	(30,236,000)	(30,837,000)	(25,240,000)	(27,724,000)	(25,036,000)
Net Change in Total Pension Liability	1,293,782,220	378,099,492	724,721,652	605,083,333	1,464,020,764	328,409,000	658,819,000	437,463,000	754,197,000	698,282,000
Total Pension Liability - Beginning	27,117,746,241	26,739,646,749	26,014,925,097	25,409,841,764	23,945,821,000	23,617,412,000	22,958,593,000	22,521,130,000	21,766,933,000	21,068,651,000
Total Pension Liability - Ending (a)	\$ 28,411,528,461	\$ 27,117,746,241	\$ 26,739,646,749	\$ 26,014,925,097	\$ 25,409,841,764	\$ 23,945,821,000	\$ 23,617,412,000	\$ 22,958,593,000	\$ 22,521,130,000	\$ 21,766,933,000
Plan Fiduciary Net Position										
Employer Contributions	\$ 683,048,543	\$ 633,738,297	\$ 609,777,928	\$ 576,443,391	\$ 545,582,547	\$ 548,158,000	\$ 535,424,000	\$ 722,617,000	\$ 480,657,000	\$ 343,259,000
Special Employer Contributions	73,052,105	219,156,318	-	-	-	-	-	-	-	-
Employee Contributions	234,317,431	217,945,186	207,064,776	210,896,385	201,481,234	201,920,000	201,391,000	200,184,000	195,582,000	198,035,000
Pension Plan Net Investment Income	1,437,612,160	(21,579,143)	5,055,162,928	361,060,166	1,211,721,847	1,302,241,000	1,963,811,000	277,166,000	728,083,000	2,243,999,000
Benefit Payments	(1,610,265,651)	(1,536,664,842)	(1,486,951,352)	(1,427,873,034)	(1,360,832,374)	(1,296,803,000)	(1,234,388,000)	(1,195,198,000)	(1,136,102,000)	(1,081,866,000)
Refunds of Contributions	(31,013,508)	(31,680,440)	(29,065,328)	(27,426,881)	(26,897,650)	(30,236,000)	(30,837,000)	(25,240,000)	(27,724,000)	(25,036,000)
Pension Plan Administrative Expense	(14,497,904)	(14,301,972)	(12,903,729)	(12,602,679)	(12,373,471)	(11,481,000)	(11,612,000)	(10,140,000)	(10,302,000)	(12,341,000)
Other	248,065	295,766	(735,549)	(539,185)	(761,900)	28,502,000	(1,743,000)	(122,000)	(154,000)	123,000
Net Change in Plan Fiduciary Net Position	772,501,241	(533,090,830)	4,342,349,674	(320,041,837)	557,920,233	742,301,000	1,422,046,000	(30,733,000)	230,040,000	1,666,173,000
Plan Fiduciary Net Position - Beginning	22,579,326,240	23,112,417,070	18,770,067,396	19,090,109,233	18,532,189,000	17,789,888,000	16,367,842,000	16,398,575,000	16,168,535,000	14,502,362,000
Plan Fiduciary Net Position - Ending (b)	\$ 23,351,827,481	\$ 22,579,326,240	\$ 23,112,417,070	\$ 18,770,067,396	\$ 19,090,109,233	\$ 18,532,189,000	\$ 17,789,888,000	\$ 16,367,842,000	\$ 16,398,575,000	\$ 16,168,535,000
Net Pension Liability - Ending (a) - (b)	5,059,700,980	4,538,420,001	3,627,229,679	7,244,857,701	6,319,732,531	5,413,632,000	5,827,524,000	6,590,751,000	6,122,555,000	5,598,398,000



Teachers

Fiscal year ending June 30,	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability										
Service Cost	\$ 901,516,809	\$ 823,884,059	\$ 948,915,273	\$ 938,143,989	\$ 889,003,292	\$ 885,510,000	\$ 830,475,000	\$ 828,856,000	\$ 828,901,000	\$ 831,501,000
Interest on the Total Pension Liability	3,660,139,379	3,568,410,098	3,355,158,131	3,269,776,154	3,184,697,542	3,099,338,000	3,016,207,000	2,931,065,000	2,834,138,000	2,722,787,000
Benefit Changes	-	-	-	-	-	-	-	-	-	-
Difference between expected and actual										
experience of the Total Pension Liability	1,099,742,161	(361,724,703)	(178,348,918)	(404,985,282)	(174,815,175)	(440,308,000)	(642,745,000)	(391,881,000)	(212,089,000)	-
Assumption Changes	-	-	845,179,109	-	1,472,647,362	-	218,559,000	-	-	-
Benefit Payments	(2,773,752,065)	(2,635,944,718)	(2,553,153,337)	(2,448,204,545)	(2,331,036,972)	(2,241,927,000)	(2,147,781,000)	(2,081,069,000)	(1,980,353,000)	(1,874,636,000)
Refunds of Contributions	(45,366,232)	(43,436,778)	(38,463,686)	(36,211,791)	(36,714,671)	(40,578,000)	(39,521,000)	(35,067,000)	(36,058,000)	(36,103,000)
Net Change in Total Pension Liability	2,842,280,052	1,351,187,958	2,379,286,572	1,318,518,525	3,003,781,378	1,262,035,000	1,235,194,000	1,251,904,000	1,434,539,000	1,643,549,000
Total Pension Liability - Beginning	54,732,329,433	53,381,141,475	51,001,854,903	49,683,336,378	46,679,555,000	45,417,520,000	44,182,326,000	42,930,422,000	41,495,883,000	39,852,334,000
Total Pension Liability - Ending (a)	\$ 57,574,609,485	\$ 54,732,329,433	\$ 53,381,141,475	\$ 51,001,854,903	\$ 49,683,336,378	\$ 46,679,555,000	\$ 45,417,520,000	\$ 44,182,326,000	\$ 42,930,422,000	\$ 41,495,883,000
Plan Fiduciary Net Position										
Employer Contributions	\$ 1,576,963,398	\$ 1,485,306,601	\$ 1,416,134,388	\$ 1,327,772,013	\$ 1,280,962,776	\$ 1,292,988,000	\$ 1,137,976,000	\$ 1,062,338,000	\$ 1,267,250,000	\$ 853,634,000
Non-Employer Contributions	147,457,029	442,371,085	61,344,275	-	-	-	-	-	-	-
Employee Contributions	465,100,419	439,139,284	419,414,949	418,909,152	403,257,714	391,490,000	392,730,000	380,314,000	373,525,000	371,241,000
Pension Plan Net Investment Income	2,913,861,987	(66,609,130)	9,887,249,917	689,013,633	2,311,029,037	2,421,157,000	3,632,291,000	516,704,000	1,327,047,000	4,042,441,000
Benefit Payments	(2,773,752,065)	(2,635,944,718)	(2,553,153,337)	(2,448,204,545)	(2,331,036,972)	(2,241,927,000)	(2,147,781,000)	(2,081,069,000)	(1,980,353,000)	(1,874,636,000)
Refunds of Contributions	(45,366,232)	(43,436,778)	(38,463,686)	(36,211,791)	(36,714,671)	(40,578,000)	(39,521,000)	(35,067,000)	(36,058,000)	(36,103,000)
Pension Plan Administrative Expense	(28,677,175)	(27,875,772)	(24,543,264)	(23,649,318)	(22,843,327)	(20,945,000)	(21,123,000)	(18,859,000)	(18,238,000)	(22,036,000)
Other	86,576	736,100	832,115	(1,168,511)	(1,449,445)	(2,167,000)	(3,238,000)	(222,000)	(284,000)	217,000
Net Change in Plan Fiduciary Net Position	2,255,673,937	(406,313,328)	9,168,815,357	(73,539,367)	1,603,205,112	1,800,018,000	2,951,334,000	(175,861,000)	932,889,000	3,334,758,000
Plan Fiduciary Net Position - Beginning	45,211,730,774	45,618,044,102	36,449,228,745	36,522,768,112	34,919,563,000	33,119,545,000	30,168,211,000	30,344,072,000	29,411,183,000	26,076,425,000
Plan Fiduciary Net Position - Ending (b)	\$ 47,467,404,711	\$ 45,211,730,774	\$ 45,618,044,102	\$ 36,449,228,745	\$ 36,522,768,112	\$ 34,919,563,000	\$ 33,119,545,000	\$ 30,168,211,000	\$ 30,344,072,000	\$ 29,411,183,000
Net Pension Liability - Ending (a) - (b)	10,107,204,774	9,520,598,659	7,763,097,373	14,552,626,158	13,160,568,266	11,759,992,000	12,297,975,000	14,014,115,000	12,586,350,000	12,084,700,000



