

# Navigating the New World of Retirement Planning



Virginia Retirement System  
Comprehensive Annual Financial Report  
For the Year Ended June 30, 2014



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

(DOLLARS IN THOUSANDS)

|  | 2014          | 2013          | % Change |
|--|---------------|---------------|----------|
| <b>Activity for the Year:</b>  |               |               |          |
| Contributions  | \$ 2,696,968  | \$ 2,598,587  | 3.8%     |
| Investment Income (Net of Investment Expenses)                             | \$ 8,875,060  | \$ 6,078,336  | 46.0%    |
| Retirement Benefits  | \$ 3,878,071  | \$ 3,672,541  | 5.6%     |
| Refunds  | \$ 103,399    | \$ 81,538     | 26.8%    |
| Administrative and Other Expenses (Net of Miscellaneous Income)            | \$ 47,450     | \$ 35,035     | 35.4%    |
| Increase (Decrease) in Net Assets Held in Trust for Pension Benefits       | \$ 7,543,108  | \$ 4,887,809  | 54.3%    |
| Retirement Benefits as a Percentage of Contributions                       | 143.8%        | 141.3%        |          |
| Retirement Benefits as a Percentage of Contributions and Investment Income | 33.5%         | 42.3%         |          |
| <b>Net Position Held in Trust for Benefits at Fiscal Year-End:</b>         |               |               |          |
| Virginia Retirement System (VRS)   | \$ 62,208,638 | \$ 54,972,736 | 13.2%    |
| State Police Officers' Retirement System (SPORS)                           | \$ 720,990    | \$ 625,562    | 15.3%    |
| Virginia Law Officers' Retirement System (VaLORS)                          | \$ 1,150,450  | \$ 992,031    | 16.0%    |
| Judicial Retirement System (JRS)   | \$ 442,194    | \$ 388,835    | 13.7%    |
| <b>Investment Performance:</b>   |               |               |          |
| One-Year Return on Investments   | 15.7%         | 11.8%         |          |
| Three-Year Return on Investments   | 9.5%          | 10.5%         |          |
| Five-Year Return on Investments  | 12.3%         | 4.0%          |          |
| <b>Participating Employers:</b>  |               |               |          |
| Counties/Cities/Towns  | 255           | 255           |          |
| Special Authorities  | 198           | 198           |          |
| School Boards  | 145           | 145           |          |
| State Agencies   | 226           | 228           |          |
| Total Employers  | 824           | 826           | -0.2%    |
| <b>Members/Retirees:</b>   |               |               |          |
| Active Members   | 341,499       | 340,751       | 0.2%     |
| Retired Members  | 177,126       | 169,588       | 4.4%     |

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



# Virginia Retirement System

## Comprehensive Annual Financial Report

For the Year Ended June 30, 2014

### VRS STANDARDS OF CONDUCT

#### RESPONSIBILITY

We are loyal to members, beneficiaries and participants, discharging our duties for the exclusive purpose of administering benefits and providing customer services.

#### FAIRNESS

We work for all members, beneficiaries and participants, not for any one individual or group of individuals.

#### COMPETENCE

We strive to maintain and improve our skills and knowledge.

#### INTEGRITY

We conduct ourselves in a professional and ethical manner befitting the high level of trust bestowed upon us by our members, beneficiaries and participants.

### AN INDEPENDENT AGENCY OF THE COMMONWEALTH OF VIRGINIA

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



Government Finance Officers Association

**Certificate of Achievement for Excellence in Financial Reporting**

Presented to

**Virginia Retirement System**

For its Comprehensive Annual Financial Report for the Fiscal Year Ended

**June 30, 2013**

Executive Director/CEO

**Certificate of Achievement for Excellence in Financial Reporting**

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 comprehensive annual financial report (CAFR) for the fiscal year ended June 30, 2013. This was the 32<sup>nd</sup> consecutive year that VRS achieved this prestigious recognition.

To be awarded the certificate, a government unit must publish an easily readable and efficiently organized comprehensive 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 *Comprehensive Annual Financial Report for FY 2014* 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 Recognition Award for Administration**

VRS received the 2013 Recognition Award for Administration from the Public Pension Coordinating Council (PPCC) in recognition of the agency's fulfillment of the Public Pension Standards. Developed by PPCC, these standards are the benchmark for measuring excellence in defined benefit plan administration. This is the System's 10th 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).



Public Pension Coordinating Council

**Public Pension Standards Award For Funding and Administration 2013**

Presented to

**Virginia Retirement System**

In recognition of meeting professional standards for plan funding and administration as set forth in the Public Pension Standards.

*Presented by the Public Pension Coordinating Council, a confederation of*

National Association of State Retirement Administrators (NASRA)  
National Conference on Public Employee Retirement Systems (NCPERS)  
National Council on Teacher Retirement (NCTR)

Alan H. Winkle  
Program Administrator

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# 1 Introductory Section

Planning for retirement is like starting a journey toward a faraway, unfamiliar destination. More than ever before, VRS members are actively involved in their retirement planning, not only through making contributions to their plans but also in choosing investments and strategies. Just as explorers and adventurers throughout Virginia's history have relied on maps and charts to guide their travels, members utilize information and data, in charting a course toward a financially stable retirement.

Chairman's Letter  
Board of Trustees  
VRS Organization  
Investment Advisory Committee  
Executive Administrative Team  
Executive Investment Team  
Professional Consultants  
Letter of Transmittal



Photo: Sarah Hauser, Virginia Tourism Corporation

## CHARTING THE COURSE

Virginia's tradition of exploration began in prehistory, when the Chesapeake Bay region attracted Paleo-American hunters. Italian and Spanish navigators sailed the bay in the 1500s, but England established the first permanent European settlement at Jamestown in 1607. Colonists learned that their new home, "Virginia," was known as "Tsenacomoco," or "densely populated land," to the Powhatan Confederation of 30 native tribes who inhabited the area. Today, libraries, universities, state agencies and foundations join others to preserve, research and interpret Virginia's past for present and future generations.



NAVIGATING  
THE NEW WORLD  
OF RETIREMENT  
PLANNING



## Chairman's Letter



**Diana F. Cantor**, Chairman  
**Robert P. Schultze**, Director  
**Ronald D. Schmitz**, Chief Investment Officer

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December 4, 2014

### **The Honorable Terence R. McAuliffe, Governor of Virginia, and Members of the General Assembly:**

I am pleased to present the Virginia Retirement System (VRS) Comprehensive Annual Financial Report for fiscal year 2014.

VRS achieved a 15.7% net return on its investment portfolio for fiscal year 2014, allowing the trust fund to end the year with a net position of \$66.2 billion.

During fiscal year 2014, the public equity program returned 21.6%; the private equity program returned 23.2%; the real assets program returned 14.2%; the credit strategies program returned 12.2%; and the fixed income program returned 4.9%.

The portfolio included \$28.8 billion in public equity; \$11.9 billion in credit strategies; \$12.2 billion in fixed income; \$7.0 billion in real assets; and \$5.1 billion in private equity, as of June 30, 2014.

For the second consecutive year, VRS investments yielded double-digit returns. This year the return resulted in a \$9 billion gain for the system's portfolio. Approximately one-third of the portfolio is managed internally by VRS staff at considerable cost savings. The remainder is invested by external managers, subject to supervision by VRS staff. According to an outside study, the skill exhibited by VRS staff in performing these functions in comparison with their public fund peers saves the portfolio about \$31 million annually in fees.

Strong market returns and skilled management were bolstered by the Board's decision to change the asset allocation strategy, which increases real assets and private equity and decreases fixed income and credit strategies. Private equities performed below their benchmarks for most of fiscal year 2014, but performed well in June 2014 and are expected to pay higher returns over the long term.

We believe this strategy improves our chances of meeting the actuarially assumed rate of return, 7% on an annualized basis, without significantly increasing the volatility of the portfolio. VRS is phasing in this strategy over a five-year period.

The VRS Board acknowledges the skills and efforts exhibited by the professional investment staff, who provided superior investment management and generated an average annual excess return of \$310 million earned above the policy benchmark for the previous 10 years, which will help provide benefits for members of the system.

While the investment team was implementing the Board's asset allocation strategy, the administrative staff was managing the launch of the Hybrid Retirement Plan, a significant accomplishment for fiscal year 2014. The agency-wide effort included development or modification of policies, procedures and processes for the hybrid plan; changes to VRS systems; procuring a new defined contribution plans record keeper; training and communications for external and internal stakeholders; and extensive outreach to employers. Post-implementation, staff continued to monitor system functionality, work with employers on payroll readiness and review operations with the record keeper and the Department of Accounts.

ICMA-RC became the provider of record-keeping services for the Hybrid Retirement Plan and the Commonwealth of Virginia Defined Contribution Plans in fiscal year 2014. The transition from ING, former record keeper for the defined contribution plans, was effected electronically at the beginning of January 2014 and resulted in the transfer of \$2.3 billion in assets and the reconciliation of approximately 153,000 participant accounts. No action was required from participants, who enjoyed the same investment lineup and lower administrative fees.

Soon after the launch of the Hybrid Retirement Plan, Plan 1 and Plan 2 members could make an irrevocable election to opt into the hybrid plan. To assist eligible members in determining if they wanted to opt into the Hybrid Retirement Plan, VRS staff constructed an online calculator to help members compare VRS Plans 1 and 2 with the hybrid plan. This resource proved its value to more than 18,000 users of the calculator.

The VRS Board of Trustees recognizes and commends the VRS staff for implementing the Hybrid Retirement Plan, which required effort from many different areas within the agency and development of a new partnership with ICMA-RC. During this successful implementation, staff exemplified the agency's Core Values – integrity, teamwork, accountability and agility – in their work to launch the Hybrid Retirement Plan.

Following the implementation of the Hybrid Retirement Plan, VRS prepared to continue its Modernization program. Employers across Virginia began using *myVRS Navigator* in 2012 for reporting and submitting contributions and reviewing employees' VRS accounts. During the past two years, this platform has proven a strong foundation for future enhancements that will advance both efficiency and customer service. In Modernization Phase IV, beginning in fiscal year 2015, *myVRS Navigator* will expand to include online services available to members, such as requesting refunds, simulating alternative benefit options and applying for retirement.

VRS also has begun implementing the Governmental Accounting Standards Board (GASB) Statement Number 67, *Financial Reporting for Pension Plans*, which addresses financial reporting for state and local pension administrators, and Statement Number 68, *Accounting*

*and Financial Reporting for Pensions*, which establishes new accounting and financial reporting requirements for state and local governments that provide their employees with pensions. For the first time, in fiscal year 2015, employers that issue financial statements will have to report retirement plan liabilities on their financial statements.

These statements effect important changes in how governments calculate and report costs and obligations associated with pensions. Employers will begin reporting net liabilities for pension plans in their fiscal year 2015 financial statements using fiscal year 2014 actuarial valuation data. Each employer that issues financial statements will have to report retirement plan liabilities on those statements. The new standards require the net pension liabilities of cost-sharing plans, such as VRS' teacher retirement plan, to be apportioned to each of the participating local governing bodies. To aid employers in meeting the new standards, VRS has created an online resource center that includes financial reporting guidelines, GASB guidance documents and presentations.

As we enter the second biennium of the phasing in of higher contribution rates, we appreciate your continuing commitment to achieving our shared goal of fully funding the rates, especially as you face extremely difficult choices in today's economic climate. However, you have recognized that favorable investment returns, although encouraging, cannot support the entire system, and reduced costs from pension reform, although significant in the long term, will not have an immediate effect. Therefore, approval of the 80% funding rate for the 2014-2016 biennium was an important step toward funding the contribution rates at 100% of the Board-certified levels by fiscal year 2019.

We are fortunate that the Governor and the General Assembly continue to appoint skilled and capable VRS board members to guide the system through times of change. William H. Leighty was appointed by the Governor in March as the higher education representative. In April, Joseph W. Montgomery was appointed by the Joint Rules Committee as an investment expert.

In closing, I would like to offer my personal thanks for the opportunity to serve as Chairman of the Virginia Retirement System over the past few years. As my term as Chairman comes to a close in the spring of next year, let me express that it has been an honor to work with the Board of Trustees and VRS staff as we met great challenges and accomplished significant goals.

On behalf of the Board of Trustees and the VRS staff, I would like to express our gratitude for your continuing leadership and support. As always, the Board stands ready to assist you.

Sincerely,







Diana F. Cantor  
Chairman  
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 chairman. 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.

|  | TRUSTEE   | BOARD SEAT HELD                     | APPOINTED BY          | TERM EXPIRES                              | COMMITTEE ASSIGNMENTS  |
|--|---|-------------------------------------|-----------------------|---|--|
|    | <b>Diana F. Cantor</b><br>Chairman<br>Alternative Investment Management | Investment Professional             | Governor              | 2/28/2015<br><br>As Chairman:<br>5/4/2015 | Administration & Personnel (Chairman)<br><br>Audit & Compliance (Vice Chairman)<br><br>Investment Policy (Chairman)<br><br>Strategic Projects (Chairman) |
|  | <b>Robert L. Greene</b><br>Syncom Venture Partners                      | Employee Benefit Plans Professional | Governor              | 2/28/2017                                 | Administration & Personnel (Vice Chairman)<br><br>Audit & Compliance (Chairman)<br><br>Investment Policy (Vice Chairman)<br><br>Strategic Projects       |
|  | <b>A. Marshall Acuff, Jr.</b><br>Silvercrest Asset Management Group LLC | Investment Professional             | Governor              | 2/28/2016                                 | Administration & Personnel<br><br>Investment Policy<br><br>Strategic Projects  |
|  | <b>Wallace G. "Bo" Harris, Ph.D.</b><br>University of Richmond          | State Employee (Retired)            | Joint Rules Committee | 2/28/2016                                 | Benefits & Actuarial (Vice Chairman)<br><br>Investment Policy<br><br>Strategic Projects  |

BOARD OF TRUSTEES, cont.

|  | TRUSTEE   | BOARD SEAT HELD                       | APPOINTED BY          | TERM EXPIRES | COMMITTEE ASSIGNMENTS  |
|--|---|---------------------------------------|-----------------------|--------------|--|
|    | <b>W. Brett Hayes</b><br>Wells Fargo<br>Advisors Financial<br>Network                   | Investment<br>Professional            | Joint Rules Committee | 2/28/2018    | Defined Contribution<br>Plans Advisory<br>(Chairman)<br><br>Investment Policy<br><br>Strategic Projects                    |
|    | <b>William H. Leighty</b><br>Virginia Tech  | Higher Education<br>Representative    | Governor              | 2/28/2019    | Audit & Compliance<br><br>Investment Policy<br><br>Strategic Projects  |
|   | <b>Joseph W. Montgomery</b><br>The Optimal Service Group,<br>Wells Fargo Advisors       | Investment<br>Professional            | Joint Rules Committee | 2/28/2019    | Defined Contribution<br>Plans Advisory<br>(Vice Chairman)<br><br>Investment Policy<br><br>Strategic Projects               |
|  | <b>Mitchell L. Nason</b><br>Prince William County<br>Department of Fire<br>and Rescue   | Local Government<br>Employee          | Governor              | 2/28/2018    | Administration &<br>Personnel<br><br>Benefits & Actuarial<br>(Chairman)<br><br>Investment Policy<br><br>Strategic Projects |
|  | <b>Troilen Gainey<br/>Seward, Ed.S.</b><br>Dinwiddie County Public<br>Schools (Retired) | School<br>Superintendent<br>(Retired) | Joint Rules Committee | 2/28/2017    | Benefits & Actuarial<br><br>Investment Policy<br><br>Strategic Projects  |

## VRS Organization

### BOARD OF TRUSTEES

#### ADMINISTRATION



**Robert P. Schultze**  
Director

#### INVESTMENTS



**Ronald D. Schmitz**  
Chief Investment Officer

#### INTERNAL AUDIT



**Franklin O. Berry**  
Internal Audit Director

## Investment Advisory Committee

| MEMBER   | TERM EXPIRES                               |
|--|--|
| <b>Rod Smyth</b><br><b>Chairman</b><br>Chief Investment Strategist<br>RiverFront Investment Group        | 6/20/2015<br><br>As Chairman:<br>6/20/2015 |
| <b>Hance West</b><br><b>Vice Chairman</b><br>Managing Director<br>Investure                              | 12/31/2015                                 |
| <b>Deborah Allen Hewitt, Ph.D.</b><br>Clinical Professor<br>The College of William and Mary              | 10/17/2014                                 |
| <b>Michael Beasley</b><br>Retired Chairman Emeritus<br>Strategic Investment Solutions, Inc.              | 6/20/2015                                  |
| <b>Theodore Economou</b><br>Chief Executive Officer<br>and Chief Investment Officer<br>CERN Pension Fund | 9/13/2014                                  |
| <b>Thomas S. Gayner</b><br>President and Chief Investment Officer<br>Markel Corporation                  | 2/19/2015                                  |
| <b>Joe Grills</b><br>Former Chief Investment Officer<br>IBM Retirement Funds                             | 6/17/2014                                  |



*Seated: Thomas Gayner; Rod Smyth, Chairman; Deborah Allen Hewitt, Ph.D.; Hance West.  
Standing: Michael Beasley, Theodore Economou, Joe Grills, Donald Lindsey.*

| MEMBER  | TERM EXPIRES |
|---|--------------|
| <b>Lawrence E. Kochard, Ph.D.</b><br>Chief Executive Officer<br>and Chief Investment Officer<br>University of Virginia Investment<br>Management Company | 2/17/2015    |
| <b>Donald W. Lindsey</b><br>Chief Investment Officer<br>The George Washington University  | 3/31/2016    |

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## Executive Administrative Team

---

**Robert P. Schultze**  
Director

**Patricia S. Bishop**  
Deputy Director  
for Customer Relationships

**Barry C. Faison**  
Chief Financial Officer

**L. Farley Beaton, Jr.**  
Chief Technology Officer

**Jeanne L. Chenault**  
Director of Public Relations

**LaShaunda B. King**  
Executive Assistant

**Franklin O. Berry**  
Internal Audit Director

**Cynthia W. Comer**  
Director of Policy,  
Planning and Compliance

**Kenneth C. Robertson, Jr.**  
Director of Human Resources

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## Executive Investment Team

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**Ronald D. Schmitz**  
Chief Investment Officer

**Field H. Griffith, CFA**  
Director of Real Assets

**Stephen R. McClelland, CFA**  
Director of Credit Strategies

**John P. Alouf, CFA**  
Director of Private Equity

**Bryan Gardiner, CFA**  
Director of Fixed Income  
Management

**Steven P. Peterson, Ph.D.**  
Managing Director of Research,  
Risk Management & Operations

**Charles W. Grant, CFA**  
Managing Director, Internal  
Asset Management

**Kenneth C. Howell, CFA**  
Managing Director of  
Global Equity

**Daniel Whitlock**  
Director of Global Equity

**John T. Grier, CFA**  
Director of Internal Equity  
Management

**Curtis M. Mattson, CPA**  
Chief Administrative Officer

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## Professional Consultants

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ACTUARY  
**Thomas J. Cavanaugh, FSA,  
FCA, EA, MAAA**  
Chief Executive Officer  
Cavanaugh Macdonald  
Consulting, LLC

COMMONWEALTH OF  
VIRGINIA DEFERRED  
COMPENSATION PLAN  
**Rod Alcázar**  
ICMA-RC

MASTER CUSTODIAN  
**BNY Mellon**

LEGAL COUNSEL  
**Office of the Attorney General**  
Commonwealth of Virginia

AUDITOR  
**Martha S. Mavredes, CPA**  
Auditor of Public Accounts  
Commonwealth of Virginia

COMMONWEALTH OF  
VIRGINIA VOLUNTARY  
GROUP LONG TERM CARE  
INSURANCE PROGRAM  
**Becky Ball**  
Genworth Financial

VIRGINIA SICKNESS AND  
DISABILITY PROGRAM  
**Michelle Jackson**  
Unum

LIFE INSURANCE CARRIER  
**Joseph K. W. Chang**  
Minnesota Life Insurance  
Company

# Letter of Transmittal



**Robert P. Schultze**, Director  
**Barry C. Faison**, Chief Financial Officer

P.O. Box 2500 • 1200 East Main Street  
Richmond, Virginia 23218-2500  
Toll-free: 1-888-VARETIR (827-3847) • TDD: (804) 289-5919

December 4, 2014

## **To the Members of the Board of Trustees:**

We are pleased to submit the Comprehensive Annual Financial Report (CAFR) of the Virginia Retirement System (the System) for the fiscal year ended June 30, 2014. In addition to the Introductory Section, the System's CAFR contains a Financial Section, Investment Section, Actuarial Section and Statistical Section.

VRS' Comprehensive Annual Report for fiscal year 2014 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 4-10.00 of Chapter 2 of the 2012 Special Session I Virginia Acts of Assembly, which requires an annual detailed statement of financial condition. The report has been mailed to the Governor, the members of his Cabinet and the members of the Virginia General Assembly. The report also is available on the VRS website at [www.varetire.org](http://www.varetire.org).

## VRS Overview

VRS administers benefits and services for approximately 645,000 members, retirees and beneficiaries covered under the following systems:

- Virginia Retirement System (VRS) for teachers, state employees and employees of participating political subdivisions, including full-time local law enforcement officers, firefighters, emergency medical technicians and jail officers
- State Police Officers' Retirement System (SPORS)
- Virginia Law Officers' Retirement System (VaLORS)
- Judicial Retirement System (JRS)

Benefits administered by the System include:

- Hybrid Retirement Plan
- Plan 1 and Plan 2 defined benefit plans for members of VRS, SPORS, VaLORS and JRS
- Plan 1 and Plan 2 optional retirement defined contribution plans for political appointees, school superintendents and faculty members at Virginia's public colleges and universities, as elected by the participant
- Commonwealth of Virginia 457 Deferred Compensation and Cash Match Plans
- Group Life Insurance Program
- Retiree Health Insurance Credit Program
- Virginia Sickness and Disability Program (VSDP) and VSDP Long-Term Care Plan
- Virginia Local Disability Program (VLDP) and VLDP Long-Term Care Plan
- Commonwealth of Virginia (COV) Voluntary Group Long Term Care Insurance Program

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 anticipated growth 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 CAFR for fiscal year 2014 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 under the Governmental Accounting Standards Board (GASB) and the Financial Accounting Standards Board (FASB).

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 within a period of 30 years or less. In management's opinion, the financial statements fairly present the plan net position of the System at June 30, 2014, 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 CAFR. 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 the MD&A and should be read in conjunction with it. The System's MD&A can be found in the Financial Section immediately following the report of the independent auditor.

### VRS Milestones

**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.

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. 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 General Assembly of Virginia.

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, 2014, adequately safeguard the System's assets and provide reasonable assurance regarding the proper recording of financial transactions.

## Funding

### PENSION PLANS

In accordance with Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans*, changes were made to the calculation of the funding for the System's defined benefit pension plans for financial reporting purposes. The most recent valuation for this presentation was prepared as of June 30, 2014. The total pension liability was determined based on the actuarial valuation as of June 30, 2013, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2014. Based on these calculations, the Plan Fiduciary Net Position as a percentage of the Total Pension Liability was 74.28% for the VRS State Plan, 70.88% for the VRS Teacher Plan, and 86.90% 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 69.87%, 63.05% and 71.71%, respectively. Since this is the first year for this presentation, there is no comparative data for the prior year.

Contributions for fiscal year 2014 were based on the June 30, 2011, actuarial valuation. The rates certified by the VRS Board of Trustees for all state employee groups and for teachers were not fully funded by the Governor and General Assembly. However, the actual rates paid in fiscal year 2014 for all groups reflected an increase over the fiscal year 2012 levels. Retirement contribution rates are discussed in further detail in the Financial Section of the CAFR.

#### VRS Milestones

**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 created for members hired or rehired on or after July 1, 2010.

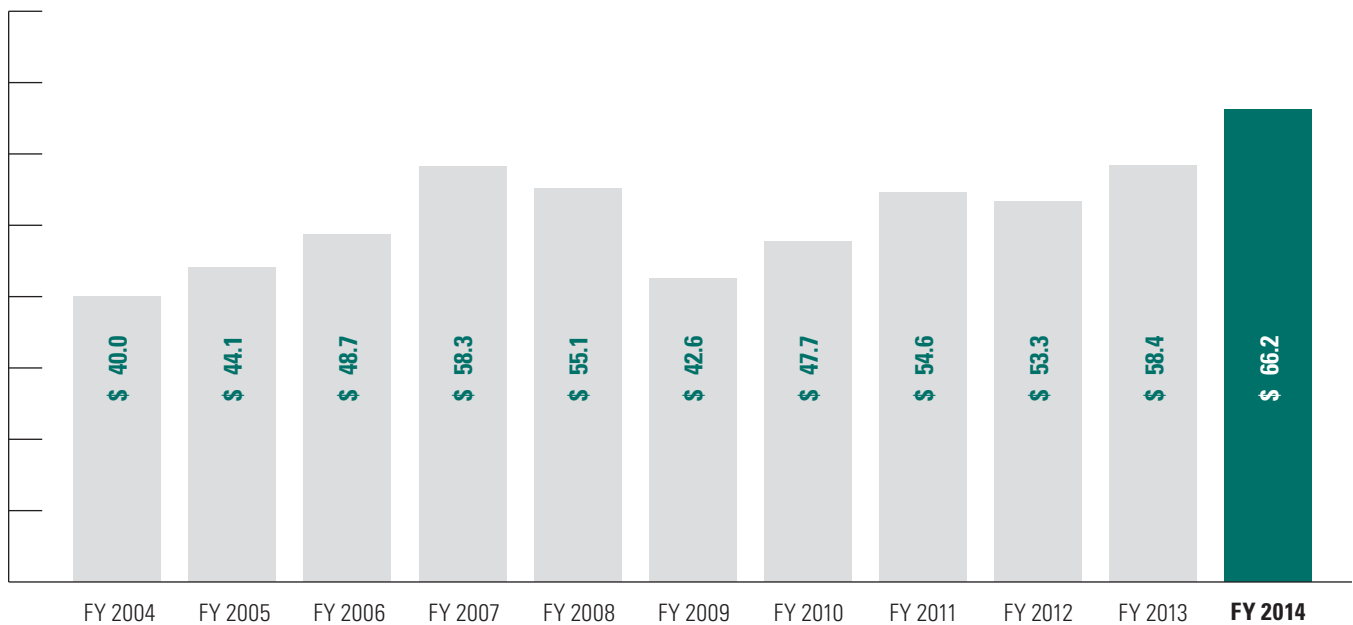
**2012** General Assembly passes legislation creating a hybrid retirement plan with implementation in 2014; Virginia Local Disability Program (VLDP) added as a benefit for political subdivisions and schools.

**2014** VRS Hybrid Retirement Plan, a combination defined benefit/defined compensation plan, becomes the mandatory retirement plan for all members (it does not cover hazardous duty members) hired on or after January 1, 2014; Virginia Local Disability Program (VLDP) becomes effective January 1, 2014.

## PLAN NET POSITION RESTRICTED FOR BENEFITS

AS OF JUNE 30

(EXPRESSED IN BILLIONS)



## OTHER POST-EMPLOYMENT BENEFITS PLANS

The System's most recent actuarial valuation for the Other Post-Employment Benefit (OPEB) plans was prepared as of June 30, 2013. As expected, the funded ratios for these plans generally improved. The funded ratios continue to reflect the impact of the negative investment returns in fiscal year 2009 on the Actuarial Value of Assets. The impact was lessened by the positive impact of the net investment gains recorded in fiscal year 2010, fiscal year 2011 and fiscal year 2013 because of the "five-year smoothing" asset valuation method used by the VRS actuary; however, this was partially offset by the poor investment performance recorded in fiscal year 2012.

The Group Life Insurance Fund, the Retiree Health Insurance Credit Fund and the Disability Insurance Trust Fund were actuarially funded at 32.5%, 6.1% and 157.4%, respectively, based on the actuarial valuation as of June 30, 2013. For the Group Life Insurance Fund, the Retiree Health Insurance Credit Fund and the Disability Insurance Trust Fund, there was an increase from the June 30, 2012, funded ratios of 30.7%, 5.8% and 113.7%, respectively. There were no changes in the primary actuarial assumptions for salary growth or inflation. Further information on this valuation is included in the Financial Section and the Actuarial Section of the CAFR.

Contributions for fiscal year 2014 were based on the June 30, 2011, actuarial valuation. The rates certified by the VRS Board of Trustees for the OPEB plans were not fully funded by the Governor and General Assembly. Contribution rates for each of these OPEB plans are discussed in further detail in the Financial Section of the CAFR.

## Investments

At June 30, 2014, the total value of the VRS investment portfolio was \$67.2 billion, an increase from the investment balance of \$59.9 billion at June 30, 2013. The increase in the portfolio resulted from an

increase in the investment return, which was 15.7% for fiscal year 2014, and an increase in both member and employer contributions. The System's net position restricted for benefits at June 30, 2014, totaled \$66.2 billion, an increase from the net position of \$58.4 billion at June 30, 2013.

## Legislative Initiatives

During the 2014 session, the Virginia General Assembly enacted the following bills that affect public employees and retirees covered under VRS.

**HOUSE BILL 10: JUDGES' RETIREMENT ALLOWANCE AND SERVICE AFTER RETIREMENT.** Provides that the annual retirement allowance of any person who has served as a judge but retires under a different defined benefit retirement plan shall not exceed 78% of the person's average final compensation, unless the person, after ceasing to be a judge, performs five or more years of creditable service under another defined benefit retirement plan. Only those persons who retired as a judge or justice may serve as a senior jurist on the Supreme Court or the Court of Appeals. This bill contained an emergency clause, making it effective when the Governor signed it into law on April 23, 2014.

**HOUSE BILL 147 AND SENATE BILL 412: DEFERRED COMPENSATION PLAN FOR MEDICAID PROGRAM INDEPENDENT CONTRACTORS.** Authorizes the VRS Board of Trustees to develop policies and procedures to allow independent contractors performing dental services for the Commonwealth's Medicaid program to participate in the deferred compensation plan for employees of the Commonwealth. Authorizes the Director of the Department of Medical Assistance Services to provide payments or transfers to and to participate in any deferred compensation plan for independent contractors providing dental services for the Commonwealth's Medicaid program established by the Board. The legislation has an expiration date of January 1, 2020, and has a delayed effective date of January 1, 2015.

**HOUSE BILL 700 AND SENATE BILL 79: OPTIONAL RETIREMENT PLANS MAINTAINED BY INSTITUTIONS OF HIGHER EDUCATION.** Allows the governing board of an institution of higher education that has established its own optional retirement plan to establish a policy regarding the number of years of service that an employee must perform before being entitled to receive all contributions made by the institution on his behalf to the plan. The legislation only applies to employees hired on or after July 1, 2014, who are not in continuous service at the time of hiring. This legislation was effective July 1, 2014.

**HOUSE JOINT RESOLUTION 103: JLARC STUDY OF VIRGINIA'S LINE OF DUTY ACT.** Directs JLARC to study Virginia's Line of Duty Act (LODA), the current and projected future costs of fully funding all benefits payable under LODA for the next 10 years, the projected premiums to be charged to ensure the full funding of benefits, and the advisability of coordinating those benefits with additional benefits paid under other state and federal programs. Approved by House and Senate conferees.

**SENATE BILL 87: VIRGINIA RETIREMENT SYSTEM.** Makes technical amendments for clarity and ease of administration to the programs administered by VRS. This legislation was effective July 1, 2014.

**SENATE BILL 188: DEFERRED COMPENSATION PLANS FOR STATE AND LOCAL EMPLOYEES.** Authorizes the inclusion of a Roth option in deferred compensation retirement plans for state and local government employees. This legislation has a delayed effective date of July 1, 2015.

**32 Years of Excellence in Financial Reporting.** The VRS Comprehensive Annual Financial Report for FY 2013 marked the 32nd year of recognition from the Government Finance Officers Association of the United States and Canada (GFOA) for excellence in financial reporting.

## Year in Review

**MEMBER AND RETIREE HIGHLIGHTS.** The total VRS membership increased from 630,316 members, retirees and beneficiaries in fiscal year 2013 to 644,868 in fiscal year 2014, representing an increase of 2.3%. The following are highlights from the fiscal year:

- The number of active VRS members increased 0.22%, from 340,751 to 341,499.
- The number of retirees and beneficiaries increased 4.4%, from 169,588 to 177,126.
- VRS paid \$3,878.1 million in retirement benefits in fiscal year 2014, compared to \$3,672.5 million during fiscal year 2013.
- The number of inactive and deferred members increased 5.2%, from 119,977 to 126,243.
- A total of 79,631 members held accounts through the Commonwealth of Virginia Deferred Compensation Plan at the end of the fiscal year. Of these participants, 74,930 received a cash match through the Virginia Cash Match Plan.

**EXCEEDING BENCHMARKS.** VRS personnel continued to satisfy or exceed benchmarks for operating standards, as the following highlights show:

| OPERATING STANDARDS  | BENCHMARK   | FY 2014 RESULT  |
|--|---|---|
| <b>Retiree Payroll</b> <i>(benefits paid each month to retirees and other annuitants)</i>              | 100% of all monthly retirement payrolls run no later than the first day of the month.   | 100% of monthly payrolls ran on time.   |
| <b>Customer Counseling Center Abandoned Call Rate</b> <i>(rate of incoming calls going unanswered)</i> | The averaged abandoned call rate is no greater than 10% for the year.   | The averaged abandoned call rate was 8%.  |
| <b>Service Retirements</b>   | Service retirement applications are processed in an average of 60 days with a 95% accuracy rate.  | Service retirement applications were processed in an average of 29 days with a 99% accuracy rate.             |
| <b>Disability Retirements</b>  | 98% of disability retirement applications are processed within 40 days of approval by the VRS Medical Board.                            | 99% of disability retirement applications were processed within 13 days of approval by the VRS Medical Board. |
| <b>Refunds</b>   | 95% of requests for refunds of member contributions are processed within 60 days.   | 99% of refunds were processed within 5.7 days.  |
| <b>Benefit Estimates</b>   | 90% of requests for retirement benefit estimates are completed within 30 days.  | 94% of estimates were completed within 13 days.   |
| <b>Workflow Imaging</b>  | 95% of documents VRS receives are imaged and available to customer service and operations personnel within 24 hours (one business day). | 100% of documents were imaged and available within 24 hours.  |
| <b>System Availability</b>   | 99% of planned system availability for all critical systems.  | The system was available 99% of the time.   |

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

- The Member Counseling Team assisted 2,854 members in one-on-one counseling sessions and responded to 7,335 emails. Staff also conducted 171 retirement education and group counseling sessions, special presentations, videoconferences, webinars and benefit fairs, reaching 7,840 members around the state.
- With the advent of the Hybrid Retirement Plan in January 2014, VRS staff conducted 68 “hybrid roadshows” (educational sessions and webinars) for 2,540 participating members and 27 informational sessions attended by 1,152 employers.
- In 2014, the Employer Representatives completed a series of special regional employer meetings detailing the Hybrid Retirement Plan. They also resumed their employer roundtables and site visits, which focused on the full scope of VRS products and services. In total, they conducted 90 employer site visits and 65 workshops/forums, with 1,800 participants.
- In addition, the Employer Representatives assisted two new state agencies joining VRS; five employers adding the enhanced benefit for hazardous duty employees; one employer adding the

enhanced retirement multiplier for hazardous duty employees; three employers adding the Hazardous Duty Alternate Option; seven employers adopting defined contribution plans; one employer electing the Group Life Insurance Program; three employers electing the Health Insurance Credit; and two employers picking up the Virginia Law Officers’ Retirement System.

- During the fiscal year, there were approximately 1,400,875 visits to the VRS website at [www.varetire.org](http://www.varetire.org), reflecting an increase of nearly 9% over the previous June 30. Except for the homepage, *myVRS*, the secure online system, led again in page views as a top destination.
- The number of subscribers to the online Employer Update newsletter increased 31%, from 3,011 in fiscal year 2013 to 3,960 in fiscal year 2014. The average “open rate” was 41%.



## Innovations

**VRS SUPPORTS AND IMPLEMENTS PENSION REFORM.** After implementation of Phase 3 of the Modernization Program in November 2012, Modernization was put on hold as VRS' focus shifted in calendar year 2013 to supporting the new *myVRS* Navigator system and implementing the complex changes required for pension reform. VRS staff formalized the project management and software development processes to be used, including a customized Systems Development Life Cycle (SDLC), and completed a high-level roadmap for Phase 4 work.

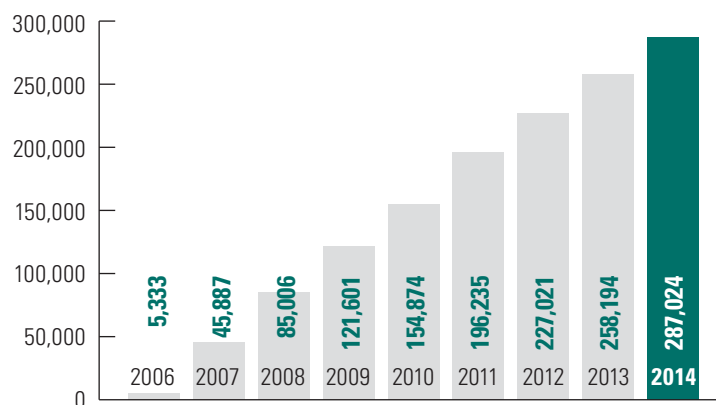
Staff prepared to restart Modernization during the first six months of 2014. Phase 4 will deliver member and retiree functionality required to decommission the legacy mainframe system. Analysis and design work on the first two initiatives for Modernization Phase 4 started July 1, 2014.

In fiscal year 2014, VRS staff completed a series of Mobility initiatives that allows VRS staff and managers to work remotely. A new electronic portal for the VRS Board of Trustees streamlines communications for Board members, allowing members to access meeting materials and reports electronically. VRS also facilitated new office space for the Investments staff.

***myVRS* CONTINUES TO ATTRACT USERS.** During the fiscal year, the secure online *myVRS* system continued to serve as a valuable resource for members, retirees and employers:

- By June 30, 2014, 30,808 members had registered for *myVRS*, bringing the total of registered users to 287,024 in fiscal year 2014, an increase from the 258,194 registered members in fiscal year 2013.
- Members put *myVRS* planning tools to good use during the fiscal year, creating more than 372,638 estimates through the *myVRS* Benefit Estimator and 50,379 Quick and Detailed Plans through the *myVRS* Retirement Planner.
- Since 2008, when *myVRS* was opened to retirees, there have been 64,299 retiree registrations. Retirees completed more than 18,119 income tax transactions through the *myVRS* retiree tax tool during the fiscal year.
- By June 30, 2014, more than 5,392 participating employer contacts authorized to access member information had registered for *myVRS* for Employers. During the fiscal year, employers created more than 97,319 benefit estimates to help counsel employees getting ready to retire.

***myVRS* MEMBER USERS**



## Acknowledgments

VRS' mission calls on us to provide the best service possible and to be responsible stewards of the funds in our care on behalf of our members, retirees and beneficiaries. This report provides complete and reliable information that supports management's decisions in carrying out this mission. Responsible stewardship, however, is more than sound management. It also encompasses the outstanding commitment of VRS staff to excellence, the support of VRS' affiliated employers and business partners and the guidance and dedication of the Board of Trustees. We would like to express our sincere thanks and appreciation to each of these exceptional individuals and representatives.

Finally, we wish to thank Governor Terence R. McAuliffe and the members of the Virginia General Assembly for their continued commitment to the financial security of the members, retirees and beneficiaries of the Virginia Retirement System.

Respectfully submitted,



Robert P. Schultze  
Director



Barry C. Faison  
Chief Financial Officer



## 2 Financial Section

Under new standards for reporting unfunded liability for retirement plans, liabilities from statewide cost-sharing plans are apportioned to local governments. Employers will have a greater stake in funding progress as they adjust reporting to the new standards. In response, VRS ensures that actuarial valuations sent to employers have the information they need for accurate reporting. VRS also works with the Auditor of Public Accounts in providing information to external auditors to facilitate annual audits.

Independent Auditor's Report  
Management's Discussion and Analysis  
Basic Financial Statements:  
    Statement of Fiduciary Net Position  
    Statement of Changes in Fiduciary Net Position  
    VRS Combining Statement of Fiduciary Net Position  
    VRS Combining Statement of Changes in Fiduciary  
        Net Position  
Notes to Financial Statements:  
    Schedule of Funding Progress – Pension Plans  
    Schedule of Actuarial Methods and Significant  
        Assumptions – Pension Plans  
    Schedule of Funding Progress – Other Post-Employment  
        Benefit Plans  
    Schedule of Actuarial Methods and Significant  
        Assumptions – Other Post-Employment Benefit Plans  
Required Supplemental Schedule of Funding Progress –  
    Pension Plans  
Required Supplemental Schedule of Employer  
    Contributions – Pension Plans  
Required Supplemental Schedule of Funding Progress –  
    Other Post-Employment Benefit Plans  
Required Supplemental Schedule of Employer  
    Contributions – Other Post-Employment Benefit Plans  
Schedule of Administrative Expenses  
Schedule of Professional and Consulting Services  
Schedule of Investment Expenses



Photo: Virginia Tourism Corporation



## BLAZING THE TRAILS

With independence won from England, Virginians led the way in exploring the American West. Meriwether Lewis and William Clark led the Corps of Discovery Expedition, commissioned by President Thomas Jefferson in 1803, to find “the most direct & practicable water communication across this continent, for the purposes of commerce.” Modern adventurers in Virginia’s state parks can still admire the natural beauty that distinguished the wilderness. Many early trails are now the basis of state-maintained highways, and 21st-century Virginians can experience lifestyles of earlier pioneers at the Frontier Culture Museum in Staunton.



# Commonwealth of Virginia

*Auditor of Public Accounts*

Martha S. Mavredes, CPA  
Auditor of Public Accounts

P.O. Box 1295  
Richmond, Virginia 23218

December 11, 2014

The Honorable Terence R. McAuliffe  
Governor of Virginia

The Honorable John C. Watkins  
Chairman, Joint Legislative Audit  
And Review Commission

Board of Trustees  
Virginia Retirement System

## INDEPENDENT AUDITOR'S REPORT

### Report on Financial Statements

We have audited the accompanying financial statements of the **Virginia Retirement System** as of and for the year ended June 30, 2014, and the related notes to the financial statements, which collectively comprise the Virginia Retirement System's basic financial statements as listed in the table of contents.

### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes 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 Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of

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the financial statements 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 entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall financial statement presentation.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a reasonable basis for our audit opinion.

### Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the plan net position of the Virginia Retirement System as of June 30, 2014, and the changes in plan net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

### Emphasis of Matter

#### **Reporting Entity**

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 Virginia Retirement System. They do not purport to, and do not, present fairly the Commonwealth of Virginia's overall financial position as of June 30, 2014, and the changes in its financial position and its cash flows, where applicable, for the year then ended in conformity with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

#### **Change in Accounting Principle**

The System's basic financial statements for the year ended June 30, 2014, reflect the provisions of the Governmental Accounting Standards Board's (GASB) Statement No. 67, *Financial Reporting for Pension Plans*. The System implemented the requirements of GASB Statement No. 67 in accordance with its required effective date. See Notes 1 and 2 and required supplementary information in the accompanying financial statements for the impact of the standard's implementation. Our opinion is not modified with respect to this matter.

## Other Matters

### **Prior-Year Summarized Comparative Information**

We have previously audited the Virginia Retirement System's 2013 financial statements, and we expressed an unmodified audit opinion on the respective financial statements in our report dated December 2, 2013. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2013, is consistent, in all material respects, with the audited financial statements from which it has been derived.

### **Required Supplementary Information**

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, changes in net pension liability schedule, funding progress schedule, and employer contributions schedules on pages 29 through 39 and 94 through 98 be presented to supplement the basic financial statements. Such information, 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 the 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 and Other Information**

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Virginia Retirement System's basic financial statements. The accompanying supplementary information, such as the schedules of administrative expenses, professional and consulting services, and investment expenses, and other information, such as the introductory, investment, actuarial, and statistical sections, are presented for the purpose of additional analysis and are not a required part of the basic financial statements.


The schedules of administrative expenses, professional and consulting services, and investment expenses are the responsibility of management and were derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such 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 schedules of administrative expenses, professional and consulting services, and investment expenses are fairly stated, in all material respects, in relation to the basic financial statements taken as a whole.

The introductory, investment, actuarial, and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

**Other Reporting Required by Government Auditing Standards**

In accordance with *Government Auditing Standards*, we have also issued our report dated December 11, 2014, on our consideration of the Virginia Retirement System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, and other matters. 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 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 Virginia Retirement System's internal control over financial reporting and compliance.

  
AUDITOR OF PUBLIC ACCOUNTS

The Virginia Retirement System (the System) administers pension and other employee benefit plans for approximately 640,000 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 regarding historical information and the administration of the plans.

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## 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, 2014. 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 Virginia law officers other than state police officers; and
- 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 funding of 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.

### FINANCIAL HIGHLIGHTS

- The combined total net position of the trust funds restricted for benefits was \$66.2 billion at June 30, 2014, representing an increase of \$7,798 million, or 13.4%, from the net position as of June 30, 2013. The increase was due to a second year of higher contribution rates and improved investment returns; however, these were partially offset by increased expenses for benefit payments.
- The System's rate of return on investments during the fiscal year ended June 30, 2014, was 15.7% compared to a return of 11.8% for the fiscal year ended June 30, 2013. The increase was due primarily to the improved performance of the public equity investments in the portfolio.
- The latest valuations of the pension plans were performed by Cavanaugh Macdonald Consulting, LLC using the new GASB Statement No. 67 calculation processes. Using the June 30, 2013, data, rolled forward to June 30, 2014, the plan fiduciary net position as a percentage

of the total pension liability was 74.28% for the VRS state plan, 70.88% for the VRS teacher plan, 86.90% for the aggregate total of the VRS political subdivision plans, 69.87% for SPORS, 63.05% for VaLORS and 71.71% for JRS. There is no comparative data for prior years since this is the first year the information has been prepared in this manner.

- The Group Life Insurance Fund, the Retiree Health Insurance Credit Fund and the Disability Insurance Trust Fund were actuarially funded at 32.5%, 6.1% and 157.4%, respectively, based on the actuarial valuation as of June 30, 2013. For the Group Life Insurance Fund, the Retiree Health Insurance Credit Fund and the Disability Insurance Trust Fund, there was an increase from the June 30, 2012, funded ratios of 30.7%, 5.8% and 113.7%, respectively. There were no changes in the primary actuarial assumptions for salary growth or inflation. The funded ratios of all the plans continue to reflect the impact of the investment losses recorded in fiscal year 2009 on the Actuarial Value of Assets. The impact was lessened by the positive impact of the net investment gains recorded in fiscal year 2010, fiscal year 2011 and fiscal year 2013 because of the “five-year smoothing” asset valuation method used by the VRS actuary; however, this was partially offset by the poor investment performance recorded in fiscal year 2012.
- The Line of Duty Act Trust Fund was created effective July 1, 2010, as a new trust fund and has actuarial valuations prepared to determine the actuarial accrued liability and to establish the appropriate contribution rates for the program. The fund has a funded ratio of 4.9% at June 30, 2013, an improvement over the funded ratio of 2.7% at June 30, 2012.

## Overview of the Financial Statements and Accompanying Information

The pension components of the fiscal year 2014 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*. The other employee benefit plan components of the fiscal year 2014 financial statements, notes to the financial statements and required supplemental information were prepared in conformity with GASB Statement No. 43, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*.

**BASIC FINANCIAL STATEMENTS.** The System presents the Basic Financial Statements for the year ended June 30, 2014, with comparative information from the previous fiscal year. In addition, a set of combining statements is now added to show the amounts attributable to the state, teacher and local plans included in the VRS 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 Trust Funds and Other Employee Benefit Trust Funds.** 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 Trust Funds and Other Employee Benefit Trust Funds.** 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 Supplemental Schedule of Changes in Employers' Net Pension Liability
- Required Supplemental Schedule of Employer Contributions – Pension Plans
- Required Supplemental Schedule of Funding Progress – Other Post-Employment Benefit Plans

- Required Supplemental 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 Administrative Expenses
- Schedule of Professional and Consulting Services
- Schedule of Investment Expenses

## FIGURE 2.1 – SUMMARY OF FIDUCIARY NET POSITION

AT JUNE 30

(EXPRESSED IN MILLIONS)

|   | 2014               | Increase<br>(Decrease) | 2013               | Increase<br>(Decrease) | 2012               |
|---|--------------------|------------------------|--------------------|------------------------|--------------------|
| <b>Assets:</b>  |                    |                        |                    |                        |                    |
| Cash, Receivables and Capital Assets                    | \$ 1,865.2         | \$ 136.9               | \$ 1,728.3         | \$ (106.6)             | \$ 1,834.9         |
| Investments   | 67,182.8           | 7,283.7                | 59,899.1           | 6,378.6                | 53,520.5           |
| Security Lending Collateral                             | 6,022.2            | 2,054.6                | 3,967.6            | 1,806.3                | 2,161.3            |
| <b>Total Assets</b>                                     | <b>\$ 75,070.2</b> | <b>\$ 9,475.2</b>      | <b>\$ 65,595.0</b> | <b>\$ 8,078.3</b>      | <b>\$ 57,516.7</b> |
| <b>Liabilities:</b>                                     |                    |                        |                    |                        |                    |
| Accounts Payable  | \$ 543.6           | \$ (28.0)              | \$ 571.6           | \$ 47.9                | \$ 523.7           |
| Investment Purchases Payable                            | 2,322.8            | (349.4)                | 2,672.2            | 1,160.2                | 1,512.0            |
| Obligations Under Securities Lending                    | 6,022.1            | 2,054.4                | 3,967.7            | 1,795.9                | 2,171.8            |
| <b>Total Liabilities</b>                                | <b>\$ 8,888.5</b>  | <b>\$ 1,677.0</b>      | <b>\$ 7,211.5</b>  | <b>\$ 3,004.0</b>      | <b>\$ 4,207.5</b>  |
| <b>Total Net Position –<br/>Restricted for Benefits</b> | <b>\$ 66,181.7</b> | <b>\$ 7,798.2</b>      | <b>\$ 58,383.5</b> | <b>\$ 5,074.3</b>      | <b>\$ 53,309.2</b> |

**FIGURE 2.2 – SUMMARY OF CHANGES IN FIDUCIARY NET POSITION**

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN MILLIONS)

|  | 2014              | Increase<br>(Decrease) | 2013              | Increase<br>(Decrease) | 2012                |
|--|-------------------|------------------------|-------------------|------------------------|---------------------|
| Member Contributions                           | \$ 848.6          | \$ 133.7               | \$ 714.9          | \$ 483.9               | \$ 231.0            |
| Member Contributions Paid by Employer          | 96.2              | (114.3)                | 210.5             | (350.0)                | 560.5               |
| Employer Contributions                         | 2,129.5           | 86.7                   | 2,042.8           | 908.0                  | 1,134.8             |
| Net Investment Income                          | 9,099.9           | 2,878.8                | 6,221.1           | 5,574.5                | 646.6               |
| Miscellaneous Revenue and Transfers            | 0.8               | (2.0)                  | 2.8               | (1.8)                  | 4.6                 |
| <b>Total Additions</b>                         | <b>\$12,175.0</b> | <b>\$ 2,982.9</b>      | <b>\$ 9,192.1</b> | <b>\$ 6,614.6</b>      | <b>\$ 2,577.5</b>   |
| <b>Deductions:</b>                             |                   |                        |                   |                        |                     |
| Retirement Benefits                            | \$ 3,878.1        | \$ 205.5               | \$ 3,672.6        | \$ 270.8               | \$ 3,401.8          |
| Refunds of Member Contributions                | 103.4             | 21.9                   | 81.5              | (7.4)                  | 88.9                |
| Insurance Premiums and Claims                  | 159.4             | 9.9                    | 149.5             | 9.6                    | 139.9               |
| Retiree Health Insurance Credit Reimbursements | 142.6             | 5.1                    | 137.5             | 6.4                    | 131.1               |
| Disability Insurance Benefits                  | 33.8              | 3.7                    | 30.1              | 1.7                    | 28.4                |
| Line of Duty Act Reimbursements                | 7.8               | 1.1                    | 6.7               | (3.8)                  | 10.5                |
| Administrative and Other Expenses              | 51.7              | 11.8                   | 39.9              | 9.9                    | 30.0                |
| <b>Total Deductions</b>                        | <b>\$ 4,376.8</b> | <b>\$ 259.0</b>        | <b>\$ 4,117.8</b> | <b>\$ 287.2</b>        | <b>\$ 3,830.6</b>   |
| <b>Net Increase (Decrease) in Net Position</b> | <b>\$ 7,798.2</b> | <b>\$ 2,723.9</b>      | <b>\$ 5,074.3</b> | <b>\$ 6,327.4</b>      | <b>\$ (1,253.1)</b> |

## 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 341,499 active members were employed with 824 VRS-participating employers as of June 30, 2014. The number of retirees and other annuitants totaled approximately 177,126 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

|                                       | 2014           |                  | 2013           |                  | 2012           |                  |
|---------------------------------------|----------------|------------------|----------------|------------------|----------------|------------------|
|                                       | Number         | Percent of Total | Number         | Percent of Total | Number         | Percent of Total |
| State Employees (VRS)                 | 78,882         | 23.1%            | 78,534         | 23.0%            | 79,030         | 23.1%            |
| Teachers (VRS)                        | 145,421        | 42.5%            | 145,945        | 42.9%            | 146,690        | 42.9%            |
| Political Subdivision Employees (VRS) | 105,374        | 30.9%            | 104,563        | 30.7%            | 104,427        | 30.5%            |
| State Police Officers (SPORS)         | 2,020          | 0.6%             | 2,003          | 0.6%             | 1,886          | 0.6%             |
| Virginia Law Officers (VaLORS)        | 9,415          | 2.8%             | 9,324          | 2.7%             | 9,413          | 2.8%             |
| Judges (JRS)                          | 387            | 0.1%             | 382            | 0.1%             | 380            | 0.1%             |
| <b>Total Active Members</b>           | <b>341,499</b> | <b>100.0%</b>    | <b>340,751</b> | <b>100.0%</b>    | <b>341,826</b> | <b>100.0%</b>    |

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

|   | 2014           |                  | 2013           |                  | 2012           |                  |
|---|----------------|------------------|----------------|------------------|----------------|------------------|
|   | Number         | Percent of Total | Number         | Percent of Total | Number         | Percent of Total |
| State Employees (VRS)                   | 51,051         | 28.8%            | 49,586         | 29.2%            | 48,431         | 29.8%            |
| Teachers (VRS)                          | 77,153         | 43.6%            | 73,662         | 43.4%            | 70,392         | 43.2%            |
| Political Subdivision Employees (VRS)   | 43,801         | 24.7%            | 41,511         | 24.5%            | 39,443         | 24.2%            |
| State Police Officers (SPORS)           | 1,201          | 0.7%             | 1,175          | 0.7%             | 1,161          | 0.7%             |
| Virginia Law Officers (VaLORS)          | 3,429          | 1.9%             | 3,180          | 1.9%             | 2,872          | 1.8%             |
| Judges (JRS)                            | 491            | 0.3%             | 474            | 0.3%             | 452            | 0.3%             |
| <b>Total Retirees and Beneficiaries</b> | <b>177,126</b> | <b>100.0%</b>    | <b>169,588</b> | <b>100.0%</b>    | <b>162,751</b> | <b>100.0%</b>    |

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

### FIGURE 2.5 – DISTRIBUTION OF EMPLOYERS

AT JUNE 30

|                        | 2014       | 2013       | 2012       |
|------------------------|------------|------------|------------|
| Cities and Towns       | 162        | 162        | 162        |
| Counties               | 93         | 93         | 93         |
| School Boards*         | 145        | 145        | 144        |
| Special Authorities    | 198        | 198        | 199        |
| State Agencies         | 226        | 228        | 236        |
| <b>Total Employers</b> | <b>824</b> | <b>826</b> | <b>834</b> |

\* Of the 145 school boards, 133 also provide coverage for non-professional 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, 2014, amounted to \$11,572.5 million. This was an increase of \$2,894.0 million when compared with the activity for fiscal year 2013. It was also greater than the contributions and investments earnings of \$2,457.9 million recorded in fiscal year 2012.

Total member contributions increased by \$16.4 million. The portion members paid increased by \$130.7 million. This was due primarily to an increase in the member-paid contributions for Plan 2 and a continuation in implementation of the statutory shift from employer-paid to member-paid contributions.

For fiscal year 2014, employer contributions increased by \$82.0 million due primarily to an increase in the covered payroll. The employer contribution rate for all employer groups remained the same as it was in fiscal year 2013. The total of all contributions represented an increase of \$98.4 million from fiscal year 2013. Employer contributions for pensions are discussed further in Notes 2 and 12.

During fiscal year 2013, the System experienced an increase in total member contributions of \$14.3 million and an increase in employer contributions of \$767.5 million. The increase in employer contributions was related primarily to an increase in the employer contribution rate for all employer groups. This increase also reflects some payroll growth, the addition of some new local government employers and the election of enhanced hazardous duty or other coverage by some local governments.

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

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN MILLIONS)

|  | 2014               | Increase<br>(Decrease) | 2013              | Increase<br>(Decrease) | 2012              |
|--|--------------------|------------------------|-------------------|------------------------|-------------------|
| Member Contributions   | \$ 726.0           | \$ 130.7               | \$ 595.3          | \$ 364.3               | \$ 231.0          |
| Member Contributions Paid by Employers                                     | 96.2               | (114.3)                | 210.5             | (350.0)                | 560.5             |
| Employer Contributions   | 1,874.8            | 82.0                   | 1,792.8           | 767.5                  | 1,025.3           |
| Net Investment Income  | 8,875.0            | 2,796.7                | 6,078.3           | 5,441.1                | 637.2             |
| Miscellaneous Revenue and Transfers  | 0.5                | (1.1)                  | 1.6               | (2.3)                  | 3.9               |
| <b>Total Contributions, Investment Earnings and Miscellaneous Revenues</b> | <b>\$ 11,572.5</b> | <b>\$ 2,894.0</b>      | <b>\$ 8,678.5</b> | <b>\$ 6,220.6</b>      | <b>\$ 2,457.9</b> |

## 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 – VRS-state, VRS-teacher, VRS-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.

As shown in Figure 2.6, there was net investment income for fiscal year 2014 of \$8,875.0 million, which represented an increase of \$2,796.7 million from fiscal year 2013. This compares with the net investment income increase of \$5,441.1 million in fiscal year 2013. Total pension trust fund investments were \$65,475.1 million at fair value at June 30, 2014. This was an increase of \$7,033.1 million from the fair value of \$58,442.0 million at June 30, 2013.

The total pension trust fund investments also increased in fiscal year 2013 by \$6,171.5 million from their fair value of \$52,270.5 million at June 30, 2012. The total return on pension trust fund investments for the year ended June 30, 2014, was 15.7%. This represents an annualized return of 9.5% over the past three years and 12.3% 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 2014 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 2014 totaled \$4,029.4 million, an increase of \$238.7 million, or 6.3%, over the 2013 period.

Benefit payments were \$3,878.1 million in fiscal year 2014. This is an increase of \$205.5 million compared to an increase of \$270.8 million for fiscal year 2013. The increase in fiscal year 2014 was due to continued growth in the number of retirees and beneficiaries receiving benefits. The fiscal year 2014 benefit payments also reflect a 2.07% cost-of-living adjustment (COLA) effective July 1, 2013, for Plan 1 retirees and 2.04% for Plan 2 retirees.

Refunds of contributions to members who terminated employment during fiscal year 2014 amounted to \$103.4 million (10,729 refunds), compared with \$81.5 million refunded (8,530 refunds) during fiscal year 2013 and \$88.9 million refunded (9,670 refunds) during fiscal year 2012. The change during fiscal year 2014 reflects an increase in the volume of refunds and a slight increase in the average refund amount compared to fiscal year 2013.

Administrative and other expenses for fiscal year 2014 were \$47.9 million, compared with \$36.6 million for fiscal year 2013 and \$26.9 million for fiscal year 2012.

**FIGURE 2.7 – SUMMARY OF PENSION PLAN PRIMARY EXPENSES**

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN MILLIONS)

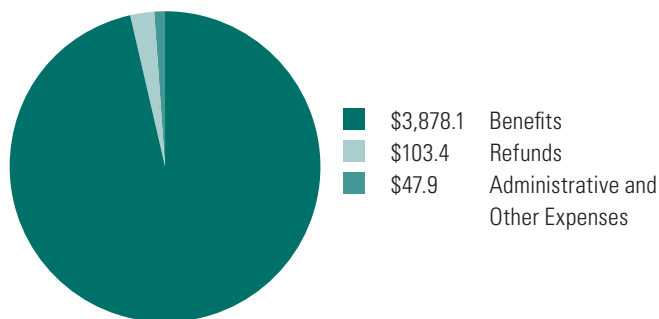
|                                   | 2014              | Increase<br>(Decrease) | 2013              | Increase<br>(Decrease) | 2012              |
|-----------------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|
| Benefits                          | \$ 3,878.1        | \$ 205.5               | \$ 3,672.6        | \$ 270.8               | \$ 3,401.8        |
| Refunds                           | 103.4             | 21.9                   | 81.5              | (7.4)                  | 88.9              |
| Administrative and Other Expenses | 47.9              | 11.3                   | 36.6              | 9.7                    | 26.9              |
| <b>Total Primary Expenses</b>     | <b>\$ 4,029.4</b> | <b>\$ 238.7</b>        | <b>\$ 3,790.7</b> | <b>\$ 273.1</b>        | <b>\$ 3,517.6</b> |

Administrative and other expenses increased by \$11.3 million for fiscal year 2014. This compares to an increase in fiscal year 2013 of \$9.7 million. The increase for fiscal year 2014 reflects an increase in both the administrative and the other expenses categories. This increase in administrative expenses includes the System's costs associated with the addition of a Hybrid Retirement benefit, the additional depreciation of the capitalized software created as part of Modernization and pension reform and an increase in some of the other administrative expense categories. Other expenses increased because of larger investment income distributions to other accounts managed by the System. Further details are provided in the Schedule of Administrative Expenses following the Required Supplemental Schedules.

### PENSION PLAN ACTIVITY

FISCAL YEAR 2014

(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, revenues exceeded expenses for fiscal year 2014, leading to a net increase of \$7,543.1 million in the retirement reserves held by the plans. This follows an increase of \$4,887.8 million in the retirement reserves in fiscal year 2013. The increase for fiscal year 2014 was related primarily to the improved investment performance for the year. There was no change in the employer contribution rates.

### 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.

### FIGURE 2.8 – SUMMARY OF PENSION PLAN RESERVE BALANCES

AT JUNE 30

(EXPRESSED IN MILLIONS)

|                   | 2014               | Increase<br>(Decrease) | 2013               | Increase<br>(Decrease) | 2012               |
|-------------------|--------------------|------------------------|--------------------|------------------------|--------------------|
| Member Reserves   | \$ 12,182.9        | \$ 411.3               | \$ 11,771.6        | \$ 429.7               | \$ 11,341.9        |
| Employer Reserves | 52,339.4           | 7,131.8                | 45,207.6           | 4,458.1                | 40,749.5           |
| <b>Total</b>      | <b>\$ 64,522.3</b> | <b>\$ 7,543.1</b>      | <b>\$ 56,979.2</b> | <b>\$ 4,887.8</b>      | <b>\$ 52,091.4</b> |

*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 2014, the amount of interest credited to member accounts was \$447.4 million, and the amount of member balances transferred to the Employer Reserve for retirements was \$756.7 million. For fiscal year 2013, the interest and retirement transfers were \$430.9 million and \$727.0 million, respectively.*

The latest valuations of the pension plans were performed by Cavanaugh Macdonald Consulting, LLC using the new GASB Statement No. 67 calculation processes. Using the June 30, 2013 data, rolled forward to June 30, 2014, the plan fiduciary net position as a percentage of the total pension liability was 74.28% for the VRS state plan, 70.88% for the VRS teacher plan, 86.90% for the aggregate total of the VRS political subdivision plans, 69.87% for SPORS, 63.05% for VaLORS and 71.71% 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.

## Analysis of Financial Activities – Other Employee Benefit Plans

### GROUP LIFE INSURANCE PROGRAM

The 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 2014, the System remitted \$159.4 million to the insurer for claims and administrative costs. This is an increase over the \$149.5 million remitted for fiscal year 2013. Approximately 358,971 active members were covered under the Group Life Insurance Program at June 30, 2014.

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 \$1,079.3 million at June 30, 2014.

Investment income, including net securities lending income, was \$146.9 million during the fiscal year. For fiscal year 2013, this reserve had investment income of \$90.2 million and ended the year with a reserve balance of \$887.8 million, an increase from the \$746.6 million at June 30, 2012.

For fiscal year 2014, the increase in the reserve balance was primarily the result of contributions and improved investment income, which exceeded the program's claims, administrative expenses and other costs. Employer contributions for the Group Life Insurance Program are discussed further in Note 12. Approximately 156,549 retirees were covered under the Group Life Insurance Program at June 30, 2014.

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 67,731 active members and 2,626 retirees were enrolled in the Optional Group Life Insurance Program at June 30, 2014.

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 2014, the System collected \$146.7 million in retiree health insurance credit contributions from participating employers and provided reimbursements to retirees of \$142.6 million. During fiscal year 2013, the System collected \$145.0 million in retiree health insurance credit contributions from participating employers and provided reimbursements of \$137.5 million.

There was no change in the contribution rates for any of the employer groups in fiscal year 2014. Employer contributions for the Retiree Health Insurance Credit Program are discussed further in Note 12. The growth in health insurance credit reimbursements reflects an increase in the number of eligible retirees.

The Retiree Health Insurance Credit Fund reserve had a fiduciary net position restricted for benefits of \$170.0 million at June 30, 2014. Investment income, including net securities lending income, was \$19.9 million for the fiscal year. The reserve balances at June 30, 2013, and June 30, 2012, were \$146.5 million and \$127.2 million, respectively.

Approximately 108,076 retirees were receiving the health insurance credit at June 30, 2014. 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 2014, the System collected \$17.4 million in VSDP contributions from participating employers and paid disability premiums and benefits of \$33.7 million. This is an increase from the \$30.1 million in benefits paid in fiscal year 2013. Administrative and other expenses increased slightly from fiscal year 2013. Employer contributions for the Virginia Sickness and Disability Program are discussed further in Note 12.

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 \$410.1 million at June 30, 2014. Investment income, including net securities lending income, was \$56.6 million during the fiscal year. The reserve balances at June 30, 2013, and June 30, 2012, were \$370.1 million and \$344.0 million, respectively.

At June 30, 2014, approximately 74,394 active members were participating in the program and approximately 2,764 former members were receiving benefits. Additional information is provided in Note 3.

#### LINE OF DUTY ACT PROGRAM

The Line of Duty Act Program was a new program for the System in fiscal year 2011. The System is responsible for identifying eligible individuals, having the VRS actuary prepare an actuarial valuation, collecting contributions reimbursing the Commonwealth of Virginia's Department of Accounts (DOA) for claims and administrative costs and managing the assets of the program. DOA is responsible for the administration of the benefits under the program and the payment of claims for death benefits and health insurance reimbursements 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.

During fiscal year 2014, the cost for the benefits provided by this program was \$7.8 million. This is an increase from the \$6.7 million in benefit costs for fiscal year 2013 and reflects the impact of the employers who have elected to handle their own claims costs rather than participate in the program and stabilization of the program's participation and claims levels. 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 2014, the System collected contributions for eligible employees and implemented the structure for administering the program going forward.

## ACTUARIAL VALUATIONS AND FUNDING PROGRESS – OTHER EMPLOYEE BENEFIT PLANS

The System’s actuarial firms perform actuarial valuations of other employee benefit plans administered by the System 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.

According to the latest valuations of these plans performed by Milliman, Inc., for the long-term care component of the Disability Insurance Trust Fund and by Cavanaugh Macdonald Consulting, LLC, for all other programs as of June 30, 2013, the ratio of assets accumulated by the plans to their total actuarial accrued liabilities for benefits was 32.5% for the Group Life Insurance Fund, 6.1% for the Retiree Health Insurance Credit Fund, 157.4% for the Disability Insurance Trust Fund and 4.9% for the Line of Duty Act Trust Fund. Funding progress for these plans is presented in the Required Supplemental Schedule of Funding Progress – Other Post-Employment Benefit Plans.

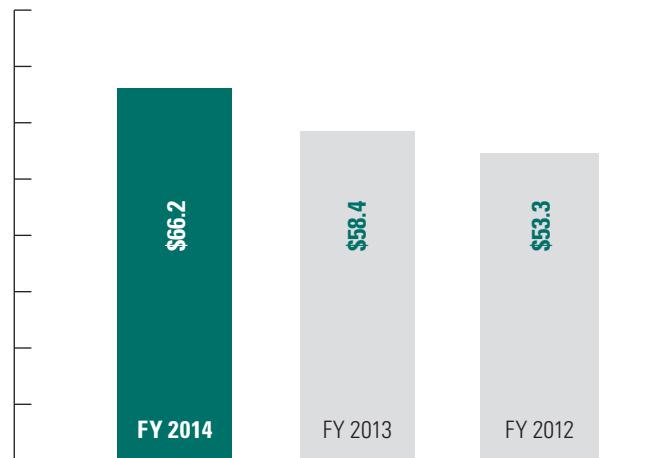
## Market Volatility

The System’s investment performance for the fiscal year ended June 30, 2014, was 15.7%, resulting in 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. While management cannot predict future market returns, the changes in assets reflect the volatility in the market.

