# 2015

# FAIRFAX COUNTY

# EMPLOYEES' RETIREMENT SYSTEM

*A Pension Trust Fund of Fairfax County, Virginia*

COUNTY OF FAIRFAX
FARE FAC
1742
VIRGINIA

## Comprehensive Annual Financial Report

**For the Fiscal Year Ended June 30, 2015**

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County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

November 24, 2015

Dear Members of the Board of Trustees:

I am pleased to submit to you the annual report of the Fairfax County Employees' Retirement System (System) for the fiscal year ended June 30, 2015. This annual report is provided as an aid to understanding the structure and evaluating the status of the System. The System's management is responsible for the accuracy of financial information contained herein. The Management's Discussion and Analysis provides further detail to the financial statements.

**Background**

The Fairfax County Supplemental Retirement System was established on July 1, 1955. On February 26, 2001, the name of the System was changed to the Fairfax County Employees' Retirement System. In previous years, Fairfax County Employees' Retirement System reported the plan as a cost-sharing multiple employer defined benefit plan. With the implementation of GASB 67 in the previous fiscal year ended June 30, 2014, the System is now considered as a single employer public employee retirement system providing defined benefit pension plan coverage to full-time and certain part-time Fairfax County and Fairfax County Public Schools employees who are not covered by the Fairfax County Police Officers Retirement System, the Fairfax County Uniformed Retirement System, the Educational Employees' Supplementary Retirement System of Fairfax County (ERFC) or the Virginia Retirement System (VRS). There were 13,696 active members, 644 in the Deferred Retirement Option Program (DROP) and 8,020 retirees participating in the System as of June 30, 2015. For calculations surrounding the Total Pension Liability and its components, Cheiron used rollforward techniques with the June 30, 2014, valuation as a starting point. As such, their results were based on the active, DROP, and retiree counts disclosed as of that date.

**Provisions**

The benefit provisions of the System are established by County Ordinance. The System provides normal service retirement and early service retirement benefits for members who attain age or service requirements. Coverage for service-connected disability benefits is immediate upon membership in the System. Ordinary (non-service-related) disability benefits are provided after the attainment of five years of service. Members are vested after five years of service and are eligible for benefits at the early or normal service retirement date.

**Fairfax County Retirement Systems**
10680 Main Street ∗ Suite 280 ∗ Fairfax, VA 22030
Phone: 703-279-8200∗1-800-333-1633∗Fax: 703-273-3185
*www.fairfaxcounty.gov/retirement/*

**Capital Markets and Economic Conditions**

In fiscal year 2015, the System's investment returns were challenged by market downturns in a number of asset classes. In particular, the effect of steep declines in oil prices pushed commodities investments down 23.7 percent for the year. The System's portfolio return for the year was only 0.8% (0.45 %, net of fees), significantly lagging the long term return target of 7.5%. This return was below the median public fund return of 3.1% and placed in the 90th percentile of the BNY Mellon universe of public funds. However, over the long term, returns compared more favorably, with investment returns for the ten-year period at 7.6% per year, ranking the fund in the top 7th percentile of all other public funds in the BNY Mellon universe.

Additional details on the markets and the System's investments are provided in the Investment Section.

**Internal and Budgetary Controls**

The System's management is responsible for the financial information presented in this report in accordance with U.S. generally accepted accounting principles. Proper internal accounting controls exist to provide reasonable, but not absolute, assurance for both the safekeeping of assets and the fair presentation of the financial statements. The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived and that the valuation of costs and benefits requires estimates and judgments by management.

**Investment Policies and Strategies**

The Board of Trustees has an adopted Statement of Investment Objectives and Policy. This Statement establishes the investment goals, guidelines, constraints and performance standards that the Board of Trustees uses when exercising its fiduciary duties to manage the investment assets of the System. The Board operates in conformity with the standard of care required in making investments as stated in the Code of Virginia §51.1-803. Please see Footnote 3 in the Financial Section of this report for a description of this standard of care and details on the System's investment policies and strategies.

The Board receives quarterly reporting from staff to ensure compliance with its stated objectives and policy. Staff also monitors the performance of the System and its investment managers and updates the Board on a monthly basis throughout the year. Rate of return information is in the Investment Section prepared internally by staff using data from the System and investment managers.

Securities of the System, except for the pooled funds and the County's pooled cash and temporary investments, are held in safekeeping, on the System's behalf, by BNY Mellon Asset Servicing as agent. The BNY Mellon Financial Corporation, the parent company, carries Financial Institution bond insurance coverage including a Computer Crime Policy. An additional Excess Securities policy covers all risk of physical loss to securities.

**Funded Status**

An actuarial valuation of the System to determine funding requirements is performed annually. The System's funding policy provides for periodic employer contributions at actuarially determined rates, which are calculated as a percentage of payroll, and are adjusted as necessary to accumulate sufficient assets to meet the costs of benefit payments when due. The valuation of the

System performed as of July 1, 2014, indicated that the ratio of assets accumulated by the System to total actuarial accrued liabilities for benefits showed an increase from 72.9% to 75.3%. The actuarial section contains further information on the results of the July 1, 2014 valuation. For purposes of calculating the Net Pension Liability as of June, 30, 2015, in accordance with Governmental Accounting Standards Board's (GASB) Statement Number 67, the System's funded status was 74.2%.

Based on the July 1, 2014, actuarial valuation, the employer contribution rate for 2015 following the adopted corridor-based funding policy was 20.18%, an increase of 0.88% from the 2014 rate of 19.30%. This increase in the rate is based on fiscal year 2014 actuarial experience. During establishment of the fiscal year 2016 County budget, however, the Board of Supervisors adopted a higher contribution rate of 21.99%. This was done to improve the funded level of the plan, accomplished by raising the target unfunded liability amortization level from 93% to 95%, and to fund an increase in service connected disability benefits (discussed further below).

**Major Initiatives**

Working in concert with the County's Chief Financial Officer, the System's actuary (Cheiron), and other County staff, efforts continue to improve the funded status of the Plan. As a result of this work, and as referenced above, the County has increased the employer contribution rate above what was required by the adopted corridor-based funding policy for three consecutive years. This was accomplished by increasing the target amortization level for the unfunded liability from 90% in prior years to 91% in 2014, and 93% in 2015. This target was further increased to 95% for the County's 2016 adopted budget.

On June 23, 2015 the County Board of Supervisors was presented with changes to the Fairfax County Code to amend the County's funding policies for the three retirement systems. These changes, which were subsequently adopted by the Board on July 28, 2015, modified the methodology used for determining the annual employer contribution rates. The changes enacted are as follows:

- Increases in the employer contribution rates will continue so that the County will amortize 100 percent of the unfunded liability by FY 2020 at the latest, thus fully funding the Annual Required Contribution.
- The County will continue to use a conservative 15-year amortization period and, once 100 percent of the unfunded liability is being amortized, these amortization periods will be closed and any subsequent years' incremental unfunded liabilities will be amortized over separate 15-year periods.
- Any additional unfunded liabilities created as a result of future approved benefit enhancements will be fully funded when implemented, to ensure that adjustments to benefit levels will not reduce the system's funded status.

Finally, as part of these changes to the County Code, the Board made it a budgetary priority to not reduce the employer contribution rates until each of the systems reaches 100 percent funding.

**Awards**

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to The Fairfax County Employees' Retirement System for its comprehensive annual financial report for the fiscal year ended June 30, 2014. This was the fifth consecutive year that the System has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current annual financial report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

Fairfax County Retirement Systems received the Public Pension Standards Award for the fiscal year ended June 30, 2015, from the Public Pension Coordinating Council (PPCC), in recognition of meeting the professional standards for plan funding as set forth in the Public Pensions Standards. The PPCC is a confederation of the National Association of the State Retirement Administrators (NASRA), the National Conference on Public Employee Retirement Systems (NCPERS), and the National Council on Teacher Retirement (NCTR).

**Other Information**

*Independent Audit and Actuarial Certifications*

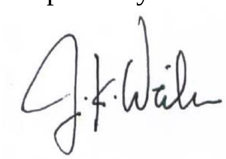
KPMG LLP performed an annual audit of the financial statements of the System to obtain reasonable assurance about whether the financial statements are free from material misstatements, whether due to fraud or error. Additionally, Cheiron performed an annual actuarial valuation to assess the plan's ability to meet future obligations. The independent auditors' report and certification from the actuary are included in this report.

*Acknowledgements*

The annual report of the Employees' Retirement System was prepared by the System's staff under the leadership of the Board of Trustees, whom I have the privilege to serve. I must also acknowledge the entire Retirement Systems' team for their tireless work throughout the year to ensure that we continue to provide the best-possible service to and stewardship for the employees, retirees, and citizens of Fairfax County.

This report is intended to provide complete and reliable information for determining the financial status of the System. It is being submitted to the Board of Supervisors and other interested parties and is available to the public via the County's website located at www.fairfaxcounty.gov/retirement/.

Respectfully submitted,



Jeffrey K. Weiler
Executive Director

Government Finance Officers Association

# Certificate of Achievement for Excellence in Financial Reporting

Presented to

**Fairfax County Employees' Retirement System, Virginia**

For its Comprehensive Annual Financial Report for the Fiscal Year Ended

**June 30, 2014**

Executive Director/CEO

Public Pension Coordinating Council

## *Recognition Award for Funding*
## *2015*

Presented to

## *Fairfax County Employees' Retirement System*

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

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

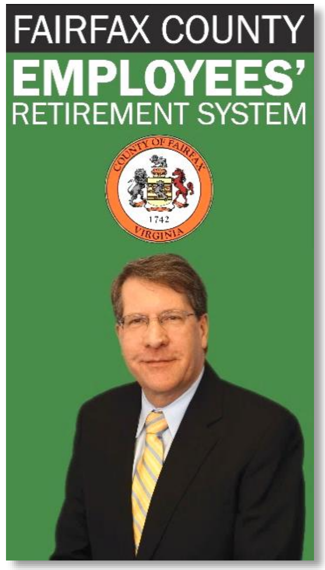
National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

Alan H. Winkle

Alan H. Winkle
Program Administrator

Ten members serve on the Fairfax County Employees' Retirement System. Four of the members are citizens appointed by the Fairfax County Board of Supervisors. Three of the members are elected by Fairfax County Government Employees, Fairfax County Public Schools Employees, and Fairfax County Retirees respectively. The Director of Human Resources, the Director of Finance, and the Assistant Superintendent of Human Resources at the Fairfax County Public Schools also serve as Ex Officio members.