State Police

Fiscal year ending June 30,	2023	2022	2021	2020		2019		2018	20	017	2016	2	2015		2014
Total Pension Liability															
Service Cost	\$ 25,400,715	\$ 23,688,274	\$ 22,041,596	\$ 22,167,233 \$	5	20,078,289	\$	18,187,000 \$	1	3,880,000	\$ 18,700,000 \$	1	18,847,000	\$	18,341,000
Interest on the Total Pension Liability	90,682,691	86,396,232	79,549,396	77,231,145		72,714,868		71,251,000	7	4,042,000	72,618,000	7	70,350,000		67,977,000
Benefit Changes	-	-	-	-		-		-		-	-		-		-
Difference between expected and actual															
experience of the Total Pension Liability	66,727,399	25,537,550	(9,431,035)	4,466,024		45,330,743		(7,248,000)	(5,327,000)	(14,711,000)		(2,890,000)		-
Assumption Changes	-	-	58,257,232	-		31,772,675		-	(6	3,707,000)	-		-		-
Benefit Payments	(75,578,259)	(71,465,612)	(73,226,848)	(64,990,934)	(62,683,309)		(58,197,000)	(5	7,814,000)	(53,515,000)	(5	53,338,000)		(50,467,000)
Refunds of Contributions	 (240,463)	(378,452)	(270,823)	(551,279)		(805,044)		(867,000)		(630,000)	(584,000)		(375,000)		(685,000)
Net Change in Total Pension Liability	106,992,083	63,777,992	76,919,518	38,322,189	1	06,408,222		23,126,000	(3	9,556,000)	22,508,000	3	32,594,000		35,166,000
Total Pension Liability - Beginning	1,355,955,921	1,292,177,929	1,215,258,411	1,176,936,222	1,0	70,528,000	:	1,047,402,000	1,08	5,958,000	1,064,450,000	1,03	31,856,000		996,690,000
Total Pension Liability - Ending (a)	\$ 1,462,948,004	\$ 1,355,955,921	\$ 1,292,177,929	\$ 1,215,258,411 \$	1,1	76,936,222	\$:	1,070,528,000 \$	1,04	7,402,000	\$ 1,086,958,000 \$	1,06	54,450,000	\$ 1,	031,856,000
Plan Fiduciary Net Position															
Employer Contributions	\$ 46,936,401	\$ 36,494,431	\$ 33,788,401	\$ 32,496,258 \$;	31,436,774	\$	35,806,000 \$	3	1,888,000	\$ 33,655,000 \$	2	28,427,000	\$	42,683,000
Special Employer Contributions	3,652,605	10,957,816	-	-		-		-		-	-		-		
Employee Contributions	7,951,756	7,130,833	6,489,374	6,600,050		6,379,355		6,311,000	!	5,701,000	5,759,000		5,680,000		5,646,000
Pension Plan Net Investment Income	66,246,282	(901,658)	229,137,634	16,333,892		54,790,848		58,148,000	8	7,265,000	12,634,000	3	32,466,000		98,682,000
Benefit Payments	(75,578,259)	(71,465,612)	(73,226,848)	(64,990,934)	(62,683,309)		(58,197,000)	(5	7,814,000)	(53,515,000)	(5	53,338,000)		(50,467,000)
Refunds of Contributions	(240,463)	(378,452)	(270,823)	(551,279)		(805,044)		(867,000)		(630,000)	(584,000)		(375,000)		(685,000)
Pension Plan Administrative Expense	(595,225)	(602,287)	(531,925)	(359,899)		(487,015)		(509,000)		(926,000)	(590,000)		(471,000)		(431,000)
Other	 (1,485)	(144)	-	(38,456)		(60,612)		(63,000)		(99,000)	(23,000)		(27,000)		-
Net Change in Plan Fiduciary Net Position	48,371,612	(18,765,073)	195,385,813	(10,510,368)		28,570,997		40,629,000	6	5,385,000	(2,664,000)	1	12,362,000		95,428,000
Plan Fiduciary Net Position - Beginning	 1,031,383,369	1,050,148,442	854,762,629	865,272,997	8	36,702,000		796,073,000	73	0,688,000	733,352,000	72	20,990,000		625,562,000
Plan Fiduciary Net Position - Ending (b)	\$ 1,079,754,981	\$ 1,031,383,369	\$ 1,050,148,442	\$ 854,762,629 \$	8	65,272,997	\$	836,702,000 \$	79	5,073,000	\$ 730,688,000 \$	73	33,352,000	\$	720,990,000
Net Pension Liability - Ending (a) - (b)	383,193,023	324,572,552	242,029,487	360,495,782	3	11,663,225		233,826,000	25	1,329,000	356,270,000	33	31,098,000		310,866,000



