



Virginia
Retirement
System®

2023

**ANNUAL
COMPREHENSIVE
FINANCIAL
REPORT**

FOR THE FISCAL YEAR ENDED
JUNE 30, 2023

AN INDEPENDENT AGENCY OF THE COMMONWEALTH OF VIRGINIA

VIRGINIA RETIREMENT SYSTEM
FINANCIAL AND STATISTICAL HIGHLIGHTS – ALL PENSION TRUST FUNDS

(EXPRESSED IN THOUSANDS)

	2023	2022	% Change
Activity for the Year:			
Contributions	\$ 4,424,152	\$ 4,520,890	(2.14)%
Investment Income (Net of Investment Expenses)	\$ 6,255,942	\$ (117,477)	5,425.25 %
Retirement Benefits	\$ 6,043,315	\$ 5,729,308	5.48 %
Refunds	\$ 125,016	\$ 130,117	(3.92)%
Administrative and Other Expenses (Net of Miscellaneous Income)	\$ 61,196	\$ 59,379	3.06 %
Increase (Decrease) in Net Position Held in Trust for Pension Benefits	\$ 4,450,567	\$ (1,515,391)	
Retirement Benefits as a Percentage of Contributions	136.6%	126.7%	
Retirement Benefits as a Percentage of Contributions and Investment Income	56.6%	130.1%	
Net Position Held in Trust for Benefits at Fiscal Year-End:			
Virginia Retirement System (VRS)	\$ 98,127,270	\$ 93,836,088	4.57 %
State Police Officers' Retirement System (SPORS)	\$ 1,079,755	\$ 1,031,383	4.69 %
Virginia Law Officers' Retirement System (VaLORS)	\$ 1,931,061	\$ 1,841,041	4.89 %
Judicial Retirement System (JRS)	\$ 677,958	\$ 656,965	3.20 %
Investment Performance*:			
One-Year Return on Investments	6.1%	0.6%	
Three-Year Return on Investments	10.8%	9.2%	
Five-Year Return on Investments	8.0%	8.3%	
Participating Employers:			
Counties/Cities/Towns	256	255	
Special Authorities	213	211	
School Boards**	142	144	
State Agencies	225	222	
Total Employers	836	832	0.48 %
Members/Retirees:			
Active Members	356,515	349,711	1.95 %
Retired Members	236,208	231,523	2.02 %

* Investment return calculations were prepared using a time-weighted return methodology based on market value and net of investment expenses.

** Of the 142 school boards, 131 also provide coverage for non-teacher employees.



Virginia Retirement System

Annual Comprehensive Financial Report

For the Year Ended June 30, 2023

VRS CODE OF ETHICS

The VRS Code of Ethics is built on our commitment to upholding the highest standards of integrity, ethical principles and professional conduct.

INTEGRITY

Integrity is the ability to act with honesty and be consistent in administering benefits and managing investments. Integrity serves as the foundation for building trust with the public, retirees, members and employers as we provide services.

ACCOUNTABILITY

Accountability is being responsible for decisions made, actions taken and assignments completed. Accountability reinforces our commitment to ethically perform our duties to meet the goals of the agency.

CONFIDENTIALITY

Confidentiality is exercising discretion and performing our ethical duty to protect the personal information of our members, retirees, beneficiaries and employers. We safeguard personal data and sensitive VRS information that is viewed, acquired or otherwise accessible during the course of VRS employment.

INCLUSIVITY

Inclusivity is embracing a diversity of thinking that helps us reach solutions that achieve excellence and meet the needs of our customers. We encourage an open work environment and an ethical culture in which colleagues are treated with respect and are free to raise issues or concerns without fear of retaliation.

AN INDEPENDENT AGENCY OF THE COMMONWEALTH OF VIRGINIA

This report was prepared by the financial, administrative and investment staff of the Virginia Retirement System.

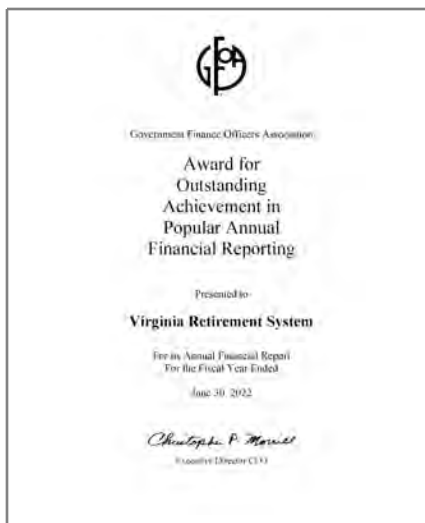


Certificate of Achievement for Excellence in Financial Reporting, Annual Comprehensive Financial Report (Annual Report)

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Virginia Retirement System for its *Annual Comprehensive Financial Report* for the fiscal year ended June 30, 2022. This was the 41st consecutive year that VRS achieved this prestigious recognition.

To be awarded the certificate, a government unit must publish an easily readable and efficiently organized annual comprehensive report. This report must satisfy both generally accepted accounting principles and applicable legal requirements. The certificate is valid for a period of one year.

The VRS *Annual Comprehensive Financial Report* for fiscal year 2023 continues to conform to the Certificate of Achievement Program requirements and will be submitted to GFOA to determine its eligibility for another certificate.

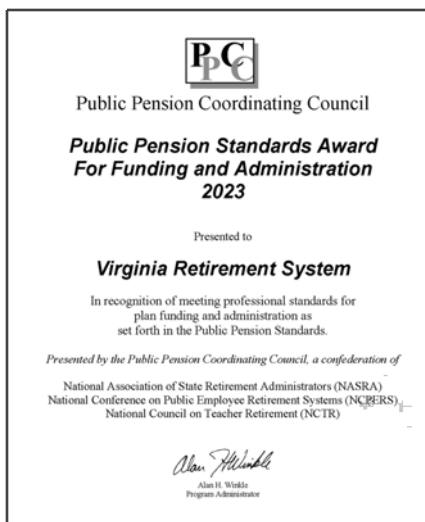


Award for Outstanding Achievement in Financial Reporting, Popular Annual Financial Report (PAFR)

The Government Finance Officers Association of the United States and Canada (GFOA) presented an Award for Outstanding Achievement in Financial Reporting to the Virginia Retirement System for its *Popular Annual Financial Report* (PAFR) for the fiscal year ended June 30, 2022. This was the seventh consecutive year of publication for which VRS was eligible to achieve this prestigious recognition.

To be awarded the certificate, a government unit must publish an easily readable and efficiently organized popular annual report. This report must satisfy both generally accepted accounting principles and applicable legal requirements. The certificate is valid for a period of one year.

The VRS PAFR for fiscal year 2023 continues to conform to the Certificate of Achievement Program requirements and will be submitted to GFOA to determine its eligibility for another certificate.



Public Pension Coordinating Council Standards Award for Funding and Administration

VRS received the 2023 Standards Award for Funding and Administration from the Public Pension Coordinating Council (PPCC) in recognition of the agency's fulfillment of public pension standards. Developed by PPCC, these standards are the benchmark for measuring excellence in defined benefit plan administration. This is the agency's 20th award from PPCC.

The purpose of the PPCC's awards program is to promote high professional standards for public employee retirement systems and publicly commend systems that adhere to these standards. The PPCC is a coalition of the National Association of State Retirement Administrators (NASRA), the National Conference on Public Employee Retirement Systems (NCPERS) and the National Council on Teacher Retirement (NCTR).

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2023

Introductory Section

Chair's Letter

Board of Trustees

VRS Organization

Investment Advisory Committee

Defined Contribution Plans Advisory Committee

Executive Administrative Team

Executive Investment Team

Professional Consultants

Letter of Transmittal

Chair's Letter



A. Scott Andrews, Chair
Patricia S. Bishop, Director
Andrew H. Junkin, Chief Investment Officer

P.O. Box 2500 • 1200 East Main Street
Richmond, Virginia 23218-2500
Toll-free: 888-827-3847 • TDD: 804-289-5919

December 14, 2023

The Honorable Glenn Youngkin, Governor of Virginia, and Members of the General Assembly:

As VRS completes its 81st year of serving those who serve others, the system continues to grow. VRS is recognized as the 14th largest public or private pension fund in the United States and the 42nd largest in the world, serving more than 803,000 active and inactive members, retirees and beneficiaries with 836 participating employers across the state.

PLAN FUNDING AND INVESTMENTS

Your resolute commitment and timely action over the past two years have contributed to the stability of Virginia's public pension plan. The \$1 billion total infusion to the plans has increased funded status, decreased unfunded liabilities and moderated contribution rates. The infusions are expected to save the commonwealth an estimated \$2 billion over the next 20 years.

Maintaining board-certified rates from the prior biennium will provide an additional estimated \$548 million in savings over 15 years. In addition to the positive effects for VRS, we note that the accelerated plan funding is also considered favorable by bond-rating agencies. On behalf of the VRS Board of Trustees, I thank you for your continued support of Virginia's public servants.

Similarly, the VRS trust fund continues to exceed \$100 billion, ending the fiscal year at \$105.9 billion. The annualized return on the trust fund portfolio is 6.1% as of June 30, reflecting our success in managing risk and capitalizing on growth opportunities, even in uncertain times. When looking at the annualized return for 10 years, as of June 30, 2023, VRS exceeds the assumed rate of return at 8.2%; for 20 years, 7.9% and for 25 years, 6.8%. As a long-term investor with an investment horizon extending decades into the future, VRS is positioned to support our current and future retirees and maintain stable contribution rates for our employers.

A healthy public pension fund has a positive impact on local economies. VRS paid \$6.0 billion in benefits to retirees in fiscal year 2023. Approximately 84% of VRS retirees choose to remain in Virginia during their post-career years.

Over the past decade, the Hybrid Retirement Plan, now the dominant VRS retirement plan with more than 163,000 members, has created a shared-risk model between the employer and employee, lowering the future cost of benefits for employers.

MEASUREMENT OF MANAGEMENT

In fiscal year 2022, VRS' total pension administration cost of \$74 remained lower than the peer average of \$113, according to CEM Benchmarking. VRS' total service score was 83, exceeding the peer median of 78. We cost-effectively deliver a high level of service at a lower relative cost, in comparison to our peers.

In its evaluation of VRS investments, CEM reported that VRS saves approximately \$60.7 million in fees annually by managing a portion of the total fund in-house. In addition, VRS' skilled negotiating in external investment management costs and effective cost management results in approximately \$55.4 million a year in savings versus the cost paid by our peers for similar services.

Active management by VRS' investment professionals also continues to provide added value to the fund. As of June 30, 2023, VRS' investment professionals have provided an average added value of \$956 million annually to the trust fund over the past decade, value that would not have been realized from managing a passive, indexed portfolio.

CUSTOMER SERVICE AND BENEFITS ADMINISTRATION

Service is at the heart of VRS. Our agile team continuously innovates using collaborative technologies to serve our customers and meet them wherever they are. Our new customer experience survey, planned and developed during fiscal year 2023, will enable us to gather customer feedback and use it as a resource to enhance the personal service we seek to provide.

Online retirements have continued to increase, representing 37% of all retirement applications submitted in fiscal year 2023. Cumulative registrations for myVRS now total more than 500,000, reflecting member and retiree interest in its self-service functionality. Personalized myVRS Financial Wellness features, including courses, videos and assessments, have attracted almost 29,000 registrants.

VRS depends on the availability of secure and efficient information systems to its staff, and by extension to its members, retirees and employers. This year, we directed efforts toward building a resilient and scalable data infrastructure and near-instant disaster recovery services.

DEFINED CONTRIBUTION PLANS UPDATE

The Hybrid Retirement Plan's auto-escalation feature increases participant voluntary contributions every three years until reaching the maximum amount. January 1, 2023, marked the third auto-escalation for plan participants since the plan's inception in 2014.

During the fiscal year, VRS partnered with MissionSquare Retirement, the third-party record keeper for the plan, to develop a multi-channel communications campaign highlighting auto-escalation as an easy and convenient way for members to increase their voluntary contributions to the Hybrid 457 Deferred Compensation Plan.

More than 99% of eligible hybrid plan members targeted in the auto-escalation campaign are now making voluntary contributions. Additionally, 3% of members took active control by choosing to increase their contributions by enrolling in voluntary contributions early and at a higher contribution level than the baseline. The Academy of Interactive & Visual Arts (AIVA) recognized the campaign's effective marketing with a Communicator Award of Distinction.

During fiscal year 2023, VRS issued a request for proposals for the Defined Contribution Plans' third-party record keeper. Following evaluation of responses, finalist interviews and a recommendation by the Defined Contributions Plans Advisory Committee (DCPAC), the VRS Board of Trustees named Voya Financial to serve as the third-party record keeper beginning January 1, 2025.

BEHIND THE SCENES

Another agency priority is to foster a positive working environment and a culture of engagement. We value our professional and diverse workforce, and we will continue to place emphasis on retaining, developing and recruiting employees for a workplace that truly represents those it serves. This past year, VRS enhanced its careers webpage with videos, employee testimonials, benefit information and agency facts to attract and engage potential employees.

VRS also launched an in-house professional development and training initiative known as EDGE (Empower, Develop, Grow and Engage), tailored to the VRS culture of continuous learning as we serve those who serve others across Virginia. In its first year, 60 courses drew a total of 800 registrants, most of whom speedily applied the knowledge gains in their professional and personal lives.

Once again, VRS employees enthusiastically supported the Commonwealth of Virginia Campaign (CVC), making donations and raising funds for participating nonprofits across the state. Although among the smaller agencies in terms of employees, VRS ranked among the top 10 contributing to the 2022 campaign.

AWARDS

During fiscal year 2023, VRS received the following national and local awards:

- 2023 Communicator Award of Distinction for the Hybrid Retirement Plan Auto-Escalation Campaign, presented by the Academy of Interactive & Visual Arts (AIVA), in recognition of marketing effectiveness.
- Certificate of Transparency, presented by the National Conference on Public Employee Retirement Systems (NCPERS), for fostering an atmosphere of openness between public pension systems and the general population.
- Certificate of Achievement, Government Finance Officers Association (GFOA) – the highest form of recognition in governmental accounting and financial reporting – for the *Annual Comprehensive Financial Report* for the fiscal year ended June 30, 2022; this is the 41st consecutive year that VRS has been honored.
- Award for Outstanding Achievement in Financial Reporting, also from GFOA, for the seventh *Popular Annual Financial Report*.
- Public Pension Standards Award for Funding and Administration from the Public Pension Coordinating Council (PPCC); this is the 20th award VRS has received from PPCC.
- Ronald L. Stokes, VRS senior investment analyst, was honored by WWBT-TV 12 for his “Acts of Kindness” in volunteering his time to organize free “Budget Bootcamps” in Richmond that have helped participants reduce personal debt by more than \$800,000 over the past six years.

- Commonwealth of Virginia Certificate of Appreciation, presented to VRS volunteers for their enthusiastic support of the Commonwealth of Virginia Campaign (CVC), in which employees made donations and raised funds for participating nonprofits across the state. In the final tally, VRS ranked among the top 10 agencies contributing to the 2022 campaign.

PLANNING FOR TOMORROW, TODAY

Since our establishment in 1942, VRS has weathered changes and conquered challenges. Some years are distinguished by milestones brought about by long-term effort, while others are marked by quiet persistence toward future goals and ensuring our core functions are healthy and robust. Our commitment to serving those who serve others has remained constant, demonstrated by sound financial stewardship and exceptional customer service.

Sincerely,

A handwritten signature in black ink, appearing to read "A. Scott Andrews". The signature is fluid and cursive, with the first name "A. Scott" and last name "Andrews" clearly distinguishable.

A. Scott Andrews
Chair, Virginia Retirement System

Board of Trustees

COMPOSITION OF THE BOARD

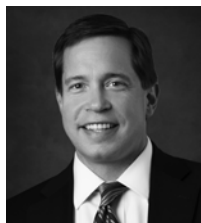
Nine members serve on the VRS Board of Trustees. Their appointment is shared between the executive and legislative branches of state government. The Governor appoints five members, including the chair. The Joint Rules Committee of the Virginia General Assembly appoints four members. The General Assembly confirms all appointments.

Of the nine Board members, four must be investment experts, one must be experienced in employee benefit plans, one must be a local government employee, one must be an employee of a Virginia public institution of higher education, one must be a state employee and one must be a public school teacher. The public employee members may be either active or retired.



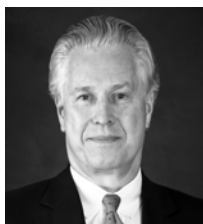
A. Scott Andrews, Chair

Northern Contours & Harvest Equity Investments
Employee Benefit Plans Professional
Appointed by Governor
Term Expires: 2/28/2027
As Chair: 2/28/2024
Committee Assignments: Administration, Finance & Talent Management (Chair), Audit & Compliance, Investment Policy (Chair)



Michael P. Disharoon

Cerity Partners
Investment Professional
Appointed by Governor
Term Expires: 2/28/2025
Committee Assignments: Administration, Finance & Talent Management, Investment Policy



Joseph W. Montgomery, Vice Chair

The Optimal Service Group, Wells Fargo Advisors
Investment Professional
Appointed by Joint Rules Committee
Term Expires: 2/28/2024
Committee Assignments: Administration, Finance & Talent Management (Vice Chair), Audit & Compliance (Chair), Investment Policy (Vice Chair)



Susan T. Gooden, Ph.D.

Virginia Commonwealth University
Higher Education Representative
Appointed by Governor
Term Expires: 2/28/2024
Committee Assignments: Defined Contribution Plans Advisory (Vice Chair), Investment Policy



The Hon. J. Brandon Bell II, CRPC

Brandon Bell Financial Partners
Investment Professional
Appointed by Governor
Term Expires: 2/28/2026
Committee Assignments: Defined Contribution Plans Advisory (Chair), Investment Policy



W. Brett Hayes

Wells Fargo Advisors Financial Network
Investment Professional
Appointed by Joint Rules Committee
*Term Expires: 2/28/2023**
Committee Assignments: Audit & Compliance (Vice Chair), Administration, Finance & Talent Management, Investment Policy



John M. Bennett

Virginia Commonwealth University (Retired)
State Government Employee
Appointed by Joint Rules Committee
Term Expires: 2/28/2026
Committee Assignments: Benefits & Actuarial (Chair), Investment Policy



Jessica L. Hood

Wise County and City of Norton
Commonwealth's Attorney's Office
Local Government Employee
Appointed by Governor
Term Expires: 2/28/2028
Committee Assignments: Benefits & Actuarial, Investment Policy



Lindsey K. Pantele

Henrico County Public Schools
Teacher Employee
Appointed by Joint Rules Committee
Term Expires: 2/28/2027
Committee Assignments: Benefits & Actuarial (Vice Chair), Investment Policy

* Term continues until successor appointed.

VRS Organization

BOARD OF TRUSTEES



Patricia S. Bishop
Director



Andrew H. Junkin
Chief Investment Officer



Jennifer P. Schreck
Internal Audit Director

INVESTMENT ADVISORY COMMITTEE

Lawrence E. Kochard, Ph.D., Chair
Chief Investment Officer and Managing Director,
Makena Capital Management
Term Expires: 2/16/2025
As Chair: 5/31/2025

Hance West, Vice Chair
Chief Investment Officer and Managing Director,
Investure
Term Expires: 12/31/2023

Michael Beasley
Retired Chairman Emeritus, Strategic Investment Solutions Inc.
Term Expires: 6/20/2025

Théodore Economou
Chief Investment Officer, Hereditas Group,
(Switzerland) SA
Term Expires: 9/13/2024

Palmer P. Garson
Managing Director, Silvercrest Asset Management Group
Term Expires: 10/16/2024

Thomas S. Gayner
President and Chief Investment Officer,
Markel Corporation
Term Expires: 2/19/2025

Nancy G. Leake
Advisory Partner, Partners Group (USA) Inc.
Term Expires: 12/31/2023

W. Bryan Lewis
Vice President and Chief Investment Officer,
United States Steel Corporation
Term Expires: 3/31/2024

Rod Smyth
Chief Investment Strategist, Riverfront Investment Group
Term Expires: 6/20/2025

DEFINED CONTRIBUTION PLANS ADVISORY COMMITTEE

The Hon. J. Brandon Bell II, Chair
Member, VRS Board of Trustees
Brandon Bell Financial Partners
Term Expires: 4/19/2025

Susan T. Gooden, Ph.D., Vice Chair
Member, VRS Board of Trustees
Virginia Commonwealth University
Term Expires: 4/19/2025

Ravindra Deo
Executive Director, Federal Retirement Thrift Investment Board
Term Expires: 6/20/2024

C. Matt Harris
Deputy County Administrator for Finance and Administration,
Chesterfield County
Term Expires: 6/20/2024

Shannon T. Irvin
Assistant Superintendent for Administration, Nelson County Public Schools
Term Expires: 6/20/2025

Rick Larson
Assistant Vice President for Human Resources, Training and Performance,
James Madison University
Term Expires: 6/20/2025

Brenda O. Madden
Senior Vice President and Human Resources Director, Davenport & Company
Term Expires: 6/20/2024

Arun S. Muralidhar, Ph.D.
Co-Founder, M^{cube} Investment Technologies LLC;
Co-Founder and Client CIO, AlphaEngine Global Investment Solutions
Term Expires: 6/20/2024

David A. Winter
Owner, Winter HR Consulting LLC
Term Expires: 6/20/2025

Executive Administrative Team

Patricia S. Bishop

Director

Jeanne L. Chenault

Director of Public Relations

Michael P. Cooper

Chief Operating Officer

Robert L. Irving

Director of Customer Services

LaShaunda B. King

Executive Assistant

Paula G. Reid

Director of Human Resources

Mark A. Rein

Chief Technology and Security Officer

Jennifer P. Schreck

Internal Audit Director

Leslie B. Weldon

Chief Financial Officer

Cynthia D. Wilkinson

Director of Policy, Planning and Compliance

Executive Investment Team

Andrew H. Junkin, CFA, CAIA

Chief Investment Officer

John P. Alouf, CFA

Director, Private Equity

Parham M. Behrooz, CFA

Co-Director, Fixed Income Management

John T. Grier, CFA

Managing Director, Public Market Assets

Kenneth C. Howell, CFA

Managing Director, Private Market Assets

Ross M. Kasarda, CFA

Director, Risk Management

Kristina P. Koutrakos, CAIA

Director, Portfolio Strategy

Matthew L. Lacy, CFA

Director, Portfolio Integration

Chung S. Ma, CFA

Managing Director, Portfolio Solutions Group

Curtis M. Mattson, CPA

Chief Administrative Officer

Walker J. Noland, CFA

Director, Real Assets

B. Gregory Oliff Jr., CFA

Co-Director, Fixed Income Management

Steven P. Peterson, Ph.D.

Program Director, Research & IDS

Daniel C. Schlusser, CFA

Director, Internal Equity Management

Daniel B. Whitlock, CFA, CAIA

Director, Global Equity

Steven M. Woodall, CFA, CAIA

Director, Credit Strategies

Professional Consultants

ACTUARY**Judith Kermans, EA, FCA, MAAA**

President & Chief Executive Officer,
Gabriel, Roeder, Smith & Company (GRS)

AUDITOR**Staci A. Henshaw, CPA**

Auditor of Public Accounts,
Commonwealth of Virginia

VRS DEFINED CONTRIBUTION PLANS**Carolina LaMonica**

MissionSquare Retirement

**COMMONWEALTH OF VIRGINIA
VOLUNTARY GROUP LONG TERM CARE
INSURANCE PROGRAM****Kathy Qualk**

Genworth Financial

LEGAL COUNSEL**Office of the Attorney General**

Commonwealth of Virginia

LIFE INSURANCE CARRIER**NaTosha D. Palmer**

Securian Financial

MASTER CUSTODIAN**BNY Mellon****VIRGINIA SICKNESS AND DISABILITY
PROGRAM AND VIRGINIA LOCAL
DISABILITY PROGRAM****Jen Pardi-McCarthy**

Alight

Letter of Transmittal



Patricia S. Bishop, Director
Leslie B. Weldon, Chief Financial Officer

P.O. Box 2500 • 1200 East Main Street
Richmond, Virginia 23218-2500
Toll-free: 888-827-3847 • TDD: 804-289-5919

December 14, 2023

To the Members of the Board of Trustees:

We are pleased to submit the *Annual Comprehensive Financial Report (Annual Report)* of the Virginia Retirement System (the System) for the fiscal year ended June 30, 2023. In addition to the Introductory Section, the System's *Annual Report* contains a Financial Section, Investment Section, Actuarial Section and Statistical Section. VRS' *Annual Report* for fiscal year 2023 has been prepared in accordance with Section 51.1-1003 of the *Code of Virginia* (1950), as amended, which requires every retirement system to publish an annual report, and Section 4-11.00 of Chapter 1 of the 2023 Special Session I Virginia Acts of Assembly, which requires an annual detailed statement of financial condition. The report is delivered to the Governor, members of the Cabinet and the members of the Virginia General Assembly. The report is also available on the VRS website at varetire.org.

VRS Overview

Administration: VRS is an independent state agency. As provided under the *Constitution of Virginia*, VRS funds are separate from other state funds and can be used only to administer and pay benefits for members, retirees and beneficiaries. The Board of Trustees administers and is trustee of the funds of:

- the Virginia Retirement System Trust, including Plan 1, Plan 2, the defined benefit component of the Hybrid Retirement Plan, and Plan 1 and Plan 2 hazardous duty benefits for political subdivision employees;
- the State Police Officers' Retirement System Trust, including Plan 1 and Plan 2;
- the Virginia Law Officers' Retirement System Trust, including Plan 1 and Plan 2;
- the Judicial Retirement System Trust, including Plan 1 and Plan 2, and the defined benefit component of the Hybrid Retirement Plan for judges;
- the Virginia Sickness and Disability Program (VSDP) Trust for state employees, including VSDP long-term care;
- the Virginia Local Disability Program (VLDP) Trust for eligible school division and political subdivision employees, including VLDP long-term care;
- a disability retirement option for certain members not covered under VSDP or VLDP;
- the Hybrid 457 Deferred Compensation Plan;
- the Hybrid 401(a) Cash Match Plan;
- the Optional Retirement Plan for Political Appointees, the Optional Retirement Plan for School Superintendents and the Optional Retirement Plan for Higher Education (ORPHE);
- the Commonwealth of Virginia 457 Deferred Compensation Plan;
- the Virginia Cash Match Plan;
- the Virginia Supplemental Retirement Plan;
- the Group Life Insurance Program;

- the Retiree Health Insurance Credit Program; and
- the Line of Duty Death and Health Benefits Trust Fund.

In addition, the Board administers or has substantial oversight responsibilities for the Benefit Restoration Plan, the Commonwealth of Virginia Voluntary Group Long Term Care Insurance Program, and the Volunteer Firefighters' and Rescue Squad Workers' Service Award Fund Program, as well as benefit eligibility determinations under the Line of Duty Act in Title 9.1 of the *Code of Virginia*.

The system also has full investment responsibility for other custodial funds, which include the Commonwealth Health Research Fund (CHRF), the Commonwealth's Attorneys Training Fund (CATF) and the VRS Investment Portfolio (VRSIP).

More than 800 employers participate in VRS on behalf of their employees. They include state agencies, public colleges and universities, school boards, political subdivisions and special authorities.

Fiduciary Responsibility of the Board

The VRS Board of Trustees (the Board) has full power to invest and reinvest the trust funds of the System.

To fulfill its responsibility, the Board has adopted various investment policies and guidelines. The Board's investment objective for the VRS portfolio is to maximize long-term investment returns while targeting an acceptable level of risk. Primary risk measures are volatility in the plan's assets, funded status and contribution rates. As set forth in Section 11 of Article X of the *Constitution of Virginia*, the funds of the retirement system shall be deemed separate and independent trust funds; shall be segregated from all other funds of the Commonwealth; and shall be invested and administered solely in the interests of members, retirees and beneficiaries. The Board retains a professional investment staff, as well as outside managers, to advise and assist in the implementation of these policies and objectives.

The assets of the System are invested in a prudent manner that is intended to provide for the adequate funding of VRS' pension liability. Section 51.1-124.30(C) of the *Code of Virginia* states that "... the Board shall invest the assets of the Retirement System with the care, skill, prudence and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of like character and with like aims."

Accordingly, the Board must sufficiently diversify the portfolio to minimize the risk of large losses unless, under the circumstances, it is clearly prudent not to do so.

Accounting System and Internal Control

The financial statements included in the *Annual Report* for fiscal year 2023 are the responsibility of the System's management and have been prepared in accordance with generally accepted accounting principles (GAAP) for government accounting and reporting promulgated by the Governmental Accounting Standards Board (GASB).

The accrual basis of accounting is used in the preparation of the financial statements. Revenues are taken into account when they are earned and become measurable; expenses are recorded when the liabilities are incurred.

Investments are reported at fair value as determined by the System's master custodian. Capital assets are recorded at cost and depreciated over their estimated useful life.

Contributions to the System are based on the principle of level-cost funding and are developed using the entry age normal cost method, with current service financed on a current basis and prior service amortized over a 20-year closed period. Legacy unfunded liability as of June 30, 2013, is being amortized over a 30-year closed period, while deferred contributions from the 2010-2012 biennium are being recognized over a 10-year closed period. In management's opinion, the financial statements fairly present the plan net position of the System at June 30, 2023, and the changes in its plan net position for the period then ended.

GASB Statement Number 34 requires the System to include additional information in the *Annual Report*. This information is provided in Management's Discussion and Analysis (MD&A) and includes an introduction as well as an overview and analysis of the System's financial activities for the current fiscal year and the two preceding years. The Letter of Transmittal is designed to complement and should be read in conjunction with the MD&A, found in the Financial Section immediately following the report of the independent auditor.

GASB Statement Number 67 focuses on financial reporting for state and local pension administrators and is addressed in the Financial Section. GASB Statement Number 68 establishes accounting and financial reporting requirements for state and local governments that provide their employees with pensions and prepare annual financial statements. To assist employers in meeting the GASB 68 standard, VRS developed a resource center available to employers via the VRS website. The online resources included GASB 68 audit opinions and disclosure guidance, contribution rates, valuation reports and GASB 67/68 guidance documents.

VRS Milestones (1908-Present)

- 1908** Retired Teachers Fund created.
- 1942** Virginia Retirement System (VRS) created for teachers and state employees.
- 1944** Political subdivisions have the option to join VRS.
- 1950** State Police Officers' Retirement System (SPORS) created.
- 1960** Group Life Insurance Program created.
- 1970** Cost-of-Living Adjustment (COLA) established; Judicial Retirement System (JRS) created.
- 1990** Health Insurance Credit for state retirees established.
- 1992** Health Insurance Credit for retired teachers and political subdivision employees established.
- 1995** Optional Group Life Insurance Program established.
- 1999** Virginia Sickness and Disability Program (VSDP) for state employees established; Virginia Law Officers' Retirement System (VaLORS) created.
- 2002** VSDP Long-Term Care Plan established.
- 2010** VRS Plan 2 implemented for members hired or rehired on or after July 1, 2010.
- 2012** General Assembly passed legislation creating a Hybrid Retirement Plan with implementation in 2014; Virginia Local Disability Program (VLDP) created as a benefit for political subdivisions and schools with implementation in 2014.

(Continued)

VRS Milestones (1908-Present)

2014 VRS implemented the Hybrid Retirement Plan, a combined defined benefit and defined contribution plan, for eligible members hired on or after July 1, 2014.

2015 VRS added a Roth option to the Commonwealth of Virginia 457 Deferred Compensation Plan and the General Assembly permitted school divisions the option to offer an employer-sponsored hybrid 403(b) plan for Hybrid Retirement Plan voluntary contributions.

2016 The enhanced myVRS was launched, increasing self-service functionality for members.

2017 Self-service purchase of prior service, enhanced security and features for retirees added to myVRS, along with tools to help college and university faculty members and political appointees compare retirement plan options and make their plan election online. Financial wellness program for members added to myVRS.

2019 VRS took a major step forward in member-record management, moving from a legacy mainframe to a web-based environment and adding new retirement application processing, retirement payments and disbursement, retiree health insurance maintenance and post-retirement maintenance.

2020 In a nimble response to the global COVID-19 pandemic, VRS provided timely information to members, employers and retirees on subjects including financial matters, the CARES Act, market volatility and myVRS resources.

2021 VRS reached its long-held goal of online retirement, providing exceptional member service by leveraging technology to improve member outcomes. VRS also added online management of beneficiaries, direct deposit, health insurance credit and survivor accounts in myVRS. In addition, VRS received national recognition for its response to the pandemic.

2022 VRS observed its 80th anniversary of "Serving Those Who Serve Others."

2023 Following a \$750 million appropriation to the VRS trust fund in fiscal year 2022, the Governor and the Virginia General Assembly appropriated \$250 million in fiscal year 2023 to further reduce unfunded liabilities for VRS-administered retirement plans and other post-employee benefits.

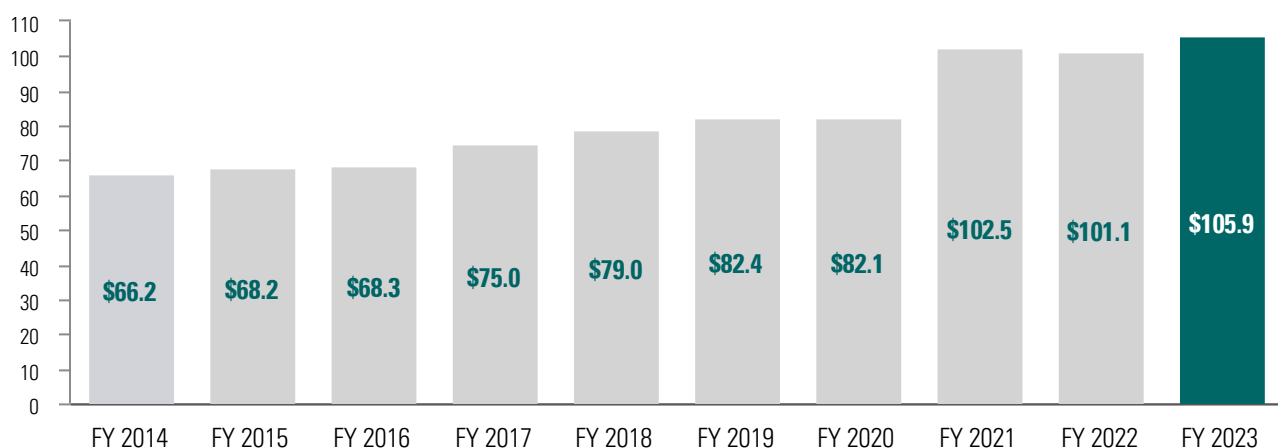
For other post-employment benefits (OPEBs), GASB Statement Number 74 focuses on financial reporting for state and local plan administrators and is also addressed in the Financial Section. GASB Statement Number 75 establishes accounting and financial reporting requirements for state and local governments that provide their employers with OPEB benefits and prepare annual financial statements. To assist employers in meeting the GASB 75 standard, VRS developed additional OPEB-specific resources for employers and added those resources to the VRS website. Those online resources included GASB 75 audit opinions and disclosure guidance, contribution rates, valuation reports and GASB 74/75 guidance documents.

The System's management is responsible for maintaining a system of adequate internal accounting controls designed to provide reasonable assurance that transactions are executed in accordance with management's general or specific authorization, and are recorded as necessary to maintain accountability for assets and to permit preparation of financial statements in accordance with GAAP. The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits that are likely to be derived from that control. The internal control system includes the organizational plan; the appropriate segregation of duties and responsibilities and sound practices in the performance of duties; and personnel with capabilities commensurate with their responsibilities.

PLAN NET POSITION RESTRICTED FOR BENEFITS

AS OF JUNE 30

(EXPRESSED IN BILLIONS)



The System also has an internal audit program that reports to the Audit Committee of the Board of Trustees, and the budget for the System's administrative expenses is approved by the Board and appropriated by the Virginia General Assembly.

The retirement funds held by the System are constitutionally established as independent trust funds dedicated to the exclusive benefit of its members, retirees and beneficiaries. In management's opinion, the internal controls in effect during the fiscal year ended June 30, 2023, adequately safeguard the System's assets and provide reasonable assurance regarding the proper recording of financial transactions.

Funding

PENSION PLANS

Calculations for the System's defined benefit pension plans for financial reporting purposes were made in accordance with Governmental Accounting Standards Board Statement No. 67, *Financial Reporting for Pension Plans*. The most recent valuation for this presentation was prepared as of June 30, 2023. The total pension liability was determined based on the actuarial valuation as of June 30, 2022, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2023.

Based on these calculations, the Plan Fiduciary Net Position as a percentage of the Total Pension Liability was 82.19% for the VRS State Plan, 82.45% for the VRS Teacher Plan and 91.93% for the aggregate total of the VRS Political Subdivision Plans. For the SPORS, VaLORS and JRS plans, the Plan Fiduciary Net Position as a percentage of the Total Pension Liability was 73.81%, 74.91% and 88.29%, respectively.

This compares to opening plan fiduciary net position as a percentage of the total pension liability at June 30, 2022, for the VRS State Plan, the VRS Teacher Plan and the aggregate total of the VRS Political Subdivision Plans, of 83.26%, 82.61% and 92.52%, respectively. For SPORS, VaLORS and JRS, the percentage of total pension liability was 76.06%, 74.41% and 86.42%, respectively, at June 30, 2022. Further information on this valuation is included in the Financial Section and the Actuarial Section.

Contributions for fiscal year 2023 were based on the June 30, 2021, actuarial valuation. In accordance with Section 51.1-145 of the *Code of Virginia*, the General Assembly funded 100% of the VRS Board-certified

rates for fiscal year 2023. Retirement contribution rates are discussed in further detail in the Financial Section.

OPEB PLANS

Calculations for the System's Other Post-Employment Benefit (OPEB) plans for financial reporting purposes were made in accordance with Governmental Accounting Standards Board Statement No. 74, *Financial Reporting for Post-Employment Benefit Plans Other Than Pension Plans*. The most recent valuation for this presentation was prepared as of June 30, 2023. The total OPEB liability was determined based on the actuarial valuation as of June 30, 2022, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2023.

Based on these calculations, the plan fiduciary net position as a percentage of the total OPEB liability was 69.30% for the Group Life Insurance Fund, 25.46% for the state employee Health Insurance Credit, 17.90% for the teacher employee Health Insurance Credit, 51.79% for the aggregate total of the VRS political subdivision plans for Health Insurance Credit, 24.42% for the state-funded Health Insurance Credit for constitutional officers, 34.36% for the state-funded Health Insurance Credit for social services employees, and 45.88% for the state-funded Health Insurance Credit for Registrars. In addition, the plan fiduciary net position as a percentage of the total OPEB liability was 199.05% for the Disability Insurance Program and 1.31% for the Line of Duty Act plan. The Virginia Local Disability Program plans for teachers and political subdivisions were 93.77% and 116.89%, respectively.

This compares to the opening plan fiduciary net position as a percentage of the total OPEB liability at June 30, 2022, of 67.21% for the Group Life Insurance Fund, 21.52% for the state employee Health Insurance Credit, 15.08% for the teacher employee Health Insurance Credit, 39.63% for the aggregate total of the VRS political subdivision plans for Health Insurance Credit, 22.44% for the state-funded Health Insurance Credit for constitutional officers, 17.17% for the state-funded Health Insurance Credit for social services employees and 36.51% for the state-funded Health Insurance Credit for registrars. In addition, the plan fiduciary net position as a percentage of the total OPEB liability was 195.90% for the Disability Insurance Program and 1.87% for the Line of Duty Act Program. The Virginia Local Disability Program plans for teachers and political subdivisions were 101.57% and 107.99%, respectively. Further information on this valuation is included in the Financial Section and the Actuarial Section.

Contributions for fiscal year 2023 were based on the June 30, 2021, actuarial valuation. The rates certified by the VRS Board of Trustees for the OPEB plans were fully funded by the Governor and General Assembly, except for the Line of Duty Act Program for which rates are not applicable. Contribution rates for each of these OPEB plans are discussed in further detail in the Financial Section.

Investments

At June 30, 2023, the total value of the VRS managed investment portfolio was \$107.8 billion, an increase from the investment balance of \$102.8 billion at June 30, 2022. The increase was due to increased investment and contribution activity. The Fixed Income, Real Assets, Private Equity, Private Investment Partnerships and Multi-Asset Public Strategies portfolio returns exceeded their benchmarks this year.

The System's net position restricted for benefits at June 30, 2023, totaled \$105.9 billion, representing an increase from the net position of \$101.1 billion as of June 30, 2022.

Information regarding the investment professionals who provide services for the VRS Investment Pool for the pension and OPEB plans can be found on pages [173](#) through [175](#) in the Investment Section. The schedule of public equity commissions and investment expenses is located on page [176](#).

Additional information on the System's investment policies and strategies as well as the portfolio's composition and investment return information is included in the Investment Section.

Legislative Updates

During the 2023 session, the Virginia General Assembly enacted the following bills that affect the Virginia Retirement System.

2023 BILLS

Return-to-Work

HOUSE BILL 1630: VIRGINIA RETIREMENT SYSTEM; RETURN TO WORK.

SENATE BILL 1107: VIRGINIA RETIREMENT SYSTEM; LAW-ENFORCEMENT OFFICERS, RETURN TO WORK.

SENATE BILL 1289: VIRGINIA RETIREMENT SYSTEM; RETURN TO EMPLOYMENT, REPORT.

SENATE BILL 1479: VIRGINIA RETIREMENT SYSTEM; RETURN TO WORK, HIRING RETIRED TEACHERS, BUS DRIVERS, ETC.

Reduces the break-in-service requirements from 12 months to six months for retirees returning to work full-time in certain positions while continuing to draw their monthly retirement benefits. Those jobs include critical shortage education positions and retiree school security officers.

- Reduces the break-in-service for retirees returning to work full-time as school security officers from 12 months to six months.
- Reduces the break-in-service from 12 months to six months for retirees returning to work full-time in critical shortage positions as teachers, assistant principals, principals or bus drivers.
- Makes specialized student support personnel – social workers, psychologists, nurses and others, as defined in [§ 22.1-253:13.2\(O\)](#) – eligible for the K-12 critical shortage program.
- Requires employers to report critical shortage employees to VRS and submit employer contributions for these positions.
- Requires VRS to study options for allowing certain retirees with at least 25 years of service to return to work part-time during the required six-month break-in-service period.
- Extends these provisions to July 1, 2028.

SENATE BILL 1411: VIRGINIA RETIREMENT SYSTEM AND DEPARTMENT OF CRIMINAL JUSTICE SERVICES (DCJS); RETURN TO WORK FOR RETIRED LAW-ENFORCEMENT OFFICERS.

Directs VRS and DCJS, in consultation with the Joint Legislative Audit and Review Commission (JLARC), to analyze and report on options for allowing law-enforcement officers to return to work as law-enforcement officers after retirement and continue to receive their retirement benefits.

Health Insurance Credit

HOUSE BILL 1789: HEALTH INSURANCE; CREDITS FOR CERTAIN LOCAL OFFICIALS AND EMPLOYEES. Raises the monthly health insurance credit amount from \$1.50 to \$1.75 per year of creditable service (not to exceed \$52.50 per month) for retired constitutional officers and their employees who have at least 15 years of creditable service. Increases the monthly health insurance credit to \$52.50 per month for constitutional

officers or constitutional officers' employees who retired on long-term disability. Effective July 1, 2023, for benefit payments beginning July 1, 2024.

HOUSE BILL 2314: HEALTH INSURANCE; CREDITS FOR RETIRED STATE EMPLOYEES. Raises the monthly health insurance credit amount from \$4 to \$4.25 per year of service with no monthly cap for current and future retired state employees who have at least 15 years of service credit. Increases the monthly health insurance credit for state employees who retired on long-term disability from \$4 per year of service to \$4.25, or \$120 per month, whichever is greater. Effective July 1, 2023, for benefit payments beginning July 1, 2024.

State Budget

HOUSE BILL 1400: LUMP-SUM CONTRIBUTIONS TO VRS. Allocates \$250 million by June 30, 2023, to reduce unfunded liabilities for VRS-administered retirement plans and other post-employment benefits.

Cash infusions will go into the following plans:

- \$147.5 million to the teacher retirement plan.
- \$73.1 million to the state employee plan.
- \$10.1 million to the group life insurance plan.
- \$6.6 million to the Virginia Law Officers' Retirement System (VaLORS).
- \$4 million to the health insurance credit plan for public school teachers.
- \$3.7 million to the State Police Officers' Retirement System (SPORS).
- \$2.8 million to the health insurance credit plan for state employees.
- \$2.1 million to the Judicial Retirement System (JRS).
- \$134,742 to the health insurance credit plans for constitutional officers and their employees, local social services employees and registrars and their employees.

Membership

MEMBER AND RETIREE HIGHLIGHTS. The total VRS membership increased from 778,087 members, retirees and beneficiaries in fiscal year 2022 to 803,024 in fiscal year 2023, representing an increase of 3.20%. The following are highlights from the fiscal year:

- The number of active VRS members increased 1.95%, from 349,711 to 356,515.
- The number of retirees and beneficiaries increased 2.02%, from 231,523 to 236,208.
- VRS paid \$6,043.3 million in retirement benefits during fiscal year 2023, compared to \$5,729.3 million in retirement benefits in fiscal year 2022.
- The number of inactive and deferred members increased 6.83%, from 196,853 to 210,301.
- A total of 89,672 members held accounts through the Commonwealth of Virginia Deferred Compensation Plan at the end of the fiscal year. Of these participants, 73,408 received a cash match through the Virginia Cash Match Plan.

AIMING FOR EXCELLENCE. VRS personnel continued to meet or exceed target goals for operational measures, as the following highlights show:

OPERATIONAL MEASURES	TARGET	FY 2023 RESULT
Timeliness of Monthly Financial Account Reconciliations	95.00% or more of monthly financial control reconciliations completed by the last business day of the following month.	100.00% of monthly financial control reconciliations completed by the last business day of the following month.
Timeliness of Response to Messages Received by the Customer Counseling Center	The average response time is 0.75 business days.	The average response time is 0.39 business days.
Timeliness of Monthly Retirement Disbursements	100.00% of monthly retirement disbursements processed no later than the first business day of the month.	100.00% of monthly retirement disbursements processed no later than the first business day of the month.
Timeliness of Service Retirements Processed	95.00% of service retirements processed so that retiring members are set up to receive retirement benefits on the first retirement payment date for which they are eligible.	99.85% of service retirements processed so that retiring members are set up to receive retirement benefits on the first retirement payment date for which they are eligible.
Accuracy of Disability Retirements Processed	99.00% of disability retirements processed for which the corresponding benefit payment correctly reflects the member's service record.	100.00% of disability retirements processed for which the corresponding benefit payment correctly reflects the member's service record.
Timeliness of Employer Contribution Confirmations	97.00% of employer contribution confirmation snapshots are completed by the end of the month in which they are due.	100.00% of employer contribution confirmation snapshots are completed by the end of the month in which they are due.
Timeliness of Workflow Documentation Imaging	99.50% of documents VRS receives are imaged within one business day of receipt.	100.00% of documents VRS receives are imaged within one business day of receipt.
Planned IT System Availability	Critical business systems are available 99.50% of the time during periods of planned availability.	Critical business systems are available 99.98% of the time during periods of planned availability.
Employee Professional Development	85.00% of eligible full-time VRS administration employees receive at least eight hours of professional development.	97.00% of eligible full-time VRS administration employees receive at least eight hours of professional development.

Counseling, Education and Communications

In addition to these achievements, VRS staff provided counseling, education, workshops and training opportunities for members and employers throughout the state during fiscal year 2023:

- The **VRS Customer Contact Center** answered 175,179 calls and provided 8,076 email responses.
- The **Member Counseling Team** conducted 257 statewide retirement education sessions, including presentations, videoconferences and webinars, with a total of 11,080 attendees, and participated in 88 benefit fairs with 16,503 attendees. The team also held 5,128 counseling sessions for members and retirees. In addition, the team helped guide nearly 7,500 members through the online retirement process.
- The **Hybrid Retirement Plan Counseling Team** conducted 38 Plan Features & Benefits presentations with MissionSquare Retirement, attended by 575 Hybrid Retirement Plan members, and 471 virtual counseling sessions. Hybrid plan member counselors participated in 14 benefit fairs with 3,840 attendees. In addition, MissionSquare Retirement held 100 Hybrid Overview Sessions with 974 attendees.
- The **Education and Training Team** provided 16 e-courses for employers, with 1,070 views and 659 completions; and 23 employer webinars with 1,892 attendees. There were a total of 22,974 views of 27 member training videos with 7,859 completions.
- **Employer Relationship Managers** (formerly known as Employer Representatives) continued to conduct employer roundtables and employer site visits with a focus on the full scope of VRS products and services. In total, they conducted 87 employer site visits and 91 employer roundtables, with 2,017 participants (representing 693 employers) in attendance, and offered technical assistance and guidance to 826 new benefit administrators at participating employers.
 - During the fiscal year, they implemented 107 critical shortage teacher, 29 critical shortage bus driver and 26 retired school security officer positions through their continuing administration of the critical shortage program.
 - Employer Relationship Managers coordinated eight actuarial studies and processed 26 employer requests for new coverage, 19 new coverage items and seven new employers. They assisted two political subdivisions joining VRS; one employer adding a group of employees eligible for VRS; two employers electing the Group Life Insurance Program; eight employers electing the enhanced benefit for hazardous duty employees; six employers electing the enhanced retirement multiplier for hazardous duty employees; one employer electing the health insurance credit; one employer electing to offer tax-deferred purchase of prior service; one employer electing to offer the Commonwealth of Virginia 457 Deferred Compensation Plan; and five new state agencies joining VRS.
- **Digital communications** were a top focus during the fiscal year, as VRS completed the conversion of its three newsletters — *Employer Update*, *Member News* and *Retiree News* — to searchable and shareable online formats.
 - The **VRS website** (varetire.org) received 3,058,234 total page views. **myVRS**, the secure online member account portal, continued to be one of the top destinations.
 - The average “open rate” for *Employer Update* was 36%, well above the government industry average.

- **Member News** had an “open rate” of 41%.
- VRS had approximately 4,800 **Facebook** followers and 2,800 **LinkedIn** followers.

Innovations

For VRS’ work to continue without interruption, we require a stable technology infrastructure that includes the latest tools, managed services and best practices for top-quality cybersecurity.

Our technology stack includes a custom software solution for managing back-office processes; the myVRS online platform with customer-facing functions; content management for processing incoming documents; financial management for fiscal matters; and a cloud platform and applications for automation, insights, security and mobility needs. In addition, VRS utilizes a data repository and tools for reporting and data analytics functions.

This year, VRS completed its transition to managed data services, a suite of services that efficiently delivers data protection, disaster recovery, steady state operations and support, and monitoring and patch management. The suite brings simplicity, automation, and performance to protecting workloads, enabling Information Technology staff to focus on managing production, instead of troubleshooting backups.

VRS utilizes Hyperconverged Infrastructure (HCI) technology, a unified system that combines elements of a traditional data center and supplies a resilient infrastructure for the agency’s applications and business processes. VRS HCI uses leading technologies to ensure the environment exceeds business requirements and offers components for future development needs. This year, VRS installed and configured an ultramodern server, storage and virtualization on an HCI platform, in addition to developing a security model and related documentation.

During the year, VRS assessed various technology platforms to review current implementation and operations, remedy shortcomings and align with industry best practices. Digitization and maintenance of VRS records was ongoing throughout the fiscal year. In addition to hiring new staff to bolster our efforts, we invested in professional development training for our personnel to ensure that they have the knowledge and skills to work with fast-evolving technologies. Throughout the year, programming featured security awareness tips for VRS staff and external audiences such as retired teachers and government employees.

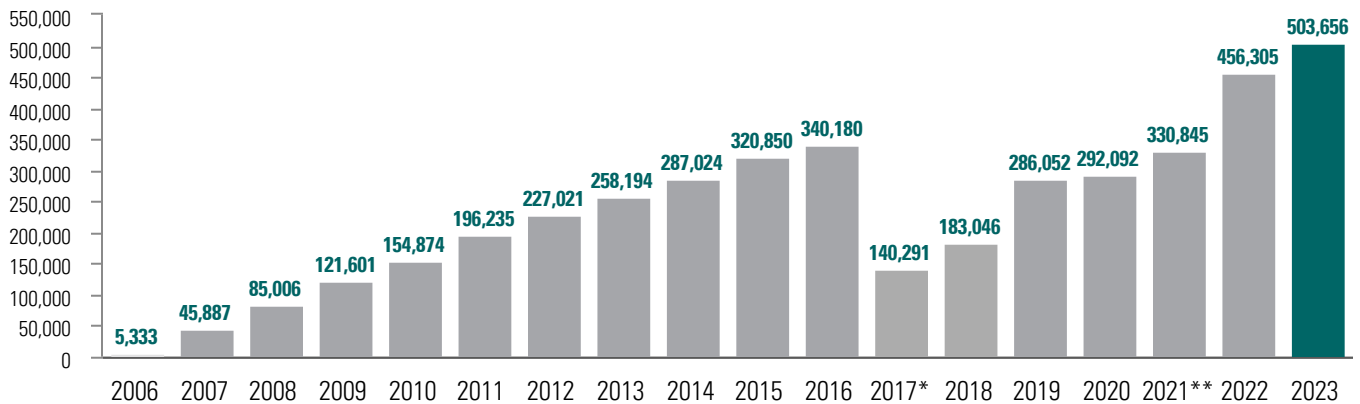
Plans for future initiatives include the implementation of identity and access management solutions, new contact center software, a fraud prevention program, an enterprise human resource management solution and a multiyear strategic roadmap for technology.

The secure online **myVRS** system continues to attract users. During the fiscal year, myVRS continued to serve as a valuable resource for members, retirees and employers:

- The cumulative number of member registrations as of June 30, 2023, was 364,699, with 139,480 retiree registrations, for a total of 503,656.
- In fiscal year 2023, there were 38,834 member and 7,479 retiree registrations, as well as 49 survivor registrations.
- There was a total of 4,121 online retirements, representing 37% of total retirement applications received in fiscal year 2023.

- Members are taking greater advantage of the myVRS Retirement Planner and Benefit Estimator to plan their futures and adjust their savings goals, creating 325,833 retirement plans and 585,941 benefit estimates in fiscal year 2023.
- In fiscal year 2023, 1,911 retirees used the health insurance credit feature, 97,056 designated beneficiaries and 5,823 updated direct deposit information online.

myVRS USERS



* First-time and returning users of myVRS were required to register with enhanced security features in fiscal year 2017.

** Corrected prior fiscal year count.

The **myVRS Financial Wellness** program, now in its seventh year, continues to help members make informed decisions on personal financial matters and spending wisely now while saving for the future. VRS' nationally recognized program provides a customized customer experience, consistent with industry best practices for engaging users, in collaboration with our partner iGrad.

There were 5,668 registrations in myVRS Financial Wellness for fiscal year 2023, with 500 course completions. "Planning for Retirement" continued as the most completed course in fiscal year 2023, with an average knowledge gain of 20% for all courses. More than 830 users completed the "Your Money Personality" assessment and 306 users created budgets. The most popular "Start Here Guides" were "Managing Your Money," "Sudden Life Changes," and "Buying a Home."

VRS highlighted specific tools in four email campaigns celebrating designated financial awareness observances throughout the year. The campaigns, in addition to promotions in *Member News* and *Retiree News*, created steep traffic and registration spikes on the platform. Our partnership with the Department of Human Resources Management continued with monthly promotions included in each issue of its financial wellness program email to state employees.

Acknowledgments

As VRS enters its ninth decade of helping Virginia public employees plan for tomorrow, today, our missions remain constant: exceptional customer service, efficient benefits delivery and sound financial stewardship. Each fiscal year brings new goals and projects to complete, but VRS always holds fast to a long-term vision of the future for those we serve. Recent cash infusions have contributed to an increase in VRS' funded status and a decrease in unfunded liabilities, reinforcing the fund's health and stability with considerable savings for the commonwealth over time.

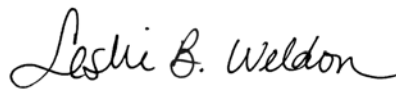
VRS strives to keep administrative costs as low as possible while placing the highest priority on customer service. Technology and innovation have helped us transform business processes so that our members can be engaged in managing their myVRS accounts, planning for retirement and saving for the future. Our communications, counseling and education efforts have adapted to meet members, retirees and employers wherever they are. At the same time, we focus on enhancing customer experiences with personalized interaction and information.

We acknowledge the collaborative and diligent efforts of many people in ensuring VRS' stability and continuity: our VRS staff, Board of Trustees, participating employers and business partners. We are grateful to Governor Glenn Youngkin and the members of the General Assembly for their resolute commitment to the financial security of VRS members, retirees and beneficiaries. Together, we continue to serve those who serve others.

Respectfully submitted,



Patricia S. Bishop
Director



Leslie B. Weldon
Chief Financial Officer



Virginia
Retirement
System®

FINANCIAL SECTION

2023

Financial Section

Independent Auditor's Report

Management's Discussion and Analysis

Basic Financial Statements:

VRS Statement of Fiduciary Net Position: Defined Benefit Pension Trust Funds, Other Employee Benefit Trust Funds and Other Custodial Plans

VRS Statement of Changes in Fiduciary Net Position: Defined Benefit Pension Trust Funds, Other Employee Benefit Trust Funds and Other Custodial Plans

VRS Combining Statement of Fiduciary Net Position

VRS Combining Statement of Changes in Fiduciary Net Position

VRS Statement of Fiduciary Net Position: Defined Benefit Pension Trust Funds

VRS Statement of Changes in Fiduciary Net Position: Defined Benefit Pension Trust Funds

VRS Combining Statement of Fiduciary Net Position: Other Employee Benefit Trust Funds

VRS Combining Statement of Changes in Fiduciary Net Position: Other Employee Benefit Trust Funds

Retiree Health Insurance Credit Combining Statement of Fiduciary Net Position

Retiree Health Insurance Credit Combining Statement of Changes in Fiduciary Net Position

VLDP Combining Statement of Fiduciary Net Position

VLDP Combining Statement of Changes in Fiduciary Net Position

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Schedule of Impact of Changes in Discount Rate: Pension Plans

Schedule of Participating Employers: OPEB Plans

Schedule of Employers' Net OPEB Liability by Program and Plan

Schedule of Actuarial Methods and Significant Assumptions: OPEB Plans

Schedule of Impact of Changes in Discount Rate: LODA Plan

Schedule of Impact of Changes in Health Care Trend Rate: LODA Plan

Schedule of Impact of Changes in Discount Rate: Non-LODA OPEB Plans

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Required Supplementary Schedule of Changes in Employers' Net Pension Liability: VRS Teacher

Required Supplementary Schedule of Changes in Employers' Net Pension Liability: VRS Political Subdivisions

Required Supplementary Schedule of Changes in Employers' Net Pension Liability: SPORS

Required Supplementary Schedule of Changes in Employers' Net Pension Liability: VaLORS

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Required Supplementary Schedule of Employer Contributions: Pension Plans

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Required Supplementary Schedule of Changes in Employers' Net OPEB Liability and Related Ratios

Required Supplementary Schedule of Employer Contributions: OPEB Plans

Schedule of Fiduciary Net Position: Other Custodial Plans

Schedule of Changes in Fiduciary Net Position: Other Custodial Plans

Schedule of Investment Expenses

Schedule of Administrative Expenses

Schedule of Professional and Consulting Services



Staci A. Henshaw, CPA
Auditor of Public Accounts

Commonwealth of Virginia

Auditor of Public Accounts

P.O. Box 1295
Richmond, Virginia 23218

December 14, 2023

The Honorable Glenn Youngkin
Governor of Virginia

Joint Legislative Audit
and Review Commission

Board of Trustees
Virginia Retirement System

Patricia S. Bishop, Director
Virginia Retirement System

INDEPENDENT AUDITOR'S REPORT

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of the Virginia Retirement System (System) as of and for the year ended June 30, 2023, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System as of June 30, 2023, and the changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States (*Government Auditing Standards*). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the System, and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Emphasis of Matter

Relationship to the Commonwealth of Virginia

As discussed in Note 1, the basic financial statements of the System are intended to present the financial position and the changes in financial position of only that portion of the aggregate remaining fund information of the Commonwealth of Virginia that is attributable to the transactions of the System. They do not purport to, and do not, present fairly the Commonwealth of Virginia's overall financial position as of June 30, 2023, the changes in its financial position, or, where applicable, its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Other Matter

Report on Summarized Comparative Information

We have previously audited the System's 2022 financial statements, and we expressed an unmodified audit opinion on the respective financial statements in our report dated December 7, 2022. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2022, is consistent, in all material respects, with the audited financial statements from which it has been derived.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the following be presented to supplement the basic financial statements: Management's Discussion and Analysis on pages 35 through 45 and the Schedules of Changes in Employers' Net Pension Liability, Schedule of Employer Contributions for Pension Plans, Schedule of Investment Returns, Schedules of Changes in Employers' Net Other Post-Employment Benefit (OPEB) Liability and Related Ratios, and Schedule of Employer Contributions for Other Post-Employment Benefit (OPEB) Plans on pages 116 through 155. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's basic financial statements. The accompanying supplementary information, such as the Schedule of Fiduciary Net Position for Other Custodial Plans, Schedule of Changes in Fiduciary Net Position for Other Custodial Plans, and Schedules of Investment Expenses, Administrative Expenses, and Professional and Consulting Services, are presented for the purpose of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Schedule of Fiduciary Net Position for Other Custodial Plans, Schedule of Changes in Fiduciary Net Position for Other Custodial Plans, and

Schedules of Investment Expenses, Administrative Expenses, and Professional and Consulting Services are fairly stated, in all material respects, in relation to the basic financial statements taken as a whole.

Other Information

Management is responsible for the other information included in the annual report. The other information comprises the Financial and Statistical Highlights for All Pension Trust Funds and the Introductory, Investment, Actuarial, and Statistical sections but does not include the basic financial statements and our auditor's report thereon. Our opinion on the basic financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we will also issue our report dated December 14, 2023, on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements, and other matters. We anticipate releasing that report in January 2024. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

Staci A. Henshaw

AUDITOR OF PUBLIC ACCOUNTS

The Virginia Retirement System (the System) administers pension and other employee benefit plans for approximately 803,024 members, retirees and beneficiaries. The purpose of the Financial Section is to present the plans' net position and changes in net position for the fiscal year through the audited Basic Financial Statements. In support of this information, the Financial Section includes Management's Discussion and Analysis of activity affecting the plans and the operations of the System during the current and previous fiscal years. It also includes the Notes to Financial Statements, providing additional detail about the statements, as well as required schedules and supplemental items regarding historical information and the administration of the plans.

Management's Discussion and Analysis (Unaudited)

Management's Discussion and Analysis provides highlights of the funding of the plans and the performance and operations of the System for the fiscal year ended June 30, 2023. The information provided in the Introductory, Investment, Actuarial and Statistical sections complements this discussion.

The System administers two defined benefit retirement benefit structures, Plan 1 and Plan 2, and a hybrid retirement benefit structure. While all of the following systems have employees with Plan 1 and Plan 2 benefits, only the VRS and JRS systems have employees with hybrid benefits. All of these systems are defined as pension trust funds:

- Virginia Retirement System (VRS) for state employees, teachers, other eligible school division employees, employees of participating political subdivisions and other qualifying employees.
- State Police Officers' Retirement System (SPORS) for state police officers.
- Virginia Law Officers' Retirement System (VaLORS) for non-local government Virginia law officers other than state police officers.
- Judicial Retirement System (JRS) for judges of state courts of record, state district courts and other qualifying employees.

The System also administers the Group Life Insurance Fund, Retiree Health Insurance Credit Fund, a Disability Insurance Trust Fund for state

employees, a Disability Insurance Trust Fund for local government employees and the Line of Duty Act Trust Fund. All of these funds are defined as other employee benefit trust funds. Both the pension and other employee benefit trust funds are classified as fiduciary funds.

The system also has full investment responsibility for other custodial funds, which include the Commonwealth Health Research Fund (CHRF), the Commonwealth's Attorneys Training Fund (CATF), the Volunteer Firefighters' and Rescue Squad Workers' Service Award Program (VolSAP) and the VRS Investment Portfolio (VRSIP).

FINANCIAL HIGHLIGHTS

- The combined total net position of the trust funds restricted for benefits was \$105.9 billion at June 30, 2023, representing an increase of \$4.8 billion, or 4.8%, from the net position as of June 30, 2022.
- The System's time-weighted rate of return on investments during the fiscal year ended June 30, 2023, was 6.1% compared to a return of 0.6% for the fiscal year ending June 30, 2022. The increase was due primarily to the performance of public stock markets.
- The latest valuations of the pension plans were performed by Gabriel, Roeder, Smith & Company, using the GASB Statement No. 67 calculation processes. Using the June 30, 2022, data rolled forward to June 30, 2023, the plan fiduciary net position as a percentage of the total pension liability was 82.19% for the VRS state plan, 82.45% for the VRS teacher plan, 91.93% for the aggregate total of the VRS

political subdivision plans, 73.81% for SPORS, 74.91% for VaLORS and 88.29% for JRS. This compares to the June 30, 2021, data rolled forward to June 30, 2022, when the plan fiduciary net position as a percentage of the total pension liability was 83.26% for the VRS state plan, 82.61% for the VRS teacher plan, 92.52% for the aggregate total of the VRS political subdivision plans, 76.06% for SPORS, 74.41% for VaLORS and 86.42% for JRS.

- Gabriel, Roeder, Smith & Company also performed the latest actuarial valuations for the Other Post-Employment Benefit (OPEB) plans using the GASB Statement No. 74 calculation processes. Using the June 30, 2022, data rolled forward to June 30, 2023, the plan fiduciary net position as a percentage of the total OPEB liability was 69.30% for the Group Life Insurance Fund, 25.46% for the state employee Health Insurance Credit, 17.90% for the teacher employee Health Insurance Credit, 51.79% for the aggregate total of the VRS political subdivision plans for Health Insurance Credit, 24.42% for the state-funded Health Insurance Credit for constitutional officers, 34.36% for the state-funded Health Insurance Credit for social services employees, and 45.88% for the state-funded Health Insurance Credit for registrars. In addition, the plan fiduciary net position as a percentage of the total OPEB liability was 199.05% for the Disability Insurance Program and 1.31% for the Line of Duty Act plan. The Virginia Local Disability Program plans for teachers and political subdivisions were 93.77% and 116.89%, respectively.
- This compares to the June 30, 2021, data rolled forward to June 30, 2022, when the plan fiduciary net position as a percentage of the total OPEB liability was 67.21% for the Group Life Insurance Fund, 21.52% for the state employee Health Insurance Credit, 15.08% for the teacher employee Health Insurance Credit, 39.63% for the aggregate total of the VRS political subdivision plans for Health Insurance Credit, 22.44% for the state-funded Health

Insurance Credit for constitutional officers, 17.17% for the state-funded Health Insurance Credit for social services employees, and 36.51% for the state-funded Health Insurance Credit for registrars. In addition, the plan fiduciary net position as a percentage of the total OPEB liability was 195.90% for the Disability Insurance Program and 1.87% for the Line of Duty Act plan. The Virginia Local Disability Program plans for teachers and political subdivisions were 101.57% and 107.99%, respectively.

Overview of the Financial Statements and Accompanying Information

The pension components of the fiscal year 2023 VRS financial statements, notes to the financial statements and required supplementary information were prepared in conformity with GASB Statement No. 67, *Financial Reporting for Pension Plans*, as modified by GASB Statement No. 82, *Pension Issues*. The Other Post-Employment Benefit (OPEB) components of the fiscal year 2023 financial statements, notes to the financial statements and required supplementary information were prepared in conformity with GASB Statement No. 74, *Financial Reporting for Post-Employment Benefit Plans Other Than Pension Plans*, as modified by GASB Statement No. 85, *Omnibus 2017*.

BASIC FINANCIAL STATEMENTS. The System presents the Basic Financial Statements for the year ended June 30, 2023, with comparative information from the previous fiscal year. In addition, a set of pension combining statements shows the amounts attributable to pension trust funds as well as the state, teacher and local plans included in the VRS totals. There is also a set of OPEB combining statements for the Health Insurance Credit and Virginia Local Disability Program to show the specific amounts attributed to the plans included in the totals. The statements were prepared on the accrual basis of accounting and are used to account for the resources the System administers on behalf of plan members and beneficiaries. These statements include:

- **Statement of Fiduciary Net Position: Pension, Other Employee Benefit Trust Funds and Custodial Plans.** This statement reflects the balance of the resources available to pay benefits to members, retirees and beneficiaries at the end of the fiscal year.
- **Statement of Changes in Fiduciary Net Position: Pension, Other Employee Benefit Trust Funds and Custodial Plans.** This statement reflects the changes in the resources available to pay benefits to members, retirees and beneficiaries during the fiscal year.

A summary of the Basic Financial Statements is presented in Figures 2.1 and 2.2. The full statements follow Management's Discussion and Analysis.

NOTES TO FINANCIAL STATEMENTS. The Notes to Financial Statements provide detailed information and are integral to the Basic Financial Statements.

REQUIRED SUPPLEMENTARY SCHEDULES. These schedules include:

- Required Supplementary Schedules of Changes in Employers' Net Pension Liability
- Required Supplementary Schedule of Employer Contributions: Pension Plans
- Required Supplementary Schedule of Investment Returns
- Required Supplementary Schedule of Changes in Employers' Net Other Post-Employment Benefit Liability
- Required Supplementary Schedule of Employer Contributions: Other Post-Employment Benefit Plans

ADDITIONAL FINANCIAL INFORMATION. The following schedules provide additional information not included in the Basic Financial Statements:

- Schedule of Fiduciary Net Position: Other Custodial Plans
- Schedule of Changes in Fiduciary Net Position: Other Custodial Plans
- Schedule of Investment Expenses
- Schedule of Administrative Expenses
- Schedule of Professional and Consulting Services

FIGURE 2.1: SUMMARY OF FIDUCIARY NET POSITION

AT JUNE 30

(EXPRESSED IN MILLIONS)

	2023	Increase (Decrease)	2022	Increase (Decrease)	2021
Assets:					
Cash, Receivables and Capital Assets	\$ 5,640.3	\$ 2,659.4	\$ 2,980.9	\$ (366.7)	\$ 3,347.6
Investments	107,836.9	5,042.9	102,794.0	(2,253.8)	105,047.8
Security Lending Collateral	3,726.7	(913.1)	4,639.8	(547.2)	5,187.0
Total Assets	117,203.9	6,789.2	110,414.7	(3,167.7)	113,582.4
Liabilities:					
Accounts Payable and Other Payables	258.1	(403.4)	661.5	(87.5)	749.0
Investment Purchases Payable	7,285.6	3,266.3	4,019.3	(1,117.7)	5,137.0
Obligations Under Securities Lending	3,727.1	(914.1)	4,641.2	(545.8)	5,187.0
Total Liabilities	11,270.8	1,948.8	9,322.0	(1,751.0)	11,073.0
Total Net Position – Restricted for Benefits	\$ 105,933.1	\$ 4,840.4	\$ 101,092.7	\$ (1,416.7)	\$ 102,509.4

FIGURE 2.2: SUMMARY OF CHANGES IN FIDUCIARY NET POSITION

FOR THE YEARS ENDED JUNE 30

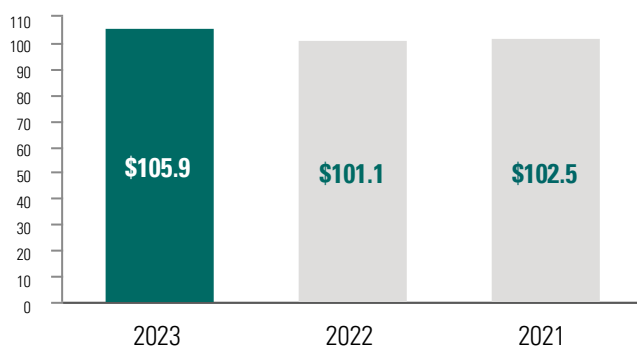
(EXPRESSED IN MILLIONS)

	2023	Increase (Decrease)	2022	Increase (Decrease)	2021
Additions:					
Member Contributions	\$ 1,220.2	\$ 86.0	\$ 1,134.2	\$ 57.6	\$ 1,076.6
Employer Contributions	3,567.0	328.4	3,238.6	142.8	3,095.8
Special Employer Contributions	116.7	(157.6)	274.3	235.6	38.7
Non-employer Contributing Entity	158.5	(317.2)	475.7	414.4	61.3
Net Investment Income	6,511.1	6,635.4	(124.3)	(22,406.6)	22,282.3
Miscellaneous Revenue & Transfers	6.9	(2.1)	9.0	3.7	5.3
Total Additions	11,580.4	6,572.9	5,007.5	(21,552.5)	26,560.0
Deductions:					
Retirement Benefits	6,043.3	314.0	5,729.3	207.1	5,522.2
Refunds of Member Contributions	127.1	(4.8)	131.9	15.7	116.2
Insurance Premiums and Claims	256.5	(2.5)	259.0	7.6	251.4
Retiree Health Insurance Credit Reimbursements	181.4	2.4	179.0	7.6	171.4
Disability Insurance Benefits	43.0	2.3	40.7	2.0	38.7
Line of Duty Act Reimbursements	15.7	1.6	14.1	1.0	13.1
Administrative and Other Expenses	73.0	2.8	70.2	7.1	63.1
Total Deductions	6,740.0	315.8	6,424.2	248.1	6,176.1
Net Increase (Decrease) in Net Position	4,840.4	6,257.1	(1,416.7)	(21,800.6)	20,383.9
Net Position – Beginning of Year	101,092.7	(1,416.7)	102,509.4	20,383.9	82,125.5
Net Position – End of Year	\$105,933.1	\$ 4,840.4	\$101,092.7	\$ (1,416.7)	\$102,509.4

SYSTEM NET POSITION

AT JUNE 30

(EXPRESSED IN BILLIONS)



Analysis of Financial Activities – Pension Plans

The System's funding objective is to meet its long-term benefit obligations through investment income and contributions. Accordingly, the collection of contributions and the income from investments provide the reserves needed to finance the benefits provided under the plans.

MEMBERS, RETIREES, BENEFICIARIES AND EMPLOYERS

Approximately 356,515 active members were employed with 836 VRS-participating employers as of June 30, 2023. The number of retirees and other annuitants totaled approximately 236,208 at year-end. The distribution of active members, retirees and beneficiaries, and employers is shown in Figures 2.3, 2.4 and 2.5.

FIGURE 2.3: DISTRIBUTION OF ACTIVE MEMBERS

AT JUNE 30

	2023		2022		2021	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
State Employees (VRS)	79,064	22.2%	76,156	21.8%	76,108	22.1%
Teachers (VRS)	152,954	43.0%	153,204	43.9%	149,853	43.4%
Political Subdivision Employees (VRS)	114,599	32.1%	110,675	31.6%	108,712	31.5%
State Police Officers (SPORS)	1,917	0.5%	1,875	0.5%	1,939	0.6%
Virginia Law Officers (VaLORS)	7,524	2.1%	7,342	2.1%	7,812	2.3%
Judges (JRS)	457	0.1%	459	0.1%	453	0.1%
Total Members	356,515	100.0%	349,711	100.0%	344,877	100.0%

Additional information about the membership is presented in Note 2 and in the Statistical Section.

FIGURE 2.4: DISTRIBUTION OF RETIREES AND BENEFICIARIES

AT JUNE 30

	2023		2022		2021	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
State Employees (VRS)	62,292	26.4%	61,651	26.6%	60,478	26.9%
Teachers (VRS)	102,346	43.4%	100,148	43.2%	97,378	43.3%
Political Subdivision Employees (VRS)	63,631	26.9%	61,994	26.8%	59,678	26.5%
State Police Officers (SPORS)	1,533	0.6%	1,511	0.7%	1,495	0.7%
Virginia Law Officers (VaLORS)	5,853	2.5%	5,673	2.5%	5,400	2.4%
Judges (JRS)	553	0.2%	546	0.2%	544	0.2%
Total Retirees and Beneficiaries	236,208	100.0%	231,523	100.0%	224,973	100.0%

Additional information about retirees and beneficiaries is presented in the Statistical Section.

FIGURE 2.5: DISTRIBUTION OF EMPLOYERS

AT JUNE 30

	2023	2022	2021
Cities and Towns	163	162	162
Counties	93	93	93
School Boards*	142	144	144
Special Authorities	213	211	208
State Agencies	225	222	228
Total Employers	836	832	835

* Of the 142 school boards, 131 also provide coverage for non-teacher employees and are treated as political subdivisions. A list of VRS-participating employers and additional employer information is presented in the Statistical Section.

CONTRIBUTIONS AND INVESTMENT EARNINGS

The retirement benefits provided by the plans are funded from pension trust fund revenue. As shown in Figure 2.6, the primary sources of revenue are contributions for active members made by members or their employers, contributions from employers and investment income generated from the investment of plan assets.

Total contributions and investment earnings for the year ended June 30, 2023, amounted to \$10,682.5 million. This was an increase of \$6,277.0 million when compared with the activity for fiscal year 2022. It was also lower than the contributions and investments earnings of \$25,216.5 million recorded in fiscal year 2021.

For fiscal year 2023, member contributions increased by \$71.4 million. The increase in the member contribution level reflects an increase in total active members as well as increases in covered payroll.

For fiscal year 2023, employer contributions increased by \$297.5 million, due primarily to increases in the total active members and covered payroll amounts. In addition, the Commonwealth of Virginia made a contribution of \$232.9 million to reduce unfunded liabilities; \$147.5 million was contributed to the teacher plan which is classified as

a non-employer contribution. The remaining \$85.4 million was contributed to the state (\$73.0 million), SPORS (\$3.7 million), JRS (\$2.1 million) and VaLORS (\$6.6 million) plans and was classified as special employer contributions. The total of all contributions represented a decrease of \$96.8 million from fiscal year 2022. Employer contributions for pensions are discussed further in Notes 2 and 13.

During fiscal year 2022, the System experienced a increase in total member contributions of \$48.9 million and an increase in employer contributions of \$123.4 million. The increase in member and employer contributions was due primarily to increases in the covered payroll amounts as well as additional special contributions from the Commonwealth.

INVESTMENTS

The System holds contributions from members and employers in a commingled pool, which is invested to provide for the payment of current and future benefits to members when they retire. Each plan – state, teacher, political subdivisions, SPORS, VaLORS and JRS – owns an equity position in the pool and receives a proportionate share of the total investment income or loss from the pool on a monthly basis.

FIGURE 2.6: SUMMARY OF PENSION CONTRIBUTIONS, INVESTMENT EARNINGS AND MISCELLANEOUS REVENUES

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN MILLIONS)

	2023	Increase (Decrease)	2022	Increase (Decrease)	2021
Member Contributions	\$ 1,031.3	\$ 71.4	\$ 959.9	\$ 48.9	\$ 911.0
Employer Contributions	3,159.9	297.5	2,862.4	123.4	2,739.0
Special Employer	85.4	(170.8)	256.2	256.2	—
Non-employer Contributing Entity	147.5	(294.9)	442.4	381.1	61.3
Net Investment Income	6,256.0	6,373.5	(117.5)	(21,620.8)	21,503.3
Miscellaneous Revenue and Transfers	2.4	0.3	2.1	0.2	1.9
Total Contributions, Investment Earnings and Miscellaneous Revenues	\$ 10,682.5	\$ 6,277.0	\$ 4,405.5	\$(20,811.0)	\$ 25,216.5

As shown in Figure 2.6, net investment income for fiscal year 2023 of \$6,255.9 million represented an increase of \$6,373.5 million from fiscal year 2022. This compares with the net investment income decrease of \$21,620.8 million in fiscal year 2022. Total pension trust fund investments were \$103,570.6 million at fair value at June 30, 2023. This was an increase of \$4,627.4 million from the fair value of \$98,943.3 million at June 30, 2022. The total pension trust fund investments decreased in fiscal year 2022 by \$(2,331.1) million from their fair value of \$101,274.4 million at June 30, 2021. The total return on pension trust fund investments for the year ended June 30, 2023, was 6.1%. This represents an annualized return of 10.8% over the past three years and 8.0% over the past five years. An explanation of investment policies and strategies as well as the portfolio's composition is included in the Investment Section. A review of investment activity and results for fiscal year 2023 also is provided in that section.

EXPENSES – DEDUCTIONS FROM PLAN NET POSITION

As shown in Figure 2.7, the primary expenses of the pension trust funds include annuity benefits for retirees and beneficiaries, refunds of contributions to former members and expenses associated with the administration of the retirement plans. Expenses for fiscal year 2023 totaled \$6,231.9 million, an increase of \$310.9 million, or 5%, over the 2022 period.

Benefit payments were \$6,043.3 million in fiscal year 2023. This is an increase of \$314.0 million

compared to an increase of \$207.1 million in fiscal year 2022. The increase in fiscal year 2023 was due to continued growth in the number of retirees and beneficiaries receiving benefits. The fiscal year 2023 benefit payments also reflect a cost-of-living adjustment (COLA) of 5.00% for Plan 1 retirees and 3.00% for Plan 2 and hybrid plan retirees effective July 1, 2022.

Refunds of contributions to members who terminated employment during fiscal year 2023 amounted to \$125.0 million (11,536 refunds), compared with \$130.1 million refunded (13,466 refunds) during fiscal year 2022 and \$116.2 million refunded (12,405 refunds) during fiscal year 2021.

The change during fiscal year 2023 reflects a slight decrease in the volume of refunds and a slight increase in the average refund amount compared to fiscal year 2022.

Administrative and other expenses for fiscal year 2023 were \$63.6 million, compared with \$61.5 million for fiscal year 2022 and \$55.3 million for fiscal year 2021.

Administrative and other expenses increased by \$2.1 million for fiscal year 2023. This compares to an increase in fiscal year 2022 of \$6.2 million. The increase for fiscal year 2023 was primarily due to an increase in personnel-related expenses. Further details are provided in the Schedule of Administrative Expenses following the Required Supplementary Schedules.

FIGURE 2.7: SUMMARY OF PENSION PLAN PRIMARY EXPENSES

FOR THE YEARS ENDED JUNE 30

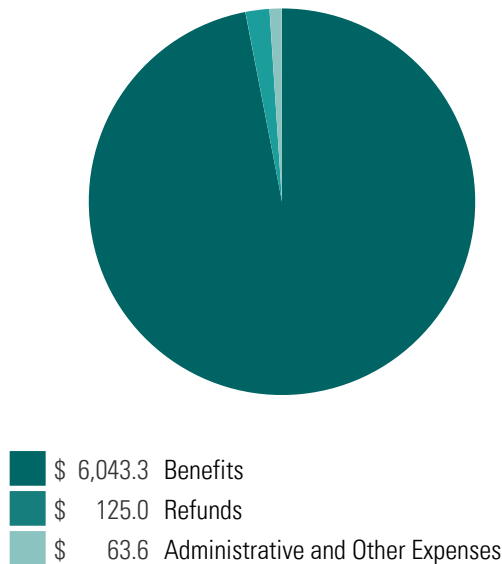
(EXPRESSED IN MILLIONS)

	2023	Increase (Decrease)	2022	Increase (Decrease)	2021
Benefits	\$ 6,043.3	\$ 314.0	\$ 5,729.3	\$ 207.1	\$ 5,522.2
Refunds	125.0	(5.1)	130.1	13.9	116.2
Administrative and Other Expenses	63.6	2.1	61.5	6.2	55.3
Total Primary Expenses	\$ 6,231.9	\$ 310.9	\$ 5,920.9	\$ 227.2	\$ 5,693.7

PENSION PLAN ACTIVITY

FOR THE YEAR ENDED JUNE 30, 2023

(EXPRESSED IN MILLIONS)



RETIREMENT RESERVES

The funds accumulated by the pension plans to meet current and future obligations to retirees and beneficiaries are derived from the excess of revenues over expenses. The higher the level of funding a plan achieves, the larger the accumulation of assets and the greater the investment income potential.

As shown in Figure 2.8, expenses were lower than revenue for fiscal year 2023, leading to a net increase of \$4,450.5 million in the retirement reserves held by the plans.

This follows a decrease of \$1,515.4 million in the retirement reserves in fiscal year 2022. The increase

for fiscal year 2023 is primarily due to an increase in investment income, which is partially offset by an increase in benefit expenses, a slight decrease in total contributions primarily due to a higher special contribution from the Commonwealth in fiscal year 2022.

ACTUARIAL VALUATIONS AND FUNDING PROGRESS – PENSION PLANS

The System's actuarial firm performs actuarial valuations of VRS, SPORS, VaLORS and JRS at least every two years to determine funding requirements. The funding policy provides for periodic employer contributions at actuarially determined rates that will remain relatively level over time as a percentage of payroll and will accumulate sufficient assets to meet the costs of all benefits when due.

The latest valuations of the pension plans were performed by Gabriel, Roeder, Smith & Company using the GASB Statement No. 67 calculation processes. Using the June 30, 2022, data rolled forward to June 30, 2023, the plan fiduciary net position as a percentage of the total pension liability was 82.19% for the VRS state plan, 82.45% for the VRS teacher plan, 91.93% for the aggregate total of the VRS political subdivision plans, 73.81% for SPORS, 74.91% for VaLORS and 88.29% for JRS. The valuations reflect full pre-funding of the statutory cost-of-living adjustment (COLA) for retirees as well as other changes required in GASB Statement No. 67. Additional information on plan funding is presented in Note 2 and in the Actuarial Section.

FIGURE 2.8: SUMMARY OF PENSION PLAN RESERVE BALANCES

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN MILLIONS)

	2023	Increase (Decrease)	2022	Increase (Decrease)	2021
Member Reserves	\$ 15,845.5	\$ 618.8	\$ 15,226.7	\$ 373.4	\$ 14,853.3
Employer Reserves	85,970.5	3,831.7	82,138.8	(1,888.8)	84,027.6
Total	\$ 101,816.0	\$ 4,450.5	\$ 97,365.5	\$ (1,515.4)	\$ 98,880.9

These balances also reflect transfers between the Member and Employer Reserves for interest credited to member accounts and member contributions transferred to the Employer Reserve upon a member's retirement. For fiscal year 2023, the amount of interest credited to member accounts was \$579.6 million, and the amount of member balances transferred to the Employer Reserve for retirements was \$877.8 million. For fiscal year 2022, the interest and retirement transfers were \$563.2 million and \$1,028.8 million, respectively.

Analysis of Financial Activities – Other Employee Benefit Plans

GROUP LIFE INSURANCE PROGRAM

The VRS Group Life Insurance Program provides basic group life insurance coverage for natural death, accidental death, accidental dismemberment and other life insurance benefits to the majority of members covered under the pension plans, as well as to other qualifying employees. Employers and their covered employees pay the premiums for group life insurance coverage; many employers pay the employee's portion.

During fiscal year 2023, the System remitted \$256.5 million to the insurer for claims and administrative costs. This is a decrease from the \$259.0 million remitted for fiscal year 2022. Approximately 346,624 active members were covered under the Group Life Insurance Program at June 30, 2023.

The difference between the amounts collected and paid by the System is added to the reserve established to pre-fund group life insurance coverage for retirees. The reserve had a fiduciary net position restricted for benefits of \$2,707.7 million at June 30, 2023.

Investment income, including net securities lending income, was \$173.5 million during the fiscal year. For fiscal year 2022, this reserve had investment loss of \$(5.2) million and ended the year with a reserve balance of \$2,468.0 million, an increase from the balance of \$2,413.1 million at June 30, 2021.

For fiscal year 2023, the increase in the reserve balance was primarily the result of contributions and net investment income exceeding other expenses. Employer contributions for the Group Life Insurance Program are discussed further in Note 13.

Approximately 227,538 retirees were covered under the Group Life Insurance Program at June 30, 2023.

Members covered under the Basic Group Life Insurance Program are eligible to elect additional coverage through the Optional Group Life

Insurance Program. This program provides life insurance, accidental death and accidental dismemberment coverage as a supplement to the basic group plan. Members also may cover their spouses and dependent children. Members pay the premiums through payroll deduction.

Approximately 70,498 active members and 3,460 retirees were enrolled in the Optional Group Life Insurance Program at June 30, 2023. Additional information about the Group Life Insurance Program is provided in Note 3.

RETIREE HEALTH INSURANCE CREDIT PROGRAM

The Retiree Health Insurance Credit Program provides a tax-free reimbursement for the portion of health insurance premiums eligible retirees pay for single coverage under qualifying health insurance plans. During fiscal year 2023, the System collected \$224.8 million in retiree health insurance credit contributions from participating employers and provided reimbursements to retirees of \$181.4 million. The program also received special contributions of \$28.3 million and non-employer contributions of \$4.0 million from the Commonwealth of Virginia. During fiscal year 2022, the System collected \$208.0 million in retiree health insurance credit contributions from participating employers and provided reimbursements of \$179.0 million. The Commonwealth provided an additional \$8.9 million of special contributions and \$12.0 million in non-employer contributions in 2022.

The contribution rate for the teacher employer group was the fully actuarially determined rate of 1.21% for fiscal year 2023 and 1.21% for fiscal year 2022. Employer contributions for the Retiree Health Insurance Credit Program are discussed further in Note 13. The Retiree Health Insurance Credit Fund reserve had a fiduciary net position restricted for benefits of \$599.9 million at June 30, 2023. Investment income, including net securities lending income, was \$32.7 million for the fiscal year. The reserve balances at June 30, 2022, and June 30, 2021, were \$492.3 million and \$444.6 million, respectively. Approximately 140,669 retirees were receiving the health insurance credit at June

30, 2023. Additional information is provided in Note 3.

VIRGINIA SICKNESS AND DISABILITY PROGRAM

The Virginia Sickness and Disability Program (VSDP), also known as the Disability Insurance Trust Fund, provides eligible state employees with sick, family and personal leave, and short-term and long-term disability benefits for non-work-related and work-related illnesses and injuries. The System is responsible for administering the disability program and the payment of long-term disability benefits.

Employers are responsible for administering the leave program and the payment of short-term disability benefits. During fiscal year 2023, the System collected \$31.1 million in VSDP contributions from participating employers and paid disability premiums and benefits of \$38.4 million. This is an increase from the \$36.9 million in benefits paid in fiscal year 2022.

Administrative expenses and other expenses increased from fiscal year 2022. Employer contributions for VSDP are discussed further in Note 13.

The benefit costs reflect continued stability in the number of members receiving long-term disability benefits, the amount of these benefits, the costs of the long-term care benefits and the operating costs of the program. The Disability Insurance Trust Fund reserve had a fiduciary net position restricted for benefits of \$634.8 million at June 30, 2023. Investment income, including net securities lending income, was \$38.9 million during the fiscal year. The reserve balances at June 30, 2022, and June 30, 2021, were \$602.9 million and \$612.0 million, respectively. At June 30, 2023, approximately 82,381 active members were participating in the program and approximately 2,290 former members were receiving benefits. Additional information is provided in Note 3.

LINE OF DUTY ACT PROGRAM

The Line of Duty Act Program was new for the System in fiscal year 2011. Beginning July 1, 2017,

the program was restructured and the responsibility for its operations were transferred from the Commonwealth of Virginia's Department of Accounts (DOA) to the System. The program provides death and health insurance benefits for eligible state employees and local government employees, including volunteers, who die or become disabled as the result of the performance of their duties as a public safety officer. The System is responsible for the review of all claims, determination of eligibility and case management. For participants in the program, the System is also responsible for identifying eligible individuals, having the VRS actuary prepare an actuarial valuation, collecting contributions, paying the Commonwealth of Virginia's Department of Human Resource Management health insurance premiums for covered eligible individuals and managing the assets of the program.

During fiscal years 2023 and 2022, the System collected \$13.3 million and \$13.8 million in contributions, respectively. In fiscal 2023, the System paid out \$15.7 million in benefits provided by this program. This is an increase in benefit costs from the \$14.1 million for fiscal year 2022. This reflects the impact of continued stabilization of the program's participation and claims levels. The reserve balance at June 30, 2023, was \$5.3 million, a decrease from the reserve balance of \$7.2 million at June 30, 2022. Additional information is provided in Note 3.

VIRGINIA LOCAL DISABILITY PROGRAM

The Virginia Local Disability Program (VLDP) was a new program for the System in fiscal year 2014. The program provides eligible local government employees who are members of the Hybrid Retirement Plan with sick, family and personal leave and short-term and long-term disability benefits for non-work-related and work-related illnesses and injuries. The System is responsible for administering the disability program and the payment of long-term disability benefits. Employers are responsible for administering the leave program and the payment of short-term disability benefits.

During fiscal year 2023, the System collected \$9.6 million in contributions and paid out \$4.7 million in benefits provided by this program. During fiscal year 2022, the System collected \$7.7 million in contributions and paid out \$3.9 million in benefits provided by the program. At June 30, 2023, approximately 32,774 active members were participating in the program and approximately 139 former members were receiving benefits. Additional information is provided in Note 3.

ACTUARIAL VALUATIONS AND FUNDING PROGRESS – OTHER EMPLOYEE BENEFIT PLANS

The System's actuarial firm performs actuarial valuations of the Group Life Insurance Program, the Retiree Health Insurance Credit Program, the Disability Insurance Program, the Virginia Local Disability Program and the Line of Duty Act Program at least every two years to determine funding requirements. The funding policy provides for periodic employer contributions at actuarially determined rates that will remain relatively level over time as a percentage of payroll and will accumulate sufficient assets to meet the costs of all benefits when due.

The latest valuations of the Other Post-Employment Benefit (OPEB) plans were performed by Gabriel, Roeder, Smith & Company using GASB Statement No. 74 calculation processes. Using the June 30, 2022, data rolled forward to June 30, 2023, the plan fiduciary net position as a percentage of the total OPEB liability was 69.30% for the Group Life Insurance Fund, 25.46% for the state employee Health Insurance Credit, 17.90% for the teacher employee Health Insurance Credit, 51.79% for the aggregate total of the political subdivision plans for Health Insurance Credit, 24.42% for the state-funded Health

Insurance Credit for constitutional officers, 34.36% for the state-funded Health Insurance Credit for social services employees, and 45.88% for the state-funded Health Insurance Credit for registrars. In addition, the plan fiduciary net position as a percentage of the total OPEB liability was 199.05% for the Disability Insurance Program and 1.31% for the Line of Duty Act Program. The Virginia Local Disability Program plans for teachers and political subdivisions were 93.77% and 116.89%, respectively. The valuations reflect all of the changes required in GASB Statement No. 74.

Market Volatility

The System's investment performance for the fiscal year ended June 30, 2023, was 6.1%, and there was an increase in the net position restricted for benefits. As noted in this section, in the Introductory Section and in the Chief Investment Officer's letter in the Investment Section, the investment markets continue to be extremely volatile. The amount of assets and reserves required to meet future obligations is based, in part, on estimated or expected long-term investment returns. Although management cannot predict future market returns, the changes in assets reflect the volatility in the market.

REQUEST FOR INFORMATION

This financial report is designed to provide an overview of the System's finances. Questions concerning the information provided in this report or requests for additional information should be addressed to the Chief Financial Officer, Virginia Retirement System, P.O. Box 2500, Richmond, VA 23218-2500.