## SYSTEM NET ASSETS

AT JUNE 30

(EXPRESSED IN BILLIONS)



## 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 AND OTHER EMPLOYEE BENEFIT TRUST FUNDS**

AS OF JUNE 30, 2014, WITH COMPARATIVE INFORMATION AS OF JUNE 30, 2013

|  | Pension Trust Funds        |  |  |                            |                           |
|--|----------------------------|--|--|----------------------------|---------------------------|
|  | Virginia Retirement System | State Police Officers' Retirement System | Virginia Law Officers' Retirement System | Judicial Retirement System | Total Pension Trust Funds |
| <b>Assets:</b>   |                            |  |  |                            |                           |
| Cash (Note 5)  | \$ 417                     | \$ 5                                     | \$ 8                                     | \$ 3                       | \$ 433                    |
| Receivables:   |                            |  |  |                            |                           |
| Contributions  | 244,333                    | 1,420                                    | 3,296                                    | 1,255                      | 250,304                   |
| Interest and Dividends                                 | 201,682                    | 2,346                                    | 3,740                                    | 1,438                      | 209,206                   |
| Receivable for Security Transactions                   | 1,222,015                  | 14,213                                   | 22,661                                   | 8,715                      | 1,267,604                 |
| Other Investment Receivables                           | 11,737                     | 136                                      | 218                                      | 84                         | 12,175                    |
| Other Receivables                                      | 1,886                      | 7  | 2  | 4                          | 1,899                     |
| <b>Total Receivables</b>                               | <b>1,681,653</b>           | <b>18,122</b>                            | <b>29,917</b>                            | <b>11,496</b>              | <b>1,741,188</b>          |
| Investments: (Note 5)                                  |                            |  |  |                            |                           |
| Bonds and Mortgage Securities                          | 18,763,405                 | 218,244                                  | 347,951                                  | 133,814                    | 19,463,414                |
| Stocks   | 23,350,490                 | 271,598                                  | 433,015                                  | 166,526                    | 24,221,629                |
| Fixed Income Commingled Funds                          | 619,540                    | 7,205                                    | 11,489                                   | 4,418                      | 642,652                   |
| Index and Pooled Funds                                 | 5,794,966                  | 67,404                                   | 107,463                                  | 41,327                     | 6,011,160                 |
| Real Assets  | 5,800,221                  | 67,465                                   | 107,560                                  | 41,365                     | 6,016,611                 |
| Private Equity   | 8,400,508                  | 97,710                                   | 155,780                                  | 59,909                     | 8,713,907                 |
| Short-Term Investments                                 | 389,975                    | 4,536                                    | 7,232                                    | 2,781                      | 404,524                   |
| Hybrid Defined Contribution Investments                | 1,213                      | -  | -  | -                          | 1,213                     |
| <b>Total Investments</b>                               | <b>63,120,318</b>          | <b>734,162</b>                           | <b>1,170,490</b>                         | <b>450,140</b>             | <b>65,475,110</b>         |
| Collateral on Loaned Securities                        | 5,658,034                  | 65,811                                   | 104,923                                  | 40,351                     | 5,869,119                 |
| Property, Plant, Furniture and Equipment (Note 6)      | 30,427                     | -  | -  | -                          | 30,427                    |
| <b>Total Assets</b>                                    | <b>70,490,849</b>          | <b>818,100</b>                           | <b>1,305,338</b>                         | <b>501,990</b>             | <b>73,116,277</b>         |
| <b>Liabilities:</b>                                    |                            |  |  |                            |                           |
| Retirement Benefits Payable                            | 294,680                    | 4,630                                    | 7,356                                    | 3,108                      | 309,774                   |
| Refunds Payable  | 4,207                      | 24                                       | 128                                      | -                          | 4,359                     |
| Accounts Payable and Accrued Expenses                  | 28,084                     | 298                                      | 475                                      | 183                        | 29,040                    |
| Compensated Absences Payable                           | 2,275                      | -  | -  | -                          | 2,275                     |
| Insurance Premiums and Claims Payable                  | -                          | -  | -  | -                          | -                         |
| Payable for Security Transactions                      | 2,183,982                  | 25,079                                   | 39,984                                   | 15,377                     | 2,264,422                 |
| Other Investment Payables                              | 109,097                    | 1,269                                    | 2,023                                    | 778                        | 113,167                   |
| Other Payables   | 1,933                      | -  | -  | -                          | 1,933                     |
| Obligations Under Security Lending Program             | 5,657,953                  | 65,810                                   | 104,922                                  | 40,350                     | 5,869,035                 |
| <b>Total Liabilities</b>                               | <b>8,282,211</b>           | <b>97,110</b>                            | <b>154,888</b>                           | <b>59,796</b>              | <b>8,594,005</b>          |
| <b>Net Position – Restricted for Benefits (Note 4)</b> | <b>\$ 62,208,638</b>       | <b>\$ 720,990</b>                        | <b>\$ 1,150,450</b>                      | <b>\$ 442,194</b>          | <b>\$ 64,522,272</b>      |

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

(EXPRESSED IN THOUSANDS)

| Other Employee Benefit Trust Funds |                                 |                                 |                             |                                   |                                    | Totals               |                      |
|------------------------------------|---------------------------------|---------------------------------|-----------------------------|-----------------------------------|------------------------------------|----------------------|----------------------|
| Group Life Insurance               | Retiree Health Insurance Credit | Disability Insurance Trust Fund | Line of Duty Act Trust Fund | Virginia Local Disability Program | Total Other Employee Benefit Plans | 2014                 | 2013                 |
| \$ 7                               | \$ 1                            | \$ 3                            | \$ -                        | \$ -                              | \$ 11                              | \$ 444               | \$ 1,369             |
| 19,781                             | 16,786                          | 938                             | 1,269                       | 383                               | 39,157                             | 289,461              | 286,258              |
| 3,594                              | 534                             | 1,306                           | 22                          | -                                 | 5,456                              | 214,662              | 191,877              |
| 21,778                             | 3,236                           | 7,913                           | 135                         | -                                 | 33,062                             | 1,300,666            | 1,054,252            |
| 209                                | 31                              | 76                              | 1                           | -                                 | 317                                | 12,492               | 136,635              |
| 8,291                              | 11                              | 6,653                           | 142                         | 10                                | 15,107                             | 17,006               | 24,295               |
| <b>53,653</b>                      | <b>20,598</b>                   | <b>16,886</b>                   | <b>1,569</b>                | <b>393</b>                        | <b>93,099</b>                      | <b>1,834,287</b>     | <b>1,693,317</b>     |
| 334,391                            | 49,689                          | 121,502                         | 2,073                       | -                                 | 507,655                            | 19,971,069           | 18,165,775           |
| 416,139                            | 61,837                          | 151,205                         | 2,581                       | -                                 | 631,762                            | 24,853,391           | 21,954,047           |
| 11,042                             | 1,641                           | 4,012                           | 68                          | -                                 | 16,763                             | 659,415              | 857,756              |
| 103,275                            | 15,346                          | 37,525                          | 640                         | -                                 | 156,786                            | 6,167,946            | 5,343,955            |
| 103,368                            | 15,360                          | 37,559                          | 641                         | -                                 | 156,928                            | 6,173,539            | 4,889,615            |
| 149,709                            | 22,246                          | 54,397                          | 929                         | -                                 | 227,281                            | 8,941,188            | 8,126,024            |
| 6,950                              | 1,033                           | 2,525                           | 43                          | -                                 | 10,551                             | 415,075              | 561,921              |
| -                                  | -                               | -                               | -                           | -                                 | -                                  | 1,213                | -                    |
| <b>1,124,874</b>                   | <b>167,152</b>                  | <b>408,725</b>                  | <b>6,975</b>                | <b>-</b>                          | <b>1,707,726</b>                   | <b>67,182,836</b>    | <b>59,899,093</b>    |
| 100,834                            | 14,984                          | 36,638                          | 625                         | -                                 | 153,081                            | 6,022,200            | 3,967,576            |
| -                                  | -                               | -                               | -                           | -                                 | -                                  | 30,427               | 33,697               |
| <b>1,279,368</b>                   | <b>202,735</b>                  | <b>462,252</b>                  | <b>9,169</b>                | <b>393</b>                        | <b>1,953,917</b>                   | <b>75,070,194</b>    | <b>65,595,052</b>    |
| -                                  | -                               | -                               | -                           | -                                 | -                                  | 309,774              | 290,729              |
| 6                                  | 138                             | -                               | -                           | -                                 | 144                                | 4,503                | 4,687                |
| 457                                | 11,567                          | 849                             | 3                           | -                                 | 12,876                             | 41,916               | 39,898               |
| -                                  | -                               | -                               | -                           | -                                 | -                                  | 2,275                | 2,293                |
| 58,388                             | -                               | -                               | -                           | -                                 | 58,388                             | 58,388               | 49,676               |
| 38,425                             | 5,710                           | 13,962                          | 238                         | -                                 | 58,335                             | 2,322,757            | 2,672,185            |
| 1,944                              | 289                             | 706                             | 12                          | -                                 | 2,951                              | 116,118              | 168,076              |
| -                                  | -                               | -                               | 8,291                       | 393                               | 8,684                              | 10,617               | 16,279               |
| 100,833                            | 14,983                          | 36,638                          | 625                         | -                                 | 153,079                            | 6,022,114            | 3,967,699            |
| <b>200,053</b>                     | <b>32,687</b>                   | <b>52,155</b>                   | <b>9,169</b>                | <b>393</b>                        | <b>294,457</b>                     | <b>8,888,462</b>     | <b>7,211,522</b>     |
| <b>\$ 1,079,315</b>                | <b>\$ 170,048</b>               | <b>\$ 410,097</b>               | <b>\$ -</b>                 | <b>\$ -</b>                       | <b>\$ 1,659,460</b>                | <b>\$ 66,181,732</b> | <b>\$ 58,383,530</b> |

**VIRGINIA RETIREMENT SYSTEM STATEMENT OF CHANGES IN FIDUCIARY NET POSITION –  
DEFINED BENEFIT PENSION TRUST FUNDS AND OTHER EMPLOYEE BENEFIT TRUST FUNDS**

FOR THE YEAR ENDED JUNE 30, 2014, WITH COMPARATIVE INFORMATION FOR THE YEAR ENDED JUNE 30, 2013

|  | Pension Trust Funds        |  |  |                            |                           |
|--|----------------------------|--|--|----------------------------|---------------------------|
|  | Virginia Retirement System | State Police Officers' Retirement System | Virginia Law Officers' Retirement System | Judicial Retirement System | Total Pension Trust Funds |
| <b>Additions:</b>  |                            |  |  |                            |                           |
| Contributions:   |                            |  |  |                            |                           |
| Members  | \$ 702,089                 | \$ 5,646                                 | \$ 17,908                                | \$ 327                     | \$ 725,970                |
| Member Paid by Employers                                     | 93,468                     | -  | -  | 2,724                      | 96,192                    |
| Employers  | 1,736,913                  | 42,683                                   | 67,483                                   | 27,727                     | 1,874,806                 |
| <b>Total Contributions</b>                                   | <b>2,532,470</b>           | <b>48,329</b>                            | <b>85,391</b>                            | <b>30,778</b>              | <b>2,696,968</b>          |
| <b>Investment Income:</b>                                    |                            |  |  |                            |                           |
| Interest, Dividends and Other Investment Income              | 1,268,418                  | 14,652                                   | 23,261                                   | 9,010                      | 1,315,341                 |
| Net Appreciation/(Depreciation) in Fair Value of Investments | 7,610,012                  | 87,721                                   | 139,385                                  | 54,095                     | 7,891,213                 |
| Securities Lending Income                                    | 20,161                     | 235                                      | 370                                      | 142                        | 20,908                    |
| Total Investment Income Before Investment Expenses           | 8,898,591                  | 102,608                                  | 163,016                                  | 63,247                     | 9,227,462                 |
| <b>Investment Expenses</b>                                   |                            |  |  |                            |                           |
| Direct Investment Expenses                                   | (337,283)                  | (3,896)                                  | (6,182)                                  | (2,396)                    | (349,757)                 |
| Securities Lending Management Fees and Borrower Rebates      | (2,549)                    | (30)                                     | (48)                                     | (18)                       | (2,645)                   |
| Total Investment Expenses                                    | (339,832)                  | (3,926)                                  | (6,230)                                  | (2,414)                    | (352,402)                 |
| <b>Net Investment Income</b>                                 | <b>8,558,759</b>           | <b>98,682</b>                            | <b>156,786</b>                           | <b>60,833</b>              | <b>8,875,060</b>          |
| Miscellaneous Revenue  | 460                        | -  | -  | -                          | 460                       |
| Transfers In   | -                          | -  | -  | -                          | -                         |
| <b>Total Additions</b>                                       | <b>11,091,689</b>          | <b>147,011</b>                           | <b>242,177</b>                           | <b>91,611</b>              | <b>11,572,488</b>         |
| <b>Deductions:</b>   |                            |  |  |                            |                           |
| Retirement Benefits  | 3,711,208                  | 50,467                                   | 78,412                                   | 37,984                     | 3,878,071                 |
| Refunds of Member Contributions                              | 98,049                     | 685                                      | 4,665                                    | -                          | 103,399                   |
| Insurance Premiums and Claims                                | -                          | -  | -  | -                          | -                         |
| Retiree Health Insurance Reimbursements                      | -                          | -  | -  | -                          | -                         |
| Disability Insurance Premiums and Benefits                   | -                          | -  | -  | -                          | -                         |
| Line of Duty Benefits  | -                          | -  | -  | -                          | -                         |
| Administrative Expenses                                      | 39,785                     | 353                                      | 557                                      | 221                        | 40,916                    |
| Other Expenses   | 6,745                      | 78                                       | 124                                      | 47                         | 6,994                     |
| Transfers Out  | -                          | -  | -  | -                          | -                         |
| <b>Total Deductions</b>                                      | <b>3,855,787</b>           | <b>51,583</b>                            | <b>83,758</b>                            | <b>38,252</b>              | <b>4,029,380</b>          |
| Net Increase (Decrease)                                      | 7,235,902                  | 95,428                                   | 158,419                                  | 53,359                     | 7,543,108                 |
| Net Position – Restricted for Benefits – Beginning of Year   | 54,972,736                 | 625,562                                  | 992,031                                  | 388,835                    | 56,979,164                |
| <b>Net Position – Restricted for Benefits – End of Year</b>  | <b>\$ 62,208,638</b>       | <b>\$ 720,990</b>                        | <b>\$ 1,150,450</b>                      | <b>\$ 442,194</b>          | <b>\$ 64,522,272</b>      |

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

(EXPRESSED IN THOUSANDS)

| Other Employee Benefit Trust Funds |                                 |                                 |                             |                                   |                                    | Totals               |                      |
|------------------------------------|---------------------------------|---------------------------------|-----------------------------|-----------------------------------|------------------------------------|----------------------|----------------------|
| Group Life Insurance               | Retiree Health Insurance Credit | Disability Insurance Trust Fund | Line of Duty Act Trust Fund | Virginia Local Disability Program | Total Other Employee Benefit Plans | 2014                 | 2013                 |
| \$ 122,678                         | \$ -                            | \$ -                            | \$ -                        | \$ -                              | \$ 122,678                         | \$ 848,648           | \$ 714,932           |
| -                                  | -                               | -                               | -                           | -                                 | -                                  | 96,192               | 210,490              |
| 82,908                             | 146,742                         | 17,391                          | 7,229                       | 419                               | 254,689                            | 2,129,495            | 2,042,770            |
| <b>205,586</b>                     | <b>146,742</b>                  | <b>17,391</b>                   | <b>7,229</b>                | <b>419</b>                        | <b>377,367</b>                     | <b>3,074,335</b>     | <b>2,968,192</b>     |
| 22,428                             | 2,969                           | 8,378                           | 212                         | -                                 | 33,987                             | 1,349,328            | 1,245,902            |
| 129,884                            | 17,696                          | 50,309                          | 1,282                       | -                                 | 199,171                            | 8,090,384            | 5,288,845            |
| 350                                | 48                              | 132                             | 3                           | -                                 | 533                                | 21,441               | 20,937               |
| 152,662                            | 20,713                          | 58,819                          | 1,497                       | -                                 | 233,691                            | 9,461,153            | 6,555,684            |
| (5,751)                            | (785)                           | (2,230)                         | (58)                        | -                                 | (8,824)                            | (358,581)            | (331,887)            |
| (46)                               | (6)                             | (16)                            | -                           | -                                 | (68)                               | (2,713)              | (2,687)              |
| (5,797)                            | (791)                           | (2,246)                         | (58)                        | -                                 | (8,892)                            | (361,294)            | (334,574)            |
| <b>146,865</b>                     | <b>19,922</b>                   | <b>56,573</b>                   | <b>1,439</b>                | <b>-</b>                          | <b>224,799</b>                     | <b>9,099,859</b>     | <b>6,221,110</b>     |
| -                                  | -                               | 302                             | -                           | -                                 | 302                                | 762                  | 2,797                |
| -                                  | -                               | -                               | -                           | 10                                | 10                                 | 10                   | 27                   |
| <b>352,451</b>                     | <b>166,664</b>                  | <b>74,266</b>                   | <b>8,668</b>                | <b>429</b>                        | <b>602,478</b>                     | <b>12,174,966</b>    | <b>9,192,126</b>     |
| -                                  | -                               | -                               | -                           | -                                 | -                                  | 3,878,071            | 3,672,541            |
| -                                  | -                               | -                               | -                           | -                                 | -                                  | 103,399              | 81,538               |
| 159,358                            | -                               | -                               | -                           | -                                 | 159,358                            | 159,358              | 149,487              |
| -                                  | 142,610                         | -                               | -                           | -                                 | 142,610                            | 142,610              | 137,538              |
| -                                  | -                               | 33,681                          | -                           | 139                               | 33,820                             | 33,820               | 30,133               |
| -                                  | -                               | -                               | 7,824                       | -                                 | 7,824                              | 7,824                | 6,676                |
| 275                                | 463                             | 555                             | 126                         | 290                               | 1,709                              | 42,625               | 32,959               |
| 1,276                              | 15                              | 44                              | 718                         | -                                 | 2,053                              | 9,047                | 6,877                |
| -                                  | -                               | 10                              | -                           | -                                 | 10                                 | 10                   | 27                   |
| <b>160,909</b>                     | <b>143,088</b>                  | <b>34,290</b>                   | <b>8,668</b>                | <b>429</b>                        | <b>347,384</b>                     | <b>4,376,764</b>     | <b>4,117,776</b>     |
| 191,542                            | 23,576                          | 39,976                          | -                           | -                                 | 255,094                            | 7,798,202            | 5,074,350            |
| 887,773                            | 146,472                         | 370,121                         | -                           | -                                 | 1,404,366                          | 58,383,530           | 53,309,180           |
| <b>\$ 1,079,315</b>                | <b>\$ 170,048</b>               | <b>\$ 410,097</b>               | <b>\$ -</b>                 | <b>\$ -</b>                       | <b>\$ 1,659,460</b>                | <b>\$ 66,181,732</b> | <b>\$ 58,383,530</b> |

## VIRGINIA RETIREMENT SYSTEM COMBINING STATEMENT OF FIDUCIARY NET POSITION

AS OF JUNE 30, 2014

(EXPRESSED IN THOUSANDS)

|  | State<br>Employee<br>Plan | Teacher<br>Employee<br>Plan | Political<br>Subdivision<br>Plans | Hybrid<br>Defined<br>Contribution<br>Plan | Total<br>VRS<br>Plans |
|--|---------------------------|-----------------------------|-----------------------------------|---|-----------------------|
| <b>Assets:</b>   |                           |                             |                                   |   |                       |
| Cash (Note 5)  | \$ 109                    | \$ 197                      | \$ 111                            | \$ -                                      | \$ 417                |
| Receivables:   |                           |                             |                                   |   |                       |
| Contributions  | 34,161                    | 139,709                     | 70,295                            | 168                                       | 244,333               |
| Interest and Dividends                                 | 52,545                    | 95,305                      | 53,832                            | -   | 201,682               |
| Receivable for Security Transactions                   | 318,376                   | 577,463                     | 326,176                           | -   | 1,222,015             |
| Other Investment Receivables                           | 3,058                     | 5,546                       | 3,133                             | -   | 11,737                |
| Other Receivables                                      | 491                       | 891                         | 504                               | -   | 1,886                 |
| <b>Total Receivables</b>                               | <b>408,631</b>            | <b>818,914</b>              | <b>453,940</b>                    | <b>168</b>                                | <b>1,681,653</b>      |
| Investments: (Note 5)                                  |                           |                             |                                   |   |                       |
| Bonds and Mortgage Securities                          | 4,888,501                 | 8,866,640                   | 5,008,264                         | -   | 18,763,405            |
| Stocks   | 6,083,592                 | 11,034,265                  | 6,232,633                         | -   | 23,350,490            |
| Fixed Income Commingled Funds                          | 161,411                   | 292,764                     | 165,365                           | -   | 619,540               |
| Index and Pooled Funds                                 | 1,509,785                 | 2,738,409                   | 1,546,772                         | -   | 5,794,966             |
| Real Assets  | 1,511,154                 | 2,740,892                   | 1,548,175                         | -   | 5,800,221             |
| Private Equity   | 2,188,616                 | 3,969,657                   | 2,242,235                         | -   | 8,400,508             |
| Short-Term Investments                                 | 101,602                   | 184,282                     | 104,091                           | -   | 389,975               |
| Hybrid Defined Contribution Investments                | -                         | -                           | -                                 | 1,213                                     | 1,213                 |
| <b>Total Investments</b>                               | <b>16,444,661</b>         | <b>29,826,909</b>           | <b>16,847,535</b>                 | <b>1,213</b>                              | <b>63,120,318</b>     |
| Collateral on Loaned Securities                        | 1,474,109                 | 2,673,702                   | 1,510,223                         | -   | 5,658,034             |
| Property, Plant, Furniture and Equipment (Note 6)      | 7,927                     | 14,379                      | 8,121                             | -   | 30,427                |
| <b>Total Assets</b>                                    | <b>18,335,437</b>         | <b>33,334,101</b>           | <b>18,819,930</b>                 | <b>1,381</b>                              | <b>70,490,849</b>     |
| <b>Liabilities:</b>                                    |                           |                             |                                   |   |                       |
| Retirement Benefits Payable                            | 85,903                    | 148,851                     | 59,926                            | -   | 294,680               |
| Refunds Payable  | 1,075                     | 1,549                       | 1,583                             | -   | 4,207                 |
| Accounts Payable and Accrued Expenses                  | 7,317                     | 13,271                      | 7,496                             | -   | 28,084                |
| Compensated Absences Payable                           | 593                       | 1,075                       | 607                               | -   | 2,275                 |
| Insurance Premiums and Claims Payable                  | -                         | -                           | -                                 | -   | -                     |
| Payable for Security Transactions                      | 569,001                   | 1,032,040                   | 582,941                           | -   | 2,183,982             |
| Other Investment Payables                              | 28,423                    | 51,554                      | 29,120                            | -   | 109,097               |
| Other Payables   | 502                       | 914                         | 517                               | -   | 1,933                 |
| Obligations Under Security Lending Program             | 1,474,088                 | 2,673,664                   | 1,510,201                         | -   | 5,657,953             |
| <b>Total Liabilities</b>                               | <b>2,166,902</b>          | <b>3,922,918</b>            | <b>2,192,391</b>                  | <b>-</b>                                  | <b>8,282,211</b>      |
| <b>Net Position – Restricted for Benefits (Note 4)</b> | <b>\$ 16,168,535</b>      | <b>\$ 29,411,183</b>        | <b>\$ 16,627,539</b>              | <b>\$ 1,381</b>                           | <b>\$ 62,208,638</b>  |

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, 2014

(EXPRESSED IN THOUSANDS)

|   | State<br>Employee<br>Plan | Teacher<br>Employee<br>Plan | Political<br>Subdivision<br>Plans | Hybrid<br>Defined<br>Contribution<br>Plan | Total<br>VRS<br>Plans |
|---|---------------------------|-----------------------------|-----------------------------------|---|-----------------------|
| <b>Additions:</b>   |                           |                             |                                   |   |                       |
| Contributions:  |                           |                             |                                   |   |                       |
| Members   | \$ 197,923                | \$ 312,485                  | \$ 190,955                        | \$ 726                                    | \$ 702,089            |
| Member Paid by Employers  | 112                       | 58,756                      | 34,600                            | -   | 93,468                |
| Employers   | 343,259                   | 853,634                     | 539,366                           | 654                                       | 1,736,913             |
| <b>Total Contributions</b>                                      | <b>541,294</b>            | <b>1,224,875</b>            | <b>764,921</b>                    | <b>1,380</b>                              | <b>2,532,470</b>      |
| Investment Income:  |                           |                             |                                   |   |                       |
| Interest, Dividends and Other<br>Investment Income              | 332,565                   | 599,097                     | 336,756                           | -   | 1,268,418             |
| Net Appreciation/(Depreciation) in<br>Fair Value of Investments | 1,995,248                 | 3,594,331                   | 2,020,398                         | 35  | 7,610,012             |
| Securities Lending Income                                       | 5,286                     | 9,522                       | 5,353                             | -   | 20,161                |
| Total Investment Income Before<br>Investment Expenses           | 2,333,099                 | 4,202,950                   | 2,362,507                         | 35  | 8,898,591             |
| Direct Investment Expenses                                      | (88,432)                  | (159,305)                   | (89,546)                          | -   | (337,283)             |
| Securities Lending Management<br>Fees and Borrower Rebates      | (668)                     | (1,204)                     | (677)                             | -   | (2,549)               |
| Total Investment Expenses                                       | (89,100)                  | (160,509)                   | (90,223)                          | -   | (339,832)             |
| <b>Net Investment Income</b>                                    | <b>2,243,999</b>          | <b>4,042,441</b>            | <b>2,272,284</b>                  | <b>35</b>                                 | <b>8,558,759</b>      |
| Miscellaneous Revenue   | 123                       | 217                         | 120                               | -   | 460                   |
| Transfers In  | -                         | -                           | -                                 | -   | -                     |
| <b>Total Additions</b>  | <b>2,785,416</b>          | <b>5,267,533</b>            | <b>3,037,325</b>                  | <b>1,415</b>                              | <b>11,091,689</b>     |
| <b>Deductions:</b>  |                           |                             |                                   |   |                       |
| Retirement Benefits   | 1,081,866                 | 1,874,636                   | 754,706                           | -   | 3,711,208             |
| Refunds of Member Contributions                                 | 25,036                    | 36,103                      | 36,876                            | 34  | 98,049                |
| Insurance Premiums and Claims                                   | -                         | -                           | -                                 | -   | -                     |
| Retiree Health Insurance<br>Reimbursements                      | -                         | -                           | -                                 | -   | -                     |
| Disability Insurance Premiums<br>and Benefits                   | -                         | -                           | -                                 | -   | -                     |
| Line of Duty Benefits   | -                         | -                           | -                                 | -   | -                     |
| Administrative Expenses   | 10,552                    | 18,842                      | 10,391                            | -   | 39,785                |
| Other Expenses  | 1,789                     | 3,194                       | 1,762                             | -   | 6,745                 |
| Transfers Out   | -                         | -                           | -                                 | -   | -                     |
| <b>Total Deductions</b>   | <b>1,119,243</b>          | <b>1,932,775</b>            | <b>803,735</b>                    | <b>34</b>                                 | <b>3,855,787</b>      |
| Net Increase (Decrease)   | 1,666,173                 | 3,334,758                   | 2,233,590                         | 1,381                                     | 7,235,902             |
| Net Position – Restricted for<br>Benefits – Beginning of Year   | 14,502,362                | 26,076,425                  | 14,393,949                        | -   | 54,972,736            |
| <b>Net Position – Restricted for<br/>Benefits – End of Year</b> | <b>\$ 16,168,535</b>      | <b>\$ 29,411,183</b>        | <b>\$ 16,627,539</b>              | <b>\$ 1,381</b>                           | <b>\$ 62,208,638</b>  |

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

# Notes to Financial Statements

JUNE 30, 2014 AND 2013

## 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. 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 Virginia law officers other than state police officers; and
- 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 funding of 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 Virginia Retirement 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 defined benefit 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 Disability Insurance Trust Fund for local government employees 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



was created by and is administered in accordance with the provisions of the 2010 Appropriation Act (Item 258, Chapter 874, 2010 Virginia Acts of Assembly) and most recently confirmed in the 2014 Appropriation Act (Item 264, Chapter 2, 2014 Special Session I Virginia Acts of Assembly).

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.

**2. Other Plans Established by the Commonwealth of Virginia.** The Board has oversight and limited administrative responsibility, but no investment responsibility, for several other plans of the Commonwealth. Because the Board neither owns nor has custody of the assets, their financial transactions are not recorded in the System's accounting system.

Therefore, these programs are not included in the System's Basic Financial Statements:

- Commonwealth of Virginia 457 Deferred Compensation Plan and the Virginia Cash Match Plan for state employees and employees of participating political subdivisions. Additional information about the 457 and Cash Match Plans is provided in the Statistical Section.
- Commonwealth of Virginia (COV) Voluntary Group Long Term Care Insurance Program, an employee-paid program for eligible employees.

- Defined contribution plans, referred to as the 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.
- Commonwealth Health Research Fund, which provides financial support for human health research on behalf of citizens of the Commonwealth.

**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.

- Volunteer Firefighters' and Rescue Squad Workers' Service Award Fund, which provides service awards to eligible volunteer firefighters and rescue squad workers.

### 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 (AAL), which is being amortized as a level percentage of covered payroll within 30 years or less.

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 Supplemental Schedules of funding progress and employer contributions, which follow the Notes to Financial Statements, 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 deposit and investment risk is provided in Note 5.
- GASB Statement No. 43, *Financial Reporting for Post-employment Benefit Plans Other Than Pension Plans*, requires additional reporting and disclosures for other post-employment benefits (OPEBs). The statement became effective for VRS-administered OPEBs beginning with the fiscal year ended June 30, 2007. The Required Supplemental Schedules of funding progress and employer contributions for the pension plans and other employee benefit plans present information about contributions in comparison to the annual required contribution (ARC), which is actuarially determined in accordance with the parameters of GASB Statement 43. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover the normal cost for each year and amortize any unfunded actuarial liabilities or funding excess over a period not to exceed 30 years.
- 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.

## F. INVESTMENTS

**1. Investment Valuation.** Investments 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 estate 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.

Defined contribution plan assets for hybrid plan members are held in self-directed investments for both the member and employer contributions. Contributions must be invested in the investment accounts approved by the VRS Board of Trustees.

**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. Investments in limited partnerships are accounted for on the equity method of accounting, and their earnings or losses for the period are included in investment income using the equity method.

**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, 2014, the annual money-weighted rate of return for the Pooled Assets portfolio, net of investment expenses, was 15.67%. 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 2014 money-weighted rate of return differs only slightly from the dollar-weighted rate of return because the flow of cash for contributions and benefit payments is fairly consistent over the fiscal year.

## **G. PROPERTY, PLANT, FURNITURE, EQUIPMENT AND INTANGIBLE ASSETS**

Tangible capital assets are recorded at cost at the time

of acquisition and are reported net of accumulated depreciation. The System capitalizes all property, plant and equipment 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 property, ranging from five years to 40 years. Intangible capital assets for the System include internal and external costs incurred during VRS' current Application Development Stage. These costs are being depreciated over the software's useful life which is estimated at seven years.

## **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, 2014 and 2013, 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 Trust Funds 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 exclusively from investment income. 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 Supplemental 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 Fund; and the Disability Insurance Trust Fund. 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 employer 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 accounting principles generally accepted in the United States of America, requires management to make estimates and assumptions that affect the reported amounts of net position restricted for benefits at June 30, 2014. Actual results could differ from those estimates.

## 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, 2013, 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 a defined benefit plan 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 Supplemental Retirement System (VRS), established March 1, 1952, includes a single-employer plan for state employees, a multiple-employer cost-sharing plan for teachers and an agent, multiple-employer plan for employees of participating political subdivisions.
- 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 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.

**FIGURE 2.9 – ACTIVE, RETIRED AND TERMINATED MEMBERS AND BENEFICIARIES**

AT JUNE 30

|  | VRS<br>State<br>Employees | VRS<br>Teachers | VRS<br>Political<br>Subdivision<br>Employees | SPORS        | VaLORS       | JRS        | 2014<br>Total  | 2013<br>Total  |
|--|---------------------------|-----------------|--|--------------|--------------|------------|----------------|----------------|
| Retirees and Beneficiaries                     |                           |                 |  |              |              |            |                |                |
| Receiving Benefits                             | 51,051                    | 77,153          | 43,801                                       | 1,201        | 3,429        | 491        | 177,126        | 169,588        |
| Terminated Employees                           |                           |                 |  |              |              |            |                |                |
| Entitled to Benefits but<br>not Receiving Them | 9,986                     | 20,287          | 10,719                                       | 90           | 541          | 3          | 41,626         | 39,987         |
| <b>Total</b>                                   | <b>61,037</b>             | <b>97,440</b>   | <b>54,520</b>                                | <b>1,291</b> | <b>3,970</b> | <b>494</b> | <b>218,752</b> | <b>209,575</b> |
| Active Members:                                |                           |                 |  |              |              |            |                |                |
| Vested   | 57,313                    | 109,036         | 73,606                                       | 1,580        | 6,199        | 336        | 248,070        | 250,336        |
| Non-Vested                                     | 21,569                    | 36,385          | 31,768                                       | 440          | 3,216        | 51         | 93,429         | 90,415         |
| <b>Total</b>                                   | <b>78,882</b>             | <b>145,421</b>  | <b>105,374</b>                               | <b>2,020</b> | <b>9,415</b> | <b>387</b> | <b>341,499</b> | <b>340,751</b> |

**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, 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 defined benefit plans are presented in Figure 2.10.

**FIGURE 2.10 – DEFINED BENEFIT PLAN PROVISIONS**

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

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 the following table:

FIGURE 2.10 – DEFINED BENEFIT PLAN PROVISIONS, cont.

| RETIREMENT PLAN PROVISIONS   |  |   |
|--|--|---|
| PLAN 1   | PLAN 2   | HYBRID RETIREMENT PLAN  |
| <p><b>About Plan 1</b><br/>Plan 1 is a defined benefit plan. The retirement benefit is based on a member’s age, creditable service and average final compensation at retirement using a formula. Employees are eligible for Plan 1 if their membership date is before July 1, 2010, and they were vested as of January 1, 2013.</p>  | <p><b>About Plan 2</b><br/>Plan 2 is a defined benefit plan. The retirement benefit is based on a member’s age, creditable service and average final compensation at retirement using a formula. Employees are eligible for Plan 2 if their membership date is on or after July 1, 2010, or their membership date is before July 1, 2010, and they were not vested as of January 1, 2013.</p>  | <p><b>About the Hybrid Retirement Plan</b><br/>The Hybrid Retirement Plan combines the features of a defined benefit plan and a defined contribution plan. Most members hired on or after January 1, 2014, are in this plan, as well as Plan 1 and Plan 2 members who were eligible to opt into the plan during a special election window (see “Eligible Members”).</p> <ul style="list-style-type: none"> <li>• The defined benefit is based on a member’s age, creditable service and average final compensation at retirement using a formula.</li> <li>• 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.</li> <li>• 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.</li> </ul>  |
| <p><b>Eligible Members</b><br/>Employees are in Plan 1 if their membership date is before July 1, 2010, and they were vested as of January 1, 2013.</p> <p><b>Hybrid Opt-In Election</b><br/>VRS non-hazardous duty-covered Plan 1 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014.</p> <p>The Hybrid Retirement Plan’s effective date for eligible Plan 1 members who opted in was July 1, 2014.</p> <p>If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan.</p> <p>Members who were eligible for an optional retirement plan (ORP) and had prior service under Plan 1 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 1 or ORP.</p> | <p><b>Eligible Members</b><br/>Employees are in Plan 2 if their membership date is on or after July 1, 2010, or their membership date is before July 1, 2010, and they were not vested as of January 1, 2013.</p> <p><b>Hybrid Opt-In Election</b><br/>Eligible Plan 2 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014.</p> <p>The Hybrid Retirement Plan’s effective date for eligible Plan 2 members who opted in was July 1, 2014.</p> <p>Members who were eligible for an optional retirement plan (ORP) and have prior service under Plan 2 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 2 or ORP.</p> | <p><b>Eligible Members</b><br/>Employees are in the Hybrid Retirement Plan if their membership date is on or after January 1, 2014. This includes:</p> <ul style="list-style-type: none"> <li>• State employees*</li> <li>• School division employees</li> <li>• Political subdivision employees*</li> <li>• Judges appointed or elected to an original term on or after January 1, 2014</li> <li>• Judges appointed or elected to an original term on or after January 1, 2014</li> </ul> <p><b>*Non-Eligible Members</b><br/>Some employees are not eligible to participate in the Hybrid Retirement Plan. They include:</p> <ul style="list-style-type: none"> <li>• Members of the State Police Officers’ Retirement System (SPORS)</li> <li>• Members of the Virginia Law Officers’ Retirement System (VaLORS)</li> <li>• Political subdivision employees who are covered by enhanced benefits for hazardous duty employees</li> </ul> <p>Those employees eligible for an optional retirement plan (ORP) must elect the ORP plan or the Hybrid Retirement Plan. If these members have prior service under Plan 1 or Plan 2, they are not eligible to elect the Hybrid Retirement Plan and must select Plan 1 or Plan 2 (as applicable) or ORP.</p> |

FIGURE 2.10 – DEFINED BENEFIT PLAN PROVISIONS, cont.

| PLAN 1   | PLAN 2  | HYBRID RETIREMENT PLAN   |
|--|---|--|
| <p><b>Retirement Contributions</b><br/>                     State employees, excluding state elected officials, judges and optional retirement plan participants, contribute 5% of their compensation each month to their member contribution account through a pre-tax salary reduction. Some school divisions and political subdivisions elected to phase in the required 5% member contribution; all employees will be paying the full 5% by July 1, 2016. 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 payment.</p> | <p><b>Retirement Contributions</b><br/>                     State employees contribute 5% of their compensation each month to their member contribution account through a pre-tax salary reduction. Some school divisions and political subdivisions elected to phase in the required 5% member contribution; all employees will be paying the full 5% by July 1, 2016.</p> | <p><b>Retirement Contributions</b><br/>                     A member's retirement benefit is funded through mandatory and voluntary contributions made by the member and the employer to both the defined benefit and the defined contribution components of the plan. Mandatory contributions are based on a percentage of the employee's creditable compensation and are required from both the member and the employer. Additionally, members may choose to make voluntary contributions to the defined contribution component of the plan, and the employer is required to match those voluntary contributions according to specified percentages.</p>   |
| <p><b>Creditable Service</b><br/>                     Creditable service includes active service. Members earn creditable service for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional creditable service the member was granted. A member's total creditable service 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.</p>   | <p><b>Creditable Service</b><br/>                     Same as Plan 1.</p>   | <p><b>Creditable Service</b><br/> <i>Defined Benefit Component:</i><br/>                     Under the defined benefit component of the plan, creditable service includes active service. Members earn creditable service for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional creditable service the member was granted. A member's total creditable service 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.</p> <p><i>Defined Contribution Component:</i><br/>                     Under the defined contribution component, creditable service is used to determine vesting for the employer contribution portion of the plan.</p> |
| <p><b>Vesting</b><br/>                     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 creditable service. 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.</p> <p>Members are always 100% vested in the contributions that they make.</p>  | <p><b>Vesting</b><br/>                     Same as Plan 1.</p>  | <p><b>Vesting</b><br/> <i>Defined Benefit Component:</i><br/>                     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 creditable service. Plan 1 or Plan 2 members with at least five years (60 months) of creditable service who opted into the Hybrid Retirement Plan remain vested in the defined benefit component.</p> <p><i>Defined Contribution Component:</i><br/>                     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.</p> <p>Members are always 100% vested in the contributions that they make.</p>                                      |



FIGURE 2.10 – DEFINED BENEFIT PLAN PROVISIONS, cont.

| PLAN 1   | PLAN 2   | HYBRID RETIREMENT PLAN   |
|--|--|--|
|  |  | <p><i>Vesting, cont.</i></p> <p>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.</p> <ul style="list-style-type: none"> <li>• After two years, a member is 50% vested and may withdraw 50% of employer contributions.</li> <li>• After three years, a member is 75% vested and may withdraw 75% of employer contributions.</li> <li>• After four or more years, a member is 100% vested and may withdraw 100% of employer contributions.</li> </ul> <p>Distribution is not required by law until age 70½.</p> |
| <p><b>Calculating the Benefit</b><br/>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.</p> <p>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.</p>  | <p><b>Calculating the Benefit</b><br/>See definition under Plan 1.</p>   | <p><b>Calculating the Benefit</b><br/><i>Defined Benefit Component:</i><br/>See definition under Plan 1.</p> <p><i>Defined Contribution Component:</i><br/>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.</p>  |
| <p><b>Average Final Compensation</b><br/>A member’s average final compensation is the average of the 36 consecutive months of highest compensation as a covered employee.</p>  | <p><b>Average Final Compensation</b><br/>A member’s average final compensation is the average of the 60 consecutive months of highest compensation as a covered employee.</p>  | <p><b>Average Final Compensation</b><br/>Same as Plan 2. It is used in the retirement formula for the defined benefit component of the plan.</p>   |
| <p><b>Service Retirement Multiplier</b><br/>VRS and JRS: 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 1.7%.</p> <p>SPORS, sheriffs and regional jail superintendents: The retirement multiplier for sheriffs and regional jail superintendents is 1.85%.</p> <p>VaLORS: The retirement multiplier for VaLORS employees is 1.70% or 2.00%.</p> <p>Political subdivision hazardous duty employees: The retirement multiplier of eligible political subdivision hazardous duty employees other than sheriffs and regional jail superintendents is 1.7% or 1.85% as elected by the employer.</p> | <p><b>Service Retirement Multiplier</b><br/>VRS and JRS: 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 creditable service earned, purchased or granted on or after January 1, 2013.</p> <p>SPORS, sheriffs and regional jail superintendents: Same as Plan 1.</p> <p>VaLORS: The retirement multiplier for VaLORS employees is 2.00%.</p> <p>Political subdivision hazardous duty employees: Same as Plan 1.</p> | <p><b>Service Retirement Multiplier</b><br/><i>Defined Contribution Component:</i><br/>VRS and JRS: The retirement multiplier for the defined benefit component is 1.0%.</p> <p>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.</p> <p>SPORS, sheriffs and regional jail superintendents: Not applicable.</p> <p>VaLORS: Not applicable.</p> <p>Political subdivision hazardous duty employees: Not applicable.</p> <p><i>Defined Contribution Component:</i><br/>Not applicable.</p>      |

FIGURE 2.10 – DEFINED BENEFIT PLAN PROVISIONS, cont.

| PLAN 1  | PLAN 2  | HYBRID RETIREMENT PLAN   |
|---|---|--|
| <p><b>Normal Retirement Age</b><br/> VRS: Age 65.<br/> SPORS, VaLORS, and political subdivision hazardous duty employees: Age 60.<br/> JRS: Age 65.</p>   | <p><b>Normal Retirement Age</b><br/> VRS: Normal Social Security retirement age.<br/> SPORS, VaLORS, and political subdivision hazardous duty employees: Same as Plan 1.<br/> JRS: Same as Plan 1.</p>  | <p><b>Normal Retirement Age</b><br/> <i>Defined Benefit Component:</i><br/> VRS: Same as Plan 2.<br/> SPORS, VaLORS, and political subdivision hazardous duty employees: Not applicable.<br/> JRS: Same as Plan 1.<br/> <i>Defined Benefit Component:</i><br/> Members are eligible to receive distributions upon leaving employment, subject to restrictions.</p>   |
| <p><b>Earliest Unreduced Retirement Eligibility</b><br/> VRS: Age 65 with at least five years (60 months) of creditable service or at age 50 with at least 30 years of creditable service.<br/> SPORS, VaLORS, and political subdivision hazardous duty employees: Age 60 with at least five years of creditable service or age 50 with at least 25 years of creditable service.<br/> JRS: Age 65 with at least five years of creditable service or at age 60 with at least 30 years of creditable service. Service earned under JRS is weighted. The weighting factors under Plan 1 are:</p> <ul style="list-style-type: none"> <li>• 3.5 for JRS members appointed or elected before January 1, 1995.</li> <li>• 2.5 for JRS members appointed or elected on or after January 1, 1995.</li> </ul> | <p><b>Earliest Unreduced Retirement Eligibility</b><br/> VRS: Normal Social Security retirement age with at least five years (60 months) of creditable service or when their age and service equal 90.<br/> SPORS, VaLORS, and political subdivision hazardous duty employees: Same as Plan 1.<br/> JRS: Same as Plan 1. Service earned under JRS weighted. The weighting factors under Plan 2 are:</p> <ul style="list-style-type: none"> <li>• 1.5 for JRS members appointed or elected before age 45.</li> <li>• 2.0 for JRS members appointed or elected between ages 45 and 54.</li> <li>• 2.5 for JRS members appointed or elected at age 55 or older.</li> </ul> | <p><b>Earliest Unreduced Retirement Eligibility</b><br/> <i>Defined Benefit Component:</i><br/> VRS: Normal Social Security retirement age and have at least five years (60 months) of creditable service or when their age and service equal 90.<br/> SPORS, VaLORS, and political subdivision hazardous duty employees: Not applicable.<br/> JRS: Same as Plan 2. Service earned under JRS is weighted. The weighting factors under Plan 2 are:</p> <ul style="list-style-type: none"> <li>• 1.5 for JRS members appointed or elected before age 45.</li> <li>• 2.0 for JRS members appointed or elected between ages 45 and 54.</li> <li>• 2.5 for JRS members appointed or elected at age 55 or older.</li> </ul> <p><i>Defined Contribution Component:</i><br/> Members are eligible to receive distributions upon leaving employment, subject to restrictions.</p> |
| <p><b>Earliest Reduced Retirement Eligibility</b><br/> VRS: Age 55 with at least five years (60 months) of creditable service or age 50 with at least 10 years of creditable service.<br/> SPORS, VaLORS, and political subdivision hazardous duty employees: Age 50 with at least five years of creditable service.<br/> JRS: Age 55 with at least five years of creditable service.</p>   | <p><b>Earliest Reduced Retirement Eligibility</b><br/> VRS: Age 60 with at least five years (60 months) of creditable service.<br/> SPORS, VaLORS, and political subdivision hazardous duty employees: Same as Plan 1.<br/> JRS: Same as Plan 1.</p>  | <p><b>Earliest Reduced Retirement Eligibility</b><br/> <i>Defined Benefit Component:</i><br/> VRS: Age Members may retire with a reduced benefit as early as age 60 with at least five years (60 months) of creditable service.<br/> SPORS, VaLORS, and political subdivision hazardous duty employees: Not applicable.<br/> JRS: Same as Plan 1.<br/> <i>Defined Contribution Component:</i><br/> Members are eligible to receive distributions upon leaving employment, subject to restrictions.</p>   |

FIGURE 2.10 – DEFINED BENEFIT PLAN PROVISIONS, cont.

| PLAN 1   | PLAN 2  | HYBRID RETIREMENT PLAN  |
|--|---|---|
| <p><b>Cost-of-Living Adjustment (COLA) in Retirement</b></p> <p>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%.</p> <p><i>Eligibility:</i><br/>For members who retire with an unreduced benefit or with a reduced benefit with at least 20 years of creditable service, the COLA will go into effect on July 1 after one full calendar year from the retirement date.</p> <p>For members who retire with a reduced benefit and who have less than 20 years of creditable service, the COLA will go into effect on July 1 after one calendar year following the unreduced retirement eligibility date.</p> <p><i>Exceptions to COLA Effective Dates:</i><br/>The COLA is effective July 1 following one full calendar year (January 1 to December 31) under any of the following circumstances:</p> <ul style="list-style-type: none"> <li>• The member is within five years of qualifying for an unreduced retirement benefit as of January 1, 2013.</li> <li>• The member retires on disability.</li> <li>• 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.</li> <li>• The member dies in service and the member's survivor or beneficiary is eligible for a monthly death-in-service benefit. The COLA will go into effect on July 1 following one full calendar year (January 1 to December 31) from the date the monthly benefit begins.</li> </ul> | <p><b>Cost-of-Living Adjustment (COLA) in Retirement</b></p> <p>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%.</p> <p><i>Eligibility:</i><br/>Same as Plan 1.</p> <p><i>Exceptions to COLA Effective Dates:</i><br/>Same as Plan 1.</p>  | <p><b>Cost-of-Living Adjustment (COLA) in Retirement</b></p> <p><i>Defined Benefit Component:</i><br/>Same as Plan 2.</p> <p><i>Defined Contribution Component:</i><br/>Not applicable.</p> <p><i>Eligibility:</i><br/>Same as Plan 1 and Plan 2.</p>   |
| <p><b>Disability Coverage</b></p> <p>Members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.7% on all service, regardless of when it was earned, purchased or granted.</p> <p>Most state employees are covered under the Virginia Sickness and Disability Program (VSDP) and are not eligible for disability retirement.</p>   | <p><b>Disability Coverage</b></p> <p>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.</p> <p>Most state employees are covered under the Virginia Sickness and Disability Program (VSDP) and are not eligible for disability retirement.</p> | <p><b>Disability Coverage</b></p> <p>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.</p> <p>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.</p> |

FIGURE 2.10 – DEFINED BENEFIT PLAN PROVISIONS, cont.

| PLAN 1   | PLAN 2  | HYBRID RETIREMENT PLAN  |
|--|---|---|
| <p><b>Purchase of Prior Service</b><br/>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 creditable service in their plan. Prior creditable service counts toward vesting, eligibility for retirement and the health insurance credit. Only active members are eligible to purchase prior service. When buying service, members must purchase their most recent period of service first. Members also may be eligible to purchase periods of leave without pay.</p> | <p><b>Purchase of Prior Service</b><br/>Same as Plan 1.</p> | <p><b>Purchase of Prior Service</b><br/><i>Defined Benefit Component:</i><br/>Same as Plan 1, with the following exceptions: Hybrid Retirement Plan members are ineligible for ported service.<br/><br/>The cost for purchasing refunded service is the higher of 4% of creditable compensation or average final compensation.<br/><br/>Plan members have one year from their date of hire or return from leave to purchase all but refunded prior service at approximate normal cost. After that one-year period, the rate for most categories of service will change to actuarial cost.<br/><br/><i>Defined Contribution Component:</i><br/>Not applicable.</p> |

## 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 the balance, excluding any member contributions made by employers to their accounts after July 1, 2010, and the interest on these 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 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. The contribution rates for fiscal year 2014 and fiscal year 2013 were based on the actuary's valuation as of June 30, 2011. In addition, the actuary computed a separate contribution requirement for the employers in the teacher cost-sharing pool for each year using the same valuation date.

As shown in Figure 2.11, contributions for the fiscal years ended June 30, 2014 and 2013, totaled \$2,696,968,000 and \$2,598,587,000, respectively, in accordance with statutory requirements.

## FIGURE 2.11 – MEMBER AND EMPLOYER CONTRIBUTIONS

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

| Fiscal Year | System/Plan                  | Member Contributions* | Member Contributions Paid By Employer | Employer Contributions* | Total               |
|-------------|------------------------------|-----------------------|---------------------------------------|-------------------------|---------------------|
| <b>2014</b> | VRS – State                  | \$ 198,188            | \$ 112                                | \$ 343,516              | \$ 541,816          |
|             | VRS – Teacher                | 312,636               | 58,756                                | 853,783                 | 1,225,175           |
|             | VRS – Political Subdivisions | 191,265               | 34,600                                | 539,614                 | 765,479             |
|             | <b>Total VRS</b>             | <b>702,089</b>        | <b>93,468</b>                         | <b>1,736,913</b>        | <b>2,532,470</b>    |
|             | SPORS                        | 5,646                 | -                                     | 42,683                  | 48,329              |
|             | VaLORS                       | 17,908                | -                                     | 67,483                  | 85,391              |
|             | JRS                          | 327                   | 2,724                                 | 27,727                  | 30,778              |
| <b>2014</b> | <b>Total</b>                 | <b>\$ 725,970</b>     | <b>\$ 96,192</b>                      | <b>\$1,874,806</b>      | <b>\$ 2,696,968</b> |
| <b>2013</b> | <b>Total</b>                 | <b>\$ 595,339</b>     | <b>\$ 210,490</b>                     | <b>\$1,792,758</b>      | <b>\$ 2,598,587</b> |

\* Member and employer contributions for VRS plans include \$726,000 and \$654,000, respectively, in Hybrid Defined Contribution Plan contributions.

Employer contributions to the VRS cost-sharing pool for teachers represented 11.66% of covered payrolls. Employer contributions for state employees represented 8.76% of covered payrolls. Each political subdivision's contributions ranged from zero (0.00%) to 39.52% of covered payrolls. State employer contributions to SPORS, VaLORS and JRS represented 24.74%, 14.80% and 45.44%, respectively. For state and teacher employers and a small number of 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, 2011, actuarial valuation and using modified actuarial assumptions. This is discussed further in Note 12. Member contributions for both years represented 5.00% of covered payrolls.

### C. EMPLOYERS' NET PENSION LIABILITY – PENSION PLANS

The most recent actuarial valuation to determine the net pension liabilities for the VRS pension plans was prepared as of June 30, 2014. The total pension liability was determined based on an actuarial valuation as of June 30, 2013, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2014.



## SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY BY SYSTEM AND PLAN

AS OF JUNE 30, 2014

(DOLLARS IN THOUSANDS)

|  | Total Pension Liability (a) | Plan Fiduciary Net Position (b) | Employers' Net Position Liability/ (Asset) (a-b) | Plan Fiduciary Net Position as a % of the Total Pension Liability (b/a) | Covered Employee Payroll (c) | Net Pension Liability/ (Asset) as a % of the Covered Employee Payroll (a-b)/(c) |
|--|-----------------------------|---------------------------------|--|---|------------------------------|---|
| <b>Virginia Retirement System:</b>       |                             |                                 |  |   |                              |   |
| State                                    | \$ 21,766,933               | \$ 16,168,535                   | \$ 5,598,398                                     | 74.28%  | \$ 3,861,712                 | 144.97%   |
| Teacher                                  | 41,495,883                  | 29,411,183                      | 12,084,700                                       | 70.88%  | 7,313,025                    | 165.25%   |
| Political Subdivision                    | 19,135,008                  | 16,627,539                      | 2,507,469  | 86.90%  | 4,434,764                    | 56.54%  |
| <b>Total Virginia Retirement System</b>  | <b>82,397,824</b>           | <b>62,207,257</b>               | <b>20,190,567</b>                                |   | <b>15,609,501</b>            |   |
| State Police Officers' Retirement System | 1,031,856                   | 720,990                         | 310,866  | 69.87%  | 112,010                      | 277.53%   |
| Virginia Law Officers' Retirement System | 1,824,577                   | 1,150,450                       | 674,127  | 63.05%  | 352,492                      | 191.25%   |
| Judicial Retirement System               | 616,680                     | 442,194                         | 174,486  | 71.71%  | 61,020                       | 285.95%   |
| <b>Grand Total</b>                       | <b>\$85,870,937</b>         | <b>\$64,520,891</b>             | <b>\$21,350,046</b>                              |   | <b>\$ 16,135,023</b>         |   |

## SCHEDULE OF ACTUARIAL METHODS AND SIGNIFICANT ASSUMPTIONS – PENSION PLANS

|  | VRS State        | VRS Teacher      | VRS Political Subdivisions | SPORS            | VaLORS           | JRS              |
|--|------------------|------------------|----------------------------|------------------|------------------|------------------|
| Valuation Date                                       | June 30, 2013    | June 30, 2013    | June 30, 2013              | June 30, 2013    | June 30, 2013    | June 30, 2013    |
| 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*                           | 7.00%            | 7.00%            | 7.00%                      | 7.00%            | 7.00%            | 7.00%            |
| Projected Salary Increases*:                         |                  |                  |                            |                  |                  |                  |
| State Employees/Teachers                             | 3.50% to 5.35%   | 3.50% to 5.95%   | 3.50% to 5.35%             | 3.50% to 4.75%   | 3.50% to 4.75%   | 4.50%            |
| Political Subdivision – Non-Hazardous Duty Employees | N/A              | N/A              | 3.50% to 5.35%             | N/A              | N/A              | N/A              |
| Political Subdivision – Hazardous Duty Employees     | N/A              | N/A              | 3.50% to 4.75%             | N/A              | N/A              | N/A              |
| Post-Retirement Benefits 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%            |

\* Includes inflation at 2.50%.

\*\* Compounded annually.

#### D. CHANGES IN DISCOUNT RATE

The discount rate used to measure the total pension liability was 7.00%. 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 in 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 7.00%, as well as what the employers’ net pension liability would be if it were calculated using a discount rate that is 1.00% lower (6.00%) or 1.00% higher (8.00%) than the current rate.

#### SCHEDULE OF IMPACT OF CHANGES IN DISCOUNT RATE

AS OF JUNE 30, 2014

(DOLLARS IN THOUSANDS)

| System/Plan                              | Net Pension Liability        |                                     |                              |
|--|------------------------------|-------------------------------------|------------------------------|
|  | 1.00%<br>Decrease<br>(6.00%) | Current<br>Discount Rate<br>(7.00%) | 1.00%<br>Increase<br>(8.00%) |
| Virginia Retirement System               |                              |                                     |                              |
| State                                    | \$ 8,201,094                 | \$ 5,598,398                        | \$ 3,415,966                 |
| Teacher                                  | 17,745,186                   | 12,084,700                          | 7,424,273                    |
| Political Subdivision                    | 5,052,686                    | 2,507,469                           | 394,561                      |
| Total Virginia Retirement System         | 30,998,966                   | 20,190,567                          | 11,234,800                   |
| State Police Officers’ Retirement System | 434,119                      | 310,866                             | 207,412                      |
| Virginia Law Officers’ Retirement System | 921,139                      | 674,127                             | 471,033                      |
| Judicial Retirement System               | 230,771                      | 174,486                             | 125,641                      |
| <b>Grand Total</b>                       | <b>\$ 32,584,995</b>         | <b>\$ 21,350,046</b>                | <b>\$ 12,038,886</b>         |

### 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 and the Virginia Sickness and Disability Program (VSDP). The System also manages the assets of the Line of

Duty Act Fund; the Department of Accounts (DOA) administers the benefits and payment of claims under the program.

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 Supplemental Schedules following the Notes to Financial Statements. Additional information also is presented in the Statistical Section.

**1. Group Life Insurance Program.** The 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. A portion of the premium contributions collected during members' active careers is placed in an Advance Premium Deposit Reserve to fund coverage for eligible retired and deferred members. Approximately 358,971 active members and 156,549 retirees were covered under the Basic Group Life Insurance Program at June 30, 2014.

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 67,731 active members and 2,626 retirees were covered under the Optional Group Life Insurance Program at June 30, 2014.

**2. Retiree Health Insurance Credit Program.** The Retiree Health Insurance Credit Program is an agent, multiple-employer plan. 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.

Approximately 108,076 retirees were covered under the health insurance credit program at June 30, 2014.

**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 74,394 members were covered under VSDP at June 30, 2014, and approximately 2,764 former members were receiving benefits from the program during the fiscal year.

**4. Line of Duty Act Program.** A new program in fiscal year 2011, 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 a public safety officer.

As required by statute, the System is responsible for managing the assets of 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.



## 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   |
|---|---|--|
| <b>VRS Group Life Insurance Program: Basic Coverage</b> | <p>The VRS Group Life Insurance Program was established July 1, 1960, for state employees, teachers and employees of political subdivisions that elect the program, which include the following employers that do not participate in VRS for retirement:</p> <p>City of Richmond, City of Portsmouth, City of Roanoke, City of Norfolk and Roanoke City School Board.</p> <p>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.</p>  | <ul style="list-style-type: none"> <li>• Natural death benefit equal to the employee's compensation rounded to the next highest thousand and then doubled.</li> <li>• Accidental death benefit, which is double the natural death benefit.</li> <li>• Accidental dismemberment benefit, safety belt benefit, repatriation benefit, felonious assault benefit and accelerated death benefit option.</li> <li>• 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 termination. Coverage begins to reduce by 25% on the January 1 following one calendar year of retirement or termination and reduces by 25% each January 1 until it reaches 25% of its original value.</li> </ul>  |
| <b>Optional Group Life Insurance Program</b>            | <p>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.</p> <p>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.</p>   | <p>The program provides natural death and accidental death or dismemberment coverage:</p> <ul style="list-style-type: none"> <li>• Employees select one, two, three or four times their compensation, not to exceed \$750,000.</li> <li>• Spouses may be covered for up to half the maximum amount of the employees' coverage, not to exceed \$375,000. 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.</li> <li>• Accidental death and dismemberment coverage ends upon retirement. Optional life insurance amounts begin to reduce by 25% based on the retiree's age, beginning with the retiree's normal retirement age under his or her plan; coverage ends at age 80. Retirees may elect to continue coverage within 31 days of retirement.</li> </ul> |
| <b>Retiree Health Insurance Credit Program</b>          | <p>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.</p> |  |

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

**Health Insurance Credit Dollar Amounts at Retirement**

|  | Amount per<br>Year of Service | Maximum<br>Credit per<br>Month* |
|--|-------------------------------|---------------------------------|
| State employees  | \$ 4.00                       | No Cap                          |
| Teachers and other professional school employees   | \$ 4.00                       | No Cap                          |
| General registrars and their employees, constitutional officers and their employees and local social service employees   | \$ 1.50                       | \$ 45.00                        |
| 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                       | \$ 75.00                        |
| Other political subdivision employees as elected by the employer   | \$ 1.50                       | \$ 45.00                        |

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

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

| Eligible Employees   | Coverage  |
|--|---|
| State employees other than state police officers           | \$120 per month or \$4 per year of service credit per month, whichever is higher.   |
| 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. |
| Teachers and other professional school employees           | 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 higher.  |
| Political subdivision employees as elected by the employer | \$45 per month.   |

\* Not to exceed the individual premium amount.

\*\* Not to exceed the individual premium amount. State employees who retire from being on long-term disability under VSDP 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   |
|---|---|--|
| <p><b>Virginia Sickness and Disability Program (VSDP)</b></p> | <p>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:</p> <ul style="list-style-type: none"> <li>• 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).</li> <li>• 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.</li> <li>• Public college and university faculty members who elect the VRS defined benefit plan. They 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, he or she is enrolled in VSDP.</li> </ul> | <ul style="list-style-type: none"> <li>• Sick, family and personal leave.</li> <li>• 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%.</li> <li>• 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.</li> <li>• Income replacement adjustment to 80% for catastrophic conditions.</li> <li>• VSDP Long-Term Care Plan, a self-funded program that assists with the cost of covered long-term care services.</li> </ul> |

*Note:*

- 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.

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

| Virginia Local Disability Program (VLDP) | Eligible Employees  | Coverage  |
|--|---|---|
|  | <p>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:</p> <ul style="list-style-type: none"> <li>• Teacher or other professional employee of a local public school division</li> <li>• General employee of a VRS-participating political subdivision such as a city, county, town, authority or commission</li> <li>• Local law enforcement officer, firefighter or emergency medical technician if the employer does not provide enhanced hazardous duty benefits</li> </ul> | <p>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.</p> <ul style="list-style-type: none"> <li>• Eligibility for work-related short-term disability coverage begins upon employment.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• VLDP Long-Term Care Plan, a self-funded program that assists with the cost of covered long-term care services.</li> </ul> |

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

| Eligible Employees   | Coverage   |
|--|--|
| <b>Commonwealth of Virginia (COV) Voluntary Group Long Term Care Insurance Program</b> | <p>The following members between the ages of 18 and 79 are eligible to apply:</p> <ul style="list-style-type: none"> <li>• State employees and public college and university faculty members</li> <li>• Employees of school divisions and political subdivisions whose employers have elected to participate in the program</li> <li>• Vested deferred members and retirees (their employers are not required to have elected the program)</li> <li>• Select family members of eligible members</li> </ul> |
| <b>Line of Duty Act Program</b>  | <p>Paid employees and volunteers in hazardous duty positions in Virginia localities, including hazardous duty employees covered under VRS, SPORS and VaLORS.</p> <p>Coverage provides death and health insurance benefits, which are administered by the Virginia Department of Accounts. The System is responsible for managing the assets of the Line of Duty Act Fund.</p>  |

SCHEDULE OF FUNDING PROGRESS – OTHER POST-EMPLOYMENT BENEFIT PLANS

AS OF JUNE 30, 2013

(DOLLARS IN MILLIONS)

|                                      | 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) |
|--------------------------------------|-------------------------------|---|---------------------------|--------------------|---------------------|---|
| Group Life Insurance Fund            | \$ 836,547                    | \$ 2,571,691                              | \$ 1,735,144              | 32.5%              | \$ 17,132,176       | 10.1%   |
| Retiree Health Insurance Credit Fund | 139,432                       | 2,273,473                                 | 2,134,041                 | 6.1%               | 14,688,383          | 14.5%   |
| Disability Insurance Trust Fund      | 359,091                       | 228,092                                   | (130,999)                 | 157.4%             | 3,472,669           | (3.8%)  |
| Line of Duty Act Trust Fund *        | 10,084                        | 204,084                                   | 194,000                   | 4.9%               | N/A                 | N/A   |

\* The Line of Duty Act Program was established and set up as a Trust Fund effective July 1, 2010. Contributions into the trust fund will be based on the number of participants in the program using a per capita-based contribution versus a payroll-based contribution.

## B. FUNDED STATUS AND FUNDING PROGRESS – OTHER POST-EMPLOYMENT BENEFIT PLANS

The most recent actuarial valuations prepared for other post-employment benefit plans administered by the System are as of June 30, 2013. Actuarial valuations for these plans involve estimates of the value of reported amounts and assumptions about the probability of events far into the future. Actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.

The calculations in these actuarial valuations are based on the benefits provided under the terms of the plans as of June 30, 2013, and on the pattern of cost sharing between the employers and plan members at that point. These calculations reflect a long-term perspective. The actuarial methods and assumptions used in these valuations include techniques that are designed to reduce short-term volatility in the actuarial accrued liabilities and the actuarial value of assets.

The Retiree Health Insurance Credit benefit is based on a member's employer eligibility and his or

her years of service. The monthly maximum credit amount cannot exceed the member's actual health insurance premium costs. The actuarial valuation for this plan assumes the maximum credit is payable for each eligible member. Since this benefit is a flat dollar amount multiplied by the member's years of service and the maximum benefit is assumed, no assumption relating to health care cost trend rates is needed or applied.

The following schedule presents selected information from that valuation report. Additional information is presented in the Required Supplemental Schedule of Funding Progress – Other Post-Employment Benefit Plans following the Notes to Financial Statements, as well as in the Actuarial Section.

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



**SCHEDULE OF ACTUARIAL METHODS AND SIGNIFICANT ASSUMPTIONS – OTHER POST-EMPLOYMENT BENEFIT PLANS**

|  | Group Life Insurance Fund   | Retiree Health Insurance Credit Fund | Disability Insurance Trust Fund | Line of Duty Act Trust Fund |
|--|-----------------------------|--------------------------------------|---------------------------------|-----------------------------|
| <b>Valuation Date</b>  | June 30, 2013               | June 30, 2013                        | June 30, 2013                   | June 30, 2013               |
| <b>Actuarial Cost Method</b>                                     | Entry Age Normal            | Entry Age Normal                     | Entry Age Normal                | Entry Age Normal            |
| <b>Amortization Method</b>                                       | Level Percent of Pay Closed | Level Percent of Pay Closed          | Level Percent of Pay Closed     | Level Percent of Pay Closed |
| <b>Payroll Growth Rate:</b>                                      |                             |                                      |                                 |                             |
| State Employees  | 3.00%                       | 3.00%                                | 3.00%                           | 3.00%                       |
| Teachers   | 3.00%                       | 3.00%                                | N/A                             | N/A                         |
| Political Subdivision Employees                                  | 3.00%                       | 3.00%                                | N/A                             | 3.00%                       |
| State Police and Virginia Law Officers                           | 3.00%                       | 3.00%                                | 3.00%                           | 3.00%                       |
| Judges   | 3.00%                       | 3.00%                                | N/A                             | N/A                         |
| <b>Remaining Amortization Period*</b>                            | 30 Years                    | 30 Years                             | 30 Years                        | 3 and 30 Years              |
| <b>Asset Valuation Method</b>                                    |                             |                                      |                                 |                             |
| State Employees and Teachers                                     | 5-Year, Smoothed Market     | 5-Year, Smoothed Market              | 5-Year, Smoothed Market         | Market Value                |
| Political Subdivision Employees and State-Funded Local Employees | 5-Year, Smoothed Market     | Market Value                         | N/A                             | Market Value                |
| <b>Actuarial Assumptions</b>                                     |                             |                                      |                                 |                             |
| Investment Rate of Return**                                      | 7.00%                       | 7.00%                                | 7.00%                           | 4.25% and 7.00%             |
| Projected Salary Increases:***                                   |                             |                                      |                                 |                             |
| State Employees  | 3.50% to 5.35%              | 3.50% to 5.35%                       | 3.50% to 5.35%                  | N/A                         |
| Teachers   | 3.50% to 5.95%              | 3.50% to 5.95%                       | N/A                             | N/A                         |
| Political Subdivision – Non-Hazardous Duty Employees             | 3.50% to 5.35%              | 3.50% to 5.35%                       | N/A                             | N/A                         |
| Political Subdivision – Hazardous Duty Employees                 | 3.50% to 4.75%              | 3.50% to 4.75%                       | 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                         |
| Judges   | 4.50%                       | 4.50%                                | N/A                             | N/A                         |
| Medical Trend Assumptions (Under Age 65)                         | N/A                         | N/A                                  | N/A                             | 8.50% to 5.00%              |
| Medical Trend Assumptions (Ages 65 and Older)                    | N/A                         | N/A                                  | N/A                             | 6.25% to 5.00%              |
| Year of Ultimate Trend Rate                                      | N/A                         | N/A                                  | N/A                             | 2019                        |

\* The amortization period of the Unfunded Actuarial Accrued Liability (UAAL) began at 30 years on June 30, 2013, and will decrease by one each year until reaching zero years. The Line of Duty Act Program amortization period is 30 years for the UAAL and three years for the Loan.

\*\* Includes inflation at 2.50%. The Line of Duty Act Program uses 4.25% for the Investment Rate of Return and 7.00% for the Loan interest.

\*\*\* 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.

## 4. Reserve Accounts

The reserve account balances available for benefits at June 30, 2014 and 2013, 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%. 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. The program was new in fiscal year 2011 and still has no net position.

- 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). The program was new in fiscal year 2014 and has no net position.

**FIGURE 2.13 – NET POSITION RESTRICTED FOR BENEFITS**

|   | (EXPRESSED IN THOUSANDS) |                      |
|---|--------------------------|----------------------|
|   | 2014                     | 2013                 |
| <b>Virginia Retirement System</b>                           |                          |                      |
| Member Reserve  | \$11,821,152             | \$11,420,836         |
| Employer Reserve  | 50,387,486               | 43,551,900           |
| <b>Total VRS</b>  | <b>62,208,638</b>        | <b>54,972,736</b>    |
| <b>State Police Officers' Retirement System</b>             |                          |                      |
| Member Reserve  | 92,637                   | 88,814               |
| Employer Reserve  | 628,353                  | 536,748              |
| <b>Total SPORS</b>  | <b>720,990</b>           | <b>625,562</b>       |
| <b>Virginia Law Officers' Retirement System</b>             |                          |                      |
| Member Reserve  | 230,522                  | 223,467              |
| Employer Reserve  | 919,928                  | 768,564              |
| <b>Total VaLORS</b>   | <b>1,150,450</b>         | <b>992,031</b>       |
| <b>Judicial Retirement System</b>                           |                          |                      |
| Member Reserve  | 38,522                   | 38,439               |
| Employer Reserve  | 403,672                  | 350,396              |
| <b>Total JRS</b>  | <b>442,194</b>           | <b>388,835</b>       |
| <b>Group Life Insurance Advance Premium Deposit Reserve</b> | <b>1,079,315</b>         | <b>887,773</b>       |
| <b>Retiree Health Insurance Credit Reserve</b>              | <b>170,048</b>           | <b>146,472</b>       |
| <b>Disability Insurance Trust Fund (VSDP)</b>               | <b>410,097</b>           | <b>370,121</b>       |
| <b>Line of Duty Act Trust Fund</b>                          | -                        | -                    |
| <b>Disability Insurance Trust Fund (VLDP)</b>               | -                        | -                    |
| <b>Total Pension and Other Employee Benefit Reserves</b>    | <b>\$ 66,181,732</b>     | <b>\$ 58,383,530</b> |



## 5. Deposits and Investment Risk Disclosures

### A. DEPOSITS

Deposits of the System maintained by the Treasurer of Virginia at June 30, 2014 and 2013, as shown in Figure 2.14, were entirely 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. Deposits with the System's master custodian, BNY Mellon, were entirely insured by federal depository insurance coverage.

FIGURE 2.14 – DEPOSITS

AT JUNE 30

(EXPRESSED IN THOUSANDS)

|                       | 2014<br>Carrying<br>Amount | 2013<br>Carrying<br>Amount |
|-----------------------|----------------------------|----------------------------|
| Treasurer of Virginia | \$ -                       | \$ -                       |
| Master Custodian      | 444                        | 1,369                      |
| <b>Total Deposits</b> | <b>\$ 444</b>              | <b>\$ 1,369</b>            |

### 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 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, 2014 and 2013, is presented in Figure 2.15.

FIGURE 2.15 – EQUITY INTERESTS

AT JUNE 30

| Fund                                     | 2014           | 2013           |
|--|----------------|----------------|
| Virginia Retirement System               | 93.96%         | 94.12%         |
| State Police Officers' Retirement System | 1.09%          | 1.07%          |
| Virginia Law Officers' Retirement System | 1.74%          | 1.70%          |
| Judicial Retirement System               | 0.67%          | 0.67%          |
| Group Life Insurance Fund                | 1.67%          | 1.55%          |
| Retiree Health Insurance Credit Fund     | 0.25%          | 0.24%          |
| Disability Insurance Trust Fund (VSDP)   | 0.61%          | 0.63%          |
| Line of Duty Act Trust Fund              | 0.01%          | 0.02%          |
| <b>Total Equity Interests</b>            | <b>100.00%</b> | <b>100.00%</b> |

2. **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 or option-adjusted methodology, as shown in Figure 2.16. 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.

**FIGURE 2.16 – EFFECTIVE DURATION OF DEBT SECURITIES BY INVESTMENT TYPE**

AS OF JUNE 30, 2014

(DOLLARS IN THOUSANDS)

| Investment Type                     | Fair Value           | Weighted Avg. Effective Duration (Years) |
|-------------------------------------|----------------------|--|
| U.S. Government Agencies            | \$ 3,936,263         | 4.99                                     |
| Municipal Securities                | 3,514,827            | 4.32                                     |
| Asset-Backed Securities             | 80,135               | 10.94                                    |
| Collateralized Mortgage Obligations | 98,875               | 0.23                                     |
| Commercial Mortgages                | 380,312              | 2.43                                     |
| Corporate and Other Bonds           | 270,860              | 5.85                                     |
| Repurchase Agreements               | 9,412,391            | 5.97                                     |
| Fixed-Income Commingled Funds       | 205,300              | 0.00                                     |
| Cash and Cash Equivalents           | 659,415              | 5.38                                     |
| <b>Total Debt Securities</b>        | <b>\$ 20,853,618</b> | <b>4.74</b>                              |

**3. 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, 2014, the System’s fixed income assets that are not government guaranteed represented 81% 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, 2014, are summarized in Figure 2.17.

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.7. Policies related to credit risk pertaining to the System’s securities lending program are provided in Note 5.B.5.



## FIGURE 2.17 – CREDIT QUALITY AND EXPOSURE LEVELS OF NONGOVERNMENT GUARANTEED SECURITIES

AS OF JUNE 30, 2014

(EXPRESSED IN THOUSANDS)

| Credit Rating Level                                    | Agencies           | Municipal Securities | Asset-Backed Securities | Collateralized Mortgage Obligations | Commercial Mortgages | Corporate and Other Bonds | Repurchase Agreements | Fixed-Income Commingled Funds | Cash and Cash Equivalents |
|--|--------------------|----------------------|-------------------------|-------------------------------------|----------------------|---------------------------|-----------------------|-------------------------------|---------------------------|
| <b>U.S. Government, Short-Term and Not Rated Debt:</b> |                    |                      |                         |                                     |                      |                           |                       |                               |                           |
| U.S. Government Agencies:                              |                    |                      |                         |                                     |                      |                           |                       |                               |                           |
| FHLB:  |                    |                      |                         |                                     |                      |                           |                       |                               |                           |
| A2   | \$ 532             | \$ -                 | \$ -                    | \$ -                                | \$ -                 | \$ -                      | \$ -                  | \$ -                          | \$ -                      |
| Aaa  | 11,537             | -                    | -                       | -                                   | -                    | -                         | -                     | -                             | -                         |
| FHLMC:   |                    |                      |                         |                                     |                      |                           |                       |                               |                           |
| Aaa  | 971,425            | -                    | -                       | 109,492                             | 74,541               | -                         | -                     | -                             | -                         |
| FNMA:  |                    |                      |                         |                                     |                      |                           |                       |                               |                           |
| Aaa  | 1,809,931          | -                    | -                       | 153,481                             | 23,208               | -                         | -                     | -                             | -                         |
| Aaa-mf   | -                  | -                    | -                       | -                                   | -                    | -                         | -                     | -                             | 1,986,944                 |
| Not Rated  | 651,508            | 24,467               | 4,529                   | 21,663                              | 27,312               | 2,500,037                 | 205,300               | 461                           | 308,296                   |
| <b>Long-Term Debt:</b>                                 |                    |                      |                         |                                     |                      |                           |                       |                               |                           |
| Aaa  | 59,489             | 10,609               | 6,944                   | 16,406                              | 136,567              | 191,221                   | -                     | -                             | -                         |
| Aa1  | 10,405             | 21,419               | -                       | -                                   | -                    | 58,797                    | -                     | -                             | -                         |
| Aa2  | -                  | 23,640               | -                       | 465                                 | -                    | 93,716                    | -                     | -                             | -                         |
| Aa3  | -                  | -                    | -                       | -                                   | -                    | 204,116                   | -                     | -                             | -                         |
| A1   | -                  | -                    | -                       | -                                   | -                    | 221,170                   | -                     | 149,878                       | -                         |
| A2   | -                  | -                    | -                       | -                                   | -                    | 426,497                   | -                     | -                             | -                         |
| A3   | -                  | -                    | -                       | -                                   | -                    | 691,111                   | -                     | -                             | -                         |
| Baa1   | -                  | -                    | -                       | -                                   | -                    | 1,233,433                 | -                     | 423,505                       | -                         |
| Baa2   | -                  | -                    | 2,159                   | -                                   | -                    | 1,248,477                 | -                     | -                             | -                         |
| Baa3   | -                  | -                    | -                       | -                                   | -                    | 947,017                   | -                     | -                             | -                         |
| Ba1  | -                  | -                    | 1,835                   | -                                   | -                    | 238,219                   | -                     | 85,571                        | -                         |
| Ba2  | -                  | -                    | 1,157                   | 2,442                               | -                    | 137,358                   | -                     | -                             | -                         |
| Ba3  | -                  | -                    | 840                     | 2,278                               | 2,900                | 258,035                   | -                     | -                             | -                         |
| B1   | -                  | -                    | 4,794                   | -                                   | 1,779                | 326,390                   | -                     | -                             | -                         |
| B2   | -                  | -                    | 4,792                   | 660                                 | 428                  | 215,700                   | -                     | -                             | -                         |
| B3   | -                  | -                    | -                       | 787                                 | 4,125                | 200,552                   | -                     | -                             | -                         |
| Caa1   | -                  | -                    | 502                     | 107                                 | -                    | 151,336                   | -                     | -                             | -                         |
| Caa2   | -                  | -                    | 9,825                   | 18,676                              | -                    | 39,253                    | -                     | -                             | -                         |
| Caa3   | -                  | -                    | 7,425                   | 33,587                              | -                    | 29,154                    | -                     | -                             | -                         |
| Ca   | -                  | -                    | 47,663                  | 20,268                              | -                    | 338                       | -                     | -                             | -                         |
| C  | -                  | -                    | 6,410                   | -                                   | -                    | 209                       | -                     | -                             | -                         |
| (P) Caa1   | -                  | -                    | -                       | -                                   | -                    | 255                       | -                     | -                             | -                         |
| <b>Total</b>   | <b>\$3,514,827</b> | <b>\$ 80,135</b>     | <b>\$ 98,875</b>        | <b>\$ 380,312</b>                   | <b>\$ 270,860</b>    | <b>\$9,412,391</b>        | <b>\$ 205,300</b>     | <b>\$ 659,415</b>             | <b>\$2,295,240</b>        |

VRS used Moody's ratings for this presentation. A large portion of the securities are not rated by Moody's but are rated by other rating agencies.