Judicial

Fiscal year ending June 30,		2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability											
Service Cost	\$	19,734,457 \$	18,630,280 \$	19,335,180 \$	20,649,982 \$	18,767,031 \$	19,228,000 \$	22,144,000 \$	21,978,000 \$	23,254,000	\$ 24,024,000
Interest on the Total Pension Liability		50,937,800	50,035,918	44,788,102	44,233,505	44,139,042	43,799,000	42,081,000	42,820,000	41,759,000	40,014,000
Benefit Changes		-	-	-	-	-	-	-	(15,552,000)	-	-
Difference between expected and actual											
experience of the Total Pension Liability		(12,421,327)	(7,255,761)	(10,245,397)	(9,446,288)	(7,157,647)	(15,786,000)	(14,774,000)	(18,681,000)	(9,107,000)	-
Assumption Changes		-	-	53,039,560	-	14,076,928	-	16,114,000	-	-	-
Benefit Payments		(50,571,965)	(47,678,981)	(47,749,544)	(46,545,799)	(43,586,503)	(41,165,000)	(40,895,000)	(41,341,000)	(40,205,000)	(37,984,000)
Refunds of Contributions		(14,810)	(41,025)	(135,056)	(11,520)	-	-	-	-	-	-
Net Change in Total Pension Liability		7,664,155	13,690,431	59,032,845	8,879,880	26,238,851	6,076,000	24,670,000	(10,776,000)	15,701,000	26,054,000
Total Pension Liability - Beginning		760,193,007	746,502,576	687,469,731	678,589,851	652,351,000	646,275,000	621,605,000	632,381,000	616,680,000	590,626,000
Total Pension Liability - Ending (a)	\$	767,857,162 \$	760,193,007 \$	746,502,576 \$	687,469,731 \$	678,589,851 \$	652,351,000 \$	646,275,000 \$	621,605,000 \$	632,381,000	\$ 616,680,000
Plan Fiduciary Net Position											
Employer Contributions	\$	25,705,092 \$	24,016,451 \$	22,855,683 \$	24,817,883 \$	22,893,124 \$	28,096,000 \$	27,612,000 \$	41,502,000 \$	31,503,000	\$ 27,727,000
Special Employer Contributions		2,083,338	6,250,014	-	-	-	-	-	-	-	-
Employee Contributions		2,319,934	2,032,453	1,868,382	3,436,043	3,208,353	3,231,000	3,272,000	3,236,000	3,015,000	3,051,000
Pension Plan Net Investment Income		41,850,104	(476,447)	147,200,377	10,489,514	35,371,399	37,466,000	56,029,000	8,112,000	20,051,000	60,833,000
Benefit Payments		(50,571,965)	(47,678,981)	(47,749,544)	(46,545,799)	(43,586,503)	(41,165,000)	(40,895,000)	(41,341,000)	(40,205,000)	(37,984,000)
Refunds of Contributions		(14,810)	(41,025)	(135,056)	(11,520)	-	-	-	-	-	-
Pension Plan Administrative Expense		(377,858)	(385,887)	(342,710)	(231,601)	(314,877)	(326,000)	(594,000)	(363,000)	(283,000)	(268,000)
Other		-	96,169	-	(40,994)	(39,435)	(42,000)	(64,000)	(15,000)	(17,000)	-
Net Change in Plan Fiduciary Net Position		20,993,835	(16,187,253)	123,697,132	(8,086,474)	17,532,061	27,260,000	45,360,000	11,131,000	14,064,000	53,359,000
Plan Fiduciary Net Position - Beginning		656,964,466	673,151,719	549,454,587	557,541,061	540,009,000	512,749,000	467,389,000	456,258,000	442,194,000	388,835,000
Plan Fiduciary Net Position - Ending (b)	\$	677,958,301 \$	656,964,466 \$	673,151,719 \$	549,454,587 \$	557,541,061 \$	540,009,000 \$	512,749,000 \$	467,389,000 \$	456,258,000	\$ 442,194,000
Net Pension Liability - Ending (a) - (b)	_	89,898,861	103,228,541	73,350,857	138,015,144	121,048,790	112,342,000	133,526,000	154,216,000	176,123,000	174,486,000



Virginia Law Officers

Fiscal year ending June 30,		2023	2022	2021	2020		2019		2018		2017	2016		2015		2014
Total Pension Liability																
Service Cost	\$	46,317,195	44,326,239	\$ 47,606,141	\$ 48,003,115	\$	44,526,173	\$	45,179,000	\$	47,189,000 \$	45,608,000	\$	47,531,000	\$	46,504,000
Interest on the Total Pension Liability		165,299,372	159,759,434	149,676,722	143,708,106		139,306,834		136,289,000		135,453,000	129,756,000		124,579,000		119,040,000
Benefit Changes		-	-	-	-		-		-		-	-		-		-
Difference between expected and actual																
experience of the Total Pension Liability		35,308,088	15,631,619	(25,404,753)	22,645,674		11,067,542		(26,111,000)		(1,457,000)	4,997,000		(4,849,000)		-
Assumption Changes		-	-	66,215,936	-		62,089,118		-		(63,457,000)	-		-		-
Benefit Payments		(138,022,708)	(129,974,023)	(124,044,662)	(117,136,820)		(109,192,755)		(104,776,000)		(96,224,000)	(92,270,000)		(84,990,000)		(78,412,000)
Refunds of Contributions		(4,989,945)	(6,283,501)	(5,791,359)	(4,893,089)		(4,933,976)		(5,604,000)		(4,938,000)	(4,524,000)		(4,797,000)		(4,665,000)
Net Change in Total Pension Liability		103,912,002	83,459,768	108,258,025	92,326,986		142,862,936		44,977,000		16,566,000	83,567,000		77,474,000		82,467,000
Total Pension Liability - Beginning		2,474,068,715	2,390,608,947	2,282,350,922	2,190,023,936	2	2,047,161,000		2,002,184,000	1	1,985,618,000	1,902,051,000		1,824,577,000	1,	742,110,000
Total Pension Liability - Ending (a)	\$	2,577,980,717	2,474,068,715	\$ 2,390,608,947	\$ 2,282,350,922	\$ 2	2,190,023,936	\$	2,047,161,000	\$ 2	2,002,184,000 \$	1,985,618,000	\$	1,902,051,000	\$1,	824,577,000
Plan Fiduciary Net Position																
Employer Contributions	\$	90,433,385	73,959,423	\$ 76,414,947	\$ 79,913,158	\$	75,326,824	\$	73,793,000	\$	73,816,000 \$	79,392,000	\$	62,084,000	\$	67,483,000
Special Employer Contributions	·	6,628,802	19,886,407	-	-		-	·	-		-	-	·	-	•	
Employee Contributions		18,768,604	17,276,267	17,602,495	18,712,484		17,870,998		17,496,000		17,598,000	17,574,000		17,081,000		17,908,000
Pension Plan Net Investment Income		118,276,272	(1,665,880)	405,216,623	28,578,977		93,872,895		98,292,000		146,039,000	20,899,000		52,312,000		156,786,000
Benefit Payments		(138,022,708)	(129,974,023)	(124,044,662)	(117,136,820)		(109,192,755)		(104,776,000)		(96,224,000)	(92,270,000)		(84,990,000)		(78,412,000)
Refunds of Contributions		(4,989,945)	(6,283,501)	(5,791,359)	(4,893,089)		(4,933,976)		(5,604,000)		(4,938,000)	(4,524,000)		(4,797,000)		(4,665,000)
Pension Plan Administrative Expense		(1,062,934)	(1,073,675)	(942,670)	(622,819)		(831,136)		(861,000)		(1,540,000)	(940,000)		(743,000)		(681,000)
Other		(12,129)	(8,167)	562	(73,052)		(103,153)		(247,000)		(310,000)	(38,000)		(44,000)		-
Net Change in Plan Fiduciary Net Position		90,019,347	(27,883,149)	368,455,936	4,478,839		72,009,697		78,093,000		134,441,000	20,093,000		40,903,000		158,419,000
Plan Fiduciary Net Position - Beginning		1,841,041,323	1,868,924,472	1,500,468,536	1,495,989,697	:	1,423,980,000		1,345,887,000	1	1,211,446,000	1,191,353,000		1,150,450,000		992,031,000
Plan Fiduciary Net Position - Ending (b)	\$	1,931,060,670	1,841,041,323	\$ 1,868,924,472	\$ 1,500,468,536	\$:	1,495,989,697	\$	1,423,980,000	\$ 1	1,345,887,000 \$	1,211,446,000	\$	1,191,353,000	\$1,	150,450,000
Net Pension Liability - Ending (a) - (b)		646,920,047	633,027,392	521,684,475	781,882,386		694,034,239		623,181,000		656,297,000	774,172,000		710,698,000		674,127,000