VIRGINIA RETIREMENT SYSTEM STATEMENT OF FIDUCIARY NET POSITION:

DEFINED BENEFIT PENSION TRUST FUNDS, OTHER EMPLOYEE BENEFIT TRUST FUNDS AND OTHER CUSTODIAL PLANS

AS OF JUNE 30, 2023, WITH COMPARATIVE INFORMATION AS OF JUNE 30, 2022

(EXPRESSED IN THOUSANDS)

				Totals	
	Pension Trust Funds	Other Employee Benefit Trust Funds	Other Custodial Plans	2023	2022
Assets:					
Cash (Note 5)	\$ 120,711	\$ 6,216	\$ 343	\$ 127,270	\$ 85,204
Receivables:					
Contributions	331,307	48,780	—	380,087	357,656
Interest and Dividends	297,459	11,834	434	309,727	229,912
Receivables for Security Transactions	4,299,889	171,064	6,274	4,477,227	2,218,790
Other Investment Receivables	276,144	10,987	403	287,534	25,763
Other Receivables	22,837	10,248	—	33,085	31,131
Total Receivables	5,227,636	252,913	7,111	5,487,660	2,863,252
Investments: (Note 5)					
Bonds and Mortgage Securities	18,349,243	724,736	26,766	19,100,745	19,916,323
Stocks	23,920,017	951,621	34,902	24,906,540	22,153,696
Fixed-Income Commingled Funds	791,244	31,477	1,155	823,876	1,424,241
Index and Pooled Funds	12,718,441	505,982	18,558	13,242,981	12,627,783
Real Estate	13,445,237	534,899	19,618	13,999,754	13,735,587
Private Equity	34,201,500	1,360,654	49,902	35,612,056	32,530,492
Short-Term Investments	144,939	5,765	211	150,915	405,919
Total Investments	103,570,621	4,115,134	151,112	107,836,867	102,794,041
Collateral on Loaned Securities	3,578,709	142,790	5,221	3,726,720	4,639,790
Other Capital Assets, Net (Note 6)	25,394	—	—	25,394	32,381
Total Assets	112,523,071	4,517,053	163,787	117,203,911	110,414,668
Liabilities:					
Retirement Benefits Payable	20,758	—	—	20,758	481,163
Refunds Payable	4,488	725	—	5,213	4,672
Accounts Payable and Accrued Expenses	34,041	5,460	34	39,535	50,904
Compensated Absences Payable	3,812	—	—	3,812	4,328
Insurance Premiums and Claims Payable	—	118,861	—	118,861	103,829
Payable for Security Transactions	6,997,013	278,365	10,209	7,285,587	4,019,320
Other Investment Payables	60,071	2,389	88	62,548	8,783
Lease Liabilities (Note 7)	2,314	—	—	2,314	4,336
Subscription Based IT Liabilities (Note 8)	960	—	—	960	—
Other Payables	4,088	—	—	4,088	3,437
Obligations Under Security Lending Program	3,579,482	142,405	5,223	3,727,110	4,641,210
Total Liabilities	10,707,027	548,205	15,554	11,270,786	9,321,982
Net Position – Restricted for Benefits (Note 4)	\$ 101,816,044	\$ 3,968,848	\$ 148,233	\$105,933,125	\$ 101,092,686

The accompanying Notes to Financial Statements are an integral part of this statement.

VIRGINIA RETIREMENT SYSTEM STATEMENT OF CHANGES IN FIDUCIARY NET POSITION:
DEFINED BENEFIT PENSION TRUST FUNDS, OTHER EMPLOYEE BENEFIT TRUST FUNDS AND OTHER CUSTODIAL PLANS
 FOR THE YEAR ENDED JUNE 30, 2023, WITH COMPARATIVE INFORMATION FOR THE YEAR ENDED JUNE 30, 2022

(EXPRESSED IN THOUSANDS)

	Totals			2023	2022
	Pension Trust Funds	Other Employee Benefit Trust Funds	Other Custodial Plans		
Additions:					
Contributions:					
Members	\$ 1,031,349	\$ 188,773	\$ 62	\$ 1,220,184	\$ 1,134,217
Employers	3,159,929	406,215	907	3,567,051	3,238,599
Special Employer	85,417	31,338	—	116,755	274,332
Non-employer Contributing Entity	147,457	11,097	—	158,554	475,668
Total Contributions	4,424,152	637,423	969	5,062,544	5,122,816
Investment Income:					
Interest, Dividends and Other Investment Income	2,472,476	95,587	3,627	2,571,690	1,234,714
Net Appreciation/(Depreciation) in Fair Value of Investments	4,396,066	174,945	5,602	4,576,613	(767,203)
Securities Lending Income	159,058	6,185	209	165,452	26,775
Total Investment Income Before Investment Expenses	7,027,600	276,717	9,438	7,313,755	494,286
Investment Expenses:					
Direct Investment Expenses	(639,634)	(24,642)	(987)	(665,263)	(613,509)
Securities Lending Management Fees and Borrower Rebates	(132,024)	(5,136)	(174)	(137,334)	(5,037)
Total Investment Expenses	(771,658)	(29,778)	(1,161)	(802,597)	(618,546)
Net Investment Income	6,255,942	246,939	8,277	6,511,158	(124,260)
Miscellaneous Revenue	2,434	1,798	2,633	6,865	9,037
Total Additions	10,682,528	886,160	11,879	11,580,567	5,007,593
Deductions:					
Retirement Benefits	6,043,315	—	—	6,043,315	5,729,308
Refunds of Member Contributions	125,016	—	2,067	127,083	131,885
Insurance Premiums and Claims	—	256,548	—	256,548	258,997
Retiree Health Insurance Reimbursements	—	181,401	—	181,401	179,043
Disability Insurance Premiums and Benefits	—	43,019	—	43,019	40,733
Line of Duty Benefits	—	15,716	—	15,716	14,112
Administrative Expenses	61,867	3,844	—	65,711	64,315
Other Expenses	1,763	2,496	3,076	7,335	5,900
Total Deductions	6,231,961	503,024	5,143	6,740,128	6,424,293
Net Increase (Decrease)	4,450,567	383,136	6,736	4,840,439	(1,416,700)
Net Position – Restricted for Benefits – Beginning of Year	97,365,477	3,585,712	141,497	101,092,686	102,509,386
Net Position – Restricted for Benefits – End of Year	\$ 101,816,044	\$ 3,968,848	\$ 148,233	\$ 105,933,125	\$ 101,092,686

The accompanying Notes to Financial Statements are an integral part of this statement.

VIRGINIA RETIREMENT SYSTEM COMBINING STATEMENT OF FIDUCIARY NET POSITION

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	State Employee Plan	Teacher Employee Plan	Political Subdivision Plans	Total VRS Plans
Assets:				
Cash (Note 5)	\$ 27,404	\$ 55,611	\$ 32,023	\$ 115,038
Receivables:				
Contributions	53,539	185,838	81,161	320,538
Interest and Dividends	68,286	138,573	79,797	286,656
Receivables for Security Transactions	987,106	2,003,131	1,153,492	4,143,729
Other Investment Receivables	63,393	128,644	74,079	266,116
Other Receivables	5,435	11,047	6,355	22,837
Total Receivables	1,177,759	2,467,233	1,394,884	5,039,876
Investments: (Note 5)				
Bonds and Mortgage Securities	4,214,242	8,551,959	4,924,600	17,690,801
Stocks	5,491,204	11,143,296	6,416,807	23,051,307
Fixed-Income Commingled Funds	181,642	368,606	212,260	762,508
Index and Pooled Funds	2,919,712	5,924,968	3,411,861	12,256,541
Real Estate	3,086,559	6,263,552	3,606,832	12,956,943
Private Equity	7,851,476	15,932,992	9,174,928	32,959,396
Short-Term Investments	33,273	67,521	38,881	139,675
Total Investments	23,778,108	48,252,894	27,786,169	99,817,171
Collateral on Loaned Securities	821,548	1,667,165	960,028	3,448,741
Other Capital Assets, Net (Note 6)	6,049	12,276	7,069	25,394
Total Assets	25,810,868	52,455,179	30,180,173	108,446,220
Liabilities:				
Retirement Benefits Payable	5,533	9,530	4,794	19,857
Refunds Payable	1,162	1,700	1,626	4,488
Accounts Payable and Accrued Expenses	7,898	16,028	9,230	33,156
Compensated Absences Payable	908	1,843	1,061	3,812
Insurance Premiums and Claims Payable	—	—	—	—
Payable for Security Transactions	1,606,271	3,259,604	1,877,025	6,742,900
Other Investment Payables	13,791	27,984	16,115	57,890
Lease Liabilities (Note 7)	551	1,119	644	2,314
Subscription Based IT Liabilities (Note 8)	229	464	267	960
Other Payables	973	1,977	1,138	4,088
Obligations Under Security Lending Program	821,725	1,667,525	960,235	3,449,485
Total Liabilities	2,459,041	4,987,774	2,872,135	10,318,950
Net Position – Restricted for Benefits (Note 4)	\$ 23,351,827	\$ 47,467,405	\$ 27,308,038	\$ 98,127,270

The accompanying Notes to Financial Statements are an integral part of this statement.

VIRGINIA RETIREMENT SYSTEM COMBINING STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

FOR THE YEAR ENDED JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	State Employee Plan	Teacher Employee Plan	Political Subdivision Plans	Total VRS Plans
Additions:				
Contributions:				
Members	\$ 234,317	\$ 465,101	\$ 302,890	\$ 1,002,308
Employers	683,049	1,576,963	736,843	2,996,855
Special Employer	73,052	—	—	73,052
Non-employer Contributing Entity	—	147,457	—	147,457
Total Contributions	990,418	2,189,521	1,039,733	4,219,672
Investment Income:				
Interest, Dividends and Other Investment Income	568,267	1,151,833	663,337	2,383,437
Net Appreciation/(Depreciation) in Fair Value of Investments	1,010,118	2,047,428	1,179,106	4,236,652
Securities Lending Income	36,555	74,095	42,671	153,321
Total Investment Income Before Investment Expenses	1,614,940	3,273,356	1,885,114	6,773,410
Investment Expenses:				
Direct Investment Expenses	(146,986)	(297,992)	(171,599)	(616,577)
Securities Lending Management Fees and Borrower Rebates	(30,342)	(61,502)	(35,419)	(127,263)
Total Investment Expenses	(177,328)	(359,494)	(207,018)	(743,840)
Net Investment Income	1,437,612	2,913,862	1,678,096	6,029,570
Miscellaneous Revenue	579	1,178	677	2,434
Total Additions	2,428,609	5,104,561	2,718,506	10,251,676
Deductions:				
Retirement Benefits	1,610,266	2,773,752	1,395,124	5,779,142
Refunds of Member Contributions	31,014	45,366	43,391	119,771
Insurance Premiums and Claims	—	—	—	—
Retiree Health Insurance Reimbursements	—	—	—	—
Disability Insurance Premiums and Benefits	—	—	—	—
Line of Duty Benefits	—	—	—	—
Administrative Expenses	14,498	28,677	16,656	59,831
Other Expenses	330	1,092	328	1,750
Total Deductions	1,656,108	2,848,887	1,455,499	5,960,494
Net Increase (Decrease)	772,501	2,255,674	1,263,007	4,291,182
Net Position – Restricted for Benefits – Beginning of Year	22,579,326	45,211,731	26,045,031	93,836,088
Net Position – Restricted for Benefits – End of Year	\$ 23,351,827	\$ 47,467,405	\$ 27,308,038	\$ 98,127,270

The accompanying Notes to Financial Statements are an integral part of this statement.

**VIRGINIA RETIREMENT SYSTEM COMBINING STATEMENT OF FIDUCIARY NET POSITION:
DEFINED BENEFIT PENSION TRUST FUNDS**

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	Virginia Retirement System	State Police Officers' Retirement System	Virginia Law Officers' Retirement System	Judicial Retirement System	Total Pension Plans
Assets:					
Cash (Note 5)	\$ 115,038	\$ 1,662	\$ 2,968	\$ 1,043	\$ 120,711
Receivables:					
Contributions	320,538	2,323	7,273	1,173	331,307
Interest and Dividends	286,656	3,164	5,652	1,987	297,459
Receivables for Security Transactions	4,143,729	45,736	81,704	28,720	4,299,889
Other Investment Receivables	266,116	2,937	5,247	1,844	276,144
Other Receivables	22,837	—	—	—	22,837
Total Receivables	5,039,876	54,160	99,876	33,724	5,227,636
Investments: (Note 5)					
Bonds and Mortgage Securities	17,690,801	192,798	344,291	121,353	18,349,243
Stocks	23,051,307	254,429	454,513	159,768	23,920,017
Fixed-Income Commingled Funds	762,508	8,416	15,035	5,285	791,244
Index and Pooled Funds	12,256,541	135,282	241,668	84,950	12,718,441
Real Estate	12,956,943	143,012	255,478	89,804	13,445,237
Private Equity	32,959,396	363,789	649,875	228,440	34,201,500
Short-Term Investments	139,675	1,542	2,754	968	144,939
Total Investments	99,817,171	1,099,268	1,963,614	690,568	103,570,621
Collateral on Loaned Securities	3,448,741	38,066	68,000	23,902	3,578,709
Other Capital Assets, Net (Note 6)	25,394	—	—	—	25,394
Total Assets	108,446,220	1,193,156	2,134,458	749,237	112,523,071
Liabilities:					
Retirement Benefits Payable	19,857	4	825	72	20,758
Refunds Payable	4,488	—	—	—	4,488
Accounts Payable and Accrued Expenses	33,156	259	463	163	34,041
Compensated Absences Payable	3,812	—	—	—	3,812
Insurance Premiums and Claims Payable	—	—	—	—	—
Payable for Security Transactions	6,742,900	74,425	132,953	46,735	6,997,013
Other Investment Payables	57,890	639	1,141	401	60,071
Lease Liabilities (Note 7)	2,314	—	—	—	2,314
Subscription Based IT Liabilities (Note 8)	960	—	—	—	960
Other Payables	4,088	—	—	—	4,088
Obligations Under Security Lending Program	3,449,485	38,074	68,015	23,908	3,579,482
Total Liabilities	10,318,950	113,401	203,397	71,279	10,707,027
Net Position – Restricted for Benefits (Note 4)	\$ 98,127,270	\$ 1,079,755	\$ 1,931,061	\$ 677,958	\$ 101,816,044

The accompanying Notes to Financial Statements are an integral part of this statement.

VIRGINIA RETIREMENT SYSTEM COMBINING STATEMENT OF CHANGES IN FIDUCIARY NET POSITION: DEFINED BENEFIT PENSION TRUST FUNDS

FOR THE YEAR ENDED JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	Virginia Retirement System	State Police Officers' Retirement System	Virginia Law Officers' Retirement System	Judicial Retirement System	Total Pension Plans
Additions:					
Contributions:					
Members	\$ 1,002,308	\$ 7,952	\$ 18,769	\$ 2,320	\$ 1,031,349
Employers	2,996,855	46,936	90,433	25,705	3,159,929
Special Employer	73,052	3,653	6,629	2,083	85,417
Non-employer Contributing Entity	147,457	—	—	—	147,457
Total Contributions	4,219,672	58,541	115,831	30,108	4,424,152
Investment Income:					
Interest, Dividends and Other Investment Income	2,383,437	26,051	46,505	16,483	2,472,476
Net Appreciation/(Depreciation) in Fair Value of Investments	4,236,652	46,654	83,302	29,458	4,396,066
Securities Lending Income	153,321	1,678	2,997	1,062	159,058
Total Investment Income Before Investment Expenses	6,773,410	74,383	132,804	47,003	7,027,600
Investment Expenses:					
Direct Investment Expenses	(616,577)	(6,745)	(12,040)	(4,272)	(639,634)
Securities Lending Management Fees and Borrower Rebates	(127,263)	(1,393)	(2,487)	(881)	(132,024)
Total Investment Expenses	(743,840)	(8,138)	(14,527)	(5,153)	(771,658)
Net Investment Income	6,029,570	66,245	118,277	41,850	6,255,942
Miscellaneous Revenue	2,434	—	—	—	2,434
Total Additions	10,251,676	124,786	234,108	71,958	10,682,528
Deductions:					
Retirement Benefits	5,779,142	75,578	138,023	50,572	6,043,315
Refunds of Member Contributions	119,771	240	4,990	15	125,016
Insurance Premiums and Claims	—	—	—	—	—
Retiree Health Insurance Reimbursements	—	—	—	—	—
Disability Insurance Premiums and Benefits	—	—	—	—	—
Line of Duty Benefits	—	—	—	—	—
Administrative Expenses	59,831	595	1,063	378	61,867
Other Expenses	1,750	1	12	—	1,763
Total Deductions	5,960,494	76,414	144,088	50,965	6,231,961
Net Increase (Decrease)	4,291,182	48,372	90,020	20,993	4,450,567
Net Position – Restricted for Benefits	93,836,088	1,031,383	1,841,041	656,965	97,365,477
Net Position – Restricted for Benefits – End of Year	\$ 98,127,270	\$ 1,079,755	\$ 1,931,061	\$ 677,958	\$ 101,816,044

The accompanying Notes to Financial Statements are an integral part of this statement.

**VIRGINIA RETIREMENT SYSTEM COMBINING STATEMENT OF FIDUCIARY NET POSITION:
OTHER EMPLOYEE BENEFIT TRUST FUNDS**

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	Group Life Insurance	Retiree Health Insurance Credit	Disability Insurance Trust Fund	Line of Duty Act Trust Fund	Virginia Local Disability Program	Total OPEB Plans
Assets:						
Cash (Note 5)	\$ 4,314	\$ 897	\$ 965	\$ 8	\$ 32	\$ 6,216
Receivables:						
Contributions	26,487	19,495	1,764	—	1,034	48,780
Interest and Dividends	8,214	1,708	1,838	14	60	11,834
Receivables for Security Transactions	118,730	24,696	26,563	207	868	171,064
Other Investment Receivables	7,625	1,586	1,706	14	56	10,987
Other Receivables	—	116	10,102	16	14	10,248
Total Receivables	161,056	47,601	41,973	251	2,032	252,913
Investments: (Note 5)						
Bonds and Mortgage Securities	504,272	103,479	112,396	885	3,704	724,736
Stocks	660,485	137,385	147,769	1,153	4,829	951,621
Fixed-Income Commingled Funds	21,847	4,545	4,888	38	159	31,477
Index and Pooled Funds	351,183	73,048	78,570	613	2,568	505,982
Real Estate	371,253	77,223	83,060	648	2,715	534,899
Private Equity	944,380	196,436	211,284	1,649	6,905	1,360,654
Short-Term Investments	4,002	832	895	7	29	5,765
Total Investments	2,857,422	592,948	638,862	4,993	20,909	4,115,134
Collateral on Loaned Securities	98,827	20,557	22,110	573	723	142,790
Other Capital Assets, Net (Note 6)	—	—	—	—	—	—
Total Assets	3,121,619	662,003	703,910	5,825	23,696	4,517,053
Liabilities:						
Retirement Benefits Payable	—	—	—	—	—	—
Refunds Payable	—	725	—	—	—	725
Accounts Payable and Accrued Expenses	1,321	309	3,422	1	407	5,460
Compensated Absences Payable	—	—	—	—	—	—
Insurance Premiums and Claims Payable	118,861	—	—	—	—	118,861
Payable for Security Transactions	193,203	40,187	43,225	337	1,413	278,365
Other Investment Payables	1,658	345	371	3	12	2,389
Lease Liabilities (Note 7)	—	—	—	—	—	—
Other Payables	—	—	—	—	—	—
Obligations Under Security Lending Program	98,837	20,559	22,113	173	723	142,405
Total Liabilities	413,880	62,125	69,131	514	2,555	548,205
Net Position – Restricted for Benefits (Note 4)	\$ 2,707,739	\$ 599,878	\$ 634,779	\$ 5,311	\$ 21,141	\$ 3,968,848

The accompanying Notes to Financial Statements are an integral part of this statement.

VIRGINIA RETIREMENT SYSTEM COMBINING STATEMENT OF CHANGES IN FIDUCIARY NET POSITION: OTHER EMPLOYEE BENEFIT TRUST FUNDS

FOR THE YEAR ENDED JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	Group Life Insurance	Retiree Health Insurance Credit	Disability Insurance Trust Fund	Line of Duty Act Trust Fund	Virginia Local Disability Program	Total OPEB Plans
Additions:						
Contributions:						
Members	\$ 188,773	\$ —	\$ —	\$ —	\$ —	\$ 188,773
Employers	127,427	224,792	31,138	13,271	9,587	406,215
Special Employer	3,053	28,285	—	—	—	31,338
Non-employer Contributing Entity	7,093	4,004	—	—	—	11,097
Total Contributions	326,346	257,081	31,138	13,271	9,587	637,423
Investment Income:						
Interest, Dividends and Other Investment Income	67,315	12,345	15,200	270	457	95,587
Net Appreciation/(Depreciation) in Fair Value of Investments	122,799	23,402	27,502	392	850	174,945
Securities Lending Income	4,342	817	979	18	29	6,185
Total Investment Income Before Investment Expenses	194,456	36,564	43,681	680	1,336	276,717
Investment Expenses:						
Direct Investment Expenses	(17,369)	(3,144)	(3,931)	(82)	(116)	(24,642)
Securities Lending Management Fees and Borrower Rebates	(3,606)	(679)	(812)	(15)	(24)	(5,136)
Total Investment Expenses	(20,975)	(3,823)	(4,743)	(97)	(140)	(29,778)
Net Investment Income	173,481	32,741	38,938	583	1,196	246,939
Miscellaneous Revenue	—	—	1,137	661	—	1,798
Total Additions	499,827	289,822	71,213	14,515	10,783	886,160
Deductions:						
Retirement Benefits	—	—	—	—	—	—
Refunds of Member Contributions	—	—	—	—	—	—
Insurance Premiums and Claims	256,548	—	—	—	—	256,548
Retiree Health Insurance Reimbursements	—	181,401	—	—	—	181,401
Disability Insurance Premiums and Benefits	—	—	38,354	—	4,665	43,019
Line of Duty Benefits	—	—	—	15,716	—	15,716
Administrative Expenses	1,268	832	797	702	245	3,844
Other Expenses	2,261	36	199	—	—	2,496
Total Deductions	260,077	182,269	39,350	16,418	4,910	503,024
Net Increase (Decrease)	239,750	107,553	31,863	(1,903)	5,873	383,136
Net Position – Restricted for Benefits – Beginning of Year	2,467,989	492,325	602,916	7,214	15,268	3,585,712
Net Position – Restricted for Benefits – End of Year	\$ 2,707,739	\$ 599,878	\$ 634,779	\$ 5,311	\$ 21,141	\$ 3,968,848

The accompanying Notes to Financial Statements are an integral part of this statement.

RETIREE HEALTH INSURANCE CREDIT COMBINING STATEMENT OF FIDUCIARY NET POSITION

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	State Employee Plan	Teacher Employee Plan	Political Subdivision Plans	Constitutional Officers	Social Services Employees	Registrars	Total HIC Plans
Assets:							
Cash (Note 5)	\$ 424	\$ 390	\$ 61	\$ 15	\$ 7	\$ —	\$ 897
Receivables:							
Contributions	6,312	11,860	553	140	626	4	19,495
Interest and Dividends	807	742	116	28	14	1	1,708
Receivables for Security Transactions	11,671	10,731	1,681	410	192	11	24,696
Other Investment Receivables	750	689	107	26	13	1	1,586
Other Receivables	55	50	8	2	1	—	116
Total Receivables	19,595	24,072	2,465	606	846	17	47,601
Investments: (Note 5)							
Bonds and Mortgage Securities	48,903	44,966	7,043	1,716	806	45	103,479
Stocks	64,927	59,699	9,351	2,279	1,070	59	137,385
Fixed-Income Commingled Funds	2,148	1,975	309	76	35	2	4,545
Index and Pooled Funds	34,521	31,742	4,972	1,212	569	32	73,048
Real Estate	36,495	33,557	5,256	1,281	601	33	77,223
Private Equity	92,833	85,360	13,370	3,258	1,530	85	196,436
Short-Term Investments	393	362	57	14	6	—	832
Total Investments	280,220	257,661	40,358	9,836	4,617	256	592,948
Collateral on Loaned Securities	9,715	8,933	1,399	341	160	9	20,557
Other Capital Assets, Net (Note 6)	—	—	—	—	—	—	—
Total Assets	309,954	291,056	44,283	10,798	5,630	282	662,003
Liabilities:							
Retirement Benefits Payable	—	—	—	—	—	—	—
Refunds Payable	340	319	48	12	6	—	725
Accounts Payable and Accrued Expenses	144	136	21	5	3	—	309
Compensated Absences Payable	—	—	—	—	—	—	—
Insurance Premiums and Claims Payable	—	—	—	—	—	—	—
Payable for Security Transactions	18,992	17,463	2,735	667	313	17	40,187
Other Investment Payables	163	150	23	6	3	—	345
Other Payables	—	—	—	—	—	—	—
Obligations Under Security Lending Program	9,716	8,934	1,399	341	160	9	20,559
Total Liabilities	29,355	27,002	4,226	1,031	485	26	62,125
Net Position –							
Restricted for Benefits (Note 4)	\$ 280,599	\$ 264,054	\$ 40,057	\$ 9,767	\$ 5,145	\$ 256	\$ 599,878

The accompanying Notes to Financial Statements are an integral part of this statement.

RETIREE HEALTH INSURANCE CREDIT COMBINING STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

FOR THE YEAR ENDED JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	State Employee Plan	Teacher Employee Plan	Political Subdivision Plans	Constitutional Officers	Social Services Employees	Registrars	Total HIC Plans
Additions:							
Contributions:							
Members	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Employers	92,376	120,623	6,752	3,101	1,876	64	224,792
Special Employer	27,159	—	—	92	1,032	2	28,285
Non-employer Contributing Entity	—	4,004	—	—	—	—	4,004
Total Contributions	119,535	124,627	6,752	3,193	2,908	66	257,081
Investment Income:							
Interest, Dividends and Other Investment Income	5,343	5,522	843	348	280	9	12,345
Net Appreciation/(Depreciation) in Fair Value of Investments	10,129	10,466	1,597	662	530	18	23,402
Securities Lending Income	353	366	56	23	19	—	817
Total Investment Income Before Investment Expenses	15,825	16,354	2,496	1,033	829	27	36,564
Investment Expenses:							
Direct Investment Expenses	(1,362)	(1,405)	(214)	(89)	(71)	(3)	(3,144)
Securities Lending Management Fees and Borrower Rebates	(294)	(304)	(46)	(19)	(15)	(1)	(679)
Total Investment Expenses	(1,656)	(1,709)	(260)	(108)	(86)	(4)	(3,823)
Net Investment Income	14,169	14,645	2,236	925	743	23	32,741
Miscellaneous Revenue	—	—	—	—	—	—	—
Total Additions	133,704	139,272	8,988	4,118	3,651	89	289,822
Deductions:							
Retirement Benefits	—	—	—	—	—	—	—
Refunds of Member Contributions	—	—	—	—	—	—	—
Insurance Premiums and Claims	—	—	—	—	—	—	—
Retiree Health Insurance Reimbursements	77,273	96,645	4,303	2,069	1,074	37	181,401
Disability Insurance Premiums and Benefits	—	—	—	—	—	—	—
Line of Duty Benefits	—	—	—	—	—	—	—
Administrative Expenses	374	359	55	24	20	—	832
Transfers	18	38	113	(138)	(30)	(1)	—
Other Expenses	15	21	—	—	—	—	36
Total Deductions	77,680	97,063	4,471	1,955	1,064	36	182,269
Net Increase (Decrease)	56,024	42,209	4,517	2,163	2,587	53	107,553
Net Position – Restricted for Benefits – Beginning of Year	224,575	221,845	35,540	7,604	2,558	203	492,325
Net Position – Restricted for Benefits – End of Year	\$ 280,599	\$ 264,054	\$ 40,057	\$ 9,767	\$ 5,145	\$ 256	\$ 599,878

The accompanying Notes to Financial Statements are an integral part of this statement.

VIRGINIA LOCAL DISABILITY PROGRAM COMBINING STATEMENT OF FIDUCIARY NET POSITION

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	Teacher Employee Plan	Political Subdivision Plan	Total VLDP Plans
Assets:			
Cash (Note 5)	\$ 15	\$ 17	\$ 32
Receivables:			
Contributions	568	466	1,034
Interest and Dividends	28	32	60
Receivables for Security Transactions	411	457	868
Other Investment Receivables	27	29	56
Other Receivables	7	7	14
Total Receivables	1,041	991	2,032
Investments: (Note 5)			
Bonds and Mortgage Securities	1,753	1,951	3,704
Stocks	2,286	2,543	4,829
Fixed-Income Commingled Funds	75	84	159
Index and Pooled Funds	1,216	1,352	2,568
Real Estate	1,285	1,430	2,715
Private Equity	3,268	3,637	6,905
Short-Term Investments	14	15	29
Total Investments	9,897	11,012	20,909
Collateral on Loaned Securities	264	459	723
Other Capital Assets, Net (Note 6)	—	—	—
Total Assets	11,217	12,479	23,696
Liabilities:			
Retirement Benefits Payable	—	—	—
Refunds Payable	—	—	—
Accounts Payable and Accrued Expenses	193	214	407
Compensated Absences Payable	—	—	—
Insurance Premiums and Claims Payable	—	—	—
Payable for Security Transactions	669	744	1,413
Other Investment Payables	6	6	12
Other Payables	—	—	—
Obligations Under Security Lending Program	342	381	723
Total Liabilities	1,210	1,345	2,555
Net Position – Restricted for Benefits (Note 4)	\$ 10,007	\$ 11,134	\$ 21,141

The accompanying Notes to Financial Statements are an integral part of this statement.

VIRGINIA LOCAL DISABILITY PROGRAM COMBINING STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

FOR THE YEAR ENDED JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	Teacher Employee Plan	Political Subdivision Plan	Total VLDP Plans
Additions:			
Contributions:			
Members	\$ —	\$ —	\$ —
Employers	4,387	5,200	9,587
Special Employer	—	—	—
Non-employer Contributing Entity	—	—	—
Total Contributions	4,387	5,200	9,587
Investment Income:			
Interest, Dividends and Other Investment Income	209	248	457
Net Appreciation/(Depreciation) in Fair Value of Investments	389	461	850
Securities Lending Income	13	16	29
Total Investment Income Before Investment Expenses	611	725	1,336
Investment Expenses:			
Direct Investment Expenses	(53)	(63)	(116)
Securities Lending Management Fees and Borrower Rebates	(11)	(13)	(24)
Total Investment Expenses	(64)	(76)	(140)
Net Investment Income	547	649	1,196
Miscellaneous Revenue	—	—	—
Total Additions	4,934	5,849	10,783
Deductions:			
Retirement Benefits	—	—	—
Refunds of Member Contributions	—	—	—
Insurance Premiums and Claims	—	—	—
Retiree Health Insurance Reimbursements	—	—	—
Disability Insurance Premiums and Benefits	959	1,136	2,095
Line of Duty Benefits	—	—	—
Administrative Expenses	112	133	245
Third Party Administrative Expenses	1,176	1,394	2,570
Other Expenses	—	—	—
Total Deductions	2,247	2,663	4,910
Net Increase (Decrease)	2,687	3,186	5,873
Net Position – Restricted for Benefits – Beginning of Year	7,320	7,948	15,268
Net Position – Restricted for Benefits – End of Year	\$ 10,007	\$ 11,134	\$ 21,141

The accompanying Notes to Financial Statements are an integral part of this statement.

Notes to Financial Statements

JUNE 30, 2023 AND 2022

1. Summary of Significant Financial Policies, Administration and Management

A. FINANCIAL REPORTING ENTITY

The Virginia Retirement System (the System) is an independent agency of the Commonwealth of Virginia. The System administers two defined benefit retirement benefit structures, Plan 1 and Plan 2, and a hybrid retirement benefit structure. Although all of the following systems have employees with Plan 1 and Plan 2 benefits, only the VRS and JRS systems have employees with hybrid benefits. All of these systems are defined as pension trust funds:

- Virginia Retirement System (VRS) for state employees, teachers, other eligible school division employees, employees of participating political subdivisions and other qualifying employees.
- State Police Officers' Retirement System (SPORS) for state police officers.
- Virginia Law Officers' Retirement System (VaLORS) for non-local government Virginia law officers other than state police officers.
- Judicial Retirement System (JRS) for judges of state courts of record, state district courts and other qualifying employees.

The System also administers the Group Life Insurance Fund, Retiree Health Insurance Credit Fund, a Disability Insurance Trust Fund for state employees, the Virginia Local Disability Program Trust Fund and the Line of Duty Act Trust Fund. All of these funds are defined as other employee benefit trust funds. Both the pension and other employee benefit trust funds are classified as fiduciary funds and are included in the basic financial statements of the Commonwealth of Virginia. As required by generally accepted accounting principles (GAAP), the System's financial statements include all funds for which financial transactions are recorded in its accounting system and for which the Board of Trustees exercises administrative responsibility. Effective

January 1, 1997, the *Constitution of Virginia* was amended to strengthen the independence of the System. As set forth in Section 11 of Article X, the funds of the retirement system shall be deemed separate and independent trust funds, segregated from all other funds of the Commonwealth, and invested and administered solely in the interests of members, retirees and beneficiaries.

B. ADMINISTRATION AND MANAGEMENT

1. Pension Plans and Other Employee Benefit Plans.

The Board of Trustees (the Board) is responsible for the general administration and operation of the pension plans and other employee benefit plans. The Board has full power to invest and reinvest the trust funds of the System through the adoption of investment policies and guidelines that fulfill the Board's investment objective to maximize long-term investment returns while targeting an acceptable level of risk.

The Board consists of five members appointed by the Governor and four members appointed by the Joint Rules Committee of the Virginia General Assembly, all subject to confirmation by the General Assembly. The Board appoints a director to serve as the chief administrative officer of the System and a chief investment officer to direct, manage and administer the investment of the System's funds. The Board also retains outside managers to advise and assist in the implementation of these policies. The Board of Trustees has appointed BNY Mellon as the custodian of designated assets of the System.

The Virginia Retirement System (VRS), the State Police Officers' Retirement System (SPORS), the Virginia Law Officers' Retirement System (VaLORS) and the Judicial Retirement System (JRS) are administered in accordance with Title 51.1, Chapters 1, 2, 2.1, 3 and 4, respectively, of the *Code of Virginia* (1950), as amended. The Group Life Insurance Fund, the Retiree Health Insurance Credit Fund, the Disability Insurance Trust Fund for state employees and the Virginia Local Disability Program Trust Fund are administered in accordance with Title 51.1, Chapters 5, 14, 11 and 11.1, respectively, of the *Code of Virginia* (1950), as amended. The Line of Duty Act Trust Fund is

administered in accordance with Title 9.1, Chapter 4 of the *Code of Virginia* (1950), as amended. The Optional Life Insurance Fund is administered in accordance with Sections 51.1-512 and 51.1-512.1 of the *Code of Virginia* (1950), as amended. Optional life insurance is an insured product, and the premium collection is handled by the insurer. The Board provides only oversight for the program with limited administrative responsibility. State statutes governing the plans administered by the System may be amended only by the General Assembly of Virginia. Additional information about the plans is provided in Notes 2 and 3.

Fiduciary Responsibility of the VRS Board of Trustees

As stated in Section 51.1-124.30(C) of the *Code of Virginia*:
“...the Board shall invest the assets of the Retirement System with the care, skill, prudence and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of like character and with like aims.”
Accordingly, the Board must sufficiently diversify the portfolio to minimize the risk of large losses unless, under the circumstances, it is clearly prudent not to do so. Primary risk measures are volatility in the plan’s assets, funded status and contribution rates.

2. Custodial Funds. The Board has fiduciary responsibility for several programs primarily because of the responsibility for investment of the funds. For these programs, the Board has either limited oversight or administration responsibilities for the programs. The VRS-held assets of these programs are represented as an equity interest in the VRS Pooled Investment Portfolio and are invested in accordance with the System’s investment policies and guidelines. These programs include:

- a. VRS Investment Portfolio (VRSIP), which is an investment option available for defined contribution plan participants.
- b. Commonwealth Health Research Fund (CHRF), which provides financial support for human health research on behalf of citizens of the Commonwealth. The investment of assets for the CHRF is in accordance with Section

51.1-124.36 of the *Code of Virginia* (1950), as amended.

- c. Commonwealth’s Attorneys Training Fund (CATF), which provides financial support for the training of Commonwealth’s Attorneys and their staffs. The investment of assets for the CATF is in accordance with Section 51.1-124.37 of the *Code of Virginia* (1950), as amended.
- d. Volunteer Firefighters’ and Rescue Squad Workers’ Service Award Fund (VolSAP), which provides service awards to eligible volunteer firefighters and rescue squad workers. The VolSAP is administered in accordance with Chapter 12 of the *Code of Virginia* (1950), as amended.

3. Other Plans Established by the Commonwealth of Virginia. The Board has oversight, but limited administrative and investment responsibility, for several other plans of the Commonwealth. Because of the Board’s limited role, the financial transactions of these plans are not recorded in the System’s financial statements. Therefore, these programs are not included in the System’s Basic Financial Statements:

- a. Defined Contribution components of the Hybrid Retirement Plan. The VRS Hybrid Retirement Plan is administered in accordance with Section 51.1-169 of the *Code of Virginia* (1950), as amended. Additional information on the Hybrid Retirement Plan is provided in the Statistical Section.
- b. Commonwealth of Virginia 457 Deferred Compensation Plan and the Virginia Cash Match Plan for state employees and employees of participating political subdivisions. The Commonwealth of Virginia 457 Deferred Compensation Plan and the Virginia Cash Match Plan are administered in accordance with Chapter 6 and Chapter 6.1 of the *Code of Virginia* (1950), as amended. Additional information on these plans is provided in the Statistical Section.
- c. Defined contribution plans, referred to as Optional Retirement Plans 1 and 2 for political appointees, certain employees of public institutions of higher education and certain

employees of public school divisions and teaching hospitals.

- d. Commonwealth of Virginia (COV) Voluntary Group Long Term Care Insurance Program, an employee-paid program for eligible employees and retirees.

C. ACCOUNTING BASIS

The accounting and presentation of the pension plans and other employee benefit plans use the flow of economic resources measurement focus and the accrual basis of accounting. Under the accrual basis, revenues are recognized when earned, and expenses are recognized when liabilities are incurred, regardless of the timing of related cash flows. Member and employer contributions are recognized as revenues when due, pursuant to formal commitments as well as statutory or contractual requirements. Investment income is recognized as earned by the plans. Benefits and refunds are recognized when due and payable in accordance with the terms of the plans.

D. ACTUARIAL BASIS AND CONTRIBUTION RATES

The funding policy for the pension plans provides for periodic employer contributions at actuarially determined rates, which will remain relatively level over time as a percentage of payroll and will accumulate sufficient assets to meet the cost of all benefits when due. Member and employer contributions are required by Title 51.1 of the *Code of Virginia* (1950), as amended.

Contribution rates are developed using the entry age normal cost method for both normal cost and amortization of the unfunded actuarial accrued liability. Gains and losses are reflected in the Unfunded Actuarial Accrued Liability (UAAL), which is being amortized as a level percentage of covered payroll within 30 years or less through fiscal year 2023 and 20 years or less beginning in fiscal year 2024.

In addition to determining contribution requirements, actuarial computations present an estimate of the discounted present value of the prospective accrued liability contributions that employers will have to pay to ensure that such contributions – when combined with the assets on hand, the normal contributions to be made in the

future by employers and members, and investment income – will be sufficient to pay all benefits due to current members in the future as well as to annuitants and designated beneficiaries.

Actuarial valuations estimate the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include future employment, mortality and the use of the benefit. Actuarially determined amounts are subject to revision as actual results are compared with past expectations and new estimates are made about the future. The Required Supplementary Schedules follow the Notes to Financial Statements. For pension plans, the schedules present historical information about the increase or decrease in the employer's fiduciary net position over time related to the employer's net pension liability. For other employee benefit plans, the schedules present historical information about the increase or decrease of the actuarial values of the plans' assets over time relative to the AAL for benefits.

E. GOVERNMENTAL ACCOUNTING STANDARDS BOARD (GASB) STATEMENTS

- Governmental Accounting Standards Board (GASB) Statement No. 40, *Deposit and Investment Risk Disclosures*, requires disclosures related to deposits, authorized investments and investment risk. Required investment risk disclosures address interest rate risk; credit risk, to include custodial credit risk and concentrations of credit risk; and foreign currency risk. The statement also requires disclosures of custodial credit risk and foreign currency risk for depository accounts. Information about the System's deposits and investment risk is provided in Note 5.
- GASB Statement No. 51, *Accounting and Financial Reporting for Intangible Assets*, establishes a "specific conditions" approach to recognizing intangible assets, specifically computer software. The statement became effective beginning with the fiscal year ended June 30, 2010. Capitalized costs are incurred during the Application Development Stage and consist of design of chosen path, including software configuration and software interfaces; coding; installation of

hardware; testing, including the parallel processing phase; and data conversion to the extent that the data are necessary to make the computer software operational. Other costs incurred before or after the Application Development Stage are expensed when incurred. Additional disclosures resulting from the implementation of this statement are presented in Note 6.

- GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments*, establishes accounting and financial reporting standards for governments that enter into derivative instruments. The statement became effective beginning with the fiscal year ended June 30, 2010. The objective of the statement is to enhance the usefulness and comparability of derivative financial instrument information reported by state and local governments. It provides a comprehensive framework for the measurement, recognition and disclosure of derivative instrument transactions. Additional disclosures resulting from the implementation of this statement are presented in Note 5.
- GASB Statement No. 59, *Financial Instruments Omnibus*, clarifies the definition of items that should be included in the reporting required by Statement No. 53. The statement became effective beginning with the fiscal year ended June 30, 2010. This is reflected in the disclosures in Note 5.
- GASB Statement No. 63, *Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources and Net Position*, establishes standards for reporting deferred outflows of resources, deferred inflows of resources and net position. The statement became effective beginning with the fiscal year ended June 30, 2013. The financial statement presentations have been updated to reflect the impact of this standard.
- GASB Statement No. 64, *Derivative Instruments: Application of Hedge Accounting Termination Provisions – An Amendment of GASB Statement No. 53*, clarifies the circumstances in which hedge accounting should continue when a swap counterparty, or a swap counterparty's credit support provider, is replaced. The statement became effective beginning with the fiscal year ended June 30, 2012. This is reflected in the disclosures in Note 5.
- GASB Statement No. 67, *Financial Reporting for Pension Plans*, replaces the requirements of Statements No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*, and No. 50, *Pension Disclosures*, as they relate to pension plans that are administered through trusts and that meet certain criteria. The statement became effective beginning with the fiscal year ended June 30, 2014, and required changes in the presentation of the financial statements, notes to the financial statements and required supplementary information. Significant changes include an actuarial calculation of total and net pension liability. These are presented in Note 2.C. The changes also include comprehensive footnote disclosure regarding the pension liability, the sensitivity of the net pension liability to the discount rate and increased investment activity disclosures. The implementation of GASB Statement No. 67 did not significantly impact the accounting for accounts receivable and investment balances.
- GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*, an amendment of GASB Statement No. 27. The statement became effective for fiscal years beginning after June 30, 2014, and required changes in the presentation of the financial statements, notes to the financial statements and required supplementary information for the employers that participate in the VRS-administered pension plans. The information reported by the employers is their share of the information reported by VRS under GASB Statement No. 67.
- GASB Statement No. 71, *Pension Transition for Contributions Made Subsequent to the Measurement Date*, an amendment of GASB Statement No. 68, became effective simultaneously with the provision of GASB Statement No. 68. The statement clarified the adjustments necessary to the beginning deferred outflows of resources

and limited that adjustment to contributions made subsequent to the measurement date.

- GASB Statement No. 72, *Fair Value Measurement and Application*. The statement became effective for the fiscal years beginning after June 15, 2015. The statement addresses accounting and financial reporting issues related to fair value measurements. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The statement provides guidance for determining a fair value measurement for financial reporting purposes. It also provides guidance for applying fair value to certain investments and disclosures related to all fair value measurements. This information is presented in Note 5.B.2 and Figures 2.16 and 2.17.
- GASB Statement No. 74, *Financial Reporting for Post-Employment Benefit Plans Other Than Pension Plans*, replaces the requirements of Statement No. 43, *Financial Reporting for Post-Employment Benefit Plans Other Than Pension Plans*. The statement became effective beginning with the fiscal year ended June 30, 2017, and required changes in the presentation of the financial statements, notes to the financial statements and required supplementary information. Significant changes include an actuarial calculation of total and net OPEB liability. These are presented in Note 3.B. The changes also include comprehensive footnote disclosure regarding the liability for OPEB plans, the sensitivity of the net OPEB liability to the discount rate and increased investment activity disclosures. The implementation of GASB Statement No. 74 did not significantly impact the accounting for accounts receivable and investment balances.
- GASB Statement No. 75, *Accounting and Financial Reporting for Post-Employment Benefits Other Than Pensions*. The statement became effective for fiscal years beginning after June 15, 2017, and required changes in the presentation of the financial statements, notes to the financial statements and required supplementary information for the employers that participate in the VRS-administered OPEB plans. The information reported by the employers will be their share of the information reported by VRS under GASB Statement No. 74.
- GASB Statement No. 79, *Certain External Investment Pools and Pool Participants*. The statement became effective for the fiscal years beginning after June 30, 2015. The statement addresses accounting and financial reporting for certain external investment pool and pool participants. Specifically, it establishes criteria for an external investment pool to qualify for making the election to measure all investments at amortized cost for financial reporting purposes. This statement impacts the VRS presentations related to the short-term investments in the Commonwealth of Virginia's Local Government Investment Pool.
- GASB Statement No. 82, *Pension Issues*, an amendment of GASB Statements No. 67, No. 68 and No. 73. This statement addressed certain issues that were raised during the implementation of these standards. Specifically, the statement addresses the issues regarding (1) the presentation of payroll-related measures in the required supplementary information, (2) the selection of assumptions and the treatment of deviations from guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. Although this statement was effective for reporting periods beginning after June 15, 2016, VRS elected to implement it early and provide disclosure guidance to participating employers.
- GASB Statement No. 84, *Fiduciary Activities*, established new criteria for the evaluation of activities to determine whether they were fiduciary activities and should be included in the financial statements as fiduciary funds. One of the primary determining factors was whether the entity had "control" of the assets. After a full evaluation of the System's activities, it was determined that the defined contribution plan activities of the hybrid plan did not meet this criteria and should not be included as part of

the pension funds. It was also determined that several other activities, for which the System has full investment responsibility, did meet the criteria and should be included in the System's financial statements as custodial funds. These newly included custodial funds include the Commonwealth Health Research Fund (CHRF), the Commonwealth's Attorneys' Training Fund (CATF), the Volunteer Firefighters' and Rescue Squad Workers' Service Award Program (VolSAP) and the VRS Investment Portfolio (VRSIP). The VRSIP is an investment option available for the defined contribution plan participants and the other custodial funds are stand-alone funds established in statute. This Statement was originally effective for VRS for FY 2020; however, GASB allowed for a one-year implementation postponement in GASB Statement No. 95. GASB Statement No. 95 was intended to provide temporary relief to governments and other stakeholders in light of the COVID-19 pandemic. This statement also encouraged and permitted implementation in accordance with the original dates. VRS elected to early implement GASB Statement No. 84 in accordance with the original statement effective date.

- GASB Statement No. 85, *Omnibus 2017*, amended a number of GASB statements, including GASB Statements No. 73, No. 74 and No. 75. This statement addressed certain issues that were raised during the implementation of these standards. Specifically, the statement addressed the issues regarding (1) the presentation of payroll-related measures in the required supplementary information and (2) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. This statement was effective for reporting periods beginning after June 15, 2017.
- GASB Statement No. 87, *Leases*. The statement became effective for fiscal years starting after June 15, 2021. A single model approach to lease classification was adopted and leases are no longer classified as operating and capital leases. Under this statement, all leases over 12 months

require a recognition of a right-to-use asset and a lease liability on the financial statements. This information is presented in Figure 2.30 and Note 7.

- GASB Statement No. 96, *Subscription-Based Information Technology Arrangements (SBITA)*. Defined SBITA as a contract that conveys control of the right to use another party's information technology software, alone or in combination with tangible capital assets, as specified in the contract for a period of time in an exchange or exchange-like transaction. This statement was effective for fiscal years beginning after June 15, 2022. This information is presented in Figure 2.31 and Note 8.

F. INVESTMENTS

1. Investment Valuation. Cash equivalents and other short-term, highly liquid investments of the System are reported at amortized cost as follows:

- 1) Money market investments and participating interest-earning investment contracts that have a remaining maturity at the time of purchase of one year or less are reported at amortized cost.
- 2) The System may be a party to short-term contracts to buy and sell securities known as repurchase and reverse repurchase agreements. Agreements to repurchase securities that have been sold to a counterparty are valued at the contract price, exclusive of interest, at which the securities will be repurchased. Securities purchased pursuant to agreements to resell are carried at fair value.
- 3) The System participates in the Commonwealth's Local Government Investment Pool (LGIP), which is managed by the State Treasurer. The State Treasurer reports that the LGIP complies with or exceeds all of the criteria in GASB Statement No. 79, *Accounting and Reporting for Certain External Investment Pools and Pool Participants*, to be eligible to use amortized cost for financial reporting and transacting shares. The System likewise measures its investment in the LGIP at amortized cost as per GASB Statement No. 79. The LGIP imposes no limitations or restrictions on the System's ability to withdraw invested funds.

Long-term investments of the System are reported at fair value. Fair value is the amount that one can reasonably expect to receive for an investment in a current sale between a willing buyer and a willing seller; that is, other than a forced or liquidation sale. The fair value for the System's defined benefit investments is determined by the System's master custodian, BNY Mellon, from its Global Pricing System. This system assigns a price source, based on asset type and the vendor pricing products to which the master custodian subscribes, for every security held immediately following its acquisition. The master custodian monitors prices supplied by these sources daily.

When a pricing source is unable to provide a price, quotes are sought from major investment brokers and market-making dealers; or internal calculations are applied, if feasible. As a last resort, the master custodian will contact investment managers for a price. The master custodian prices commingled funds, partnerships and real assets from statements received from the funds, partnerships or investment managers.

The pricing sources used by the master custodian provide daily prices for equity securities; corporate, government and mortgage-backed fixed-income securities; private placement securities; futures and options on futures; open-ended funds; and foreign exchange rates. Depending on the vendor, collateralized mortgage obligations (CMOs), adjustable-rate mortgages (ARMs) and asset-backed securities are priced daily, weekly or twice a month as well as at month-end. Municipal fixed-income securities and options on U.S. Treasury/GNMA securities are priced at month-end.

2. Investment Transactions and Income. Security transactions and related gains and losses are recorded on a trade-date basis. The cost of investments sold is the average cost of the aggregate holding of the specific investment sold. Dividend income is recorded on the ex-dividend date, and interest income is accrued as earned. Futures contracts are valued daily, with the resulting adjustments recorded as realized gains or losses arising from the daily settlement of the variation margin. Gains and losses related to forward contracts and options are recognized at the time the

contracts are settled. For investments in limited partnerships the System's share of the partnership's earnings or losses for the period are included in investment income.

3. Investment Policy. The System's defined benefit assets are pooled for investment purposes in a Pooled Assets portfolio. The allocation of investment assets within the Pooled Assets portfolio is approved by the Board of Trustees as outlined in the Board's Investment Policy. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the defined benefit plans.

4. Rate of Return. For the fiscal year ended June 30, 2023, the annual money-weighted rate of return for the Pooled Assets portfolio, net of investment expenses, was 6.07%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. For the VRS Pooled Assets portfolio, the fiscal year 2023 money-weighted rate of return differs only slightly from the time-weighted rate of return because the flow of cash for contributions and benefit payments is fairly consistent over the fiscal year.

G. CAPITAL ASSETS

Tangible capital assets are recorded at cost at the time of acquisition and are reported net of accumulated depreciation. The System capitalizes all capital assets that have a cost or value greater than \$5,000. Depreciation is computed on the straight-line basis over the estimated useful life of the depreciable capital assets, ranging from five years to 40 years. Intangible capital assets for the System include internal and external costs incurred during VRS' Application Development. These costs are being depreciated over the software's useful life, which is estimated at seven years. Intangible right to use assets are capitalized for a present value greater than \$50,000.

H. ACCUMULATED LEAVE AND DISABILITY CREDITS

Employees of the System participate in the Commonwealth's annual leave program and in its sick leave program or the Virginia Sickness and Disability Program (VSDP), which is administered

by the System. Additional information about VSDP is presented in Note 3. Unused annual leave may be accumulated and is paid at the time of permanent separation from service up to the maximum calendar-year limit. For vested employees who are not covered under VSDP, unused sick leave is paid at a rate of 25% of the amount accumulated, not to exceed \$5,000, at the time of permanent separation. VSDP-covered employees with unused disability credits converted from sick leave at the time of enrollment may be paid in the same manner as for non-VSDP employees or may convert these credits to service credit at a rate of 173 disability credits to one month of service.

The accrued liability for unused annual leave, sick leave and disability credits for System employees at June 30, 2023 and 2022, was computed using salary rates in effect at those times and represents annual and sick leave earned up to the allowable ceilings as well as unused, converted disability credits. This information is included in the Statement of Fiduciary Net Position: Pension and Other Employee Benefit Trust Funds.

I. ADMINISTRATIVE EXPENSES AND BUDGET

The Board of Trustees approves expenses related to the administration and management of the trust fund. These expenses are included in a budget prepared in compliance with the Commonwealth's biennial budgetary system (cash basis).

Appropriations are controlled at the program level and lapse at the end of the fiscal year.

Administrative expenses are funded from investment income and employer contributions. Expenses for goods and services received but not paid for prior to the System's fiscal year-end are accrued for financial reporting purposes in accordance with generally accepted accounting principles (GAAP). A reconciliation of the difference between the GAAP basis and budgeted basis is presented in the Schedule of Administrative Expenses following the Required Supplementary Schedules.

J. INVESTMENT INCOME ALLOCATION

Income earned on investments is distributed monthly to the VRS, SPORS, VaLORS and JRS retirement plans; the Group Life Insurance Fund;

the Retiree Health Insurance Credit Funds; the Disability Insurance Trust Fund; the Line of Duty Trust Fund; the Virginia Local Disability Program and the Custodial Plans. Distribution of investment income is based on the respective equity of each trust fund in the common investment pool.

The retirement plans distribute their cumulative investment income, net of administrative expenses, in the following manner:

- Investment income is distributed to each individual member contribution account based on a rate of 4.00% applied to each member's cumulative balance as of the close of the preceding fiscal year.
- The remaining portion is allocated monthly to the participating employers' retirement allowance accounts based on the ratio of their member account and employer account balances to the total of all such balances.

K. USE OF ESTIMATES

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make significant estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities as of the date of the financial statements, as well as the reported amounts of revenue and expenses during the reporting period. These estimates impact the reported values of assets, including investments. Actual results could differ from those estimates. See footnote 5.B.2 for additional information.

Investment rate of returns for the real assets and private equity programs, as well as the private investment partnerships portfolio, occasionally do not reflect managers' actual valuations of these investments as of June 30, 2023, because valuations of private assets have a timing lag behind other assets. In those circumstances, investment rate of returns are based on valuations as of March 31, 2023, adjusted for cash flows during the quarter that ended June 30, 2023.

L. SUMMARIZED COMPARATIVE DATA/ RECLASSIFICATIONS

The Basic Financial Statements include certain prior-year summarized comparative information in

total, but not at the level of detail required for a presentation in conformity with generally accepted accounting principles. Accordingly, such information should be read in conjunction with the System's financial statements for the year ended June 30, 2022, from which the summarized information was derived.

2. Pension Plans

A. PLAN DESCRIPTIONS

1. Establishment of the System. The Virginia Retirement System (the System) was established March 1, 1952, as the administrator of governmental retirement plans qualified under Section 401(a) of the Internal Revenue Code. Its mission is to provide retirement benefits for state employees, teachers, other eligible school employees and employees of political subdivisions that elect to participate in the System.

The System is comprised of the following pension trust funds:

- The Virginia Retirement System (VRS), established March 1, 1952, as the Virginia Supplemental Retirement System, was renamed VRS in 1990 in response to the Federal Tax Reform Act of 1986. VRS includes a single-employer plan for state employees, a multiple-employer cost-sharing plan for teachers (142 employers) and an agent multiple-employer plan for employees of participating political subdivisions (469 employers).
- State Police Officers' Retirement System (SPORS), established July 1, 1950, is a single-employer plan for state police officers.
- Virginia Law Officers' Retirement System (VaLORS), established October 1, 1999, is a single-employer plan for non-local government Virginia law officers other than state police.
- Judicial Retirement System (JRS), established July 1, 1970, is a single-employer plan for judges of a court of record or a district court of the state and other eligible judicial employees.

The System is required by law to use the plans' accumulated assets to pay benefits when due to eligible members, retirees and beneficiaries. Full-time permanent, salaried employees of participating employers are covered automatically under VRS, SPORS, VaLORS or JRS upon employment; some part-time permanent, salaried state employees also are covered under VRS. Information regarding the membership is presented in Figure 2.9. Teaching, research and administrative faculty of the state's public colleges and universities who elect an optional retirement plan, as well as permanent, salaried employees of the state's two public teaching hospitals, are not covered under the VRS retirement plans.

All full-time, salaried permanent (professional) employees of state agencies, public school divisions and employees of participating employers are automatically covered by a pension plan upon employment. Members qualify for retirement when they become vested and meet the age and service requirements for their plan, as shown in the following table. The System administers three different benefit structures for government employees: Plan 1, Plan 2 and the Hybrid Retirement Plan. Each of these is called a plan in statute and each has different provisions with a specific eligibility and benefit structure. These different benefit structures are set out in Figure 2.10.

FIGURE 2.9: ACTIVE, RETIRED AND TERMINATED MEMBERS AND BENEFICIARIES

AT JUNE 30

	VRS State Employees	VRS Teachers	VRS Political Subdivision Employees	SPORS	VaLORS	JRS	2023 Total	2022 Total
Retirees and Beneficiaries Receiving Benefits	62,292	102,346	63,631	1,533	5,853	553	236,208	231,523
Terminated Employees Entitled to Benefits But Not Receiving Them	13,855	32,153	16,535	165	884	2	63,594	60,856
Total	76,147	134,499	80,166	1,698	6,737	555	299,802	292,379
Active Members:								
Vested	51,099	107,957	68,137	1,528	4,011	369	233,101	232,249
Non-Vested	27,965	44,997	46,462	389	3,513	88	123,414	117,462
Total	79,064	152,954	114,599	1,917	7,524	457	356,515	349,711

2. Pension Plan Provisions and Requirements. Under Plan 1, Plan 2 and the Hybrid Retirement Plan, members are vested in the defined benefit pension after attaining five years of service credit. They become eligible to retire with an unreduced or reduced benefit when they meet the age and service requirements for their plan. The unreduced benefit is actuarially reduced to calculate the reduced benefit amount. A cost-of-living adjustment (COLA), based on changes in the Consumer Price Index for all Urban Consumers (CPI-U), is granted on July 1 of the second calendar year after retirement and is effective each July 1 thereafter, when provided.

Members not covered under the Virginia Sickness and Disability Program (VSDP) for state employees (see Note 3) or the Virginia Local Disability Program (VLDP) for local government employees are eligible to be considered for disability retirement.

If a member dies while in active service, his or her beneficiary or survivor may qualify for a death-in-service benefit. Provisions for the retirement plans are presented in Figure 2.10.

FIGURE 2.10 : RETIREMENT PLAN PROVISIONS

AS ESTABLISHED BY TITLE 51.1 OF THE *CODE OF VIRGINIA* (1950), AS AMENDED

RETIREMENT PLAN PROVISIONS		
PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
About Plan 1 Plan 1 is a defined benefit plan. The retirement benefit is based on a member's age, service credit and average final compensation at retirement using a formula.	About Plan 2 Plan 2 is a defined benefit plan. The retirement benefit is based on a member's age, service credit and average final compensation at retirement using a formula.	About the Hybrid Retirement Plan The Hybrid Retirement Plan combines the features of a defined benefit plan and a defined contribution plan. - The defined benefit is based on a member's age, service credit and average final compensation at retirement using a formula. - The benefit from the defined contribution component of the plan depends on the member and employer contributions made to the plan and the investment performance of those contributions. - In addition to the monthly benefit payment payable from the defined benefit plan at retirement, a member may start receiving distributions from the balance in the defined contribution account, reflecting the contributions, investment gains or losses and any required fees.
Eligible Members Members are in Plan 1 if their membership date is prior to July 1, 2010, they were vested before January 1, 2013, and they have not taken a refund.	Eligible Members Members are in Plan 2 if their membership date is from July 1, 2010, to December 31, 2013, and they have not taken a refund. Additionally, members are covered under Plan 2 if they have a membership date prior to July 1, 2010, but were not vested before January 1, 2013. Members covered under VaLORS, SPORS or VRS with enhanced hazardous duty benefits or the hazardous duty alternate option, and whose membership dates are on or after July 1, 2010, are in Plan 2 even if their membership dates are after December 31, 2013.	Eligible Members Members are in the Hybrid Retirement Plan if their membership date is on or after January 1, 2014. This includes: - State employees* - School division employees - Political subdivision employees* - Judges appointed or elected to an original term on or after January 1, 2014, regardless if vested to VRS Plan 1 or VRS Plan 2. - Members in Plan 1 or Plan 2 who elected to opt into the plan during the election window held January 1-April 30, 2014; the plan's effective date for opt-in members was July 1, 2014. * Non-Eligible Members Some members are not eligible to participate in the Hybrid Retirement Plan. They include: - Members of the State Police Officers' Retirement System (SPORS) - Members of the Virginia Law Officers' Retirement System (VaLORS) - Political subdivision members who are covered by enhanced benefits for hazardous duty employees Members eligible for an optional retirement plan (ORP) must elect the ORP or the Hybrid Retirement Plan. If these members are credited with service that was earned, purchased or granted prior to January 1, 2014, they are not eligible to elect the Hybrid Retirement Plan, and must select Plan 1 or Plan 2 (as applicable) or ORP.

FIGURE 2.10 : RETIREMENT PLAN PROVISIONS, cont.

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Retirement Contributions Members, excluding state elected officials, judges in Plan 1 and optional retirement plan participants, contribute 5% of their compensation each month to their member contribution account through a pretax salary reduction. Member contributions are tax-deferred until they are withdrawn as part of a retirement benefit or as a refund. The employer makes a separate actuarially determined contribution to VRS for all covered employees. VRS invests both member and employer contributions to provide funding for the future benefit payments.	Retirement Contributions Same as Plan 1.* <i>* Plan 2 judges and elected officials pay their own member contributions.</i>	Retirement Contributions <i>Defined Benefit Component:</i> Members contribute 4% of their compensation each month to their member contribution account through a pretax salary reduction. <i>Defined Contribution Component:</i> Members contribute 1% of their compensation each month to their account through a pretax salary reduction. In addition, 1% of the total actuarially determined employer contribution is a mandatory employer contribution to this component of the plan. Hybrid plan members may also elect to contribute an additional amount of up to 4% to a voluntary defined contribution plan. The voluntary component also has a mandatory employer match of 0.5% to 2.5% that is also deducted from the total actuarially determined employer contributions. Mandatory member contributions and the employer match on the mandatory and voluntary member contributions are recorded in a 401(a) account, along with the accrued net investment income. The voluntary member contributions and accrued net investment income are recorded in a 457(b) account. Members are responsible for investing their accounts using the various investment options that are available.
Service Credit Service credit includes active service. Members earn service credit for each month they are employed in a covered position.* It also may include credit for prior service the member has purchased or additional service credit the member was granted. A member's total service credit is one of the factors used to determine eligibility for retirement and to calculate the retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit. <i>* JRS members in Plan 1, Plan 2 and the Hybrid Retirement Plan earn more than one month for each month they are employed in a covered position.</i>	Service Credit Same as Plan 1.	Service Credit <i>Defined Benefit Component:</i> Under the defined benefit component of the plan, service credit includes active service. Members earn service credit for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional service credit the member was granted. A member's total service credit is one of the factors used to determine eligibility for retirement and to calculate the retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit. <i>Defined Contribution Component:</i> Under the defined contribution component, service credit is used to determine vesting for the employer contribution portion of the plan.
Vesting Vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members become vested when they have at least five years (60 months) of service credit. Vesting means members are eligible to qualify for retirement if they meet the age and service requirements for their plan. Members also must be vested to receive a full refund of their member contribution account balance if they leave employment and request a refund. Members are always 100% vested in the contributions that they make.	Vesting Same as Plan 1.	Vesting <i>Defined Benefit Component:</i> Defined benefit vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members are vested under the defined benefit component of the Hybrid Retirement Plan when they reach five years (60 months) of service credit. Plan 1 or Plan 2 members with at least five years (60 months) of service credit who opted into the Hybrid Retirement Plan remain vested in the defined benefit component. (Cont.)

FIGURE 2.10 : RETIREMENT PLAN PROVISIONS, cont.

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
		<i>Vesting, cont.</i> <i>Defined Contribution Component:</i> Defined contribution vesting refers to the minimum length of service a member needs to be eligible to withdraw the employer contributions from the defined contribution component of the plan. Members are always 100% vested in the contributions that they make. Upon retirement or leaving covered employment, a member is eligible to withdraw a percentage of employer contributions to the defined contribution component of the plan, based on service. • After two years, a member is 50% vested and may withdraw 50% of employer contributions. • After three years, a member is 75% vested and may withdraw 75% of employer contributions. • After four or more years, a member is 100% vested and may withdraw 100% of employer contributions. Distribution is not required by law until age 73.
Calculating the Benefit The Basic Benefit is calculated based on a formula using the member's average final compensation, a retirement multiplier and total service credit at retirement. It is one of the benefit payout options available to a member at retirement. An early retirement reduction factor is applied to the Basic Benefit if the member retires with a reduced retirement benefit or selects a benefit payout option other than the Basic Benefit.	Calculating the Benefit Same as Plan 1.	Calculating the Benefit <i>Defined Benefit Component:</i> Same as Plan 1. <i>Defined Contribution Component:</i> The benefit is based on contributions made by the member and any matching contributions made by the employer, plus net investment earnings on those contributions.
Average Final Compensation A member's average final compensation is the average of the 36 consecutive months of highest creditable compensation as a covered employee.	Average Final Compensation A member's average final compensation is the average of the 60 consecutive months of highest creditable compensation as a covered employee.	Average Final Compensation Same as Plan 2. It is used in the retirement formula for the defined benefit component of the plan.

FIGURE 2.10 : RETIREMENT PLAN PROVISIONS, cont.

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Service Retirement Multiplier VRS Plan 1: The retirement multiplier is a factor used in the formula to determine a final retirement benefit. The retirement multiplier for non-hazardous duty members is 1.70%. SPORS, sheriffs and regional jail superintendents: The retirement multiplier is 1.85%. VaLORS: The retirement multiplier is 1.70% or 2.00%. - Members hired before July 1, 2001, have a 1.70% multiplier and are eligible for a hazardous duty supplement. They also had the option to elect the 2.00% multiplier and no supplement. - Members hired or rehired on or after July 1, 2001, have 2.00% applied to hazardous duty service and 1.70% applied to non-hazardous duty service and no supplement. Political subdivision hazardous duty employees: The retirement multiplier for eligible political subdivision hazardous duty employees other than sheriffs and regional jail superintendents is 1.70% or 1.85% as elected by the employer. JRS Plan 1: If appointed or elected to an original term prior to January 1, 2013, the retirement multiplier is 1.70%. If appointed or elected to an original term between January 1, 2013, and December 31, 2013, the retirement multiplier is 1.70% on non-JRS service earned, purchased or granted before the date of appointment or election to an original term, and 1.65% on JRS service earned, purchased or granted on or after the date of appointment or election to an original term.	Service Retirement Multiplier VRS Plan 2: Same as Plan 1 for service earned, purchased or granted prior to January 1, 2013. For non-hazardous duty members, the retirement multiplier is 1.65% for service credit earned, purchased or granted on or after January 1, 2013. SPORS, sheriffs and regional jail superintendents: Same as Plan 1. VaLORS: The retirement multiplier is 2.00% applied to hazardous duty service and 1.70% applied to non-hazardous duty service and no supplement. Political subdivision hazardous duty employees: Same as Plan 1. JRS Plan 2: Same as Plan 1.	Service Retirement Multiplier <i>Defined Benefit Component:</i> VRS: The retirement multiplier for the defined benefit component is 1.00%. For members who opted into the Hybrid Retirement Plan from Plan 1 or Plan 2, the applicable multipliers for those plans will be used to calculate the retirement benefit for service credited in those plans. SPORS, sheriffs and regional jail superintendents: Not applicable. VaLORS: Not applicable. Political subdivision hazardous duty employees: Not applicable. JRS: The retirement multiplier for the defined benefit component is 1.00%, beginning on the date of appointment or election to an original term. The member will retain the applicable multiplier on any covered service outside JRS. <i>Defined Contribution Component:</i> Not applicable.
Normal Retirement Age VRS: Age 65. SPORS, VaLORS and political subdivision hazardous duty employees: Age 60. JRS: Age 65; mandatory retirement age is 73.	Normal Retirement Age VRS: Normal Social Security retirement age. SPORS, VaLORS and political subdivision hazardous duty employees: Same as Plan 1. JRS: Same as Plan 1.	Normal Retirement Age <i>Defined Benefit Component:</i> VRS: Same as Plan 2. SPORS, VaLORS and political subdivision hazardous duty employees: Not applicable. JRS: Same as Plan 1. <i>Defined Contribution Component:</i> Members are eligible to receive distributions upon leaving employment, subject to restrictions.

FIGURE 2.10 : RETIREMENT PLAN PROVISIONS, cont.

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Earliest Unreduced Retirement Eligibility VRS: Age 65 with at least five years (60 months) of service credit or at age 50 with at least 30 years of service credit.* SPORS, VaLORS and political subdivision hazardous duty employees: Age 60 with at least five years of service credit or age 50 with at least 25 years of service credit. JRS: Age 65 with at least five years of weighted service credit, or at age 60 with at least 30 years of weighted service credit. Service earned under JRS is weighted. The weighting factors for a judge appointed prior to July 1, 2010, are as follows: • 3.5 for JRS members appointed or elected to an original term before January 1, 1995. • 2.5 for JRS members appointed or elected to an original term on or after January 1, 1995, but before July 1, 2010. For members appointed or elected to an original term between July 1, 2010, and December 31, 2013, the weighting factors are: • 1.5 if appointed or elected to an original term before age 45. • 2.0 if appointed or elected to an original term between ages 45 and 54. • 2.5 if appointed or elected to an original term at age 55 or older. <i>* Some political subdivision employers require employees to reach age 55 with at least 30 years of service credit to be eligible for an unreduced retirement benefit.</i>	Earliest Unreduced Retirement Eligibility VRS: Normal Social Security retirement age with at least five years (60 months) of service credit or when their age and service equal 90. SPORS, VaLORS and political subdivision hazardous duty employees: Same as Plan 1. JRS: Age 65, with at least five years of weighted service credit, or age 60 with at least 30 years of weighted service credit. Service earned under JRS is weighted. The weighting factors under Plan 2 are: • 1.5 for JRS members appointed or elected to an original term before age 45. • 2.0 for JRS members appointed or elected to an original term between ages 45 and 54. • 2.5 for JRS members appointed or elected to an original term at age 55 or older.	Earliest Unreduced Retirement Eligibility <i>Defined Benefit Component:</i> VRS: Same as Plan 2. SPORS, VaLORS and political subdivision hazardous duty employees: Not applicable. JRS: Same as Plan 2. <i>Defined Contribution Component:</i> Members are eligible to receive distributions upon leaving employment, subject to restrictions.
Earliest Reduced Retirement Eligibility VRS: Age 55 with at least five years (60 months) of service credit or age 50 with at least 10 years of service credit. SPORS, VaLORS and political subdivision hazardous duty employees: Age 50 with at least five years of service credit. JRS: Age 55, with at least five years of service credit.	Earliest Reduced Retirement Eligibility VRS: Age 60 with at least five years (60 months) of service credit. SPORS, VaLORS and political subdivision hazardous duty employees: Same as Plan 1. JRS: Same as Plan 1.	Earliest Reduced Retirement Eligibility <i>Defined Benefit Component:</i> VRS: Same as Plan 2. SPORS, VaLORS and political subdivision hazardous duty employees: Not applicable. JRS: Same as Plan 1. <i>Defined Contribution Component:</i> Members are eligible to receive distributions upon leaving employment, subject to restrictions.

FIGURE 2.10 : RETIREMENT PLAN PROVISIONS, cont.

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Cost-of-Living Adjustment (COLA) in Retirement The Cost-of-Living Adjustment (COLA) matches the first 3% increase in the Consumer Price Index for all Urban Consumers (CPI-U) and half of any additional increase (up to 4%) up to a maximum COLA of 5%. <i>Eligibility:</i> For members who retire with an unreduced benefit or with a reduced benefit with at least 20 years of service credit, the COLA will go into effect on July 1 after one full calendar year from the retirement date. For members who retire with a reduced benefit and who have fewer than 20 years of service credit, the COLA will go into effect on July 1 after one calendar year following the unreduced retirement eligibility date. <i>Exceptions to COLA Effective Dates:</i> The COLA is effective July 1 following one full calendar year (January 1 to December 31) from the date the monthly benefit begins, under any of the following circumstances: • The member is within five years of qualifying for an unreduced retirement benefit as of January 1, 2013. • The member retires directly from short-term or long-term disability under the Virginia Local Disability Program (VLDP) or employer opt-out plan. • The member is involuntarily separated from employment for causes other than job performance or misconduct and is eligible to retire under the Workforce Transition Act or the Transitional Benefits Program. • The member dies in service and the member's survivor or beneficiary is eligible for a monthly death-in-service benefit.	Cost-of-Living Adjustment (COLA) in Retirement The Cost-of-Living Adjustment (COLA) matches the first 2% increase in the CPI-U and half of any additional increase (up to 2%), for a maximum COLA of 3%. <i>Eligibility:</i> Same as Plan 1. <i>Exceptions to COLA Effective Dates:</i> Same as Plan 1.	Cost-of-Living Adjustment (COLA) in Retirement <i>Defined Benefit Component:</i> Same as Plan 2. <i>Defined Contribution Component:</i> Not applicable. <i>Eligibility:</i> Same as Plan 1. <i>Exceptions to COLA Effective Dates:</i> The COLA is effective July 1 following one full calendar year (January 1 to December 31) from the date the monthly benefit begins, under any of the following circumstances: • The member is within five years of qualifying for an unreduced retirement benefit as of January 1, 2013. • The member retires directly from short-term or long-term disability under the Virginia Local Disability Program (VLDP) or employer opt-out plan. • The member is involuntarily separated from employment for causes other than job performance or misconduct and is eligible to retire under the Workforce Transition Act or the Transitional Benefits Program. • The member dies in service and the member's survivor or beneficiary is eligible for a monthly death-in-service benefit.
Disability Coverage For members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.70% on all service, regardless of when it was earned, purchased or granted. Most state employees are covered under the Virginia Sickness and Disability Program (VSDP) and are not eligible for disability retirement. VSDP members are subject to a one-year waiting period before becoming eligible for non-work-related disability benefits.	Disability Coverage For members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.65% on all service, regardless of when it was earned, purchased or granted. Most state employees are covered under the Virginia Sickness and Disability Program (VSDP) and are not eligible for disability retirement. VSDP members are subject to a one-year waiting period before becoming eligible for non-work-related disability benefits.	Disability Coverage Employees of political subdivisions and school divisions (including Plan 1 and Plan 2 opt-ins) participate in the Virginia Local Disability Program (VLDP) unless their local governing body provides an employer-paid comparable program for its members. State employees (including Plan 1 and Plan 2 opt-ins) participating in the Hybrid Retirement Plan are covered under the Virginia Sickness and Disability Program (VSDP), and are not eligible for disability retirement. Hybrid members (including Plan 1 and Plan 2 opt-ins) covered under VSDP or VLDP are subject to a one-year waiting period before becoming eligible for non-work-related disability benefits.

FIGURE 2.10 : RETIREMENT PLAN PROVISIONS, cont.

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Purchase of Prior Service Members may be eligible to purchase service from previous public employment, active duty military service, an eligible period of leave or VRS refunded service as service credit in their plan. Prior service credit counts toward vesting, eligibility for retirement and the health insurance credit, if offered by the employer. Only active members are eligible to purchase prior service. Members also may be eligible to purchase periods of leave without pay.	Purchase of Prior Service Same as Plan 1.	Purchase of Prior Service <i>Defined Benefit Component:</i> Same as Plan 1, with the following exception: Hybrid Retirement Plan members are ineligible for ported service. <i>Defined Contribution Component:</i> Not applicable.

B. CONTRIBUTIONS

Members and employers are required to contribute to the retirement plans as provided by Title 51.1 of the *Code of Virginia* (1950), as amended. The member contribution is 5.00% of compensation, contributed by members or employers each month to members' contribution accounts. Members leaving covered employment are eligible to request a refund of their member contribution account balance. Vested members and those involuntarily separated from employment for causes other than job performance or misconduct are eligible for a full refund. Non-vested members are eligible for a refund of their account balance, excluding any member contributions made by employers to their accounts after July 1, 2010, and the interest on those contributions.

Each participating employer is required to contribute the remaining amounts necessary to fund the pension plans using the entry age normal actuarial cost method adopted by the Board of Trustees. The System's former actuary, Cavanaugh Macdonald Consulting LLC, computed the amount of contributions to be provided by state agency, state police and Virginia law officer employers; each participating political subdivision employer; and state judicial employers. For state employees and teachers, the General Assembly-approved rate was greater than the actuarially determined rate.

The contribution rates for fiscal years 2023 and 2022 were based on the actuary's valuation as of June 30, 2021 and June 20, 2019, respectively.

As shown in Figure 2.11, contributions to the pension plans for the fiscal years ended June 30, 2023 and 2022, totaled \$4,424.2 million and \$4,520.9 million, respectively, in accordance with statutory requirements.

In June 2023, the Commonwealth made a special contribution of approximately \$232.9 million, of which \$73.0 million was allocated to the VRS State plan, \$147.5 million to the VRS Teacher plan, \$2.1 million to JRS, \$3.7 million to SPORS, and \$6.6 million to VaLORS. This special payment was authorized by a budget amendment included in Chapter 2 of the Acts of Assembly of 2022, Special Session I, and is classified as a non-employer contribution for the VRS Teacher plan and a special employer contribution for the other plans.

Employer contributions to the VRS cost-sharing pool for teachers in the fiscal year ended June 30, 2023, represented 16.62% of covered payrolls. This was the General Assembly-approved rate and was the same as the 16.62% contributed in the fiscal year ended June 30, 2022. Employer contributions for state employees represented 14.46% of covered payrolls and were based on the General Assembly-approved rate. Each political subdivision's contributions ranged from zero (0.00%) to 42.89% of covered payrolls. State employer contributions to SPORS, VaLORS and JRS represented 29.98%, 24.60% and 30.67%, respectively, for the fiscal year. For state and teacher employers and a majority of the political subdivisions, these rates reflected the normal cost and the amortization of a

portion of the unfunded actuarial accrued liability of each of the plans based on the June 30, 2021, actuarial valuation. For a small number of political subdivisions, the rates reflect modified actuarial

assumptions. This is discussed further in Note 13. Member contributions for both years represented 5.00% of covered payrolls.

FIGURE 2.11: MEMBER AND EMPLOYER CONTRIBUTIONS

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

Fiscal Year	System/Plan	Member Contributions	Employer Contributions	Special Employer	Non-employer Contributing Entity	Total
2023	VRS – State	\$ 234,317	\$ 683,049	\$ 73,052	\$ —	\$ 990,418
	VRS – Teacher	465,101	1,576,963	—	147,457	2,189,521
	VRS – Political Subdivisions	302,890	736,843	—	—	1,039,733
	Total VRS	1,002,308	2,996,855	73,052	147,457	4,219,672
	JRS	2,320	25,705	2,083	—	30,108
	SPORS	7,952	46,936	3,653	—	58,541
	ValORS	18,769	90,433	6,629	—	115,831
	Total	\$ 1,031,349	\$ 3,159,929	\$ 85,417	\$ 147,457	\$ 4,424,152
2022	Total	\$ 959,874	\$ 2,862,394	\$ 256,251	\$ 442,371	\$ 4,520,890

C. EMPLOYERS' NET PENSION LIABILITY: PENSION PLANS

The net pension liabilities for the VRS pension plans were measured as of June 30, 2023. The total pension liability was determined based on an actuarial valuation as of June 30, 2022, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2023. The

actuarial assumptions include PUB2010 public sector mortality tables. For future mortality improvements, replace load with a modified Mortality Improvement Scale MP-2020. This change is based on plan experience for the four-year period July 1, 2016, through June 30, 2020, and is reflected in the development of the June 30, 2023, total pension liability.

SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY BY SYSTEM AND PLAN

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Employers' Net Pension Liability/ (Asset) (a-b)	Plan Fiduciary Net Position as a % of the Total Pension Liability (b/a)	Covered Payroll (c)	Net Pension Liability/ (Asset) as a % of the Covered Employee Payroll (a-b)/(c)
Virginia Retirement System:						
State	\$ 28,411,528	\$ 23,351,827	\$ 5,059,701	82.19%	\$ 5,069,435	99.81%
Teacher	57,574,609	47,467,405	10,107,204	82.45%	9,970,623	101.37%
Political Subdivisions*	29,704,278	27,308,038	2,396,240	91.93%	6,337,774	37.81%
Total Virginia Retirement System	115,690,415	98,127,270	17,563,145		21,377,832	
State Police Officers' Retirement System	1,462,948	1,079,755	383,193	73.81%	156,707	244.53%
Virginia Law Officers' Retirement System	2,577,980	1,931,061	646,919	74.91%	369,142	175.25%
Judicial Retirement System	767,857	677,958	89,899	88.29%	84,059	106.95%
Grand Total	\$ 120,499,200	\$ 101,816,044	\$ 18,683,156		\$ 21,987,739	

* Political subdivision data is from the consolidated report provided by Gabriel, Roeder, Smith and Company.

SCHEDULE OF ACTUARIAL METHODS AND SIGNIFICANT ASSUMPTIONS – PENSION PLANS

	VRS					
	State	Teacher	Political Subdivisions	SPORS	ValORS	JRS
Valuation Date	June 30, 2022	June 30, 2022	June 30, 2022	June 30, 2022	June 30, 2022	June 30, 2022
Actuarial Cost Method	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal
Actuarial Assumptions:						
Investment Rate of Return*	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%
Projected Salary Increases*						
State Employees/ Teachers	3.50% to 5.35%	3.50% to 5.95%	N/A	3.50% to 4.75%	3.50% to 4.75%	4.00%
Political Subdivisions – Non-Hazardous Duty Employees	N/A	N/A	3.50% to 5.35%	N/A	N/A	N/A
Political Subdivisions – Hazardous Duty Employees	N/A	N/A	3.50% to 4.75%	N/A	N/A	N/A
Post-Retirement Benefit Increases**						
Plan 1	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Plan 2	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%
Hybrid Retirement Plan	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%

* Includes inflation at 2.50%.

** Compounded annually.

Note: Actuarial assumptions and methods were based on an analysis of plan experience for the four-year period July 1, 2016, through June 30, 2020, and were used for the June 30, 2022, valuation. The mortality rates used are based on the PUB2010 table projected with a modified mortality improvement scale MP-2020. Additional information regarding mortality rate assumptions and experience studies can be found in the Actuarial Assumptions and Methods presentation in the Actuarial Section.

D. CHANGES IN DISCOUNT RATE

The discount rate used to measure the total pension liability was 6.75%. The projection of cash flows used to determine the discount rate assumed that contributions from participating employers will be based on the actuarially determined rates according to the Board's funding policy, which certifies the required rates under Title 51.1 of the *Code of Virginia* (1950), as amended. Based on those assumptions, the fiduciary net position was projected to be available to make all of the 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 the projected benefit payments to determine the total pension liability. In accordance with GASB Statement No. 67, regarding the disclosure of the sensitivity of the net pension liability to changes in the discount rate, the table below presents the employers' net pension liability for each of the plans calculated using the discount rate of 6.75%, as well as what the employers' net pension liability would be if it were calculated using a discount rate that is 1.00% lower (5.75%) or 1.00% higher (7.75%) than the current rate.

SCHEDULE OF IMPACT OF CHANGES IN DISCOUNT RATE – PENSION PLANS

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

System/Plan	Net Pension Liability		
	1.00% Decrease (5.75%)	Current Discount Rate (6.75%)	1.00% Increase (7.75%)
Virginia Retirement System			
State	\$ 8,431,527	\$ 5,059,701	\$ 2,237,742
Teacher	17,916,469	10,107,204	3,687,347
Political Subdivisions	6,319,819	2,396,240	(819,270)
Total Virginia Retirement System	\$ 32,667,815	\$ 17,563,145	\$ 5,105,819
State Police Officers' Retirement System	570,303	383,193	227,459
Virginia Law Officers' Retirement System	989,007	646,919	367,473
Judicial Retirement System	164,622	89,899	25,512
Grand Total	\$ 34,391,747	\$ 18,683,156	\$ 5,726,263

3. Other Employee and Post-Employment Benefit Plans (OPEBs)

A. PLAN DESCRIPTIONS

The System administers other employee and post-employment benefit plans for active, deferred and retired members of VRS, SPORS, VaLORS and JRS. These plans are the Group Life Insurance Program, the Retiree Health Insurance Credit Program, the Virginia Sickness and Disability Program (VSDP) and the Virginia Local Disability Program (VLDP). The System also handles the administration of the Line of Duty Act Fund.

Contributions and payments for other employee benefit plans for active members occur on a current basis; therefore, the System does not record the net position of these plans and is not required to report their funding progress and employer contributions. However, the System does record plan net position and reports funding progress and employer contributions for post-employment benefit plans. This information is provided in the Required Supplementary Schedules following the Notes to Financial Statements. Additional information also is presented in the Statistical Section.

1. Group Life Insurance Program. The VRS Group Life Insurance Program is a cost-sharing, multiple-employer plan. Members whose employers participate in the Group Life Insurance Program are covered automatically under the Basic Group Life Insurance Program upon employment. They also are eligible to elect additional coverage for themselves as well as a spouse or dependent children through the Optional Group Life Insurance Program.

Participating employers and covered employees are required by Title 51.1 of the *Code of Virginia* (1950), as amended, to contribute to the cost of group life insurance benefits. Employers may assume employees' contributions. The premium contributions collected during members' active careers, less the amount required to cover current life insurance premiums and claims plus administrative and other expenses, are retained in the Group Life Insurance Advance Premium Deposit Reserve to fund the claims for eligible retired and deferred members. Approximately 346,624 active members and 227,538 retirees were covered under the Basic Group Life Insurance Program at June 30, 2023.

For members who elect optional group life insurance coverage, the insurer bills employers directly for the premiums. Employers deduct the premiums from members' paychecks and pay the premiums to the insurer. Premiums are based on members' ages and are approved by the Board of Trustees. Any differences and adjustments are settled between the employer and the insurer. Approximately 70,498 active members and 3,460 retirees were covered under the Optional Group Life Insurance Program at June 30, 2023.

In June 2023, the Commonwealth made a special contribution of approximately \$10.1 million to the Group Life Insurance plan. This special payment was authorized by Chapter 2 of the Acts of Assembly of 2022, Special Session I.

2. Retiree Health Insurance Credit Program. The Retiree Health Insurance Credit Program is composed of a single-employer plan for state

employees; a cost-sharing, multiple-employer plan for teachers; three cost-sharing, multiple-employer plans for constitutional officers, social services employees and registrars; and an agent, multiple-employer plan for political subdivisions electing coverage. It provides eligible retirees a tax-free reimbursement for health insurance premiums for single coverage under qualifying health plans, including coverage under a spouse's plan, not to exceed the amount of the monthly premium or the maximum credit, whichever is less. Premiums for health plans covering specific conditions are ineligible for reimbursement. Employers are required by Title 51.1 of the *Code of Virginia* (1950), as amended, to contribute to the program. The amount is financed based on employer contribution rates determined by the System's actuary.

In June 2023, the Commonwealth made a special contribution of approximately \$32.3 million to the Health Insurance Credit Plans, of which \$28.3 million was applied to the VRS State, Constitutional Officers, Social Services and Registrars plan; and \$4.0 million was applied to the VRS Teacher plan. This special payment was authorized by Chapter 2 of the Acts of Assembly of 2022, Special Session I.

There were approximately 323,330 active members in the program and 140,669 retirees receiving benefits under the program at June 30, 2023.

3. Virginia Sickness and Disability Program. The Virginia Sickness and Disability Program (VSDP) is a single-employer plan. It provides state employees with sick, family and personal leave, and short-term and long-term disability benefits. State agencies are required by Title 51.1 of the *Code of Virginia* (1950), as amended, to contribute to the cost of providing long-term disability benefits and administering the program. Approximately 82,381 members were covered under VSDP at June 30, 2023, and approximately 2,290 former members were receiving benefits from the program during the fiscal year.

4. Virginia Local Disability Program. The Virginia Local Disability Program (VLDP) is composed of two multiple-employer cost-sharing pools, one for

teachers and one for employees of political subdivisions. It provides eligible employees with short-term and long-term disability benefits. Local government employers are required by Title 51.1 of the *Code of Virginia* (1950), as amended, to provide long-term disability benefits for their hybrid plan employees, either through a local plan or through VLDP. Approximately 32,774 members were covered under VLDP at June 30, 2023, and 139 former members received benefits from the program during the fiscal year.

5. Commonwealth of Virginia (COV) Voluntary Group Long Term Care Insurance Program. The COV Voluntary Group Long Term Care Insurance Program is a participant-paid long-term care insurance program for eligible VRS members, retirees and family members. The program provides a maximum monthly allowance for covered long-term care expenses such as nursing home care, adult day care, in-home care or assistance with other activities of daily living. Approximately 14,190 members, retirees and their eligible family members were covered under the program at June 30, 2023.

6. Line of Duty Act Program. The Line of Duty Act Program is a cost-sharing, multiple-employer plan. It provides death and health insurance reimbursement benefits to eligible state employees and local government employees, including volunteers, who die or become disabled as a result of the performance of their duties as public safety officers. Beginning July 1, 2017, the System was responsible for the program and for managing the assets of the employers participating in the program. Participating employers made contributions to the program beginning in fiscal year 2012. The employer contribution rate was determined by the System’s actuary using the anticipated program costs and the number of covered individuals associated with all participating employers. Provisions for other employee benefit and post-employment benefit plans are presented in Figure 2.12.

There were approximately 27,823 members in the Line of Duty Act Program at June 30, 2023. Benefit payments were made to 820 beneficiaries during the fiscal year.

SCHEDULE OF PARTICIPATING EMPLOYERS: OTHER POST-EMPLOYMENT BENEFIT (OPEB) PLANS

AT JUNE 30, 2023

OPEB Plan	Number of Participating Employers			
	State	Teachers	Political Subdivisions	Total
Group Life Insurance	224	142	550*	916
Retiree Health Insurance Credit	225	142	232*	599
Disability Insurance Trust Fund	225	—	—	225
Virginia Local Disability Program	—	35	215*	250
Line of Duty Act Trust Fund	71	—	58	129

* Also includes school division non-teacher employees, as applicable.

FIGURE 2.12: OTHER EMPLOYEE BENEFIT AND POST-EMPLOYMENT BENEFIT PLAN PROVISIONS

AS ESTABLISHED BY TITLE 51.1 OF THE *CODE OF VIRGINIA* (1950), AS AMENDED

	Eligible Employees	Coverage
VRS Group Life Insurance Program: Basic Coverage	The VRS Group Life Insurance Program was established July 1, 1960, for state employees, teachers and employees of political subdivisions that elect the program, including the following employers that do not participate in VRS for retirement: City of Richmond, City of Portsmouth, City of Roanoke, City of Norfolk and Roanoke City School Board. Basic group life insurance coverage is automatic upon employment. Coverage ends for employees who leave their position before retirement eligibility or who take a refund of their member contributions and accrued interest.	• Natural death benefit equal to the employee's compensation rounded to the next highest thousand and then doubled. • Accidental death benefit, which is double the natural death benefit. • Accidental dismemberment benefit, seatbelt benefit, repatriation benefit, felonious assault benefit and accelerated death benefit option. • Continuation of death benefit and accelerated death benefit option for employees who retire or who have met the age and service requirements for retirement upon separation from employment. Coverage begins to reduce by 25% on the January 1 following one calendar year after employment ends and reduces by 25% each January 1 until it reaches 25% of its original value. If a member has at least 30 years of service credit, coverage cannot reduce below \$8,984. This minimum will be increased annually based on the VRS Plan 2 cost-of-living adjustment calculation. The member may end employment and defer retirement until a later date; however, the group life insurance will begin reducing based on the last month of employment.
Optional Group Life Insurance Program	Employees covered under the VRS Group Life Insurance Program are eligible to elect additional coverage for themselves as well as a spouse or dependent children through the Optional Group Life Insurance Program. Employees pay the premiums through payroll deduction. Spousal coverage ends if the employee's coverage ends or the couple divorce. Coverage for dependent children ends if the employee's coverage ends or when the children marry, become self-supporting, reach age 21 or reach age 25 as a dependent attending college full time. Coverage continues for dependent unmarried children who are disabled. Employees who meet qualifications for retirement may continue a portion of their coverage upon leaving employment.	The program provides natural death and accidental death or dismemberment coverage: • Employees select one, two, three or four times their compensation, not to exceed \$800,000. • Spouses may be covered for up to half the maximum amount of the employees' coverage, not to exceed \$400,000. Dependent children who are at least 15 days old may be covered for \$10,000, \$20,000 or \$30,000, depending on the option employees select. • Accidental death and dismemberment coverage ends upon retirement. A retired employee may elect within 31 days of the last day of the month in which he or she leaves employment to continue optional life coverage provided he or she has 60 months of coverage prior to leaving service. As a retiree, the participant can elect either one or two times his or her compensation, not to exceed \$300,000 or the amount of coverage in place when the employee left service. • Coverage begins to reduce beginning with the retiree's normal retirement age under his or her plan and all coverage ends at age 80. Upon retirement, spouse coverage can continue at one-half the amount of the retiree's coverage and dependent coverage can continue at the same level previously covered prior to retirement. Premiums for coverage are at the same rates as active employees. If the retiree previously had coverage exceeding \$300,000, he or she can elect to convert the excess over this amount to an individual policy with individual rates. • If an employee terminates with fewer than 60 months of optional life coverage, he or she may convert the policy and any spouse and/or dependent coverage to an individual policy (without evidence of insurability if done within 31 days of termination). However, it may be at higher premiums than those paid by active employees.

FIGURE 2.12: OTHER EMPLOYEE BENEFIT AND POST-EMPLOYMENT BENEFIT PLAN PROVISIONS, cont.

Retiree Health Insurance Credit Program	The Retiree Health Insurance Credit Program was established January 1, 1990, for retired state employees covered under VRS, SPORS, VaLORS and JRS who retire with at least 15 years of service credit. The program was opened to teachers and eligible employees of participating political subdivisions on July 1, 1993. The health insurance credit is a tax-free reimbursement in an amount set by the General Assembly for each year of service credit against qualified health insurance premiums retirees pay for single coverage, excluding any portion covering a spouse or dependents. The credit cannot exceed the amount of the premiums and ends upon the retiree's death.
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Health Insurance Credit Dollar Amounts at Retirement

	Amount per Year of Service	Maximum Credit per Month**
State employees*	\$4	No Maximum
Teachers and school administrators	\$4	No Maximum
General registrars and their employees, constitutional officers and their employees, and local social service employees	\$1.50	\$45
General registrars and their employees, constitutional officers and their employees and local social service employees, if the political subdivision elects the \$1.00 enhancement	\$2.50	\$75
Non-teacher school division employees	\$1.50	No Maximum
Non-teacher school division employees, if the political subdivision has elected the \$1.00 enhancement	\$2.50	No Maximum
Other political subdivision employees as elected by the employer	\$1.50	\$45

Health Insurance Credit Dollar Amounts at Disability Retirement and for VSDP and VLDP Long-Term Disability

Employees who retire on disability or go on long-term disability under the Virginia Sickness and Disability Program (VSDP) or the Virginia Local Disability Program (VLDP) are eligible for the health insurance credit.***

Eligible Employees	Coverage
State employees other than state police	\$120 per month or \$4 per year of service credit per month, whichever is higher. No maximum.
State police officers	Non-work-related disability: \$120 per month or \$4 per year of service credit per month, whichever is higher. Work-related disability: No health insurance credit for premiums qualified under the Virginia Line of Duty Act; may receive the credit for premiums paid for other qualified health plans.
General registrars and their employees; constitutional officers and their employees; local social service employees	\$1.50 per year of service; \$45 maximum credit per month.
General registrars and their employees; constitutional officers and their employees; local social service employees if political subdivision elects the \$1.00 enhancement	\$2.50 per year of service; \$75 maximum credit per month.
Teachers and school administrators	Either (a) \$4 multiplied by twice the amount of service credit per month; or (b) \$4 multiplied by the amount of service earned had the employee been active until age 60 per month, whichever is lower. No maximum.
Non-teacher school division employees	\$1.50 x the smaller of (a) twice the amount of service credit or (b) the amount of service that would have been earned had the member remained an active employee until age 60. No maximum.
Non-teacher school division employees, if the school division elects the \$1.00 enhancement	\$2.50 x the smaller of (a) twice the amount of service credit or (b) the amount of service that would have been earned had the member remained an active employee until age 60. No maximum.
Political subdivision employees as elected by the employer	\$45 per month. No health insurance credit premiums for premiums qualified under LODA. May receive the credit for premiums paid for other qualified health plans.