- **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 issue. 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 market 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. The System's market value of securities that were uninsured and held by a counterparty at June 30, 2014 and 2013, are presented in Figure 2.18.



**FIGURE 2.18 – CUSTODIAL CREDIT RISK**

| AT JUNE 30   | (EXPRESSED IN THOUSANDS) |                    |
|--|--------------------------|--------------------|
|  | 2014                     | 2013               |
| U.S. Government and Agency Mortgage Securities Held by Broker-Dealer Under Securities Lending Program: |                          |                    |
| U.S. Government and Agency Mortgage Securities   | \$ 33,502                | \$ 82,668          |
| Corporate and Other Bonds  | 112,486                  | 1,247,365          |
| Common and Preferred Stocks  | -                        | -                  |
| <b>Total</b>   | <b>\$3,007,442</b>       | <b>\$3,615,203</b> |

**4. 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. From time to time, the System's external managers may hedge their portfolios' foreign currency exposures with currency-forward contracts, depending on their views about a specific foreign currency relative to the U.S. dollar. The System's exposure to foreign currency risk as of June 30, 2014, is highlighted in Figure 2.19.

## FIGURE 2.19 – CURRENCY EXPOSURES BY ASSET CLASS

AS OF JUNE 30, 2014

(EXPRESSED IN THOUSANDS)

| Currency                | Cash<br>and Cash<br>Equivalents | Equity              | Fixed<br>Income   | Private<br>Equity | Real Assets      | International<br>Funds | Total               |
|-------------------------|---------------------------------|---------------------|-------------------|-------------------|------------------|------------------------|---------------------|
| Euro Currency Unit      | \$ 48,054                       | \$ 1,105,944        | \$ (18,790)       | \$ 934,465        | \$ 1,583         | \$ -                   | \$ 2,071,256        |
| Japanese Yen            | 22,936                          | 1,332,022           | (15,742)          | -                 | 965              | -                      | 1,340,181           |
| British Pound Sterling  | 7,677                           | 950,455             | (98)              | 1,167             | 4,355            | -                      | 963,556             |
| Hong Kong Dollar        | 13,236                          | 671,448             | 95                | -                 | 8,303            | -                      | 693,082             |
| U.S. Dollar             | -                               | -                   | -                 | -                 | -                | 579,073                | 579,073             |
| Canadian Dollar         | 5,432                           | 472,564             | 484               | -                 | 21,678           | -                      | 500,158             |
| South Korean Won        | 1,489                           | 460,690             | 2,784             | -                 | -                | -                      | 464,963             |
| New Taiwan Dollar       | 6,988                           | 300,330             | -                 | -                 | -                | -                      | 307,318             |
| Australian Dollar       | 3,352                           | 281,487             | (389)             | -                 | 14,578           | -                      | 299,028             |
| Brazil Real             | 4,445                           | 214,012             | 61,783            | -                 | 2,584            | -                      | 282,824             |
| South African Comm Rand | 1,620                           | 199,725             | 32,628            | -                 | -                | -                      | 233,973             |
| Norwegian Krone         | 1,565                           | 221,658             | -                 | -                 | -                | -                      | 223,223             |
| Mexican New Peso        | 1,849                           | 77,733              | 81,915            | -                 | 762              | -                      | 162,259             |
| Swiss Franc             | 6,386                           | 131,017             | (8)               | -                 | 2,397            | -                      | 139,792             |
| Thailand Baht           | 83                              | 116,154             | 17,325            | -                 | -                | -                      | 133,562             |
| Indian Rupee            | 461                             | 110,556             | 14,550            | -                 | -                | -                      | 125,567             |
| Malaysian Ringgit       | 1,192                           | 71,686              | 42,338            | -                 | -                | -                      | 115,216             |
| Indonesian Rupiah       | 751                             | 64,301              | 36,460            | -                 | -                | -                      | 101,512             |
| New Turkish Lira        | 3,128                           | 62,056              | 30,310            | -                 | -                | -                      | 95,494              |
| Danish Krone            | 248                             | 63,213              | -                 | -                 | -                | -                      | 63,461              |
| Polish Zloty            | 101                             | 10,714              | 52,544            | -                 | -                | -                      | 63,359              |
| Chilean Peso            | 657                             | 54,090              | 2,632             | -                 | -                | -                      | 57,379              |
| Russian Ruble (New)     | 996                             | -                   | 32,122            | -                 | -                | -                      | 33,118              |
| Philippines Peso        | 263                             | 25,082              | 1,001             | -                 | -                | -                      | 26,346              |
| Colombian Peso          | 337                             | -                   | 18,061            | -                 | -                | -                      | 18,398              |
| Hungarian Forint        | 18                              | -                   | 15,450            | -                 | -                | -                      | 15,468              |
| Israeli Shekel          | 920                             | 12,544              | -                 | -                 | -                | -                      | 13,464              |
| Nigerian Naira          | 122                             | -                   | 12,847            | -                 | -                | -                      | 12,969              |
| Romanian Leu            | 537                             | -                   | 7,037             | -                 | -                | -                      | 7,574               |
| Turkish Lira            | 7,189                           | -                   | -                 | -                 | -                | -                      | 7,189               |
| Peruvian Nuevo Sol      | -                               | -                   | 6,936             | -                 | -                | -                      | 6,936               |
| Egyptian Pound          | 188                             | 6,728               | -                 | -                 | -                | -                      | 6,916               |
| Sri Lanka Rupee         | -                               | -                   | 3,258             | -                 | -                | -                      | 3,258               |
| Ghanaian Cedi           | -                               | -                   | 2,467             | -                 | -                | -                      | 2,467               |
| UAE Dirham              | 29                              | 2,290               | -                 | -                 | -                | -                      | 2,319               |
| Costa Rican Colon       | -                               | -                   | 1,341             | -                 | -                | -                      | 1,341               |
| Chinese Yuan Renminbi   | -                               | 34                  | 12                | -                 | -                | -                      | 46                  |
| Czech Koruna            | 4                               | -                   | -                 | -                 | -                | -                      | 4                   |
| Moroccan Dirham         | 1                               | -                   | -                 | -                 | -                | -                      | 1                   |
| New Zealand Dollar      | 351                             | (8,764)             | -                 | -                 | -                | -                      | (8,413)             |
| Singapore Dollar        | 2,796                           | (66,493)            | -                 | -                 | -                | -                      | (63,697)            |
| Swedish Krona           | 5,253                           | (76,985)            | -                 | 138               | -                | -                      | (71,594)            |
| <b>Total</b>            | <b>\$ 150,654</b>               | <b>\$ 6,866,291</b> | <b>\$ 441,353</b> | <b>\$ 935,770</b> | <b>\$ 57,205</b> | <b>\$ 579,073</b>      | <b>\$ 9,030,346</b> |

**5. 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 market value equal to at least 102% of the market 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 40 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 market value.

The market value of securities on loan at June 30, 2014 and 2013, was \$9,233,730,000 and \$7,405,441,000, respectively. The June 30, 2014 and 2013, balances were composed of U.S. government and agency securities of \$3,342,276,000 and \$2,280,396,000, respectively; corporate and other bonds of \$374,137,000 and \$253,596,000, respectively; and common and preferred stocks of \$5,517,317,000 and \$4,871,449,000, respectively. The value of collateral (cash and non-cash) at June 30, 2014 and 2013 was \$9,734,260,000 and \$7,827,920,000, respectively. Securities on loan are included with investments on the statement of plan net position. The invested cash collateral is included in the statement of plan net position as an asset and corresponding liability.

At June 30, 2014, the invested cash collateral had a market value of 6,022,199,000 and was composed of commercial paper of \$1,237,216,000, certificates of deposit of \$1,298,889,000, floating rate notes of \$1,930,090,000, asset-backed securities of \$3,751,000, time deposits of \$933,767,000 and repurchase agreements of \$618,486,000.

**6. 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, 2014 and 2013, included (1) receivables for deposits with brokers for securities sold short of \$560,665,000 and \$502,467,000, respectively; and (2) payables for securities sold short and not covered with market values of \$518,516,000 and \$481,107,000 respectively.

**7. 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. They include futures, forwards, options and swap contracts. Some traditional securities, such as structured notes, can have derivative-like characteristics. In this case, the return may be linked to one or more indexes and asset-backed securities, such as collateralized mortgage obligations (CMOs), which are sensitive to changes in interest rates and pre-payments. Futures, forwards, options and swaps generally are not recorded on the financial statements, whereas structured notes and asset-backed investments generally are recorded.

The System is a party, directly and indirectly, to various derivative financial investments that may or may not appear on the financial statements and that are used in the normal course of business to enhance returns on investments and manage risk exposure to changes in value resulting from fluctuations in market conditions. These investments may involve, to varying degrees, elements of credit and market risk in excess of amounts recognized on the financial statements.

At June 30, 2014, the System had four types of derivative financial instruments: futures, currency forwards, options and swaps. Futures, currency forwards and options 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. Credit risks depend on whether the contracts are exchange-traded or exercised over-the-counter. Market risks arise from adverse changes in market prices, interest rates and foreign exchange rates.

**8. 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 financial statements. 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. The notional value of the System's investment in futures contracts at June 30, 2014 and 2013, is shown in Figure 2.20.

**FIGURE 2.20 – FUTURES**

AT JUNE 30

(EXPRESSED IN THOUSANDS)

|                                 | 2014               | 2013              |
|---------------------------------|--------------------|-------------------|
| Notional Value                  |                    |                   |
| <b>Cash and Cash Equivalent</b> |                    |                   |
| <b>Derivatives Futures:</b>     |                    |                   |
| Long                            | \$ 77,225          | \$ -              |
| Short                           | -                  | (86,971)          |
| <b>Equity Derivatives</b>       |                    |                   |
| <b>Futures:</b>                 |                    |                   |
| Long                            | 61,465             | 601,441           |
| Short                           | (4,295)            | -                 |
| <b>Fixed Income Derivatives</b> |                    |                   |
| <b>Futures:</b>                 |                    |                   |
| Long                            | 12,201             | 367,692           |
| Short                           | (197,647)          | (262,406)         |
| <b>Total Futures</b>            | <b>\$ (51,051)</b> | <b>\$ 619,756</b> |

**9. Currency Forwards.** Currency forwards represent foreign exchange contracts and are used by the System to effect settlements and to protect the base currency (\$US) 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. Information on the System's currency forwards contracts at June 30, 2014 and 2013, is shown in Figure 2.21.

## FIGURE 2.21 – CURRENCY FORWARDS

AT JUNE 30

(EXPRESSED IN THOUSANDS)

| Currency   | Cost         | Pending Foreign Exchange Purchases | Pending Foreign Exchange Sales | Fair Value 2014    | Fair Value 2013  |
|--|--------------|------------------------------------|--------------------------------|--------------------|------------------|
| Australian Dollar                                      | \$ (313,341) | \$ 110,602                         | \$ (424,768)                   | \$ (314,166)       | \$ (267,082)     |
| Brazil Real  | (49,730)     | 25,986                             | (77,124)                       | (51,138)           | (26,325)         |
| British Pound Sterling                                 | (947,352)    | 237,782                            | (1,189,097)                    | (951,315)          | (845,277)        |
| Canadian Dollar  | (446,847)    | 189,270                            | (636,266)                      | (446,996)          | (459,899)        |
| Chilean Peso   | 2,617        | 2,632                              | -                              | 2,632              | 235              |
| Chinese Yuan Renminbi                                  | 13           | 338                                | (326)                          | 12                 | (11)             |
| Colombian Peso   | (5,767)      | 2,464                              | (8,324)                        | (5,860)            | (3,070)          |
| Danish Krone   | (95,356)     | 20,762                             | (116,313)                      | (95,551)           | (7,888)          |
| Euro Currency Unit                                     | (1,398,224)  | 264,901                            | (1,666,402)                    | (1,401,501)        | (832,022)        |
| Hong Kong Dollar                                       | (211,946)    | 11,506                             | (223,460)                      | (211,954)          | (14,109)         |
| Hungarian Forint                                       | (4,296)      | 4,701                              | (8,999)                        | (4,298)            | (3,863)          |
| Indian Rupee   | 7,258        | 8,844                              | (1,599)                        | 7,245              | 2,662            |
| Indonesian Rupiah                                      | 809          | 2,135                              | (1,351)                        | 784                | 3,242            |
| Israeli Shekel   | (63,679)     | 364                                | (64,276)                       | (63,912)           | (50,917)         |
| Japanese Yen   | (600,875)    | 301,024                            | (902,343)                      | (601,319)          | (1,112,988)      |
| Malaysian Ringgit                                      | 10,603       | 10,721                             | -                              | 10,721             | 9,945            |
| Mexican New Peso                                       | 14,413       | 20,258                             | (5,770)                        | 14,488             | (1,595)          |
| New Turkish Lira                                       | 6,216        | 8,301                              | (2,120)                        | 6,181              | 13,852           |
| New Zealand Dollar                                     | (23,241)     | 98,836                             | (121,429)                      | (22,593)           | (6,638)          |
| Norwegian Krone  | 79,744       | 190,752                            | (113,571)                      | 77,181             | 723              |
| Peruvian Nuevo Sol                                     | (710)        | 1,891                              | (2,618)                        | (727)              | (9,300)          |
| Philippines Peso                                       | (576)        | 305                                | (910)                          | (605)              | 3,866            |
| Polish Zloty   | 11,185       | 20,894                             | (9,619)                        | 11,275             | 9,912            |
| Romanian Leu   | (49)         | 1,492                              | (1,542)                        | (50)               | 789              |
| Russian Ruble (New)                                    | 276          | 14,648                             | (14,254)                       | 394                | 7,762            |
| Singapore Dollar                                       | (190,987)    | 41,460                             | (232,719)                      | (191,259)          | (150,982)        |
| South African Comm Rand                                | (11,856)     | 2,458                              | (14,267)                       | (11,809)           | (6,026)          |
| South Korean Won                                       | 2,672        | 2,784                              | -                              | 2,784              | (142)            |
| Swedish Krona  | (330,001)    | 66,931                             | (396,587)                      | (329,656)          | (155,532)        |
| Swiss Franc  | (608,197)    | 58,119                             | (669,772)                      | (611,653)          | (420,713)        |
| Thailand Baht  | 4,562        | 7,378                              | (2,793)                        | 4,585              | 17,026           |
| U.S. Dollar  | 5,162,660    | 6,860,410                          | (1,697,750)                    | 5,162,660          | 4,340,722        |
| <b>Total Forwards Subject to Foreign Currency Risk</b> |              |                                    |                                | <b>\$ (15,420)</b> | <b>\$ 36,357</b> |



**10. 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. The notional value of the System's options balances at June 30, 2014 and 2013, is shown in Figure 2.22.

**FIGURE 2.22 – OPTIONS**

AT JUNE 30

(EXPRESSED IN THOUSANDS)

|  | 2014            | 2013            |
|--|-----------------|-----------------|
| Notional Value                           |                 |                 |
| <b>Cash and Cash Equivalent Options:</b> |                 |                 |
| Call                                     | \$ (117)        | \$ (10)         |
| Put                                      | (23)            | -               |
| <b>Equity Options:</b>                   |                 |                 |
| Call                                     | -               | -               |
| Put                                      | -               | -               |
| <b>Fixed Income Options:</b>             |                 |                 |
| Call                                     | -               | -               |
| Put                                      | -               | -               |
| <b>Swaptions:</b>                        |                 |                 |
| Call                                     | (110)           | (2)             |
| Put                                      | (53)            | (379)           |
| <b>Total Options:</b>                    | <b>\$ (303)</b> | <b>\$ (391)</b> |

**11. 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 2014, the System had activity in credit defaults, interest rate and total return swaps. Information on the System's swap balances at June 30, 2014 and 2013, is shown in Figure 2.23.

## FIGURE 2.23 – SWAPS

AS OF JUNE 30

| Counterparty                 | Notional Amount | VRS Rate | Counterparty Rate |
|------------------------------|-----------------|----------|-------------------|
| <b>Credit Default Swaps:</b> |                 |          |                   |
| Barclays Bank PLC            | \$ 5,100        |          |                   |
| Barclays Bank PLC            | 4,381           |          |                   |
| Barclays Bank PLC            | 3,900           |          |                   |
| Barclays Bank PLC            | 3,400           |          |                   |
| Barclays Bank PLC            | 2,600           |          |                   |
| Barclays Bank PLC            | 1,800           |          |                   |
| Barclays Bank PLC            | 1,800           |          |                   |
| Barclays Bank PLC            | 1,400           |          |                   |
| Barclays Bank PLC            | 1,369           |          |                   |
| Barclays Bank PLC            | 1,100           |          |                   |
| Barclays Bank PLC            | 1,000           |          |                   |
| Barclays Bank PLC            | 958             |          |                   |
| Barclays Bank PLC            | 700             |          |                   |
| Barclays Bank PLC            | 600             |          |                   |
| Barclays Bank PLC            | 548             |          |                   |
| Barclays Bank PLC            | 200             |          |                   |
| Barclays Bank PLC            | 24,697          |          |                   |
| Barclays Bank PLC            | 5,600           |          |                   |
| Barclays Bank PLC            | 5,000           |          |                   |
| Barclays Bank PLC            | 4,400           |          |                   |
| Barclays Bank PLC            | 4,100           |          |                   |
| Barclays Bank PLC            | 3,200           |          |                   |
| Barclays Bank PLC            | 2,800           |          |                   |
| Barclays Bank PLC            | 1,400           |          |                   |
| Barclays Bank PLC            | 1,300           |          |                   |
| Barclays Bank PLC            | 1,175           |          |                   |
| Barclays Bank PLC            | 1,000           |          |                   |
| Barclays Bank PLC            | 900             |          |                   |
| Credit Suisse Group AG       | 6,250           |          |                   |
| Credit Suisse Group AG       | 5,100           |          |                   |
| Credit Suisse Group AG       | 1,000           |          |                   |
| Credit Suisse Group AG       | 800             |          |                   |
| Credit Suisse Group AG       | 500             |          |                   |
| Credit Suisse Group AG       | 200             |          |                   |
| Credit Suisse Group AG       | 58,150          |          |                   |
| Credit Suisse Group AG       | 26,500          |          |                   |
| Credit Suisse Group AG       | 14,298          |          |                   |
| Credit Suisse Group AG       | 13,025          |          |                   |
| Credit Suisse Group AG       | 8,000           |          |                   |
| Credit Suisse Group AG       | 3,700           |          |                   |
| Credit Suisse Group AG       | 2,800           |          |                   |
| Credit Suisse Group AG       | 2,800           |          |                   |
| Credit Suisse Group AG       | 2,800           |          |                   |
| Credit Suisse Group AG       | 2,750           |          |                   |
| Credit Suisse Group AG       | 2,600           |          |                   |
| Credit Suisse Group AG       | 2,600           |          |                   |

(DOLLARS EXPRESSED IN THOUSANDS)

| Maturity Date | Buying/Selling Protection | Pay/Receive Rate | Fair Value 2014 | Fair Value 2013 |
|---------------|---------------------------|------------------|-----------------|-----------------|
| 12/20/2018    | Buying                    | 1.000%           | \$ (63)         | \$ -            |
| 3/20/2021     | Selling                   | 5.000%           | 536             | -               |
| 6/20/2019     | Selling                   | 1.000%           | 75              | -               |
| 6/20/2019     | Selling                   | 1.000%           | 38              | -               |
| 9/20/2015     | Selling                   | 1.000%           | 2               | -               |
| 12/20/2018    | Buying                    | 1.000%           | (28)            | -               |
| 9/20/2015     | Selling                   | 1.000%           | (5)             | -               |
| 6/20/2015     | Selling                   | 1.000%           | 7               | -               |
| 3/20/2021     | Selling                   | 5.000%           | 180             | -               |
| 12/20/2018    | Buying                    | 1.000%           | (18)            | -               |
| 6/20/2019     | Selling                   | 1.000%           | (33)            | -               |
| 6/20/2019     | Selling                   | 5.000%           | 76              | -               |
| 12/20/2018    | Buying                    | 1.000%           | (9)             | -               |
| 6/20/2019     | Selling                   | 1.000%           | 8               | -               |
| 9/20/2022     | Selling                   | 5.000%           | 68              | -               |
| 3/20/2019     | Selling                   | 1.000%           | (6)             | -               |
| 12/20/2017    | Buying                    | 1.000%           | -               | 104             |
| 3/20/2018     | Buying                    | 1.000%           | -               | (114)           |
| 3/20/2018     | Buying                    | 1.000%           | -               | (97)            |
| 3/20/2018     | Buying                    | 1.000%           | -               | (98)            |
| 3/20/2018     | Selling                   | 5.000%           | -               | 546             |
| 6/20/2018     | Selling                   | 5.000%           | -               | 426             |
| 3/20/2018     | Buying                    | 1.000%           | -               | (77)            |
| 3/20/2018     | Buying                    | 1.000%           | -               | (29)            |
| 3/20/2018     | Buying                    | 1.000%           | -               | 29              |
| 3/20/2018     | Buying                    | 1.000%           | -               | (26)            |
| 6/20/2018     | Selling                   | 5.000%           | -               | 80              |
| 6/20/2018     | Selling                   | 5.000%           | -               | 54              |
| 12/20/2016    | Buying                    | 1.000%           | (111)           | (103)           |
| 12/20/2018    | Buying                    | 1.000%           | (93)            | -               |
| 12/20/2018    | Selling                   | 1.000%           | 16              | -               |
| 12/20/2016    | Selling                   | 1.000%           | 14              | 5               |
| 12/20/2018    | Buying                    | 5.000%           | (96)            | -               |
| 12/20/2016    | Selling                   | 1.000%           | 2               | -               |
| 12/20/2017    | Buying                    | 5.000%           | -               | (2,604)         |
| 6/20/2018     | Selling                   | 1.000%           | -               | 163             |
| 12/20/2017    | Buying                    | 1.000%           | -               | 330             |
| 9/20/2017     | Selling                   | 1.000%           | -               | (340)           |
| 12/20/2016    | Buying                    | 1.000%           | -               | (112)           |
| 6/20/2017     | Selling                   | 1.000%           | -               | (29)            |
| 3/20/2018     | Buying                    | 1.000%           | -               | 144             |
| 3/20/2018     | Buying                    | 5.000%           | -               | (332)           |
| 3/20/2018     | Buying                    | 1.000%           | -               | 98              |
| 12/20/2017    | Buying                    | 1.000%           | -               | (35)            |
| 3/20/2018     | Buying                    | 1.000%           | -               | 117             |
| 9/20/2017     | Buying                    | 1.000%           | -               | 2               |

**FIGURE 2.23 – SWAPS, cont.**

AS OF JUNE 30

| Counterparty             | Notional Amount | VRS Rate | Counterparty Rate |
|--------------------------|-----------------|----------|-------------------|
| Credit Suisse Group AG   | 2,000           |          |                   |
| Credit Suisse Group AG   | 1,850           |          |                   |
| Credit Suisse Group AG   | 1,000           |          |                   |
| Credit Suisse Group AG   | 900             |          |                   |
| Credit Suisse Group AG   | 400             |          |                   |
| Deutsche Bank AG         | 18,875          |          |                   |
| Deutsche Bank AG         | 6,000           |          |                   |
| Deutsche Bank AG         | 5,300           |          |                   |
| Deutsche Bank AG         | 3,000           |          |                   |
| Deutsche Bank AG         | 3,000           |          |                   |
| Deutsche Bank AG         | 2,900           |          |                   |
| Deutsche Bank AG         | 2,600           |          |                   |
| Deutsche Bank AG         | 2,300           |          |                   |
| Deutsche Bank AG         | 1,600           |          |                   |
| Deutsche Bank AG         | 1,500           |          |                   |
| Deutsche Bank AG         | 1,400           |          |                   |
| Deutsche Bank AG         | 1,200           |          |                   |
| Deutsche Bank AG         | 1,100           |          |                   |
| Deutsche Bank AG         | 1,100           |          |                   |
| Deutsche Bank AG         | 700             |          |                   |
| Deutsche Bank AG         | 700             |          |                   |
| Deutsche Bank AG         | 700             |          |                   |
| Deutsche Bank AG         | 500             |          |                   |
| Deutsche Bank AG         | 300             |          |                   |
| Deutsche Bank AG         | 5,800           |          |                   |
| Deutsche Bank AG         | 5,600           |          |                   |
| Deutsche Bank AG         | 3,500           |          |                   |
| Deutsche Bank AG         | 3,150           |          |                   |
| Deutsche Bank AG         | 2,675           |          |                   |
| Deutsche Bank AG         | 2,675           |          |                   |
| Deutsche Bank AG         | 2,675           |          |                   |
| Deutsche Bank AG         | 2,675           |          |                   |
| Deutsche Bank AG         | 2,450           |          |                   |
| Deutsche Bank AG         | 2,300           |          |                   |
| Deutsche Bank AG         | 2,300           |          |                   |
| Deutsche Bank AG         | 1,800           |          |                   |
| Deutsche Bank AG         | 1,500           |          |                   |
| Deutsche Bank AG         | 900             |          |                   |
| Deutsche Bank AG         | 350             |          |                   |
| Deutsche Bank AG         | 101             |          |                   |
| Goldman Sachs Group Inc. | 9,600           |          |                   |
| Goldman Sachs Group Inc. | 6,600           |          |                   |
| Goldman Sachs Group Inc. | 5,200           |          |                   |
| Goldman Sachs Group Inc. | 5,100           |          |                   |
| Goldman Sachs Group Inc. | 5,000           |          |                   |
| Goldman Sachs Group Inc. | 3,400           |          |                   |
| Goldman Sachs Group Inc. | 3,150           |          |                   |

(DOLLARS EXPRESSED IN THOUSANDS)

| Maturity Date | Buying/Selling Protection | Pay/Receive Rate | Fair Value 2014 | Fair Value 2013 |
|---------------|---------------------------|------------------|-----------------|-----------------|
| 6/20/2018     | Selling                   | 5.000%           | -               | 87              |
| 9/20/2017     | Buying                    | 1.000%           | -               | (21)            |
| 3/20/2018     | Buying                    | 1.000%           | -               | (10)            |
| 6/20/2018     | Buying                    | 5.000%           | -               | (27)            |
| 3/20/2018     | Buying                    | 1.000%           | -               | 20              |
| 6/20/2019     | Selling                   | 1.000%           | (341)           | -               |
| 12/20/2018    | Selling                   | 1.000%           | (63)            | -               |
| 12/20/2018    | Selling                   | 1.000%           | 64              | -               |
| 9/20/2014     | Selling                   | 1.000%           | -               | (11)            |
| 9/20/2014     | Selling                   | 1.000%           | (2)             | (15)            |
| 6/20/2019     | Selling                   | 1.000%           | 25              | -               |
| 9/20/2015     | Selling                   | 1.000%           | 2               | -               |
| 9/20/2014     | Selling                   | 1.000%           | 2               | (9)             |
| 3/20/2021     | Selling                   | 5.000%           | 135             | -               |
| 3/20/2021     | Selling                   | 5.000%           | 125             | -               |
| 9/20/2015     | Selling                   | 1.000%           | 11              | -               |
| 12/20/2016    | Selling                   | 1.000%           | 21              | 8               |
| 12/20/2018    | Selling                   | 1.000%           | 7               | -               |
| 6/20/2019     | Buying                    | 5.000%           | (169)           | -               |
| 12/20/2018    | Buying                    | 5.000%           | (134)           | -               |
| 6/20/2015     | Selling                   | 1.000%           | 5               | (3)             |
| 6/20/2018     | Selling                   | 1.000%           | (3)             | (27)            |
| 9/20/2014     | Selling                   | 1.000%           | 1               | -               |
| 9/20/2014     | Buying                    | 10.000%          | 1               | -               |
| 6/20/2018     | Selling                   | 5.000%           | -               | 462             |
| 3/20/2018     | Buying                    | 1.000%           | -               | (155)           |
| 9/20/2013     | Selling                   | 1.000%           | -               | (1)             |
| 12/20/2016    | Buying                    | 1.000%           | -               | (56)            |
| 9/20/2017     | Buying                    | 1.000%           | -               | (4)             |
| 9/20/2017     | Buying                    | 1.000%           | -               | (3)             |
| 9/20/2017     | Buying                    | 1.000%           | -               | (4)             |
| 9/20/2017     | Buying                    | 1.000%           | -               | (4)             |
| 9/20/2017     | Buying                    | 1.000%           | -               | 2               |
| 3/20/2018     | Buying                    | 1.000%           | -               | (75)            |
| 9/20/2013     | Selling                   | 1.000%           | -               | 1               |
| 3/20/2018     | Buying                    | 1.000%           | -               | (50)            |
| 12/20/2013    | Selling                   | 5.000%           | -               | 28              |
| 6/20/2018     | Selling                   | 5.000%           | -               | 54              |
| 12/20/2017    | Selling                   | 5.000%           | -               | 26              |
| 3/20/2018     | Selling                   | 1.000%           | -               | (4)             |
| 9/20/2014     | Selling                   | 1.000%           | 16              | -               |
| 6/20/2019     | Selling                   | 1.000%           | 75              | -               |
| 9/20/2015     | Selling                   | 1.000%           | 41              | -               |
| 6/20/2019     | Selling                   | 1.000%           | 20              | -               |
| 12/20/2018    | Selling                   | 1.000%           | 30              | -               |
| 6/20/2019     | Selling                   | 1.000%           | 46              | -               |
| 12/20/2016    | Buying                    | 1.000%           | (58)            | (43)            |

**FIGURE 2.23 – SWAPS, cont.**

AS OF JUNE 30

| Counterparty             | Notional Amount | VRS Rate | Counterparty Rate |
|--------------------------|-----------------|----------|-------------------|
| Goldman Sachs Group Inc. | 2,300           |          |                   |
| Goldman Sachs Group Inc. | 1,400           |          |                   |
| Goldman Sachs Group Inc. | 1,300           |          |                   |
| Goldman Sachs Group Inc. | 1,050           |          |                   |
| Goldman Sachs Group Inc. | 1,000           |          |                   |
| Goldman Sachs Group Inc. | 800             |          |                   |
| Goldman Sachs Group Inc. | 600             |          |                   |
| Goldman Sachs Group Inc. | 400             |          |                   |
| Goldman Sachs Group Inc. | 300             |          |                   |
| Goldman Sachs Group Inc. | 100             |          |                   |
| Goldman Sachs Group Inc. | 11,699          |          |                   |
| Goldman Sachs Group Inc. | 8,400           |          |                   |
| Goldman Sachs Group Inc. | 7,400           |          |                   |
| Goldman Sachs Group Inc. | 6,889           |          |                   |
| Goldman Sachs Group Inc. | 5,940           |          |                   |
| Goldman Sachs Group Inc. | 5,940           |          |                   |
| Goldman Sachs Group Inc. | 5,850           |          |                   |
| Goldman Sachs Group Inc. | 5,350           |          |                   |
| Goldman Sachs Group Inc. | 4,600           |          |                   |
| Goldman Sachs Group Inc. | 3,900           |          |                   |
| Goldman Sachs Group Inc. | 3,900           |          |                   |
| Goldman Sachs Group Inc. | 3,100           |          |                   |
| Goldman Sachs Group Inc. | 2,950           |          |                   |
| Goldman Sachs Group Inc. | 2,860           |          |                   |
| Goldman Sachs Group Inc. | 2,600           |          |                   |
| Goldman Sachs Group Inc. | 2,500           |          |                   |
| Goldman Sachs Group Inc. | 2,000           |          |                   |
| Goldman Sachs Group Inc. | 1,400           |          |                   |
| Goldman Sachs Group Inc. | 1,200           |          |                   |
| Goldman Sachs Group Inc. | 975             |          |                   |
| Goldman Sachs Group Inc. | 300             |          |                   |
| Goldman Sachs Group Inc. | 101             |          |                   |
| Goldman Sachs Group Inc. | 101             |          |                   |
| HSBC Securities Inc.     | 6,000           |          |                   |
| HSBC Securities Inc.     | 4,600           |          |                   |
| HSBC Securities Inc.     | 1,900           |          |                   |
| HSBC Securities Inc.     | 1,500           |          |                   |
| HSBC Securities Inc.     | 1,400           |          |                   |
| HSBC Securities Inc.     | 1,300           |          |                   |
| HSBC Securities Inc.     | 1,100           |          |                   |
| HSBC Securities Inc.     | 1,000           |          |                   |
| HSBC Securities Inc.     | 1,000           |          |                   |
| HSBC Securities Inc.     | 900             |          |                   |
| HSBC Securities Inc.     | 844             |          |                   |
| HSBC Securities Inc.     | 756             |          |                   |
| HSBC Securities Inc.     | 700             |          |                   |
| HSBC Securities Inc.     | 400             |          |                   |

(DOLLARS EXPRESSED IN THOUSANDS)

| Maturity Date | Buying/Selling Protection | Pay/Receive Rate | Fair Value 2014 | Fair Value 2013 |
|---------------|---------------------------|------------------|-----------------|-----------------|
| 3/20/2019     | Selling                   | 5.000%           | 319             | -               |
| 6/20/2019     | Buying                    | 1.000%           | (57)            | -               |
| 3/20/2018     | Selling                   | 5.000%           | (35)            | -               |
| 12/20/2020    | Selling                   | 1.000%           | (60)            | -               |
| 3/20/2021     | Selling                   | 5.000%           | 83              | -               |
| 12/20/2018    | Buying                    | 1.000%           | (12)            | -               |
| 3/20/2015     | Selling                   | 1.000%           | 3               | (2)             |
| 3/20/2015     | Selling                   | 1.000%           | (2)             | -               |
| 12/20/2018    | Selling                   | 1.000%           | 4               | -               |
| 9/20/2018     | Selling                   | 5.000%           | 13              | -               |
| 12/20/2017    | Buying                    | 1.000%           | -               | 270             |
| 6/20/2018     | Selling                   | 10.000%          | -               | (144)           |
| 6/20/2018     | Selling                   | 5.000%           | -               | 590             |
| 12/20/2016    | Buying                    | 1.000%           | -               | 32              |
| 12/20/2016    | Buying                    | Variable Rate    | -               | 44              |
| 12/20/2016    | Buying                    | Variable Rate    | -               | 54              |
| 9/20/2017     | Selling                   | 1.000%           | -               | (153)           |
| 9/20/2018     | Selling                   | 0.890%           | -               | 121             |
| 3/20/2018     | Selling                   | 5.000%           | -               | (322)           |
| 6/20/2018     | Buying                    | Variable Rate    | -               | 96              |
| 6/20/2018     | Buying                    | 3.000%           | -               | 134             |
| 3/20/2018     | Selling                   | 5.000%           | -               | 413             |
| 12/20/2017    | Selling                   | 5.000%           | -               | 174             |
| 3/20/2018     | Buying                    | 1.000%           | -               | (18)            |
| 3/20/2018     | Buying                    | 1.000%           | -               | 65              |
| 12/20/2016    | Buying                    | 1.000%           | -               | 37              |
| 3/20/2018     | Selling                   | 5.000%           | -               | (140)           |
| 9/20/2016     | Selling                   | 5.000%           | -               | 111             |
| 12/20/2017    | Selling                   | 5.000%           | -               | 89              |
| 12/20/2016    | Selling                   | 1.000%           | -               | (138)           |
| 9/20/2019     | Selling                   | 5.000%           | -               | 22              |
| 12/20/2017    | Selling                   | 1.000%           | -               | (4)             |
| 3/20/2018     | Selling                   | 1.000%           | -               | (4)             |
| 9/20/2014     | Selling                   | 1.000%           | 5               | -               |
| 9/20/2014     | Selling                   | 1.000%           | 2               | -               |
| 3/20/2015     | Selling                   | 1.000%           | 10              | (7)             |
| 3/20/2019     | Selling                   | 1.000%           | (44)            | -               |
| 12/20/2018    | Selling                   | 1.000%           | 23              | -               |
| 9/20/2015     | Selling                   | 1.000%           | 10              | -               |
| 6/20/2019     | Selling                   | 1.000%           | 15              | -               |
| 6/20/2019     | Selling                   | 1.000%           | 11              | -               |
| 6/20/2019     | Selling                   | 1.000%           | (33)            | -               |
| 3/20/2019     | Selling                   | 1.000%           | (26)            | -               |
| 6/20/2019     | Selling                   | 1.000%           | 3               | -               |
| 6/20/2019     | Selling                   | 1.000%           | 3               | -               |
| 6/20/2018     | Selling                   | 1.000%           | (3)             | (27)            |
| 3/20/2019     | Selling                   | 1.000%           | (11)            | -               |

**FIGURE 2.23 – SWAPS, cont.**

AS OF JUNE 30

| Counterparty                         | Notional Amount   | VRS Rate                         | Counterparty Rate             |
|--------------------------------------|-------------------|----------------------------------|-------------------------------|
| HSBC Securities Inc.                 | 200               |                                  |                               |
| HSBC Securities Inc.                 | 100               |                                  |                               |
| Intercontinental Exchange Holdings   | 17,700            |                                  |                               |
| UBS AG                               | 7,350             |                                  |                               |
| UBS AG                               | 3,200             |                                  |                               |
| UBS AG                               | 2,800             |                                  |                               |
| <b>Totals – Credit Default Swaps</b> | <b>\$ 533,682</b> |                                  |                               |
| <b>Interest Rate Swaps:</b>          |                   |                                  |                               |
| Barclays PLC                         | \$ 921            | 3-month Johannesburg (JIBAR)     | 8.00%                         |
| Barclays PLC                         | 544               | Brazil Cetip Interbank Deposit   | 10.63% CDI                    |
| Barclays PLC                         | 136               | Brazil Cetip Interbank Deposit   | 11.47%                        |
| Barclays PLC                         | 5,794             | Brazil Cetip Interbank Deposit   | 10.91%                        |
| BlackRock Inc.                       | 786               | Mexico Interbank 28-day Index    | 5.00%                         |
| Chicago Mercantile Exchange Inc.     | 49,000            | 2.00%                            | 3-month LIBOR                 |
| Chicago Mercantile Exchange Inc.     | 37,400            | 3-month LIBOR                    | 3.00%                         |
| Chicago Mercantile Exchange Inc.     | 8,010             | 2.00%                            | 6-month EURIBOR               |
| Chicago Mercantile Exchange Inc.     | 6,292             | 1.00%                            | 6-month LIBOR - Japanese Yen  |
| Chicago Mercantile Exchange Inc.     | 4,100             | 3.75%                            | 3-month LIBOR                 |
| Chicago Mercantile Exchange Inc.     | 3,933             | 3.00%                            | 6-month LIBOR - British Pound |
| Chicago Mercantile Exchange Inc.     | 1,780             | 0.40%                            | 3-month EURIBOR               |
| Chicago Mercantile Exchange Inc.     | 1,369             | 6-month EURIBOR                  | 1.50%                         |
| Credit Suisse Group AG               | 13,807            | Brazil Cetip Interbank Deposit   | 8.50%                         |
| Credit Suisse Group AG               | 13,128            | Brazil Cetip Interbank Deposit   | 10.45% CDI                    |
| Deutsche Bank AG                     | 1,526             | Klibor Interbank Offered Rate    | 3.335%                        |
| Deutsche Bank AG                     | 1,406             | Brazil Cetip Interbank Deposit   | 10.630%                       |
| Deutsche Bank AG                     | 848               | 5.25% DUB                        | Mexican Interbank Equilibrium |
| Deutsche Bank AG                     | 154               | 6-month LIBOR-Thai Baht          | 3.41%                         |
| Deutsche Bank AG                     | 154               | 6-month LIBOR-Thai Baht          | 3.41%                         |
| Deutsche Bank AG                     | 62                | 6-month LIBOR-Thai Baht          | 3.39%                         |
| Deutsche Bank AG                     | 31                | 6-month LIBOR-Thai Baht          | 3.37%                         |
| Deutsche Bank AG                     | 11,370            | Mexico Interbank 28-day Index    | 5.00%                         |
| Deutsche Bank AG                     | 10,252            | 6-month Australian BBR-BBSW      | 4.00%                         |
| Deutsche Bank AG                     | 4,074             | Brazil Cetip Interbank Deposit   | 8.285%                        |
| Deutsche Bank AG                     | 3,531             | Brazil Cetip Interbank Deposit   | 8.485% CDI                    |
| Deutsche Bank AG                     | 1,100             | 2.75%                            | 3-month LIBOR                 |
| HSBC Holdings PLC                    | 4,310             | Brazil Cetip Interbank Deposit   | 12.06%                        |
| HSBC Holdings PLC                    | 2,158             | Mexico Interbank 28-day Index    | 5.75%                         |
| HSBC Holdings PLC                    | 624               | Mexico Interbank 28-day Index    | 5.50%                         |
| HSBC Holdings PLC                    | 612               | Colombia IBR Overnight Interbank | 6.20%                         |
| HSBC Holdings PLC                    | 136               | Brazil Cetip Interbank Deposit   | 8.32% CDI                     |
| UBS AG                               | 15,653            | Brazil Cetip Interbank Deposit   | 12.56% UAG                    |
| UBS AG                               | 22,408            | Brazil Cetip Interbank Deposit   | 8.20% CDI                     |
| UBS AG                               | 11,169            | Mexico Interbank 28-day Index    | 5.80%                         |
| UBS AG                               | 1,361             | Brazil Cetip Interbank Deposit   | 9.13%                         |
| UBS AG                               | 1,222             | Brazil Cetip Interbank Deposit   | 8.59%                         |
| UBS AG                               | 231               | 5.25% UAG                        | Mexican Interbank Equilibrium |
| <b>Total Interest Rate Swaps</b>     | <b>\$ 241,392</b> |                                  |                               |



(DOLLARS EXPRESSED IN THOUSANDS)

| Maturity Date | Buying/Selling Protection | Pay/Receive Rate | Fair Value 2014 | Fair Value 2013   |
|---------------|---------------------------|------------------|-----------------|-------------------|
| 3/20/2023     | Selling                   | 1.000%           | (18)            | (26)              |
| 3/20/2023     | Selling                   | 1.000%           | (9)             | (13)              |
| 6/20/2019     | Selling                   | 5.000%           | 2,101           | -                 |
| 6/20/2017     | Buying                    | 1.000%           | -               | (200)             |
| 9/20/2017     | Buying                    | 1.000%           | -               | 3                 |
| 3/20/2018     | Buying                    | 1.000%           | -               | (58)              |
|               |                           |                  | <b>\$ 2,712</b> | <b>\$ (733)</b>   |
| 12/18/2023    |                           |                  | \$ (9)          | \$ -              |
| 1/2/2017      |                           |                  | (5)             | -                 |
| 1/2/2017      |                           |                  | (1)             | -                 |
| 1/2/2017      |                           |                  | -               | (8)               |
| 2/26/2018     |                           |                  | 16              | (21)              |
| 6/18/2019     |                           |                  | (742)           | -                 |
| 6/18/2024     |                           |                  | 1,314           | -                 |
| 9/17/2024     |                           |                  | (388)           | -                 |
| 9/18/2023     |                           |                  | (210)           | -                 |
| 6/18/2044     |                           |                  | (361)           | -                 |
| 9/17/2024     |                           |                  | (56)            | -                 |
| 3/14/2015     |                           |                  | (3)             | -                 |
| 3/19/2019     |                           |                  | 56              | -                 |
| 1/2/2017      |                           |                  | -               | (745)             |
| 1/2/2017      |                           |                  | -               | (214)             |
| 4/19/2018     |                           |                  | (30)            | (19)              |
| 1/2/2017      |                           |                  | (13)            | -                 |
| 9/6/2019      |                           |                  | 8               | (38)              |
| 1/15/2021     |                           |                  | 2               | -                 |
| 1/21/2021     |                           |                  | (2)             | -                 |
| 11/19/2018    |                           |                  | 1               | -                 |
| 11/14/2018    |                           |                  | 1               | -                 |
| 2/22/2023     |                           |                  | -               | (1,446)           |
| 3/15/2023     |                           |                  | -               | (238)             |
| 1/2/2017      |                           |                  | -               | (241)             |
| 1/2/2015      |                           |                  | -               | (50)              |
| 6/19/2043     |                           |                  | -               | 143               |
| 1/4/2021      |                           |                  | 13              | -                 |
| 6/5/2023      |                           |                  | (32)            | (153)             |
| 2/22/2023     |                           |                  | (19)            | (54)              |
| 3/21/2024     |                           |                  | 4               | -                 |
| 1/2/2017      |                           |                  | -               | (8)               |
| 1/4/2021      |                           |                  | 326             | -                 |
| 1/2/2017      |                           |                  | -               | (1,369)           |
| 6/8/2016      |                           |                  | 433             | 240               |
| 1/2/2017      |                           |                  | (48)            | (43)              |
| 1/2/2017      |                           |                  | -               | (66)              |
| 9/6/2019      |                           |                  | 2               | (11)              |
|               |                           |                  | <b>\$ 257</b>   | <b>\$ (4,341)</b> |

**FIGURE 2.23 – SWAPS, cont.**

AS OF JUNE 30

| Counterparty               | Notional Amount     | VRS Rate               | Counterparty Rate         |
|----------------------------|---------------------|------------------------|---------------------------|
| <b>Total Return Swaps:</b> |                     |                        |                           |
| Goldman Sachs Group Inc.   | 451,410             | 0.47%                  | MSCI AC World Index IMI   |
| Goldman Sachs Group Inc.   | 142,767             | 3-month LIBOR + 42 bps | MSCI Daily Small Cap      |
| Goldman Sachs Group Inc.   | 5,321               | 3-month LIBOR          | Kuraray Co. Ltd.          |
| Goldman Sachs Group Inc.   | 5,533               | 3-month LIBOR          | Shionogi Co. Ltd.         |
| Goldman Sachs Group Inc.   | 4,638               | 3-month LIBOR          | MSAD Insurance Group      |
| Goldman Sachs Group Inc.   | 5,085               | 3-month LIBOR          | Canon Inc.                |
| Goldman Sachs Group Inc.   | 4,582               | 3-month LIBOR          | Itochu Corp.              |
| Goldman Sachs Group Inc.   | 4,684               | 3-month LIBOR          | Trend Micro Inc.          |
| Goldman Sachs Group Inc.   | 4,428               | 3-month LIBOR          | Takeda Pharmaceuticals    |
| Goldman Sachs Group Inc.   | 4,164               | 3-month LIBOR          | Daiichi Sankyo Co.        |
| Goldman Sachs Group Inc.   | 4,325               | 3-month LIBOR          | Dai Nippon Printing       |
| Goldman Sachs Group Inc.   | 3,001               | 3-month LIBOR          | Asahi Glass Co. Ltd.      |
| Goldman Sachs Group Inc.   | 4,031               | 3-month LIBOR          | Eisai Co. Ltd.            |
| Goldman Sachs Group Inc.   | 4,491               | 3-month LIBOR          | Mitsui Co. Ltd.           |
| Goldman Sachs Group Inc.   | 4,166               | 3-month LIBOR          | NKSJ Holdings Inc.        |
| Goldman Sachs Group Inc.   | 3,795               | 3-month LIBOR          | Sumitomo Corp.            |
| Goldman Sachs Group Inc.   | 4,166               | 3-month LIBOR          | Shiseido Co Ltd.          |
| Goldman Sachs Group Inc.   | 3,878               | 3-month LIBOR          | Mitsubishi Corp.          |
| Goldman Sachs Group Inc.   | 32,278              | 3-month LIBOR          | Fast Retailing Co. Ltd.   |
| Goldman Sachs Group Inc.   | 1,693               | 3-month LIBOR          | Sharp Corp.               |
| Goldman Sachs Group Inc.   | 3,703               | 3-month LIBOR          | Nippon Telegraph          |
| Goldman Sachs Group Inc.   | 2,676               | 3-month LIBOR          | Marubeni Corp.            |
| Goldman Sachs Group Inc.   | 2,746               | 3-month LIBOR          | JX Holdings Inc.          |
| Goldman Sachs Group Inc.   | 4,409               | 3-month LIBOR          | Alps Electric Co Ltd.     |
| Goldman Sachs Group Inc.   | 2,241               | 3-month LIBOR          | Sumitomo Mitsui Trust     |
| Goldman Sachs Group Inc.   | 2,211               | 3-month LIBOR          | Nippon Electric Glass     |
| Goldman Sachs Group Inc.   | 2,290               | 3-month LIBOR          | Sumitomo Mitsui Financial |
| Goldman Sachs Group Inc.   | 2,741               | 3-month LIBOR          | Showa Shell Sekiyu        |
| Goldman Sachs Group Inc.   | 2,274               | 3-month LIBOR          | Oji Paper Co. Ltd.        |
| Goldman Sachs Group Inc.   | 2,013               | 3-month LIBOR          | Sumitomo Chemical Co.     |
| Goldman Sachs Group Inc.   | 1,905               | 3-month LIBOR          | NTN Corp.                 |
| Goldman Sachs Group Inc.   | 1,634               | 3-month LIBOR          | Aozora Bank Ltd.          |
| Goldman Sachs Group Inc.   | 1,409               | 3-month LIBOR          | Denki Kagaku Kogyo        |
| Goldman Sachs Group Inc.   | 1,075               | 3-month LIBOR          | Mizuho Financial Group    |
| Goldman Sachs Group Inc.   | 1,054               | 3-month LIBOR          | NTT Docomo Inc.           |
| Goldman Sachs Group Inc.   | 908                 | 3-month LIBOR          | Mitsui Engineer Ship      |
| Goldman Sachs Group Inc.   | 753                 | 3-month LIBOR          | Chubu Electric Power      |
| Goldman Sachs Group Inc.   | 799                 | 3-month LIBOR          | Toyobo Co. Ltd.           |
| Goldman Sachs Group Inc.   | 513                 | 3-month LIBOR          | Kansai Electric Power     |
| Goldman Sachs Group Inc.   | 790                 | 3-month LIBOR          | Nippon Suisan Kaisha      |
| Goldman Sachs Group Inc.   | 2                   | 3-month LIBOR + 42 bps | MSCI ACWI                 |
| <b>Total Return Swaps</b>  | <b>\$ 736,582</b>   |                        |                           |
| <b>Total Swaps</b>         | <b>\$ 1,511,656</b> |                        |                           |

(DOLLARS EXPRESSED IN THOUSANDS)

| Maturity Date | Buying/Selling Protection | Pay/Receive Rate | Fair Value 2014 | Fair Value 2013   |
|---------------|---------------------------|------------------|-----------------|-------------------|
| 4/2/2013      |                           |                  | \$ -            | \$ (160)          |
| 8/20/2014     |                           |                  | 11,702          | 19                |
| 8/20/2014     |                           |                  | (471)           | 5                 |
| 8/20/2014     |                           |                  | (727)           | 5                 |
| 8/20/2014     |                           |                  | (193)           | 4                 |
| 8/20/2014     |                           |                  | 65              | 4                 |
| 8/20/2014     |                           |                  | (555)           | 4                 |
| 8/20/2014     |                           |                  | (253)           | 3                 |
| 8/20/2014     |                           |                  | (210)           | 3                 |
| 8/20/2014     |                           |                  | (500)           | 3                 |
| 8/20/2014     |                           |                  | (375)           | 3                 |
| 8/20/2014     |                           |                  | (240)           | 3                 |
| 8/20/2014     |                           |                  | (159)           | 3                 |
| 8/20/2014     |                           |                  | (319)           | 3                 |
| 8/20/2014     |                           |                  | (142)           | 3                 |
| 8/20/2014     |                           |                  | (256)           | 3                 |
| 8/20/2014     |                           |                  | (392)           | 2                 |
| 8/20/2014     |                           |                  | (282)           | 2                 |
| 8/20/2014     |                           |                  | (1,577)         | 2                 |
| 8/20/2014     |                           |                  | (391)           | 2                 |
| 8/20/2014     |                           |                  | (351)           | 2                 |
| 8/20/2014     |                           |                  | (250)           | 2                 |
| 8/20/2014     |                           |                  | (197)           | 2                 |
| 8/20/2014     |                           |                  | (724)           | 2                 |
| 8/20/2014     |                           |                  | (272)           | 2                 |
| 8/20/2014     |                           |                  | (410)           | 2                 |
| 8/20/2014     |                           |                  | (224)           | 2                 |
| 8/20/2014     |                           |                  | (384)           | 2                 |
| 8/20/2014     |                           |                  | 10              | 1                 |
| 8/20/2014     |                           |                  | (66)            | 1                 |
| 8/20/2014     |                           |                  | (495)           | 1                 |
| 8/20/2014     |                           |                  | (174)           | 1                 |
| 8/20/2014     |                           |                  | (127)           | 1                 |
| 8/20/2014     |                           |                  | (55)            | 1                 |
| 8/20/2014     |                           |                  | (57)            | 1                 |
| 8/20/2014     |                           |                  | (212)           | 1                 |
| 8/20/2014     |                           |                  | (55)            | 1                 |
| 8/20/2014     |                           |                  | (64)            | 1                 |
| 8/20/2014     |                           |                  | (8)             | 1                 |
| 8/20/2014     |                           |                  | (137)           | -                 |
| 9/24/2014     |                           |                  | -               | -                 |
|               |                           |                  | <b>\$ 473</b>   | <b>\$ (57)</b>    |
|               |                           |                  | <b>\$ 3,442</b> | <b>\$ (5,131)</b> |

**12. 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 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 20, 2013. Best estimates of arithmetic real rates of return for each major asset class included in the System's target asset allocation for fiscal year 2014 are summarized in Figure 2.24.

## FIGURE 2.24 – ASSET ALLOCATION

FOR THE YEAR ENDED JUNE 30, 2014

| Asset Class (Strategy)    | Target Allocation                    | Arithmetic Long-Term Expected Rate of Return | Weighted Average Long-Term Expected Rate of Return |
|---------------------------|--------------------------------------|--|--|
| U.S. Equity               | 19.50%                               | 6.46%  | 1.26%  |
| Developed Non-U.S Equity  | 16.50%                               | 6.28%  | 1.04%  |
| Emerging Market Equity    | 6.00%                                | 10.00%                                       | 0.60%  |
| Fixed Income              | 15.00%                               | 0.09%  | 0.01%  |
| Emerging Debt             | 3.00%                                | 3.51%  | 0.11%  |
| Rate-Sensitive Credit     | 4.50%                                | 3.51%  | 0.16%  |
| Non-Rate-Sensitive Credit | 4.50%                                | 5.00%  | 0.23%  |
| Convertibles              | 3.00%                                | 4.81%  | 0.14%  |
| Public Real Assets        | 2.25%                                | 6.12%  | 0.14%  |
| Private Real Assets       | 12.75%                               | 7.10%  | 0.91%  |
| Private Equity            | 12.00%                               | 10.41%                                       | 1.25%  |
| Cash                      | 1.00%                                | -1.50%                                       | -0.02%   |
| <b>Total</b>              | <b>100.00%</b>                       |  | <b>5.83%</b>                                       |
|                           | Inflation                            |  | 2.50%  |
|                           | * Expected Arithmetic Nominal Return |  | 8.33%  |

\* The above allocation provides a one-year expected return of 8.33%. 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 pension system, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 7.44%, including expected inflation of 2.50%.

## 6. Capital Assets

The System's non-depreciable and depreciable capital assets for the year ended June 30, 2014, and the changes by category from the prior fiscal year-end are presented in Figure 2.25.

**FIGURE 2.25 – PROPERTY, PLANT, FURNITURE, EQUIPMENT AND INTANGIBLE ASSETS**

FOR THE YEAR ENDED JUNE 30, 2014

(EXPRESSED IN THOUSANDS)

|   | Balance<br>June 30, 2013 | Increases         | Decreases       | Balance<br>June 30, 2014 |
|---|--------------------------|-------------------|-----------------|--------------------------|
| <b>Non-Depreciable Capital Assets:</b>            |                          |                   |                 |                          |
| Land  | \$ 1,368                 | \$ -              | \$ -            | \$ 1,368                 |
| Construction in Progress                          | 316                      | 1,432             | 1,214           | 534                      |
| <b>Total Non-Depreciable Capital Assets</b>       | <b>1,684</b>             | <b>1,432</b>      | <b>1,214</b>    | <b>1,902</b>             |
| <b>Depreciable Capital and Intangible Assets:</b> |                          |                   |                 |                          |
| Building  | 4,632                    | -                 | -               | 4,632                    |
| Furniture and Equipment                           | 5,819                    | 320               | -               | 6,139                    |
| Intangible Assets                                 | 29,801                   | 1,214             | -               | 31,015                   |
| <b>Total Depreciable Capital Assets</b>           | <b>40,252</b>            | <b>1,534</b>      | <b>-</b>        | <b>41,786</b>            |
| <b>Less Accumulated Depreciation:</b>             |                          |                   |                 |                          |
| Building  | 1,736                    | 116               | -               | 1,852                    |
| Furniture and Equipment                           | 4,020                    | 546               | -               | 4,566                    |
| Intangible Assets                                 | 2,483                    | 4,360             | -               | 6,843                    |
| <b>Total Accumulated Depreciation</b>             | <b>8,239</b>             | <b>5,022</b>      | <b>-</b>        | <b>13,261</b>            |
| <b>Total Depreciable Capital Assets – Net</b>     | <b>32,013</b>            | <b>(3,488)</b>    | <b>-</b>        | <b>28,525</b>            |
| <b>Total Net Capital Assets</b>                   | <b>\$ 33,697</b>         | <b>\$ (2,056)</b> | <b>\$ 1,214</b> | <b>\$ 30,427</b>         |

Depreciation expense amounted to \$5,022,000 and \$3,173,000 in 2014 and 2013, respectively.

## 7. Operating Leases

The System has commitments under various operating leases for office space and parking. In general, the leases are for a 10-year term. In most cases, the System expects that in the normal course of business, these leases will be replaced by similar leases. Total rental expense for the year ended June 30, 2014, was \$2,270,000. The System's total future minimum rental payments as of June 30, 2014, are presented in Figure 2.26.

**FIGURE 2.26 – OPERATING LEASES – FUTURE PAYMENTS**

AT JUNE 30, 2014

(EXPRESSED IN THOUSANDS)

| Year  | Amount           |
|---|------------------|
| 2015  | \$ 1,271         |
| 2016  | 1,308            |
| 2017  | 1,302            |
| 2018  | 1,259            |
| 2019  | 1,301            |
| 2020-2024                                   | 7,126            |
| <b>Total Future Minimum Rental Payments</b> | <b>\$ 13,567</b> |

## 8. 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 contribution requirement for general employees for the years ended June 30, 2014, and June 30, 2013, was 8.76% of covered payroll. There were approximately 51,051 state retirees, including System retirees, at June 30, 2014. Note 2.B provides information on the state's contribution toward funding the defined benefit plan for state employees for fiscal year 2014 and fiscal year 2013. The System's contribution requirement for its employees for fiscal year 2014 and fiscal year 2013 was \$2,178,000 and \$1,985,000, respectively.

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 for the years ended June 30, 2014, and June 30, 2013, was 1.19% of covered payroll. There were approximately 90,301 active state employees and 48,255 state retirees, including System employees and retirees, eligible for group life insurance coverage at June 30, 2014. The System's contribution requirement for its employees and retirees for fiscal year 2014 and fiscal year 2013 was \$296,000 and \$272,000, respectively.
- The state's contribution requirement for the Retiree Health Insurance Credit Program for the years ended June 30, 2014, and June 30, 2013, was 1.00% of covered payroll. There were approximately 41,191 state retirees, including System retirees, receiving the health insurance credit at June 30, 2014. The System's contribution requirement for its employees for fiscal year 2014 and fiscal year 2013 was \$249,000 and \$229,000, respectively.

- The state's contribution requirement for the Virginia Sickness and Disability Program (VSDP) for the years ended June 30, 2014, and June 30, 2013, was 0.47% of covered payroll. There were approximately 74,394 state employees, including System employees, enrolled in VSDP at June 30, 2014. The System's contribution requirement for its employees for fiscal year 2014 and fiscal year 2013 was \$112,000 and \$104,000, respectively.

Information regarding the Commonwealth's funding progress is presented in the Commonwealth's Comprehensive Annual 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.

## 9. 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, 2014. 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.

## 10. 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 2014 and the three preceding fiscal years.

## 11. Commitments

The System extends investment commitments in the normal course of business. At June 30, 2014 and 2013, these commitments amounted to \$7,251,232,000 and \$4,402,371,000, respectively.

## 12. Statutory Contribution Adjustment

For fiscal year 2013 and fiscal year 2014, pension contributions due or required were based on the June 30, 2011, actuarial valuation, which used a 10-year funding period for the deferred contributions from fiscal year 2011 and fiscal year 2012 and a 30-year funding period for the balance of the UAAL. The General Assembly, in accordance with Section 51.1145(K1) of the *Code of Virginia*, funded the employer retirement contribution rates for teachers and state employees at less than the rate determined by the actuary and certified by the VRS Board of Trustees. The percentage of the certified rate funded for fiscal year 2013 and fiscal year 2014 was 69.53% for teachers, 67.02% for state employees, 75.84% for SPORS, 75.82% for VaLORS and 83.98% for JRS. As a result, the fiscal year 2013 and fiscal year 2014

employer retirement contribution rate for teachers was reduced from 16.77% to 11.66% and for state employees from 13.07% to 8.76%. Additionally, the employer retirement contribution rates for SPORS, VaLORS and JRS were reduced from 32.62%, 19.52% and 54.11% to 24.74%, 14.80% and 45.44%, 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 2013 and fiscal year 2014, other post-employment benefit plan contributions due or required also were based on the June 30, 2011, actuarial valuation, which used a 30-year funding period for the UAAL. The General Assembly again funded less than the rates determined by the actuary by increasing the investment return assumption from 7.00% to 8.00%. As a result, the fiscal year 2013 and fiscal year 2014 rate for the Group Life Insurance Program was reduced from 1.32% to 1.19% and for VSDP from 0.58% to 0.47%. Additionally, for the Retiree Health Insurance Credit Program, the state employer rate was reduced from 1.05% to 1.00% and the teacher employer rate from 1.17% to 1.11%. There was no adjustment to the Retiree Health Insurance Credit Program employer contribution rates for political subdivision employers.

## REQUIRED SUPPLEMENTAL SCHEDULE OF CHANGES IN EMPLOYERS' NET PENSION LIABILITY

(DOLLARS IN THOUSANDS)

| Change in the Net Pension Liability  | VRS State<br>2014   | VRS Teacher<br>2014 | VRS Political<br>Subdivisions<br>2014 | SPORS<br>2014      | VaLORS<br>2014     | JRS<br>2014      | Total<br>2014       |
|--|---------------------|---------------------|---------------------------------------|--------------------|--------------------|------------------|---------------------|
| <b>Total pension liability:</b>  |                     |                     |                                       |                    |                    |                  |                     |
| Service cost   | \$ 369,120          | \$ 831,501          | \$ 524,758                            | \$ 18,341          | \$ 46,504          | \$ 24,024        | \$ 1,814,248        |
| Interest   | 1,436,064           | 2,722,787           | 1,243,386                             | 67,977             | 119,040            | 40,014           | 5,629,268           |
| Benefit changes  | -                   | -                   | -                                     | -                  | -                  | -                | -                   |
| Difference between actual and expected experience                                | -                   | -                   | -                                     | -                  | -                  | -                | -                   |
| Assumption changes   | -                   | -                   | -                                     | -                  | -                  | -                | -                   |
| Benefit payments   | (1,081,866)         | (1,874,636)         | (754,706)                             | (50,467)           | (78,412)           | (37,984)         | (3,878,071)         |
| Refunds of contributions   | (25,036)            | (36,103)            | (36,876)                              | (685)              | (4,665)            | -                | (103,365)           |
| <b>Net change in total pension liability</b>                                     | <b>698,282</b>      | <b>1,643,549</b>    | <b>976,562</b>                        | <b>35,166</b>      | <b>82,467</b>      | <b>26,054</b>    | <b>3,462,080</b>    |
| <b>Total pension liability – beginning</b>                                       | <b>21,068,651</b>   | <b>39,852,334</b>   | <b>18,158,446</b>                     | <b>996,690</b>     | <b>1,742,110</b>   | <b>590,626</b>   | <b>82,408,857</b>   |
| <b>Total pension liability – ending (a)</b>                                      | <b>\$21,766,933</b> | <b>\$41,495,883</b> | <b>\$19,135,008</b>                   | <b>\$1,031,856</b> | <b>\$1,824,577</b> | <b>\$616,680</b> | <b>\$85,870,937</b> |
| <b>Plan fiduciary net position:</b>  |                     |                     |                                       |                    |                    |                  |                     |
| Contributions – employer   | \$ 343,259          | \$ 853,634          | \$ 539,366                            | \$ 42,683          | \$ 67,483          | \$ 27,727        | \$ 1,874,152        |
| Contributions – member   | 198,035             | 371,241             | 225,555                               | 5,646              | 17,908             | 3,051            | 821,436             |
| Net investment income  | 2,243,999           | 4,042,441           | 2,272,284                             | 98,682             | 156,786            | 60,833           | 8,875,025           |
| Benefit payments   | (1,081,866)         | (1,874,636)         | (754,706)                             | (50,467)           | (78,412)           | (37,984)         | (3,878,071)         |
| Refunds of contributions   | (25,036)            | (36,103)            | (36,876)                              | (685)              | (4,665)            | -                | (103,365)           |
| Administrative expense   | (12,341)            | (22,036)            | (12,153)                              | (431)              | (681)              | (268)            | (47,910)            |
| Other  | 123                 | 217                 | 120                                   | -                  | -                  | -                | 460                 |
| <b>Net change in plan fiduciary net position</b>                                 | <b>1,666,173</b>    | <b>3,334,758</b>    | <b>2,233,590</b>                      | <b>95,428</b>      | <b>158,419</b>     | <b>53,359</b>    | <b>7,541,727</b>    |
| <b>Plan fiduciary net position – beginning</b>                                   | <b>14,502,362</b>   | <b>26,076,425</b>   | <b>14,393,949</b>                     | <b>625,562</b>     | <b>992,031</b>     | <b>388,835</b>   | <b>56,979,164</b>   |
| <b>Plan fiduciary net position – ending (b)</b>                                  | <b>\$16,168,535</b> | <b>\$29,411,183</b> | <b>\$16,627,539</b>                   | <b>\$720,990</b>   | <b>\$1,150,450</b> | <b>\$442,194</b> | <b>\$64,520,891</b> |
| <b>Net pension liability – ending (a-b)</b>                                      | <b>\$5,598,398</b>  | <b>\$12,084,700</b> | <b>\$2,507,469</b>                    | <b>\$310,866</b>   | <b>\$674,127</b>   | <b>\$174,486</b> | <b>\$21,350,046</b> |
| Plan fiduciary net position as a percentage of the total pension liability (b/a) | 74.28%              | 70.88%              | 86.90%                                | 69.87%             | 63.05%             | 71.71%           | 75.14%              |
| Covered employee payroll (c)   | \$3,861,712         | \$7,313,025         | \$4,434,764                           | \$112,010          | \$352,492          | \$61,020         | \$16,135,023        |
| Net pension liability as a percentage of covered employee payroll ((a-b)/c)      | 144.97%             | 165.25%             | 56.54%                                | 277.53%            | 191.25%            | 285.95%          | 132.32%             |



## REQUIRED SUPPLEMENTAL SCHEDULE OF EMPLOYER CONTRIBUTIONS – PENSION PLANS

(DOLLARS IN THOUSANDS)

| Year Ended<br>June 30                                     | Actuarially<br>Determined<br>Contribution | Contributions in Relation<br>to the Actuarially<br>Determined Contribution | Contributions<br>Deficiency<br>(Excess) | Covered<br>Employee<br>Payroll | Contributions as a<br>Percentage of Covered<br>Employee Payroll |
|---|---|--|---|--------------------------------|---|
| VIRGINIA RETIREMENT SYSTEM (VRS) – STATE                  |   |  |   |                                |   |
| 2014  | \$ 504,726                                | \$ 338,286   | \$ 166,440                              | \$ 3,861,712                   | 8.76%   |
| 2013  | 485,577                                   | 325,452  | 160,125                                 | 3,715,205                      | 8.76%   |
| 2012  | 309,930                                   | 117,696  | 192,234                                 | 3,663,475                      | 3.21%   |
| 2011  | 294,363                                   | 74,113   | 220,250                                 | 3,479,484                      | 2.13%   |
| 2010  | 285,209                                   | 176,751  | 108,458                                 | 3,556,222                      | 4.97%   |
| 2009  | 290,653                                   | 225,782  | 64,871                                  | 3,624,109                      | 6.23%   |
| 2008  | 260,965                                   | 218,954  | 42,011                                  | 3,560,228                      | 6.15%   |
| 2007  | 246,458                                   | 192,997  | 53,461                                  | 3,362,317                      | 5.74%   |
| 2006  | 124,556                                   | 125,197  | (641)                                   | 3,201,969                      | 3.91%   |
| 2005  | 116,997                                   | 117,599  | (602)                                   | 3,007,647                      | 3.91%   |
| VIRGINIA RETIREMENT SYSTEM (VRS) – TEACHERS               |   |  |   |                                |   |
| 2014  | \$1,226,394                               | \$ 852,699   | \$ 373,695                              | \$ 7,313,025                   | 11.66%  |
| 2013  | 1,203,856                                 | 837,028  | 366,828                                 | 7,178,629                      | 11.66%  |
| 2012  | 903,655                                   | 443,078  | 460,577                                 | 6,999,653                      | 6.33%   |
| 2011  | 891,237                                   | 271,306  | 619,931                                 | 6,903,465                      | 3.93%   |
| 2010  | 839,550                                   | 450,218  | 389,332                                 | 7,090,791                      | 6.35%   |
| 2009  | 845,999                                   | 629,497  | 216,502                                 | 7,145,260                      | 8.81%   |
| 2008  | 766,559                                   | 706,222  | 60,337                                  | 6,856,523                      | 10.30%  |
| 2007  | 733,633                                   | 603,705  | 129,928                                 | 6,562,008                      | 9.20%   |
| 2006  | 499,861                                   | 408,528  | 91,333                                  | 6,171,124                      | 6.62%   |
| 2005  | 470,079                                   | 349,947  | 120,132                                 | 5,803,439                      | 6.03%   |
| VIRGINIA RETIREMENT SYSTEM (VRS) – POLITICAL SUBDIVISIONS |   |  |   |                                |   |
| 2014  | \$ 551,822                                | \$ 539,131   | \$ 12,691                               | \$ 4,434,764                   | 12.16%  |
| 2013  | 537,657                                   | 525,385  | 12,272                                  | 4,321,565                      | 12.16%  |
| 2012  | 400,879                                   | 400,879  | -                                       | 4,142,150                      | 9.68%   |
| 2011  | 391,531                                   | 391,531  | -                                       | 4,078,580                      | 9.60%   |
| 2010  | 363,982                                   | 363,982  | -                                       | 4,125,087                      | 8.82%   |
| 2009  | 364,366                                   | 364,366  | -                                       | 4,144,638                      | 8.79%   |
| 2008  | 351,469                                   | 351,469  | -                                       | 3,960,566                      | 8.87%   |
| 2007  | 319,516                                   | 319,516  | -                                       | 3,699,629                      | 8.64%   |
| 2006  | 239,827                                   | 239,827  | -                                       | 3,441,325                      | 6.97%   |
| 2005  | 223,869                                   | 223,869  | -                                       | 3,208,791                      | 6.98%   |

REQUIRED SUPPLEMENTAL SCHEDULE OF EMPLOYER CONTRIBUTIONS – PENSION PLANS, cont.