## Board of Trustees




**Robert C. Carlson**
*Chairman*
Board of Supervisors Appointee
*Term Expires: August 30, 2021*

**John M. Yeatman**
*Vice Chairman*
Elected Retiree Trustee
*Term Expires: December 31, 2018*

**Christopher J. Pietsch**
*Treasurer*
Fairfax County Director of Finance
*Ex officio Trustee*

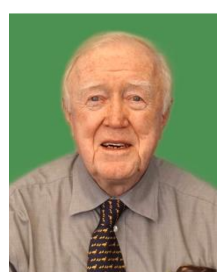
**Randy R. Creller**
Fairfax County Government
Elected Member Trustee
*Term Expires: June 30, 2017*

**Walter Leppin**
Fairfax County Public Schools
Elected Member Trustee
*Term Expires: June 30, 2015*

**John A. Miskell, Jr.**
Board of Supervisors Appointee
*Term Expires: July 31, 2018*

**Phyllis C. Pajardo**
Assistant Superintendent
Fairfax County Public Schools
*Ex officio Trustee*

**Catherine Spage**
Fairfax County Assistant Director
of Human Resources
*Ex officio Trustee*



**Thomas M. Stanners**
Board of Supervisors Appointee
*Term Expires: July 31, 2016*

**Gordon R. Trapnell, FSA**
Board of Supervisors Appointee
*Term Expires: June 30, 2019*

## Administrative Organization

### Administrative Staff

Jeffrey K. Weiler
*Executive Director*

Gregory A. Samay
*Chief Investment Officer*

Andrew J. Spellar
*Senior Investment Officer*

Christopher Colandene
*Retirement Administrator*

### Professional Services

**Actuary**
Cheiron
Actuaries
McLean, VA

**Auditor**
KPMG LLP
Certified Public Accountants
Washington, DC

### Investment Managers

Aberdeen Asset Management Inc.
Philadelphia, PA

AQR Capital Management
Greenwich, CT

BlackRock, Inc.
San Francisco, CA

Brandywine Global Invest. Management, LLC
Philadelphia, PA

Bridgewater Associates, Inc.
Westport, CT

Cohen & Steers Capital Management, Inc.
New York, NY

The Clifton Group
Edina, MN

Czech Asset Management, L.P.
Old Greenwich, CT

ColumbiaWanger Asset Management, LLC
Chicago, IL

DePrince, Race & Zollo
Winter Park, FL

DoubleLine Capital, L.P.
Los Angeles, CA

Eagle Trading Systems, Inc.
Princeton, NJ

First Eagle Investment Management
New York, NY

Frontpoint Partners, LLC
Greenwich, CT

## Investment Managers
## (continued)

JP Morgan Investment Management, Inc.
New York, NY

Lazard Asset Management, LLC
New York, NY

LSV Asset Management
Chicago, IL

MacKay Shields, LLC
New York, NY

Marathon Asset Management, LLP
London, UK

Nicholas Company
Milwaukee, WI

PIMCO
Newport Beach, CA

Post Advisory Group, LLC
Los Angeles, CA

Pzena Investment Management, LLC
New York, NY

QMA Investment Management
Newark, NJ 07102

Sands Capital Management, Inc.
Arlington, VA

Shenkman Capital Management, Inc.
Arlington, VA

Standish Mellon Asset Management
Pittsburgh, PA

Stark Investments
St. Francis, WI

WCM Investment Management
Laguna Beach, CA

## Custodian Bank

BNY Mellon Asset Servicing
Pittsburgh, PA

## Organization Chart

**Board of Supervisors**
*Left to right: Catherine M. Hudgins, Michael R. Frey, John C. Cook, Gerald W. Hyland, Sharon Bulova (Chairman At-Large), Penelope A. Gross (Vice Chairman), John W. Foust, Jeffrey C. McKay, Pat Herrity, Linda Q. Smyth*

**Board of Trustees**
(Ten Members – see page 7)
*Robert Carlson, John Yeatman, Christopher Pietsch, Randy Creller, Walter Leppin, John Miskell, Jr., Phyllis Pajardo, Catherine Spage, Thomas Stanners, Gordon Trapnell*

**Executive Director**
*Jeffrey K. Weiler*

**Chief Investment Officer**
*Gregory A. Samay*

**Retirement Administrator**
*Christopher Colandene*

**Senior Investment Officer**
*Andrew J. Spellar*

**KPMG LLP**
Suite 12000
1801 K Street, NW
Washington, DC 20006

## Independent Auditor's Report

The Board of Supervisors
County of Fairfax, Virginia

The Board of Trustees
Fairfax County Employees' Retirement System:

**Report on the Financial Statements**

We have audited the accompanying financial statements of the Fairfax County Employees' Retirement System (the System), a pension trust fund of the County of Fairfax, Virginia which comprise the statement of fiduciary net position as of June 30, 2015, the related statement of changes in fiduciary net position for the year ended June 30, 2015, and the related notes to the financial statements.

***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; 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.

***Auditors' 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. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from 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 auditors' 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 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 presentation of the financial statements.

The Board of Supervisors
County of Fairfax, Virginia

The Board of Trustees
Fairfax County Employees' Retirement System Fairfax County, VA

November 24, 2015


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

***Opinion***

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System as of June 30, 2015, and the respective changes in fiduciary net position thereof for the year then ended in accordance with U.S. generally accepted accounting principles.

***Other Matters***

*Required Supplementary Information*

U.S. generally accepted accounting principles require that the management's discussion and analysis on pages 14-17, the schedule of changes in net pension liability and related ratios information on page 37, the schedule of net pension liability and the schedule of money weighted rate of return on page 38, the schedule of employer contributions on page 39, and the summary of significant changes to the pension system on page 40 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 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.

The Board of Supervisors
County of Fairfax, Virginia

The Board of Trustees
Fairfax County Employees' Retirement System Fairfax County, VA

November 24, 2015
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*Supplementary and Other Information*

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's basic financial statements. The introductory section on pages 1-10, the other supplementary information on page 41, the investment section on pages 43-55, the actuarial section on pages 57-75, and the statistical section on pages 77-80 are presented for purposes of additional analysis and are not a required part of the basic financial statements. The introductory section, other supplementary information, investment section, actuarial section, and statistical section has 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 it.

KPMG LLP

Washington, DC
November 24, 2015

# Management's Discussion and Analysis (unaudited)

This section presents management's discussion and analysis of the Fairfax County Employees' Retirement System's ("System" or "Plan") financial performance and provides an overview of the financial activities for the fiscal year ended June 30, 2015. The information in this section should be reviewed in conjunction with the Letter of Transmittal located in the Introductory Section.

### Overview of Financial Statements and Accompanying Information

**Financial Statements.** The System presents the Statement of Fiduciary Net Position as of June 30, 2015 and Statement of Changes in Fiduciary Net Position for the fiscal year ended June 30, 2015. The Statement of Fiduciary Net Position provides a snapshot of the financial position. It reports the assets, liabilities and resulting net position restricted for pension benefits. The Statement of Changes in Fiduciary Net Position summarized the financial activities that occurred during the reporting period that increased and decreased the net position restricted for pension.

**Notes to the Financial Statements.** The Notes to the Financial Statements are an integral part of the financial statements and include additional information and schedules to provide a better understanding of the fiduciary fund financial statements. The Notes to the Financial Statements include detailed information that are not readily evident in the financial statements such as the accounting policies, plan membership and benefits, and summary disclosures. Specifically:

- Note 1 Describes significant accounting policies.
- Note 2 Provides a description of the System, the funding policy, and member contributions and benefits.
- Note 3 Describes investments and disclosures on interest rate, credit quality, foreign currency risk, derivatives disclosures, and security lending.
- Note 4 Describes the net pension liability, actuarial method and assumptions.
- Note 5 Explains the System's tax status.

**Required Supplementary Information.** The Required Supplementary Information includes the Schedule of Changes in Net Pension Liability and Related Ratios, Schedule of Net Pension Liability, Schedule of Employer Contributions and Schedule of Money-Weighted Rate of Return. These schedules will be presented over 10 years as information becomes available. A Summary of Significant Changes to the Pension System is also included. Other Supplementary Information for the Schedule of Administrative Expenses and the Schedule of Investment and Consultant Expenses are included. The Required Supplementary Information and Additional Supplementary notes are immediately following the Notes to the Financial Statements.

### Financial Highlights

The net position restricted for pension benefits as of June 30, 2015, and June 30, 2014, were $3.69 billion and $3.77 billion, respectively. The net position representing assets available to pay for current and future member pension benefits, decreased by $72.7 million or 1.9 percent.

Total additions to net position decreased by 71.2 percent from $652.6 million in 2014 to $188.0 million in 2015 primarily due to lower investment performance this year versus 2014.

Net investment income decreased 96.8 percent from $489.8 million in 2014 to $15.7 million in 2015. The net money-weighted rate of return on investments on a fair value basis was approximately 0.5 percent in fiscal year 2015, and has decreased from 14.9 percent in fiscal year 2014.

Employer and employee contributions received totaled $171.7 million, an increase of 5.7 percent or $9.3 million compared to 2014 received contributions of $162.4 million. The total employer contributions increased from $129.6 million in fiscal year 2014 to $138.5 million in fiscal year 2015.

Total deductions from fiduciary net position increased by $20.3 million from $240.4 million in 2014 to $260.7 million in 2015. Member retirement benefit payments of $254.9 million in 2015 make up the majority of total deduction and increased by $19.7 million or 8.4 percent from $235.2 million in 2014. The number of retired members and beneficiaries receiving a benefit payment increased 5 percent from 7,263 to 7,626 payees as of June 30, 2015.

The net pension liability as calculated per GASB 67 as of June 30, 2015, and June 30, 2014, were $1.29 billion and $1.04 billion, respectively. The net position as a percentage of total pension liability as of June 30, 2015, and June 30, 2014, were 74.2 percent and 78.3 percent, respectively. The net pension liability as a percentage of covered payroll has increased from 155.1 percent in 2014 to 187.4 percent in fiscal year 2015. The covered employee payroll increased from $671.6 million in 2014 to $686.3 million in 2015.

Administrative expense have remained stable at 0.05 percent of the value of net position for fiscal year 2015.

## Financial Analysis

**Plan Net Position**. As of June 30, 2015, The Employees' Retirement System held a net position of $3.69 billion restricted for pension benefits. Total assets as of June 30, 2015, were $4.13 billion, representing an increase of $149.3 million, or 3.8 percent over the previous fiscal year. The main components of the increase was the securities lending environment. Flat market conditions also resulted in a decline in total cash and investment of $3.72 billion in fiscal year 2015 as compared to $3.78 billion in fiscal year 2014.

For fiscal year 2015, the net position of the Employees' Retirement System decreased 1.9 percent resulting in a total net position value of $3.69 billion, reflecting a decrease of $72.7 million over fiscal year 2014. The falling-off in net position was primarily due to lower investment performance that resulted in an investment income decline to $15.7 million. The following table details the Employees' Retirement System's net position for the current and prior fiscal years:

| Fiscal Year | Ending Balances (millions) | Net Change in Dollars (millions) | Net Change in Percent |
|---|---|---|---|
| 2014 | $3,766.1 | $412.1 | 12.3 |
| 2015 | $3,693.4 | (72.7) | (1.9) |

Total liabilities as of June 30, 2015, were $434.7 million, representing an increase of $222 million, or 104 percent, over the previous year. The upturn in total liabilities is the result of an increased level of securities lending activity and an increase in cash collateral received for securities on loan.

Securities lending cash collateral increased by $219.4 million or 551 percent due to an increase in activities in the securities lending program. A separate account structure was implemented in fiscal year 2015 to replace a collective investment pool. The separate account now holds a large position in equity repurchase securities.

Receivables decreased by $9.6 million or 5.9 percent due to the timing of investment for settled trades that occurred near year end.

The actuarial value of the assets as of the last valuation on July 1, 2014, was $3.61 billion while actuarial liabilities as of the same period were $4.80 billion. For purposes of funding, this resulted in a funding ratio of 75.3 percent. However, for purposes of GASB 67, the Total Pension Liability as of June 30, 2015, was $4.98 billion compared to the Plan Fiduciary Net Position of $3.69 billion, which results in a funding ratio of 74.2 percent.

The Plan's investments are exposed to various risks including interest rate, market and credit risks. These risks may be influenced by changes in economic conditions and market conditions. Therefore, it is reasonable to assume that there will be changes in the values of the investments held in trust which could materially affect the amounts reported in the financial statements. Detailed information on investment results are in the Investment Section of this report.