* For JRS employees, the calculation is based on weighted service.

** Not to exceed the individual premium amount.

*** Not to exceed the individual premium amount. Employees who retire from being on long-term disability under VSDP or VLDP must have at least 15 years of service credit to qualify for the health insurance credit as a retiree.

FIGURE 2.12: OTHER EMPLOYEE BENEFIT AND POST-EMPLOYMENT BENEFIT PLAN PROVISIONS, cont.

	Eligible Employees	Coverage
Virginia Sickness and Disability Program (VSDP)	VSDP, also known as the Disability Insurance Trust Fund, was established January 1, 1999, to provide short-term and long-term disability benefits for non-work-related and work-related disabilities. Eligible employees are enrolled automatically upon employment. They include: • Full-time and part-time permanent, salaried state employees covered under VRS, SPORS and VaLORS (members new to VaLORS following its creation on October 1, 1999, have been enrolled since the inception of VSDP). • State employees hired before January 1, 1999, who elected to transfer to VSDP rather than retain their eligibility to be considered for VRS disability retirement.	• Sick, family and personal leave. • Short-term disability benefit beginning after a seven-calendar-day waiting period from the first day of disability. The benefit provides income replacement beginning at 100% of the employee's pre-disability income, reducing to 80% and then 60%. • Long-term disability benefit beginning after 125 workdays of short-term disability and continuing until the employee reaches his or her normal retirement age. The benefit provides income replacement of 60% of the employee's pre-disability income. If an employee becomes disabled within five years of his or her normal retirement age, the employee will receive up to five years of VSDP benefits, provided he or she remains medically eligible. • Income replacement adjustment to 80% for catastrophic conditions. • VSDP Long-Term Care Plan, a self-funded program that assists with the cost of covered long-term care services.

Notes:

- Employees hired or rehired on or after July 1, 2009, must satisfy eligibility periods before becoming eligible for non-work-related short-term disability coverage and certain income-replacement levels.
- A state employee who is approved for VSDP benefits on or after the date that is five years prior to his or her normal retirement date is eligible for five years of VSDP benefits.
- Employees on work-related short-term disability receiving only a workers' compensation payment may be eligible to purchase service credit for this period if retirement contributions are not being withheld from the workers' compensation payment. The rate will be based on 5.00% of the employee's compensation.
- Public college and university faculty members who elect the VRS defined benefit plan may participate in VSDP or their institution's disability program, if offered. If the institution does not offer the program or the faculty member does not make an election, the member is enrolled in VSDP.

FIGURE 2.12: OTHER EMPLOYEE BENEFIT AND POST-EMPLOYMENT BENEFIT PLAN PROVISIONS, cont.

	Eligible Employees	Coverage
Virginia Local Disability Program (VLDP)	VLDP was implemented January 1, 2014, to provide short-term and long-term disability benefits for non-work-related and work-related disabilities. Eligible employees are enrolled automatically upon employment, unless their employer has elected to provide comparable coverage. Eligible employees include: • Teacher or other professional employee of a local public school division. • General employee of a VRS-participating political subdivision such as a city, county, town, authority or commission. • Local law enforcement officer, firefighter or emergency medical technician if the employer does not provide enhanced hazardous duty benefits.	Short-term disability benefit beginning after a seven-calendar day waiting period from the first day of disability. Employees become eligible for non-work-related short-term disability coverage after one year of continuous participation in VLDP with their current employer. • Eligibility for work-related short-term disability coverage begins upon employment. • During the first five years of continuous participation in VLDP with their current employer, employees are eligible for 60% of their pre-disability income if they go on non-work-related or work-related short-term disability. • Once the eligibility period is satisfied, employees are eligible for higher income-replacement levels. • VLDP long-term benefit beginning after 125 workdays of short-term disability. Members are eligible if they are unable to work at all or are working fewer than 20 hours a week. • Members approved for long-term disability will receive 60% of their pre-disability income. If approved for work-related long-term disability, the VLDP benefit will be offset by the workers' compensation benefit. Members will not receive a VLDP benefit if their workers' compensation is greater than the VLDP benefit amount. • Members approved for short-term or long-term disability at age 60 or older will be eligible for a benefit, provided they remain medically eligible. • VLDP Long-Term Care Plan, a self-funded program that assists with the cost of covered long-term care services.
Commonwealth of Virginia (COV) Voluntary Group Long Term Care Insurance Program	The following members and retirees between the ages of 18 and 75 are eligible to apply: • State employees or faculty members of a Virginia public institution of higher education who work at least 20 hours a week (VRS membership is not required). • Employees of school divisions and political subdivisions who work at least 20 hours per week and whose employers have elected to participate in the program (VRS membership is not required). • Vested deferred members (their employers are not required to have elected the program). • Retirees receiving a VRS-administered benefit. • Retirees of Virginia public colleges and universities. • Select family members of eligible members.	The program provides assistance with covered long-term care expenses at group rates. Participants pay the premium directly to Genworth.

FIGURE 2.12: OTHER EMPLOYEE BENEFIT AND POST-EMPLOYMENT BENEFIT PLAN PROVISIONS, cont.

	Eligible Employees	Coverage
Line of Duty Act (LODA) Program	Paid employees and volunteers in hazardous duty positions in Virginia localities, including hazardous duty employees covered under VRS, SPORS and VaLORS.	Coverage provides death and health insurance benefits. The LODA death benefit is a one-time payment made to the beneficiary or beneficiaries. Amounts vary as follows: • \$100,000 when a death occurs as the direct or proximate result of performing duty as of January 1, 2006, or after. • \$25,000 when the cause of death is attributed to one of the applicable presumptions and occurred earlier than five years after the retirement date. • An additional \$20,000 benefit is payable when certain members of the National Guard and U.S. military reserves are killed in action in any armed conflict on or after October 7, 2001. The System is responsible for managing the assets of the Line of Duty Act Fund.
Cost-of-Living Adjustments (COLA) for OPEB Plans	• VRS Group Life Insurance Program, Basic Coverage: If a member has at least 30 years of service credit, coverage cannot reduce below an \$8,000 minimum established in 2015. This minimum will be increased annually based on the VRS Plan 2 COLA calculation. • Optional Group Life Insurance: The actuary reviews the maximum coverage levels every five years for possible increases. • Virginia Local Disability Program (VLDP): For participating members taking a service retirement immediately when their period of long-term disability ends, the COLA may be increased annually by an amount recommended by the actuary and approved by the board, from the date of the commencement of the disability to the date of retirement. • Virginia Sickness and Disability Program (VSDP): ◦ During periods an employee receives long-term disability benefits, the COLA may be increased annually by an amount recommended by the actuary and approved by the Board. ◦ For participating full-time employees taking a service retirement, the COLA may be increased annually by an amount recommended by the actuary and approved by the Board, from the date of the commencement of the disability to the date of retirement. ◦ For participating full-time employees receiving supplemental (work-related) disability benefits, the COLA may be increased annually by an amount recommended by the actuary and approved by the Board, from the date of the commencement of the disability to the date of retirement.	

B. EMPLOYERS' NET OPEB LIABILITY – OTHER POST-EMPLOYMENT BENEFIT PLANS

The net OPEB liabilities for the OPEB plans were measured as of June 30, 2023. The total OPEB liability was determined based on an actuarial valuation as of June 30, 2022, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2023. The actuarial assumptions include PUB2010 public sector mortality tables. For future mortality improvements, replace load with a modified

Mortality Improvement Scale MP-2020. This change is based on plan experience for the four-year period July 1, 2016, through June 30, 2020, and is reflected in the development of the June 30, 2023, total OPEB liability.

Actuarial methods and assumptions for the OPEB plans are presented in the Actuarial Section. The following schedule presents selected information as of the latest actuarial valuation:

SCHEDULE OF EMPLOYERS' NET OPEB LIABILITY BY PROGRAM AND PLAN

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Employers' Net OPEB Liability/ (Asset) (a-b)	Plan Fiduciary Net OPEB as a % of the Total OPEB Liability (b/a)	Covered Payroll (c)	Net OPEB Liability/(Asset) as a % of the Covered Payroll (a-b)/(c)
Group Life Insurance Fund	\$ 3,907,052	\$ 2,707,739	\$ 1,199,313	69.30%	\$ 23,592,896	5.08%
Health Insurance Credit Fund:						
State	1,102,220	280,599	821,621	25.46%	8,241,227	9.97%
Teacher	1,475,471	264,054	1,211,417	17.90%	9,971,090	12.15%
Political Subdivisions*	77,344	40,057	37,287	51.79%	1,755,661	2.12%
Constitutional Officers	40,001	9,767	30,234	24.42%	847,657	3.57%
Social Services Employees	14,972	5,145	9,827	34.36%	342,719	2.87%
Registrars	558	256	302	45.88%	19,199	1.57%
Total Health Insurance Credit	\$ 2,710,566	\$ 599,878	\$ 2,110,688		\$ 21,177,553	
Disability Insurance Trust Fund	\$ 318,901	\$ 634,779	\$ (315,878)	199.05%	\$ 5,103,828	(6.19%)
Virginia Local Disability Program:						
Teacher	10,672	10,007	665	93.77%	933,836	0.07%
Political Subdivisions	9,525	11,134	(1,609)	116.89%	612,072	(0.26%)
Total Virginia Local Disability Program	\$ 20,197	\$ 21,141	\$ (944)		\$ 1,545,908	
Line of Duty Act Trust Fund	\$ 406,211	\$ 5,311	\$ 400,900	1.31%	**	N/A
Grand Total	\$ 7,362,927	\$ 3,968,848	\$ 3,394,079		\$ 51,420,185	

* Political subdivision data is from the consolidated report provided by Gabriel, Roeder, Smith & Company.

** Contributions into the Line of Duty Act Trust Fund are based on the number of participants in the program using a per capita-based contribution versus a payroll-based contribution.

**SCHEDULE OF ACTUARIAL METHODS AND SIGNIFICANT ASSUMPTIONS:
OTHER POST-EMPLOYMENT BENEFIT (OPEB) PLANS**

	Group Life Insurance Fund	Retiree Health Insurance Credit Fund	Disability Insurance Trust Fund	Line of Duty Act Trust Fund	Virginia Local Disability Program
Valuation Date	June 30, 2022	June 30, 2022	June 30, 2022	June 30, 2022	June 30, 2022
Actuarial Cost Method	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal
Amortization Method	Level Percent of Pay, Closed	Level Percent of Pay, Closed	Level Percent of Pay, Closed	Level Percent of Pay, Open	Level Percent of Pay, Closed
Payroll Growth Rate:					
State Employees	3.00%	3.00%	3.00%	3.00%	N/A
Teachers	3.00%	3.00%	N/A	N/A	3.00%
Political Subdivision Employees	3.00%	3.00%	N/A	3.00%	3.00%
State Police and Virginia Law Officers	3.00%	3.00%	3.00%	3.00%	N/A
Judges	3.00%	3.00%	N/A	N/A	N/A
Asset Valuation Method					
State Employees and Teachers	5-Year, Smoothed Market	5-Year, Smoothed Market	5-Year, Smoothed Market	Market Value	5-Year, Smoothed Market
Political Subdivision Employees and State-Funded Local Employees	5-Year, Smoothed Market	Market Value	N/A	Market Value	5-Year, Smoothed Market
Actuarial Assumptions					
Investment Rate of Return*	6.75%	6.75%	6.75%	6.75%	6.75%
Projected Salary Increases:**					
State Employees	3.50% to 5.35%	3.50% to 5.35%	3.50% to 5.35%	N/A	N/A
Teachers	3.50% to 5.95%	3.50% to 5.95%	N/A	N/A	3.50% to 5.95%
Political Subdivision Non-Hazardous Duty Employees	3.50% to 5.35%	3.50% to 5.35%	N/A	N/A	3.50% to 5.35%
Political Subdivision Hazardous Duty Employees	3.50% to 4.75%	3.50% to 4.75%	N/A	N/A	N/A
State Police and Virginia Law Officers	3.50% to 4.75%	3.50% to 4.75%	3.50% to 4.75%	N/A	N/A
Judges	4.00%	4.00%	N/A	N/A	N/A
Medical Trend Assumptions (Under Age 65)	N/A	N/A	N/A	7.00% to 4.75%	N/A
Medical Trend Assumptions (Age 65 and Older)	N/A	N/A	N/A	5.25% to 4.75%	N/A
Year of Ultimate Trend Rate					
Under Age 65	N/A	N/A	N/A	2028	N/A
Ages 65 and Older	N/A	N/A	N/A	2023	N/A

* Includes inflation at 2.50%.

** Projected salary increases for the Retiree Health Insurance Credit Fund are used in the application of the actuarial cost method. Projected salary increase factors are not applicable to the Line of Duty Act Program since neither the benefit nor the cost is salary-based.

Note: Actuarial assumptions and methods were based on an analysis of plan experience for the four-year period July 1, 2016, through June 30, 2020, and were used for the June 30, 2022, valuation. The mortality rates used are based on the PUB2010 table projected with a modified mortality improvement scale MP-2020. Additional information regarding mortality rate assumptions and experience studies can be found in the Actuarial Assumptions and Methods presentation in the Actuarial Section.

C. CHANGES IN DISCOUNT RATE

The discount rate used to measure the total OPEB liability was 6.75% for the prefunded plans. These include the Group Life Insurance Program, the Retiree Health Insurance Program, the Disability Insurance Program and the Virginia Local Disability Program. The projection of cash flows used to determine the discount rate assumed that contributions from participating employers will be based on the actuarially determined rates based on the Board's funding policy, which certifies the required rates under Title 51.1 of the *Code of Virginia* (1950), as amended. Based on those assumptions, the fiduciary net position was projected to be available to make all of the 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 the projected benefit payments to determine the total OPEB liability.

In accordance with GASB Statement No. 74, regarding the disclosure of the sensitivity of the net pension liability to changes in the discount rate, the table below presents the employers' net pension liability for each of the plans calculated using the discount rate of 6.75%, as well as what the employers' net pension liability would be if it were calculated using a discount rate that is 1.00% lower (5.75)% or 1.00% higher (7.75)% than the current rate. The Line of Duty Act Program is funded on a pay-as-you-go basis. As a result, the liabilities are valued using a discount rate of 3.86%, which approximates the risk-free rate of return. This Single Equivalent Interest Rate (SEIR) is the applicable municipal bond index rate based on the Fidelity Fixed Income General Obligation 20-year Municipal Bond Index published monthly by the Board of Governors of the Federal Reserve System as of the measurement date of June 30, 2023.

SCHEDULE OF IMPACT OF CHANGES IN DISCOUNT RATE: LINE OF DUTY ACT (LODA) PLAN

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	1.00% Decrease	Current Discount Rate	1.00% Increase
System/Plan	(2.86%)	(3.86%)	(4.86%)
Net LODA OPEB Liability	\$449,503	\$400,899	\$359,781

SCHEDULE OF IMPACT OF CHANGES IN HEALTH CARE TREND RATE: LODA PLAN

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	1.00% Decrease	Health Care Cost Trend Rates	1.00% Increase
System/Plan	(6.00% decreasing to 3.75%)	(7.00% decreasing to 4.75%)	(8.00% decreasing to 5.75%)
Net LODA OPEB Liability	\$339,976	\$400,899	\$476,393

SCHEDULE OF IMPACT OF CHANGES IN DISCOUNT RATE: NON-LODA OPEB PLANS

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

System/Plan	Net OPEB Liability/(Asset)		
	1.00% Decrease (5.75%)	Current Discount Rate (6.75%)	1.00% Increase (7.75%)
Group Life Insurance Fund	\$ 1,777,757	\$ 1,199,313	\$ 731,638
Health Insurance Credit Fund:			
State	927,782	821,621	730,588
Teacher	1,370,248	1,211,417	1,076,822
Political Subdivisions	45,669	37,287	30,187
Constitutional Officers	34,702	30,234	26,472
Social Services Employees	11,400	9,827	8,500
Registrars	358	302	254
Total Health Insurance Credit	2,390,159	2,110,688	1,872,823
Disability Insurance Trust Fund	(292,326)	(315,878)	(336,640)
Virginia Local Disability Program:			
Teacher	1,871	665	(386)
Political Subdivisions	(843)	(1,609)	(2,280)
Total Virginia Local Disability Program	1,028	(944)	(2,666)
Grand Total	\$ 3,876,618	\$ 2,993,179	\$ 2,265,155

4. Reserve Accounts

The reserve account balances available for benefits at June 30, 2023 and 2022, are presented in Figure 2.13. These funds are required by Titles 51.1 and 2.2 of the *Code of Virginia* (1950), as amended, to provide for the payment of current and future benefits as follows:

- Member and employer contributions and investment income fund the member and employer reserves. Each member has a member contribution account that accumulates member contributions plus annual interest of 4.00% calculated on the balance as of the previous June 30. Each employer has a retirement allowance account that accumulates employer contributions, transfers of investment income less administrative expenses incurred in operating the retirement plans and transfers of member contributions and accrued interest upon a member's retirement. Benefit payments are charged to employers' retirement allowance accounts.
- The Group Life Insurance Advance Premium Deposit Reserve accumulates a portion of insurance premium contributions collected during members' active careers and their investment earnings, and is charged for life insurance benefits paid and expenses incurred in operating the Group Life Insurance Program.
- Employer contributions and investment income fund the Retiree Health Insurance Credit Reserve. It is charged for credit reimbursements applied to the monthly health insurance premiums of eligible retired members and expenses incurred in operating the Retiree Health Insurance Credit Program.
- Employer contributions and investment income fund the Disability Insurance Trust Fund. It is charged for long-term disability benefits and expenses incurred in operating the Virginia Sickness and Disability Program (VSDP).
- Employer contributions and investment income fund the Line of Duty Act Trust Fund. It is charged for Line of Duty Act death and health insurance benefits and expenses incurred in operating the Line of Duty Act Program.
- Employer contributions and investment income fund the Local Disability Insurance Trust Fund. It is charged for long-term disability benefits and expenses incurred in operating the Virginia Local Disability Program (VLDP).

FIGURE 2.13: NET POSITION RESTRICTED FOR BENEFITS

AT JUNE 30

(EXPRESSED IN THOUSANDS)

	2023	2022
Virginia Retirement System		
Member Reserve	\$ 15,424,699	\$ 14,820,774
Employer Reserve	82,702,571	79,015,314
Total VRS	98,127,270	93,836,088
State Police Officers' Retirement System		
Member Reserve	118,024	112,775
Employer Reserve	961,731	918,608
Total SPORS	1,079,755	1,031,383
Virginia Law Officers' Retirement System		
Member Reserve	258,585	250,987
Employer Reserve	1,672,476	1,590,054
Total VaLORS	1,931,061	1,841,041
Judicial Retirement System		
Member Reserve	44,162	42,182
Employer Reserve	633,796	614,783
Total JRS	677,958	656,965
Group Life Insurance Advance Premium Deposit Reserve	2,707,739	2,467,989
Retiree Health Insurance Credit Reserve	599,878	492,325
Disability Insurance Trust Fund (VSDP)	634,779	602,916
Line of Duty Act Trust Fund	5,311	7,214
Disability Insurance Trust Fund (VLDP)	21,141	15,268
VRS Investment Portfolio DC Plans	68,321	63,656
Commonwealth Health Research Fund	47,847	46,592
Volunteer Firefighters' and Rescue Squad Workers Service Award Fund	5,859	5,472
Commonwealth's Attorneys Training Fund	26,206	25,777
Total Pension and Other Employee Benefit Reserves	\$ 105,933,125	\$ 101,092,686

5. Deposits and Investment Risk Disclosures

A. DEPOSITS

Deposits of the System maintained by the Treasurer of Virginia at June 30, 2023 and 2022, as shown in Figure 2.14, were partially insured under the Virginia Security for Public Deposits Act, Section 2.2-4400 et seq. of the *Code of Virginia* (1950), as amended, which provides for an assessable, multiple financial institution collateral pool. The remainder of the funds held by the Treasurer of Virginia for the System are invested in accordance with its policy to invest public funds in a manner that will provide the highest investment return with the maximum security while meeting the daily cash flow demands of the entity and conforming to all statutes governing the investment of public funds. Deposits with the System's master custodian, BNY Mellon, were entirely insured by federal depository insurance coverage. Other reflects cash temporarily invested in a Money Market account at Wells Fargo Bank, N.A., for the Volunteer Firefighters' and Rescue Squad Workers' Service Award Fund (VolSAP).

FIGURE 2.14: DEPOSITS

AT JUNE 30

(EXPRESSED IN THOUSANDS)

	2023 Carrying Amount	2022 Carrying Amount
Treasurer of Virginia	\$ 76,601	\$ 63,178
Master Custodian	50,553	21,966
Other	116	60
Total Deposits	\$ 127,270	\$ 85,204

B. INVESTMENTS

1. Authorized Investments. The Board of Trustees of the System has full power to invest and reinvest the trust funds in accordance with Section 51.1-124.30 of the *Code of Virginia* (1950), as amended. This section requires the Board to discharge its duties solely in the interests of members, retirees and beneficiaries. It also requires the Board to invest the assets with the care, skill, prudence and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar

with such matters would use in the conduct of an enterprise of a like character and with like aims. Investment value and earnings of the investment pool are proportionally allocated among the System's trust and custodial funds on the basis of each fund's equity interest in the common investment pool. An Investment Summary is included in the Investment Section. The equity interest of each fund as of June 30, 2023 and 2022, is presented in Figure 2.15.

FIGURE 2.15: EQUITY INTERESTS

AT JUNE 30

Fund	2023	2022
Virginia Retirement System	92.553%	92.758%
State Police Officers' Retirement System	1.021%	1.022%
Virginia Law Officers' Retirement System	1.825%	1.824%
Judicial Retirement System	0.642%	0.651%
Group Life Insurance Fund	2.652%	2.514%
Retiree Health Insurance Credit Fund	0.552%	0.483%
Disability Insurance Trust Fund (VSDP)	0.593%	0.587%
Line of Duty Act Trust Fund	0.005%	0.007%
Virginia Local Disability Program	0.019%	0.015%
VRS Investment Portfolio	0.063%	0.063%
Commonwealth Health Research Fund	0.045%	0.046%
Volunteer Firefighters' and Rescue Squad Workers Service Award Fund	0.005%	0.005%
Commonwealth's Attorneys Training Fund	0.025%	0.025%
Total Equity Interests	100.000%	100.000%

2. Fair Value Measurements. The System categorizes the fair value measurements within the hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements).

The System's master custodian uses a proprietary matrix based on asset class as the basis for the fair value hierarchy, which utilizes industry standard asset categories to assign a fair value level to each investment.

Level 1: Unadjusted quoted prices for identical instruments in active markets.

Level 2: Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-driven valuations in which all significant inputs are observable.

Level 3: Valuations derived from valuation techniques in which significant inputs are unobservable.

Investments that are measured at fair value using the net asset value (NAV) per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy. Cash equivalents and certain other short-term, highly liquid investments that are measured at amortized cost, as described in Note 1F(1) Investment Valuation, are also not classified in the fair value hierarchy.

In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant in the valuation. The System's assessment of significant particular inputs to these fair value measurements requires judgment and considers factors specific to each asset or liability. Figure 2.16 shows the fair value leveling of the investments for the System and the following recurring fair value measurements as of June 30, 2023, and June 30, 2022.

FIGURE 2.16: INVESTMENTS AND DERIVATIVE INSTRUMENTS MEASURED AT FAIR VALUE

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

		Fair Value Measurements Using		
	6/30/2023	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by Fair Value Level:				
Debt Securities:				
U.S. Government Securities	\$ 5,141,576	\$ 4,696,419	\$ 445,157	\$ —
Agencies	4,591,542	—	4,591,542	—
Municipal Securities	65,451	—	65,451	—
Supranational and Non-U.S. Government Bonds	687,609	—	687,609	—
Asset-Backed Securities	236,647	—	236,647	—
Collateralized Mortgage Obligations	470,169	—	470,169	—
Commercial Mortgages	145,621	—	145,621	—
Corporate and Other Bonds	4,444,758	—	4,444,758	—
Mutual and Money Market Funds	85,984	85,984	—	—
Negotiable Certificates of Deposit	85,022	—	85,022	—
Term Loans	19,983	—	—	19,983
Total Debt Securities	15,974,362	4,782,403	11,171,976	19,983
Equity Securities:				
Common and Preferred Stocks	24,764,544	24,762,599	195	1,750
Total Equity Securities	24,764,544	24,762,599	195	1,750
Hedge Funds	62,319	—	—	62,319
Real Estate and Real Asset Funds	996,552	—	—	996,552
Total Investments by Fair Value Level	\$ 41,797,777	\$ 29,545,002	\$ 11,172,171	\$ 1,080,604
Investments Measured at the Net Asset Value (NAV):				
Hedge Funds	\$ 9,572,397			
Credit Strategies Funds	16,090,766			
Private Equity Funds	19,521,293			
Equity International Commingled Funds	3,321,061			
Fixed-Income Commingled Funds	823,876			
Real Estate and Real Asset Funds	13,003,202			
U.S. Equity Commingled Funds	287,204			
Total Investments Measured at the NAV	62,619,799			
Total Investments Measured at Fair Value	\$104,417,576			
Investment Derivative Instruments:				
Fixed Income Options	\$ (1)	\$ (1)	\$ —	
Foreign Currency Forwards	(14,589)	—	(14,589)	
Futures Contracts	(1,869)	(1,869)	—	
Credit Default Swaps	(9)	—	(9)	
Interest Rate Swaps	2,442	—	2,442	
Swaptions	(8)	—	(8)	
Total Return Swaps	118,313	—	118,313	
Total Investment Derivative Instruments	\$ 104,279	\$ (1,870)	\$ 106,149	

FIGURE 2.16: INVESTMENTS AND DERIVATIVE INSTRUMENTS MEASURED AT FAIR VALUE, cont.

AS OF JUNE 30, 2022

(EXPRESSED IN THOUSANDS)

		Fair Value Measurements Using		
	6/30/2022	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by Fair Value Level:				
Debt Securities:				
U.S. Government Securities	\$ 4,689,920	\$ 4,284,650	\$ 405,270	\$ —
Agencies	2,462,947	—	2,462,947	—
Municipal Securities	76,558	—	76,558	—
Supranational and Non-U.S. Government Bonds	808,078	—	808,078	—
Asset-Backed Securities	294,736	—	294,736	—
Collateralized Mortgage Obligations	323,192	—	323,192	—
Commercial Mortgages	217,308	—	217,308	—
Corporate and Other Bonds	6,193,424	—	6,193,424	—
Mutual and Money Market Funds	93,172	93,172	—	—
Negotiable Certificates of Deposit	29,975	—	29,975	—
Term Loans	49,116	—	—	49,116
Total Debt Securities	15,238,426	4,377,822	10,811,488	49,116
Equity Securities:				
Common and Preferred Stocks	22,157,130	22,154,785	389	1,956
Total Equity Securities	22,157,130	22,154,785	389	1,956
Hedge Funds	77,565	—	—	77,565
Private Equity Funds	1,781	—	—	1,781
Real Estate and Real Asset Funds	1,051,106	—	—	1,051,106
Total Investments by Fair Value Level	\$38,526,008	\$ 26,532,607	\$ 10,811,877	\$ 1,181,524
Investments Measured at the Net Asset Value (NAV):				
Hedge Funds	9,554,837			
Credit Strategies Funds	13,744,079			
Private Equity Funds	18,784,632			
Equity International Commingled Funds	2,813,735			
Fixed-Income Commingled Funds	1,473,505			
Real Estate and Real Asset Funds	12,684,481			
U.S. Equity Commingled Funds	181,646			
Total Investments Measured at the NAV	59,236,915			
Total Investments Measured at Fair Value	\$97,762,923			
Investment Derivative Instruments:				
Foreign Currency Forwards	\$ 6,007	\$ —	\$ 6,007	
Futures Contracts	(12,352)	(12,352)	—	
Credit Default Swaps	67	—	67	
Total Return Swaps	346	—	346	
Total Investment Derivative Instruments	\$ (5,932)	\$ (12,352)	\$ 6,420	

Description of Investments Measured at Fair Value

Equity and debt securities classified in Level 1 are valued using quoted prices in active markets for those securities. Debt securities classified in Level 2 are valued using bid evaluations or matrix pricing techniques. Inputs to the valuation techniques may include market participants' assumptions, quoted prices for similar assets, benchmark yield curves, market corroborated inputs and other data inputs. Debt securities classified in Level 3 include term loans, which are valued using proprietary information.

Equity securities in Level 2 are typically valued using quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; or model-driven valuations in which all significant inputs are observable. Equity securities in Level 3 include common and preferred equity securities, privately issued securities and other securities with limited trading volume and are valued using proprietary information or single source pricing.

Other investments in Level 3 include investments in hedge funds, real estate and real assets funds, and term loans. These investments have been assigned a Level 3, as they are valued using unobservable inputs. When observable inputs are not available for these investments, one or more valuation techniques (e.g., the market approach, the income approach and/or the cost approach) are used for which sufficient and reliable data is available. Within Level 3, the use of the market approach generally consists of using comparable market transactions or other data, while the use of the income approach generally consists of the net present value of estimated future cash flows. The cost approach is often based on the amount that would currently be required to replace an asset with one of comparable utility.

The System also has investments in hedge and commingled funds and private equity, credit strategies, and real estate and real assets funds that are not categorized under the fair value hierarchy and are shown at net asset value (NAV).

Investments at NAV are commonly calculated by subtracting the fair value of liabilities from the fair value of assets. In some cases, the actual NAV has not been determined by the external fund or investment managers as of the System's fiscal year end and must be projected using a roll-forward process. The projected NAV is the value at the end of the prior quarter, adjusted for any contributions or distributions and an estimate of income and management fees. There is no adjustment for realized or unrealized gains and losses. These investments are discussed below in "Description of Investments Measured at the NAV."

Derivative instruments classified as Level 1 of the Fair Value Hierarchy are valued using prices quoted in active markets for those securities. The derivative instruments in Level 1 consist of futures contracts on currencies, U.S. Treasury bonds and notes, non-U.S. government bonds, and U.S. and non-U.S. equity indexes and options on futures contracts on U.S. Treasury notes. Derivative instruments classified as Level 2 are valued using a number of modeling approaches that take into account observable market levels, benchmark rates and foreign exchange rates.

FIGURE 2.17: INVESTMENTS MEASURED AT THE NAV

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Hedge Funds:				
Equity Long/Short Funds	\$ 5,070,936	\$ 219,130	Monthly, quarterly, semi-annually, annually	30-90 days
Equity Long-Only Funds	1,725,890	—	Quarterly, annually	90 days
Credit Funds	128,624	—	Quarterly, semi-annually	90 days
Multi-Strategy Funds	2,646,947	—	Monthly, quarterly, semi-annually	20-90 days
Total Hedge Funds	9,572,397	219,130		
Credit Strategies Funds:				
Bank Loan and Direct Lending Funds	4,437,213	2,403,949		
Distressed Debt Funds	1,839,809	959,693		
Diversified Private Credit Funds	2,096,230	1,216,560		
Mezzanine Debt Funds	1,417,868	1,272,110		
Multi-Strategy Funds	2,775,572	908,826		
Opportunistic Funds	2,732,077	732,758		
Other Funds	791,997	442,616		
Total Credit Strategies Funds	16,090,766	7,936,512		
Private Equity Funds:				
Buyout Funds	10,918,888	2,470,583		
Energy Funds	540,061	79,942		
Growth Funds	2,947,665	700,489		
International Buyout Funds	2,378,427	754,215		
Special Situations Funds	1,763,480	1,030,201		
Subordinated Debt Funds	301,420	275,577		
Turnaround Funds	567,271	242,150		
Venture Capital Funds	104,081	37,966		
Total Private Equity Funds	19,521,293	5,591,123		
Equity International Commingled Funds	3,321,061	—	Daily, semi-monthly	None, 6-14 days
Fixed-Income Commingled Funds	823,876	—	Daily	None
Real Estate and Real Asset Funds:				
Infrastructure Funds	2,615,149	1,075,684		
Natural Resources Funds	1,917,097	442,029		
Private Investment Real Estate Funds	8,371,397	1,772,235		
Private Real Estate Investment Trusts	99,559	—		
Total Real Estate and Real Asset Funds	13,003,202	3,289,948		
U.S. Equity Commingled Funds	287,204	—	Daily	None
Total Investments Measured at the NAV	\$ 62,619,799	\$ 17,036,713		

FIGURE 2.17: INVESTMENTS MEASURED AT THE NAV, cont.

AS OF JUNE 30, 2022

(EXPRESSED IN THOUSANDS)

	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Hedge Funds:				
Equity Long/Short Funds	\$ 4,787,051	\$ 216,667	Monthly, quarterly, semi-annually, annually	30-90 days
Equity Long-Only Funds	1,919,068	—	Daily, quarterly, annually	14-90 days
Credit Funds	136,014	—	Quarterly, semi-annually	90 days
Multi-Strategy Funds	2,712,704	—	Monthly, quarterly, semi-annually	5-90 days
Total Hedge Funds	9,554,837	216,667		
Credit Strategies Funds:				
Bank Loan and Direct Lending Funds	4,337,498	1,996,105		
Distressed Debt Funds	1,505,230	1,104,801		
Mezzanine Debt Funds	1,089,873	1,530,948		
Multi-Strategy Funds	2,536,687	1,027,032		
Opportunistic Funds	2,591,325	946,517		
Other Funds	1,683,466	2,351,942		
Total Credit Strategies Funds	13,744,079	8,957,345		
Private Equity Funds:				
Buyout Funds	10,309,081	2,938,122		
Energy Funds	611,650	98,317		
Growth Funds	2,992,234	704,517		
International Buyout Funds	2,190,563	800,801		
Special Situations Funds	1,763,513	1,150,943		
Subordinated Debt Funds	229,285	374,749		
Turnaround Funds	562,936	287,670		
Venture Capital Funds	125,370	5,716		
Total Private Equity Funds	18,784,632	6,360,835		
Equity International Commingled Funds	2,813,735	—	Daily, semi-monthly	None, 6 days
Fixed-Income Commingled Funds	1,473,505	—	Daily	None
Real Estate and Real Asset Funds:				
Infrastructure Funds	2,226,760	723,009		
Natural Resources Funds	1,901,699	619,993		
Private Investment Real Estate Funds	8,435,833	1,321,649		
Real Estate Investment Trusts	120,189	—		
Total Real Estate and Real Asset Funds	12,684,481	2,664,651		
U.S. Equity Commingled Funds	181,646	—	Daily	None
Total Investments Measured at the NAV	\$ 59,236,915	\$ 18,199,498		

Description of Investments Measured at the NAV

Figure 2.17 presents the investments measured at the net asset value (NAV) per share (or its equivalent). Below are descriptions of the investment strategies, valuation methods and redemption restrictions of the investments measured at the NAV by fund type:

HEDGE FUNDS:

- **Equity Long/Short Hedge Funds:** This type included investments in 11 hedge funds at June 30, 2023, and in 10 hedge funds at June 30, 2022, which invest in global long and short equity positions. Management of each hedge fund has the ability to invest from value to growth strategies, from small to large capitalization stocks and may vary net exposure considerably. The fair values of the investments in this type have been determined using the NAV per share of the investments. Investments representing approximately 29% of the value of the investments in this type of fund cannot be redeemed because the investments include restrictions that do not allow redemption in the first 12 to 60 months after acquisition. The remaining restriction period for these investments was less than 12 months at June 30, 2023.
- **Equity Long-Only Hedge Funds:** This type included an investment in three hedge funds at June 30, 2023, and in four hedge funds at June 30, 2022, which invest in global long-only equity positions. These hedge funds are generally fully invested and only very occasionally may take short positions for hedging purposes. The fair value of the investment in this type has been determined using the NAV per share of the investments. Investments representing approximately 70% of the value of the investments in this type of fund cannot be redeemed because the investments include restrictions that do not allow redemption in the first 12 to 36 months after acquisition. The remaining restriction period for these investments was less than 12 months at June 30, 2023.
- **Credit Hedge Funds:** This type included investments in one hedge fund at June 30, 2023, which invests in event-driven, distressed and special situation credit opportunities. The fair values of the investments in this type have been determined using the NAV per share of the investments. At June 30, 2023, there were no restrictions preventing the redemption of any of the investments in this category during the next 12 months.
- **Multi-Strategy Hedge Funds:** This type included investments in 10 hedge funds at June 30, 2023, and in eight hedge funds at June 30, 2022, which invest in multiple asset classes, combining exposure to balance risks. Such exposure can include traditional and alternative investments. The fair values of the investments in this type have been determined using the NAV per share of the investments. Investments representing approximately 7% of the value of the investments in this type of fund cannot be redeemed because the investments include restrictions that do not allow redemption in the first 12 to 60 months after acquisition. The remaining restriction period for these investments was one to 12 months at June 30, 2023.
- **Credit Strategies Funds:** This type consists of many fund categories, including bank loan and direct lending funds, distressed debt funds, diversified private credit, mezzanine debt funds, multi-strategy funds and opportunistic funds. The fair value of the investments in these funds have been determined using the NAV per share of the investments. The nature of the investments in this type is that distributions are received through the liquidation of the underlying assets in the fund. It is expected that hold periods for the underlying fund assets will range from three to eight years.

- **Private Equity Funds:** This type consists of many fund categories including Venture Capital, Buyout, Subordinated Debt, Growth Capital, Turnaround, Energy and Special Situations. The fair value of the investments in these funds have been determined using the NAV per share of the investments. The nature of the investments involves receiving distributions through liquidation of the underlying fund assets. It is expected that hold periods for the underlying fund assets will range from three to eight years.
- **Equity International Commingled Funds:** This type includes investments in six institutional investment funds at June 30, 2023, which invest in international equities. These funds employ a variety of investment strategies in global developed and emerging markets. The funds are regulated by either the Securities and Exchange Commission or the Office of the Comptroller of the Currency. The fair values of the investments in these funds have been determined using the NAV per share of the investments. Redemptions can be made from these funds, given the appropriate notice, any regular trading day on the NYSE.
- **Fixed-Income Commingled Funds:** This type consists of 10 institutional investment funds that invest in U.S. and multi-national fixed income markets. The funds are regulated by either the Securities and Exchange Commission or the Office of the Comptroller of the Currency. The fair values of the investments in these funds have been determined using the NAV per share of the investments.
- **U.S. Equity Commingled Funds:** This type includes an investment in six institutional investment funds at June 30, 2023, which invest in domestic equities. The funds are regulated by the Office of the Comptroller of the Currency. The fair values of the investments in these funds have been determined using the NAV per share of the investment. Redemptions can be made from these funds, given the appropriate notice, any regular trading day on the NYSE.
- **Real Assets:** This type includes investments in many fund categories including Private Investment Real Estate, Private Real Estate Investment Trusts, Infrastructure and Natural Resources. The fair value of the investments in these funds have been determined using the NAV per share of the investments. The nature of the investments in this type is that distributions are received through income as well as the liquidation of the underlying assets in the fund. If these investments were held, it is expected that the underlying assets of the funds would be liquidated over one to 14 years.

3. Interest Rate Risk. Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The risk is managed within the portfolio using the effective duration (option-adjusted) methodology. It is widely used in the management of fixed-income portfolios in that it quantifies, to a much greater degree, the risk of interest rate changes. The methodology takes into account optionality on bonds and scales the risk of price changes on bonds depending on the degree of change in rates and the slope of the yield curve. All of the System's fixed-income portfolios are managed in accordance with investment guidelines, most of which are specific as to the degree of interest rate risk that can be taken.

As of June 30, 2023, the System's investments include securities with longer investment terms as measured by an option adjusted duration of greater than 10 years that are highly sensitive to interest rate fluctuations, as well as other securities that are subject to the possibility of early repayment in a period of declining interest rates (i.e., collateralized and mortgage pass-through). The resulting reduction in expected total cash flows affects the fair value of these securities.

The following table presents the weighted average effective duration for the System's investments subject to interest rate risk as of June 30, 2023.

FIGURE 2.18: DEBT SECURITIES SUBJECT TO INTEREST RATE RISK

AT JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

Investment Type	Weighted Average Effective Duration	Fair Value	Percent of Debt Securities
Effective Duration:			
Agencies	6.40	\$ 4,591,542	23.0%
Asset-Backed Securities	2.74	236,647	1.2%
Collateralized Mortgage Obligations	6.78	466,318	2.3%
Commercial Mortgages	2.30	143,406	0.7%
Commercial Paper	0.16	1,991,658	10.0%
Corporate Bonds and Notes	5.29	4,483,905	22.4%
Fixed-Income Commingled Funds	5.74	823,876	4.1%
Fixed-Income Derivatives	(3.03)	(8,668)	—%
Municipal Securities	7.72	65,451	0.3%
Mutual & Money Market Funds	7.20	85,984	0.4%
Negotiable Certificates of Deposit	0.27	822,787	4.1%
Supranational & Non-U.S. Government Bonds	7.46	686,558	3.4%
Term Loans	0.15	17,425	0.1%
Time Deposits	0.01	95,000	0.5%
U.S. Government	6.02	5,377,812	26.9%
No Effective Duration:			
Mutual & Money Market Funds	N/A	117,678	0.6%
Collateralized Mortgage Obligations	N/A	3,851	—%
Corporate Bonds and Notes	N/A	3,144	—%
U.S. Government	N/A	3,136	—%
Supranational & Non-U.S. Government Bonds	N/A	2,856	—%
Term Loans	N/A	2,558	—%
Commercial Mortgages	N/A	2,215	—%
Fixed-Income Derivatives	N/A	(14,452)	—%
Total Debt Securities	5.09	\$ 20,000,687	100.0%

Through its Securities Lending program, the System receives cash collateral from borrowers that is reported in the statement of net position as an asset with an offsetting liability. The cash collateral held at June 30, 2023, was reinvested in cash equivalents and short-term investments that carry little interest rate risk as shown in Figure 2.19.

FIGURE 2.19: SECURITIES LENDING COLLATERAL SUBJECT TO INTEREST RATE RISK

AT JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

Investment Type	Carrying Amount	Weighted Average Effective Duration
Commercial Paper	\$ 388,652	0.104
Corporate Bonds and Notes-Floating Rate	2,069,875	0.008
Negotiable Certificates of Deposit	167,720	0.099
Repurchase Agreements	872,964	0.008
Supranational & Non-U.S. Government Bonds	7,070	0.016
Time Deposits	220,439	0.008
Total	\$ 3,726,720	0.022

4. Credit Risk. Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations to the System. As of June 30, 2023, the System's fixed-income assets that are not government-guaranteed represented 73% of the fixed-income assets.

The System's policy for credit risk is based on the concept of a risk budget rather than specific limitations related to the rating of an individual security. The System's risk budget is allocated among the different investment strategies. The System's fixed-income portfolio credit quality and exposure levels as of June 30, 2023, are summarized in Figure 2.20.

Credit risk for derivative instruments held by the System results from counterparty risk assumed by the System. This is essentially the risk that the borrower will be unable to meet its obligation. Information regarding the System's credit risk related to derivatives is provided in Note 5.B.8. Policies related to credit risk pertaining to the System's securities lending program are provided in Note 5.B.6. A summary of the ratings of the reinvested securities lending cash collateral subject to credit risk is provided in Figure 2.21.

FIGURE 2.20: CREDIT QUALITY AND EXPOSURE LEVELS OF NON-GOVERNMENT-GUARANTEED SECURITIES*

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

U.S. Government and Short-Term Debt	Carrying Amount by Most Conservative Credit Rating**								
	Long-Term Debt Credit Ratings				Short-Term Debt Credit Ratings				Totals
	Aaa/AAA	Aa/AA	A	Baa/BBB	P-1/ A-1/F1 AAAm	P-2/A-2/ F2	Less than Investment Grade	Unrated	
U.S. Government Agencies:									
FHLB	\$ —	\$ 109,882	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 109,882
FHLMC	39,540	—	—	—	—	—	—	908,264	947,804
FNMA	—	4,614	—	—	—	—	—	3,697,556	3,702,170
Other Agencies	—	48,414	—	—	—	—	—	—	48,414
Short-Term Debt:									
Commercial Paper	—	—	196,576	67,371	1,147,838	579,873	—	—	1,991,658
Mutual and Money Market Funds	—	—	—	—	76,066	59	78,288	49,248	203,661
Negotiable Certificates of Deposit	—	42,910	152,880	—	571,982	—	—	55,015	822,787
Time Deposits	—	—	—	—	—	—	—	95,000	95,000
Total U.S. Government and Short-Term Debt	39,540	205,820	349,456	67,371	1,795,886	579,932	78,288	4,805,083	7,921,376
Long-Term Debt	Long-Term Debt Credit Ratings				Short-Term Debt Credit Ratings				Totals
	Aaa/AAA	Aa/AA	A	Baa/BBB	P-1/ A-1/F1 AAAm	P-2/A-2/ F2	Less than Investment Grade	Unrated	
Asset-Backed Securities	94,081	32,177	100,602	5,100	—	—	4,687	—	236,647
Collateralized Mortgage Obligations	210,979	27,309	16,176	11,856	—	—	—	29,436	295,756
Commercial Mortgages	75,092	17,813	6,001	—	—	—	1	4,399	103,306
Corporate Bonds and Notes	18,317	213,625	1,250,339	1,574,430	—	—	1,273,940	156,398	4,487,049
Fixed-Income Commingled Funds	—	—	—	—	—	—	—	823,876	823,876
Fixed-Income Derivatives	—	—	—	—	—	—	—	(23,120)	(23,120)
Municipal Securities	—	56,788	5,425	—	—	—	—	3,238	65,451
Term Loans	—	—	100	—	—	—	19,883	—	19,983
Supranational and Non-U.S. Government Bonds	24,805	43,149	89,763	155,381	—	—	364,663	11,653	689,414
Total Long-Term Debt	423,274	390,861	1,468,406	1,746,767	—	—	1,663,174	1,005,880	6,698,362
Total	\$ 462,814	\$ 596,681	\$ 1,817,862	\$ 1,814,138	\$ 1,795,886	\$ 579,932	\$ 1,741,462	\$ 5,810,963	\$ 14,619,738

* Excludes investments that are obligations of the U.S. government or obligations explicitly guaranteed by the U.S. government that are not subject to the GASB 40 credit quality disclosures.

** Credit quality ratings issued by nationally recognized statistical rating organizations as reported by the System's custodian, Bank of New York Mellon.

FIGURE 2.21: SECURITIES LENDING COLLATERAL SUBJECT TO CREDIT RISK

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

Investment Type	Carrying Amount by Most Conservative Credit Rating**				Totals
	Aaa/AAA	Aa/AA	A	P-1/A-1***	
Commercial Paper	\$ —	\$ —	\$ —	\$ 388,652	\$ 388,652
Corporate Bonds and Notes-Floating Rate	—	397,499	1,603,658	68,718	2,069,875
Negotiable Certificates of Deposits	—	—	—	167,720	167,720
Repurchase Agreements	6,530	32,650	16,325	—	55,505
Supranational & Non-U.S. Government Bonds	—	—	—	7,070	7,070
Time Deposits	—	—	140,834	79,605	220,439
Total*	\$ 6,530	\$ 430,149	\$ 1,760,817	\$ 711,765	\$ 2,909,261

* This figure does not include \$817,459 in equity and U.S. government security repurchase agreements that are not subject to GASB 40 disclosure. The total of the investments in the securities lending collateral portfolio is \$3,726,720.

** Credit quality ratings issued by nationally recognized statistical rating organizations as reported by the System's custodian, Bank of New York Mellon.

*** Investment-grade short-term credit quality ratings.

- **Concentration of Credit Risk.** This is the risk of loss that may be attributed to the magnitude of a government's investment in a single issuer. The System's investment guidelines for each specific portfolio limits investments in any corporate entity to no more than 5.00% of the market value of the account for both the internally and externally managed portfolios. The System has no investments in any commercial or industrial organization whose fair value equals 5.00% or more of the System's net fiduciary position.
- **Custodial Credit Risk.** This is the risk that in the event of the failure of the counterparty, the System will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. As of June 30, 2023, investment securities (excluding cash equivalents and repurchase agreements held as securities lending collateral) were registered and held in the name of the System for the benefit of the System's trust and custodial funds and were not exposed to custodial credit risk. It is the standard practice and policy of the System, through the relevant provisions in its contracts and agreements with third parties, to minimize

all known and reasonably foreseeable custodial credit risks.

5. Foreign Currency Risk. Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment. The System's currency risk exposures, or exchange rate risk, primarily exist in the international and global equity investment holdings. The foreign currency risk of invested cash collateral in the Securities Lending program consisted of \$777,787,000 in cash equivalents and short-term investments denominated in euros. The System's other exposure to foreign currency risk as of June 30, 2023, is highlighted in Figure 2.22. The net realized gains and losses resulting from the settlement of foreign currency transactions and unrealized gains and losses associated with unsettled transactions are recorded in Investment Income in the Statement of Changes in Fiduciary Net Position.

FIGURE 2.22: CURRENCY EXPOSURES BY ASSET CLASS

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

Currency	Cash and Short-term Investments	Equity	Fixed Income	Private Equity	Real Assets	International Funds	Forward Contracts	Total
U.S. Dollar	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 2,636,953	\$ —	\$ 2,636,953
Euro Currency Unit	44,323	2,124,977	24,092	1,262,645	404,496	—	216,820	4,077,353
Japanese Yen	22,001	1,558,250	—	—	1,191	215,892	405,735	2,203,069
Pound Sterling	10,381	1,172,471	(3)	—	15,591	—	75,574	1,274,014
Canadian Dollar	3,520	566,057	—	—	15,398	—	243,851	828,826
Hong Kong Dollar	6,512	784,346	—	—	—	—	(53,249)	737,609
Australian Dollar	1,628	415,677	—	—	918	—	53,248	471,471
New Taiwan Dollar	1,187	443,040	—	—	—	—	1,456	445,683
Swiss Franc	21,767	499,602	—	—	—	—	(80,997)	440,372
Indian Rupee	3,582	364,985	—	—	—	—	7,119	375,686
South Korean Won	1,084	343,407	—	—	—	—	5,677	350,168
Swedish Krona	1,617	180,151	—	—	812	—	130,782	313,362
Danish Krone	6,845	225,287	—	—	—	—	(18,802)	213,330
Brazil Real	1,446	184,175	5,480	—	11,160	—	1,285	203,546
Chinese Yuan Renminbi	394	108,399	—	—	—	—	(12,241)	96,552
Saudi Arabia Riyal	319	80,144	—	—	—	—	—	80,463
Indonesian Rupiah	1,751	62,899	3,417	—	—	—	(4,386)	63,681
Thailand Baht	89	58,954	1,038	—	—	—	736	60,817
South African Rand	670	53,097	6,764	—	4,798	—	(5,614)	59,715
Israeli Shekel	2,331	91,949	1,516	—	1,193	—	(40,180)	56,809
Mexican Peso	114	46,589	226	—	4,332	—	(3,350)	47,911
Turkish Lira	321	25,527	—	—	477	—	922	27,247
UAE Dirham	56	24,186	—	—	—	—	526	24,768
Polish Zloty	(630)	24,961	—	—	—	—	(3,377)	20,954
Hungarian Forint	418	15,473	1,190	—	—	—	1,579	18,660
Malaysian Ringgit	331	15,984	1,693	—	—	—	(1,836)	16,172
Qatari Riyal	9	14,911	—	—	—	—	—	14,920
Chilean Peso	752	6,795	1,411	—	—	—	1,126	10,084
Czech Koruna	1,022	1,944	2,289	—	—	—	2,880	8,135
Singapore Dollar	272	97,169	—	—	—	—	(90,548)	6,893
Peruvian Sol	2	—	5,176	—	—	—	(2,284)	2,894
Uruguayan Peso	—	—	2,284	—	—	—	—	2,284
Ukraine Hryvnia	—	—	1,578	—	—	—	—	1,578
Egyptian Pound	123	1,169	—	—	—	—	(3)	1,289
Kazakhstan Tenge	—	—	—	—	—	—	1,115	1,115
Romanian Leu	91	—	1,398	—	—	—	(693)	796
Argentina Peso	759	—	—	—	—	—	—	759
Russian Ruble	—	759	—	—	—	—	—	759
Dominican Rep Peso	—	—	682	—	—	—	—	682
Kenyan Shilling	—	730	—	—	—	—	—	730
Philippines Peso	15	4,996	—	—	—	—	(4,397)	614
Moroccan Dirham	1	—	—	—	—	—	—	1
Colombian Peso	74	201	—	—	—	—	(728)	(453)
Chinese R Yuan HK	—	—	—	—	—	—	(2,201)	(2,201)
Norwegian Krone	2,468	130,340	—	—	—	—	(294,105)	(161,297)
New Zealand Dollar	20	4,921	—	—	—	—	(175,944)	(171,003)
Total	\$ 137,665	\$ 9,734,522	\$ 60,231	\$ 1,262,645	\$ 460,366	\$ 2,852,845	\$ 355,496	\$14,863,770

6. Securities Lending. Under authorization of the Board, the System lends its fixed-income and equity securities to various broker-dealers on a temporary basis. This program is administered through an agreement with the System's custodial agent bank.

All security loan agreements are collateralized by cash, securities or an irrevocable letter of credit issued by a major bank, and have a fair value equal to at least 102% of the fair value for domestic securities and 105% for international securities. Securities received as collateral cannot be pledged or sold by the System unless the borrower defaults. Contracts require the lending agents to indemnify the System if the borrowers fail to return the securities lent and related distributions and if the collateral is inadequate to replace the securities lent. All securities loans can be terminated on demand by either the System or the borrowers. The majority of loans are open loans, meaning the rebate is set daily. This results in a maturity of one or two days on average, although securities are often on loan for longer periods. The maturity of loans generally does not match the maturity of collateral investments, which averages 8.14 days. At year-end, the System had no credit risk exposure to borrowers because the amounts it owes the borrowers exceeded the amounts the borrowers owe the System. All securities are marked to market daily and carried at fair value. The fair value of securities on loan at June 30, 2023 and 2022, was \$7,926,496,000 and \$8,018,930,000, respectively. The June 30, 2023 and 2022, balances were composed of U.S. government and agency securities of \$3,602,852,000 and \$3,066,664,000, respectively; corporate and other bonds of \$724,712,000 and \$1,240,479,000, respectively; common and preferred stocks of \$3,557,231,000 and \$3,662,554,000, respectively; and supranational and non-U.S. government bonds of \$41,701,000 and \$49,233,000, respectively.

The value of collateral (cash and non-cash) at June 30, 2023 and 2022, was \$8,493,284,000 and \$8,599,601,000, respectively. Securities on loan are included with investments on the Statement of Fiduciary Net Position. The invested cash collateral

is included in the Statement of Fiduciary Net Position as an asset and corresponding liability.

At June 30, 2023, the invested cash collateral had a fair value of \$3,726,720,000 and was composed of negotiable certificates of deposit of \$167,720,000, floating rate notes of \$2,069,875,000, commercial paper of \$388,652,000, time deposits of \$220,439,000, supranational and non-U.S. government bonds of \$7,070,000, and repurchase agreements of \$872,964,000.

7. Accounts Receivable/Accounts Payable for Security Transactions. In addition to unsettled purchases and sales, accounts receivable and accounts payable for security transactions at June 30, 2023 and 2022, included (1) receivables for deposits with brokers for securities sold short of \$943,339,000 and \$533,748,000, respectively; and (2) payables for securities sold short and not covered with fair values of \$954,610,000 and \$518,411,000, respectively. Other investment receivables included an in-kind transfer of assets between two external private equity investment managers of \$249 million as well as other miscellaneous investment receivables.

8. Derivative Financial Instruments. Derivative instruments are financial contracts whose values depend on the values of one or more underlying assets, reference rates or financial indexes. All derivatives held by the System are considered investments. The fair value of all derivative financial instruments is reported on a net basis on the Statement of Fiduciary Net Position. The derivative instruments are either subject to an enforceable master netting arrangement or similar agreement. The master netting arrangements allow the System to net applicable liabilities or payment obligations to counterparties to the derivative contracts against amounts owed to the System by the counterparties.

The System holds investments in swaps, futures and options and enters into forward foreign currency exchange contracts. Swaps, futures, options and currency forwards contracts provide the System with the opportunity to build passive benchmark

positions, manage portfolio duration in relation to various benchmarks, adjust portfolio yield curve exposure and gain market exposure to various indexes in a more efficient way and at lower transaction costs. Derivatives that are exchange-traded are not subject to credit risk, but all over-the-counter derivatives, such as swaps and currency forwards, do expose the System to counterparty credit risk. Counterparty credit risk for the System's investments in derivatives instruments is summarized in Figure 2.27.

Market risks arise from adverse changes in market prices, interest rates and foreign exchange rates. The System's level of exposure to interest rate risk through derivative instruments is shown in Figure 2.24. The System's investments in derivative instruments at June 30, 2023, are summarized in Figure 2.23.

FIGURE 2.23: DERIVATIVE INSTRUMENTS SUMMARY

(EXPRESSED IN THOUSANDS)

Investment	Net Appreciation/ (Depreciation) in Fair Value for the Fiscal Year Ended June 30, 2023		Fair Value June 30, 2023	
Derivatives (by Type)	Amount	Classification	Amount	Notional (Dollars)
Commodity Futures Long	\$ (172)	Equity Securities	\$ —	\$ —
Credit Default Swaps Bought	(56)	Debt Securities	11	1,600
Credit Default Swaps Written	(20)	Debt Securities	(20)	20,000
Currency Futures Long	74	Debt Securities	74	5,676
Currency Futures Short	(144)	Debt Securities	—	—
Fixed-Income Futures Long	992	Debt Securities	(16,758)	1,531,513
Fixed-Income Futures Short	(2,896)	Debt Securities	5,519	(910,595)
Fixed Income Options	(1)	Debt Securities	(1)	—
FX Forwards	(20,596)	Investment Sales/Purchases	(14,589)	(391,437)
Index Futures Long	14,391	Equity Securities	10,143	409,395
Index Futures Short	(1,762)	Equity Securities	(847)	(24,049)
Pay Fixed-Interest Rate Swaps	2,737	Debt Securities	2,737	69,582
Receive Fixed-Interest Rate Swaps	(294)	Debt Securities	(295)	24,472
Swaptions	(8)	Debt Securities	(8)	(2,600)
Total Return Equity Index Swaps	117,967	Equity Securities	118,313	2,400,506
Total	\$ 110,212		\$ 104,279	

FIGURE 2.24: DERIVATIVE INSTRUMENTS SUBJECT TO INTEREST RATE RISK

(EXPRESSED IN THOUSANDS)

Investment Type	Fair Value June 30, 2023	Investment Maturities (in years)			
		Under-1	1-5	6-10	Greater than 10
Credit Default Swaps Bought	\$ 11	\$ —	\$ 11	\$ —	\$ —
Credit Default Swaps Written	(20)	(15)	70	(75)	—
Pay Fixed-Interest Rate Swaps	2,737	—	474	322	1,941
Receive Fixed-Interest Rate Swaps	(294)	(250)	21	(65)	—
Total Return Equity Index Swaps	(14,388)	—	(14,388)	—	—
Total	\$ (11,954)	\$ (265)	\$ (13,812)	\$ 182	\$ 1,941

9. Futures. Futures contracts are contracts to deliver or receive securities at a specified future date and at a specified price or yield. Futures contracts are traded on organized exchanges (exchange-traded) and require an initial margin (collateral) in the form of cash or marketable securities. The net change in the futures contract value is settled daily, in cash, with the exchanges. The net gains or losses resulting from the daily settlements are included in the System's Statement of Changes in Fiduciary Net Position. Holders of futures contracts look to the exchange for performance under the contract and not to the entity holding the offsetting futures position. Accordingly, the amount at risk posed by nonperformance of counterparties to futures contracts is minimal. Information on the System's investments in fixed income, currency and equity index futures at June 30, 2023, is shown in Figure 2.23.

10. Currency Forwards. Currency forwards represent foreign exchange contracts and are used by the System to effect settlements and to protect the base currency (\$ U.S.) value of portfolio assets denominated in foreign currencies against fluctuations in the exchange rates of those currencies. A forward foreign currency exchange contract is a commitment to purchase or sell a foreign currency at a future date at a negotiated price. The credit risk of currency contracts that are exchange-traded lies with the clearinghouse of the exchange where the contracts are traded. The credit risk of currency contracts traded over the counter lies with the counterparty, and exposure usually is equal to the unrealized profit on in-the-money contracts. The market risk in foreign currency contracts is related to adverse movements in currency exchange rates. The net realized gains or losses arising from the differences between the original values of the foreign currency contracts and the closing values of such contracts are included in the Net Appreciation/Depreciation in Fair Value of Investments in the Statement of Changes in Fiduciary Net Position. Information on the System's currency forward contracts at June 30, 2023, is shown in Figures 2.23 and 2.25.

FIGURE 2.25: CURRENCY FORWARDS

AS OF JUNE 30

(EXPRESSED IN THOUSANDS)

Currency	Cost	Pending Foreign Exchange Purchases	Pending Foreign Exchange Sales	Fair Value 2023	Fair Value 2022
Australian Dollar	48,879	225,429	(172,181)	53,248	(7,969)
Brazilian Real	178	6,874	(6,943)	(69)	4,356
British Pound Sterling	71,931	233,459	(158,742)	74,717	16,341
Canadian Dollar	237,333	476,177	(231,386)	244,791	111,791
Chilean Peso	1,153	4,956	(3,830)	1,126	1,528
Chinese Yuan Renminbi	(12,775)	—	(12,114)	(12,114)	(60,961)
Chinese Yuan Renminbi HK	(2,279)	—	(2,201)	(2,201)	—
Colombian Peso	(558)	2,067	(2,795)	(728)	(1,380)
Czech Koruna	2,852	2,880	—	2,880	(4,048)
Danish Krone	(18,752)	—	(18,802)	(18,802)	(17,753)
Egyptian Pound	(49)	396	(399)	(3)	—
Euro Currency Unit	211,988	815,719	(598,868)	216,851	179,851
Hong Kong Dollar	(53,191)	—	(53,143)	(53,143)	(55,356)
Hungarian Forint	1,564	2,887	(1,308)	1,579	1,945
Indian Rupee	7,119	9,325	(2,206)	7,119	(4,533)
Indonesian Rupiah	(4,531)	1,740	(6,232)	(4,492)	(1,695)
Israeli Shekel	(39,794)	22	(38,470)	(38,448)	(26,069)
Japanese Yen	426,158	620,771	(215,166)	405,605	(286,160)
Kazakhstan Tenge	1,124	1,115	—	1,115	—
Malaysian Ringgit	(1,995)	2,389	(4,225)	(1,836)	1,298
Mexican Peso	(2,911)	4,319	(7,348)	(3,029)	1,062
New Taiwan Dollar	1,456	2,873	(1,417)	1,456	(11,198)
New Zealand Dollar	(175,548)	47,799	(223,743)	(175,944)	(68,396)
Nigerian Naira	(26)	81	(81)	—	—
Norwegian Krone	(281,046)	138,865	(432,970)	(294,105)	(21,455)
Peruvian Sol	(2,269)	—	(2,284)	(2,284)	(4,611)
Philippines Peso	(4,369)	2,105	(6,502)	(4,397)	(607)
Polish Zloty	(3,322)	—	(3,369)	(3,369)	3,779
Romanian Leu	(696)	1,466	(2,159)	(693)	(1,161)
Singapore Dollar	(90,922)	42,296	(132,844)	(90,548)	(75,951)
South African Rand	(6,117)	855	(6,917)	(6,062)	(2,408)
South Korean Won	5,124	6,456	(1,423)	5,033	18
Swedish Krona	129,364	294,216	(163,463)	130,753	97,416
Swiss Franc	(77,506)	286,738	(367,735)	(80,997)	(343,508)
Thai Baht	768	3,511	(2,775)	736	4,945
Turkish Lira	—	—	—	—	(1,461)
U.S. Dollar	(368,334)	2,861,346	(3,229,680)	(368,334)	578,357
Total Forwards Subject to Foreign Currency Risk				\$ (14,589)	\$ 6,007

11. Options. Options may be either exchange-traded or negotiated directly between two counterparties over the counter. Options grant the holder the right, but not the obligation, to purchase (call) or sell (put) a financial instrument at a specified price and within a specified period of time from the writer of the option.

As a purchaser of options, the System typically pays a premium at the outset. This premium is reflected as an asset on the financial statements. The System then retains the right, but not the obligation, to exercise the options and purchase the underlying financial instrument. Should the option not be exercised, it expires worthless, and the premium is recorded as a loss.

A writer of options assumes the obligation to deliver or receive the underlying financial instrument on exercise of the option. Certain option contracts may involve cash settlements based on specified indexes such as stock indexes. As a writer of options, the System receives a premium at the outset. This premium is reflected as a liability on the financial statements, and the System bears the risk of an unfavorable change in the price of the financial instrument underlying the option.

Information on the System's investments in options on interest rate swaps (swaptions) and fixed income futures contracts at June 30, 2023, is shown in Figure 2.23.

12. Swap Agreements. Swaps are negotiated contracts between two counterparties for the exchange of payments at certain intervals over a predetermined timeframe. The payments are based on a notional principal amount and calculated using either fixed or floating interest rates or total returns from certain instruments or indexes. Swaps are used to manage risk and enhance returns. To reduce the risk of counterparty nonperformance, the System generally requires collateral on any material gains from these transactions. During fiscal year 2023, the System had activity in credit default, total return, and interest rate swaps. Gains and losses on swaps are determined based on fair values and are recorded in the Statement of Changes in Fiduciary Net Position. Information on the System's swap balances at June 30, 2023, is shown in Figure 2.23, and the terms, fair values and notional values of the System's investments in swap agreements that are highly sensitive to interest rate changes are disclosed in Figure 2.26.

FIGURE 2.26: DERIVATIVE INSTRUMENTS HIGHLY SENSITIVE TO INTEREST RATE CHANGES

(EXPRESSED IN THOUSANDS)

Investment Type	Reference Rate	Fair Value June 30, 2023	Notional Amount
Interest Rate Swaps	Receive Fixed 8.34%, Pay Variable 28-day MTIE	\$ 16	\$ 1,090
Interest Rate Swaps	Receive Fixed 8.39%, Pay Variable 28-day MTIE	15	819
Interest Rate Swaps	Receive Fixed 11.42%, Pay Variable Brazil 1-day CDI	16	705
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 13.02%	(26)	415
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 13.65%	—	2,011
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 13.65%	—	5,307
Interest Rate Swaps	Receive Fixed 4.61%, Pay Variable Czech Krona 6-month PRIBOR	8	3,090
Interest Rate Swaps	Receive Variable Poland 6-month WIBOR, Pay Fixed 5.46%	(7)	837
Interest Rate Swaps	Receive Variable Daily Compound SOFR, Pay Fixed 1.00%	507	6,600
Interest Rate Swaps	Receive Fixed 1.75%, Pay Variable Daily Compound SOFR	(250)	7,100
Interest Rate Swaps	Receive Fixed 8.15%, Pay Variable 28-day MTIE	4	1,236
Interest Rate Swaps	Receive Variable Euro short term rate (€STR), Pay Fixed 1.34%	75	709

(Continued)

FIGURE 2.26: DERIVATIVE INSTRUMENTS HIGHLY SENSITIVE TO INTEREST RATE CHANGES, cont.

(EXPRESSED IN THOUSANDS)

Investment Type	Reference Rate	Fair Value June 30, 2023	Notional Amount
Interest Rate Swaps	Receive Variable Euro short term rate (€STR), Pay Fixed 1.74%	123	1,549
Interest Rate Swaps	Receive Variable Euro short term rate (€STR), Pay Fixed 2.05%	33	573
Interest Rate Swaps	Receive Variable Euro short term rate (€STR), Pay Fixed 2.08%	90	1,582
Interest Rate Swaps	Receive Fixed 8.8%, Pay Variable 28-day MTIIE	184	4,198
Interest Rate Swaps	Receive Fixed 2.78%, Pay Variable Daily Compound SOFR	(51)	732
Interest Rate Swaps	Receive Fixed 2.77%, Pay Variable Daily Compound SOFR	(103)	1,621
Interest Rate Swaps	Receive Fixed 2.92%, Pay Variable Daily Compound SOFR	(30)	560
Interest Rate Swaps	Receive Fixed 2.92%, Pay Variable Daily Compound SOFR	(101)	1,540
Interest Rate Swaps	Receive Fixed 5.59%, Pay Variable Pound Sterling SONIA overnight rate	(3)	1,780
Interest Rate Swaps	Receive Variable Daily SOFR, Pay Fixed 2.889%	628	10,000
Interest Rate Swaps	Receive Variable Fed Funds Effective Rate, Pay Fixed 2.857%	317	5,000
Interest Rate Swaps	Receive Variable Fed Funds Effective Rate, Pay Fixed 2.8425%	333	5,000
Interest Rate Swaps	Receive Variable Fed Funds Effective Rate, Pay Fixed 3.1555%	59	10,000
Interest Rate Swaps	Receive Variable Fed Funds Effective Rate, Pay Fixed 3.166%	5	10,000
Interest Rate Swaps	Receive Variable Fed Funds Effective Rate, Pay Fixed 2.896%	288	5,000
Interest Rate Swaps	Receive Variable Fed Funds Effective Rate, Pay Fixed 2.87%	312	5,000
Subtotal Interest Rate Swaps		\$ 2,442	\$ 94,054
Total Return Equity Index Swaps	Receive Variable MSCI US Total Return Index, Pay Variable 3-month SOFR + 33 bps	\$ 6,445	\$ 105,832
Total Return Equity Index Swaps	Receive Variable MSCI US Total Return Index, Pay Variable 3-month SOFR + 39 bps	44,879	517,081
Total Return Equity Index Swaps	Receive Variable MSCI US Total Return Index, Pay Variable 3-month SOFR + 33 bps	13,958	160,814
Total Return Equity Index Swaps	Receive Variable GDUEACWF Index, Pay Variable 1-day SOFR + 42.5 bps	5,413	112,966
Total Return Equity Index Swaps	Receive Variable GDUEACWF Index, Pay Variable 1-day SOFR + 39 bps	5,931	101,376
Total Return Equity Index Swaps	Receive Variable MSCI US Total Return Index, Pay Variable 3-month SOFR + 50 bps	13,958	160,815
Total Return Equity Index Swaps	Receive Variable GDUEACWF Index, Pay Variable 1-day SOFR + 42.5 bps	6,278	107,309
Total Return Equity Index Swaps	Receive Variable GDUEACWF Index, Pay Variable 1-day SOFR + 44 bps	10,239	209,384
Total Return Equity Index Swaps	Receive Variable GDUEACWF Index, Pay Variable 1-day SOFR + 42.5 bps	6,558	353,796
Total Return Equity Index Swaps	Receive Variable GDDUUS Index, Pay Variable 1-day SOFR Cmpd + 35.5 bps	19,042	285,564
Total Return Equity Index Swaps	Receive Variable 1-day SOFR Cmpd + 31.5 bps, Pay Variable FTEPNAUS Index	(14,388)	285,569
Subtotal Total Return Swaps		\$ 118,313	\$ 2,400,506
Total		\$ 120,755	\$ 2,494,560

FIGURE 2.27: DERIVATIVE INSTRUMENTS SUBJECT TO COUNTERPARTY CREDIT RISK

AT JUNE 30, 2023

Counterparty	Percentage of Net Exposure	Moody's Ratings	S&P Ratings	Fitch Ratings
Barclays Bank PLC	44.97%	A1	A+	A+
JPMorgan Chase Bank NA	21.02%	Aa2	A+	AA
Goldman Sachs International	15.78%	A1	A+	A+
UBS AG/Stamford CT	8.66%	A3	—	A
BNP Paribas SA	3.74%	Aa3	A+	A+
HSBC Bank USA NA/New York NY	2.96%	A3	—	A+
BNP Paribas Securities Corp.	2.65%	—	A+	—
Goldman Sachs Bank USA-New York NY	0.22%	A1	A+	A+
Total	100.00%			

13. Asset Allocation. The long-term expected rate of return on the System's investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The long-term target allocations are based on the Strategic Asset Allocation Implementation

Schedule and Allowable Ranges document, which was approved by the VRS Board of Trustees on June 15, 2023. Best estimates of arithmetic real rates of return for each major asset class included in the System's long-term target asset allocation are summarized in Figure 2.28. This provided the basis for the 6.75% long-term rate of return actuarial assumption used in the calculation of the Pension and OPEB liabilities with the Measurement Date of June 30, 2023. See the Investments Section for more detailed asset allocation and performance information.

FIGURE 2.28: ASSET ALLOCATION

FOR THE YEAR ENDED JUNE 30, 2023

Asset Class (Strategy)	Long-Term Target Asset Allocation	Arithmetic Long-Term Expected Rate of Return	Weighted Average Long-Term Expected Rate of Return*
Public Equity	34.00%	6.14%	2.09%
Fixed Income	15.00%	2.56%	0.38%
Credit Strategies	14.00%	5.60%	0.78%
Real Assets	14.00%	5.02%	0.70%
Private Equity	16.00%	9.17%	1.47%
MAPS – Multi-Asset Public Strategies	4.00%	4.50%	0.18%
PIP – Private Investment Partnerships	2.00%	7.18%	0.14%
Cash	1.00%	1.20%	0.01%
Total	100.00%		5.75%
		Inflation	2.50%
		* Expected arithmetic nominal return	8.25%

* The above allocation provides a one-year expected return of 8.25%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the System, stochastic projections are employed to model future returns under various economic conditions. These results provide a range of returns over various time periods that ultimately provide a median return of 7.14%, including expected inflation of 2.50%.

On June 15, 2023, the VRS Board elected a long-term rate of return of 6.75%, which was roughly at the 45th percentile of expected long-term results of the VRS fund asset allocation at that time, providing a median return of 7.14%, including expected inflation of 2.50%.

6. Capital Assets

The System's non-depreciable and depreciable capital assets for the year ended June 30, 2023, and the changes by category from the prior fiscal year-

end are presented in Figure 2.29. Right-to-use intangible assets included long-term leases in the equipment and building categories.

FIGURE 2.29: CAPITAL ASSETS

FOR THE YEAR ENDED JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	Balance June 30, 2022	Increases	Decreases	Balance June 30, 2023
Non-Depreciable Capital Assets:				
Land	\$ 1,368	\$ —	\$ —	\$ 1,368
Construction in progress	2,864	—	—	2,864
Total Non-Depreciable Capital Assets	4,232	—	—	4,232
Depreciable Capital and Amortizable Intangible Assets:				
Building	4,632	—	—	4,632
Furniture and Equipment	7,133	—	893	6,240
Intangible Assets	72,385	—	—	72,385
Right-to-Use Intangible Assets	6,212	—	—	6,212
Subscription-Based IT Assets	—	1,254	—	1,254
Total Depreciable/Amortizable Capital Assets	90,362	1,254	893	90,723
Less Accumulated Depreciation/Amortization:				
Building	2,779	116	—	2,895
Furniture and Equipment	6,532	143	893	5,782
Intangible Assets	51,027	5,744	—	56,771
Right-to-Use Intangible Assets	1,875	2,139	—	4,014
Subscription-Based IT Assets	—	99	—	99
Total Accumulated Depreciation/Amortization	62,213	8,241	893	69,561
Total Depreciable/Amortizable Capital Assets – Net	28,149	(6,987)	—	21,162
Total Net Capital Assets	\$ 32,381	\$ (6,987)	\$ —	\$ 25,394

7. Lease Liabilities

The System has recorded liabilities related to long-term lease activity in accordance with GASB 87. In most cases, the System expects that in the normal course of business, these leases will be replaced by similar leases. The System's future lease activity as of June 30, 2023, is presented in Figure 2.30.

FIGURE 2.30: LONG-TERM LEASE LIABILITIES

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

Fiscal Year	Principal	Interest	Total
2024	\$ 1,863	\$ 47	\$ 1,910
2025	77	14	91
2026	80	11	91
2027	83	8	91
2028	85	6	91
2029 - 2033	126	3	129
Total	\$ 2,314	\$ 89	\$ 2,403

8. Subscription-based IT Liabilities

Starting in fiscal year ending June 30, 2023, the System implemented GASB 96, which requires the recognition of liabilities related to subscription-based information technology arrangements (SBITA). The liabilities related to these arrangements are presented in Figure 2.31.

FIGURE 2.31: SBITA LIABILITIES

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

Fiscal Year	Principal	Interest	Total
2024	\$ 75	\$ 74	\$ 149
2025	67	69	136
2026	77	63	140
2027	89	57	146
2028	101	51	152
2029 - 2033	551	113	664
Total	\$ 960	\$ 427	\$ 1,387

9. System Employee Benefit Plan Obligations

All full-time permanent, salaried employees of the System are employees of the Commonwealth of Virginia and included in the Commonwealth's participation as an employer in VRS. The Commonwealth, not the System, has overall responsibility for contributions to the VRS pension trust fund as well as other employee benefit and post-employment benefit trust funds for System employees. The state's pension contribution requirement for general employees was 14.46% for the fiscal year ended June 30, 2023, and 14.46% for fiscal year ended 2022.

There were approximately 62,292 state retirees, including System retirees, at June 30, 2023. Note 2.B provides information on the state's contribution toward funding the defined benefit plan for state employees for fiscal year 2023 and fiscal year 2022.

The System's contribution requirement for its employees for fiscal year 2023 and fiscal year 2022 was \$5,380,000 and \$5,071,000, respectively, of

which \$4,956,000 related to the defined benefit plan and \$424,000 related to the hybrid defined contribution plan for fiscal year 2023. For fiscal year 2022, \$4,718,000 related to the defined benefit plan and \$353,000 related to the defined contribution plan. The System's financial obligations for other employee benefit and post-employment benefit plans were as follows:

- The state's contribution requirement for the Group Life Insurance Program was 1.34% of covered payroll for the year ended June 30, 2023, and 1.34% for the year ended June 30, 2022. There were approximately 87,157 active state employees, 14,888 inactive vested participants and 70,231 state retirees, including System employees and retirees, eligible for group life insurance coverage at June 30, 2023. The System's contribution requirement for its employees and retirees for fiscal year 2023 and fiscal year 2022 was \$503,000 and \$474,000, respectively.
- The state's contribution requirement for the Retiree Health Insurance Credit Program for the years ended June 30, 2023 and 2022, was 1.12% and 1.12% of covered payroll, respectively. There were approximately 47,846 state retirees, including System retirees, receiving the health insurance credit at June 30, 2023. The System's contribution requirement for its employees for fiscal year 2023 and fiscal year 2022 was \$420,000 and \$396,000, respectively.
- The state's contribution requirement for the Virginia Sickness and Disability Program (VSDP) for the years ended June 30, 2023, and June 30, 2022, was 0.61% and 0.61%, respectively. There were approximately 82,381 state employees, including System employees, enrolled in VSDP at June 30, 2023. The System's contribution requirement for its employees for fiscal year 2023 and fiscal year 2022 was \$226,208 and \$213,000, respectively.

Information regarding the Commonwealth's funding progress is presented in the Commonwealth's *Annual Comprehensive Financial Report*. Information about the pension plans is provided in Note 2; information about other employee and post-employment benefit plans is provided in Note 3.

10. Litigation

The System, including its Board of Trustees, officers and employees, is a defendant in claims and lawsuits that are pending, are in progress or have been settled since June 30, 2023. The Attorney General and outside counsel have reviewed the status of these claims, lawsuits and the System's potential liability arising from them. Based on their review, it is the opinion of management that such liability, if any, would have no material adverse effect on the System's financial condition.

11. Risk Management

To cover its exposure to various risks of loss, the System, as an independent agency of the Commonwealth of Virginia, participates in the Commonwealth's self-insurance programs for state employee health care and risk management. The latter program includes property, general (tort) liability, medical malpractice and automobile plans. The System's employees are covered by the Virginia Workers' Compensation Program administered by the Department of Human Resource Management. In addition, the System is self-insured for fiduciary liability as well as directors' and officers' liability under a program administered by the Commonwealth's Division of Risk Management. There were no claims in excess of coverage and no reductions in coverage during fiscal year 2023 and the three preceding fiscal years.

12. Commitments

The System extends investment commitments in the normal course of business. At June 30, 2023 and 2022, these commitments amounted to \$19,167,634,000 and \$20,128,834,000, respectively.

13. Statutory Contribution Adjustment

For fiscal year 2023, the employer retirement contribution rate for state employees was 14.46% and the employer retirement contribution rate for teachers was 16.62%. The rate for state employees was 102% of the adjusted actuarially determined rate and the rate for teachers was 112% of the adjusted actuarially determined rate. Additionally, the employer retirement contribution rates for SPORS, VaLORS and JRS were funded at 100% of the adjusted actuarially determined rate and were 29.98%, 24.60% and 30.67%, respectively. There was no adjustment to the employer contribution rates for political subdivision employers or to the member contribution rate of 5.00%.

For fiscal years 2023, other post-employment benefit plan contributions due or required also were based on the June 30, 2021, actuarial valuation, which used a 30-year funding period for the UAAL. The rate for Group Life Insurance was 1.34%, the rate for the Retiree Health Insurance Credit Program for state employees was 1.12% and the rate for the Retiree Health Insurance Credit Program for teachers was 1.21% of covered payroll. The rate for VSDP was 0.61%, and the rates for VLDP for teachers and political subdivision employers were 0.47% and 0.85% of covered payroll, respectively.

For fiscal year 2022, the employer retirement contribution rate for state employees was 14.46% and the employer retirement contribution rate for teachers was 16.62%. The rates for both of these groups were 100% of the adjusted actuarially determined rate. Additionally, the employer retirement contribution rates for SPORS, VaLORS and JRS were funded at 100% of the adjusted actuarially determined rate and were 26.33%, 21.90% and 29.84%, respectively. There was no

adjustment to the employer contribution rates for political subdivision employers or to the member contribution rate of 5.00%.

For fiscal year 2022, other post-employment benefit plan contributions due or required also were based on the June 30, 2019, actuarial valuation, which used a 30-year funding period for the UAAL. The rate for Group Life Insurance was 1.34%, the rate for the Retiree Health Insurance Credit Program for state employees was 1.12% and the rate for the Retiree Health Insurance Credit Program for teachers was 1.21% of covered payroll. The rate for VSDP was 0.61%, and the rates for VLDP for teachers and political subdivision employers were 0.47% and 0.83% of covered payroll, respectively.

The Board approved Pay-As-You-Go contribution rate for fiscal years 2023 and 2022 for employer groups participating in Line of Duty Act Program were \$681.84 and \$722.55, respectively.

Contributions to the VRS-administered other post-employment programs, with the exception of the Group Life Insurance program, are fully paid by the employer. The Group Life Insurance Program has a total contribution rate, which is allocated into an employee and an employer component using a 60/40 split. For fiscal year 2023, the split yields an employee contribution rate of 0.80% of covered payroll and an employer contribution rate of 0.54% of covered payroll. For fiscal year 2022, the split yields an employee contribution rate of 0.80% of covered payroll and an employer contribution rate of 0.54% of covered payroll. Employers may elect to pay all or part of the employee contribution; however, the employer must pay all of the employer contribution.