(DOLLARS IN THOUSANDS)

| Year Ended<br>June 30                             | Actuarially<br>Determined<br>Contribution | Contributions in Relation<br>to the Actuarially<br>Determined Contribution | Contributions<br>Deficiency<br>(Excess) | Covered<br>Employee<br>Payroll | Contributions as a<br>Percentage of Covered<br>Employee Payroll |
|---|---|--|---|--------------------------------|---|
| STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)  |   |  |   |                                |   |
| 2014  | \$ 36,538                                 | \$ 27,711  | \$ 8,827                                | \$ 112,010                     | 24.74%  |
| 2013  | 34,535                                    | 26,193   | 8,342                                   | 105,872                        | 24.74%  |
| 2012  | 26,250                                    | 11,441   | 14,809                                  | 102,701                        | 11.14%  |
| 2011  | 24,570                                    | 7,460  | 17,110                                  | 96,128                         | 7.76%   |
| 2010  | 23,791                                    | 15,714   | 8,077                                   | 98,757                         | 15.91%  |
| 2009  | 24,241                                    | 20,175   | 4,066                                   | 100,626                        | 20.05%  |
| 2008  | 22,941                                    | 20,989   | 1,952                                   | 101,106                        | 20.76%  |
| 2007  | 19,402                                    | 16,358   | 3,044                                   | 97,892                         | 16.71%  |
| 2006  | 23,132                                    | 15,258   | 7,874                                   | 92,526                         | 16.49%  |
| 2005  | 21,946                                    | 14,475   | 7,471                                   | 87,782                         | 16.49%  |
| VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS) |   |  |   |                                |   |
| 2014  | \$ 68,806                                 | \$ 52,169  | \$ 16,637                               | \$ 352,492                     | 14.80%  |
| 2013  | 68,463                                    | 50,392   | 16,071                                  | 340,489                        | 14.80%  |
| 2012  | 55,306                                    | 24,481   | 30,825                                  | 347,181                        | 7.05%   |
| 2011  | 53,686                                    | 17,255   | 36,431                                  | 337,010                        | 5.12%   |
| 2010  | 57,894                                    | 39,027   | 18,867                                  | 345,020                        | 11.31%  |
| 2009  | 60,059                                    | 50,932   | 9,127                                   | 357,922                        | 14.23%  |
| 2008  | 61,325                                    | 55,929   | 5,396                                   | 352,643                        | 15.86%  |
| 2007  | 56,190                                    | 48,338   | 7,852                                   | 323,115                        | 14.96%  |
| 2006  | 77,414                                    | 52,611   | 24,803                                  | 309,656                        | 16.99%  |
| 2005  | 74,301                                    | 50,495   | 23,806                                  | 297,202                        | 16.99%  |
| JUDICIAL RETIREMENT SYSTEM (JRS)                  |   |  |   |                                |   |
| 2014  | \$ 33,018                                 | \$ 27,728  | \$ 5,290                                | \$ 61,020                      | 45.44%  |
| 2013  | 32,185                                    | 27,028   | 5,157                                   | 59,481                         | 45.44%  |
| 2012  | 27,631                                    | 18,907   | 8,724                                   | 59,053                         | 32.02%  |
| 2011  | 28,101                                    | 17,303   | 10,798                                  | 60,058                         | 28.81%  |
| 2010  | 23,368                                    | 17,065   | 6,573                                   | 62,139                         | 27.46%  |
| 2009  | 23,148                                    | 21,000   | 2,148                                   | 60,853                         | 34.51%  |
| 2008  | 23,600                                    | 22,386   | 1,214                                   | 58,896                         | 38.01%  |
| 2007  | 22,557                                    | 20,530   | 2,027                                   | 56,293                         | 36.47%  |
| 2006  | 23,871                                    | 16,206   | 7,665                                   | 53,047                         | 30.55%  |
| 2005  | 22,490                                    | 15,269   | 7,221                                   | 49,979                         | 30.55%  |

**REQUIRED SUPPLEMENTAL SCHEDULE OF FUNDING PROGRESS –  
OTHER POST-EMPLOYMENT BENEFIT PLANS**

(DOLLARS IN MILLIONS)

| Actuarial<br>Valuation<br>Date June 30         | Actuarial<br>Value of<br>Assets (a) | Actuarial<br>Accrued<br>Liability<br>(AAL) -<br>Entry Age (b) | Unfunded<br>AAL (UAAL)<br>(b-a) | Funded<br>Ratio (a/b) | Covered<br>Payroll<br>(c) | UAAL as a<br>Percentage<br>of Covered<br>Payroll<br>(b-a)/(c) |
|--|-------------------------------------|---|---------------------------------|-----------------------|---------------------------|---|
| <b>GROUP LIFE INSURANCE FUND</b>               |                                     |   |                                 |                       |                           |   |
| 2013   | \$ 837                              | \$ 2,572  | \$ 1,735                        | 32.5%                 | \$ 17,132                 | 10.1%   |
| 2012   | 756                                 | 2,458   | 1,702                           | 30.7%                 | 16,697                    | 10.2%   |
| 2011   | 852                                 | 2,359   | 1,507                           | 36.1%                 | 16,543                    | 9.1%  |
| 2010   | 929                                 | 2,245   | 1,316                           | 41.4%                 | 16,526                    | 8.0%  |
| 2009   | 967                                 | 1,995   | 1,028                           | 48.5%                 | 16,728                    | 6.1%  |
| 2008   | 975                                 | 1,772   | 797                             | 55.0%                 | 16,267                    | 4.9%  |
| 2007   | 880                                 | 1,552   | 672                             | 56.7%                 | 14,822                    | 4.5%  |
| 2006 *   | 751                                 | 1,436   | 685                             | 52.3%                 | 13,923                    | 4.9%  |
| <b>RETIREE HEALTH INSURANCE CREDIT FUND **</b> |                                     |   |                                 |                       |                           |   |
| 2013   | \$ 139                              | \$ 2,273  | \$ 2,134                        | 6.1%                  | \$ 14,688                 | 14.5%   |
| 2012   | 130                                 | 2,258   | 2,128                           | 5.8%                  | 14,211                    | 15.0%   |
| 2011   | 213                                 | 2,195   | 1,982                           | 9.7%                  | 14,111                    | 14.0%   |
| 2010   | 281                                 | 2,162   | 1,881                           | 13.0%                 | 14,220                    | 13.2%   |
| 2009   | 296                                 | 2,007   | 1,711                           | 14.8%                 | 14,339                    | 11.9%   |
| 2008   | 264                                 | 1,943   | 1,679                           | 13.6%                 | 13,686                    | 12.3%   |
| 2007   | 207                                 | 1,883   | 1,676                           | 11.0%                 | 11,935                    | 14.0%   |
| <b>DISABILITY INSURANCE TRUST FUND ***</b>     |                                     |   |                                 |                       |                           |   |
| 2013   | \$ 359                              | \$ 228  | \$ (131)                        | 157.4%                | \$ 3,473                  | (3.8%)  |
| 2012   | 344                                 | 303   | (41)                            | 113.7%                | 3,433                     | (1.2%)  |
| 2011   | 369                                 | 296   | (73)                            | 124.6%                | 3,372                     | (2.2%)  |
| 2010   | 336                                 | 311   | (25)                            | 108.0%                | 3,168                     | (0.8%)  |
| 2009   | 290                                 | 291   | 1                               | 99.7%                 | 4,080                     | 0.0%  |
| 2008   | 313                                 | 392   | 79                              | 79.9%                 | 4,111                     | 1.9%  |
| 2007   | 264                                 | 451   | 187                             | 58.5%                 | 3,909                     | 4.8%  |
| 2006 *   | 192                                 | 423   | 231                             | 45.4%                 | 3,716                     | 6.2%  |
| <b>LINE OF DUTY ACT TRUST FUND ****</b>        |                                     |   |                                 |                       |                           |   |
| 2013   | \$ 10                               | \$ 204  | \$ 194                          | 4.9%                  | N/A                       | N/A   |
| 2012   | 6                                   | 226   | 220                             | 2.7%                  | N/A                       | N/A   |
| 2011   | -                                   | 399   | 399                             | 0.0%                  | N/A                       | N/A   |
| 2010 ****                                      | -                                   | 576   | 576                             | 0.0%                  | N/A                       | N/A   |

\* The June 30, 2006, actuarial valuation was the first prepared using the required parameters of GASB 43.

\*\* Data includes the state-funded Retiree Health Insurance Credit benefit for local employees. Similar information for 2006 is not available, so that year has been excluded.

\*\*\* Data for 2008 and subsequent years includes the state-funded Long-Term Care (LTC) program. In prior years LTC premiums were paid to an insurance carrier. LTC benefits were paid by the carrier and the program liabilities belonged to the carrier.

\*\*\*\* 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. Fiscal year 2010 was the first actuarial valuation prepared for the Line of Duty Act Trust Fund.

**REQUIRED SUPPLEMENTAL SCHEDULE OF EMPLOYER CONTRIBUTIONS –  
OTHER POST-EMPLOYMENT BENEFIT PLANS**

(DOLLARS IN THOUSANDS)

| Year Ended<br>June 30                       | Annual<br>Required<br>Contribution | Percentage<br>Contributed* | Statutory<br>Required<br>Contribution | Percentage<br>Contributed |
|---|------------------------------------|----------------------------|---------------------------------------|---------------------------|
| <b>GROUP LIFE INSURANCE FUND</b>            |                                    |                            |                                       |                           |
| 2014  | \$ 228,086                         | 90.15%                     | \$ 205,623                            | 100.00%                   |
| 2013  | 221,622                            | 90.15%                     | 199,796                               | 100.00%                   |
| 2012  | 181,527                            | 26.05%                     | 47,293                                | 100.00%                   |
| 2011  | 177,378                            | 25.23%                     | 44,744                                | 100.00%                   |
| 2010  | 145,228                            | 65.54%                     | 95,185                                | 100.00%                   |
| 2009  | 146,545                            | 92.13%                     | 135,019                               | 100.00%                   |
| 2008  | 158,740                            | 100.00%                    | 158,740                               | 100.00%                   |
| <b>RETIREE HEALTH INSURANCE CREDIT FUND</b> |                                    |                            |                                       |                           |
| 2014  | \$ 150,831                         | 95.09%                     | \$ 143,425                            | 100.00%                   |
| 2013  | 145,416                            | 95.09%                     | 138,282                               | 100.00%                   |
| 2012  | 138,195                            | 37.54%                     | 51,882                                | 100.00%                   |
| 2011  | 133,655                            | 36.46%                     | 48,736                                | 100.00%                   |
| 2010  | 148,956                            | 66.70%                     | 99,356                                | 100.00%                   |
| 2009  | 150,048                            | 96.63%                     | 144,989                               | 100.00%                   |
| 2008  | 147,524                            | 100.00%                    | 147,524                               | 100.00%                   |
| <b>DISABILITY INSURANCE TRUST FUND</b>      |                                    |                            |                                       |                           |
| 2014  | \$ 20,610                          | 81.03%                     | \$ 16,701                             | 100.00%                   |
| 2013  | 21,032                             | 81.03%                     | 17,043                                | 100.00%                   |
| 2012  | 30,285                             | 3.62%                      | 1,096                                 | 100.00%                   |
| 2011  | 28,646                             | 0.00%                      | -                                     | 100.00%                   |
| 2010  | 76,530                             | 40.32%                     | 30,861                                | 100.00%                   |
| 2009  | 78,120                             | 91.33%                     | 71,344                                | 100.00%                   |
| 2008  | 97,975                             | 80.00%                     | 78,380                                | 100.00%                   |
| <b>LINE OF DUTY ACT TRUST FUND</b>          |                                    |                            |                                       |                           |
| 2014  | \$ 22,103                          | 46.96%                     | \$ 10,381                             | 100.00%                   |
| 2013  | 21,895                             | 42.66%                     | 9,341                                 | 100.00%                   |
| 2012  | 25,033                             | 33.25%                     | 8,323                                 | 100.00%                   |
| 2011 *                                      | N/A                                | N/A                        | N/A                                   | N/A                       |

\* Contributions made by employers during the fiscal years ended June 30, 2008, through June 30, 2014, were not in all cases in accordance with the actuarially determined Annual Required Contribution (ARC), but they did meet statutory requirements.

\*\* Fiscal year 2011 was the first year for the Line of Duty Act Trust Fund. It was funded by a loan from the Group Life Insurance Trust Fund. As a result, there were not contributions required or paid during the fiscal year. Contributions of \$10,678,000 were recorded for fiscal year 2011; however, VRS did not receive contributions under the program until fiscal year 2012.

## SCHEDULE OF ADMINISTRATIVE EXPENSES

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

|   | 2014          | 2013          |
|---|---------------|---------------|
| <b>Personal Services:</b>               |               |               |
| Salaries and Wages                      | \$ 31,066     | \$ 27,835     |
| Per Diem Services                       | 333           | 334           |
| Retirement Contributions                | 2,282         | 2,085         |
| Social Security                         | 1,893         | 1,751         |
| Group Life and Medical Insurance        | 3,962         | 3,331         |
| Compensated Absences                    | 197           | 419           |
| <b>Total Personal Services</b>          | <b>39,733</b> | <b>35,755</b> |
| <b>Professional Services:</b>           |               |               |
| Data Processing                         | 13,133        | 12,222        |
| Actuarial and Consulting Services       | 1,599         | 1,746         |
| Legal Services                          | 673           | 638           |
| Medical Review Services                 | 752           | 705           |
| Management Services                     | 873           | 605           |
| Personnel Development Services          | 57            | 158           |
| <b>Total Professional Services</b>      | <b>17,087</b> | <b>16,074</b> |
| <b>Communication Services:</b>          |               |               |
| Media Services                          | 11            | 16            |
| Printing                                | 717           | 721           |
| Postage and Delivery Services           | 622           | 576           |
| Telecommunications                      | 856           | 849           |
| <b>Total Communication Services</b>     | <b>2,206</b>  | <b>2,162</b>  |
| <b>Rentals:</b>                         |               |               |
| Business Equipment                      | -             | 1             |
| Office Space                            | 2,270         | 2,296         |
| <b>Total Rentals</b>                    | <b>2,270</b>  | <b>2,297</b>  |
| Other Services and Charges:             |               |               |
| Skilled and Clerical Services           | 412           | 478           |
| Depreciation                            | 5,022         | 3,173         |
| Dues and Membership                     | 122           | 115           |
| Equipment                               | 1,769         | 734           |
| Insurance                               | 43            | 42            |
| Repairs and Maintenance                 | 19            | 11            |
| Supplies and Materials                  | 144           | 138           |
| Travel and Transportation               | 771           | 594           |
| Miscellaneous                           | 84            | 83            |
| <b>Total Other Services and Charges</b> | <b>8,386</b>  | <b>5,368</b>  |

**SCHEDULE OF ADMINISTRATIVE EXPENSES, cont.**

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

|   | 2014             | 2013             |
|---|------------------|------------------|
| <b>Total Administrative Expenses</b>  | <b>69,682</b>    | <b>61,656</b>    |
| Adjustment for Capitalization of Expenses   | (1,432)          | (7,493)          |
| <b>Total Administrative Expenses (GAAP Basis)</b>   | <b>68,250</b>    | <b>54,163</b>    |
| Adjustments Necessary to Convert Administrative Expenses on the GAAP Basis to the Budgetary Basis at Year-End (Net) | (3,899)          | 4,353            |
| <b>Administrative Expenses (Budgetary Basis)</b>  | <b>\$ 64,351</b> | <b>\$ 58,516</b> |
| <b>Administrative Expenses Appropriated</b>   | <b>\$ 71,028</b> | <b>\$ 70,164</b> |
| <b>Distribution of Administrative Expenses</b>  |                  |                  |
| Total Administrative Expenses   | \$ 68,250        | \$ 54,163        |
| Less In-House Investment Management   | (25,625)         | (21,204)         |
| <b>Net Administrative Expenses</b>  | <b>\$ 42,625</b> | <b>\$ 32,959</b> |



## SCHEDULE OF PROFESSIONAL AND CONSULTING SERVICES

FOR THE YEAR ENDED JUNE 30, 2014

(EXPRESSED IN THOUSANDS)

### Actuarial, Legal and Oversight Services:

|   |  |          |
|---|--|----------|
| Cavanaugh MacDonald Consulting, LLC       | Actuarial Services & Benefits Consulting | \$ 835.3 |
| Joint Legislative Audit Review Commission | Oversight Responsibilities               | 115.7    |
| Challa Law Offices                        | Legal Services                           | 3.7      |
| David L. Home, PLLC                       | Legal Services                           | 10.0     |
| Jeffrey Summers Law Office                | Legal Services                           | 5.0      |
| Reed Smith, LLP                           | Legal Services                           | 0.3      |
| Troutman Sanders, LLP                     | Legal Services                           | 197.5    |

### Total Actuarial, Legal and Oversight Services

**\$ 1,167.5**

### Consulting Services:

|  |   |          |
|--|---|----------|
| Advantage 2000                           | Social Security Advocacy & Disability Tracking    | \$ 120.0 |
| Advent Software, Inc.                    | Software Maintenance                              | 195.9    |
| Advisor Compliance                       | Investment Compliance Services                    | 12.0     |
| Albourne America, LLC                    | Investment Consulting Services                    | 140.0    |
| BCA Research                             | Research and Advisory Services                    | 43.0     |
| CACI Federal, Inc.                       | Test Planning & Execution, I, V & V Review Report | 95.2     |
| CEM Benchmarking, Inc.                   | Benchmarking Analysis                             | 65.0     |
| FX Transparency, LLC                     | Investment Advisory Services                      | 20.0     |
| Gartner                                  | Research and Advisory Services                    | 24.6     |
| Genex                                    | Job Analysis of Disability Cases                  | 2.1      |
| Harrison & Turk, PC                      | Fact-Finding Hearing Officer for Disability Cases | 100.9    |
| Hewitt Associates                        | Retirement Benefits Planning Tool                 | 20.3     |
| Hewitt EnnisKnupp, Inc.                  | Investment Consulting Services                    | 20.0     |
| Inrarv Enterprises                       | Fact-Finding Hearing Officer for Disability Cases | 2.4      |
| Katzen & Frye, PC                        | Fact-Finding Hearing Officer for Disability Cases | 163.1    |
| Kroll                                    | Investment Advisory Services                      | 272.1    |
| Legal Writers, Inc.                      | Fact-Finding Hearing Officer for Disability Cases | 0.5      |
| McGinley, Elsberg & Hutcheson, PLC       | Fact-Finding Hearing Officer for Disability Cases | 16.4     |
| McLagan Partners, Inc.                   | Investment Compensation Study                     | 6.3      |
| Mercer Investment                        | Consulting Services for Hybrid Plan               | 7.7      |
| Mercer Health & Benefits                 | Consulting Services for VSDP                      | 80.3     |
| Milliman, Inc.                           | Long-Term Care Plan Consulting                    | 63.7     |
| Property & Portfolio Research, Inc.      | Investment Consulting Services                    | 150.0    |
| Sagitec Solutions, LLC                   | VRS "Modernization Project" Solution Vendor       | 4,089.7  |
| Small World Solution, LLC                | Location Services                                 | 10.9     |
| Strategic Economic Decisions, Inc.       | Economic Advisory Services                        | 10.0     |
| Strategic Public Policy & Communications | Consulting Services                               | 20.0     |
| Torreycove Capital                       | Investment Consulting Services                    | 50.0     |
| Townsend Group                           | Investment Consulting Services                    | 170.0    |
| United Review Services, Inc.             | Medical Board Review and Examinations             | 752.4    |
| Wells Fargo Bank, NA                     | Recordkeeping Services                            | 34.2     |
| Yardeni Research                         | Research and Advisory Services                    | 7.5      |

### Total Consulting Services

**\$ 6,766.2**

### Total Professional and Consulting Services

**\$ 7,933.7**

## SCHEDULE OF INVESTMENT EXPENSES

FOR THE YEARS ENDED JUNE 30

(EXPRESSED IN THOUSANDS)

|  | 2014              | 2013              |
|--|-------------------|-------------------|
| <b>Management Fees:</b>                      |                   |                   |
| Domestic Managers                            | \$ 14,536         | \$ 11,369         |
| Non-U.S. Equity Managers                     | 23,089            | 26,793            |
| Global Equity Managers                       | 24,753            | 19,871            |
| Fixed Income Managers                        | 421               | 1,030             |
| Credit Strategies Managers                   | 47,467            | 43,788            |
| Real Asset Managers                          | 59,111            | 50,408            |
| Alternative Investment Managers              | 71,606            | 68,675            |
| Hedge Fund Managers                          | 72,508            | 65,275            |
| Strategic Opportunity Portfolio              | 2,289             | 4,333             |
| <b>Total Management Fees</b>                 | <b>315,780</b>    | <b>291,542</b>    |
| <b>Performance Fees</b>                      | <b>11,677</b>     | <b>13,677</b>     |
| <b>Miscellaneous Fees and Expenses:</b>      |                   |                   |
| Custodial Fees                               | 4,513             | 4,501             |
| Legal Fees                                   | 486               | 430               |
| Other Fees and Expenses                      | 500               | 533               |
| <b>Total Miscellaneous Fees and Expenses</b> | <b>5,499</b>      | <b>5,464</b>      |
| <b>In-House Investment Management</b>        | <b>25,625</b>     | <b>21,204</b>     |
| <b>Total Investment Expenses</b>             | <b>\$ 358,581</b> | <b>\$ 331,887</b> |



## 3 Investment Section

VRS members' investments play an increasingly important role in future financial stability. While members can act by increasing voluntary contributions and choosing investment paths for defined contribution plans based on knowledge and comfort levels, the VRS investment staff seeks to minimize investment management costs and maximize returns in a volatile economy. Whether one is a novice investor or a savvy stockholder, learning more about the financial investment process is part of preparing for retirement.

Chief Investment Officer's Letter

Investment Account

Portfolio Highlights

VRS Money Managers

Public Equity Commissions

Schedule of Investment Management Fees and Expenses:

    Defined Benefit Plans

Investment Summary:

    Defined Benefit Plans

Description of Hybrid Defined Contribution Plan

Description of Defined Contribution Plan Investment Options

Investment Option Performance Summary:

    Defined Contribution Plans



Photo: Keith Lanpher, Virginia Tourism Corporation

## DISCOVERING NEW TERRITORY

After crossing the continent, Virginia adventurers explored other areas of the world. Commander William Lewis Herndon, USN, visited South America's Amazon Basin in 1851, while his cousin Matthew Fontaine Maury became known as "Pathfinder of the Seas" for his oceanographic achievements. In the early 1900s, Rear Admiral Richard Evelyn Byrd Jr., USN, visited the North and South Poles by air. Today, Virginia's global connections are strengthened by the work of state agencies that foster economic development, commerce and trade, and regulate Virginia's ports.



NAVIGATING  
THE NEW WORLD  
OF RETIREMENT  
PLANNING

# Chief Investment Officer's Letter



**Ronald D. Schmitz**, Chief Investment Officer

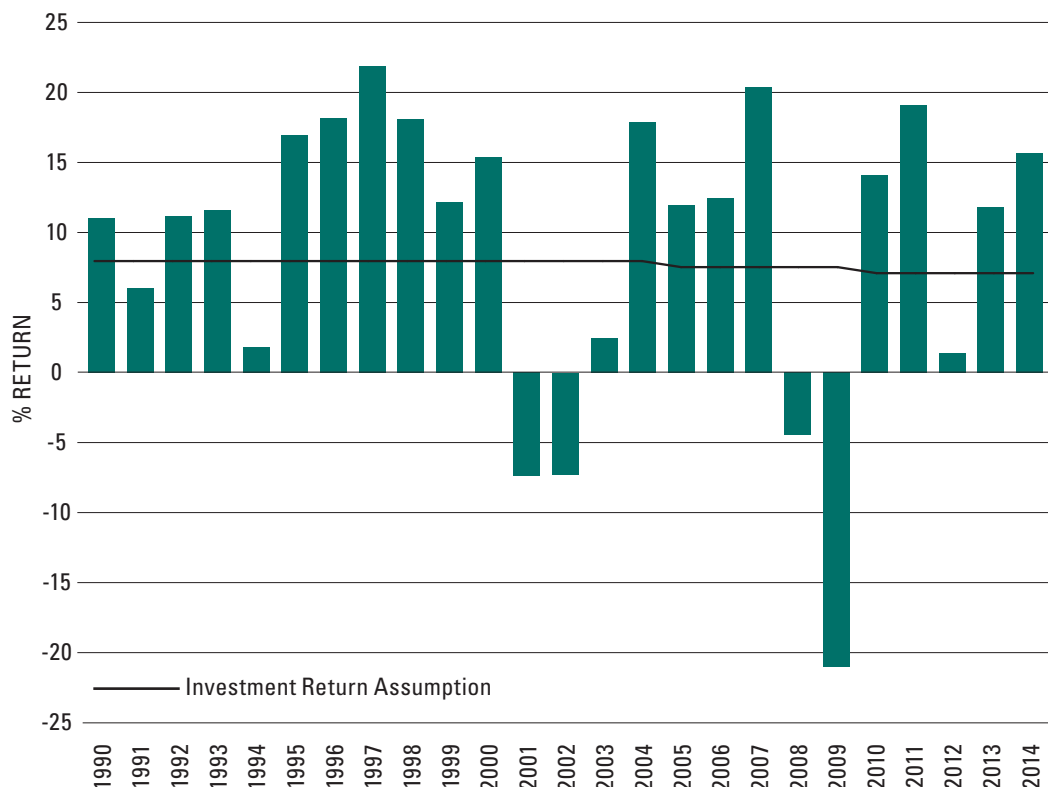
P.O. Box 2500 • 1200 East Main Street  
Richmond, Virginia 23218-2500

Toll-free: 1-888-VARETIR (827-3847) • TDD: 804-344-3190

December 4, 2014

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

I am pleased to report that economic and financial market conditions were favorable most of the past year and the VRS fund generated a robust 15.7% return for fiscal year 2014. This return was prepared using a time-weighted methodology based on market value, net of investment expenses. This is the second consecutive year of strong results, and follows an 11.8% return last year. Together, the two-year annualized return is approximately double the long-term, actuarially assumed investment return of 7%. These results are gratifying. A graph follows showing the annual fiscal year performance compared to the return assumption used for actuarial purposes. Annualizing the 20-year performance shown in the graph, the fund has earned 8.8% per year with some individual years being well above and some well below that long-term average.



The trust fund's net position at June 30, 2014, was \$66.2 billion – a high-water mark for VRS. However, I urge caution. As the saying goes, what goes up must come down. Over the long run, the markets cannot be expected to remain as strong as they have been for the last two years. We feel reasonably comfortable with security valuations and the near-term economic outlook. The point is that the bull market cannot continue without taking a breath or correcting excesses wherever they exist. At least, that is what history tells us.

Before getting into a more detailed discussion of performance results, I wanted to highlight a couple of major initiatives undertaken this past year. VRS has made significant investment in systems and technology that will enable us to continue to be a world-class investment operation in the years ahead. Fiscal year 2014 saw the investment team roll out a new enterprise risk management system, as well as implement a new portfolio management and trading platform. Without a doubt, these investments make us a more effective operation.

### Performance Overview

For fiscal year 2014, the fund as a whole, as well as all five major asset classes, outperformed Board-approved benchmarks. Let me add some color on portfolio performance. As mentioned, the total fund return was 15.7%, which was well ahead of the benchmark index return of 14.7%. This level of performance is above expectations, as the Board sets performance goals for staff in the range of 0.3% to 0.6% above the benchmark index in keeping with the risk parameters granted to staff's discretion.

By asset class, the performance derby for the year was won by the private equity portfolio with a 23.2% return. Fiscal year 2014 was a year of significant realizations on investments made in the previous several years. Distributions from investment partnerships amounted to \$1.6 billion, more than double the amount of capital calls for new opportunities. Part of the reason for this outcome was the robust public market, which allowed for favorable pricing of IPOs. The flipside is that the prices for new investments also are high, making new commitments a somewhat riskier proposition.

Public equity also was strong, generating a return of 21.6%. Not only was this a strong absolute level of return, it was nicely ahead of the benchmark index return of 21.1%. Developed markets continued performing well. Emerging markets had positive returns, but lagged their developed market counterparts. Corporate earnings, particularly in the U.S., continued to come through, primarily due to strong margins but also due to increasing sales. Collectively, external managers and the internal team showed strong security selection versus the index. Some of this outperformance was lost due to our overweight position in emerging markets. But, all in all, the portfolio was strong for the year.

The internal equity team's performance was particularly impressive this year. The group runs passive, risk-controlled active and low-volatility strategies. The composite portfolio performed well, exceeding its weighted benchmarks by a comfortable margin. Risk-controlled active strategies showed excess return of 1.2% while the low-volatility strategies had excess performance of 4.5%. These results are impressive when you consider that valuation spreads have been very tight – especially in the U.S.

Robust, but slightly more modest results of 14.2% were turned in by the real assets portfolio. Real assets are comprised of traditional real estate (offices, apartments, etc.) as well as natural resources (oil, gas and timber) and infrastructure (a hybrid investment combining real estate and business operations, such as port operations and power generation facilities). Real estate fundamentals have been improving in most markets around the globe. Pricing is not cheap, but offers attractive yields relative to 10-year Treasury bonds. In the energy arena, new extraction technologies have created a demand for investment in new production and pipeline capacity, resulting in attractive opportunities. Last, improving demand for housing stock and packaging materials has been a positive force in the timber arena.

The credit strategies portfolio generated a 12.2% return. Falling U.S. Treasury yields and tightening spreads across high-yield, emerging market and high-quality corporate bonds created upward pricing pressure in the credit strategies portfolio. In addition to these benefits, the credit portfolio has expanded into direct lending, which has been a positive influence on results. Our exposure to convertible bonds has generated strong returns, but our approach to this segment of the market is somewhat conservative, which has been a slight drag as compared to the overall convertible market. Nonetheless, “converts” have been additive to the strong results in the credit segment.

Last of the five primary asset classes was fixed income, returning 4.9%, which performed well if more modestly than other assets in keeping with the low-risk nature of an investment-grade bond portfolio. Fiscal year 2014 can be characterized by slow growth and low inflation for the developed economies around the globe. Central banks of the major economies continued to provide monetary accommodation in the form of low interest rates and, in some cases, quantitative easing programs to stimulate growth. The internal fixed income program performed well throughout this environment by overweighting exposures in the investment grade credit and the residential and commercial mortgage-backed securities sectors.

Finally, we report on the SOP (Strategic Opportunities Portfolio), which is not a strategic asset class. Right now, that portfolio is small and holds a few investments that have been orphaned due to changes in strategy of the five primary asset classes. SOP generated a modest 2% return in fiscal year 2014. These investments are being reevaluated for mandate changes or liquidation. The intent of the SOP is to provide a home for asset classes or investment strategies that do not neatly fit into the primary asset classes. Senior investment staff has been working hard on this sleeve of the VRS fund and expect to roll out several new investments in the next year. We will report back with more detail in next year’s annual report.

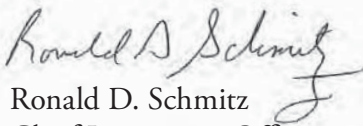
### Economic and Market Outlook

Significant global geo-political frictions in Ukraine and the Middle East pose risks to the recovery in the European Union as well as to disruptions in the supply of oil. Real growth in the U.S. will lead developed markets, with the EU and Japan lagging behind but committed to aggressively accommodative monetary policies directed at fighting deflationary pressures.

On the domestic front, the economy contracted in the first quarter of 2014, but recovered in the second quarter to post a robust 4% (annualized) growth rate. Economic growth is expected to exceed 3% in the final half of the year. The quickening economy and better-than-estimated corporate earnings have pushed U.S. stocks to new highs, while manufacturing and residential construction are stabilizing after subtracting from growth for the past two quarters.

Inflation remains muted primarily on continued weakness in the labor market and stagnant real wages. Despite improvement in the unemployment rate, the Federal Reserve continues to cite sustained high unemployment duration as well as the high numbers of part-time workers and flat-to-declining real wages as reasons for maintaining “forward guidance” on continued low rates until such time real wages recover.

Sincerely,



Ronald D. Schmitz  
Chief Investment Officer

**T**he 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.

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## 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. This allows 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. This 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 Chief Investment Officer has been delegated authority by the Board 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.

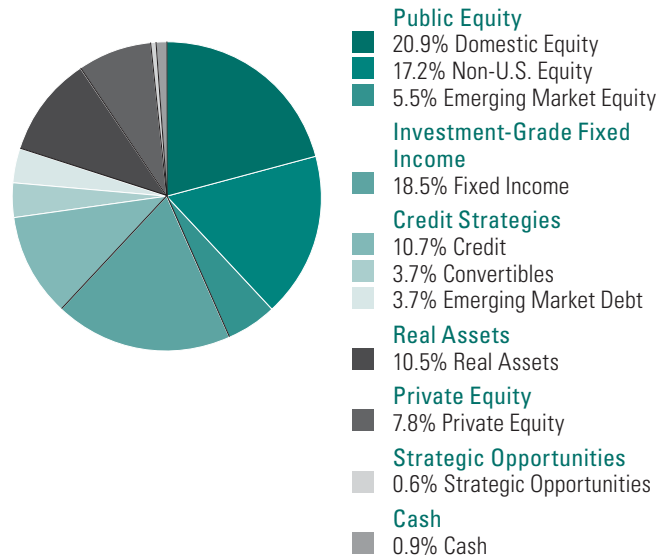
The investment staff manages the VRS portfolio on a day-to-day basis according to policies and guidelines established by the Board. The staff manages assets on a direct basis and through outside investment managers. Managers employ both active and passive investment strategies. The Board has established 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, 2014, is shown in Figure 3.1:



**FIGURE 3.1 – ASSET ALLOCATION MIX**

AS OF JUNE 30, 2014



**FIGURE 3.2 – INVESTMENT PERFORMANCE SUMMARY**

ANNUALIZED DATA FOR THE PERIOD ENDING JUNE 30, 2014

|   | 1 Year | 3 Years | 5 Years |
|---|--------|---------|---------|
| <b>1. Total Fund</b>                          |        |         |         |
| VRS   | 15.7%  | 9.5%    | 12.3%   |
| VRS Custom Benchmark <sup>1</sup>             | 14.7%  | 8.9%    | 11.6%   |
| <b>2. Total Public Equity</b>                 |        |         |         |
| VRS   | 21.6%  | 11.3%   | 15.0%   |
| Custom Benchmark <sup>2</sup>                 | 21.1%  | 10.6%   | 14.0%   |
| <b>3. Total Investment-Grade Fixed Income</b> |        |         |         |
| VRS   | 4.9%   | 4.2%    | 6.5%    |
| Custom Benchmark <sup>3</sup>                 | 4.3%   | 3.8%    | 4.8%    |
| <b>4. Total Credit Strategies</b>             |        |         |         |
| VRS   | 12.2%  | 7.9%    | 12.0%   |
| Custom Benchmark <sup>4</sup>                 | 11.0%  | 7.1%    | 9.7%    |
| <b>5. Total Real Assets</b>                   |        |         |         |
| VRS   | 14.2%  | 12.3%   | 12.1%   |
| Custom Benchmark <sup>5</sup>                 | 12.1%  | 11.4%   | 10.1%   |
| <b>6. Total Private Equity</b>                |        |         |         |
| VRS   | 23.2%  | 15.1%   | 16.0%   |
| Custom Benchmark <sup>6</sup>                 | 19.7%  | 15.4%   | 23.3%   |
| <b>7. Total Strategic Opportunities</b>       |        |         |         |
| VRS   | 2.0%   | n/a     | n/a     |
| Custom Benchmark <sup>7</sup>                 | 2.3%   | n/a     | n/a     |

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

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



## FIGURE 3.2 – INVESTMENT PERFORMANCE SUMMARY, cont.

- <sup>2</sup> Effective July 2009, the Public Equity Custom Benchmark is risk-adjusted. Effective April 2010, the risk-adjusted benchmark is based on the market-value weights of the MSCI ACWI IMI Index with the Developed Market Currencies 50% Hedged customized for the VRS dividend withholding tax rates.
- <sup>3</sup> Effective July 2012, the Investment-Grade Fixed Income Custom Benchmark consists of the Citigroup BIG Index.
- <sup>4</sup> Effective July 2012, the Credit Strategies Custom Benchmark is the weighted average of the Citigroup Broad Investment Grade Index (10%), the Bank of America Merrill Lynch BB-B Constrained Index (20%), the S&P Performing Loan Index (30%), the Emerging Market Debt Custom Benchmark (20%), and the Bank of America Merrill Lynch All U.S. Convertibles Index (20%). For the four years prior to July 2012, the risk-adjusted benchmark is the weighted average of the Bank of America Merrill Lynch U.S. High Yield BB-B Constrained Index and the Bank of America All Convertibles Index.
- <sup>5</sup> Effective July 2013, the Real Assets Custom Benchmark is the weighted average of the NCREIF ODCE Index (net) lagged by three months (private real estate), the Dow Jones US Select REIT Index (domestic public real estate), the FTSE/EPRA/NAREIT Developed Index (global public real estate) and the CPI-U Index plus 400 basis points per annum lagged by three months (other real assets) with modified benchmarking for Other Real Assets during the increased allocation period.
- <sup>6</sup> Effective July 2013, the Private Equity Custom Benchmark is the MSCI ACWI IMI with the Developed Market Currencies 50% Hedged customized for the VRS dividend withholding tax rates lagged by three months plus 250 basis points per annum with modified benchmarking during the increased allocation period.
- <sup>7</sup> Effective January 2013, the Strategic Opportunities Portfolio Custom Benchmark is a weighted average of the benchmarks of the mandates within the program. The weights are based on the beginning-of-month notional account value for the assets within the program.

## Portfolio Highlights

### PUBLIC EQUITY

The market value of the Total Public Equity Program, including rebalance equity exposure, as of June 30, 2014, was \$28.8 billion, representing approximately 44% of the total fund. Forty-eight percent was invested in Domestic Equity and 52% in International Equity. Four percent was invested in passive strategies, and 34% was managed internally. The objective of the portfolio is to exceed the Custom Benchmark over longer-term periods, net of all costs. At fiscal year-end, the Custom Benchmark was comprised of 49.4% of the MSCI U.S. Investible Market Index (IMI), 39.8% of the MSCI World excluding U.S. IMI (50% hedged) and 10.8% in the MSCI Emerging IMI.



The Total Public Equity Program is dominated by traditional, long-only strategies (83.3% of program, or \$24.0 billion). The program also employs traditional long-short strategies (2.0% of program, or \$0.6 billion) and equity-oriented hedge fund strategies (14.7% of program, or \$4.2 billion).

The Total Public Equity portfolio strategic sectors and region weights are as follows:

**FIGURE 3.3 – CUSTOM BENCHMARK SECTORS AND REGIONS**

| Strategic Sectors          | VRS     | Strategic Benchmark | Regions                   | VRS     | Strategic Benchmark |
|----------------------------|---------|---------------------|---------------------------|---------|---------------------|
| Consumer Discretionary     | 12.81%  | 12.10%              | North America             | 52.10%  | 53.31%              |
| Consumer Staples           | 9.23%   | 8.86%               | Europe/Middle East/Africa | 25.83%  | 25.78%              |
| Energy                     | 8.45%   | 9.61%               | Asia Pacific              | 19.41%  | 18.99%              |
| Financials                 | 18.97%  | 21.31%              | Latin and South America   | 2.66%   | 1.92%               |
| Health Care                | 10.43%  | 10.39%              |                           |         |                     |
| Industrials                | 12.35%  | 11.67%              |                           | 100.00% | 100.00%             |
| Information Technology     | 14.26%  | 12.92%              |                           |         |                     |
| Materials                  | 3.75%   | 6.39%               |                           |         |                     |
| Telecommunication Services | 5.23%   | 3.43%               |                           |         |                     |
| Utilities                  | 4.52%   | 3.32%               |                           |         |                     |
|                            | 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 6.5% of the program at fiscal year-end. Two companies, Chevron and Novartis, were replaced by Hewlett-Packard Co. and Verizon Communications on this year's schedule.

**FIGURE 3.4 – PUBLIC EQUITY: TOP 10 EXPOSURES**

AS OF JUNE 30, 2014

| Company                 | Fair Value    | Shares    |
|-------------------------|---------------|-----------|
| Microsoft Corporation   | \$268,726,049 | 6,444,270 |
| Apple Inc.              | 262,599,928   | 2,825,782 |
| Johnson & Johnson       | 200,593,060   | 1,917,349 |
| Google, Inc.            | 194,890,086   | 335,400   |
| Wells Fargo             | 183,340,639   | 3,488,216 |
| Roche Holdings          | 174,780,258   | 585,993   |
| Exxon Mobil Corporation | 150,421,020   | 1,494,051 |
| Samsung Electronics     | 150,224,085   | 126,339   |
| Hewlett-Packard Co.     | 149,245,660   | 4,431,284 |
| Verizon Communications  | 139,582,764   | 2,852,703 |

*Aggregated various share classes based on parent company.*

## FIXED INCOME

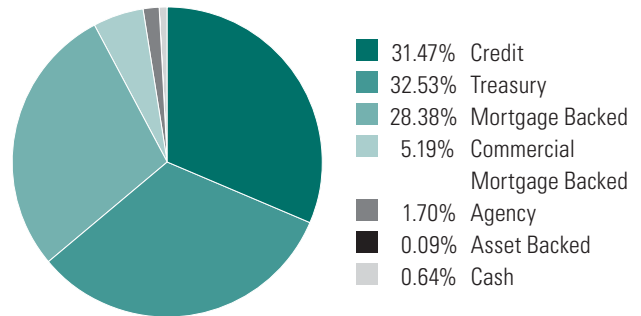
VRS invests a portion of its portfolio in fixed income investments in order to reduce total fund volatility, produce income and provide for some protection in the event of a deflationary environment. The market value of the Fixed Income Program, including rebalance fixed income exposure, as of June 30, 2014, was \$12.2 billion, representing 18.5% of the total fund.

The Fixed Income Program is internally invested in a diversified portfolio of high-quality assets, such as government securities, corporate securities and mortgage-backed securities. The objective of the program is to exceed the return of the Citigroup Broad Investment Grade Index, while staying in compliance with risk limits. For fiscal year 2014, the return of the program was 4.9% versus a return of 4.3% for the benchmark.



### FIGURE 3.5 – FIXED INCOME PORTFOLIO BY SECTOR ALLOCATION

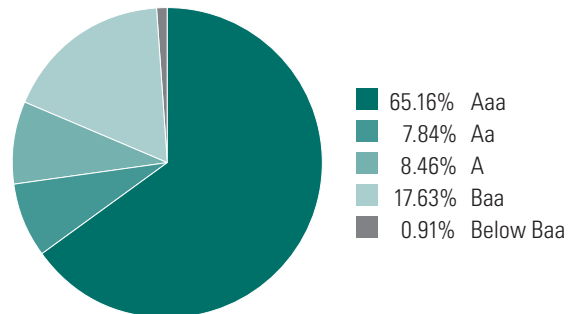
AS OF JUNE 30, 2014



### FIGURE 3.6 – FIXED INCOME PORTFOLIO BY CREDIT QUALITY BREAKDOWN

AS OF JUNE 30, 2014

Source: Moody's Credit Rating Service



## FIGURE 3.7 – FIXED INCOME: TOP 10 HOLDINGS BY MARKET VALUE

AS OF JUNE 30, 2014

| Par            | Security Description                         | Fair Value     |
|----------------|--|----------------|
| \$ 176,360,535 | Freddie Mac MBS<br>3.000% due 7/01/2043      | \$ 174,178,955 |
| 162,000,000    | U.S. Treasury Notes<br>2.375% due 3/31/2016  | 167,772,060    |
| 150,000,000    | U.S. Treasury Notes<br>2.625% due 4/30/2016  | 156,147,000    |
| 125,000,000    | U.S. Treasury Bonds<br>7.500% due 11/15/2016 | 145,417,500    |
| 135,700,000    | U.S. Treasury Notes<br>2.375% due 5/31/2018  | 141,497,104    |
| 124,800,000    | U.S. Treasury Notes<br>3.125% due 5/15/2019  | 133,839,264    |
| 120,850,000    | U.S. Treasury Notes<br>2.125% due 12/31/2015 | 124,220,507    |
| 118,000,000    | U.S. Treasury Notes<br>2.000% due 1/31/2016  | 121,206,060    |
| 105,000,000    | Fannie Mae MBS<br>5.000% due 7/1/2044        | 116,599,350    |
| 105,500,000    | U.S. Treasury Notes<br>3.500% due 2/15/2018  | 114,289,205    |

### SHORT-TERM INVESTMENTS

Generally, VRS desires to remain fully invested at all times and seeks to minimize 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.

### PRIVATE EQUITY

VRS invests in private equity in order 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

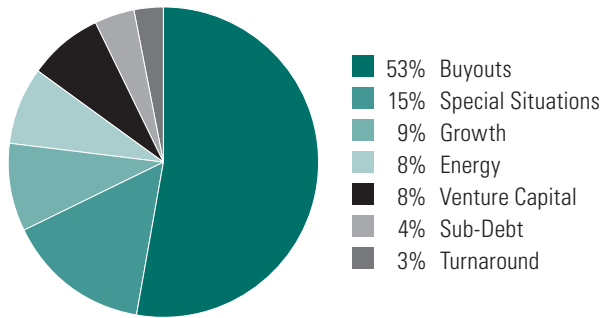
ACWI) by 2.5% per year. Program returns are calculated on both a time-weighted basis and a dollar-weighted or internal rate-of-return (IRR) basis. On a time-weighted basis, the program return for fiscal year 2014 was 23.2%. On a dollar-weighted or IRR basis, the private equity one-year return was 22.0% as of March 31, 2014.

As of June 30, 2014, the carrying value of the program was approximately \$5.1 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 sub-class was as follows:

**FIGURE 3.8 – PRIVATE EQUITY PROGRAM**

AS OF JUNE 30, 2014



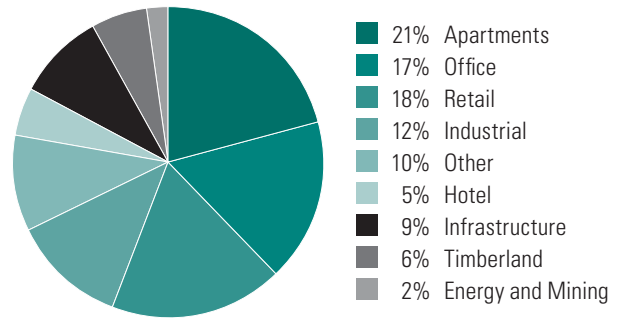
**REAL ASSETS**

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 2014, producing a 14.2% return and outperforming the benchmark by 207 basis points. The REITs produced a total return of 14.8% while the private real estate portfolio delivered a 15.1% return. Investments in infrastructure, natural resources and timberland produced a 9.1% return for the fiscal year.

The percentage of the total fund represented by the real assets portfolio increased over the course of the year from 9.4% to 10.5%, due primarily to new fundings as well as asset income and appreciation. At fiscal year-end, the portfolio was composed of approximately 13% REITs, 70% private real estate, 9% infrastructure, 2% energy and mining and 6% timberland. Portfolio leverage as a percentage of total real assets was 28.6% as of June 30, 2014.

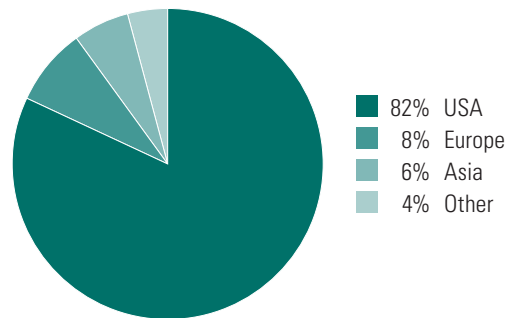
**FIGURE 3.9 – REAL ASSETS BY SECTOR**

AS OF JUNE 30, 2014



**FIGURE 3.10 – REAL ASSETS BY GEOGRAPHIC REGION**

AS OF JUNE 30, 2014

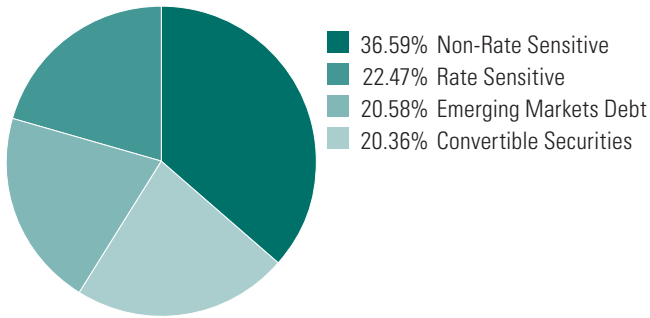


### CREDIT STRATEGIES

VRS allocates a portion of the portfolio to credit-related investments. The Credit Strategies program is utilized to provide an alternative arena for generating attractive returns for the plan. The objectives of the program are to provide attractive returns relative to the Custom Credit Strategies benchmark, to provide higher levels of income, and to provide diversification benefits to the plan. For the fiscal year, the program returned 12.2%, while the program's custom benchmark returned 11.0%.

FIGURE 3.11 – CREDIT STRATEGIES PROGRAM

AS OF JUNE 30, 2014



### STRATEGIC OPPORTUNITIES PORTFOLIO

The Strategic Opportunities Portfolio was approved by the Board of Trustees on January 1, 2013, to manage strategies that staff believes would add value to the total fund but would otherwise not fit individual program mandates or benchmarks. As of June 30, 2014, the portfolio had a market value of \$384 million and was invested in a global macro hedge fund, a developed market active currency manager and a commercial real estate mortgage separate account. During the fiscal year, it returned 2.0% against the program's custom benchmark, which returned 2.3%.

### 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.



## VRS Money Managers

The diversified investment structure as of June 30, 2014, is reflected in the following tables, which list VRS managers by investment program and style.

### PUBLIC EQUITY MONEY MANAGERS

| External Managers – Top 10 Managers | Style Description                |
|-------------------------------------|----------------------------------|
| Acadian Asset Management            | Non-U.S. Small, Emerging Markets |
| AllianceBernstein                   | Global                           |
| Arrowstreet Capital                 | Global                           |
| Baillie Gifford                     | Global                           |
| BlackRock                           | Global                           |
| Epoch                               | Global                           |
| LSV Asset Management                | Non-U.S. Small                   |
| Nordea                              | Global                           |
| Relational                          | U.S. Large Cap                   |
| Wells Fargo / Berkeley Street       | Emerging Markets                 |
| Internal Portfolios                 | Style Description                |
| Afton                               | U.S. Small                       |
| Dogwood                             | Non-U.S. Large                   |
| Madison                             | U.S. Large                       |
| Matoaka                             | Non-U.S. Large                   |
| Mobjack                             | U.S. Large                       |
| Piedmont                            | Non-U.S. Large                   |
| Potomac                             | U.S. Large                       |
| Small Cap Synthetic                 | U.S. Small                       |
| Hedge Funds – Top 10 Managers       | Style Description                |
| Blue Ridge, LP                      | Long/Short                       |
| Cevian                              | Long/Short                       |
| Clough                              | Long/Short                       |
| Glenhill Capital                    | Long/Short                       |
| Lansdowne Partners                  | Long/Short                       |
| Maverick Capital                    | Long/Short                       |
| New Mountain Capital                | Long/Short                       |
| Theleme                             | Long/Short                       |
| TPG-Axon Partners                   | Long/Short                       |
| ValueAct Capital                    | Long/Short                       |

### FIXED INCOME

| Internal Portfolios    | Style Description                                 |
|------------------------|---|
| VRS Collateralized     | Mortgage and other Asset-Backed Securities        |
| VRS Credit             | High-Quality Corporates                           |
| VRS Government-Related | Treasuries, Agencies and other Government-Related |

## PRIVATE EQUITY – TOP 10 MANAGERS

Apax  
First Reserve  
Grosvenor  
Hellman and Friedman  
Natural Gas Partners  
Nordic Capital  
Summit Partners  
TA Associates  
TPG  
Welsh, Carson, Anderson and Stowe

## Style Description

Buyout  
Energy  
Customized Separate Account  
Buyout  
Energy  
Buyout  
Growth & Sub-Debt  
Growth & Sub-Debt  
Buyout  
Buyout & Sub-Debt

## CREDIT STRATEGIES – TOP 10 MANAGERS

Advent Capital  
Anchorage  
Beach Point Capital Management  
Oaktree Capital Management  
Pacific Investment Management Company  
  
Payden & Rygel  
Prudential  
Solus Alternative Asset Management  
Western Asset Management  
Zazove Associates

## Style Description

Convertibles  
Hedge Fund, Opportunistic  
Distressed, Leveraged Loans, Opportunistic  
Convertibles, Distressed, High-Yield, Mezzanine  
Emerging Markets Debt, High-Yield, Investment Grade  
  
Emerging Markets Debt  
High-Yield, Investment Grade, Mezzanine  
Hedge Fund, Opportunistic  
Emerging Markets Debt, Leveraged Loans  
Convertibles

## REAL ASSETS – TOP 10 MANAGERS

Blackstone Real Estate Partners  
CIM Group  
Clarion Partners  
Hancock Natural Resource Group  
Industry Funds Management  
J.P. Morgan Asset Management, Inc.  
LaSalle Investment Management  
Morgan Stanley  
Prudential Real Estate Investors  
TA Associates Realty

## Style Description

Core, Enhanced Core, Opportunistic & REITs  
Enhanced Core Real Estate  
Enhanced Core Real Estate  
Timberland  
Infrastructure  
Core Real Estate  
Core Real Estate  
Core, Enhanced Core, Opportunistic & Global REITs  
Core & Enhanced Core Real Estate  
Core Real Estate



## Public Equity Commissions

AS OF JUNE 30, 2014

| Broker  | Commission      | Broker                                     | Commission              |
|---|-----------------|--|-------------------------|
| Investment Technology Group Inc., New York              | \$ 1,275,530.89 | Weeden & Co. LP, New York                  | \$ 168,861.90           |
| Credit Suisse, New York (CSUS)                          | \$ 1,236,736.88 | Macquarie Securities Ltd., Seoul           | \$ 165,903.58           |
| Goldman Sachs & Co., New York                           | \$ 602,337.64   | Credit Suisse (Europe), London             | \$ 163,832.63           |
| Merrill Lynch Pierce Fenner & Smith Inc.,<br>New York   | \$ 543,718.61   | UBS Securities LLC, Stamford               | \$ 163,651.36           |
| Morgan Stanley & Co. Inc., New York                     | \$ 472,871.09   | Euroclear Bank SA/NV, Brussels             | \$ 152,306.20           |
| Deutsche Bank Securities Inc., New York<br>(NWSCUS33)   | \$ 421,043.66   | Morgan Stanley & Co., London (MSLNGB2X)    | \$ 148,909.00           |
| Merrill Lynch International Equities, London            | \$ 365,842.13   | Jefferies & Co. Inc., New York             | \$ 139,564.97           |
| Citigroup Global Markets Inc., New York                 | \$ 287,636.65   | Investment Technology Group Ltd., Dublin   | \$ 130,050.72           |
| UBS Equities, London                                    | \$ 284,118.83   | Citigroup Global Markets/Salomon, New York | \$ 123,008.38           |
| Instinet Europe Limited, London                         | \$ 272,338.53   | Barclays Capital LE, Jersey City           | \$ 122,827.97           |
| Merrill Lynch Pierce Fenner & Smith Inc.,<br>Wilmington | \$ 243,376.22   | RBC Capital Markets LLC, New York          | \$ 122,627.73           |
| Citigroup Global Markets Ltd., London                   | \$ 222,682.15   | J.P. Morgan Securities LLC, Brooklyn       | \$ 118,202.62           |
| Sanford C. Bernstein & Co. LLC, New York                | \$ 209,100.82   | HSBC Bank PLC (Midland Bank)(JAC), London  | \$ 115,277.06           |
| Macquarie Bank Ltd., Hong Kong                          | \$ 201,431.34   | M. Ramsey King Securities Inc., Brooklyn   | \$ 111,602.46           |
| Goldman Sachs International, London<br>(GSILGB2X)       | \$ 183,838.26   | Instinet Corp., New York                   | \$ 111,493.23           |
| J.P. Morgan Securities Ltd., London                     | \$ 180,788.86   | Daiwa Securities (HK) Ltd., Hong Kong      | \$ 100,835.20           |
| J.P. Morgan Clearing Corp., New York                    | \$ 172,751.69   | Barclays Capital, London (BARCGB33)        | \$ 100,219.84           |
|   |                 | Other Brokers                              | \$ 3,543,200.78         |
|   |                 | <b>Total FY 2014</b>                       | <b>\$ 12,978,519.88</b> |

## SCHEDULE OF INVESTMENT MANAGEMENT FEES AND EXPENSES: DEFINED BENEFIT PLANS

AS OF JUNE 30, 2014

(EXPRESSED IN THOUSANDS)

|   | Assets Under Management | Management Fees and Expenses |
|---|-------------------------|------------------------------|
| <b>Management Fees:</b>                 |                         |                              |
| Internally Managed Assets               | \$ 21,699,536           | \$ 7,611                     |
| Domestic Managers                       | 2,534,973               | 17,375                       |
| Non-U.S. Equity Managers                | 6,291,537               | 23,089                       |
| Global Equity Managers                  | 5,602,083               | 24,753                       |
| Fixed Income Managers                   | 1,987,371               | 421                          |
| Credit Strategies Managers              | 6,995,602               | 47,467                       |
| Real Asset Managers                     | 7,025,830               | 67,949                       |
| Private Equity Managers                 | 9,007,361               | 71,606                       |
| Hedge Fund Managers                     | 5,588,873               | 72,508                       |
| Strategic Opportunities Portfolio*      | 149,877                 | 2,289                        |
| <b>Portfolio Oversight</b>              | -                       | 18,014                       |
| <b>Miscellaneous Fees and Expenses:</b> |                         |                              |
| Custodian fees                          | -                       | 4,513                        |
| Legal fees                              | -                       | 486                          |
| Other fees and expenses                 | -                       | 500                          |
| <b>Total</b>                            | <b>\$ 66,883,043</b>    | <b>\$ 358,581</b>            |

\* The assets within the Strategic Opportunities Portfolio include an Active Currency Overlay program and the related fee is based on the managers' notional account values.

## Investment Summary: Defined Benefit Plans

In accordance with Section 51.1-124.31 of the *Code of Virginia* (1950), as amended, the Board of Trustees has pooled substantially all assets of the Virginia Retirement System, the State Police Officers' Retirement System, the Virginia Law Officers' Retirement System, the Judicial Retirement System, the Group Life Insurance Fund, the Retiree Health Insurance Credit Fund and the Disability Insurance Trust Fund into a common investment pool. The common investment pool of the pension trust funds and other employee benefit trust funds held the following composition of investments at June 30, 2014 and 2013:

|  | (EXPRESSED IN THOUSANDS) |                           |                      |                           |
|--|--------------------------|---------------------------|----------------------|---------------------------|
|  | 2014<br>Fair Value       | Percent of<br>Total Value | 2013<br>Fair Value   | Percent of<br>Total Value |
| <b>Bonds and Mortgage Securities:</b>        |                          |                           |                      |                           |
| U.S. Government and Agencies                 | \$ 4,123,513             | 6.14%                     | \$ 3,760,695         | 6.28%                     |
| Mortgage Securities                          | 4,074,000                | 6.06%                     | 3,757,050            | 6.27%                     |
| Corporate and Other Bonds                    | 11,773,556               | 17.52%                    | 10,648,030           | 17.79%                    |
| <b>Total Bonds and Mortgage Securities</b>   | <b>19,971,069</b>        | <b>29.73%</b>             | <b>18,165,775</b>    | <b>30.34%</b>             |
| <b>Common and Preferred Stocks</b>           | <b>24,853,391</b>        | <b>36.99%</b>             | <b>21,954,047</b>    | <b>36.65%</b>             |
| <b>Index and Pooled Funds</b>                |                          |                           |                      |                           |
| Equity Index and Pooled Funds                | 6,167,946                | 9.18%                     | 5,343,955            | 8.92%                     |
| Fixed Income Commingled Funds                | 659,415                  | 0.98%                     | 857,756              | 1.43%                     |
| <b>Total Index and Pooled Funds</b>          | <b>6,827,361</b>         | <b>10.16%</b>             | <b>6,201,711</b>     | <b>10.35%</b>             |
| <b>Real Assets – Private Assets</b>          | <b>6,173,539</b>         | <b>9.19%</b>              | <b>4,889,615</b>     | <b>8.16%</b>              |
| <b>Private Equity</b>                        | <b>8,941,188</b>         | <b>13.31%</b>             | <b>8,126,024</b>     | <b>13.57%</b>             |
| <b>Short-Term Investments</b>                |                          |                           |                      |                           |
| Treasurer of Virginia – LGIP Investment Pool | 267,722                  | 0.40%                     | 440,226              | 0.73%                     |
| Short-Term Investment Fund                   | 30,858                   | 0.05%                     | 20,398               | 0.03%                     |
| Foreign Currencies                           | 116,495                  | 0.17%                     | 101,297              | 0.17%                     |
| <b>Total Short-Term Investments</b>          | <b>415,075</b>           | <b>0.62%</b>              | <b>561,921</b>       | <b>0.93%</b>              |
| <b>Total Investments</b>                     | <b>\$ 67,181,623</b>     | <b>100.00%</b>            | <b>\$ 59,899,093</b> | <b>100.00%</b>            |

## 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) account contains the hybrid plan member and employer mandatory contributions and the employer match on the voluntary member contributions. The Hybrid Deferred Compensation Plan (457) contains the hybrid plan member's voluntary member contributions. Below is a schedule showing 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, 2014

| <b>Fund Name</b>              | <b>Hybrid 401(a)</b> | <b>Hybrid 457</b> | <b>Total</b>        |
|-------------------------------|----------------------|-------------------|---------------------|
| Retirement Portfolio          | \$ 9,998             | \$ 16             | \$ 10,014           |
| Target Date 2015 Portfolio    | 7,624                | 16                | 7,640               |
| Target Date 2020 Portfolio    | 66,870               | 3,380             | 70,250              |
| Target Date 2025 Portfolio    | 100,094              | 4,728             | 104,822             |
| Target Date 2030 Portfolio    | 118,327              | 21,403            | 139,730             |
| Target Date 2035 Portfolio    | 116,570              | 4,049             | 120,619             |
| Target Date 2040 Portfolio    | 122,993              | 1,323             | 124,316             |
| Target Date 2045 Portfolio    | 142,255              | 36,675            | 178,930             |
| Target Date 2050 Portfolio    | 187,889              | 4,751             | 192,640             |
| Target Date 2055 Portfolio    | 233,433              | 4,115             | 237,548             |
| Money Market Fund             | 1,414                | 590               | 2,004               |
| Stable Value Fund             | 849                  | 398               | 1,247               |
| Bond Fund                     | 267                  | 16                | 283                 |
| Inflation-Protected Bond Fund | 121                  | 16                | 137                 |
| High-Yield Bond Fund          | 840                  | 154               | 994                 |
| Stock Fund                    | 6,198                | 3,914             | 10,112              |
| Small/Mid-Cap Stock Fund      | 2,861                | 3,870             | 6,731               |
| International Stock Fund      | 2,128                | 776               | 2,904               |
| Emerging Markets Stock Fund   | 1,063                | 469               | 1,532               |
| Global Real Estate Fund       | 455                  | 272               | 727                 |
| VRS Investment Portfolio      | -                    | -                 | -                   |
| Self-Directed Brokerage       | -                    | -                 | -                   |
| <b>Total Plan Assets</b>      | <b>\$ 1,122,249</b>  | <b>\$ 90,931</b>  | <b>\$ 1,213,180</b> |

## Description of Defined Contribution Plan Investment Options

Participants with the System's Hybrid Retirement Plan benefit structure have access to a number of core investment options for their Defined Contribution Plan contributions. These options are intended to provide participants with a variety of investment choices while controlling the costs associated with their choices. 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 multiple accounts in the plan pay only one annual fee of \$30.50. At June 30, 2014, the plan provided the following core investment options to participants.

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### DO-IT-FOR-ME PATH

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**Retirement Portfolio:** Seeks to maximize total return with a risk level that may be appropriate for the portfolio's particular time frame and provide those who are close to retirement or already retired with an appropriate blend of income and inflation protection.

U.S. Bonds-52.8%   U.S. Large-Cap Stocks-18.3%   International Stocks-10.0%   U.S. Inflation-Index Bonds-9.0%  
U.S. Small/Mid-Cap Stocks-6.0%   Commodities-3.8%   Developed Real Estate-0.1%

---

**Target Date 2015 Portfolio:** Seeks to maximize total return with a risk level that may be appropriate for the portfolio's particular time frame and provide those who are close to retirement or already retired with an appropriate blend of income and inflation protection.

U.S. Bonds-51.6%   U.S. Large-Cap Stocks-19.0%   International Stocks-10.6%   U.S. Inflation-Index Bonds-8.3%  
U.S. Small/Mid-Cap Stocks-6.1%   Commodities-3.8%   Developed Real Estate-0.6%

---

**Target Date 2020 Portfolio:** Seeks to maximize total return with a risk level that may be appropriate for the portfolio's particular time frame and provide those who are close to retirement or already retired with an appropriate blend of income and inflation protection.

U.S. Bonds-42.5%   U.S. Large-Cap Stocks-23.6%   International Stocks-14.2%   U.S. Inflation-Index Bonds-6.8%  
U.S. Small/Mid-Cap Stocks-6.6%   Commodities-3.7%   Developed Real Estate-2.6%

---

**Target Date 2025 Portfolio:** Seeks to maximize total return with a risk level that may be appropriate for the portfolio's particular time frame and provide those who are close to retirement or already retired with an appropriate blend of income and inflation protection.

U.S. Bonds-35.2%   U.S. Large-Cap Stocks-27.3%   International Stocks-17.0%   U.S. Small/Mid-Cap Stocks-7.0%  
U.S. Inflation-Index Bonds-5.4%   Developed Real Estate-4.3%   Commodities-3.8%

**Target Date 2030 Portfolio:** Seeks to maximize total return with a risk level that may be appropriate for the portfolio's particular time frame and provide those who are close to retirement or already retired with an appropriate blend of income and inflation protection.

U.S. Large-Cap Stocks-30.4%   U.S. Bonds-29.0%   International Stocks-19.5%   U.S. Small/Mid-Cap Stocks-7.4%  
Developed Real Estate-5.8%   U.S. Inflation-Index Bonds-4.2%   Commodities-3.7%

---

**Target Date 2035 Portfolio:** Seeks to maximize total return with a risk level that may be appropriate for the portfolio's particular time frame and provide those who are close to retirement or already retired with an appropriate blend of income and inflation protection.

U.S. Large-Cap Stocks-33.2%   U.S. Bonds-23.6%   International Stocks-21.7%   U.S. Small/Mid-Cap Stocks-7.7%  
Developed Real Estate-7.1%   Commodities-3.8%   U.S. Inflation-Index Bonds-2.9%

---

**Target Date 2040 Portfolio:** Seeks to maximize total return with a risk level that may be appropriate for the portfolio's particular time frame and provide those who are close to retirement or already retired with an appropriate blend of income and inflation protection.

U.S. Large-Cap Stocks-35.7%   International Stocks-23.6%   U.S. Bonds-18.7%   U.S. Small/Mid-Cap Stocks-8.3%  
Developed Real Estate-8.1%   Commodities-3.7%   U.S. Inflation-Index Bonds-1.9%

---

**Target Date 2045 Portfolio:** Seeks to maximize total return with a risk level that may be appropriate for the portfolio's particular time frame and provide those who are close to retirement or already retired with an appropriate blend of income and inflation protection.

U.S. Large-Cap Stocks-38.0%   International Stocks-25.4%   U.S. Bonds-15.1%   Developed Real Estate-9.4%  
U.S. Small/Mid-Cap Stocks-8.4%   Commodities-3.7%

---

**Target Date 2050 Portfolio:** Seeks to maximize total return with a risk level that may be appropriate for the portfolio's particular time frame and provide those who are close to retirement or already retired with an appropriate blend of income and inflation protection.

U.S. Large-Cap Stocks-40.0%   International Stocks-27.2%   Developed Real Estate-10.4%  
U.S. Bonds-9.8%   U.S. Small/Mid-Cap Stocks-8.7%   Commodities-3.9%

---

**Target Date 2055 Portfolio:** Seeks to maximize total return with a risk level that may be appropriate for the portfolio's particular time frame and provide those who are close to retirement or already retired with an appropriate blend of income and inflation protection.

U.S. Large-Cap Stocks-41.4%   International Stocks-28.8%   Developed Real Estate-11.9%  
U.S. Small/Mid-Cap Stocks-9.3%   U.S. Bonds-4.7%   Commodities-3.9%

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## HELP-ME-DO-IT PATH

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

Government Agency Debt-56.6%    Government Agency Repurchase Agreements-29.2%  
Treasury Repurchase Agreements-7.3%    Treasury Debt-6.9%

---

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

Security-Backed Contracts (Wrap Providers): Monumental Life Insurance Company-25.2%  
State Street Bank and Trust Company-20.9%    Royal Bank of Canada-15.9%  
ING Life Insurance and Annuity Co.-16.0%    Stable Value Funds: Wells Fargo Stable Return Fund-20.4%  
Money Market-1.6%

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**Bond Fund:** Seeks to track the performance of the Barclays 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-35.4%    Mortgages-28.5%    Industrials-13.9%    Financials-7.6%    Non-U.S. Credit-5.3%    Agencies-3.2%  
CMBS-1.9%    Utilities-1.8%    Taxable Municipals-0.9%    Cash-0.6%    Asset-Backed Securities-0.5%    Hybrid ARM-0.4%

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

U.S. Treasury-99.7%    Cash/Other-0.3%

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**High-Yield Bond Fund:** Seeks to achieve returns that exceed, over time, its benchmark, the Bank of America (BofA) Merrill Lynch U.S. High-Yield BB-B Rated 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.

Communications-19.9%    Consumer Non-Cyclical-18.0%    Consumer Cyclical-15.9%  
Capital Goods-10.4%    Technology-8.0%    Energy-7.7%    Basic Industry-6.3%  
Financial/REIT-5.3%    Other/Cash/CDX-3.7%    Utilities-3.5%    Transportation-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-18.7%   Financials-16.1%   Health Care-13.3%   Consumer Discretionary-11.9%  
Energy-10.9%   Industrials-10.5%   Consumer Staples-9.5%   Materials-3.5%   Utilities-3.2%   Telecommunications Services-2.4%

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**Small/Mid-Cap 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.

Financials- 22.4%   Industrials-15.8%   Information Technology-15.5%   Consumer Discretionary-13.9%  
Health Care-11.2%   Materials-6.7%   Energy-6.2%   Utilities-4.5%   Consumer Staples-3.0%   Telecommunication Services-0.8%

---

**International Stock Fund:** Seeks to track the performance of the Morgan Stanley Capital International World ex-U.S. (MSCI World ex-U.S.) Index. The index is an unmanaged index that is comprised of foreign stocks representing companies located in Canada and in developed countries across Western Europe, and the Pacific Rim.

Financials-26.3%   Industrials-12.2%   Consumer Discretionary-11.2%   Consumer Staples-10.3%   Health Care-9.9%  
Energy-9.3%   Materials-8.4%   Telecommunication Services-4.7%   Information Technology-4.1%   Utilities-3.6%

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**Emerging Markets Stock Fund:** Seeks to track the performance of the Morgan Stanley Capital International Emerging Markets (MSCI Emerging Markets) Index. The index is an unmanaged index that is comprised of foreign stocks representing companies located in 26 emerging markets.

Financials-26.8%   Information Technology-17.2%   Energy-10.8%   Consumer Discretionary-9.1%  
Materials-8.9%   Consumer Staples-8.3%   Telecommunication Services-7.0%  
Industrials-6.5%   Utilities-3.6%   Health Care-1.8%

---

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

Retail REITs-23.5%   Diversified REITs-14.7%   Diversified Real Estate Activities-13.2%  
Office REITs-11.1%   Residential REITs-9.0%   Real Estate Operating Companies-7.1%   Health Care REITs-6.7%  
Industrial REITs-5.2%   Hotel & Resort REITs-4.2%   Specialized REITs-4.1%   Real Estate Development-1.0%  
Asset Management & Custody Banks-0.1%   Health Care Facilities-0.1%

**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.

Domestic Equity-20.9%   Fixed Income-18.5%   Non-U.S. Equity (Dev)-17.2%   Private Equity-7.8%  
Private Real Estate-7.5%   Non-Rate Sensitive Credit-6.6%   Emerging Markets-5.5%  
Rate Sensitive Credit-4.1%   Convertibles-3.7%   Emerging Market Debt-3.7%  
Other Real Assets-1.7%   Public Real Estate-1.3%   Cash-0.9%   Strategic Opportunities-0.6%

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#### DO-IT-MYSELF PATH

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**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 Plan

AS OF JUNE 30, 2014

(RETURNS GREATER THAN ONE YEAR ARE ANNUALIZED)

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

Total Annual Operating Expenses

| Investment Options                      | 1 Year | 3 Years | 5 Years | Expense Ratio<br>as a % | Expense Ratio<br>Per \$1,000 |
|---|--------|---------|---------|-------------------------|------------------------------|
| Retirement Portfolio <sup>1</sup>       | 11.13% | 6.86%   | 9.37%   | 0.08%                   | \$0.80                       |
| Custom Benchmark <sup>2</sup>           | 11.15% | 6.82%   | 9.37%   |                         |                              |
| Target Date 2015 Portfolio <sup>1</sup> | 11.72% | 7.01%   | 10.24%  | 0.08%                   | \$0.80                       |
| Custom Benchmark <sup>2</sup>           | 11.72% | 7.01%   | 10.23%  |                         |                              |
| Target Date 2020 Portfolio <sup>1</sup> | 13.54% | 7.86%   | 11.36%  | 0.08%                   | \$0.80                       |
| Custom Benchmark <sup>2</sup>           | 13.54% | 7.86%   | 11.36%  |                         |                              |
| Target Date 2025 Portfolio <sup>1</sup> | 15.04% | 8.56%   | 12.30%  | 0.08%                   | \$0.80                       |
| Custom Benchmark <sup>2</sup>           | 15.03% | 8.54%   | 12.29%  |                         |                              |
| Target Date 2030 Portfolio <sup>1</sup> | 16.39% | 9.17%   | 13.13%  | 0.08%                   | \$0.80                       |
| Custom Benchmark <sup>2</sup>           | 16.32% | 9.12%   | 13.10%  |                         |                              |
| Target Date 2035 Portfolio <sup>1</sup> | 17.52% | 9.72%   | 13.86%  | 0.09%                   | \$0.90                       |
| Custom Benchmark <sup>2</sup>           | 17.49% | 9.63%   | 13.82%  |                         |                              |
| Target Date 2040 Portfolio <sup>1</sup> | 18.61% | 10.18%  | 14.53%  | 0.09%                   | \$0.90                       |
| Custom Benchmark <sup>2</sup>           | 18.56% | 10.09%  | 14.48%  |                         |                              |
| Target Date 2045 Portfolio <sup>1</sup> | 19.63% | 10.59%  | 15.14%  | 0.09%                   | \$0.90                       |
| Custom Benchmark <sup>2</sup>           | 19.55% | 10.51%  | 15.08%  |                         |                              |
| Target Date 2050 Portfolio <sup>1</sup> | 20.52% | 10.96%  | 15.72%  | 0.09%                   | \$0.90                       |
| Custom Benchmark <sup>2</sup>           | 20.49% | 10.89%  | 15.67%  |                         |                              |
| Target Date 2055 Portfolio <sup>1</sup> | 21.43% | 11.53%  | N/A     | 0.09%                   | \$0.90                       |
| Custom Benchmark <sup>2</sup>           | 21.36% | 11.36%  | N/A     |                         |                              |

### HELP-ME-DO-IT PATH: INDIVIDUAL OPTIONS

| Investment Options                                 | 1 Year | 3 Years | 5 Years | Expense Ratio<br>as a % | Expense Ratio<br>Per \$1,000 |
|--|--------|---------|---------|-------------------------|------------------------------|
| Money Market Fund                                  | 0.00%  | 0.08%   | 0.14%   | 0.10%                   | \$1.00                       |
| Benchmark: Barclays 3-Month<br>Treasury Bill Index |        |         |         |                         |                              |
| Yield as of June 30, 2014 was 0.08%                | 0.07%  | 0.09%   | 0.13%   |                         |                              |
| Stable Value Fund                                  | 1.54%  | 2.09%   | 2.39%   | 0.29%                   | \$2.90                       |
| Custom Benchmark <sup>3</sup>                      |        |         |         |                         |                              |
| Yield as of June 30, 2014, was 1.47%               | 1.25%  | 1.02%   | 1.29%   |                         |                              |

HELP-ME-DO-IT PATH: INDIVIDUAL OPTIONS, cont.

| <b>Investment Options</b>   | <b>1 Year</b> | <b>3 Years</b> | <b>5 Years</b> | <b>Expense Ratio<br/>as a %</b> | <b>Expense Ratio<br/>Per \$1,000</b> |
|---|---------------|----------------|----------------|---------------------------------|--------------------------------------|
| Bond Fund   | 4.44%         | 3.74%          | 4.91%          | 0.04%                           | \$0.40                               |
| Benchmark: Barclays U.S. Aggregate<br>Bond Index                          | 4.37%         | 3.66%          | 4.85%          |                                 |                                      |
| Inflation-Protected Bond Fund   | 4.53%         | 3.63%          | 5.61%          | 0.04%                           | \$0.40                               |
| Benchmark: Barclays U.S. Treasury<br>Inflation-Protected Securities Index | 4.44%         | 3.55%          | 5.55%          |                                 |                                      |
| High-Yield Bond Fund  | 10.35%        | 9.18%          | 12.94%         | 0.39%                           | \$3.90                               |
| Benchmark: BofA Merrill Lynch U.S.<br>High-Yield BB-B Constrained Index   | 11.37%        | 8.94%          | 12.49%         |                                 |                                      |
| Stock Fund  | 24.63%        | 16.61%         | 18.86%         | 0.01%                           | \$0.10                               |
| Benchmark: S&P 500 Index  | 24.61%        | 16.58%         | 18.83%         |                                 |                                      |
| Small/Mid-Cap Stock Fund  | 25.59%        | 15.41%         | 21.39%         | 0.05%                           | \$0.50                               |
| Benchmark: Russell 2500 Index <sup>4</sup>                                | 25.58%        | 15.36%         | 21.34%         |                                 |                                      |
| International Stock Fund  | 24.17%        | 8.12%          | 11.81%         | 0.06%                           | \$0.60                               |
| Benchmark: MSCI World ex-U.S. Index <sup>5</sup>                          | 23.83%        | 7.70%          | 11.52%         |                                 |                                      |
| Emerging Markets Stock Fund   | 14.25%        | -0.57%         | 8.94%          | 0.14%                           | \$1.40                               |
| Benchmark: MSCI Emerging Markets Index                                    | 14.31%        | -0.39%         | 9.24%          |                                 |                                      |
| Global Real Estate Fund <sup>6</sup>                                      | 14.03%        | 13.65%         | 25.06%         | 0.12%                           | \$1.20                               |
| Benchmark: FTSE EPRA/NAREIT<br>Developed Index <sup>7</sup>               | 13.55%        | 13.45%         | 25.13%         |                                 |                                      |
| VRS Investment Portfolio (VRSIP)  | 15.67%        | 9.48%          | 12.25%         | 0.59%                           | \$5.90                               |
| VRS Custom Benchmark <sup>8</sup>   | 14.71%        | 8.87%          | 11.60%         |                                 |                                      |

<sup>1</sup> The Target Date Portfolios invest in units of BlackRock's LifePath Index Funds O. The LifePath Index Funds O invest in the master LifePath Index Funds F. Fund returns prior to January 2012 are those of the master Funds F with deductions taken for investment management fees negotiated by VRS and fund administrative expenses.