**Summary Schedule of Plan Fiduciary Net Position**

| **Assets** | **2015** | **2014** | **Difference** | **Percent of Change** |
|---|---|---|---|---|
| Total cash and investments | $3,715,008,164 | $3,775,495,163 | ($60,486,999) | -1.6% |
| Cash collateral, securities lending | 259,247,449 | 39,803,388 | 219,444,061 | 551.3% |
| Capital assets, net | 2,538 | 3,806 | (1,268) | -33.3% |
| Total receivables | 153,838,233 | 163,462,101 | (9,623,868) | -5.9% |
| **Total assets** | 4,128,096,384 | 3,978,764,458 | 149,331,926 | 3.8% |
| | | | | |
| **Liabilities** | | | | |
| Purchase of investments | (168,142,424) | (165,763,981) | (2,378,443) | 1.4% |
| Cash collateral, securities lending | (259,247,449) | (39,803,388) | (219,444,061) | 551.3% |
| Accounts payable and others | (7,348,892) | (7,137,424) | (211,468) | 3.0% |
| **Total liabilities** | (434,738,765) | (212,704,793) | (222,033,972) | 104.4% |
| | | | | |
| **Net position restricted for pension** | $3,693,357,619 | $3,766,059,665 | ($72,702,046) | -1.9% |

**Additions and Deductions.** Total additions to the retirement fund consist of contributions from employers and active members and changes in the value of assets. Total additions decreased by $464.5 million or 71.2 percent in fiscal year 2015 attributed primarily due to $474 million, less appreciation in the fair value of the investments. This is clearly a substantial reversal of the previous year's investment performance due to the more favorable market environment in fiscal year 2014.

Total contributions for the fiscal year ended June 30, 2015, amounted to $171.7 million. This was an increase of $9.3 million when compared with the activity of fiscal year 2014. The employer contributions for fiscal year 2015 increased by 6.8 percent due primarily to an increase in the employer contribution rate from 19.30 percent to 20.18 percent of salary. Employee contributions increased by 1.3 percent, due to a small increase in covered payroll.

The system experienced a nearly 51.0 percent increase in net income from securities lending as a result of an upturn in lending activities during the year. Albeit positive, investment returns were lower for fiscal year 2015 than 2014 reflecting moderate returns in the capital markets. Net investment income decreased from $489.8 million in fiscal year 2014 to $15.7 million in fiscal year 2015, which is consistent with the decrease in the net money-weighted investment rate of return from 14.9 percent for fiscal year 2014 to 0.5 percent for fiscal year 2015.

Total deductions to the retirement system consist of the payments of benefits to retirees and beneficiaries, the refund of contributions to former members, and the cost of administering the retirement system. The total deductions for fiscal year 2015 were $260.7 million, an increase of $20.3 million, or 8.4 per cent, over fiscal year 2015. Regular pension benefit payments increased as the number of retirees and beneficiaries receiving benefit payments climbed to 7,626 from 7,263 in fiscal year 2014. Benefit payments also increased due to a cost-of-living increase of 0.2 percent and higher average benefits for new retirees. Refunds reflected an 18.0 percent increase due to higher employee turnover and separation in the current fiscal year.

An actuarial valuation is performed annually by Cheiron. As of July 1, 2014, the date of the most recent actuarial valuation, the funded ratio of the system was 75.3 percent. This was an increase of 2.4 percent from the July 1, 2013, valuation funded ratio of 72.9 percent. The combination of liabilities, investment results, and member and employer contributions over the last year led the funding ratio to increase. Under GASB 67 calculation, using the June 30, 2014 data rolled forward to June 30, 2015, the plan fiduciary net position as a percentage of the total pension liability was 74.2 percent. It decreased from 78.3 percent in fiscal year 2014 primarily as a result of slower growth in the plan fiduciary net position due to low investment returns than forecasted.

**Summary of Additions and Deductions**

| **Additions** | **2015** | **2014** | **Difference** | **Percent of Change** |
|---|---|---|---|---|
| Employer contributions | $138,493,099 | $129,618,309 | $8,874,790 | 6.8% |
| Plan member contributions | 33,193,593 | 32,758,587 | 435,006 | 1.3% |
| Net income from investments | 15,728,732 | 489,789,183 | (474,060,451) | -96.8% |
| Net income from securities lending | 613,725 | 407,203 | 206,522 | 50.7% |
| **Total Additions** | 188,029,149 | 652,573,282 | (464,544,133) | -71.2% |
| **Deductions** | | | | |
| Benefit payments | 254,875,795 | 235,204,611 | 19,671,184 | 8.4% |
| Refunds | 3,958,786 | 3,356,282 | 602,504 | 18.0% |
| Administrative expense | 1,896,614 | 1,884,827 | 11,787 | 0.6% |
| **Total Deductions** | 260,731,195 | 240,445,720 | 20,285,475 | 8.4% |
| **Net increase/(decrease)** | ($72,702,046) | $412,127,562 | ($484,829,608) | -117.6% |

## Contacting the System's Financial Management

This financial report is designed to provide our membership, the Board of Trustees and the County's Board of Supervisors with a general overview of the System's financial condition. If you have any questions about this report or need additional information, contact the Fairfax County Retirement Administration Agency, 10680 Main Street, Suite 280, Fairfax, Virginia 22030. This report can also be found on the County's internet site at www.fairfaxcounty.gov/retirement/.

## Statement of Fiduciary Net Position

As of June 30, 2015

| | | |
|---|---|---|
| **Assets** | | |
| Cash and short-term investments | | |
| Equity in County's pooled cash and temporary investments | $6,659,279 | |
| Cash collateral received for securities on loan | 259,247,449 | |
| Short-term investments | 189,194,158 | |
| Total cash and short-term investments | | $455,100,886 |
| Capital Assets | | |
| Equipment, net | 2,538 | |
| Total capital assets | | 2,538 |
| Receivables | | |
| Accounts receivable | 5,727,169 | |
| Accrued interest and dividends | 12,922,379 | |
| Investment proceeds and other receivables | 135,188,685 | |
| Total receivables | | 153,838,233 |
| Investments, at fair value | | |
| Common and preferred stock | 1,162,158,227 | |
| Fixed income | | |
| Asset-backed securities | 204,539,081 | |
| Corporate and other bonds | 441,530,101 | |
| U.S. Government obligations | 111,393,309 | |
| Pooled and mutual funds | 1,599,534,009 | |
| Total investments | | 3,519,154,727 |
| Total assets | | 4,128,096,384 |
| **Liabilities** | | |
| Investment purchases and other liabilities | 168,142,424 | |
| Cash collateral received for securities on loan | 259,247,449 | |
| Accounts payable and accrued expenses | 7,348,892 | |
| Total liabilities | | (434,738,765) |
| **Net position restricted for pensions** | | **$3,693,357,619** |

See accompanying notes to financial statements.

## Statement of Changes in Fiduciary Net Position

For the Year Ended June 30, 2015

| | | |
|---|---|---|
| **Additions** | | |
| Contributions | | |
| Employer | $138,493,099 | |
| Plan members | 33,193,593 | |
| Total contributions | | $171,686,692 |
| Investment income | | |
| Net depreciation in fair value of investments | (11,955,714) | |
| Interest and other investment income | 9,171,776 | |
| Dividends | 31,662,015 | |
| Total investment income | 28,878,077 | |
| Investment activity expense | | |
| Management fees | (12,057,166) | |
| Custodial fees | (127,835) | |
| Consulting fees | (77,729) | |
| Allocated administration expense | (886,615) | |
| Total investment expense | (13,149,345) | |
| Net income from investment activities | | 15,728,732 |
| Securities lending activities | | |
| Securities lending income | 914,305 | |
| Securities lending expenses | (300,580) | |
| Net income from securities lending activities | | 613,725 |
| Total net investment income | | 16,342,457 |
| Total additions | | 188,029,149 |
| **Deductions** | | |
| Annuity benefits | 241,694,202 | |
| Disability benefits | 7,942,996 | |
| Survivor benefits | 5,238,597 | |
| Refunds of employee contributions | 3,958,786 | |
| Administrative expense | 1,896,614 | |
| Total deductions | | 260,731,195 |
| Net decrease | | (72,702,046) |
| Net position restricted for pensions | | |
| Beginning of fiscal year | | 3,766,059,665 |
| **End of fiscal year** | | **$3,693,357,619** |

See accompanying notes to financial statements.

# Notes to the Financial Statements

As of and for the year ended June 30, 2015

The Fairfax County Employees' Retirement System is a single employer defined benefit pension plan considered part of the County of Fairfax, Virginia's ("County") reporting entity and its financial statements are included in the County's basic financial statements as a pension trust fund.

**Note 1. Summary of Significant Accounting Policies**

*A. Basis of Accounting.* The System's financial statements have been prepared under the accrual basis of accounting in accordance with accounting principles applicable to governmental units in the United States of America. Member and employer contributions to the System are recognized in the period in which the contributions are due. Benefits and refunds are recognized when due in accordance with the terms of the System. The cost of administering the System is paid by the System.

*B. Method Used to Value Investments.* Short-term investments are reported at cost, which approximates fair value. All other investments are reported at fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Asset-backed securities are valued on the basis of future principal and interest payments and are discounted at prevailing interest rates for similar instruments. Because of the inherent uncertainty in valuing these securities, the fair value may differ from the values that would have been used had a ready market for such securities existed. Accordingly, the realized value received upon the sale of the assets may differ from the fair value. The System records investment purchases and sales as of the trade date. These transactions are not finalized until the settlement date, which occurs approximately three business days after the trade date. The amounts of trade receivables and payables are shown as receivables and payables on the Statement of Fiduciary Net Position. Cash received as collateral on securities lending transactions and investments made with such cash are reported as assets along with a related liability for collateral received. The market values of private investments and direct real estate are lagged by one quarter due to the timing of receipt of private market valuations and information.

*C. Equity in County's Pooled Cash and Temporary Investments.* The System maintains cash with the County, which invests cash and allocates interest earned, net of a management fee, on a daily basis to the System based on the System's average daily balance of equity in pooled cash. As of June 30, 2015, the bank balance of the County's public deposits was either insured by the Federal Deposit Insurance Corporation or through the State Treasury Board pursuant to the provisions of the Security for Public Deposit Act. The County's investments are exposed to various risks such as interest rate risk, market and credit risks. Such risks, and the resulting investment security values, may be influenced by changes in economic conditions and market perceptions and expectations. Accordingly, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such change could materially affect the amounts reported in the financial statements.

*Notes, continued on next page.*

**Note 2. Summary of Plan Provision**

*A. Plan Description.* The Employees' Retirement System is a single employer defined benefit pension plan which covers employees of the County and its component units. The Plan covers full-time and certain part-time County, Public Schools, Economic Development Authority, Park Authority and Fairfax County Redevelopment and Housing Authority employees who are not covered by other plans of the County or the Virginia Retirement System. Benefit provisions are established and may be amended by County ordinance. All benefits vest at five years of service. To be eligible for normal retirement, an individual must meet the following criteria: (a) attain the age of 65 with five years of service, (b) for Options A and B, attain the age of 50 with age plus years of service being greater than or equal to 80, or (c) for Options C and D, attain the age of 55 with age plus years of service being greater than or equal to 85. Normal retirement is calculated using average final compensation (i.e., the highest consecutive three years) and years, or partial years, of service at date of termination. The Plan provides that unused sick leave credit may be used in the calculation of average final compensation by projecting the final salary during the unused sick leave period (maximum of 2,080 hours of sick leave service credit for Options C & D). Unused sick leave is also used to increase years of service for calculating benefits and determining retirement eligibility.