Political Subdivisions

Fiscal year ending June 30,	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability										
Service Cost	\$ 725,694,222	\$ 640,326,868	\$ 613,226,699	\$ 603,765,952	\$ 556,149,437	\$ 544,762,000	\$ 541,594,000	\$ 535,322,000	\$ 530,945,000	\$ 524,758,000
Interest on the Total Pension Liability	1,900,513,744	1,840,834,308	1,674,639,649	1,593,594,255	1,535,532,384	1,472,680,000	1,422,753,000	1,362,892,000	1,309,484,000	1,243,386,000
Benefit Changes	2,890,735	9,041,894	13,156,588	19,656,740	3,948,465	10,811,000	36,652,000	2,053,000	1,135,000	-
Difference between expected and actual										
experience of the Total Pension Liability	363,647,704	(294,247,308)	(164,894,521)	221,364,302	45,031,456	(43,177,000)	(205,649,000)	(87,268,000)	(185,419,000)	-
Assumption Changes	690,758	(14,779)	1,003,381,832	-	691,407,023	-	(64,510,000)	-	-	-
Benefit Payments	(1,395,124,313)	(1,307,580,106)	(1,237,073,517)	(1,157,505,004)	(1,082,791,828)	(1,010,021,000)	(941,856,000)	(893,585,000)	(819,201,000)	(754,706,000)
Refunds of Contributions	(43,391,331)	(48,297,043)	(42,459,920)	(38,323,303)	(40,248,652)	(41,324,000)	(42,068,000)	(37,380,000)	(36,898,000)	(36,876,000)
Net Change in Total Pension Liability	1,554,921,519	840,063,834	1,859,976,810	1,242,552,942	1,709,028,285	933,731,000	746,916,000	882,034,000	800,046,000	976,562,000
Total Pension Liability - Beginning	28,149,356,871	27,309,293,037	25,449,316,227	24,206,763,285	22,497,735,000	21,564,004,000	20,817,088,000	19,935,054,000	19,135,008,000	18,158,446,000
Total Pension Liability - Ending (a)	\$ 29,704,278,390	\$ 28,149,356,871	\$ 27,309,293,037	\$ 25,449,316,227	\$ 24,206,763,285	\$ 22,497,735,000	\$ 21,564,004,000	\$ 20,817,088,000	\$ 19,935,054,000	\$ 19,135,008,000
Plan Fiduciary Net Position ¹										
Employer Contributions	\$ 736,844,665									
Employee Contributions	302,890,308	276,349,681	258,561,680	258,396,039	248,421,687	241,339,000	238,636,000	231,934,000	227,060,000	225,555,000
Pension Plan Net Investment Income	1,678,095,970	(26,243,944)	5,779,326,711	405,050,874	1,345,759,207	1,415,454,000	2,113,973,000	300,995,000	761,164,000	2,272,284,000
Benefit Payments	(1,395,124,313)	(1,307,580,106)	(1,237,073,517)	(1,157,505,004)	(1,082,791,828)	(1,010,021,000)	(941,856,000)	(893,585,000)	(819,201,000)	(754,706,000)
Refunds of Contributions	(43,391,331)	(48,297,043)	(42,459,920)	(38,323,303)	(40,248,652)	(41,324,000)	(42,068,000)	(37,380,000)	(36,898,000)	(36,876,000)
Pension Plan Administrative Expense	(16,656,245)	(16,525,468)	(14,411,894)	(13,841,789)	(13,368,660)	(12,236,000)	(12,220,000)	(10,696,000)	(10,358,000)	(12,153,000)
Other	347,432	265,953	160,632	(332,796)	(851,041)	(30,924,000)	(1,887,000)	(130,000)	(162,000)	120,000
Net Change in Plan Fiduciary Net Position	1,263,006,486	(513,152,338)	5,324,092,955	(24,943,394)	956,212,960	1,052,574,000	1,832,141,000	135,085,000	655,482,000	2,233,590,000
Plan Fiduciary Net Position - Beginning	26,045,031,183	26,558,183,521	21,234,090,566	21,259,033,960	20,302,821,000	19,250,247,000	17,418,106,000	17,283,021,000	16,627,539,000	14,393,949,000
Plan Fiduciary Net Position - Ending (b)	\$ 27,308,037,669	\$ 26,045,031,183	\$ 26,558,183,521	\$ 21,234,090,566	\$ 21,259,033,960	\$ 20,302,821,000	\$ 19,250,247,000	\$ 17,418,106,000	\$ 17,283,021,000	\$ 16,627,539,000
Net Pension Liability - Ending (a) - (b)	2,396,240,721	2,104,325,688	751,109,516	4,215,225,661	2,947,729,325	2,194,914,000	2,313,757,000	3,398,982,000	2,652,033,000	2,507,469,000

¹ Beginning with 2022, components of the Plan Fiduciary net position are summed from the individual disclosures prepared for GASB Statement No. 68 purposes and may differ from the aggregate figures of the financial statement.



Schedules of Required Supplementary Information Multiyear Schedule of the Net Pension Liability/(Asset) and Related Ratios

Last 10 Fiscal Years

State Employees

Fiscal year ending June 30,	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability	\$ 28,411,528,461	\$ 27,117,746,241	\$ 26,739,646,749	\$ 26,014,925,097	\$ 25,409,841,764	\$ 23,945,821,000	\$ 23,617,412,000	\$ 22,958,593,000	\$ 22,521,130,000	\$ 21,766,933,000
Plan Fiduciary Net Position	23,351,827,481	22,579,326,240	23,112,417,070	18,770,067,396	19,090,109,233	18,532,189,000	17,789,888,000	16,367,842,000	16,398,575,000	16,168,535,000
Net Pension Liability	\$ 5,059,700,980	\$ 4,538,420,001	\$ 3,627,229,679	\$ 7,244,857,701	\$ 6,319,732,531	\$ 5,413,632,000	\$ 5,827,524,000	\$ 6,590,751,000	\$ 6,122,555,000	\$ 5,598,398,000
Ratio of Plan Fiduciary Net Position to Total										
Pension Liability	82.19 %	83.26 %	86.44 %	72.15 %	75.13 %	77.39 %	75.33 %	71.29 %	72.81 %	74.28 %
Covered-Employee Payroll ⁽¹⁾	\$ 5,069,434,611	\$ 4,661,990,509	\$ 4,399,969,381	\$ 4,440,135,406	\$ 4,197,483,596	\$ 4,152,368,000	\$ 4,020,893,000	\$ 3,977,759,000	\$ 3,878,632,000	\$ 3,861,712,000
Net Pension Liability as a Percentage										
of Covered-Employee Payroll	99.81 %	97.35 %	82.44 %	163.17 %	150.56 %	130.37 %	144.93 %	165.69 %	157.85 %	144.97 %