<sup>2</sup> 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; S&P 500 Index, Dow Jones U.S. Completion Total Stock Market Index, MSCI ACWI ex-U.S. IMI Index, Barclays U.S. Aggregate Bond Index, Barclays U.S. Treasury Inflation-Protected Securities Index, FTSE EPRA/NAREIT Developed Index and the Dow Jones-UBS Commodity Total Return Index.

<sup>3</sup> The benchmark represents the hypothetical return generated by the monthly yield of actively traded U.S. Treasuries with a three-year maturity plus an annualized spread of 0.50% and representative of the Fund's expected return profile, given its mandate and book value accounting treatment.

<sup>4</sup> Effective July 2012, the performance benchmark is the Russell 2500 Index. Prior to July 2012, the performance benchmark was the Russell Small Cap Completeness Index. The benchmark returns are linked.

<sup>5</sup> Effective July 2012, the performance benchmark is the MSCI World ex-U.S. Index. Prior to July 2012, the performance benchmark was the MSCI EAFE Index. The benchmark returns are linked.

<sup>6</sup> The fund transitioned from a U.S. domestic REIT fund to a global real estate fund during July 2012.

<sup>7</sup> Effective July 2012, the performance benchmark is the FTSE EPRA/NAREIT Developed Index. Prior to July 2012, the performance benchmark was the Dow Jones U.S. Select REIT Index. The benchmark returns are linked.

<sup>8</sup> The VRS Custom Benchmark is a blend of the asset class benchmarks at policy weights.

## 4 Actuarial Section

Retirement benefits are funded by member and employer contributions and investment gains. The VRS actuary evaluates the funded status of the plans and recommends contribution rates to the Board of Trustees and government leaders in anticipation of future funding needs. The actuary also reviews trends and returns, compares experience with assumptions and uses methodology and measurement to calculate recommended rates and provide valuations of plans and programs.

### Pension Trust Funds:

- Actuary's Certification Letter – Pension Plans
- Summary of Actuarial Assumptions and Methods
- Solvency Test – Pension Plans
- Solvency Test – VRS Pension Plans
- Schedule of Funding Progress (Actuarial Value of Assets Basis) – All Pension Plans
- Schedule of Funding Progress (Actuarial Value of Assets Basis) – VRS Pension Plans
- Schedule of Active Member Valuation Data – Pension Plans
- Schedule of Active Member Valuation Data – VRS Pension Plans
- Schedule of Retiree and Beneficiary Valuation Data – Pension Plans
- Schedule of Retiree and Beneficiary Valuation Data – VRS Pension Plans
- Actuarial Assumptions and Methods
- Additional Information About Actuarial Assumptions and Methods – Pension Plans
- Summary of Pension Plan Provisions
- Summary of Pension Plan Changes

### Other Post-Employment Benefit (OPEB) Plan Funds:

- Actuary's Certification Letter – OPEB Plans
- Actuary's Certification Letter – OPEB Plans – VSDP Long-Term Care Plan
- Actuary's Certification Letter – OPEB Plans – Line of Duty Act Fund
- Summary Actuarial Assumptions and Methods
- Solvency Test OPEB Plans
- Schedule of Active Member Valuation Data – OPEB Plans
- Schedule of Retiree and Beneficiary Valuation Data – OPEB Plans
- Actuarial Assumptions and Methods
- Additional Information About Actuarial Assumptions and Methods – OPEB Plans
- Summary of OPEB Plan Provisions
- Summary of OPEB Plan Changes



Photo: Tony Hall, Virginia Tourism Corporation

## BREAKING THE BARRIERS

Aviation's advent in the early 20th century was significant for Virginia's women, who were not only breaking social barriers on earth but also in the skies, proving themselves as pilots and entrepreneurs. In the first century of flight, women served as pilots, airline officials and airport administrators. Their achievements, recognized by the Virginia Aviation Hall of Fame and The Library of Virginia's Virginia Women in History program, continue to inspire Virginians to soar to great heights in personal and professional arenas.



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Actuary's Certification Letter –  
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October 31, 2014

**Board of Trustees**

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

Dear Trustees:

We are pleased to submit the results of the annual actuarial valuation for the following retirement plans administered by the Virginia Retirement System (VRS), prepared as of June 30, 2013:

- State Employees (VRS)
- Teachers (VRS)
- State Police (SPORS)
- Virginia Law Officers (VaLORS)
- Judicial (JRS)

In addition, this report includes information in aggregate on the actuarial valuations of the Political Subdivisions participating in the VRS plan as of June 30, 2013. We have prepared and provided separately, actuarial valuation reports for each of the Political Subdivisions. Please refer to the individual reports for the valuation results, summary of actuarial assumptions and methods, and plan provisions for each of the Political Subdivision plans.

The purpose of this report is to provide a summary of the funded status of the plans administered by VRS as of June 30, 2013, to recommend rates of contribution, and to provide accounting information under Governmental Accounting Standards Board (GASB) Statements No. 25 and 27 (GASB 25 and 27). While not verifying the data at source, the actuary performed tests for consistency and reasonability.

The valuation results indicate that the employer contribution rates shown in the table on the following page are sufficient to fund the normal cost for all members and finance the unfunded accrued liability of the plans for fiscal years 2015 and 2016. We also present the expected employer contributions to be actually funded based on the percentage of the full rate adopted by the General Assembly. For comparison, in the table on the following page we present the recommended employer contribution rates based on the June



| System                                       | June 30, 2011 Valuation<br>Fiscal Years 2013-2014 |                                 | June 30, 2012<br>Valuation<br>Informational<br>Purposes | June 30, 2013 Valuation<br>Fiscal Years 2015 & 2016 |   |   |
|--|---|---------------------------------|---|---|---|---|
|  | Board<br>Approved                                 | General<br>Assembly<br>Approved |   | Full Employer<br>Contribution<br>Rate               | Percentage<br>Adopted by<br>General<br>Assembly | Estimated<br>Employer<br>Contribution<br>Rate Adopted |
| State  | 13.07%  | 8.76%                           | 14.87%  | 15.79%  | 78.02%  | 12.33%  |
| Teachers                                     | 16.77%  | 11.66%                          | 18.20%  | 18.19%  | 79.69%  | 14.50%  |
| SPORS  | 32.62%  | 24.74%                          | 35.16%  | 32.93%  | 83.90%  | 27.63%  |
| ValORS                                       | 19.52%  | 14.80%                          | 21.30%  | 21.74%  | 83.88%  | 18.24%  |
| Judicial                                     | 54.11%  | 45.44%                          | 55.18%  | 57.84%  | 89.32%  | 51.66%  |
| Political<br>Subdivisions<br>(Average rates) | 10.63%  | N/A                             | 11.11%  | 9.91%   | N/A   | 9.91%   |

30, 2012, actuarial valuations, the recommended employer contribution rates based on the June 30, 2011, actuarial valuation, and the employer contribution rates approved by the General Assembly for the fiscal years ending June 30, 2013 and 2014.

Contribution rates for VRS employers are established every two years. The actuarially calculated employer contribution rates based on the June 30, 2012, results presented in this report are for informational purposes only.

The promised benefits of VRS are included in the calculated contribution rates, which are developed using the entry age normal cost method. The valuation takes into account the differentiation between Plan 1 vested members, Plan 1 non-vested members as of January 1, 2013, resulting from House Bill 1130 and Senate Bill 498, and Plan 2 members. Five-year smoothed market value of assets is used for actuarial valuation purposes. Gains and losses are reflected in the unfunded accrued liability. In accordance with the supplemental contribution provision under the 2011 Appropriations Act, Item 469(I)(6), the portion of the unfunded accrued liability with respect to deferred contributions for the 2010-2012 biennium is amortized using a level-dollar, closed, 10-year period beginning June 30, 2011. In accordance with the new funding policy adopted by the Board of Trustees, the balance of the unfunded accrued liability as of June 30, 2013, is being amortized by regular annual contributions as a level percentage of payroll within a closed 30-year period, on the assumption that payroll will increase by 3% annually and the amortization period will decrease by one year until reaching 0 years. The assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the Fund and to reasonable expectations of anticipated experience under the Fund, and meet the parameters for disclosures under GASB 25 and 27. The valuation reflects changes in the actuarial assumptions adopted by the Board of Trustees recommended in the experience study of VRS for the four-year period ending June 20, 2012. The table on the next page summarizes the changes in actuarial assumptions.



| STATE SYSTEM | ASSUMPTION CHANGE   |
|--------------|---|
| State        | Update mortality table<br>Decrease rates of service retirement<br>Decrease rates of withdrawals for fewer than 10 years of service<br>Decrease rates of male disability retirement<br>Reduce rates of salary increase by 0.25% per year           |
| Teachers     | Update mortality table<br>Adjustments to rates of service retirement<br>Decrease rates of withdrawals for three through nine years of service<br>Decrease rates of disability<br>Reduce rates of salary increase by 0.25% per year                |
| SPORS        | Update mortality table<br>Increase rate of service retirement at age 54   |
| ValORS       | Update mortality table<br>Adjustments to rates of service retirement<br>Decrease rates of withdrawals for females with fewer than 10 years of service<br>Increase rates of disability<br>Decrease service related disability rate from 60% to 50% |
| Judicial     | Update mortality table  |

| POLITICAL SUBDIVISION SYSTEM               | ASSUMPTION CHANGE   |
|--|---|
| Largest 10 –<br>Non-LEOS                   | Update mortality table<br>Decrease rates of service retirement<br>Decrease rates of disability retirement<br>Reduce rates of salary increase by 0.25% per year    |
| Largest 10 –<br>LEOS                       | Update mortality table<br>Decrease rates of disability  |
| All Others<br>(Non-10 Largest)<br>Non-LEOS | Update mortality table<br>Decrease rates of service retirement<br>Decrease rates of disability<br>Reduce rates of salary increase by 0.25% per year               |
| All Others<br>(Non-10 Largest)<br>LEOS     | Update mortality table<br>Adjustments to rates of service retirement for females<br>Increase rates of withdrawals<br>Decrease male and female rates of disability |

The valuation assumes no members will elect to opt into the Hybrid Retirement Plan during the election window to be held January 1 through April 30, 2014.

We have prepared the Schedule of Funding Progress and Trend Information shown in the Financial Section of the Comprehensive Annual Financial Report and all supporting schedules, including the Schedule of Active Member Valuation Data, the Solvency Test and the Analysis of Financial Experience shown in the



Actuarial Section of the Comprehensive Annual Financial Report. For completeness, the table of Changes in Unfunded Actuarial Accrued Liabilities in Section VII, the Solvency Test in Schedule A, and the Retiree and Beneficiary Valuation Data in Schedule H include the information with respect to the Political Subdivisions participating in VRS. All historical information that references a valuation date prior to June 30, 2008, was prepared by a previous actuarial firm.

In addition, the following schedules (or updates to them) were prepared by VRS from information prepared by us during the 2013 and prior actuarial valuations or from supplemental information prepared by us for use in the System's Comprehensive Annual Financial Report. Historical information that references a valuation date prior to June 30, 2008, was prepared by a previous actuarial firm. We have reviewed the following schedules for the periods indicated for inclusion in the System's 2014 Comprehensive Annual Financial Report:

- Schedule of Funding Progress (Fiscal Year 2004-Fiscal Year 2005)
- Schedule of Employer Contributions (All Years)
- Solvency Test (Fiscal Year 2004-Fiscal Year 2006)
- Schedule of Active Member Valuation Data (Fiscal Year 2004-Fiscal Year 2009)
- Schedule of Retirees and Beneficiaries (All Years)

Our organization has only a contractual relationship with the Virginia Retirement System to provide actuarial consulting services and we do not provide other services to nor have a financial interest in the Virginia Retirement System. There are no known interests or relationships that our firm has with the Virginia retirement System that may impair or appear to impair the objectivity of our work.

This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the System and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

Future actuarial results may differ significantly from the current results 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. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

Thomas J. Cavanaugh, FSA, FCA, EA, MAAA  
Chief Executive Officer

Jose I. Fernandez, ASA, FCA, EA, MAAA  
Principal and Consulting Actuary



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 provisions of and changes to the pension plans administered by the System.

#### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS – PENSION PLANS

|   | 2004                   | 2005-2009              | 2010                   | 2011-2012              | 2013                   |
|---|------------------------|------------------------|------------------------|------------------------|------------------------|
| Investment Rate of Return                             | 8.00%                  | 7.50%                  | 7.00%                  | 7.00%                  | 7.00%                  |
| Inflation Assumption                                  | 3.00%                  | 2.50%                  | 2.50%                  | 2.50%                  | 2.50%                  |
| Cost of Living (COLA) Assumption                      |                        |                        |                        |                        |                        |
| Plan 1  | 3.00%                  | 2.50%                  | 2.50%                  | 2.50%                  | 2.50%                  |
| Plan 2  | N/A                    | N/A                    | N/A                    | 2.25%                  | 2.25%                  |
| Actuarial Cost Method                                 | Entry Age Normal       | Entry Age Normal       | Entry Age Normal       | Entry Age Normal       | Entry Age Normal       |
| Change in Decremental Assumptions                     | No                     | Yes                    | No                     | No                     | Yes                    |
| Value of Ancillary Benefits Included                  | Yes                    | Yes                    | Yes                    | Yes                    | Yes                    |
| Value of Post-Retirement Adjustments to Date Included | 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 |

**SOLVENCY TEST – PENSION PLANS**

(EXPRESSED IN THOUSANDS)

| Valuation Date<br>(June 30)                              | Aggregate Accrued Liabilities for |                                |                      | Valuation Assets | Portion of Accrued Liabilities Covered by Assets |         |        |
|--|-----------------------------------|--------------------------------|----------------------|------------------|--|---------|--------|
|  | (1) Active Member Contributions   | (2) Retirees and Beneficiaries | (3) Active Members * |                  | (1)  | (2)     | (3)    |
| <b>VIRGINIA RETIREMENT SYSTEM (VRS)</b>                  |                                   |                                |                      |                  |  |         |        |
| 2013   | \$ 11,420,836                     | \$ 42,383,697                  | \$ 25,273,058        | \$ 52,124,581    | 100.00%  | 96.00%  | 0.00%  |
| 2012   | 9,479,988                         | 39,996,442                     | 28,382,426           | 51,211,915       | 100.00%  | 100.00% | 6.11%  |
| 2011   | 9,116,662                         | 37,539,539                     | 28,528,577           | 52,558,997       | 100.00%  | 100.00% | 20.69% |
| 2010   | 9,246,421                         | 35,117,915                     | 28,436,065           | 52,728,575       | 100.00%  | 100.00% | 29.41% |
| 2009   | 8,876,564                         | 31,589,747                     | 25,856,699           | 53,185,033       | 100.00%  | 100.00% | 49.19% |
| 2008   | 8,389,773                         | 29,225,652                     | 24,939,054           | 52,548,375       | 100.00%  | 100.00% | 59.88% |
| 2007   | 8,154,046                         | 23,339,386                     | 23,623,041           | 47,815,450       | 100.00%  | 100.00% | 56.39% |
| 2006   | 6,988,172                         | 23,055,815                     | 22,777,916           | 42,668,752       | 100.00%  | 100.00% | 55.43% |
| 2005   | 6,555,402                         | 21,140,882                     | 21,932,204           | 40,372,648       | 100.00%  | 100.00% | 57.80% |
| 2004   | 6,139,908                         | 18,971,864                     | 18,846,578           | 39,691,562       | 100.00%  | 100.00% | 77.36% |
| <b>STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)</b>  |                                   |                                |                      |                  |  |         |        |
| 2013   | \$ 88,814                         | \$ 548,115                     | \$ 359,761           | \$ 591,983       | 100.00%  | 91.80%  | 0.00%  |
| 2012   | 78,465                            | 563,612                        | 371,201              | 587,160          | 100.00%  | 90.30%  | 0.00%  |
| 2011   | 74,943                            | 540,097                        | 370,664              | 616,603          | 100.00%  | 100.00% | 0.42%  |
| 2010   | 77,759                            | 510,491                        | 360,642              | 633,415          | 100.00%  | 100.00% | 12.52% |
| 2009   | 74,662                            | 474,622                        | 329,896              | 646,960          | 100.00%  | 100.00% | 29.61% |
| 2008   | 71,160                            | 444,025                        | 329,010              | 646,277          | 100.00%  | 100.00% | 39.84% |
| 2007   | 70,796                            | 408,085                        | 327,147              | 594,985          | 100.00%  | 100.00% | 35.49% |
| 2006   | 66,055                            | 378,636                        | 285,236              | 538,646          | 100.00%  | 100.00% | 32.94% |
| 2005   | 62,917                            | 337,017                        | 273,239              | 514,330          | 100.00%  | 100.00% | 41.87% |
| 2004   | 61,529                            | 310,306                        | 284,509              | 510,604          | 100.00%  | 100.00% | 48.77% |
| <b>VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS)</b> |                                   |                                |                      |                  |  |         |        |
| 2013   | \$ 223,467                        | \$ 916,886                     | \$ 601,757           | \$ 941,933       | 100.00%  | 78.40%  | 0.00%  |
| 2012   | 176,172                           | 861,342                        | 715,499              | 909,399          | 100.00%  | 85.10%  | 0.00%  |
| 2011   | 174,963                           | 763,631                        | 744,597              | 926,082          | 100.00%  | 98.40%  | 0.00%  |
| 2010   | 186,792                           | 682,378                        | 710,151              | 925,443          | 100.00%  | 100.00% | 7.92%  |
| 2009   | 181,760                           | 581,887                        | 648,197              | 912,922          | 100.00%  | 100.00% | 23.03% |
| 2008   | 173,039                           | 510,878                        | 597,560              | 873,473          | 100.00%  | 100.00% | 31.72% |
| 2007   | 169,393                           | 458,383                        | 538,203              | 766,243          | 100.00%  | 100.00% | 25.73% |
| 2006   | 156,310                           | 412,767                        | 527,291              | 656,668          | 100.00%  | 100.00% | 16.61% |
| 2005   | 148,890                           | 330,502                        | 500,705              | 575,327          | 100.00%  | 100.00% | 19.16% |
| 2004   | 143,836                           | 246,872                        | 536,424              | 508,561          | 100.00%  | 100.00% | 21.97% |
| <b>JUDICIAL RETIREMENT SYSTEM (JRS)</b>                  |                                   |                                |                      |                  |  |         |        |
| 2013   | \$ 38,439                         | \$ 360,470                     | \$ 191,717           | \$ 368,671       | 100.00%  | 91.60%  | 0.00%  |
| 2012   | 38,578                            | 335,501                        | 208,377              | 361,097          | 100.00%  | 96.10%  | 0.00%  |
| 2011   | 37,981                            | 312,423                        | 219,091              | 371,051          | 100.00%  | 100.00% | 9.42%  |
| 2010   | 43,217                            | 310,305                        | 206,398              | 372,096          | 100.00%  | 100.00% | 9.00%  |
| 2009   | 41,793                            | 287,543                        | 192,127              | 378,212          | 100.00%  | 100.00% | 25.44% |
| 2008   | 38,785                            | 271,276                        | 184,707              | 373,850          | 100.00%  | 100.00% | 34.54% |
| 2007   | 38,675                            | 242,825                        | 160,998              | 340,200          | 100.00%  | 100.00% | 36.46% |
| 2006   | 34,756                            | 240,005                        | 149,637              | 302,734          | 100.00%  | 100.00% | 18.69% |
| 2005   | 32,143                            | 229,942                        | 140,216              | 287,825          | 100.00%  | 100.00% | 18.36% |
| 2004   | 30,176                            | 211,228                        | 124,171              | 285,178          | 100.00%  | 100.00% | 35.25% |

\* 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<br>(June 30)  | Aggregate Accrued Liabilities for     |                                      |                         |                     | Portion of<br>Accrued Liabilities<br>Covered by Assets |         |        |
|------------------------------|---------------------------------------|--------------------------------------|-------------------------|---------------------|--|---------|--------|
|                              | (1) Active<br>Member<br>Contributions | (2) Retirees<br>and<br>Beneficiaries | (3) Active<br>Members * | Valuation<br>Assets | (1)  | (2)     | (3)    |
| VRS – STATE                  |                                       |                                      |                         |                     |  |         |        |
| 2013                         | \$ 3,113,926                          | \$ 11,954,023                        | \$ 6,000,702            | \$ 13,714,404       | 100.00%  | 88.70%  | 0.00%  |
| 2012                         | 2,559,930                             | 11,363,015                           | 7,021,313               | 13,740,366          | 100.00%  | 98.40%  | 0.00%  |
| 2011                         | 2,475,123                             | 10,844,164                           | 7,088,671               | 14,406,275          | 100.00%  | 100.00% | 15.33% |
| 2010                         | 2,511,650                             | 10,279,653                           | 6,748,150               | 14,700,854          | 100.00%  | 100.00% | 28.30% |
| 2009                         | 2,501,163                             | 9,024,592                            | 6,400,124               | 15,049,901          | 100.00%  | 100.00% | 55.06% |
| 2008                         | 2,398,033                             | 8,411,441                            | 6,287,468               | 15,046,348          | 100.00%  | 100.00% | 67.39% |
| 2007                         | 2,361,187                             | 7,707,539                            | 6,211,055               | 13,857,242          | 100.00%  | 100.00% | 61.00% |
| 2006 **                      | 2,023,931                             | 6,865,383                            | 6,174,748               | 12,542,390          | 100.00%  | 100.00% | 59.16% |
| VRS – TEACHER                |                                       |                                      |                         |                     |  |         |        |
| 2013                         | \$ 5,310,701                          | \$ 21,627,490                        | \$ 12,914,143           | \$ 24,724,679       | 100.00%  | 89.80%  | 0.00%  |
| 2012                         | 4,573,244                             | 20,361,089                           | 14,156,075              | 24,391,761          | 100.00%  | 97.30%  | 0.00%  |
| 2011                         | 4,394,657                             | 19,066,272                           | 14,310,803              | 25,166,124          | 100.00%  | 100.00% | 11.92% |
| 2010                         | 4,376,385                             | 17,935,907                           | 14,776,284              | 25,447,677          | 100.00%  | 100.00% | 21.22% |
| 2009                         | 4,155,034                             | 16,383,311                           | 13,322,169              | 25,764,665          | 100.00%  | 100.00% | 39.23% |
| 2008                         | 3,922,647                             | 15,181,246                           | 12,854,428              | 25,502,482          | 100.00%  | 100.00% | 49.78% |
| 2007                         | 3,826,300                             | 13,670,111                           | 12,173,427              | 23,204,871          | 100.00%  | 100.00% | 46.89% |
| 2006 **                      | 3,284,393                             | 12,086,579                           | 11,903,092              | 20,731,192          | 100.00%  | 100.00% | 45.03% |
| VRS – POLITICAL SUBDIVISIONS |                                       |                                      |                         |                     |  |         |        |
| 2013                         | \$ 2,996,209                          | \$ 8,802,184                         | \$ 6,358,213            | \$ 13,685,498       | 100.00%  | 100.00% | 29.68% |
| 2012                         | 2,346,814                             | 8,272,338                            | 7,205,038               | 13,079,788          | 100.00%  | 100.00% | 34.15% |
| 2011                         | 2,246,882                             | 7,629,103                            | 7,129,103               | 12,986,598          | 100.00%  | 100.00% | 43.63% |
| 2010                         | 2,358,386                             | 6,902,355                            | 6,911,631               | 12,580,044          | 100.00%  | 100.00% | 48.02% |
| 2009                         | 2,220,367                             | 6,181,844                            | 6,134,406               | 12,370,467          | 100.00%  | 100.00% | 64.69% |
| 2008                         | 2,069,093                             | 5,632,966                            | 5,797,158               | 11,999,545          | 100.00%  | 100.00% | 74.13% |
| 2007                         | 1,966,559                             | 4,961,736                            | 5,238,559               | 10,753,337          | 100.00%  | 100.00% | 73.02% |
| 2006 **                      | 1,679,848                             | 4,103,853                            | 4,700,076               | 9,395,170           | 100.00%  | 100.00% | 76.84% |
| VRS – TOTAL                  |                                       |                                      |                         |                     |  |         |        |
| 2013                         | \$ 11,420,836                         | \$ 42,383,697                        | \$ 25,273,058           | \$ 52,124,581       | 100.00%  | 96.00%  | 0.00%  |
| 2012                         | 9,479,988                             | 39,996,442                           | 28,382,426              | 51,211,915          | 100.00%  | 100.00% | 6.11%  |
| 2011                         | 9,116,662                             | 37,539,539                           | 28,528,577              | 52,558,997          | 100.00%  | 100.00% | 20.69% |
| 2010                         | 9,246,421                             | 35,117,915                           | 28,436,065              | 52,728,575          | 100.00%  | 100.00% | 29.41% |
| 2009                         | 8,876,564                             | 31,589,747                           | 25,856,699              | 53,185,033          | 100.00%  | 100.00% | 49.19% |
| 2008                         | 8,389,773                             | 29,225,652                           | 24,939,054              | 52,548,375          | 100.00%  | 100.00% | 59.88% |
| 2007                         | 8,154,046                             | 26,339,386                           | 23,623,041              | 47,815,450          | 100.00%  | 100.00% | 56.39% |
| 2006 **                      | 6,988,172                             | 23,055,815                           | 22,777,916              | 42,668,752          | 100.00%  | 100.00% | 55.43% |

\* Employer-financed portion.

\*\* Plan-level information is not available for periods prior to 2006.

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**

(DOLLARS IN MILLIONS)

| Actuarial Valuation Date<br>June 30                      | Market Value of Assets (MVA) (a) | Actuarial Accrued Liability (AAL) – Entry Age (b) | Net Pension Liability (AAL-MVA) (b-a) | Funded Ratio (MVA/AAL) (a/b) | Covered Payroll (c) | Net Pension Liability as a Percentage of Covered Payroll (b-a)/(c) |
|--|----------------------------------|---|---------------------------------------|------------------------------|---------------------|--|
| <b>VIRGINIA RETIREMENT SYSTEM (VRS) **</b>               |                                  |   |                                       |                              |                     |  |
| 2013 *   | \$ 52,125                        | \$ 79,078   | \$ 26,953                             | 65.9%                        | \$ 15,269           | 176.5%   |
| 2012   | 51,212                           | 77,859  | 26,647                                | 65.8%                        | 14,880              | 179.1%   |
| 2011   | 52,559                           | 75,185  | 22,626                                | 69.9%                        | 14,709              | 153.8%   |
| 2010   | 52,729                           | 72,801  | 20,072                                | 72.4%                        | 14,758              | 136.0%   |
| 2009 *   | 53,185                           | 66,323  | 13,138                                | 80.2%                        | 14,948              | 87.9%  |
| 2008   | 52,548                           | 62,554  | 10,006                                | 84.0%                        | 14,559              | 68.7%  |
| 2007   | 47,815                           | 58,116  | 10,301                                | 82.3%                        | 13,834              | 74.5%  |
| 2006   | 42,669                           | 52,822  | 10,153                                | 80.8%                        | 13,002              | 78.1%  |
| 2005 *   | 40,372                           | 49,628  | 9,256                                 | 81.3%                        | 12,212              | 75.8%  |
| 2004   | 39,691                           | 43,958  | 4,267                                 | 90.3%                        | 11,510              | 37.1%  |
| <b>STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)</b>  |                                  |   |                                       |                              |                     |  |
| 2013 *   | \$ 592                           | \$ 997  | \$ 405                                | 59.4%                        | \$ 109              | 371.3%   |
| 2012   | 587                              | 1,013   | 426                                   | 57.9%                        | 104                 | 409.0%   |
| 2011   | 617                              | 986   | 369                                   | 62.6%                        | 100                 | 370.3%   |
| 2010   | 634                              | 949   | 315                                   | 66.8%                        | 98                  | 323.2%   |
| 2009 *   | 647                              | 879   | 232                                   | 73.6%                        | 101                 | 230.0%   |
| 2008   | 646                              | 844   | 198                                   | 76.6%                        | 103                 | 193.2%   |
| 2007   | 595                              | 806   | 211                                   | 73.8%                        | 101                 | 209.4%   |
| 2006   | 539                              | 730   | 191                                   | 73.8%                        | 94                  | 204.1%   |
| 2005 *   | 514                              | 673   | 159                                   | 76.4%                        | 91                  | 174.8%   |
| 2004   | 510                              | 656   | 146                                   | 77.8%                        | 82                  | 178.0%   |
| <b>VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS)</b> |                                  |   |                                       |                              |                     |  |
| 2013 *   | \$ 942                           | \$ 1,742  | \$ 800                                | 54.1%                        | \$ 342              | 233.9%   |
| 2012   | 909                              | 1,753   | 844                                   | 51.9%                        | 345                 | 244.8%   |
| 2011   | 926                              | 1,683   | 757                                   | 55.0%                        | 356                 | 212.5%   |
| 2010   | 925                              | 1,579   | 654                                   | 58.6%                        | 346                 | 189.0%   |
| 2009 *   | 913                              | 1,412   | 499                                   | 64.7%                        | 359                 | 138.9%   |
| 2008   | 873                              | 1,281   | 408                                   | 68.2%                        | 368                 | 110.8%   |
| 2007   | 766                              | 1,166   | 400                                   | 65.7%                        | 341                 | 117.2%   |
| 2006   | 656                              | 1,096   | 440                                   | 59.9%                        | 321                 | 137.0%   |
| 2005 *   | 575                              | 980   | 405                                   | 58.7%                        | 307                 | 132.0%   |
| 2004   | 509                              | 927   | 418                                   | 54.9%                        | 298                 | 140.3%   |
| <b>JUDICIAL RETIREMENT SYSTEM (JRS)</b>                  |                                  |   |                                       |                              |                     |  |
| 2013 *   | \$ 369                           | \$ 591  | \$ 222                                | 62.4%                        | \$ 57               | 388.6%   |
| 2012   | 361                              | 582   | 221                                   | 62.0%                        | 57                  | 388.6%   |
| 2011   | 371                              | 569   | 198                                   | 65.2%                        | 59                  | 336.8%   |
| 2010   | 372                              | 560   | 188                                   | 66.5%                        | 61                  | 307.8%   |
| 2009 *   | 378                              | 521   | 143                                   | 72.5%                        | 63                  | 228.4%   |
| 2008   | 374                              | 495   | 121                                   | 75.6%                        | 61                  | 199.9%   |
| 2007   | 340                              | 442   | 102                                   | 76.9%                        | 58                  | 177.3%   |
| 2006   | 302                              | 424   | 122                                   | 71.3%                        | 54                  | 224.1%   |
| 2005 *   | 288                              | 402   | 114                                   | 71.5%                        | 52                  | 220.7%   |
| 2004   | 285                              | 366   | 81                                    | 78.0%                        | 48                  | 168.8%   |

\* 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**

(DOLLARS 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) |
|--|-------------------------------|---|---------------------------|--------------------|---------------------|---|
| <b>VIRGINIA RETIREMENT SYSTEM (VRS) – STATE</b>                  |                               |   |                           |                    |                     |   |
| 2013 *   | \$ 13,714,404                 | \$ 21,068,651                             | \$ 7,354,247              | 65.1%              | \$ 3,716,548        | 197.9%  |
| 2012   | 13,740,366                    | 20,944,258                                | 7,203,892                 | 65.6%              | 3,713,119           | 194.0%  |
| 2011   | 14,406,275                    | 20,407,958                                | 6,001,683                 | 70.6%              | 3,686,259           | 162.8%  |
| 2010   | 14,700,854                    | 19,539,453                                | 4,838,599                 | 75.2%              | 3,514,396           | 137.7%  |
| 2009 *   | 15,049,901                    | 17,925,879                                | 2,875,978                 | 84.0%              | 3,619,478           | 79.5%   |
| 2008   | 15,046,348                    | 17,096,942                                | 2,050,594                 | 88.0%              | 3,640,692           | 56.3%   |
| 2007   | 13,857,342                    | 16,279,781                                | 2,422,439                 | 85.1%              | 3,467,388           | 69.9%   |
| 2006   | 12,542,390                    | 15,064,062                                | 521,672                   | 83.3%              | 3,301,286           | 76.4%   |
| 2005 *   | 12,018,175                    | 14,007,274                                | 1,989,099                 | 85.8%              | 3,100,479           | 64.2%   |
| 2004   | 11,981,566                    | 12,669,013                                | 687,447                   | 94.6%              | 2,946,067           | 23.3%   |
| <b>VIRGINIA RETIREMENT SYSTEM (VRS) – TEACHER</b>                |                               |   |                           |                    |                     |   |
| 2013 *   | \$ 24,724,679                 | \$ 39,852,334                             | \$ 15,127,655             | 62.0%              | \$ 7,211,543        | 209.8%  |
| 2012   | 24,391,761                    | 39,090,408                                | 14,698,647                | 62.4%              | 7,004,577           | 209.8%  |
| 2011   | 25,166,124                    | 37,771,732                                | 12,605,608                | 66.6%              | 6,922,130           | 182.1%  |
| 2010   | 25,447,677                    | 37,088,576                                | 11,640,899                | 68.6%              | 7,119,889           | 163.5%  |
| 2009 *   | 25,764,665                    | 33,860,514                                | 8,095,849                 | 76.1%              | 7,160,842           | 113.1%  |
| 2008   | 25,502,482                    | 31,958,321                                | 6,455,839                 | 79.8%              | 6,896,432           | 93.6%   |
| 2007   | 23,204,871                    | 29,669,838                                | 6,464,967                 | 78.2%              | 6,604,643           | 97.9%   |
| 2006   | 20,731,192                    | 27,274,064                                | 6,542,872                 | 76.0%              | 6,195,421           | 105.6%  |
| 2005 *   | 19,639,994                    | 25,205,725                                | 5,565,731                 | 77.9%              | 5,844,860           | 95.2%   |
| 2004   | 19,343,319                    | 22,173,218                                | 2,829,899                 | 87.2%              | 5,491,142           | 51.5%   |
| <b>VIRGINIA RETIREMENT SYSTEM (VRS) – POLITICAL SUBDIVISIONS</b> |                               |   |                           |                    |                     |   |
| 2013 *   | \$ 13,685,498                 | \$ 18,156,606                             | \$ 4,471,108              | 75.4%              | \$ 4,340,988        | 103.0%  |
| 2012   | 13,079,788                    | 17,824,190                                | 4,744,402                 | 73.4%              | 4,162,579           | 114.0%  |
| 2011   | 12,986,598                    | 17,005,070                                | 4,018,472                 | 76.4%              | 4,100,470           | 98.0%   |
| 2010   | 12,580,044                    | 16,172,372                                | 3,592,328                 | 77.8%              | 4,123,505           | 87.1%   |
| 2009 *   | 12,370,467                    | 14,536,618                                | 2,166,151                 | 85.1%              | 4,167,324           | 52.0%   |
| 2008   | 11,999,545                    | 13,499,216                                | 1,499,671                 | 88.9%              | 4,021,468           | 37.3%   |
| 2007   | 10,753,237                    | 12,166,854                                | 1,413,617                 | 88.4%              | 3,761,991           | 37.6%   |
| 2006   | 9,395,170                     | 10,483,777                                | 1,088,607                 | 89.6%              | 3,504,844           | 31.1%   |
| 2005 *   | 8,714,479                     | 10,415,489                                | 1,701,010                 | 83.7%              | 3,266,806           | 52.1%   |
| 2004   | 8,366,677                     | 9,116,119                                 | 749,442                   | 91.8%              | 3,072,693           | 24.4%   |
| <b>VIRGINIA RETIREMENT SYSTEM (VRS) – TOTAL</b>                  |                               |   |                           |                    |                     |   |
| 2013 *   | \$ 52,124,581                 | \$ 79,077,591                             | \$ 26,953,010             | 65.9%              | \$15,269,079        | 176.5%  |
| 2012   | 51,211,915                    | 77,858,856                                | 26,646,941                | 65.8%              | 14,880,275          | 179.1%  |
| 2011   | 52,558,997                    | 75,184,760                                | 22,625,763                | 69.9%              | 14,708,859          | 153.8%  |
| 2010   | 52,728,575                    | 72,800,401                                | 20,071,826                | 72.4%              | 14,757,790          | 136.0%  |
| 2009 *   | 53,185,033                    | 66,323,011                                | 13,137,978                | 80.2%              | 14,947,644          | 87.9%   |
| 2008   | 52,548,375                    | 62,554,479                                | 10,006,104                | 84.0%              | 14,558,592          | 68.7%   |
| 2007   | 47,815,450                    | 58,116,473                                | 10,301,023                | 82.3%              | 13,834,022          | 74.5%   |
| 2006   | 42,668,752                    | 52,821,903                                | 10,153,151                | 80.8%              | 13,001,551          | 78.1%   |
| 2005 *   | 40,372,648                    | 49,628,488                                | 9,255,840                 | 81.3%              | 12,212,145          | 75.8%   |
| 2004   | 39,691,562                    | 43,958,350                                | 4,266,788                 | 90.3%              | 11,509,902          | 37.1%   |

\* Revised economic and demographic assumptions due to experience study.

**SCHEDULE OF ACTIVE MEMBER VALUATION DATA – PENSION PLANS**

| Valuation Date<br>(June 30)                       | Active Members |                          |                    |                                    |                     |
|---|----------------|--------------------------|--------------------|------------------------------------|---------------------|
|   | Number         | Annual Payroll<br>(000s) | Average Annual Pay | Annualized % Change in Average Pay | Number of Employers |
| VIRGINIA RETIREMENT SYSTEM (VRS)                  |                |                          |                    |                                    |                     |
| 2013  | 328,277        | \$ 15,269,079            | \$ 46,513          | 2.6%                               | 599                 |
| 2012  | 328,385        | 14,880,275               | 45,314             | 0.5%                               | 599                 |
| 2011  | 326,357        | 14,708,859               | 45,070             | 0.6%                               | 594                 |
| 2010  | 329,374        | 14,757,790               | 44,806             | -0.2%                              | 592                 |
| 2009  | 333,049        | 14,947,644               | 44,881             | 2.3%                               | 587                 |
| 2008  | 331,851        | 14,558,592               | 43,871             | 3.5%                               | 583                 |
| 2007  | 326,218        | 13,834,022               | 42,407             | 4.4%                               | 578                 |
| 2006  | 320,065        | 13,001,551               | 40,622             | 4.1%                               | 575                 |
| 2005  | 312,981        | 12,212,145               | 39,019             | 3.5%                               | 571                 |
| 2004  | 305,388        | 11,509,902               | 37,689             | 4.1%                               | 565                 |
| STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)  |                |                          |                    |                                    |                     |
| 2013  | 2,002          | \$ 109,006               | \$ 54,449          | -1.7%                              | 1                   |
| 2012  | 1,881          | 104,189                  | 55,390             | -3.4%                              | 1                   |
| 2011  | 1,738          | 99,669                   | 57,347             | 3.8%                               | 1                   |
| 2010  | 1,767          | 97,601                   | 55,235             | 0.0%                               | 1                   |
| 2009  | 1,828          | 100,974                  | 55,237             | -0.2%                              | 1                   |
| 2008  | 1,852          | 102,466                  | 55,327             | 3.8%                               | 1                   |
| 2007  | 1,890          | 100,785                  | 53,325             | 2.1%                               | 1                   |
| 2006  | 1,795          | 93,742                   | 52,224             | 4.1%                               | 1                   |
| 2005  | 1,811          | 90,865                   | 50,174             | 7.3%                               | 1                   |
| 2004  | 1,755          | 82,100                   | 46,781             | 2.2%                               | 1                   |
| VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS) |                |                          |                    |                                    |                     |
| 2013  | 9,372          | \$ 342,154               | \$ 36,508          | -0.6%                              | 1                   |
| 2012  | 9,383          | 344,616                  | 36,728             | -0.7%                              | 1                   |
| 2011  | 9,631          | 356,240                  | 36,989             | 4.0%                               | 1                   |
| 2010  | 9,734          | 346,040                  | 35,550             | -0.1%                              | 1                   |
| 2009  | 10,087         | 359,070                  | 35,597             | 0.2%                               | 1                   |
| 2008  | 10,370         | 368,255                  | 35,512             | 6.3%                               | 1                   |
| 2007  | 10,213         | 341,035                  | 33,392             | 3.1%                               | 1                   |
| 2006  | 9,904          | 320,869                  | 32,398             | 3.8%                               | 1                   |
| 2005  | 9,819          | 306,574                  | 31,222             | 2.0%                               | 1                   |
| 2004  | 9,746          | 298,313                  | 30,609             | 1.0%                               | 1                   |
| JUDICIAL RETIREMENT SYSTEM (JRS)                  |                |                          |                    |                                    |                     |
| 2013  | 381            | \$ 57,110                | \$ 149,895         | 0.0%                               | 1                   |
| 2012  | 380            | 56,958                   | 149,889            | 0.2%                               | 1                   |
| 2011  | 394            | 58,919                   | 149,541            | 0.0%                               | 1                   |
| 2010  | 408            | 61,021                   | 149,561            | 0.4%                               | 1                   |
| 2009  | 421            | 62,709                   | 148,952            | 1.5%                               | 1                   |
| 2008  | 412            | 60,486                   | 146,811            | 7.9%                               | 1                   |
| 2007  | 424            | 57,687                   | 136,054            | 4.0%                               | 1                   |
| 2006  | 415            | 54,289                   | 130,818            | 4.4%                               | 1                   |
| 2005  | 414            | 51,874                   | 125,300            | 5.1%                               | 1                   |
| 2004  | 405            | 48,271                   | 119,188            | 2.2%                               | 1                   |

**SCHEDULE OF ACTIVE MEMBER VALUATION DATA – VRS PENSION PLANS**

| Valuation Date<br>(June 30)  | Active Members |                          |                    |                                    |                     |
|------------------------------|----------------|--------------------------|--------------------|------------------------------------|---------------------|
|                              | Number         | Annual Payroll<br>(000s) | Average Annual Pay | Annualized % Change in Average Pay | Number of Employers |
| VRS – STATE                  |                |                          |                    |                                    |                     |
| 2013                         | 75,879         | \$ 3,716,548             | \$ 48,980          | 0.6%                               | 1                   |
| 2012                         | 76,274         | 3,713,119                | 48,681             | 0.1%                               | 1                   |
| 2011                         | 75,820         | 3,686,259                | 48,619             | 5.2%                               | 1                   |
| 2010 *                       | 76,033         | 3,514,396                | 46,222             | N/A                                | 1                   |
| VRS – TEACHER                |                |                          |                    |                                    |                     |
| 2013                         | 147,257        | \$ 7,211,543             | \$ 48,972          | 2.9%                               | 145                 |
| 2012                         | 147,216        | 7,004,577                | 47,580             | 0.5%                               | 144                 |
| 2011                         | 146,152        | 6,922,130                | 47,363             | -1.2%                              | 144                 |
| 2010 *                       | 148,462        | 7,119,889                | 47,958             | N/A                                | 144                 |
| VRS – POLITICAL SUBDIVISIONS |                |                          |                    |                                    |                     |
| 2013                         | 105,141        | \$ 4,340,988             | \$ 41,287          | 4.0%                               | 453                 |
| 2012                         | 104,895        | 4,162,579                | 39,683             | 1.0%                               | 454                 |
| 2011                         | 104,385        | 4,100,470                | 39,282             | -0.1%                              | 449                 |
| 2010 *                       | 104,879        | 4,123,505                | 39,317             | N/A                                | 447                 |
| VRS – TOTAL                  |                |                          |                    |                                    |                     |
| 2013                         | 328,277        | \$ 15,269,079            | \$ 46,513          | 2.6%                               | 599                 |
| 2012                         | 328,385        | 14,880,275               | 45,314             | 0.5%                               | 599                 |
| 2011                         | 326,357        | 14,708,859               | 45,070             | 0.6%                               | 594                 |
| 2010 *                       | 329,374        | 14,757,790               | 44,806             | N/A                                | 592                 |

\* Plan-level statistics for this presentation are not available for years prior to 2010.

**SCHEDULE OF RETIREE AND BENEFICIARY VALUATION DATA – PENSION PLANS**

Retirees and Beneficiaries

| Valuation Date<br>(June 30)                              | Added to Rolls |                | Removed from Rolls |                  | Rolls at End of Year |                 | Annualized %<br>Increase in Annual Allowances | Average Annual Allowance |
|--|----------------|----------------|--------------------|------------------|----------------------|-----------------|---|--------------------------|
|  | Number         | Allowances *   | Number             | Allowances       | Number               | Allowances      |   |                          |
| <b>VIRGINIA RETIREMENT SYSTEM (VRS)</b>                  |                |                |                    |                  |                      |                 |   |                          |
| 2013   | 11,297         | \$ 303,240,000 | 4,574              | \$ 83,618,000    | 165,494              | \$3,433,557,000 | 6.8%  | \$ 20,747                |
| 2012   | 10,493         | 305,440,000    | 4,411              | 91,446,000       | 158,771              | 3,213,935,000   | 7.1%  | 20,243                   |
| 2011   | 11,630         | 248,784,000    | 4,210              | 31,978,000       | 152,689              | 2,999,941,000   | 7.8%  | 19,647                   |
| 2010   | 10,780         | 234,416,000    | 4,011              | 65,755,000       | 145,269              | 2,783,135,000   | 6.5%  | 19,158                   |
| 2009   | 9,474          | 278,307,000    | 4,202              | 63,388,000       | 138,500              | 2,614,474,000   | 9.0%  | 18,877                   |
| 2008   | 9,610          | 284,577,000    | 3,869              | 68,575,000       | 133,228              | 2,399,555,000   | 9.9%  | 18,011                   |
| 2007   | 9,475          | 277,466,000    | 3,774              | 66,307,000       | 127,487              | 2,183,553,000   | 10.7%   | 17,128                   |
| 2006   | 8,949          | 190,775,000    | 3,834              | 33,172,000       | 121,786              | 1,972,394,000   | 8.7%  | 16,196                   |
| 2005   | 9,151          | 187,247,000    | 4,250              | 48,631,000       | 116,671              | 1,814,791,000   | 8.3%  | 15,555                   |
| 2004   | 7,913          | 167,577,000    | 2,561              | 29,304,000       | 111,770              | 1,676,175,000   | 9.0%  | 14,997                   |
| <b>STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)</b>  |                |                |                    |                  |                      |                 |   |                          |
| 2013   | 44             | \$ 2,652,000   | 36                 | \$ 1,491,000     | 1,208                | \$ 47,005,000   | 2.5%  | \$ 38,912                |
| 2012   | 54             | 3,619,000      | 20                 | 1,543,000        | 1,200                | 45,844,000      | 4.7%  | 38,203                   |
| 2011   | 68             | 2,954,000      | 24                 | 412,000          | 1,166                | 43,768,000      | 6.2%  | 37,537                   |
| 2010   | 62             | 2,450,000      | 22                 | 1,085,000        | 1,122                | 41,226,000      | 3.4%  | 36,743                   |
| 2009   | 72             | 3,604,000      | 23                 | 777,000          | 1,082                | 39,861,000      | 7.6%  | 36,840                   |
| 2008   | 68             | 4,207,000      | 26                 | 548,000          | 1,033                | 37,034,000      | 11.0%   | 35,851                   |
| 2007   | 52             | 3,292,000      | 18                 | 1,311,000        | 991                  | 33,375,000      | 6.3%  | 33,678                   |
| 2006   | 57             | 2,378,000      | 23                 | 170,000          | 957                  | 31,394,000      | 7.6%  | 32,805                   |
| 2005   | 70             | 3,035,000      | 9                  | 210,000          | 923                  | 29,186,000      | 10.7%   | 31,620                   |
| 2004   | 56             | 2,717,000      | 4                  | 93,000           | 862                  | 26,361,000      | 11.1%   | 30,581                   |
| <b>VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS)</b> |                |                |                    |                  |                      |                 |   |                          |
| 2013   | 336            | \$ 8,561,000   | 34                 | \$ (2,847,000)** | 3,213                | \$ 75,370,000   | 17.8%   | \$ 23,458                |
| 2012   | 347            | 9,437,000      | 37                 | 2,505,000        | 2,911                | 63,962,000      | 12.2%   | 21,973                   |
| 2011   | 316            | 6,677,000      | 33                 | 1,145,000        | 2,601                | 57,030,000      | 10.7%   | 21,926                   |
| 2010   | 281            | 6,667,000      | 24                 | 932,000          | 2,318                | 51,498,000      | 12.5%   | 22,216                   |
| 2009   | 264            | 6,903,000      | 17                 | 671,000          | 2,061                | 45,763,000      | 15.8%   | 22,204                   |
| 2008   | 224            | 5,774,000      | 28                 | 3,817,000        | 1,814                | 39,531,000      | 5.2%  | 21,792                   |
| 2007   | 253            | 7,118,000      | 16                 | 1,393,000        | 1,618                | 37,574,000      | 18.0%   | 23,222                   |
| 2006   | 209            | 4,692,000      | 34                 | 129,000          | 1,381                | 31,849,000      | 16.7%   | 23,062                   |
| 2005   | 248            | 7,541,000      | 12                 | 678,000          | 1,206                | 27,286,000      | 33.6%   | 22,625                   |
| 2004   | 207            | 4,554,000      | 2                  | 113,000          | 970                  | 20,423,000      | 27.8%   | 21,055                   |
| <b>JUDICIAL RETIREMENT SYSTEM (JRS)</b>                  |                |                |                    |                  |                      |                 |   |                          |
| 2013   | 40             | \$ 3,483,000   | 14                 | \$ 205,000       | 489                  | \$ 36,169,000   | 10.0%   | \$ 73,966                |
| 2012   | 34             | 3,354,000      | 17                 | 1,022,000        | 463                  | 32,891,000      | 7.6%  | 71,039                   |
| 2011   | 25             | 1,717,000      | 30                 | 1,514,000        | 446                  | 30,559,000      | 0.7%  | 68,518                   |
| 2010   | 29             | 2,116,000      | 17                 | 1,022,000        | 451                  | 30,356,000      | 3.7%  | 67,308                   |
| 2009   | 36             | 2,919,000      | 20                 | 1,491,000        | 439                  | 29,262,000      | 5.1%  | 66,657                   |
| 2008   | 36             | 3,567,000      | 17                 | 1,746,000        | 423                  | 27,834,000      | 7.0%  | 65,802                   |
| 2007   | 24             | 2,831,000      | 19                 | 1,723,000        | 404                  | 26,013,000      | 4.4%  | 64,390                   |
| 2006   | 25             | 1,983,000      | 21                 | 814,000          | 399                  | 24,905,000      | 4.9%  | 62,420                   |
| 2005   | 25             | 2,017,000      | 17                 | 70,000           | 395                  | 23,736,000      | 8.9%  | 60,092                   |
| 2004   | 33             | 1,387,000      | 21                 | 86,000           | 387                  | 21,789,000      | 6.4%  | 56,302                   |

\* Additions to Allowances include added retirees and the annual COLA provided to existing retirees and beneficiaries.

\*\* Reflects adjustment to benefits attributable to this plan. Adjustment of prior amounts removed from payroll.



**SCHEDULE OF RETIREE AND BENEFICIARY VALUATION DATA – VRS PENSION PLANS**

Retirees and Beneficiaries

| Valuation Date<br>(June 30)  | Added to Rolls |                | Removed from Rolls |               | Rolls at End of Year |                 | Annualized %<br>Increase in Annual Allowances | Average Annual Allowance |
|------------------------------|----------------|----------------|--------------------|---------------|----------------------|-----------------|---|--------------------------|
|                              | Number         | Allowances *   | Number             | Allowances    | Number               | Allowances      |   |                          |
| VRS – STATE                  |                |                |                    |               |                      |                 |   |                          |
| 2013                         | 2,864          | \$ 81,985,000  | 1,650              | \$ 28,163,000 | 49,829               | \$1,021,572,000 | 5.6%  | \$ 20,502                |
| 2012                         | 2,739          | 85,005,000     | 1,618              | 30,250,000    | 48,615               | 967,750,000     | 6.0%  | 19,906                   |
| 2011                         | 2,994          | 66,569,000     | 1,564              | 14,936,000    | 47,494               | 912,995,000     | 6.0%  | 19,223                   |
| 2010 **                      | 3,728          | 88,557,000     | 1,432              | 22,536,000    | 46,064               | 861,362,000     | N/A   | 18,699                   |
| VRS – TEACHER                |                |                |                    |               |                      |                 |   |                          |
| 2013                         | 4,929          | \$ 142,836,000 | 1,607              | \$ 35,947,000 | 73,908               | \$1,718,783,000 | 6.6%  | \$ 23,256                |
| 2012                         | 4,520          | 147,153,000    | 1,550              | 36,908,000    | 70,586               | 1,611,894,000   | 7.3%  | 22,836                   |
| 2011                         | 5,291          | 123,035,000    | 1,433              | 14,549,000    | 67,616               | 1,501,649,000   | 7.8%  | 22,208                   |
| 2010 **                      | 4,045          | 95,290,000     | 1,432              | 28,977,000    | 63,758               | 1,393,163,000   | N/A   | 21,851                   |
| VRS – POLITICAL SUBDIVISIONS |                |                |                    |               |                      |                 |   |                          |
| 2013                         | 3,504          | \$ 78,419,000  | 1,317              | \$ 19,508,000 | 41,757               | \$ 693,202,000  | 9.3%  | \$ 16,601                |
| 2012                         | 3,234          | 73,282,000     | 1,243              | 24,288,000    | 39,570               | 634,291,000     | 8.4%  | 16,030                   |
| 2011                         | 3,345          | 59,180,000     | 1,213              | 2,493,000     | 37,579               | 585,297,000     | 10.7%   | 15,575                   |
| 2010 **                      | 3,007          | 50,569,000     | 1,147              | 14,242,000    | 35,447               | 528,610,000     | N/A   | 14,913                   |
| VRS – TOTAL                  |                |                |                    |               |                      |                 |   |                          |
| 2013                         | 11,297         | \$ 303,240,000 | 4,574              | \$ 83,618,000 | 165,494              | \$3,433,557,000 | 6.8%  | \$ 20,747                |
| 2012                         | 10,493         | 305,440,000    | 4,411              | 91,446,000    | 158,771              | 3,213,935,000   | 7.1%  | 20,243                   |
| 2011                         | 11,630         | 248,784,000    | 4,210              | 31,978,000    | 152,689              | 2,999,941,000   | 7.8%  | 19,647                   |
| 2010 **                      | 10,780         | 234,416,000    | 4,011              | 65,755,000    | 145,269              | 2,783,135,000   | N/A   | 19,158                   |

\* Additions to Allowances include added retirees and the annual COLA provided to existing retirees and beneficiaries.

\*\* Plan-level statistics for this presentation are not available for years prior to 2010.

## FIGURE 4.1 – ANALYSIS OF ACTUARIAL GAINS AND LOSSES – PENSION PLANS

FOR THE YEAR ENDED JUNE 30, 2013

(EXPRESSED IN THOUSANDS)

|   | VRS                 | SPORS           | VaLORS            | JRS              | Total               |
|---|---------------------|-----------------|-------------------|------------------|---------------------|
| <b>A. Calculation of Expected Unfunded Actuarial Accrued Liability (UAAL)</b> |                     |                 |                   |                  |                     |
| 1. UAAL as of June 30, 2012   | \$ 26,646,941       | \$ 426,118      | \$ 843,615        | \$ 221,359       | \$ 28,138,033       |
| 2. Normal Cost for Previous Year  | 1,546,759           | 16,143          | 39,594            | 20,727           | 1,623,223           |
| 3. Actual Contributions During the Year                                       | (2,470,900)         | (31,553)        | (67,681)          | (30,000)         | (2,600,134)         |
| 4. Interest at Previous Year's Rate of 7.00%                                  |                     |                 |                   |                  |                     |
| a. On UAAL  | 1,865,285           | 29,828          | 59,053            | 15,495           | 1,969,661           |
| b. On Normal Cost   | 108,273             | 1,130           | 2,772             | 1,451            | 113,626             |
| c. On Contributions   | (86,481)            | (1,104)         | (2,369)           | (1,050)          | (91,004)            |
| <b>d. Total</b>   | <b>1,887,077</b>    | <b>29,854</b>   | <b>59,456</b>     | <b>15,896</b>    | <b>1,992,283</b>    |
| 5. Expected UAAL as of June 30, 2013 (A1+A2+A3+A4)                            | 27,609,877          | 440,562         | 874,984           | 227,982          | 29,153,405          |
| 6. Actual UAAL as of June 30, 2013  | 26,953,010          | 404,707         | 800,177           | 221,955          | 28,379,849          |
| <b>7. Total Gain/(Loss) (A5-A6)</b>   | <b>656,867</b>      | <b>35,855</b>   | <b>74,807</b>     | <b>6,027</b>     | <b>773,556</b>      |
| <b>B. Calculation of Asset Gain/(Loss)</b>                                    |                     |                 |                   |                  |                     |
| 1. Actuarial Value of Assets (AVA) as of June 30, 2012                        | 51,211,916          | 587,160         | 909,399           | 361,097          | 53,069,572          |
| 2. Contributions During the Year  | 2,470,900           | 31,553          | 67,681            | 30,000           | 2,600,134           |
| 3. Benefit Payments During the Year   | (3,593,807)         | (48,248)        | (75,224)          | (36,800)         | (3,754,079)         |
| 4. Interest at Previous Year's Rate of 7.00%                                  |                     |                 |                   |                  |                     |
| a. On AVA at Beginning of Year  | 3,584,834           | 41,101          | 63,658            | 25,277           | 3,714,870           |
| b. On Contributions   | 86,481              | 1,104           | 2,369             | 1,050            | 91,004              |
| c. On Benefit Payments  | (125,784)           | (1,689)         | (2,633)           | (1,288)          | (131,394)           |
| <b>d. Total</b>   | <b>3,545,531</b>    | <b>40,516</b>   | <b>63,394</b>     | <b>25,039</b>    | <b>3,674,480</b>    |
| 5. Expected AVA as of June 30, 2013 (B1+B2+B3+B4)                             | 53,634,540          | 610,981         | 965,250           | 379,336          | 55,590,107          |
| 6. Actual AVA as of June 30, 2013   | 52,124,581          | 591,983         | 941,933           | 368,671          | 54,027,168          |
| <b>7. Total Gain/(Loss) on Assets (B6-B5)</b>                                 | <b>(1,509,959)</b>  | <b>(18,998)</b> | <b>(23,317)</b>   | <b>(10,665)</b>  | <b>(1,562,939)</b>  |
| <b>C. Calculation of Liability Gain/(Loss)</b>                                |                     |                 |                   |                  |                     |
| 1. Gain/(Loss) Due to Changes in Actuarial Assumptions                        | 814,556             | 40,272          | 61,264            | (2,832)          | 913,260             |
| 2. Gain/(Loss) Due to Plan Amendments   | (2,342)             | -               | -                 | -                | (2,342)             |
| 3. Gain/(Loss) Due to Change in Asset Method                                  | 1,476,847           | 4,889           | 38,099            | 7,384            | 1,527,219           |
| <b>4. Liability Experience Gain/(Loss) (A7-B7-C1-C2-C3)</b>                   | <b>\$ (122,235)</b> | <b>\$ 9,692</b> | <b>\$ (1,239)</b> | <b>\$ 12,140</b> | <b>\$ (101,642)</b> |

## FIGURE 4.2 – ANALYSIS OF ACTUARIAL GAINS AND LOSSES – VRS PENSION PLANS

FOR THE YEAR ENDED JUNE 30, 2013

(EXPRESSED IN THOUSANDS)

|   | State             | Teacher          | Political<br>Subdivisions | Total               |
|---|-------------------|------------------|---------------------------|---------------------|
| <b>A. Calculation of Expected Unfunded Actuarial Accrued Liability (UAAL)</b> |                   |                  |                           |                     |
| 1. UAAL as of June 30, 2012   | \$ 7,203,892      | \$ 14,698,647    | \$ 4,744,402              | \$ 26,646,941       |
| 2. Normal Cost for Previous Year  | 312,456           | 742,659          | 491,644                   | 1,546,759           |
| 3. Actual Contributions During the Year                                       | (519,803)         | (1,204,697)      | (746,400)                 | (2,470,900)         |
| 4. Interest at Previous Year's Rate of 7.00%                                  |                   |                  |                           |                     |
| a. On UAAL  | 504,272           | 1,028,905        | 332,108                   | 1,865,285           |
| b. On Normal Cost   | 21,872            | 51,986           | 34,415                    | 108,273             |
| c. On Contributions   | (18,193)          | (42,164)         | (26,124)                  | (86,481)            |
| <b>d. Total</b>   | <b>507,951</b>    | <b>1,038,727</b> | <b>340,399</b>            | <b>1,887,077</b>    |
| 5. Expected UAAL as of June 30, 2013<br>(A1+A2+A3+A4)                         | 7,504,496         | 15,275,336       | 4,830,045                 | 27,609,877          |
| 6. Actual UAAL as of June 30, 2013  | 7,354,247         | 15,127,655       | 4,471,108                 | 26,953,010          |
| <b>7. Total Gain/(Loss) (A5-A6)</b>   | <b>150,249</b>    | <b>147,681</b>   | <b>358,937</b>            | <b>656,867</b>      |
| <b>B. Calculation of Asset Gain/(Loss)</b>                                    |                   |                  |                           |                     |
| 1. Actuarial Value of Assets (AVA)<br>as of June 30, 2012                     | 13,740,366        | 24,391,761       | 13,079,789                | 51,211,916          |
| 2. Contributions During the Year  | 519,803           | 1,204,697        | 746,400                   | 2,470,900           |
| 3. Benefit Payments During the Year   | (1,044,558)       | (1,816,700)      | (732,549)                 | (3,593,807)         |
| 4. Interest at Previous Year's Rate of 7.00%                                  |                   |                  |                           |                     |
| a. On AVA at Beginning of Year  | 961,826           | 1,707,423        | 915,585                   | 3,584,834           |
| b. On Contributions   | 18,193            | 42,164           | 26,124                    | 86,481              |
| c. On Benefit Payments  | (36,560)          | (63,585)         | (25,639)                  | (125,784)           |
| <b>d. Total</b>   | <b>943,459</b>    | <b>1,686,002</b> | <b>916,070</b>            | <b>3,545,531</b>    |
| 5. Expected AVA as of June 30, 2013<br>(B1+B2+B3+B4)                          | 14,159,070        | 25,465,760       | 14,009,710                | 53,634,540          |
| 6. Actual AVA as of June 30, 2013   | 13,714,404        | 24,724,679       | 13,685,498                | 52,124,581          |
| <b>7. Total Gain/(Loss) on Assets (B6-B5)</b>                                 | <b>(444,666)</b>  | <b>(741,081)</b> | <b>(324,212)</b>          | <b>(1,509,959)</b>  |
| <b>C. Calculation of Liability Gain/(Loss)</b>                                |                   |                  |                           |                     |
| 1. Gain/(Loss) Due to Changes in<br>Actuarial Assumptions                     | 46,209            | 214,181          | 554,166                   | 814,556             |
| 2. Gain/(Loss) Due to Plan Amendments   | -                 | -                | (2,342)                   | (2,342)             |
| 3. Gain/(Loss) Due to Change in Asset Method                                  | 404,248           | 664,174          | 408,425                   | 1,476,847           |
| <b>4. Liability Experience Gain/(Loss)<br/>(A7-B7-C1-C2-C3)</b>               | <b>\$ 144,458</b> | <b>\$ 10,407</b> | <b>\$ (277,100)</b>       | <b>\$ (122,235)</b> |

## Actuarial Assumptions and Methods

On June 20, 2013, 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, 2008, through June 30, 2012, and were used for the June 30, 2013, valuation.

### ACTUARIAL ASSUMPTIONS AND METHODS – PENSION PLANS

FOR THE JUNE 30, 2013, VALUATION

**Investment Return Rate:** 7.00% 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 retirees and by 2.25% for Plan 2 retirees due to the cost-of-living adjustment (COLA).

#### Mortality Rates

**Pre-Retirement:** RP-2000 Employee Mortality Table Projected With Scale AA to 2020

- State – Males set forward 2 years and females set back 3 years
- Teachers – Males set back 3 years and females set back 5 years
- State Police – Males set forward 5 years and females set back 3 years
- VaLORS – Males set forward 5 years and females set back 3 years
- Judicial – Males set forward 2 years and females set back 3 years
- Political subdivisions, Non-LEOS – Males set forward 4 years and females set back 2 years
- Political subdivisions, LEOS – Males set back 2 years and females set back 2 years

**Post-Retirement:** RP-2000 Combined Mortality Table Projected With Scale AA to 2020

- State – Females set back 1 year
- Teachers – Males set back 2 years and females set back 3 years
- State Police – Females set back 1 year
- VaLORS – Females set back 1 year
- Judicial – Females set back 1 year
- Political subdivisions, Non-LEOS – Males set forward 1 year
- Political subdivisions, LEOS – Males set forward 1 year

**Post-Disablement:** RP-2000 Disability Life Mortality Table

- State – Males set back 3 years and no provision for future mortality improvement
- Teachers – Males set back 1 year and no provision for future mortality improvement
- State Police – Males set back 3 years and no provision for future mortality improvement
- VaLORS – Males set back 3 years and no provision for future mortality improvement
- Judicial – Males set back 3 years and no provision for future mortality improvement
- Political subdivisions, Non-LEOS – Males set back 3 years and no provision for future mortality improvement
- Political subdivisions, LEOS – Males set back 3 years and no provision for future mortality improvement

**FIGURE 4.3 – RETIREMENT RATES – PENSION PLANS**

Sample rates of retirement for members eligible to retire are shown below.