The System consists of four Options, A, B, C and D, which have different employee contribution rates and slightly different benefits. Effective January 1, 2013, all new employees will be enrolled in either Option C or D. The employee has the choice to enroll in either Option within 30 days of employment. This choice is irrevocable. Employees who make no election are automatically enrolled in Option C.

The general provisions of the Employees' Retirement System follows:

**<u>Contribution Rates</u>**

| | | |
|---|---|---|
| Member | Option A | The contribution rate for Option A is 4.0% of base salary up to the maximum Social Security wage base plus 5.33% of base salary over the wage base. |
| | Option B | The contribution rate for Option B is 5.33% of base salary. |
| | Option C | The contribution rate for Option C is 4.0% of base salary up to the maximum Social Security wage base plus 5.33% of base salary over the wage base. |
| | Option D | The contribution rate for Option D is 5.33% of base salary. |
| Employer | Option A, B, C, and D | The contribution rate for all four options for Fiscal Year 2015 was 20.18%. |

*Notes, continued on next page.*

**Benefit**

**Options A and C:** The benefit is 1.8 percent of average final annual compensation (highest consecutive 78 pay periods) up to the Social Security Breakpoint times creditable service plus 2.0 percent of average final compensation which exceeds the Social Security Breakpoint times creditable service; and it is then increased by 3.0 percent. The Social Security Breakpoint is an average of Social Security wage bases for the last 35 years before a member reaches the age of eligibility for unreduced Social Security benefits.

**Options B and D:** The benefit is 2.0 percent of average final annual compensation (highest consecutive 78 pay periods) times the creditable service; and it is then increased by 3.0 percent.

**Options A, B, C & D:** In addition to the above, at the time of normal service retirement, a Pre-Social Security Benefit is payable at the rate of 1.0 percent of average final compensation up to the Social Security Breakpoint times creditable service; and it is then increased by 3.0 percent. This benefit will be payable until the member reaches the age of eligibility for unreduced Social Security benefits.

**Types of Benefits - Options A, B, C & D**

**Normal Retirement:**

**Options A & B:** A member is eligible for normal retirement at either age 65 with at least 5 years of creditable service or at least age 50 when the member's age plus creditable service totals 80 or more.

**Options C & D**: A member is eligible for normal retirement at either age 65 with at least 5 years of creditable service or at least age 55 when the member's age plus creditable service totals 85 or more. The maximum retirement service credit allowed for sick leave is 2080 hours.

**Benefit Limits:**
Benefits are limited to the maximum amounts for qualified plans as set forth in Section 415 of the Internal Revenue Code. A separate, nonqualified benefit restoration plan has been established for the payment of any benefit formula amounts in excess of the Section 415 limit.

**Deferred Retirement Option (DROP):**
Those eligible for normal retirement may participate in DROP for up to three years. While in DROP, the member continues to work and receive a salary. In lieu of continuing to earn service credit, DROP participants accumulate a lump sum, including interest, payable at retirement. For those in Option C or D, the member does not receive the Pre-Social Security Benefit while in DROP.

**Early Retirement:**
For all 4 options, a member is eligible for early retirement at age 50 or older when the member's age plus creditable service totals 75 or more. Reduction factors are applied to the basic formula for early retirement based on how far from age 65 the member is at early retirement and no Pre-Social Security Benefit is payable.

*Notes, continued on next page.*

**Deferred Vested Retirement:**
Deferred vested retirement is available for vested members (vesting is at 5 years of service) who leave their contributions in the System when they terminate. These members are entitled to their normal retirement benefit, at age 65, based on service with the County or a reduced benefit earlier when they reach age 50 and age plus years of creditable service equal 75. The member also has the option to request a refund of member contributions and interest at any time prior to reaching age 65 or receiving retirement benefits.

**Service-Connected Disability Retirement:**
Service-connected disability retirement is available for members, regardless of their length of service, who become disabled as a result of a job-related illness or injury. Benefits are 66.67 percent of average final compensation, less an offset for a workers' compensation award, less 15.0 percent of the initial award amount of a member's Social Security benefit.

**Ordinary Disability Retirement:**
Ordinary disability retirement is available for vested members who become disabled due to an injury or illness that is not job-related. Benefits are 2.0 percent of average final compensation (highest consecutive three years) times the creditable service. The total benefit is then increased by 3.0 percent.

**Death Benefits:**
*If death occurs prior to retirement:* If the member is vested and the spouse is the listed beneficiary, the spouse may elect to receive 50.0 percent of the normal retirement benefit earned as of the date of the member's death. If the 50.0 percent of normal retirement benefit is not payable, a refund of the member's contribution plus interest will be paid to the named beneficiary or member's estate.

*If death occurs after retirement:* A refund of any of the member's contributions and interest not already paid in benefits will be payable to the named beneficiary(ies) unless the member has elected the irrevocable Joint and Last Survivor Option which provides a benefit to the member's spouse for life. At retirement, the member may choose to have his or her spouse receive 50.0 percent, 66.67 percent, 75.0 percent or 100.0 percent of the member's reduced annuity upon the member's death. The member's annuity is reduced by a percentage based on the difference in age between the member and his or her spouse. If the spouse pre-deceases the member, the annuity is restored to what it would have been if this option had not been elected.

*If death occurs because of a job-related illness or injury:* A $10,000 lump-sum payment is made to the beneficiary if the member's death is due to a job-related illness or injury.

**Cost of Living Benefit**

Annual cost of living adjustments are provided to retirees and beneficiaries equal to the lesser of 4.0 percent or the percentage increase in the Consumer Price Index for the Metropolitan Statistical Area that includes Fairfax County.

Note: Detailed provisions may be found in the Retirement Handbook for Active Employees.

*Notes, continued on next page.*

*B. Board of Trustees.* Ten members serve on the Fairfax County Employees' Retirement System. Four of the members are citizens appointed by the Fairfax County Board of Supervisors. Three of the members are elected by Fairfax County Government Employees, Fairfax County Public Schools Employees, and Fairfax County Retirees respectively. The Director of Human Resources, the Director of Finance, and the Assistant Superintendent of Human Resources at the Fairfax County Public Schools also serve as Ex Officio members.

*C. Membership.* At July 1, 2014, the date of the latest actuarial valuation, membership in the System consisted of:

| | |
|---|---|
| Retirees and beneficiaries receiving benefits | 7,626 |
| Terminated plan members entitled to but not yet receiving benefits | 1,677 |
| Deferred Retirement Option Program (DROP) participants | 705 |
| Active plan members | 13,862 |
| **Total** | **23,870** |

*D. Deferred Retirement Option Program.* Members eligible for normal retirement may elect to enter the DROP. As a DROP member, he or she will continue to work and receive a salary for a maximum period of three years while an amount equal to what could have been received as a retirement benefit is credited to his or her DROP account. (No pre-Social Security Supplements are paid into DROP accounts for Plans C & D). The monthly benefit that will be credited to the DROP account is determined by the years of service and Average Final Compensation at the DROP entry date. During the DROP period, the retirement plan accumulates his or her accrued monthly benefit which is payable at the end of the DROP period. The DROP account balance is credited at an annual interest rate of 5 percent, compounded monthly. At the end of the DROP period, the DROP member must terminate employment with the Fairfax County Government and will begin receiving his or her monthly retirement benefit. Upon DROP exit, the retiree can elect to receive the balance of the DROP account in the form of a lump sum distribution, a rollover to another qualified plan (or IRA), or as an addition to the monthly retirement annuity. The DROP balance as of June 30, 2015, was $51,023,921.

*E. Contributions.* The contribution requirements of the System members are established and may be amended by County ordinances. Employees hired prior to January 1, 2013 are members of Option A or Option B. All eligible employees whose County or school board employment commenced by reporting to work on or after January 1, 2013, may elect to join Option C or Option D. Options A and C require member contributions of 4 percent of compensation up to the social security wage base and 5.33 percent of compensation in excess of the wage base. Options B and D require member contributions of 5.33 percent of compensation. The County is required to contribute at an actuarially determined rate; the rate for the year ended June 30, 2015, was 18.35 percent of annual covered payroll. The decision was made to commit additional funding and a rate of 20.18 percent was adopted for fiscal year 2015. Total contributions for the fiscal year ended June 30, 2015, amounted to $171.7 million.

*F. Deductions.* The deductions from the System included the payment of retiree and beneficiary payments, the refund of employee contributions to former members and administrative expenses. The total deductions for the fiscal year ended June 30, 2015, amounted to $260.7 million.

*Notes, continued on next page.*

**Note 3. Investments**

*A. Investment Policy*. The authority to establish the System is set forth in Section 51.1-800 *Code of Virginia* (Code). Section 51.1-803 of the Code authorizes fiduciaries of the System to purchase investments *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 the same aims. The Board shall also diversify such investments as to minimize the risk of large losses unless under the circumstances it is clearly prudent not to do so.*

The System has adopted the Employees' Retirement System Investment Policy Statement to provide a well-managed investment program to meet the long-term needs of the System. Investment decisions for these assets are made by the Board of Trustees or investment managers selected by the Board. The overall investment policies do not address specific levels of credit risk, interest rate risk or foreign currency risk. The Board of Trustees believes that risks can be managed, but not eliminated, by establishing constraints on the investment portfolio and by properly monitoring the investment markets, the System's asset allocation and the investment managers hired by the System. Each individual investment portfolio is managed by an investment management firm selected by the Board. Each investment manager has a specific benchmark and investment guidelines appropriate for the type of mandate they are managing and that fit within the total risk tolerance of the fund.

The following was the System's adopted asset allocation policy as of June 30, 2015. Our asset allocation policy commonly exceeds 100 percent because we monitor the target exposures to both direct investments in asset classes plus notional exposure to asset classes through derivative positions such as Futures held at the portfolio level. We also commonly include notional exposures for select Investment Managers that have a mandate from the Board to provide the System with additional asset class exposure using leverage or derivatives.

| Asset Class | Target Exposure |
|---|---|
| U.S. Equities | 20.0% |
| International Equities | 10.0% |
| Core Fixed Income | 73.0% |
| High Yield | 7.5% |
| Absolute Return | 20.0% |
| Real Estate | 7.5% |
| Commodity | 5.0% |

*B. Concentrations*. The investment policy states that the securities of any one issuer shall not exceed 10.0 percent at fair value. At June 30, 2015, the System did not have investments (other than U.S. Government and U.S. Government guaranteed obligations) in any one issuer that represents 5.0 percent or more of net position available for benefits. All investments, except for the pooled and mutual funds, short-term investment fund and a short-term collateral investment pool are held by an unaffiliated custodian. There is no custodial credit risk since the custodian's records establish the System's interest in the securities.

The System's fixed income portfolio shall be, on average, comprised of high-quality issues and limits are imposed on investment manager's below-investment-grade holdings. Unless otherwise specified, if any security has a split rating, the higher of the two ratings is used for the purposes of meeting minimum quality standards.