Teachers

Fiscal year ending June 30,	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability	\$ 57,574,609,485	\$ 54,732,329,433	\$ 53,381,141,475	\$ 51,001,854,903	\$ 49,683,336,378	\$ 46,679,555,000	\$ 45,417,520,000	\$ 44,182,326,000	\$ 42,930,422,000	\$ 41,495,883,000
Plan Fiduciary Net Position	47,467,404,711	45,211,730,774	45,618,044,102	36,449,228,745	36,522,768,112	34,919,563,000	33,119,545,000	30,168,211,000	30,344,072,000	29,411,183,000
Net Pension Liability	\$ 10,107,204,774	\$ 9,520,598,659	\$ 7,763,097,373	\$ 14,552,626,158	\$ 13,160,568,266	\$ 11,759,992,000	\$ 12,297,975,000	\$ 14,014,115,000	\$ 12,586,350,000	\$ 12,084,700,000
Ratio of Plan Fiduciary Net Position to Total										
Pension Liability	82.45 %	82.61 %	85.46 %	71.47 %	73.51 %	74.81 %	72.92 %	68.28 %	70.68 %	70.88 %
Covered-Employee Payroll ⁽¹⁾	\$ 9,970,623,246	\$ 9,319,260,057	\$ 8,843,886,917	\$ 8,766,666,892	\$ 8,387,502,872	\$ 8,086,986,000	\$ 7,891,783,000	\$ 7,624,612,000	\$ 7,434,932,000	\$ 7,313,025,000
Net Pension Liability as a Percentage										
of Covered-Employee Payroll	101.37 %	102.16 %	87.78 %	166.00 %	156.91 %	145.42 %	155.83 %	183.80 %	169.29 %	165.25 %

Notes to Schedule:

(1) Covered-Employee Payroll was provided by VRS.



Multiyear Schedule of the Net Pension Liability/(Asset) and Related Ratios (Continued)

Last 10 Fiscal Years

State Police

Fiscal year ending June 30,	2023	2022	2021	2020	2019	2018	2017	2016	2015		2014
Total Pension Liability	\$ 1,462,948,004	\$ 1,355,955,921 \$	1,292,177,929	\$ 1,215,258,411	\$ 1,176,936,222	\$ 1,070,528,000	\$ 1,047,402,000	\$ 1,086,958,000	\$ 1,064,450,000	\$ 1	,031,856,000
Plan Fiduciary Net Position	 1,079,754,981	1,031,383,369	1,050,148,442	854,762,629	865,272,997	836,702,000	796,073,000	730,688,000	733,352,000		720,990,000
Net Pension Liability	\$ 383,193,023	\$ 324,572,552 \$	242,029,487	\$ 360,495,782	\$ 311,663,225	\$ 233,826,000	\$ 251,329,000	\$ 356,270,000	\$ 331,098,000	\$	310,866,000
Ratio of Plan Fiduciary Net Position to Total											
Pension Liability	73.81 %	76.06 %	81.27 %	70.34 %	73.52 %	78.16 %	76.00 %	67.22 %	68.89 %		69.87 %
Covered-Employee Payroll ⁽¹⁾	\$ 156,706,588	\$ 138,643,566 \$	128,252,194	\$ 130,759,499	\$ 126,482,552	\$ 124,003,195	\$ 111,395,000	\$ 114,395,000	\$ 110,059,000	\$	112,010,000
Net Pension Liability as a Percentage											
of Covered-Employee Payroll	244.53 %	234.11 %	188.71 %	275.69 %	246.41 %	188.56 %	225.62 %	311.44 %	300.84 %		277.53 %

Judicial

Fiscal year ending June 30,	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability	\$ 767,857,162 \$	760,193,007 \$	746,502,576 \$	687,469,731 \$	678,589,851 \$	652,351,000 \$	646,275,000 \$	621,605,000 \$	632,381,000	\$ 616,680,000
Plan Fiduciary Net Position	 677,958,301	656,964,466	673,151,719	549,454,587	557,541,061	540,009,000	512,749,000	467,389,000	456,258,000	442,194,000
Net Pension Liability	\$ 89,898,861 \$	103,228,541 \$	73,350,857 \$	138,015,144 \$	121,048,790 \$	112,342,000 \$	133,526,000 \$	154,216,000 \$	176,123,000	\$ 174,486,000
Ratio of Plan Fiduciary Net Position to Total										
Pension Liability	88.29 %	86.42 %	90.17 %	79.92 %	82.16 %	82.78 %	79.34 %	75.19 %	72.15 %	71.71 %
Covered-Employee Payroll ⁽¹⁾	\$ 84,059,592 \$	79,539,271 \$	74,594,273 \$	74,768,610 \$	68,330,332 \$	68,245,000 \$	66,826,000 \$	66,621,000 \$	61,092,000	\$ 61,020,000
Net Pension Liability as a Percentage										
of Covered-Employee Payroll	106.95 %	129.78 %	98.33 %	184.59 %	177.15 %	164.62 %	199.81 %	231.48 %	288.29 %	285.95 %

Notes to Schedule:

(1) Covered-Employee Payroll was provided by VRS.



Multiyear Schedule of the Net Pension Liability/(Asset) and Related Ratios (Concluded)

Last 10 Fiscal Years

Virginia Law Officers

Fiscal year ending June 30,	2023	2022		2021	2020	2019	2018	2017	2016	2015		2014
Total Pension Liability	\$ 2,577,980,717	\$ 2,474,068,715	\$ 2	2,390,608,947	\$ 2,282,350,922	\$ 2,190,023,936	\$ 2,047,161,000 \$	2,002,184,000	\$ 1,985,618,000	\$ 1,902,051,000	\$1	,824,577,000
Plan Fiduciary Net Position	 1,931,060,670	1,841,041,323	1	1,868,924,472	1,500,468,536	1,495,989,697	1,423,980,000	1,345,887,000	1,211,446,000	1,191,353,000	1	,150,450,000
Net Pension Liability	\$ 646,920,047	\$ 633,027,392	\$	521,684,475	\$ 781,882,386	\$ 694,034,239	\$ 623,181,000 \$	656,297,000	\$ 774,172,000	\$ 710,698,000	\$	674,127,000
Ratio of Plan Fiduciary Net Position to Total												
Pension Liability	74.91 %	74.41 %		78.18 %	65.74 %	68.31 %	69.56 %	67.22 %	61.01 %	62.64 %		63.05 %
Covered-Employee Payroll ⁽¹⁾	\$ 369,141,771	\$ 338,767,528	\$	348,649,734	\$ 369,995,506	\$ 349,997,734	\$ 345,531,000 \$	344,468,000	\$ 345,504,000	\$ 338,562,000	\$	352,492,000
Net Pension Liability as a Percentage												
of Covered-Employee Payroll	175.25 %	186.86 %		149.63 %	211.32 %	198.30 %	180.35 %	190.52 %	224.07 %	209.92 %		191.25 %