**State Employees**

| Age    | Plan 1   |         |   |         | Plan 2             |         |                      |         |
|--------|--|---------|---|---------|--------------------|---------|----------------------|---------|
|        | Retirement With Fewer Than 30 Years of Service |         | Retirement With 30 or More Years of Service |         | Reduced Retirement |         | Unreduced Retirement |         |
|        | Male   | Female  | Male  | Female  | Male               | Female  | Male                 | Female  |
| 50     | 3.00%  | 3.20%   | 10.00%                                      | 10.00%  | 0.00%              | 0.00%   | 35.00%               | 35.00%  |
| 55     | 5.00%  | 5.00%   | 10.00%                                      | 10.00%  | 0.00%              | 0.00%   | 10.00%               | 10.00%  |
| 59     | 5.00%  | 5.50%   | 10.00%                                      | 10.00%  | 0.00%              | 0.00%   | 10.00%               | 10.00%  |
| 60     | 5.00%  | 5.50%   | 10.00%                                      | 15.00%  | 5.00%              | 5.50%   | 10.00%               | 15.00%  |
| 61     | 10.00%   | 10.00%  | 15.00%                                      | 20.00%  | 10.00%             | 10.00%  | 15.00%               | 20.00%  |
| 62     | 15.00%   | 15.00%  | 25.00%                                      | 30.00%  | 15.00%             | 15.00%  | 25.00%               | 30.00%  |
| 64     | 15.00%   | 15.00%  | 20.00%                                      | 20.00%  | 15.00%             | 15.00%  | 20.00%               | 20.00%  |
| 65     | 30.00%   | 30.00%  | 30.00%                                      | 40.00%  | 30.00%             | 30.00%  | 30.00%               | 40.00%  |
| 67     | 30.00%   | 30.00%  | 25.00%                                      | 25.00%  | 30.00%             | 30.00%  | 25.00%               | 25.00%  |
| > = 70 | 100.00%  | 100.00% | 100.00%                                     | 100.00% | 100.00%            | 100.00% | 100.00%              | 100.00% |

**Teachers**

| Age    | Plan 1   |         |   |         | Plan 2             |         |                      |         |
|--------|--|---------|---|---------|--------------------|---------|----------------------|---------|
|        | Retirement With Fewer Than 30 Years of Service |         | Retirement With 30 or More Years of Service |         | Reduced Retirement |         | Unreduced Retirement |         |
|        | Male   | Female  | Male  | Female  | Male               | Female  | Male                 | Female  |
| 50     | 2.00%  | 2.00%   | 17.50%                                      | 15.00%  | 0.00%              | 0.00%   | 40.00%               | 35.00%  |
| 55     | 5.70%  | 6.10%   | 22.50%                                      | 22.50%  | 0.00%              | 0.00%   | 22.50%               | 22.50%  |
| 59     | 7.00%  | 7.50%   | 22.50%                                      | 22.50%  | 0.00%              | 0.00%   | 22.50%               | 22.50%  |
| 60     | 7.50%  | 8.50%   | 22.50%                                      | 22.50%  | 7.50%              | 8.50%   | 22.50%               | 22.50%  |
| 61     | 11.00%   | 12.00%  | 30.00%                                      | 30.00%  | 11.00%             | 12.00%  | 30.00%               | 30.00%  |
| 62     | 17.00%   | 17.00%  | 35.00%                                      | 35.00%  | 17.00%             | 17.00%  | 35.00%               | 35.00%  |
| 64     | 18.00%   | 16.50%  | 30.00%                                      | 35.00%  | 18.00%             | 16.50%  | 30.00%               | 35.00%  |
| 65     | 30.00%   | 30.00%  | 40.00%                                      | 35.00%  | 30.00%             | 30.00%  | 40.00%               | 35.00%  |
| 67     | 30.00%   | 30.00%  | 40.00%                                      | 35.00%  | 30.00%             | 30.00%  | 40.00%               | 35.00%  |
| > = 70 | 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**

| Age    | Plan 1             |         |                      |         | Plan 2             |         |                      |         |
|--------|--------------------|---------|----------------------|---------|--------------------|---------|----------------------|---------|
|        | Reduced Retirement |         | Unreduced Retirement |         | Reduced Retirement |         | Unreduced Retirement |         |
|        | Male               | Female  | Male                 | Female  | Male               | Female  | Male                 | Female  |
| 50     | 3.50%              | 3.50%   | 13.00%               | 15.60%  | 0.00%              | 0.00%   | 13.00%               | 15.60%  |
| 55     | 5.00%              | 5.00%   | 11.50%               | 14.30%  | 0.00%              | 0.00%   | 11.50%               | 14.30%  |
| 59     | 4.50%              | 6.00%   | 13.50%               | 13.40%  | 0.00%              | 0.00%   | 13.50%               | 13.40%  |
| 60     | 6.00%              | 7.50%   | 17.00%               | 12.80%  | 6.00%              | 7.50%   | 17.00%               | 12.80%  |
| 61     | 10.50%             | 10.00%  | 19.00%               | 17.70%  | 10.50%             | 10.00%  | 19.00%               | 17.70%  |
| 62     | 17.50%             | 15.50%  | 31.00%               | 28.00%  | 17.50%             | 15.50%  | 31.00%               | 28.00%  |
| 64     | 16.50%             | 17.00%  | 29.00%               | 18.30%  | 16.50%             | 17.00%  | 29.00%               | 18.30%  |
| 65     | 30.00%             | 30.00%  | 41.00%               | 29.60%  | 30.00%             | 30.00%  | 41.00%               | 29.60%  |
| 67     | 30.00%             | 30.00%  | 24.00%               | 33.20%  | 30.00%             | 30.00%  | 24.00%               | 33.20%  |
| > = 70 | 100.00%            | 100.00% | 100.00%              | 100.00% | 100.00%            | 100.00% | 100.00%              | 100.00% |

**FIGURE 4.3 – RETIREMENT RATES – PENSION PLANS, cont.**

**Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – All Other Employers**

| Age    | Plan 1             |         |                      |         | Plan 2             |         |                      |         |
|--------|--------------------|---------|----------------------|---------|--------------------|---------|----------------------|---------|
|        | Reduced Retirement |         | Unreduced Retirement |         | Reduced Retirement |         | Unreduced Retirement |         |
|        | Male               | Female  | Male                 | Female  | Male               | Female  | Male                 | Female  |
| 50     | 5.00%              | 4.00%   | 9.00%                | 8.00%   | 0.00%              | 0.00%   | 9.00%                | 8.00%   |
| 55     | 5.00%              | 5.50%   | 14.00%               | 11.50%  | 0.00%              | 0.00%   | 14.00%               | 11.50%  |
| 59     | 6.00%              | 5.00%   | 11.00%               | 11.50%  | 0.00%              | 0.00%   | 11.00%               | 11.50%  |
| 60     | 6.00%              | 7.50%   | 11.00%               | 13.00%  | 6.00%              | 7.50%   | 11.00%               | 13.00%  |
| 61     | 10.00%             | 7.50%   | 25.00%               | 17.50%  | 10.00%             | 7.50%   | 25.00%               | 17.50%  |
| 62     | 17.00%             | 17.00%  | 35.00%               | 25.00%  | 17.00%             | 17.00%  | 35.00%               | 25.00%  |
| 64     | 15.00%             | 13.00%  | 27.00%               | 17.50%  | 15.00%             | 13.00%  | 25.00%               | 25.00%  |
| 65     | 30.00%             | 30.00%  | 33.00%               | 40.00%  | 30.00%             | 30.00%  | 25.00%               | 25.00%  |
| 67     | 30.00%             | 30.00%  | 20.00%               | 25.00%  | 30.00%             | 30.00%  | 33.00%               | 40.00%  |
| > = 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 – Ten Largest Employers – All Plans**

| Age    | Reduced Retirement | Unreduced Retirement |
|--------|--------------------|----------------------|
| 50     | 9.00%              | 25.00%               |
| 55     | 8.50%              | 18.00%               |
| 59     | 13.50%             | 31.50%               |
| 60     | 20.00%             | 35.00%               |
| > = 65 | 100.00%            | 100.00%              |

**Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – All Other Employers – All Plans**

| Age    | Reduced Retirement | Unreduced Retirement |
|--------|--------------------|----------------------|
| 50     | 8.50%              | 25.00%               |
| 55     | 8.50%              | 17.50%               |
| 59     | 11.50%             | 28.50%               |
| 60     | 20.00%             | 35.00%               |
| > = 65 | 100.00%            | 100.00%              |

**State Police Officers – All Plans**

| Age    | Reduced Retirement | Unreduced Retirement |
|--------|--------------------|----------------------|
| 50     | 10.00%             | 15.00%               |
| 55     | 10.00%             | 15.00%               |
| 59     | 12.00%             | 20.00%               |
| 60     | 25.00%             | 40.00%               |
| > = 64 | 100.00%            | 100.00%              |

**Virginia Law Officers – All Plans**

| Age    | Reduced Retirement | Unreduced Retirement |
|--------|--------------------|----------------------|
| 50     | 9.20%              | 25.00%               |
| 55     | 9.50%              | 25.00%               |
| 59     | 12.00%             | 40.00%               |
| 60     | 20.00%             | 40.00%               |
| > = 65 | 100.00%            | 100.00%              |

**FIGURE 4.3 – RETIREMENT RATES – PENSION PLANS, cont.**

**Judges – All Plans**

| Age   | Service Multiplier = 1.5<br>Years of Service |         |         | Service Multiplier = 2.0<br>Years of Service |         |         |
|-------|--|---------|---------|--|---------|---------|
|       | 2-19   | 20      | >=20    | 2-14   | 15      | >=16    |
| 60    | 0.00%  | 50.00%  | 50.00%  | 0.00%  | 50.00%  | 50.00%  |
| 65    | 50.00%                                       | 50.00%  | 15.00%  | 50.00%                                       | 50.00%  | 15.00%  |
| 69    | 15.00%                                       | 15.00%  | 15.00%  | 15.00%                                       | 15.00%  | 15.00%  |
| >= 70 | 100.00%                                      | 100.00% | 100.00% | 100.00%                                      | 100.00% | 100.00% |

| Age   | Service Multiplier = 2.5<br>Years of Service |         |         | Service Multiplier = 3.5<br>Years of Service |         |         |
|-------|--|---------|---------|--|---------|---------|
|       | 2-11   | 12      | >=13    | 1-8  | 9       | >=10    |
| 60    | 0.00%  | 50.00%  | 50.00%  | 0.00%  | 50.00%  | 50.00%  |
| 65    | 50.00%                                       | 50.00%  | 15.00%  | 50.00%                                       | 50.00%  | 15.00%  |
| 69    | 15.00%                                       | 15.00%  | 15.00%  | 15.00%                                       | 15.00%  | 15.00%  |
| >= 70 | 100.00%                                      | 100.00% | 100.00% | 100.00%                                      | 100.00% | 100.00% |

**FIGURE 4.4 – DISABILITY RATES – PENSION PLANS**

As shown below for selected ages.

**State Employees**

14% of disability cases are assumed to be service-related.

| Age | Male    | Female  |
|-----|---------|---------|
| 20  | 0.0900% | 0.0100% |
| 30  | 0.1800% | 0.1500% |
| 40  | 0.1800% | 0.2900% |
| 50  | 0.4500% | 0.5500% |
| 60  | 0.7200% | 1.0000% |

**Teachers**

5% of disability cases are assumed to be service-related.

| Age | Male    | Female  |
|-----|---------|---------|
| 20  | 0.0000% | 0.0000% |
| 30  | 0.0100% | 0.0100% |
| 40  | 0.0210% | 0.0360% |
| 50  | 0.1330% | 0.0900% |
| 60  | 0.3080% | 0.2400% |

**FIGURE 4.4 – DISABILITY RATES – PENSION PLANS, cont.**

**Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers**

14% of disability cases are assumed to be service-related.

| Age | Male    | Female  |
|-----|---------|---------|
| 20  | 0.0000% | 0.0000% |
| 30  | 0.0600% | 0.0500% |
| 40  | 0.1800% | 0.0500% |
| 50  | 0.2400% | 0.1800% |
| 60  | 0.7200% | 0.4500% |

**Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – All Other Employers**

14% of disability cases are assumed to be service-related.

| Age | Male    | Female  |
|-----|---------|---------|
| 20  | 0.0200% | 0.0100% |
| 30  | 0.0600% | 0.0200% |
| 40  | 0.1400% | 0.0800% |
| 50  | 0.3100% | 0.2700% |
| 60  | 0.8200% | 0.7000% |

**Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers**

60% of disability cases are assumed to be service-related.

| Age | Male    | Female  |
|-----|---------|---------|
| 20  | 0.0000% | 0.0000% |
| 30  | 0.0500% | 0.0500% |
| 40  | 0.1800% | 0.2400% |
| 50  | 0.4000% | 0.5300% |
| 60  | 0.6500% | 0.8100% |

**Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – All Other Employers**

60% of disability cases are assumed to be service-related.

| Age | Rate    |
|-----|---------|
| 20  | 0.0000% |
| 30  | 0.0300% |
| 40  | 0.1100% |
| 50  | 0.3800% |
| 60  | 0.6400% |



**FIGURE 4.4 – DISABILITY RATES – PENSION PLANS, cont.**

**State Police Officers**

60% of disability cases are assumed to be service-related.

| Age | Rate    |
|-----|---------|
| 20  | 0.0000% |
| 30  | 0.0280% |
| 40  | 0.2100% |
| 50  | 0.6750% |
| 60  | 0.0000% |

**Virginia Law Officers**

50% of disability cases are assumed to be service-related.

| Age | Rate    |
|-----|---------|
| 20  | 0.1500% |
| 30  | 0.6000% |
| 40  | 0.8000% |
| 50  | 1.2000% |
| 60  | 1.0000% |

**Judges**

5% of disability cases are assumed to be service-related.

| Age | Male    | Female  |
|-----|---------|---------|
| 20  | 0.0000% | 0.0000% |
| 30  | 0.0070% | 0.0070% |
| 40  | 0.1420% | 0.0900% |
| 50  | 0.4800% | 0.3970% |
| 60  | 0.0000% | 0.0000% |

**FIGURE 4.5 – TERMINATION RATES – PENSION PLANS**

Withdrawal rates are based on age and years of service. Sample rates for selected ages and years of service are shown below for causes other than death, disability or retirement.

**State Employees – Plan 1**

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION

| Age | Years of Service – Males |        |       | Years of Service – Females |        |       |
|-----|--------------------------|--------|-------|----------------------------|--------|-------|
|     | 0-2                      | 3-9    | 10+   | 0-2                        | 3-9    | 10+   |
| 25  | 22.10%                   | 13.00% | 0.00% | 25.60%                     | 15.70% | 0.00% |
| 35  | 16.70%                   | 9.30%  | 4.50% | 17.80%                     | 11.00% | 5.00% |
| 45  | 12.90%                   | 7.00%  | 2.30% | 13.90%                     | 7.40%  | 2.50% |
| 55  | 10.20%                   | 6.00%  | 0.00% | 12.50%                     | 0.00%  | 0.00% |
| 65  | 11.30%                   | 0.00%  | 0.00% | 14.00%                     | 0.00%  | 0.00% |

**FIGURE 4.5 – TERMINATION RATES – PENSION PLANS, cont.**

**State Employees – Plan 2**

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION

| Age | Years of Service – Males |        |       | Years of Service – Females |        |       |
|-----|--------------------------|--------|-------|----------------------------|--------|-------|
|     | 0-2                      | 3-9    | 10+   | 0-2                        | 3-9    | 10+   |
| 25  | 22.10%                   | 13.00% | 0.00% | 25.60%                     | 15.70% | 0.00% |
| 35  | 16.70%                   | 9.30%  | 4.50% | 17.80%                     | 11.00% | 5.00% |
| 45  | 12.90%                   | 7.00%  | 2.30% | 13.90%                     | 7.40%  | 2.50% |
| 55  | 10.20%                   | 6.00%  | 0.40% | 12.50%                     | 6.00%  | 0.40% |
| 65  | 11.30%                   | 0.00%  | 0.00% | 14.00%                     | 0.00%  | 0.00% |

**Teachers – Plan 1**

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION

| Age | Years of Service – Males |        |       | Years of Service – Females |        |        |
|-----|--------------------------|--------|-------|----------------------------|--------|--------|
|     | 0-2                      | 3-9    | 10+   | 0-2                        | 3-9    | 10+    |
| 25  | 15.40%                   | 11.80% | 0.80% | 14.60%                     | 12.00% | 15.00% |
| 35  | 14.10%                   | 7.30%  | 3.10% | 14.90%                     | 9.00%  | 3.90%  |
| 45  | 14.70%                   | 7.50%  | 1.90% | 11.70%                     | 6.40%  | 2.10%  |
| 55  | 14.30%                   | 0.00%  | 0.00% | 12.40%                     | 0.00%  | 0.00%  |
| 65  | 17.00%                   | 0.00%  | 0.00% | 13.00%                     | 0.00%  | 0.00%  |

**Teachers – Plan 2**

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION

| Age | Years of Service – Males |        |       | Years of Service – Females |        |        |
|-----|--------------------------|--------|-------|----------------------------|--------|--------|
|     | 0-2                      | 3-9    | 10+   | 0-2                        | 3-9    | 10+    |
| 25  | 15.40%                   | 11.80% | 0.80% | 14.60%                     | 12.00% | 15.00% |
| 35  | 14.10%                   | 7.30%  | 3.10% | 14.90%                     | 9.00%  | 3.90%  |
| 45  | 14.70%                   | 7.50%  | 1.90% | 11.70%                     | 6.40%  | 2.10%  |
| 55  | 14.30%                   | 7.00%  | 0.30% | 12.40%                     | 5.80%  | 0.30%  |
| 65  | 17.00%                   | 0.00%  | 0.00% | 13.00%                     | 0.00%  | 0.00%  |

**Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits –  
Ten Largest Employers – All Plans**

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION

| Age | Years of Service – Males |        |       | Years of Service – Females |        |       |
|-----|--------------------------|--------|-------|----------------------------|--------|-------|
|     | 0-2                      | 3-9    | 10+   | 0-2                        | 3-9    | 10+   |
| 25  | 21.80%                   | 13.70% | 0.00% | 23.30%                     | 16.70% | 0.00% |
| 35  | 17.20%                   | 9.70%  | 5.80% | 18.60%                     | 10.60% | 5.10% |
| 45  | 14.30%                   | 7.10%  | 2.90% | 14.80%                     | 7.70%  | 2.80% |
| 55  | 10.90%                   | 5.30%  | 0.70% | 11.90%                     | 6.30%  | 0.00% |
| 65  | 13.60%                   | 8.20%  | 0.00% | 12.60%                     | 8.20%  | 0.00% |

FIGURE 4.5 – TERMINATION RATES – PENSION PLANS, cont.

**Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – All Other Employers – All Plans**

| SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION |                          |        |       |                            |        |       |
|--|--------------------------|--------|-------|----------------------------|--------|-------|
| Age  | Years of Service – Males |        |       | Years of Service – Females |        |       |
|  | 0-2                      | 3-9    | 10+   | 0-2                        | 3-9    | 10+   |
| 25   | 23.50%                   | 14.00% | 0.00% | 25.50%                     | 16.50% | 0.00% |
| 35   | 18.50%                   | 10.50% | 5.50% | 19.00%                     | 11.50% | 6.00% |
| 45   | 15.50%                   | 8.00%  | 3.00% | 15.00%                     | 8.00%  | 3.50% |
| 55   | 12.00%                   | 6.50%  | 1.00% | 12.50%                     | 6.50%  | 0.00% |
| 65   | 12.00%                   | 8.00%  | 0.00% | 13.00%                     | 9.00%  | 0.00% |

**Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers – All Plans**

| SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION |                          |       |       |                            |       |       |
|--|--------------------------|-------|-------|----------------------------|-------|-------|
| Age  | Years of Service – Males |       |       | Years of Service – Females |       |       |
|  | 0-2                      | 3-9   | 10+   | 0-2                        | 3-9   | 10+   |
| 25   | 7.80%                    | 6.80% | 0.00% | 7.80%                      | 6.80% | 0.00% |
| 35   | 8.00%                    | 4.40% | 2.40% | 8.00%                      | 4.40% | 2.40% |
| 45   | 9.20%                    | 4.60% | 1.50% | 9.20%                      | 4.60% | 1.50% |
| 55   | 8.30%                    | 6.30% | 0.00% | 8.30%                      | 6.30% | 0.00% |
| 60   | 8.70%                    | 6.50% | 0.00% | 8.70%                      | 6.50% | 0.00% |

**Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – All Other Employers – All Plans**

| SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION |                          |        |       |                            |        |       |
|--|--------------------------|--------|-------|----------------------------|--------|-------|
| Age  | Years of Service – Males |        |       | Years of Service – Females |        |       |
|  | 0-2                      | 3-9    | 10+   | 0-2                        | 3-9    | 10+   |
| 25   | 13.00%                   | 8.50%  | 0.00% | 13.00%                     | 10.00% | 0.00% |
| 35   | 11.00%                   | 7.00%  | 3.80% | 14.00%                     | 8.00%  | 4.50% |
| 45   | 13.00%                   | 6.00%  | 2.40% | 12.00%                     | 6.00%  | 3.50% |
| 55   | 15.00%                   | 8.00%  | 0.50% | 12.00%                     | 5.00%  | 0.50% |
| 60   | 11.00%                   | 10.00% | 0.50% | 12.00%                     | 5.00%  | 0.50% |

**State Police Officers – All Plans**

| SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION |                          |       |       |                            |       |       |
|--|--------------------------|-------|-------|----------------------------|-------|-------|
| Age  | Years of Service – Males |       |       | Years of Service – Females |       |       |
|  | 0-2                      | 3-9   | 10+   | 0-2                        | 3-9   | 10+   |
| 25   | 7.50%                    | 5.50% | 3.00% | 10.80%                     | 5.40% | 4.40% |
| 35   | 7.50%                    | 4.80% | 2.40% | 12.10%                     | 6.00% | 6.10% |
| 45   | 10.00%                   | 4.50% | 1.40% | 10.80%                     | 6.40% | 5.90% |
| 55   | 10.00%                   | 6.70% | 1.20% | 7.40%                      | 6.70% | 4.10% |
| 65   | 10.00%                   | 7.50% | 1.20% | 1.50%                      | 6.90% | 0.60% |

**FIGURE 4.5 – TERMINATION RATES – PENSION PLANS, cont.**

| Virginia Law Officers – All Plans |        | SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION |       |        |                            |       |  |
|-----------------------------------|--------|--|-------|--------|----------------------------|-------|--|
|                                   |        | Years of Service – Males                           |       |        | Years of Service – Females |       |  |
| Age                               | 0-2    | 3-9  | 10+   | 0-2    | 3-9                        | 10+   |  |
| 25                                | 20.00% | 15.00%   | 5.00% | 20.00% | 15.00%                     | 7.50% |  |
| 35                                | 20.00% | 12.50%   | 5.00% | 20.00% | 12.50%                     | 6.00% |  |
| 45                                | 15.00% | 10.50%   | 4.00% | 17.50% | 8.00%                      | 4.00% |  |
| 55                                | 12.00% | 6.50%  | 4.00% | 10.00% | 12.00%                     | 4.00% |  |
| 65                                | 15.00% | 7.00%  | 4.00% | 10.00% | 10.00%                     | 4.00% |  |

**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 1.25% 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               | 0.15%  | 3.65%                         |
| 15               | 0.15%  | 3.65%                         |
| 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       | 0.00%  | 3.50%                         |

**FIGURE 4.6 – SALARY INCREASE RATES – PENSION PLANS, cont.**

**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               | 0.15%  | 3.65%                         |
| 15               | 0.15%  | 3.65%                         |
| 19               | 0.15%  | 3.65%                         |
| 20 or more       | 0.00%  | 3.50%                         |

**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               | 0.15%  | 3.65%                         |
| 15               | 0.15%  | 3.65%                         |
| 19               | 0.15%  | 3.65%                         |
| 20 or more       | 0.00%  | 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               | 0.50%  | 4.00%                         |
| 15               | 0.50%  | 4.00%                         |
| 19               | 0.50%  | 4.00%                         |
| 20 or more       | 0.00%  | 3.50%                         |

**FIGURE 4.6 – SALARY INCREASE RATES – PENSION PLANS, cont.**

**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               | 0.50%  | 4.00%                         |
| 15               | 0.50%  | 4.00%                         |
| 19               | 0.50%  | 4.00%                         |
| 20 or more       | 0.00%  | 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%                         |
| 11               | 0.50%  | 4.00%                         |
| 15               | 0.50%  | 4.00%                         |
| 19               | 0.50%  | 4.00%                         |
| 20 or more       | 0.00%  | 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%                         |
| 11               | 0.50%  | 4.00%                         |
| 15               | 0.50%  | 4.00%                         |
| 19               | 0.50%  | 4.00%                         |
| 20 or more       | 0.00%  | 3.50%                         |

**Judges**

Salary increase rates are 4.50%.

## 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 unfunded actuarial accrued liability 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), is to be amortized using a level-dollar, closed 10-year period beginning June 30, 2011.

**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, and Plan 2 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 and Plan 2 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 are effective for new members hired or rehired on or after July 1, 2010.

In addition, Plan 1 members who were not vested as of January 1, 2013, are also in Plan 2.

### TYPE OF PLANS

**1. Virginia Retirement System (VRS), effective March 1, 1952.** VRS is a qualified governmental pension system that administers two defined benefit structures, the VRS Plan 1 and the VRS Plan 2. 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; 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 or Plan 2 according to their membership date:

- Members hired before July 1, 2010, and who had at least five years of service on January 1, 2013, are covered under the Plan 1 benefit

structure. These members also include deferred members who have returned to covered employment with service credit in VRS or an account balance in an optional retirement plan (ORP) authorized or administered by VRS as of June 30, 2010, and members retired under Plan 1 who have returned to covered employment and resumed active membership.

- Members hired or rehired on or after July 1, 2010, and former Plan 1 members who did not have five years of service on January 1, 2013, are covered under the Plan 2 benefit structure. These members also include those employed in a covered position before July 1, 2010, who left covered employment, took a refund and returned to covered employment on or after July 1, 2010, with no service credit in VRS or no ORP account balance.

**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; and
- Judicial Retirement System (JRS) established July 1, 1970, for full-time permanent, salaried state judges and other qualifying employees.



## MEMBER CONTRIBUTIONS

The member contribution is 5.00% of the member's compensation. Contributions paid by employers on behalf of employees are governed by Section 414(h) of the Internal Revenue Code. Members' contribution accounts accrue 4.00% interest each year, calculated on the balance as of the previous June 30.

| PLAN 1  | PLAN 2   |
|---|--|
| State employees, excluding state elected officials, judges and optional retirement plan participants, contribute 5.00% of their compensation each month to their member contribution accounts.  | State employees contribute 5.00% of their compensation each month to their member contribution accounts. |
| Employees of school divisions and political subdivisions may contribute some or all of the 5.00% member contribution, as elected by the employer. Some school divisions and political subdivisions elected to phase in the required 5% member contribution; all employees will be paying the full 5% by July 1, 2016. | Same as Plan 1.  |

## COMPENSATION AND AVERAGE FINAL COMPENSATION

Compensation is the member's salary reported to VRS by the employer. It does not include payments for overtime, temporary employment, extra duties or other additional payments.

| PLAN 1   | PLAN 2   |
|--|--|
| Average of the member's 36 consecutive months of highest compensation as a covered employee. | Average of the member's 60 consecutive months of highest compensation as a covered employee. |

## VESTING

Plan 1 and Plan 2 members become vested after accumulating five years of service credit.

## SERVICE CREDIT

**1. VRS, SPORS and VaLORS Members in Plan 1 and Plan 2.** 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 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, is 2.5.

**3. JRS Members in Plan 2.** Judges appointed or elected on or after July 1, 2010, receive one month of service credit multiplied by the following weighting factors for each month they are employed in a JRS-covered position and the employer is contributing to the System: 1.5 for those appointed or elected before age 45; 2.0 for those appointed or elected between the ages 45 and 54; and 2.5 for those appointed or elected at age 55 or older.

## 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 or adoption of a child; 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. 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 pre-tax rollover of funds; an after-tax payroll deduction contract or a pre-tax salary reduction contract (if the employer offers the pre-tax salary reduction option); or a combination of these methods. Members must be within their eligibility period to use a contract. Other special rules and limits govern the purchase of prior service.

The cost basis and eligibility periods for Plan 1 and Plan 2 members are as follows:

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### PLAN 1

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Within three years of becoming eligible: 5.00% of compensation or average final compensation at the time of purchase, whichever is higher, multiplied by the number of months to purchase. If the member uses a contract to purchase service, the cost is based on compensation, even if average final compensation is higher.

After the three-year eligibility period: Actuarial equivalent rate.

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VRS refunded service: 5.00% of compensation or average final compensation at the time of purchase, whichever is higher, multiplied by the number of months to purchase. If the member uses a contract to purchase VRS refunded service, the cost is based on compensation, even if average final compensation is higher. If the member has not purchased VRS refunded service within three years, the cost basis will remain 5.00%, but the member will be required to use a lump-sum payment.

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### PLAN 2

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Within one year of becoming eligible: Approximate normal cost rate as a percentage of compensation or average final compensation at the time of purchase, whichever is higher, multiplied by the number of months to purchase. If the member uses a contract to purchase service, the cost is based on compensation, even if average final compensation is higher. Normal cost rates vary depending on whether the member is covered under VRS, SPORS, VaLORS or JRS, or employed in a political subdivision position eligible for enhanced hazardous duty coverage.

After the one-year eligibility period: Actuarial equivalent rate.

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Same as Plan 1.

## NORMAL (UNREDUCED) AND REDUCED RETIREMENT ELIGIBILITY AND BENEFIT CALCULATIONS

|  | PLAN 1  | PLAN 2  | BENEFIT CALCULATIONS   |
|--|---|---|--|
| <b>Earliest Unreduced Retirement Eligibility</b> | VRS: Age 65 with at least five years of service credit or age 50 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. Example: Age 60 with 30 years of service credit. | 1.70% of average final compensation for each year of service credit. The benefit multiplier was reduced to 1.65% for Plan 2 service after January 1, 2013.   |
|  | 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. | Same as Plan 1.   | SPORS, sheriffs and regional jail superintendents: 1.85% of average final compensation for each year of service credit.<br><br>VaLORS: 1.70% or 2.00% of average final compensation for each year of service credit. Note: VaLORS members retiring under the 2.00% multiplier are not eligible for the hazardous duty supplement.<br><br>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. |
|  | JRS: Age 65 with at least five years of service credit or age 60 with at least 30 years of service credit.  | Same as Plan 1.   | 1.70% of average final compensation for each year of service credit. For members hired after January 1, 2013, the benefit multiplier is 1.65%.   |
| <b>Earliest Reduced Retirement Eligibility</b>   | 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.           | Same as Plan 1.   | All members: A reduction of 0.5% per month for the first 60 months of retirement and 0.4% per month for the next 60 months of retirement. The reduction is applied for each month until the member reaches age 65 or, if more favorable to the member, for each month the member's service credit is less than 30 years (less than 25 years for hazardous duty members).   |
|  | SPORS, VaLORS and political subdivision hazardous duty employees: Age 50 with at least five years of service credit.  | Same as Plan 1.   |  |
|  | JRS: Age 55 with at least five years of service credit.   | Same as Plan 1.   |  |

## BENEFIT PAYOUT OPTIONS

Under Plan 1 and Plan 2, 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. Partial Lump-Sum Option Payment (PLOP).** Members who are in active service for one or more years beyond the date they become eligible for an unreduced retirement benefit may 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 date. The monthly benefit is actuarially reduced accordingly. This option is available with the Basic Benefit and the Survivor Option.
- 4. Advance Pension Option.** With this option, members elect to receive a temporary higher benefit until at least age 62 up to their normal retirement age under Social Security, as elected by the member. At that point, the monthly benefit is permanently reduced on an actuarially equivalent basis. The benefit can never be reduced by more than 50%.

## 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 deferred for one full calendar year after the member reaches unreduced retirement age. The deferred COLA does not apply to employees within five years of eligibility for unreduced retirement as of January 1, 2013, and to members who retire with 20 or more years of service. 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, the COLA matches the first 3.00% increase in the CPI-U and half the remaining increase, not to exceed a maximum COLA of 5.00%. Under Plan 2, the COLA matches the first 2.00% increase in the CPI-U and half the remaining increase, not to exceed a maximum COLA of 3.00%.

## Refunds and Deferred Membership

**1. Refunds.** Vested members under Plan 1 and Plan 2 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. Taking a refund cancels membership and eligibility for any future benefits under the retirement plans. Plan 1 members who take a refund and return to covered employment on or after July 1, 2010, are rehired under Plan 2. They are eligible to purchase their VRS refunded service as credit in Plan 2.

**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, natural or legally adopted 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 not vested at the time of death, his or her spouse, natural or legally adopted minor child or parent will be eligible for a refund 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 uses age 60. The calculation for Plan 1 and Plan 2 members of SPORS and VaLORS and members of VRS who are 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, natural or legally adopted 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

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 primary Social Security benefits; or (2) 33⅓% of average final compensation (50% if the disability is work-related) if the member qualifies for primary Social Security benefits.

Vested members receive the greater of the minimum guaranteed benefit or 1.70% of average final compensation for each year of service credit at the time of disability retirement. 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 state employees covered under VRS, SPORS and VaLORS income protection 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.

## Summary of Pension Plan Changes

The following actuarially material changes have occurred to the pension plan provisions in recent years.

**2004 VALUATION:** No actuarially material changes are made to the plan provisions.

**2005 VALUATION:** No actuarially material changes are made to the plan provisions. On May 19, 2005, the Board adopts the recommended economic and demographic assumptions proposed by the actuary as a result of the June 2004 actuarial experience study.

**2006 VALUATION:** No actuarially material changes are made to the plan provisions.

**2007 VALUATION:** The retirement multiplier for VRS-covered sheriffs and SPORS members changes from 1.70% to 1.85% of average final compensation, effective July 1, 2008.

**2008 VALUATION:** No actuarially material changes are made to the plan provisions.

**2009 VALUATION:** No actuarially material changes are made to the plan provisions. There are three changes of note:

1. On April 16, 2009, the Board adopts the recommended economic and demographic assumptions proposed by the actuary as a result of the June 2008 experience study.
2. The temporary retirement supplement for SPORS members, VaLORS members and political subdivision employees eligible for enhanced hazardous duty coverage changes from \$11,508 to \$12,456 annually.
3. For the June 30, 2009, valuation, the Board suspends application of the 80% to 120% market value-of-assets corridor on the actuarial value of assets.

**2010 VALUATION:** No actuarially material changes are made to the plan provisions. There are two changes of note:

1. For the June 30, 2010, valuation, the application of the 80% to 120% market value-of-assets corridor on the actuarial value of assets is reinstated.
2. The Board reduces the investment rate-of-return assumption from 7.50% to 7.00%.

**2011 VALUATION:** In 2010, VRS adopts a second retirement plan, Plan 2. All employees hired on or after July 1, 2010, are automatically enrolled in this plan. The differences between Plan 1 and Plan 2 are listed below:

1. Under Plan 2, average final compensation is based on the highest 60 consecutive months of service.
2. The Plan 2 cost-of-living adjustment (COLA) is based on the first 2.00% increase in the Consumer Price Index for all Urban Consumers (CPI-U) plus half of each percent from 2.00% to 10.00%, with a maximum COLA of 6.00%.
3. Under Plan 2, normal retirement age is Social Security normal retirement age with at least five years of service credit. A Plan 2 member is eligible for unreduced early retirement when the sum of his or her age plus service credit is 90 (Rule of 90). Eligibility for reduced early retirement is at age 60 with five years of service credit.
4. Weighted service factors for first-term Plan 2 judges are 1.5 for judges less than age 45; 2.0 for judges age 45-54; and 2.5 for judges age 55 or older.

New general state employees, teachers and general political subdivision employees under VRS are subject to changes 1, 2 and 3 above. New state police officers (SPORS), Virginia law officers (VaLORS) and political subdivision employees eligible for enhanced hazardous duty coverage (VRS) are subject to changes 1 and 2 above.

New employees covered under JRS are subject to changes 1, 2 and 4 above.

**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 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 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.



Actuary's Certification Letter –  
OPEB Plans



**Cavanaugh Macdonald**  
CONSULTING, LLC  
*The experience and dedication you deserve*

October 31, 2014

**Board of Trustees**

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

Dear Trustees:

Governmental Accounting Standards Board Statements No. 43 and 45 (GASB 43 and 45) require actuarial valuations of retiree health care and other post-employment benefit (OPEB) plans. Cavanaugh Macdonald Consulting, LLC (CMC) is submitting the results of the annual actuarial valuation of the Virginia Retirement System (VRS) Group Life Insurance Program, the Health Insurance Credit Program and the long-term disability (LTD) benefits payable by the Virginia Sickness and Disability Program (VSDP), prepared as of June 30, 2013. While not verifying the data at source, the actuary performed tests for consistency and reasonability.

**Group Life Insurance Program.** This valuation covers only the portion of the Group Life Insurance Program providing benefits for current retirees and active employees upon retirement. This valuation does not value the plan's benefits for members who die while actively employed. Death benefits for active employees are covered under a group life insurance arrangement. The valuation indicates that the Annual Required Contribution (ARC) under GASB 43 and 45 is 0.98% of active covered payroll. Adjusted to include the costs for deaths in active service, the total contribution rate for the plan is 1.32% of active covered payroll. Contribution rates for VRS employers are established every two years. The actuarially calculated employer contribution rates based on the June 30, 2013, valuation are for fiscal years ending 2015 and 2016.

**Retiree Health Insurance Credit Program.** The valuation indicates that the Annual Required Contribution (ARC) under GASB 43 and 45 is 1.17% of active covered payroll for state employees [including state police (SPORS), judicial employees (JRS), Virginia law officers (VaLORS), Optional Retirement Plan (ORP) participants, and the University of Virginia (UVA) members]; 1.18% of active teachers' payroll; and varying percentages of active covered payroll for employees of political subdivisions that have elected to provide this benefit 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. Contribution rates for VRS employers are established every two years. The actuarially calculated employer contribution rates based on the June 30, 2013, valuation are for fiscal years ending 2015 and 2016.

**Virginia Sickness and Disability Program.** The valuation indicates that the Annual Required Contribution (ARC) under GASB 43 and 45 for long-term disability (LTD) benefits is 0.60% of active covered payroll



for members covered by VSDP. Contribution rates for VRS employers are established every two years. The actuarially calculated employer contribution rates based on the June 30, 2013, valuation are for fiscal years ending 2015 and 2016.

The promised post-employment death benefit under the Group Life Insurance Program, the health care benefits under the Retiree Health Insurance Credit Program of VRS, and the long-term disability benefits of VSDP are included in the actuarially calculated contribution rates, which were developed using the entry age normal actuarial cost method with projected benefits.

Five-year smoothed market value of assets is used for actuarial valuation purposes for the Group Life Insurance Program and the state and teacher components of the Retiree Health Insurance Credit Program. The actual market value of assets is used for actuarial valuation purposes for the political subdivision components of the Retiree Health Insurance Credit Program and for VSDP.

GASB 43 and 45 require that the discount rate used to value a plan be based on the likely return of the assets used to pay benefits. As of June 30, 2013, each of the plans had assets in trust solely to provide benefits to eligible recipients. Therefore, the discount rate has been set at 7.00%. In accordance with the new funding policy adopted by the Board of Trustees, the balance of the unfunded accrued liability as of June 30, 2013, is being amortized by regular annual contributions as a level percentage of payroll within a closed 30-year period, on the assumption that payroll will increase by 3.00% annually and the amortization period will decrease by one year until reaching 0 years.

The assumptions recommended by the actuary are in the aggregate reasonably related to the experience under each of the Plans and to reasonable expectations of anticipated experience under each of the Plans, and meet the parameters for the disclosures under GASB 43 and 45.

The valuation reflects changes in the actuarial assumptions adopted by the Board of Trustees recommended in the experience study of VRS for the four-year period ending June 20, 2012. The following tables summarize the changes in actuarial assumptions.

| STATE SYSTEM | ASSUMPTION CHANGE   |
|--------------|---|
| State        | Update mortality table<br>Decrease rates of service retirement<br>Decrease rates of withdrawals for fewer than 10 years of service<br>Decrease rates of male disability retirement<br>Reduce rates of salary increase by 0.25% per year           |
| Teachers     | Update mortality table<br>Adjustments to rates of service retirement<br>Decrease rates of withdrawals for three through nine years of service<br>Decrease rates of disability<br>Reduce rates of salary increase by 0.25% per year                |
| SPORS        | Update mortality table<br>Increase rate of service retirement at age 54   |
| ValORS       | Update mortality table<br>Adjustments to rates of service retirement<br>Decrease rates of withdrawals for females with fewer than 10 years of service<br>Increase rates of disability<br>Decrease service related disability rate from 60% to 50% |
| Judicial     | Update mortality table  |



## POLITICAL SUBDIVISION SYSTEM ASSUMPTION CHANGE

|  |   |
|--|---|
| Largest 10 –<br>Non-LEOS                   | Update mortality table<br>Decrease rates of service retirement<br>Decrease rates of disability retirement<br>Reduce rates of salary increase by 0.25% per year    |
| Largest 10 –<br>LEOS                       | Update mortality table<br>Decrease rates of disability  |
| All Others<br>(Non-10 Largest)<br>Non-LEOS | Update mortality table<br>Decrease rates of service retirement<br>Decrease rates of disability<br>Reduce rates of salary increase by 0.25% per year               |
| All Others<br>(Non-10 Largest)<br>LEOS     | Update mortality table<br>Adjustments to rates of service retirement for females<br>Increase rates of withdrawals<br>Decrease male and female rates of disability |

For the Health Insurance Credit Program, assumptions specific to the valuation were made, including adjustments to rates of participation, benefit utilization, and the assumed age of the initial benefit receipt for deferred vested members.

For the Virginia Sickness and Disability Program, assumptions and methods specific to the valuation were made, including adjustments to claim termination rates, benefit offsets, a change to the Entry Age Normal actuarial cost method, and the use of five-year asset smoothing.

The liability associated with long-term care (LTC) benefits was calculated by Milliman. In addition, all historical information that references a valuation date prior to June 30, 2008, was prepared by a previous actuarial firm.

The following schedules (or updates to them) were prepared by VRS from information prepared by us during the 2012 actuarial valuation or from supplemental information prepared by us for use in the System's Comprehensive Annual Financial Report. We have reviewed them for inclusion in the 2014 Comprehensive Annual Financial Report:

- Schedule of Funding Progress
- Schedule of Actuarial Methods and Significant Assumptions
- Schedule of Employer Contributions
- Schedules of Selected Experience Rates

Our organization has only a contractual relationship with the Virginia Retirement System to provide actuarial consulting services and we do not provide other services to nor have a financial interest in the Virginia Retirement System. There are no known interests or relationships that our firm has with the Virginia Retirement System that may impair or appear to impair the objectivity of our work.



This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems; that the valuations were prepared in accordance with principles of practice prescribed by the Actuarial Standards Board; and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the individual Plans and on actuarial assumptions that are internally consistent and reasonably based on the actuarial experience of the System and the individual Plans.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the 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. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Jose I. Fernandez'.

Jose I. Fernandez, ASA, FCA, EA, MAAA  
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Eric H. Gary'.

Eric H. Gary, FSA, FCA, MAAA  
Chief Health Actuary

# Actuary's Certification Letter – OPEB Plans – VSDP Long-Term Care Plan



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October 31, 2014

## **Board of Trustees**

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

Dear Trustees:

### **Purpose**

This report presents the required disclosures to comply with the Governmental Accounting Standards Board (GASB) No. 43 based on the results of the June 30, 2013, actuarial valuation of the self-funded long-term care (LTC) benefits provided to the Virginia Sickness and Disability Program (VSDP) eligible members. This benefit program is an employer-paid self-funded plan. The funding for this plan is a percent of payroll determined by the Board to sustain both the active and ported group long-term care benefits.

This report determines the funded status of the program under the parameters of GASB Statement No. 43 and calculates the annual required contribution sufficient to fund the program's normal cost and amortize any unfunded liability over a period not to exceed 30 years. We have used an amortization period of 30 years to amortize the gain/loss over the past year for this valuation. The results of this report apply to the plan's fiscal year ending June 30, 2013.

### **Liabilities and Costs**

Section II of the actuarial valuation report provides the results of the calculations of liabilities and annual required contributions of the program under the Unit Credit Cost Method. The Actuarial Liability represents the present value of long-term care benefits allocated to the service of active participants performed up to the valuation date. The unfunded actuarial accrued liability equals the difference between the total actuarial accrued liability and the value of the assets accumulated for the future payment of the benefits. The normal cost represents the annual ongoing cost of the post-retirement benefits accruing to active participants.

The required level of funding for the LTC program is 0.133% of payroll from each participating employer. This contribution funds both current employee and future retiree benefits. This is the sixth valuation to determine the actuarial accrued liabilities and GASB Statement No. 43-compliant required funding necessary to fund the retiree long-term care benefits.

Changes made in this year's valuation were for the following items, which are described in detail in the July 1, 2013, valuation report.

- Update to the fiscal year 2013 census,
- Update to the porting rates to more accurately reflect actual experience,
- Adjustment to the claim selection factors, and
- Adjustment to the amortization period

This work product was prepared solely for VRS for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work.

#### Actuarial Methods and Assumptions

The methods and assumptions are those used in the July 1, 2013, actuarial valuation of the self-funded long-term care benefit that is part of the VSDP program. The methods and assumptions used herein comply with the parameters specified by GASB Statement Nos. 43 and 45.

#### Limitations

In preparing this report, we relied, without audit, on information provided by VRS. This information includes, but is not limited to, benefit provisions, benefit payments, employee data, and financial information. In our examination of these data, we found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data are incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

Differences between our projections and actual amounts depend on the extent to which future experience conforms to the assumptions used in this valuation. It is certain that actual experience will not conform exactly to the assumptions used in this valuation. Actual liability amounts will differ from projected amounts to the extent that actual experience deviates from expected experience.

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; and changes in plan provisions or applicable law.

Milliman's work product was prepared exclusively for VRS for a specific and limited purpose. It is a complex technical analysis that assumes a high level of knowledge concerning the plan's operations, and uses data which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs. Any distribution of this report must be provided in its entirety unless prior written consent is obtained from Milliman.

### Valuation Results and Supplemental Information

The following schedules (or updates to them) were prepared by VRS from information prepared by us during the 2013 actuarial valuation or from supplemental information prepared by us for use in the System's Comprehensive Annual Financial Report. We have reviewed them for inclusion in the 2014 Comprehensive Annual Financial Report:

- Schedule of Funding Progress
- Schedule of Actuarial Methods and Significant Assumptions
- Schedule of Employer Contributions
- Schedules of Selected Experience Rates

### Certification

On the basis of the foregoing, I certify that, to the best of my knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with Actuarial Standards of Practice, the Code of Professional Conduct and Qualification Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries. I am a member of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Best regards,

A handwritten signature in black ink that reads 'Amy Pahl'.

Amy Pahl, FSA, MAAA  
Consulting Actuary

Actuary's Certification Letter –  
OPEB Plans – Line of Duty Act Fund



**Cavanaugh Macdonald**  
CONSULTING, LLC  
*The experience and dedication you deserve*

October 31, 2014

**Board of Trustees**

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

Dear Trustees:

Governmental Accounting Standards Board Statements No. 43 and 45 (GASB 43 and 45) require the actuarial valuations of retiree health care and other post-employment benefit (OPEB) plans. Cavanaugh Macdonald Consulting, LLC (CMC) is submitting the results of the annual actuarial valuation of the Virginia Retirement System (VRS) Line of Duty Act Fund (the Plan) prepared as of June 30, 2013.

CMC has relied on the plan provisions and eligibility provisions provided by the Commonwealth of Virginia's Line of Duty Act Program (LODA Program) provided by §9.1-400 of the *Code of Virginia* (the Code) and Item 268 of the 2013 Appropriations Act (the Act). Additionally, CMC has received active participant data from the Virginia Retirement System (VRS) and inactive data provided by the Commonwealth of Virginia's Department of Accounts (DOA). CMC has reviewed the data for reasonableness only, and has not performed a formal audit of the data used for this valuation. Because the census data was collected from a wide range of sources with varying and, at times, limited content, the data is incomplete. Adjustments have been made to account for this incompleteness. Along with the valuation results, commentary is provided regarding the various aspects of developing the cost structure for LODA Program benefits to be financed through the Plan.

The valuation results are provided on a blended, single group cost basis comprised of two individual segments of the total population: state employees and political subdivision employees. State employees include state employees, Virginia law officers (VaLORS), state police (SPORS), Department of Motor Vehicles (DMV) employees, and members of the National Guard. Political subdivision employees include Emergency Medical Technicians (EMTs), fire personnel and employees performing hazardous duties in political subdivisions within VRS, as well as one independent retirement system.

Projections estimate annual Full-Time Equivalent (FTE) employee contributions for the fiscal years 2015 and 2016 to be \$518.84. The estimated contribution rate assumes plan participation of 12,616.50 state FTE employees and 7,439.00 political subdivision FTE employees for a total of 20,055.50 FTE employees. The contribution rate represents, in total, the estimated cost of providing benefits payable in fiscal years 2015 and 2016; including administrative expenses; the cost of benefits incurred and reported to the administrator but awaiting processing

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(additional reserves); and the loan installment to repay the LODA Program's costs financed via loans from the Group Life Insurance Program. Contribution rates for participating employer groups are established very two years. The actuarially calculated employer contribution rates based on the June 30, 2013, valuation are for fiscal years ending 2015 and 2016.

The results provided do not account for the potential, long-term incurred but not reported claims resulting from a lack of employer or beneficiary education about the Plan's benefits. The potential cost and liability for these claims may be considerable. A margin for these costs may need to be considered. Additionally, the State Comptroller may want to consider this potential risk in regards to its authority to waive the five-year statute of limitation on claims.

The promised death benefits and post-employment health care benefits provided through the plan are included in all of the actuarially estimated contribution rates. The Plan is a cost-sharing, multiple-employer plan, and the liability for the Plan is developed and reported, as a whole, under the requirements of GASB Statement No. 43. The measurement of the cost-sharing employers' OPEB expense and liabilities under GASB Statement No. 45 is based upon the employers' contractually required contributions to the Plan. The actuarially calculated contribution rates based upon the requirements of GASB 43 and 45 were developed using the entry age normal cost method with projected benefits. As the Act requires contributions to be determined on a current disbursement basis, the Plan has minimal assets in trust solely to provide benefits, and GASB 43 and 45 requires that the discount rate used to value a plan be based on the likely return of the assets held in trust to pay benefits, the GASB 43 and 45 valuation results provided in this report reflect a discount rate of 4.75%. The assumed annual rate of return of 4.75% is assumed to be consistent with the long-term rate of return for Virginia's Local Government Investment Pool (LGIP). The unfunded accrued liability is being amortized by regular annual contributions as a level percentage of payroll within a 30-year period on the assumption that payroll will increase by 3.00% annually. The assumptions recommended by the actuary are in the aggregate reasonably related to the experience under the Plan and to reasonable expectations of anticipated experience under the Plan, and meet the parameters for disclosures under GASB 43 and 45.

The valuation reflects changes in the actuarial assumptions adopted by the Board of Trustees recommended in the experience study of VRS for the four-year period ending June 20, 2012. The following tables summarize the changes in actuarial assumptions.

| STATE SYSTEM | ASSUMPTION CHANGE   |
|--------------|---|
| State        | Update mortality table<br>Decrease rates of service retirement<br>Decrease rates of withdrawals for fewer than 10 years of service<br>Decrease rates of male disability retirement<br>Reduce rates of salary increase by 0.25% per year           |
| SPORS        | Update mortality table<br>Increase rate of service retirement at age 54   |
| ValORS       | Update mortality table<br>Adjustments to rates of service retirement<br>Decrease rates of withdrawals for females with fewer than 10 years of service<br>Increase rates of disability<br>Decrease service related disability rate from 60% to 50% |



## POLITICAL SUBDIVISION SYSTEM

## ASSUMPTION CHANGE

Largest 10 –  
LEOS

Update mortality table  
Update mortality table  
Decrease rates of disability

All Others  
(Non-10 Largest)  
LEOS

Update mortality table  
Adjustments to rates of service retirement for females  
Increase rates of withdrawals  
Decrease male and female rates of disability

Additionally, assumptions and methods specific to the valuation of the Plan were made, including adjustments to the percentage of qualifying service-related disabilities for members of VaLORS, the percentage of death benefit payments made as direct or proximate result of the performance of duty, the rates of spouse participation in the health care benefit component of the Plan, the assumed age difference between members and spouses, the assumed rates of health care inflation, and a change to the Entry Age Normal actuarial cost method.

The following schedules (or updates to them) were prepared by VRS from information prepared by us during the 2013 actuarial valuation or from supplemental information prepared by us for use in the System's Comprehensive Annual Financial Report. We have reviewed them for inclusion in the 2014 Comprehensive Annual Financial Report:

- Schedule of Funding Progress
- Schedule of Actuarial Methods and Significant Assumptions
- Schedule of Employer Contributions
- Schedules of Selected Experience Rates

Our organization has only a contractual relationship with the Virginia Retirement System to provide actuarial consulting services and we do not provide other services to nor have a financial interest in the Virginia Retirement System. There are no known interests or relationships that our firm has with the Virginia Retirement System that may impair or appear to impair the objectivity of our work.

This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the Plan and on actuarial assumptions that are internally consistent and reasonably based on the actuarial experience of the VRS. The aggregate assumptions recommended by the actuary are reasonably related to the experience under the Plan and are reasonable expectations of anticipated experience under the Plan.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: potential variance in the number and/or type of covered lives; Plan experience differing from that anticipated by the 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. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

Respectfully submitted,

Jose I. Fernandez, ASA, FCA, EA, MAAA  
Principal and Consulting Actuary

Eric H. Gary, FSA, FCA, MAAA  
Chief Health Actuary

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 June 20, 2013, 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 and the Line of Duty Act Program. They were based on an analysis of plan experience for the four-year period July 1, 2008, through June 30, 2012, and were used for the June 30, 2013, valuation.

### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS – OTHER POST-EMPLOYMENT BENEFIT (OPEB) PLANS

FOR THE JUNE 30, 2013, ACTUARIAL VALUATION

| Actuarial Assumptions and Methods                | Group Life Insurance Program | Retiree Health Insurance Credit Program | Virginia Sickness and Disability Program | Line of Duty Act Program    |
|--|------------------------------|---|--|-----------------------------|
| Valuation Interest Rate                          | 7.00%                        | 7.00%                                   | 7.00%                                    | 4.25%                       |
| Salary Scale Inflation Factor                    | 2.50%                        | 2.50%                                   | 2.50%                                    | 2.50%                       |
| Actuarial Cost Method                            | Entry Age Normal             | Entry Age Normal                        | Entry Age Normal                         | Entry Age Normal            |
| Amortization Period                              | 30 Years                     | 30 Years                                | 30 Years                                 | 30 Years                    |
| Amortization Method                              | Level Percent of Pay Closed  | Level Percent of Pay Closed             | Level Percent of Pay Closed              | Level Percent of Pay Closed |
| Payroll Growth Rate                              | 3.00%                        | 3.00%                                   | 3.00%                                    | 3.00%                       |
| Assets Valuation Method – State and Teacher      | 5-Year Smoothed Market       | 5-Year Smoothed Market                  | 5-Year Smoothed Market                   | Market Value                |
| Assets Valuation Method – Political Subdivisions | 5-Year Smoothed Market       | Market Value *                          | N/A                                      | Market Value                |

\* Includes state-funded retiree health insurance for certain local government employees.

**SOLVENCY TEST – OPEB PLANS**

(EXPRESSED IN THOUSANDS)

| Valuation Date<br>(June 30)   | Aggregate Accrued Liabilities for |                                |                      | Valuation Assets | Portion of Accrued Liabilities Covered by Assets |         |       |
|---|-----------------------------------|--------------------------------|----------------------|------------------|--|---------|-------|
|   | (1) Active Member Contributions   | (2) Retirees and Beneficiaries | (3) Active Members * |                  | (1)  | (2)     | (3)   |
| <b>GROUP LIFE INSURANCE</b>   |                                   |                                |                      |                  |  |         |       |
| 2013  | N/A                               | \$ 1,422,423                   | \$ 1,149,268         | \$ 836,547       | N/A  | 58.81%  | 0.00% |
| 2012  | N/A                               | 1,308,096                      | 1,150,214            | 755,889          | N/A  | 57.79%  | 0.00% |
| 2011  | N/A                               | 1,228,335                      | 1,130,642            | 852,424          | N/A  | 69.40%  | 0.00% |
| 2010  | N/A                               | 1,140,158                      | 1,105,157            | 928,920          | N/A  | 81.47%  | 0.00% |
| 2009  | N/A                               | 995,206                        | 999,593              | 967,188          | N/A  | 97.18%  | 0.00% |
| 2008 ***  | N/A                               | 912,508                        | 858,862              | 974,869          | N/A  | 100.00% | 7.26% |
| <b>RETIREE HEALTH INSURANCE CREDIT – STATE EMPLOYEES **</b>             |                                   |                                |                      |                  |  |         |       |
| 2013  | N/A                               | \$ 562,448                     | \$ 382,134           | \$ 54,773        | N/A  | 9.74%   | 0.00% |
| 2012  | N/A                               | 542,874                        | 374,294              | 55,510           | N/A  | 10.23%  | 0.00% |
| 2011  | N/A                               | 530,461                        | 366,099              | 110,791          | N/A  | 20.89%  | 0.00% |
| 2010  | N/A                               | 521,153                        | 373,888              | 159,163          | N/A  | 30.54%  | 0.00% |
| 2009  | N/A                               | 466,457                        | 375,654              | 169,287          | N/A  | 36.29%  | 0.00% |
| 2008 ***  | N/A                               | 422,996                        | 379,164              | 153,738          | N/A  | 36.35%  | 0.00% |
| <b>RETIREE HEALTH INSURANCE CREDIT – TEACHERS</b>                       |                                   |                                |                      |                  |  |         |       |
| 2013  | N/A                               | \$ 728,612                     | \$ 529,180           | \$ 67,012        | N/A  | 9.20%   | 0.00% |
| 2012  | N/A                               | 732,146                        | 536,924              | 58,286           | N/A  | 7.96%   | 0.00% |
| 2011  | N/A                               | 707,436                        | 522,769              | 85,933           | N/A  | 12.15%  | 0.00% |
| 2010  | N/A                               | 666,263                        | 536,175              | 108,187          | N/A  | 16.24%  | 0.00% |
| 2009  | N/A                               | 614,050                        | 494,120              | 115,880          | N/A  | 18.87%  | 0.00% |
| 2008 ***  | N/A                               | 554,541                        | 523,484              | 98,266           | N/A  | 17.72%  | 0.00% |
| <b>RETIREE HEALTH INSURANCE CREDIT – STATE-FUNDED LOCALITY BENEFITS</b> |                                   |                                |                      |                  |  |         |       |
| 2013  | N/A                               | \$ 20,001                      | \$ 17,794            | \$ 1,510         | N/A  | 7.55%   | 0.00% |
| 2012  | N/A                               | 19,817                         | 18,456               | 1,807            | N/A  | 9.12%   | 0.00% |
| 2011  | N/A                               | 18,271                         | 18,406               | 2,338            | N/A  | 12.80%  | 0.00% |
| 2010  | N/A                               | 17,045                         | 17,724               | 2,743            | N/A  | 16.09%  | 0.00% |
| 2009  | N/A                               | 15,289                         | 16,049               | 3,040            | N/A  | 19.88%  | 0.00% |
| 2008 ***  | N/A                               | 14,960                         | 19,726               | 3,311            | N/A  | 22.13%  | 0.00% |
| <b>RETIREE HEALTH INSURANCE CREDIT – POLITICAL SUBDIVISIONS</b>         |                                   |                                |                      |                  |  |         |       |
| 2013  | N/A                               | \$ 16,268                      | \$ 17,036            | \$ 16,137        | N/A  | 99.19%  | 0.00% |
| 2012  | N/A                               | 15,054                         | 16,369               | 14,275           | N/A  | 94.83%  | 0.00% |
| 2011  | N/A                               | 14,503                         | 15,688               | 13,918           | N/A  | 95.97%  | 0.00% |
| 2010  | N/A                               | 13,223                         | 16,861               | 11,218           | N/A  | 84.84%  | 0.00% |
| 2009  | N/A                               | 11,943                         | 13,548               | 8,332            | N/A  | 69.76%  | 0.00% |
| 2008 ***  | N/A                               | 15,388                         | 12,722               | 8,553            | N/A  | 55.58%  | 0.00% |

**SOLVENCY TEST – OPEB PLANS, cont.**

(EXPRESSED IN THOUSANDS)

| Valuation Date<br>(June 30)                     | Aggregate Accrued Liabilities for |                                |                      | Valuation Assets | Portion of Accrued Liabilities Covered by Assets |         |         |  |
|---|-----------------------------------|--------------------------------|----------------------|------------------|--|---------|---------|--|
|   | (1) Active Member Contributions   | (2) Retirees and Beneficiaries | (3) Active Members * |                  | (1)  | (2)     | (3)     |  |
| <b>VIRGINIA SICKNESS AND DISABILITY PROGRAM</b> |                                   |                                |                      |                  |  |         |         |  |
| 2013  | N/A                               | \$ 132,842                     | \$ 50,104            | \$ 313,480       | N/A  | 100.00% | 360.53% |  |
| 2012  | N/A                               | 125,578                        | 136,151              | 305,170          | N/A  | 100.00% | 131.91% |  |
| 2011  | N/A                               | 123,339                        | 139,505              | 330,079          | N/A  | 100.00% | 148.20% |  |
| 2010  | N/A                               | 133,728                        | 148,251              | 302,683          | N/A  | 100.00% | 113.97% |  |
| 2009  | N/A                               | 120,811                        | 146,773              | 266,635          | N/A  | 100.00% | 99.35%  |  |
| 2008 ***  | N/A                               | 147,518                        | 215,357              | 286,164          | N/A  | 100.00% | 64.38%  |  |
| <b>LINE OF DUTY ACT PROGRAM</b>                 |                                   |                                |                      |                  |  |         |         |  |
| 2013  | N/A                               | \$ 139,835                     | \$ 64,249            | \$ 10,084        | N/A  | 7.21%   | 0.00%   |  |
| 2012  | N/A                               | 131,501                        | 94,673               | 6,052            | N/A  | 4.60%   | 0.00%   |  |
| 2011  | N/A                               | 207,186                        | 191,770              | -                | N/A  | 0.00%   | 0.00%   |  |
| 2010 ***  | N/A                               | 200,908                        | 375,134              | -                | N/A  | 0.00%   | 0.00%   |  |

\* Employer-financed portion.

\*\* State employees include state, SPORS, JRS, VaLORS, ORP and UVA.

\*\*\* Data for prior fiscal years is unavailable.

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<br>(June 30)                                      | Active Members |                          |                    |                                    |
|--|----------------|--------------------------|--------------------|------------------------------------|
|  | Number         | Annual Payroll<br>(000s) | Average Annual Pay | Annualized % Change in Average Pay |
| GROUP LIFE INSURANCE   |                |                          |                    |                                    |
| 2013   | 361,080        | \$ 17,132,176            | \$ 47,447          | 2.47%                              |
| 2012   | 360,602        | 16,696,961               | 46,303             | 0.36%                              |
| 2011   | 358,536        | 16,542,753               | 46,140             | 0.97%                              |
| 2010   | 361,644        | 16,526,260               | 45,698             | -0.10%                             |
| 2009   | 365,682        | 16,728,060               | 45,745             | 2.67%                              |
| 2008 **  | 365,103        | 16,267,352               | 44,556             | N/A                                |
| RETIREE HEALTH INSURANCE CREDIT – STATE EMPLOYEES *              |                |                          |                    |                                    |
| 2013   | 106,780        | \$ 5,724,611             | \$ 53,611          | 1.22%                              |
| 2012   | 106,517        | 5,641,862                | 52,967             | -0.91%                             |
| 2011   | 105,186        | 5,622,425                | 53,452             | 5.21%                              |
| 2010   | 105,106        | 5,340,134                | 50,807             | 0.45%                              |
| 2009   | 107,791        | 5,452,111                | 50,580             | 0.79%                              |
| 2008 **  | 104,774        | 5,257,958                | 50,184             | N/A                                |
| RETIREE HEALTH INSURANCE CREDIT – TEACHERS                       |                |                          |                    |                                    |
| 2013   | 147,257        | \$ 7,188,884             | \$ 48,819          | 2.60%                              |
| 2012   | 147,216        | 7,004,577                | 47,580             | 0.46%                              |
| 2011   | 146,152        | 6,922,130                | 47,363             | -1.24%                             |
| 2010   | 148,462        | 7,119,889                | 47,958             | -0.37%                             |
| 2009   | 148,762        | 7,160,842                | 48,136             | 3.29%                              |
| 2008 **  | 147,833        | 6,889,702                | 46,605             | N/A                                |
| RETIREE HEALTH INSURANCE CREDIT – STATE-FUNDED LOCALITY BENEFITS |                |                          |                    |                                    |
| 2013   | 16,093         | \$ 742,121               | \$ 46,115          | 4.07%                              |
| 2012   | 16,175         | 716,748                  | 44,312             | 1.13%                              |
| 2011   | 16,894         | 740,253                  | 43,818             | -0.02%                             |
| 2010   | 17,021         | 745,952                  | 43,825             | -0.34%                             |
| 2009   | 17,052         | 749,841                  | 43,974             | 1.53%                              |
| 2008 **  | 16,168         | 700,231                  | 43,310             | N/A                                |
| VIRGINIA SICKNESS AND DISABILITY PROGRAM                         |                |                          |                    |                                    |
| 2013   | 74,178         | \$ 3,472,669             | \$ 46,815          | 0.50%                              |
| 2012   | 73,707         | 3,433,322                | 46,581             | 0.08%                              |
| 2011   | 72,440         | 3,371,773                | 46,546             | 5.10%                              |
| 2010   | 71,529         | 3,167,849                | 44,288             | 0.04%                              |
| 2009   | 73,003         | 3,231,897                | 44,271             | 0.15%                              |
| 2008 **  | 72,854         | 3,220,489                | 44,205             | N/A                                |

\* State employees include 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<br>(June 30) | Retirees       |                  |                    |                  | End of Year Totals |                             | Annualized % Increase in Life Insurance Amount | Average Life Insurance Amount | % Increase in Average Life Insurance Amount |
|                             | Added to Rolls |                  | Removed from Rolls |                  | Total Number       | Total Life Insurance Amount |  |                               |   |
|                             | Number         | Insurance Amount | Number             | Insurance Amount |                    |                             |  |                               |   |
| 2013                        | 12,910         | \$1,148,100,000  | 6,602              | \$ 800,829,000   | 152,622            | \$ 7,006,128,000            | 5.22%  | \$ 45,905                     | 0.87%                                       |
| 2012                        | 9,787          | 1,064,957,000    | 3,864              | 773,058,000      | 146,314            | 6,658,857,000               | 4.58%  | 45,511                        | 0.35%                                       |
| 2011                        | 11,216         | 1,205,368,000    | 4,325              | 714,803,000      | 140,391            | 6,366,958,000               | 8.35%  | 45,352                        | 3.03%                                       |
| 2010                        | 10,048         | 1,074,004,000    | 2,577              | 614,199,000      | 133,500            | 5,876,393,000               | 8.49%  | 44,018                        | 2.42%                                       |
| 2009                        | 8,296          | 887,011,000      | 10,816             | 455,360,000      | 126,029            | 5,416,588,000               | 8.66%  | 42,979                        | 10.83%                                      |
| 2008 **                     | N/A            | N/A              | N/A                | N/A              | 128,549            | 4,984,937,000               | N/A  | 38,778                        | N/A   |

| RETIREE HEALTH INSURANCE CREDIT – STATE EMPLOYEES * |                |                   |                    |                   |                    |                                |  |  |   |
|---|----------------|-------------------|--------------------|-------------------|--------------------|--------------------------------|--|--|---|
| Valuation Date<br>(June 30)                         | Retirees       |                   |                    |                   | End of Year Totals |                                | Annualized % Increase in Health Insurance Credit | Average Annual Health Insurance Credit | % Increase in Average Health Insurance Credit |
|   | Added to Rolls |                   | Removed from Rolls |                   | Total Number       | Annual Health Insurance Credit |  |  |   |
|   | Number         | Insurance Credits | Number             | Insurance Credits |                    |                                |  |  |   |
| 2013  | 2,542          | \$ 3,765,000      | 1,503              | \$ 2,112,000      | 41,085             | \$ 60,823,000                  | 2.79%  | \$ 1,480                               | 0.14%   |
| 2012  | 2,539          | 3,784,000         | 1,453              | 2,065,000         | 40,046             | 59,170,000                     | 2.99%  | 1,478                                  | 0.20%   |
| 2011  | 2,684          | 4,009,000         | 1,986              | 2,841,000         | 38,960             | 57,451,000                     | 2.08%  | 1,475                                  | 0.27%   |
| 2010  | 3,521          | 5,685,000         | 1,279              | 1,784,000         | 38,262             | 56,283,000                     | 7.45%  | 1,471                                  | 1.17%   |
| 2009  | 3,201          | 6,180,000         | 1,368              | 1,865,000         | 36,020             | 52,382,000                     | 8.98%  | 1,454                                  | 3.41%   |
| 2008 **   | N/A            | N/A               | N/A                | N/A               | 34,187             | 48,067,000                     | N/A  | 1,406                                  | N/A   |

| RETIREE HEALTH INSURANCE CREDIT – TEACHERS |                |                   |                    |                   |                    |                                |  |  |   |
|--|----------------|-------------------|--------------------|-------------------|--------------------|--------------------------------|--|--|---|
| Valuation Date<br>(June 30)                | Retirees       |                   |                    |                   | End of Year Totals |                                | Annualized % Increase in Health Insurance Credit | Average Annual Health Insurance Credit | % Increase in Average Health Insurance Credit |
|  | Added to Rolls |                   | Removed from Rolls |                   | Total Number       | Annual Health Insurance Credit |  |  |   |
|  | Number         | Insurance Credits | Number             | Insurance Credits |                    |                                |  |  |   |
| 2013                                       | 3,557          | \$ 5,016,000      | 1,389              | \$ 1,918,000      | 55,683             | \$ 76,934,000                  | 4.20%  | \$ 1,382                               | 0.14%   |
| 2012                                       | 3,240          | 4,426,000         | 1,214              | 1,649,000         | 53,515             | 73,836,000                     | 3.91%  | 1,380                                  | 0.00%   |
| 2011                                       | 4,073          | 5,776,000         | 1,163              | 1,568,000         | 51,489             | 71,059,000                     | 6.29%  | 1,380                                  | 0.29%   |
| 2010                                       | 3,216          | 4,545,000         | 1,101              | 1,483,000         | 48,579             | 66,851,000                     | 4.80%  | 1,376                                  | 0.22%   |
| 2009                                       | 5,375          | 7,094,000         | 1,002              | 1,350,000         | 46,464             | 63,789,000                     | 9.90%  | 1,373                                  | -0.44%  |
| 2008 **                                    | N/A            | N/A               | N/A                | N/A               | 42,091             | 58,045,000                     | N/A  | 1,379                                  | N/A   |

**SCHEDULE OF RETIREE AND BENEFICIARY VALUATION DATA – OPEB PLANS, cont.**

| VIRGINIA SICKNESS AND DISABILITY PROGRAM |                |              |                    |              |       |                    |                                   |                                       |                            |  |  |
|--|----------------|--------------|--------------------|--------------|-------|--------------------|-----------------------------------|---------------------------------------|----------------------------|--|--|
| Valuation Date<br>(June 30)              | Disableds      |              |                    |              |       | End of Year Totals |                                   |                                       |                            |  |  |
|  | Added to Rolls |              | Removed from Rolls |              |       | Total              | Current Total Annual LTD Payments | Annualized % Increase in LTD Payments | Average Annual LTD Payment | % Increase in Average Annual LTD Payment |  |
|  | Number         | LTD Amount   | Number             | LTD Payments |       |                    |                                   |                                       |                            |  |  |
| 2013                                     | 401            | \$ 6,256,000 | 434                | \$ 4,707,000 | 2,637 | \$ 25,779,000      | 6.39%                             | \$ 9,776                              | 7.72%                      |  |  |
| 2012                                     | 424            | 6,438,000    | 374                | 5,635,000    | 2,670 | 24,230,000         | 3.43%                             | 9,075                                 | 1.49%                      |  |  |
| 2011                                     | 411            | 6,262,000    | 365                | 6,252,000    | 2,620 | 23,427,000         | 0.04%                             | 8,942                                 | -1.71%                     |  |  |
| 2010                                     | 445            | 6,902,000    | 265                | 4,972,000    | 2,574 | 23,417,000         | 8.98%                             | 9,098                                 | 1.37%                      |  |  |
| 2009                                     | 377            | 5,688,000    | 297                | 6,500,000    | 2,394 | 21,487,000         | -3.64%                            | 8,975                                 | -6.87%                     |  |  |
| 2008 **                                  | N/A            | N/A          | N/A                | N/A          | 2,314 | 22,299,000         | N/A                               | 9,637                                 | N/A                        |  |  |

\* State employees include state, SPORS, JRS, VaLORS, ORP and UVA.

\*\* Data for prior fiscal years is unavailable.

**FIGURE 4.7 – RETIREMENT RATES – OPEB PLANS**

Sample rates of retirement for members eligible to retire 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**

| Age    | Plan 1   |         |   |         | Plan 2             |         |                      |         |
|--------|--|---------|---|---------|--------------------|---------|----------------------|---------|
|        | Retirement With Fewer Than 30 Years of Service |         | Retirement With 30 or More Years of Service |         | Reduced Retirement |         | Unreduced Retirement |         |
|        | Male   | Female  | Male  | Female  | Male               | Female  | Male                 | Female  |
| 50     | 3.00%  | 3.20%   | 10.00%                                      | 10.00%  | 0.00%              | 0.00%   | 35.00%               | 35.00%  |
| 55     | 5.00%  | 5.00%   | 10.00%                                      | 10.00%  | 0.00%              | 0.00%   | 10.00%               | 10.00%  |
| 59     | 5.00%  | 5.50%   | 10.00%                                      | 10.00%  | 0.00%              | 0.00%   | 10.00%               | 10.00%  |
| 60     | 5.00%  | 5.50%   | 10.00%                                      | 15.00%  | 5.00%              | 5.50%   | 10.00%               | 15.00%  |
| 61     | 10.00%   | 10.00%  | 15.00%                                      | 20.00%  | 10.00%             | 10.00%  | 15.00%               | 20.00%  |
| 62     | 15.00%   | 15.00%  | 25.00%                                      | 30.00%  | 15.00%             | 15.00%  | 25.00%               | 30.00%  |
| 64     | 15.00%   | 15.00%  | 20.00%                                      | 20.00%  | 15.00%             | 15.00%  | 20.00%               | 20.00%  |
| 65     | 30.00%   | 30.00%  | 30.00%                                      | 40.00%  | 30.00%             | 30.00%  | 30.00%               | 40.00%  |
| 67     | 30.00%   | 30.00%  | 25.00%                                      | 25.00%  | 30.00%             | 30.00%  | 25.00%               | 25.00%  |
| > = 70 | 100.00%  | 100.00% | 100.00%                                     | 100.00% | 100.00%            | 100.00% | 100.00%              | 100.00% |



**FIGURE 4.7 – RETIREMENT RATES – OPEB PLANS, cont.**

**Teachers**

| Age    | Plan 1   |         |   |         | Plan 2             |         |                      |         |
|--------|--|---------|---|---------|--------------------|---------|----------------------|---------|
|        | Retirement With Fewer Than 30 Years of Service |         | Retirement With 30 or More Years of Service |         | Reduced Retirement |         | Unreduced Retirement |         |
|        | Male   | Female  | Male  | Female  | Male               | Female  | Male                 | Female  |
| 50     | 2.00%  | 2.00%   | 17.50%                                      | 15.00%  | 0.00%              | 0.00%   | 40.00%               | 35.00%  |
| 55     | 5.70%  | 6.10%   | 22.50%                                      | 22.50%  | 0.00%              | 0.00%   | 22.50%               | 22.50%  |
| 59     | 7.00%  | 7.50%   | 22.50%                                      | 22.50%  | 0.00%              | 0.00%   | 22.50%               | 22.50%  |
| 60     | 7.50%  | 8.50%   | 22.50%                                      | 22.50%  | 7.50%              | 8.50%   | 22.50%               | 22.50%  |
| 61     | 11.00%   | 12.00%  | 30.00%                                      | 30.00%  | 11.00%             | 12.00%  | 30.00%               | 30.00%  |
| 62     | 17.00%   | 17.00%  | 35.00%                                      | 35.00%  | 17.00%             | 17.00%  | 35.00%               | 35.00%  |
| 64     | 18.00%   | 16.50%  | 30.00%                                      | 35.00%  | 18.00%             | 16.50%  | 30.00%               | 35.00%  |
| 65     | 30.00%   | 30.00%  | 40.00%                                      | 35.00%  | 30.00%             | 30.00%  | 40.00%               | 35.00%  |
| 67     | 30.00%   | 30.00%  | 40.00%                                      | 35.00%  | 30.00%             | 30.00%  | 40.00%               | 35.00%  |
| > = 70 | 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**

| Age    | Plan 1             |         |                      |         | Plan 2             |         |                      |         |
|--------|--------------------|---------|----------------------|---------|--------------------|---------|----------------------|---------|
|        | Reduced Retirement |         | Unreduced Retirement |         | Reduced Retirement |         | Unreduced Retirement |         |
|        | Male               | Female  | Male                 | Female  | Male               | Female  | Male                 | Female  |
| 50     | 3.50%              | 3.50%   | 13.00%               | 15.60%  | 0.00%              | 0.00%   | 13.00%               | 15.60%  |
| 55     | 5.00%              | 5.00%   | 11.50%               | 14.30%  | 0.00%              | 0.00%   | 11.50%               | 14.30%  |
| 59     | 4.50%              | 6.00%   | 13.50%               | 13.40%  | 0.00%              | 0.00%   | 13.50%               | 13.40%  |
| 60     | 6.00%              | 7.50%   | 17.00%               | 12.80%  | 6.00%              | 7.50%   | 17.00%               | 12.80%  |
| 61     | 10.50%             | 10.00%  | 19.00%               | 17.70%  | 10.50%             | 10.00%  | 19.00%               | 17.70%  |
| 62     | 17.50%             | 15.50%  | 31.00%               | 28.00%  | 17.50%             | 15.50%  | 31.00%               | 28.00%  |
| 64     | 16.50%             | 17.00%  | 29.00%               | 18.30%  | 16.50%             | 17.00%  | 29.00%               | 18.30%  |
| 65     | 30.00%             | 30.00%  | 41.00%               | 29.60%  | 30.00%             | 30.00%  | 41.00%               | 29.60%  |
| 67     | 30.00%             | 30.00%  | 24.00%               | 33.20%  | 30.00%             | 30.00%  | 24.00%               | 33.20%  |
| > = 70 | 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**

| Age    | Plan 1             |         |                      |         | Plan 2             |         |                      |         |
|--------|--------------------|---------|----------------------|---------|--------------------|---------|----------------------|---------|
|        | Reduced Retirement |         | Unreduced Retirement |         | Reduced Retirement |         | Unreduced Retirement |         |
|        | Male               | Female  | Male                 | Female  | Male               | Female  | Male                 | Female  |
| 50     | 5.00%              | 4.00%   | 9.00%                | 8.00%   | 0.00%              | 0.00%   | 9.00%                | 8.00%   |
| 55     | 5.00%              | 5.50%   | 14.00%               | 11.50%  | 0.00%              | 0.00%   | 14.00%               | 11.50%  |
| 59     | 6.00%              | 5.00%   | 11.00%               | 11.50%  | 0.00%              | 0.00%   | 11.00%               | 11.50%  |
| 60     | 6.00%              | 7.50%   | 11.00%               | 13.00%  | 6.00%              | 7.50%   | 11.00%               | 13.00%  |
| 61     | 10.00%             | 7.50%   | 25.00%               | 17.50%  | 10.00%             | 7.50%   | 25.00%               | 17.50%  |
| 62     | 17.00%             | 17.00%  | 35.00%               | 25.00%  | 17.00%             | 17.00%  | 35.00%               | 25.00%  |
| 64     | 15.00%             | 13.00%  | 27.00%               | 17.50%  | 15.00%             | 13.00%  | 25.00%               | 25.00%  |
| 65     | 30.00%             | 30.00%  | 33.00%               | 40.00%  | 30.00%             | 30.00%  | 25.00%               | 25.00%  |
| 67     | 30.00%             | 30.00%  | 20.00%               | 25.00%  | 30.00%             | 30.00%  | 33.00%               | 40.00%  |
| > = 70 | 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    | Reduced Retirement | Unreduced Retirement |
|--------|--------------------|----------------------|
| 50     | 9.00%              | 25.00%               |
| 55     | 8.50%              | 18.00%               |
| 59     | 13.50%             | 31.50%               |
| 60     | 20.00%             | 35.00%               |
| > = 65 | 100.00%            | 100.00%              |

**Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – All Other Employers – All Plans**

| Age    | Reduced Retirement | Unreduced Retirement |
|--------|--------------------|----------------------|
| 50     | 8.50%              | 25.00%               |
| 55     | 8.50%              | 17.50%               |
| 59     | 11.50%             | 28.50%               |
| 60     | 20.00%             | 35.00%               |
| > = 65 | 100.00%            | 100.00%              |

**State Police Officers – All Plans**

| Age    | Reduced Retirement | Unreduced Retirement |
|--------|--------------------|----------------------|
| 50     | 10.00%             | 15.00%               |
| 55     | 10.00%             | 15.00%               |
| 59     | 12.00%             | 20.00%               |
| 60     | 25.00%             | 40.00%               |
| > = 64 | 100.00%            | 100.00%              |

**Virginia Law Officers – All Plans**

| Age    | Reduced Retirement | Unreduced Retirement |
|--------|--------------------|----------------------|
| 50     | 9.20%              | 25.00%               |
| 55     | 9.50%              | 25.00%               |
| 59     | 12.00%             | 40.00%               |
| 60     | 20.00%             | 40.00%               |
| > = 65 | 100.00%            | 100.00%              |

**FIGURE 4.7 – RETIREMENT RATES – OPEB PLANS, cont.**

**Judges – All Plans**

| Age   | Service Multiplier = 1.5<br>Years of Service |         |         | Service Multiplier = 2.0<br>Years of Service |         |         |
|-------|--|---------|---------|--|---------|---------|
|       | 2-19   | 20      | >= 20   | 2-14   | 15      | >= 16   |
| 60    | 0.00%  | 50.00%  | 50.00%  | 0.00%  | 50.00%  | 50.00%  |
| 65    | 50.00%                                       | 50.00%  | 15.00%  | 50.00%                                       | 50.00%  | 15.00%  |
| 69    | 15.00%                                       | 15.00%  | 15.00%  | 15.00%                                       | 15.00%  | 15.00%  |
| >= 70 | 100.00%                                      | 100.00% | 100.00% | 100.00%                                      | 100.00% | 100.00% |

| Age   | Service Multiplier = 2.5<br>Years of Service |         |         | Service Multiplier = 3.5<br>Years of Service |         |         |
|-------|--|---------|---------|--|---------|---------|
|       | 2-19   | 20      | >= 20   | 2-14   | 15      | >= 16   |
| 60    | 0.00%  | 50.00%  | 50.00%  | 0.00%  | 50.00%  | 50.00%  |
| 65    | 50.00%                                       | 50.00%  | 15.00%  | 50.00%                                       | 50.00%  | 15.00%  |
| 69    | 15.00%                                       | 15.00%  | 15.00%  | 15.00%                                       | 15.00%  | 15.00%  |
| >= 70 | 100.00%                                      | 100.00% | 100.00% | 100.00%                                      | 100.00% | 100.00% |

**FIGURE 4.8 – DISABILITY RATES – OPEB PLANS**

As shown below for selected ages.