*Notes, continued on next page.*

*C. Rate of Return*. For the year ended June 30, 2015, the annual money-weighted rate of return on pension plan investment, net of pension plan investment expense, was 0.5 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

*D.* The System's investment quality ratings at June 30, 2015, were as follows:

| Type of Investment | Fair Value | Ratings | Percent of Fixed |
|---|---|---|---|
| U.S. Government obligations | $111,393,309 | AA | 14.7% |
| Corporate & other bonds | 4,779,458 | AAA | 0.6% |
| | 35,498,401 | AA | 4.7% |
| | 53,303,610 | A | 7.0% |
| | 28,645,747 | BBB | 3.8% |
| | 104,236,965 | BB | 13.8% |
| | 122,132,554 | B | 16.1% |
| | 36,380,078 | CCC | 4.8% |
| | 56,553,288 | Unrated | 7.5% |
| Asset-backed securities | 1,192,009 | AAA | 0.2% |
| | 70,711,105 | AA | 9.3% |
| | 4,914,759 | A | 0.6% |
| | 5,409,088 | BBB | 0.7% |
| | 2,416,807 | BB | 0.3% |
| | 3,080,646 | B | 0.4% |
| | 19,366,836 | CCC | 2.6% |
| | 3,527,264 | CC | 0.5% |
| | 36,320,285 | D | 4.8% |
| | 57,600,282 | Unrated | 7.6% |
| **Total fixed income** | **$757,462,491** | | 100.0% |

| Short-term investments | | |
|---|---|---|
| Cash and cash equivalents | $18,679,469 | Unrated |
| Employees' STIF* | 170,514,689 | Unrated |
| | **$189,194,158** | |

*Short Term Investment Funds

As of June 30, 2015, the fixed income portfolio, excluding pooled funds, consisted of 41.6 percent invested in investment grade securities, 43.3 percent invested in below-investment-grade securities and 15.1 percent was invested in unrated securities.

The Barclays Capital Aggregate Bond Index (BCAG) is the standard benchmark against which the industry and the System's Board measures its fixed income portfolio performance and volatility. The System's fixed income managers have discretion, within circumscribed limits, to extend the duration of their portfolios beyond that of the BCAG if they forecast falling interest rates (and thus

*Notes, continued on next page.*

higher bond prices). Conversely, if managers anticipate that the general level of interest rates will rise, they have the ability to shorten the duration of their portfolio, thus reducing the portfolio's sensitivity to rising rates.

*E*. The System's investments' sensitivity to interest rates at June 30, 2015 were as, follows:

| **Investment Type** | **Fair Value** | **Option- Adjusted Duration (yrs)** | **Percentage of Fixed** |
|---|---|---|---|
| U.S. Government obligations | $111,393,309 | 7.6 | 14.7% |
| Corporate and other bonds | 441,530,101 | 4.5 | 58.3% |
| Asset-backed securities | 204,539,081 | 3.1 | 27.0% |
| **Total fixed income** | **$757,462,491** | 4.6 | 100.0% |
| | | | |
| **Short-term investments** | | | |
| Cash and cash equivalents | $18,679,469 | 0.0 | |
| Employees' STIF | 170,514,689 | 0.1 | |
| | **$189,194,158** | | |

As of June 30, 2015, duration of the System's overall fixed income portfolio excluding pooled funds was 4.6 years compared with the 5.6 year duration of the BCAG.

*F*. Short term investments of $189.2 million includes a position of $170.5 million of uninvested cash held by our investment managers and cash held by the system in an enhanced short term investment fund managed by our custodian.

*Notes, continued on next page.*

*G.* Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of the investment. The System's investments at June 30, 2015, held in currencies other than U.S. dollars were as follows:

| **International Securities** | **Short Term Investments & other** | **Convertible & Fixed Income** | **Equity** | **Total** |
|---|---|---|---|---|
| Australian Dollar | ($58,032) | $11,956,652 | $17,531,666 | $29,430,286 |
| Brazil Real | | 8,183,613 | | 8,183,613 |
| Canadian Dollar | 40,747 | 119,188 | 12,116,293 | 12,276,228 |
| Danish Krone | 705 | | 10,389,863 | 10,390,568 |
| Euro Currency Unit | (174,952) | 22,586,393 | 57,148,688 | 79,560,129 |
| Hong Kong Dollar | 399,762 | | 22,015,591 | 22,415,353 |
| Hungarian Forint | 1,113 | 5,850,961 | | 5,852,074 |
| Indonesian Rupiah | | 7,507,411 | | 7,507,411 |
| Japanese Yen | 523,015 | 28,766 | 56,687,026 | 57,238,807 |
| Malaysian Ringgit | | 5,024,047 | | 5,024,047 |
| Mexican New Peso | 19,357 | 26,489,076 | 1,604,131 | 28,112,564 |
| New Zealand Dollar | 22,563 | 6,636,003 | 234,525 | 6,893,091 |
| Pound Sterling | 133,138 | 2,643,572 | 39,145,861 | 41,922,571 |
| S. African Command | 27 | 7,422,532 | 1,275,190 | 8,697,749 |
| Singapore Dollar | 1 | 11,597 | 6,983,223 | 6,994,821 |
| South Korean Won | | 7,904,518 | 1,514,170 | 9,418,688 |
| Swedish Krona | 2,935 | | 6,315,018 | 6,317,953 |
| Swiss Franc | 3,193 | | 12,380,384 | 12,383,577 |
| Other Currencies | 462,889 | 3,899,529 | 4,288,360 | 8,650,778 |
| | **$1,376,461** | **$116,263,858** | **$249,629,989** | **$367,270,308** |

*H. Derivative Financial Instruments.* In accordance with the Board's investment policies, the System regularly invests in derivative financial instruments with off-balance-sheet risk in the normal course of its investing activities to enhance return on investment and manage exposure to certain risks within the System. The System also enters into derivative transactions to gain exposure to currencies and markets where derivatives are the most cost-effective instrument. Derivative instruments are financial contracts whose values depend on the values of one or more underlying assets, reference rates or financial indices. During fiscal year 2015, the System invested directly in various derivatives including asset-backed securities, collateralized mortgage obligations, exchange-traded futures contracts, forward currency contracts, options, swaps, and floating rate securities. Some securities, such as structured notes, can have derivative-like characteristics where the return may be linked to one or more indexes. Asset-backed securities, such as collateralized mortgage obligations (CMOs), are sensitive to changes in interest rates and pre-payments. It should also be noted that the System also has exposure to derivatives indirectly through its ownership interests in certain hedge funds, mutual funds and commingled funds which may use, hold, or write derivative financial instruments.

*Notes, continued on next page.*

Derivative investments may involve, to varying degrees, elements of credit and market risk in excess of amounts recognized on the financial statements. Market risk results from fluctuations in interest rates and currency rates. The credit risk of these investments is associated with the creditworthiness of the related parties to the contracts. The System could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. Holders of futures contracts look to the exchange for performance under the contract and not to the other party holding the offsetting futures position. Accordingly, the amount at risk due to nonperformance of counterparties to futures contracts is minimal. For counterparties involving over the counter derivatives, the Board seeks to control this risk through counterparty credit evaluations, counterparty credit limits, and exposure monitoring procedures conducted by investment managers and staff. To address counterparty risk, the System instructs our investment managers who use swaps, forwards, and options to only enter into contracts with counterparties rated at investment grade of BBB or better by at least one nationally recognized rating agency.

At June 30, 2015, the System held the following four types of derivative financial instruments: futures, currency forwards, options and swaps. Futures, currency forwards, options, and swaps 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, enhance returns, and gain market exposure to various indices 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.

Investment managers are prohibited from purchasing securities on margin or using leverage unless specifically permitted within the investment manager's guidelines. Derivative instruments covered under the scope of GASB 53 are reported at fair value. The changes in fair value of derivative instruments that are used for investment purposes are reported within the investment revenue classification. Gains and losses on derivative securities are determined based upon fair values as determined by our custodian and recorded in the Statement of Changes in Fiduciary Net Position.

*Notes, continued on next page.*

*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 typically 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, 2015, is as follows:

| **Types of Futures** | **Base Exposure** | **Notional Cost** |
|---|---|---|
| Cash and cash equivalents futures | | |
| Short | ($74,043,475) | ($73,955,961) |
| Commodity futures | | |
| Long | 23,189,653 | 23,348,167 |
| Short | (13,224,472) | (13,046,681) |
| Fixed income futures | | |
| Long | 325,039,565 | 325,770,740 |
| Short | (1,746,953) | (1,752,769) |
| Equity futures | | |
| Long | 27,911,130 | 28,435,313 |
| **Total** | **$287,125,448** | **$288,798,809** |

*Swaps.* The System enters into several types of swap contracts, in which two counterparties agree to exchange one stream of payments for another over some agreed to period of time. Swaps are used to manage risk and enhance returns. All counterparties are rated A or better. The following is the information on the System's swap contracts outstanding at June 30, 2015:

| | **Base Exposure** | **Fair Value** |
|---|---|---|
| **Equity Swaps:** | | |
| Total return swaps | $ - | $3,122,671 |
| Variance swaps | 9,969 | 9,969 |
| **Fixed Income Swaps:** | | |
| Credit default swaps | 26,816 | 27,388 |
| Inflation swaps | (77,587) | (77,587) |
| Interest rate swaps | (619,170) | (596,898) |
| Total return swaps | - | (926,235) |
| **Commodity Swaps:** | | |
| Commodity swaps | 36,125 | 36,125 |
| **Total** | **($623,847)** | **$1,595,433** |

*Notes, continued on next page.*

*Currency Forwards.* Currency forwards represent foreign exchange contracts and are used to effect settlements and to protect the base currency value of portfolio assets denominated in foreign currencies against fluctuations in the exchange rates of those currencies or to gain exposure to the change in market value of a specific currency. A forward foreign currency exchange contract is a commitment to purchase or sell a foreign currency at a future date and 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. All counterparties are rated A or better. The market risk in foreign currency contracts is related to adverse movements in currency exchange rates. The following is summary information on the System's currency forward contracts at June 30, 2015:

| **Foreign Currency Contracts Purchased** | **Notional (Local Currency)** | **Unrealized Gain/(Loss) ($US)** |
|---|---|---|
| Australian Dollar | (424,000) | ($2,643) |
| Brazil Real | (4,699,025) | 19,447 |
| Euro Currency Unit | (30,822,000) | 102,038 |
| Japanese Yen | (149,600,000) | (10,961) |
| Mexican New Peso | (33,657,038) | 17,606 |
| New Zealand Dollar | (10,654,000) | 550,091 |
| Pound Sterling | (3,881,000) | (74,164) |
| South Korean Won | (431,704,850) | 12,383 |
| | | $613,797 |

| **Foreign Currency Contracts Sold** | **Notional (Local Currency)** | **Unrealized Gain/(Loss) ($US)** |
|---|---|---|
| Australian Dollar | 287,000 | (1,845) |
| Brazil Real | 4,009,523 | 7,777 |
| Chilean Peso | 5,393,400,000 | (338,799) |
| Euro Currency Unit | 9,880,000 | (70,025) |
| Indian Rupee | 622,444,442 | 84,561 |
| Japanese Yen | 74,800,000 | 5,035 |
| Mexican New Peso | 12,163,916 | (7,436) |
| Norwegian Krone | 43,400,000 | (50,445) |
| Pound Sterling | 1,975,000 | 1,614 |
| Swedish Krona | 48,000,000 | 230,324 |
| | | (139,239) |

| | |
|---|---|
| **Net Unrealized Gain/(Loss) on Foreign Currency Spot and Forward Contracts** | **$474,558** |