**REQUIRED SUPPLEMENTARY SCHEDULE OF CHANGES IN EMPLOYERS' NET PENSION LIABILITY:
VIRGINIA RETIREMENT SYSTEM – STATE**

FOR THE PLAN YEARS ENDED JUNE 30

	VRS State				
	2023	2022	2021	2020	2019
Total pension liability:					
Service cost	\$ 425,233	\$ 413,902	\$ 404,703	\$ 406,776	\$ 379,359
Interest	1,803,758	1,779,933	1,704,842	1,666,047	1,627,637
Benefit changes	—	—	—	—	—
Difference between actual and expected experience	706,071	(247,391)	(281,382)	(12,440)	181,189
Assumption changes	—	—	412,575	—	663,566
Benefit payments	(1,610,266)	(1,536,665)	(1,486,951)	(1,427,873)	(1,360,833)
Refunds of contributions	(31,014)	(31,680)	(29,065)	(27,427)	(26,897)
Net change in total pension liability	1,293,782	378,099	724,722	605,083	1,464,021
Total pension liability – beginning	27,117,746	26,739,647	26,014,925	25,409,842	23,945,821
Total pension liability – ending (a)	\$ 28,411,528	\$ 27,117,746	\$ 26,739,647	\$ 26,014,925	\$ 25,409,842
Plan fiduciary net position:					
Contributions – employer	\$ 683,049	\$ 633,738	\$ 609,778	\$ 576,443	\$ 545,584
Contributions – member	234,317	217,945	207,065	210,896	201,481
Contributions – employer special	73,052	219,156	—	—	—
Net investment income	1,437,612	(21,579)	5,055,163	361,061	1,211,722
Benefit payments	(1,610,266)	(1,536,665)	(1,486,951)	(1,427,873)	(1,360,833)
Refunds of contributions	(31,014)	(31,680)	(29,065)	(27,427)	(26,897)
Administrative expense	(14,498)	(14,302)	(12,904)	(12,603)	(12,374)
Other	249	296	(737)	(539)	(762)
Net change in plan fiduciary net position	772,501	(533,091)	4,342,349	(320,042)	557,921
Plan fiduciary net position – beginning	22,579,326	23,112,417	18,770,068	19,090,110	18,532,189
Plan fiduciary net position – ending (b)	23,351,827	\$ 22,579,326	\$ 23,112,417	\$ 18,770,068	\$ 19,090,110
Net pension liability – ending (a-b)	5,059,701	\$ 4,538,420	\$ 3,627,230	\$ 7,244,857	\$ 6,319,732
Plan fiduciary net position as a percentage of the total pension liability (b/a)	82.19%	83.26%	86.44%	72.15%	75.13%
Covered payroll (c)	\$ 5,069,435	\$ 4,661,991	\$ 4,399,969	\$ 4,440,135	\$ 4,197,484
Net pension liability as a percentage of covered payroll ((a-b)/c)	99.81%	97.35%	82.44%	163.17%	150.56%

(EXPRESSED IN THOUSANDS)

VRS State

2018		2017		2016		2015		2014	
\$	375,965	\$	370,235	\$	369,779	\$	375,149	\$	369,120
	1,606,772		1,562,819		1,533,764		1,482,951		1,436,064
	—		—		—		—		—
	(327,289)		(85,975)		(245,642)		59,923		—
	—		76,965		—		—		—
	(1,296,803)		(1,234,388)		(1,195,198)		(1,136,102)		(1,081,866)
	(30,236)		(30,837)		(25,240)		(27,724)		(25,036)
	328,409		658,819		437,463		754,197		698,282
	23,617,412		22,958,593		22,521,130		21,766,933		21,068,651
\$	23,945,821	\$	23,617,412	\$	22,958,593	\$	22,521,130	\$	21,766,933
\$	548,158	\$	535,424	\$	560,211	\$	480,657	\$	343,259
	201,920		201,391		200,184		195,582		198,035
	—		—		162,406		—		—
	1,302,241		1,963,811		277,166		728,083		2,243,999
	(1,296,803)		(1,234,388)		(1,195,198)		(1,136,102)		(1,081,866)
	(30,236)		(30,837)		(25,240)		(27,724)		(25,036)
	(11,481)		(11,612)		(10,140)		(10,302)		(12,341)
	28,502		(1,743)		(122)		(154)		123
	742,301		1,422,046		(30,733)		230,040		1,666,173
	17,789,888		16,367,842		16,398,575		16,168,535		14,502,362
\$	18,532,189	\$	17,789,888	\$	16,367,842	\$	16,398,575	\$	16,168,535
\$	5,413,632	\$	5,827,524	\$	6,590,751	\$	6,122,555	\$	5,598,398
	77.39%		75.33%		71.29%		72.81%		74.28%
\$	4,152,368	\$	4,020,893	\$	3,977,759	\$	3,878,632	\$	3,861,712
	130.37%		144.93%		165.69%		157.85%		144.97%

**REQUIRED SUPPLEMENTARY SCHEDULE OF CHANGES IN EMPLOYERS' NET PENSION LIABILITY:
VIRGINIA RETIREMENT SYSTEM – TEACHER**

FOR THE PLAN YEARS ENDED JUNE 30

	VRS Teacher				
	2023	2022	2021	2020	2019
Total pension liability:					
Service cost	\$ 901,517	\$ 823,885	\$ 948,915	\$ 938,143	\$ 889,003
Interest	3,660,139	3,568,410	3,355,158	3,269,776	3,184,697
Benefit changes	—	—	—	—	—
Difference between actual and expected experience	1,099,742	(361,725)	(178,349)	(404,985)	(174,815)
Assumption changes	—	—	845,179	—	1,472,649
Benefit payments	(2,773,752)	(2,635,945)	(2,553,153)	(2,448,204)	(2,331,038)
Refunds of contributions	(45,366)	(43,437)	(38,464)	(36,211)	(36,715)
Net change in total pension liability	2,842,280	1,351,188	2,379,286	1,318,519	3,003,781
Total pension liability – beginning	54,732,329	53,381,141	51,001,855	49,683,336	46,679,555
Total pension liability – ending (a)	\$ 57,574,609	\$ 54,732,329	\$ 53,381,141	\$ 51,001,855	\$ 49,683,336
Plan fiduciary net position:					
Contributions – employer	\$ 1,576,963	\$ 1,485,307	\$ 1,416,135	\$ 1,327,774	\$ 1,280,964
Contributions – member	465,101	439,139	419,415	418,909	403,258
Contributions – non-employer	147,457	442,371	61,344	—	—
Net investment income	2,913,862	(66,609)	9,887,249	689,010	2,311,028
Benefit payments	(2,773,752)	(2,635,945)	(2,553,153)	(2,448,204)	(2,331,038)
Refunds of contributions	(45,366)	(43,437)	(38,464)	(36,211)	(36,715)
Administrative expense	(28,677)	(27,876)	(24,543)	(23,649)	(22,843)
Other	86	737	832	(1,169)	(1,448)
Net change in plan fiduciary net position	2,255,674	(406,313)	9,168,815	(73,540)	1,603,206
Plan fiduciary net position – beginning	45,211,731	45,618,044	36,449,229	36,522,769	34,919,563
Plan fiduciary net position – ending (b)	\$ 47,467,405	\$ 45,211,731	\$ 45,618,044	\$ 36,449,229	\$ 36,522,769
Net pension liability – ending (a-b)	\$ 10,107,204	\$ 9,520,598	\$ 7,763,097	\$ 14,552,626	\$ 13,160,567
Plan fiduciary net position as a percentage of the total pension liability (b/a)	82.45%	82.61%	85.46%	71.47%	73.51%
Covered payroll (c)	\$ 9,970,623	\$ 9,319,260	\$ 8,843,887	\$ 8,766,667	\$ 8,387,503
Net pension liability as a percentage of covered payroll ((a-b)/c)	101.37%	102.16%	87.78%	166.00%	156.91%

(EXPRESSED IN THOUSANDS)

VRS Teacher

2018		2017		2016		2015		2014	
\$	885,510	\$	830,475	\$	828,856	\$	828,901	\$	831,501
	3,099,338		3,016,207		2,931,065		2,834,138		2,722,788
	—		—		—		—		—
	(440,308)		(642,745)		(391,881)		(212,089)		—
	—		218,559		—		—		—
	(2,241,927)		(2,147,781)		(2,081,069)		(1,980,353)		(1,874,636)
	(40,578)		(39,521)		(35,067)		(36,058)		(36,103)
	1,262,035		1,235,194		1,251,904		1,434,539		1,643,550
	45,417,520		44,182,326		42,930,422		41,495,883		39,852,333
\$	46,679,555	\$	45,417,520	\$	44,182,326	\$	42,930,422	\$	41,495,883
\$	1,292,988	\$	1,137,976	\$	1,062,338	\$	1,074,366	\$	853,634
	391,490		392,730		380,314		373,525		371,241
	—		—		—		192,884		—
	2,421,157		3,632,291		516,704		1,327,047		4,042,441
	(2,241,927)		(2,147,781)		(2,081,069)		(1,980,353)		(1,874,636)
	(40,578)		(39,521)		(35,067)		(36,058)		(36,103)
	(20,945)		(21,123)		(18,859)		(18,238)		(22,036)
	(2,167)		(3,238)		(222)		(284)		217
	1,800,018		2,951,334		(175,861)		932,889		3,334,758
	33,119,545		30,168,211		30,344,072		29,411,183		26,076,425
\$	34,919,563	\$	33,119,545	\$	30,168,211	\$	30,344,072	\$	29,411,183
\$	11,759,992	\$	12,297,975	\$	14,014,115	\$	12,586,350	\$	12,084,700
	74.81%		72.92%		68.28%		70.68%		70.88%
\$	8,086,986	\$	7,891,783	\$	7,624,612	\$	7,434,932	\$	7,313,025
	145.42 %		155.83 %		183.80 %		169.29 %		165.25 %

**REQUIRED SUPPLEMENTARY SCHEDULE OF CHANGES IN EMPLOYERS' NET PENSION LIABILITY:
VIRGINIA RETIREMENT SYSTEM – POLITICAL SUBDIVISIONS**

FOR THE PLAN YEARS ENDED JUNE 30

	VRS Political Subdivisions				
	2023	2022	2021	2020	2019
Total pension liability:					
Service cost	\$ 725,694	\$ 640,327	\$ 613,227	\$ 603,766	\$ 556,149
Interest	1,900,513	1,840,834	1,674,640	1,593,594	1,535,532
Benefit changes	2,891	9,042	13,157	19,657	3,948
Difference between actual and expected experience	363,648	(294,247)	(164,895)	221,364	45,032
Assumption changes	691	(15)	1,003,382	—	691,407
Benefit payments	(1,395,124)	(1,307,581)	(1,237,074)	(1,157,505)	(1,082,791)
Refunds of contributions	(43,391)	(48,297)	(42,460)	(38,323)	(40,249)
Net change in total pension liability	1,554,922	840,063	1,859,977	1,242,553	1,709,028
Total pension liability – beginning	28,149,356	27,309,293	25,449,316	24,206,763	22,497,735
Total pension liability – ending (a)	\$ 29,704,278	\$ 28,149,356	\$ 27,309,293	\$ 25,449,316	\$ 24,206,763
Plan fiduciary net position:					
Contributions – employer	\$ 736,843	\$ 608,879	\$ 579,989	\$ 521,543	\$ 499,293
Contributions – member	302,890	276,350	258,562	258,408	248,421
Net investment income	1,678,096	(26,243)	5,779,327	405,051	1,345,759
Benefit payments	(1,395,124)	(1,307,581)	(1,237,074)	(1,157,505)	(1,082,791)
Refunds of contributions	(43,391)	(48,297)	(42,460)	(38,323)	(40,249)
Administrative expense	(16,656)	(16,525)	(14,411)	(13,842)	(13,369)
Other	349	264	161	(274)	(853)
Net change in plan fiduciary net position	1,263,007	(513,153)	5,324,094	(24,942)	956,211
Plan fiduciary net position – beginning	26,045,031	26,558,184	21,234,090	21,259,032	20,302,821
Plan fiduciary net position – ending (b)	\$ 27,308,038	\$ 26,045,031	\$ 26,558,184	\$ 21,234,090	\$ 21,259,032
Net pension liability – ending (a-b)	\$ 2,396,240	\$ 2,104,325	\$ 751,109	\$ 4,215,226	\$ 2,947,731
Plan fiduciary net position as a percentage of the total pension liability (b/a)	91.93%	92.52%	97.25%	83.44%	87.82%
Covered payroll (c)	\$ 6,337,774	\$ 5,699,596	\$ 5,403,267	\$ 5,368,250	\$ 5,118,622
Net pension liability as a percentage of covered payroll ((a-b)/c)	37.81%	36.92%	13.90%	78.52%	57.59%

(EXPRESSED IN THOUSANDS)

VRS Political Subdivisions

2018		2017		2016		2015		2014	
\$	544,762	\$	541,594	\$	535,322	\$	530,945	\$	524,758
	1,472,680		1,422,753		1,362,892		1,309,484		1,243,386
	10,811		36,652		2,053		1,135		—
	(43,177)		(205,649)		(87,268)		(185,419)		—
	—		(64,510)		—		—		—
	(1,010,021)		(941,856)		(893,585)		(819,201)		(754,706)
	(41,324)		(42,068)		(37,380)		(36,898)		(36,876)
	933,731		746,916		882,034		800,046		976,562
	21,564,004		20,817,088		19,935,054		19,135,008		18,158,446
\$	22,497,735	\$	21,564,004	\$	20,817,088	\$	19,935,054	\$	19,135,008
\$	490,286	\$	477,563	\$	543,947	\$	533,877	\$	539,366
	241,339		238,636		231,934		227,060		225,555
	1,415,454		2,113,973		300,995		761,164		2,272,284
	(1,010,021)		(941,856)		(893,585)		(819,201)		(754,706)
	(41,324)		(42,068)		(37,380)		(36,898)		(36,876)
	(12,236)		(12,220)		(10,696)		(10,358)		(12,153)
	(30,924)		(1,887)		(130)		(162)		120
	1,052,574		1,832,141		135,085		655,482		2,233,590
	19,250,247		17,418,106		17,283,021		16,627,539		14,393,949
\$	20,302,821	\$	19,250,247	\$	17,418,106	\$	17,283,021	\$	16,627,539
\$	2,194,914	\$	2,313,757	\$	3,398,982	\$	2,652,033	\$	2,507,469
	90.24%		89.27%		83.67%		86.70%		86.90%
\$	4,932,344	\$	4,765,842	\$	4,628,806	\$	4,513,335	\$	4,434,764
	44.50%		48.55%		73.43%		58.76%		56.54%

**REQUIRED SUPPLEMENTARY SCHEDULE OF CHANGES IN EMPLOYERS' NET PENSION LIABILITY:
STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)**

FOR THE PLAN YEARS ENDED JUNE 30

	SPORS				
	2023	2022	2021	2020	2019
Total pension liability:					
Service cost	\$ 25,401	\$ 23,688	\$ 22,042	\$ 22,167	\$ 20,079
Interest	90,683	86,396	79,549	77,231	72,715
Benefit changes		—	—	—	—
Difference between actual and expected experience	66,727	25,538	(9,431)	4,466	45,330
Assumption changes		—	58,257	—	31,773
Benefit payments	(75,578)	(71,466)	(73,227)	(64,991)	(62,683)
Refunds of contributions	(240)	(378)	(271)	(552)	(805)
Net change in total pension liability	106,993	63,778	76,919	38,321	106,409
Total pension liability – beginning	1,355,955	1,292,177	1,215,258	1,176,937	1,070,528
Total pension liability – ending (a)	\$ 1,462,948	\$ 1,355,955	\$ 1,292,177	\$ 1,215,258	\$ 1,176,937
Plan fiduciary net position:					
Contributions – employer	\$ 46,936	\$ 36,494	\$ 33,788	\$ 32,497	\$ 31,437
Contributions – member	7,952	7,131	6,489	6,600	6,379
Contributions – employer special	3,653	10,958	—	—	—
Net investment income	66,245	(902)	229,138	16,333	54,792
Benefit payments	(75,578)	(71,466)	(73,227)	(64,991)	(62,683)
Refunds of contributions	(240)	(378)	(271)	(552)	(805)
Administrative expense	(595)	(602)	(531)	(360)	(488)
Other	(1)	—	—	(38)	(61)
Net change in plan fiduciary net position	48,372	(18,765)	195,386	(10,511)	28,571
Plan fiduciary net position – beginning	1,031,383	1,050,148	854,762	865,273	836,702
Plan fiduciary net position – ending (b)	\$ 1,079,755	\$ 1,031,383	\$ 1,050,148	\$ 854,762	\$ 865,273
Net pension liability – ending (a-b)	\$ 383,193	\$ 324,572	\$ 242,029	\$ 360,496	\$ 311,664
Plan fiduciary net position as a percentage of the total pension liability (b/a)	73.81%	76.06%	81.27%	70.34%	73.52%
Covered payroll (c)	\$ 156,707	\$ 138,644	\$ 128,252	\$ 130,759	\$ 126,483
Net pension liability as a percentage of covered payroll ((a-b)/c)	244.53%	234.10%	188.71%	275.69%	246.41%

(EXPRESSED IN THOUSANDS)

SPORS

2018		2017		2016		2015		2014	
\$	18,187	\$	18,880	\$	18,700	\$	18,847	\$	18,341
	71,251		74,042		72,618		70,350		67,978
	—		—		—		—		—
	(7,248)		(5,327)		(14,711)		(2,890)		—
	—		(68,707)		—		—		—
	(58,197)		(57,814)		(53,515)		(53,338)		(50,467)
	(867)		(630)		(584)		(375)		(685)
	23,126		(39,556)		22,508		32,594		35,167
	1,047,402		1,086,958		1,064,450		1,031,856		996,689
\$	1,070,528	\$	1,047,402	\$	1,086,958	\$	1,064,450	\$	1,031,856
\$	35,806	\$	31,888	\$	31,536	\$	28,427	\$	27,683
	6,311		5,701		5,759		5,680		5,646
	—		—		2,119		—		15,000
	58,148		87,265		12,634		32,466		98,682
	(58,197)		(57,814)		(53,515)		(53,338)		(50,467)
	(867)		(630)		(584)		(375)		(685)
	(509)		(926)		(590)		(471)		(431)
	(63)		(99)		(23)		(27)		—
	40,629		65,385		(2,664)		12,362		95,428
	796,073		730,688		733,352		720,990		625,562
\$	836,702	\$	796,073	\$	730,688	\$	733,352	\$	720,990
\$	233,826	\$	251,329	\$	356,270	\$	331,098	\$	310,866
	78.16%		76.00%		67.22%		68.89%		69.87%
\$	124,003	\$	111,395	\$	114,395	\$	110,059	\$	112,010
	188.56%		225.62%		311.44%		300.84%		277.53%

**REQUIRED SUPPLEMENTARY SCHEDULE OF CHANGES IN EMPLOYERS' NET PENSION LIABILITY:
VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS)**

FOR THE PLAN YEARS ENDED JUNE 30

	VaLORS				
	2023	2022	2021	2020	2019
Total pension liability:					
Service cost	\$ 46,317	\$ 44,326	\$ 47,606	\$ 48,003	\$ 44,526
Interest	165,299	159,759	149,677	143,708	139,307
Benefit changes	—	—	—	—	—
Difference between actual and expected experience	35,308	15,632	(25,405)	22,645	11,067
Assumption changes	—	—	66,216	—	62,090
Benefit payments	(138,022)	(129,974)	(124,045)	(117,137)	(109,193)
Refunds of contributions	(4,990)	(6,284)	(5,791)	(4,893)	(4,933)
Net change in total pension liability	103,912	83,459	108,258	92,326	142,864
Total pension liability – beginning	2,474,068	2,390,609	2,282,351	2,190,025	2,047,161
Total pension liability – ending (a)	\$ 2,577,980	\$ 2,474,068	\$ 2,390,609	\$ 2,282,351	\$ 2,190,025
Plan fiduciary net position:					
Contributions – employer	\$ 90,433	\$ 73,960	\$ 76,415	\$ 79,914	\$ 75,327
Contributions – member	18,769	17,276	17,602	18,712	17,871
Contributions – employer special	6,629	19,887	—	—	—
Net investment income	118,276	(1,666)	405,217	28,579	93,872
Benefit payments	(138,022)	(129,974)	(124,045)	(117,137)	(109,193)
Refunds of contributions	(4,990)	(6,284)	(5,791)	(4,893)	(4,933)
Administrative expense	(1,063)	(1,074)	(943)	(623)	(831)
Other	(12)	(8)	—	(73)	(103)
Net change in plan fiduciary net position	90,020	(27,883)	368,455	4,479	72,010
Plan fiduciary net position – beginning	1,841,041	1,868,924	1,500,469	1,495,990	1,423,980
Plan fiduciary net position – ending (b)	\$ 1,931,061	\$ 1,841,041	\$ 1,868,924	\$ 1,500,469	\$ 1,495,990
Net pension liability – ending (a-b)	\$ 646,919	\$ 633,027	\$ 521,685	\$ 781,882	\$ 694,035
Plan fiduciary net position as a percentage of the total pension liability (b/a)	74.91%	74.41%	78.18%	65.74%	68.31%
Covered payroll (c)	\$ 369,142	\$ 338,768	\$ 348,650	\$ 369,996	\$ 349,998
Net pension liability as a percentage of covered payroll ((a-b)/c)	175.25%	186.86%	149.63%	211.32%	198.30%

(EXPRESSED IN THOUSANDS)

VaLORS

2018		2017		2016		2015		2014	
\$	45,179	\$	47,189	\$	45,608	\$	47,531	\$	46,504
	136,289		135,453		129,756		124,579		119,040
	—		—		—		—		—
	(26,111)		(1,457)		4,997		(4,849)		—
	—		(63,457)		—		—		—
	(104,776)		(96,224)		(92,270)		(84,990)		(78,412)
	(5,604)		(4,938)		(4,524)		(4,797)		(4,665)
	44,977		16,566		83,567		77,474		82,467
	2,002,184		1,985,618		1,902,051		1,824,577		1,742,110
\$	2,047,161	\$	2,002,184	\$	1,985,618	\$	1,902,051	\$	1,824,577
\$	73,793	\$	73,816	\$	62,900	\$	62,084	\$	52,483
	17,496		17,598		17,574		17,081		17,908
	—		—		16,492		—		15,000
	98,292		146,039		20,899		52,312		156,786
	(104,776)		(96,224)		(92,270)		(84,990)		(78,412)
	(5,604)		(4,938)		(4,524)		(4,797)		(4,665)
	(861)		(1,540)		(940)		(743)		(681)
	(247)		(310)		(38)		(44)		—
	78,093		134,441		20,093		40,903		158,419
	1,345,887		1,211,446		1,191,353		1,150,450		992,031
\$	1,423,980	\$	1,345,887	\$	1,211,446	\$	1,191,353	\$	1,150,450
\$	623,181	\$	656,297	\$	774,172	\$	710,698	\$	674,127
	69.56%		67.22%		61.01%		62.64%		63.05%
\$	345,531	\$	344,468	\$	345,504	\$	338,562	\$	352,492
	180.35%		190.52%		224.07%		209.92%		191.25%

**REQUIRED SUPPLEMENTARY SCHEDULE OF CHANGES IN EMPLOYERS' NET PENSION LIABILITY:
JUDICIAL RETIREMENT SYSTEM**

FOR THE PLAN YEARS ENDED JUNE 30

	JRS				
	2023	2022	2021	2020	2019
Total pension liability:					
Service cost	\$ 19,735	\$ 18,630	\$ 19,335	\$ 20,650	\$ 18,767
Interest	50,938	50,036	44,788	44,234	44,139
Benefit changes		—	—	—	—
Difference between actual and expected experience	(12,421)	(7,256)	(10,245)	(9,446)	(7,158)
Assumption changes		—	53,040	—	14,077
Benefit payments	(50,572)	(47,679)	(47,750)	(46,546)	(43,587)
Refunds of contributions	(15)	(41)	(135)	(12)	—
Net change in total pension liability	7,665	13,690	59,033	8,880	26,238
Total pension liability – beginning	760,192	746,502	687,469	678,589	652,351
Total pension liability – ending (a)	\$ 767,857	\$ 760,192	\$ 746,502	\$ 687,469	\$ 678,589
Plan fiduciary net position:					
Contributions – employer	\$ 25,705	\$ 24,016	\$ 22,856	\$ 24,819	\$ 22,893
Contributions – member	2,320	2,033	1,868	3,436	3,208
Contributions – employer special	2,083	6,250	—	—	—
Net investment income	41,850	(477)	147,200	10,491	35,372
Benefit payments	(50,572)	(47,678)	(47,750)	(46,546)	(43,587)
Refunds of contributions	(15)	(41)	(135)	(12)	—
Administrative expense	(378)	(386)	(343)	(232)	(315)
Other		97	—	(42)	(39)
Net change in plan fiduciary net position	20,993	(16,186)	123,696	(8,086)	17,532
Plan fiduciary net position – beginning	656,965	673,151	549,455	557,541	540,009
Plan fiduciary net position – ending (b)	\$ 677,958	\$ 656,965	\$ 673,151	\$ 549,455	\$ 557,541
Net pension liability – ending (a-b)	\$ 89,899	\$ 103,227	\$ 73,351	\$ 138,014	\$ 121,048
Plan fiduciary net position as a percentage of the total pension liability (b/a)	88.29%	86.42%	90.17%	79.92%	82.16%
Covered payroll (c)	\$ 84,059	\$ 79,540	\$ 74,594	\$ 74,769	\$ 68,330
Net pension liability as a percentage of covered payroll ((a-b)/c)	106.95%	129.78%	98.33%	184.59%	177.15%

(EXPRESSED IN THOUSANDS)

JRS									
2018		2017		2016		2015		2014	
\$	19,228	\$	22,144	\$	21,978	\$	23,254	\$	24,024
	43,799		42,081		42,820		41,759		40,013
	—		—		(15,552)		—		—
	(15,786)		(14,774)		(18,681)		(9,107)		—
	—		16,114		—		—		—
	(41,165)		(40,895)		(41,341)		(40,205)		(37,984)
	—		—		—		—		—
	6,076		24,670		(10,776)		15,701		26,053
	646,275		621,605		632,381		616,680		590,627
\$	652,351	\$	646,275	\$	621,605	\$	632,381	\$	616,680
\$	28,096	\$	27,612	\$	33,036	\$	31,503	\$	27,727
	3,231		3,272		3,236		3,015		3,051
	—		—		8,466		—		—
	37,466		56,029		8,112		20,051		60,833
	(41,165)		(40,895)		(41,341)		(40,205)		(37,984)
	—		—		—		—		—
	(326)		(594)		(363)		(283)		(268)
	(42)		(64)		(15)		(17)		—
	27,260		45,360		11,131		14,064		53,359
	512,749		467,389		456,258		442,194		388,835
\$	540,009	\$	512,749	\$	467,389	\$	456,258	\$	442,194
\$	112,342	\$	133,526	\$	154,216	\$	176,123	\$	174,486
	82.78%		79.34%		75.19%		72.15%		71.71%
\$	68,245	\$	66,826	\$	66,621	\$	61,092	\$	61,020
	164.62%		199.81%		231.48%		288.29%		285.95%

REQUIRED SUPPLEMENTARY SCHEDULE OF EMPLOYER CONTRIBUTIONS: PENSION PLANS

FOR THE PLAN YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

Year Ended June 30		Actuarially Determined Contribution	Contributions in Relation to the Actuarially Determined Contribution	Contributions Deficiency (Excess)		Covered Payroll	Contributions as a Percentage of Covered Payroll
VIRGINIA RETIREMENT SYSTEM (VRS) – STATE							
2023	\$	716,311	\$ 733,040	\$ (16,729)	\$	5,069,435	14.46%
2022		674,124	674,124	—		4,661,991	14.46%
2021		636,236	636,236	—		4,399,969	14.46%
2020		600,306	600,306	—		4,440,135	13.52%
2019		567,450	567,450	—		4,197,484	13.52%
2018		560,154	560,154	—		4,152,368	13.49%
2017		542,418	542,418	—		4,020,893	13.49%
2016		628,486	557,160	71,326		3,977,759	14.01%
2015		612,824	478,235	134,589		3,878,632	12.33%
2014		504,726	338,286	166,440		3,861,712	8.76%
VIRGINIA RETIREMENT SYSTEM (VRS) – TEACHER							
2023	\$	1,471,664	\$ 1,657,118	\$ (185,454)	\$	9,970,623	16.62%
2022		1,548,861	1,548,861	—		9,319,260	16.62%
2021		1,469,854	1,469,854	—		8,843,887	16.62%
2020		1,374,613	1,374,613	—		8,766,667	15.68%
2019		1,315,160	1,315,160	—		8,387,503	15.68%
2018		1,319,796	1,319,796	—		8,086,986	16.32%
2017		1,287,939	1,156,935	131,004		7,891,783	14.66%
2016		1,344,981	1,072,020	272,961		7,624,612	14.06%
2015		1,353,158	1,078,065	275,093		7,434,932	14.50%
2014		1,226,394	852,699	373,695		7,313,025	11.66%
VIRGINIA RETIREMENT SYSTEM (VRS) – POLITICAL SUBDIVISIONS							
2023	\$	780,825	\$ 780,825	\$ —	\$	6,337,774	12.32%
2022		643,826	643,826	—		5,699,596	11.30%
2021		610,434	610,473	(39)		5,403,267	11.30%
2020		544,676	547,382	(2,706)		5,368,250	10.20%
2019		515,904	518,513	(2,609)		5,118,622	10.13%
2018		504,955	505,603	(648)		4,932,344	10.25%
2017		487,067	487,702	(635)		4,765,842	10.22%
2016		554,335	549,408	4,927		4,628,806	11.87%
2015		540,859	535,919	4,940		4,513,335	11.87%
2014		551,822	539,131	12,691		4,434,764	12.16%

REQUIRED SUPPLEMENTARY SCHEDULE OF EMPLOYER CONTRIBUTIONS: PENSION PLANS, cont.

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Actuarially Determined Contribution	Contributions in Relation to the Actuarially Determined Contribution	Contributions Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)					
2023	\$ 46,981	\$ 46,981	\$ —	\$ 156,707	29.98%
2022	36,505	36,505	—	138,644	26.33%
2021	33,769	33,769	—	128,252	26.33%
2020	32,533	32,533	—	130,759	24.88%
2019	31,469	31,469	—	126,483	24.88%
2018	35,391	35,391	—	124,003	28.54%
2017	31,792	31,792	—	111,395	28.54%
2016	35,211	31,561	3,650	114,395	27.59%
2015	33,876	28,417	5,459	110,059	25.82%
2014	36,538	27,711	8,827	112,010	24.74%
VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS)					
2023	\$ 90,809	\$ 90,809	\$ —	\$ 369,142	24.60%
2022	74,190	74,190	—	338,768	21.90%
2021	76,354	76,354	—	348,650	21.90%
2020	79,956	79,956	—	369,996	21.61%
2019	75,635	75,635	—	349,998	21.61%
2018	72,734	72,734	—	345,531	21.05%
2017	72,511	72,511	—	344,468	21.05%
2016	72,763	65,101	7,662	345,504	18.84%
2015	71,301	59,824	11,477	338,562	17.67%
2014	68,806	52,169	16,637	352,492	14.80%
JUDICIAL RETIREMENT SYSTEM (JRS)					
2023	\$ 25,781	\$ 25,781	\$ —	\$ 84,059	30.67%
2022	23,735	23,735	—	79,540	29.84%
2021	22,259	22,259	—	74,594	29.84%
2020	25,713	25,713	—	74,769	34.39%
2019	23,498	23,498	—	68,330	34.39%
2018	28,642	28,642	—	68,245	41.97%
2017	28,047	28,047	—	66,826	41.97%
2016	37,008	33,291	3,717	66,621	49.97%
2015	35,336	31,560	3,776	61,092	51.66%
2014	33,018	27,728	5,290	61,020	45.44%

REQUIRED SUPPLEMENTARY SCHEDULE OF INVESTMENT RETURNS

FOR THE PLAN YEARS ENDED JUNE 30

VRS Pooled Asset Portfolio*

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Annual money-weighted rate of return, net of investment expense	6.07%	0.70%	27.45%	1.42%	6.63%	7.57%	12.13%	1.83%	4.72%	15.67%

* Investments for all plans are pooled for investing purposes. Therefore, a money-weighted rate of return, net of investment expense, is only available for the pool and not for each individual plan.

REQUIRED SUPPLEMENTARY SCHEDULE OF CHANGES IN EMPLOYERS' NET OTHER POST-EMPLOYMENT BENEFIT (OPEB) LIABILITY AND RELATED RATIOS

FOR THE PLAN YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

Change in the Net OPEB Liability	Group Life Insurance Fund		
	2023	2022	2021
Total OPEB liability:			
Service cost	\$ 88,493	\$ 79,890	\$ 96,894
Interest	247,906	241,074	232,052
Changes in benefit terms	—	—	—
Difference between actual and expected experience	74,372	(54,700)	63,189
Changes of assumptions	—	—	(166,464)
Benefit payments ¹	(175,804)	(171,525)	(172,263)
Net change in total OPEB liability	234,967	94,739	53,408
Total OPEB liability – beginning	3,672,085	3,577,346	3,523,938
Total OPEB liability – ending (a)	\$ 3,907,052	\$ 3,672,085	\$ 3,577,346
Plan fiduciary net position:			
Contributions – employer	\$ 127,427	\$ 117,664	\$ 111,797
Contributions – member ¹	108,029	86,846	86,509
Contributions – special employer	3,053	9,154	—
Contributions – non-employer contributing entity	7,093	21,284	—
Net investment income	173,481	(5,235)	534,709
Benefit payments ¹	(175,804)	(171,525)	(172,263)
Administrative expense	(1,268)	(1,184)	(862)
Other	(2,261)	(2,089)	(1,918)
Net change in plan fiduciary net position	239,750	54,915	557,972
Plan fiduciary net position – beginning	2,467,989	2,413,074	1,855,102
Plan fiduciary net position – ending (b)	\$ 2,707,739	\$ 2,467,989	\$ 2,413,074
Net OPEB liability – ending (a-b)	\$ 1,199,313	\$ 1,204,096	\$ 1,164,272
Plan fiduciary net position as a percentage of the total OPEB liability (b/a)	69.30%	67.21%	67.45%
Covered payroll (c)	\$ 23,592,896	\$ 21,787,891	\$ 20,679,890
Net OPEB liability as a percentage of covered payroll ((a-b)/c)	5.08%	5.53%	5.63%

Note: This schedule should present 10 years of data; however, the information prior to 2017 is unavailable.

¹ Starting in 2021, member contributions and benefit payments are net of contributions and benefit payments for active life insurance.

(EXPRESSED IN THOUSANDS)

Group Life Insurance Fund

2020		2019		2018		2017	
\$	98,367	\$	86,912	\$	84,355	\$	81,479
	221,684		210,950		198,960		201,770
	—		—		—		—
	25,709		56,736		88,052		(39,461)
	—		122,011		—		(91,738)
	(212,060)		(199,879)		(200,285)		(184,092)
	133,700		276,730		171,082		(32,042)
	3,390,238		3,113,508		2,942,426		2,974,468
	3,523,938		3,390,238		3,113,508		2,942,426
\$	107,252	\$	102,175	\$	98,530	\$	94,082
	162,925		155,153		150,402		146,002
	—		—		—		—
	—		—		—		—
	36,276		113,440		110,917		158,430
	(212,060)		(199,879)		(200,285)		(184,092)
	(824)		(709)		(664)		(31)
	(1,439)		(1,981)		(1,713)		(1,731)
	92,130		168,199		157,187		212,660
	1,762,972		1,594,773		1,437,586		1,224,926
\$	1,855,102	\$	1,762,972	\$	1,594,773	\$	1,437,586
\$	1,668,836	\$	1,627,266	\$	1,518,735	\$	1,504,840
	52.64%		52%		51.22%		48.86%
\$	20,612,888	\$	19,633,771	\$	19,044,361	\$	18,473,085
	8.10%		8.29%		7.97%		8.15%

REQUIRED SUPPLEMENTARY SCHEDULE OF CHANGES IN EMPLOYERS' NET OTHER POST-EMPLOYMENT BENEFIT (OPEB) LIABILITY AND RELATED RATIOS, cont.

FOR THE PLAN YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

	Disability Insurance Trust Fund			
Change in the Net OPEB Liability	2023	2022	2021	
Total OPEB liability:				
Service cost	\$ 33,331	\$ 30,802	\$ 32,679	
Interest	21,978	19,115	17,222	
Changes in benefit terms	—	—	—	
Difference between actual and expected experience	(13,168)	20,274	(22,057)	
Changes of assumptions	—	—	(1,387)	
Benefit payments	(31,004)	(29,625)	(28,790)	
Net change in total OPEB liability	11,137	40,566	(2,333)	
Total OPEB liability – beginning	307,764	267,198	269,531	
Total OPEB liability – ending (a)	\$ 318,901	\$ 307,764	\$ 267,198	
Plan fiduciary net position:				
Contributions – employer	\$ 31,138	\$ 28,249	\$ 26,542	
Contributions – member	—	—	—	
Contributions – special employer	—	—	—	
Contributions – non-employer contributing entity	—	—	—	
Net investment income	38,938	(507)	131,373	
Benefit payments	(31,004)	(29,625)	(28,790)	
Third-party administrator charges	(7,350)	(7,247)	(7,137)	
Administrative expense	(797)	(483)	(600)	
Other	938	610	311	
Net change in plan fiduciary net position	31,863	(9,003)	121,699	
Plan fiduciary net position – beginning	602,916	611,919	490,220	
Plan fiduciary net position – ending (b)	\$ 634,779	\$ 602,916	\$ 611,919	
Net OPEB liability – ending (a-b)	\$ (315,878)	\$ (295,152)	\$ (344,721)	
Plan fiduciary net position as a percentage of the total OPEB liability (b/a)	199.05%	195.90%	229.01%	
Covered payroll (c)	\$ 5,103,828	\$ 4,637,755	\$ 4,355,154	
Net OPEB liability as a percentage of covered payroll ((a-b)/c)	(6.19)%	(6.36)%	(7.92)%	

Note: This schedule should present 10 years of data; however, the information prior to 2017 is unavailable.

(EXPRESSED IN THOUSANDS)

Disability Insurance Trust Fund

2020		2019		2018		2017	
\$	32,988	\$	29,232	\$	27,527	\$	27,884
	18,774		15,788		15,503		15,810
	—		—		—		—
	(46,473)		29,489		(11,237)		—
	—		4,180		—		(17,511)
	(27,804)		(24,376)		(31,073)		(30,056)
	(22,515)		54,313		720		(3,873)
	292,046		237,733		237,013		240,886
	269,531		292,046		237,733		237,013
\$	26,994	\$	25,263	\$	27,260	\$	24,130
	—		—		—		—
	—		—		—		—
	—		—		—		—
	9,445		30,494		32,073		48,206
	(27,804)		(24,376)		(31,073)		(30,056)
	(6,611)		(6,431)		(6,637)		(7,001)
	(631)		(787)		(961)		(717)
	586		1,117		(35)		(54)
	1,979		25,280		20,627		34,508
	488,241		462,961		442,334		407,826
\$	490,220	\$	488,241	\$	462,961	\$	442,334
\$	(220,689)	\$	(196,195)	\$	(225,228)	\$	(205,321)
	181.88%		167.18%		194.74%		186.63%
\$	4,365,296	\$	4,077,627	\$	3,972,637	\$	3,799,590
	(5.06)%		(4.81)%		(5.67)%		(5.4)%

REQUIRED SUPPLEMENTARY SCHEDULE OF CHANGES IN EMPLOYERS' NET OTHER POST-EMPLOYMENT BENEFIT (OPEB) LIABILITY AND RELATED RATIOS, cont.

FOR THE PLAN YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

Virginia Local Disability Program				
	Teachers			
Change in the Net OPEB Liability	2023	2022	2021	
Total OPEB liability:				
Service cost	\$ 1,950	\$ 1,598	\$	1,366
Interest	586	411		237
Changes in benefit terms	—	—		—
Difference between actual and expected experience	1,888	1,102		(379)
Changes of assumptions	—	—		339
Benefit payments	(959)	(788)		(366)
Net change in total OPEB liability	3,465	2,323		1,197
Total OPEB liability – beginning	7,207	4,884		3,687
Total OPEB liability – ending (a)	\$ 10,672	\$ 7,207	\$	4,884
Plan fiduciary net position:				
Contributions – employer	\$ 4,387	\$ 3,783	\$	3,166
Contributions – member	—	—		—
Contributions – special employer	—	—		—
Contributions – non-employer contributing entity	—	—		—
Net investment income	547	(56)		1,031
Benefit payments	(959)	(788)		(366)
Third-party administrator charges	(1,176)	(1,116)		(988)
Administrative expense	(112)	(93)		(140)
Other	—	—		—
Net change in plan fiduciary net position	2,687	1,730		2,703
Plan fiduciary net position – beginning	7,320	5,590		2,887
Plan fiduciary net position – ending (b)	\$ 10,007	\$ 7,320	\$	5,590
Net OPEB liability – ending (a-b)	\$ 665	\$ (113)	\$	(706)
Plan fiduciary net position as a percentage of the total OPEB liability (b/a)	93.77%	101.57%		114.46%
Covered payroll (c)	\$ 933,836	\$ 804,858	\$	672,908
Net OPEB liability as a percentage of covered payroll ((a-b)/c)	0.07%	(0.01%)		(0.10%)

Note: This schedule should present 10 years of data; however, the information prior to 2017 is unavailable.

(EXPRESSED IN THOUSANDS)

Virginia Local Disability Program

		Teachers			
2020		2019		2018	
				2017	
\$	1,109	\$	871	\$	668
	144		92		57
	—		—		—
	406		(19)		(66)
	—		63		—
	(213)		(167)		(131)
	1,446		840		528
	2,241		1,401		873
	3,687		2,241		1,401
\$	2,426	\$	1,966	\$	1,160
	—		—		—
	—		—		—
	—		—		—
	45		83		29
	(213)		(167)		(131)
	(935)		(829)		(794)
	(97)		(39)		(76)
	—		—		180
	1,226		1,014		368
	1,661		647		279
\$	2,887	\$	1,661	\$	647
\$	800	\$	580	\$	754
	78.30%		74.12%		46.18%
\$	591,499	\$	479,535	\$	372,869
	0.14 %		0.12 %		0.20 %
					31.96%
					282,200
					0.21 %

REQUIRED SUPPLEMENTARY SCHEDULE OF CHANGES IN EMPLOYERS' NET OTHER POST-EMPLOYMENT BENEFIT (OPEB) LIABILITY AND RELATED RATIOS, cont.

FOR THE PLAN YEARS ENDED JUNE 30

Change in the Net OPEB Liability	Virginia Local Disability Program		
	Political Subdivisions		
	2023	2022	2021
Total OPEB liability:			
Service cost	\$ 2,585	\$ 2,039	\$ 1,820
Interest	633	458	278
Changes in benefit terms	—	—	—
Difference between actual and expected experience	83	517	(603)
Changes of assumptions	—	—	(271)
Benefit payments	(1,136)	(810)	(385)
Net change in total OPEB liability	2,165	2,204	839
Total OPEB liability – beginning	7,360	5,156	4,317
Total OPEB liability – ending (a)	\$ 9,525	\$ 7,360	\$ 5,156
Plan fiduciary net position:			
Contributions – employer	\$ 5,200	\$ 3,888	\$ 3,338
Contributions – member	—	—	—
Contributions – special employer	0	—	—
Contributions – non-employer contributing entity	0	—	—
Net investment income	649	(56)	1,086
Benefit payments	(1,136)	(811)	(385)
Third-party administrator charges	(1,394)	(1,146)	(1,042)
Administrative expense	(133)	(93)	(148)
Other	—	—	—
Net change in plan fiduciary net position	3,186	1,782	2,849
Plan fiduciary net position – beginning	7,948	6,166	3,317
Plan fiduciary net position – ending (b)	\$ 11,134	\$ 7,948	\$ 6,166
Net OPEB liability – ending (a-b)	\$ (1,609)	\$ (588)	\$ (1,010)
Plan fiduciary net position as a percentage of the total OPEB liability (b/a)	116.89%	107.99%	119.59%
Covered payroll (c)	\$ 612,072	\$ 468,489	\$ 401,715
Net OPEB liability as a percentage of covered payroll ((a-b)/c)	(0.26%)	(0.13%)	(0.25%)

Note: This schedule should present 10 years of data; however, the information prior to 2017 is unavailable.

(EXPRESSED IN THOUSANDS)

Virginia Local Disability Program

Political Subdivisions			
2020	2019	2018	2017
\$ 1,553	\$ 1,191	\$ 876	\$ 664
261	105	58	25
—	—	—	—
(1,250)	1,224	(95)	—
—	69	—	(110)
(236)	(188)	(165)	(44)
328	2,401	674	535
3,989	1,588	914	379
4,317	3,989	1,588	914
\$ 2,684	\$ 2,226	\$ 1,463	\$ 740
—	—	—	—
—	—	—	—
—	—	—	—
48	93	36	—
(236)	(188)	(165)	(44)
(1,034)	(940)	(1,000)	(609)
(107)	(45)	(96)	(106)
—	—	227	370
1,355	1,146	465	351
1,962	816	351	—
\$ 3,317	\$ 1,962	\$ 816	\$ 351
\$ 1,000	\$ 2,027	\$ 772	\$ 563
76.84%	49.19%	51.39%	38.4%
\$ 372,635	\$ 309,020	\$ 242,807	\$ 183,629
0.27 %	0.66 %	0.32 %	0.31 %

REQUIRED SUPPLEMENTARY SCHEDULE OF CHANGES IN EMPLOYERS' NET OTHER POST-EMPLOYMENT BENEFIT (OPEB) LIABILITY AND RELATED RATIOS, cont.

FOR THE PLAN YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

Change in the Net OPEB Liability	Line of Duty Trust Fund		
	2023	2022	2021
Total OPEB liability:			
Service cost	\$ 31,836	\$ 40,357	\$ 21,241
Interest	15,125	10,413	9,207
Changes in benefit terms	8,664	—	—
Difference between actual and expected experience	(16,526)	(14,082)	(18,371)
Changes of assumptions	(3,329)	(85,924)	26,413
Benefit payments ¹	(15,228)	(13,637)	(13,095)
Net change in total OPEB liability	20,542	(62,873)	25,395
Total OPEB liability – beginning	385,669	448,542	423,147
Total OPEB liability – ending (a)	\$ 406,211	\$ 385,669	\$ 448,542
Plan fiduciary net position:			
Contributions – employer	\$ 13,271	\$ 13,770	\$ 13,633
Contributions – member	—	—	—
Contributions – special employer	—	—	—
Contributions – non-employer contributing entity	—	—	—
Net investment income	583	262	3,031
Benefit payments ¹	(15,228)	(13,638)	(13,095)
Administrative expense	(702)	(911)	(979)
Other	173	178	630
Net change in plan fiduciary net position	(1,903)	(339)	3,220
Plan fiduciary net position – beginning	7,214	7,553	4,333
Plan fiduciary net position – ending (b)	\$ 5,311	\$ 7,214	\$ 7,553
Net OPEB liability – ending (a-b)	\$ 400,900	\$ 378,455	\$ 440,989
Plan fiduciary net position as a percentage of the total OPEB liability (b/a)	1.31%	1.87%	1.68%
Covered payroll (c)	*	*	*
Net OPEB liability as a percentage of covered payroll ((a-b)/c)	N/A	N/A	N/A

* Contributions to the Line of Duty Trust Fund are based on the number of participants in the program using a per-capita-based contribution versus a payroll-based contribution.

¹ Starting in 2022, benefit payments are net of the Health Insurance Credit Offset

Note: This schedule should present 10 years of data; however, the information prior to 2017 is unavailable.

(EXPRESSED IN THOUSANDS)

Line of Duty Trust Fund

2020		2019		2018		2017	
\$	16,019	\$	13,292	\$	15,197	\$	17,648
	12,443		12,019		9,258		8,305
	—		—		—		—
	(64,121)		14,833		51,048		—
	109,371		18,941		(13,962)		(30,500)
	(12,191)		(12,854)		(12,398)		(10,255)
	61,521		46,231		49,143		(14,802)
	361,626		315,395		266,252		281,054
	423,147		361,626		315,395		266,252
\$	13,567	\$	13,377	\$	10,035	\$	11,024
	—		—		—		—
	—		—		—		—
	—		—		—		—
	346		277		678		683
	(12,191)		(12,854)		(12,398)		(10,255)
	(810)		(508)		(742)		(1,283)
	581		659		855		584
	1,493		951		(1,572)		753
	2,840		1,889		3,461		2,708
\$	4,333	\$	2,840	\$	1,889	\$	3,461
\$	418,814	\$	358,786	\$	313,506	\$	262,791
	1.02%		0.79%		0.60%		1.30%
	*		*		*		*
	N/A		N/A		N/A		N/A

REQUIRED SUPPLEMENTARY SCHEDULE OF CHANGES IN EMPLOYERS' NET OTHER POST-EMPLOYMENT BENEFIT (OPEB) LIABILITY AND RELATED RATIOS, cont.

FOR THE PLAN YEARS ENDED JUNE 30

Change in the Net OPEB Liability	Health Insurance Credit		
	2023	State 2022	2021
Total OPEB liability:			
Service cost	\$ 17,076	\$ 18,311	\$ 20,432
Interest	68,998	69,707	68,014
Changes in benefit terms	68,280	—	—
Difference between actual and expected experience	(18,609)	(34,169)	(20,219)
Changes of assumptions	—	13,522	12,326
Benefit payments	(77,273)	(76,023)	(71,536)
Net change in total OPEB liability	58,472	(8,652)	9,017
Total OPEB liability – beginning	1,043,748	1,052,400	1,043,383
Total OPEB liability – ending (a)	\$ 1,102,220	\$ 1,043,748	\$ 1,052,400
Plan fiduciary net position:			
Contributions – employer	92,376	85,324	81,191
Contributions – special employer	27,159	8,523	38,656
Contributions – non-employer contributing entity	—	—	—
Net investment income	14,169	(358)	34,790
Benefit payments	(77,273)	(76,023)	(71,536)
Administrative expense	(374)	(357)	(589)
Transfers	(18)	(387)	—
Other	(15)	(7)	(30)
Net change in plan fiduciary net position	56,024	16,715	82,482
Plan fiduciary net position – beginning	224,575	207,860	125,378
Plan fiduciary net position – ending (b)	\$ 280,599	\$ 224,575	\$ 207,860
Net OPEB liability – ending (a-b)	\$ 821,621	\$ 819,173	\$ 844,540
Plan fiduciary net position as a percentage of the total OPEB liability (b/a)	25.46%	21.52%	19.75%
Covered payroll (c)	\$ 8,241,227	\$ 7,612,495	\$ 7,239,781
Net OPEB liability as a percentage of covered payroll ((a-b)/c)	9.97%	10.76%	11.67%

Note: This schedule should present 10 years of data; however, the information prior to 2017 is unavailable.

(EXPRESSED IN THOUSANDS)

Health Insurance Credit

		State			
2020		2019		2018	
\$	20,143	\$	19,446	\$	19,645
	67,289		68,023		66,883
	—		—		—
	(5,703)		(13,402)		745
	—		22,700		—
	(70,440)		(72,857)		(69,117)
	11,289		23,910		18,156
	1,032,094		1,008,184		990,028
	1,043,383		1,032,094		1,008,184
\$	84,849	\$	79,926	\$	79,416
	—		—		—
	—		—		—
	2,185		6,189		5,706
	(70,440)		(72,857)		(69,117)
	(230)		(135)		(149)
	—		—		—
	(9)		(8)		536
	16,355		13,115		16,392
	109,023		95,908		79,516
\$	125,378	\$	109,023	\$	95,908
\$	918,005	\$	923,071	\$	912,276
	12.02%		10.56%		9.51%
\$	7,237,090	\$	6,844,807	\$	6,764,917
	12.68 %		13.49 %		13.49 %
					8.03%
					6,489,069
					14.03 %

REQUIRED SUPPLEMENTARY SCHEDULE OF CHANGES IN EMPLOYERS' NET OTHER POST-EMPLOYMENT BENEFIT (OPEB) LIABILITY AND RELATED RATIOS, cont.

FOR THE PLAN YEARS ENDED JUNE 30

	Health Insurance Credit		
		Teacher	
Change in the Net OPEB Liability	2023	2022	2021
Total OPEB liability:			
Service cost	\$ 18,138	\$ 18,621	\$ 21,713
Interest	97,248	97,797	94,626
Changes in benefit terms	—	—	—
Difference between actual and expected experience	(14,161)	(38,198)	(9,325)
Changes of assumptions	—	10,085	15,792
Benefit payments	(96,645)	(95,288)	(93,607)
Net change in total OPEB liability	4,580	(6,983)	29,199
Total OPEB liability – beginning	1,470,891	1,477,874	1,448,675
Total OPEB liability – ending (a)	\$ 1,475,471	\$ 1,470,891	\$ 1,477,874
Plan fiduciary net position:			
Contributions – employer	120,623	112,832	107,172
Contributions – special employer	—	—	—
Contributions – non-employer contributing entity	4,004	12,013	—
Net investment income	14,645	(919)	37,093
Benefit payments	(96,645)	(95,289)	(93,607)
Administrative expense	(359)	(334)	(501)
Transfers	(38)	(755)	—
Other	(21)	(8)	(13)
Net change in plan fiduciary net position	42,209	27,540	50,144
Plan fiduciary net position – beginning	221,845	194,305	144,161
Plan fiduciary net position – ending (b)	\$ 264,054	\$ 221,845	\$ 194,305
Net OPEB liability – ending (a-b)	\$ 1,211,417	\$ 1,249,046	\$ 1,283,569
Plan fiduciary net position as a percentage of the total OPEB liability (b/a)	17.90%	15.08%	13.15%
Covered payroll (c)	\$ 9,971,090	\$ 9,320,159	\$ 8,843,941
Net OPEB liability as a percentage of covered payroll ((a-b)/c)	12.15%	13.40%	14.51%

This schedule should present 10 years of data; however, the information prior to 2017 is unavailable.

(EXPRESSED IN THOUSANDS)

Health Insurance Credit

		Teacher			
2020		2019		2018	
				2017	
\$	21,738	\$	20,979	\$	20,887
	93,964		93,526		92,399
	—		—		—
	(13,054)		(2,398)		(7,255)
	—		35,149		—
	(92,086)		(90,456)		(89,420)
	10,562		56,800		16,611
	1,438,113		1,381,313		1,364,702
	1,448,675		1,438,113		1,381,313
\$	105,210	\$	100,643	\$	99,469
	—		—		—
	—		—		—
	2,291		7,350		6,097
	(92,086)		(90,455)		(89,420)
	(258)		(152)		(152)
	—		—		—
	(12)		(9)		(446)
	15,145		17,377		15,548
	129,016		111,639		96,091
\$	144,161	\$	129,016	\$	111,639
\$	1,304,514	\$	1,309,097	\$	1,269,674
	9.95%		8.97%		8.08%
\$	8,766,759	\$	8,387,684	\$	8,087,389
	14.88 %		15.61 %		15.70 %
					7.04%
					7,892,011
					16.07 %

REQUIRED SUPPLEMENTARY SCHEDULE OF CHANGES IN EMPLOYERS' NET OTHER POST-EMPLOYMENT BENEFIT (OPEB) LIABILITY AND RELATED RATIOS, cont.

FOR THE PLAN YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

Change in the Net OPEB Liability	Health Insurance Credit			
	Political Subdivisions			
	2023	2022	2021	
Total OPEB liability:				
Service cost	\$ 1,134	\$ 1,545	\$ 1,532	
Interest	5,968	5,468	5,113	
Changes in benefit terms	97	1,513	—	
Difference between actual and expected experience	(15,216)	(2,642)	(669)	
Changes of assumptions	(9)	6,225	1,656	
Benefit payments	(4,303)	(4,460)	(3,098)	
Net change in total OPEB liability	(12,329)	7,649	4,534	
Total OPEB liability – beginning	89,673	82,024	77,490	
Total OPEB liability – ending (a)	\$ 77,344	\$ 89,673	\$ 82,024	
Plan fiduciary net position:				
Contributions – employer	6,752	5,683	5,239	
Contributions – special employer	—	—	—	
Contributions – non-employer contributing entity	—	—	—	
Net investment income	2,236	3	6,711	
Benefit payments	(4,303)	(4,460)	(3,098)	
Administrative expense	(55)	(62)	(86)	
Transfers	(113)	—	—	
Other	—	1,142	2	
Net change in plan fiduciary net position	4,517	2,306	8,768	
Plan fiduciary net position – beginning	35,540	33,234	24,466	
Plan fiduciary net position – ending (b)	\$ 40,057	\$ 35,540	\$ 33,234	
Net OPEB liability – ending (a-b)	\$ 37,287	\$ 54,133	\$ 48,790	
Plan fiduciary net position as a percentage of the total OPEB liability (b/a)	51.79%	39.63%	40.52%	
Covered payroll (c)	\$ 1,755,661	\$ 1,574,328	\$ 1,489,771	
Net OPEB liability as a percentage of covered payroll ((a-b)/c)	2.12 %	3.44 %	3.27 %	

This schedule should present 10 years of data; however, the information prior to 2017 is unavailable.

(EXPRESSED IN THOUSANDS)

Health Insurance Credit

Political Subdivisions			
2020	2019	2018	2017
\$ 1,063	\$ 997	\$ 960	\$ 972
2,797	2,721	2,644	2,618
32,238	—	—	—
624	964	339	—
220	1,066	—	(1,015)
(2,996)	(2,564)	(2,707)	(1,676)
33,946	3,184	1,236	899
43,544	40,360	39,124	38,225
77,490	43,544	40,360	39,124
\$ 2,553	\$ 2,406	\$ 2,291	\$ 2,164
—	—	—	—
—	—	—	—
490	1,490	1,570	2,273
(2,996)	(2,564)	(2,707)	(1,676)
(47)	(32)	(37)	(37)
—	—	—	—
(2)	(2)	(103)	111
(2)	1,298	1,014	2,835
24,468	23,170	22,156	19,321
\$ 24,466	\$ 24,468	\$ 23,170	\$ 22,156
\$ 53,024	\$ 19,076	\$ 17,190	\$ 16,968
31.57%	56.19%	57.41%	56.63%
\$ 1,477,727	\$ 1,081,702	\$ 1,022,007	\$ 966,611
3.59 %	1.76 %	1.68 %	1.76 %

REQUIRED SUPPLEMENTARY SCHEDULE OF CHANGES IN EMPLOYERS' NET OTHER POST-EMPLOYMENT BENEFIT (OPEB) LIABILITY AND RELATED RATIOS, cont.

FOR THE PLAN YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

Change in the Net OPEB Liability	Health Insurance Credit		
	Constitutional Officers		
	2023	2022	2021
Total OPEB liability:			
Service cost	\$ 637	\$ 920	\$ 776
Interest	2,261	2,257	2,118
Changes in benefit terms	6,010	—	—
Difference between actual and expected experience	(727)	(1,240)	(241)
Changes of assumptions	—	492	567
Benefit payments	(2,069)	(2,121)	(2,047)
Net change in total OPEB liability	6,112	308	1,173
Total OPEB liability – beginning	33,889	33,581	32,408
Total OPEB liability – ending (a)	\$ 40,001	\$ 33,889	\$ 33,581
Plan fiduciary net position:			
Contributions – employer	3,101	2,836	2,666
Contributions – special employer	92	276	—
Contributions – non-employer contributing entity	—	—	—
Net investment income	925	(27)	954
Benefit payments	(2,069)	(2,121)	(2,047)
Administrative expense	(24)	(27)	(16)
Transfers	138	—	—
Other	—	(1)	(1)
Net change in plan fiduciary net position	2,163	936	1,556
Plan fiduciary net position – beginning	7,604	6,668	5,112
Plan fiduciary net position – ending (b)	\$ 9,767	\$ 7,604	\$ 6,668
Net OPEB liability – ending (a-b)	\$ 30,234	\$ 26,285	\$ 26,913
Plan fiduciary net position as a percentage of the total OPEB liability (b/a)	24.42%	22.44%	19.86%
Covered payroll (c)	\$ 847,657	\$ 774,013	\$ 733,933
Net OPEB liability as a percentage of covered payroll ((a-b)/c)	3.57 %	3.40 %	3.67 %

This schedule should present 10 years of data; however, the information prior to 2017 is unavailable.

(EXPRESSED IN THOUSANDS)

Health Insurance Credit

Constitutional Officers			
2020	2019	2018	2017
\$ 746	\$ 687	\$ 677	\$ 671
2,050	2,010	1,913	1,890
—	—	—	—
223	97	569	—
—	759	—	(578)
(1,969)	(1,824)	(1,723)	(1,568)
1,050	1,729	1,436	415
31,358	29,629	28,193	27,778
32,408	31,358	29,629	28,193
\$ 2,526	\$ 2,794	\$ 2,378	\$ 2,320
—	—	—	—
—	—	—	—
87	238	183	215
(1,970)	(1,825)	(1,723)	(1,568)
(9)	(6)	(4)	(4)
—	—	—	—
—	—	17	(15)
634	1,201	851	948
4,479	3,278	2,427	1,479
\$ 5,113	\$ 4,479	\$ 3,278	\$ 2,427
\$ 27,295	\$ 26,879	\$ 26,351	\$ 25,766
15.78%	14.28%	11.06%	8.61%
\$ 719,390	\$ 682,376	\$ 655,995	\$ 633,397
3.79 %	3.94 %	4.02 %	4.07 %

REQUIRED SUPPLEMENTARY SCHEDULE OF CHANGES IN EMPLOYERS' NET OTHER POST-EMPLOYMENT BENEFIT (OPEB) LIABILITY AND RELATED RATIOS, cont.

FOR THE PLAN YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

Change in the Net OPEB Liability	Health Insurance Credit		
	Social Services Employees		
	2023	2022	2021
Total OPEB liability:			
Service cost	\$ 180	\$ 290	\$ 301
Interest	982	993	964
Changes in benefit terms	—	—	—
Difference between actual and expected experience	(15)	(524)	(254)
Changes of assumptions	—	276	229
Benefit payments	(1,074)	(1,113)	(1,078)
Net change in total OPEB liability	73	(78)	162
Total OPEB liability – beginning	14,899	14,977	14,815
Total OPEB liability – ending (a)	\$ 14,972	\$ 14,899	\$ 14,977
Plan fiduciary net position:			
Contributions – employer	1,876	1,212	1,160
Contributions – special employer	1,032	122	—
Contributions – non-employer contributing entity	—	—	—
Net investment income	743	(4)	335
Benefit payments	(1,074)	(1,113)	(1,078)
Administrative expense	(20)	(5)	(6)
Transfers	30	—	—
Other	—	—	—
Net change in plan fiduciary net position	2,587	212	411
Plan fiduciary net position – beginning	2,558	2,346	1,935
Plan fiduciary net position – ending (b)	\$ 5,145	\$ 2,558	\$ 2,346
Net OPEB liability – ending (a-b)	\$ 9,827	\$ 12,341	\$ 12,631
Plan fiduciary net position as a percentage of the total OPEB liability (b/a)	34.36%	17.17%	15.66%
Covered payroll (c)	\$ 342,719	\$ 314,734	\$ 300,727
Net OPEB liability as a percentage of covered payroll ((a-b)/c)	2.87 %	3.92 %	4.20 %

This schedule should present 10 years of data; however, the information prior to 2017 is unavailable.

(EXPRESSED IN THOUSANDS)

Health Insurance Credit

Social Services Employees

2020		2019		2018		2017	
\$	291	\$	260	\$	257	\$	263
	958		960		933		928
	—		—		—		—
	(106)		(27)		186		—
	—		327		—		(162)
	(1,058)		(1,012)		(970)		(928)
	85		508		406		101
	14,730		14,222		13,816		13,715
	14,815		14,730		14,222		13,816
\$	689	\$	1,847	\$	1,120	\$	1,069
	—		—		—		—
	—		—		—		—
	34		122		72		98
	(1,058)		(1,012)		(970)		(928)
	(3)		(3)		(1)		(2)
	—		—		—		—
	—		—		7		(7)
	(338)		954		228		230
	2,273		1,319		1,091		861
\$	1,935	\$	2,273	\$	1,319	\$	1,091
\$	12,880	\$	12,457	\$	12,903	\$	12,725
	13.06%		15.43%		9.27%		7.90%
\$	298,257	\$	279,503	\$	263,298	\$	251,084
	4.32 %		4.46 %		4.90 %		5.07 %

REQUIRED SUPPLEMENTARY SCHEDULE OF CHANGES IN EMPLOYERS' NET OTHER POST-EMPLOYMENT BENEFIT (OPEB) LIABILITY AND RELATED RATIOS, cont.

FOR THE PLAN YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

Change in the Net OPEB Liability	Health Insurance Credit		
	2023	Registrars 2022	2021
Total OPEB liability:			
Service cost	\$ 11	\$ 20	\$ 18
Interest	37	41	39
Changes in benefit terms	—	—	—
Difference between actual and expected experience	(9)	(16)	(21)
Changes of assumptions	—	(54)	7
Benefit payments	(37)	(38)	(35)
Net change in total OPEB liability	2	(47)	8
Total OPEB liability – beginning	556	603	595
Total OPEB liability – ending (a)	\$ 558	\$ 556	\$ 603
Plan fiduciary net position:			
Contributions – employer	64	68	54
Contributions – special employer	2	6	—
Contributions – non-employer contributing entity	—	—	—
Net investment income	23	(1)	23
Benefit payments	(37)	(37)	(35)
Administrative expense	—	(1)	—
Transfers	1	—	—
Other	—	—	—
Net change in plan fiduciary net position	53	35	42
Plan fiduciary net position – beginning	203	168	126
Plan fiduciary net position – ending (b)	\$ 256	\$ 203	\$ 168
Net OPEB liability – ending (a-b)	\$ 302	\$ 353	\$ 435
Plan fiduciary net position as a percentage of the total OPEB liability (b/a)	45.88%	36.51%	27.86%
Covered payroll (c)	\$ 19,199	\$ 17,043	\$ 13,391
Net OPEB liability as a percentage of covered payroll ((a-b)/c)	1.57%	2.07%	3.25%

This schedule should present 10 years of data; however, the information prior to 2017 is unavailable.

(EXPRESSED IN THOUSANDS)

Health Insurance Credit

2020		2019		Registrars		2018		2017	
\$	16	\$	16	\$	12	\$	12		
	40		39		36		35		
	—		—		—		—		
	(44)		(22)		1		—		
	—		12		—		(10)		
	(7)		(12)		(12)		(27)		
	5		33		37		10		
	590		557		520		510		
	595		590		557		520		
\$	44	\$	36	\$	32	\$	47		
	—		—		—		—		
	—		—		—		—		
	2		5		4		3		
	(7)		(12)		(12)		(27)		
	—		—		—		—		
	—		—		—		—		
	39		29		24		23		
	87		58		34		11		
\$	126	\$	87	\$	58	\$	34		
\$	469	\$	503	\$	499	\$	486		
	21.18%		14.75%		10.41%		6.54%		
\$	12,745	\$	11,770	\$	11,512	\$	11,047		
	3.68 %		4.27 %		4.33 %		4.4 %		

**REQUIRED SUPPLEMENTARY SCHEDULE OF EMPLOYER CONTRIBUTIONS:
OTHER POST-EMPLOYMENT BENEFIT (OPEB) PLANS**

FOR THE PLAN YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Actuarially Determined Contribution	Contributions in Relation to the Actuarially Determined Contribution	Contributions Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
GROUP LIFE INSURANCE FUND					
2023	\$ 113,246	\$ 127,402	\$ (14,156)	\$ 23,592,896	0.54%
2022	117,655	117,655	—	21,787,891	0.54%
2021	111,671	111,671	—	20,679,890	0.54%
2020	107,187	107,187	—	20,612,888	0.52%
2019	102,096	102,096	—	19,633,771	0.52%
2018	99,031	99,031	—	19,044,361	0.52%
2017	96,060	96,060	—	18,473,085	0.52%
2016	95,383	86,385	8,998	17,996,821	0.48%
2015	92,864	84,103	8,761	17,521,463	0.48%
2014	91,580	82,940	8,640	17,279,273	0.48%
DISABILITY INSURANCE TRUST FUND					
2023	\$ 28,581	\$ 31,133	\$ (2,552)	\$ 5,103,828	0.61%
2022	28,290	28,290	—	4,637,755	0.61%
2021	26,566	26,566	—	4,355,154	0.61%
2020	27,065	27,065	—	4,365,296	0.62%
2019	25,281	25,281	—	4,077,627	0.62%
2018	26,219	26,219	—	3,972,637	0.66%
2017	25,077	25,077	—	3,799,590	0.66%
2016	27,187	24,580	2,607	3,724,248	0.66%
2015	26,244	23,728	2,516	3,595,080	0.66%
2014	20,610	16,701	3,909	3,553,444	0.47%
VIRGINIA LOCAL DISABILITY PROGRAM – TEACHER					
2023	\$ 4,389	\$ 4,389	\$ —	\$ 933,836	0.47%
2022	3,783	3,783	—	804,858	0.47%
2021	3,163	3,163	—	672,908	0.47%
2020	2,425	2,425	—	591,499	0.41%
2019	1,966	1,966	—	479,535	0.41%
2018	1,156	1,156	—	372,869	0.31%
2017	875	875	—	282,200	0.31%
2016	536	536	—	184,729	0.29%
2015	276	276	—	95,328	0.29%
2014	10	10	—	3,549	0.29%

**REQUIRED SUPPLEMENTARY SCHEDULE OF EMPLOYER CONTRIBUTIONS:
OTHER POST-EMPLOYMENT BENEFIT (OPEB) PLANS, cont.**

FOR THE PLAN YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

VIRGINIA LOCAL DISABILITY PROGRAM – POLITICAL SUBDIVISIONS								
2023	\$	5,203	\$	5,203	—	\$	612,072	0.85%
2022		3,888		3,888	—		468,489	0.83%
2021		3,334		3,334	—		401,715	0.83%
2020		2,683		2,683	—		372,635	0.72%
2019		2,225		2,225	—		309,020	0.72%
2018		1,457		1,457	—		242,807	0.60%
2017		1,102		1,102	—		183,629	0.60%
2016		741		741	—		123,509	0.60%
2015		377		377	—		62,801	0.60%
2014		41		41	—		6,818	0.60%
LINE OF DUTY TRUST FUND**								
2023	\$	33,199	\$	13,271	\$	19,928	N/A	N/A
2022		24,756		13,773		10,983	N/A	N/A
2021		24,929		13,767		11,162	N/A	N/A
2020		24,481		13,590		10,891	N/A	N/A
2019		24,176		13,421		10,755	N/A	N/A
2018		23,214		10,652		12,562	N/A	N/A
2017		23,503		10,785		12,718	N/A	N/A
2016		23,328		9,756		13,572	N/A	N/A
2015		23,847		9,974		13,873	N/A	N/A
2014		22,103		10,381		11,722	N/A	N/A

**REQUIRED SUPPLEMENTARY SCHEDULE OF EMPLOYER CONTRIBUTIONS:
OTHER POST-EMPLOYMENT BENEFIT (OPEB) PLANS, cont.**

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Actuarially Determined Contribution	Contributions in Relation to the Actuarially Determined Contribution	Contributions Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
HEALTH INSURANCE CREDIT – STATE					
2023	\$ 85,709	\$ 92,302	\$ (6,593)	\$ 8,241,227	1.12%
2022	85,260	85,260	—	7,612,495	1.12%
2021	81,086	81,086	—	7,239,781	1.12%
2020	84,674	84,674	—	7,237,090	1.17%
2019	80,084	80,084	—	6,844,807	1.17%
2018	79,802	79,802	—	6,762,917	1.18%
2017	76,571	76,571	—	6,489,069	1.18%
2016	73,961	66,375	7,586	6,321,454	1.05%
2015	71,522	64,186	7,336	6,112,951	1.05%
2014	63,385	60,367	3,018	6,036,629	1.00%
HEALTH INSURANCE CREDIT – TEACHER					
2023	\$ 120,650	\$ 120,650	\$ —	\$ 9,971,090	1.21%
2022	112,774	112,774	—	9,320,159	1.21%
2021	107,012	107,012	—	8,843,941	1.21%
2020	105,201	105,201	—	8,766,759	1.20%
2019	100,652	100,652	—	8,387,684	1.20%
2018	99,475	99,475	—	8,087,389	1.23%
2017	97,072	87,601	9,471	7,892,011	1.11%
2016	89,976	80,826	9,150	7,625,071	1.06%
2015	87,739	78,817	8,922	7,435,548	1.06%
2014	85,571	81,183	4,388	7,313,792	1.11%
HEALTH INSURANCE CREDIT – POLITICAL SUBDIVISIONS					
2023	\$ 6,659	\$ 6,659	\$ —	\$ 1,755,661	0.38%
2022	5,501	5,501	—	1,574,328	0.35%
2021	5,191	5,191	—	1,489,771	0.35%
2020	2,494	2,494	—	1,477,727	0.17%
2019	2,353	2,353	—	1,081,702	0.22%
2018	2,208	2,208	—	1,022,007	0.22%
2017	2,088	2,088	—	966,611	0.22%
2016	1,936	1,936	—	921,923	0.21%
2015	1,859	1,859	—	886,366	0.21%
2014	1,875	1,875	—	859,540	0.22%
HEALTH INSURANCE CREDIT – CONSTITUTIONAL OFFICERS					
2023	\$ 3,052	\$ 3,052	\$ —	\$ 847,657	0.36%
2022	2,786	2,786	—	774,013	0.36%
2021	2,642	2,642	—	733,933	0.36%
2020	2,734	2,734	—	719,390	0.38%
2019	2,593	2,593	—	682,376	0.38%
2018	2,362	2,362	—	655,995	0.36%
2017	2,280	2,280	—	633,397	0.36%
2016***	1,950	1,830	120	609,359	0.30%

**REQUIRED SUPPLEMENTARY SCHEDULE OF EMPLOYER CONTRIBUTIONS:
OTHER POST-EMPLOYMENT BENEFIT (OPEB) PLANS, cont.**

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Actuarially Determined Contribution	Contributions in Relation to the Actuarially Determined Contribution	Contributions Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
HEALTH INSURANCE CREDIT – SOCIAL SERVICES EMPLOYEES					
2023	1,268	1,268	—	342,719	0.37%
2022	1,196	1,196	—	314,734	0.38%
2021	1,143	1,143	—	300,727	0.38%
2020	1,283	1,283	—	298,257	0.43%
2019	1,202	1,202	—	279,503	0.43%
2018	1,106	1,106	—	263,298	0.42%
2017	1,055	1,055	—	251,084	0.42%
2016***	961	824	137	240,250	0.34%
HEALTH INSURANCE CREDIT – REGISTRARS					
2023	\$ 61	\$ 61	\$ —	\$ 19,199	0.32%
2022	66	66	—	17,043	0.39%
2021	52	52	—	13,391	0.39%
2020	50	50	—	12,745	0.39%
2019	46	46	—	11,770	0.39%
2018	47	47	—	11,512	0.41%
2017	45	45	—	11,047	0.41%
2016***	36	30	6	9,987	0.30%

** Contributions to the Line of Duty Trust Fund are based on the number of participants in the program using a per-capita-based contribution versus a payroll-based contribution.

***Although the Health Insurance Credit Program for constitutional officers, social services employees and registrars existed prior to fiscal year 2016, the program was funded in a different manner and the results do not provide comparability with the current presentations.

SCHEDULE OF FIDUCIARY NET POSITION: OTHER CUSTODIAL PLANS

AS OF JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	VRS Investment Portfolio DC Plans	Commonwealth Health Research Fund	Volunteer Firefighters' and Rescue Squad Workers' Service Award Fund	Commonwealth's Attorneys Training Fund	Total Custodial Plans
Assets:					
Cash (Note 5)	\$ 105	\$ 74	\$ 124	\$ 40	\$ 343
Receivables:					
Contributions	—	—	—	—	—
Interest and Dividends	200	140	17	77	434
Receivables for Security Transactions	2,894	2,027	243	1,110	6,274
Other Investment Receivables	186	131	15	71	403
Other Receivables	—	—	—	—	—
Total Receivables	3,280	2,298	275	1,258	7,111
Investments: (Note 5)					
Bonds and Mortgage Securities	12,346	8,646	1,038	4,736	26,766
Stocks	16,099	11,274	1,354	6,175	34,902
Fixed-Income Commingled Funds	533	373	45	204	1,155
Index and Pooled Funds	8,560	5,995	720	3,283	18,558
Real Estate	9,049	6,337	761	3,471	19,618
Private Equity	23,018	16,120	1,935	8,829	49,902
Short-Term Investments	98	68	8	37	211
Total Investments	69,703	48,813	5,861	26,735	151,112
Collateral on Loaned Securities	2,408	1,687	202	924	5,221
Other Capital Assets, Net (Note 6)	—	—	—	—	—
Total Assets	75,496	52,872	6,462	28,957	163,787
Liabilities:					
Retirement Benefits Payable	—	—	—	—	—
Refunds Payable	—	—	—	—	—
Accounts Payable and Accrued Expenses	16	11	1	6	34
Compensated Absences Payable	—	—	—	—	—
Insurance Premiums and Claims Payable	—	—	—	—	—
Payable for Security Transactions	4,709	3,298	396	1,806	10,209
Other Investment Payables	41	29	3	15	88
Lease Liabilities (Note 7)	—	—	—	—	—
Other Payables	—	—	—	—	—
Obligations Under Security Lending Program	2,409	1,687	203	924	5,223
Total Liabilities	7,175	5,025	603	2,751	15,554
Net Position – Restricted for Benefits (Note 4)	\$ 68,321	\$ 47,847	\$ 5,859	\$ 26,206	\$ 148,233

The accompanying Notes to Financial Statements are an integral part of this statement.

SCHEDULE OF CHANGES IN FIDUCIARY NET POSITION: OTHER CUSTODIAL PLANS

FOR THE YEAR ENDED JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	VRS Investment Portfolio DC Plans	Commonwealth Health Research Fund	Volunteer Firefighters' and Rescue Squad Workers' Service Award Fund	Commonwealth's Attorneys Training Fund	Total Custodial Plans
Additions:					
Contributions:					
Members	\$ —	\$ —	\$ 62	\$ —	\$ 62
Employers	826	—	81	—	907
Special Employer	—	—	—	—	—
Non-employer Contributing Entity	—	—	—	—	—
Total Contributions	826	—	143	—	969
Investment Income:					
Interest, Dividends and Other Investment Income	1,684	1,158	139	646	3,627
Net Appreciation/(Depreciation) in Fair Value of Investments	2,060	2,134	251	1,157	5,602
Securities Lending Income	84	74	9	42	209
Total Investment Income Before Investment Expenses	3,828	3,366	399	1,845	9,438
Investment Expenses:					
Direct Investment Expenses	(485)	(298)	(36)	(168)	(987)
Securities Lending Management Fees and Borrower Rebates	(70)	(62)	(7)	(35)	(174)
Total Investment Expenses	(555)	(360)	(43)	(203)	(1,161)
Net Investment Income	3,273	3,006	356	1,642	8,277
Miscellaneous Revenue	2,633	—	—	—	2,633
Total Additions	6,732	3,006	499	1,642	11,879
Deductions:					
Retirement Benefits	—	—	—	—	—
Refunds of Member Contributions	2,067	—	—	—	2,067
Insurance Premiums and Claims	—	—	—	—	—
Retiree Health Insurance Reimbursements	—	—	—	—	—
Disability Insurance Premiums and Benefits	—	—	—	—	—
Line of Duty Benefits	—	—	—	—	—
Administrative Expenses	—	—	—	—	—
Other Expenses	—	1,751	112	1,213	3,076
Total Deductions	2,067	1,751	112	1,213	5,143
Net Increase (Decrease)	4,665	1,255	387	429	6,736
Net Position – Restricted for Benefits – Beginning of Year	63,656	46,592	5,472	25,777	141,497
Net Position – Restricted for Benefits – End of Year	\$ 68,321	\$ 47,847	\$ 5,859	\$ 26,206	\$ 148,233

The accompanying Notes to Financial Statements are an integral part of this statement.

SCHEDULE OF INVESTMENT EXPENSES

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

	2023	2022
Management Fees:		
Public Equity Managers	\$ 46,222	\$ 54,530
Fixed Income Managers	3,841	4,555
Credit Strategies Managers	122,062	99,176
Real Assets Managers	134,077	127,152
Alternative Investment Managers	171,600	146,731
Hedge Fund Managers	63,805	77,630
Dynamic Strategies Managers	—	7,530
Risk-Based Investments Managers	—	14,212
Currency Managers	—	2,700
Multi-Asset Class/Other Managers	26,762	—
Total External Management Fees	568,369	534,216
Performance Fees	5,326	29,078
Miscellaneous Fees and Expenses:		
Custodial Fees	4,500	4,500
Legal Fees	981	1,078
Other Fees and Expenses	36,551	6,514
Total Miscellaneous Fees and Expenses	42,032	12,092
In-House Investment Management	49,536	38,123
Total Investment Expenses	\$ 665,263	\$ 613,509

SCHEDULE OF ADMINISTRATIVE EXPENSES: ACTUAL TO BUDGET

FOR THE YEARS ENDED JUNE 30, 2023 AND 2022

(EXPRESSED IN THOUSANDS)

	Totals	
	2023	2022
Personnel Services:		
Salaries and Wages	\$ 42,567	\$ 42,103
Retirement Contributions	5,126	4,828
Social Security	2,898	2,804
Group Life and Medical Insurance	6,288	6,152
Compensated Absences	6,268	5,361
Personnel Development Services	161	592
Total Personnel Services	63,308	61,840
Data Processing	25,749	20,503
Professional Services:		
Actuarial and Consulting Services	2,599	2,844
Legal Services	509	462
Medical Review Services	751	710
Management Services	839	112
Total Professional Services	4,698	4,128
Communication Services:		
Media Services	27	28
Printing	558	554
Postal and Delivery Services	671	736
Telecommunications	1,244	859
Total Communication Services	2,500	2,177
Rentals:		
Business Equipment	—	—
Office Space	2,660	2,236
Total Rentals	2,660	2,236
Other Services and Charges:		
Skilled and Clerical Services	203	221
Depreciation	5,925	6,525
Dues and Memberships	191	145
Equipment	7,979	5,791
Insurance	304	250
Repairs and Maintenance	715	720
Supplies and Materials	221	298
Travel and Transportation	686	377
Miscellaneous	108	91
Total Other Services and Charges	16,332	14,418
Total Administrative Expenses	\$ 115,247	\$ 105,302
Adjustment for Capitalization of Expenses	—	(2,864)
Total Administrative Expenses (GAAP basis)	115,247	102,438
Adjustments Necessary to Convert Administrative Expenses on the GAAP Basis to the Budgetary Basis at Year End (Net)	(6,465)	(4,553)
Administrative Expenses (Budgetary Basis)	\$ 108,782	\$ 97,885
Administrative Expenses Appropriated	\$ 118,839	\$ 106,103
Distribution of Administrative Expenses:		
Total Administrative Expenses	115,247	102,438
Less: In-house Investment Management	(49,536)	(38,123)
Net Administrative Expenses	\$ 65,711	\$ 64,315

SCHEDULE OF PROFESSIONAL AND CONSULTING SERVICES

FOR THE YEAR ENDED JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

Actuarial and Consulting Services

Gabriel, Roeder, Smith & Company	Actuarial Services and Benefits Consulting	\$	632
Albourne America LLC	Investment Consultant Services		400
Joint Legislative Audit & Review Comm	Oversight Responsibilities		248
Auditor of Public Accounts	Financial Reporting Auditor		183
Townsend Holdings LLC	Investment Consultant Services		170
The Bank of New York Mellon	Investment Consultant Services		166
Mercer Investment Consulting	Investment Consultant Services		145
Costar Realty Information Inc.	Investment Consultant Services		120
Cavanaugh MacDonald Consulting LLC	Actuarial Services and Benefits Consulting		109
Lenox Park Solutions LLC	Investment Advisory Services		100
CEM Benchmarking Inc.	Benchmarking Analysis		90
Agilis Partners LLC	Investment Advisory Services		80
Aksia CA LLC	Investment Consultant Services		50
FX Transparency LLC	Investment Advisory Services		30
Wolfe HoldCo LLC	Investment Consultant Services		30
Aon Consulting Inc.	Investment Consultant Services		20
Nomura Research Institute Holdings America	Investment Consultant Services		16
KPA Advisory Services LTD	Investment Advisory Services		6
Findley Inc DBA USI Consulting Group	Defined Contribution Incentive Plan Recordkeeping		3
Principal Custody Solutions	Defined Contribution Incentive Plan Custodial Services		1

Total Actuarial and Consulting Services		\$	2,599
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Legal Services

Ice Miller LLP	Legal Services	\$	123
Frye, John	Fact Finding Hearing Officer for Disability Cases		114
Harrison & Turk PC	Fact Finding Hearing Officer for Disability Cases		75
The Law Office of Michael A Katzen	Fact Finding Hearing Officer for Disability Cases		67
Attorney General Office	Legal Services		35
County Court Reporters Inc.	Court Reporting Services		28
Farnsworth & Taylor Reporting LLC	Fact Finding Hearing Officer for Disability Cases		21
Advantage 2000 Consultants	Social Security Advocacy and Disability Tracking		20
Sarah P. Campbell	Fact Finding Hearing Officer for Disability Cases		11
Gwynn, Waddell, Carroll & Lockaby	Fact Finding Hearing Officer for Disability Cases		7
Daniel Scott Gordon	Fact Finding Hearing Officer for Disability Cases		4
Fragomen, Del Rey	Legal Services		2
McGuireWoods LLP	Legal Services		2

Total Legal Services		\$	509
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Management Services

KPMG LLP	Customer Experience Initiative	\$	515
Longevity Holding	Due Diligence Services		121
Manpowergroup Public Sector Inc.	Contractors		121
Bishops Services Inc.	Due Diligence Services		60
SageView	Due Diligence Services		16
State Police, Department of	Due Diligence Services		6

Total Management Services		\$	839
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Medical Services

Managed Medical Review Organization	Due Diligence Services	\$	750
Genex Services Inc.	Due Diligence Services		1

Total Medical Services		\$	751
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Total Professional and Consulting Services		\$	4,698
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Virginia
Retirement
System®

INVESTMENT SECTION

2023

Investment Section

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Description of Defined Contribution Plans Investment Options

Investment Option Performance Summary: Defined Contribution Plans

Chief Investment Officer's Letter



Virginia
Retirement
System®

Andrew H. Junkin, Chief Investment Officer

P.O. Box 2500 • 1200 East Main Street
Richmond, Virginia 23218-2500

Toll-free: 888-827-3847 • TDD: 804-344-3190

September 29, 2023

**To: Members of the Board of Trustees
and Participants of the Virginia Retirement System**

Fiscal year 2023 was volatile across the globe as inflation, rising interest rates and geopolitics remained front and center in the financial markets. In the United States, inflation reached 9.1% in June 2022 – the highest rate of inflation since the 1980s. Factors that played into the increase were accommodative fiscal and monetary policy on a global scale, strong labor markets and supply chain disruptions. In response, central banks began to increase borrowing costs.

The Federal Reserve raised interest rates 3.5% during the fiscal year. U.S. inflation declined to 3.2% as of July 2023 but is still above the Fed's target of 2%.

Political friction around the globe has also contributed to volatility in financial markets. The war in Ukraine rages on, now in its second year. Tension between the U.S. and China – representing the world's two largest economies – has grown over economic and defense issues.

Despite the challenging backdrop, the global stock market had a strong fiscal-year end with a 16.7% return, while other assets provided more mixed results as noted below.

PERFORMANCE OVERVIEW

While the economic news offered a mixed picture, the VRS portfolio returned 6.1% for the fiscal year, slightly underperforming the total fund benchmark of 6.3% and the 6.75% assumed rate of return. VRS' long-term investment strategy is focused on maximizing the return while minimizing risk. To achieve that balance, the VRS portfolio is highly diversified with investments around the globe in a variety of asset classes and strategies such as publicly traded stocks, private equity, fixed income, credit strategies, real assets, and other risk-mitigating and return-seeking strategies.

The VRS portfolio outperformed the fund benchmark and the assumed rate of return for intermediate-term periods (three and five years) and long-term periods (10, 15, 20 and 25 years) as shown below.

Annualized Return for Periods Ended June 30, 2023

	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years
VRS Total Fund	6.1%	10.8%	8.0%	8.2%	6.8%	7.9%	6.8%
Benchmark*	6.3%	7.9%	6.3%	7.1%	6.0%	7.1%	6.0%

Investment return calculations were prepared using a time-weighted return methodology based on market value, net of investment expenses.

The portfolio is positioned to be resilient in a variety of future economic scenarios. In addition, we are constantly evaluating opportunities for investments and strategies that will add value to the portfolio. Our long-term approach and focus mean that VRS is well positioned to support more than 800,000 members, retirees and beneficiaries into the future.

PERFORMANCE COMMENTARY

- Public stock markets staged a significant rally from October through June after stumbling in the first three months of the fiscal year, ending with a 16.7% return. The VRS equity portfolio was also up strongly, returning 15.6%. Our focus on value and lower volatility has served VRS well in the long term but proved challenging in the very narrow, technology-stock-led rally during fiscal year 2023.
- Fixed Income returns finished the year up 0.5%, ahead of the benchmark, which had a negative return of -0.1%, continuing the consistent run of the bond team's outperformance. Rising rates around the globe created a challenging environment for bond returns.
- The Credit Strategies portfolio, comprised of private credit strategies, was also affected by rising interest rates and some contraction in global credit availability. Returns for the year were positive but behind the benchmark (+5.7% versus +9.2%). However, longer-term returns have all exceeded the benchmark.
- Private Equity continues to provide strong excess returns to the VRS portfolio and has been the highest returning asset class over the long term.
- Real Assets finished the year ahead of its benchmark, returning +1.7% versus -0.7%. Overall, the real estate market was challenged by rising interest rates.

MARKET OUTLOOK

Inflation, interest rates and geopolitics will likely continue to be at the forefront of financial markets through the next year. The Federal Reserve has raised rates again in fiscal year 2024 and has indicated another rate hike is probable. Inflation has declined but remains stubbornly above the Fed's target, signaling an environment where higher rates are the norm.

VRS has been positioned defensively for some time and expects to remain that way until there is more clarity about the future direction of the economy. We are carefully balancing return and risk and remain committed to diversification as a key tenet of our success. We believe VRS is well positioned to deliver returns that allow the commonwealth to continue to meet its benefit obligations.

I'd like to express my appreciation to the VRS Board of Trustees and the Investment Advisory Committee for their support, as well as my colleagues on the VRS administrative team. And of course, I'd like to thank VRS' keen and tireless investment professionals for their work. Our collaborative efforts, paired with a long-term strategy, continue to build the fund to serve those who serve others in Virginia.

Sincerely,



Andrew H. Junkin
Chief Investment Officer

The Investment Section provides detailed information regarding the structure of the investment portfolio. This information includes performance, asset allocations, portfolio highlights, a list of VRS' money managers and public equity commissions for the fiscal year. The section also presents the System's investment management fees and expenses and an investment summary.

Investment Account

The VRS Board of Trustees has fiduciary responsibility to invest the fund solely in the interest of the beneficiaries of the System. As established by the *Code of Virginia*, "the Board shall invest the assets of the Retirement System with the care, skill, prudence and due diligence that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of like character and with like aims."

Benefit payments are projected to occur over a long period of time, allowing VRS to adopt a long-term investment horizon and asset allocation policy for the management of fund assets. Asset allocation policy is critical because it defines the basic risk and return characteristics of the VRS investment portfolio. Asset allocation targets are established using an asset-liability analysis designed to assist the Board in determining an acceptable volatility target for the fund and an optimal asset allocation policy mix. The asset-liability analysis considers both sides of the VRS balance sheet in order to estimate the potential impact of various asset class mixes on key measures of total plan risk, including the resulting estimated impact on funded status and contribution rates.

The Board delegates authority to the Chief Investment Officer to allocate the System's investments within the approved asset allocation policy and within the Board-approved active risk budget. The total fund active risk budget describes the degree of tolerance for yearly variation in the fund's performance relative to the Total Fund VRS Custom Benchmark.

The primary risk measure used for this purpose is Total Fund Tracking Error, calculated as the standard deviation of the difference between the fund's return and the return of the Total Fund VRS Custom Benchmark. From this measure, probability estimates can be derived to help the Board estimate the risk of underperforming the benchmark by certain margins.

The investment staff manages the VRS portfolio on a day-to-day basis according to policies and guidelines established by the Board. The staff manages assets on a direct basis and through outside investment managers. Managers employ both active and passive investment strategies. The Board has established various performance benchmarks to serve as tools for measuring progress toward the achievement of long-term investment goals.

The asset allocation mix of the VRS fund as of June 30, 2023, is shown in Figure 3.1.

FIGURE 3.1: ASSET ALLOCATION MIX

AS OF JUNE 30, 2023

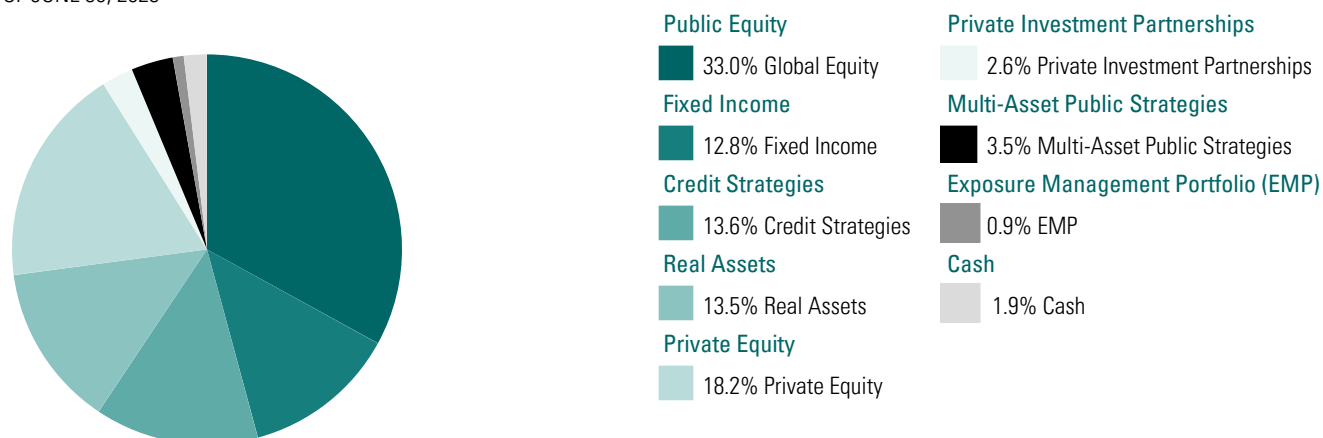


FIGURE 3.2: INVESTMENT PERFORMANCE SUMMARY

ANNUALIZED DATA FOR THE PERIOD ENDING JUNE 30, 2023

	1 Year	3 Years	5 Years	10 Years
1. Total Fund				
VRS	6.1%	10.8%	8.0%	8.2%
VRS Custom Benchmark ¹	6.3%	7.9%	6.3%	7.1%
2. Total Public Equity				
VRS	15.6%	11.6%	7.5%	8.7%
Custom Benchmark ²	16.7%	11.4%	8.0%	8.8%
3. Total Fixed Income				
VRS	0.5%	-2.5%	1.9%	2.3%
Custom Benchmark ³	-0.1%	-3.6%	0.8%	1.6%
4. Total Credit Strategies				
VRS	5.7%	8.3%	6.4%	6.1%
Custom Benchmark ⁴	9.2%	4.3%	4.4%	4.9%
5. Total Real Assets				
VRS	1.7%	11.2%	8.4%	10.0%
Custom Benchmark ⁵	-0.7%	7.6%	6.4%	8.0%
6. Total Private Equity				
VRS	-0.7%	24.9%	17.5%	16.1%
Custom Benchmark ⁶	-7.3%	16.0%	9.2%	11.1%
7. Total Private Investment Partnerships				
VRS	1.9%	16.0%	9.3%	N/A
Custom Benchmark ⁷	1.1%	10.5%	7.2%	N/A
8. Total Multi-Asset Public Strategies				
VRS	7.7%	7.3%	4.1%	N/A
Custom Benchmark ⁸	7.4%	4.8%	4.8%	N/A

Investment return calculations were prepared using a time-weighted return methodology based on market value, net of investment expenses.

FIGURE 3.2: INVESTMENT PERFORMANCE SUMMARY, cont.

¹ The VRS Custom Benchmark is a blend of the Asset Class Benchmarks at policy weights.

² Effective February 2020, the Public Equity Custom Benchmark is the MSCI ACWI IMI (net VRS tax rates) Index.

³ Effective July 2020, the Fixed Income Custom Benchmark is a blend of the Bloomberg U.S. Aggregate Bond Index (90%), Bloomberg Barclays U.S. HY Ba/B 2% Issuer Cap Index (5%), and JP Morgan EMBI Global Core Index (5%).

⁴ Effective January 2020, the Credit Strategies Custom Benchmark is a blend of the Morningstar LSTA Loan Index (60%), Bloomberg Barclays U.S. HY Ba/B 2% Issuer Cap Index (30%) and Bloomberg U.S. Aggregate Bond Index (10%).

⁵ Effective January 2023, the Real Assets Custom Benchmark is the market value weighted blend of the NCREIF Private Real Estate Benchmark (ODCE Index (net) lagged by three months) and the Other Real Assets Custom Benchmark (the CPI-U Index plus 400 basis points per annum lagged by three months).

⁶ Effective July 2020, the Private Equity Custom Benchmark is the MSCI ACWI IMI Index (net VRS tax rates) lagged by three months.

⁷ Effective July 2021, the Private Investment Partnerships Custom Benchmark is the weighted average of the custom Private Equity Benchmark (MSCI ACWI IMI Index (net VRS tax rates) lagged by three months) (33%), the NCREIF Private Real Estate Benchmark (ODCE Index (net) lagged by three months) (25%), the Other Real Assets Custom Benchmark (the CPI-U Index plus 400 basis points per annum lagged by three months) (8%), the Bloomberg U.S. HY Ba/B 2% Issuer Cap Index (17%), and the Morningstar LSTA Loan Index (17%).

⁸ Effective July 2018, the Multi-Asset Public Strategies Custom Benchmark is the market value weighted average of the benchmarks of the mandates (Dynamic Strategies and Risk-Based Investments) within the program.

Portfolio Highlights

PUBLIC EQUITY

The market value of the Total Public Equity Program as of June 30, 2023, was \$34.7 billion, representing approximately 33% of the total fund. The program is dominated by traditional strategies valued at \$27.9 billion, or 80.5%. The program also employs equity-oriented hedge fund strategies valued at \$6.8 billion, or 19.5%. The objective of the portfolio is to exceed the Custom Benchmark over longer-term periods, net of all costs. The current Custom Benchmark is the MSCI All Country World Index (ACWI) IMI (net of VRS tax rates).

The Traditional Public Equity portfolio had 58% invested in domestic equity and 42% in international equity. Internal assets are 47% of Total Public Equity.

At fiscal year-end, the ACWI IMI benchmark was comprised of 60.9% of the MSCI U.S. Investible Market Index (IMI), 28.2% of the MSCI World excluding U.S. IMI and 10.9% in the MSCI Emerging IMI.

Traditional Public Equity versus the MSCI ACWI IMI strategic sectors and region weights are as follows:

FIGURE 3.3: TRADITIONAL EQUITY CUSTOM BENCHMARK SECTORS AND REGIONS*

Strategic Sectors	VRS	ACWI IMI	Regions	VRS	ACWI IMI
Communication Services	7.18%	6.83%	North America	59.77%	64.00%
Consumer Discretionary	11.51%	11.50%	Europe/Middle East/Africa	19.18%	17.61%
Consumer Staples	7.37%	7.00%	Asia Pacific	19.64%	17.41%
Energy	4.15%	4.58%	Latin and South America	1.41%	0.98%
Financials	15.34%	15.16%	Total	100.00%	100.00%
Health Care	12.61%	11.69%			
Industrials	11.77%	11.55%			
Information Technology	19.95%	21.03%			
Materials	4.36%	4.96%			
Real Estate	2.56%	2.92%			
Utilities	3.20%	2.78%			
Total	100.00%	100.00%			

* Based on Barra's classification of sectors and regions and excludes cash.

The top 10 holdings in the Total Public Equity Program comprised 8.3% of the program at fiscal year-end.

Five companies, Bristol-Myers Squibb, Johnson & Johnson, Pfizer, Roche Holding and Verizon Communications were replaced by BroadCom, Exxon Mobil, Meta Platforms, Nvidia and Taiwan Semiconductor on this year's schedule.

FIGURE 3.4: PUBLIC EQUITY – TOP 10 EXPOSURES*

AS OF JUNE 30, 2023

Company	Fair Value	Shares
Apple	\$ 646,852,708	3,334,808
Microsoft	619,619,681	1,819,521
Alphabet	294,434,148	2,447,849
Amazon.com	235,703,655	1,808,098
Taiwan Semiconductor	198,494,927	8,615,654
Meta Platforms	194,991,431	679,460
BroadCom	187,270,330	215,891
Nvidia	186,760,792	441,494
Merck & Co.	171,821,719	1,479,691
Exxon Mobil	141,256,401	1,317,076

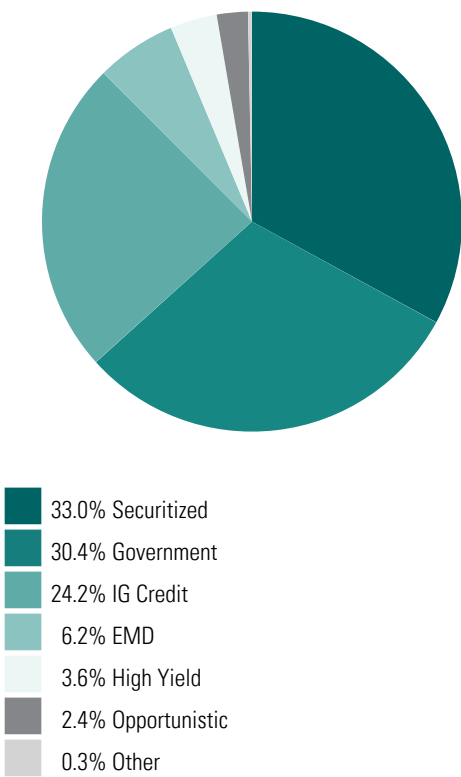
* Aggregated various share classes based on parent company. Refer to the "More Information" section on page 172 for details on how to request additional information.

FIXED INCOME

VRS invests a portion of its portfolio in fixed income investments to reduce total fund volatility, produce income and provide for some protection in the event of a deflationary environment. The market value of the Fixed Income Program as of June 30, 2023, was \$13.5 billion, representing approximately 13% of the total fund.

FIGURE 3.5: FIXED INCOME PORTFOLIO BY SECTOR ALLOCATION

AS OF JUNE 30, 2023



The Fixed Income Program is invested in a diversified portfolio of debt securities, such as government securities, corporate securities, mortgage-backed securities and emerging market debt. The objective of the program is to exceed the return of the Fixed Income blended benchmark comprised of 90% Bloomberg Barclays U.S. Aggregate Index, 5% JPM EMBI Global Core Index and 5% Bloomberg Barclays U.S. HY Ba/B 2% Issuer Constrained Index, while staying in compliance with risk limits. Approximately 95% of the Fixed Income Program is managed internally. For fiscal year 2023, the return of the program was 0.5% versus a return of -0.1% for the benchmark.

FIGURE 3.6: FIXED INCOME – TOP 10 HOLDINGS BY MARKET VALUE*

AS OF JUNE 30, 2023

Security	Par Value	Fair Value
UNIFORM MORTGAGE BACKED SECURITY	\$1,793,709,308	\$1,522,243,960
UNIFORM MORTGAGE BACKED SECURITY	353,992,765	332,887,338
UNIFORM MORTGAGE BACKED SECURITY	344,500,000	323,193,020
UNIFORM MORTGAGE BACKED SECURITY	331,200,000	291,393,734
TREASURY NOTE	300,000,000	269,484,000
UNIFORM MORTGAGE BACKED SECURITY	370,936,239	261,373,426
UNIFORM MORTGAGE BACKED SECURITY	281,443,543	256,959,646
UNIFORM MORTGAGE BACKED SECURITY	250,000,000	244,879,500
TREASURY NOTE	239,000,000	214,688,920
TREASURY NOTE	165,000,000	143,962,500

* Refer to the "More Information" section on page 172 for details on how to request additional information.

SHORT-TERM INVESTMENTS AND TRANSITION ACTIVITY

Generally, VRS desires to remain fully invested at all times and seeks to optimize its holdings of cash investments. Temporary cash balances are invested in short-term money market instruments with the goal of maintaining high credit quality and liquidity, as well as synthetically replicating exposure to equity and/or fixed income.

PRIVATE EQUITY

VRS invests in private equity to achieve returns greater than those available in the public equity markets. Specifically, the program seeks to outperform the Morgan Stanley Capital International All Country World Index (MSCI ACWI). Program returns are calculated on both a time-weighted basis and a dollar-weighted, or internal rate-of-return (IRR) basis. On a time-weighted basis, the program return for fiscal year 2023 was -0.7%. On a dollar-weighted, or IRR basis, the private equity one-year return was -1.2% as of March 31, 2023.

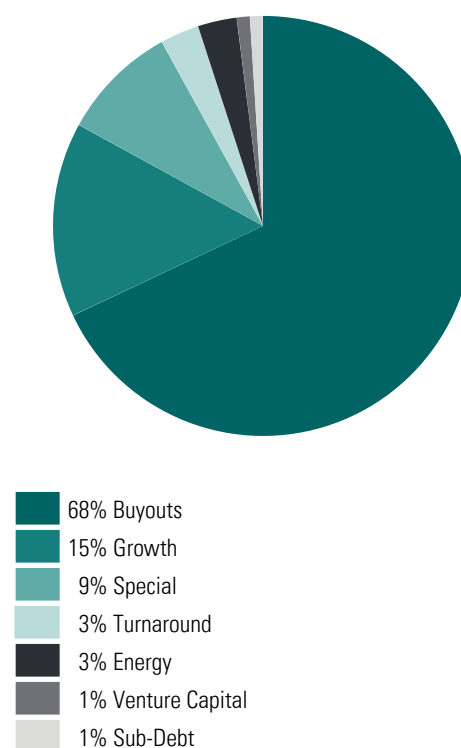
As of June 30, 2023, the carrying value of the program was approximately \$19.1 billion. Most of the program is invested in limited partnerships.

Sectors in which the program invests include leveraged buyouts, venture capital, growth, sub-

debt, turnaround, energy and special situations. The Private Equity Program's market value by subclass was as follows:

FIGURE 3.7: PRIVATE EQUITY PROGRAM

AS OF JUNE 30, 2023



REAL ASSETS

A portion of the VRS portfolio is invested in real assets to help diversify the Total Fund by providing exposure to asset classes and sectors that offer low historical correlations with the public markets and with the additional objectives of generating competitive risk-adjusted returns, significant operating cash flows and inflation linkages. The portfolio continued to grow in fiscal year 2023, producing a 1.7% return and outperforming the benchmark by 240 basis points. The private real estate portfolio delivered a 1.6% return. Investments in infrastructure, natural resources, timberland and farmland produced a 4.2% return for the fiscal year.

The percentage of the Total Fund represented by the Real Assets portfolio fluctuated over the course of the year and stood at 13.5% at fiscal year-end. In dollar terms, the real asset portfolio grew to \$14.2 billion due primarily to asset income and appreciation, with contributions to new investments outpacing distributions from existing investments by approximately \$175 million.

At fiscal year-end, the portfolio strategy composition was approximately 66% private real estate, 18% infrastructure, 9% energy and mining, 4% timberland and 3% farmland. Real estate investment trusts (REITs) were discontinued as a Real Assets strategy effective January 1, 2023. Portfolio leverage as a percentage of total real assets was 33% as of June 30, 2023.