**State Employees**

14% of disability cases are assumed to be service-related.

| Age | Male    | Female  |
|-----|---------|---------|
| 20  | 0.0900% | 0.0100% |
| 30  | 0.1800% | 0.1500% |
| 40  | 0.1800% | 0.2900% |
| 50  | 0.4500% | 0.5500% |
| 60  | 0.7200% | 1.0000% |

**Teachers**

5% of disability cases are assumed to be service-related.

| Age | Male    | Female  |
|-----|---------|---------|
| 20  | 0.0000% | 0.0000% |
| 30  | 0.0100% | 0.0100% |
| 40  | 0.0210% | 0.0360% |
| 50  | 0.1330% | 0.0900% |
| 60  | 0.3080% | 0.2400% |

**FIGURE 4.8 – DISABILITY RATES – OPEB PLANS, cont.**

**Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers**

14% of disability cases are assumed to be service-related.

| Age | Male    | Female  |
|-----|---------|---------|
| 20  | 0.0000% | 0.0000% |
| 30  | 0.0600% | 0.0500% |
| 40  | 0.1800% | 0.0500% |
| 50  | 0.2400% | 0.1800% |
| 60  | 0.7200% | 0.4500% |

**Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – All Other Employers**

14% of disability cases are assumed to be service-related.

| Age | Male    | Female  |
|-----|---------|---------|
| 20  | 0.0200% | 0.0000% |
| 30  | 0.0600% | 0.0100% |
| 40  | 0.1400% | 0.0600% |
| 50  | 0.3100% | 0.1800% |
| 60  | 0.8200% | 0.5500% |

**Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers**

60% of disability cases are assumed to be service-related.

| Age | Male    | Female  |
|-----|---------|---------|
| 20  | 0.0000% | 0.0000% |
| 30  | 0.0500% | 0.0500% |
| 40  | 0.1800% | 0.2400% |
| 50  | 0.4000% | 0.5300% |
| 60  | 0.6500% | 0.8100% |

**Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – All Other Employers**

60% of disability cases are assumed to be service-related.

| Age | Rate    |
|-----|---------|
| 20  | 0.0000% |
| 30  | 0.0300% |
| 40  | 0.1100% |
| 50  | 0.3800% |
| 60  | 0.6400% |

**State Police Officers**

60% of disability cases are assumed to be service-related.

| Age | Rate    |
|-----|---------|
| 20  | 0.0000% |
| 30  | 0.0280% |
| 40  | 0.2100% |
| 50  | 0.6750% |
| 60  | 0.0000% |

**FIGURE 4.8 – DISABILITY RATES – OPEB PLANS, cont.**

**Virginia Law Officers**

50% of disability cases are assumed to be service-related.

| Age | Rate    |
|-----|---------|
| 20  | 0.1500% |
| 30  | 0.6000% |
| 40  | 0.8000% |
| 50  | 1.2000% |
| 60  | 1.0000% |

**Judges**

5% of disability cases are assumed to be service-related.

| Age | Male    | Female  |
|-----|---------|---------|
| 20  | 0.0000% | 0.0000% |
| 30  | 0.0070% | 0.0070% |
| 40  | 0.1420% | 0.0900% |
| 50  | 0.4800% | 0.3970% |
| 60  | 0.0000% | 0.0000% |

**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 – Plan 1**

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION

| Age | Years of Service – Males |        |       | Years of Service – Females |        |       |
|-----|--------------------------|--------|-------|----------------------------|--------|-------|
|     | 0-2                      | 3-9    | 10+   | 0-2                        | 3-9    | 10+   |
| 25  | 22.10%                   | 13.00% | 0.00% | 25.60%                     | 15.70% | 0.00% |
| 35  | 16.70%                   | 9.30%  | 4.50% | 17.80%                     | 11.00% | 5.00% |
| 45  | 12.90%                   | 7.00%  | 2.30% | 13.90%                     | 7.40%  | 2.50% |
| 55  | 10.20%                   | 6.00%  | 0.00% | 12.50%                     | 0.00%  | 0.00% |
| 65  | 11.30%                   | 0.00%  | 0.00% | 14.00%                     | 0.00%  | 0.00% |

**State Employees – Plan 2**

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION

| Age | Years of Service – Males |        |       | Years of Service – Females |        |       |
|-----|--------------------------|--------|-------|----------------------------|--------|-------|
|     | 0-2                      | 3-9    | 10+   | 0-2                        | 3-9    | 10+   |
| 25  | 22.10%                   | 13.00% | 0.00% | 25.60%                     | 15.70% | 0.00% |
| 35  | 16.70%                   | 9.30%  | 4.50% | 17.80%                     | 11.00% | 5.00% |
| 45  | 12.90%                   | 7.00%  | 2.30% | 13.90%                     | 7.40%  | 2.50% |
| 55  | 10.20%                   | 6.00%  | 0.40% | 12.50%                     | 6.00%  | 0.40% |
| 65  | 11.30%                   | 0.00%  | 0.00% | 14.00%                     | 0.00%  | 0.00% |

**FIGURE 4.9 – TERMINATION RATES – OPEB PLANS, cont.**

**Teachers – Plan 1**

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION

| Age | Years of Service – Males |        |       | Years of Service – Females |        |        |
|-----|--------------------------|--------|-------|----------------------------|--------|--------|
|     | 0-2                      | 3-9    | 10+   | 0-2                        | 3-9    | 10+    |
| 25  | 15.40%                   | 11.80% | 0.80% | 14.60%                     | 12.00% | 15.00% |
| 35  | 14.10%                   | 7.30%  | 3.10% | 14.90%                     | 9.00%  | 3.90%  |
| 45  | 14.70%                   | 7.50%  | 1.90% | 11.70%                     | 6.40%  | 2.10%  |
| 55  | 14.30%                   | 0.00%  | 0.00% | 12.40%                     | 0.00%  | 0.00%  |
| 65  | 17.00%                   | 0.00%  | 0.00% | 13.00%                     | 0.00%  | 0.00%  |

**Teachers – Plan 2**

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION

| Age | Years of Service – Males |        |       | Years of Service – Females |        |        |
|-----|--------------------------|--------|-------|----------------------------|--------|--------|
|     | 0-2                      | 3-9    | 10+   | 0-2                        | 3-9    | 10+    |
| 25  | 15.40%                   | 11.80% | 0.80% | 14.60%                     | 12.00% | 15.00% |
| 35  | 14.10%                   | 7.30%  | 3.10% | 14.90%                     | 9.00%  | 3.90%  |
| 45  | 14.70%                   | 7.50%  | 1.90% | 11.70%                     | 6.40%  | 2.10%  |
| 55  | 14.30%                   | 7.00%  | 0.30% | 12.40%                     | 5.80%  | 0.30%  |
| 65  | 17.00%                   | 0.00%  | 0.00% | 13.00%                     | 0.00%  | 0.00%  |

**Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers – All Plans**

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION

| Age | Years of Service – Males |        |       | Years of Service – Females |        |       |
|-----|--------------------------|--------|-------|----------------------------|--------|-------|
|     | 0-2                      | 3-9    | 10+   | 0-2                        | 3-9    | 10+   |
| 25  | 21.80%                   | 13.70% | 0.00% | 23.30%                     | 16.70% | 0.00% |
| 35  | 17.20%                   | 9.70%  | 5.80% | 18.60%                     | 10.60% | 5.10% |
| 45  | 14.30%                   | 7.10%  | 2.90% | 14.80%                     | 7.70%  | 2.80% |
| 55  | 10.90%                   | 5.30%  | 0.70% | 11.90%                     | 6.30%  | 0.00% |
| 65  | 13.60%                   | 8.20%  | 0.00% | 12.60%                     | 8.20%  | 0.00% |

**Political Subdivision Employees Not Receiving Enhanced Hazardous Duty Benefits – All Other Employers – All Plans**

SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION

| Age | Years of Service – Males |        |       | Years of Service – Females |        |       |
|-----|--------------------------|--------|-------|----------------------------|--------|-------|
|     | 0-2                      | 3-9    | 10+   | 0-2                        | 3-9    | 10+   |
| 25  | 23.50%                   | 14.00% | 0.00% | 25.50%                     | 16.50% | 0.00% |
| 35  | 18.50%                   | 10.50% | 5.50% | 19.00%                     | 11.50% | 6.00% |
| 45  | 15.50%                   | 8.00%  | 3.00% | 15.00%                     | 8.00%  | 3.50% |
| 55  | 12.00%                   | 6.50%  | 1.00% | 12.50%                     | 6.50%  | 0.00% |
| 65  | 12.00%                   | 8.00%  | 0.00% | 13.00%                     | 9.00%  | 0.00% |

FIGURE 4.9 – TERMINATION RATES – OPEB PLANS, cont.

**Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – Ten Largest Employers – All Plans**

| SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION |                          |       |       |                            |       |       |  |
|--|--------------------------|-------|-------|----------------------------|-------|-------|--|
| Age  | Years of Service – Males |       |       | Years of Service – Females |       |       |  |
|  | 0-2                      | 3-9   | 10+   | 0-2                        | 3-9   | 10+   |  |
| 25   | 7.80%                    | 6.80% | 0.00% | 7.80%                      | 6.80% | 0.00% |  |
| 35   | 8.00%                    | 4.40% | 2.40% | 8.00%                      | 4.40% | 2.40% |  |
| 45   | 9.20%                    | 4.60% | 1.50% | 9.20%                      | 4.60% | 1.50% |  |
| 55   | 8.30%                    | 6.30% | 0.00% | 8.30%                      | 6.30% | 0.00% |  |
| 60   | 8.70%                    | 6.50% | 0.00% | 8.70%                      | 6.50% | 0.00% |  |

**Political Subdivision Employees Receiving Enhanced Hazardous Duty Benefits – All Other Employers – All Plans**

| SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION |                          |        |       |                            |        |       |  |
|--|--------------------------|--------|-------|----------------------------|--------|-------|--|
| Age  | Years of Service – Males |        |       | Years of Service – Females |        |       |  |
|  | 0-2                      | 3-9    | 10+   | 0-2                        | 3-9    | 10+   |  |
| 25   | 13.00%                   | 8.50%  | 0.00% | 13.00%                     | 10.00% | 0.00% |  |
| 35   | 11.00%                   | 7.00%  | 3.80% | 14.00%                     | 8.00%  | 4.50% |  |
| 45   | 13.00%                   | 6.00%  | 2.40% | 12.00%                     | 6.00%  | 3.50% |  |
| 55   | 15.00%                   | 8.00%  | 0.50% | 12.00%                     | 5.00%  | 0.50% |  |
| 60   | 11.00%                   | 10.00% | 0.50% | 12.00%                     | 5.00%  | 0.50% |  |

**State Police Officers – All Plans**

| SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION |                          |       |       |                            |       |       |  |
|--|--------------------------|-------|-------|----------------------------|-------|-------|--|
| Age  | Years of Service – Males |       |       | Years of Service – Females |       |       |  |
|  | 0-2                      | 3-9   | 10+   | 0-2                        | 3-9   | 10+   |  |
| 25   | 7.50%                    | 5.50% | 3.00% | 10.80%                     | 5.40% | 4.40% |  |
| 35   | 7.50%                    | 4.80% | 2.40% | 12.10%                     | 6.00% | 6.10% |  |
| 45   | 10.00%                   | 4.50% | 1.40% | 10.80%                     | 6.40% | 5.90% |  |
| 55   | 10.00%                   | 6.70% | 1.20% | 7.40%                      | 6.70% | 4.10% |  |
| 65   | 10.00%                   | 7.50% | 1.20% | 1.50%                      | 6.90% | 0.60% |  |

**Teachers – Plan 1**

| SEPARATIONS FROM ACTIVE SERVICE DUE TO TERMINATION |                          |        |       |                            |        |       |  |
|--|--------------------------|--------|-------|----------------------------|--------|-------|--|
| Age  | Years of Service – Males |        |       | Years of Service – Females |        |       |  |
|  | 0-2                      | 3-9    | 10+   | 0-2                        | 3-9    | 10+   |  |
| 25   | 20.00%                   | 15.00% | 5.00% | 20.00%                     | 15.00% | 7.50% |  |
| 35   | 20.00%                   | 12.50% | 5.00% | 20.00%                     | 12.50% | 6.00% |  |
| 45   | 15.00%                   | 10.50% | 4.00% | 17.50%                     | 8.00%  | 4.00% |  |
| 55   | 12.00%                   | 6.50%  | 4.00% | 10.00%                     | 12.00% | 4.00% |  |
| 65   | 15.00%                   | 7.00%  | 4.00% | 10.00%                     | 10.00% | 4.00% |  |

**Judges**

There are no assumed rates of withdrawal prior to service retirement for causes other than death, disability 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 since neither the benefit or 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%                         |
| 11               | 0.15%  | 3.65%                         |
| 15               | 0.15%  | 3.65%                         |
| 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       | 0.00%  | 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               | 0.15%  | 3.65%                         |
| 15               | 0.15%  | 3.65%                         |
| 19               | 0.15%  | 3.65%                         |
| 20 or more       | 0.00%  | 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               | 0.15%  | 3.65%                         |
| 15               | 0.15%  | 3.65%                         |
| 19               | 0.15%  | 3.65%                         |
| 20 or more       | 0.00%  | 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               | 0.50%  | 4.00%                         |
| 15               | 0.50%  | 4.00%                         |
| 19               | 0.50%  | 4.00%                         |
| 20 or more       | 0.00%  | 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               | 0.50%  | 4.00%                         |
| 15               | 0.50%  | 4.00%                         |
| 19               | 0.50%  | 4.00%                         |
| 20 or more       | 0.00%  | 3.50%                         |

**FIGURE 4.10 – SALARY INCREASE RATES – OPEB 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%                         |
| 11               | 0.50%  | 4.00%                         |
| 15               | 0.50%  | 4.00%                         |
| 19               | 0.50%  | 4.00%                         |
| 20 or more       | 0.00%  | 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%                         |
| 11               | 0.50%  | 4.00%                         |
| 15               | 0.50%  | 4.00%                         |
| 19               | 0.50%  | 4.00%                         |
| 20 or more       | 0.00%  | 3.50%                         |

**Judges**

Salary increase rates are 4.50%.

### FIGURE 4.11 – EMPLOYMENT TERMINATION RATES – LONG-TERM CARE

The termination rates used for the long-term care plan valuation differ from those used for other valuations, particularly at the older ages. For example, whereas other valuations assume a 100% retirement rate by age 70 for all categories of employees, this is not the case for long-term care, which is typically accessed at older ages. Since termination rates are a critical and sensitive set of assumptions for the valuation of the long-term care benefit, a more detailed age by employment duration grid of termination rates appropriate for this purpose was developed.

#### Current Assumption: Selected Employment Turnover Assumptions by Hire Age and Accrued Service

|          |       | Employment Duration (years) – Females |       |       |       |  |
|----------|-------|---------------------------------------|-------|-------|-------|--|
| Hire Age | 0     | 10                                    | 20    | 30    | 40    |  |
| 20       | 0.413 | 0.085                                 | 0.021 | 0.041 | 0.087 |  |
| 30       | 0.275 | 0.056                                 | 0.020 | 0.086 | 0.243 |  |
| 40       | 0.260 | 0.040                                 | 0.041 | 0.225 | 0.326 |  |
| 50       | 0.228 | 0.057                                 | 0.146 | 0.345 | 0.455 |  |
| 60       | 0.239 | 0.163                                 | 0.341 | 0.544 | 0.722 |  |
| 70       | 0.444 | 0.258                                 | 0.632 | 1.000 | 1.000 |  |

|          |       | Employment Duration (years) – Males |       |       |       |  |
|----------|-------|-------------------------------------|-------|-------|-------|--|
| Hire Age | 0     | 10                                  | 20    | 30    | 40    |  |
| 20       | 0.371 | 0.063                               | 0.028 | 0.088 | 0.185 |  |
| 30       | 0.273 | 0.051                               | 0.028 | 0.090 | 0.250 |  |
| 40       | 0.235 | 0.038                               | 0.047 | 0.204 | 0.350 |  |
| 50       | 0.211 | 0.058                               | 0.185 | 0.383 | 0.680 |  |
| 60       | 0.215 | 0.125                               | 0.243 | 0.534 | 0.947 |  |
| 70       | 0.288 | 0.237                               | 0.486 | 1.000 | 1.000 |  |

### FIGURE 4.12 – 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 2002 or age at hire, if later).

#### Current Selected Policy Porting Rate Assumptions by Policy Issue Age and Policy Duration

|           |        | Policy Duration (years) |        |        |        |  |
|-----------|--------|-------------------------|--------|--------|--------|--|
| Issue Age | 0      | 10                      | 20     | 30     | 40     |  |
| 30        | 0.1000 | 0.1234                  | 0.2185 | 0.4537 | 0.7574 |  |
| 40        | 0.1000 | 0.1608                  | 0.3423 | 0.5526 | 0.9230 |  |
| 50        | 0.1027 | 0.2244                  | 0.4116 | 0.6790 | 1.0000 |  |
| 60        | 0.1162 | 0.2667                  | 0.4986 | 0.8407 | 1.0000 |  |
| 70        | 0.1485 | 0.3308                  | 0.6099 | 0.9985 | 1.0000 |  |
| 80        | 0.1875 | 0.4043                  | 0.7524 | 1.0000 | 1.0000 |  |
| 90        | 0.2012 | 0.4601                  | 0.9347 | 1.0000 | 1.0000 |  |
| 100       | 0.2171 | 0.5261                  | 1.0000 | 1.0000 | 1.0000 |  |
| 110       | 0.2354 | 0.6042                  | 1.0000 | 1.0000 | 1.0000 |  |

## ADDITIONAL INFORMATION ABOUT ACTUARIAL ASSUMPTIONS AND METHODS – OTHER POST-EMPLOYMENT BENEFIT (OPEB) PLANS

### MORTALITY RATES

**Pre-Retirement:** RP-2000 Employee Mortality Table Projected With Scale AA to 2020:

- State – Males set forward 2 years and females set back 3 years
- Teachers – Males set back 3 years and females set back 5 years
- State Police – Males set forward 5 years and females set back 3 years
- VaLORS – Males set forward 5 years and females set back 3 years
- Judicial – Males set forward 2 years and females set back 3 years
- Political subdivisions, Non-LEOS – Males set forward 4 years and females set back 2 years
- Political subdivisions, LEOS – Males set back 2 years and females set back 2 years

**Post-Retirement:** RP-2000 Combined Mortality Table Projected With Scale AA to 2020:

- State – Females set back 1 year
- Teachers – Males set back 2 years and females set back 3 years
- State Police – Females set back 1 year
- VaLORS – Females set back 1 year
- Judicial – Females set back 1 year
- Political subdivisions, Non-LEOS – Males set forward 1 year
- Political subdivisions, LEOS – Males set forward 1 year

**Post-Disablement:** RP-2000 Disability Life Mortality Table:

- State – Males set back 3 years and no provision for future mortality improvement
- Teachers – Males set back 1 year and no provision for future mortality Improvement

- State Police – Males set back 3 years and no provision for future mortality improvement
- VaLORS – Males set back 3 years and no provision for future mortality improvement
- Judicial – Males set back 3 years and no provision for future mortality improvement
- Political subdivisions, Non-LEOS – Males set back 3 years and no provision for future mortality improvement
- Political subdivisions, LEOS – Males set back 3 years and no provision for future mortality improvement

**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, and VSDP, 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 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 unfunded actuarial accrued liability 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 unfunded actuarial accrued liability as of June 30, 2013, is amortized over a closed 30-year period from June 30, 2013. The amortization period of the unfunded will decrease by one each year until reaching 0 years.

## 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 the Minnesota Life Insurance Company 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, the Minnesota Life Insurance Company 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; and
- 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, safety belt 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 of retirement and by 25% each January 1 thereafter, until it reaches 25% of its original value.

**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 year from the date 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 table:

#### Health Insurance Credit Dollar Amounts at Retirement

| ELIGIBLE EMPLOYEES   | AMOUNT PER YEAR OF SERVICE | MAXIMUM CREDIT PER MONTH |
|--|----------------------------|--------------------------|
| State employees  | \$ 4.00                    | No Cap                   |
| Teachers and other administrative school employees   | \$ 4.00                    | No Cap                   |
| General registrars and their employees, constitutional officers and their employees and local social service employees   | \$ 1.50                    | \$45.00                  |
| 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                    | \$75.00                  |
| Other political subdivision employees as elected by the employer   | \$ 1.50                    | \$45.00                  |

## 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 healthcare 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 pre-funded, 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.

## 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 health insurance benefits, which are administered by the Virginia Department of Accounts (DOA). 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.

**2009 VALUATION:** No actuarially material changes are made to the plan provisions. There are two changes of note:

1. On April 16, 2009, the Board adopts the recommended economic and demographic assumptions proposed by the actuary as a result of the June 2008 actuarial experience study.
2. For the June 30, 2009, valuation, the Board suspends application of the 80% to 120% market value-of-assets corridor on the actuarial value of assets for the Group Life Insurance Program and the Retiree Health Insurance Credit Program.

**2010 VALUATION:** No actuarially material changes are made to the plan provisions. There are two changes of note:

1. For the June 30, 2010, valuation, the application of the 80% to 120% market value-of-assets corridor on the actuarial value of assets is reinstated.
2. The Board reduces the investment rate-of-return assumption for the Group Life Insurance Program, the Retiree Health Insurance Credit Program and the Virginia Sickness and Disability Program (VSDP) from 7.50% to 7.00%.

**2011 VALUATION:** No actuarially material changes are made to the plan provisions.

**2012 VALUATION:** The changes resulting from recent 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 active non-vested members of Plan 1 have to satisfy the Rule of 90 (sum of age and service totaling 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 LTD are assumed to receive cost-of-living adjustments to their LTD benefits in an amount of 2.25% per year, compounded annually.
3. Benefit offset adjustments for VSDP were adjusted to reflect actual VRS experience.

**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.



## 5 Statistical Section

While members, employers and retirees navigate the new world of retirement planning and pension administration in different ways, all have access to information and education through VRS. In recent years, VRS has modernized its business processes for employers and developed online services for members and retirees. In addition, VRS offers informational resources that range from handbooks, manuals and comparison guides to webinars, regional forums and one-on-one counseling.

### 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 of Assets Basis)
  - All Pension Plans
- Schedule of Funding (Market Value of Assets 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
- Commonwealth of Virginia 457 Deferred Compensation and Cash Match Plans



Photo: Wallops Flight Facility, Virginia Tourism Corporation

## AIMING FOR THE STARS

As the Space Age dawned in the mid-20th century, Virginia was once again at the forefront as the first home of the Project Mercury astronauts. Today, the Commonwealth promotes commercial space activity and aerospace research at Wallops Island on the Eastern Shore. Cyberspace, the newest frontier, is explored today by state agencies as they develop online methods of serving Virginians more efficiently. Virginia students at all levels pursue STEM (science, technology, engineering and mathematics) courses in preparation for a fast-paced, technologically competitive future.



NAVIGATING  
THE NEW WORLD  
OF RETIREMENT  
PLANNING

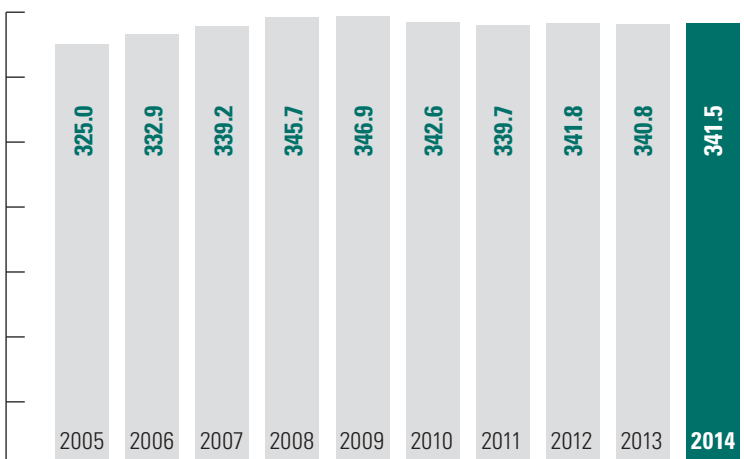
The Statistical Section presents detailed historical information regarding the pension and other employee benefit plans administered by the System. This information includes a 10-year analysis of changes in plan net position, plan enrollment, contributions, plan additions and deductions, benefits and refunds. Included in this analysis is 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 the employers participating in VRS as of the end of the fiscal year.

## 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)

|  | 2005             | 2006             | 2007             | 2008             | 2009             | 2010             | 2011             | 2012             | 2013             | 2014             |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Fiduciary Net Position Restricted – Beginning of Year</b> | <b>\$ 39,039</b> | <b>\$ 43,060</b> | <b>\$ 47,627</b> | <b>\$ 56,890</b> | <b>\$ 53,600</b> | <b>\$ 41,348</b> | <b>\$ 46,287</b> | <b>\$ 53,151</b> | <b>\$ 52,091</b> | <b>\$ 56,979</b> |
| <b>Funding:</b>  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Member and Employer Contributions and Other Additions        | 1,468            | 1,567            | 1,944            | 2,148            | 2,097            | 1,862            | 1,549            | 1,821            | 2,600            | 2,697            |
| Benefits and Administrative Expenses and Transfers           | (2,049)          | (2,214)          | (2,434)          | (2,665)          | (2,857)          | (3,157)          | (3,397)          | (3,518)          | (3,791)          | (4,029)          |
| Net Funding  | (581)            | (647)            | (490)            | (517)            | (760)            | (1,295)          | (1,848)          | (1,697)          | (1,191)          | (1,332)          |
| <b>Investment Income:</b>                                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Interest, Dividends and Other Investment Income              | 667              | 823              | 1,157            | 983              | 762              | 775              | 1,031            | 1,052            | 911              | 984              |
| Net Appreciation (Depreciation) in Fair Value                | 3,935            | 4,391            | 8,596            | (3,756)          | (12,254)         | 5,459            | 7,681            | (415)            | 5,168            | 7,891            |
| Net Investment Income  | 4,602            | 5,214            | 9,753            | (2,773)          | (11,492)         | 6,234            | 8,712            | 637              | 6,079            | 8,875            |
| <b>Net Increase (Decrease)</b>                               | <b>4,021</b>     | <b>4,567</b>     | <b>9,263</b>     | <b>(3,290)</b>   | <b>(12,252)</b>  | <b>4,939</b>     | <b>6,864</b>     | <b>(1,060)</b>   | <b>4,888</b>     | <b>7,553</b>     |
| <b>Fiduciary Net Position Restricted – End of Year</b>       | <b>\$ 43,060</b> | <b>\$ 47,627</b> | <b>\$ 56,890</b> | <b>\$ 53,600</b> | <b>\$ 41,348</b> | <b>\$ 46,287</b> | <b>\$ 53,151</b> | <b>\$ 52,091</b> | <b>\$ 56,979</b> | <b>\$ 64,522</b> |

**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 BY PENSION TRUST FUND**  
FOR THE YEARS ENDED JUNE 30

**VIRGINIA RETIREMENT SYSTEM PENSION TRUST FUND**

(EXPRESSED IN MILLIONS)

|  | 2005             | 2006             | 2007             | 2008             | 2009             | 2010             | 2011             | 2012             | 2013             | 2014             |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Fiduciary Net Position Restricted – Beginning of Year</b> | <b>\$ 37,784</b> | <b>\$ 41,640</b> | <b>\$ 46,021</b> | <b>\$ 54,948</b> | <b>\$ 51,743</b> | <b>\$ 39,890</b> | <b>\$ 44,646</b> | <b>\$ 51,280</b> | <b>\$ 50,267</b> | <b>\$ 54,973</b> |
| <b>Funding:</b>  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Member and Employer Contributions and Other Additions        | 1,366            | 1,459            | 1,834            | 2,022            | 1,979            | 1,765            | 1,482            | 1,740            | 2,471            | 2,533            |
| Benefits and Administrative Expenses and Transfers           | (1,963)          | (2,121)          | (2,333)          | (2,550)          | (2,735)          | (3,024)          | (3,254)          | (3,368)          | (3,629)          | (3,855)          |
| Net Funding  | (597)            | (662)            | (499)            | (528)            | (756)            | (1,259)          | (1,772)          | (1,628)          | (1,158)          | (1,322)          |
| <b>Investment Income:</b>                                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Interest, Dividends and Other Investment Income              | 645              | 796              | 1,118            | 948              | 736              | 748              | 995              | 1,016            | 878              | 948              |
| Net Appreciation (Depreciation) in Fair Value                | 3,808            | 4,247            | 8,308            | (3,625)          | (11,833)         | 5,267            | 7,411            | (401)            | 4,986            | 7,610            |
| Net Investment Income  | 4,453            | 5,043            | 9,426            | (2,677)          | (11,097)         | 6,015            | 8,406            | 615              | 5,864            | 8,558            |
| <b>Net Increase (Decrease)</b>                               | <b>3,856</b>     | <b>4,381</b>     | <b>8,927</b>     | <b>(3,205)</b>   | <b>(11,853)</b>  | <b>4,756</b>     | <b>6,634</b>     | <b>(1,013)</b>   | <b>4,706</b>     | <b>7,245</b>     |
| <b>Fiduciary Net Position Restricted – End of Year</b>       | <b>\$ 41,640</b> | <b>\$ 46,021</b> | <b>\$ 54,948</b> | <b>\$ 51,743</b> | <b>\$ 39,890</b> | <b>\$ 44,646</b> | <b>\$ 51,280</b> | <b>\$ 50,267</b> | <b>\$ 54,973</b> | <b>\$ 62,209</b> |

**STATE POLICE OFFICERS' RETIREMENT SYSTEM PENSION TRUST FUND**

(EXPRESSED IN MILLIONS)

|  | 2005          | 2006          | 2007          | 2008          | 2009          | 2010          | 2011          | 2012          | 2013          | 2014          |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>Fiduciary Net Position Restricted – Beginning of Year</b> | <b>\$ 486</b> | <b>\$ 530</b> | <b>\$ 581</b> | <b>\$ 684</b> | <b>\$ 636</b> | <b>\$ 484</b> | <b>\$ 534</b> | <b>\$ 599</b> | <b>\$ 575</b> | <b>\$ 625</b> |
| <b>Funding:</b>  |               |               |               |               |               |               |               |               |               |               |
| Member and Employer Contributions and Other Additions        | 19            | 20            | 21            | 26            | 25            | 21            | 13            | 16            | 31            | 48            |
| Benefits and Administrative Expenses and Transfers           | (32)          | (33)          | (35)          | (41)          | (41)          | (43)          | (47)          | (47)          | (49)          | (51)          |
| Net Funding  | (13)          | (13)          | (14)          | (15)          | (16)          | (22)          | (34)          | (31)          | (18)          | (3)           |
| <b>Investment Income:</b>                                    |               |               |               |               |               |               |               |               |               |               |
| Interest, Dividends and Other Investment Income              | 9             | 10            | 14            | 12            | 9             | 9             | 12            | 12            | 11            | 11            |
| Net Appreciation (Depreciation) in Fair Value                | 48            | 54            | 103           | (45)          | (145)         | 63            | 87            | (5)           | 57            | 88            |
| Net Investment Income  | 57            | 64            | 117           | (33)          | (136)         | 72            | 99            | 7             | 68            | 99            |
| <b>Net Increase (Decrease)</b>                               | <b>44</b>     | <b>51</b>     | <b>103</b>    | <b>(48)</b>   | <b>(152)</b>  | <b>50</b>     | <b>65</b>     | <b>(24)</b>   | <b>50</b>     | <b>96</b>     |
| <b>Fiduciary Net Position Restricted – End of Year</b>       | <b>\$ 530</b> | <b>\$ 581</b> | <b>\$ 684</b> | <b>\$ 636</b> | <b>\$ 484</b> | <b>\$ 534</b> | <b>\$ 599</b> | <b>\$ 575</b> | <b>\$ 625</b> | <b>\$ 721</b> |

VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM PENSION TRUST FUND

(EXPRESSED IN MILLIONS)

|  | 2005          | 2006          | 2007          | 2008          | 2009          | 2010          | 2011          | 2012          | 2013          | 2014            |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|
| <b>Fiduciary Net Position Restricted – Beginning of Year</b> | \$ 498        | \$ 593        | \$ 700        | \$ 868        | \$ 853        | \$ 691        | \$ 792        | \$ 911        | \$ 895        | \$ 992          |
| <b>Funding:</b>  |               |               |               |               |               |               |               |               |               |                 |
| Member and Employer Contributions and Other Additions        | 66            | 69            | 64            | 74            | 69            | 56            | 35            | 42            | 68            | 85              |
| Benefits and Administrative Expenses and Transfers           | (30)          | (34)          | (40)          | (45)          | (50)          | (58)          | (64)          | (69)          | (76)          | (84)            |
| Net Funding  | 36            | 35            | 24            | 29            | 19            | (2)           | (29)          | (27)          | (8)           | 1               |
| <b>Investment Income:</b>                                    |               |               |               |               |               |               |               |               |               |                 |
| Interest, Dividends and Other Investment Income              | 8             | 11            | 17            | 16            | 12            | 12            | 18            | 18            | 16            | 18              |
| Net Appreciation (Depreciation) in Fair Value                | 51            | 61            | 127           | (60)          | (193)         | 91            | 130           | (7)           | 89            | 139             |
| Net Investment Income  | 59            | 72            | 144           | (44)          | (181)         | 103           | 148           | 11            | 105           | 157             |
| <b>Net Increase (Decrease)</b>                               | <b>95</b>     | <b>107</b>    | <b>168</b>    | <b>(15)</b>   | <b>(162)</b>  | <b>101</b>    | <b>119</b>    | <b>(16)</b>   | <b>97</b>     | <b>159</b>      |
| <b>Fiduciary Net Position Restricted – End of Year</b>       | <b>\$ 593</b> | <b>\$ 700</b> | <b>\$ 868</b> | <b>\$ 853</b> | <b>\$ 691</b> | <b>\$ 792</b> | <b>\$ 911</b> | <b>\$ 895</b> | <b>\$ 992</b> | <b>\$ 1,150</b> |

JUDICIAL RETIREMENT SYSTEM PENSION TRUST FUND

(EXPRESSED IN MILLIONS)

|  | 2005          | 2006          | 2007          | 2008          | 2009          | 2010          | 2011          | 2012          | 2013          | 2014          |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>Fiduciary Net Position Restricted – Beginning of Year</b> | \$ 271        | \$ 296        | \$ 326        | \$ 390        | \$ 367        | \$ 284        | \$ 315        | \$ 361        | \$ 354        | \$ 389        |
| <b>Funding:</b>  |               |               |               |               |               |               |               |               |               |               |
| Member and Employer Contributions and Other Additions        | 18            | 19            | 23            | 25            | 24            | 20            | 20            | 22            | 30            | 31            |
| Benefits and Administrative Expenses and Transfers           | (24)          | (24)          | (25)          | (29)          | (29)          | (31)          | (32)          | (34)          | (37)          | (39)          |
| Net Funding  | (6)           | (5)           | (2)           | (4)           | (5)           | (11)          | (12)          | (12)          | (7)           | (8)           |
| <b>Investment Income:</b>                                    |               |               |               |               |               |               |               |               |               |               |
| Interest, Dividends and Other Investment Income              | 4             | 5             | 8             | 7             | 5             | 5             | 7             | 7             | 6             | 7             |
| Net Appreciation (Depreciation) in Fair Value                | 27            | 30            | 58            | (26)          | (83)          | 37            | 51            | (2)           | 36            | 54            |
| Net Investment Income  | 31            | 35            | 66            | (19)          | (78)          | 42            | 58            | 5             | 42            | 61            |
| <b>Net Increase (Decrease)</b>                               | <b>25</b>     | <b>30</b>     | <b>64</b>     | <b>(23)</b>   | <b>(83)</b>   | <b>31</b>     | <b>46</b>     | <b>(7)</b>    | <b>35</b>     | <b>53</b>     |
| <b>Fiduciary Net Position Restricted – End of Year</b>       | <b>\$ 296</b> | <b>\$ 326</b> | <b>\$ 390</b> | <b>\$ 367</b> | <b>\$ 284</b> | <b>\$ 315</b> | <b>\$ 361</b> | <b>\$ 354</b> | <b>\$ 389</b> | <b>\$ 442</b> |

## SCHEDULE OF RETIREMENT CONTRIBUTIONS BY SYSTEM AND PLAN

FISCAL YEARS 2005 – 2014

(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  | Sub-Total    |  |  |                            |              |
| 2014               | \$ 541,816                 | \$ 1,225,175 | \$ 765,479 | \$ 2,532,470 | \$ 48,329                                | \$ 85,391                                | \$ 30,778                  | \$ 2,696,968 |
| 2013               | 519,319                    | 1,204,021    | 746,040    | 2,469,380    | 31,553                                   | 67,654                                   | 30,000                     | 2,598,587    |
| 2012**             | 307,843                    | 814,681      | 613,572    | 1,736,096    | 16,611                                   | 42,202                                   | 21,875                     | 1,816,784    |
| 2011**             | 252,110                    | 622,904      | 605,908    | 1,480,922    | 12,343                                   | 34,423                                   | 20,338                     | 1,548,026    |
| 2010*              | 359,827                    | 820,193      | 583,864    | 1,763,884    | 20,747                                   | 56,347                                   | 20,206                     | 1,861,184    |
| 2009               | 416,921                    | 986,116      | 575,951    | 1,978,988    | 25,280                                   | 69,071                                   | 24,064                     | 2,097,403    |
| 2008               | 409,685                    | 1,055,498    | 557,230    | 2,022,413    | 26,218                                   | 74,039                                   | 25,498                     | 2,148,168    |
| 2007               | 377,117                    | 945,243      | 511,687    | 1,834,047    | 21,466                                   | 64,820                                   | 23,437                     | 1,943,770    |
| 2006               | 303,183                    | 731,929      | 423,724    | 1,458,836    | 20,188                                   | 68,688                                   | 18,967                     | 1,566,679    |
| 2005               | 295,736                    | 671,152      | 398,004    | 1,364,892    | 19,363                                   | 66,079                                   | 17,927                     | 1,468,261    |

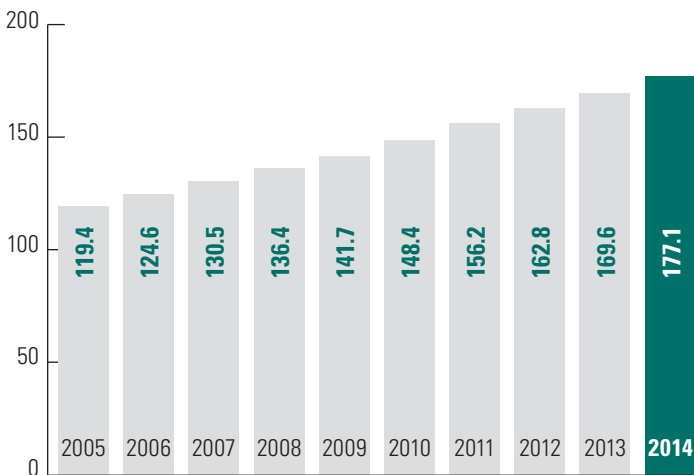
\* The General Assembly suspended employer contributions for all state employees, SPORS, VaLORS and JRS for April, May and the first half of June 2010 and for teachers for the entire fourth quarter of fiscal year 2010.

\*\* The General Assembly funded contribution rates for all state employee groups and teachers significantly below those certified by the Board of Trustees for fiscal year 2011. For fiscal year 2012, the funding for all state employee groups remained at low levels for the first three quarters of the year.

**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, 2005 – 2014

(EXPRESSED IN MILLIONS)



## SCHEDULE OF PENSION TRUST FUND ADDITIONS BY SOURCE

FISCAL YEARS 2005 – 2014

(EXPRESSED IN THOUSANDS)

| Year Ended<br>June 30                             | Member<br>Contributions | Employer Contributions |                   |              | Investment<br>Income (Loss) | Other         | Total |
|---|-------------------------|------------------------|-------------------|--------------|-----------------------------|---------------|-------|
|   |                         | For<br>Members         | Employer<br>Share |              |                             |               |       |
| VIRGINIA RETIREMENT SYSTEM (VRS)                  |                         |                        |                   |              |                             |               |       |
| 2014**  | \$ 702,089              | \$ 93,468              | \$ 1,736,913      | \$ 8,558,759 | \$ 460                      | \$ 11,091,689 |       |
| 2013**  | 572,543                 | 207,695                | 1,689,142         | 5,864,628    | 1,547                       | 8,335,555     |       |
| 2012*   | 208,243                 | 557,522                | 970,331           | 614,613      | 3,782                       | 2,354,491     |       |
| 2011  | 26,529                  | 712,560                | 741,833           | 8,405,834    | 1,290                       | 9,888,046     |       |
| 2010  | 26,225                  | 736,413                | 1,001,246         | 6,014,601    | 1,083                       | 7,779,568     |       |
| 2009  | 20,254                  | 743,762                | 1,214,972         | (11,106,018) | 8,668                       | (9,118,362)   |       |
| 2008  | 24,843                  | 716,797                | 1,280,773         | (2,677,358)  | 290                         | (654,655)     |       |
| 2007  | 29,489                  | 680,023                | 1,124,535         | 9,426,035    | 338                         | 11,260,420    |       |
| 2006  | 38,825                  | 638,242                | 781,769           | 5,042,575    | 185                         | 6,501,596     |       |
| 2005  | 63,503                  | 599,769                | 701,620           | 4,453,335    | 743                         | 5,818,970     |       |
| STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)  |                         |                        |                   |              |                             |               |       |
| 2014  | \$ 5,646                | \$ -                   | \$ 42,683         | \$ 98,682    | \$ -                        | \$ 147,011    |       |
| 2013  | 5,361                   | -                      | 26,192            | 67,067       | -                           | 98,620        |       |
| 2012*   | 5,167                   | 1                      | 11,443            | 6,853        | -                           | 23,464        |       |
| 2011  | 121                     | 4,742                  | 7,480             | 99,209       | -                           | 111,552       |       |
| 2010  | 47                      | 4,945                  | 15,755            | 72,609       | -                           | 93,356        |       |
| 2009  | 57                      | 5,034                  | 20,189            | (135,929)    | 87                          | (110,562)     |       |
| 2008  | 149                     | 5,061                  | 21,008            | (33,367)     | 20                          | (7,129)       |       |
| 2007  | 213                     | 4,895                  | 16,358            | 117,501      | -                           | 138,967       |       |
| 2006  | 304                     | 4,627                  | 15,257            | 63,475       | -                           | 83,663        |       |
| 2005  | 494                     | 4,392                  | 14,477            | 56,481       | -                           | 75,844        |       |
| VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS) |                         |                        |                   |              |                             |               |       |
| 2014  | \$ 17,908               | \$ -                   | \$ 67,483         | \$ 156,786   | \$ -                        | \$ 242,177    |       |
| 2013  | 17,256                  | -                      | 50,398            | 105,084      | 27                          | 172,765       |       |
| 2012*   | 17,510                  | 48                     | 24,644            | 11,195       | 110                         | 53,507        |       |
| 2011  | 941                     | 16,102                 | 17,380            | 147,982      | 130                         | 182,535       |       |
| 2010  | 196                     | 17,208                 | 38,943            | 103,488      | 104                         | 159,939       |       |
| 2009  | 212                     | 17,871                 | 50,988            | (181,112)    | 519                         | (111,522)     |       |
| 2008  | 291                     | 17,723                 | 56,025            | (44,270)     | 274                         | 30,043        |       |
| 2007  | 371                     | 16,127                 | 48,322            | 143,664      | 171                         | 208,655       |       |
| 2006  | 534                     | 15,492                 | 52,662            | 71,905       | 255                         | 140,848       |       |
| 2005  | 700                     | 14,869                 | 50,510            | 59,525       | 230                         | 125,834       |       |
| JUDICIAL RETIREMENT SYSTEM (JRS)                  |                         |                        |                   |              |                             |               |       |
| 2014  | \$ 327                  | \$ 2,724               | \$ 27,727         | \$ 60,833    | \$ -                        | \$ 91,611     |       |
| 2013  | 179                     | 2,795                  | 27,026            | 41,557       | -                           | 71,557        |       |
| 2012  | 47                      | 2,921                  | 18,907            | 4,576        | -                           | 26,451        |       |
| 2011  | 32                      | 3,003                  | 17,303            | 58,587       | -                           | 78,925        |       |
| 2010  | 30                      | 3,108                  | 17,068            | 42,430       | -                           | 62,636        |       |
| 2009  | 20                      | 3,043                  | 21,001            | (77,947)     | 50                          | (53,833)      |       |
| 2008  | 21                      | 2,945                  | 22,532            | (19,305)     | -                           | 6,193         |       |
| 2007  | 92                      | 2,815                  | 20,530            | 65,964       | -                           | 89,401        |       |
| 2006  | 108                     | 2,653                  | 16,206            | 35,368       | -                           | 54,335        |       |
| 2005  | 159                     | 2,499                  | 15,269            | 31,379       | -                           | 49,306        |       |

\* Member contributions and employer contributions for members reflect the shift to member-paid retirement contributions for state employees, except judges, effective July 1, 2011.

\*\* Member contributions and employer contributions for members reflect the shift to member-paid retirement contributions for teachers and political subdivision employees beginning July 1, 2012.

## SCHEDULE OF PENSION TRUST FUND DEDUCTIONS BY TYPE

FISCAL YEARS 2005 – 2014

(EXPRESSED IN THOUSANDS)

| Year Ended<br>June 30                             | Retirement<br>Benefits | Refunds   | Administrative<br>Expenses | Other    | Total        |
|---|------------------------|-----------|----------------------------|----------|--------------|
| VIRGINIA RETIREMENT SYSTEM (VRS)                  |                        |           |                            |          |              |
| 2014  | \$ 3,711,208           | \$ 98,049 | \$ 38,785                  | \$ 6,745 | \$ 3,855,787 |
| 2013  | 3,516,219              | 77,588    | 31,154                     | 4,579    | 3,629,540    |
| 2012  | 3,257,359              | 84,577    | 25,475                     | 694      | 3,368,105    |
| 2011  | 3,125,772              | 96,209    | 25,082                     | 6,464    | 3,253,527    |
| 2010  | 2,907,204              | 88,671    | 23,720                     | 3,911    | 3,023,506    |
| 2009  | 2,617,313              | 86,688    | 30,692                     | 668      | 2,735,361    |
| 2008  | 2,427,543              | 97,574    | 24,677                     | 298      | 2,550,092    |
| 2007  | 2,219,350              | 89,716    | 23,686                     | 178      | 2,332,930    |
| 2006  | 2,015,557              | 85,804    | 19,724                     | 258      | 2,121,343    |
| 2005  | 1,865,776              | 78,709    | 18,182                     | 230      | 1,962,897    |
| STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)  |                        |           |                            |          |              |
| 2014  | \$ 50,467              | \$ 685    | \$ 353                     | \$ 78    | \$ 51,583    |
| 2013  | 47,884                 | 364       | 227                        | 51       | 48,526       |
| 2012  | 46,113                 | 319       | 243                        | 7        | 46,682       |
| 2011  | 46,259                 | 279       | 222                        | 68       | 46,828       |
| 2010  | 42,714                 | 496       | 257                        | 46       | 43,513       |
| 2009  | 40,919                 | 469       | 340                        | -        | 41,728       |
| 2008  | 39,382                 | 730       | 299                        | -        | 40,411       |
| 2007  | 33,867                 | 1,221     | 301                        | -        | 35,389       |
| 2006  | 32,309                 | 596       | 231                        | -        | 33,136       |
| 2005  | 30,487                 | 1,053     | 203                        | -        | 31,743       |
| VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS) |                        |           |                            |          |              |
| 2014  | \$ 78,412              | \$ 4,665  | \$ 557                     | \$ 124   | \$ 83,758    |
| 2013  | 71,638                 | 3,586     | 344                        | 82       | 75,650       |
| 2012  | 64,849                 | 4,027     | 366                        | 15       | 69,257       |
| 2011  | 59,749                 | 4,051     | 395                        | 103      | 64,298       |
| 2010  | 53,758                 | 3,919     | 373                        | 66       | 58,116       |
| 2009  | 45,890                 | 4,151     | 471                        | -        | 50,512       |
| 2008  | 40,805                 | 4,586     | 378                        | -        | 45,769       |
| 2007  | 35,019                 | 4,828     | 365                        | -        | 40,212       |
| 2006  | 29,202                 | 4,830     | 263                        | -        | 34,295       |
| 2005  | 25,100                 | 4,927     | 208                        | -        | 30,235       |
| JUDICIAL RETIREMENT SYSTEM (JRS)                  |                        |           |                            |          |              |
| 2014  | \$ 37,984              | \$ -      | \$ 221                     | \$ 47    | \$ 33,252    |
| 2013  | 36,800                 | -         | 141                        | 31       | 36,972       |
| 2012  | 33,454                 | -         | 143                        | 5        | 33,602       |
| 2011  | 32,115                 | 5         | 158                        | 40       | 32,318       |
| 2010  | 31,598                 | -         | 151                        | 27       | 31,776       |
| 2009  | 29,101                 | 40        | 198                        | -        | 29,339       |
| 2008  | 28,538                 | 45        | 168                        | -        | 28,751       |
| 2007  | 25,253                 | -         | 169                        | -        | 25,422       |
| 2006  | 24,717                 | -         | 130                        | -        | 24,847       |
| 2005  | 24,108                 | 42        | 113                        | -        | 24,263       |



## SCHEDULE OF RETIREMENT BENEFITS BY SYSTEM AND PLAN

FISCAL YEARS 2005 – 2014

(EXPRESSED IN THOUSANDS)

| Year Ended<br>June 30 | Virginia Retirement System |              |            |              | State Police<br>Officers'<br>Retirement<br>System | Virginia Law<br>Officers'<br>Retirement<br>System | Judicial<br>Retirement<br>System | Total        |
|-----------------------|----------------------------|--------------|------------|--------------|---|---|----------------------------------|--------------|
|                       | State                      | Teachers     | Political  | Sub-Total    |   |   |                                  |              |
| 2014                  | \$ 1,081,866               | \$ 1,874,636 | \$ 754,706 | \$ 3,711,208 | \$ 50,467   | \$ 78,412   | \$ 37,984                        | \$ 3,878,071 |
| 2013                  | 1,024,464                  | 1,788,548    | 703,207    | 3,516,219    | 47,884  | 71,638  | 36,800                           | 3,672,541    |
| 2012                  | 961,209                    | 1,654,377    | 641,773    | 3,257,359    | 46,113  | 64,849  | 33,454                           | 3,401,775    |
| 2011                  | 931,893                    | 1,599,208    | 594,671    | 3,125,772    | 46,259  | 59,749  | 32,115                           | 3,263,895    |
| 2010                  | 898,226                    | 1,462,638    | 546,340    | 2,907,204    | 42,714  | 53,758  | 31,598                           | 3,035,274    |
| 2009                  | 790,472                    | 1,338,776    | 488,065    | 2,617,313    | 40,919  | 45,890  | 29,101                           | 2,733,223    |
| 2008                  | 736,053                    | 1,245,201    | 446,289    | 2,427,543    | 39,382  | 40,805  | 28,538                           | 2,536,268    |
| 2007                  | 686,258                    | 1,138,980    | 394,112    | 2,219,350    | 33,867  | 35,019  | 25,253                           | 2,313,489    |
| 2006                  | 623,571                    | 1,037,509    | 354,477    | 2,015,557    | 32,309  | 29,202  | 24,717                           | 2,101,785    |
| 2005                  | 589,113                    | 959,268      | 317,395    | 1,865,776    | 30,487  | 25,100  | 24,108                           | 1,945,471    |

## SCHEDULE OF RETIREMENT BENEFITS BY TYPE

FISCAL YEARS 2005 – 2014

(EXPRESSED IN THOUSANDS)

| Year Ended<br>June 30 | Service<br>Benefits | Disability<br>Benefits | Survivor<br>Benefits | Total        |
|-----------------------|---------------------|------------------------|----------------------|--------------|
| 2014                  | \$ 3,538,504        | \$ 308,548             | \$ 31,019            | \$ 3,878,071 |
| 2013                  | 3,341,532           | 301,045                | 29,964               | 3,672,541    |
| 2012                  | 3,080,562           | 293,336                | 27,877               | 3,401,775    |
| 2011                  | 2,948,702           | 288,951                | 26,242               | 3,263,895    |
| 2010                  | 2,724,900           | 285,802                | 24,572               | 3,035,274    |
| 2009                  | 2,434,353           | 276,382                | 22,488               | 2,733,223    |
| 2008                  | 2,252,981           | 263,427                | 19,860               | 2,536,268    |
| 2007                  | 2,045,400           | 250,212                | 17,877               | 2,313,489    |
| 2006                  | 1,849,239           | 236,266                | 16,280               | 2,101,785    |
| 2005                  | 1,708,147           | 222,632                | 14,692               | 1,945,471    |



## SCHEDULE OF REFUNDS BY TYPE

FISCAL YEARS 2005 – 2014

(EXPRESSED IN THOUSANDS)

| Year Ended<br>June 30 | Separations | Death     | Total      |
|-----------------------|-------------|-----------|------------|
| 2014                  | \$ 88,151   | \$ 15,248 | \$ 103,399 |
| 2013                  | 66,694      | 14,844    | 81,538     |
| 2012                  | 75,668      | 13,255    | 88,923     |
| 2011                  | 87,221      | 13,323    | 100,544    |
| 2010                  | 79,600      | 13,486    | 93,086     |
| 2009                  | 77,498      | 13,850    | 91,348     |
| 2008                  | 88,732      | 14,203    | 102,935    |
| 2007                  | 88,661      | 7,104     | 95,765     |
| 2006                  | 79,744      | 11,486    | 91,230     |
| 2005                  | 76,296      | 8,435     | 84,731     |

## SCHEDULE OF RETIREES AND BENEFICIARIES BY TYPE OF RETIREMENT

AS OF JUNE 30, 2014

| Minimum Guaranteed Benefit Amount | Number of Retirees | Type of Retirement |                         |                          |                                |                    |                           |                               |                               |                          |
|-----------------------------------|--------------------|--------------------|-------------------------|--------------------------|--------------------------------|--------------------|---------------------------|-------------------------------|-------------------------------|--------------------------|
|                                   |                    | Service Retirement | Early Retirement Window | 50/30 Service Retirement | 1991 Early Faculty Ret. Window | Regular Disability | Survivor Death-in-Service | Line-of-Duty (LOD) Disability | Survivor LOD Death-in-Service | 50/10 Service Retirement |
| \$ 1-200                          | 14,622             | 12,563             | 3                       | -                        | 1                              | 589                | 598                       | 46                            | 3                             | 819                      |
| 201-400                           | 20,704             | 16,683             | 149                     | 3                        | -                              | 1,950              | 516                       | 105                           | 10                            | 1,288                    |
| 401-600                           | 17,853             | 13,727             | 344                     | 30                       | 1                              | 2,373              | 337                       | 227                           | 24                            | 790                      |
| 601-800                           | 15,013             | 11,248             | 428                     | 63                       | 1                              | 2,104              | 227                       | 385                           | 22                            | 535                      |
| 801-1,000                         | 13,440             | 9,975              | 570                     | 173                      | 5                              | 1,715              | 156                       | 398                           | 25                            | 423                      |
| 1,001-1,200                       | 11,964             | 8,873              | 529                     | 366                      | 7                              | 1,384              | 130                       | 327                           | 15                            | 333                      |
| 1,201-1,400                       | 10,116             | 7,437              | 495                     | 472                      | 15                             | 1,074              | 90                        | 270                           | 8                             | 255                      |
| 1,401-1,600                       | 9,488              | 7,013              | 435                     | 636                      | 23                             | 832                | 76                        | 220                           | 8                             | 245                      |
| 1,601-1,800                       | 8,988              | 6,653              | 311                     | 922                      | 27                             | 635                | 52                        | 179                           | 5                             | 204                      |
| 1,801-2,000                       | 9,459              | 6,924              | 240                     | 1,330                    | 30                             | 540                | 70                        | 181                           | 1                             | 143                      |
| Over 2,000                        | 45,479             | 36,665             | 459                     | 5,613                    | 108                            | 1,510              | 229                       | 555                           | 8                             | 332                      |
| <b>Totals</b>                     | <b>177,126</b>     | <b>137,761</b>     | <b>3,963</b>            | <b>9,608</b>             | <b>218</b>                     | <b>14,706</b>      | <b>2,481</b>              | <b>2,893</b>                  | <b>129</b>                    | <b>5,367</b>             |

## SCHEDULE OF RETIREES AND BENEFICIARIES BY TYPE OF RETIREMENT AND PLAN

AS OF JUNE 30, 2014

| Plan                         | Number of Retirees | Type of Retirement |                         |                          |                                |                    |                           |                               |                               |                          |
|------------------------------|--------------------|--------------------|-------------------------|--------------------------|--------------------------------|--------------------|---------------------------|-------------------------------|-------------------------------|--------------------------|
|                              |                    | Service Retirement | Early Retirement Window | 50/30 Service Retirement | 1991 Early Faculty Ret. Window | Regular Disability | Survivor Death-in-Service | Line-of-Duty (LOD) Disability | Survivor LOD Death-in-Service | 50/10 Service Retirement |
| VRS – State                  | 51,051             | 38,557             | 2,142                   | 3,021                    | 218                            | 3,666              | 1,079                     | 962                           | 30                            | 1,376                    |
| VRS – Teacher                | 77,153             | 61,900             | 1,582                   | 5,359                    | -                              | 4,680              | 624                       | 184                           | 6                             | 2,818                    |
| VRS – Political Subdivisions | 43,801             | 32,735             | 239                     | 1,227                    | -                              | 6,135              | 670                       | 1,547                         | 75                            | 1,173                    |
| SPORS                        | 1,201              | 977                | -                       | -                        | -                              | 42                 | 11                        | 154                           | 17                            | -                        |
| VaLORS                       | 3,429              | 3,135              | -                       | 1                        | -                              | 173                | 73                        | 46                            | 1                             | -                        |
| JRS                          | 491                | 457                | -                       | -                        | -                              | 10                 | 24                        | -                             | -                             | -                        |
| <b>All Plans</b>             | <b>177,126</b>     | <b>137,761</b>     | <b>3,963</b>            | <b>9,608</b>             | <b>218</b>                     | <b>14,706</b>      | <b>2,481</b>              | <b>2,893</b>                  | <b>129</b>                    | <b>5,367</b>             |

## SCHEDULE OF RETIREES AND BENEFICIARIES BY PAYOUT OPTION SELECTED

AS OF JUNE 30, 2014

| Minimum Guaranteed Benefit Amount | Payout Option Selected |           |              |              |              |            |              |            |          |            |              |          |               |              |               |              |
|-----------------------------------|------------------------|-----------|--------------|--------------|--------------|------------|--------------|------------|----------|------------|--------------|----------|---------------|--------------|---------------|--------------|
|                                   | A                      | B         | C            | D            | E            | F          | G            | H          | I        | J          | K            | L        | M             | N            | O             | P            |
| \$ 1-200                          | 11,966                 | 27        | 512          | 115          | 649          | 3          | 54           | 2          | -        | 1          | 633          | -        | 396           | 117          | 137           | 10           |
| 201-400                           | 16,586                 | 14        | 561          | 176          | 635          | 6          | 769          | 19         | 2        | 30         | 600          | -        | 825           | 159          | 287           | 35           |
| 401-600                           | 13,577                 | 17        | 449          | 230          | 634          | 11         | 1,128        | 36         | -        | 75         | 472          | -        | 735           | 140          | 325           | 24           |
| 601-800                           | 11,015                 | 7         | 349          | 251          | 658          | 8          | 969          | 35         | -        | 88         | 411          | -        | 724           | 135          | 327           | 36           |
| 801-1,000                         | 9,496                  | 2         | 302          | 308          | 716          | 15         | 665          | 24         | 1        | 57         | 427          | -        | 765           | 144          | 450           | 68           |
| 1,001-1,200                       | 8,178                  | -         | 292          | 291          | 595          | 12         | 493          | 19         | 1        | 38         | 265          | -        | 841           | 161          | 663           | 115          |
| 1,201-1,400                       | 6,812                  | -         | 245          | 278          | 395          | 19         | 312          | 12         | 1        | 19         | 193          | -        | 770           | 161          | 765           | 134          |
| 1,401-1,600                       | 6,241                  | -         | 239          | 265          | 273          | 27         | 208          | 3          | -        | 25         | 144          | -        | 721           | 139          | 995           | 208          |
| 1,601-1,800                       | 5,879                  | -         | 197          | 252          | 156          | 29         | 111          | 3          | -        | 10         | 87           | -        | 719           | 166          | 1,131         | 248          |
| 1,801-2,000                       | 6,000                  | -         | 166          | 257          | 113          | 27         | 98           | 3          | -        | 8          | 81           | -        | 702           | 153          | 1,539         | 312          |
| Over 2,000                        | 24,347                 | -         | 569          | 777          | 175          | 164        | 126          | 8          | -        | 14         | 148          | -        | 5,019         | 1,157        | 11,003        | 1,972        |
| <b>Totals</b>                     | <b>120,097</b>         | <b>67</b> | <b>3,881</b> | <b>3,200</b> | <b>4,999</b> | <b>321</b> | <b>4,933</b> | <b>164</b> | <b>5</b> | <b>365</b> | <b>3,461</b> | <b>-</b> | <b>12,217</b> | <b>2,632</b> | <b>17,622</b> | <b>3,162</b> |

A- Basic Benefit

B- Increased Basic Benefit

C- 100% Survivor Option

D- Variable Survivor Option

E- Social Security Leveling Benefit

F- Special Survivor Option

G- Minimum Guaranteed Disability Basic Benefit

H- Minimum Guaranteed Disability Variable

Survivor Option

I- Disability 100% Survivor Option

J- Special Disability Survivor Option

K- Leveling Benefit

L- Leveling Benefit/Rollover

M-Survivor Option

N- Advance Pension Option

O- Partial Lump-Sum Option Payment (PLOP) With Basic Benefit

P- PLOP with Survivor Option

## SCHEDULE OF AVERAGE BENEFIT PAYMENTS

FOR RETIREMENTS EFFECTIVE JULY 1, 2008, TO JUNE 30, 2014

|         |                        | Years of Credited Service |          |          |            |            |            |            |
|---------|------------------------|---------------------------|----------|----------|------------|------------|------------|------------|
|         |                        | 1-10                      | 11-15    | 16-20    | 21-25      | 26-30      | Over 30    |            |
| 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   | \$0.00   | \$0.00   | \$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   | \$0.00   | \$0.00   | \$0.00     | \$0.00     | \$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      |

## SCHEDULE OF AVERAGE BENEFIT PAYMENTS, cont.

FOR RETIREMENTS EFFECTIVE JULY 1, 2008, TO JUNE 30, 2014

|                        |                           | Years of Credited Service |          |            |            |            |            |
|------------------------|---------------------------|---------------------------|----------|------------|------------|------------|------------|
|                        |                           | 1-10                      | 11-15    | 16-20      | 21-25      | 26-30      | Over 30    |
| 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   | \$0.00                    | \$0.00   | \$0.00     | \$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         |
| JRS                    | Average Monthly Benefit   | \$0.00                    | \$0.00   | \$3,645.63 | \$4,738.37 | \$0.00     | \$7,490.90 |
|                        | 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      |
| FY 2012 All Plans      | Average Monthly Benefit   | \$349.17                  | \$628.04 | \$950.15   | \$1,360.69 | \$2,149.70 | \$2,843.02 |
|                        | Number of Active Retirees | 1,331                     | 1,309    | 1,176      | 1,273      | 1,453      | 3,367      |
| FY 2011 All Plans      | Average Monthly Benefit   | \$346.15                  | \$590.10 | \$923.89   | \$1,364.97 | \$2,058.50 | \$2,791.19 |
|                        | Number of Active Retirees | 1,218                     | 1,196    | 1,164      | 1,383      | 1,637      | 4,318      |
| FY 2010 All Plans      | Average Monthly Benefit   | \$319.83                  | \$585.59 | \$895.47   | \$1,309.38 | \$1,977.48 | \$2,750.03 |
|                        | Number of Active Retirees | 1,106                     | 954      | 980        | 1,251      | 1,543      | 4,303      |
| FY 2009 All Plans      | Average Monthly Benefit   | \$344.16                  | \$578.17 | \$880.56   | \$1,269.17 | \$2,024.64 | \$2,669.86 |
|                        | Number of Active Retirees | 986                       | 859      | 916        | 1,090      | 1,377      | 3,063      |
| FY 2008 All Plans      | Average Monthly Benefit   | \$327.19                  | \$575.47 | \$861.72   | \$1,234.89 | \$2,024.96 | \$2,610.24 |
|                        | Number of Active Retirees | 994                       | 857      | 995        | 1,091      | 1,615      | 3,271      |

\* Fiscal year 2013 is the first year for which information is available to support this detailed presentation by plan.

**FIGURE 5.6 – DISTRIBUTION OF RETIREES BY PAYOUT OPTION SELECTED**

ALL RETIREES AT JUNE 30, 2014

|                  | Basic Benefit | Survivor Option | PLOP with Basic Benefit | PLOP with Survivor Option | Advance Payment Option | Total          |
|------------------|---------------|-----------------|-------------------------|---------------------------|------------------------|----------------|
| VRS              | 71.50%        | 10.89%          | 9.66%                   | 1.66%                     | 6.29%                  | 100.00%        |
| SPORS            | 52.12%        | 29.38%          | 11.20%                  | 6.72%                     | 0.58%                  | 100.00%        |
| VaLORS           | 61.20%        | 16.62%          | 14.77%                  | 3.79%                     | 3.62%                  | 100.00%        |
| JRS              | 45.24%        | 32.25%          | 10.14%                  | 9.94%                     | 2.43%                  | 100.00%        |
| <b>All Plans</b> | <b>71.11%</b> | <b>11.18%</b>   | <b>9.77%</b>            | <b>1.75%</b>              | <b>6.19%</b>           | <b>100.00%</b> |

FISCAL YEAR 2014 RETIREES

|                  | Basic Benefit | Survivor Option | PLOP with Basic Benefit | PLOP with Survivor Option | Advance Payment Option | Total          |
|------------------|---------------|-----------------|-------------------------|---------------------------|------------------------|----------------|
| VRS              | 68.36%        | 10.96%          | 16.55%                  | 2.28%                     | 1.85%                  | 100.00%        |
| SPORS            | 57.15%        | 12.24%          | 22.45%                  | 8.16%                     | 0.00%                  | 100.00%        |
| VaLORS           | 59.58%        | 14.29%          | 20.21%                  | 3.83%                     | 2.09%                  | 100.00%        |
| JRS              | 41.94%        | 32.26%          | 19.35%                  | 6.45%                     | 0.00%                  | 100.00%        |
| <b>All Plans</b> | <b>68.03%</b> | <b>11.10%</b>   | <b>16.67%</b>           | <b>2.35%</b>              | <b>1.85%</b>           | <b>100.00%</b> |

### Retirement 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.

**Partial Lump-Sum Option Payment (PLOP).** 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. This option is available with the Basic Benefit or Survivor Option.