*Notes, continued on next page.*

*Options.* Option contracts may be exchanged traded or negotiated directly in over the counter transaction between two counterparties. Options holders have the right, but not the obligation, to purchase (call) or sell (put) a financial instrument at a future price and time. The System can both purchase and write options. Exchange traded options rely on the exchange for performance and the risk to non-performance of counterparties is minimal. All counterparties for over the counter options are rated A or better. The following table provides information on the System's option contracts at June 30, 2015:

| Option Types | Position | Call/Put | Cost | Fair Value | Unrealized Investment Gain/Loss |
|---|---|---|---|---|---|
| Cash and cash equivalents | Purchased | Put | $2,458 | $2,063 | ($395) |
| | Written | Call | (14,718) | (44,948) | (30,230) |
| | Written | Put | (3,542) | (3,461) | 81 |
| **Total cash and cash equivalents** | | | **(15,802)** | **(46,346)** | **(30,544)** |
| Commodity | Purchased | Call | 20,254 | 10,280 | (9,974) |
| | Purchased | Put | 60,408 | 21,728 | (38,680) |
| | Written | Call | (29,637) | (41,686) | (12,049) |
| | Written | Put | (32,516) | (38,062) | (5,546) |
| **Total commodity** | | | **18,509** | **(47,740)** | **(66,249)** |
| Equity | Written | Call | (11,944) | (1,201) | 10,743 |
| | Written | Put | (3,980) | (2,748) | 1,232 |
| **Total equity** | | | **(15,924)** | **(3,949)** | **11,975** |
| Fixed income securities | Purchased | Call | 6,080 | 8,861 | 2,781 |
| | Purchased | Put | 174,100 | 201,979 | 27,879 |
| | Written | Call | (73,238) | (62,522) | 10,716 |
| | Written | Put | (182,448) | (185,335) | (2,887) |
| **Total fixed income** | | | **(75,506)** | **(37,017)** | **38,489** |
| Other | Written | Call | (3,750) | (3,750) | 0 |
| **Total other** | | | **(3,750)** | **(3,750)** | **0** |
| **Total Options** | | | **($92,473)** | **($138,802)** | **($46,329)** |

*Notes, continued on next page.*

*I. Securities Lending.* Board of Trustee policies permit the System to lend its securities to broker-dealers and other entities (borrowers) for collateral that will be returned for the same securities in the future. The System's custodian is the agent in lending the plan's domestic securities for collateral of 102.0 percent and international securities of 105.0 percent of fair value. The custodian receives cash or securities as collateral from the borrower. All securities loans can be terminated on demand by either the System or the borrower. Securities received as collateral are not reported as assets and liabilities on balance sheet since the Retirement Administration Agency does not have the ability to pledge or sell the collateral securities absent borrower default.

The following represents the balances relating to the securities lending transactions at June 30, 2015:

| Securities Lent | Underlying Securities | Cash Collateral Investment Value | Securities Collateral Investment Value |
|---|---|---|---|
| Lent for cash collateral | | | |
| US Government securities | $4,229,888 | $4,318,778 | |
| Corporate and other bonds | 36,987,321 | 37,950,194 | |
| Common and preferred stock | 211,097,523 | 216,978,477 | |
| Lent for securities collateral | | | |
| US Government securities | 53,664,475 | | $55,588,438 |
| Corporate and other bonds | 11,251,875 | | 11,653,410 |
| Common and preferred stock | 120,213,604 | | 132,618,784 |
| **Total** | **$437,444,686** | **$259,247,449** | **$199,860,632** |

The System did not impose any restrictions during fiscal 2015 on the amounts of loans the lending agent made on its behalf. At June 30, 2015, the System had no credit risk exposure to borrowers because the amounts the System owed the borrowers exceeded the amounts the borrowers owed the System. The custodian provides full indemnification to the System for any losses that might occur in the program due to the failure of a broker/dealer to return a borrowed security or failure to pay the System income earned on the securities while on loan. Cash collateral is invested in a separate account with the lending agent which includes a larger allocation to equity repurchase securities. At June 30, 2015, Cash collateral had a weighted-average maturity of two days. The maturities of the resulting investments generally match the maturities of the securities lending arrangements. While the System bears no credit risk from the failure of the borrower to return a borrowed security, it does bear risk from investing the collateral. As noted above, cash collateral is invested in the lending agent's collective investment pool. Should the collective investment pool experience a period of poor investment returns due to market turbulence or other reasons, the System can record unrealized losses on a mark-to-market basis or realized losses from the default of securities in the investment pool.

*Notes, continued on next page.*

**Note 4. Net Pension Liability, Actuarial Method and Assumptions**

*A. Net Pension Liability*. The components of the net pension liability at June 30, 2015, were as follows:

| | |
|---|---|
| Total pension liability | $4,979,660,749 |
| Plan fiduciary net position | 3,693,357,619 |
| Net pension liability | $1,286,303,130 |
| | |
| Plan fiduciary net position as a percentage of the total pension liability | 74.2% |

*B. Actuarial Methods and Assumptions.* The Total Pension Liability was determined by an actuarial valuation as of July 1, 2014, using the following actuarial assumptions, applied to all periods included in the measurement.

| | |
|---|---|
| Discount rate, net of plan investment expenses | 7.5% |
| Inflation | 3.0% |
| Salary increases, including inflation | 3.0% + merit |
| Investment rate of return, net of plan investment expenses | 7.5% |
| Municipal bond rate | N/A |
| Projected period of unfunded benefit payments | None |

The actuarial assumptions used have been recommended by the actuary and adopted by the System's Board of Trustees based on the most recent review of the System's experience completed in 2011. In the Schedule of Changes in Net Pension Liability, the beginning of year amount differs from the actuarial accrued liability listed in the July 1, 2014, actuarial valuation report because GASB 67 disclosures use a rollforward methodology and did not include the liability gain that was measured in the 2014 valuation.

The rate of employer contributions to the System is composed of normal cost, amortization of the unfunded actuarial accrued liability and an allowance for administrative expenses. The normal cost is a level percent of payroll cost which, along with the member contributions, will pay for projected benefits at retirement for each plan participant. The actuarial accrued liability is that portion of the present value of projected benefits that will not be paid by future normal employer costs or member contributions. The difference between this liability and the funds accumulated as of the same date is the unfunded actuarial accrued liability. The allowance for administrative costs is based upon the System's actual administrative expenses.

The County is required to contribute at an actuarially determined rate; the rate for the year ended June 30, 2015, was 18.35 percent of annual covered payroll. The decision was made to commit additional funding and a rate of 20.18 percent was adopted for fiscal year 2015. Since the ERS's adjusted funded ratio (the ratio of the sum of the actuarial value of assets and commitments already made to fund changes to the actuarial accrued liability) has fallen below 90.0 percent, the contribution rate includes a margin to amortize this shortfall back to the 90.0 percent level. In fiscal year 2011 the target was increased to a 91.0 percent level, with the 2015 fiscal year contribution it was increased to 93.0 percent, and with the 2016 fiscal year contribution it will be increased again to 95.0 percent. The intent of the County is to continue increasing the amortization target until full actuarial funding has been restored. The goal is to reach an amortization to 100 percent in

*Notes, continued on next page.*

contributions at or before fiscal year 2020.

Mortality rates with adjustments for mortality improvements were based on the RP 2000 Mortality tables projected to 2015 using Scale AA.

For purposes of the GASB 67, the Total Pension Liability (TPL) was determined by applying standard update procedures to roll forward to the June 30, 2015, fiscal year end, amounts from an actuarial valuation as of July 1, 2014.

The actuarial assumptions used in the July 1, 2014, valuation were based on the results of an actuarial experience study for the period July 1, 2005 to June 30, 2010.

*C. Long Term Expected Rate of Return*. The long term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan 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.

Best estimates of arithmetic real rates of return for each major asset class included in the System's target asset allocation as of June 30, 2015, are summarized below:

| Asset Class | Long Term Expected Real Rate of Return |
|---|---|
| U.S. Equities | 4.5% |
| International Equities | 5.1% |
| Core Fixed Income | 2.0% |
| High Yield | 3.2% |
| Absolute Return | 6.0% |
| Real Estate | 5.3% |
| Commodity | 4.5% |

*D. Discount Rate.* The discount rate used to measure the total pension liability was 7.5 percent. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that County contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

In making this determination, we assumed the outflows would equal the anticipated benefit payments from the 2014 actuarial valuation. The administrative expenses attributable to current actives were assumed to equal 0.2 percent of covered payroll. The inflows to the plan were assumed to continue at the average aggregate rate for the 2014 active population of 4.71 percent of payroll and County contributions were projected at 20.18 percent for fiscal year 2015, 21.99 percent for fiscal years 2016 through 2033. After that time the County contribution was assumed to drop to the

*Notes, continued on next page.*

normal cost plus expenses (7.42 percent) since the unfunded actuarial liability is expected to be fully funded by that time.

We also used the actual Fiduciary Net Position at June 30, 2015, in the projections.

*E. Sensitivity of the Net Pension Liability to Changes in the Discount Rate*. The following presents the net pension liability of the County, calculated using the discount rate of 7.5 percent, as well as what the County's net pension liability would be if it were calculated using a discount rate that is 1-percentage-pont lower (6.5 percent) or 1-percentage-higher (8.5 percent) than the current rate.

**Sensitivity of Net Pension Liability to Changes in Discount Rate**

| | 1% Decrease<br>6.50% | Discount Rate<br>7.50% | 1% Increase<br>8.50% |
|---|---|---|---|
| Net Pension Liability | $1,975,801,963 | $1,286,303,130 | $723,244,328 |
| Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | 65.1% | 74.2% | 83.6% |

**Note 5. Income Taxes**

The Internal Revenue Service issued the System a determination letter which stated that the System and its underlying trust qualify under the applicable provisions of the Internal Revenue Code and therefore are exempt from federal income taxes.

# Required Supplementary Information (Unaudited)

## Schedule of Changes in the Net Pension Liability and Related Ratios

Year Ended June 30

| | 2015 | 2014 |
|---|---|---|
| Total Pension Liability | | |
| Service cost | $84,153,689 | $84,074,831 |
| Interest | 353,621,871 | 340,919,519 |
| Changes in benefit terms | 1,462,698 | 0 |
| Differences between expected and actual experience | (8,616,589) | 0 |
| Changes in assumptions | 0 | 0 |
| Benefit payments, including refunds of member contributions | (258,834,581) | (238,560,893) |
| Net change in Total Pension Liability | 171,787,088 | 186,433,457 |
| Total Pension Liability - beginning | 4,807,873,661 | 4,621,440,204 |
| Total Pension Liability - ending (a) | 4,979,660,749 | 4,807,873,661 |
| Plan Fiduciary Net Position | | |
| Contributions - employer | 138,493,099 | 129,618,309 |
| Contributions - member | 33,193,593 | 32,758,587 |
| Net investment income | 16,342,457 | 490,196,386 |
| Benefit payments, including refunds of member contributions | (258,834,581) | (238,560,893) |
| Administrative expenses | (1,896,614) | (1,884,827) |
| Net change in Plan Fiduciary Net Position | (72,702,046) | 412,127,562 |
| Plan Fiduciary Net Position - beginning | 3,766,059,665 | 3,353,932,103 |
| Plan Fiduciary Net Position - ending (b) | 3,693,357,619 | 3,766,059,665 |
| Net Pension Liability (Asset) - ending (a)-(b) | $1,286,303,130 | $1,041,813,996 |
| Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | 74.2% | 78.3% |
| Covered Employee Payroll | $686,288,895 | $671,597,456 |
| Net Pension Liability as a Percentage of covered Employee Payroll | 187.4% | 155.1% |

The total pension liability contained in this schedule was calculated by Cheiron, the System's Actuary. The net pension liability is measured as the total pension liability less the amount of the fiduciary net position of the Employees' Retirement System.