FIGURE 3.8: REAL ASSETS BY SECTOR

AS OF JUNE 30, 2023

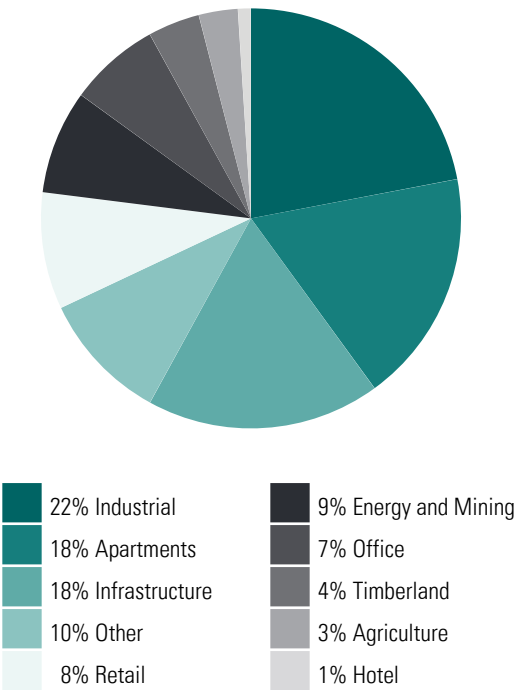
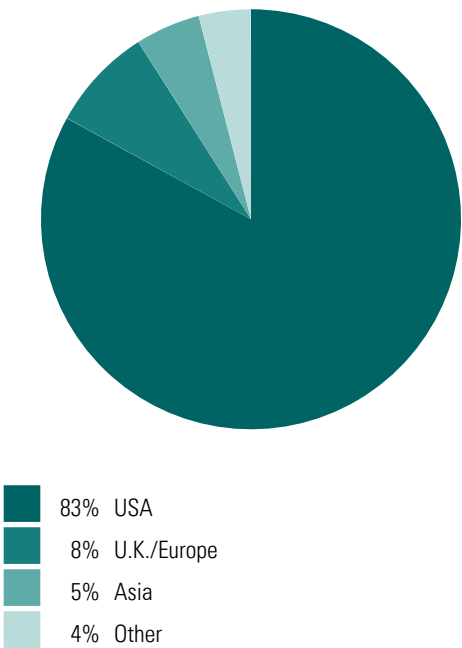


FIGURE 3.9: REAL ASSETS BY GEOGRAPHIC REGION

AS OF JUNE 30, 2023

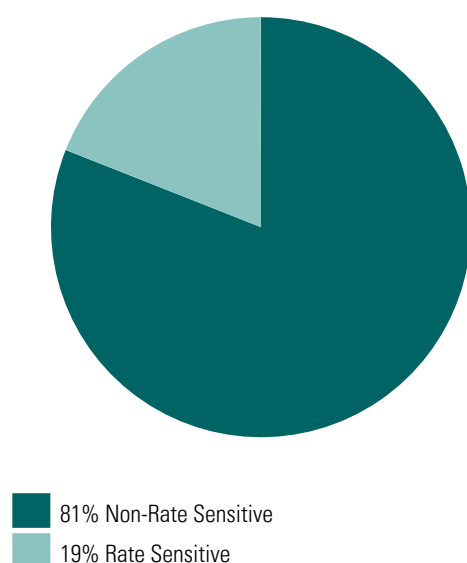


CREDIT STRATEGIES

VRS allocates a portion of the portfolio to credit-related investments. The Credit Strategies program generates returns through income and capital appreciation. The objective of the program is to provide an attractive risk/return profile relative to the Custom Credit Strategies benchmark. For the fiscal year, the program returned 5.7%, while the program's custom benchmark returned 9.2%.

FIGURE 3.10: CREDIT STRATEGIES PROGRAM

AS OF JUNE 30, 2023



CURRENCY

VRS has currency risk due to its investments in non-dollar-denominated assets. To help control this risk, VRS has a Currency Program that uses a combination of internal hedging strategies and external management. The external currency management part aims to lower overall Fund volatility and provide diversified alpha across the Fund. Investments include constrained positions in global currencies. The currency positions are typically traded on a forward basis, and thus no capital is necessary at the time of the trade. At forward settlement date, gains and losses are received/paid out against a notional value.

The current notional value, as of June 30, 2023, was \$1.8 billion. For the fiscal year, it returned -1.5% versus a zero benchmark.

MULTI-ASSET PUBLIC STRATEGIES

The Board of Trustees approved the Multi-Asset Public Strategies (MAPS) program on July 1, 2018, to manage strategies that add value and mitigate risk beyond the structure allowed by individual asset class program mandates. The program is separated into two portfolios with differing objectives. The Risk-Based Investment portfolio invests in strategies that offer meaningful diversification to the exposures of the overall Plan. The Dynamic Strategies portfolio seeks to add value across asset classes through the incorporation of macro perspectives. As of June 30, 2023, the total program had a market value of \$3.7 billion and was invested with seven multi-asset class public investments managers, three equity managers and two fixed income managers. During the fiscal year, it returned 7.7% against the program's custom benchmark, which returned 7.4%.

PRIVATE INVESTMENT PARTNERSHIPS

Beginning July 1, 2018, the VRS Board approved a strategic allocation to Private Investment Partnerships (PIP). These investments had previously been part of the Strategic Opportunities Portfolio. The objective of the program is to provide an attractive risk/return profile relative to the Private Investment Partnerships benchmark.

Managers in this program invest broadly across the private and less liquid components of the credit, private equity, real asset and real estate investment spaces. During the fiscal year the program returned 1.9% while its custom benchmark returned 1.1%.

MORE INFORMATION

A complete list of the investment portfolio is available upon request. Address requests to the VRS FOIA Coordinator, Virginia Retirement System, P.O. Box 2500, Richmond, VA 23218-2500. More information is available at varetire.org/web-policy/foia.

VRS Money Managers

The diversified investment structure as of June 30, 2023, is reflected in the following tables, which list VRS managers by investment program and style.

PUBLIC EQUITY MONEY MANAGERS

External Managers	Style Description
Acadian Asset Management	Emerging, Non-U.S. Small Cap
Ariel	Global
Arisaig	Emerging
Arrowstreet Capital	Global
Baillie Gifford	Emerging, Global
Jackson Square	U.S. Small Cap
J.P. Morgan	U.S. Large Cap
Lansdowne	Global
LSV Asset Management	Global, Non-U.S. Small Cap, U.S. Small Cap
Internal Portfolios	Style Description
Afton	U.S. Small Cap
Amherst	U.S. Large Cap
Internal Emerging	Emerging
Mobjack	U.S. Large Cap
Piedmont	Non-U.S. Large Cap
Rivanna	Global
Top 10 Equity Hedge Funds	Style Description
CET Energy Dynamics	Long/Short
Cevian	Activist
Coatue	Long/Short
Eminence	Long/Short
Farallon	Multi-Strat
Maverick Capital	Long/Short
Select	Long/Short
Taiyo	Activist
Theleme	Long/Short
ValueAct Capital	Activist

FIXED INCOME

Internal Portfolios	Style Description
VRS Investment Grade Credit	High-Quality Corporates
VRS Securitized	Mortgage and Other Asset-Backed Securities
VRS Government	U.S. and Other Government-Related Debt
VRS Emerging Market Debt	EM Sovereign and Quasi-Sovereign Debt
VRS Systematic High Yield	High-Yield Corporates
VRS Fixed-Income Opportunistic	Various Fixed-Income Related Assets

(Continued)

VRS Money Managers, *cont.*

FIXED INCOME, *cont.*

External Portfolios	Style Description
FI Payden & Rygel EMD	Emerging Market Debt
FI PIMCO EMD	Emerging Market Debt
FI Man Numeric High Yield	High-Yield Corporates

PRIVATE EQUITY – TOP 10 MANAGERS

	Style Description
Apax Partners	Buyout
Audax Group	Buyout, Sub-Debt
Bain Capital	Buyout
CVC Capital	Buyout
General Atlantic	Growth
Grosvenor	Customized Separate Account
Hellman and Friedman	Buyout
Stone Point	Buyout
TA Associates	Growth
Veritas	Buyout

CREDIT STRATEGIES – TOP 10 MANAGERS

	Style Description
Beach Point Capital Management	Distressed, Broadly Syndicated Loans, Opportunistic
Ares Management	Direct Lending, Mezzanine, Opportunistic, Asset Based
HPS Investment Partners	Direct Lending, Mezzanine
BlackRock	Direct Lending
Carlyle	Diversified Private Credit
Solus	Opportunistic, Broadly Syndicated Loans
J.P. Morgan	High Yield Bonds
KKR	Direct Lending, Distressed
PGIM	Investment Grade, Mezzanine
Sixth Street Partners	Distressed, Opportunistic

PRIVATE INVESTMENT PARTNERSHIPS

	Style Description
KKR	Multi-Asset Class Private Investments
Carlyle	Multi-Asset Class Private Investments

CURRENCY

	Style Description
Systematica	Developed

VRS Money Managers, *cont.*

REAL ASSETS – TOP 10 MANAGERS

Style Description

Blackstone Real Estate Partners	Core, Enhanced Core & Opportunistic Real Estate
Carson Companies	Core Real Estate
Clarion Partners	Enhanced Core Real Estate
Global Infrastructure Partners	Global Infrastructure
Industry Funds Management	Global Infrastructure
J.P. Morgan Asset Management Inc.	Core Real Estate
Morgan Stanley	Core Real Estate, Global Infrastructure
Pantheon Ventures	Global Infrastructure, Global Natural Resources
PGIM	Core & Enhanced Core Real Estate
Pritzker Realty Group	Core & Enhanced Core Real Estate

MULTI-ASSET PUBLIC STRATEGIES – TOP 10 MANAGERS

Style Description

AQR	Multi-Asset Class Public Investments
BlackRock	Multi-Asset Class Public Investments
Capstone	Multi-Asset Class Public Investments
Internal Portfolio Strategy	Multi-Asset Class Public Investments
J.P. Morgan	Multi-Asset Class Public Investments
Man AHL	Multi-Asset Class Public Investments
Orchard Global	Multi-Asset Class Public Investments
MetLife	Fixed Income
Nordea	Equities
Wellington	Equities

Public Equity Commissions

AS OF JUNE 30, 2023

Broker	Commission	Shares	Average Commission Per Share
Merrill Lynch, Pierce, Fenner & Smith, Inc., New York	\$ 1,533,459.42	124,701,232	\$ 0.0123
Goldman Sachs & Co., New York	1,169,919.73	110,171,270	0.0106
Credit Suisse, New York (CSUS)	927,186.85	172,322,179	0.0054
National Finl Svcs Corp, New York	573,205.39	34,350,328	0.0167
UBS Equities, London	395,081.61	191,704,568	0.0021
Morgan Stanley and Co., LLC, New York	380,020.70	121,119,309	0.0031
Sanford C. Bernstein & Co. Inc., London	325,380.44	58,278,036	0.0056
UBS Warburg Asia LTD, Hong Kong	223,023.43	89,817,408	0.0025
J.P. Morgan Secs LTD, London	213,596.61	40,026,337	0.0053
Sanford C. Bernstein & Co., New York	158,606.93	38,940,842	0.0041
Other Brokers	2,484,055.18	2,133,683,498	0.0012
Total FY 2023	\$ 8,383,536.29	3,115,115,007	\$ 0.0027

SCHEDULE OF INVESTMENT EXPENSES

FOR THE YEAR ENDED JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	Assets Under Management	Management Fees and Expenses
External Management:		
Public Equity Managers	\$ 11,385,380	\$ 47,275
Fixed Income Managers	3,979,174	3,841
Credit Strategies Managers	14,171,524	122,062
Real Assets Managers	14,873,343	138,350
Alternative Investment Managers	18,993,287	171,600
Hedge Funds Managers	16,600,797	63,805
Multi-Asset Class/Other Managers	7,451,391	26,762
Subtotal: External Management	87,454,896	573,695
Internal Management	20,305,907	49,536
Miscellaneous Fees and Expenses:		
Custodial Fees	—	4,500
Legal Fees	—	981
Other Fees and Expenses	—	36,551
Subtotal: Miscellaneous Fees and Expenses	—	42,032
Total	\$ 107,760,803	\$ 665,263

Investment Summary

In accordance with Section 51.1-124.31 of the *Code of Virginia* (1950), as amended, the Board of Trustees has pooled substantially all defined benefit plan assets of the Virginia Retirement System, the State Police Officers' Retirement System, the Judicial Retirement System, the Group Life

Insurance Fund and the Retiree Health Insurance Credit Fund into a common investment pool. The common investment pool of the pension trust funds, other trust funds and custodial funds held the following composition of investments at June 30, 2023 and 2022:

(EXPRESSED IN THOUSANDS)

	2023 Fair Value	Percent of Total Value	2022 Fair Value	Percent of Total Value
Bonds and Mortgage Securities:				
U.S. Government and Agencies	\$ 5,463,039	5.07%	\$ 5,103,220	4.96%
Mortgage Securities	7,743,993	7.18%	3,384,999	3.29%
Corporate and Other Bonds	5,893,713	5.47%	11,428,104	11.12%
Total Bonds and Mortgage Securities	19,100,745	17.72%	19,916,323	19.37%
Common and Preferred Stocks	24,906,540	23.10%	22,153,695	21.55%
Index and Pooled Funds:				
Equity Index and Pooled Funds	13,242,981	12.28%	12,627,783	12.28%
Fixed-Income Commingled Funds	823,876	0.76%	1,424,241	1.39%
Total Index and Pooled Funds	14,066,857	13.04%	14,052,024	13.67%
Real Assets	13,999,754	12.98%	13,735,587	13.36%
Private Equity	35,612,059	33.02%	32,530,492	31.66%
Short-Term Investments:				
Treasurer of Virginia – LGIP Investment Pool	76,066	0.07%	352,743	0.34%
Foreign Currencies	74,850	0.07%	53,176	0.05%
Total Short-Term Investments	150,916	0.14%	405,919	0.39%
Total Investments	\$ 107,836,871	100.00%	\$ 102,794,040	100.00%

Description of Hybrid Defined Contribution Plan

Defined contribution plan assets for Hybrid Retirement Plan members are maintained in two separate accounts. The Hybrid 401(a) Cash Match Plan account contains the hybrid plan member and employer mandatory contributions and the employer match on the voluntary member

contributions. The Hybrid 457 Deferred Compensation Plan account contains the hybrid plan member's voluntary contributions. The schedule below shows the assets in each investment option and the accumulated plan assets in each option.

HYBRID PARTICIPANT ACCOUNT PLAN ASSETS BY FUND OPTION*

AS OF JUNE 30, 2023

Fund Name	Hybrid 401(a)	Hybrid 457	Total
Retirement Portfolio	\$ 33,093,358	\$ 18,297,590	\$ 51,390,948
Target Date 2025 Portfolio	64,528,535	37,495,185	102,023,720
Target Date 2030 Portfolio	96,827,514	56,905,185	153,732,699
Target Date 2035 Portfolio	122,405,941	69,676,931	192,082,872
Target Date 2040 Portfolio	127,148,327	68,891,480	196,039,807
Target Date 2045 Portfolio	145,829,512	76,553,196	222,382,708
Target Date 2050 Portfolio	174,810,059	86,029,892	260,839,951
Target Date 2055 Portfolio	257,826,854	112,528,985	370,355,839
Target Date 2060 Portfolio	151,296,348	60,823,290	212,119,638
Target Date 2065 Portfolio	20,544,676	6,185,896	26,730,572
Money Market Fund	8,728,289	2,935,080	11,663,369
Stable Value Fund	4,294,399	6,124,801	10,419,200
Bond Fund	1,634,970	1,904,727	3,539,697
Inflation-Protected Bond Fund	1,130,470	1,174,948	2,305,418
High-Yield Bond Fund	1,667,250	2,172,043	3,839,293
Stock Fund	33,891,166	35,049,568	68,940,734
Small/Mid-Cap Stock Fund	9,338,609	10,087,631	19,426,240
International Stock Fund	4,733,555	5,195,378	9,928,933
Global Real Estate Fund	1,943,270	2,316,436	4,259,706
VRS Investment Portfolio – PIPVRSIP	34,587	22,507	57,094
VRS Investment Portfolio	407,590	368,614	776,204
Self-Directed Brokerage	1,604,514	1,805,736	3,410,250
Total Plan Assets	\$ 1,263,719,795	\$ 662,545,101	\$ 1,926,264,896

* Fund totals have been rounded to the nearest dollar amount.

Description of Defined Contribution Plans Investment Options

Participants in the System's Hybrid Retirement Plan benefit structure have access to a number of core investment options for contributions to their defined contribution plan. These options are intended to provide participants with a variety of investment choices while controlling the associated costs. In addition to the option-specific annual operating expense detailed in the Investment Option Performance Summary, participants pay an annual record-keeping fee of \$30.50 that is deducted from their accounts on a monthly basis (approximately \$2.54 per month).

Participants with more than one account in the Plan pay only one annual fee of \$30.50. At June 30, 2023, the plans provided the following core investment options to participants.

DO-IT-FOR-ME FUNDS

Retirement Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that object, the portfolio will be broadly diversified across global asset classes.

U.S. Bonds: 54.0% U.S. Large/Mid-Cap Stocks: 22.3% International Stocks: 11.7%
U.S. Inflation-Index Bonds: 5.7% U.S. Small-Cap Stocks: 3.2%
Commodities: 1.5% Developed Real Estate: 1.7%

Target Date 2025 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Bonds: 49.9% U.S. Large/Mid-Cap Stocks: 24.8% International Stocks: 13.4%
U.S. Inflation-Index Bonds: 5.5% U.S. Small-Cap Stocks: 3.0%
Developed Real Estate: 2.0% Commodities: 1.5%

Target Date 2030 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Bonds: 37.9% U.S. Large/Mid-Cap Stocks: 32.5% International Stocks: 18.3%
U.S. Inflation-Index Bonds: 4.8% Developed Real Estate: 2.6%
U.S. Small-Cap Stocks: 2.7% Commodities: 1.3%

Target Date 2035 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Large/Mid-Cap Stocks: 39.5% U.S. Bonds: 27.3% International Stocks: 22.7%
U.S. Inflation-Index Bonds: 3.9% Developed Real Estate: 3.3%
U.S. Small-Cap Stocks: 2.4% Commodities: 1.0%

Target Date 2040 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Large/Mid-Cap Stocks: 46.2% International Stocks: 27.1% U.S. Bonds: 17.2%
Developed Real Estate: 3.8% U.S. Inflation-Index Bonds: 2.8% U.S. Small-Cap Stocks: 2.2% Commodities: 0.7%

Target Date 2045 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Large/Mid-Cap Stocks: 52.3% International Stocks: 31.0% U.S. Bonds: 8.3%
Developed Real Estate: 4.3% U.S. Inflation-Index Bonds: 1.6% U.S. Small-Cap Stocks: 2.0% Commodities: 0.4%

Target Date 2050 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Large/Mid-Cap Stocks: 56.5% International Stocks: 33.6% Developed Real Estate: 4.5%
U.S. Bonds: 2.8% U.S. Small-Cap Stocks: 1.9% U.S. Inflation-Index Bonds: 0.6% Commodities: 0.1%

Target Date 2055 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Large/Mid-Cap Stocks: 57.9% International Stocks: 34.8% Developed Real Estate: 4.4%
U.S. Small-Cap Stocks: 1.9% U.S. Bonds: 0.8% U.S. Inflation-Index Bonds: 0.2% Commodities: 0.1%

Target Date 2060 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Large/Mid-Cap Stocks: 58.0% International Stocks: 34.7% Developed Real Estate: 4.4%
U.S. Small-Cap Stocks: 1.9% U.S. Bonds: 0.9% U.S. Inflation-Index Bonds: 0.1%

Target Date 2065 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Large/Mid-Cap Stocks: 58.0% International Stocks: 34.8% Developed Real Estate: 4.4%
U.S. Small-Cap Stocks: 1.9% U.S. Bonds: 1.0%

HELP-ME-DO-IT FUNDS

Money Market Fund: Seeks to provide a high level of current income as is consistent with liquidity and stability of principal.

Other Repurchase Agreement: 56.4% Certificate of Deposit: 12.3% U.S. Treasury Debt: 4.9%
Asset-Backed Commercial Paper: 3.3% Non-Negotiable Time Deposit: 5.7% U.S. Government Debt: 3.6%
U.S. Government Agency Repurchase Agreement: 4.9% Financial Company Commercial Paper: 7.6%
U.S. Treasury Repurchase Agreement: 0.1% Non-Financial Company Commercial Paper: 1.2%

Stable Value Fund: Seeks to provide safety of principal, while earning a level of interest income consistent with an underlying portfolio of short- to intermediate-duration high-quality fixed income (bond) securities and cash or cash equivalents, and liquidity to accommodate participant transactions.

Corporates: 25.7% Asset-Backed: 19.6% Agency MBS: 18.4% U.S. Treasury/Agency: 13.1% Cash/Equivalents: 5.1%
CMBS: 8.1% Taxable Municipals: 4.9% Other U.S. Government: 4.4% Non-Agency MBS: 0.7%

Bond Fund: Seeks to track the performance of the Bloomberg Aggregate Bond Index. The index is an unmanaged index that represents the broad U.S. investment-grade bond market and is comprised of U.S. treasury securities, government agency bonds, corporate bonds, mortgage-backed securities, asset-backed securities and a small amount of foreign bonds traded in the U.S.

Treasury: 40.8% Mortgages: 26.5% Industrials: 14.3% Financials: 8.1% Non-U.S. Credit: 3.2% CMBS: 1.7%
Utilities: 2.0% Agencies: 1.0% Taxable Municipals: 0.6% Asset-Backed Securities: 0.3% Cash: 0.1%

Inflation-Protected Bond Fund: Seeks to track the performance of the Bloomberg U.S. Treasury Inflation-Protected Securities Index. The index is an unmanaged index that represents the U.S. Treasury Inflation-Protection Securities (TIPS) market. The index includes investment-grade TIPS with one or more years to final maturity.

U.S. Treasury: 98.6% Cash: 1.4%

High-Yield Bond Fund: Seeks to achieve returns that exceed, over time, its benchmark, the ICE BofA U.S. High-Yield BB-B Constrained Index. The index is an unmanaged index of BB-B rated securities that caps any single issuer exposure to 2.0%. The index is indicative of the higher quality high-yield bond market.

Consumer Cyclical: 21.8% Consumer Non-Cyclical: 17.7% Communications: 18.9%
Energy: 11.4% Capital Goods: 8.7% Technology: 6.1% Basic Industry: 3.7%
Finance: 2.2% Transportation: 2.8% Other/Cash: 4.6% Other Industrial: 0.9% Utilities: 1.3%

Stock Fund: Seeks to track the performance of the Standard & Poor's 500 Index. The index is an unmanaged index that represents the broad large-capitalization U.S. stock market and is comprised of 500 widely held U.S. stocks chosen by Standard & Poor's.

Information Technology: 28.3% Health Care: 13.4% Financials: 12.4%
Consumer Discretionary: 10.7% Communication Services: 8.4% Industrials: 8.5% Consumer Staples: 6.7%
Energy: 4.1% Utilities: 2.6% Real Estate: 2.5% Materials: 2.5%

Small/Mid-Capitalization Stock Fund: Seeks to track the performance of the Russell 2500 Index. The index is an unmanaged index that represents the broad middle- to smaller-capitalization U.S. stock market.

Industrials: 19.7% Financials: 14.9% Information Technology: 12.9% Health Care: 13.4%
Consumer Discretionary: 12.7% Real Estate: 7.4% Materials: 5.4%
Energy: 4.8% Consumer Staples: 3.3% Utilities: 2.8% Communication Services: 2.8%

International Stock Fund: Seeks to track the performance of the MSCI ACWI ex-U.S. IMI Index. The index is an unmanaged index that represents the equity performance of large, mid- and small-cap segments of developed and emerging markets, excluding the U.S.

Financials: 19.3% Industrials: 14.2% Consumer Discretionary: 12.1%
Information Technology: 11.9% Health Care: 9.2% Consumer Staples: 8.3% Materials: 8.4%
Communication Services: 5.3% Energy: 5.2% Real Estate: 2.9% Utilities: 3.2%

Global Real Estate Fund: Seeks to track the performance of the FTSE EPRA/NAREIT Developed Index. The index is an unmanaged index that is designed to reflect the performance of listed real estate companies worldwide, including the U.S.

Specialized REITs: 17.0% Retail REITs: 16.7% Residential REITs: 14.3% Industrial REITs: 14.7%
Office REITs: 7.5% Health Care REITs: 7.0% Diversified REITs: 7.1%
Real Estate Management & Development: 12.9% Hotel & Resort REITs: 2.7%

VRS Investment Portfolio (VRSIP): Seeks to maximize return while managing risk within an acceptable range. Due to the long-term nature of the defined benefit plan's liabilities, the horizon for investment decisions is generally defined as 10 years or longer.

Public Equity: 33.0% Private Equity: 18.2% Fixed Income: 12.8% Credit Strategies: 13.6%
Real Assets: 13.5% MAPS: 3.5% PIP: 2.6% EMP: 0.9% Cash: 1.9%

DO-IT-MYSELF FUNDS

Self-Directed Brokerage Account (SDBA): Allows investors to select from thousands of publicly traded mutual funds, exchange-traded funds (ETFs) and individual securities in addition to the available core investment options. The SDBA option is offered through TD Ameritrade. The SDBA option is for knowledgeable investors who acknowledge and understand the risks and costs associated with the investments contained in this option.

In addition to the annual record-keeping fee and operating expenses, this option is subject to transaction fees charged by TD Ameritrade and investment management-related fees and expenses for the funds or investments selected.

Investment Option Performance Summary: Defined Contribution Plans

AS OF JUNE 30, 2023

(RETURNS GREATER THAN ONE YEAR ARE ANNUALIZED)

DO-IT-FOR-ME PATH: TARGET DATE PORTFOLIOS

Investment Options	Inception Date	1 Year	3 Years	5 Years	10 Years or Since Inception	Total Annual Operating Expenses	
						As a %	Per \$1,000
Retirement Portfolio	08/01/05	5.04%	2.41%	3.97%	4.54%	0.06%	\$0.60
Custom Benchmark ¹		5.06%	2.41%	3.95%	4.51%		
Target Date 2025 Portfolio	07/05/06	5.96%	3.83%	4.57%	5.63%	0.06%	\$0.60
Custom Benchmark ¹		5.94%	3.81%	4.52%	5.57%		
Target Date 2030 Portfolio	08/01/05	8.16%	5.62%	5.44%	6.42%	0.06%	\$0.60
Custom Benchmark ¹		8.15%	5.59%	5.39%	6.33%		
Target Date 2035 Portfolio	07/05/06	10.21%	7.32%	6.26%	7.14%	0.06%	\$0.60
Custom Benchmark ¹		10.18%	7.26%	6.18%	7.04%		
Target Date 2040 Portfolio	08/01/05	12.23%	8.87%	6.98%	7.78%	0.06%	\$0.60
Custom Benchmark ¹		12.16%	8.78%	6.88%	7.66%		
Target Date 2045 Portfolio	07/05/06	14.06%	10.13%	7.58%	8.28%	0.06%	\$0.60
Custom Benchmark ¹		13.99%	10.02%	7.46%	8.14%		
Target Date 2050 Portfolio	09/30/07	15.21%	10.81%	7.91%	8.56%	0.06%	\$0.60
Custom Benchmark ¹		15.11%	10.67%	7.77%	8.42%		
Target Date 2055 Portfolio	05/19/10	15.54%	10.94%	8.00%	8.66%	0.06%	\$0.60
Custom Benchmark ¹		15.46%	10.82%	7.86%	8.52%		
Target Date 2060 Portfolio	11/17/14	15.55%	10.93%	7.99%	7.74%	0.06%	\$0.60
Custom Benchmark ¹		15.47%	10.81%	7.85%	7.58%		
Target Date 2065 Portfolio	09/23/19	15.58%	10.90%	N/A	8.61%	0.06%	\$0.60
Custom Benchmark ¹		15.48%	10.81%	N/A	8.56%		

(Continued)

Investment Option Performance Summary: Defined Contribution Plans (cont.)

HELP-ME-DO-IT PATH: INDIVIDUAL OPTIONS

Investment Options	Inception Date					Total Annual Operating Expenses	
		1 Year	3 Years	5 Years	10 Years or Since Inception	As a %	Per \$1,000
Money Market Fund	11/01/99	4.11%	1.54%	1.75%	1.14%	0.08%	\$0.80
Benchmark: FTSE 3-Month Treasury Bill Index							
Yield as of June 30, 2023, was 5.31%		3.75%	1.33%	1.57%	0.98%		
Stable Value Fund	02/01/95	2.07%	1.81%	2.05%	1.86%	0.23%	\$2.30
Custom Benchmark ²							
Yield as of June 30, 2023, was 2.72%		4.26%	2.09%	2.09%	1.84%		
Bond Fund	11/01/99	(0.90)%	(3.92)%	0.81%	1.57%	0.03%	\$0.30
Benchmark: Bloomberg U.S. Aggregate Bond Index		(0.94)%	(3.96)%	0.77%	1.52%		
Inflation-Protected Bond Fund	07/30/02	(1.33)%	(0.08)%	2.56%	2.17%	0.03%	\$0.30
Benchmark: Bloomberg U.S. Treasury Inflation-Protected Securities Index		(1.40)%	(0.12)%	2.49%	2.08%		
High-Yield Bond Fund	05/31/04	7.13%	3.78%	3.56%	4.57%	0.39%	\$3.90
Benchmark: ICE BofA U.S. High-Yield BB-B Constrained Index		8.57%	2.64%	3.38%	4.35%		
Stock Fund	11/01/99	19.58%	14.61%	12.34%	12.89%	0.01%	\$0.10
Benchmark: S&P 500 Index		19.59%	14.60%	12.31%	12.86%		
Small/Mid-Cap Stock Fund	11/01/99	13.70%	12.37%	6.60%	9.46%	0.02%	\$0.20
Benchmark: Russell 2500 Index		13.58%	12.29%	6.55%	9.38%		
International Stock Fund	11/01/99	12.68%	7.65%	3.69%	5.23%	0.06%	\$0.60
Benchmark: MSCI ACWI ex-U.S. IMI Index ³		12.47%	7.33%	3.38%	4.98%		
Global Real Estate Fund	10/01/02	(3.47)%	4.24%	0.80%	3.73%	0.08%	\$0.80
Benchmark: FTSE EPRA/NAREIT Developed Index		(4.56)%	3.33%	(0.10)%	2.89%		
VRS Investment Portfolio (VRSIP)	07/01/08	6.09%	10.82%	8.04%	8.16%	0.59%	\$5.90
VRS Custom Benchmark ⁴		6.27%	7.95%	6.29%	7.06%		

¹ Benchmarks are calculated using blended returns of third-party indices that proportionately reflect the respective weightings of the Portfolios' asset classes. Weightings are adjusted quarterly to reflect the Portfolios' asset allocation shifts over time. Indices currently used to calculate the custom benchmarks are Russell 1000 Index, Russell 2000 Index, MSCI ACWI ex-U.S. IMI Net Dividend Return Index, Bloomberg U.S. Long Credit Bond Index, Bloomberg U.S. Intermediate Credit Bond Index, Bloomberg U.S. Long Government Bond Index, Bloomberg U.S. Intermediate Government Bond Index, Bloomberg U.S. Securitized: MBS, ABS, and CMBS Index, Bloomberg U.S. Treasury Inflation Protection Securities (TIPS) Index (Series L), FTSE EPRA NAREIT Developed Index, and the Bloomberg Commodity Index Total Return.

² Effective August 2016, the benchmark represents a hypothetical return generated by the monthly yields of actively traded U.S. Treasuries based on [50% two-year maturity + 50% three-year maturity] plus an annualized spread of 0.25% and is representative of the Fund's expected return profile, given how the Fund is managed and book value accounting treatment. Prior to August 2016, the custom benchmark was based on the monthly yield of actively traded U.S. Treasuries with a three-year maturity plus an annualized spread of 0.50%. The benchmark returns are linked.

³ Effective August 2016, the performance benchmark is the MSCI ACWI ex-U.S. IMI Index. It was the MSCI World ex-U.S. Index from July 2012 through July 2016, and prior to July 2012, it was the MSCI EAFE Index. The benchmark returns are linked.

⁴ The VRS Custom Benchmark is a blend of the asset class benchmarks at policy weights.



Virginia
Retirement
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ACTUARIAL SECTION

2023

Actuarial Section

Pension Trust Funds:

- Actuary's Certification Letter: Pension Plans
- Summary of Actuarial Assumptions and Methods: Pension Plans
- Solvency Test: Pension Plans
- Solvency Test: VRS Pension Plans
- Schedule of Funding (Actuarial Value Basis): All Pension Plans
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- Schedule of Active Member Valuation Data: Pension Plans
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- Summary of OPEB Plan Provisions
- Summary of OPEB Plan Changes

Actuary's Certification Letter: Pension Plans



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April 4, 2023

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

Re: Virginia Retirement System Actuarial Valuation as of June 30, 2023
Actuarial Disclosures – State Pension Plans

Dear Trustees:

The results of the June 30, 2022 Annual Actuarial Valuation of the Virginia Retirement System (VRS) are presented in this report (see employers.varetire.org/media/shared/pdf/valuations/valuation-report-2022-vrs.pdf). This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purposes of the valuation are to measure each Statewide System's funding progress and to determine the informational employer contribution rates for the fiscal year ended June 30, 2024. In addition, this report provides select aggregated valuation results for the participating Political Subdivisions. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The employer contribution rates in this report are determined using the actuarial assumptions and methods as adopted by the Board. This report includes risk metrics on pages 18 through 25 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.

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

The findings in this report are based on data and other information through June 30, 2022. The valuation was based upon information furnished by the VRS, concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the VRS. For a summary of the benefit provisions used, please refer to the appendix available on the VRS website.

One Towne Square | Suite 800 | Southfield, Michigan 48076-3723

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.

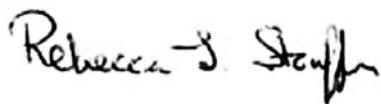
This report was prepared during the COVID-19 pandemic, which is likely to influence demographic and economic experience, at least in the short term. Results in this report are developed based on available data without adjustment. We will continue to monitor these developments and their impact on the Retirement System. Actual experience will be reflected in each subsequent report, as experience emerges.

This report was prepared using assumptions adopted by the Board. All actuarial assumptions used in this report are reasonable for the purposes of this valuation. All actuarial assumptions and methods used in the valuation follow the guidance in the applicable Actuarial Standards of Practice. For a full list of the assumptions and methods used, please refer to the appendix available on the VRS website.

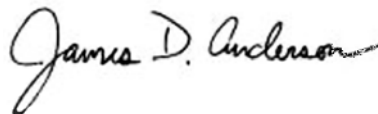
This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the VRS as of the valuation date. All calculations have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

Rebecca L. Stouffer, James D. Anderson, Richard C. Koch Jr., and Michael D. Kosciuk are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor.

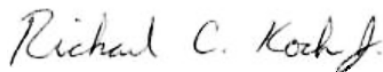
Respectfully submitted,
Gabriel, Roeder, Smith & Company



Rebecca L. Stouffer, ASA, FCA, MAAA



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



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



Michael D. Kosciuk, FSA, EA, FCA, MAAA

RLS/JDA/RCK/MDK:rmn

Executive Summary

1. Introduction

Each year actuarial valuations are prepared for the Virginia Retirement System (VRS). This report contains the results of the June 30, 2022 actuarial valuation for each of the Statewide Retirement Systems administered by the VRS.

As referenced throughout this report, the Statewide Retirement Systems are as follows:

- Virginia Retirement System
 - State Employees
 - Teachers
 - Political Subdivisions
- State Police Officers' Retirement System (State Police)
- Judicial Retirement System (Judicial)
- Virginia Law Officers' Retirement System (Virginia Law Officers)

In addition, the report presents aggregated results for the participating Political Subdivisions within the agent-multiple employer plan. The funded status and employer contribution rates for participating Political Subdivisions are developed individually at the employer level.

2. Total Employer Contribution Rates to Support Retirement System Benefits – Including an Actuarially Determined Employer Contribution (ADEC) Rate

Fiscal Year Ending:	2021 & 2022	2023 & 2024		Informational - 2024		
Valuation Date:	June 30, 2019	June 30, 2021		June 30, 2022		
Employer Contribution Rate / System	Board & General Assembly Approved	Board Approved	General Assembly Approved	ADEC For Defined Benefit (DB) Plan	For Hybrid Defined Contribution (DC) Members	Total Employer Rate (DB) + (DC)
State Employees	14.46%	14.13%	14.46%	12.05%	1.14%	13.19%
Teachers	16.62%	14.76%	16.62%	13.27%	0.86%	14.13%
State Police	26.33%	29.98%	29.98%	28.88%	N/A	28.88%
Judicial	29.84%	30.67%	30.67%	27.11%	1.99%	29.10%
Virginia Law Officers	21.90%	24.60%	24.60%	21.92%	N/A	21.92%
Political Subdivisions (Average) ^{1,2}	N/A	12.36%	N/A	11.07%	0.82%	11.89%

¹ Calculated as a weighted average starting with the June 30, 2022 valuation, consistent with GASB Statement No. 68 reporting.

² Fiscal years ending 2023 and 2024 were restated as weighted average from prior actuary's published results by individual employer. The General Assembly does not approve the Political Subdivision rates.

Contribution rates for the VRS employers are established every two years. Odd valuation years are rate setting valuations. A measure of the funded status and recommended employer contribution rates are determined by the Actuary and approved by the Board of Trustees. Actual employer contribution rates (for all except Political Subdivisions) are established by the General Assembly for the biennium, subject to intermediate updates. Even valuation years, such as this one, are considered informational. Even valuations provide a current measure of the System's funded status and an illustrative measure of the employer contribution rate, after accounting for updates to demographic data, financial data, plan provisions, and assumption and/or method changes since the previous valuation measurement.

The table on the prior page shows the employer contribution rates for fiscal years ending 2021-2024 based on June 30, 2019 and June 30, 2021 actuarial valuations. The budget maintains funding for fiscal years ending 2023 and 2024 based on the prior biennium's higher contribution rates for State (14.46% vs. 14.13%) and Teachers (16.62% vs. 14.76%). Also, the budget included the additional amounts below, contributed to the Virginia Retirement System trust fund in June 2022 in an effort to address the unfunded liabilities associated with each plan:

System	June 2022 Additional Contribution
State Employees	\$ 219,156,318
Teachers	442,371,085
State Police	10,957,816
Judicial	6,250,014
Virginia Law Officers	19,886,407

The actuarially determined employer contribution rates based on the June 30, 2022 valuation presented in this report are informational in nature and the total employer rate includes the average employer rate for the defined contribution component of the Hybrid members based upon the previous year's experience.

3. Funded Ratio

The funded ratio of the plan is the percentage of the dollar value of the accrued liability that is covered by the actuarial value of assets. While the funded ratio may be a useful plan measurement, understanding a plan's funding trend may be more important than a particular point in time. The chart below compares the funded ratio for the current valuation with the results of the prior valuation.

System	Funded Ratio	
	June 30, 2022	June 30, 2021
State Employees	78.90%	77.13%
Teachers	78.85%	77.21%
State Police	70.63%	70.65%
Judicial	85.19%	81.90%
Virginia Law Officers	71.36%	69.33%
Political Subdivisions	88.76%	87.19%

4. Reasons for Change

There are three general reasons why contribution rates change from one valuation to the next.

- Changes in the benefit or eligibility conditions of the plan;
- Change in the valuation assumptions and/or methods used to project future occurrences; and
- Experience of the plan; the difference during the year between the plan's actual experience and that expected under the actuarial assumptions.

There were no significant changes in plan benefits or eligibility conditions since the prior valuation. Some Political Subdivisions made changes to benefits provided to members in hazardous duty positions. Additionally, some entities became participating Political Subdivisions since the previous valuation. In aggregate the impact of these changes on the Political Subdivision plans is not significant. Please refer to the individual reports for the benefit provisions of each participating Political Subdivision. There were no changes in the valuation assumptions or methods since the last valuation. Plan experience differed from expectations as follows:

- For the period ending June 30, 2022, the VRS reported investment return of 0.6% on a market value basis, compared to the assumed level of 6.75%. Under the asset valuation method, investment gains and losses are spread over a 5-year period, subject to a corridor. Partial recognition of this year's loss, combined with the continued phase-in of investment gains and losses from prior years resulted in a net recognized asset gain for the funding value of assets for all plans. In addition the return on the funding value of assets was approximately 8.9%.
- Pay increases (other than JRS) were greater than assumed.
- Cost of Living Adjustments (COLA) were greater than expected for eligible recipients:
 - An actual COLA of 3.85% for Plan 1 recipients compared to a 2.50% assumption; and
 - An actual COLA of 3.00% for Plan 2 / Hybrid recipients compared to a 2.25% assumption.
- The net impact of plan experience will depend upon the specific make up (demographic and financial) of each Plan and is reflected in the computed Total Employer Contribution Rate determined in this report.

5. Change in Service Provider

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

6. General Comments

HB 473 and SB 70 separate the employer contribution into Defined Benefit and Defined Contribution components effective for contribution rates beginning July 1, 2024. This 2022 informational valuation continues to show the Defined Contribution Rate to allow continued communication to employers in the interim. The 2023 rate-setting valuation will not include the estimated Defined Contribution Rate since the rates set in that valuation will be paid beginning July 1, 2024.

Throughout this report, there may be cases when the schedules do not add due to rounding.

Conclusion. Based upon the results of the June 30, 2022 regular annual actuarial valuation, it is our opinion that the Virginia Retirement System continues to operate in accordance with actuarial principles of level percent-of-payroll financing.

Other Observations

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 normal cost as a percentage of pay will trend to the level associated with Plan 2 and/or Hybrid as members are replaced into the ultimate benefit tier.
2. The unfunded liability will decrease in dollar amount until it is fully funded.
3. The funded status of the plan will move toward a 100% funded ratio.

Limitations of Funded Status Measurements

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

1. The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations; in other words, of transferring the obligations to an unrelated third party in an arm's length market value type transaction.
2. The measurement is dependent upon the actuarial cost method which, in combination with the plan's amortization policy, affects the timing and amounts of future contributions. The amount of future contributions will most certainly differ from those assumed in this report due to future actual experience differing from assumed experience based upon actuarial assumptions. A funded ratio measurement in this report of 100% is not synonymous with no required future contributions. If the funded ratio 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 market value of assets were used instead of the actuarial value of assets, unless the market value of assets is used in the measurement.

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.



The Actuarial Section presents information about the assumptions adopted by the Board of Trustees and used by the VRS actuary to evaluate the funded status of the pension plans. This information includes trend data about retirements, disabilities, terminations and salary increase rates. The section also provides summaries of the pension plans administered by the System and any changes.

Summary of Actuarial Assumptions and Methods

On April 26, 2021, the VRS Board of Trustees adopted most of the actuarial assumptions and methods on the recommendation of its actuary. They were based on an analysis of plan experience for the four-year period July 1, 2016, through June 30, 2020, and were used for the June 30, 2022, valuation.

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS: PENSION PLANS

	2011-2012	2013	2014-2016	2017	2018	2019	2020	2021	2022
Investment Rate of Return	7.00%	7.00%	7.00%	7.00%	7.00%	6.75%	6.75%	6.75%	6.75%
Inflation Assumption	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Cost of Living (COLA) Assumption									
Plan 1	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Plan 2	0.0225	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%
Hybrid	N/A	N/A	0.0225	0.0225	2.25%	2.25%	2.25%	2.25%	2.25%
Actuarial Cost Method	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal
Change in Decremental Assumptions	No	Yes	No	Yes	No	No	No	No	No
Value of Ancillary Benefits Included	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Value of Post-Retirement Adjustments to Date Included	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Assets Valuation Method	5-Year Smoothed Market	5-Year Smoothed Market	5-Year Smoothed Market	5-Year Smoothed Market	5-Year Smoothed Market	5-Year Smoothed Market	5-Year Smoothed Market	5-Year Smoothed Market	5-Year Smoothed Market

SOLVENCY TEST: PENSION PLANS

(EXPRESSED IN THOUSANDS)

Valuation Date (June 30)	Aggregate Accrued Liabilities for				Portion of			
	(1) Active	(2) Retirees	(3) Active Members*	Valuation Assets	Accrued Liabilities Covered by Assets			
	Member Contributions	and Beneficiaries			(1)	(2)	(3)	
VIRGINIA RETIREMENT SYSTEM (VRS)								
2022	\$ 11,415,519	\$ 67,605,525	\$ 33,012,077	\$ 91,177,020	100.00%	100.00%	36.82%	
2021	14,452,659	64,528,079	27,662,643	85,027,965	100.00%	100.00%	21.86%	
2020	14,082,163	60,926,216	26,884,877	78,759,722	100.00%	100.00%	13.95%	
2019	13,613,905	58,337,920	27,182,146	76,244,148	100.00%	100.00%	15.79%	
2018	13,221,525	54,132,392	25,820,901	73,204,795	100.00%	100.00%	22.66%	
2017	12,887,047	51,247,606	25,716,631	69,214,246	100.00%	100.00%	19.75%	
2016	12,518,183	48,717,939	25,882,870	65,203,736	100.00%	100.00%	15.33%	
2015	12,176,530	46,783,519	25,751,093	62,083,601	100.00%	100.00%	12.13%	
2014	11,819,771	44,469,489	25,794,124	57,144,567	100.00%	100.00%	3.32%	
2013	11,420,836	42,383,697	25,273,058	52,124,581	100.00%	96.00%	—%	
STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)								
2022	\$ 100,990	\$ 803,632	\$ 513,842	\$ 1,001,822	100.00%	100.00%	18.92%	
2021	106,923	782,487	437,236	937,332	100.00%	100.00%	10.96%	
2020	109,787	707,082	389,555	880,834	100.00%	100.00%	16.42%	
2019	105,943	682,809	392,368	858,632	100.00%	100.00%	17.81%	
2018	103,710	646,580	362,603	830,978	100.00%	100.00%	22.25%	
2017	99,643	622,206	318,779	785,677	100.00%	100.00%	20.02%	
2016	100,291	585,837	395,852	744,656	100.00%	100.00%	14.79%	
2015	95,394	586,984	368,323	710,864	100.00%	100.00%	7.73%	
2014	92,637	562,413	374,105	662,244	100.00%	100.00%	1.92%	
2013	88,814	548,115	359,761	591,983	100.00%	91.80%	—%	
VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS)								
2022	\$ 157,404	\$ 1,718,160	\$ 631,580	\$ 1,789,127	100.00%	94.97%	—%	
2021	251,678	1,640,876	514,599	1,668,802	100.00%	86.36%	—%	
2020	250,900	1,498,644	509,009	1,546,528	100.00%	86.45%	—%	
2019	244,233	1,432,206	534,799	1,484,995	100.00%	86.63%	—%	
2018	240,390	1,317,732	499,382	1,413,876	100.00%	89.05%	—%	
2017	240,517	1,219,673	517,591	1,328,178	100.00%	89.18%	—%	
2016	237,416	1,160,507	586,334	1,235,490	100.00%	86.00%	—%	
2015	232,824	1,088,742	585,155	1,155,767	100.00%	84.77%	—%	
2014	230,522	977,848	611,675	1,058,010	100.00%	84.60%	—%	
2013	223,467	916,886	601,757	941,933	100.00%	78.40%	—%	
JUDICIAL RETIREMENT SYSTEM (JRS)								
2022	\$ 40,990	\$ 518,851	\$ 188,716	\$ 637,696	100.00%	100.00%	41.25%	
2021	42,082	498,777	192,549	600,670	100.00%	100.00%	31.06%	
2020	42,320	452,071	183,481	566,239	100.00%	100.00%	39.16%	
2019	42,660	427,846	199,235	553,136	100.00%	100.00%	41.47%	
2018	41,009	413,609	191,044	536,022	100.00%	100.00%	42.61%	
2017	39,104	407,862	184,556	505,834	100.00%	100.00%	31.90%	
2016	37,648	395,698	174,452	476,321	100.00%	100.00%	24.63%	
2015	36,784	390,690	172,914	442,250	100.00%	100.00%	8.55%	
2014	38,522	370,265	199,382	406,053	100.00%	99.30%	—%	
2013	38,439	360,470	191,717	368,671	100.00%	91.60%	—%	

* Employer-financed portion.

Aggregate Accrued Liabilities are determined under the entry age normal cost method (System-funded method used to determine employer contribution requirements).

The progress of a retirement system in accumulating assets to pay benefits when due can be measured by examining the extent to which assets accumulated for benefits cover 1) active member contributions to the System; 2) liabilities for future benefits to retirees and beneficiaries; and 3) liabilities for the employer-financed portion of service already rendered by active members. In a system receiving actuarially determined employer contributions, the liabilities for member contributions and future benefits to retirees and beneficiaries will generally be fully covered by accumulated assets. In addition, the liabilities for service already rendered will be partially covered by the remainder of the accumulated assets and will increase over time.

SOLVENCY TEST: VRS PENSION PLANS

(EXPRESSED IN THOUSANDS)

Valuation Date (June 30)	Aggregate Accrued Liabilities for				Valuation Assets	Portion of Accrued Liabilities		
	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Members*					
				(1)		(2)	(3)	
VRS – STATE								
2022	\$ 2,814,123	\$ 17,936,921	\$ 7,028,127	\$21,917,849	100.00%	100.00%	16.60%	
2021	3,566,175	17,161,682	6,000,114	20,615,301	100.00%	99.34%	—%	
2020	3,514,856	16,410,519	5,825,960	19,333,674	100.00%	96.39%	—%	
2019	3,459,343	15,831,694	6,107,151	18,932,104	100.00%	97.73%	—%	
2018	3,416,685	14,911,769	5,786,703	18,392,939	100.00%	100.00%	1.11%	
2017	3,374,835	14,148,870	5,787,829	17,547,764	100.00%	100.00%	0.42%	
2016	3,324,003	13,408,506	6,145,734	16,672,776	100.00%	99.55%	—%	
2015	3,267,188	12,960,842	6,063,528	15,881,597	100.00%	97.33%	—%	
2014	3,202,604	12,433,349	6,186,983	14,826,208	100.00%	93.50%	—%	
2013	3,113,926	11,954,023	6,000,702	13,714,404	100.00%	88.70%	—%	
VRS – TEACHER								
2022	\$ 5,713,400	\$ 32,957,731	\$ 17,091,402	\$43,970,442	100.00%	1,000.00%	31.01%	
2021	7,036,408	31,496,785	14,214,403	40,725,782	100.00%	100.00%	15.43%	
2020	6,811,064	30,055,902	13,967,817	37,556,121	100.00%	100.00%	4.93%	
2019	6,520,986	28,810,438	13,972,535	36,233,796	100.00%	100.00%	6.46%	
2018	6,282,723	26,726,567	13,506,886	34,673,952	100.00%	100.00%	12.32%	
2017	6,082,982	25,474,535	13,448,500	32,684,868	100.00%	100.00%	8.38%	
2016	5,871,258	24,559,074	13,151,297	30,768,277	100.00%	100.00%	2.57%	
2015	5,679,555	23,776,912	13,107,711	29,441,485	100.00%	99.94%	—%	
2014	5,494,752	22,720,375	13,082,542	27,026,576	100.00%	94.80%	—%	
2013	5,310,701	21,627,490	12,914,143	24,724,679	100.00%	89.80%	—%	
VRS – POLITICAL SUBDIVISIONS								
2022	\$ 2,887,997	\$ 16,710,873	\$ 8,892,548	\$25,288,728	100.00%	100.00%	63.98%	
2021	3,850,076	15,869,613	7,448,126	23,686,882	100.00%	100.00%	53.26%	
2020	3,756,243	14,459,794	7,091,101	21,869,927	100.00%	100.00%	51.53%	
2019	3,633,576	13,695,788	7,102,460	21,078,248	100.00%	100.00%	52.78%	
2018	3,522,117	12,494,055	6,527,313	20,137,904	100.00%	100.00%	63.15%	
2017	3,429,230	11,624,201	6,480,302	18,981,614	100.00%	100.00%	60.62%	
2016	3,322,922	10,750,359	6,585,839	17,762,683	100.00%	100.00%	56.02%	
2015	3,229,787	10,045,765	6,579,854	16,760,519	100.00%	100.00%	52.96%	
2014	3,122,415	9,315,765	6,524,599	15,291,783	100.00%	100.00%	43.74%	
2013	2,996,209	8,802,184	6,358,213	13,685,498	100.00%	100.00%	29.68%	
VRS – TOTAL								
2022	\$ 11,415,519	\$ 67,605,525	\$ 33,012,077	\$91,177,020	100.00%	100.00%	36.82%	
2021	14,452,659	64,528,080	27,662,643	85,027,965	100.00%	100.00%	21.86%	
2020	14,082,163	60,926,215	26,884,878	78,759,722	100.00%	100.00%	13.95%	
2019	13,613,905	58,337,920	27,182,146	76,244,148	100.00%	100.00%	15.79%	
2018	13,221,525	54,132,392	25,820,901	73,204,795	100.00%	100.00%	22.66%	
2017	12,887,047	51,247,606	25,716,631	69,214,246	100.00%	100.00%	19.75%	
2016	12,518,183	48,717,939	25,882,870	65,203,736	100.00%	100.00%	15.33%	
2015	12,176,530	46,783,519	25,751,093	62,083,601	100.00%	100.00%	12.13%	
2014	11,819,771	44,469,489	25,794,124	57,144,567	100.00%	100.00%	3.32%	
2013	11,420,836	42,383,697	25,273,058	52,124,581	100.00%	96.00%	—%	

* Employer-financed portion.

Aggregate Accrued Liabilities are determined under the entry age normal cost method (System-funded method used to determine employer contribution requirements).

The progress of a retirement system in accumulating assets to pay benefits when due can be measured by examining the extent to which assets accumulated for benefits cover 1) active member contributions to the System; 2) liabilities for future benefits to retirees and beneficiaries; and 3) liabilities for the employer-financed portion of service already rendered by active members. In a system receiving actuarially determined employer contributions, the liabilities for member contributions and future benefits to retirees and beneficiaries will generally be fully covered by accumulated assets. In addition, the liabilities for service already rendered will be partially covered by the remainder of the accumulated assets and will increase over time.

SCHEDULE OF FUNDING (ACTUARIAL VALUE OF ASSETS BASIS): ALL PENSION PLANS

(EXPRESSED IN THOUSANDS)

Actuarial Valuation Date June 30	Actuarial Value of Assets (a)	Actuarial Liability (AAL) - Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll (b-a)/(c)
VIRGINIA RETIREMENT SYSTEM (VRS) **						
2022	\$ 91,177,019	\$ 112,033,122	\$ 20,856,103	81.4%	\$ 20,781,227	100.4%
2021*	85,027,965	106,643,382	21,615,417	79.7%	19,060,681	113.4%
2020	78,759,722	101,893,256	23,133,534	77.3%	18,749,343	123.4%
2019	76,244,148	99,133,971	22,889,823	76.9%	18,242,017	125.5%
2018	73,204,795	93,174,818	19,970,023	78.6%	17,614,448	113.4%
2017*	69,214,246	89,851,284	20,637,038	77.0%	16,764,876	123.1%
2016	65,203,736	87,118,992	21,915,256	74.8%	16,325,998	134.2%
2015	62,083,601	84,711,142	22,627,541	73.3%	15,901,380	142.3%
2014	57,144,567	82,083,384	24,938,817	69.6%	15,671,359	159.1%
2013*	52,124,581	79,077,591	26,953,010	65.9%	15,269,079	176.5%
STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)						
2022	\$ 1,001,822	\$ 1,418,464	\$ 416,642	70.6%	\$ 159,212	261.7%
2021*	937,332	1,326,646	389,314	70.7%	142,795	272.6%
2020	880,834	1,206,424	325,590	73.0%	131,255	248.1%
2019	858,632	1,181,120	322,488	72.7%	132,230	243.9%
2018	830,978	1,112,893	281,915	74.7%	126,523	222.8%
2017*	785,677	1,040,628	254,951	75.5%	110,265	231.2%
2016	744,656	1,081,980	337,324	68.8%	114,877	293.6%
2015	710,864	1,050,701	339,837	67.7%	110,543	307.4%
2014	662,244	1,029,155	366,911	64.3%	112,303	326.7%
2013*	591,983	996,690	404,707	59.4%	109,006	371.3%
VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS)						
2022	\$ 1,789,127	\$ 2,507,144	\$ 718,017	71.4%	\$ 372,486	192.8%
2021*	1,668,802	2,407,153	738,351	69.3%	351,086	210.3%
2020	1,546,528	2,258,553	712,025	68.5%	363,896	195.7%
2019	1,484,995	2,211,238	726,243	67.2%	369,776	196.4%
2018	1,413,876	2,057,504	643,628	68.7%	346,106	186.0%
2017*	1,328,178	1,977,781	649,603	67.2%	339,150	191.5%
2016	1,235,490	1,984,257	748,767	62.3%	352,677	212.3%
2015	1,155,767	1,906,721	750,954	60.6%	330,397	227.3%
2014	1,058,010	1,820,045	762,035	58.1%	352,709	216.1%
2013*	941,933	1,742,110	800,177	54.1%	342,154	233.9%
JUDICIAL RETIREMENT SYSTEM (JRS)						
2022	\$ 637,696	\$ 748,557	\$ 110,861	85.2%	\$ 80,745	137.3%
2021*	600,670	733,408	132,738	81.9%	79,125	167.8%
2020	566,239	677,872	111,633	83.5%	74,734	149.4%
2019	553,136	669,741	116,605	82.6%	76,848	151.7%
2018	536,022	645,662	109,640	83.0%	67,424	162.6%
2017*	505,834	631,522	125,688	80.1%	66,288	189.6%
2016	476,321	607,798	131,477	78.4%	65,524	200.7%
2015	442,250	600,388	158,138	73.7%	61,881	255.6%
2014	406,053	608,169	202,116	66.8%	59,373	340.4%
2013*	368,671	590,626	221,955	62.4%	57,110	388.6%

* Revised economic and demographic assumptions due to experience study.

** The breakdown of VRS data into state, teacher and political subdivisions is also presented in the Statistical Section.

SCHEDULE OF FUNDING (ACTUARIAL VALUE OF ASSETS BASIS): VRS PENSION PLANS

(EXPRESSED IN THOUSANDS)

Actuarial Valuation Date June 30	Actuarial Value of Assets (a)	Actuarial Liability (AAL) - Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll (b-a)/(c)
VIRGINIA RETIREMENT SYSTEM (VRS) – STATE						
2022	\$ 21,917,849	\$ 27,779,171	\$ 5,861,322	78.9%	\$ 4,946,307	118.5%
2021*	20,615,301	26,727,971	6,112,670	77.1%	4,594,347	133.0%
2020	19,333,674	25,751,335	6,417,661	75.1%	4,428,496	144.9%
2019	18,932,104	25,398,188	6,466,084	74.5%	4,375,061	147.8%
2018	18,392,939	24,115,157	5,722,218	76.3%	4,161,922	137.5%
2017*	17,547,764	23,311,534	5,763,770	75.3%	4,037,072	142.8%
2016	16,672,776	22,878,243	6,205,467	72.9%	4,002,477	155.0%
2015	15,881,597	22,291,558	6,409,961	71.2%	3,872,724	165.5%
2014	14,826,208	21,822,936	6,966,728	67.9%	3,854,779	181.5%
2013*	13,714,404	21,068,651	7,354,247	65.1%	3,716,548	197.9%
VIRGINIA RETIREMENT SYSTEM (VRS) – TEACHER						
2022	\$ 43,970,442	\$ 55,762,533	\$ 11,792,091	78.9%	\$ 9,713,229	121.4%
2021*	40,725,782	52,747,596	12,021,814	77.2%	8,971,605	134.0%
2020	37,556,121	50,834,783	13,278,662	73.9%	8,911,307	149.0%
2019	36,233,796	49,303,959	13,070,163	73.5%	8,608,489	151.8%
2018	34,673,952	46,516,176	11,842,224	74.5%	8,479,023	139.7%
2017*	32,684,868	45,006,017	12,321,149	72.6%	7,919,450	155.6%
2016	30,768,277	43,581,629	12,813,352	70.6%	7,666,824	167.1%
2015	29,441,485	42,564,178	13,122,693	69.2%	7,488,507	175.2%
2014	27,026,576	41,297,669	14,271,093	65.4%	7,362,793	193.8%
2013*	24,724,679	39,852,334	15,127,655	62.0%	7,211,543	209.8%
VIRGINIA RETIREMENT SYSTEM (VRS) – POLITICAL SUBDIVISIONS						
2022	\$ 25,288,728	\$ 28,491,418	\$ 3,202,690	88.8%	\$ 6,121,691	52.3%
2021*	23,686,882	27,167,815	3,480,933	87.2%	5,494,729	63.4%
2020	21,869,927	25,307,138	3,437,211	86.4%	5,409,540	63.5%
2019	21,078,248	24,431,824	3,353,576	86.3%	5,258,467	63.8%
2018	20,137,904	22,543,485	2,405,581	89.3%	4,973,503	48.4%
2017*	18,981,614	21,533,733	2,552,119	88.1%	4,808,354	53.1%
2016	17,762,683	20,659,120	2,896,437	86.0%	4,656,697	62.2%
2015	16,760,519	19,855,406	3,094,887	84.4%	4,540,149	68.2%
2014	15,291,783	18,962,779	3,670,996	80.6%	4,453,787	82.4%
2013*	13,685,498	18,156,606	4,471,108	75.4%	4,340,988	103.0%
VIRGINIA RETIREMENT SYSTEM (VRS) – TOTAL						
2022	\$ 91,177,019	\$ 112,033,122	\$ 20,856,103	81.4%	\$ 20,781,227	100.4%
2021*	85,027,965	106,643,382	21,615,417	79.7%	19,060,681	113.4%
2020	78,759,722	101,893,256	23,133,534	77.3%	18,749,343	123.4%
2019	76,244,148	99,133,971	22,889,823	76.9%	18,242,017	125.5%
2018	73,204,795	93,174,818	19,970,023	78.6%	17,614,448	113.4%
2017*	69,214,246	89,851,284	20,637,038	77.0%	16,764,876	123.1%
2016	65,203,736	87,118,992	21,915,256	74.8%	16,325,998	134.2%
2015	62,083,601	84,711,142	22,627,541	73.3%	15,901,380	142.3%
2014	57,144,567	82,083,384	24,938,817	69.6%	15,671,359	159.1%
2013*	52,124,581	79,077,591	26,953,010	65.9%	15,269,079	176.5%

* Revised economic and demographic assumptions due to experience study.

SCHEDULE OF ACTIVE MEMBER VALUATION DATA: PENSION PLANS

Valuation Date (June 30)	Active Members				Number of Employers
	Number	Annual Payroll (000s)	Average Annual Pay	Annualized % Change in Average Pay	
VIRGINIA RETIREMENT SYSTEM (VRS)					
2022	337,310	\$ 20,781,227	\$ 61,609	7.3%	611
2021	332,092	19,060,681	57,396	5.4%	608
2020	336,604	18,336,555	54,475	(0.1)%	608
2019	334,610	18,242,017	54,517	3.6%	608
2018	334,858	17,614,448	52,603	4.3%	604
2017	332,538	16,764,879	50,415	2.0%	606
2016	330,257	16,325,998	49,434	2.2%	606
2015	328,833	15,901,380	48,357	1.4%	602
2014	328,494	15,671,359	47,707	2.6%	601
2013	328,277	15,269,079	46,513	2.6%	599
STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)					
2022	1,947	\$ 142,795	\$ 73,341	—%	1
2021	1,947	142,795	73,341	7.5%	1
2020	1,924	131,255	68,220	(1.3)%	1
2019	1,914	132,230	69,086	2.9%	1
2018	1,885	126,523	67,121	14.6%	1
2017	1,882	110,265	58,589	(1.1)%	1
2016	1,940	114,877	59,215	6.8%	1
2015	1,994	110,543	55,438	(0.7)%	1
2014	2,011	112,303	55,844	2.6%	1
2013	2,002	109,006	54,449	(1.7)%	1
VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS)					
2022	7,289	\$ 372,486	\$ 51,102	13.9%	1
2021	7,823	351,086	44,879	5.5%	1
2020	8,554	363,896	42,541	—%	1
2019	8,692	369,776	42,542	7.2%	1
2018	8,718	346,106	39,700	2.1%	1
2017	8,718	339,150	38,902	0.4%	1
2016	9,106	352,677	38,730	3.4%	1
2015	8,820	330,397	37,460	0.1%	1
2014	9,429	352,709	37,407	2.5%	1
2013	9,372	342,154	36,508	(0.6)%	1
JUDICIAL RETIREMENT SYSTEM (JRS)					
2022	461	\$ 80,745	\$ 175,152	0.3%	1
2021	453	79,125	174,669	4.9%	1
2020	449	74,734	166,445	0.1%	1
2019	462	76,848	166,338	2.6%	1
2018	416	67,424	162,077	2.9%	1
2017	421	66,288	157,454	—%	1
2016	416	65,524	157,510	2.1%	1
2015	401	61,881	154,317	0.1%	1
2014	385	59,373	154,216	2.9%	1
2013	381	57,110	149,895	—%	1

SCHEDULE OF ACTIVE MEMBER VALUATION DATA: VRS PENSION PLANS

Valuation Date (June 30)	Active Members				Number of Employers
	Number	Annual Payroll (000s)	Average Annual Pay	Annualized % Change in Average Pay	
VRS – STATE					
2022	74,048	\$ 4,946,307	\$ 66,799	7.1%	1
2021	73,686	4,594,347	62,350	5.7%	1
2020	75,069	4,428,496	58,992	0.9%	1
2019	74,799	4,375,061	58,491	4.8%	1
2018	74,582	4,161,922	55,803	3.4%	1
2017	74,807	4,037,072	53,967	1.1%	1
2016	74,968	4,002,477	53,389	3.7%	1
2015	75,256	3,872,724	51,461	1.1%	1
2014	75,730	3,854,779	50,902	3.9%	1
2013	75,879	3,716,548	48,980	0.6%	1
VRS – TEACHER					
2022	153,356	\$ 9,713,229	\$ 63,338	5.8%	144
2021	149,793	8,971,605	59,893	1.3%	144
2020	150,681	8,911,307	59,140	2.6%	144
2019	149,396	8,608,489	57,622	3.0%	144
2018	151,585	8,479,023	55,936	6.2%	144
2017	150,416	7,919,450	52,650	2.3%	145
2016	149,018	7,666,824	51,449	1.4%	145
2015	147,645	7,488,507	50,720	1.2%	145
2014	146,977	7,362,793	50,095	2.3%	145
2013	147,257	7,211,543	48,972	2.9%	145
VRS – POLITICAL SUBDIVISIONS					
2022	109,906	\$ 6,121,691	\$ 55,699	10.1%	466
2021	108,613	5,494,729	50,590	3.7%	463
2020	110,854	5,409,540	48,799	2.5%	463
2019	110,415	5,258,467	47,625	4.1%	463
2018	108,691	4,973,503	45,758	2.1%	459
2017	107,315	4,808,354	44,806	2.3%	460
2016	106,271	4,656,697	43,819	2.2%	460
2015	105,932	4,540,149	42,859	1.8%	456
2014	105,787	4,453,787	42,101	2.0%	455
2013	105,141	4,340,988	41,287	4.0%	453
VRS – TOTAL					
2022	337,310	\$ 20,781,227	\$ 61,609	7.3%	611
2021	332,092	19,060,681	57,396	5.4%	608
2020	336,604	18,336,555	54,475	(0.1)%	608
2019	334,610	18,242,017	54,517	3.6%	608
2018	334,858	17,614,448	52,603	4.3%	604
2017	332,538	16,764,876	50,415	2.0%	606
2016	330,257	16,325,998	49,434	2.2%	606
2015	328,833	15,901,380	48,357	1.4%	602
2014	328,494	15,671,359	47,707	2.6%	601
2013	328,277	15,269,079	46,513	2.6%	599

SCHEDULE OF RETIREE AND BENEFICIARY VALUATION DATA: PENSION PLANS

	Retirees and Beneficiaries							
Valuation Date (June 30)	Added to Rolls		Removed From Rolls		Rolls at End of Year		Annualized % Increase in Annual Allowances	Average Annual Allowance
	Number	Allowances*	Number	Allowances	Number	Allowances		
VIRGINIA RETIREMENT SYSTEM (VRS)								
2022 ¹	48,423	\$ 475,427,000	7,181	\$ 169,902,000	263,620	\$ 5,570,267,000	5.8%	\$ 21,130
2021	13,241	365,278,000	6,924	146,446,000	222,378	5,264,742,000	4.3%	23,675
2020	13,171	386,370,000	6,050	127,713,000	216,061	5,045,910,000	5.4%	23,354
2019	13,506	418,151,000	5,684	128,747,000	208,940	4,787,253,000	6.4%	22,912
2018	12,633	369,352,000	5,618	113,124,000	201,118	4,497,849,000	6.0%	22,364
2017	12,067	309,556,000	5,432	101,892,000	194,103	4,241,621,000	5.1%	21,852
2016	12,444	272,010,000	4,944	93,004,000	187,468	4,033,957,000	4.6%	21,518
2015	12,348	313,032,000	5,067	90,733,000	179,968	3,854,951,000	6.1%	21,420
2014	11,912	289,092,000	4,719	89,997,000	172,687	3,632,652,000	5.8%	21,036
2013	11,297	303,240,000	4,574	83,618,000	165,494	3,433,557,000	6.8%	20,747
STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)								
2022 ¹	252	\$ 4,003,000	32	\$ 1,294,000	1,774	\$ 71,361,000	3.9%	\$ 40,226
2021	110	6,238,000	37	1,357,000	1,554	68,652,000	7.7%	44,178
2020	75	4,770,000	31	1,694,000	1,481	63,771,000	5.1%	43,059
2019	78	4,973,000	21	1,850,000	1,437	60,695,000	5.4%	42,237
2018	63	3,942,000	29	1,618,000	1,380	57,572,000	4.2%	41,719
2017	97	4,994,000	31	1,178,000	1,346	55,248,000	7.4%	41,046
2016	45	1,775,000	36	1,512,000	1,280	51,432,000	0.5%	40,181
2015	66	3,871,000	34	1,555,000	1,271	51,169,000	4.7%	40,259
2014	55	2,972,000	24	1,124,000	1,239	48,853,000	3.9%	39,429
2013	44	2,652,000	36	1,491,000	1,208	47,005,000	2.5%	38,912
VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS)								
2022 ¹	1,188	\$ 9,263,000	153	\$ 1,215,000	6,545	\$ 132,855,000	6.4%	\$ 20,299
2021	366	11,321,000	117	3,129,000	5,510	124,807,000	7.0%	22,651
2020	342	10,265,000	104	4,536,000	5,261	116,615,000	5.2%	22,166
2019	345	10,633,000	83	3,335,000	5,023	110,886,000	7.0%	22,076
2018	422	11,565,000	74	3,584,000	4,761	103,588,000	8.3%	21,758
2017	354	9,403,000	65	3,496,000	4,413	95,607,000	6.6%	21,665
2016	365	8,051,000	67	2,737,000	4,124	89,700,000	6.3%	21,751
2015	397	10,242,000	36	2,006,000	3,826	84,386,000	10.8%	22,056
2014	311	7,736,000	59	6,956,000	3,465	76,150,000	1.0%	21,977
2013	336	8,561,000	34	(2,847,000)	3,213	75,370,000	17.8%	23,458
JUDICIAL RETIREMENT SYSTEM (JRS)								
2022 ¹	43	\$ 4,098,000	24	\$ 2,269,000	580	\$ 48,226,000	3.9%	\$ 83,148
2021	35	3,101,000	27	2,116,000	561	46,397,000	2.2%	82,704
2020	38	3,944,000	28	1,938,000	553	45,412,000	4.6%	82,119
2019	29	3,069,000	12	1,225,000	543	43,406,000	4.4%	79,937
2018	22	2,442,000	16	1,537,000	526	41,562,000	2.2%	79,015
2017	28	2,408,000	25	1,539,000	520	40,657,000	2.2%	78,187
2016	26	2,332,000	20	1,317,000	517	39,788,000	2.6%	76,959
2015	40	3,844,000	34	2,147,000	511	38,773,000	4.6%	75,877
2014	32	2,952,000	16	2,045,000	505	37,076,000	2.5%	73,418
2013	40	3,483,000	14	205,000	489	36,169,000	10.0%	73,966

* Additions to allowances include added retirees and the annual COLA provided to existing retirees and beneficiaries.

SCHEDULE OF RETIREE AND BENEFICIARY VALUATION DATA: VRS PENSION PLANS

Valuation Date (June 30)	Retirees and Beneficiaries						Annualized % Increase in Annual Allowances	Average Annual Allowance
	Added to Rolls		Removed From Rolls		Rolls at End of Year			
	Number	Allowances*	Number	Allowances	Number	Allowances		
VRS – STATE								
2022 ¹	12,862	\$ 133,175,000	2,589	\$ 59,751,000	71,374	\$ 1,546,151,000	5.0%	\$ 21,663
2021	3,318	98,283,000	2,286	50,665,000	61,101	1,472,727,000	3.3%	24,103
2020	3,439	108,643,000	2,077	45,694,000	60,069	1,425,109,000	4.6%	23,725
2019	3,490	115,623,000	1,956	44,964,000	58,707	1,362,160,000	5.5%	23,203
2018	3,448	107,317,000	1,943	39,665,000	57,173	1,291,501,000	5.5%	22,589
2017	3,323	90,543,000	1,961	38,698,000	55,668	1,223,849,000	4.4%	21,985
2016	3,338	78,366,000	1,734	32,636,000	54,306	1,172,004,000	4.1%	21,581
2015	3,263	89,596,000	1,824	31,662,000	52,702	1,126,274,000	5.4%	21,371
2014	3,152	80,896,000	1,718	34,128,000	51,263	1,068,340,000	4.6%	20,840
2013	2,864	81,985,000	1,650	28,163,000	49,829	1,021,572,000	5.6%	20,502
VRS – TEACHER								
2022 ¹	9,777	\$ 195,299,000	1,738	\$ 49,085,000	108,579	\$ 2,708,505,000	5.7%	\$ 24,945
2021	5,631	160,425,000	2,494	63,379,000	100,540	2,562,291,000	3.9%	25,485
2020	5,637	175,626,000	2,268	54,987,000	97,403	2,465,245,000	5.1%	25,310
2019	6,064	195,493,000	2,060	53,519,000	94,034	2,344,606,000	6.4%	24,934
2018	5,030	157,985,000	1,997	45,558,000	90,030	2,202,632,000	5.4%	24,466
2017	4,850	132,452,000	1,922	43,246,000	86,997	2,090,205,000	4.5%	24,026
2016	5,085	115,790,000	1,733	38,675,000	84,069	2,000,999,000	4.0%	23,802
2015	5,135	140,493,000	1,816	38,434,000	80,717	1,923,884,000	5.6%	23,835
2014	5,086	135,345,000	1,596	32,303,000	77,398	1,821,825,000	6.0%	23,538
2013	4,929	142,836,000	1,607	35,947,000	73,908	1,718,783,000	6.6%	23,256
VRS – POLITICAL SUBDIVISIONS								
2022 ¹	25,784	\$ 146,953,000	2,854	\$ 61,066,000	83,667	\$ 1,315,611,000	7.0%	\$ 15,724
2021	4,292	106,570,000	2,144	32,402,000	60,737	1,229,724,000	6.4%	20,247
2020	4,095	102,101,000	1,705	27,032,000	58,589	1,155,556,000	6.9%	19,723
2019	3,952	107,035,000	1,668	30,264,000	56,199	1,080,487,000	7.6%	19,226
2018	4,155	104,050,000	1,678	27,901,000	53,915	1,003,716,000	8.2%	18,617
2017	3,894	86,561,000	1,549	19,948,000	51,438	927,567,000	7.7%	18,033
2016	4,021	77,854,000	1,477	21,693,000	49,093	860,954,000	7.0%	17,537
2015	3,950	82,943,000	1,427	20,637,000	46,549	804,793,000	8.4%	17,289
2014	3,674	72,851,000	1,405	23,566,000	44,026	742,487,000	7.1%	16,865
2013	3,504	78,419,000	1,317	19,508,000	41,757	693,202,000	9.3%	16,601
VRS – TOTAL								
2022 ¹	48,423	\$ 475,427,000	7,181	\$ 169,902,000	263,620	\$ 5,570,267,000	5.8%	\$ 21,130
2021	13,241	365,278,000	6,924	146,446,000	222,378	5,264,742,000	4.3%	23,675
2020	13,171	386,370,000	6,050	127,713,000	216,061	5,045,910,000	5.4%	23,354
2019	13,506	418,151,000	5,684	128,747,000	208,940	4,787,253,000	6.4%	22,912
2018	12,633	369,352,000	5,618	113,124,000	201,118	4,497,849,000	6.0%	22,364
2017	12,067	309,556,000	5,432	101,892,000	194,103	4,241,621,000	5.1%	21,852
2016	12,444	272,010,000	4,944	93,004,000	187,468	4,033,957,000	4.6%	21,518
2015	12,348	313,032,000	5,067	90,733,000	179,968	3,854,951,000	6.1%	21,420
2014	11,912	234,416,000	4,011	65,755,000	172,687	3,632,652,000	5.8%	21,036
2013	11,297	303,240,000	4,574	83,618,000	165,494	3,433,557,000	6.8%	20,747

* Additions to allowances include added retirees and the annual COLA provided to existing retirees and beneficiaries.

¹ Starting in 2022 with the transition to a new actuary, members with benefits in more than one plan or political subdivision are counted for each plan/political subdivision that comprises the benefit. Only unique counts are available prior to this.

FIGURE 4.1: ANALYSIS OF ACTUARIAL GAINS AND LOSSES – PENSION PLANS

FOR THE YEAR ENDED JUNE 30, 2022

(EXPRESSED IN THOUSANDS)

	VRS	SPORS	ValORS	JRS	Total
A. Calculation of Expected Unfunded Actuarial Accrued Liability (UAAL)					
1. UAAL as of June 30, 2021	\$ 21,615,417	\$ 389,314	\$ 738,351	\$ 132,738	\$ 22,875,820
2. Normal Cost for Previous Year	1,881,999	25,507	48,982	18,805	1,975,293
3. Actual Contributions During the Year	(4,265,480)	(53,981)	(110,040)	(32,009)	(4,461,510)
4. Interest at Previous Year's Rate of 6.75%					
a. On UAAL	1,459,040	26,279	49,839	8,960	1,544,118
b. On Normal Cost	127,035	1,722	3,306	1,269	133,332
c. On contributions	(143,960)	(1,822)	(3,714)	(1,080)	(150,576)
d. Total	1,442,115	26,179	49,431	9,149	1,526,874
5. Expected UAAL as of June 30, 2022 (A1+A2+A3+A4)	20,674,051	387,019	726,724	128,682	21,916,476
6. Actual UAAL as of June 30, 2022	20,856,101	416,642	718,017	110,861	22,101,621
7. Total Gain/(Loss) (A5-A6)	(182,050)	(29,623)	8,707	17,821	(185,145)
B. Calculation of Asset Gain/(Loss)					
1. Actuarial Value of Assets (AVA) as of June 30, 2021	85,027,965	937,332	1,668,802	600,670	88,234,769
2. Contributions During the Year	4,265,480	53,981	110,040	32,009	4,461,510
3. Benefit Payments During the Year	(5,603,603)	(71,844)	(136,258)	(47,720)	(5,787,581)
4. Interest at Previous Year's Rate of 6.75%					
a. On AVA at Beginning of Year	5,739,388	63,270	112,644	40,545	5,955,847
b. On Contributions	143,960	1,822	3,714	1,080	150,576
c. On Benefit Payments	(189,122)	(2,425)	(4,599)	(1,611)	(197,757)
d. Total	5,694,226	62,667	111,759	40,014	5,908,666
5. Expected AVA as of June 30, 2022 (B1+B2+B3+B4)	89,384,068	982,136	1,754,343	624,973	92,745,520
6. Actual AVA as of June 30, 2022	91,177,019	1,001,822	1,789,127	637,696	94,605,664
7. Total Gain/(Loss) on Assets (B6-B5)	1,792,951	19,686	34,784	12,723	1,860,144
C. Calculation of Liability Gain/(Loss)					
1. Gain/(Loss) Due to Changes in Actuarial Assumptions	—	—	—	—	—
2. Gain/(Loss) Due to Plan Amendments	—	—	—	—	—
3. Gain/(Loss) Due to Change in Asset Method	—	—	—	—	—
4. Liability Experience Gain/(Loss) (A7-B7-C1-C2-C3)	\$ (1,975,001)	\$ (49,309)	\$ (26,077)	\$ 5,098	\$ (2,045,289)

FIGURE 4.2: ANALYSIS OF ACTUARIAL GAINS AND LOSSES – VRS PENSION PLANS

FOR THE YEAR ENDED JUNE 30, 2022

(EXPRESSED IN THOUSANDS)

	State	Teacher	Political Subdivisions	Total
A. Calculation of Expected Unfunded Actuarial Accrued Liability (UAAL)				
1. UAAL as of June 30, 2021	\$ 6,112,670	\$ 12,021,814	\$ 3,480,933	\$ 21,615,417
2. Normal Cost for Previous Year	418,325	921,904	541,770	1,881,999
3. Actual Contributions During the Year	(1,056,834)	(2,339,677)	(868,969)	(4,265,480)
4. Interest at Previous Year's Rate of 6.75%				
a. On UAAL	412,605	811,472	234,963	1,459,040
b. On Normal Cost	28,237	62,229	36,569	127,035
c. On Contributions	(35,668)	(78,964)	(29,328)	(143,960)
d. Total	405,174	794,737	242,204	1,442,115
5. Expected UAAL as of June 30, 2022 (A1+A2+A3+A4)	5,879,335	11,398,778	3,395,938	20,674,051
6. Actual UAAL as of June 30, 2022	5,861,321	11,792,090	3,202,690	20,856,101
7. Total Gain/(Loss) (A5-A6)	18,014	(393,312)	193,248	(182,050)
B. Calculation of Asset Gain/(Loss)				
1. Actuarial Value of Assets (AVA) as of June 30, 2021	20,615,301	40,725,782	23,686,882	85,027,965
2. Contributions During the Year	1,056,834	2,339,677	868,969	4,265,480
3. Benefit Payments During the Year	(1,568,345)	(2,679,381)	(1,355,877)	(5,603,603)
4. Interest at Previous Year's Rate of 6.75%				
a. On AVA at Beginning of Year	1,391,533	2,748,990	1,598,865	5,739,388
b. On Contributions	35,668	78,964	29,328	143,960
c. On Benefit Payments	(52,932)	(90,429)	(45,761)	(189,122)
d. Total	1,374,269	2,737,525	1,582,432	5,694,226
5. Expected AVA as of June 30, 2022 (B1+B2+B3+B4)	21,478,058	43,123,602	24,782,406	89,384,066
6. Actual AVA as of June 30, 2022	21,917,849	43,970,442	25,288,728	91,177,019
7. Total Gain/(Loss) on Assets (B6-B5)	439,791	846,840	506,322	1,792,953
C. Calculation of Liability Gain/(Loss)				
1. Gain/(Loss) Due to Changes in Actuarial Assumptions	—	—	(2,178)	—
2. Gain/(Loss) Due to Plan Amendments	—	—	—	—
3. Gain/(Loss) Due to Change in Asset Method	—	—	—	—
4. Liability Experience Gain/(Loss) (A7-B7-C1-C2-C3)	\$ (421,777)	\$ (1,240,152)	\$ (310,896)	\$ (1,975,003)

Actuarial Assumptions and Methods

On April 26, 2021, the VRS Board of Trustees adopted most of the actuarial assumptions and methods on the recommendation of its actuary. The assumptions for the pension plans include the Virginia Retirement System (VRS), the State Police Officers' Retirement System (SPORS), the Virginia

Law Officers' Retirement System (VaLORS) and the Judicial Retirement System (JRS). They were based on an analysis of plan experience for the four-year period July 1, 2016, through June 30, 2020, and were used for the June 30, 2022, valuation.

ACTUARIAL ASSUMPTIONS AND METHODS: PENSION PLANS

FOR THE JUNE 30, 2022, VALUATION

Investment Return Rate: 6.75% per annum, compounded annually, composed of an assumed 2.50% inflation rate and a 4.50% real rate of return. Benefits are assumed to increase annually by 2.50% for Plan 1 members receiving benefits or vested as of January 1, 2013, and by 2.25% for all other members.

Mortality Rates

Pre-Retirement: Pub-2010 Amount Weighted General Employee Rates projected generationally:

- State – Females set forward 2 years
- Teachers – Males 110% of rates
- State Police – Males 95% of rates, females 105% of rates set forward 2 years
- VaLORS – Males 95% of rates, females 105% of rates set forward 2 years
- Judicial – Males set forward 2 years
- Political subdivisions, non-hazardous duty – Males set forward 2 years, females 105% of rates set forward 3 years
- Political subdivisions, hazardous duty – Males 95% of rates, females 105% of rates set forward 2 years

Post-Retirement: Pub-2010 Amount Weighted General Healthy Retiree Rates projected generationally:

- State – Females 110% of rates
- Teachers – Males set forward 1 year, females 105% of rates
- State Police – Males 110% of rates, females 105% of rates set forward 3 years
- VaLORS – Males 110% of rates, females 105% of rates set forward 3 years
- Judicial – Males 95% of rates, females set back 2 years
- Political subdivisions, non-hazardous duty – Males 95% of rates set forward 2 years, females 95% of rates set forward 1 year
- Political subdivisions, hazardous duty – Males 110% of rates, females 105% of rates set forward 3 years

Post-Disablement: Pub-2010 Amount Weighted General Disabled Rates projected generationally:

- State – Males and females set forward 3 years
- Teachers – Males and females 110% of rates
- State Police – Males 95% of rates set back 3 years, Females 90% of rates set back 3 years
- VaLORS – Males 95% of rates set back 3 years, Females 90% of rates set back 3 years
- Political subdivisions, non-hazardous duty – Males 110% of rates set forward 3 years, females 110% of rates set forward 2 years
- Political subdivisions, hazardous duty – Males 95% of rates set back 3 years, Females 90% of rates set back 3 years:

Beneficiaries and Survivors: Pub-2010 Amount Weighted General Contingent Annuitant Rates projected generationally:

- State – 110% of rates for males and females
- State Police – Males 110% of rates, Females set forward 2 years
- VaLORS – Males 110% of rates, Females set forward 2 years
- Political subdivisions, hazardous duty – Males 110% of rates, Females set forward 2 years

Mortality Improvement: Rates projected generationally with Modified MP-2020 Improvement Scale that is 75% of the MP-2020 rates

FIGURE 4.3: RETIREMENT RATES – PENSION PLANS

Sample rates of retirement for members eligible to retire are shown below.

State Employees

Plan 1 – Male						
Years of Service						
Age	5	6-9	10	11-29	30	≥31
50	0.00%	0.00%	3.25%	3.25%	12.50%	12.50%
55	4.50%	4.50%	4.50%	3.50%	8.00%	9.00%
59	4.50%	4.00%	4.00%	4.00%	10.00%	9.00%
60	4.50%	5.00%	5.00%	5.00%	11.50%	9.00%
61	15.00%	7.50%	7.50%	7.50%	17.00%	15.00%
62	15.00%	10.00%	10.00%	10.00%	17.00%	20.00%
64	15.00%	13.50%	13.50%	13.50%	17.00%	17.50%
65	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
67	27.50%	22.00%	22.00%	22.00%	22.00%	22.00%
70	20.00%	22.00%	22.00%	22.00%	22.00%	22.00%
≥80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Plan 1 – Female						
Years of Service						
Age	5	6-9	10	11-29	30	≥31
50	0.00%	0.00%	4.00%	4.00%	7.50%	7.50%
55	5.00%	5.00%	5.00%	4.00%	7.50%	8.00%
59	5.00%	5.00%	5.00%	5.00%	12.00%	9.00%
60	5.00%	5.50%	5.50%	5.50%	12.00%	12.50%
61	7.50%	8.00%	8.00%	8.00%	12.00%	16.00%
62	10.00%	12.00%	12.00%	12.00%	22.50%	20.00%
64	17.50%	15.00%	15.00%	15.00%	22.50%	17.50%
65	27.50%	27.50%	27.50%	27.50%	27.50%	30.00%
67	30.00%	25.00%	25.00%	25.00%	25.00%	25.00%
70	25.00%	27.00%	27.00%	27.00%	27.00%	27.00%
≥80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

State Employees

Plan 2 and Hybrid – Male							
Years of Service							
Age	30	31	33	35	37	39	≥40
50	0.00%	0.00%	0.00%	0.00%	0.00%	8.00%	8.00%
55	0.00%	0.00%	0.00%	8.00%	8.00%	8.00%	8.00%
59	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
60	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
61	8.00%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
62	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
64	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
65	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
67	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
70	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
≥80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Rate is 11.50% when age plus service equals 90.

FIGURE 4.3: RETIREMENT RATES – PENSION PLANS, cont.

Sample rates of retirement for members eligible to retire are shown below.

Plan 2 and Hybrid – Female							
Years of Service							
Age	30	31	33	35	37	39	≥40
50	0.00%	0.00%	0.00%	0.00%	0.00%	8.00%	8.00%
55	0.00%	0.00%	0.00%	8.00%	8.00%	8.00%	8.00%
59	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
60	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
61	8.00%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
62	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
64	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
65	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
67	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
70	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
≥80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Rate is 12.00% when age plus service equals 90.

Teachers

Plan 1 – Male						
Years of Service						
Age	5	6-9	10	11-29	30	≥31
50	0.00%	0.00%	2.50%	2.50%	15.00%	15.00%
55	7.00%	7.00%	7.00%	5.00%	22.50%	15.00%
59	10.00%	7.00%	7.00%	7.00%	22.50%	15.00%
60	10.00%	7.50%	7.50%	7.50%	22.50%	17.00%
61	11.00%	12.00%	12.00%	12.00%	35.00%	23.00%
62	17.00%	15.00%	15.00%	15.00%	35.00%	30.00%
64	18.00%	15.00%	15.00%	15.00%	35.00%	25.00%
65	30.00%	30.00%	30.00%	30.00%	30.00%	34.00%
67	30.00%	34.00%	34.00%	34.00%	34.00%	34.00%
70	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
≥80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Plan 1 – Female						
Years of Service						
Age	5	6-9	10	11-29	30	≥31
50	0.00%	0.00%	3.00%	3.00%	15.00%	15.00%
55	4.50%	4.50%	4.50%	5.00%	22.50%	16.00%
59	8.00%	7.00%	7.00%	7.00%	22.50%	17.00%
60	9.00%	8.50%	8.50%	8.50%	30.00%	20.00%
61	25.00%	11.00%	11.00%	11.00%	30.00%	25.00%
62	25.00%	15.00%	15.00%	15.00%	35.00%	30.00%
64	25.00%	20.00%	20.00%	20.00%	35.00%	28.00%
65	35.00%	35.00%	35.00%	35.00%	35.00%	40.00%
67	30.00%	32.00%	32.00%	32.00%	32.00%	32.00%
70	30.00%	32.00%	32.00%	32.00%	32.00%	32.00%
≥80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

FIGURE 4.3: RETIREMENT RATES – PENSION PLANS, cont.

Sample rates of retirement for members eligible to retire are shown below.

Teachers

Plan 2 and Hybrid – Male							
Years of Service							
Age	30	31	33	35	37	39	≥40
50	0.00%	0.00%	0.00%	0.00%	0.00%	9.00%	9.00%
55	0.00%	0.00%	0.00%	9.00%	9.00%	9.00%	9.00%
59	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
60	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
61	14.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
62	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%
64	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
65	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
67	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
70	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
≥80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Rate is 22.50% when age plus service equals 90.

Plan 2 and Hybrid – Female							
Years of Service							
Age	30	31	33	35	37	39	≥40
50	0.00%	0.00%	0.00%	0.00%	0.00%	9.00%	9.00%
55	0.00%	0.00%	0.00%	9.00%	9.00%	9.00%	9.00%
59	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
60	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
61	14.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
62	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%
64	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
65	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
67	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
70	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
≥80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Rate is 22.50% when age plus service equals 90.

FIGURE 4.3: RETIREMENT RATES – PENSION PLANS, cont.

Sample rates of retirement for members eligible to retire are shown below.

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers Plan 1

Age	Male Years of Service					Female Years of Service				
	5	10	11-29	30	≥31	5	10	11-29	30	≥31
50	0.00%	6.50%	6.50%	10.00%	10.00%	0.00%	5.00%	5.00%	16.00%	16.00%
55	6.50%	6.50%	5.00%	10.00%	9.00%	7.00%	7.00%	5.50%	22.00%	15.00%
59	6.50%	4.00%	4.00%	10.00%	15.00%	10.50%	6.50%	6.50%	22.00%	16.00%
60	6.50%	6.00%	6.00%	10.00%	15.00%	10.50%	6.50%	6.50%	22.00%	16.00%
61	6.50%	9.00%	9.00%	10.00%	15.00%	10.50%	6.50%	6.50%	22.00%	16.00%
62	6.50%	9.00%	9.00%	25.00%	22.00%	10.50%	13.00%	13.00%	34.50%	25.00%
64	6.50%	15.00%	15.00%	25.00%	22.50%	10.50%	17.00%	17.00%	24.00%	27.50%
65	25.00%	25.00%	25.00%	25.00%	27.00%	28.00%	28.00%	28.00%	28.00%	27.50%
67	15.00%	25.00%	25.00%	25.00%	25.00%	15.00%	27.50%	27.50%	27.50%	27.50%
70	27.50%	20.00%	20.00%	20.00%	20.00%	15.00%	27.50%	27.50%	27.50%	27.50%
≥80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers Plan 2 and Hybrid

Age	Male Years of Service								
	5	6-25	30	31	33	35	37	39	≥40
50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.00%	8.00%
55	0.00%	0.00%	0.00%	0.00%	0.00%	8.00%	8.00%	8.00%	8.00%
59	0.00%	0.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
60	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
61	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
62	20.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
64	10.00%	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%
65	25.00%	25.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%
67	15.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
70	15.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
≥80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

FIGURE 4.3: RETIREMENT RATES – PENSION PLANS, cont.

Sample rates of retirement for members eligible to retire are shown below.

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers Plan 2 and Hybrid, cont.

Age	Female Years of Service								
	5	6-25	30	31	33	35	37	39	≥40
50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.00%	8.00%
55	0.00%	0.00%	0.00%	0.00%	0.00%	8.00%	8.00%	8.00%	8.00%
59	0.00%	0.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
60	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
61	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
62	20.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
64	10.00%	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%
65	25.00%	25.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%
67	15.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
70	15.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
≥80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – All Other Employers Plan 1

Age	Male Years of Service					Female Years of Service				
	5	10	11-29	30	≥31	5	10	11-29	30	≥31
50	0.00%	6.00%	6.00%	15.00%	15.00%	0.00%	5.00%	5.00%	10.00%	10.00%
55	10.00%	10.00%	6.00%	15.00%	11.00%	7.00%	7.00%	6.00%	12.00%	10.00%
59	10.00%	5.50%	5.50%	16.00%	10.00%	6.00%	5.50%	5.50%	10.00%	10.00%
60	10.00%	5.00%	5.00%	16.00%	12.00%	6.00%	6.50%	6.50%	15.00%	10.00%
61	10.00%	8.50%	8.50%	16.00%	16.00%	6.00%	9.50%	9.50%	20.00%	16.50%
62	10.00%	15.00%	15.00%	27.00%	22.00%	6.00%	14.50%	14.50%	20.00%	20.00%
64	10.00%	15.00%	15.00%	27.00%	18.00%	6.00%	14.50%	14.50%	35.00%	20.00%
65	30.00%	30.00%	30.00%	30.00%	30.00%	28.00%	28.00%	28.00%	28.00%	35.00%
67	30.00%	22.00%	22.00%	22.00%	22.00%	28.00%	22.00%	22.00%	22.00%	22.00%
70	30.00%	22.00%	22.00%	22.00%	22.00%	28.00%	22.00%	22.00%	22.00%	22.00%
≥80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	10.00%	100.00%	100.00%	100.00%

FIGURE 4.3: RETIREMENT RATES – PENSION PLANS, cont.

Sample rates of retirement for members eligible to retire are shown below.

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – All Other Employers Plan 2 and Hybrid

Male									
Years of Service									
Age	5	6-25	30	31	33	35	37	39	≥40
50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.00%	8.00%
55	0.00%	0.00%	0.00%	0.00%	0.00%	8.00%	8.00%	8.00%	8.00%
59	0.00%	0.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
60	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
61	11.00%	9.00%	11.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
62	15.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%
64	13.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
65	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
67	22.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
70	16.00%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%
≥80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Female									
Years of Service									
Age	5	6-25	30	31	33	35	37	39	≥40
50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.00%	8.00%
55	0.00%	0.00%	0.00%	0.00%	0.00%	8.00%	8.00%	8.00%	8.00%
59	0.00%	0.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
60	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
61	11.00%	9.00%	11.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
62	15.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%
64	13.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
65	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
67	22.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
70	16.00%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%
≥80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

FIGURE 4.3: RETIREMENT RATES – PENSION PLANS, cont.

Sample rates of retirement for members eligible to retire are shown below.

Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers – All Plans

Age	Male Years of Service				Female Years of Service			
	5	6-24	25	≥26	5	6-24	25	≥26
50	6.50%	6.50%	20.00%	20.00%	6.00%	6.00%	25.00%	25.00%
55	6.50%	6.00%	25.00%	24.00%	6.00%	7.50%	25.00%	40.00%
59	6.50%	10.00%	21.00%	20.00%	6.00%	14.00%	25.00%	25.00%
60	21.00%	21.00%	21.00%	23.00%	15.00%	15.00%	15.00%	25.00%
61	37.50%	23.00%	23.00%	23.00%	15.00%	15.00%	15.00%	15.00%
62	37.50%	27.00%	27.00%	27.00%	15.00%	15.00%	15.00%	15.00%
63	37.50%	27.00%	27.00%	27.00%	15.00%	15.00%	15.00%	15.00%
64	37.50%	27.00%	27.00%	27.00%	15.00%	30.00%	30.00%	30.00%
≥70	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – All Other Employers – All Plans

Age	Male Years of Service				Female Years of Service			
	5	6-24	25	≥26	5	6-24	25	≥26
50	9.00%	9.00%	27.50%	27.50%	6.00%	6.00%	30.00%	30.00%
55	7.00%	7.50%	20.00%	20.00%	10.00%	9.00%	20.00%	30.00%
59	7.00%	12.00%	20.00%	24.00%	10.00%	12.00%	20.00%	25.00%
60	15.00%	15.00%	15.00%	24.00%	15.00%	15.00%	15.00%	25.00%
61	20.00%	24.00%	24.00%	24.00%	15.00%	25.00%	25.00%	25.00%
62	20.00%	27.50%	27.50%	27.50%	15.00%	25.00%	25.00%	25.00%
63	20.00%	27.50%	27.50%	27.50%	15.00%	25.00%	25.00%	25.00%
64	20.00%	27.50%	27.50%	27.50%	15.00%	25.00%	25.00%	25.00%
≥70	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

State Police Officers – All Plans

Age	Years of Service	
	5-24	≥25
50	10.00%	10.00%
55	6.00%	10.00%
59	10.00%	10.00%
60	10.00%	10.00%
≥70	100.00%	100.00%

FIGURE 4.3: RETIREMENT RATES – PENSION PLANS, cont.

Sample rates of retirement for members eligible to retire are shown below.

Virginia Law Officers – All Plans

Years of Service – Male				
Age	5	6-24	25	≥26
50	15.00%	15.00%	45.00%	45.00%
55	10.00%	8.00%	18.00%	25.00%
59	10.00%	12.00%	18.00%	20.00%
60	18.00%	18.00%	18.00%	30.00%
≥70	100.00%	100.00%	100.00%	100.00%

Years of Service – Female				
Age	5	6-24	25	≥26
50	15.00%	15.00%	37.50%	37.50%
55	10.00%	9.00%	25.00%	30.00%
59	10.00%	13.00%	30.00%	20.00%
60	20.00%	20.00%	20.00%	20.00%
≥70	100.00%	100.00%	100.00%	100.00%

Judges – All Plans

Age	Rate
60	10.00%
65	10.00%
70	25.00%
≥73	100.00%

FIGURE 4.4: DISABILITY RATES – PENSION PLANS

As shown below for selected ages.

State Employees

25% of disability cases are assumed to be service-related.

Age	Male	Female
20	0.0390%	0.0331%
30	0.0906%	0.2109%
40	0.2120%	0.3537%
50	0.4967%	0.6288%
60	0.6899%	0.7354%

Teachers

5% of disability cases are assumed to be service-related.

Age	Male	Female
20	0.0005%	0.0003%
30	0.0064%	0.0081%
40	0.0325%	0.0481%
50	0.1444%	0.1609%
60	0.3395%	0.3321%

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers

20% of disability cases are assumed to be service-related.

Age	Male	Female
20	0.0048%	0.0011%
30	0.0071%	0.0230%
40	0.1392%	0.1338%
50	0.3835%	0.3298%
60	0.8081%	0.5296%

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – All Other Employers

15% of disability cases are assumed to be service-related.

Age	Male	Female
20	0.0048%	0.0009%
30	0.0215%	0.0009%
40	0.1297%	0.0579%
50	0.4292%	0.2739%
60	0.6564%	0.6403%

FIGURE 4.4: DISABILITY RATES – PENSION PLANS, cont.

Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers

70% of disability cases are assumed to be service-related.

Age	Male	Female
20	0.0187%	0.0121%
30	0.0523%	0.5583%
40	0.2668%	0.7943%
50	0.4997%	1.0903%
60	1.0554%	1.7878%

Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – All Other Employers

45% of disability cases are assumed to be service-related.

Age	Male	Female
20	0.0014%	0.0050%
30	0.0575%	0.1568%
40	0.2182%	0.2007%
50	0.4161%	0.4127%
60	0.5745%	1.6052%

State Police Officers

85% of disability cases are assumed to be service-related.

Age	Rate
≤44	0.1938%
50	0.4807%
55	0.7697%
60	0.8967%
70	1.3680%

Virginia Law Officers

35% of disability cases are assumed to be service-related.

Age	Male	Female
20	0.1426%	0.5426%
30	0.5842%	0.6594%
40	0.7929%	1.0013%
50	1.1649%	1.8214%
60	1.9159%	3.8645%
70	1.9200%	5.4994%

Judges

There are no assumed rates of disability prior to service retirement (for causes other than death or retirement).

FIGURE 4.5: TERMINATION RATES – PENSION PLANS

Withdrawal rates are based on age and years of service credit. Sample rates for selected ages and years of service are shown below for causes other than death, disability or retirement.

State Employees – All Plans

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION											
Years of Service – Males											
Age	0	1	2	3	4	5	6	7	8	9	≥10
25	23.974%	21.579%	19.409%	17.424%	15.524%	13.693%	11.975%	10.595%	9.746%	9.732%	10.701%
35	17.716%	15.218%	13.247%	11.805%	10.829%	10.087%	9.383%	8.541%	7.535%	6.447%	5.388%
45	15.975%	11.918%	9.302%	7.949%	7.467%	7.461%	7.339%	6.905%	6.126%	4.945%	3.331%
55	15.197%	11.087%	8.483%	7.159%	6.658%	6.381%	6.149%	5.872%	5.613%	5.509%	5.439%
65	15.304%	13.450%	12.193%	11.472%	11.037%	—%	—%	—%	—%	—%	—%
SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION											
Years of Service – Females											
Age	0	1	2	3	4	5	6	7	8	9	≥10
25	27.376%	26.249%	24.118%	21.199%	18.029%	15.160%	13.004%	11.112%	9.997%	10.375%	12.876%
35	20.766%	17.777%	15.365%	13.514%	12.123%	10.996%	9.994%	9.070%	8.104%	7.066%	5.980%
45	18.340%	13.974%	10.951%	9.110%	8.142%	7.776%	7.634%	7.404%	6.888%	5.803%	4.010%
55	16.001%	12.044%	9.383%	7.856%	7.120%	6.731%	6.491%	6.383%	6.463%	6.942%	7.765%
65	14.142%	12.453%	11.513%	11.187%	11.326%	—%	—%	—%	—%	—%	—%

Teachers – All Plans

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION											
Years of Service – Males											
Age	0	1	2	3	4	5	6	7	8	9	≥10
25	19.207%	16.728%	14.515%	12.651%	11.200%	10.027%	8.948%	7.865%	7.114%	7.386%	8.326%
35	16.839%	14.734%	13.071%	11.712%	10.510%	9.374%	8.315%	7.322%	6.329%	5.217%	4.003%
45	18.182%	15.046%	12.547%	10.682%	9.330%	8.397%	7.608%	6.863%	5.924%	4.581%	2.657%
55	21.008%	16.464%	12.933%	10.382%	8.670%	7.536%	6.833%	6.318%	5.973%	5.790%	2.260%
65	24.063%	18.847%	14.805%	11.831%	9.792%	—%	—%	—%	—%	—%	—%
SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION											
Years of Service – Females											
Age	0	1	2	3	4	5	6	7	8	9	≥10
25	18.376%	15.481%	13.758%	12.581%	11.260%	10.133%	9.186%	8.253%	6.911%	6.524%	7.704%
35	17.757%	15.500%	13.863%	12.610%	11.452%	10.307%	9.292%	8.399%	7.473%	6.273%	4.807%
45	15.616%	13.289%	11.458%	10.011%	8.846%	7.999%	7.497%	7.203%	6.668%	5.362%	2.476%
55	15.060%	12.499%	10.614%	9.285%	8.348%	7.597%	6.925%	6.342%	6.066%	6.295%	2.476%
65	18.831%	16.489%	14.798%	13.739%	13.130%	—%	—%	—%	—%	—%	—%

FIGURE 4.5: TERMINATION RATES – PENSION PLANS, cont.

**Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits –
Ten Largest Employers – All Plans**

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION											
Years of Service – Males											
Age	0	1	2	3	4	5	6	7	8	9	≥10
25	28.989%	27.432%	26.526%	26.242%	26.375%	26.558%	26.297%	25.458%	23.734%	20.701%	15.866%
35	21.415%	19.378%	17.963%	17.076%	16.538%	16.121%	15.615%	14.808%	13.573%	11.801%	9.397%
45	17.894%	15.267%	13.230%	11.737%	10.675%	9.865%	9.232%	8.627%	7.933%	7.192%	5.296%
55	16.167%	13.384%	11.115%	9.363%	8.092%	7.311%	6.800%	6.512%	6.387%	6.264%	4.605%
65	14.654%	12.546%	10.779%	9.372%	8.367%	—%	—%	—%	—%	—%	—%

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION											
Years of Service – Females											
Age	0	1	2	3	4	5	6	7	8	9	≥10
25	26.948%	24.864%	23.870%	23.584%	23.500%	23.043%	22.383%	21.351%	19.968%	18.230%	16.241%
35	21.697%	18.644%	16.712%	15.790%	15.565%	15.609%	15.458%	14.802%	13.451%	11.314%	8.392%
45	19.315%	15.196%	12.534%	11.170%	10.742%	10.776%	10.785%	10.381%	9.325%	7.535%	4.936%
55	17.544%	13.552%	10.836%	9.258%	8.536%	8.303%	8.149%	7.885%	7.414%	6.668%	5.673%
65	15.252%	12.880%	11.016%	9.645%	8.728%	—%	—%	—%	—%	—%	—%

**Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits –
All Other Employers – All Plans**

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION											
Years of Service – Males											
Age	0	1	2	3	4	5	6	7	8	9	≥10
25	34.582%	30.879%	27.971%	25.872%	24.501%	23.668%	22.856%	21.758%	20.423%	18.923%	17.160%
35	26.103%	23.300%	21.169%	19.604%	18.413%	17.401%	16.467%	15.478%	14.272%	12.727%	10.921%
45	21.691%	18.002%	15.364%	13.656%	12.626%	11.997%	11.521%	11.013%	10.332%	9.373%	7.933%
55	18.678%	14.934%	12.243%	10.520%	9.586%	9.185%	9.042%	9.022%	9.123%	9.336%	9.555%
65	16.801%	14.540%	12.836%	11.667%	10.985%	—%	—%	—%	—%	—%	—%

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION											
Years of Service – Females											
Age	0	1	2	3	4	5	6	7	8	9	≥10
25	32.508%	30.131%	27.509%	24.836%	22.591%	21.199%	20.768%	20.326%	19.626%	18.741%	17.582%
35	25.792%	22.474%	20.062%	18.479%	17.509%	16.848%	16.228%	15.456%	14.215%	12.254%	9.510%
45	21.851%	18.237%	15.746%	14.201%	13.248%	12.573%	11.969%	11.310%	10.459%	9.194%	7.283%
55	18.709%	15.590%	13.351%	11.857%	10.862%	10.068%	9.333%	8.825%	8.825%	8.825%	8.825%
65	17.656%	15.223%	13.387%	12.121%	11.334%	—%	—%	—%	—%	—%	—%

FIGURE 4.5: TERMINATION RATES – PENSION PLANS, cont.

**Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits –
Ten Largest Employers – All Plans**

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION		
Terminations Per 100 Members		
Years of Service	Males	Females
0	5.500%	7.000%
1	4.000%	7.000%
2	4.000%	7.000%
3	4.000%	5.000%
4	4.000%	5.000%
5	3.000%	5.000%
6	2.500%	3.000%
7	2.500%	3.000%
8	2.500%	3.500%
9	1.500%	1.500%
10 or more	1.000%	1.500%

**Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits –
All Other Employers – All Plans**

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION		
Terminations Per 100 Members		
Years of Service	Males	Females
0	11.000%	20.000%
1	11.000%	15.000%
2	9.500%	10.000%
3	8.500%	8.500%
4	7.500%	7.000%
5	6.500%	7.000%
6	6.500%	7.000%
7	4.000%	7.000%
8	4.000%	7.000%
9	4.000%	6.000%
10 or more	2.500%	3.500%

FIGURE 4.5: TERMINATION RATES – PENSION PLANS, cont.

State Police Officers – All Plans

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION	
Service	Rate
0	8.000%
1	6.000%
2	6.000%
3	6.000%
4	6.000%
5	6.000%
6	6.000%
7	3.000%
8	3.000%
9	3.000%
≥10	1.750%

Virginia Law Officers – All Plans

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION									
Years of Service – Males									
Age	0	1	2	3	4	5	6	7	8
25	36.285%	28.479%	23.294%	20.555%	19.714%	19.438%	18.892%	17.882%	17.232%
35	29.590%	24.719%	21.139%	18.685%	16.890%	15.650%	14.654%	13.513%	11.884%
45	24.947%	20.776%	17.527%	15.163%	13.800%	12.852%	11.960%	10.962%	9.617%
55	22.917%	17.523%	13.271%	10.157%	10.390%	—%	—%	—%	—%
65	23.923%	15.385%	8.724%	3.755%	6.679%	—%	—%	—%	—%
SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION									
Years of Service – Females									
Age	0	1	2	3	4	5	6	7	8
25	43.786%	33.985%	27.627%	24.458%	24.051%	24.937%	26.238%	26.963%	25.996%
35	35.591%	29.532%	25.008%	21.852%	19.421%	17.876%	16.674%	15.620%	14.391%
45	29.713%	25.007%	21.104%	17.970%	16.112%	14.777%	13.695%	12.161%	10.324%
55	27.168%	21.009%	16.023%	12.279%	13.911%	—%	—%	—%	—%
65	28.529%	17.815%	9.796%	4.508%	12.790%	—%	—%	—%	—%

Judges – All Plans

There are no assumed rates of withdrawal prior to service retirement for causes other than death, disability or retirement.

FIGURE 4.6: SALARY INCREASE RATES – PENSION PLANS

Sample salary increase rates are shown below.

State Employees

Inflation of 2.50% plus a productivity component of 1.00% and a step-rate/promotional component as shown. It is assumed state employees who are covered under the Virginia Sickness and Disability Program (VSDP) receive a 3.50% annual increase in pay while disabled. This adjusted pay is used to determine deferred retirement benefits payable from the System.

Years of Service	Annual Step-Rate/Promotional Rates of Increase	Total Annual Rate of Increase
1	1.85%	5.35%
3	1.25%	4.75%
6	0.95%	4.45%
9	0.50%	4.00%
11-19	0.15%	3.65%
20 or more	0.00%	3.50%

Teachers

Inflation of 2.50% plus a productivity component of 1.00% and a step-rate/promotional component as shown.

Years of Service	Annual Step-Rate/Promotional Rates of Increase	Total Annual Rate of Increase
1	2.45%	5.95%
3	2.35%	5.85%
6	1.95%	5.45%
9	1.85%	5.35%
11	1.35%	4.85%
15	1.15%	4.65%
19	0.95%	4.45%
20 or more	—%	3.50%

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers

Inflation of 2.50% plus a productivity component of 1.00% and a step-rate/promotional component as shown.

Years of Service	Annual Step-Rate/Promotional Rates of Increase	Total Annual Rate of Increase
1	1.85%	5.35%
3	1.25%	4.75%
6	0.95%	4.45%
9	0.50%	4.00%
11-19	0.15%	3.65%
20 or more	—%	3.50%

FIGURE 4.6: SALARY INCREASE RATES – PENSION PLANS, cont.

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – All Other Employers

Inflation of 2.50% plus a productivity component of 1.00% and a step-rate/promotional component as shown.

Years of Service	Annual Step-Rate/Promotional Rates of Increase	Total Annual Rate of Increase
1	1.85%	5.35%
3	1.25%	4.75%
6	0.95%	4.45%
9	0.50%	4.00%
11-19	0.15%	3.65%
20 or more	—%	3.50%

Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers

Inflation of 2.50% plus a productivity component of 1.00% and a step-rate/promotional component as shown.

Years of Service	Annual Step-Rate/Promotional Rates of Increase	Total Annual Rate of Increase
1	1.25%	4.75%
3	1.25%	4.75%
6	0.90%	4.40%
9	0.90%	4.40%
11-19	0.50%	4.00%
20 or more	—%	3.50%

Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – All Other Employers

Inflation of 2.50% plus a productivity component of 1.00% and a step-rate/promotional component as shown.

Years of Service	Annual Step-Rate/Promotional Rates of Increase	Total Annual Rate of Increase
1	1.25%	4.75%
3	1.25%	4.75%
6	0.90%	4.40%
9	0.90%	4.40%
11-19	0.50%	4.00%
20 or more	—%	3.50%

FIGURE 4.6: SALARY INCREASE RATES – PENSION PLANS, cont.

State Police Officers

Inflation of 2.50% plus a productivity component of 1.00% and a step-rate/promotional component as shown. It is assumed state police officers who are covered under the Virginia Sickness and Disability Program (VSDP) receive a 3.50% annual increase in pay while disabled. This adjusted pay is used to determine deferred retirement benefits payable from the System.

Years of Service	Annual Step-Rate/Promotional Rates of Increase	Total Annual Rate of Increase
1	1.25%	4.75%
3	1.25%	4.75%
6	0.90%	4.40%
9	0.90%	4.40%
10-19	0.50%	4.00%
20 or more	—%	3.50%

Virginia Law Officers

Inflation of 2.50% plus a productivity component of 1.00% and a step-rate/promotional component as shown. It is assumed Virginia law officers who are covered under the Virginia Sickness and Disability Program (VSDP) receive a 3.50% annual increase in pay while disabled. This adjusted pay is used to determine deferred retirement benefits payable from the System.

Years of Service	Annual Step-Rate/Promotional Rates of Increase	Total Annual Rate of Increase
1	1.25%	4.75%
3	1.25%	4.75%
6	0.90%	4.40%
9	0.90%	4.40%
10-19	0.50%	4.00%
20 or more	—%	3.50%

Judges

Salary increase rates are 4.00%.

ADDITIONAL INFORMATION ABOUT ACTUARIAL ASSUMPTIONS AND METHODS: PENSION PLANS

Percent Electing a Refund or Deferred Annuity (excluding JRS Members). Terminating members are assumed to elect a refund of their member contributions and accrued interest or a deferred annuity based on the option any given member would consider most valuable at the time of termination. The deferred annuity, if elected, is assumed to commence at the age at which the member first becomes eligible for an unreduced benefit.

Provision for Expense. The assumed investment return represents the anticipated net rate of return after payment of all administrative expenses.

Asset Valuation Method. The method of valuing assets is intended to recognize a “smoothed” market value of assets. Under this method, the difference between actual return on market value from investment experience and the expected return on market value is recognized over a five-year period. The resulting actuarial value of assets cannot be less than 80% or more than 120% of the market value of assets.

Actuarial Cost Method. The valuation was prepared using the entry age normal actuarial cost method. Under this method, a calculation is made for pension benefits to determine the uniform and constant percentage rate of employer contributions that – if applied to the compensation of the average new member during the entire period of his or her anticipated covered service – would be required in addition to the contributions of the member to meet the cost of all benefits payable on the member’s behalf.

The unfunded actuarial accrued liability is determined by subtracting the current assets and the present value of prospective employer normal contributions and member contributions from the present value of expected benefits to be paid from VRS. The accrued liability contribution amortizes

the balance of the unfunded accrued liability over a period of years from the valuation date.

Actuarial Gains and Losses. Actuarial gains and losses are reflected in the unfunded actuarial accrued liability and are amortized as part of that balance.

Payroll Growth Rates. For state employees, teachers and members of SPORS, VaLORS and JRS, the payroll growth rate is assumed to be 3.00% based on a zero population growth assumption. For political subdivision employees, the payroll growth rate also is assumed to be 3.00% based on a zero population growth assumption.

Funding Period. The legacy unfunded actuarial accrued liability, less the deferred contribution as of June 30, 2013, is amortized over a closed 30-year period from June 30, 2013. The amortization period of the unfunded, less the deferred contribution, will decrease by one each year until reaching 0 years. The deferred contribution, as defined under the 2011 Appropriations Act, Item 469(I)(6), has been paid for all plans as of June 30, 2021. The actuarial gains and losses and other changes in the unfunded liability due to benefits and actuarial assumption and method changes for each valuation subsequent to the June 30, 2013, valuation will be amortized over a closed 20-year period.

Cost-of-Living Adjustment (COLA). For Plan 1 employees receiving benefits or vested as of January 1, 2013, the COLA is assumed to be 2.50% per year compounded annually for the Basic Benefit option. The hazardous duty supplement for Plan 1 SPORS members, VaLORS members and political subdivision employees receiving enhanced hazardous duty benefits is assumed to increase at an inflation rate of 2.50% per year compounded annually. For Plan 1 employees who were not vested as of January 1, 2013, Plan 2 employees and Hybrid Retirement Plan employees, the COLA is assumed to be 2.25% per year compounded annually.

Summary of Pension Plan Provisions

Retirement Plans

ADMINISTRATION

The Virginia Retirement System (the System) pension Plan 1, Plan 2 and Hybrid Retirement Plan are administered by the Board of Trustees of the System. Plan 2 was established during the 2010 session of the General Assembly, and its provisions were effective for members hired between July 1, 2010, and December 31, 2013. In addition, Plan 1 members who were not vested as of January 1, 2013, are also in Plan 2. The hybrid plan was established for all non-hazardous duty employees hired on or after January 1, 2014.

TYPES OF PLANS

1. Virginia Retirement System (VRS), effective March 1, 1952. VRS is a qualified governmental pension system that administers two defined benefit structures, Plan 1 and Plan 2, and a Hybrid Retirement Plan with a benefit structure that combines both defined benefit and defined contribution features. The Governmental Accounting Standards Board (GASB) defines VRS as an agent multiple-employer public employee retirement system. Covered employees include full-time permanent, salaried state employees; faculty members of the state's public colleges and universities who do not elect to participate in an optional retirement plan (ORP); teachers and administrative employees of the state's local public school divisions; and employees of Virginia cities, towns, counties and other political subdivisions that have elected to participate in VRS. Some part-time permanent, salaried state employees also are covered under VRS. VRS has separate cost-sharing pools for state and school employers.

Members are covered under Plan 1, Plan 2 or the hybrid plan according to their membership date:

- **Plan 1:** Membership date is July 1, 2010, with at least five years of service on January 1, 2013, and have not taken a refund. Members are covered under Optional Retirement Plan (ORP) 1 if they have an ORP membership date before July 1, 2010, and maintain an account balance. If the member had a pre-July 1, 2010, ORP account balance and moved to a defined benefit plan, the member must have any combination of VRS service credit and/or ORP participation that totals five years as of January 1, 2013, to be considered a Plan 1 member.
- **Plan 2:** Membership date is from July 1, 2010, to December 31, 2013, and have not taken a refund. Additionally, members are covered under Plan 2 if they have a membership date prior to July 1, 2010, but were not vested before January 1, 2013. Members are covered under ORP 2 if they have an ORP membership date on or after July 1, 2010, and maintain an account balance. If a member of VaLORS, SPORS, VRS with enhanced hazardous duty benefits or the hazardous duty alternate option was hired on or after July 1, 2010, the member is in Plan 2, even if the membership date is after December 31, 2013.
- **Hybrid Retirement Plan:** Membership date is on or after January 1, 2014, or is a Plan 1 or Plan 2 member who elected, during a one-time opt-in period, to be covered under the hybrid plan. Employees in positions with hazardous duty benefits are not eligible to participate in the hybrid plan and become members of Plan 2. If the member was hired on or after January 1, 2014, and was eligible for an ORP, the member must elect the ORP or the hybrid plan. If the member has prior service under Plan 1 or Plan 2, the member is not eligible to elect the hybrid plan and will choose between the ORP or the applicable VRS defined benefit plan.

2. Single-Employer Public Employee Retirement Systems as Defined by GASB. The provisions for the Plan 1 and Plan 2 benefit structures for the following systems are the same as those for VRS:

- State Police Officers' Retirement System (SPORS) established July 1, 1950, for full-time permanent, salaried state police officers.
- Virginia Law Officers' Retirement System (VaLORS) established October 1, 1999, for full-time permanent, salaried Virginia law officers other than state police.
- Judicial Retirement System (JRS) established July 1, 1970, for full-time permanent, salaried state judges and other qualifying employees. Members hired on or after January 1, 2014, are covered under the hybrid plan.

MEMBER CONTRIBUTIONS

Member contributions vary by plan.

Defined Benefit: Active members in Plan 1 and Plan 2 contribute 5% of their creditable compensation per year. Active members in the hybrid plan contribute 4% of their creditable compensation per year. Members' contribution accounts accrue 4% interest each year, calculated on the balance as of the previous June 30. Contributions paid by employers on behalf of employees are governed by Section 414(h) of the Internal Revenue Code.

Defined Contribution: Active members in the hybrid plan are required to contribute 1% of their creditable compensation per year to the defined contribution component of the hybrid plan. Active members can make additional voluntary contributions of up to 4% of their creditable compensation.

CREDITABLE COMPENSATION

Creditable compensation is the member's current annual base salary excluding overtime; extraordinary pay; bonus pay; housing and moving expenses; mobile device and internet costs; vehicle allowances; termination pay for leave; non-permanent shift differentials; payments of a temporary nature including but not limited to acting pay (if not

permanently confirmed for the position); or payments for extra duties, such as pay for teachers who serve as coaches. A member's election to defer salary to a deferred compensation plan, such as a 403(b), a 457(b) or a 125 plan, may only be included in creditable compensation if the member voluntarily elects the deferral, the deferral is not conditional or performance based, and the deferral would otherwise be included in the member's gross income. Other exclusions apply.

AVERAGE FINAL COMPENSATION

Average final compensation is one of the factors used to calculate the member's retirement benefit.

Plan 1. Average of the member's 36 consecutive months of highest creditable compensation as a covered employee.

Plan 2 and Hybrid Retirement Plan. Average of the member's 60 consecutive months of highest creditable compensation as a covered employee.

VESTING

VRS members become vested after accumulating five years of service credit.

SERVICE CREDIT

1. VRS; SPORS and VaLORS Members in Plan 1 and Plan 2; and Hybrid Retirement Plan. These members receive one month of service credit for each month they are employed in a covered position and the employer is contributing to the System.

2. JRS Members in Plan 1. Judges appointed or elected to an original term before January 1, 1995, receive one month of service credit multiplied by a weighting factor of 3.5 for each month they are employed in a JRS-covered position and the employer is contributing to the System. The weighting factor for judges appointed or elected on or after January 1, 1995, but before July 1, 2010, is 2.5. Judges appointed or elected to an original term between July 1, 2010, and December 31, 2013, receive one month of service credit multiplied by a weighting factor of 2.5 if appointed or elected to an original term and were at least 55 years old; 2.0 if

appointed or elected to an original term and were at least 45 years old but less than 55 years old; or 1.5, if appointed or elected to an original term and were less than 45 years old.

3. JRS Members in Plan 2 and Hybrid Retirement Plan.

Judges appointed or elected to an original term between July 1, 2010, and December 31, 2013, receive one month of service credit multiplied by a weighting factor of 2.5 if appointed or elected to an original term and were at least 55 years old; 2.0 if appointed or elected to an original term and were at least 45 years old but less than 55 years old; or 1.5, if appointed or elected to an original term and were less than 45 years old.

PRIOR SERVICE CREDIT

Members may purchase prior service as credit in their plan. Eligible prior service includes active duty military service; full-time salaried federal service; full-time salaried public service with an employer or school system of another state or United States territory, or with a Virginia public employer that does not participate in VRS; non-covered service with a VRS-participating employer; approved leave from a VRS-covered position for the birth, adoption or death of a child; Family and Medical Leave Act (FMLA) leave for a serious health condition (as defined under FMLA) of the member or an immediate family member, also as defined under FMLA; approved educational leave; unused sick leave at retirement, if the member is eligible; and VRS-refunded service. Members also can apply for no-cost military leave, provided they are not dishonorably discharged, return to covered employment within one year of discharge and do not take a refund of their member contributions and interest.

Prior service credit counts toward vesting, eligibility for retirement and eligibility for the health insurance credit, if offered by the employer. Prior service credit for refunded VRS hazardous duty service or for an eligible period of leave while covered under

VRS in a hazardous duty position also counts toward the hazardous duty supplement for eligible members, provided they purchase or, in the case of no-cost military leave, are granted this service. Other types of prior service credit, such as active duty military service or hazardous duty service with a non-VRS participating employer, do not count toward the supplement.

Members may arrange to purchase prior service through a lump-sum payment using a personal check; a trustee-to-trustee transfer of funds or a pretax rollover of funds; an after-tax payroll deduction agreement or a pretax salary reduction agreement (if the employer offers the pretax salary reduction option); or a combination of these methods. Other special rules and limits govern the purchase of prior service.

The cost basis and eligibility periods for members are as follows:

VRS Refunded Service. The purchase cost is based on the refund amount, plus interest compounded annually from the date of the refund to the date the member buys back the service. The interest rate is the assumed rate of return of the VRS fund. The member may purchase all refunded service or a portion at any time while an active VRS member.

Other Types of Eligible Service. The two-year cost window to purchase most types of service at approximate normal cost begins upon employment in a VRS-covered position or following an eligible period of leave. If the member does not purchase prior service within the two-year window and leaves employment or takes a leave of absence without pay, the window temporarily closes until the member returns to active VRS-covered employment. If the member does not purchase the service within the two-year window, the cost shifts to an actuarial equivalent cost.

NORMAL (UNREDUCED) AND REDUCED RETIREMENT ELIGIBILITY AND BENEFIT CALCULATIONS

EARLIEST UNREDUCED RETIREMENT ELIGIBILITY

PLAN 1	PLAN 2 & HYBRID PLAN	BENEFIT CALCULATIONS
VRS: Age 65 with at least five years of service credit, or age 50 with at least 30 years of service credit. NOTE: Some political subdivisions require employees to reach age 55 with at least 30 years of service credit.	Normal Social Security retirement age with at least five years of service credit or when age and service equal 90. <i>Example:</i> Age 60 with 30 years of service credit.	- Plan 1: 1.70% of average final compensation X years of service. - Plan 2: 1.65% of average final compensation X years of service. - Hybrid Retirement Plan: 1.00% of average final compensation X years of service for the defined benefit component. NOTE: Plan 2 and Hybrid Retirement Plan members could have a bifurcated multiplier. For example, Plan 2 members with a membership date prior to July 1, 2010, have a 1.70% multiplier on any service earned, purchased or granted prior to January 1, 2013, and a 1.65% multiplier on any service earned, purchased or granted on or after January 1, 2013.
SPORS, VaLORS and political subdivision hazardous duty covered employees: Age 60 with at least five years of service credit or age 50 with at least 25 years of service credit.	SPORS, VaLORS and political subdivision hazardous duty covered employees: Age 60 with at least five years of service credit or age 50 with at least 25 years of service credit. (Hybrid plan not applicable.)	- SPORS, sheriffs and regional jail superintendents: 1.85% of average final compensation for each year of service credit. - VaLORS: 1.70% (if membership date in VaLORS was before July 1, 2001, and member has at least 20 years of service credit) or 2.00% of average final compensation for each year of service credit as elected by the member. <i>Note:</i> VaLORS members retiring under the 2.00% multiplier are not eligible for the hazardous duty supplement. - All other VaLORS members receive 2.00% of average final service X years of hazardous duty service plus 1.70% of average final compensation X years of non-hazardous service. <i>Note:</i> VaLORS members retiring under the 2.00% multiplier are not eligible for the hazardous duty supplement. - Political subdivision hazardous duty employees: 1.70% or 1.85% of average final compensation for each year of service credit, as elected by the employer.

NORMAL (UNREDUCED) AND REDUCED RETIREMENT ELIGIBILITY AND BENEFIT CALCULATIONS, cont.

EARLIEST UNREDUCED RETIREMENT ELIGIBILITY

PLAN 1	PLAN 2 & HYBRID PLAN	BENEFIT CALCULATIONS
JRS: Age 65 with at least five years of weighted service credit or age 60 with at least 30 years of weighted service credit	Same as Plan 1.	Plan 1 and Plan 2: - If appointed or elected to an original term prior to January 1, 2013: 1.70% of average final compensation for each year of service credit. - If appointed or elected to an original term between January 1, 2013, and December 31, 2013: 1.70% on non-JRS service earned, purchased or granted before the date of appointment or election to an original term and 1.65% on JRS service earned, purchased or granted on or after the date of appointment or election to an original term. Hybrid Retirement Plan: 1.00% of average final compensation for each year of service credit beginning on the date of appointment or election to an original term.

EARLIEST REDUCED RETIREMENT ELIGIBILITY

PLAN 1	PLAN 2 & HYBRID PLAN	BENEFIT CALCULATIONS
VRS: Age 55 with at least five years of service credit or age 50 with at least 10 years of service credit.	Age 60 with at least five years of service credit.	VRS Plan 1, JRS Plan 1, JRS Plan 2 and JRS Hybrid, SPORS, VaLORS and political subdivision hazardous duty covered Plan 1 and Plan 2 members who are at least age 55 (age 50 for SPORS, VaLORS and political subdivision hazardous duty covered members): A reduction is applied of 0.50% per month for the first 60 months and 0.40% for the next 60 months the member is away from meeting unreduced retirement eligibility. For VRS Plan 1 members, an additional reduction of 0.60% is applied for each month the member's age precedes age 55.
SPORS, VaLORS and political subdivision hazardous duty covered employees: Age 50 with at least five years of service credit.	Same as Plan 1.	
JRS: Age 55 with at least five years of weighted service credit.	Same as Plan 1.	

BENEFIT PAYOUT OPTIONS

VRS members eligible for retirement must elect one of the following benefit payout options when they apply for retirement. This election is irrevocable, except for the Survivor Option under certain circumstances. These options are available on an actuarially equivalent basis:

1. Basic Benefit. Members may choose the Basic Benefit, which is the unreduced benefit amount. An early retirement reduction factor is applied for the reduced benefit. The Basic Benefit does not provide a continuation of a lifetime monthly benefit to a survivor.

2. Survivor Option. Members may choose a whole percentage of their benefit, between 10% and 100%, to continue as a lifetime benefit to a survivor upon their death. The member's benefit is actuarially reduced accordingly.

3. Basic Benefit With the Partial Lump-Sum Option Payment (PLOP) or Survivor Option With the PLOP. This option is available with the Basic Benefit and the Survivor Option. Members who are in active service for one or more years beyond the date they become eligible for an unreduced retirement benefit may elect the Basic Benefit with the PLOP or Survivor Option with the PLOP and accrued interest equal to one, two or three times their annual retirement benefit, depending on how long they work beyond their unreduced retirement eligibility date. The monthly benefit is actuarially reduced accordingly.

4. Advance Pension Option. With this option, members elect to receive a temporary higher benefit until an age selected by the member, between age 62 and the normal retirement age under Social Security. At that point, the monthly benefit is permanently reduced on an actuarially equivalent basis. The benefit can never be reduced by more than 50%. The Advance Pension Option does not provide a continuation of a benefit to a survivor.

PAYMENT FORM

The retirement benefit is paid as a lifetime monthly annuity. Upon the member's death in retirement,

the member's beneficiary receives a lump-sum payment of any remaining member contributions and accrued interest in the member's account. If the member has elected the Survivor Option, a lifetime monthly benefit is paid to his or her survivor instead of a lump-sum payment.

HAZARDOUS DUTY SUPPLEMENT

An annual supplement is payable to members of SPORS and VRS political subdivision members eligible for enhanced hazardous duty coverage who retire with at least 20 years of eligible hazardous duty service credit. The supplement begins when they retire and continues until they reach their normal retirement age under Social Security.

VaLORS members retiring under the 1.70% multiplier who have at least 20 years of eligible hazardous duty service credit receive the supplement beginning when they retire and continuing until age 65; VaLORS members retiring under the 2.00% multiplier are not eligible for the supplement. Vested members hired in eligible hazardous duty positions before July 1, 1974, are not required to have 20 years of hazardous duty service credit to qualify for the supplement, provided they take an immediate annuity.

The supplement is a dollar amount added to the member's monthly retirement benefit payment. It is adjusted biennially based on increases in Social Security benefits during interim periods, as determined by the VRS actuary.

COST-OF-LIVING ADJUSTMENT (COLA)

The cost-of-living adjustment (COLA) is an annual increase in your retirement benefit that allows it to keep pace with inflation. If a member retires with an unreduced benefit or with a reduced benefit with at least 20 years of service credit, the COLA will go into effect on July 1 after one full calendar year from the retirement date.

If a member retires with a reduced benefit with fewer than 20 years of service credit, the COLA will go into effect on July 1 after one full calendar year from the date the member would have become

eligible for an unreduced benefit. Exceptions to the COLA effective dates are listed in Figure 2.10 in the Financial Section.

The COLA is effective each July 1 thereafter, when provided. During periods of no inflation or deflation, the COLA is zero (0.00%).

The COLA is calculated based on changes in the Consumer Price Index for all Urban Consumers (CPI-U) as follows:

1. The CPI-U for the most recent calendar year used to determine the VRS COLA is subtracted from the most recent average annual CPI-U to arrive at the index point change.
2. The index point change is divided by the CPI-U for the most recent calendar year in which a COLA was paid.
3. The result is multiplied by 100 to convert it to a percentage. Under Plan 1, automatic cost-of-living increases are calculated as the first 3.00% of the increase of the CPI-U, plus half of each percentage increase from 3.00% to 7.00%.

Under Plan 2 and the Hybrid Retirement Plan, automatic cost-of-living increases are calculated as the first 2.00% of the increase of the CPI-U, plus half of each percentage increase from 2.00% to 4.00%, with a maximum COLA increase of 3.00%.

Refunds and Deferred Membership

1. Refunds. Vested members in Plan 1, Plan 2 and the Hybrid Retirement Plan who leave or are involuntarily separated from employment for causes other than job performance or misconduct are eligible for a full refund of their member contribution account balance, including accrued interest. Non-vested members are eligible for a refund of the balance, excluding any employer-paid member contributions made to their accounts after July 1, 2010, and the accrued interest on these contributions.

Hybrid plan members are also immediately vested to any funds they contribute to the defined contribution component of their plan. They become vested over a four-year period to the funds their employer contributes on their behalf. Members with fewer than two years of service credit forfeit the employer contributions.

Taking a refund cancels membership and eligibility for any future benefits under the retirement plans. Members who take a refund and return to covered employment will be rehired under the currently applicable plan. They are then eligible to purchase their VRS refunded service as credit in their plan.

2. Deferred membership. Members separating from employment have the option to leave their funds with VRS and become deferred members. If they are vested or involuntarily separated from employment, they may be eligible for a future retirement benefit if they meet the age and service requirements for their plan. The benefit is calculated based on the member's service credit and average final compensation at the time of separation. Upon the member's death, the member's beneficiary receives a lump-sum payment of any remaining member contributions and accrued interest. If the member retires and elects the Survivor Option, a lifetime monthly benefit is paid to the survivor upon the member's death.

Deferred members remain eligible to receive a full or partial refund of their member contribution account balance, depending on whether or not they are vested. If a deferred member returns to covered employment, member contributions and the service credit the member earns upon reemployment are added to the member's record.

Death-in-Service Benefit

If a member dies while in active service, his or her named beneficiary or spouse, natural or legally adopted minor child or parent may be eligible for a death-in-service benefit in addition to VRS life insurance benefits, if applicable.

NON-WORK-RELATED CAUSE OF DEATH

If the member dies from a non-work-related cause, the member's named beneficiary will be eligible for a refund of any funds remaining in the member's contribution account. If the member is vested at the time of death and his or her spouse, minor child or parent is one of the member's named beneficiaries or is the beneficiary based on order of precedence, he or she will be eligible for a refund or a monthly benefit to the exclusion of all other primary beneficiaries. Any benefits minor children receive will end when they reach age 18. If the member is vested and his or her spouse, minor child or parent is not one of the member's named beneficiaries, or is not the beneficiary based on order of precedence, that beneficiary will be eligible for a lump-sum payment only. If the member is not vested at the time of death, his or her spouse, minor child or parent will be eligible for a lump-sum payment only, which will be shared with any other primary beneficiaries the member has designated, if applicable.

The monthly non-work-related benefit is a lifetime monthly annuity based on the 100% Survivor Option. Members covered under Plan 1 who die before age 55 are assumed to be age 55 at the time of death for the purpose of calculating the benefit. The calculation for members covered under Plan 2 and the Hybrid Retirement Plan uses age 60. The calculation for Plan 1 and Plan 2 members of SPORS and VaLORS, and for VRS members eligible for enhanced hazardous duty coverage, uses age 50.

WORK-RELATED CAUSE OF DEATH

If the member dies from a work-related cause, the member's named beneficiary will be eligible for a lump-sum payment of any funds remaining in the member's contribution account. In addition, the member's spouse, minor child or parent will be eligible for a monthly benefit, whether or not this individual is a named beneficiary.

The monthly work-related benefit is a lifetime monthly annuity based on 33⅓% of the member's average final compensation if the spouse, minor

child or parent qualifies for Social Security survivor benefits, or 50% of the member's average final compensation if the spouse, minor child or parent does not qualify for Social Security survivor benefits. The benefit is then adjusted by any workers' compensation survivor benefits.

Disability Benefits

DISABILITY RETIREMENT

Plan 1 and Plan 2 members who are not covered under the Virginia Sickness and Disability Program (VSDP) are eligible to apply for disability retirement from the first day of covered employment if they have a physical or cognitive disability that prevents them from performing their job and is likely to be permanent. Members covered under Plan 1 and Plan 2 who retire on disability before age 60 are credited with the lesser of (1) twice their total service credit at disability retirement; or (2) their total service credit plus the number of years remaining between their age at disability retirement and age 60.

The disability benefit for non-vested members is the minimum guaranteed benefit, which is either (1) 50% of the member's average final compensation (66⅔% if the disability is work-related) if the member does not qualify for Social Security disability benefits; or (2) 33⅓% of average final compensation (50% if the disability is work-related) if the member qualifies for Social Security disability benefits.

If a member is vested and has a non-work-related disability, the amount of the disability retirement benefit will be the VRS formula amount, as described below, or the guaranteed benefit, whichever is higher.

For vested members under age 60, the benefit will be equal to 1.70% for Plan 1 members or 1.65% for Plan 2 members of average final compensation multiplied by (a) twice the amount of total service credit or (b) actual service credit plus the number of years remaining between the member's age at disability retirement and age 60, whichever is less.

For vested members age 60 or older, the benefit will be equal to 1.70% for Plan 1 members or 1.65% for Plan 2 members of average final compensation multiplied by total service credit.

The benefit for members retiring on work-related disability is reduced by any workers' compensation benefits. The payout options available to members retiring on disability are the Basic Benefit and Survivor Option.

VIRGINIA SICKNESS AND DISABILITY PROGRAM

The Virginia Sickness and Disability Program (VSDP) was established on January 1, 1999, to provide income protection to state employees covered under VRS, SPORS and VaLORS if they suffer a non-work-related or work-related illness or injury. Enrollment in VSDP is automatic upon employment. State employees hired before January 1, 1999, had the option to elect VSDP or retain their eligibility to be considered for disability retirement. Employees enrolled in VSDP are not eligible to retire on disability. Additional information about VSDP is provided in the "Summary of Other Post-Employment Benefit (OPEB) Plan Provisions" in the next discussion on OPEBs. Additional information also is provided in the Financial Section.

VIRGINIA LOCAL DISABILITY PROGRAM

The Virginia Local Disability Program (VLDP) was implemented January 1, 2014, to provide Hybrid Retirement Plan members short-term and long-term disability benefits for non-work-related and work-related disabilities. Eligible employees are enrolled automatically upon employment, unless their employer has elected to provide comparable coverage.

Eligible employees include:

- Teachers or other professional employees of a local public school division.
- General employees of a VRS-participating political subdivision, such as a city, county, town, authority or commission.
- Local law enforcement officers, firefighters or emergency medical technicians if the employer does not provide enhanced hazardous duty benefits.

Additional information about VLDP is provided in the "Summary of Other Post-Employment Benefit (OPEB) Plan Provisions" in the next discussion on OPEBs. Additional information also is provided in the Financial Section.

Summary of Pension Plan Changes

The following actuarially material changes have occurred to the pension plan provisions in recent years.

2012 VALUATION: In 2012 House Bill 1130/Senate Bill 498 was enacted and was effective on January 1, 2013.

The changes resulting from this legislation are as listed below:

1. Active non-vested members of Plan 1 have their Average Final Compensation based on the highest 60 consecutive months of service instead of the highest 36 consecutive months of service. This provision applies to all plans.
2. Active non-vested members of Plan 1 and all Plan 2 members accrue benefits at 1.65% as of the effective date. This provision applies to the state and teacher plans and to members in political subdivision plans who are not covered by hazardous duty benefits.
3. Active members in the judicial plan hired after January 1, 2013, accrue benefits at 1.65%.
4. Active non-vested members of Plan 1 have to satisfy the Rule of 90 (sum of age and service is at least 90) or reach their Social Security normal retirement age to be eligible for unreduced retirement. These same members must attain age 60 with five years of service to be eligible for early retirement. This provision applies to the state and teacher plans and to members of political subdivision plans who are not covered by hazardous duty benefits.
5. Non-vested members of Plan 1 and all members of Plan 2 have a maximum cost-of-living adjustment (COLA) of 3.00%. This provision applies to all plans.
6. All active employees not within five years of eligibility for an unreduced retirement as of January 1, 2013, and retiring with fewer than 20 years of service have their cost-of-living adjustment (COLA) deferred to one year following their unreduced retirement date after beginning to receive benefits. All active employees within five years of eligibility for unreduced retirement as of January 1, 2013, are grandfathered into the old provisions with no deferral of the COLA.

2013 VALUATION: No actuarially material changes are made to the plan provisions. There are two changes of note:

1. On June 20, 2013, the Board adopts the recommended economic and demographic assumptions proposed by the actuary as a result of the June 2012 experience study.

2. Changes noted in the 2012 valuation information, with effective dates in fiscal year 2013, were implemented.

2014 VALUATION: No actuarially material changes are made to the plan provisions. The 2014 valuation includes Hybrid Retirement Plan members for the first time. The hybrid plan covers eligible employees hired on or after January 1, 2014, in the state, teacher and judicial plans or Plan 1 and Plan 2 members who elected, during a one-time opt-in period, to be covered under the hybrid plan. The hybrid plan does not apply to members in the SPORS and VaLORS plans. The hybrid plan consists of defined benefit plan and defined contribution plan components.

2015 VALUATION: No actuarially material changes are made to the plan provisions. There are two changes of note:

1. An administrative expense charge was added to the employer contribution rates to cover administrative expenses.
2. The retirement rates for the judicial plan were extended to age 73 to reflect the change in the mandatory retirement age to 73.

2016 VALUATION: No actuarially material changes are made to the plan provisions.

2017 VALUATION: No actuarially material changes are made to the plan provisions. There is one change of note: On April 26, 2017, the Board adopts the recommended economic and demographic assumptions proposed by the actuary as a result of the June 2016 experience study.

2018 VALUATION: No actuarially material changes are made to the plan provisions.

2019 VALUATION: The investment rate was decreased from 7.00% per annum to 6.75% per annum.

2020 VALUATION: No actuarially material changes are made to the plan provisions.

2021 VALUATION: No actuarially material changes are made to the plan provisions. There is one change of note: On April 20, 2021, the Board adopts the recommended economic and demographic assumptions proposed by the actuary as a result of the June 2020 experience study.

Actuary's Certification Letter: Other Post-Employment Benefit (OPEB) Plans



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April 6, 2023

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

Re: Virginia Retirement System Actuarial OPEB Valuation as of June 30, 2022
Actuarial Disclosures – VRS OPEB Plans

Dear Trustees:

The results of the June 30, 2022 Annual Actuarial Valuation of the Virginia Retirement System (VRS) Other Post Employment Benefits (OPEB) Plans are presented in this report (see employers.varetire.org/media/shared/pdf/valuations/valuation-report-2022-opeb.pdf). This report was prepared at the request of the Board and is intended for use by the VRS and those designated or approved by the Board. This report may be provided to parties other than the VRS only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purposes of the valuation are to measure the OPEB Plans' funding progress and to determine the employer contribution rates. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different. This report does not include actuarial information needed to satisfy reporting requirements under Governmental Accounting Standards Board Statements No. 74 or No. 75.

Results presented in this report are developed using the actuarial assumptions and methods disclosed in the appendix posted on VRS' website. 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. This report does not include a robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment. We encourage a review and assessment of the investment and other significant risks that may have a material effect on the plan's financial condition.

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

One Towne Square | Suite 800 | Southfield, Michigan 48076-3723

The findings in this report are based on data and other information through June 30, 2022. The valuation was based upon information furnished by the VRS, concerning OPEB benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the VRS.

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.

This report was prepared during the COVID-19 pandemic, which is likely to influence demographic and economic experience, at least in the short term. Results in this report are developed based on available data without adjustment. We will continue to monitor these developments and their impact on the VRS OPEB Plans.

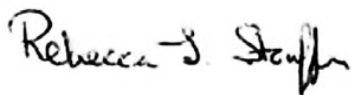
Actual experience will be reflected in each subsequent report, as experience emerges.

This report was prepared using assumptions adopted by the Board. All actuarial assumptions used in this report are reasonable for the purposes of this valuation. All actuarial assumptions and methods used in the valuation follow the guidance in the applicable Actuarial Standards of Practice. Additional information about the actuarial assumptions is included in the appendix posted on VRS' website.

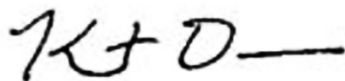
This report has been prepared by actuaries who have substantial experience valuing public retiree health programs. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the VRS OPEB Plans as of the valuation date. All calculations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

Rebecca L. Stouffer, James D. Anderson, Kurt Dosson, Michael D. Kosciuk, Shana M. Neeson, and Adam J. Reese are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor.

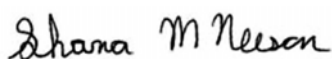
Respectfully submitted,
Gabriel, Roeder, Smith & Company



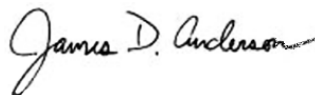
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RLS/JDA/KD/MDK/SMN:sc

Executive Summary

1. General Comments

Each year actuarial valuations are prepared for the Virginia Retirement System (VRS). This valuation provides information for the following Other Postemployment Benefit (OPEB) Plans of the VRS, prepared as of June 30, 2022:

- Group Life Insurance Program (GLI)
- Health Insurance Credit Program (HIC)
 - State Employees (HIC – State Employees)
 - Teachers (HIC – Teachers)
 - Participating Political Subdivisions in Aggregate (HIC – Participating Political Subdivisions)
 - Constitutional Officers (HIC – Constitutional Officers)
 - Social Service Employees (HIC – Social Service Employees)
 - Registrars (HIC – Registrars)
- Virginia Sickness and Disability Program (VSDP)
- Virginia Local Disability Program (VLDP)
 - Teachers (VLDP – Teachers)
 - Political Subdivisions (VLDP – Political Subdivisions)

This report includes information, in aggregate, regarding the actuarial valuations of the Health Insurance Credit Program for Participating Political Subdivisions as of June 30, 2022. The funded status and employer contribution rates for Participating Political Subdivisions are developed individually at the employer level. Actuarial valuation reports for each of the Participating Political Subdivisions are provided under separate cover.

Throughout this report, there may be cases when the schedules do not add due to rounding.

2. Total Employer Contributions to Support OPEB Plan Benefits – Including an Actuarially Determined Employer Contribution (ADEC) Rate

Fiscal Year Ending:	2021 & 2022	2023 & 2024		Informational – 2024
Valuation Date:	June 30, 2019	June 30, 2021		June 30, 2022
OPEB Plan	Board & General Assembly Approved	Board Approved	General Assembly Approved	ADEC
GLI				
HIC - State Employees	1.12%	1.04%	1.12%	0.90%
HIC - Teachers	1.21%	1.21%	1.21%	1.08%
HIC - Participating Local Subdivisions (Average ^{1,2})	N/A	0.36%	N/A	0.36%
HIC - Constitutional Officers	0.36%	0.36%	0.36%	0.29%
HIC - Social Service Employees	0.38%	0.37%	0.37%	0.31%
HIC - Registrars	0.39%	0.32%	0.32%	0.21%
VSDP	0.61%	0.56%	0.61%	0.45%
VLDP - Teachers	0.47%	0.47%	0.47%	0.46%
VLDP - Political Subdivisions	0.83%	0.85%	0.85%	0.78%

¹ Calculated as a weighted average starting with the June 30, 2022 valuation, consistent with GASB Statement No. 75 reporting.

² Fiscal years ending 2023 and 2024 were restated as weighted average from prior actuary's published results by individual employer. The General Assembly does not approve the Political Subdivision rates.

Contribution rates for VRS employers are established every two years – the table above shows the employer contribution rates for fiscal years ending 2021-2024 based on the June 30, 2019 and June 30, 2021 actuarial valuations. The budget provides for funding fiscal years ending 2023 and 2024 based on the prior biennium's higher contribution rates for GLI (1.34% vs. 1.19%), HIC-State Employees (1.12% vs. 1.04%) and VSDP (0.61% vs. 0.56%). Also, the budget included the additional amounts below, contributed in June 2022 in an effort to address the unfunded liabilities associated with each plan:

OPEB Plan	June 2022 Additional Contributions
GLI	\$ 30,438,378
HIC - State Employees	8,522,746
HIC - Teachers	12,013,013
HIC - Constitutional Officers	275,975
HIC - Social Service Employees	121,754
HIC - Registrars	6,494

The actuarially calculated employer contribution rates based on the June 30, 2022 valuation presented in this report are *informational* in nature.

3. Funded Ratio

The funded ratio of the plan is the percentage of the dollar value of the accrued liability that is covered by the actuarial value of assets. While the funded ratio may be a useful plan measurement, understanding a plan's funding trend may be more important than a particular point in time. The chart below compares the funded ratio for the current valuation with the results of the prior valuation.

OPEB Plan	Funded Ratio	
	June 30, 2022	June 30, 2021
GLI	63.95%	60.58%
HIC - State Employees	21.84%	18.36%
HIC - Teachers	15.13%	12.05%
HIC - Participating Local Subdivisions	47.21%	40.25%
HIC - Constitutional Officers	22.90%	20.06%
HIC - Social Service Employees	17.18%	15.81%
HIC - Registrars	37.04%	28.64%
VSDP	198.57%	218.86%
VLDP - Teachers	81.18%	98.55%
VLDP - Political Subdivisions	106.83%	111.97%

4. Reasons for Change

There are three general reasons why contribution rates change from one valuation to the next. The first is a change in the benefits or eligibility conditions of the plan. The second is a change in the valuation assumptions used to project future occurrences. The third is the difference during the year between the plan's actual experience and what the assumptions predicted.

There were no significant changes in plan benefits or eligibility conditions since the prior valuation.

However, the allocation of HIC benefits to members employed by multiple employers changed:

- The previous allocation method charged the final employer providing HIC benefits, the full cost of the member's earned HIC benefit.
- The current method allocates the member's HIC benefit between all employers, for which the member worked and the employer provided HIC benefits. The allocation is based on a combination of service and benefit accrual level (i.e., \$4 vs. \$1.5 vs. \$2.5).

- As a result of the method change a new membership classification exists beginning with the June 30, 2022 valuation, Inactive, Active Elsewhere in VRS, as shown on pages 6 through 11.

Additionally, retiree and disabled counts may have increased due to participants who worked across multiple employers. Some Political Subdivision plans made changes to HIC benefits, namely schools electing an extra \$1 per month of service. In aggregate the impact of these changes on the Political Subdivision plans is not significant. Please refer to the individual reports for the benefit provisions of each of the Political Subdivision plans.

4. Reasons for Change (Concluded)

There were no changes in the valuation assumptions since the last valuation. Plan experience differed from expectations as follows:

- For the period ending June 30, 2022, the VRS reported an investment return of 0.6% on a market value basis, compared to the assumed level of 6.75%. For the HIC – State Employees and HIC – Teachers, under the asset valuation method, investment gains and losses are spread over a 5-year period. Partial recognition of this year's loss, combined with the continued phase-in of investment gains and losses from prior years resulted in a net recognized asset gain for both plans and a resulting 7.60% and 7.69% return on the funding value of assets, respectively.
- Results for 161 Participating Political Subdivision Employers include an additional contribution rate applied to plans with funding levels below 75%.
- In the absence of relevant data for participating political subdivisions offering HIC benefits under House Bill (HB) 1513, passed during the 2020 legislative session, the prior valuation assumed that 100% of eligible retired members would elect HIC benefits. This valuation reflects actual elections.

5. Change in Service Provider

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



Actuary's Certification Letter: OPEB Plans – Line of Duty Act (LODA) Fund



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April 4, 2023

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

Dear Trustees:

The results of the June 30, 2022 annual actuarial valuation of the Virginia Retirement System (VRS) Line of Duty Act (LODA) Fund are presented in this report (see employers.varetire.org/media/shared/pdf/valuations/valuation-report-2022-loda.pdf). This report was prepared at the request of the Board and is intended for use by the VRS and those designated or approved by the Board. This report may be provided to parties other than the VRS only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purpose of the valuation is to provide pay-as-you-go full-time equivalent employer contribution rate for the Fiscal Year ending June 30, 2024 and to develop an Actuarially Determined Employer Contribution Rate (ADEC) to be used in Governmental Accounting Standards Board (GASB) Statement Nos. 74 and 75 reporting. This report should not be relied on for any other purpose.

Future actuarial measurements may differ significantly from those presented in this report due to such factors as experience differing from that anticipated by actuarial assumptions, changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. This valuation was based on the assumption that the participating employers will continue to be able to make any contributions necessary to fund the plan in the future. A determination of the participating employers' ability to make the necessary contributions in the future is beyond the scope of our expertise and was not performed by us.

The findings in this report are based on data and other information through June 30, 2022. The valuation was based upon information furnished by the VRS, concerning LODA health care claims, financial transactions, plan provisions and active members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the VRS.

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

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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.

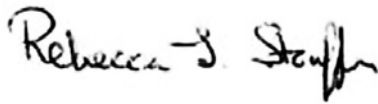
Financial results were prepared using our financing model which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents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

This report was prepared during the COVID-19 pandemic, which is likely to influence demographic, economic and health care experience, at least in the short term. Results in this report are developed based on available data without adjustment. We will continue to monitor these developments and their impact on the Fund. Actual experience will be reflected in each subsequent report, as experience emerges.

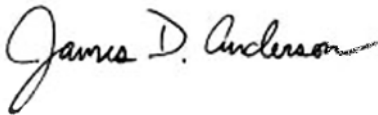
This report was prepared using assumptions adopted by the Board. All actuarial assumptions used in this report are reasonable for the purposes of this valuation. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the Plan as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Rebecca L. Stouffer, Kurt Dosson, James D. Anderson and Michael D. Kosciuk are Members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor.

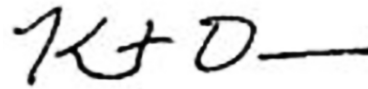
Respectfully submitted,
Gabriel, Roeder, Smith & Company



Rebecca L. Stouffer, ASA, FCA, MAAA



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



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Michael D. Kosciuk, FSA, EA, FCA, MAAA

RLS/KD/JDA/MDK:sc

Executive Summary

1. Introduction and Purpose

This report contains the results of the June 30, 2022 actuarial valuation of the LODA Fund. The historic practice has been that odd year valuations develop the Full-Time Equivalent (FTE) employer contribution rate to fund the plan on a pay-as-you-go basis. Each odd year valuation develops a flat annual contribution rate for two years, such that the resulting Fund balance at the end of the biennium is \$0. For example, the June 30, 2021 valuation developed the fiscal year 2023 and 2024 FTE employer contribution rate.

Even year valuations, such as this one, generally provide intermediate results and updates on the current and projected Fund status for informational purposes.

In the process of developing the informational results for the June 30, 2022 actuarial valuation, it was determined a revision to the previously established fiscal year 2024 FTE employer contribution rate was necessary in order to maintain short-term solvency of the Fund (please see item 2).

2. Development of LODA Fund FTE Employer Contribution Rate

Using scheduled fiscal year 2023 contributions and projected fiscal year 2024 contributions (based on the current 2024 Board certified FTE rate of \$681.84), the two-year cycle ending June 30, 2024 projects the Fund to be insolvent. The primary cause of the deficiency is a decrease in the count of eligible active participants, and thus a decrease in the amount of projected FTE employer contributions.

As a result, this June 30, 2022 valuation recommends an adjusted fiscal year 2024 rate to ensure the Fund will have sufficient monies available to pay projected benefits. This valuation develops a revised fiscal year 2024 FTE employer contribution rate based on:

- Updated asset information at June 30, 2022 of \$7,213,739;
- Updated 2022 Department of Human Resource Management (DHRM) invoice premiums and participant and beneficiary data;
- Scheduled FTE employer contributions of \$13,254,190;
- No projected investment income for fiscal year 2023;
- Establishing a reserve at the end of each two-year cycle equal to approximately one month's worth of benefit payments; and
- Implementation of integer FTE employer contribution rates, rounded to the nearest \$5 increment.

At the November 15, 2022 Board of Trustees meeting, a FTE employer contribution rate of \$830 was recommended and approved for FY 2024.

3. Experience

There are three general reasons why rates change from one valuation to the next. The first is a change in the benefits or eligibility conditions of the plan. The second is a change in the valuation assumptions used to project future occurrences. The third is the difference during the year between the plan's actual experience and what the assumptions expected.

There were no significant changes in plan benefits or eligibility conditions since the prior valuation.

Changes in valuation assumptions since the last valuation follow:

- Age grading factors for medical and prescription drug costs are updated based on aging on claims utilization tables developed by the Society of Actuaries in 2013;
- Age grading is removed from Medicare Part B premiums;
- Health care cost trend rates were reset; and
- Medicare Part B trend rates were updated to reflect the 2022 Medicare Trustees report.
- Plan experience differed from expectations as follows:
- For the period ending June 30, 2022, the VRS reported investment return of 0.6% on a market value basis fell short of the assumed level of 6.75%;

- The number of FTE active participants decreased from 19,087 to 17,900; and
- The Department of Human Resource Management (DHRM) provided updated monthly invoice
- costs for LODA beneficiaries:
 - Pre-Medicare premiums increased roughly 6.7%, versus 7.0% expected;
 - Medicare eligible premiums increased roughly 1.0%, versus 5.25% expected; and
 - Medicare Part B premiums decreased roughly 3.1%, versus an increase of 6.97% expected.

See page 7 for additional details of the impact of assumption changes and plan experience.

4. General Comments

Section 9.1-400.1 of the *Code of Virginia* requires participating employers to make annual contributions to the Fund as determined by VRS. The amount of the contribution for each participating employer shall be determined on a current disbursement basis (i.e., pay-as-you-go) in accordance with the provisions of the Act. The Fund shall be used to provide the benefits of the Act to eligible disabled persons, deceased persons, dependents, and spouses on behalf of participating employers and to pay related administrative costs. Any moneys remaining in the Fund at the end of a biennium cycle shall not revert to the general fund but remain in the Fund.

In this report, employer contributions per FTE are computed for fiscal year 2024 such that projected assets at the end of fiscal year 2024 (the end of the biennium cycle) are expected to be sufficient to cover costs for the two-year period and provide approximately a one-month benefit reserve. Future biennium LODA Fund contributions are projected to increase, due to the following:

- Health care inflation;
- A projected increase in the number of beneficiaries; and
- A projected static FTE employee count.

Lastly, the Actuarially Determined Contribution Rate (ADEC) for GASB Statement No. 74 reporting purposes increased from the prior valuation result of \$1,705.75 per FTE for fiscal year 2023 to \$1,917.15 per FTE for fiscal year 2024.



The Actuarial Section for VRS-administered Other Post-Employment Benefit (OPEB) Plans presents information about the assumptions adopted by the Board of Trustees and used by the VRS actuaries to evaluate the funded status of these plans. This information includes assumptions about retirements, disabilities, terminations and salary increase rates. The section also provides a summary of OPEB plan provisions and changes.

Summary of Actuarial Assumptions and Methods

On April 26, 2021, the VRS Board of Trustees adopted most of the actuarial assumptions and methods on the recommendation of its actuary. The following assumptions include the Group Life Insurance Program, the Retiree Health Insurance Credit Program, the Virginia Sickness and Disability

Program, the Virginia Local Disability Program and the Line of Duty Act Program. They were based on an analysis of plan experience for the four-year period July 1, 2016, through June 30, 2020, and were used for the June 30, 2022, valuation.

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS: OTHER POST-EMPLOYMENT BENEFIT (OPEB) PLANS

Actuarial Assumptions and Methods	Group Life Insurance Program	Retiree Health Insurance Credit Program	Virginia Sickness and Disability Program	Line of Duty Act Program	Virginia Local Disability Program
Valuation Interest Rate	6.75%	6.75%	6.75%	6.75%	6.75%
Salary Scale Inflation Factor	2.5%	2.5%	2.5%	2.5%	2.5%
Actuarial Cost Method	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal
Amortization Method	Level Percent of Pay	Level Percent of Pay	Level Percent of Pay	Level Percent of Pay	Level Percent of Pay
	Closed	Closed	Closed	Open	Closed
Payroll Growth Rate	3%	3%	3%	3%	3%
Assets Valuation Method – State and Teacher	5-Year Smoothed Market	5-Year Smoothed Market	5-Year Smoothed Market	Market Value	5-Year Smoothed Market
Assets Valuation Method – Political Subdivisions	5-Year Smoothed Market	Market Value*	N/A	Market Value	5-Year Smoothed Market

* Includes state-funded retiree health insurance for certain local government employees.

SOLVENCY TEST: OPEB PLANS

(EXPRESSED IN THOUSANDS)

Valuation Date (June 30)	Aggregate Accrued Liabilities for				Valuation Assets	Portion of Accrued Liabilities Covered by Assets		
	(1) Active Member	(2) Retirees and	(3) Active Members*			(1)	(2)	(3)
	Contributions	Beneficiaries						
GROUP LIFE INSURANCE								
2022	N/A	\$ 1,281,339	\$ 1,281,339	\$ 2,392,750	N/A	100.00%	—%	
2021	N/A	2,315,129	1,209,335	2,135,187	N/A	92.23%	—%	
2020	N/A	2,265,657	1,317,474	1,905,233	N/A	84.09%	—%	
2019	N/A	2,071,215	1,343,107	1,741,406	N/A	84.08%	—%	
2018	N/A	1,901,090	1,265,443	1,574,017	N/A	82.80%	—%	
2017	N/A	1,786,401	1,238,317	1,410,087	N/A	78.93%	—%	
2016	N/A	1,749,825	1,224,643	1,247,564	N/A	71.30%	—%	
2015	N/A	1,633,937	1,195,167	1,128,876	N/A	69.09%	—%	
2014	N/A	1,522,758	1,178,751	992,221	N/A	65.16%	—%	
2013	N/A	1,422,423	1,149,268	836,547	N/A	58.81%	—%	
RETIREE HEALTH INSURANCE CREDIT – STATE EMPLOYEES**								
2022	N/A	\$ 706,825	\$ 319,491	\$ 224,132	N/A	31.71%	—%	
2021	N/A	707,502	337,161	191,829	N/A	27.11%	—%	
2020	N/A	690,846	333,597	129,901	N/A	18.80%	—%	
2019	N/A	683,387	343,365	109,417	N/A	16.01%	—%	
2018	N/A	651,476	344,183	96,294	N/A	14.78%	—%	
2017	N/A	638,266	352,458	79,451	N/A	12.45%	—%	
2016	N/A	610,570	377,071	70,798	N/A	11.60%	—%	
2015	N/A	594,098	382,428	67,164	N/A	11.31%	—%	
2014	N/A	577,291	384,851	60,645	N/A	10.51%	—%	
2013	N/A	562,448	382,134	54,773	N/A	9.74%	—%	
RETIREE HEALTH INSURANCE CREDIT – TEACHERS								
2022	N/A	\$ 934,044	\$ 523,594	\$ 220,590	N/A	23.62%	—%	
2021	N/A	933,691	537,706	177,304	N/A	18.99%	—%	
2020	N/A	905,279	525,259	149,949	N/A	16.56%	—%	
2019	N/A	896,306	529,577	130,043	N/A	14.51%	—%	
2018	N/A	851,963	527,110	113,136	N/A	13.28%	—%	
2017	N/A	832,771	525,150	96,987	N/A	11.65%	—%	
2016	N/A	811,164	540,039	86,701	N/A	10.69%	—%	
2015	N/A	786,781	538,634	85,379	N/A	10.85%	—%	
2014	N/A	761,301	536,420	79,177	N/A	10.40%	—%	
2013	N/A	728,612	529,180	67,012	N/A	9.20%	—%	
RETIREE HEALTH INSURANCE CREDIT – STATE-FUNDED LOCALITY BENEFITS								
2022	N/A	\$ 32,909	\$ 15,735	\$ 10,365	N/A	31.50%	—%	
2021	N/A	31,397	17,267	9,183	N/A	29.25%	—%	
2020	N/A	29,727	17,612	7,174	N/A	24.13%	—%	
2019	N/A	28,937	17,811	6,840	N/A	23.64%	—%	
2018	N/A	27,195	17,259	4,655	N/A	17.12%	—%	
2017	N/A	25,791	17,444	3,552	N/A	13.77%	—%	
2016	N/A	24,167	17,836	2,351	N/A	9.73%	—%	
2015	N/A	22,440	18,172	2,042	N/A	9.10%	—%	
2014	N/A	21,179	18,120	4,145	N/A	19.57%	—%	
2013	N/A	20,001	17,794	1,510	N/A	7.55%	—%	

* Data for prior fiscal years is unavailable.

** Includes Long-Term Care. Values prior to June 30, 2015, reflect Long-Term Disability only.

SOLVENCY TEST: OPEB PLANS, cont.

(EXPRESSED IN THOUSANDS)

RETIREE HEALTH INSURANCE CREDIT – POLITICAL SUBDIVISIONS								
2022	N/A	\$	45,470	\$	29,812	\$	35,541	N/A 78.16% —%
2021	N/A		50,835		31,956		33,333	N/A 65.57% —%
2020	N/A		44,880		31,792		24,468	N/A 54.52% —%
2019	N/A		41,097		31,758		24,468	N/A 59.54% —%
2018	N/A		22,409		18,534		23,161	N/A 100.00% 4.06%
2017	N/A		21,326		17,974		22,167	N/A 100.00% 4.68%
2016	N/A		20,216		18,026		19,337	N/A 95.65% —%
2015	N/A		19,286		17,626		19,348	N/A 100.00% 0.35%
2014	N/A		17,371		17,826		18,605	N/A 100.00% 6.92%
2013	N/A		16,268		17,036		16,137	N/A 99.19% —%
VIRGINIA SICKNESS AND DISABILITY PROGRAM – LONG-TERM DISABILITY (LTD) BENEFITS								
2022**	N/A	\$	163,999	\$	131,429	\$	586,619	N/A 100.00% 475.10%
2021**	N/A		170,851		79,252		547,379	N/A 100.00% 475.10%
2020**	N/A		171,585		77,284		505,236	N/A 100.00% 431.72%
2019**	N/A		170,146		78,366		484,986	N/A 100.00% 401.76%
2018**	N/A		187,514		77,778		460,466	N/A 100.00% 350.94%
2017**	N/A		160,283		66,229		437,372	N/A 100.00% 418.38%
2016**	N/A		156,449		84,437		416,248	N/A 100.00% 307.68%
2015**	N/A		156,796		78,451		398,609	N/A 100.00% 308.23%
2014	N/A		138,511		50,027		325,354	N/A 100.00% 373.48%
2013	N/A		132,842		50,104		313,480	N/A 100.00% 360.53%
VIRGINIA LOCAL DISABILITY PROGRAM – TEACHERS								
2022**	N/A	\$	2,465	\$	6,511	\$	7,287	N/A 100.00% 74.06%
2021**	N/A		1,203		3,899		5,028	N/A 100.00% 98.10%
2020**	N/A		639		2,694		2,973	N/A 100.00% 86.64%
2019**	N/A		806		1,816		1,662	N/A 100.00% 47.14%
2018**	N/A		271		1,112		674	N/A 100.00% 36.24%
2017**	N/A		103		709		324	N/A 100.00% 31.17%
2016**	N/A		132		307		57	N/A 43.18% —%
2015**	N/A		15		162		48	N/A 100.00% 20.37%
2014*	N/A		N/A		N/A		N/A	N/A —% —%
VIRGINIA LOCAL DISABILITY PROGRAM – POLITICAL SUBDIVISIONS								
2022**	N/A	\$	3,369	\$	4,069	\$	7,946	N/A 100.00% 112.48%
2021**	N/A		2,641		2,364		5,604	N/A 100.00% 100.00%
2020**	N/A		1,841		1,911		3,425	N/A 100.00% 82.89%
2019**	N/A		1,511		1,306		1,971	N/A 100.00% 35.22%
2018**	N/A		1,571		1,161		853	N/A 54.30% —%
2017**	N/A		361		464		413	N/A 100.00% 11.21%
2016**	N/A		135		243		52	N/A 38.52% —%
2015**	N/A		30		106		30	N/A 100.00% —%
2014*	N/A		N/A		N/A		N/A	N/A —% —%
LINE OF DUTY ACT PROGRAM								
2022	N/A	\$	219,320	\$	52,854	\$	7,214	N/A 3.29% —%
2021	N/A		215,991		39,274		7,553	N/A 3.50% —%
2020	N/A		256,627		38,828		4,333	N/A 1.69% —%
2019	N/A		248,195		36,990		2,839	N/A 1.14% —%
2018	N/A		257,076		36,766		1,889	N/A 0.73% —%
2017	N/A		233,193		37,186		3,461	N/A 1.48% —%
2016	N/A		192,578		32,105		2,708	N/A 1.41% —%
2015	N/A		169,288		76,520		728	N/A 0.43% —%
2014	N/A		152,120		73,696		—	N/A —% —%
2013	N/A		139,835		64,249		—	N/A —% —%

SOLVENCY TEST: OPEB PLANS, cont.

* Data for prior fiscal years is unavailable.

** Includes Long-Term Care. Values prior to June 30, 2015, reflect Long-Term Disability only.

The progress of a plan in accumulating assets to pay benefits when due can be measured by examining the extent to which assets accumulated for benefits cover 1) any active member contributions to the plan; 2) liabilities for future benefits to retirees and beneficiaries; and 3) liabilities for the employer-financed portion of service already rendered by active members. In a plan receiving actuarially determined employer contributions, the liabilities for future benefits to retirees and beneficiaries will generally be fully covered by accumulated assets. In addition, the liabilities for service already rendered will be partially covered by the remainder of the accumulated assets and will increase over time.

SCHEDULE OF ACTIVE MEMBER VALUATION DATA: OPEB PLANS

Valuation Date (June 30)	Active Members			
	Number	Annual Payroll (000s)	Average Annual Pay	Annualized % Change in Average Pay
GROUP LIFE INSURANCE				
2022	362,386	\$ 22,887,363	\$ 63,157	7.67%
2021	358,905	21,052,089	58,656	3.60%
2020	361,306	20,456,977	56,620	1.55%
2019	367,627	20,498,084	55,758	3.69%
2018	367,903	19,783,323	53,773	2.14%
2017	365,149	19,222,759	52,644	4.21%
2016	362,678	18,321,880	50,518	2.34%
2015	360,873	17,813,570	49,362	1.44%
2014	360,855	17,559,285	48,660	2.56%
2013	361,080	17,132,176	47,447	2.47%
RETIREE HEALTH INSURANCE CREDIT – STATE EMPLOYEES*				
2022	107,975	\$ 7,990,179	\$ 74,000	7.90%
2021	108,528	7,442,699	68,579	5.26%
2020	110,834	7,221,134	65,153	0.87%
2019	106,948	6,907,506	64,588	4.37%
2018	107,234	6,635,983	61,883	3.15%
2017	108,027	6,480,712	59,992	2.37%
2016	107,840	6,319,509	58,601	3.74%
2015	107,200	6,055,429	56,487	1.73%
2014	106,815	5,930,862	55,525	3.57%
2013	106,780	5,724,611	53,611	1.22%
RETIREE HEALTH INSURANCE CREDIT – TEACHERS				
2022	153,356	\$ 9,713,588	\$ 63,340	5.76%
2021	149,793	8,971,605	59,893	1.27%
2020	150,681	8,911,307	59,140	2.63%
2019	149,396	8,608,489	57,622	3.01%
2018	151,585	8,479,023	55,936	1.33%
2017	150,416	8,303,502	55,204	7.30%
2016	149,018	7,666,824	51,449	1.44%
2015	147,645	7,488,507	50,720	1.25%
2014	146,977	7,362,793	50,095	2.61%
2013	147,257	7,188,884	48,819	2.60%

SCHEDULE OF ACTIVE MEMBER VALUATION DATA: OPEB PLANS, cont.

RETIREE HEALTH INSURANCE CREDIT – STATE-FUNDED LOCALITY BENEFITS					
2022	20,051	\$ 1,174,310	\$ 58,566		8.95%
2021	19,847	1,066,874	53,755		3.19%
2020	20,169	1,050,666	52,093		2.42%
2019	19,582	995,936	50,860		3.59%
2018	18,836	924,785	49,097		1.85%
2017	18,532	893,334	48,205		1.30%
2016	18,006	856,824	47,585		1.37%
2015	17,535	823,153	46,943		0.79%
2014	16,894	786,875	46,577		1.00%
2013	16,093	742,121	46,115		4.07%
RETIREE HEALTH INSURANCE CREDIT – POLITICAL SUBDIVISIONS					
2022	36,427	\$ 1,670,364	\$ 45,855		10.79%
2021	36,426	1,507,656	41,390		4.02%
2020	37,398	1,488,073	39,790		2.87%
2019	37,248	1,440,731	38,679		(14.99)%
2018	23,034	1,048,068	45,501		3.52%
2017	22,478	987,951	43,952		1.80%
2016	21,846	943,186	43,174		2.32%
2015	21,339	900,390	42,195		0.83%
2014	20,921	875,485	41,847		1.51%
2013	20,534	846,523	41,225		3.92%
VIRGINIA SICKNESS AND DISABILITY PROGRAM					
2022	75,692	\$ 4,907,916	\$ 64,841		8.44%
2021	76,529	4,576,046	59,795		6.21%
2020	77,848	4,382,943	56,301		(0.07)%
2019	79,105	4,456,996	56,343		6.06%
2018	75,164	3,993,073	53,125		3.82%
2017	73,620	3,767,055	51,169		1.13%
2016	75,410	3,815,678	50,599		3.74%
2015	74,367	3,627,297	48,776		1.21%
2014	74,399	3,585,486	48,193		2.94%
2013	74,178	3,472,669	46,815		0.50%
VIRGINIA LOCAL DISABILITY PROGRAM – TEACHERS					
2022	16,592	\$ 801,003	\$ 48,276		7.57%
2021	14,312	642,284	44,877		2.32%
2020	13,027	571,356	43,859		4.61%
2019	11,047	463,174	41,928		3.57%
2018	9,332	377,798	40,484		(4.05)%
2017	7,239	305,446	42,195		9.31%
2016	5,001	193,042	38,601		3.69%
2015	2,796	104,087	37,227		13.53%
2014**	282	9,247	32,791		N/A
VIRGINIA LOCAL DISABILITY PROGRAM – POLITICAL SUBDIVISIONS					
2022	12,374	\$ 537,869	\$ 43,468		13.17%
2021	11,017	423,151	38,409		4.38%
2020	10,672	392,684	36,796		3.04%
2019	9,447	337,363	35,711		5.42%
2018	7,915	268,121	33,875		3.66%
2017	6,331	206,895	32,680		3.42%
2016	4,675	147,729	31,600		4.33%
2015	2,917	88,350	30,288		3.67%
2014**	845	24,688	29,217		N/A

* State employees includes state, SPORS, JRS, VaLORS, ORP and UVA.

** Data for prior fiscal years is unavailable.

SCHEDULE OF RETIREE AND BENEFICIARY VALUATION DATA: OPEB PLANS

GROUP LIFE INSURANCE								
Valuation Date (June 30)	Retirees					Insurance Amount	Annualized % Increase in Life Insurance Amount	Average Life Insurance Amount
	Added to Rolls		Removed from Rolls		Total			
	Number	Amount	Number	Amount				
2022 ¹	10,572	\$ 1,344,537,000	6,537	\$ 501,845,000	210,288	\$ 9,366,554,000	9.89%	\$ 44,542
2021	12,528	1,457,980,000	14,919	1,358,144,000	206,253	8,523,862,000	1.19%	41,327
2020	23,194	1,799,018,000	6,571	1,136,382,000	208,644	8,423,934,000	8.54%	40,375
2019	12,091	1,480,985,000	5,675	1,074,045,000	192,021	7,761,298,000	5.53%	40,419
2018	11,464	1,357,284,000	5,269	1,071,515,000	185,605	7,354,358,000	4.04%	39,624
2017	11,212	1,281,014,000	4,936	2,445,277,000	179,410	7,068,589,000	(14.14)%	39,399
2016	11,550	1,324,900,000	4,564	895,728,000	173,134	8,232,852,000	5.50%	47,552
2015	11,429	1,275,150,000	4,519	840,576,000	166,148	7,803,680,000	5.90%	46,968
2014	10,922	1,206,647,000	4,306	843,669,000	159,238	7,369,106,000	5.18%	46,277
2013	10,511	1,148,100,000	4,203	800,829,000	152,622	7,006,128,000	5.22%	45,905
RETIREE HEALTH INSURANCE CREDIT – STATE EMPLOYEES*								
Valuation Date (June 30)	Retirees					Current Total Annual Health Insurance Credit	Annualized % Increase in Health Insurance Credit	Average Annual Health Insurance Credit
	Added to Rolls		Removed from Rolls		Total			
	Number	Amount	Number	Amount				
2022 ¹	6,038	\$ —	—	\$ 1,911,000	58,621	\$ 75,746,000	(2.46)%	\$ 1,292
2021	3,025	4,420,000	2,315	4,301,000	52,583	77,657,000	0.15%	1,477
2020	2,865	4,452,000	2,070	3,026,000	51,873	77,538,000	1.87%	1,495
2019	7,854	11,734,000	1,517	2,176,000	51,078	76,112,000	14.36%	1,490
2018	2,558	3,779,000	4,105	5,981,000	44,741	66,554,000	(3.20)%	1,488
2017	3,364	4,928,000	1,734	2,671,000	46,288	68,756,000	3.39%	1,485
2016	2,881	4,332,000	1,663	2,369,000	44,658	66,499,000	3.06%	1,489
2015	2,869	4,226,000	1,618	2,357,000	43,440	64,524,000	2.98%	1,485
2014	2,652	4,044,000	1,548	2,212,000	42,189	62,655,000	3.01%	1,485
2013	2,542	3,765,000	1,503	2,112,000	41,085	60,823,000	2.79%	1,480
RETIREE HEALTH INSURANCE CREDIT – TEACHERS								
Valuation Date (June 30)	Retirees					Current Total Annual Health Insurance Credit	Annualized % Increase in Health Insurance Credit	Average Annual Health Insurance Credit
	Added to Rolls		Removed from Rolls		Total			
	Number	Amount	Number	Amount				
2022 ¹	4,440	\$ —	—	\$ 2,856,000	76,012	\$ 95,201,000	(2.91)%	\$ 1,252
2021	3,959	5,274,000	2,085	2,864,000	71,572	98,057,000	2.52%	1,370
2020	3,180	4,275,000	2,283	3,054,000	69,698	95,647,000	1.29%	1,372
2019	4,054	5,283,000	1,585	2,163,000	68,801	94,426,000	3.42%	1,372
2018	3,511	4,719,000	1,534	2,067,000	66,332	91,306,000	2.99%	1,377
2017	3,412	4,565,000	1,470	1,984,000	64,355	88,654,000	3.00%	1,378
2016	3,649	4,913,000	1,329	1,795,000	62,413	86,073,000	3.76%	1,379
2015	3,465	4,714,000	1,493	2,016,000	60,093	82,955,000	3.36%	1,380
2014	3,729	5,075,000	1,291	1,752,000	58,121	80,257,000	4.32%	1,381
2013	3,557	5,016,000	1,389	1,918,000	55,683	76,934,000	4.20%	1,382

* State employees include state, SPORS, JRS, VaLORS, ORP and UVA.

SCHEDULE OF RETIREE AND BENEFICIARY VALUATION DATA: OPEB PLANS, cont.

RETIREE HEALTH INSURANCE CREDIT – STATE-FUNDED LOCALITY BENEFITS									
Valuation Date (June 30)	Retirees					Current Total Annual Health Insurance Credit	Annualized % Increase in Health Insurance Credit	Average Annual Health Insurance Credit	
	Added to Rolls		Removed from Rolls		Total				
	Number	Amount	Number	Amount					
2022¹	389	\$ —	—	\$ 312,000	6,869	\$ 2,982,000	(9.47%)	\$ 434	
2021	444	221,000	216	110,000	6,480	3,294,000	3.49%	508	
2020	366	194,000	189	112,000	6,252	3,183,000	2.64%	509	
2019	432	237,000	189	94,000	6,075	3,101,000	4.83%	510	
2018	439	218,000	115	58,000	5,832	2,958,000	5.72%	507	
2017	440	217,000	133	63,000	5,508	2,798,000	5.82%	508	
2016	518	270,000	152	78,000	5,201	2,644,000	7.83%	508	
2015	410	206,000	123	60,000	4,835	2,452,000	6.33%	507	
2014**	N/A	N/A	N/A	N/A	4,548	2,306,000	N/A	507	
RETIREE HEALTH INSURANCE CREDIT – POLITICAL SUBDIVISIONS									
Valuation Date (June 30)	Retirees					Current Total Annual Health Insurance Credit	Annualized % Increase in Health Insurance Credit	Average Annual Health Insurance Credit	
	Added to Rolls		Removed from Rolls		Total				
	Number	Amount	Number	Amount					
2022¹	—	\$ —	618	\$ 1,545,000	11,021	\$ 4,048,000	(27.62%)	\$ 367	
2021	898	440,000	524	53,000	11,639	5,593,000	7.43%	481	
2020	780	420,000	414	203,000	11,265	5,206,000	4.35%	462	
2019	5,937	2,665,000	151	191,000	10,899	4,989,000	98.37%	458	
2018	439	216,000	156	84,000	5,113	2,515,000	5.54%	492	
2017	394	188,000	166	80,000	4,830	2,383,000	4.75%	493	
2016	400	198,000	140	70,000	4,602	2,275,000	5.96%	494	
2015	448	219,000	130	63,000	4,342	2,147,000	7.84%	494	
2014**	N/A	N/A	N/A	N/A	4,024	1,991,000	N/A	495	
VIRGINIA SICKNESS AND DISABILITY PROGRAM									
Valuation Date (June 30)	Retirees					Current Total Annual LTD Payments	Annualized % Increase in LTD Payments	Average Annual LTD Payment	
	Added to Rolls		Removed from Rolls		Total				
	Number	Amount	Number	Amount					
2022¹	277	\$ 6,111,000	291	\$ 3,588,000	2,346	\$ 32,640,000	8.38%	\$ 13,913	
2021	322	6,590,000	410	7,003,000	2,360	30,117,000	(1.35%)	12,761	
2020	299	6,044,000	391	6,237,000	2,448	30,530,000	(0.63%)	12,471	
2019	305	5,978,000	418	7,456,000	2,540	30,723,000	(4.59%)	12,096	
2018	339	5,994,000	407	4,424,000	2,653	32,201,000	5.13%	12,138	
2017	366	6,428,000	441	6,696,000	2,721	30,631,000	(0.87%)	11,257	
2016	377	6,507,000	423	6,734,000	2,796	30,899,000	(0.73%)	11,051	
2015	466	7,293,000	325	4,112,000	2,842	31,126,000	13.95%	10,952	
2014	369	6,103,000	305	4,567,000	2,701	27,315,000	5.96%	10,113	
2013	401	6,256,000	434	4,707,000	2,637	25,779,000	6.39%	9,776	

SCHEDULE OF RETIREE AND BENEFICIARY VALUATION DATA: OPEB PLANS, cont.

Valuation Date (June 30)	VIRGINIA LOCAL DISABILITY PROGRAM – TEACHERS							
	Retirees					Current	Annualized %	Average
	Added to Rolls		Removed from Rolls		Total	Total Annual LTD Payments	Increase in LTD Payments	Annual LTD Payment
	Number	Amount	Number	Amount				
2022 ¹	28	\$ 537,000	5	65,000	39	\$ 680,000	226.92 %	\$ 17,436
2021	10	184,000	3	48,000	16	208,000	188.89 %	13,000
2020	6	61,000	4	61,000	9	72,000	— %	8,000
2019	4	33,000	3	36,000	7	72,000	(4)%	10,286
2018	6	75,000	—	—	6	75,000	N/A	12,500
2017	—	—	1	11,000	—	—	N/A	N/A
2016	1	11,000	—	—	1	11,000	N/A	11,000
2015	—	—	—	—	—	—	N/A	N/A
2014**	—	—	—	—	—	—	N/A	N/A

VIRGINIA LOCAL DISABILITY PROGRAM – POLITICAL SUBDIVISIONS									
Valuation Date (June 30)	Retirees					Current	Annualized %	Average	
	Added to Rolls		Removed from Rolls		Total	Total Annual LTD Payments	Increase in LTD Payments	Annual LTD Payment	
	Number	Amount	Number	Amount					
2022 ¹	44	\$ 756,000	11	261,000	87	\$ 1,167,000	73.66 %	\$ 13,414	
2021	34	517,000	16	107,000	54	672,000	156.49 %	12,444	
2020	13	116,000	5	161,000	36	262,000	(14.66)%	7,278	
2019	11	178,000	8	184,000	28	307,000	(1.92)%	10,964	
2018	20	244,000	—	—	25	313,000	353.62 %	12,520	
2017	5	69,000	—	—	5	69,000	N/A	13,800	
2016	—	—	—	—	—	—	N/A	N/A	
2015	—	—	—	—	—	—	N/A	N/A	
2014 ^{**}	—	—	—	—	—	—	N/A	N/A	

** Data for prior fiscal years is unavailable.

¹ Starting in 2022 with the transition to a new actuary, members with benefits in more than one plan or political subdivision are counted for each plan/ political subdivision that comprises the benefit. Only unique counts are available prior to this.

FIGURE 4.7: RETIREMENT RATES – OPEB PLANS

Sample retirement rates for eligible members are shown below. For the Retiree Health Insurance Credit, 95% of the state employees, teachers, state police officers, Virginia law officers and judges who retire with 15 or more years of service will utilize the benefit. For all political subdivision employees, 85% of the employees with 15 or more years of service will utilize the benefit.

State Employees

Plan 1 – Male						
Years of Service						
Age	5	6-9	10	11-29	30	>31
50	—%	—%	3.25%	3.25%	12.50%	12.50%
55	4.50%	4.50%	4.50%	3.50%	8.00%	9.00%
59	4.50%	4.00%	4.00%	4.00%	10.00%	9.00%
60	4.50%	5.00%	5.00%	5.00%	11.50%	9.00%
61	15.00%	7.50%	7.50%	7.50%	17.00%	15.00%
62	15.00%	10.00%	10.00%	10.00%	17.00%	20.00%
64	15.00%	13.50%	13.50%	13.50%	17.00%	17.50%
65	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
67	27.50%	22.00%	22.00%	22.00%	22.00%	22.00%
70	20.00%	22.00%	22.00%	22.00%	22.00%	22.00%
>80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

State Employees

Plan 1 – Female						
Years of Service						
Age	5	6-9	10	11-29	30	>31
50	—%	—%	4.00%	4.00%	7.50%	7.50%
55	5.00%	5.00%	5.00%	4.00%	7.50%	8.00%
59	5.00%	5.00%	5.00%	5.00%	12.00%	9.00%
60	5.00%	5.50%	5.50%	5.50%	12.00%	12.50%
61	7.50%	8.00%	8.00%	8.00%	12.00%	16.00%
62	10.00%	12.00%	12.00%	12.00%	22.50%	20.00%
64	17.50%	15.00%	15.00%	15.00%	22.50%	17.50%
65	27.50%	27.50%	27.50%	27.50%	27.50%	30.00%
67	30.00%	25.00%	25.00%	25.00%	25.00%	25.00%
70	25.00%	27.00%	27.00%	27.00%	27.00%	27.00%
>80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

FIGURE 4.7: RETIREMENT RATES – OPEB PLANS, cont.

State Employees

Plan 2 and Hybrid – Male							
Years of Service							
Age	30	31	33	35	37	39	>40
50	—%	—%	—%	—%	—%	8.00%	8.00%
55	—%	—%	—%	8.00%	8.00%	8.00%	8.00%
59	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
60	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
61	8.00%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
62	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
64	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
65	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
67	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
70	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
>80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Rate is 11.50% when age plus service equals 90.

State Employees

Plan 2 and Hybrid – Female							
Years of Service							
Age	30	31	33	35	37	39	>40
50	—%	—%	—%	—%	—%	8.00%	8.00%
55	—%	—%	—%	8.00%	8.00%	8.00%	8.00%
59	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
60	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
61	8.00%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
62	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
64	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
65	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
67	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
70	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
>80	20.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Rate is 12.00% when age plus service equals 90.

FIGURE 4.7: RETIREMENT RATES – OPEB PLANS, cont.

Teachers

Plan 1 – Male						
Years of Service						
Age	5	6-9	10	11-29	30	>31
50	—%	—%	2.50%	2.50%	15.00%	15.00%
55	7.00%	7.00%	7.00%	5.00%	22.50%	15.00%
59	10.00%	7.00%	7.00%	7.00%	22.50%	15.00%
60	10.00%	7.50%	7.50%	7.50%	22.50%	17.00%
61	11.00%	12.00%	12.00%	12.00%	35.00%	23.00%
62	17.00%	15.00%	15.00%	15.00%	35.00%	30.00%
64	18.00%	15.00%	15.00%	15.00%	35.00%	25.00%
65	30.00%	30.00%	30.00%	30.00%	30.00%	34.00%
67	30.00%	34.00%	34.00%	34.00%	34.00%	34.00%
70	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
>80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Teachers

Plan 1 – Female						
Years of Service						
Age	5	6-9	10	11-29	30	>31
50	—%	—%	3.00%	3.00%	15.00%	15.00%
55	4.50%	4.50%	4.50%	5.00%	22.50%	16.00%
59	8.00%	7.00%	7.00%	7.00%	22.50%	17.00%
60	9.00%	8.50%	8.50%	8.50%	30.00%	20.00%
61	25.00%	11.00%	11.00%	11.00%	30.00%	25.00%
62	25.00%	15.00%	15.00%	15.00%	35.00%	30.00%
64	25.00%	20.00%	20.00%	20.00%	35.00%	28.00%
65	35.00%	35.00%	35.00%	35.00%	35.00%	40.00%
67	30.00%	32.00%	32.00%	32.00%	32.00%	32.00%
70	30.00%	32.00%	32.00%	32.00%	32.00%	32.00%
>80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

FIGURE 4.7: RETIREMENT RATES – OPEB PLANS, cont.

Teachers

Plan 2 and Hybrid – Male							
Years of Service							
Age	30	31	33	35	37	39	>40
50	—%	—%	—%	—%	—%	9.00%	9.00%
55	—%	—%	—%	9.00%	9.00%	9.00%	9.00%
59	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
60	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
61	14.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
62	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%
64	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
65	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
67	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
70	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
>80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Rate is 22.50% when age plus service equals 90.

Teachers

Plan 2 and Hybrid – Female							
Years of Service							
Age	30	31	33	35	37	39	>40
50	—%	—%	—%	—%	—%	9.00%	9.00%
55	—%	—%	—%	9.00%	9.00%	9.00%	9.00%
59	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
60	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
61	14.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
62	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%
64	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
65	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
67	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
70	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
>75	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Rate is 22.50% when age plus service equals 90.

FIGURE 4.7: RETIREMENT RATES – OPEB PLANS, cont.