Political Subdivisions

Fiscal year ending June 30,	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability	\$ 29,704,278,390	\$ 28,149,356,871	\$ 27,309,293,037	\$ 25,449,316,227	\$ 24,206,763,285	\$ 22,497,735,000	\$ 21,564,004,000	\$ 20,817,088,000	\$ 19,935,054,000	\$ 19,135,008,000
Plan Fiduciary Net Position	27,308,037,669	26,045,031,183	26,558,183,521	21,234,090,566	21,259,033,960	20,302,821,000	19,250,247,000	17,418,106,000	17,283,021,000	16,627,539,000
Net Pension Liability	\$ 2,396,240,721	\$ 2,104,325,688	\$ 751,109,516	\$ 4,215,225,661	\$ 2,947,729,325	\$ 2,194,914,000	\$ 2,313,757,000	\$ 3,398,982,000	\$ 2,652,033,000	\$ 2,507,469,000
Ratio of Plan Fiduciary Net Position to Total										
Pension Liability	91.93 %	92.52 %	97.25 %	83.44 %	87.82 %	90.24 %	89.27 %	83.67 %	86.70 %	86.90 %
Covered-Employee Payroll ⁽¹⁾	\$ 6,337,773,895	\$ 5,699,595,938	\$ 5,403,266,882	\$ 8,843,886,917	\$ 5,368,250,421	\$ 5,118,621,606	\$ 4,932,344,000	\$ 4,765,842,000	\$ 4,628,806,000	\$ 4,513,335,000
Net Pension Liability as a Percentage										
of Covered-Employee Payroll	37.81 %	36.92 %	13.90 %	47.66 %	54.91 %	42.88 %	46.91 %	71.32 %	57.29 %	55.56 %

Notes to Schedule:

(1) Covered-Employee Payroll was provided by VRS.



Multiyear Schedule of Contributions

Last 10 Fiscal Years

State Employees

2023	2	2022		2021		2020		2019		2018		2017		2016		2015		2014
\$ 716,311,111	\$ 67	74,123,828	\$	636,235,572	\$	600,306,307	\$	567,499,782	\$	560,154,000	\$	542,418,000	\$	628,486,000	\$	612,824,000	\$	504,726,000
733,040,245	67	74,123,828		636,235,572		600,306,307		567,499,782		560,154,000		542,418,000		557,160,000		478,235,000		338,286,000
\$ (16,729,134) \$	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	71,326,000	\$	134,589,000	\$	166,440,000
\$ 5,069,434,611	\$ 4,66	61,990,509	\$	4,399,969,381	\$	4,440,135,406	\$	4,197,483,596	\$	4,152,368,000	\$	4,020,893,000	\$	3,977,759,000	\$	3,878,632,000	\$ 3	3,861,712,000
14.46 %		14.46 %		14.46 %		13.52 %		13.52 %		13.49 %		13.49 %		14.01 %		12.33 %		8.76 %
\$ \$	\$ 716,311,111 1 733,040,245 \$ (16,729,134) 1 \$ 5,069,434,611	\$ 716,311,111 \$ 6 733,040,245 6 \$ (16,729,134) \$ \$ 5,069,434,611 \$ 4,6	\$ 716,311,111 \$ 674,123,828 733,040,245 674,123,828 \$ (16,729,134) \$ - \$ 5,069,434,611 \$ 4,661,990,509	\$ 716,311,111 \$ 674,123,828 \$ 733,040,245 \$ 674,123,828 \$ \$ \$ \$ (16,729,134) \$ \$ - \$ \$ \$ 5,069,434,611 \$ \$ 4,661,990,509 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$ 716,311,111 \$ 674,123,828 \$ 636,235,572 733,040,245 674,123,828 636,235,572 \$ (16,729,134) \$ - \$ - \$ 5,069,434,611 \$ 4,661,990,509 \$ 4,399,969,381	\$\begin{array}{cccccccccccccccccccccccccccccccccccc	\$\begin{array}{cccccccccccccccccccccccccccccccccccc	\$\begin{array}{c c c c c c c c c c c c c c c c c c c	\$\begin{array}{cccccccccccccccccccccccccccccccccccc	\$\begin{array}{c c c c c c c c c c c c c c c c c c c	\$\begin{array}{c c c c c c c c c c c c c c c c c c c	\$\begin{array}{c c c c c c c c c c c c c c c c c c c	\$\begin{array}{c c c c c c c c c c c c c c c c c c c	\$\begin{array}{c c c c c c c c c c c c c c c c c c c	\$\begin{array}{c c c c c c c c c c c c c c c c c c c	\$\begin{array}{c c c c c c c c c c c c c c c c c c c	\$\begin{array}{c c c c c c c c c c c c c c c c c c c	\$\begin{array}{c c c c c c c c c c c c c c c c c c c

Teachers

Fiscal year ending June 30,	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Actuarially Determined Employer Contribution	\$ 1,471,663,991	\$ 1,548,861,021	\$ 1,469,854,006	\$ 1,374,613,369	\$ 1,315,160,450	\$ 1,319,796,000	\$ 1,287,939,000	\$ 1,344,981,000	\$ 1,353,158,000	\$ 1,226,394,000
Actual Employer Contribution	1,657,117,583	1,548,861,021	1,469,854,006	1,374,613,369	1,315,160,450	1,319,796,000	1,156,935,000	1,072,020,000	1,078,065,000	852,699,000
Annual Contribution Deficiency/(Excess)	\$ (185,453,592)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 131,004,000	\$ 272,961,000	\$ 275,093,000	\$ 373,695,000
Covered-Employee Payroll ⁽¹⁾	\$ 9,970,623,246	\$ 9,319,260,057	\$ 8,843,886,917	\$ 8,766,666,892	\$ 8,387,502,872	\$ 8,086,986,000	\$ 7,891,783,000	\$ 7,624,612,000	\$ 7,434,932,000	\$ 7,313,025,000
Actual Contribution as a Percentage of Covered- Employee Payroll	16.62 %	16.62 %	16.62 %	15.68 %	15.68 %	16.32 %	14.66 %	14.06 %	14.50 %	11.66 %

State Police

Fiscal year ending June 30,	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Actuarially Determined Employer Contribution Actual Employer Contribution	\$ 46,980,635 \$ 46,980,635	36,504,851 \$ 36,504,851	33,768,803 \$ 33,768,803	32,532,963 \$ 32,532,963	31,468,859 \$ 31,468,859	35,391,000 \$ 35,391,000	31,792,000 \$ 31,792,000	35,211,000 \$ 31,561,000	33,876,000 \$ 28,417,000	35,538,000 27,711,000
Annual Contribution Deficiency/(Excess)	\$ - \$	- \$	- \$	- \$	- \$	- \$	- \$	3,650,000 \$	5,459,000 \$	7,827,000
Covered-Employee Payroll ⁽¹⁾	\$ 156,706,588 \$	138,643,566 \$	128,252,194 \$	130,759,499 \$	126,482,552 \$	124,003,195 \$	111,395,000 \$	114,395,000 \$	110,059,000 \$	112,010,000
Actual Contribution as a Percentage of Covered- Employee Payroll	29.98 %	26.33 %	26.33 %	24.88 %	24.88 %	28.54 %	28.54 %	27.59 %	25.82 %	24.74 %

Notes to Schedule:

The Actuarially Determined Employer Contribution and actual employer contribution were provided by VRS. These amounts may differ from the employer contributions shown in the schedule of Changes in NPL. Some reasons for a difference include adjustments from the prior year, impact of the Workforce Transition Act, early retirement plan contribution amounts, and Hybrid Defined Contribution Plan employer contribution amounts.