**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.

**Advance Pension Option.** With this option, members elect to receive a temporary higher benefit until at least age 62 up to their normal retirement age under Social Security, as elected by the member. 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, 2014

|                  | 1-10<br>Years | 11-20<br>Years | 21-30<br>Years | Over 30<br>Years | Total          |
|------------------|---------------|----------------|----------------|------------------|----------------|
| VRS              | 11.34%        | 24.04%         | 29.65%         | 34.97%           | 100.00%        |
| SPORS            | 2.37%         | 3.95%          | 21.74%         | 71.94%           | 100.00%        |
| VaLORS           | 7.92%         | 19.92%         | 52.50%         | 19.66%           | 100.00%        |
| JRS              | 0.72%         | 2.71%          | 6.86%          | 89.71%           | 100.00%        |
| <b>All Plans</b> | <b>11.18%</b> | <b>23.76%</b>  | <b>29.96%</b>  | <b>35.10%</b>    | <b>100.00%</b> |

FISCAL YEAR 2014 RETIREES

|                  | 1-10<br>Years | 11-20<br>Years | 21-30<br>Years | Over 30<br>Years | Total          |
|------------------|---------------|----------------|----------------|------------------|----------------|
| VRS              | 13.90%        | 27.01%         | 28.58%         | 30.51%           | 100.00%        |
| SPORS            | 0.00%         | 2.44%          | 29.27%         | 68.29%           | 100.00%        |
| VaLORS           | 8.87%         | 26.24%         | 52.12%         | 12.77%           | 100.00%        |
| JRS              | 0.00%         | 0.00%          | 12.00%         | 88.00%           | 100.00%        |
| <b>All Plans</b> | <b>13.69%</b> | <b>26.84%</b>  | <b>29.14%</b>  | <b>30.33%</b>    | <b>100.00%</b> |

### FIGURE 5.8 – DISTRIBUTION OF RETIREES BY AGE AT RETIREMENT

ALL RETIREES AT JUNE 30, 2014

|                  | Under 55      | 55 - 59       | 60 - 65       | Over Age 65   | Total          |
|------------------|---------------|---------------|---------------|---------------|----------------|
| VRS              | 16.56%        | 26.12%        | 45.82%        | 11.50%        | 100.00%        |
| SPORS            | 47.70%        | 33.73%        | 16.30%        | 2.27%         | 100.00%        |
| VaLORS           | 43.25%        | 25.88%        | 26.44%        | 4.43%         | 100.00%        |
| JRS              | 1.38%         | 12.08%        | 42.35%        | 44.19%        | 100.00%        |
| <b>All Plans</b> | <b>17.11%</b> | <b>26.12%</b> | <b>45.35%</b> | <b>11.42%</b> | <b>100.00%</b> |

FISCAL YEAR 2014 RETIREES

|                  | Under 55      | 55 - 59       | 60 - 65       | Over Age 65   | Total          |
|------------------|---------------|---------------|---------------|---------------|----------------|
| VRS              | 10.35%        | 20.15%        | 48.23%        | 21.27%        | 100.00%        |
| SPORS            | 42.86%        | 30.95%        | 19.05%        | 7.14%         | 100.00%        |
| VaLORS           | 36.98%        | 20.77%        | 36.62%        | 5.63%         | 100.00%        |
| JRS              | 0.00%         | 4.00%         | 16.00%        | 80.00%        | 100.00%        |
| <b>All Plans</b> | <b>11.12%</b> | <b>20.17%</b> | <b>47.75%</b> | <b>20.96%</b> | <b>100.00%</b> |

**FIGURE 5.9 – DISTRIBUTION OF RETIREES BY AVERAGE FINAL COMPENSATION**

ALL RETIREES AT JUNE 30, 2014

|                  | Up to \$10,000 | \$10,001 - 20,000 | \$20,001 - 30,000 | \$30,001 - 40,000 | \$40,001 - 50,000 | \$50,001 - 70,000 | Over \$70,000 | Total          |
|------------------|----------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------|----------------|
| VRS              | 6.74%          | 18.55%            | 17.93%            | 16.21%            | 14.06%            | 17.10%            | 9.41%         | 100.00%        |
| SPORS            | 4.04%          | 5.81%             | 7.87%             | 14.17%            | 18.21%            | 29.28%            | 20.62%        | 100.00%        |
| VaLORS           | 0.00%          | 0.08%             | 11.69%            | 47.73%            | 26.50%            | 12.20%            | 1.80%         | 100.00%        |
| JRS              | 3.52%          | 1.99%             | 1.07%             | 4.43%             | 5.66%             | 10.86%            | 72.47%        | 100.00%        |
| <b>All Plans</b> | <b>6.61%</b>   | <b>18.15%</b>     | <b>17.73%</b>     | <b>16.65%</b>     | <b>14.26%</b>     | <b>17.08%</b>     | <b>9.52%</b>  | <b>100.00%</b> |

FISCAL YEAR 2014 RETIREES

|                  | Up to \$10,000 | \$10,001 - 20,000 | \$20,001 - 30,000 | \$30,001 - 40,000 | \$40,001 - 50,000 | \$50,001 - 70,000 | Over \$70,000 | Total          |
|------------------|----------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------|----------------|
| VRS              | 0.48%          | 7.53%             | 11.81%            | 15.41%            | 15.14%            | 28.76%            | 20.87%        | 100.00%        |
| SPORS            | 0.00%          | 0.00%             | 0.00%             | 0.00%             | 2.38%             | 26.19%            | 71.43%        | 100.00%        |
| VaLORS           | 0.00%          | 0.00%             | 0.70%             | 53.88%            | 25.70%            | 13.73%            | 5.99%         | 100.00%        |
| JRS              | 0.00%          | 0.00%             | 0.00%             | 0.00%             | 0.00%             | 0.00%             | 100.00%       | 100.00%        |
| <b>All Plans</b> | <b>0.47%</b>   | <b>7.30%</b>      | <b>11.46%</b>     | <b>16.28%</b>     | <b>15.33%</b>     | <b>28.30%</b>     | <b>20.86%</b> | <b>100.00%</b> |



## SCHEDULE OF FUNDING (MARKET VALUE BASIS) – ALL PENSION PLANS

(DOLLARS IN MILLIONS)

| 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)**                |                                 |   |                                       |                                     |                     |  |
| 2013*   | \$ 54,973                       | \$ 79,078   | \$ 24,105                             | 69.5%                               | \$ 15,269           | 157.9%   |
| 2012  | 50,267                          | 77,859  | 27,592                                | 64.6%                               | 14,880              | 185.4%   |
| 2011  | 51,280                          | 75,185  | 23,905                                | 68.2%                               | 14,709              | 162.5%   |
| 2010  | 44,646                          | 72,801  | 28,155                                | 61.3%                               | 14,758              | 190.8%   |
| 2009*   | 39,890                          | 66,323  | 26,433                                | 60.1%                               | 14,948              | 176.8%   |
| 2008  | 51,743                          | 62,554  | 10,811                                | 82.7%                               | 14,559              | 74.3%  |
| 2007  | 54,948                          | 58,116  | 3,168                                 | 94.5%                               | 13,834              | 22.9%  |
| 2006  | 46,021                          | 52,822  | 6,801                                 | 87.1%                               | 13,002              | 52.3%  |
| 2005*   | 41,640                          | 49,628  | 7,988                                 | 83.9%                               | 12,212              | 65.4%  |
| 2004  | 37,784                          | 43,958  | 6,174                                 | 86.0%                               | 11,510              | 53.6%  |
| STATE POLICE OFFICERS' RETIREMENT SYSTEM (SPORS)  |                                 |   |                                       |                                     |                     |  |
| 2013*   | \$ 625                          | \$ 997  | \$ 372                                | 62.7%                               | \$ 109              | 341.0%   |
| 2012  | 575                             | 1,013   | 438                                   | 56.8%                               | 104                 | 420.6%   |
| 2011  | 599                             | 986   | 387                                   | 60.8%                               | 100                 | 388.3%   |
| 2010  | 534                             | 949   | 415                                   | 56.3%                               | 98                  | 425.3%   |
| 2009*   | 484                             | 879   | 395                                   | 55.1%                               | 101                 | 391.4%   |
| 2008  | 636                             | 844   | 208                                   | 75.5%                               | 103                 | 202.9%   |
| 2007  | 684                             | 806   | 122                                   | 84.9%                               | 101                 | 121.3%   |
| 2006  | 581                             | 730   | 149                                   | 79.6%                               | 94                  | 159.4%   |
| 2005*   | 530                             | 673   | 143                                   | 78.8%                               | 91                  | 157.2%   |
| 2004  | 486                             | 656   | 170                                   | 74.2%                               | 82                  | 207.3%   |
| VIRGINIA LAW OFFICERS' RETIREMENT SYSTEM (VaLORS) |                                 |   |                                       |                                     |                     |  |
| 2013*   | \$ 992                          | \$ 1,742  | \$ 750                                | 56.9%                               | \$ 342              | 219.0%   |
| 2012  | 895                             | 1,753   | 858                                   | 51.1%                               | 345                 | 248.9%   |
| 2011  | 911                             | 1,683   | 772                                   | 54.1%                               | 356                 | 216.8%   |
| 2010  | 792                             | 1,579   | 787                                   | 50.2%                               | 346                 | 227.5%   |
| 2009*   | 691                             | 1,412   | 721                                   | 48.9%                               | 359                 | 200.7%   |
| 2008  | 853                             | 1,281   | 428                                   | 66.7%                               | 368                 | 116.2%   |
| 2007  | 868                             | 1,166   | 298                                   | 74.4%                               | 341                 | 87.3%  |
| 2006  | 700                             | 1,096   | 396                                   | 63.9%                               | 321                 | 123.3%   |
| 2005*   | 593                             | 980   | 387                                   | 60.5%                               | 307                 | 126.2%   |
| 2004  | 498                             | 927   | 429                                   | 53.7%                               | 298                 | 144.0%   |
| JUDICIAL RETIREMENT SYSTEM (JRS)                  |                                 |   |                                       |                                     |                     |  |
| 2013*   | \$ 389                          | \$ 591  | \$ 202                                | 65.8%                               | \$ 57               | 353.5%   |
| 2012  | 354                             | 582   | 228                                   | 60.8%                               | 57                  | 400.9%   |
| 2011  | 361                             | 569   | 208                                   | 63.4%                               | 59                  | 353.7%   |
| 2010  | 315                             | 560   | 245                                   | 56.4%                               | 61                  | 401.2%   |
| 2009*   | 284                             | 521   | 237                                   | 54.4%                               | 63                  | 377.6%   |
| 2008  | 367                             | 495   | 128                                   | 74.1%                               | 61                  | 211.3%   |
| 2007  | 390                             | 442   | 52                                    | 88.2%                               | 58                  | 91.1%  |
| 2006  | 326                             | 424   | 98                                    | 77.0%                               | 54                  | 179.7%   |
| 2005*   | 296                             | 402   | 106                                   | 73.5%                               | 52                  | 205.3%   |
| 2004  | 271                             | 366   | 95                                    | 74.1%                               | 48                  | 197.9%   |

\* 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

(DOLLARS 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 (MVA/AAL) (a/b) | Covered Payroll (c) | Net Pension Liability as a Percentage of Covered Payroll (b-a)/(c) |
|---|---------------------------------|---|---------------------------------------|------------------------------|---------------------|--|
| VIRGINIA RETIREMENT SYSTEM (VRS) – STATE                  |                                 |   |                                       |                              |                     |  |
| 2013*   | \$ 14,502,362                   | \$ 21,068,651                                     | \$ 6,566,289                          | 68.8%                        | \$ 3,716,548        | 176.7%   |
| 2012  | 13,469,215                      | 20,944,258  | 7,475,043                             | 64.3%                        | 3,713,119           | 201.3%   |
| 2011  | 13,992,901                      | 20,407,958  | 6,415,057                             | 68.6%                        | 3,686,259           | 174.0%   |
| 2010  | 12,384,638                      | 19,539,453  | 7,154,815                             | 63.4%                        | 3,514,396           | 203.6%   |
| 2009*   | 11,253,767                      | 17,925,879  | 6,672,112                             | 62.8%                        | 3,619,478           | 184.3%   |
| 2008  | 14,856,159                      | 17,096,942  | 2,240,783                             | 86.9%                        | 3,640,692           | 61.5%  |
| 2007  | 15,987,528                      | 16,279,781  | 292,253                               | 98.2%                        | 3,467,388           | 8.4%   |
| 2006  | 13,549,153                      | 15,064,062  | 1,514,909                             | 89.9%                        | 3,301,286           | 45.9%  |
| 2005*   | 12,398,345                      | 14,007,274  | 1,608,929                             | 88.5%                        | 3,100,479           | 51.9%  |
| 2004  | 11,379,685                      | 12,669,013  | 1,289,328                             | 89.8%                        | 2,946,067           | 43.8%  |
| VIRGINIA RETIREMENT SYSTEM (VRS) – TEACHER                |                                 |   |                                       |                              |                     |  |
| 2013*   | \$ 26,076,425                   | \$ 39,852,334                                     | \$ 13,775,909                         | 65.4%                        | \$ 7,211,543        | 191.0%   |
| 2012  | 23,930,149                      | 39,090,408  | 15,160,259                            | 61.2%                        | 7,004,577           | 216.4%   |
| 2011  | 24,520,362                      | 37,771,732  | 13,251,370                            | 64.9%                        | 6,922,130           | 191.4%   |
| 2010  | 21,517,178                      | 37,088,576  | 15,571,398                            | 58.0%                        | 7,119,889           | 218.7%   |
| 2009*   | 19,302,368                      | 33,860,514  | 14,558,146                            | 57.0%                        | 7,160,842           | 203.3%   |
| 2008  | 25,076,413                      | 31,958,321  | 6,881,908                             | 78.5%                        | 6,896,432           | 99.8%  |
| 2007  | 26,618,235                      | 29,669,838  | 3,051,603                             | 89.7%                        | 6,604,643           | 46.2%  |
| 2006  | 22,330,731                      | 27,274,064  | 4,943,333                             | 81.9%                        | 6,195,421           | 79.8%  |
| 2005*   | 20,239,648                      | 25,205,725  | 4,966,077                             | 80.3%                        | 5,844,860           | 85.0%  |
| 2004  | 18,406,676                      | 22,173,218  | 3,766,542                             | 83.0%                        | 5,491,142           | 68.6%  |
| VIRGINIA RETIREMENT SYSTEM (VRS) – POLITICAL SUBDIVISIONS |                                 |   |                                       |                              |                     |  |
| 2013*   | \$ 14,393,949                   | \$ 18,156,606                                     | \$ 3,762,657                          | 79.3%                        | \$ 4,340,988        | 86.7%  |
| 2012  | 12,867,357                      | 17,824,190  | 4,956,833                             | 72.2%                        | 4,162,579           | 119.1%   |
| 2011  | 12,767,072                      | 17,005,070  | 4,237,998                             | 75.1%                        | 4,100,470           | 103.4%   |
| 2010  | 10,744,000                      | 16,172,372  | 5,428,372                             | 66.4%                        | 4,123,505           | 131.6%   |
| 2009*   | 9,333,619                       | 14,536,618  | 5,202,999                             | 64.2%                        | 4,167,324           | 124.9%   |
| 2008  | 11,810,904                      | 13,499,216  | 1,688,312                             | 87.5%                        | 4,021,468           | 42.0%  |
| 2007  | 12,342,460                      | 12,166,854  | (175,606)                             | 101.4%                       | 3,761,991           | (4.7%)   |
| 2006  | 10,140,847                      | 10,483,777  | 342,930                               | 96.7%                        | 3,504,844           | 9.8%   |
| 2005*   | 9,002,488                       | 10,415,489  | 1,413,001                             | 86.4%                        | 3,266,806           | 43.3%  |
| 2004  | 7,997,944                       | 9,116,119   | 1,118,175                             | 87.7%                        | 3,072,693           | 36.4%  |
| VIRGINIA RETIREMENT SYSTEM (VRS) – TOTAL                  |                                 |   |                                       |                              |                     |  |
| 2013*   | \$ 54,972,736                   | \$ 79,077,591                                     | \$ 24,104,855                         | 69.5%                        | \$15,269,079        | 157.9%   |
| 2012  | 50,266,721                      | 77,858,856  | 27,592,135                            | 64.6%                        | 14,880,275          | 185.4%   |
| 2011  | 51,280,335                      | 75,184,760  | 23,904,425                            | 68.2%                        | 14,708,859          | 162.5%   |
| 2010  | 44,645,816                      | 72,800,401  | 28,154,585                            | 61.3%                        | 14,757,790          | 190.8%   |
| 2009*   | 39,889,754                      | 66,323,011  | 26,433,257                            | 60.1%                        | 14,947,644          | 176.8%   |
| 2008  | 51,743,476                      | 62,554,479  | 10,811,003                            | 82.7%                        | 14,558,592          | 74.3%  |
| 2007  | 54,948,223                      | 58,116,473  | 3,168,250                             | 94.5%                        | 13,834,022          | 22.9%  |
| 2006  | 46,020,731                      | 52,821,903  | 6,801,172                             | 87.1%                        | 13,001,551          | 52.3%  |
| 2005*   | 41,640,481                      | 49,628,488  | 7,988,007                             | 83.9%                        | 12,212,145          | 65.4%  |
| 2004  | 37,784,305                      | 43,958,350  | 6,174,045                             | 86.0%                        | 11,509,902          | 53.6%  |

\* 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 THOUSANDS)

|   | 2005*            | 2006*            | 2007             | 2008             | 2009             | 2010*            | 2011             | 2012             | 2013             | 2014               |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------|
| <b>Fiduciary Net Position</b>                         |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |
| <b>Restricted – Beginning of Year</b>                 | <b>\$778,464</b> | <b>\$771,817</b> | <b>\$751,361</b> | <b>\$962,328</b> | <b>\$937,146</b> | <b>\$713,812</b> | <b>\$783,058</b> | <b>\$833,065</b> | <b>\$746,619</b> | <b>\$887,773</b>   |
| <b>Funding:</b>                                       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |
| Member and Employer Contributions and Other Additions | (31)             | 52               | 169,824          | 158,823          | 135,063          | 94,860           | 45,048           | 47,285           | 201,688          | 205,586            |
| Benefits and Administrative Expenses                  | (98,163)         | (112,695)        | (119,738)        | (133,407)        | (153,083)        | (139,344)        | (146,550)        | (141,026)        | (150,700)        | (160,909)          |
| Net Funding   | (98,194)         | (112,643)        | 50,086           | 25,416           | (18,020)         | (44,484)         | (101,502)        | (93,741)         | 50,988           | 44,677             |
| <b>Investment Income:</b>                             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |
| Interest, Dividends and Other Investment Income       | 13,256           | 14,546           | 19,078           | 17,908           | 13,582           | 14,128           | 17,924           | 16,301           | 13,669           | 16,981             |
| Net Appreciation (Depreciation) in Fair Value         | 78,291           | 77,641           | 141,803          | (68,506)         | (218,896)        | 99,602           | 133,585          | (9,006)          | 76,497           | 129,884            |
| Net Investment Income                                 | 91,547           | 92,187           | 160,881          | (50,598)         | (205,314)        | 113,730          | 151,509          | 7,295            | 90,166           | 146,865            |
| <b>Net Increase (Decrease)</b>                        | <b>(6,647)</b>   | <b>(20,456)</b>  | <b>210,967</b>   | <b>(25,182)</b>  | <b>(223,334)</b> | <b>69,246</b>    | <b>50,007</b>    | <b>(86,446)</b>  | <b>141,154</b>   | <b>191,542</b>     |
| <b>Fiduciary Net Position</b>                         |                  |                  |                  |                  |                  |                  |                  |                  |                  |                    |
| <b>Restricted – End of Year</b>                       | <b>\$771,817</b> | <b>\$751,361</b> | <b>\$962,328</b> | <b>\$937,146</b> | <b>\$713,812</b> | <b>\$783,058</b> | <b>\$833,065</b> | <b>\$746,619</b> | <b>\$887,773</b> | <b>\$1,079,315</b> |

\* The group life insurance contribution rates for the last quarter of fiscal year 2010 and for all of fiscal years 2006 and 2005 were zero as a result of a statutory premium holiday. Amounts shown in premium holiday years are adjustments and contributions for new employers.

## SCHEDULE OF GROUP LIFE INSURANCE ADDITIONS BY SOURCE

FISCAL YEARS 2005 – 2014

(EXPRESSED IN THOUSANDS)

| Year Ended<br>June 30 | Contributions |           |                           |            | Investment<br>Income (Loss) | Other | Total      |
|-----------------------|---------------|-----------|---------------------------|------------|-----------------------------|-------|------------|
|                       | State         | Teacher   | Political<br>Subdivisions | Sub-Total  |                             |       |            |
| 2014                  | \$ 64,151     | \$ 86,807 | \$ 54,628                 | \$ 205,586 | \$ 146,865                  | \$ -  | \$ 352,451 |
| 2013                  | 61,541        | 85,725    | 53,449                    | 200,715    | 90,166                      | 973   | 291,854    |
| 2012                  | 14,243        | 20,183    | 12,108                    | 46,534     | 7,295                       | 751   | 54,580     |
| 2011                  | 13,348        | 19,427    | 11,920                    | 44,695     | 151,509                     | 353   | 196,557    |
| 2010*                 | 28,685        | 40,502    | 25,673                    | 94,860     | 113,730                     | -     | 208,590    |
| 2009                  | 40,369        | 58,855    | 35,839                    | 135,063    | (205,314)                   | -     | (70,251)   |
| 2008                  | 52,503        | 60,405    | 45,915                    | 158,823    | (50,598)                    | -     | 108,225    |
| 2007                  | 51,116        | 74,442    | 44,266                    | 169,824    | 160,881                     | -     | 330,705    |
| 2006*                 | (2)           | -         | 54                        | 52         | 92,187                      | -     | 92,239     |
| 2005*                 | 1             | (33)      | 1                         | (31)       | 91,547                      | -     | 91,516     |

\* The group life insurance contribution rates for the last quarter of fiscal year 2010 and for all of fiscal years 2006, 2005 and 2004 were zero as a result of a statutory premium holiday. Amounts shown in premium holiday years are adjustments and contributions for new employers.

## SCHEDULE OF GROUP LIFE INSURANCE DEDUCTIONS BY TYPE

FISCAL YEARS 2005 – 2014

(EXPRESSED IN THOUSANDS)

| Year Ended<br>June 30 | Group Life Claims |            |            | Administrative<br>Expenses | Other    | Total      |
|-----------------------|-------------------|------------|------------|----------------------------|----------|------------|
|                       | Active            | Retired    | Sub-Total  |                            |          |            |
| 2014                  | \$ 53,478         | \$ 105,880 | \$ 159,358 | \$ 275                     | \$ 1,276 | \$ 160,909 |
| 2013                  | 47,875            | 101,612    | 149,487    | 65                         | 1,148    | 150,700    |
| 2012                  | 54,605            | 85,338     | 139,943    | 77                         | 1,006    | 141,026    |
| 2011                  | 51,236            | 93,791     | 145,027    | 484                        | 1,039    | 146,550    |
| 2010                  | 46,263            | 91,570     | 137,833    | 663                        | 848      | 139,344    |
| 2009                  | 64,119            | 87,550     | 151,669    | 700                        | 714      | 153,083    |
| 2008                  | 55,814            | 76,279     | 132,093    | 686                        | 628      | 133,407    |
| 2007                  | 46,322            | 72,305     | 118,627    | 568                        | 543      | 119,738    |
| 2006                  | 43,140            | 68,350     | 111,490    | 716                        | 489      | 112,695    |
| 2005                  | 37,139            | 59,902     | 97,041     | 678                        | 444      | 98,163     |

**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)

|   | 2005             | 2006             | 2007             | 2008*            | 2009             | 2010**           | 2011             | 2012             | 2013             | 2014             |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Fiduciary Net Position</b>                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>Restricted – Beginning of Year</b>           | <b>\$120,895</b> | <b>\$146,956</b> | <b>\$178,068</b> | <b>\$224,606</b> | <b>\$251,634</b> | <b>\$231,994</b> | <b>\$244,958</b> | <b>\$209,033</b> | <b>\$127,234</b> | <b>\$146,472</b> |
| <b>Funding:</b>                                 |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Employer Contributions and Other Additions      | 81,995           | 86,913           | 92,919           | 148,908          | 146,333          | 100,613          | 50,052           | 51,356           | 145,031          | 146,742          |
| Reimbursements and Administrative Expenses      | (69,474)         | (72,819)         | (80,803)         | (109,426)        | (115,878)        | (120,872)        | (126,963)        | (131,435)        | (137,906)        | (143,088)        |
| Net Funding                                     | 12,521           | 14,094           | 12,116           | 39,482           | 30,455           | (20,259)         | (76,911)         | (80,079)         | 7,125            | 3,654            |
| <b>Investment Income:</b>                       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Interest, Dividends and Other Investment Income | 1,960            | 2,685            | 4,082            | 4,407            | 3,314            | 4,127            | 4,849            | 2,997            | 1,856            | 2,226            |
| Net Appreciation (Depreciation) in Fair Value   | 11,580           | 14,333           | 30,340           | (16,861)         | (53,409)         | 29,096           | 36,137           | (4,717)          | 10,257           | 17,696           |
| Net Investment Income                           | 13,540           | 17,018           | 34,422           | (12,454)         | (50,095)         | 33,223           | 40,986           | (1,720)          | 12,113           | 19,922           |
| <b>Net Increase (Decrease)</b>                  | <b>26,061</b>    | <b>31,112</b>    | <b>46,538</b>    | <b>27,028</b>    | <b>(19,640)</b>  | <b>12,964</b>    | <b>(35,925)</b>  | <b>(81,799)</b>  | <b>19,238</b>    | <b>23,576</b>    |
| <b>Fiduciary Net Position</b>                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>Restricted – End of Year</b>                 | <b>\$146,956</b> | <b>\$178,068</b> | <b>\$224,606</b> | <b>\$251,634</b> | <b>\$231,994</b> | <b>\$244,958</b> | <b>\$209,033</b> | <b>\$127,234</b> | <b>\$146,472</b> | <b>\$170,048</b> |

\* The health credit for teachers increased to \$4 per month for each year of service with no cap on the benefit. The balance in the Enhanced Retiree Health Insurance Credit Program for teachers was refunded to employers.

\*\* The health insurance credit contribution rate for the last quarter of fiscal year 2010 was zero as a result of a statutory contribution holiday.

## SCHEDULE OF RETIREE HEALTH INSURANCE CREDIT ADDITIONS BY SOURCE

FISCAL YEARS 2005 – 2014

(EXPRESSED IN THOUSANDS)

| Year Ended<br>June 30 | State     | Teacher   | Political<br>Subdivisions | Sub-Total  | Investment<br>Income (Loss) | Other | Total      |
|-----------------------|-----------|-----------|---------------------------|------------|-----------------------------|-------|------------|
| 2014                  | \$ 64,146 | \$ 80,720 | \$ 1,876                  | \$ 146,742 | \$ 19,922                   | \$ -  | \$ 166,664 |
| 2013                  | 62,597    | 80,489    | 1,945                     | 145,031    | 12,113                      | -     | 157,144    |
| 2012                  | 7,137     | 42,245    | 1,974                     | 51,356     | (1,720)                     | -     | 49,636     |
| 2011                  | 6,702     | 41,410    | 1,940                     | 50,052     | 40,986                      | -     | 91,038     |
| 2010*                 | 44,485    | 53,114    | 3,014                     | 100,613    | 33,223                      | -     | 133,836    |
| 2009                  | 66,256    | 77,205    | 2,872                     | 146,333    | (50,095)                    | -     | 96,238     |
| 2008                  | 65,696    | 79,518    | 3,694                     | 148,908    | (12,454)                    | -     | 136,454    |
| 2007                  | 55,289    | 34,019    | 3,611                     | 92,919     | 34,422                      | -     | 127,341    |
| 2006                  | 50,979    | 34,758    | 1,176                     | 86,913     | 17,018                      | -     | 103,931    |
| 2005                  | 48,196    | 32,745    | 1,054                     | 81,995     | 13,540                      | -     | 95,535     |

\* The health insurance credit contribution rate for the last quarter of fiscal year 2010 was zero as a result of a statutory contribution holiday.



## SCHEDULE OF RETIREE HEALTH INSURANCE CREDIT DEDUCTIONS BY TYPE

FISCAL YEARS 2005 – 2014

(EXPRESSED IN THOUSANDS)

| Year Ended<br>June 30 | Retiree Health Insurance Reimbursements |           |                           |            | Administrative<br>Expenses | Other | Total      |
|-----------------------|---|-----------|---------------------------|------------|----------------------------|-------|------------|
|                       | State                                   | Teacher   | Political<br>Subdivisions | Sub-Total  |                            |       |            |
| 2014                  | \$ 64,422                               | \$ 76,389 | \$ 1,799                  | \$ 142,610 | \$ 463                     | \$ 15 | \$ 143,088 |
| 2013                  | 62,795                                  | 72,997    | 1,746                     | 137,538    | 358                        | 10    | 137,906    |
| 2012                  | 59,882                                  | 69,638    | 1,582                     | 131,102    | 333                        | -     | 131,435    |
| 2011                  | 58,433                                  | 66,608    | 1,459                     | 126,500    | 463                        | -     | 126,963    |
| 2010                  | 56,337                                  | 62,573    | 1,359                     | 120,269    | 603                        | -     | 120,872    |
| 2009                  | 52,742                                  | 61,229    | 1,307                     | 115,278    | 600                        | -     | 115,878    |
| 2008*                 | 49,248                                  | 58,748    | 993                       | 108,989    | 437                        | -     | 109,426    |
| 2007                  | 47,263                                  | 32,308    | 876                       | 80,447     | 356                        | -     | 80,803     |
| 2006                  | 41,560                                  | 30,177    | 745                       | 72,482     | 337                        | -     | 72,819     |
| 2005                  | 40,038                                  | 28,255    | 673                       | 68,966     | 508                        | -     | 69,474     |

\* The health insurance credit reimbursement for teachers was increased to \$4 per month per year of service with no cap on the benefit.

## 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)

|   | 2005             | 2006             | 2007             | 2008             | 2009             | 2010*            | 2011*            | 2012*            | 2013             | 2014             |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Fiduciary Net Position</b>                             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>Restricted – Beginning of Year</b>                     | <b>\$103,322</b> | <b>\$144,234</b> | <b>\$191,872</b> | <b>\$263,586</b> | <b>\$313,521</b> | <b>\$290,481</b> | <b>\$336,213</b> | <b>\$369,071</b> | <b>\$343,972</b> | <b>\$370,121</b> |
| <b>Funding:</b>   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Employer Contributions and Other Additions                | 54,505           | 57,991           | 65,726           | 99,430           | 71,337           | 31,021           | 6                | 78               | 17,267           | 17,693           |
| Disability Insurance Benefits and Administrative Expenses | (26,316)         | (27,915)         | (34,048)         | (32,697)         | (28,800)         | (28,415)         | (29,001)         | (28,955)         | (30,668)         | (34,290)         |
| Net Funding   | 28,189           | 30,076           | 31,678           | 66,733           | 42,537           | 2,606            | (28,995)         | (28,877)         | (13,401)         | (16,597)         |
| <b>Investment Income:</b>                                 |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Interest, Dividends and Other Investment Income           | 1,843            | 2,771            | 4,749            | 5,946            | 4,339            | 5,358            | 7,317            | 7,048            | 5,919            | 6,264            |
| Net Appreciation (Depreciation) in Fair Value             | 10,880           | 14,791           | 35,287           | (22,744)         | (69,916)         | 37,768           | 54,536           | (3,270)          | 33,631           | 50,309           |
| Net Investment Income                                     | 12,723           | 17,562           | 40,036           | (16,798)         | (65,577)         | 43,126           | 61,853           | 3,778            | 39,550           | 56,573           |
| <b>Net Increase (Decrease)</b>                            | <b>40,912</b>    | <b>47,638</b>    | <b>71,714</b>    | <b>49,935</b>    | <b>(23,040)</b>  | <b>45,732</b>    | <b>32,858</b>    | <b>(25,099)</b>  | <b>26,149</b>    | <b>39,976</b>    |
| <b>Fiduciary Net Position Restricted – End of Year</b>    | <b>\$144,234</b> | <b>\$191,872</b> | <b>\$263,586</b> | <b>\$313,521</b> | <b>\$290,481</b> | <b>\$336,213</b> | <b>\$369,071</b> | <b>\$343,972</b> | <b>\$370,121</b> | <b>\$410,097</b> |

\* The disability insurance contribution rate for fiscal year 2011 and fiscal year 2012 and the last quarter of fiscal year 2010 was zero as a result of a statutory contribution holiday.

## SCHEDULE OF DISABILITY INSURANCE TRUST FUND ADDITIONS BY SOURCE

FISCAL YEARS 2008 – 2014

(EXPRESSED IN THOUSANDS)

| Year Ended<br>June 30                 | Contributions | Investment<br>Income | Transfers<br>and Other<br>Additions** | Total     |
|---------------------------------------|---------------|----------------------|---------------------------------------|-----------|
| LONG-TERM DISABILITY PROGRAM          |               |                      |                                       |           |
| 2014                                  | \$ 14,393     | \$ 49,603            | \$ -                                  | \$ 63,996 |
| 2013                                  | 14,061        | 35,090               | -                                     | 49,151    |
| 2012                                  | 67            | 3,378                | -                                     | 3,445     |
| 2011                                  | 5             | 55,686               | -                                     | 55,691    |
| 2010                                  | 24,196        | 39,586               | 7,029                                 | 70,811    |
| 2009                                  | 61,371        | (59,852)             | -                                     | 1,519     |
| 2008*                                 | 66,606        | (15,332)             | -                                     | 51,274    |
| LONG-TERM CARE PROGRAM                |               |                      |                                       |           |
| 2014                                  | \$ 2,998      | \$ 6,970             | \$ 302                                | \$ 10,270 |
| 2013                                  | 2,929         | 4,460                | 277                                   | 7,666     |
| 2012                                  | 11            | 400                  | -                                     | 411       |
| 2011                                  | 1             | 6,167                | -                                     | 6,168     |
| 2010                                  | 6,825         | 3,540                | -                                     | 10,365    |
| 2009                                  | 9,966         | (5,725)              | -                                     | 4,241     |
| 2008*                                 | 11,754        | (1,466)              | 21,070                                | 31,358    |
| TOTAL DISABILITY INSURANCE TRUST FUND |               |                      |                                       |           |
| 2014                                  | \$ 17,391     | \$ 56,573            | \$ 302                                | \$ 74,266 |
| 2013                                  | 16,990        | 39,550               | 277                                   | 56,817    |
| 2012                                  | 78            | 3,778                | -                                     | 3,856     |
| 2011                                  | 6             | 61,853               | -                                     | 61,859    |
| 2010                                  | 31,021        | 43,126               | 7,029                                 | 81,176    |
| 2009                                  | 71,337        | (65,577)             | -                                     | 5,760     |
| 2008*                                 | 78,360        | (16,798)             | 21,070                                | 82,632    |

\* Fiscal year 2008 is the first year for program activity with the current program design.

\*\* Transfers and Other Additions in fiscal year 2008 was a transfer of assets from a fully insured plan. Transfers and Other Additions in fiscal year 2010 include a transfer of \$7,029,000 between long-term care and long-term disability.

## SCHEDULE OF DISABILITY INSURANCE TRUST FUND DEDUCTIONS BY TYPE

FISCAL YEARS 2008 – 2014

(EXPRESSED IN THOUSANDS)

| Year Ended<br>June 30                 | Long-Term<br>Disability<br>Benefits | Long-Term<br>Care<br>and Costs | Third-Party<br>Administrator<br>Administrative<br>Services | VRS<br>Administrative<br>Expenses | Transfers<br>and Other<br>Expenses** | Total     |
|---------------------------------------|-------------------------------------|--------------------------------|--|-----------------------------------|--------------------------------------|-----------|
| LONG-TERM DISABILITY PROGRAM          |                                     |                                |  |                                   |                                      |           |
| 2014                                  | \$ 24,920                           | \$ -                           | \$ 7,830   | \$ 486                            | \$ 39                                | \$ 33,275 |
| 2013                                  | 23,015                              | -                              | 6,320  | 449                               | 26                                   | 29,810    |
| 2012                                  | 20,924                              | -                              | 6,974  | 425                               | 32                                   | 28,355    |
| 2011                                  | 20,050                              | -                              | 7,512  | 585                               | 148                                  | 28,295    |
| 2010                                  | 19,771                              | -                              | 7,191  | 747                               | 25                                   | 27,734    |
| 2009                                  | 19,076                              | -                              | 8,285  | 716                               | -                                    | 28,077    |
| 2008*                                 | 19,675                              | -                              | 8,438  | 583                               | -                                    | 28,696    |
| LONG-TERM CARE PROGRAM                |                                     |                                |  |                                   |                                      |           |
| 2014                                  | \$ -                                | \$ 931                         | \$ -   | \$ 69                             | \$ 15                                | \$ 1,015  |
| 2013                                  | -                                   | 798                            | -  | 57                                | 3                                    | 858       |
| 2012                                  | -                                   | 546                            | -  | 50                                | 4                                    | 600       |
| 2011                                  | -                                   | 624                            | -  | 65                                | 17                                   | 706       |
| 2010                                  | -                                   | 612                            | -  | 67                                | 7,031                                | 7,710     |
| 2009                                  | -                                   | 655                            | -  | 68                                | -                                    | 723       |
| 2008*                                 | -                                   | 3,098                          | -  | 903                               | -                                    | 4,001     |
| TOTAL DISABILITY INSURANCE TRUST FUND |                                     |                                |  |                                   |                                      |           |
| 2014                                  | \$ 24,920                           | \$ 931                         | \$ 7,830   | \$ 555                            | \$ 54                                | \$ 34,290 |
| 2013                                  | 23,015                              | 798                            | 6,320  | 506                               | 29                                   | 30,668    |
| 2012                                  | 20,924                              | 546                            | 6,974  | 475                               | 36                                   | 28,955    |
| 2011                                  | 20,050                              | 624                            | 7,512  | 650                               | 165                                  | 29,001    |
| 2010                                  | 19,771                              | 612                            | 7,191  | 814                               | 7,056                                | 35,444    |
| 2009                                  | 19,076                              | 655                            | 8,285  | 784                               | -                                    | 28,800    |
| 2008*                                 | 19,675                              | 3,098                          | 8,438  | 1,486                             | -                                    | 32,697    |

\* Fiscal year 2008 is the first year for program activity with the current program design.

\*\* Transfers and Other Expenses in fiscal year 2010 includes a transfer of \$7,029,000 between long-term care and long-term disability.

## FIGURE 5.13 – OTHER POST-EMPLOYMENT BENEFIT PLAN STATISTICS

### SCHEDULE OF RETIRED MEMBERS AND BENEFICIARIES BY PLAN

| At<br>June 30 | Group Life<br>Insurance | Retiree Health<br>Insurance<br>Credit | Disability<br>Insurance | Line of Duty* |
|---------------|-------------------------|---------------------------------------|-------------------------|---------------|
| 2014          | 156,549                 | 108,076                               | 2,764                   | 551           |
| 2013          | 149,926                 | 103,952                               | 2,757                   | 536           |
| 2012          | 143,657                 | 99,836                                | 2,722                   | 788           |
| 2011          | 137,784                 | 96,671                                | 2,698                   | 801           |
| 2010          | 130,915                 | 92,126                                | 2,592                   | N/A           |
| 2009**        | 124,646                 | 87,538                                | 2,483                   | N/A           |

\* This was a new program in fiscal year 2011. The reduction in cases resulted from employers that opted out of the Line of Duty program and are self-administering their line of duty cases and funding their benefits.

\*\* Fiscal year 2009 is the first year that this data is available.



FIGURE 5.13 – OTHER POST-EMPLOYMENT BENEFIT PLAN STATISTICS, cont.

SCHEDULE OF AVERAGE BENEFIT PAYMENTS BY PLAN

| Group Life Insurance  |                          |                         | Retiree Health Insurance Credit |                         |                                  |
|-----------------------|--------------------------|-------------------------|---------------------------------|-------------------------|----------------------------------|
| Year Ended<br>June 30 | Number of<br>Claims Paid | Average Claim<br>Amount | Payment<br>Period               | Number of<br>Recipients | Average Monthly<br>Credit Amount |
| 2014                  | 4,259                    | \$ 23,489               | June 2014                       | 108,076                 | \$ 108                           |
| 2013                  | 4,206                    | \$ 21,816               | June 2013                       | 103,952                 | \$ 107                           |
| 2012                  | 4,013                    | \$ 21,737               | June 2012                       | 99,834                  | \$ 107                           |
| 2011                  | 3,999                    | \$ 21,896               | June 2011                       | 96,671                  | \$ 107                           |
| 2010                  | 3,852                    | \$ 22,118               | June 2010                       | 92,125                  | \$ 106                           |
| 2009*                 | 3,650                    | \$ 21,301               | June 2009*                      | 87,537                  | \$ 105                           |

\* Fiscal year 2009 is the first year that this data is available.

\* Fiscal year 2009 is the first year that this data is available.

| Disability Insurance |                          |                                  |                                 |
|----------------------|--------------------------|----------------------------------|---------------------------------|
| Payment<br>Period    | Number of<br>Claims Paid | Average Gross<br>Monthly Benefit | Average Net<br>Monthly Benefit* |
| June 2014            | 2,814                    | \$1,852                          | \$843                           |
| June 2013            | 2,707                    | \$1,852                          | \$814                           |
| June 2012            | 2,683                    | \$1,828                          | \$762                           |
| June 2011            | 2,650                    | \$1,770                          | \$759                           |
| June 2010            | 2,564                    | \$1,738                          | \$779                           |
| June 2009**          | 2,428                    | \$1,714                          | \$797                           |

\* The net monthly benefit reflects adjustments for Social Security, workers' compensation and other offsets.

\*\* Fiscal year 2009 is the first year that this data is available.

Line of Duty \*

| Line of Duty Death Benefits ** |           |                          | Health Insurance Benefits |                               |   |
|--------------------------------|-----------|--------------------------|---------------------------|-------------------------------|---|
| Year Ended<br>June 30          | LOD Death | Presumptive<br>LOD Death | Year Ended<br>June 30     | Number of<br>Active<br>Claims | Average Annual<br>Health Insurance<br>Benefit |
| 2014                           | 3         | 2                        | 2014                      | 573                           | \$ 12,725                                     |
| 2013                           | 2         | 3                        | 2013                      | 552                           | \$ 10,807                                     |
| 2012                           | 4         | 4                        | 2012                      | 781                           | \$ 12,298                                     |
| 2011***                        | 6         | 11                       | 2011                      | 801                           | \$ 11,138                                     |

\* The Line of Duty Program was funded by a trust fund beginning in fiscal year 2011. In that year and fiscal year 2012, employers had the option to opt-out and self-fund the benefits provided by the program. Data for fiscal year 2011 and fiscal year 2012 are not representative of the program's expected activity going forward.

\*\* The Line of Duty Program provides a \$100,000 death benefit for an eligible individual whose death was 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.

\*\*\* Fiscal year 2011 is the first year that this data is available.

## 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, 2014:

### PARTICIPATING POLITICAL SUBDIVISIONS: 453

*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 - B     | 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 - B         | 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 - B        | 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 - B       | 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 - B        | 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 - B       | Wythe County - C        |
| Clarke County - B       | James City County - C    | Prince Edward County - B  | York County - C         |
| Craig County - C        | King & Queen County - B  | 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: 162

|                              |                           |                            |                           |
|------------------------------|---------------------------|----------------------------|---------------------------|
| City of Alexandria - A       | City of Hampton - B       | City of Radford - C        | Town of Appomattox - A    |
| City of Bedford - B          | City of Harrisonburg - B  | City of Richmond - B       | Town of Ashland - B       |
| City of Bristol - B          | City of Hopewell - B      | City of Roanoke - C        | Town of Berryville - B    |
| City of Buena Vista - B      | City of Lexington - B     | City of Salem - B          | Town of Big Stone Gap - A |
| City of Chesapeake - B       | City of Lynchburg - B     | City of Staunton - B       | Town of Blacksburg - B    |
| City of Colonial Heights - B | City of Manassas - C      | City of Suffolk - B        | Town of Blackstone - B    |
| City of Covington - C        | City of Manassas Park - B | City of Virginia Beach - B | Town of Bluefield - B     |
| City of Danville - A         | City of Martinsville - B  | City of Waynesboro - B     | Town of Bowling Green - B |
| City of Emporia - B          | City of Newport News - B  | City of Williamsburg - B   | Town of Boyce - B         |
| City of Fairfax - A          | City of Norfolk - B       | City of Winchester - C     | Town of Boydton - B       |
| City of Falls Church - B     | City of Norton - B        | Town of Abingdon - B       | Town of Boykins - A       |
| City of Franklin - B         | City of Petersburg - B    | Town of Alberta - B        | Town of Bridgewater - B   |
| City of Fredericksburg - B   | City of Poquoson - C      | Town of Altavista - B      | Town of Broadway - B      |
| City of Galax - B            | City of Portsmouth - B    | Town of Amherst - B        | Town of Brodnax - A       |

CITIES AND TOWNS, cont.

|                            |                           |                            |                           |
|----------------------------|---------------------------|----------------------------|---------------------------|
| Town of Brookneal - B      | Town of Gordonsville - B  | Town of Middleburg - B     | Town of Smithfield - B    |
| Town of Burkeville - B     | Town of Gretna - B        | Town of Middletown - D     | Town of South Boston - B  |
| Town of Cape Charles - B   | Town of Grottoes - B      | Town of Mineral - A        | Town of South Hill - A    |
| Town of Chase City - B     | Town of Grundy - B        | Town of Montross - B       | Town of St. Paul - B      |
| Town of Chatham - B        | Town of Halifax - B       | Town of Mt. Jackson - B    | Town of Stanley - C       |
| Town of Chilhowie - B      | Town of Hamilton - C      | Town of Narrows - A        | Town of Stephens City - B |
| Town of Chincoteague - B   | Town of Haymarket - A     | Town of New Market - B     | Town of Strasburg - C     |
| Town of Christiansburg - A | Town of Haysi - A         | Town of Onancock - B       | Town of Stuart - B        |
| Town of Clarksville - B    | Town of Herndon - B       | Town of Onley - B          | Town of Tappahannock - A  |
| Town of Clifton Forge - B  | Town of Hillsville - B    | Town of Orange - B         | Town of Tazewell - A      |
| Town of Coeburn - B        | Town of Hurt - B          | Town of Parksley - B       | Town of Timberville - B   |
| Town of Colonial Beach - B | Town of Independence - A  | Town of Pearisburg - C     | Town of Urbanna - B       |
| Town of Courtland - B      | Town of Iron Gate - B     | Town of Pembroke - B       | Town of Victoria - B      |
| Town of Craigsville - B    | Town of Jarratt - A       | Town of Pennington Gap - A | Town of Vienna - B        |
| Town of Crewe - B          | Town of Jonesville - B    | Town of Pound - A          | Town of Vinton - B        |
| Town of Culpeper - B       | Town of Kenbridge - C     | Town of Pulaski - B        | Town of Wakefield - A     |
| Town of Dayton - B         | Town of Kilmarnock - C    | Town of Purcellville - B   | Town of Warrenton - B     |
| Town of Dillwyn - A        | Town of La Crosse - A     | Town of Quantico - B       | Town of Warsaw - B        |
| Town of Dublin - B         | Town of Lawrenceville - C | Town of Remington - B      | Town of Waverly - A       |
| Town of Dumfries - C       | Town of Lebanon - A       | Town of Rich Creek - A     | Town of Weber City - B    |
| Town of Edinburg - A       | Town of Leesburg - B      | Town of Richlands - A      | Town of West Point - B    |
| Town of Elkton - B         | Town of Louisa - B        | Town of Rocky Mount - B    | Town of Windsor - B       |
| Town of Exmore - A         | Town of Lovettsville - B  | Town of Round Hill - B     | Town of Wise - B          |
| Town of Floyd - B          | Town of Luray - B         | Town of Rural Retreat - A  | Town of Woodstock - C     |
| Town of Front Royal - B    | Town of Madison - B       | Town of Saltville - A      | Town of Wytheville - B    |
| Town of Gate City - A      | Town of Marion - B        | Town of Scottsville - B    |                           |
| Town of Glasgow - B        | Town of McKenney - B      | Town of Shenandoah - C     |                           |

AUTHORITIES, COMMISSIONS, DISTRICTS, REGIONAL INSTITUTIONS AND COMMUNITY SERVICES BOARDS: 198

|   |   |   |  |
|---|---|---|--|
| Accomack-Northampton Planning District Commission - B | Bedford Public Library - B                          | Campbell County Utilities & Service Authority - B     | Chesterfield County Health Center Commission - B           |
| Albemarle County Service Authority - B                | Big Sandy Soil & Water Conservation District - A    | Capital Region Airport Commission - B                 | Clinch Valley Soil & Water Conservation District - B       |
| Albemarle-Charlottesville Regional Jail - B           | Big Stone Gap Redevelopment & Housing Authority - A | Castlewood Water & Sewage Authority - B               | Coeburn-Norton-Wise Regional Water Treatment Authority - B |
| Alexandria Redevelopment & Housing Authority - B      | Big Walker Soil & Water Conservation District - A   | Central Rappahannock Regional Library - B             | Colonial Behavioral Health - C                             |
| Alexandria Renew Enterprises - A                      | Blacksburg-Christiansburg-VPI Water Authority - B   | Central Virginia Community Services Board - B         | Colonial Soil & Water Conservation District - B            |
| Alleghany Highlands Community Services Board - B      | Blacksburg-VPI Sanitation Authority - B             | Central Virginia Regional Jail - B                    | Commonwealth Regional Council - A                          |
| Amherst County Service Authority - C                  | Blue Ridge Behavioral Healthcare - B                | Central Virginia Waste Management Authority - C       | Crater Youth Care Commission - B                           |
| Anchor Commission - B                                 | Blue Ridge Juvenile Detention Center - B            | Charles Pinckney Jones Memorial Library - B           | Culpeper Soil & Water Conservation District - B            |
| Appalachian Juvenile Commission - C                   | Blue Ridge Regional Jail Authority - B              | Charlottesville-Albemarle Airport Authority - B       | Cumberland Mountain Community Services Board - B           |
| Appomattox Regional Library - B                       | Bristol Redevelopment & Housing Authority - B       | Charlottesville Redevelopment & Housing Authority - B | Cumberland Plateau Regional Housing Authority - B          |
| Appomattox River Water Authority - B                  | Bristol Virginia Utilities Authority - B            | Chesapeake Bay Bridge & Tunnel District - B           | Daniel Boone Soil & Water Conservation District - B        |
| Augusta County Service Authority - B                  | Brunswick Industrial Development Authority - B      | Chesapeake Redevelopment & Housing Authority - B      | Danville-Pittsylvania Community Services Board - B         |

AUTHORITIES, COMMISSIONS, DISTRICTS, REGIONAL INSTITUTIONS AND COMMUNITY SERVICES BOARDS, cont.

|   |   |  |  |
|---|---|--|--|
| Danville Redevelopment & Housing Authority - B        | Hopewell Redevelopment & Housing Authority - A              | Northern Neck-Essex County Group Home Commission - B           | Region Ten Community Services Board - B                  |
| Dinwiddie County Water Authority - B                  | Institute for Advanced Learning and Research - A            | Northern Neck Regional Jail - B                                | Richmond Metropolitan Authority - B                      |
| District 19 Community Services Board - C              | James City Service Authority - C                            | Northern Shenandoah Valley Regional Commission - B             | Richmond Redevelopment & Housing Authority - B           |
| Eastern Shore Community Services Board - B            | John Marshall Soil & Water Conservation District - B        | Northern Virginia Health Care Center Commission - A            | Richmond Regional Planning District Commission - A       |
| Eastern Shore Public Library - B                      | Lee County Redevelopment & Housing Authority - B            | Northern Virginia Juvenile Detention Home - B                  | Rivanna Solid Waste Authority - B                        |
| Eastern Shore Soil & Water Conservation District - B  | Lee County Public Service Authority - B                     | Northwestern Community Services Board - B                      | Rivanna Water & Sewer Authority - B                      |
| Economic Development Authority of Henrico County - B  | Lenowisco Planning District Commission - B                  | Opportunity Inc. of Hampton Roads - B                          | Riverside Regional Jail - B                              |
| Evergreen Soil & Water Conservation District - B      | Lonesome Pine Regional Library - B                          | Pamunkey Regional Jail - B                                     | Roanoke Higher Education Authority - C                   |
| Fauquier County Water & Sanitation Authority - B      | Lonesome Pine Soil & Water Conservation District - A        | Peaks of Otter Soil & Water Conservation District - B          | Roanoke Redevelopment & Housing Authority - A            |
| Ferrum Water & Sewage Authority - A                   | Loudoun County Sanitation Authority - B                     | Peninsula Airport Commission - B                               | Roanoke River Service Authority - A                      |
| Franklin Redevelopment & Housing Authority - B        | Massanutten Regional Library - B                            | Pepper's Ferry Regional Wastewater Authority - C               | Robert E. Lee Soil & Water Conservation District - A     |
| Frederick County Sanitation Authority - C             | Meherrin Regional Library - C                               | Peter Francisco Soil & Water Conservation District - A         | Rockbridge Area Community Services Board - B             |
| Giles County Public Service Authority - B             | Meherrin River Regional Jail Authority - C                  | Petersburg Redevelopment & Housing Authority - C               | Rockbridge Area Social Services Department - B           |
| Goochland-Powhatan Community Services Board - B       | Middle Peninsula-Northern Neck Community Services Board - B | Peumansend Creek Regional Jail - B                             | Rockbridge County Public Service Authority - B           |
| Greensville County Water & Sewer Authority - C        | Middle Peninsula Planning District Commission - B           | Piedmont Community Services Board - B                          | Rockbridge Regional Library - A                          |
| Greensville-Emporia Department of Social Services - C | Middle Peninsula Regional Security Center - B               | Piedmont Regional Jail - B                                     | Russell County Public Service Authority - C              |
| Halifax Service Authority - B                         | Middle River Regional Jail Authority - B                    | Piedmont Regional Juvenile Detention Center - B                | Scott County Public Service Authority - B                |
| Hampton-Newport News Community Services Board - A     | Monacan Soil & Water Conservation District - C              | Pittsylvania County Service Authority - B                      | Scott County Redevelopment & Housing Authority - B       |
| Hampton Redevelopment & Housing Authority - B         | Montgomery Regional Solid Waste Authority - B               | Planning District One Behavioral Health Services Board - C     | Scott County Soil & Water Conservation District - B      |
| Hampton Roads Planning District Commission - B        | Mount Rogers Community Services Board - B                   | Portsmouth Redevelopment & Housing Authority - B               | Shenandoah Valley Juvenile Detention Home Commission - C |
| Hampton Roads Regional Jail Authority - B             | Nelson County Service Authority - B                         | Potomac and Rappahannock Transportation Commission - B         | Shenandoah Valley Regional Airport Commission - B        |
| Hampton Roads Sanitation District - C                 | New River Resource Authority - C                            | Potomac River Fisheries Commission - B                         | Skyline Soil & Water Conservation District - A           |
| Hampton Roads Transit - B                             | New River Soil & Water Conservation District - B            | Prince William County Service Authority - C                    | South Central Wastewater Authority - B                   |
| Handley Regional Library - B                          | New River Valley Community Services Board - A               | Prince William Soil & Water Conservation District - B          | Southeastern Virginia Public Service Authority - B       |
| Harrisonburg-Rockingham Community Services Board - C  | New River Valley Juvenile Detention Home Commission - B     | Rappahannock Area Community Services Board - C                 | Southside Community Services Board - C                   |
| Harrisonburg-Rockingham Regional Sewer Authority - B  | New River Valley Planning District Commission - A           | Rappahannock Juvenile Center - C                               | Southside Planning District Commission - B               |
| Henricopolis Soil & Water Conservation District - B   | New River Valley Regional Jail - B                          | Rappahannock-Rapidan Community Services Board - B              | Southside Regional Jail - C                              |
| Henry County Public Service Authority - C             | Norfolk Airport Authority - B                               | Rappahannock-Rapidan Regional Planning District Commission - B | Southside Regional Juvenile Group Home Commission - B    |
| Holston River Soil & Water Conservation District - A  | Norfolk Redevelopment & Housing Authority - B               | Rappahannock Regional Jail - B                                 |  |

AUTHORITIES, COMMISSIONS, DISTRICTS, REGIONAL INSTITUTIONS AND COMMUNITY SERVICES BOARDS, cont.

|  |   |  |   |
|--|---|--|---|
| Southside Regional Library Board - B                           | Thomas Jefferson Soil & Water Conservation District - B | Virginia Peninsula Regional Jail - B                       | Western Virginia Regional Jail Authority - C      |
| Southwest Regional Recreation Authority - B                    | Tidewater Soil & Water Conservation District - A        | Virginia Peninsulas Public Service Authority - B           | Western Virginia Water Authority - B              |
| Southwest Virginia Regional Jail - B                           | Tidewater Youth Services Commission - C                 | Virginia Resources Authority - B                           | Wise County Public Service Authority - B          |
| Spotsylvania-Stafford-Fredericksburg Group Home Commission - B | Tri-County/City Soil & Water Conservation District - B  | Virginia's Region 2000 Local Government Council - B        | Wise County Redevelopment & Housing Authority - C |
| Staunton Redevelopment & Housing Authority - B                 | Upper Occoquan Sewage Authority - B                     | Washington County Service Authority - B                    | Woodway Water Authority - B                       |
| Suffolk Redevelopment & Housing Authority - B                  | Valley Community Services Board - B                     | Washington Metropolitan Area Transportation Commission - A | Wythe-Grayson Regional Library - B                |
| Sussex Service Authority - B                                   | Virginia Biotechnology Research Park Authority - C      | Waynesboro Redevelopment & Housing Authority - B           | Wytheville Redevelopment & Housing Authority - B  |
| Tazewell Soil & Water Conservation District - B                | Virginia Coalfield Economic Development Authority - C   | Western Tidewater Community Services Board - D             |   |
| Thomas Jefferson Planning District Commission - B              | Virginia Highlands Airport Commission - B               | Western Tidewater Regional Jail - B                        |   |

**SCHOOLS: 145**

*E: professional employees covered by retirement, group life insurance and the retiree health insurance credit and non-professional employees (as applicable) covered by retirement and group life insurance F: professional and non-professional employees covered by retirement, group life insurance and the retiree health insurance credit*

COUNTY SCHOOLS: 94

|                                 |                                  |                                   |                                   |
|---------------------------------|----------------------------------|-----------------------------------|-----------------------------------|
| Accomack County Schools - E     | Cumberland County Schools - E    | King William County Schools - E   | Prince William County Schools - F |
| Albemarle County Schools - E    | Dickenson County Schools - E     | Lancaster County Schools - E      | Pulaski County Schools - E        |
| Alleghany County Schools - E    | Dinwiddie County Schools - E     | Lee County Schools - F            | Rappahannock County Schools - F   |
| Amelia County Schools - E       | Essex County Schools - E         | Loudoun County Schools - F        | Richmond County Schools - E       |
| Amherst County Schools - E      | Fairfax County Schools - E       | Louisa County Schools - F         | Roanoke County Schools - E        |
| Appomattox County Schools - F   | Fauquier County Schools - E      | Lunenburg County Schools - E      | Rockbridge County Schools - E     |
| Arlington County Schools - E    | Floyd County Schools - E         | Madison County Schools - E        | Rockingham County Schools - F     |
| Augusta County Schools - E      | Fluvanna County Schools - E      | Mathews County Schools - E        | Russell County Schools - F        |
| Bath County Schools - F         | Franklin County Schools - F      | Mecklenburg County Schools - E    | Scott County Schools - E          |
| Bedford County Schools - E      | Frederick County Schools - E     | Middlesex County Schools - E      | Shenandoah County Schools - E     |
| Bland County Schools - E        | Giles County Schools - E         | Montgomery County Schools - E     | Smyth County Schools - E          |
| Botetourt County Schools - F    | Gloucester County Schools - F    | Nelson County Schools - E         | Southampton County Schools - E    |
| Brunswick County Schools - F    | Goochland County Schools - E     | New Kent County Schools - E       | Spotsylvania County Schools - E   |
| Buchanan County Schools - E     | Grayson County Schools - E       | Northampton County Schools - E    | Stafford County Schools - F       |
| Buckingham County Schools - E   | Greene County Schools - E        | Northumberland County Schools - E | Surry County Schools - E          |
| Campbell County Schools - F     | Greensville County Schools - E   | Nottoway County Schools - E       | Sussex County Schools - E         |
| Caroline County Schools - E     | Halifax County Schools - F       | Orange County Schools - E         | Tazewell County Schools - E       |
| Carroll County Schools - F      | Hanover County Schools - E       | Page County Schools - E           | Warren County Schools - E         |
| Charles City County Schools - E | Henrico County Schools - E       | Patrick County Schools - E        | Washington County Schools - F     |
| Charlotte County Schools - E    | Henry County Schools - E         | Pittsylvania County Schools - E   | Westmoreland County Schools - E   |
| Chesterfield County Schools - E | Highland County Schools - E      | Powhatan County Schools - E       | Wise County Schools - F           |
| Clarke County Schools - E       | Isle of Wight County Schools - E | Prince Edward County Schools - E  | Wythe County Schools - F          |
| Craig County Schools - E        | King & Queen County Schools - E  | Prince George County Schools - E  | York County Schools - E           |
| Culpeper County Schools - F     | King George County Schools - E   |                                   |                                   |

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**CITY AND TOWN SCHOOLS: 39**

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|                                    |                                 |                                 |   |
|------------------------------------|---------------------------------|---------------------------------|---|
| Alexandria City Schools - E        | Franklin City Schools - F       | Newport News Public Schools - E | Suffolk City Schools - E                      |
| Bristol City Schools - E           | Fredericksburg City Schools - E | Norfolk Public Schools - E      | Virginia Beach City Schools - E               |
| Buena Vista City Schools - E       | Galax City Schools - E          | Norton City Schools - E         | Waynesboro City Schools - E                   |
| Charlottesville Public Schools - E | Hampton City Schools - E        | Petersburg City Schools - E     | West Point Schools - E                        |
| Chesapeake Public Schools - E      | Harrisonburg City Schools - E   | Poquoson City Schools - F       | Williamsburg-James City County<br>Schools - F |
| Colonial Beach Schools - E         | Hopewell City Schools - E       | Portsmouth City Schools - E     | Winchester Public Schools - F                 |
| Colonial Heights City Schools - E  | Lexington City Schools - E      | Radford City Schools - E        |   |
| Covington City Schools - F         | Lynchburg Public Schools - E    | Richmond Public Schools - E     |   |
| Danville City Schools - E          | Manassas City Schools - F       | Roanoke City Schools - F        |   |
| Fairfax City Schools - E           | Manassas Park City Schools - F  | Salem City Schools - F          |   |
| Falls Church Public Schools - E    | Martinsville City Schools - E   | Staunton City Schools - F       |   |

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**OTHER SCHOOLS: 12**

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|  |  |   |  |
|--|--|---|--|
| Amelia-Nottoway Vocational<br>Center - E                                 | Charlottesville-Albemarle<br>Vocational Technical Center - E                       | New Horizons Technical Center - E                       | The Pruden Center for Industry<br>and Technology - E |
| Appomattox Regional Governor's<br>School - E                             | Jackson River Vocational<br>Technical Center - F                                   | Northern Neck Regional Special<br>Education Program - E | Valley Vocational Technical<br>Center - E            |
| Bridging Communities Regional<br>Career Center & Technical<br>Center - E | Maggie Walker Governor's School<br>for Government and<br>International Studies - E | Northern Neck Regional<br>Vocational Center - E         |  |
|  |  | Rowanty Vocational Technical<br>Center - E              |  |

*Of the 145 school boards, 133 also provide coverage for non-professional employees and are treated as political subdivisions.*

**AGENCIES OF THE COMMONWEALTH OF VIRGINIA, INCLUDING PUBLIC COLLEGES  
AND UNIVERSITIES: 226**

*Covered by retirement, group life insurance, retiree health insurance credit and sickness and disability*

**TOTAL VRS-PARTICIPATING EMPLOYERS: 824**

## FIGURE 5.14 – VRS EMPLOYER RANKING

### CURRENT YEAR

AS OF JUNE 30, 2014

| Employer   | Active Employees | Percentage of Total |
|--|------------------|---------------------|
| 1. Fairfax County Schools – Professional Employees                 | 21,506           | 6.30%               |
| 2. Virginia Beach City Schools – Professional Employees            | 8,058            | 2.36%               |
| 3. Loudoun County Schools – Professional Employees                 | 7,984            | 2.34%               |
| 4. Prince William County Schools – Professional Employees          | 7,970            | 2.33%               |
| 5. City of Virginia Beach – General Government                     | 5,962            | 1.75%               |
| 6. Chesterfield County Schools – Professional Employees            | 5,952            | 1.74%               |
| 7. University of Virginia – Academic Division                      | 5,166            | 1.51%               |
| 8. Henrico County Schools – Professional Employees                 | 5,124            | 1.50%               |
| 9. Henrico County – General Government                             | 4,942            | 1.45%               |
| 10. Virginia Polytechnic Institute and State University – Academic | 4,772            | 1.40%               |
| 11. All other  | 264,063          | 77.32%              |
| <b>Total</b>   | <b>341,499</b>   | <b>100.00%</b>      |

### HISTORICAL COMPARISON

AS OF JUNE 30, 2005\*

| Employer   | Active Employees | Percentage of Total |
|--|------------------|---------------------|
| 1. Fairfax County Schools – Professional Employees                 | 18,821           | 5.81%               |
| 2. Virginia Beach City Schools – Professional Employees            | 8,401            | 2.59%               |
| 3. Prince William County Schools – Professional Employees          | 6,558            | 2.02%               |
| 4. Chesterfield County Schools – Professional Employees            | 5,660            | 1.75%               |
| 5. City of Virginia Beach – General Government                     | 5,655            | 1.75%               |
| 6. University of Virginia – Academic Division                      | 5,248            | 1.62%               |
| 7. Loudoun County Schools – Professional Employees                 | 5,163            | 1.59%               |
| 8. Norfolk City Schools – Professional Employees                   | 4,960            | 1.53%               |
| 9. Henrico County – General Government                             | 4,526            | 1.40%               |
| 10. Virginia Polytechnic Institute and State University – Academic | 4,493            | 1.39%               |
| 11. All other  | 254,540          | 78.55%              |
| <b>Total</b>   | <b>324,025</b>   | <b>100.00%</b>      |

\* Fiscal year 2005 is the earliest year for which information exists to support this detailed presentation by specific employer.

# 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.

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 5.15 – STATEMENT OF CHANGES IN PLAN ACCUMULATION ASSETS

FOR THE YEARS ENDED JUNE 30

|                                    | Deferred Compensation Plan – 457(b) |                         | Cash Match Plan – 401(a) |                       |
|------------------------------------|-------------------------------------|-------------------------|--------------------------|-----------------------|
|                                    | 2014                                | 2013                    | 2014                     | 2013                  |
| Plan Assets on July 1              | \$ 1,741,845,322                    | \$ 1,528,232,980        | \$ 302,484,937           | \$ 259,611,643        |
| Contributions                      | 129,879,195                         | 128,720,554             | 17,654,309               | 17,424,822            |
| Distributions                      | (103,153,207)                       | (79,590,047)            | (18,281,127)             | (16,004,308)          |
| Plan Transfers*                    | 2,044,169                           | 928,134                 | 10,613,093               | 15,598,642            |
| Third-Party Administrative Fees ** | (2,328,590)                         | (2,449,461)             | (290,504)                | (472,879)             |
| Period Earnings                    | 258,588,473                         | 166,003,162             | 41,107,233               | 26,327,017            |
| <b>Plan Assets on June 30</b>      | <b>\$ 2,026,875,362</b>             | <b>\$ 1,741,845,322</b> | <b>\$ 353,287,941</b>    | <b>\$ 302,484,937</b> |

\* 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, ICMA-RC, 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 \$676,533 and \$665,028 in fiscal year 2014 and fiscal year 2013, respectively. For the Cash Match Plan they were \$474,645 and \$473,073 in fiscal year 2014 and fiscal year 2013, respectively. These costs are funded by the employers participating in the plans.



**ELIGIBILITY**

New and re-hired salaried state employees 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 to salaried state employees hired before January 1, 2008, and to 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 5.15 presents details of each plan’s activity for the years ended June 30, 2014, and 2013.

Contributions to the Deferred Compensation Plan during fiscal year 2014 and fiscal year 2013

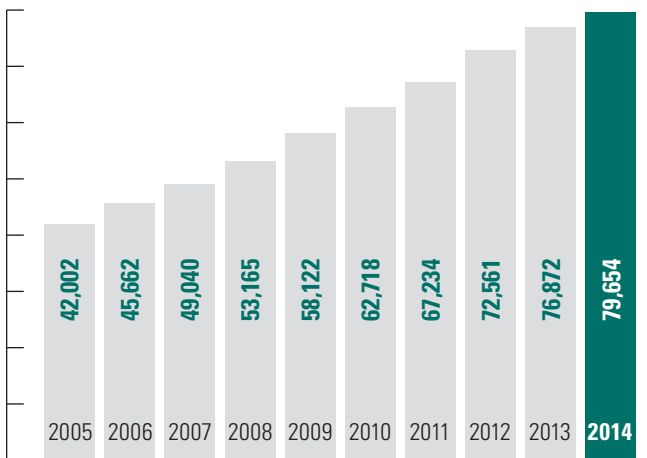
were \$129,879,195 and \$128,720,554, respectively. Contributions to the Cash Match Plan during fiscal year 2014 and fiscal year 2013 were \$17,654,309 and \$17,424,822, respectively.

As shown in Figures 5.16 and 5.17, there were approximately 79,654 employees in the Deferred Compensation Plan and 74,946 employees in the Cash Match Plan as of June 30, 2014.

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 123 plan participants used the trustee-to-trustee transfer provision to buy VRS service credit.

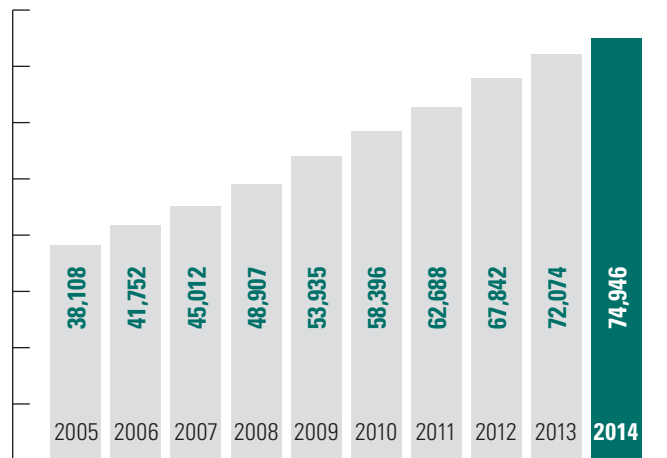
**FIGURE 5.16 – 457(b) ACTIVE AND INACTIVE PLAN PARTICIPANTS**

AT JUNE 30 (EXPRESSED IN THOUSANDS)



**FIGURE 5.17 – 401(a) ACTIVE AND INACTIVE PLAN PARTICIPANTS**

AT JUNE 30 (EXPRESSED IN THOUSANDS)



## FIGURE 5.18 – TOTAL PARTICIPANT ACCOUNTS IN EACH FUND OPTION

AT JUNE 30, 2014

(EXPRESSED IN THOUSANDS)

| Fund Name                     | Deferred Compensation Plan – 457(b) | Cash Match Plan – 401(a) |
|-------------------------------|-------------------------------------|--------------------------|
| Retirement Portfolio          | 3,358                               | 2,597                    |
| Target Date 2015 Portfolio    | 2,615                               | 2,141                    |
| Target Date 2020 Portfolio    | 5,654                               | 4,899                    |
| Target Date 2025 Portfolio    | 6,235                               | 5,484                    |
| Target Date 2030 Portfolio    | 6,230                               | 5,474                    |
| Target Date 2035 Portfolio    | 6,237                               | 5,507                    |
| Target Date 2040 Portfolio    | 5,814                               | 5,177                    |
| Target Date 2045 Portfolio    | 6,422                               | 5,767                    |
| Target Date 2050 Portfolio    | 6,753                               | 6,158                    |
| Target Date 2055 Portfolio    | 4,125                               | 3,930                    |
| Money Market Fund             | 4,747                               | 3,741                    |
| Stable Value Fund             | 20,507                              | 21,084                   |
| Bond Fund                     | 10,311                              | 7,848                    |
| Inflation-Protected Bond Fund | 4,272                               | 2,986                    |
| High-Yield Bond Fund          | 4,318                               | 2,865                    |
| Stock Fund                    | 25,232                              | 21,734                   |
| Small/Mid-Cap Stock Fund      | 13,425                              | 10,622                   |
| International Stock Fund      | 12,524                              | 9,714                    |
| Emerging Markets Stock Fund   | 1,386                               | 686                      |
| Global Real Estate Fund       | 8,930                               | 6,901                    |
| VRS Investment Portfolio      | 1,679                               | 1,092                    |
| Self-Directed Brokerage       | 336                                 | 49                       |

*The number of participant accounts exceeds the number of participants as a participant may invest in more than one fund.*



## FIGURE 5.19 – ACCUMULATION PLAN ASSETS BY FUND

FOR THE YEAR ENDED JUNE 30, 2014

| Fund Name                                     | Deferred Compensation Plan – 457(b) |                         | Cash Match Plan – 401(a) |                       |
|---|-------------------------------------|-------------------------|--------------------------|-----------------------|
|   | 2014                                | 2013                    | 2014                     | 2013                  |
| Retirement Portfolio                          | \$ 89,948,245                       | \$ 87,711,899           | \$ 13,499,498            | \$ 12,758,228         |
| Target Date 2015 Portfolio                    | 51,898,275                          | 44,479,900              | 7,542,049                | 6,558,438             |
| Target Date 2020 Portfolio                    | 87,735,414                          | 69,030,653              | 14,491,015               | 11,327,092            |
| Target Date 2025 Portfolio                    | 62,588,283                          | 47,156,926              | 11,794,733               | 9,122,905             |
| Target Date 2030 Portfolio                    | 43,644,322                          | 31,325,436              | 10,053,110               | 7,719,799             |
| Target Date 2035 Portfolio                    | 34,575,922                          | 25,293,156              | 9,363,090                | 7,128,274             |
| Target Date 2040 Portfolio                    | 24,401,410                          | 16,740,785              | 6,690,708                | 4,826,263             |
| Target Date 2045 Portfolio                    | 16,515,238                          | 11,568,287              | 5,757,396                | 4,005,551             |
| Target Date 2050 Portfolio                    | 11,272,850                          | 7,424,593               | 4,274,299                | 2,777,230             |
| Target Date 2055 Portfolio                    | 6,198,398                           | 3,054,275               | 1,691,867                | 838,204               |
| Money Market Fund                             | 36,528,539                          | 37,048,723              | 5,997,599                | 5,811,203             |
| Stable Value Fund                             | 375,728,991                         | 376,500,260             | 93,031,775               | 90,827,125            |
| Bond Fund                                     | 98,975,281                          | 101,739,439             | 12,831,395               | 13,043,214            |
| Inflation-Protected Bond Fund                 | 33,080,531                          | 36,854,027              | 3,373,189                | 3,832,883             |
| High-Yield Bond Fund                          | 24,835,102                          | 22,041,323              | 3,499,405                | 3,009,729             |
| Stock Fund                                    | 575,358,557                         | 464,067,854             | 88,125,771               | 70,461,482            |
| Small/Mid-Cap Stock Fund                      | 200,491,298                         | 154,050,693             | 27,264,072               | 20,805,564            |
| International Stock Fund                      | 123,496,662                         | 97,655,593              | 15,309,496               | 11,989,232            |
| Emerging Markets Stock Fund                   | 8,506,685                           | 4,905,915               | 675,130                  | 501,227               |
| Global Real Estate Fund                       | 79,545,789                          | 72,379,586              | 12,332,598               | 10,794,187            |
| VRS Investment Portfolio –<br>Interim Account | 1,317,922                           | 429,109                 | 67,436                   | 74,065                |
| VRS Investment Portfolio                      | 14,923,653                          | 11,647,963              | 5,037,873                | 3,875,334             |
| Self-Directed Brokerage                       | 25,307,995                          | 18,738,927              | 584,437                  | 397,708               |
| <b>Total Accumulation<br/>Plan Assets</b>     | <b>\$ 2,026,875,362</b>             | <b>\$ 1,741,845,322</b> | <b>\$ 353,287,941</b>    | <b>\$ 302,484,937</b> |

Detailed information on each of these funds, including the investment objective and distribution of assets for each fund, and the investment performance and annual operating expense for each fund, is presented in the Investment Section of this report.



Virginia  
Retirement  
System

**Virginia Retirement System**

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