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits –
Ten Largest Employers – Plan 1

Age	Male Years of Service					Female Years of Service				
	5	10	11-29	30	>31	5	10	11-29	30	>31
50	—%	6.50%	6.50%	10.00%	10.00%	—%	5.00%	5.00%	16.00%	16.00%
55	6.50%	6.50%	5.00%	10.00%	9.00%	7.00%	7.00%	5.50%	22.00%	15.00%
59	6.50%	4.00%	4.00%	10.00%	15.00%	10.50%	6.50%	6.50%	22.00%	16.00%
60	6.50%	6.00%	6.00%	10.00%	15.00%	10.50%	6.50%	6.50%	22.00%	16.00%
61	6.50%	9.00%	9.00%	10.00%	15.00%	10.50%	6.50%	6.50%	22.00%	16.00%
62	6.50%	9.00%	9.00%	25.00%	22.50%	10.50%	13.00%	13.00%	34.50%	25.00%
64	6.50%	15.00%	15.00%	25.00%	22.50%	10.50%	17.00%	17.00%	24.00%	27.50%
65	25.00%	25.00%	25.00%	25.00%	27.00%	28.00%	28.00%	28.00%	28.00%	27.50%
67	15.00%	25.00%	25.00%	25.00%	25.00%	15.00%	27.50%	27.50%	27.50%	27.50%
70	27.50%	20.00%	20.00%	20.00%	20.00%	15.00%	27.50%	27.50%	27.50%	27.50%
>80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits –
Ten Largest Employers – Plan 2 and Hybrid

Age	Male Years of Service								
	5	6-25	30	31	33	35	37	39	>40
50	—%	—%	—%	—%	—%	—%	—%	8.00%	8.00%
55	—%	—%	—%	—%	—%	8.00%	8.00%	8.00%	8.00%
59	—%	—%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
60	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
61	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
62	20.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
64	10.00%	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%
65	25.00%	25.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%
67	15.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
70	15.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
>80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

FIGURE 4.7: RETIREMENT RATES – OPEB PLANS, cont.

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits –
Ten Largest Employers – Plan 2 and Hybrid

Age	Female								
	Years of Service								
	5	6-25	30	31	33	35	37	39	>40
50	—%	—%	—%	—%	—%	—%	—%	8.00%	8.00%
55	—%	—%	—%	—%	—%	8.00%	8.00%	8.00%	8.00%
59	—%	—%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
60	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
61	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
62	20.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
64	10.00%	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%
65	25.00%	25.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%
67	15.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
70	15.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
>80	100.00%	100.00%	20.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – All Other Employers – Plan 1

Age	Male					Female				
	Years of Service					Years of Service				
	5	10	11-29	30	>31	5	10	11-29	30	>31
50	—%	6.00%	6.00%	15.00%	15.00%	—%	5.00%	5.00%	10.00%	10.00%
55	10.00%	10.00%	6.00%	15.00%	11.00%	7.00%	7.00%	6.00%	12.00%	10.00%
59	10.00%	5.50%	5.50%	16.00%	10.00%	6.00%	5.50%	5.50%	10.00%	10.00%
60	10.00%	5.00%	5.00%	16.00%	12.00%	6.00%	6.50%	6.50%	15.00%	10.00%
61	10.00%	8.50%	8.50%	16.00%	16.00%	6.00%	9.50%	9.50%	20.00%	16.50%
62	10.00%	15.00%	15.00%	27.00%	22.00%	6.00%	14.50%	14.50%	20.00%	20.00%
64	10.00%	15.00%	15.00%	27.00%	18.00%	6.00%	14.50%	14.50%	35.00%	20.00%
65	30.00%	30.00%	30.00%	30.00%	30.00%	28.00%	28.00%	28.00%	28.00%	35.00%
67	30.00%	22.00%	22.00%	22.00%	22.00%	28.00%	22.00%	22.00%	22.00%	22.00%
70	30.00%	22.00%	22.00%	22.00%	22.00%	28.00%	22.00%	22.00%	22.00%	22.00%
>80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

FIGURE 4.7: RETIREMENT RATES – OPEB PLANS, cont.

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – All Other Employers – Plan 2 and Hybrid

Age	Male								
	Years of Service								
	5	6-25	30	31	33	35	37	39	>40
50	—%	—%	—%	—%	—%	—%	—%	8.00%	8.00%
55	—%	—%	—%	—%	—%	8.00%	8.00%	8.00%	8.00%
59	—%	—%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
60	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
61	11.00%	9.00%	11.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
62	15.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%
64	13.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
65	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
67	22.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
70	16.00%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%
>80	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – All Other Employers – Plan 2 and Hybrid

Age	Female								
	Years of Service								
	5	6-25	30	31	33	35	37	39	>40
50	—%	—%	—%	—%	—%	—%	—%	8.00%	8.00%
55	—%	—%	—%	—%	—%	8.00%	8.00%	8.00%	8.00%
59	—%	—%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
60	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
61	11.00%	9.00%	11.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
62	15.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%
64	13.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
65	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
67	22.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
70	16.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
>75	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

FIGURE 4.7: RETIREMENT RATES – OPEB PLANS, cont.

Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers – All Plans

Age	Male				Female			
	Years of Service				Years of Service			
	5	6-24	25	>26	5	6-24	25	>26
50	6.50%	6.50%	20.00%	20.00%	6.00%	6.00%	25.00%	25.00%
55	6.50%	6.00%	25.00%	24.00%	6.00%	7.50%	25.00%	40.00%
59	6.50%	10.00%	21.00%	20.00%	6.00%	14.00%	25.00%	25.00%
60	21.00%	21.00%	21.00%	23.00%	15.00%	15.00%	15.00%	25.00%
61	37.50%	23.00%	23.00%	23.00%	15.00%	15.00%	15.00%	15.00%
62	37.50%	27.00%	27.00%	27.00%	15.00%	15.00%	15.00%	15.00%
63	37.50%	27.00%	27.00%	27.00%	15.00%	15.00%	15.00%	15.00%
64	37.50%	27.00%	27.00%	27.00%	15.00%	30.00%	30.00%	30.00%
>70	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – All Other Employers – All Plans

Age	Male				Female			
	Years of Service				Years of Service			
	5	6-24	25	>26	5	6-24	25	>26
50	9.00%	9.00%	27.50%	27.50%	6.00%	6.00%	30.00%	30.00%
55	7.00%	7.50%	20.00%	20.00%	10.00%	9.00%	20.00%	30.00%
59	7.00%	12.00%	20.00%	24.00%	10.00%	12.00%	20.00%	25.00%
60	15.00%	15.00%	15.00%	24.00%	15.00%	15.00%	15.00%	25.00%
61	20.00%	24.00%	24.00%	24.00%	15.00%	25.00%	25.00%	25.00%
62	20.00%	27.50%	27.50%	27.50%	15.00%	25.00%	25.00%	25.00%
63	20.00%	27.50%	27.50%	27.50%	15.00%	25.00%	25.00%	25.00%
64	20.00%	27.50%	27.50%	27.50%	15.00%	25.00%	25.00%	25.00%
>70	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

State Police Officers – All Plans

Age	Years of Service	
	5-24	>25
50	10.00%	10.00%
55	6.00%	20.00%
59	10.00%	13.00%
60	10.00%	13.00%
>70	100.00%	100.00%

FIGURE 4.7: RETIREMENT RATES – OPEB PLANS, cont.
Virginia Law Officers – All Plans

Age	Years of Service – Male			
	5	6-24	25	>26
50	15.00%	15.00%	45.00%	45.00%
55	10.00%	8.00%	18.00%	25.00%
59	10.00%	12.00%	18.00%	20.00%
60	18.00%	18.00%	18.00%	30.00%
>70	100.00%	100.00%	100.00%	100.00%

Age	Years of Service – Female			
	5	6-24	25	> 26
50	15.00%	15.00%	37.50%	37.50%
55	10.00%	9.00%	25.00%	30.00%
59	10.00%	13.00%	30.00%	20.00%
60	20.00%	20.00%	20.00%	20.00%
>70	100.00%	100.00%	100.00%	100.00%

Judges – All Plans

Age	Rate
60	10.00%
65	10.00%
70	25.00%
>73	100.00%

FIGURE 4.8: DISABILITY RATES – OPEB PLANS

As shown below for selected ages.

State Employees

25% of disability cases are assumed to be service-related.

Age	Male	Female
20	0.0390%	0.0330%
30	0.0910%	0.2110%
40	0.2120%	0.3540%
50	0.4970%	0.6290%
60	0.6900%	0.7350%

FIGURE 4.8: DISABILITY RATES – OPEB PLANS, cont.

Teachers

5% of disability cases are assumed to be service-related.

Age	Male	Female
20	0.0005%	0.0003%
30	0.0064%	0.0081%
40	0.0325%	0.0481%
50	0.1444%	0.1609%
60	0.3395%	0.3321%

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers

20% of disability cases are assumed to be service-related.

Age	Male	Female
20	0.0050%	0.0010%
30	0.0070%	0.0230%
40	0.1390%	0.1340%
50	0.3840%	0.3300%
60	0.8080%	0.5300%

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – All Other Employers

15% of disability cases are assumed to be service-related.

Age	Male	Female
20	0.0050%	0.0010%
30	0.0220%	0.0010%
40	0.1300%	0.0580%
50	0.4290%	0.2740%
60	0.6560%	0.6400%

Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers

70% of disability cases are assumed to be service-related.

Age	Male	Female
20	0.0190%	0.0120%
30	0.0520%	0.5580%
40	0.2670%	0.7940%
50	0.5000%	1.0900%
60	1.0550%	1.7880%

Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – All Other Employers

45% of disability cases are assumed to be service-related.

Age	Male	Female
20	0.0010%	0.0050%
30	0.0580%	0.1570%
40	0.2180%	0.2010%
50	0.4160%	0.4130%
60	0.5750%	1.6050%

FIGURE 4.8: DISABILITY RATES – OPEB PLANS, cont.

State Police Officers

85% of disability cases are assumed to be service-related.

Age	Rate
≤44	0.1940%
50	0.4810%
55	0.7700%
60	0.8970%
70	1.3680%

Virginia Law Officers

35% of disability cases are assumed to be service-related.

Age	Male	Female
20	0.1430%	0.5430%
30	0.5840%	0.6590%
40	0.7930%	1.0010%
50	1.1650%	1.8210%
60	1.7820%	2.9010%
70	1.9200%	5.4990%

Judges

There are no assumed rates of disability prior to service retirement (for causes other than death or retirement).

FIGURE 4.9: TERMINATION RATES – OPEB PLANS

Withdrawal rates are based on age and years of service credit. Sample rates for selected ages and years of service are shown below for causes other than death, disability or retirement.

State Employees – All Plans

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION

Years of Service – Males											
Age	0	1	2	3	4	5	6	7	8	9	>10
25	23.974%	21.579%	19.409%	17.424%	15.524%	13.693%	11.975%	10.595%	9.975%	9.732%	10.701%
35	17.716%	15.218%	13.247%	11.805%	10.829%	10.087%	9.383%	8.541%	7.535%	6.447%	5.388%
45	15.975%	11.918%	9.302%	7.949%	7.467%	7.461%	7.339%	6.905%	6.126%	4.945%	3.331%
55	15.197%	11.087%	8.401%	7.159%	6.658%	6.381%	6.149%	5.872%	5.613%	5.509%	5.439%
65	15.304%	13.450%	12.193%	11.472%	11.037%	—%	—%	—%	—%	—%	—%

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION

Years of Service – Females											
Age	0	1	2	3	4	5	6	7	8	9	>10
25	27.376%	26.249%	24.118%	21.199%	18.029%	15.160%	13.004%	11.112%	9.997%	10.375%	12.876%
35	20.766%	17.777%	15.365%	13.514%	12.123%	10.996%	9.994%	9.070%	8.104%	7.066%	5.980%
45	18.340%	13.974%	10.951%	9.110%	8.142%	7.776%	7.634%	7.404%	6.888%	5.803%	4.010%
55	16.001%	12.044%	9.383%	7.856%	7.120%	6.731%	6.491%	6.383%	6.463%	6.942%	7.765%
65	14.142%	12.453%	11.513%	11.187%	11.326%	—%	—%	—%	—%	—%	—%

FIGURE 4.9: TERMINATION RATES – OPEB PLANS, cont.

Teachers – All Plans

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION											
Years of Service – Males											
Age	0	1	2	3	4	5	6	7	8	9	>10
25	19.207%	16.728%	14.515%	12.651%	11.200%	10.027%	8.948%	7.865%	7.114%	7.386%	8.326%
35	16.839%	14.734%	13.071%	17.712%	10.510%	9.374%	8.315%	7.322%	6.329%	5.217%	4.003%
45	18.182%	15.046%	12.547%	10.682%	9.330%	8.397%	7.608%	6.863%	5.924%	4.581%	2.657%
55	21.008%	16.464%	12.933%	10.382%	8.670%	7.536%	6.833%	6.318%	5.973%	5.790%	2.260%
65	24.063%	18.847%	14.805%	11.831%	9.792%	—%	—%	—%	—%	—%	—%

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION											
Years of Service – Females											
Age	0	1	2	3	4	5	6	7	8	9	>10
25	18.376%	15.481%	13.758%	12.581%	11.260%	10.133%	9.186%	8.253%	6.911%	6.524%	7.704%
35	17.757%	15.500%	13.863%	12.610%	11.452%	10.307%	9.292%	8.399%	7.473%	6.273%	4.807%
45	15.616%	13.289%	11.458%	10.011%	8.846%	7.999%	7.497%	7.203%	6.668%	5.362%	2.476%
55	15.060%	12.499%	10.614%	9.285%	8.348%	7.597%	6.925%	6.342%	6.066%	6.295%	2.476%
65	18.831%	16.489%	14.798%	13.739%	13.130%	—%	—%	—%	—%	—%	—%

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits –
Ten Largest Employers – All Plans

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION											
Years of Service – Males											
Age	0	1	2	3	4	5	6	7	8	9	>10
25	28.989%	27.432%	26.526%	26.242%	26.375%	26.558%	26.297%	25.458%	23.734%	20.701%	15.866%
35	21.415%	19.378%	17.963%	17.076%	16.538%	16.121%	15.615%	14.808%	13.573%	11.801%	9.397%
45	17.894%	15.267%	13.230%	11.737%	10.675%	9.865%	9.232%	8.627%	7.933%	7.192%	5.296%
55	16.167%	13.384%	11.115%	9.363%	8.092%	7.311%	6.800%	6.512%	6.387%	6.264%	4.605%
65	14.654%	12.546%	10.779%	9.372%	8.367%	—%	—%	—%	—%	—%	—%

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION											
Years of Service – Females											
Age	0	1	2	3	4	5	6	7	8	9	>10
25	26.948%	24.864%	23.870%	23.584%	23.500%	23.043%	22.383%	21.351%	19.968%	18.230%	16.241%
35	21.697%	18.644%	16.712%	15.790%	15.565%	15.609%	15.458%	14.802%	13.451%	11.314%	8.392%
45	19.315%	15.196%	12.534%	11.170%	10.742%	10.776%	10.785%	10.381%	9.325%	7.535%	4.936%
55	17.544%	13.552%	10.836%	9.258%	8.536%	8.303%	8.149%	7.885%	7.414%	6.668%	5.673%
65	15.252%	12.880%	11.016%	9.645%	8.728%	—%	—%	—%	—%	—%	—%

FIGURE 4.9: TERMINATION RATES – OPEB PLANS, cont.

**Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits –
All Other Employers – All Plans**

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION											
Years of Service – Males											
Age	0	1	2	3	4	5	6	7	8	9	>10
25	34.582%	30.879%	27.971%	25.872%	24.501%	23.668%	22.856%	21.758%	20.423%	18.923%	17.160%
35	26.103%	23.300%	21.169%	19.604%	18.413%	17.401%	16.467%	15.478%	14.272%	12.727%	10.921%
45	21.691%	18.002%	15.364%	13.656%	12.626%	11.997%	11.521%	11.013%	10.332%	9.373%	7.933%
55	18.678%	14.934%	12.243%	10.520%	9.586%	9.185%	9.042%	9.022%	9.123%	9.336%	9.555%
65	16.801%	14.540%	12.836%	11.667%	10.985%	—%	—%	—%	—%	—%	—%

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION											
Years of Service – Females											
Age	0	1	2	3	4	5	6	7	8	9	>10
25	32.508%	30.131%	27.509%	24.836%	22.591%	21.199%	20.768%	20.326%	19.626%	18.741%	17.582%
35	25.792%	22.474%	20.062%	18.479%	17.509%	16.848%	16.228%	15.456%	14.215%	12.254%	9.510%
45	21.851%	18.237%	15.746%	14.201%	13.248%	12.573%	11.969%	11.310%	10.459%	9.194%	7.283%
55	18.709%	15.590%	13.351%	11.857%	10.862%	10.068%	9.333%	8.825%	8.825%	8.825%	8.825%
65	17.656%	15.223%	13.387%	12.121%	11.334%	—%	—%	—%	—%	—%	—%

**Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits –
Ten Largest Employers – All Plans**

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION		
Terminations Per 100 Members		
Years of Service	Males	Females
0	5.500%	7.000%
1	4.000%	7.000%
2	4.000%	7.000%
3	4.000%	5.000%
4	4.000%	5.000%
5	3.000%	5.000%
6	2.500%	3.000%
7	2.500%	3.000%
8	2.500%	3.500%
9	1.500%	1.500%
10 or more	1.000%	1.500%

FIGURE 4.9: TERMINATION RATES – OPEB PLANS, cont.

Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits –
All Other Employers – All Plans

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION

Terminations Per 100 Members		
Years of Service	Males	Females
0	11.000%	20.000%
1	11.000%	15.000%
2	9.500%	10.000%
3	8.500%	8.500%
4	7.500%	7.000%
5	6.500%	7.000%
6	6.500%	7.000%
7	4.000%	7.000%
8	4.000%	7.000%
9	4.000%	6.000%
10 or more	2.500%	3.500%

FIGURE 4.9: TERMINATION RATES – OPEB PLANS, cont.

State Police Officers – All Plans

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION

Service	Rate
0	8.000%
1	6.000%
2	6.000%
3	6.000%
4	6.000%
5	6.000%
6	6.000%
7	3.000%
8	3.000%
9	3.000%
>10	1.750%

Virginia Law Officers – All Plans

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION

Years of Service – Males											
Age	0	1	2	3	4	5	6	7	8	9	>10
25	36.285%	28.479%	23.294%	20.555%	19.714%	19.438%	18.892%	17.882%	17.232%	16.314%	17.288%
35	29.590%	24.719%	22.390%	18.685%	16.890%	15.650%	14.654%	13.513%	11.884%	10.094%	7.962%
45	24.947%	20.776%	17.527%	15.163%	13.800%	12.852%	11.960%	10.962%	9.617%	7.511%	4.653%
55	22.917%	17.523%	13.271%	10.157%	10.390%	—%	—%	—%	—%	—%	—%
65	23.923%	15.385%	8.724%	3.755%	6.679%	—%	—%	—%	—%	—%	—%

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION

Years of Service – Females											
Age	0	1	2	3	4	5	6	7	8	9	>10
25	43.786%	33.985%	27.627%	24.458%	24.051%	24.937%	26.238%	26.963%	25.996%	24.867%	18.991%
35	35.591%	29.532%	25.008%	21.852%	19.421%	17.876%	16.674%	15.620%	14.391%	12.349%	9.981%
45	29.713%	25.007%	21.104%	17.970%	16.112%	14.777%	13.695%	12.161%	10.324%	8.381%	4.500%
55	27.168%	21.009%	16.023%	12.279%	13.911%	—%	—%	—%	—%	—%	—%
65	28.529%	17.815%	9.796%	4.508%	12.790%	—%	—%	—%	—%	—%	—%

Judges

There are no assumed rates of withdrawal prior to service retirement (for causes other than death or retirement).

FIGURE 4.10: SALARY INCREASE RATES – OPEB PLANS

The sample salary increase rates are shown below. These factors are not applicable to the Line of Duty Act Program because neither the benefit nor the cost are salary-based.

State Employees

Inflation of 2.50% plus a productivity component of 1.00% and a step-rate/promotional component as shown. It is assumed state employees who are covered under the Virginia Sickness and Disability Program (VSDP) receive a 3.50% annual increase in pay while disabled. This adjusted pay is used to determine deferred retirement benefits payable from the System.

Years of Service	Annual Step-Rate/ Promotional Rates of Increase	Total Annual Rate of Increase
1	1.85%	5.35%
3	1.25%	4.75%
6	0.95%	4.45%
9	0.50%	4.00%
10-19	0.15%	3.65%
20 or more	—%	3.50%

Teachers

Inflation of 2.50% plus a productivity component of 1.00% and a step-rate/promotional component as shown.

Years of Service	Annual Step-Rate/ Promotional Rates of Increase	Total Annual Rate of Increase
1	2.45%	5.95%
3	2.35%	5.85%
6	1.95%	5.45%
9	1.85%	5.35%
11	1.35%	4.85%
15	1.15%	4.65%
19	0.95%	4.45%
20 or more	—%	3.50%

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers

Inflation of 2.50% plus a productivity component of 1.00% and a step-rate/promotional component as shown.

Years of Service	Annual Step-Rate/ Promotional Rates of Increase	Total Annual Rate of Increase
1	1.85%	5.35%
3	1.25%	4.75%
6	0.95%	4.45%
9	0.50%	4.00%
11-19	0.15%	3.65%
20 or more	—%	3.50%

FIGURE 4.10: SALARY INCREASE RATES – OPEB PLANS, cont.

Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – All Other Employers

Inflation of 2.50% plus a productivity component of 1.00% and a step-rate/promotional component as shown.

Years of Service	Annual Step-Rate/ Promotional Rates of Increase	Total Annual Rate of Increase
1	1.85%	5.35%
3	1.25%	4.75%
6	0.95%	4.45%
9	0.50%	4.00%
11-19	0.15%	3.65%
20 or more	—%	3.50%

Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers

Inflation of 2.50% plus a productivity component of 1.00% and a step-rate/promotional component as shown.

Years of Service	Annual Step-Rate/ Promotional Rates of Increase	Total Annual Rate of Increase
1	1.25%	4.75%
3	1.25%	4.75%
6	0.90%	4.40%
9	0.90%	4.40%
11-19	0.50%	4.00%
20 or more	—%	3.50%

Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – All Other Employers

Inflation of 2.50% plus a productivity component of 1.00% and a step-rate/promotional component as shown.

Years of Service	Annual Step-Rate/ Promotional Rates of Increase	Total Annual Rate of Increase
1	1.25%	4.75%
3	1.25%	4.75%
6	0.90%	4.40%
9	0.90%	4.40%
11-19	0.50%	4.00%
20 or more	—%	3.50%

State Police Officers

Inflation of 2.50% plus a productivity component of 1.00% and a step-rate/promotional component as shown. It is assumed state police officers who are covered under the Virginia Sickness and Disability Program (VSDP) receive a 3.50% annual increase in pay while disabled. This adjusted pay is used to determine deferred retirement benefits payable from the System.

Years of Service	Annual Step-Rate/ Promotional Rates of Increase	Total Annual Rate of Increase
1	1.25%	4.75%
3	1.25%	4.75%
6	0.90%	4.40%
9	0.90%	4.40%
10-19	0.50%	4.00%
20 or more	—%	3.50%

FIGURE 4.10: SALARY INCREASE RATES – OPEB PLANS, cont.

Virginia Law Officers

Inflation of 2.50% plus a productivity component of 1.00% and a step-rate/promotional component as shown. It is assumed Virginia law officers who are covered under the Virginia Sickness and Disability Program (VSDP) receive a 3.50% annual increase in pay while disabled. This adjusted pay is used to determine deferred retirement benefits payable from the System.

Years of Service	Annual Step-Rate/ Promotional Rates of Increase	Total Annual Rate of Increase
1	1.25%	4.75%
3	1.25%	4.75%
6	0.90%	4.40%
9	0.90%	4.40%
10-19	0.50%	4.00%
20 or more	—%	3.50%

Judges

Salary increase rates are 4.00%.

FIGURE 4.11: PORTING RATES – LONG-TERM CARE

Porting rates represent the probability that an individual will choose to port the coverage upon employment termination. Porting rates are assumed to increase with longevity because the contributions for terminated employees are based on the age at which they started the program (either their age in 2002 or age at hire, if later).

Current Selected Policy Porting Rate Assumptions by Policy Issue Age and Policy Duration

Issue Age	Policy Duration (in years)					
	0	10	20	30	40	50+
30	0.1000	0.1234	0.2185	0.4537	0.7574	1.0000
40	0.1000	0.1608	0.3423	0.5526	0.9230	1.0000
50	0.1027	0.2244	0.4116	0.6790	1.0000	1.0000
60	0.1162	0.2667	0.4986	0.8407	1.0000	1.0000
70	0.1485	0.3308	0.6099	0.9985	1.0000	1.0000
80	0.1875	0.4043	0.7524	1.0000	1.0000	1.0000
90	0.2012	0.4601	0.9347	1.0000	1.0000	1.0000
100	0.2171	0.5261	1.0000	1.0000	1.0000	1.0000
110	0.2354	0.6042	1.0000	1.0000	1.0000	1.0000

ADDITIONAL INFORMATION ABOUT ACTUARIAL ASSUMPTIONS AND METHODS: OTHER POST-EMPLOYMENT BENEFIT (OPEB) PLANS

Mortality Rates:

Pre-Retirement: Pub-2010 Amount Weighted General Employee Rates Projected Generationally

- State – Females set forward 2 years
- Teachers – Males 110% of rates
- State Police – Males 95% of rates, females 105% of rates set forward 1 year
- ValORS – Males 95% of rates, females 105% of rates set forward 2 years
- Judicial – Males set forward 2 years
- Political subdivisions, non-hazardous duty – Males set forward 2 years, females 105% of rates set forward 3 years
- Political subdivisions, hazardous duty – Males 95% of rates, females 105% of rates set forward 2 years

Post-Retirement: Pub-2010 Amount Weighted General Healthy Retiree Rates Projected Generationally

- State – Females 110% of rates
- Teachers – Males set forward 1 year, females 105% of rates
- State Police – Males 110% of rates, females 105% of rates set forward 3 years
- ValORS – Males 110% of rates, females 105% of rates set forward 3 years
- Judicial – Males 95% of rates, females set back 2 years
- Political subdivisions, non-hazardous duty – Males 95% of rates set forward 2 years, females 95% of rates set forward 1 year
- Political subdivisions, hazardous duty – Males 110% of rates, females 105% of rates set forward 3 years

Post-Disablement: Pub-2010 Amount Weighted General Disabled Rates Projected Generationally

- State – Males and females set forward 3 years
- Teachers – 110% of rates for males and females
- State Police – Males 95% of rates set back 3 years, females 90% of rates set back 3 years
- ValORS – Males 95% of rates set back 3 years, females 90% of rates set back 3 years
- Political subdivisions, non-hazardous duty – Males 110% of rates set forward 3 years, females 110% of rates set forward 2 years
- Political subdivisions, hazardous duty – Males 95% of rates set back 3 years, females 90% of rates set back 3 years

Beneficiaries and Survivors: Pub-2010 Amount Weighted General Contingent Annuitant Rates projected generationally:

- State – 110% of rates for males and females
- State Police – 110% of rates for males and females set forward 2 years
- ValORS – 110% of rates for males and females set forward 2 years
- Political subdivisions, hazardous duty – 110% of rates for males and females set forward 2 years

Mortality Improvement: Rates projected generationally with Modified MP-2020 Improvement Scale that is 75% of the MP-2020 rates

Provision for Expense. The assumed investment return represents the anticipated net rate of return after payment of all administrative expenses.

Asset Valuation Method. For the Group Life Insurance Program, the state and teacher employer groups for the Retiree Health Insurance Credit Program, VSDP and VLDP, the method of valuing assets is intended to recognize a “smoothed”

market value of assets. Under this method, the difference between actual return on market value from investment experience and the expected return on market value is recognized over a five-year period.

The resulting actuarial value of assets cannot be less than 80% or more than 120% of the market value of assets. For the Line of Duty Act Program and the political subdivision employer groups in the Retiree Health Insurance Credit Program or employees who are eligible for the state-funded benefit for constitutional officers and their employees, general registrars and their employees and local social services employees, the actuarial value of assets is equal to the market value of assets.

Actuarial Cost Method. For the Group Life Insurance, Retiree Health Insurance Credit Programs, VSDP, VLDP and the Line of Duty Act Program, the normal contribution is determined using the entry age normal method. Under this method, a calculation is made for the cost of benefits to determine the uniform and constant percentage rate of the employer contribution which, if applied to the compensation of the average new member during the entire period of the member's anticipated covered service, would meet the cost of all benefits payable on the member's behalf. The unfunded accrued liability is determined by subtracting the current assets and the present value of prospective employer normal contributions from the present value of the expected benefits to be paid. The accrued liability contribution amortizes the balance of the unfunded accrued actuarial liability (UAAL) over a period of years from the valuation date.

Actuarial Gains and Losses. Actuarial gains and losses are reflected in the UAAL and are amortized as part of that balance.

Payroll Growth Rates. The payroll growth rate is assumed to be 3.00% based on a zero population growth assumption.

Funding Period. For all programs, the amortization of the legacy UAAL began at 30 years on June 30, 2013, and this amortization period is to decrease by one year on each subsequent valuation date until the legacy UAAL is fully amortized (amortization period is 0 years). With each subsequent valuation, a new amortization base will be used to amortize that portion of the UAAL not covered by the current balances of the previously established amortization bases. Here, each valuation's newly allocated share of the UAAL will be amortized over a closed 20-year period. In the event this funding policy produces an effective amortization period of greater than 30 years, a 30-year amortization period for the aggregate UAAL is used in accordance with GASB 43 and 45.

Summary of Other Post-Employment Benefit Plan Provisions

Group Life Insurance Program

ADMINISTRATION

The plan is administered by the Board of Trustees of the Virginia Retirement System (the System).

Contributions received are held in trust. Payments are made to Securian Financial as reimbursement for the payment of life insurance proceeds to the beneficiaries.

An addition to the contribution requirement for the active member benefit provides for the retiree death benefit. The active portion of the contribution is used to purchase group term life insurance from an insurance company; the retired member portion is held in a trust until required for benefit payments.

When a covered retiree dies, Securian Financial pays the insurance claim and then collects a premium equal to the cost of the claim.

The retired member contribution is determined actuarially. The Board sets administrative policy and determines the allocation of the assets held for investment.

ELIGIBILITY

The following employees are covered under the Group Life Insurance Program upon employment:

- Full-time permanent, salaried employees of the Commonwealth of Virginia, including state employees, faculty members of the state's public colleges and universities, state police officers (SPORS), Virginia law officers (VaLORS) and judicial employees (JRS).
- Full-time permanent, salaried teachers and other administrative employees of local public school divisions.
- Full-time permanent, salaried sheriffs, deputy sheriffs and other eligible non-hazardous duty and hazardous duty employees of political subdivisions that have elected to participate in the Group Life Insurance Program.
- Employees of five localities that do not participate in VRS for retirement: City of Richmond, City of Portsmouth, City of Roanoke, City of Norfolk and Roanoke City School Board.

- Certain members who were employed at the time of initial coverage under the Group Life Insurance Program had the option to decline coverage.

ACTIVE MEMBER BENEFIT

Active members are covered for the following benefits:

- Natural death benefit equal to the member's compensation rounded to the next highest thousand and then doubled.
- Accidental death benefit, which is double the natural death benefit.
- Accidental dismemberment benefit, seatbelt benefit, repatriation benefit, felonious assault benefit and an accelerated death benefit option.

Covered employees may elect additional coverage for themselves as well as a spouse or dependent children through the Optional Group Life Insurance Program. Optional group life benefits are not included in the valuations of the OPEB plans.

RETIREE BENEFIT

1. Service Retirement. A death benefit equal to the active member's natural death benefit and the accelerated death benefit option continue for retirees and for deferred members who have met the eligibility requirements for retirement upon leaving employment. Coverage begins to reduce by 25% on the January 1 following one calendar year after the member's employment ends and by 25% each January 1 thereafter, until it reaches 25% of its original value. For covered members with at least 30 years of service credit, there is a minimum benefit payable under the Group Life Insurance Program, set at \$8,000 by statute in 2015. This will be increased annually based on the VRS Plan 2 cost-of-living adjustment calculation. The minimum benefit adjusted for the COLA was \$8,984 as of June 30, 2023. A member may end employment and defer retirement until a later date; however, the group life insurance will begin reducing based on the last month of employment.

2. Disability Retirement. The benefits available to disability retirees are the same as those for service retirees, except that the first 25% annual reduction begins on the January 1 following the first full

calendar year from the month the retiree reaches normal retirement age.

Retiree Health Insurance Credit Program

ADMINISTRATION

The plan is administered by the System's Board of Trustees. Contributions received are held in trust. The Board sets administrative policy and determines the allocation of the assets held for investment.

ELIGIBILITY

The health insurance credit is a tax-free reimbursement in an amount set by the General Assembly for each year of service credit against the

portion of qualified health insurance premiums retirees pay for single coverage. The credit cannot exceed the amount of the premium and ends upon the retiree's death.

If a member has worked for more than one employer under VRS, SPORS, VaLORS or JRS, for the purpose of this valuation, the most current (or last) employer assumes the full liability for that employee.

CREDIT AMOUNTS

The dollar amounts vary depending on the employee type, as shown in the following tables:

Health Insurance Credit Dollar Amounts at Retirement

ELIGIBLE EMPLOYEES	AMOUNT PER YEAR OF SERVICE	MAXIMUM CREDIT PER MONTH
State employees	\$4	No Maximum
Teachers and school administrators	\$4	No Maximum
General registrars and their employees, constitutional officers and their employees and local social service employees	\$1.50	\$45
General registrars and their employees, constitutional officers and their employees and local social service employees, if the political subdivision elects the \$1 enhancement	\$2.50	\$75
Non-teacher school division employees	\$1.50	No Maximum
Non-teacher school division employees, if the school division elects the \$1 enhancement	\$2.50	No Maximum
Other political subdivision employees as elected by the employer	\$1.50	\$45

Health Insurance Credit for Disability Retirees and Employees on Long-Term Disability

ELIGIBLE EMPLOYEES	DISABILITY RETIREMENT AMOUNT PER MONTH	MAXIMUM CREDIT PER MONTH
State employees	\$120 or \$4 per year of service, whichever is greater	No Maximum
Teachers and school administrators	\$4	No Maximum
General registrars and their employees, constitutional officers and their employees and local social service employees	\$45	\$45
General registrars and their employees, constitutional officers and their employees and local social service employees, if the political subdivision elects the \$1 enhancement	\$75	\$75
Non-teacher school division employees	\$1.50 x the smaller of (a) twice the amount of service credit or (b) the amount of service that would have been earned had the member remained an active employee until age 60	No Maximum
Non-teacher school division employees, if the school division elects the \$1 enhancement	\$2.50 x the smaller of (a) twice the amount of service credit or (b) the amount of service that would have been earned had the member remained an active employee until age 60	No Maximum
Other political subdivision employees as elected by the employer	\$45	\$45

Virginia Sickness and Disability Program (VSDP)

ADMINISTRATION

The plan is administered by the System's Board of Trustees. Contributions received are held in trust. The Board sets administrative policy and determines the allocation of the assets held for investment.

ELIGIBILITY

The following state employees are covered automatically under the Virginia Sickness and Disability Program (VSDP) upon employment:

- Full-time permanent, salaried employees of the Commonwealth of Virginia (VRS) and part-time permanent, salaried state employees who work at least 20 hours a week;
- Public college and university faculty members who elect to participate in VRS instead of an optional retirement plan. These faculty members can elect VSDP or a disability plan offered by their institution;
- Full-time permanent, salaried state police officers (SPORS); and
- Full-time permanent, salaried Virginia law officers other than state police (VaLORS).

State employees hired before January 1, 1999, had the option to elect VSDP or retain their eligibility to be considered for disability retirement.

SHORT-TERM AND LONG-TERM DISABILITY BENEFITS

VSDP coverage provides short-term and long-term disability benefits for non-work-related and work-related illnesses and injuries. Eligible members who become disabled receive short-term disability benefits for up to 125 workdays, following a seven-calendar-day waiting period from the first day of disability.

Members who are still disabled after 125 workdays are evaluated for long-term disability. Members hired or rehired on or after July 1, 2009, must satisfy eligibility periods for non-work-related disability coverage and certain income-replacement levels.

The long-term disability benefit provides income replacement equal to 60% of the member's pre-disability income. While members are on long-term disability, they are not considered employees of the Commonwealth of Virginia. Members who can work

at least 20 hours a week but cannot perform their full duties may be eligible for long-term disability benefits while working. They must have returned to work with modified duties while on short-term disability.

The long-term disability benefit is adjusted by any salary, wages, workers' compensation benefits or other disability payments the member receives for the same condition. If a member's condition becomes catastrophic, income replacement will increase to 80% of pre-disability income for as long as the condition is considered catastrophic. A disability is determined to be catastrophic if a member is unable to perform at least two of a specified list of activities of daily living without assistance.

Long-term disability benefits end if the member can perform the full duties of his or her pre-disability position without any restrictions during the first 24 months of disability; can perform the regular duties of any job for which the member is reasonably qualified after 24 months of disability and earning 80% or more of his or her pre-disability income; takes a refund of his or her member contributions and interest; does not cooperate or comply with the requirements of VSDP; or begins receiving a VRS service retirement benefit. Benefits also end in the event of the member's death.

VSDP LONG-TERM CARE PLAN

VSDP plan members are eligible for no-cost long-term care coverage under the VSDP Long-Term Care Plan. The plan provides a two-year maximum coverage period with a maximum \$96-per-day daily benefit for nursing home care and other covered services. The benefit of many of the other services is less than the nursing home benefit, which means those needing these services will take longer to reach their lifetime maximum amount, resulting in longer coverage duration.

Benefits begin after 90 days from the date the member is certified by a licensed health care professional as eligible for benefits. The benefit schedule includes the possibility of an increase for inflation every five years in the amount of 5.00% compounded annually since the last inflation increase. Since such increases are not prefunded, they are accompanied by a corresponding increase in

contributions. Upon retirement or termination from employment, VSDP plan members may elect to continue their long-term care coverage by paying the premiums.

Virginia Local Disability Program (VLDP)

ADMINISTRATION

The plan is administered by the System's Board of Trustees. Contributions received are held in trust. The Board sets administrative policy and determines the allocation of the assets held for investment.

ELIGIBILITY

The following state employees are covered automatically under the Virginia Local Disability Program (VLDP) upon employment:

- Full-time permanent, salaried Hybrid Retirement Plan employees of participating local public school divisions; and
- Full-time permanent, salaried Hybrid Retirement Plan employees of participating political subdivisions.

SHORT-TERM AND LONG-TERM DISABILITY BENEFITS

VLDP coverage provides short-term and long-term disability benefits for non-work-related and work-related illnesses and injuries. Eligible members who become disabled receive short-term disability benefits for up to 125 workdays, following a seven-calendar-day waiting period from the first day of disability. Members who are still disabled after 125 workdays are evaluated for long-term disability.

The long-term disability benefit provides income replacement equal to 60% of the member's pre-disability income. While members are on long-term disability, they are not considered employees.

Members who can work at least 20 hours a week but cannot perform their full duties may be eligible for long-term disability benefits while working. They must have returned to work with modified duties while on short-term disability.

The long-term disability benefit is adjusted by any salary, wages, workers' compensation benefits or other disability payments the member receives for the same condition. If a member's condition becomes catastrophic, income replacement will increase to 80% of pre-disability income for as long

as the condition is considered catastrophic. A disability is determined to be catastrophic if a member is unable to perform at least two of a specified list of activities of daily living without assistance.

Long-term disability benefits end if the member can perform the full duties of his or her pre-disability position without any restrictions during the first 24 months of disability; can perform the regular duties of any job for which the member is reasonably qualified after 24 months of disability and earning 80% or more of his or her pre-disability income; takes a refund of his or her member contributions and interest; does not cooperate or comply with the requirements of VLDP; or begins receiving a VRS service retirement benefit. Benefits also end in the event of the member's death.

VLDP LONG-TERM CARE PLAN

VLDP plan members are eligible for no-cost long-term care coverage under the VSDP Long-Term Care Plan. The plan provides a two-year maximum coverage period with a maximum \$96-per-day daily benefit for nursing home care and other covered services. The benefit of many of the other services is less than the nursing home benefit, which means those needing these services will take longer to reach their lifetime maximum amount, resulting in longer coverage duration.

Benefits begin after 90 days from the date the member is certified by a licensed health care professional as eligible for benefits. The benefit schedule includes the possibility of an increase for inflation every five years in the amount of 5.00% compounded annually since the last inflation increase. Since such increases are not prefunded, they are accompanied by a corresponding increase in contributions. Upon retirement or termination from employment, VLDP plan members may elect to continue their long-term care coverage by paying the premiums.

Line of Duty Act Program

ADMINISTRATION

The plan is administered by the System's Board of Trustees. Contributions received are held in trust. The Board sets administrative policy and determines the allocation of the assets held for investment.

ELIGIBILITY

Members of SPORS and VaLORS as well as members of VRS who are eligible for enhanced hazardous duty coverage are covered under the Line of Duty Act. Paid employees and volunteers in hazardous duty positions in all VRS-participating and non-VRS participating localities also are covered under the act.

BENEFITS

Coverage provides death and disability benefits administered by VRS, and health insurance benefits, which are administered by the Virginia Department of Human Resource Management (DHRM). The System is responsible for managing the assets of the Line of Duty Act Fund.

Summary of OPEB Plan Changes

The following changes have occurred to the OPEB plan provisions.

2012 VALUATION: The changes resulting from legislation are listed below:

1. Under House Bill 791, effective July 1, 2012, the life insurance amount reduction start date for disabled retirees was changed to January 1 following the first full year from the date the retiree reaches normal retirement age.
2. In 2012 House Bill 1130/Senate Bill 498 was enacted and was effective on January 1, 2013, requiring that active non-vested members of Plan 1 have to satisfy the Rule of 90 (sum of age and service is at least 90) or reach their Social Security normal retirement age to be eligible for unreduced retirement. These same members must attain age 60 with five years of service to be eligible for early retirement. This provision applies to the state and teacher plans and to members of political subdivision plans who are not covered by hazardous duty benefits. In addition, state employees on long-term disability are assumed to receive cost-of-living adjustments to their long-term disability benefits in an amount of 2.25% per year, compounded annually.

2013 VALUATION: No actuarially material changes are made to the plan provisions. There are two changes of note:

1. On June 20, 2013, the Board adopts the recommended economic and demographic assumptions proposed by the actuary as a result of the June 2012 experience study.
2. Changes noted in the 2012 valuation information, with effective dates in fiscal year 2013 were implemented.

2014 VALUATION: No actuarially material changes are made to the plan provisions. The 2014 valuation includes Hybrid Retirement Plan members for the first time. The hybrid plan covers eligible employees hired on or after January 1, 2014, in the state, teacher and judicial plans or Plan 1 or Plan 2 members who elected during a one-time opt-in period, to be covered under the hybrid plan. The hybrid plan does not apply to members in the SPORS and VaLORS plans. The hybrid plan consists of defined benefit plan and defined contribution plan components.

2015 VALUATION: No actuarially material changes are made to the plan provisions. There are two changes of note:

1. An administrative expense charge was added to the employer contribution rates to cover administrative expenses.
2. The retirement rates for the judicial plan were extended to age 73 to reflect the change in the mandatory retirement age to 73.

2016 VALUATION: No actuarially material changes are made to the plan provisions.

2017 VALUATION: No actuarially material changes are made to the plan provisions. There is one change of note: On April 26, 2017, the Board adopts the recommended economic and demographic assumptions proposed by the actuary as a result of the June 2016 experience study.

2018 VALUATION: No actuarially material changes are made to the plan provisions.

2019 VALUATION: The investment rate was decreased from 7.00% per annum to 6.75% per annum.

2020 VALUATION: No actuarially material changes are made to the plan provisions.

2021 VALUATION: No actuarially material changes are made to the plan provisions. There is one change of note: On April 20, 2021, the Board adopts the recommended economic and demographic assumptions proposed by the actuary as a result of the June 2020 experience study.



Virginia
Retirement
System®

STATISTICAL SECTION

2023

Statistical Section

VRS Fiscal Year Returns

Pension Trust Funds:

- Schedule of Retirement Contributions by System and Plan

- Schedule of Pension Trust Fund Additions by Source

- Schedule of Pension Trust Fund Deductions by Type

- Schedule of Retirement Benefits by System and Plan

- Schedule of Retirement Benefits by Type

- Schedule of Refunds by Type

- Schedule of Retirees and Beneficiaries by Type of Retirement

- Schedule of Retirees and Beneficiaries by Type of Retirement and Plan

- Schedule of Retirees and Beneficiaries by Payout Option Selected

- Schedule of Average Benefit Payments

- Schedule of Funding (Market Value Basis): All Pension Plans

- Schedule of Funding (Market Value Basis): VRS Pension Plans

Other Employee Benefit Trust Funds:

- Schedule of Group Life Insurance Additions by Source

- Schedule of Group Life Insurance Deductions by Type

- Schedule of Retiree Health Insurance Credit Additions by Source

- Schedule of Retiree Health Insurance Credit Deductions by Type

- Schedule of Disability Insurance Trust Fund Additions by Source

- Schedule of Disability Insurance Trust Fund Deductions by Type

- Schedule of Retired Members and Beneficiaries by Plan

- Schedule of Average Benefit Payments by Plan

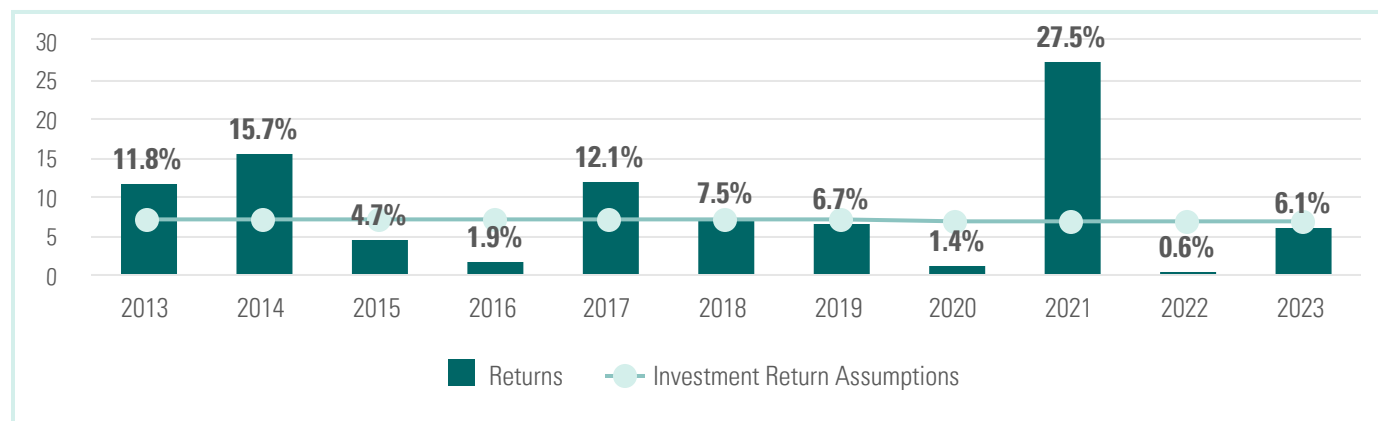
VRS-Participating Employers

Hybrid Defined Contribution Plan Schedules

Commonwealth of Virginia 457 Deferred Compensation and Cash Match Plans

The Statistical Section presents detailed historical information regarding the pension and other employee benefit plans administered by the System. This information includes a 10-year analysis of changes in plan net position, plan enrollment, contributions, plan additions and deductions, benefits and refunds. In addition, this section provides information regarding retirees and an analysis of funding, enrollment and investment activity related to the Commonwealth of Virginia 457 Deferred Compensation Plan and the Virginia Cash Match Plan. The Statistical Section also lists VRS-participating employers as of fiscal year-end.

VRS FISCAL YEAR RETURNS



Pension Trust Funds

FIGURE 5.1: ANALYSIS OF CHANGES AND GROWTH IN FIDUCIARY NET POSITION – ALL PENSION TRUST FUNDS

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN MILLIONS)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fiduciary Net Position Restricted – Beginning of Year	\$ 56,979	\$ 64,521	\$ 66,407	\$ 66,363	\$ 72,814	\$ 76,556	\$ 79,790	\$ 79,358	\$ 98,881	\$ 97,366
Funding:										
Member and Employer Contributions and Other Additions	2,695	3,226	3,323	3,144	3,331	3,338	3,480	3,711	4,521	4,424
Less: Benefits and Administrative Expenses and Transfers	4,030	4,263	4,504	4,692	4,953	5,155	5,424	5,694	5,921	6,232
Net Funding	(1,335)	(1,037)	(1,181)	(1,548)	(1,622)	(1,817)	(1,944)	(1,983)	(1,400)	(1,808)
Investment Income:										
Interest, Dividends and Other Investment Income	986	913	907	904	926	967	804	692	622	1,862
Net Appreciation (Depreciation) in Fair Value	7,891	2,010	230	7,095	4,438	4,084	708	20,814	(737)	4,396
Net Investment Income	8,877	2,923	1,137	7,999	5,364	5,051	1,512	21,506	(115)	6,258
Net Increase (Decrease)	7,542	1,886	(44)	6,451	3,742	3,234	(432)	19,523	(1,515)	4,450
Fiduciary Net Position Restricted – End of Year	\$ 64,521	\$ 66,407	\$ 66,363	\$ 72,814	\$ 76,556	\$ 79,790	\$ 79,358	\$ 98,881	\$ 97,366	\$101,816

FIGURE 5.2: NUMBER OF ACTIVE MEMBERS

AT JUNE 30

(EXPRESSED IN THOUSANDS)

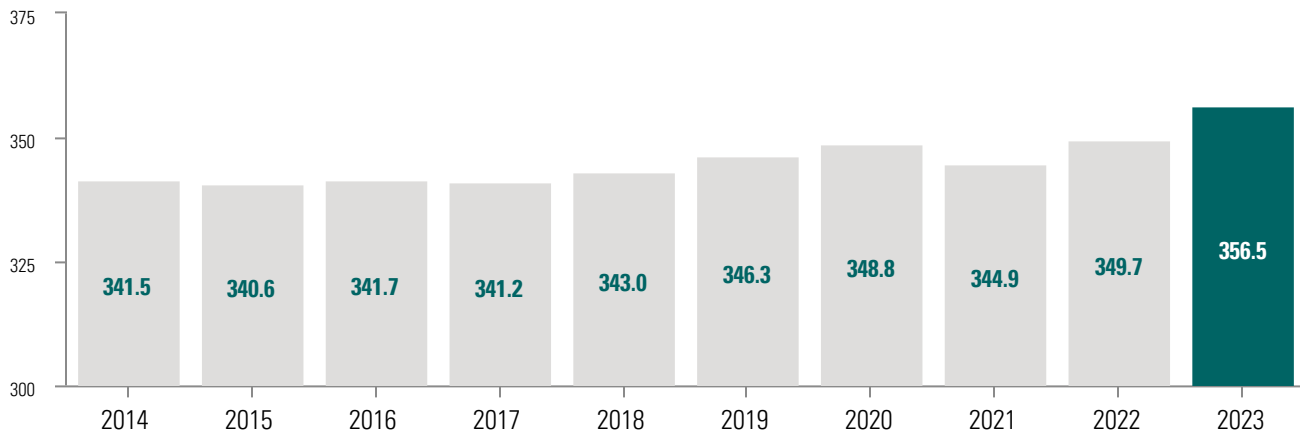


FIGURE 5.3: ANALYSIS OF CHANGES AND GROWTH IN FIDUCIARY NET POSITION – VIRGINIA RETIREMENT SYSTEM

FOR THE YEARS ENDED JUNE 30

VIRGINIA RETIREMENT SYSTEM (VRS) – STATE

(EXPRESSED IN MILLIONS)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fiduciary Net Position Restricted – Beginning of Year	\$ 14,502	\$ 16,169	\$ 16,399	\$ 16,368	\$ 17,790	\$ 18,532	\$ 19,090	\$ 18,770	\$ 23,112	\$ 22,579
Funding:										
Member and Employer Contributions and Other Additions	541	676	923	737	750	747	787	817	1,071	990
Less: Benefits and Administrative Expenses and Transfers	1,119	1,175	1,231	1,279	1,340	1,401	1,468	1,530	1,583	1,656
Net Funding	(578)	(499)	(308)	(542)	(590)	(654)	(681)	(713)	(512)	(666)
Investment Income:										
Interest, Dividends and Other Investment Income	249	228	221	222	248	232	192	162	95	428
Net Appreciation (Depreciation) in Fair Value	1,996	501	56	1,742	1,084	980	169	4,893	(116)	1,010
Net Investment Income	2,245	729	277	1,964	1,332	1,212	361	5,055	(21)	1,438
Net Increase (Decrease)	1,667	230	(31)	1,422	742	558	(320)	4,342	(533)	772
Fiduciary Net Position Restricted – End of Year	\$ 16,169	\$ 16,399	\$ 16,368	\$ 17,790	\$ 18,532	\$ 19,090	\$ 18,770	\$ 23,112	\$ 22,579	\$ 23,351

FIGURE 5.3: ANALYSIS OF CHANGES AND GROWTH IN FIDUCIARY NET POSITION – VIRGINIA RETIREMENT SYSTEM, cont.

FOR THE YEARS ENDED JUNE 30

VIRGINIA RETIREMENT SYSTEM (VRS) – TEACHER

(EXPRESSED IN MILLIONS)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fiduciary Net Position Restricted – Beginning of Year	\$ 26,076	\$ 29,411	\$ 30,344	\$ 30,168	\$ 33,120	\$ 34,920	\$ 36,523	\$ 36,449	\$ 45,617	\$ 45,212
Funding:										
Member and Employer Contributions and Other Additions	1,225	1,641	1,443	1,531	1,684	1,684	1,747	1,897	2,367	2,190
Less: Benefits and Administrative Expenses and Transfers	1,933	2,036	2,136	2,212	2,306	2,393	2,510	2,616	2,708	2,849
Net Funding	(708)	(395)	(693)	(681)	(622)	(709)	(763)	(719)	(341)	(659)
Investment Income:										
Interest, Dividends and Other Investment Income	449	415	413	412	407	443	366	317	382	867
Net Appreciation (Depreciation) in Fair Value	3,594	913	104	3,221	2,015	1,869	323	9,570	(446)	2,047
Net Investment Income	4,043	1,328	517	3,633	2,422	2,312	689	9,887	(64)	2,914
Net Increase (Decrease)	3,335	933	(176)	2,952	1,800	1,603	(74)	9,168	(405)	2,255
Fiduciary Net Position Restricted – End of Year	\$ 29,411	\$ 30,344	\$ 30,168	\$ 33,120	\$ 34,920	\$ 36,523	\$ 36,449	\$ 45,617	\$ 45,212	\$ 47,467

VIRGINIA RETIREMENT SYSTEM (VRS) – POLITICAL SUBDIVISIONS

(EXPRESSED IN MILLIONS)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fiduciary Net Position Restricted – Beginning of Year	\$ 14,395	\$ 16,628	\$ 17,283	\$ 17,418	\$ 19,250	\$ 20,303	\$ 21,259	\$ 21,234	\$ 26,558	\$ 26,045
Funding:										
Member and Employer Contributions and Other Additions	765	761	776	716	732	748	780	839	885	1,040
Less: Benefits and Administrative Expenses and Transfers	804	867	942	998	1,095	1,138	1,210	1,294	1,373	1,455
Net Funding	(39)	(106)	(166)	(282)	(363)	(390)	(430)	(455)	(488)	(415)
Investment Income:										
Interest, Dividends and Other Investment Income	252	237	241	239	237	258	215	185	124	499
Net Appreciation (Depreciation) in Fair Value	2,020	524	60	1,875	1,179	1,088	190	5,594	(149)	1,179
Net Investment Income	2,272	761	301	2,114	1,416	1,346	405	5,779	(25)	1,678
Net Increase (Decrease)	2,233	655	135	1,832	1,053	956	(25)	5,324	(513)	1,263
Fiduciary Net Position Restricted – End of Year	\$ 16,628	\$ 17,283	\$ 17,418	\$ 19,250	\$ 20,303	\$ 21,259	\$ 21,234	\$ 26,558	\$ 26,045	\$ 27,308

FIGURE 5.3: ANALYSIS OF CHANGES AND GROWTH IN FIDUCIARY NET POSITION – VIRGINIA RETIREMENT SYSTEM, cont.

FOR THE YEARS ENDED JUNE 30

STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS) PENSION TRUST FUND

(EXPRESSED IN MILLIONS)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fiduciary Net Position Restricted – Beginning of Year	\$ 625	\$ 721	\$ 733	\$ 731	\$ 796	\$ 837	\$ 865	\$ 855	\$ 1,050	\$ 1,031
Funding:										
Member and Employer Contributions and Other Additions	48	34	39	38	42	38	39	40	54	59
Less: Benefits and Administrative Expenses and Transfers	51	54	55	59	59	64	66	74	72	76
Net Funding	(3)	(20)	(16)	(21)	(17)	(26)	(27)	(34)	(18)	(17)
Investment Income:										
Interest, Dividends and Other Investment Income	11	10	11	9	10	10	9	7	6	19
Net Appreciation (Depreciation) in Fair Value	88	22	3	77	48	44	8	222	(7)	47
Net Investment Income	99	32	14	86	58	54	17	229	(1)	66
Net Increase (Decrease)	96	12	(2)	65	41	28	(10)	195	(19)	49
Fiduciary Net Position Restricted – End of Year	\$ 721	\$ 733	\$ 731	\$ 796	\$ 837	\$ 865	\$ 855	\$ 1,050	\$ 1,031	\$ 1,080

VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS) PENSION TRUST FUND

(EXPRESSED IN MILLIONS)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fiduciary Net Position Restricted – Beginning of Year	\$ 992	\$ 1,150	\$ 1,191	\$ 1,211	\$ 1,346	\$ 1,424	\$ 1,496	\$ 1,500	\$ 1,869	\$ 1,841
Funding:										
Member and Employer Contributions and Other Additions	85	79	97	91	91	93	99	94	111	116
Less: Benefits and Administrative Expenses and Transfers	84	90	98	103	111	115	123	131	137	144
Net Funding	1	(11)	(1)	(12)	(20)	(22)	(24)	(37)	(26)	(28)
Investment Income:										
Interest, Dividends and Other Investment Income	18	16	16	17	17	18	14	14	11	35
Net Appreciation (Depreciation) in Fair Value	139	36	5	130	81	76	14	392	(13)	83
Net Investment Income	157	52	21	147	98	94	28	406	(2)	118
Net Increase (Decrease)	158	41	20	135	78	72	4	369	(28)	90
Fiduciary Net Position Restricted – End of Year	\$ 1,150	\$ 1,191	\$ 1,211	\$ 1,346	\$ 1,424	\$ 1,496	\$ 1,500	\$ 1,869	\$ 1,841	\$ 1,931

FIGURE 5.3: ANALYSIS OF CHANGES AND GROWTH IN FIDUCIARY NET POSITION – VIRGINIA RETIREMENT SYSTEM, cont.

FOR THE YEARS ENDED JUNE 30

JUDICIAL RETIREMENT SYSTEM (JRS) PENSION TRUST FUND

(EXPRESSED IN MILLIONS)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fiduciary Net Position Restricted – Beginning of Year	\$ 389	\$ 442	\$ 457	\$ 467	\$ 512	\$ 540	\$ 558	\$ 549	\$ 673	\$ 657
Funding:										
Member and Employer Contributions and Other Additions	31	35	45	31	32	28	28	25	32	30
Less: Benefits and Administrative Expenses and Transfers	39	41	42	41	42	44	47	48	48	51
Net Funding	(8)	(6)	3	(10)	(10)	(16)	(19)	(23)	(16)	(21)
Investment Income:										
Interest, Dividends and Other Investment Income	7	7	5	5	7	6	5	5	5	13
Net Appreciation (Depreciation) in Fair Value	54	14	2	50	31	28	5	142	(5)	29
Net Investment Income	61	21	7	55	38	34	10	147	—	42
Net Increase (Decrease)	53	15	10	45	28	18	(9)	124	(16)	21
Fiduciary Net Position Restricted – End of Year	\$ 442	\$ 457	\$ 467	\$ 512	\$ 540	\$ 558	\$ 549	\$ 673	\$ 657	\$ 678

SCHEDULE OF RETIREMENT CONTRIBUTIONS BY SYSTEM AND PLAN

FISCAL YEARS 2014-2023

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Virginia Retirement System				State Police Officers' Retirement System	Virginia Law Officers' Retirement System	Judicial Retirement System	Total
	State	Teacher	Political Subdivisions	Sub-Total				
2023	\$ 990,418	\$ 2,189,521	\$ 1,039,733	\$ 4,219,672	\$ 58,541	\$ 115,831	\$ 30,108	\$ 4,424,152
2022	1,070,839	2,366,817	885,229	4,322,885	54,583	111,123	32,299	4,520,890
2021	816,843	1,896,894	838,550	3,552,287	40,278	94,017	24,724	3,711,306
2020	787,339	1,746,683	779,951	3,313,973	39,097	98,626	28,255	3,479,951
2019	747,065	1,684,222	747,714	3,179,001	37,816	93,198	26,098	3,336,113
2018	750,078	1,684,478	731,625	3,166,181	42,117	91,288	31,327	3,330,913
2017	736,815	1,530,706	716,199	2,983,720	37,589	91,414	30,884	3,143,607
2016	922,801	1,442,652	775,881	3,141,334	39,414	96,966	44,738	3,322,452
2015	676,239	1,640,775	760,937	3,077,951	34,107	79,165	34,518	3,225,741
2014	541,294	1,224,875	764,921	2,531,090	48,329	85,391	30,778	2,695,588

FIGURE 5.4: NUMBER OF RETIREES AND BENEFICIARIES

AT JUNE 30

(EXPRESSED IN THOUSANDS)

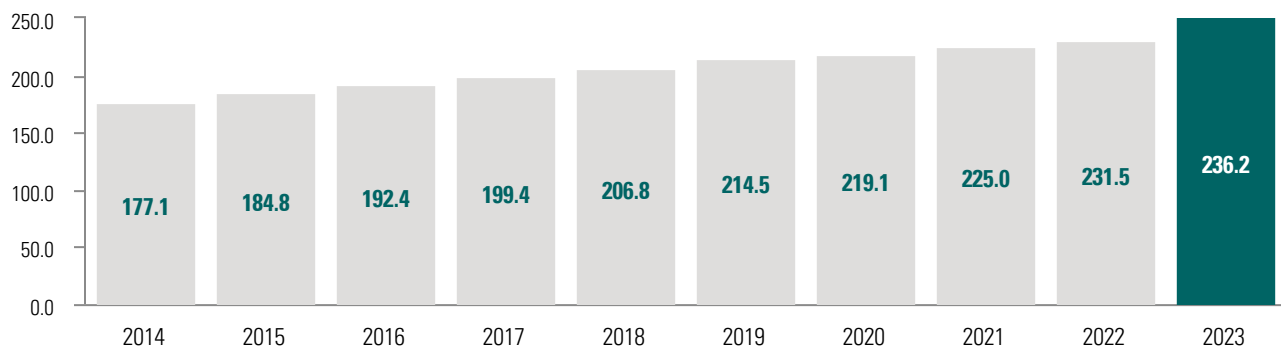
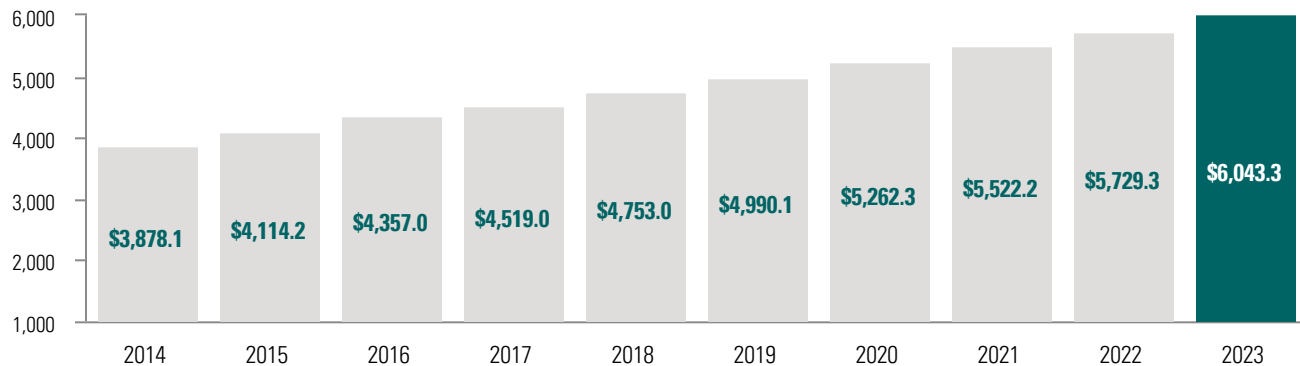


FIGURE 5.5: RETIREMENT BENEFITS PAID

FISCAL YEARS ENDED JUNE 30, 2014-2023

(EXPRESSED IN MILLIONS)



SCHEDULE OF PENSION TRUST FUND ADDITIONS BY SOURCE

FISCAL YEARS 2014-2023

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Member Contributions	Employer Contributions		Investment Income (Loss)	Other	Total
		For Members	Employer Share			
VIRGINIA RETIREMENT SYSTEM (VRS)						
2023	\$ 1,002,308	\$ —	\$ 2,996,855	\$ 6,029,570	\$ 149,891	\$ 10,178,624
2022	933,434	—	2,727,924	(114,431)	444,347	3,991,274
2021	885,029	—	2,605,914	20,721,739	63,204	24,275,886
2020	888,213	—	2,425,760	1,455,122	1,723	4,770,818
2019	953,343	—	2,399,465	4,898,307	2,299	8,253,414
2018	910,312	—	2,389,567	5,158,889	1,076	8,459,844
2017	888,870	115	2,191,935	7,725,350	1,798	10,808,068
2016	817,652	23,463	2,189,744	1,095,229	164,195	4,290,283
2015	758,355	51,006	2,292,248	2,815,780	1,723	5,919,112
2014	702,089	93,468	1,736,913	8,558,759	460	11,091,689
STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)						
2023	\$ 7,952	—	\$ 46,936	\$ 66,245	—	\$ 121,133
2022	7,131	—	36,494	(903)	—	42,722
2021	6,490	—	33,788	229,139	—	269,417
2020	6,600	—	32,497	16,333	—	55,430
2019	6,379	—	31,437	54,792	—	92,608
2018	6,311	—	35,806	58,148	—	100,265
2017	5,701	—	31,888	87,265	—	124,854
2016	5,759	—	31,536	12,635	2,119	52,049
2015	5,680	—	28,427	32,466	—	66,573
2014	5,646	—	42,683	98,682	—	147,011
VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS)						
2023	\$ 18,769	\$ —	\$ 90,433	\$ 118,277	\$ —	\$ 227,479
2022	17,276	—	73,960	(1,666)	—	89,570
2021	17,602	—	76,415	405,216	—	499,233
2020	18,712	—	79,914	28,579	—	127,205
2019	17,871	—	75,327	93,872	—	187,070
2018	17,495	—	73,793	98,293	—	189,581
2017	17,598	—	73,816	146,039	—	237,453
2016	17,574	—	62,900	20,897	16,492	117,863
2015	17,081	—	62,084	52,312	—	131,477
2014	17,908	—	67,483	156,786	—	242,177
JUDICIAL RETIREMENT SYSTEM (JRS)						
2023	\$ 2,320	\$ —	\$ 25,705	\$ 41,850	\$ —	\$ 69,875
2022	2,033	—	24,016	(477)	—	25,572
2021	1,868	—	22,856	147,200	—	171,924
2020	3,436	—	24,819	10,491	—	38,746
2019	4,031	—	23,490	35,719	—	63,240
2018	4,010	—	28,620	37,689	—	70,319
2017	2,225	2,209	28,039	56,180	—	88,653
2016	1,154	2,349	33,443	8,137	8,466	53,549
2015	643	2,531	31,560	20,049	—	54,783
2014	327	2,724	27,727	60,833	—	91,611

SCHEDULE OF PENSION TRUST FUND DEDUCTIONS BY TYPE

FISCAL YEARS 2014-2023

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Retirement Benefits	Refunds	Administrative Expenses	Other	Total
VIRGINIA RETIREMENT SYSTEM (VRS)					
2023	\$ 5,779,142	\$ 119,771	\$ 59,831	\$ 1,750	\$ 5,960,494
2022	5,480,191	123,414	58,703	679	5,662,987
2021	5,277,178	109,987	51,859	1,604	5,440,628
2020	5,033,582	101,961	50,094	3,705	5,189,342
2019	4,774,664	112,169	48,586	9,282	4,944,701
2018	4,548,751	116,473	44,661	8,750	4,718,635
2017	4,324,025	114,137	44,955	10,927	4,494,044
2016	4,169,852	99,444	39,695	2,263	4,311,254
2015	3,935,656	100,993	38,898	2,323	4,077,870
2014	3,711,208	98,049	39,785	6,745	3,855,787
STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)					
2023	\$ 75,578	\$ 240	\$ 595	\$ 1	\$ 76,414
2022	71,465	378	602	—	72,445
2021	73,226	274	531	—	74,031
2020	64,991	552	360	38	65,941
2019	62,683	805	488	61	64,037
2018	58,197	867	509	63	59,636
2017	57,814	630	926	99	59,469
2016	53,515	584	591	23	54,713
2015	53,338	375	471	27	54,211
2014	50,467	685	353	78	51,583
VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS)					
2023	\$ 138,023	\$ 4,990	\$ 1,063	\$ 12	\$ 144,088
2022	129,974	6,284	1,074	8	137,340
2021	124,045	5,790	943	—	130,778
2020	117,137	4,893	623	73	122,726
2019	109,193	4,933	831	103	115,060
2018	104,776	5,604	861	247	111,488
2017	96,224	4,938	1,540	310	103,012
2016	92,270	4,524	938	38	97,770
2015	84,990	4,797	743	44	90,574
2014	78,412	4,665	557	124	83,758
JUDICIAL RETIREMENT SYSTEM (JRS)					
2023	\$ 50,572	\$ 15	\$ 378	\$ —	\$ 50,965
2022	47,678	41	386	—	48,105
2021	47,750	135	343	—	48,228
2020	46,546	12	232	42	46,832
2019	43,584	—	315	43	43,942
2018	41,165	24	326	45	41,560
2017	40,895	—	594	67	41,556
2016	41,341	—	363	15	41,719
2015	40,205	—	283	17	40,505
2014	37,984	—	221	47	38,252

SCHEDULE OF RETIREMENT BENEFITS BY SYSTEM AND PLAN

FISCAL YEARS 2014-2023

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Virginia Retirement System				State Police Officers' Retirement System	Virginia Law Officers' Retirement System	Judicial Retirement System	Total
	State	Teacher	Political Subdivisions	Sub-Total				
2023	\$ 1,610,266	\$ 2,773,752	\$ 1,395,124	\$ 5,779,142	\$75,578	\$138,023	\$50,572	\$ 6,043,315
2022	1,536,665	2,635,945	1,307,581	5,480,191	71,465	129,974	47,678	5,729,308
2021	1,486,951	2,553,154	1,237,073	5,277,178	73,226	124,045	47,750	5,522,199
2020	1,427,873	2,448,204	1,157,505	5,033,582	64,991	117,137	46,546	5,262,256
2019	1,360,833	2,331,038	1,082,793	4,774,664	62,683	109,193	43,584	4,990,124
2018	1,296,803	2,241,927	1,010,021	4,548,751	58,197	104,776	41,165	4,752,889
2017	1,234,388	2,147,781	941,856	4,324,025	57,814	96,224	40,895	4,518,958
2016	1,195,198	2,081,069	893,585	4,169,852	53,515	92,270	41,341	4,356,978
2015	1,136,102	1,980,353	819,201	3,935,656	53,338	84,990	40,205	4,114,189
2014	1,081,866	1,874,636	754,706	3,711,208	50,467	78,412	37,984	3,878,071

SCHEDULE OF RETIREMENT BENEFITS BY TYPE

FISCAL YEARS 2014-2023

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Service Benefits	Disability Benefits	Survivor Benefits	Total
STATE				
2023	\$ 1,529,185	\$ 60,605	\$ 20,475	\$ 1,610,265
2022	1,455,616	61,614	19,435	1,536,665
2021	1,404,953	64,167	17,832	1,486,952
2020	1,344,216	66,004	17,653	1,427,873
2019	1,277,123	66,909	16,801	1,360,833
2018	1,212,167	68,343	16,295	1,296,805
2017	1,146,792	72,148	15,448	1,234,388
2016	1,105,788	74,127	15,283	1,195,198
2015	1,048,497	73,490	14,115	1,136,102
2014	994,111	74,245	13,510	1,081,866
TEACHER				
2023	\$ 2,644,767	\$ 116,912	\$ 12,073	\$ 2,773,752
2022	2,511,192	113,591	11,162	2,635,945
2021	2,428,875	113,677	10,601	2,553,153
2020	2,325,036	112,702	10,466	2,448,204
2019	2,210,585	110,690	9,763	2,331,038
2018	2,122,961	109,420	9,546	2,241,927
2017	2,030,384	108,142	9,255	2,147,781
2016	1,965,675	106,580	8,814	2,081,069
2015	1,867,670	104,305	8,378	1,980,353
2014	1,764,792	101,720	8,124	1,874,636

SCHEDULE OF RETIREMENT BENEFITS BY TYPE, cont.

FISCAL YEARS 2014-2023

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Service Benefits	Disability Benefits	Survivor Benefits	Total
POLITICAL SUBDIVISIONS				
2023	\$ 1,226,529	\$ 156,171	\$ 12,425	\$ 1,395,125
2022	1,145,479	150,476	11,626	1,307,581
2021	1,077,215	148,853	11,005	1,237,073
2020	1,000,280	146,763	10,462	1,157,505
2019	930,161	142,828	9,804	1,082,793
2018	861,564	139,170	9,285	1,010,019
2017	797,794	135,025	9,037	941,856
2016	752,038	132,240	9,307	893,585
2015	685,530	125,992	7,679	819,201
2014	625,221	122,362	7,123	754,706
TOTAL VIRGINIA RETIREMENT SYSTEM (VRS)				
2023	\$ 5,400,481	\$ 333,688	\$ 44,973	\$ 5,779,142
2022	5,112,287	325,681	42,223	5,480,191
2021	4,911,043	326,697	39,438	5,277,178
2020	4,669,532	325,469	38,581	5,033,582
2019	4,417,869	320,427	36,368	4,774,664
2018	4,196,692	316,933	35,126	4,548,751
2017	3,974,970	315,315	33,740	4,324,025
2016	3,823,501	312,947	33,404	4,169,852
2015	3,601,697	303,787	30,172	3,935,656
2014	3,384,124	298,327	28,757	3,711,208
STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)				
2023	\$ 67,202	\$ 7,440	\$ 936	\$ 75,578
2022	63,371	7,293	801	71,465
2021	65,135	7,309	782	73,226
2020	56,996	7,230	765	64,991
2019	55,125	6,892	666	62,683
2018	50,901	6,644	652	58,197
2017	50,708	6,523	583	57,814
2016	46,429	6,447	639	53,515
2015	46,426	6,392	520	53,338
2014	43,693	6,270	504	50,467

SCHEDULE OF RETIREMENT BENEFITS BY TYPE, cont.

FISCAL YEARS 2014-2023

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Service Benefits	Disability Benefits	Survivor Benefits	Total
VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS)				
2023	\$ 132,348	\$ 4,394	\$ 1,281	\$ 138,023
2022	124,622	4,248	1,104	129,974
2021	118,779	4,305	961	124,045
2020	111,821	4,412	903	117,136
2019	104,023	4,312	858	109,193
2018	99,748	4,227	801	104,776
2017	91,364	4,141	719	96,224
2016	87,538	4,013	719	92,270
2015	80,663	3,728	599	84,990
2014	74,291	3,549	572	78,412
JUDICIAL RETIREMENT SYSTEM (JRS)				
2023	\$ 49,128	\$ 291	\$ 1,153	\$ 50,572
2022	46,256	273	1,149	47,678
2021	46,368	235	1,147	47,750
2020	45,056	241	1,248	46,545
2019	42,091	235	1,258	43,584
2018	39,725	229	1,211	41,165
2017	39,406	335	1,154	40,895
2016	39,806	387	1,148	41,341
2015	38,632	401	1,172	40,205
2014	36,396	402	1,186	37,984

SCHEDULE OF REFUNDS BY TYPE

FISCAL YEARS 2014-2023

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Separation	Death	Total
STATE (VRS)			
2023	\$ 21,545	\$ 9,469	\$ 31,014
2022	23,233	8,447	31,680
2021	19,137	9,928	29,065
2020	19,539	7,888	27,427
2019	20,068	6,829	26,897
2018	22,114	8,122	30,236
2017	23,294	7,543	30,837
2016	18,623	6,617	25,240
2015	20,768	6,956	27,724
2014	19,662	5,374	25,036

SCHEDULE OF REFUNDS BY TYPE, cont.

FISCAL YEARS 2014-2023

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Separation	Death	Total
TEACHER (VRS)			
2023	\$ 38,629	\$ 6,737	\$ 45,366
2022	36,642	6,795	43,437
2021	31,036	7,426	38,462
2020	30,131	6,080	36,211
2019	31,115	5,600	36,715
2018	34,057	6,521	40,578
2017	34,320	5,201	39,521
2016	30,070	4,997	35,067
2015	30,314	5,744	36,058
2014	30,947	5,156	36,103
POLITICAL SUBDIVISIONS (VRS)			
2023	\$ 37,075	\$ 6,316	\$ 43,391
2022	40,053	8,244	48,297
2021	33,638	8,822	42,460
2020	32,399	5,924	38,323
2019	35,015	5,234	40,249
2018	35,900	5,425	41,325
2017	37,717	4,351	42,068
2016	32,832	4,548	37,380
2015	31,571	5,327	36,898
2014	32,483	4,393	36,876
TOTAL VIRGINIA RETIREMENT SYSTEM (VRS)			
2023	\$ 97,249	\$ 22,522	\$ 119,771
2022	99,928	23,486	123,414
2021	33,638	8,822	42,460
2020	32,399	5,924	38,323
2019	35,015	5,234	40,249
2018	35,900	5,425	41,325
2017	37,717	4,351	42,068
2016	32,832	4,548	37,380
2015	31,571	5,327	36,898
2014	32,483	4,393	36,876

SCHEDULE OF REFUNDS BY TYPE, cont.

FISCAL YEARS 2014-2023

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Separation	Death	Total
STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)			
2023	\$ —	\$ 240	\$ 240
2022	347	31	378
2021	274	—	274
2020	316	236	552
2019	774	31	805
2018	573	294	867
2017	601	29	630
2016	405	179	584
2015	325	50	375
2014	685	—	685
VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS)			
2023	\$ 4,686	\$ 304	\$ 4,990
2022	5,703	581	6,284
2021	5,364	426	5,790
2020	4,497	396	4,893
2019	4,592	341	4,933
2018	4,899	705	5,604
2017	4,694	244	4,938
2016	3,688	836	4,524
2015	4,465	332	4,797
2014	4,340	325	4,665
JUDICIAL RETIREMENT SYSTEM (JRS)			
2023	\$ —	\$ 15	\$ 15
2022	—	41	41
2021	38	97	135
2020	—	12	12
2019	—	—	—
2018	—	—	—
2017	—	—	—
2016	—	—	—
2015	—	—	—
2014	—	—	—

SCHEDULE OF RETIREES AND BENEFICIARIES BY TYPE OF RETIREMENT

AS OF JUNE 30, 2023

Minimum Guaranteed Benefit Amount	Number of Retirees	Type of Retirement		
		Service Retirement	Disability Retirement	Pre-Retirement Death
\$ 1-200	13,199	12,279	367	553
201-400	22,303	20,346	1,358	599
401-600	20,520	18,110	1,962	448
601-800	17,691	15,410	1,956	325
801-1,000	16,418	14,365	1,814	239
1,001-1,200	15,341	13,568	1,571	202
1,201-1,400	13,369	11,866	1,326	177
1,401-1,600	12,560	11,367	1,070	123
1,601-1,800	12,102	11,090	928	84
1,801-2,000	12,378	11,488	780	110
2,001-2,500	28,113	26,478	1,465	170
2,501-3,000	19,311	18,438	778	95
3,001-3,500	12,564	12,124	377	63
3,501-4,000	7,510	7,306	164	40
4,001-4,500	5,016	4,907	91	18
Over 4,500	7,813	7,695	77	41
Totals	236,208	216,837	16,084	3,287

SCHEDULE OF RETIREES AND BENEFICIARIES BY TYPE OF RETIREMENT AND PLAN

AS OF JUNE 30, 2023

Plan	Number of Retirees	Type of Retirement		
		Service Retirement	Disability Retirement	Pre-Retirement Death
VRS – State	62,292	57,967	3,009	1,316
VRS – Teacher	102,346	96,692	4,849	805
VRS – Political Subdivisions	63,631	54,836	7,821	974
SPORS	1,533	1,299	187	47
ValORS	5,853	5,519	211	123
JRS	553	524	7	22
All Plans	236,208	216,837	16,084	3,287

SCHEDULE OF RETIREES AND BENEFICIARIES BY PAYOUT OPTION SELECTED

AS OF JUNE 30, 2023

Minimum Guaranteed Benefit Amount	Payout Option Selected							
	Basic Benefit	Survivor Option	PLOP with Basic Benefit	PLOP with Survivor Option	Advance Pension Option	Leveling Option	Increased Basic Benefit	Social Security Leveling Benefit
\$ 1-200	9,980	1,992	372	57	221	363	4	187
201-400	17,416	3,225	666	120	313	346	2	184
401-600	15,787	3,001	742	163	256	291	2	251
601-800	13,448	2,538	766	149	266	243	4	228
801-1,000	12,012	2,426	855	200	268	303	2	302
1,001-1,200	10,733	2,309	1,155	272	320	214	—	301
1,201-1,400	9,081	2,044	1,262	272	291	153	—	231
1,401-1,600	8,185	1,874	1,632	315	234	107	—	163
1,601-1,800	7,720	1,671	1,899	358	225	80	—	99
1,801-2,000	7,720	1,573	2,269	466	203	52	—	73
2,001-2,500	15,919	3,431	7,134	1,082	400	71	—	74
2,501-3,000	10,843	2,200	5,267	710	265	33	—	38
3,001-3,500	6,828	1,765	3,312	540	181	8	—	7
3,501-4,000	4,211	1,063	1,834	321	135	4	—	0
4,001-4,500	2,745	763	1,230	239	71	1	—	—
Over 4,500	4,246	1,639	1,529	435	123	2	—	2
Totals	156,874	33,514	31,924	5,699	3,772	2,271	14	2,140

SCHEDULE OF AVERAGE BENEFIT PAYMENTS

FOR RETIREMENTS EFFECTIVE JULY 1, 2013, TO JUNE 30, 2023

			Years of Credited Service					
			1-10	11-15	16-20	21-25	26-30	Over 30
FY 2023	State	Average Monthly Benefit	\$ 520.00	\$ 1,009.20	\$ 1,430.65	\$ 1,853.15	\$ 2,776.48	\$ 3,631.01
		Number of Active Retirees	417.00	343.00	346.00	370.00	348.00	863.00
		Average AFC	54,188.32	59,031.75	62,642.72	63,853.28	71,987.89	75,998.91
	Teacher	Average Monthly Benefit	419.15	804.73	1,263.65	1,770.90	2,936.87	3,440.99
		Number of Active Retirees	555.00	550.00	850.00	773.00	852.00	1,062.00
		Average AFC	43,696.45	48,624.63	58,863.18	63,558.98	75,219.02	77,759.35
	Political Subdivisions	Average Monthly Benefit	355.07	716.03	1,171.46	1,833.53	2,664.45	3,377.20
		Number of Active Retirees	585.00	495.00	588.00	648.00	526.00	609.00
		Average AFC	40,688.02	42,002.63	50,723.83	58,889.85	68,722.94	75,270.08
	Total VRS	Average Monthly Benefit	—	498.46	1,471.83	2,546.77	3,194.31	5,286.38
		Number of Active Retirees	422.08	823.63	1,265.65	1,810.55	2,821.51	3,490.37
		Weighted Average AFC	—	2.00	4.00	9.00	12.00	21.00
	SPORS	Average Monthly Benefit	1,557.00	1,388.00	1,784.00	1,791.00	1,726.00	2,534.00
		Number of Active Retirees	—	43,071.26	61,303.46	73,736.74	83,626.65	110,837.86
		Weighted Average AFC	45,376.00	48,835.00	56,914.00	61,930.00	72,588.00	76,562.00

SCHEDULE OF AVERAGE BENEFIT PAYMENTS

FOR RETIREMENTS EFFECTIVE JULY 1, 2013, TO JUNE 30, 2023

			Years of Credited Service					
			1-10	11-15	16-20	21-25	26-30	Over 30
FY 2023 (cont.)	VaLORS	Average Monthly Benefit	\$ 505.17	\$ 998.62	\$ 1,192.04	\$ 1,644.41	\$ 2,226.39	\$ 3,546.17
		Number of Active Retirees	20.00	39.00	49.00	81.00	47.00	22.00
		Weighted Average AFC	42,351.76	46,711.36	45,206.97	49,254.77	57,985.84	72,299.56
	JRS	Average Monthly Benefit	—	1,965.94	—	4,557.23	4,682.40	8,976.51
		Number of Active Retirees	—	1.00	—	3.00	2.00	15.00
		Weighted Average AFC	—	158,065.65	—	147,064.59	169,255.48	178,130.14
	All Plans	Average Monthly Benefit	423.14	828.74	1,264.14	1,811.30	2,810.44	3,537.15
		Number of Active Retirees	1,577.00	1,430.00	1,837.00	1,884.00	1,787.00	2,592.00
		Weighted Average AFC	45,338.00	48,845.00	56,611.00	61,577.00	72,386.00	77,391.00
FY 2022	State	Average Monthly Benefit	420.82	712.67	991.71	1,357.33	1,961.85	2,671.09
		Number of Active Retirees	7,855	6,967	7,210	7,429	10,604	21,586
		Average AFC	40,086.69	43,592.97	45,069.19	47,414.84	51,216.89	58,871.22
	Teacher	Average Monthly Benefit	383.91	676.44	1,019.62	1,438.61	2,252.09	2,739.05
		Number of Active Retirees	10,697	11,329	13,205	13,525	20,902	30,490
		Average AFC	38,073.22	44,139.48	49,118.29	53,709.69	58,940.23	62,795.24
	Political Subdivisions	Average Monthly Benefit	372.81	607.27	905.60	1,365.26	2,075.82	2,672.90
		Number of Active Retirees	11,450	9,313	9,092	9,119	10,965	12,055
		Average AFC	30,428.99	35,166.21	39,832.04	46,265.40	54,727.65	61,565.99
	Total VRS	Average Monthly Benefit	389.34	662.25	977.67	1,396.29	2,134.11	2,703.74
		Number of Active Retirees	30,002	27,609	29,507	30,073	42,471	64,131
		Weighted Average AFC	35,683.00	40,975.00	45,268.00	49,897.00	55,924.00	61,243.00
	SPORS	Average Monthly Benefit	868.79	1,038.41	1,427.80	1,971.07	2,452.52	3,200.97
		Number of Active Retirees	59	24	39	119	409	861
		Average AFC	35,906.19	44,994.98	50,739.29	57,492.89	61,269.99	70,497.74
	VaLORS	Average Monthly Benefit	432.05	712.51	999.44	1,350.58	1,750.11	2,353.81
		Number of Active Retirees	513	617	1,003	1,526	1,338	676
		Average AFC	34,490.44	36,991.31	39,178.87	42,248.37	46,634.15	54,165.40
	JRS	Average Monthly Benefit	642.88	1,728.93	2,474.95	3,261.57	4,405.04	6,542.36
		Number of Active Retirees	8	4	14	20	19	481
		Average AFC	72,036.09	142,387.23	126,848.40	132,852.08	137,623.83	134,566.78
	All Plans	Average Monthly Benefit	391.05	663.82	979.65	1,397.42	2,126.42	2,734.55
		Number of Active Retirees	30,582	28,254	30,563	31,738	44,237	66,149
		Weighted Average AFC	35,673.00	40,906.00	45,112.00	49,610.00	55,728.00	61,825.00
FY 2021	State	Average Monthly Benefit	640.44	757.71	1,047.45	1,437.89	2,004.31	2,702.44
		Number of Active Retirees	11,766	6,523	6,608	6,805	9,827	18,949
		Average AFC	29,625.49	43,403.13	44,415.06	47,083.35	50,560.69	57,991.63
	Teacher	Average Monthly Benefit	531.86	695.66	1,050.24	1,491.62	2,253.20	2,721.77
		Number of Active Retirees	12,926	10,891	12,520	12,883	19,899	28,259
		Average AFC	32,410.22	44,069.85	48,891.60	53,522.32	58,173.02	61,757.62
	Political Subdivisions	Average Monthly Benefit	500.30	633.83	939.52	1,404.33	2,109.15	2,679.54
		Number of Active Retirees	14,183	8,663	8,313	8,191	9,973	10,355
		Average AFC	25,217.70	34,998.45	39,501.88	45,931.98	54,338.15	60,561.15
	Total VRS	Average Monthly Benefit	553.21	690.64	1,016.02	1,452.86	2,155.41	2,707.81
		Number of Active Retirees	38,875	26,077	27,441	27,879	39,699	57,563
		Weighted Average AFC	28,943.00	40,889.00	44,969.00	49,721.00	55,325.00	60,303.00

SCHEDULE OF AVERAGE BENEFIT PAYMENTS

FOR RETIREMENTS EFFECTIVE JULY 1, 2013, TO JUNE 30, 2023

			Years of Credited Service					
			1-10	11-15	16-20	21-25	26-30	Over 30
FY 2021 (cont.)	SPORS	Average Monthly Benefit	\$ 1,255.88	\$ 1,177.20	\$ 1,522.26	\$ 2,118.74	\$ 2,562.07	\$ 3,366.42
		Number of Active Retirees	213	20	36	114	379	733
		Average AFC	15,189.34	43,728.94	48,998.72	58,868.35	62,442.46	71,615.72
	VaLORS	Average Monthly Benefit	555.34	732.63	1,056.36	1,368.47	1,754.06	2,397.16
		Number of Active Retirees	719	568	952	1,364	1,179	618
		Average AFC	27,432.76	36,395.59	39,504.22	42,200.38	46,243.55	54,011.32
	JRS	Average Monthly Benefit	3,013.14	1,728.93	2,924.83	3,772.41	5,556.79	7,139.04
		Number of Active Retirees	118	4	7	17	18	380
		Average AFC	25,943.37	142,387.23	118,190.94	136,552.07	145,113.41	138,619.16
	All Plans	Average Monthly Benefit	564.27	692.05	1,018.49	1,452.87	2,149.16	2,741.11
		Number of Active Retirees	39,925	26,669	28,436	29,374	41,275	59,294
		Weighted Average AFC	28,834.00	40,811.00	44,809.00	49,457.00	55,170.00	60,879.00
FY 2020	State	Average Monthly Benefit	654.02	984.34	1,311.22	1,872.61	2,460.80	3,323.14
		Number of Active Retirees	382	397	401	325	415	1,002
		Average AFC	50,021.38	55,053.57	52,571.08	60,413.38	62,656.41	68,789.87
	Teacher	Average Monthly Benefit	486.13	865.93	1,316.79	1,846.00	2,713.81	3,340.62
		Number of Active Retirees	451	625	721	617	839	992
		Average AFC	41,230.05	50,874.10	56,958.75	63,197.88	70,243.56	74,914.36
	Political Subdivisions	Average Monthly Benefit	474.58	754.72	1,155.81	1,717.05	2,542.99	3,322.17
		Number of Active Retirees	576	546	602	506	538	577
		Average AFC	37,276.05	42,185.67	49,206.57	55,027.95	64,091.24	73,794.49
	Total VRS	Average Monthly Benefit	527.00	857.00	1,259.00	1,807.00	2,603.93	3,329.66
		Number of Active Retirees	1,409	1,568	1,724	1,448	1,792	2,571
		Weighted Average AFC	41,997.00	48,907.00	53,231.00	59,718.00	66,639.00	72,276.00
	SPORS	Average Monthly Benefit	—	1,082.49	1,598.18	2,968.10	3,262.20	4,753.84
		Number of Active Retirees	—	3	6	3	15	21
		Weighted Average AFC	—	61,959.94	60,268.35	74,259.53	78,750.91	97,682.52
	VaLORS	Average Monthly Benefit	494.08	789.70	1,144.94	1,492.00	1,884.22	2,710.04
		Number of Active Retirees	29	39	61	82	45	22
		Weighted Average AFC	35,862.33	39,996.68	42,574.08	46,019.45	49,167.93	65,649.72
	JRS	Average Monthly Benefit	1,471.81	1,455.31	—	—	5,506.51	8,830.85
		Number of Active Retirees	2	1	—	—	1	26
		Weighted Average AFC	154,667.00	152,410.31	—	—	154,819.57	169,367.62
	All Plans	Average Monthly Benefit	528.00	856.00	1,257.00	1,792.00	2,593.35	3,390.01
		Number of Active Retirees	1,440	1,611	1,791	1,533	1,853	2,640
		Weighted Average AFC	42,030.00	48,780.00	52,892.00	59,014.00	66,361.00	73,379.00
FY 2019	State	Average Monthly Benefit	556.77	1,130.53	2,220.79	3,096.43	4,017.05	6,231.70
		Number of Active Retirees	425	843	738	680	242	5
		Average AFC	48,438.21	53,122.77	60,109.13	67,482.06	73,075.21	92,173.89
	Teacher	Average Monthly Benefit	476.86	1,065.89	2,315.80	3,207.99	4,293.18	4,423.04
		Number of Active Retirees	490	1,485	1,416	871	132	4
		Average AFC	41,487.37	52,765.27	66,479.20	73,634.63	83,052.23	79,395.87
	Political Subdivisions	Average Monthly Benefit	442.07	906.12	2,142.88	2,887.59	3,729.12	5,607.75
		Number of Active Retirees	554	1,027	1,023	543	72	2
		Average AFC	34,890.16	43,392.24	59,749.44	66,564.07	75,715.07	81,452.40
	Total VRS	Average Monthly Benefit	486.86	1,033.22	2,238.05	3,088.68	4,052.29	5,460.56
		Number of Active Retirees	1,469	3,355	3,177	2,094	446	11
		Weighted Average AFC	41,010.35	49,985.92	62,832.47	69,803.18	76,454.22	85,577.98

SCHEDULE OF AVERAGE BENEFIT PAYMENTS

FOR RETIREMENTS EFFECTIVE JULY 1, 2013, TO JUNE 30, 2023

			Years of Credited Service					
			1-10	11-15	16-20	21-25	26-30	Over 30
FY 2019 (cont.)	SPORS	Average Monthly Benefit	\$ —	\$ 1,677.61	\$ 3,040.45	\$ 4,156.60	\$ 5,375.07	\$ —
		Number of Active Retirees	—	2	24	26	6	—
		Weighted Average AFC	—	56,913.25	75,116.44	89,192.84	102,437.81	—
	VaLORS	Average Monthly Benefit	480.85	983.78	1,644.12	2,774.46	4,785.22	—
		Number of Active Retirees	23	129	121	25	3	—
		Weighted Average AFC	40,863.42	40,995.09	47,746.88	60,974.57	83,333.98	—
	JRS	Average Monthly Benefit	422.28	—	6,166.24	7,382.26	7,546.48	8,028.31
		Number of Active Retirees	2	—	1	3	5	8
		Weighted Average AFC	91,640.00	—	168,489.58	162,497.43	155,159.32	157,977.80
	All Plans	Average Monthly Benefit	486.68	1,031.76	2,223.40	3,103.94	4,112.31	6,541.72
		Number of Active Retirees	1,494	3,486	3,323	2,148	460	19
		Weighted Average AFC	41,075.86	49,657.19	62,403.68	70,064.58	77,693.49	116,062.11
FY 2018	State	Average Monthly Benefit	430.51	743.61	1,115.65	1,492.54	2,155.74	3,201.83
		Number of Active Retirees	329	382	437	329	413	1,226
		Average AFC	46,191.00	51,341.00	51,470.00	56,655.00	59,536.00	70,115.00
	Teacher	Average Monthly Benefit	397.48	702.13	1,164.24	1,605.86	2,411.89	3,225.68
		Number of Active Retirees	478	647	802	653	782	1,424
		Average AFC	39,946.00	47,785.00	55,420.00	58,933.00	65,809.00	73,067.00
	Political Subdivisions	Average Monthly Benefit	348.90	619.09	889.04	1,452.77	2,234.06	2,986.58
		Number of Active Retirees	471	644	583	523	595	877
		Average AFC	35,320.00	40,381.00	42,941.00	53,511.00	61,134.00	68,504.00
	Total VRS	Average Monthly Benefit	388.08	679.64	1,064.53	1,527.89	2,293.68	3,157.94
		Number of Active Retirees	1,278	1,673	1,822	1,505	1,790	3,527
		Weighted Average AFC	39,849.00	45,747.00	50,480.00	56,551.00	62,808.00	70,906.00
	SPORS	Average Monthly Benefit	—	467.23	—	1,344.71	2,929.29	4,355.99
		Number of Active Retirees	—	2	—	4	16	22
		Weighted Average AFC	—	54,484.00	—	60,252.00	75,772.00	92,743.00
	VaLORS	Average Monthly Benefit	457.08	706.48	1,001.35	1,231.97	1,846.10	2,624.09
		Number of Active Retirees	22	51	63	131	81	41
		Weighted Average AFC	37,163.00	37,664.00	40,782.00	44,121.00	51,789.00	59,481.00
	JRS	Average Monthly Benefit	—	2,287.69	—	—	2,020.72	7,766.95
		Number of Active Retirees	—	1	—	—	3	14
		Weighted Average AFC	—	148,351.00	—	—	149,709.00	158,830.00
	All Plans	Average Monthly Benefit	389.25	681.11	1,062.42	1,503.79	2,279.44	3,177.07
		Number of Active Retirees	1,300	1,727	1,885	1,640	1,890	3,604
		Weighted Average AFC	39,803.00	45,578.00	50,155.00	55,567.00	62,583.00	71,251.00
FY 2017	State	Average Monthly Benefit	413.21	743.04	1,034.43	1,550.80	2,059.13	3,066.54
		Number of Active Retirees	320	374	414	338	374	1,200
		Average AFC	45,412.00	49,487.00	48,208.00	58,190.00	56,901.00	65,405.00
	Teacher	Average Monthly Benefit	386.27	693.17	1,093.01	1,571.09	2,414.56	3,132.83
		Number of Active Retirees	444	644	772	656	756	1,369
		Average AFC	39,773.00	45,512.00	52,398.00	58,570.00	65,087.00	70,892.00
	Political Subdivisions	Average Monthly Benefit	350.60	553.85	886.92	1,351.87	2,211.27	2,813.82
		Number of Active Retirees	493	590	562	482	591	813
		Average AFC	33,216.00	35,209.00	41,290.00	48,136.00	59,764.00	65,487.00

SCHEDULE OF AVERAGE BENEFIT PAYMENTS

FOR RETIREMENTS EFFECTIVE JULY 1, 2013, TO JUNE 30, 2023

			Years of Credited Service					
			1-10	11-15	16-20	21-25	26-30	Over 30
FY 2017 (cont.)	Total VRS	Average Monthly Benefit	\$ 379.14	\$ 653.66	\$ 1,012.88	\$ 1,494.85	\$ 2,267.51	\$ 3,032.62
		Number of Active Retirees	1,257	1,608	1,748	1,476	1,721	3,382
		Weighted Average AFC	38,637.00	42,656.00	47,834.00	55,076.00	61,480.00	67,646.00
	SPORS	Average Monthly Benefit	599.64	639.34	—	1,826.61	2,960.46	3,905.67
		Number of Active Retirees	1	4	—	3	23	47
		Weighted Average AFC	55,565.00	46,014.00	—	58,898.00	74,016.00	85,256.00
	VaLORS	Average Monthly Benefit	444.50	653.93	1,032.94	1,318.83	1,788.27	2,564.74
		Number of Active Retirees	17	44	45	107	82	38
		Weighted Average AFC	35,913.00	36,428.00	41,026.00	43,808.00	47,182.00	58,498.00
	JRS	Average Monthly Benefit	—	511.79	—	2,608.35	4,863.62	8,352.50
		Number of Active Retirees	—	2	—	2	2	14
		Weighted Average AFC	—	142,367.00	—	147,295.00	156,110.00	153,865.00
	All Plans	Average Monthly Benefit	380.18	653.46	1,013.37	1,485.01	2,257.56	3,060.69
		Number of Active Retirees	1,275	1,658	1,793	1,588	1,828	3,481
		Weighted Average AFC	38,614.00	42,619.00	47,663.00	54,440.00	61,100.00	68,130.00
FY 2016*	State	Average Monthly Benefit	401.55	768.31	1,038.35	1,539.86	1,907.73	3,004.64
		Number of Active Retirees	315	318	357	307	411	1,307
		Average AFC	43,993.00	49,585.00	49,392.00	55,174.00	54,986.00	64,126.00
	Teacher	Average Monthly Benefit	432.49	746.26	1,115.50	1,606.80	2,436.89	3,078.52
		Number of Active Retirees	484	681	699	671	797	1,468
		Average AFC	42,306.00	49,610.00	54,438.00	58,555.00	65,786.00	70,336.00
	Political Subdivisions	Average Monthly Benefit	320.69	562.57	895.21	1,252.95	2,082.39	2,946.00
		Number of Active Retirees	545	569	556	473	647	895
		Average AFC	31,052.00	38,544.00	41,480.00	45,989.00	58,617.00	68,431.00
	Total VRS	Average Monthly Benefit	379.90	684.08	1,022.44	1,477.29	2,196.01	3,019.89
		Number of Active Retirees	1,344	1,568	1,612	1,451	1,855	3,670
		Weighted Average AFC	38,138.00	45,589.00	48,851.00	53,743.00	60,893.00	67,660.00
	SPORS	Average Monthly Benefit	—	139.46	864.59	1,538.59	2,960.02	4,092.02
		Number of Active Retirees	—	2	2	5	11	18
		Weighted Average AFC	—	24,869.00	53,438.00	62,731.00	75,082.00	92,720.00
	VaLORS	Average Monthly Benefit	372.46	619.25	946.46	1,203.56	1,596.89	2,458.85
		Number of Active Retirees	29	26	48	90	79	51
		Weighted Average AFC	39,019.00	37,606.00	39,308.00	43,542.00	45,962.00	55,791.00
	JRS	Average Monthly Benefit	—	—	—	4,396.22	5,647.58	8,048.62
		Number of Active Retirees	—	—	—	1	1	17
		Weighted Average AFC	—	—	—	146,295.00	146,294.00	154,562.00
	All Plans	Average Monthly Benefit	379.74	682.34	1,020.04	1,463.44	2,177.77	3,040.16
		Number of Active Retirees	1,373	1,596	1,662	1,547	1,946	3,756
		Weighted Average AFC	38,156.00	45,433.00	48,581.00	53,239.00	60,411.00	68,012.00
FY 2015	State	Average Monthly Benefit	392.12	694.37	1,030.11	1,446.53	1,930.58	3,016.49
		Number of Active Retirees	329	327	369	301	388	1,170

SCHEDULE OF AVERAGE BENEFIT PAYMENTS

FOR RETIREMENTS EFFECTIVE JULY 1, 2013, TO JUNE 30, 2023

			Years of Credited Service					
			1-10	11-15	16-20	21-25	26-30	Over 30
FY 2015 (cont.)	Teacher	Average Monthly Benefit	\$ 381.68	\$ 714.22	\$ 1,066.14	\$ 1,541.72	\$ 2,476.42	\$ 3,096.71
		Number of Active Retirees	559	669	696	704	732	1,453
	Political Subdivisions	Average Monthly Benefit	330.59	513.35	843.10	1,254.45	2,059.40	2,708.39
		Number of Active Retirees	592	620	478	458	572	846
	Total VRS	Average Monthly Benefit	363.56	633.14	988.43	1,432.21	2,210.28	2,974.96
		Number of Active Retirees	1,480	1,616	1,543	1,463	1,692	3,469
	SPORS	Average Monthly Benefit	1,078.60	969.65	—	2,506.63	2,539.27	3,697.36
		Number of Active Retirees	1	1	—	2	16	34
	VaLORS	Average Monthly Benefit	455.80	585.05	946.20	1,161.28	1,715.68	2,141.37
		Number of Active Retirees	23	50	52	95	93	56
	JRS	Average Monthly Benefit	—	—	—	—	5,408.75	7,674.09
		Number of Active Retirees	—	—	—	—	1	31
	All Plans	Average Monthly Benefit	365.45	631.90	987.05	1,417.08	2,189.44	3,009.36
		Number of Active Retirees	1,504	1,667	1,595	1,560	1,802	3,590
FY 2014	State	Average Monthly Benefit	374.40	674.96	1,035.41	1,308.58	1,913.24	2,766.37
		Number of Active Retirees	341	363	299	315	333	1,185
	Teacher	Average Monthly Benefit	408.27	701.52	1,083.91	1,559.04	2,383.18	3,055.18
		Number of Active Retirees	604	651	611	690	804	1,463
	Political Subdivisions	Average Monthly Benefit	308.87	542.75	855.38	1,248.49	2,007.63	2,668.41
		Number of Active Retirees	569	563	456	448	524	676
	Total VRS	Average Monthly Benefit	363.28	638.73	997.01	1,408.99	2,170.49	2,873.56
		Number of Active Retirees	1,514	1,577	1,366	1,453	1,661	3,324
	SPORS	Average Monthly Benefit	—	—	615.19	1,631.99	2,809.19	3,597.68
		Number of Active Retirees	—	—	1	2	10	28
	VaLORS	Average Monthly Benefit	383.32	695.40	899.70	1,133.65	1,700.98	2,537.26
		Number of Active Retirees	25	29	45	75	72	36
	JRS	Average Monthly Benefit	—	—	—	—	5,051.59	7,400.90
		Number of Active Retirees	—	—	—	—	3	22
	All Plans	Average Monthly Benefit	363.61	639.75	993.63	1,395.78	2,159.73	2,905.16
		Number of Active Retirees	1,539	1,606	1,412	1,530	1,746	3,410
FY 2013	State	Average Monthly Benefit	373.47	636.41	1,035.61	1,362.08	1,881.63	2,813.81
		Number of Active Retirees	291	299	261	283	340	1,086
	Teacher	Average Monthly Benefit	429.20	689.55	1,128.94	1,537.48	2,304.17	2,915.42
		Number of Active Retirees	531	574	536	636	747	1,672
	Political Subdivisions	Average Monthly Benefit	295.20	525.24	803.27	1,220.49	1,920.03	2,666.07
		Number of Active Retirees	562	512	396	394	496	753
	Total VRS	Average Monthly Benefit	363.12	617.34	1,000.42	1,404.56	2,093.05	2,830.51
		Number of Active Retirees	1,384	1,385	1,193	1,313	1,583	3,511
	SPORS	Average Monthly Benefit	—	—	—	2,263.68	2,752.85	3,282.00
		Number of Active Retirees	—	—	—	3	10	17
	VaLORS	Average Monthly Benefit	332.59	632.67	883.09	1,223.64	1,709.19	2,246.63
		Number of Active Retirees	29	30	39	67	70	49

SCHEDULE OF AVERAGE BENEFIT PAYMENTS

FOR RETIREMENTS EFFECTIVE JULY 1, 2013, TO JUNE 30, 2023

			Years of Credited Service					
			1-10	11-15	16-20	21-25	26-30	Over 30
FY 2013	JRS	Average Monthly Benefit	\$ —	\$ —	\$ 3,645.63	\$ 4,738.37	\$ —	\$ 7,490.90
(cont.)		Number of Active Retirees	—	—	3	1	—	28
	All Plans	Average Monthly Benefit	362.24	617.66	1,003.13	1,400.06	2,080.06	2,860.90
		Number of Active Retirees	1,413	1,415	1,235	1,384	1,663	3,605

* Average Final Compensation (AFC) information was not available prior to fiscal year 2016.