⁽¹⁾ Covered-Employee Payroll was provided by VRS.

Multiyear Schedule of Contributions (Concluded)

Last 10 Fiscal Years

Judicial

Fiscal year ending June 30,	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Actuarially Determined Employer Contribution	\$ 25,781,077 \$	23,734,519 \$	22,258,931 \$	25,712,925 \$	23,498,801 \$	28,642,000 \$	28,047,000 \$	37,008,000 \$	35,336,000 \$ 33	3,018,000
Actual Employer Contribution	25,781,077	23,734,519	22,258,931	25,712,925	23,498,801	28,642,000	28,047,000	33,291,000	31,560,000 27	7,728,000
Annual Contribution Deficiency/(Excess)	\$ - \$	- \$	- \$	- \$	- \$	- \$	- \$	3,717,000 \$	3,776,000 \$ 5	5,290,000
Covered-Employee Payroll ⁽¹⁾	\$ 84,059,592 \$	79,539,271 \$	74,594,273 \$	74,768,610 \$	68,330,332 \$	68,245,000 \$	66,826,000 \$	66,621,000 \$	61,092,000 \$ 61	1,020,000
Actual Contribution as a Percentage of Covered-Employee Payroll	30.67 %	29.84 %	29.84 %	34.39 %	34.39 %	41.97 %	41.97 %	49.97 %	51.66 %	45.44 %

Virginia Law Officers

Fiscal year ending June 30,		2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Actuarially Determined Employer Contribution	\$	90,808,876 \$	74,190,089 \$	76,354,292 \$	79,956,029 \$	75,634,510 \$	72,734,000 \$	72,511,000 \$	72,763,000 \$	71,301,000 \$	68,806,000
Actual Employer Contribution		90,808,876	74,190,089	76,354,292	79,956,029	75,634,510	72,734,000	72,511,000	65,101,000	59,824,000	52,169,000
Annual Contribution Deficiency/(Excess)	\$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	7,662,000 \$	11,477,000 \$	16,637,000
Covered-Employee Payroll ⁽¹⁾	\$	369,141,771 \$	338,767,528 \$	348,649,734 \$	369,995,506 \$	349,997,734 \$	345,531,000 \$	344,468,000 \$	345,504,000 \$	338,562,000 \$	352,492,000
Actual Contribution as a Percentage of Covered- Employee Payroll	•	24.60 %	21.90 %	21.90 %	21.61 %	21.61 %	21.05 %	21.05 %	18.84 %	17.67 %	14.80 %

Political Subdivisions

Fiscal year ending June 30,	2023	2022	2021	2020		2019	2018	2017	2016	2015	2014
Actuarially Determined Employer Contribution	\$ 780,825,031	\$ 643,826,493	\$ 610,473,947	\$ 544,676,278 \$		515,903,853 \$	504,955,000 \$	487,066,000 \$	554,335,000 \$	540,859,000 \$	551,822,000
Actual Employer Contribution Annual Contribution Deficiency/(Excess)	\$ 780,825,031	\$ 643,826,493	\$ 610,434,832 39,115	\$ 547,381,859 (2,705,581) \$		(2,608,961) \$	505,603,000 (648,000) \$	487,702,000 (636,000) \$	549,408,000 4,927,000 \$	535,919,000 4,940,000 \$	539,131,000 12,691,000
Covered-Employee Payroll ⁽¹⁾	6,337,773,895	\$ 5,699,595,938	\$ 5,403,266,882	\$ 5,368,250,421 \$	5 5,1	118,621,606 \$	4,932,344,000 \$	4,765,842,000 \$	4,628,806,000 \$	4,513,335,000 \$	4,434,764,000
Actual Contribution as a Percentage of Covered- Employee Payroll	12.32 %	11.30 %	11.30 %	10.20 %		10.13 %	10.25 %	10.23 %	11.87 %	11.87 %	12.16 %

Notes to Schedule:

The Actuarially Determined Employer Contribution and actual employer contribution were provided by VRS. These amounts may differ from the employer contributions shown in the schedule of Changes in NPL. Some reasons for a difference include adjustments from the prior year, impact of the Workforce Transition Act, early retirement plan contribution amounts, and Hybrid Defined Contribution Plan employer contribution amounts.



⁽¹⁾ Covered-Employee Payroll was provided by VRS.

Notes to Schedule of Contributions

Valuation Date:

Notes Actuarially determined contribution amounts for fiscal year 2023 are calculated

based upon the results of the June 30, 2021 actuarial valuation.

Methods and Assumptions Used to Determine Contribution Amounts for the Fiscal Year Ending June 30, 2023:

Actuarial Cost Method Entry-Age Normal

Amortization Method Level Percentage of Payroll, Closed

Remaining Amortization Period 8-22 years

Asset Valuation Method 5-year smoothed market

Inflation 2.50%

Salary Increases State Employees - 3.50% to 5.35%

Teachers - 3.50% to 5.95% State Police - 3.50% to 4.75%

Judicial - 4.00%

Virginia Law Officers - 3.50% to 4.75%

Political Subdivisions -

Non-Hazardous Duty - 3.50% to 5.35% Hazardous Duty - 3.50% to 4.75%

Investment Rate of Return

6.75%, net of investment expenses

Retirement Age Experience

 $\label{thm:experience-based tables of rates that are specific to the type of eligibility \\$

condition.

Mortality A version of the PUB-2010 Mortality Tables (amount weighted) with fully

generational mortality improvements projected using 75% of the MP-2020

projection scale.

Other Information:

Notes Total Pension Liability (TPL) calculations are based on the assumptions and

methods found in the 2022 Appendix, available on the VRS website.





NOTES TO FINANCIAL STATEMENTS

Summary of Membership as of the Valuation Date (June 30, 2022)

			Cou	ınt		
Category/Group	State Employees	Teachers	State Police	Judicial	Virginia Law Officers	Political Subdivisions
Active Members	74,048	153,356	1,885	461	7,289	109,906
Inactive Members						
Vested	15,387	32,031	199	9	1,494	22,746
Non-Vested	33,016	46,596	271	1	6,554	50,565
LTD	2,380	41	28	0	489	91
Active Elsewhere in VRS	<u>9,393</u>	<u>6,218</u>	<u>252</u>	<u>4</u>	<u>3,736</u>	<u>37,906</u>
Total Inactive Members	60,176	84,886	750	14	12,273	111,308
Retirees						
Service	62,845	100,592	1,316	446	5,899	70,103
Disabled	2,975	4,249	185	1	248	8,010
Beneficiaries	<u>5,554</u>	<u>3,738</u>	<u>273</u>	<u>133</u>	<u>398</u>	<u>5,554</u>
Total Retirees	71,374	108,579	1,774	580	6,545	83,667
Totals	205,598	346,821	4,409	1,055	26,107	304,881



Long-Term Expected Return on Plan Assets

For each major asset class that is included in the pension plan's target asset allocation as of June 30, 2023, these best estimates of the 20-year forward looking geometric nominal rates of return were provided by the VRS Investment Staff, and are summarized in the following table:

Asset Allocation

Asset Class	Target Allocation	Long-Term Expected Rate of Return
Public Equity	34.0%	7.0%
Fixed Income	15.0%	4.9%
Credit Strategies	14.0%	7.9%
Real Assets	14.0%	6.5%
Private Equity	16.0%	9.0%
PIP ¹	2.0%	7.8%
Dstrat ²	2.0%	6.7%
RBI ³	2.0%	6.2%
Cash	1.0%	3.7%
Total	100.0%	
Currency Return Ac	ldition	0.1%
Total Fund Expecte	d Rate of Return	7.14%

^{1.} Private Investment Partnership



^{2.} Dynamic Strategy

^{3.} Risk-Based Investments

Single Discount Rate

Aside from the Political Subdivision Plan(s) denoted in the executive summary, a single discount rate of 6.75% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 6.75% and a long-term bond rate of 3.86%. The projection of cash flows (provided under separate cover) used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of Total Pension Liability to the Single Discount Rate Assumption

Regarding the sensitivity of the net pension liability/(asset) to changes in the single discount rate, the following presents the plan's net pension liability/(asset), calculated using a single discount rate of 6.75% (3.86% for certain Political Subdivisions), as well as what the plan's net pension liability/(asset) would be if it were calculated using a single discount rate that is 1% lower or 1% higher:

Net Pension Liability	1% Decrease 5.75%	Current Single Discount Rate Assumption 6.75%	1% Increase 7.75%
State Employees	\$ 8,431,527,184	\$ 5,059,700,980	\$ 2,237,742,224
Teachers	17,916,469,114	10,107,204,774	3,687,347,164
State Police	570,303,243	383,193,023	227,459,399
Judicial	164,621,968	89,898,861	25,511,930
Virginia Law Officers	989,007,039	646,920,047	367,472,704
Political Subdivisions ¹	6,319,818,868	2,396,240,721	(819,270,035)

As denoted in the executive summary, select Political Subdivision Plan(s) use the municipal bond rate for accounting disclosures. The sensitivity for the select plans is computed at 1% +/- the municipal bond rate disclosed in the executive summary for the current measurement date.



SECTION D

OTHER DISCLOSURES

Other Disclosures

This report complements the actuarial valuation reports prepared as of June 30, 2022. Information herein should be considered along with the information from these separate reports, especially for additional discussions of the nature of actuarial calculations and for more information related to:

Plan Provisions;

Valuation Methods and Actuarial Assumptions; and

• Summary of Participant Data.

Assumption Rationale: Assumptions are based upon a four-year Experience Review for the

period ending June 30, 2020, as adopted by the Board of Trustees at its

April 20, 2021 meeting.

Asset Method: The market value of assets is used for GASB Statement No. 67

purposes.

Roll-Forward Disclosure: The total pension liabilities shown in this report are based on

an actuarial valuation as of June 30, 2022 and a measurement date of June 30, 2023. The roll-forward procedure increases the June 30, 2022 actuarial accrued liability with normal cost and interest and decreases it with actual benefit payments and interest, except for new Political Subdivision Plan(s) where the total pension liabilities at the measurement date

are used.

Changes of Benefit Terms: There have been no significant changes to the System benefit

provisions since the prior actuarial valuation. A hybrid plan with changes to the defined benefit plan structure and a new defined contribution component was adopted in 2012. The hybrid plan applies to most new employees hired on or after January 1, 2014 and not covered by enhanced hazardous duty benefits. Some of the Participating Political Subdivision have made changes to the level of benefits provided to members. In aggregate, the impact of these changes is not significant.



SECTION E

GLOSSARY OF TERMS

Accrued Service Service credited under the system which was rendered before the date of

the actuarial valuation.

Actuarial Accrued Liability

(AAL)

The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be

referred to as "accrued liability" or "actuarial liability."

Actuarial Assumptions These assumptions are estimates of future experience with respect to

rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption 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 the pension trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may

also be referred to as the "actuarial funding method."

Actuarial Equivalent A single amount or series of amounts of equal actuarial value to another

single amount or series of amounts, computed on the basis of

appropriate actuarial assumptions.

Actuarial Gain (Loss) The difference in liabilities between actual experience and expected

experience during the period between two actuarial valuations is the gain

(loss) on the accrued liabilities.

Actuarial Present Value

(APV)

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

payment.

Actuarial Valuation The actuarial valuation report determines, as of the actuarial valuation

date, the service cost, total pension liability, and related actuarial

present value of projected benefit payments for pensions.

Actuarial Valuation Date The date as of which an actuarial valuation is performed.

Actuarially Determined Contribution (ADC) or Annual Required

Contribution (ARC)

A calculated contribution into a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically, the Actuarially Determined Contribution has a

normal cost payment and an amortization payment.



Amortization Payment

The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.

Amortization Method

The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be "open" (meaning, reset each year) or "closed" (the number of years remaining will decline each year).

Cost-of-Living Adjustments

Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.

Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan) A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.

Covered-Employee Payroll

The payroll of covered employees, which is typically only the pensionable pay and does not include pay above any pay cap.

Deferred Retirement Option Program (DROP)

A program that permits a plan member to elect a calculation of benefit payments based on service credits and salary, as applicable, as of the DROP entry date. The plan member continues to provide service to the employer and is paid for the service by the employer after the DROP entry date; however, the pensions that would have been paid to the plan member are credited to an individual member account within the defined benefit pension plan until the end of the DROP period. Other variations for DROP exist and will be more fully detailed in the plan provision section of the valuation report.

Deferred Inflows and Outflows

The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.

Discount Rate

For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically:

- 1. The benefit payments to be made while the pension plans' fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period and;
- 2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.



Entry Age Actuarial Cost Method (EAN) The EAN is a funding method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit age(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.

GASB

The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.

Fiduciary Net Position

The fiduciary net position is the value of the assets of the trust.

Long-Term Expected Rate of Return

The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.

Money-Weighted Rate of Return

The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 67, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.

Multiple-Employer Defined Benefit Pension Plan

A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.

Municipal Bond Rate

The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.

Net Pension Liability (NPL)

The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.

Non-Employer Contribution Entities Non-employer contribution entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB Accounting statement plan members are not considered non-employer contribution entities.

Normal Cost

The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method.



Other Postemployment Benefits (OPEB)

All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment health care benefits regardless of the manner in which they are provided. Other postemployment benefits do not include termination benefits.

Real Rate of Return

The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.

Service Cost

The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.

Total Pension Expense

The total pension expense is the sum of the following items that are recognized at the end of the employer's fiscal year:

- 1. Service Cost
- 2. Interest on the Total Pension Liability
- 3. Current-Period Benefit Changes
- 4. Expensed Portion of Current Period Liability Experience
- 5. Expensed Portion of Current Period Assumption Change
- 6. Employee Contributions (made negative for addition here)
- 7. Projected Earnings on Plan Investments (made negative for addition here)
- 8. Expensed Portion of Current Period Investment Expense
- 9. Pension Plan Administrative Expense
- 10. Other Changes in Plan Fiduciary Net Position
- 11. Recognition of Prior Deferred Outflows of Resources
- 12. Recognition of Prior Deferred (Inflows) of Resources1.

Total Pension Liability (TPL)

The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.

Unfunded Actuarial Accrued Liability (UAAL)

The UAAL is the difference between actuarial accrued liability and valuation assets.

Valuation Assets

The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of the GASB Statement No. 67, the valuation asset is equal to the market value of assets.