*This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

*RSI, continued on next page.*

**Schedule of Net Pension Liability**

Year Ended June 30

| | 2015 | 2014 |
|---|---|---|
| Total Pension Liability | $4,979,660,749 | $4,807,873,661 |
| Plan Fiduciary Net Position | 3,693,357,619 | 3,766,059,665 |
| Net Pension Liability | $1,286,303,130 | $1,041,813,996 |
| Plan Fiduciary Net Position as a Percentage of the Total Plan Liability | 74.2% | 78.3% |
| Covered employee payroll | $686,288,895 | $671,597,456 |
| Net pension Liability as a percentage of covered payroll | 187.4% | 155.1% |

*This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

**Schedule of Money-Weighted Rate of Return**

| Fiscal Year | Annual Money-Weighted Rate of Return, Net of Investment Expense |
|---|---|
| 2015 | 0.5% |
| 2014 | 14.9% |

*This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

*RSI, continued on next page.*

## Schedule of Employer Contributions

| Fiscal Year | Actuarial Determined Contribution | Contributions in relations to the Actuarial Determined Contribution | Contribution Deficiency (Excess) | Covered Employee Payroll | Contributions as a Percentage of Covered Payroll |
|---|---|---|---|---|---|
| 2015 | $138,493,099 | $138,493,099 | $- | $686,288,895 | 20.18% |
| 2014 | 129,618,309 | 129,618,309 | - | 671,597,456 | 19.30% |
| 2013 | 127,448,018 | 127,448,018 | - | 669,018,467 | 19.05% |
| 2012 | 114,682,538 | 114,682,538 | - | 666,758,942 | 17.20% |
| 2011 | 96,607,535 | 96,607,535 | - | 657,194,116 | 14.70% |
| 2010 | 64,069,102 | 64,069,102 | - | 659,825,973 | 9.71% |
| 2009 | 65,110,832 | 65,110,832 | - | 676,827,775 | 9.62% |
| 2008 | 62,636,121 | 62,636,121 | - | 653,139,948 | 9.59% |
| 2007 | 57,452,711 | 57,452,711 | - | 621,110,389 | 9.25% |
| 2006 | 49,436,463 | 49,436,463 | - | 599,957,075 | 8.24% |

**Notes to Schedule**

| | |
|---|---|
| Valuation Date | 7/1/2014 |
| Timing | Actuarially determined contribution rates are calculated based on the actuarial valuation one year prior to the beginning of the plan year |

Key Methods and Assumptions Used to Determine Contribution Rates:

| | |
|---|---|
| Actuarial cost method | Entry Age Normal |
| Asset valuation method | 3-year smoothed market |
| Amortization method | Corridor method, amortize liability outside of 90% corridor over an open 15 year period with level % of payroll. In fiscal year 2011 through 2015, the target was increased to a 93% level. |
| Discount rate | 7.5% |
| Amortization growth rate | 3.5% |
| Price inflation | 3.0% |
| Salary increases | 3.0% plus merit component based on employee's years of service |
| Mortality | Sex distinct RP-2000 Combined Mortality projected to 2015 using Scale AA |

A complete description of the methods and assumptions used to determine contribution rates for the year ending June 30, 2015, can be found in the July 1, 2013, actuarial valuation report.

*RSI, continued on next page.*

## Summary of Significant Changes to the Pension System

The summary of employer and employee contribution rates during the past 5 years and other significant changes in the pension system are as follows:

| | Contribution Rates | |
|---|---|---|
| Fiscal Year | Employer | Employee |
| 2015 | 20.18% | 4%, $5^{1}/_{3}$% |
| 2014 | 19.30% | 4%, $5^{1}/_{3}$% |
| 2013 | 19.05% | 4%, $5^{1}/_{3}$% |
| 2012 | 17.20% | 4%, $5^{1}/_{3}$% |
| 2011 | 14.70% | 4%, $5^{1}/_{3}$% |

**January 2014** Service-Connected Disability Social Security offset was reduced from 25.0 percent to 15.0 percent.

**January 2013** Employees hired on or after January 1, 2013, will be automatically enrolled in Option C or elect to switch to Option D within 30 days of employment. The maximum amount of accrued sick leave is capped at 2,080 hours. Eligibility for normal service retirement is at age 55 or older if age plus years of service total 85 years or more; DROP does not include the Pre-Social Security benefit.

# Other Supplementary Information (Unaudited)

**Schedule of Investment & Consultant Expenses**
For the Year Ended June 30, 2015

| | |
|---|---|
| Investment Activity Expenses | |
| Investment manager fees | $12,057,166 |
| Custodial fees | 127,835 |
| Consultant Expenses | |
| Consultant expenses | 77,729 |
| Total investment and consulting expenses | **$12,262,730** |

**Schedule of Administrative Expenses**
For the Year Ended June 30, 2015

| | | |
|---|---|---|
| Personnel services | | |
| Salaries and wages | $984,349 | |
| Fringe benefits | 416,404 | |
| Total personnel services | | $1,400,753 |
| Professional services | | |
| Actuarial | 82,375 | |
| Audit | 32,352 | |
| Legal | 18,167 | |
| Total professional services | | 132,894 |
| Communications | | |
| Phone charges | 28,217 | |
| Printing, binding and copying | 5,563 | |
| Postage | 14,438 | |
| Total communications | | 48,218 |
| Supplies | | |
| Office supplies | 8,436 | |
| Total supplies | | 8,436 |
| Other services and charges | | |
| Board and staff travel and development | 24,593 | |
| Professional memberships | 1,968 | |
| Professional subscriptions | 1,573 | |
| Insurance | 26,242 | |
| Building rent | 85,557 | |
| Depreciation expense | 846 | |
| Computer system | 149,225 | |
| Other operating | 16,309 | |
| Total other services and charges | | 306,313 |
| Total Administrative Expenses | | **$1,896,614** |

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# County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

November 24, 2015

Dear Members of the Board of Trustees:

Fiscal year 2015 was a challenging environment for most major asset classes. Only select segments of the U.S. equity markets approached or exceeded our target 7.5% actuarial return. The major U.S. bond market benchmarks produced modest low single digit returns that are not inconsistent with a low interest rate environment. On the international side, non - U.S. equities and fixed income mostly generated negative returns as the U.S. dollar strengthened and commodity market turmoil heightened. Returns for risk parity managers were also under pressure and mostly negative as commodity prices fell by over 25% and other real assets such as TIPS posted low single digit declines.

For most of the past 12 months, the Federal Reserve has been a headline story as it decides when, how quickly and for how long to raise interest rates. On one side are the pundits that argue that the U.S. and global economy haven't recovered sufficiently to withstand a rate increase and on the other are those that contend that the Fed needs to eventually bring to an end this unnatural period of low interest rates to help normalize the investment landscape. Since eighty percent of the world's central banks are currently in an easing cycle, by raising interest rates the Fed would be at odds with what the global norm is. In contrast, the ECB has indicated it intends to maintain its QE program and rates through at least September 2016. In part because the U.S. Dollar is the world's reserve currency and in part due to the increasing codependency of the U.S. and international markets, Chairman Yellen is trying to balance not only what is good monetary policy for the U.S. with what is best globally. In any event, once the Fed decides to act, it will be the first rate increase since August 2006. The Fed would clearly like to restock its toolbox to be able to reduce interest rates and stimulate the economy in the next economic downturn.

Key global concerns that came into play during the year include the Greek political drama and debt negotiations that were front and center. Questions arose again about the European Union's ability to maintain solidarity among its members with austerity measures being such a prominent tool. The Ukraine/Russia conflict and continued geopolitical tensions across the Middle East were also major factors moving and concerning markets. A slowdown in China's growth rate and the related lower consumption of raw materials and a continued excess of oil globally due in part to increased supply from U.S. fracking resulted in multi-year lows in many commodities but especially oil that has

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resulted in global trade imbalances and debt and equity market disruptions as well. Weak emerging market economies impacted by weak currencies, low commodity prices, and high debt levels risk dragging the global economy into recession as real GDP growth in emerging markets has fallen to 15-year lows.

Domestically, the harsh U.S. winter weather led to a string of disappointing economic data that led the Fed to question its positive view of the economy. In spite of the harsh winter, the employment numbers have improved to 5.3% unemployment in June from 6.1% 12 months ago and real GDP growth has been a solid 2.9% for the fiscal year ending June.

Another focus of the market is that the dollar has strengthened significantly over the last 12 months and that has made U.S. goods less competitive and increased the fear that any Fed tightening will continue to support a stronger dollar and reduce the attractiveness of U.S. goods and services. In the first quarter of 2015 alone, the dollar index soared by 9% and for the full fiscal year by 19.8%. There has been a related material change in trade flows and distress in the credit markets especially in energy and material related credits. Currency devaluations like those that China has recently undertaken are more likely as a viable means to attempt to correct the balance of trade imbalances between countries as normal monetary policy options become limited.

Looking forward, the valuation landscape is as always unpredictable. Equities are not cheap by many historical standards and have had a great run since the lows of 2009 and low interest rates put a ceiling on fixed income returns. However, equities look more reasonably priced considering we are in a low interest rate and low inflation environment. As long-term investors, we strive to stay fully invested and attempt to maintain a risk balanced approach in order to meet or exceed our long-term return objective of 7.5%. We continue to believe in the value of diversification and have a healthy allocation to absolute return managers and mandates as an uncorrelated source of return versus traditional asset classes.

## Domestic Equity Markets

U.S. equity markets continued to move higher for the fiscal year ending in June 2015, producing positive returns across the board. Throughout the year, equity investors faced headwinds of slowing equity returns. Although value, growth and core indexes were all positive for the year ending in June they were muted relative to fiscal year 2014. Indications of full valuations have been met with hope for continued growth, but as the markets have sustained momentum-driven results, they appear to be moving at a more cautious pace. Large cap stocks outperformed small cap stocks by +0.9% as the Russell 1000 returned +7.4% and the Russell 2000 returned +6.5%. Large cap growth outperformed large cap value with the Russell 1000 Growth up +10.6% compared to +4.1% for the Russell 1000 Value. The same trend held true to an even greater degree in smaller cap names as the Russell 2000 Growth returned +12.3% as compared with the Russell 2000 Value Index return of +0.8%.

## Domestic Fixed Income Markets

Bond markets produced modest returns over the twelve-month period ending June 30, 2015. Monetary policy divergence was the dominant macro theme during the year, with the Federal Reserve tapering its quantitative-easing (QE) program and moving gently towards policy-rate normalization, while the European Central Bank and the Bank of Japan either launched or expanded their own asset purchase programs. U.S. economic growth accelerated early in the period, only to lose momentum following a meaningful appreciation in the foreign exchange value of the U.S. dollar. Inflation fell sharply during the fiscal year, driven by a steep fall in the price of oil and other commodities, while interest-rate volatility trended higher. The 10-year U.S. Treasury note ended the fiscal year yielding 2.4%, 18 basis points lower than where it had begun the period. High-quality bonds performed reasonably well under these conditions, with the Barclays U.S. Treasury Bond Index, the Barclays U.S. Aggregate Bond Index, and the Barclays U.S. Credit Index all producing returns of 2.3%, 1.9%, and 0.9%, respectively. Leveraged loans also performed well, benefiting from the widely-held view that the Federal Reserve would begin raising short-term interest rates in 2015. The Barclays U.S. High-Yield Loan Index produced a solid return of 2.0% during the period, but such performance proved to be an outlier, as lower-quality bonds generally struggled to overcome the deflationary consequences of slow economic growth, a strong U.S. dollar, and lower commodity prices. The Barclays U.S. Corporate High-Yield Bond Index returned -0.4%.