FIGURE 5.6: DISTRIBUTION OF RETIREES BY PAYOUT OPTION SELECTED

ALL RETIREES AT JUNE 30, 2023

	Basic Benefit	Survivor Option	PLOP with Basic Benefit	PLOP with Survivor Option	Advance Pension Option	Total
VRS – State	62.97%	17.99%	13.45%	3.26%	2.33%	100.00%
VRS – Teacher	72.87%	10.02%	14.30%	1.47%	1.34%	100.00%
VRS – Political Subdivisions	67.74%	16.32%	11.97%	2.77%	1.20%	100.00%
SPORS	40.77%	32.03%	17.48%	9.26%	0.46%	100.00%
VaLORS	61.39%	16.11%	16.28%	3.21%	3.01%	100.00%
JRS	28.21%	43.04%	13.38%	14.47%	0.90%	100.00%
All Plans	70.00%	14.00%	13.00%	2.00%	1.00%	100.00%

FISCAL YEAR 2023 RETIREES

	Basic Benefit	Survivor Option	PLOP with Basic Benefit	PLOP with Survivor Option	Advance Pension Option	Total
VRS – State	66.40%	12.95%	16.52%	2.75%	1.38%	100.00%
VRS – Teacher	72.15%	9.28%	15.60%	1.42%	1.55%	100.00%
VRS – Political Subdivisions	69.24%	11.76%	14.69%	2.75%	1.56%	100.00%
SPORS	56.25%	12.50%	20.83%	10.42%	—%	100.00%
VaLORS	63.56%	15.50%	18.22%	1.94%	0.78%	100.00%
JRS	47.61%	19.05%	14.29%	19.05%	—%	100.00%
All Plans	71.00%	11.00%	15.00%	2.00%	1.00%	100.00%

Benefit Payout Options

Basic Benefit. The Basic Benefit is based on the unreduced (normal) retirement benefit calculation. It does not provide for a continuation of a benefit to a survivor. Upon the member's death, any remaining member contributions and accrued interest are paid in a lump sum to the member's beneficiary.

Survivor Option. Members may choose a whole percentage of their benefit, between 10% and 100%, to continue as a lifetime benefit to a survivor upon their death. The member's benefit is actuarially reduced accordingly.

Basic Benefit With Partial Lump-Sum Option Payment (PLOP) and Survivor Option With PLOP. This option is available with the Basic Benefit or Survivor Option. Members who are in active service for one or more years beyond their eligibility for an unreduced retirement benefit are eligible to elect a partial lump-sum payment of their member contributions and accrued interest equal to one, two or three times their annual retirement benefit, depending on how long they work beyond their unreduced retirement eligibility. The monthly benefit is actuarially reduced accordingly.

Advance Pension Option. With this option, members elect to receive a temporary higher benefit that begins at retirement and continues until an age chosen by the member, between age 62 up to the normal retirement age under Social Security. At that point, the monthly benefit is permanently reduced on an actuarially equivalent basis.

FIGURE 5.7: DISTRIBUTION OF RETIREES BY YEARS OF SERVICE

ALL RETIREES AT JUNE 30, 2023

	1-10 Years	11-20 Years	21-30 Years	31-40 Years	41-50 Years	Over 50 Years	Total
VRS – State	12.89%	22.98%	29.04%	28.88%	6.04%	0.17%	100.00%
VRS – Teacher	10.74%	24.76%	34.38%	28.09%	2.00%	0.03%	100.00%
VRS – Political Subdivisions	18.27%	29.59%	32.58%	17.82%	1.71%	0.03%	100.00%
SPORS	3.84%	4.44%	35.49%	49.05%	6.85%	0.33%	100.00%
VaLORS	8.99%	28.75%	50.45%	11.14%	0.65%	0.02%	100.00%
JRS	1.26%	3.44%	7.78%	12.48%	18.44%	56.60%	100.00%
All Plans	13.22%	25.51%	32.83%	25.21%	3.03%	0.20%	100.00%

FISCAL YEAR 2023 RETIREES

	1-10 Years	11-20 Years	21-30 Years	31-40 Years	41-50 Years	Over 50 Years	Total
VRS – State	15.52%	25.64%	26.72%	22.29%	9.42%	0.41%	100.00%
VRS – Teacher	11.95%	30.16%	35.01%	20.08%	2.76%	0.04%	100.00%
VRS – Political Subdivisions	16.96%	31.38%	34.02%	14.63%	3.01%	—%	100.00%
SPORS	—%	12.50%	43.75%	31.25%	12.50%	—%	100.00%
VaLORS	7.75%	34.11%	49.61%	6.98%	1.55%	—%	100.00%
JRS	—%	4.76%	23.81%	9.52%	23.81%	38.10%	100.00%
All Plans	14.20%	29.41%	33.05%	18.65%	4.50%	0.19%	100.00%

FIGURE 5.8: DISTRIBUTION OF RETIREES BY AGE AT RETIREMENT

ALL RETIREES AT JUNE 30, 2023

	Under 55	55-59	60-65	Over Age 65	Total
VRS – State	15.19%	19.92%	34.14%	30.75%	100.00%
VRS – Teacher	13.53%	31.27%	34.69%	20.51%	100.00%
VRS – Political Subdivisions	23.58%	19.00%	30.40%	27.02%	100.00%
SPORS	54.14%	28.05%	12.92%	4.89%	100.00%
VaLORS	43.94%	24.62%	22.95%	8.49%	100.00%
JRS	5.24%	14.47%	30.02%	50.27%	100.00%
All Plans	17.67%	24.75%	32.95%	24.63%	100.00%

FISCAL YEAR 2023 RETIREES

	Under 55	55-59	60-65	Over Age 65	Total
VRS – State	3.69%	8.78%	36.17%	51.36%	100.00%
VRS – Teacher	8.58%	18.85%	38.45%	34.12%	100.00%
VRS – Political Subdivisions	13.82%	13.45%	30.89%	41.84%	100.00%
SPORS	33.33%	27.08%	22.92%	16.67%	100.00%
VaLORS	37.22%	23.64%	20.54%	18.60%	100.00%
JRS	—%	—%	14.29%	85.71%	100.00%
All Plans	9.78%	14.85%	35.02%	40.35%	100.00%

FIGURE 5.9: DISTRIBUTION OF RETIREES BY AVERAGE FINAL COMPENSATION

ALL RETIREES AT JUNE 30, 2023

	Up to \$10,000	\$10,001- 20,000	\$20,001- 30,000	\$30,001- 40,000	\$40,001- 50,000	\$50,001- 60,000	\$60,001- 70,000	\$70,001- 80,000	\$80,001- 90,000	\$90,001- 100,000	Over \$100,000	Total
VRS – State	0.34%	5.32%	15.19%	20.00%	17.58%	12.91%	9.25%	6.38%	4.22%	2.78%	6.03%	100.00%
VRS – Teacher	0.54%	6.29%	9.23%	11.19%	16.56%	18.67%	14.57%	8.47%	5.68%	4.35%	4.45%	100.00%
VRS – Political Subdivisions	1.98%	12.35%	15.85%	17.84%	16.27%	11.66%	8.21%	5.51%	3.45%	2.32%	4.56%	100.00%
SPORS	0.72%	0.76%	3.20%	7.83%	14.09%	14.68%	16.31%	16.44%	11.61%	7.05%	7.31%	100.00%
VaLORS	—%	0.02%	5.01%	40.71%	35.20%	11.81%	3.95%	1.62%	0.79%	0.38%	0.51%	100.00%
JRS	0.73%	0.18%	—%	0.18%	0.36%	0.54%	1.08%	1.63%	3.44%	4.88%	86.98%	100.00%
All Plans	0.86%	7.46%	12.42%	15.98%	17.16%	15.03%	11.17%	6.99%	4.61%	3.31%	5.01%	100.00%

FISCAL YEAR 2023 RETIREES

	Up to \$10,000	\$10,001- 20,000	\$20,001- 30,000	\$30,001- 40,000	\$40,001- 50,000	\$50,001- 60,000	\$60,001- 70,000	\$70,001- 80,000	\$80,001- 90,000	\$90,001- 100,000	Over \$100,000	Total
VRS – State	—%	0.52%	5.66%	12.10%	17.12%	17.16%	12.31%	10.12%	7.07%	4.69%	13.25%	100.00%
VRS – Teacher	0.02%	3.75%	11.03%	8.47%	8.21%	13.55%	18.11%	11.83%	6.59%	7.22%	11.22%	100.00%
VRS – Political Subdivisions	0.41%	8.75%	10.69%	13.76%	16.11%	13.71%	9.70%	8.26%	6.03%	3.94%	8.64%	100.00%
SPORS	—%	—%	—%	4.17%	—%	2.08%	8.33%	27.08%	10.42%	12.50%	35.42%	100.00%
VaLORS	—%	—%	0.78%	13.57%	50.00%	21.32%	5.80%	3.10%	3.10%	0.78%	1.55%	100.00%
JRS	—%	—%	—%	—%	—%	—%	—%	—%	—%	—%	100.00%	100.00%
All Plans	0.14%	4.41%	9.32%	11.07%	13.74%	14.58%	13.72%	10.15%	6.46%	5.45%	10.96%	100.00%

SCHEDULE OF FUNDING (MARKET VALUE OF ASSETS BASIS): ALL PENSION PLANS

(EXPRESSED IN THOUSANDS)

Actuarial Valuation Date June 30	Market Value of Assets (MVA) (a)	Actuarial Accrued Liability (AAL) – Entry Age (b)	Net Pension Liability (AAL-MVA) (b-a)	Funded Ratio Funded (MVA/ AAL) (a/b)	Covered Payroll (c)	Net Pension Liability as a Percentage of Covered Payroll (b-a)/(c)
VIRGINIA RETIREMENT SYSTEM (VRS)**						
2022	\$ 93,836,088	\$ 112,033,122	\$ 18,197,034	83.8%	\$20,781,227	87.6%
2021*	95,288,645	106,643,382	11,354,737	89.4%	19,060,681	59.6%
2020	76,453,387	101,893,256	25,439,869	75.0%	18,749,343	135.7%
2019	76,871,911	99,133,971	22,262,060	77.5%	18,242,017	122.0%
2018	73,754,573	93,174,818	19,420,245	79.2%	17,614,448	110.3%
2017*	70,159,680	89,851,284	19,691,604	78.1%	16,764,876	117.5%
2016	63,954,159	87,118,992	23,164,833	73.4%	16,325,998	141.9%
2015	64,025,668	84,711,142	20,685,474	75.6%	15,901,380	130.1%
2014	62,207,257	82,083,384	19,876,127	75.8%	15,671,359	126.8%
2013*	54,972,736	79,077,591	24,104,855	69.5%	15,269,079	157.9%
STATE POLICE RETIREMENT SYSTEM						
2022	\$ 1,031,383	\$ 1,418,464	\$ 387,081	72.7%	\$ 159,212	243.1%
2021*	1,050,148	1,326,646	276,498	79.2%	142,795	193.6%
2020	854,763	1,206,424	351,661	70.9%	131,255	267.9%
2019	865,273	1,181,120	315,847	73.3%	132,230	238.9%
2018	836,702	1,112,893	276,191	75.2%	126,523	218.3%
2017*	796,073	1,040,628	244,555	76.5%	110,265	221.8%
2016	730,688	1,081,980	351,292	67.5%	114,877	305.8%
2015	733,352	1,050,701	317,349	69.7%	110,543	285.5%
2014	720,990	1,029,155	308,165	70.1%	112,303	274.0%
2013*	625,562	996,690	371,128	62.7%	109,006	341.0%
VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS)						
2022	\$ 1,789,127	\$ 2,507,144	\$ 718,017	71.4%	\$ 372,486	192.8%
2021*	1,868,924	2,407,153	538,229	77.6%	351,086	153.3%
2020	1,500,469	2,258,553	758,084	66.4%	363,896	208.3%
2019	1,495,990	2,211,238	715,248	67.7%	369,776	193.4%
2018	1,423,980	2,057,504	633,524	69.2%	346,106	183.0%
2017*	1,345,887	1,977,781	631,894	68.1%	339,150	186.3%
2016	1,211,446	1,984,257	772,811	61.1%	352,677	219.1%
2015	1,191,353	1,906,721	715,368	62.5%	330,397	217.2%
2014	1,150,450	1,820,045	669,595	63.2%	352,709	190.0%
2013*	992,031	1,742,110	750,079	56.9%	342,154	219.0%
JUDICIAL RETIREMENT SYSTEM (JRS)						
2022	\$ 673,152	\$ 748,557	\$ 75,405	89.9%	\$ 80,745	179.2%
2021*	600,670	733,408	132,738	81.9%	79,125	179.2%
2020	549,455	677,872	128,417	81.1%	74,734	179.2%
2019	557,541	669,741	112,200	83.2%	76,848	179.2%
2018	540,009	645,662	105,653	83.6%	67,424	179.2%
2017*	512,749	631,522	118,773	81.2%	66,288	179.2%
2016	467,389	607,798	140,409	76.9%	65,524	214.3%
2015	456,258	600,388	144,130	76.0%	61,881	230.3%
2014	442,194	608,169	165,975	72.7%	59,373	279.4%
2013*	388,835	590,626	201,791	65.8%	57,110	353.5%

* Revised economic and demographic assumptions due to experience study.

** The breakdown of VRS data into state, teacher and political subdivisions is also presented in the Statistical Section.

SCHEDULE OF FUNDING (MARKET VALUE BASIS): VRS PENSION PLANS

(EXPRESSED IN THOUSANDS)

Actuarial Valuation Date June 30	Market Value of Assets (MVA) (a)	Actuarial Accrued Liability (AAL) – Entry Age (b)	Net Pension Liability (AAL-MVA) (b-a)	Funded Ratio Funded (MVA/ AAL) (a/b)	Covered Payroll (c)	Net Pension Liability as a Percentage of Covered Payroll (b-a)/(c)
VIRGINIA RETIREMENT SYSTEM (VRS) – STATE						
2022	\$ 22,579,326	\$ 27,779,171	\$ 5,199,845	81.3%	\$ 4,946,307	105.1%
2021*	23,112,417	26,727,971	3,615,554	86.5%	4,594,347	78.7%
2020	18,770,067	25,751,335	6,981,268	72.9%	4,428,496	157.6%
2019	19,090,109	25,398,188	6,308,079	75.2%	4,375,061	144.2%
2018	18,532,189	24,115,157	5,582,968	76.8%	4,161,922	134.1%
2017*	17,789,888	23,311,534	5,521,646	76.3%	4,037,072	136.8%
2016	16,367,842	22,878,243	6,510,401	71.5%	4,002,477	162.7%
2015	16,398,575	22,291,558	5,892,983	73.6%	3,872,724	152.2%
2014	16,168,535	21,822,936	5,654,401	74.1%	3,854,779	146.7%
2013*	14,502,362	21,068,651	6,566,289	68.8%	3,716,548	176.7%
VIRGINIA RETIREMENT SYSTEM (VRS) – TEACHER						
2022	\$ 45,211,731	\$ 55,762,533	\$ 10,550,802	81.1%	\$ 9,713,229	108.6%
2021*	45,617,878	52,747,596	7,129,718	86.5%	8,971,605	79.5%
2020	36,449,229	50,834,783	14,385,554	71.7%	8,911,307	161.4%
2019	36,522,768	49,303,959	12,781,191	74.1%	8,608,489	148.5%
2018	34,919,563	46,516,176	11,596,613	75.1%	8,479,023	136.8%
2017*	33,119,545	45,006,017	11,886,472	73.6%	7,919,450	150.1%
2016	30,168,211	43,581,629	13,413,418	69.2%	7,666,824	175.0%
2015	30,344,072	42,564,178	12,220,106	71.3%	7,488,507	163.2%
2014	29,411,183	41,297,669	11,886,486	71.2%	7,362,793	161.4%
2013*	26,076,425	39,852,334	13,775,909	65.4%	7,211,543	191.0%
VIRGINIA RETIREMENT SYSTEM (VRS) – POLITICAL SUBDIVISIONS						
2022	\$ 26,045,031	\$ 28,491,418	\$ 2,446,387	91.4%	\$ 6,121,691	40.0%
2021*	26,558,350	27,167,815	609,465	97.8%	5,494,729	11.1%
2020	21,234,091	25,307,138	4,073,047	83.9%	5,409,540	75.3%
2019	21,259,034	24,431,824	3,172,790	87.0%	5,258,467	60.3%
2018	20,302,821	22,543,485	2,240,664	90.1%	4,973,503	45.1%
2017*	19,250,247	21,533,733	2,283,486	89.4%	4,808,354	47.5%
2016	17,418,106	20,659,120	3,241,014	84.3%	4,656,697	69.6%
2015	17,283,021	19,855,406	2,572,385	87.0%	4,540,149	56.7%
2014	16,627,539	18,962,779	2,335,240	87.7%	4,453,787	52.4%
2013*	14,393,949	18,156,606	3,762,657	79.3%	4,340,988	86.7%
VIRGINIA RETIREMENT SYSTEM (VRS) – TOTAL						
2022	\$ 93,836,088	\$ 112,033,122	\$ 18,197,034	83.8%	\$ 20,781,227	87.6%
2021*	95,288,645	106,643,382	11,354,737	89.4%	19,060,681	59.6%
2020	76,453,387	101,893,256	25,439,869	75.0%	18,749,343	135.7%
2019	76,871,911	99,133,971	22,262,060	77.5%	18,242,017	122.0%
2018	73,754,573	93,174,818	19,420,245	79.2%	17,614,448	110.3%
2017*	70,159,680	89,851,284	19,691,604	78.1%	16,764,876	117.5%
2016	63,954,159	87,118,992	23,164,833	73.4%	16,325,998	141.9%
2015	64,025,668	84,711,142	20,685,474	75.6%	15,901,380	130.1%
2014	62,207,257	82,083,384	19,876,127	75.8%	15,671,359	126.8%
2013*	54,972,736	79,077,591	24,104,855	69.5%	15,269,079	157.9%

* Revised economic and demographic assumptions due to experience study.

Other Employee Benefit Trust Funds

FIGURE 5.10: ANALYSIS OF CHANGES AND GROWTH IN FIDUCIARY NET POSITION – GROUP LIFE INSURANCE FUND

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN MILLIONS)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fiduciary Net Position Restricted – Beginning of Year	\$ 888	\$ 1,079	\$ 1,163	\$ 1,225	\$ 1,438	\$ 1,595	\$ 1,763	\$ 1,855	\$ 2,413	\$ 2,468
Funding:										
Member and Employer Contributions and Other Additions	206	208	214	240	249	257	270	277	322	326
Benefits and Administrative Expenses	161	177	175	186	203	203	214	254	262	260
Net Funding	45	31	39	54	46	55	56	23	60	66
Investment Income:										
Interest, Dividends and Other Investment Income	17	16	17	18	19	21	18	17	16	51
Net Appreciation (Depreciation) in Fair Value	130	36	6	140	92	92	18	518	(21)	123
Net Investment Income	147	52	23	158	111	113	36	535	(5)	174
Net Increase (Decrease)	192	83	62	213	157	168	92	558	55	240
Fiduciary Net Position Restricted – End of Year	\$ 1,079	\$ 1,163	\$ 1,225	\$ 1,438	\$ 1,595	\$ 1,763	\$ 1,855	\$ 2,413	\$ 2,468	\$ 2,708

SCHEDULE OF GROUP LIFE INSURANCE ADDITIONS BY SOURCE

FISCAL YEARS 2014-2023

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Contributions				Investment Income (Loss)	Other	Total
	State	Teacher	Political Subdivisions	Sub-Total			
2023	\$ 98,551	\$ 138,437	\$ 89,358	\$ 326,346	\$ 173,481	\$ —	\$ 499,827
2022	97,175	138,505	86,740	322,420	(5,235)	—	317,185
2021	83,536	119,154	74,734	277,424	534,709	—	812,133
2020	82,484	115,184	72,509	270,177	36,276	—	306,453
2019	77,778	110,262	69,288	257,328	113,440	—	370,768
2018	75,997	106,329	66,606	248,932	110,917	—	359,849
2017	71,666	103,751	64,667	240,084	158,430	—	398,514
2016	65,980	91,121	57,156	214,257	23,445	—	237,702
2015	63,927	88,871	55,665	208,463	52,175	—	260,638
2014	64,151	86,807	54,628	205,586	146,865	—	352,451

SCHEDULE OF GROUP LIFE INSURANCE DEDUCTIONS BY TYPE

FISCAL YEARS 2014-2023

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Group Life Claims			Administrative Expenses	Other	Total
	Active	Retired	Sub-Total			
2023	\$ 80,743	\$ 175,805	\$ 256,548	\$ 1,268	\$ 2,261	\$ 260,077
2022	87,472	171,525	258,997	1,184	2,089	262,270
2021	79,119	172,263	251,382	862	1,918	254,655
2020	64,273	147,787	212,060	824	1,439	214,323
2019	66,036	133,843	199,879	709	1,981	202,569
2018	64,822	135,463	200,285	664	1,713	202,662
2017	56,889	127,203	184,092	31	1,731	185,854
2016	60,427	113,416	173,843	81	1,469	175,393
2015	55,429	120,331	175,760	183	1,393	177,336
2014	53,478	105,880	159,358	275	1,276	160,909

**FIGURE 5.11: ANALYSIS OF CHANGES AND GROWTH IN FIDUCIARY NET POSITION –
RETIREE HEALTH INSURANCE CREDIT FUND**

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fiduciary Net Position Restricted – Beginning of Year	\$146,472	\$170,048	\$173,194	\$173,211	\$201,315	\$235,372	\$269,346	\$301,178	\$444,581	\$492,325
Funding:										
Employer Contributions and Other Additions	146,742	144,834	151,916	168,271	184,706	187,652	195,872	236,138	228,895	257,081
Less: Reimbursements and Administrative Expenses	143,088	148,459	154,320	159,280	164,295	169,072	169,128	172,642	179,845	182,269
Net Funding	3,654	(3,625)	(2,404)	8,991	20,411	18,580	26,744	63,496	49,050	74,812
Investment Income:										
Interest, Dividends and Other Investment Income	2,226	2,140	2,098	2,168	2,343	2,785	2,576	2,465	2,683	9,339
Net Appreciation (Depreciation) in Fair Value	17,696	4,631	323	16,945	11,303	12,609	2,512	77,442	(3,989)	23,402
Net Investment Income	19,922	6,771	2,421	19,113	13,646	15,394	5,088	79,907	(1,306)	32,741
Net Increase (Decrease)	23,576	3,146	17	28,104	34,057	33,974	31,832	143,403	47,744	107,553
Fiduciary Net Position Restricted – End of Year	\$170,048	\$173,194	\$173,211	\$201,315	\$235,372	\$269,346	\$301,178	\$444,581	\$492,325	\$599,878

VIRGINIA RETIREMENT SYSTEM – STATE

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fiduciary Net Position Restricted – Beginning of Year	\$ 59,880	\$ 65,202	\$ 67,434	\$ 68,685	\$ 79,516	\$ 95,908	\$109,023	\$125,378	\$207,860	\$224,575
Funding:										
Employer Contributions and Other Additions	59,438	63,907	66,410	74,520	79,952	79,926	84,850	119,847	93,847	119,535
Less: Reimbursements and Administrative Expenses	61,249	64,551	66,157	71,395	69,272	73,000	70,681	72,156	76,774	77,680
Net Funding	(1,811)	(644)	253	3,125	10,680	6,926	14,169	47,691	17,073	41,855
Investment Income:										
Interest, Dividends and Other Investment Income	941	910	864	875	981	1,121	1,136	1,069	829	4,040
Net Appreciation (Depreciation) in Fair Value	6,192	1,966	134	6,831	4,731	5,068	1,050	33,722	(1,187)	10,129
Net Investment Income	7,133	2,876	998	7,706	5,712	6,189	2,186	34,791	(358)	14,169
Net Increase (Decrease)	5,322	2,232	1,251	10,831	16,392	13,115	16,355	82,482	16,715	56,024
Fiduciary Net Position Restricted – End of Year	\$ 65,202	\$ 67,434	\$ 68,685	\$ 79,516	\$ 95,908	\$109,023	\$125,378	\$207,860	\$224,575	\$280,599

**FIGURE 5.11: ANALYSIS OF CHANGES AND GROWTH IN FIDUCIARY NET POSITION –
RETIREE HEALTH INSURANCE CREDIT FUND, cont.**

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

VIRGINIA RETIREMENT SYSTEM – TEACHER										
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fiduciary Net Position Restricted – Beginning of Year	\$ 68,955	\$ 82,108	\$ 84,386	\$ 82,854	\$ 96,091	\$111,639	\$129,016	\$144,161	\$194,305	\$221,845
Funding:										
Employer Contributions and Other Additions	80,720	78,875	80,831	88,059	99,019	100,643	105,210	107,172	124,845	124,627
Less: Reimbursements and Administrative Expenses	75,033	79,670	83,510	83,640	89,578	90,616	92,356	94,121	96,386	97,063
Net Funding	5,687	(795)	(2,679)	4,419	9,441	10,027	12,854	13,051	28,459	27,564
Investment Income:										
Interest, Dividends and Other Investment Income	1,012	970	995	1,000	1,049	1,330	1,096	1,148	1,629	4,179
Net Appreciation (Depreciation) in Fair Value	6,454	2,103	152	7,818	5,058	6,020	1,195	35,945	(2,548)	10,466
Net Investment Income	7,466	3,073	1,147	8,818	6,107	7,350	2,291	37,093	(919)	14,645
Net Increase (Decrease)	13,153	2,278	(1,532)	13,237	15,548	17,377	15,145	50,144	27,540	42,209
Fiduciary Net Position Restricted – End of Year	\$ 82,108	\$ 84,386	\$ 82,854	\$ 96,091	\$111,639	\$129,016	\$144,161	\$194,305	\$221,845	\$264,054

VIRGINIA RETIREMENT SYSTEM – POLITICAL SUBDIVISIONS										
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022
Fiduciary Net Position Restricted – Beginning of Year	\$ 16,126	\$ 18,592	\$ 19,332	\$ 19,321	\$ 22,156	\$ 23,170	\$ 24,468	\$ 24,466	\$ 33,234	\$ 35,540
Funding:										
Employer Contributions and Other Additions	1,876	1,933	1,991	2,278	2,179	2,406	2,553	5,239	5,683	6,752
Less: Reimbursements and Administrative Expenses	1,817	2,015	2,278	1,717	2,735	2,598	3,044	3,182	3,380	4,471
Net Funding	59	(82)	(287)	561	(556)	(192)	(491)	2,057	2,303	2,281
Investment Income:										
Interest, Dividends and Other Investment Income	273	260	239	258	270	270	281	208	148	639
Net Appreciation (Depreciation) in Fair Value	2,134	562	37	2,016	1,300	1,220	208	6,503	(145)	1,597
Net Investment Income	2,407	822	276	2,274	1,570	1,490	489	6,711	3	2,236
Net Increase (Decrease)	2,466	740	(11)	2,835	1,014	1,298	(2)	8,768	2,306	4,517
Fiduciary Net Position Restricted – End of Year	\$ 18,592	\$ 19,332	\$ 19,321	\$ 22,156	\$ 23,170	\$ 24,468	\$ 24,466	\$ 33,234	\$ 35,540	\$ 40,057

**FIGURE 5.11: ANALYSIS OF CHANGES AND GROWTH IN FIDUCIARY NET POSITION –
RETIREE HEALTH INSURANCE CREDIT FUND, cont.**

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

VIRGINIA RETIREMENT SYSTEM – CONSTITUTIONAL OFFICERS										
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fiduciary Net Position Restricted – Beginning of Year	\$ 830	\$ 2,377	\$ 1,120	\$ 1,479	\$ 2,427	\$ 3,278	\$ 4,479	\$ 5,112	\$ 6,668	\$ 7,604
Funding:										
Employer Contributions and Other Additions	2,833	113	1,830	2,305	2,397	2,794	2,526	2,666	3,112	3,193
Less: Reimbursements and Administrative Expenses	3,245	1,370	1,471	1,572	1,727	1,831	1,979	2,064	2,149	1,955
Net Funding	(412)	(1,257)	359	733	670	963	547	602	963	1,238
Investment Income:										
Interest, Dividends and Other Investment Income	—	—	—	24	31	41	44	30	65	263
Net Appreciation (Depreciation) in Fair Value	1,959	—	—	191	150	197	42	924	(92)	662
Net Investment Income	1,959	—	—	215	181	238	86	954	(27)	925
Net Increase (Decrease)	1,547	(1,257)	359	948	851	1,201	633	1,556	936	2,163
Fiduciary Net Position Restricted – End of Year	\$ 2,377	\$ 1,120	\$ 1,479	\$ 2,427	\$ 3,278	\$ 4,479	\$ 5,112	\$ 6,668	\$ 7,604	\$ 9,767

VIRGINIA RETIREMENT SYSTEM – SOCIAL SERVICES										
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fiduciary Net Position Restricted – Beginning of Year	\$ 683	\$ 1,738	\$ 915	\$ 861	\$ 1,091	\$ 1,319	\$ 2,273	\$ 1,935	\$ 2,346	\$ 2,558
Funding:										
Employer Contributions and Other Additions	1,818	5	824	1,062	1,126	1,847	689	1,160	1,334	2,908
Less: Reimbursements and Administrative Expenses	1,683	828	878	929	971	1,015	1,061	1,084	1,118	1,064
Net Funding	135	(823)	(54)	133	155	832	(372)	76	216	1,844
Investment Income:										
Interest, Dividends and Other Investment Income	—	—	—	11	12	22	18	10	9	213
Net Appreciation (Depreciation) in Fair Value	920	—	—	86	61	100	16	325	(13)	530
Net Investment Income	920	—	—	97	73	122	34	335	(4)	743
Net Increase (Decrease)	1,055	(823)	(54)	230	228	954	(338)	411	212	2,587
Fiduciary Net Position Restricted – End of Year	\$ 1,738	\$ 915	\$ 861	\$ 1,091	\$ 1,319	\$ 2,273	\$ 1,935	\$ 2,346	\$ 2,558	\$ 5,145

**FIGURE 5.11: ANALYSIS OF CHANGES AND GROWTH IN FIDUCIARY NET POSITION –
RETIREE HEALTH INSURANCE CREDIT FUND, cont.**

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

VIRGINIA RETIREMENT SYSTEM – REGISTRARS											
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
Fiduciary Net Position Restricted – Beginning of Year	\$	(2) \$	31 \$	7 \$	11 \$	34 \$	58 \$	87 \$	126 \$	168 \$	203
Funding:											
Employer Contributions and Other Additions	57	1	30	47	33	36	44	54	74	66	
Less: Reimbursements and Administrative Expenses	61	25	26	27	12	12	7	35	38	36	
Net Funding	(4)	(24)	4	20	21	24	37	19	36	30	
Investment Income:											
Interest, Dividends and Other Investment Income	—	—	—	—	—	1	1	—	3	5	
Net Appreciation (Depreciation) in Fair Value	37	—	—	3	3	4	1	23	(4)	18	
Net Investment Income	37	—	—	3	3	5	2	23	(1)	23	
Net Increase (Decrease)	33	(24)	4	23	24	29	39	42	35	53	
Fiduciary Net Position Restricted – End of Year	\$	31 \$	7 \$	11 \$	34 \$	58 \$	87 \$	126 \$	168 \$	203 \$	256

SCHEDULE OF RETIREE HEALTH INSURANCE CREDIT ADDITIONS BY SOURCE

FISCAL YEARS 2014-2023

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Contributions					Investment Income (Loss)	Other	Total
	State	Teacher	Political Subdivisions	State-Funded HIC	Sub-Total			
2023	\$ 119,535	\$ 124,627	\$ 6,752	\$ 6,167	\$ 257,081	\$ 32,741	\$ —	\$ 289,822
2022	93,847	124,845	5,683	4,520	228,895	(1,306)	—	227,589
2021	119,847	107,172	5,239	3,880	236,138	79,907	—	316,045
2020	84,850	105,210	2,553	3,259	195,872	5,088	—	200,960
2019	79,926	100,643	2,406	3,259	186,234	15,394	—	201,628
2018	79,400	99,469	2,291	3,546	184,706	13,646	—	198,352
2017	74,520	88,059	2,278	3,414	168,271	19,113	—	187,384
2016	66,411	80,831	1,990	2,684	151,916	2,421	—	154,337
2015	63,908	78,874	1,933	119	144,834	6,771	—	151,605
2014	59,438	80,720	1,876	4,708	146,742	19,922	—	166,664

SCHEDULE OF RETIREE HEALTH INSURANCE CREDIT DEDUCTIONS BY TYPE

FISCAL YEARS 2014-2023

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Retiree Health Insurance Reimbursements					Administrative Expenses	Other	Total
	State	Teacher	Political Subdivisions	State- Funded HIC	Sub-Total			
2023	\$ 77,273	\$ 96,645	\$ 4,303	\$ 3,180	\$ 181,401	\$ 832	\$ 36	\$ 182,269
2022	76,023	95,289	4,460	3,271	179,043	786	16	179,845
2021	71,536	93,607	3,098	3,160	171,401	1,198	43	172,642
2020	70,440	92,086	2,996	3,035	168,557	548	23	169,128
2019	72,857	90,455	2,564	2,849	168,725	328	19	169,072
2018	69,099	89,420	2,697	2,722	163,938	257	15	164,210
2017	71,255	83,510	1,677	2,523	158,965	294	21	159,280
2016	65,984	83,329	2,226	2,375	153,914	401	5	154,320
2015	64,354	79,457	1,956	2,222	147,989	465	5	148,459
2014	59,433	76,389	1,799	4,989	142,610	463	15	143,088

FIGURE 5.12: ANALYSIS OF CHANGES AND GROWTH IN FIDUCIARY NET POSITION – DISABILITY INSURANCE TRUST FUND

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fiduciary Net Position Restricted – Beginning of Year	\$370,121	\$410,097	\$414,518	\$407,826	\$442,334	\$462,961	\$488,241	\$490,220	\$611,919	\$602,916
Funding:										
Employer Contributions and Other Additions	17,693	24,026	25,156	24,768	25,982	25,263	26,994	26,542	28,249	31,138
Less: Disability Insurance Benefits and Administrative Expenses	34,290	37,942	38,782	38,466	38,706	31,627	35,168	36,729	37,543	39,350
Net Funding	(16,597)	(13,916)	(13,626)	(13,698)	(12,724)	(6,364)	(8,174)	(10,187)	(9,294)	(8,212)
Investment Income:										
Interest, Dividends and Other Investment Income	6,264	5,705	5,576	5,458	6,609	6,923	5,558	4,711	4,601	12,573
Net Appreciation (Depreciation) in Fair Value	50,309	12,632	1,358	42,748	26,742	24,721	4,595	127,175	(4,310)	27,502
Net Investment Income	56,573	18,337	6,934	48,206	33,351	31,644	10,153	131,886	291	40,075
Net Increase (Decrease)	39,976	4,421	(6,692)	34,508	20,627	25,280	1,979	121,699	(9,003)	31,863
Fiduciary Net Position Restricted – End of Year	\$410,097	\$414,518	\$407,826	\$442,334	\$462,961	\$488,241	\$490,220	\$611,919	\$602,916	\$634,779

SCHEDULE OF DISABILITY INSURANCE TRUST FUND ADDITIONS BY SOURCE

FISCAL YEARS 2014–2023

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Contributions	Investment Income	Transfers and Other Additions	Total
LONG-TERM DISABILITY PROGRAM				
2023	\$ 30,117	\$ 31,653	\$ —	\$ 61,770
2022	27,322	(413)	—	26,909
2021	25,671	107,844	—	133,515
2020	26,559	7,786	—	34,345
2019	24,856	25,197	—	50,053
2018	25,195	26,653	—	51,848
2017	23,399	40,339	—	63,738
2016	20,134	5,911	—	26,045
2015	19,458	15,884	—	35,342
2014	14,393	49,603	—	63,996
LONG-TERM CARE PROGRAM				
2023	\$ 2,158	\$ 7,285	\$ —	\$ 9,443
2022	1,723	(92)	—	1,631
2021	1,384	23,529	—	24,913
2020	1,143	1,659	—	2,802
2019	1,557	5,297	—	6,854
2018	2,065	5,420	—	7,485
2017	1,369	7,867	—	9,236
2016	5,022	1,023	—	6,045
2015	4,557	2,454	10	7,021
2014	2,998	6,970	302	10,270
TOTAL DISABILITY INSURANCE TRUST FUND				
2023	\$ 32,275	\$ 38,938	\$ —	\$ 71,213
2022	29,045	(505)	—	28,540
2021	27,055	131,373	—	158,428
2020	27,702	9,445	—	37,147
2019	26,413	30,494	—	56,907
2018	27,260	32,073	—	59,333
2017	24,768	48,206	—	72,974
2016	25,156	6,934	—	32,090
2015	24,015	18,338	10	42,363
2014	17,391	56,573	302	74,266

SCHEDULE OF DISABILITY INSURANCE TRUST FUND DEDUCTIONS BY TYPE

FISCAL YEARS 2014-2023

(EXPRESSED IN THOUSANDS)

Year Ended June 30	Long-Term Disability Benefits	Long-Term Care and Costs	TPA Administrative Services	VRS Administrative Expenses	Transfers and Other Expenses	Total
LONG-TERM DISABILITY PROGRAM						
2023	\$ 30,516	\$ —	\$ 6,447	\$ 648	\$ 162	\$ 37,773
2022	29,327	—	6,338	395	153	36,213
2021	28,704	—	7,137	493	166	36,500
2020	27,162	—	6,611	520	100	34,393
2019	23,045	—	6,431	650	27	30,153
2018	29,421	—	6,637	799	29	36,886
2017	29,792	—	7,001	600	45	37,438
2016	30,358	—	7,102	660	10	38,130
2015	28,504	—	7,953	729	13	37,199
2014	24,920	—	7,830	486	39	33,275
LONG-TERM CARE PROGRAM						
2023	\$ —	\$ 489	\$ 902	\$ 149	\$ 37	\$ 1,577
2022	—	298	908	89	35	1,330
2021	—	86	—	107	36	229
2020	—	643	—	111	21	775
2019	—	1,331	—	137	6	1,474
2018	—	1,652	—	162	6	1,820
2017	—	902	—	117	9	1,028
2016	—	536	—	114	2	652
2015	—	628	—	113	2	743
2014	—	931	—	69	15	1,015
TOTAL DISABILITY INSURANCE TRUST FUND						
2023	\$ 30,516	\$ 489	\$ 7,349	\$ 797	\$ 199	\$ 39,350
2022	29,327	298	7,246	484	188	37,543
2021	28,704	86	7,137	600	202	36,729
2020	28,704	86	7,137	600	202	36,729
2019	27,162	643	6,611	631	121	35,168
2018	29,421	1,652	6,637	961	35	38,706
2017	29,792	902	7,001	717	54	38,466
2016	30,358	536	7,102	774	12	38,782
2015	28,504	628	7,953	842	15	37,942
2014	24,920	931	7,830	555	54	34,290

FIGURE 5.13: ANALYSIS OF CHANGES AND GROWTH IN FIDUCIARY NET POSITION – LINE OF DUTY ACT

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Net Position Restricted – Beginning of Year	\$ —	\$ —	\$ 728	\$ 2,708	\$ 3,461	\$ 1,889	\$ 2,839	\$ 4,333	\$ 7,553	\$ 7,214
Funding:										
Employer Contributions and Other Additions	7,229	9,121	10,881	11,608	10,890	13,377	13,567	13,633	13,770	13,271
Less: Disability Insurance Benefits and Administrative Expenses	8,668	8,572	9,026	11,538	13,140	13,362	13,000	14,074	15,023	16,418
Net Funding	(1,439)	549	1,855	70	(2,250)	15	567	(441)	(1,253)	(3,147)
Investment Income:										
Interest, Dividends and Other Investment Income	157	64	62	77	96	769	681	727	745	852
Net Appreciation (Depreciation) in Fair Value	1,282	115	63	606	582	166	246	2,934	169	392
Net Investment Income	1,439	179	125	683	678	935	927	3,661	914	1,244
Net Increase (Decrease)	—	728	1,980	753	(1,572)	950	1,494	3,220	(339)	(1,903)
Net Position Restricted – End of Year	\$ —	\$ 728	\$ 2,708	\$ 3,461	\$ 1,889	\$ 2,839	\$ 4,333	\$ 7,553	\$ 7,214	\$ 5,311

FIGURE 5.14: ANALYSIS OF CHANGES AND GROWTH IN FIDUCIARY NET POSITION – DISABILITY PROGRAM

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Net Position Restricted – Beginning of Year	\$ —	\$ —	\$ —	\$ —	\$ 630	\$ 1,463	\$ 3,623	\$ 6,204	\$ 11,756	\$ 15,268
Funding:										
Employer Contributions and Other Additions	429	875	1,351	1,993	3,030	4,192	5,110	6,504	7,671	9,587
Less: Disability Insurance Benefits and Administrative Expenses	429	873	1,351	1,363	2,261	2,208	2,622	3,069	4,047	4,910
Net Funding	—	2	—	630	769	1,984	2,488	3,435	3,624	4,677
Investment Income:										
Interest, Dividends and Other Investment Income	—	—	—	—	14	26	43	62	80	346
Net Appreciation (Depreciation) in Fair Value	—	(2)	—	—	50	150	50	2,055	(192)	850
Net Investment Income	—	(2)	—	—	64	176	93	2,117	(112)	1,196
Net Increase (Decrease)	\$ —	—	—	630	833	2,160	2,581	5,552	3,512	5,873
Net Position Restricted – End of Year	\$ —	\$ —	\$ —	\$ 630	\$ 1,463	\$ 3,623	\$ 6,204	\$ 11,756	15,268	\$ 21,141

FIGURE 5.14: ANALYSIS OF CHANGES AND GROWTH IN FIDUCIARY NET POSITION – VIRGINIA LOCAL DISABILITY PROGRAM, cont.

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

VIRGINIA RETIREMENT SYSTEM – TEACHER										
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Net Position Restricted – Beginning of Year	\$ —	\$ —	\$ —	\$ —	\$ 279	\$ 647	\$ 1,661	\$ 2,887	\$ 5,590	\$ 7,320
Funding:										
Employer Contributions and Other Additions	182	370	567	883	1,339	1,966	2,426	3,166	3,783	4,387
Less: Disability Insurance Benefits and Administrative Expenses	182	369	567	604	1,000	1,035	1,245	1,494	1,997	2,247
Net Funding	—	1	—	279	339	931	1,181	1,672	1,786	2,140
Investment Income:										
Interest, Dividends and Other Investment Income	—	—	—	—	7	13	22	30	39	158
Net Appreciation (Depreciation) in Fair Value	—	(1)	—	—	22	70	23	1,001	(95)	389
Net Investment Income	—	(1)	—	—	29	83	45	1,031	(56)	547
Net Increase (Decrease)	\$ —	\$ —	\$ —	\$ 279	\$ 368	\$ 1,014	\$ 1,226	\$ 2,703	\$ 1,730	\$ 2,687
Net Position Restricted – End of Year	\$ —	\$ —	\$ —	\$ 279	\$ 647	\$ 1,661	\$ 2,887	\$ 5,590	\$ 7,320	\$ 10,007

VIRGINIA RETIREMENT SYSTEM – POLITICAL SUBDIVISIONS										
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Net Position Restricted – Beginning of Year	\$ —	\$ —	\$ —	\$ —	\$ 351	\$ 816	\$ 1,962	\$ 3,317	\$ 6,166	\$ 7,948
Funding:										
Employer Contributions and Other Additions	247	505	784	1,110	1,691	2,226	2,684	3,338	3,888	5,200
Less: Disability Insurance Benefits and Administrative Expenses	247	504	784	759	1,261	1,173	1,377	1,575	2,050	2,663
Net Funding	—	1	—	351	430	1,053	1,307	1,763	1,838	2,537
Investment Income:										
Interest, Dividends and Other Investment Income	—	—	—	—	7	13	21	32	41	188
Net Appreciation (Depreciation) in Fair Value	—	(1)	—	—	28	80	27	1,054	(97)	461
Net Investment Income	—	(1)	—	—	35	93	48	1,086	(56)	649
Net Increase (Decrease)	\$ —	\$ —	\$ —	\$ 351	\$ 465	\$ 1,146	\$ 1,355	\$ 2,849	\$ 1,782	\$ 3,186
Net Position Restricted – End of Year	\$ —	\$ —	\$ —	\$ 351	\$ 816	\$ 1,962	\$ 3,317	\$ 6,166	\$ 7,948	\$ 11,134

FIGURE 5.15: OTHER POST-EMPLOYMENT BENEFIT PLAN STATISTICS

SCHEDULE OF RETIRED MEMBERS AND BENEFICIARIES BY PLAN

	Group Life Insurance	Retiree Health Insurance Credit	Disability Insurance	Line of Duty
2023	227,538	140,669	2,290	820
2022	218,944	138,662	2,393	791
2021	213,194	132,361	2,481	749
2020	208,644	129,855	2,488	739
2019	188,370	127,802	2,579	726
2018	182,438	124,406	2,710	696
2017	176,107	120,304	2,785	654
2016	169,786	116,408	2,844	621
2015	163,482	112,053	2,860	525
2014	156,549	108,076	2,764	551

SCHEDULE OF AVERAGE BENEFIT PAYMENTS BY PLAN

Group Life Insurance			Retiree Health Insurance Credit		
Year Ended June 30	Number of Claims Paid	Average Claim Amount	Payment Period	Number of Recipients	Average Monthly Credit Amount
2023	6,172	\$ 25,992	June 2023	140,669	\$ 106
2022	6,079	25,848	June 2022	138,662	106
2021	6,291	26,308	June 2021	132,361	108
2020	5,304	25,516	June 2020	129,855	108
2019	5,171	24,307	June 2019	127,802	108
2018	5,255	24,865	June 2018	124,406	108
2017	4,846	24,634	June 2017	120,304	108
2016	4,660	23,735	June 2016	116,408	108
2015	4,520	24,754	June 2015	112,053	108
2014	4,259	23,489	June 2014	108,076	108

Disability Insurance			
Payment Period	Number of Claims Paid	Average Gross Monthly Benefit	Average Net Monthly Benefit*
June 2023	2,290	\$ 2,272	\$ 1,347
June 2022	2,393	2,090	1,156
June 2021	2,481	2,066	1,052
June 2020	2,488	2,211	1,263
June 2019	2,579	2,181	1,252
June 2018	2,707	1,899	982
June 2017	2,783	1,851	969
June 2016	2,836	1,797	892
June 2015	2,829	1,820	885
June 2014	2,814	1,852	843

* The net monthly benefit reflects adjustments for Social Security, workers' compensation and other offsets.

SCHEDULE OF AVERAGE BENEFIT PAYMENTS BY PLAN, cont.

Line of Duty					
Line of Duty Death Benefits*			Health Insurance Benefits		
Year Ended June 30	LOD Death	Presumptive LOD Death	Year Ended June 30	Number of Active Claims	Avg. Annual Health Insurance Benefit
2023	2	3	2023	820	\$ 18,912
2022	—	5	2022	791	17,683
2021	—	2	2021	749	17,417
2020	1	1	2020	739	16,238
2019	1	3	2019	726	17,464
2018	3	—	2018	696	17,381
2017	3	3	2017	654	15,107
2016	1	2	2016	621	13,503
2015	—	3	2015	525	15,198
2014	3	2	2014	573	12,725

* The Line of Duty Program provides a \$100,000 death benefit for an eligible individual whose death was as a direct or proximate result of the performance of duty. The program also provides a \$25,000 death benefit for certain individuals whose death arose out of their employment or was within five years of the date of retirement.

VRS-Participating Employers

More than 800 employers participate in the Virginia Retirement System (VRS) on behalf of their employees. Employers include state agencies, public colleges and universities, school divisions and political subdivisions.

The following employers were participating in VRS as of June 30, 2023:

PARTICIPATING POLITICAL SUBDIVISIONS: 469

A: retirement only

B: retirement and group life insurance

C: retirement, group life insurance and retiree health insurance credit

D: retirement and retiree health insurance credit

COUNTIES: 93			
Accomack County: C	Dickenson County: A	Lancaster County: B	Rappahannock County: C
Albemarle County: B	Dinwiddie County: B	Lee County: B	Richmond County: B
Alleghany County: B	Essex County: C	Loudoun County: B	Roanoke County: C
Amelia County: C	Fauquier County: B	Louisa County: C	Rockbridge County: B
Amherst County: C	Floyd County: B	Lunenburg County: B	Rockingham County: B
Appomattox County: B	Fluvanna County: C	Madison County: C	Russell County: C
Augusta County: B	Franklin County: B	Mathews County: C	Scott County: B
Bath County: B	Frederick County: B	Mecklenburg County: B	Shenandoah County: C
Bedford County: B	Giles County: B	Middlesex County: B	Smyth County: B
Bland County: C	Gloucester County: C	Montgomery County: B	Southampton County: C
Botetourt County: B	Goochland County: B	Nelson County: B	Spotsylvania County: B
Brunswick County: B	Grayson County: B	New Kent County: C	Stafford County: C
Buchanan County: B	Greene County: C	Northampton County: B	Surry County: B
Buckingham County: B	Greensville County: C	Northumberland County: C	Sussex County: B
Campbell County: B	Halifax County: C	Nottoway County: B	Tazewell County: C
Caroline County: B	Hanover County: C	Orange County: B	Warren County: B
Carroll County: B	Henrico County: B	Page County: B	Washington County: C
Charles City County: B	Henry County: C	Patrick County: C	Westmoreland County: C
Charlotte County: B	Highland County: B	Pittsylvania County: C	Wise County: C
Chesterfield County: B	Isle of Wight County: C	Powhatan County: C	Wythe County: C
Clarke County: B	James City County: C	Prince Edward County: B	York County: C
Craig County: C	King & Queen County: C	Prince George County: B	
Culpeper County: B	King George County: B	Prince William County: C	
Cumberland County: B	King William County: B	Pulaski County: C	

CITIES AND TOWNS: 163

City of Alexandria: A	Town of Ashland: B	Town of Glade Spring: B	Town of Pearisburg: C
City of Bristol: B	Town of Bedford: B	Town of Glasgow: B	Town of Pembroke: B
City of Buena Vista: B	Town of Berryville: B	Town of Gordonsville: B	Town of Pennington Gap: A
City of Chesapeake: B	Town of Big Stone Gap: A	Town of Gretna: B	Town of Pulaski: B
City of Colonial Heights: B	Town of Blacksburg: B	Town of Grottoes: B	Town of Purcellville: B
City of Covington: C	Town of Blackstone: B	Town of Grundy: B	Town of Quantico: B
City of Danville: A	Town of Bluefield: B	Town of Halifax: B	Town of Remington: B
City of Emporia: B	Town of Bowling Green: B	Town of Hamilton: C	Town of Rich Creek: B
City of Fairfax: A	Town of Boydton: B	Town of Haymarket: B	Town of Richlands: A
City of Falls Church: B	Town of Boykins: A	Town of Haysi: A	Town of Rocky Mount: B
City of Franklin: B	Town of Bridgewater: B	Town of Herndon: B	Town of Round Hill: B
City of Fredericksburg: B	Town of Broadway: B	Town of Hillsville: B	Town of Rural Retreat: A
City of Galax: B	Town of Brodnax: A	Town of Hurt: B	Town of Saltville: A
City of Hampton: B	Town of Brookneal: B	Town of Independence: A	Town of Scottsville: B
City of Harrisonburg: B	Town of Buchanan: B	Town of Iron Gate: B	Town of Shenandoah: C
City of Hopewell: B	Town of Burkeville: B	Town of Jarratt: A	Town of Smithfield: B
City of Lexington: B	Town of Cape Charles: B	Town of Jonesville: B	Town of South Boston: B
City of Lynchburg: B	Town of Chase City: B	Town of Kenbridge: C	Town of South Hill: B
City of Manassas Park: B	Town of Chatham: B	Town of Kilmarnock: C	Town of St. Paul: B
City of Manassas: C	Town of Chilhowie: B	Town of La Crosse: A	Town of Stanley: C
City of Martinsville: B	Town of Chincoteague: B	Town of Lawrenceville: C	Town of Stephens City: B
City of Newport News: B	Town of Christiansburg: A	Town of Lebanon: B	Town of Strasburg: C
City of Norfolk: B	Town of Clarksville: B	Town of Leesburg: B	Town of Tappahannock: A
City of Norton: B	Town of Clifton Forge: B	Town of Louisa: B	Town of Tazewell: A
City of Petersburg: B	Town of Coeburn: B	Town of Lovettsville: B	Town of Timberville: B
City of Poquoson: C	Town of Colonial Beach: B	Town of Luray: B	Town of Troutville: A
City of Portsmouth: B	Town of Courtland: B	Town of Madison: B	Town of Urbanna: B
City of Radford: C	Town of Craigsville: B	Town of Marion: B	Town of Victoria: B
City of Richmond: B	Town of Crewe: B	Town of McKenney: B	Town of Vienna: B
City of Roanoke: B	Town of Culpeper: B	Town of Middleburg: B	Town of Vinton: B
City of Salem: B	Town of Dayton: B	Town of Middletown: D	Town of Wakefield: A
City of Staunton: B	Town of Dublin: B	Town of Mineral: B	Town of Warrenton: B
City of Suffolk: B	Town of Dumfries: C	Town of Montross: B	Town of Warsaw: B
City of Virginia Beach: B	Town of Eastville: B	Town of Mount Jackson: B	Town of Waverly: A
City of Waynesboro: B	Town of Edinburg: A	Town of Narrows: A	Town of Weber City: B
City of Williamsburg: B	Town of Elkton: B	Town of New Market: B	Town of West Point: B
City of Winchester: C	Town of Exmore: A	Town of Occoquan: A	Town of Windsor: B
Town of Abingdon: C	Town of Farmville: A	Town of Onancock: B	Town of Wise: B
Town of Altavista: B	Town of Floyd: B	Town of Onley: B	Town of Woodstock: C
Town of Amherst: B	Town of Front Royal: B	Town of Orange: B	Town of Wytheville: B
Town of Appomattox: B	Town of Gate City: A	Town of Parksley: B	

AUTHORITIES, COMMISSIONS, DISTRICTS, REGIONAL INSTITUTIONS AND COMMUNITY SERVICES BOARDS: 213

Accomack-Northampton Planning District Commission: C	Commonwealth Regional Council: A
Albemarle County Service Authority: B	Crater Criminal Justice Training Academy: B
Albemarle-Charlottesville Regional Jail: B	Crater Juvenile Detention Home Community: B
Alexandria Redevelopment & Housing Authority: B	Culpeper Soil & Water Conservation District: B
Alexandria Renew Enterprises: A	Cumberland Mountain Community Services Board: B
Alleghany Highlands Community Services Board: B	Cumberland Plateau Regional Housing Authority: B
Alleghany Highlands Regional Library, Inc.: B	Daniel Boone Soil & Water Conservation District: C
Amherst County Service Authority: C	Danville-Pittsylvania Community Services Board: B
Anchor Commission: B	Danville Redevelopment & Housing Authority: B
Appalachian Juvenile Commission: C	Dinwiddie County Water Authority: B
Appomattox Regional Library: B	District 19 Community Services Board: C
Appomattox River Water Authority: B	Eastern Shore Community Services Board: B
Augusta County Service Authority: B	Eastern Shore Public Library: B
Bedford Public Library: B	Eastern Shore Soil & Water Conservation District: B
Bedford Regional Water Authority: B	Economic Development Authority of Henrico County: B
Big Sandy Soil & Water Conservation District: B	Evergreen Soil & Water Conservation District: C
Big Stone Gap Redevelopment & Housing Authority: B	Fauquier County Water & Sanitation Authority: B
Big Walker Soil & Water Conservation District: A	Ferrum Water & Sewage Authority: A
Blacksburg-VPI Sanitation Authority: B	Franklin Redevelopment & Housing Authority: B
Blue Ridge Behavioral Healthcare: B	Frederick County Sanitation Authority: C
Blue Ridge Juvenile Detention Center: B	Giles County Public Service Authority: B
Blue Ridge Regional Jail Authority: B	Goochland-Powhatan Community Services Board: B
Blue Ridge Resource Authority: B	Greensville County Water & Sewer Authority: C
Breaks Interstate Park Commission: A	Greensville-Emporia Department of Social Services: C
Bristol Redevelopment & Housing Authority: B	Halifax Service Authority: B
Bristol Virginia Utilities Authority: B	Hampton-Newport News Community Services Board: A
Brunswick Industrial Development Authority: B	Hampton Redevelopment & Housing Authority: B
Campbell County Utilities & Service Authority: B	Hampton Roads Planning District Commission: B
Capital Region Airport Commission: C	Hampton Roads Regional Jail Authority: B
Central Rappahannock Regional Library: B	Hampton Roads Sanitation District: C
Central Shenandoah Justice Training Academy: B	Hampton Roads Transit: B
Central Virginia Planning District Commission: B	Hampton Roads Transportation Accountability Commission: C
Central Virginia Regional Jail: B	Hampton Roads Workforce Council: B
Central Virginia Waste Management Authority: C	Handley Regional Library: B
Charlottesville-Albemarle Airport Authority: B	Harrisonburg-Rockingham Community Services Board: C
Charlottesville Redevelopment & Housing Authority: B	Harrisonburg-Rockingham Regional Sewer Authority: B
Chesapeake Bay Bridge & Tunnel District: B	Henricopolis Soil & Water Conservation District: B
Chesapeake Redevelopment & Housing Authority: B	Henry County Public Service Authority: C
Chesterfield County Health Center Commission: B	Holston River Soil & Water Conservation District: C
Clinch Valley Soil & Water Conservation District: B	Hopewell Redevelopment & Housing Authority: A
Coeburn-Norton-Wise Regional Water Treatment Authority: B	Horizon Behavioral Health: B
Colonial Behavioral Health: C	Institute for Advanced Learning and Research: A
Colonial Soil & Water Conservation District: B	James City Service Authority: C

AUTHORITIES, COMMISSIONS, DISTRICTS, REGIONAL INSTITUTIONS AND COMMUNITY SERVICES BOARDS, cont.

John Marshall Soil & Water Conservation District: B	Peninsula Airport Commission: B
Lee County Public Service Authority: B	Pepper's Ferry Regional Wastewater Authority: C
Lee County Redevelopment & Housing Authority: B	Peter Francisco Soil & Water Conservation District: A
Lenowisco Planning District Commission: B	Petersburg Redevelopment & Housing Authority: C
Lonesome Pine Regional Library: B	Peumansend Creek Regional Jail Authority: B
Lonesome Pine Soil & Water Conservation District: B	Piedmont Community Services Board: B
Loudoun County Sanitation Authority: B	Piedmont Regional Jail: B
Massanutten Regional Library: B	Piedmont Regional Juvenile Detention Center: B
Maury Service Authority: B	Planning District One Behavioral Health Services Board: C
Meherrin Regional Library: C	Portsmouth Redevelopment & Housing Authority: B
Meherrin River Regional Jail Authority: C	Potomac and Rappahannock Transportation Commission: B
Middle Peninsula Juvenile Detention Commission: C	Potomac River Fisheries Commission: B
Middle Peninsula-Northern Neck Community Services Board: B	Prince William County Service Authority: C
Middle Peninsula Planning District Commission: B	Prince William Soil & Water Conservation District: B
Middle Peninsula Regional Security Center: B	Rapidan Service Authority: B
Middle River Regional Jail Authority: B	Rappahannock Area Community Services Board: C
Monacan Soil & Water Conservation District: C	Rappahannock Area Youth Services & Group Home Commission: B
Montgomery Regional Solid Waste Authority: B	Rappahannock Juvenile Center: C
Mount Rogers Community Services Board: B	Rappahannock-Rapidan Community Services Board: B
Nelson County Service Authority: B	Rappahannock-Rapidan Regional Planning District Commission: B
New River Resource Authority: C	Rappahannock Regional Jail: B
New River Soil & Water Conservation District: B	Region Ten Community Services Board: B
New River Valley Community Services Board: A	Richmond Metropolitan Transportation Authority: B
New River Valley Emergency Communications Regional Authority: B	Richmond Redevelopment & Housing Authority: B
New River Valley Juvenile Detention Home Commission: B	Richmond Regional Planning District Commission: A
New River Valley Regional Commission: A	Rivanna Solid Waste Authority: B
New River Valley Regional Jail: B	Rivanna Water & Sewer Authority: B
Norfolk Airport Authority: B	Riverside Regional Jail: B
Norfolk Redevelopment & Housing Authority: B	Roanoke Higher Education Authority: C
Northern Neck Planning District Commission: B	Roanoke Redevelopment & Housing Authority: A
Northern Neck Regional Jail: B	Roanoke River Service Authority: B
Northern Neck Soil and Water Conservation District: A	Robert E. Lee Soil & Water Conservation District: A
Northern Shenandoah Valley Regional Commission: B	Rockbridge Area Community Services Board: B
Northern Virginia Health Care Center Commission: A	Rockbridge Area Social Services Department: B
Northern Virginia Juvenile Detention Home: B	Rockbridge County Public Service Authority: B
Northern Virginia Soil and Water Conservation District: A	Rockbridge Regional Library: A
Northern Virginia Transportation Authority: C	RSW Regional Jail Authority: B
Northwestern Community Services Board: B	Russell County Public Service Authority: C
NRV Regional Water Authority: B	Scott County Public Service Authority: B
Orange County Broadband Authority: B	Scott County Redevelopment & Housing Authority: B
Pamunkey Regional Jail: C	Scott County Soil & Water Conservation District: C
Pamunkey Regional Library: C	Shenandoah Valley Juvenile Center: C
Peaks of Otter Soil & Water Conservation District: B	Shenandoah Valley Regional Airport Commission: B
Peanut Soil and Water Conservation District: A	Skyline Soil & Water Conservation District: A

AUTHORITIES, COMMISSIONS, DISTRICTS, REGIONAL INSTITUTIONS AND COMMUNITY SERVICES BOARDS, cont.

South Central Wastewater Authority: B	Virginia Biotechnology Research Park Authority: C
Southeastern Virginia Public Service Authority: B	Virginia Dare Soil and Water Conservation District: A
Southside Behavioral Health: C	Virginia Highlands Airport Authority: B
Southside Planning District Commission: B	Virginia Peninsula Regional Jail: B
Southside Regional Jail: C	Virginia Peninsulas Public Service Authority: B
Southside Regional Juvenile Group Home Commission: B	Virginia Resources Authority: B
Southwest Regional Recreation Authority: B	Washington County Service Authority: B
Southwest Virginia Regional Jail: B	Washington Metropolitan Area Transportation Commission: A
Staunton Redevelopment & Housing Authority: B	Waynesboro Redevelopment & Housing Authority: B
Suffolk Redevelopment & Housing Authority: B	Western Tidewater Community Services Board: D
Sussex Service Authority: B	Western Tidewater Regional Jail: B
Tazewell Soil & Water Conservation District: B	Western Virginia Regional Jail Authority: C
Thomas Jefferson Planning District Commission: B	Western Virginia Water Authority: B
Thomas Jefferson Soil & Water Conservation District: B	Williamsburg Area Transit Authority: C
Tidewater Soil & Water Conservation District: A	Wise County Public Service Authority: B
Tidewater Youth Services Commission: C	Wise County Redevelopment & Housing Authority: C
Tri-County/City Soil & Water Conservation District: B	Woodway Water Authority: B
Upper Occoquan Sewage Authority: B	Wythe-Grayson Regional Library: B
VA Coalfield Economic Dev Auth: C	Wytheville Redevelopment & Housing Authority: B
Valley Community Services Board: B	

SCHOOLS: 142*

E: teacher and non-teacher (as applicable) employees covered by retirement, group life insurance and the retiree health insurance credit

COUNTY SCHOOLS: 94

Accomack County Schools: E	Carroll County Schools: E	Giles County Schools: E	Loudoun County Schools: E
Albemarle County Schools: E	Charles City County Schools: E	Gloucester County Schools: E	Louisa County Schools: E
Alleghany County Schools: E	Charlotte County Schools: E	Goochland County Schools: E	Lunenburg County Schools: E
Amelia County Schools: E	Chesterfield County Schools: E	Grayson County Schools: E	Madison County Schools: E
Amherst County Schools: E	Clarke County Schools: E	Greene County Schools: E	Mathews County Schools: E
Appomattox County Schools: E	Craig County Schools: E	Greensville County Schools: E	Mecklenburg County Schools: E
Arlington County Schools: E	Culpeper County Schools: E	Halifax County Schools: E	Middlesex County Schools: E
Augusta County Schools: E	Cumberland County Schools: E	Hanover County Schools: E	Montgomery County Schools: E
Bath County Schools: E	Dickenson County Schools: E	Henrico County Schools: E	Nelson County Schools: E
Bedford County Schools: E	Dinwiddie County Schools: E	Henry County Schools: E	New Kent County Schools: E
Bland County Schools: E	Essex County Schools: E	Highland County Schools: E	Northampton County Schools: E
Botetourt County Schools: E	Fairfax County Schools: E	Isle of Wight County Schools: E	Northumberland County
Brunswick County Schools: E	Fauquier County Schools: E	King & Queen County Schools: E	Schools: E
Buchanan County Schools: E	Floyd County Schools: E	King George County Schools: E	Nottoway County Schools: E
Buckingham County Schools: E	Fluvanna County Schools: E	King William County Schools: E	Orange County Schools: E
Campbell County Schools: E	Franklin County Schools: E	Lancaster County Schools: E	Page County Schools: E
Caroline County Schools: E	Frederick County Schools: E	Lee County Schools: E	Patrick County Schools: E

COUNTY SCHOOLS, cont.

Pittsylvania County Schools: E	Richmond County Schools: E	Smyth County Schools: E	Warren County Schools: E
Powhatan County Schools: E	Roanoke County Schools: E	Southampton County Schools: E	Washington County Schools: E
Prince Edward County Schools: E	Rockbridge County Schools: E	Spotsylvania County Schools: E	Westmoreland County
Prince George County Schools: E	Rockingham County Schools: E	Stafford County Schools: E	Schools: E
Prince William County Schools: E	Russell County Schools: E	Surry County Schools: E	Wise County Schools: E
Pulaski County Schools: E	Scott County Schools: E	Sussex County Schools: E	Wythe County Schools: E
Rappahannock County Schools: E	Shenandoah County Schools: E	Tazewell County Schools: E	York County Schools: E

CITY AND TOWN SCHOOLS: 38

Alexandria City Schools: E	Falls Church Public Schools: E	Manassas Park City Schools: E	Roanoke City Schools: E
Bristol City Schools: E	Franklin City Schools: E	Martinsville City Schools: E	Salem City Schools: E
Buena Vista City Schools: E	Fredericksburg City Schools: E	Newport News Public Schools: E	Staunton City Schools: E
Charlottesville Public Schools: E	Galax City Schools: E	Norfolk Public Schools: E	Suffolk City Schools: E
Chesapeake Public Schools: E	Hampton City Schools: E	Norton City Schools: E	Virginia Beach City Schools: E
Colonial Beach Schools: E	Harrisonburg City Schools: E	Petersburg City Schools: E	Waynesboro City Schools: E
Colonial Heights City Schools: E	Hopewell City Schools: E	Poquoson City Schools: E	West Point Schools: E
Danville City Schools: E	Lexington City Schools: E	Portsmouth City Schools: E	Williamsburg—James City County
Fairfax City Schools: E	Lynchburg Public Schools: E	Radford City Schools: E	Schools: E
	Manassas City Schools: E	Richmond City Public Schools: E	Winchester Public Schools: E

OTHER SCHOOLS: 10

Amelia-Nottoway Technical Center: E	Charlottesville-Albemarle Vocational Technical Center: E	New Horizons Technical Center: E	Rowanty Vocational Technical Center: E
Appomattox Regional Governor's School: E	Maggie Walker Governor's School for Government and International Studies: E	Northern Neck Regional Special Education Program: E	Valley Vocational Technical Center: E
Bridging Communities Regional Career Center & Technical Center: E		Northern Neck Regional Vocational Center: E	

** Of the 142 school boards, 131 also provide coverage for non-teacher employees and are treated as political subdivisions.*

AGENCIES OF THE COMMONWEALTH OF VIRGINIA, INCLUDING PUBLIC COLLEGES AND UNIVERSITIES: 225

Covered by retirement, group life insurance, retiree health insurance credit and sickness and disability

TOTAL VRS-PARTICIPATING EMPLOYERS: 836

FIGURE 5.16: VRS EMPLOYER RANKING CURRENT YEAR

AS OF JUNE 30, 2023

Employer	Active Employees	Percentage of Total
1. Fairfax County Public Schools	21,249	5.96%
2. Loudoun County School Board	10,148	2.85%
3. Prince William County School Board	9,864	2.77%
4. Virginia Beach City School Board	7,718	2.16%
5. Virginia Department of Transportation	7,289	2.04%
6. Chesterfield County School Board	7,034	1.97%
7. City of Virginia Beach	6,105	1.71%
8. University of Virginia - Academic	5,337	1.50%
9. Henrico County School Board	5,217	1.46%
10. Henrico County	5,128	1.44%
11. All Other	271,426	76.14%
Total	356,515	100.00%

HISTORICAL COMPARISON

AS OF JUNE 30, 2013

Employer	Active Employees	Percentage of Total
1. Fairfax County Schools - Professional Employees	21,117	6.20%
2. Virginia Beach City Schools - Professional Employees	8,274	2.43%
3. Prince William County Schools - Professional Employees	7,918	2.32%
4. Loudoun County Schools - Professional Employees	7,769	2.28%
5. Chesterfield County Schools - Professional Employees	6,000	1.76%
6. City of Virginia Beach - General Government	5,910	1.73%
7. University of Virginia - Academic Division	5,280	1.55%
8. Henrico County Schools - Professional Employees	5,071	1.49%
9. Henrico County - General Government	4,909	1.44%
10. Virginia Polytechnic Institute and State University - Academic	4,717	1.38%
11. All other	263,786	77.42%
Total	340,751	100.00%

HYBRID DEFINED CONTRIBUTION PLAN SCHEDULE OF FIDUCIARY NET POSITION

FOR THE YEAR ENDED JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	Total Hybrid Defined Contribution Plans
Assets:	
Receivables:	
Contributions	\$ 19,900
Total Receivables	19,900
Investments:	
Hybrid Defined Contribution Investments	1,979,473
Total Investments	1,979,473
Total Assets	1,999,373
Liabilities:	
Other Payables	3,797
Total Liabilities	3,797
Net Position – Restricted for Benefits	\$ 1,995,576

HYBRID DEFINED CONTRIBUTION PLAN SCHEDULE OF CHANGES IN FIDUCIARY NET POSITION

FOR THE YEAR ENDED JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

	Total Hybrid Defined Contribution Plans
Additions:	
Contributions:	
Members	\$ 220,787
Employers	174,746
Total Contributions	395,533
Investment Income:	
Interest, Dividends and Other Investment Income	6,222
Net Appreciation/(Depreciation) in Fair Value of Investments	164,082
Total Investment Income Before Investment Expenses	170,304
Investment Expenses:	
Total Investment Expenses	(6,515)
Net Investment Income	163,789
Miscellaneous Revenue	—
Total Additions	559,322
Deductions:	
Refunds of Member Contributions	39,587
Administrative Expenses	—
Other Expenses	—
Total Deductions	39,587
Net Increase (Decrease)	519,735
Net Position – Restricted for Benefits – Beginning of Year	1,475,841
Net Position – Restricted for Benefits – End of Year	\$ 1,995,576

HYBRID PLAN MEMBER AND EMPLOYER CONTRIBUTIONS

(EXPRESSED IN THOUSANDS)

	Virginia Retirement System	Judicial Retirement System	Total Hybrid Contributions
Member Contributions	\$ 218,731	\$ 2,056	\$ 220,787
Employer Contributions	173,269	1,477	174,746
Total	\$ 392,000	\$ 3,533	\$ 395,533

Commonwealth of Virginia 457 Deferred Compensation and Cash Match Plans Program With Oversight by VRS

PLAN OVERVIEW

The Commonwealth of Virginia 457 Deferred Compensation Plan is qualified under Section 457(b) of the Internal Revenue Code and regulated by Title 51.1, Chapter 6, of the *Code of Virginia*. The 457 Deferred Compensation Plan provides eligible members a way to save for retirement through deferrals of compensation each pay period.

The Cash Match Plan is qualified under Section 401(a) of the Internal Revenue Code and is regulated by Title 51.1, Chapter 6, of the *Code of Virginia*. Employees participating in the Deferred Compensation Plan are eligible to receive an employer-provided contribution to the Cash Match Plan if they are state employees or employees whose employers have elected the Cash Match Plan.

ELIGIBILITY

New and re-hired salaried state employees in Plan 1 and Plan 2 are automatically enrolled in the Deferred Compensation Plan upon employment with two opportunities to opt out of the plan. The Deferred Compensation Plan is voluntary for salaried state employees hired before January 1, 2008, and for eligible political subdivision employees whose employers have elected to participate in the plan.

Wage employees of employers that offer the plans may participate in the Deferred Compensation Plan but not the Cash Match Plan. Figure 5.17 presents details of each plan's activity for the years ended June 30, 2023, 2022 and 2021.

Contributions to the Deferred Compensation Plan during fiscal year 2023 and fiscal year 2022 were \$185,467,052 and \$184,240,535.83, respectively.

Contributions to the Cash Match Plan during fiscal year 2023 and fiscal year 2022 were \$14,332,479 and \$14,623,215, respectively.

As shown in Figures 5.18 and 5.19, there were approximately 89,672 employees in the Deferred Compensation Plan and 73,408 employees in the Cash Match Plan as of June 30, 2023.

Current state legislation establishing the Commonwealth of Virginia 457 Deferred Compensation Plan allows participants to use plan funds to purchase eligible prior service credit in their defined benefit plan. Approximately 80 plan participants used the trustee-to-trustee transfer provision to buy VRS service credit.

The Virginia Retirement System (the System) has oversight but no investment responsibility for the Deferred Compensation and Cash Match Plans.

These plans' assets, therefore, are not included in the System's Basic Financial Statements.

FIGURE 5.17: STATEMENT OF CHANGES IN PLAN ACCUMULATION ASSETS

FOR THE YEARS ENDED JUNE 30

	Deferred Compensation Plan – 457(b)			Cash Match Plan – 401(a)		
	2023	2022	2021	2023	2022	2021
Plan Assets on July 1	\$ 3,703,870,805	\$ 4,170,971,367	\$ 3,271,196,108	\$ 545,721,662	\$ 615,244,385	\$ 493,196,551
Contributions	185,467,052	184,240,536	171,469,430	14,332,479	14,623,215	15,035,712
Distributions	(216,621,541)	(207,507,875)	(178,531,571)	(30,552,757)	(30,149,442)	(29,010,738)
Plan Transfers*	15,822,468	18,899,978	18,914,186	5,793,593	8,716,897	8,849,802
Third-Party Administrative Fees**	(2,373,406)	(2,397,415)	(2,418,791)	(82,742)	(81,107)	(81,674)
Period Earnings	401,178,569	(460,335,786)	890,342,005	56,256,340	(62,632,286)	127,254,732
Plan Assets on June 30	\$ 4,087,343,947	\$ 3,703,870,805	\$ 4,170,971,367	\$ 591,468,575	\$ 545,721,662	\$ 615,244,385

* For the Deferred Compensation Plan, this represents plan transfers from other eligible Section 457(b) plans into the Commonwealth's Plan. For the Cash Match Plan, this represents transfers from other qualified plans, including Partial Lump-Sum Option Payments (PLOPs) for the VRS pension plans.

** The current third-party administrator, MissionSquare Retirement, is compensated based on an annual record-keeping and communication fee of \$30.50 per participant deducted on monthly basis (approximately \$2.54 per month). Participants with multiple accounts only pay one annual fee of \$30.50. In addition, administrative costs were incurred by VRS for each of the plans. For the Deferred Compensation Plan, they were \$1,009,307 and \$1,145,011 in fiscal year 2023 and fiscal year 2022, respectively. For the Cash Match Plan, they were \$892,490 and \$422,135 in fiscal year 2023 and fiscal year 2022, respectively. These costs are funded by the employers participating in the plans.

FIGURE 5.18: 457(b) ACTIVE AND INACTIVE PLAN PARTICIPANTS

AT JUNE 30

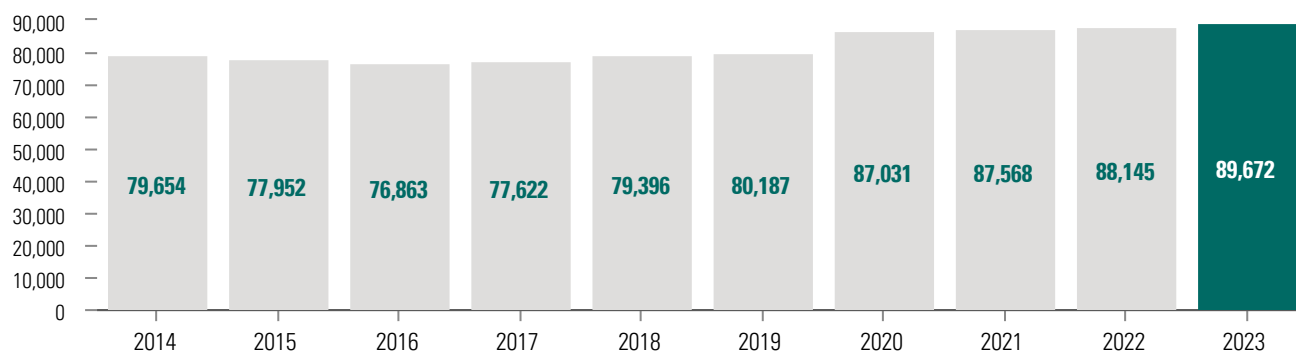


FIGURE 5.19: 401(a) ACTIVE AND INACTIVE PLAN PARTICIPANTS

AT JUNE 30

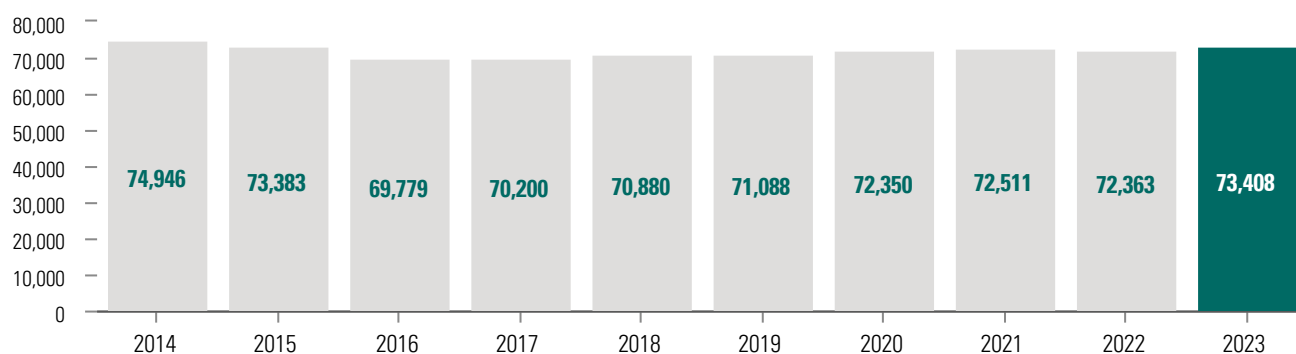


FIGURE 5.20: TOTAL PARTICIPANT ACCOUNTS IN EACH FUND OPTION

AT JUNE 30, 2023

(EXPRESSED IN THOUSANDS)

Fund Name	Deferred Compensation Plan – 457(b)	Cash Match Plan – 401(a)
Retirement Portfolio	7,584	5,829
Target Date 2025 Portfolio	6,921	5,511
Target Date 2030 Portfolio	8,061	6,389
Target Date 2035 Portfolio	8,428	6,681
Target Date 2040 Portfolio	7,855	6,263
Target Date 2045 Portfolio	8,518	6,939
Target Date 2050 Portfolio	8,621	7,231
Target Date 2055 Portfolio	7,064	5,961
Target Date 2060 Portfolio	3,688	3,037
Target Date 2065 Portfolio	1,643	1,413
Money Market Fund	4,416	2,999
Stable Value Fund	17,711	14,093
Bond Fund	8,664	5,405
Inflation-Protected Bond Fund	3,606	2,244
High-Yield Bond Fund	3,965	2,384
Stock Fund	23,643	16,549
Small/Mid-Cap Stock Fund	13,461	8,491
International Stock Fund	11,392	7,099
Global Real Estate Fund	6,858	4,868
VRS Investment Portfolio	1,482	854
Self-Directed Brokerage	784	112

The number of participant accounts exceeds the number of participants, as a participant may invest in more than one fund.

FIGURE 5.21: ACCUMULATION PLAN ASSETS BY FUND

FOR THE YEARS ENDED JUNE 30

Fund Name	Deferred Compensation Plan – 457(b)			Cash Match Plan – 401(a)		
	2023	2022	2021	2023	2022	2021
Retirement Portfolio	\$ 257,862,357	\$ 263,054,559	\$ 320,723,644	\$ 43,676,037	\$ 43,115,345	\$ 51,486,734
Target Date 2020 Portfolio	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Target Date 2025 Portfolio	\$ 204,506,612	\$ 196,052,899	\$ 221,027,213	\$ 27,680,395	\$ 26,494,442	\$ 30,495,511
Target Date 2030 Portfolio	\$ 188,539,989	\$ 164,997,883	\$ 178,560,983	\$ 27,111,588	\$ 24,460,404	\$ 27,540,293
Target Date 2035 Portfolio	\$ 174,292,005	\$ 145,235,368	\$ 156,721,920	\$ 27,662,731	\$ 24,128,300	\$ 26,954,661
Target Date 2040 Portfolio	\$ 125,162,126	\$ 103,300,945	\$ 111,616,265	\$ 22,586,110	\$ 19,280,069	\$ 21,764,138
Target Date 2045 Portfolio	\$ 96,936,996	\$ 77,327,242	\$ 83,767,190	\$ 20,914,462	\$ 17,410,100	\$ 20,201,294
Target Date 2050 Portfolio	\$ 70,939,870	\$ 54,314,090	\$ 56,878,644	\$ 17,768,544	\$ 14,637,931	\$ 16,673,634
Target Date 2055 Portfolio	\$ 41,631,658	\$ 31,830,172	\$ 33,621,418	\$ 10,045,084	\$ 8,242,047	\$ 9,241,261
Target Date 2060 Portfolio	\$ 12,827,721	\$ 9,838,743	\$ 9,264,790	\$ 2,686,769	\$ 2,050,629	\$ 2,164,306
Target Date 2065 Portfolio	\$ 4,897,778	\$ 2,715,896	\$ 1,736,097	\$ 699,876	\$ 408,244	\$ 313,770
Money Market Fund	\$ 93,742,020	\$ 81,139,038	\$ 74,820,391	\$ 10,243,346	\$ 9,665,155	\$ 8,276,367
Stable Value Fund	\$ 529,374,471	\$ 545,758,172	\$ 523,297,780	\$ 102,927,717	\$ 104,367,102	\$ 101,300,410
Bond Fund	\$ 133,626,932	\$ 133,683,431	\$ 157,684,503	\$ 12,793,720	\$ 13,029,712	\$ 15,400,301
Inflation-Protected Bond Fund	\$ 45,967,172	\$ 48,315,962	\$ 46,902,098	\$ 4,701,175	\$ 5,105,330	\$ 4,591,203
High-Yield Bond Fund	\$ 38,438,389	\$ 37,625,226	\$ 42,379,617	\$ 3,985,648	\$ 3,943,873	\$ 4,528,139
Stock Fund	\$ 1,328,608,436	\$ 1,141,986,170	\$ 1,314,381,660	\$ 178,329,997	\$ 156,221,130	\$ 183,452,513
Small/Mid-Cap Stock Fund	\$ 348,617,138	\$ 312,005,987	\$ 411,309,176	\$ 39,690,162	\$ 35,421,185	\$ 48,486,073
International Stock Fund	\$ 179,703,723	\$ 155,969,281	\$ 201,129,840	\$ 16,172,423	\$ 15,261,263	\$ 19,623,112
Global Real Estate Fund	\$ 72,931,343	\$ 78,353,563	\$ 90,531,329	\$ 10,610,189	\$ 11,863,999	\$ 13,753,893
VRS Investment Portfolio – Interim Account	\$ 1,822,230	\$ 1,073,282	\$ 991,657	\$ 107,954	\$ 60,056	\$ 36,831
VRS Investment Portfolio	\$ 48,746,910	\$ 44,100,518	\$ 40,912,054	\$ 9,085,618	\$ 8,776,150	\$ 6,943,536
Self-Directed Brokerage	\$ 88,168,071	\$ 75,192,378	\$ 92,713,099	\$ 1,989,029	\$ 1,779,196	\$ 2,016,405
Total Accumulation Plan Assets	\$4,087,343,947	\$3,703,870,805	\$4,170,971,367	\$ 591,468,574	\$ 545,721,662	\$ 615,244,385

Detailed information on each of these funds, including the investment objective, distribution of assets, investment performance and annual operating expense for each fund, is presented in the Investment Section.



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