## International Markets

Non-U.S. equity markets were driven lower as commodities widely fell, global economic growth moderated, and the U.S. dollar strengthened. While the U.S. Federal Reserve shifted to a neutral stance from easing, and began to signal potential tightening, other key central banks in China, Europe, and Japan were all engaged in stimulus activity. In a broadly declining commodity market oil (down 45%) and gold (down 11%) were among the headliners. Against this backdrop, Non-U.S. developed markets, as measured by the MSCI World ex-U.S. Index fell by roughly 5% in dollar terms. Emerging markets equities, as measured by the MSCI Emerging Markets Index, also fell by roughly 5%. Emerging market debt has been the clear loser for the year ending June 30, 2015 following a stellar 2014. According to the JPM GBI-EM Global Diversified Index, emerging market debt posted a return of -15.4%.

## Employees' System

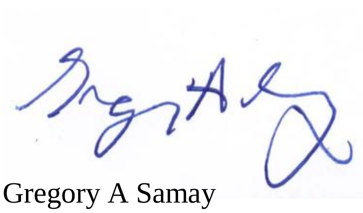
The Employees' Retirement System operates a sound and diversified investment program with disciplined asset re-balancing to achieve strategic long-term goals. This disciplined investment process has been effective in achieving a long-term record of consistent asset growth. The System follows a risk balanced approach to diversify market risk exposures and returns. Using futures and other derivative instruments, the System increases the allocation to low risk and return assets classes and reduces the relative allocation to high risk, higher return asset classes. By using futures, the System's economic exposure to all asset classes commonly exceeds the 100% weighting of the capital value of the portfolio's assets.

For fiscal year 2015, investments provided a return of 0.8%, gross of fees (0.5%, net of fees). The System's annualized rates of return, gross of fees, were 7.9% (7.5%, net of fees) over the last three years and 11.2% (10.7%, net of fees) over the last five years. The System's returns ranked in the 90th percentile of The Bank of New York Mellon universe of public plans for 2015, in the 88th percentile for the latest 3-year period, and in the 42nd percentile of public plans for the last 5 years.

During the past twelve months, Nicholas Company was added to the Domestic Equity manager lineup replacing INTECH. The Employees' System also added Aberdeen Asset Management to the Emerging Market Equity manager lineup replacing the BlackRock Emerging Markets Index

Fund. DoubleLine Commercial Mortgage-Backed Securities Fund was added to the Fixed Income manager lineup. AQR Style Premia Fund was added to the Absolute Return Manager lineup replacing the BlackRock Global Ascent Fund. Liquidation of our investment managed by Stark Investments related to the winding down of the J.P. Morgan Fixed Income Opportunity Fund was completed during the year and cash proceeds returned to the System. Finally, the System's security lending program was amended to allow cash collateral to be invested in equity repurchase and provides for indemnification from loss on repurchase transactions.

Sincerely,



Gregory A Samay
Chief Investment Officer

## Investments by Category and Investment Manager**

June 30, 2015

| *Asset Class* Manager | Investment Style | Total Fair Market Values | % of Total Portfolio |
|---|---|---|---|
| ***Domestic Equities*** | | | |
| Columbia Wanger Asset Management | Small/Mid Cap Core | $147,520,346 | 4.0% |
| DePrince, Race & Zollo | Large Cap Value | 146,791,996 | 4.0% |
| Nicholas Company | Large Cap Growth | 140,458,242 | 3.8% |
| Pzena Investment Management | Large Cap Value | 146,825,859 | 4.0% |
| Sands Capital Management | Large Cap Growth | 128,858,889 | 3.5% |
| ***International Equities*** | | | |
| Aberdeen Asset Management* | Emerging Markets | 49,469,392 | 1.3% |
| First Eagle Investment Management | Developed Markets | 56,560,001 | 1.5% |
| LSV Asset Management | Developed Markets Value | 78,723,383 | 2.1% |
| Marathon Asset Management* | Developed Markets | 53,692,206 | 1.5% |
| Quantitative Management Associates* | Emerging Markets | 60,032,988 | 1.6% |
| WCM Investment Management | Developed Markets | 78,647,408 | 2.1% |
| ***Fixed Income*** | | | |
| Brandywine Asset Management | Global Bonds | 179,117,503 | 4.9% |
| Bridgewater Associates | Enhanced Multi-Asset Real Return | 469,334,098 | 12.7% |
| Bridgewater Associates* | TIPS Index | 237,611,784 | 6.4% |
| Czech Asset Management* | Direct Lending | 40,394,304 | 1.1% |
| DoubleLine Capital | Mortgage-Backed Securities | 189,450,582 | 5.1% |
| DoubleLine Capital | Special Mortage Credit | 26,347,610 | 0.7% |
| DoubleLine Capital | Commercial Mortgage-Backed | 18,599,029 | 0.5% |
| JPMorgan Global Maritime Fund* | Distressed Opportunity | 13,543,585 | 0.4% |
| Lazard Asset Management* | Emerging Markets Debt | 67,163,445 | 1.8% |
| MacKay Shields | High Yield Bonds | 71,764,773 | 1.9% |
| Pacific Investment Management Co. (PIMCO)* | Bank Recapitalization/Value | 37,507,670 | 1.0% |
| Pacific Investment Management Co. (PIMCO)* | Distressed Senior Credit | 67,267,531 | 1.8% |
| Post Advisory | High Yield Bonds | 72,089,756 | 2.0% |
| Shenkman Capital Management | High Yield Bonds | 143,099,579 | 3.9% |
| ***Real Estate and Commodity*** | | | |
| Cohen & Steers Capital Management | Int'l Real Estate Securities | 90,608,296 | 2.5% |
| Cohen & Steers Capital Management | U.S. Real Estate Inv. Trusts | 184,888,117 | 5.0% |
| Pacific Investment Management Co. (PIMCO) | Collateralized Commodity Futures | 86,636,763 | 2.3% |
| ***Absolute Return*** | | | |
| AQR Style Premia | Global Macro Absolute Return Fund | 75,893,471 | 2.1% |
| BGI GlobalAlpha Fund* | Multi-Strategy Absolute Return Fund | 81,968,362 | 2.2% |
| Deephaven Capital Management* | Multi-Strategy Absolute Return Fund | 40,104 | 0.0% |
| Eagle Trading Systems* | Global Macro Absolute Return Fund | 67,842,815 | 1.8% |
| FrontPoint Partners* | Multi-Strategy Absolute Return Fund | 325,388 | 0.0% |
| Pacific Investment Management Co. (PIMCO)* | Multi-Strategy Absolute Return Fund | 98,036,924 | 2.7% |
| Pacific Investment Management Co. (PIMCO)* | Global Macro Absolute Return Fund | 90,926,876 | 2.5% |
| Pacific Investment Management Co. (PIMCO)* | Multi-Strategy Absolute Return Fund | 69,884,139 | 1.9% |
| ***Short-term*** | | | |
| BNY Mellon Cash Investment Strategies | Plan Level Cash Accounts | 81,733,191 | 2.2% |
| Cash Held at County Treasurer | Operating Cash Account | 6,670,132 | 0.2% |
| Parametric | Policy Implementation Overlay | 38,650,269 | 1.0% |
| **Total Investments** | | **$3,694,976,806** | **100.0%** |

* Pooled fund

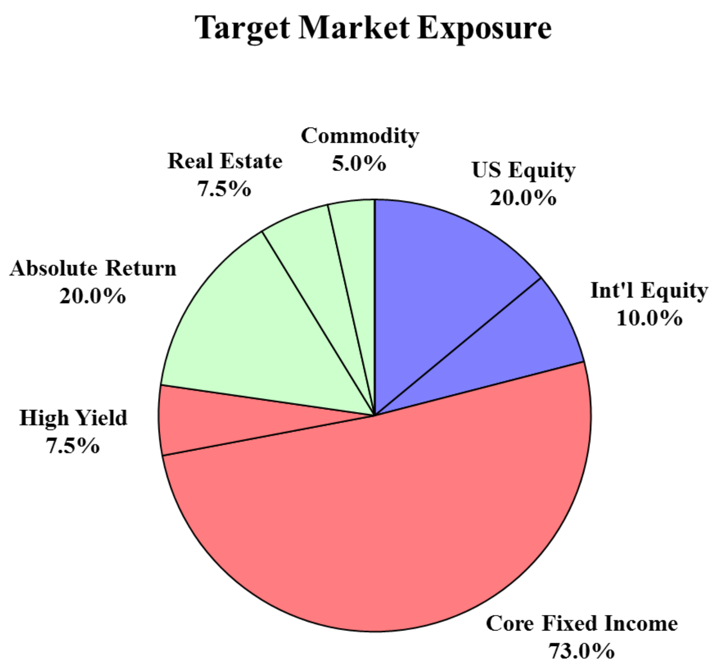
**See Pages 8-9 for complete listing of investment professionals.

## Employees' Retirement System – Allocation of Market Exposures

### Target Market Exposures

The asset structure shown below represents the Trustees' assessment of their optimal asset allocation as of June 30, 2015. The target asset allocation provides a reasonable expectation that the System's investment objectives can be achieved based on historical relationships of asset class performance.

The pie chart below details the target asset mix, consistent with the achievement of the long-term objectives of the System, as of June 30, 2015.



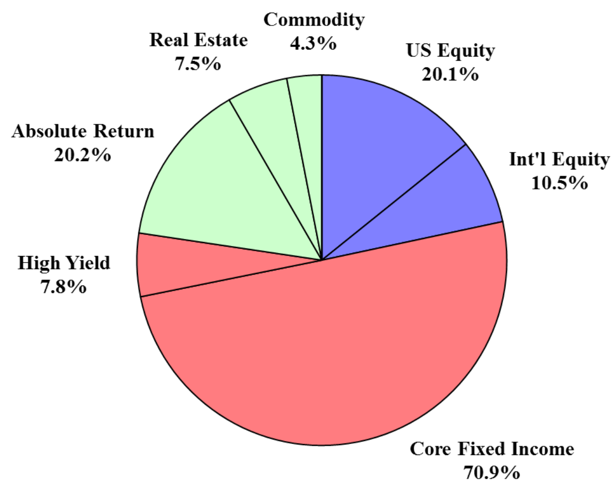

Total Exposure exceeds 100% from the addition of futures and other derivative instruments

**Actual Allocations as of June 30, 2015**

The asset structure of ERS has historically reflected a proper balance of the System's needs for liquidity, growth of assets, and risk tolerance. The System's investment policy is designed to continue to meet its long-term investment objectives while, at the same time, providing sufficient flexibility to meet short-term funding requirements.

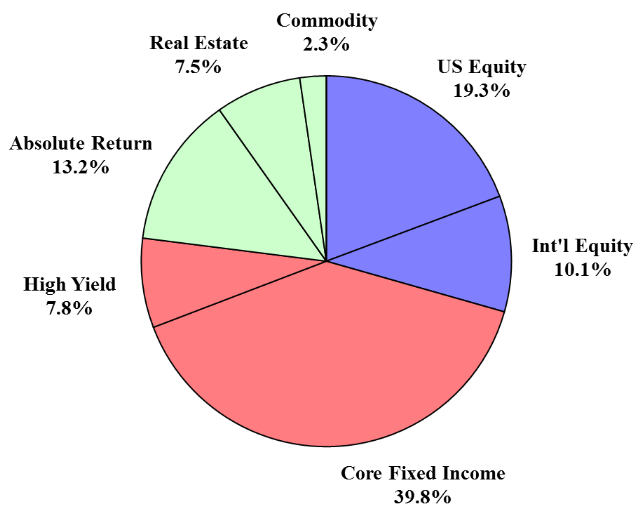
The pie chart below details the actual asset allocations as of June 30, 2015.

**Actual Market Exposure**




Total Exposure exceeds 100% from the addition of futures and other derivative instruments

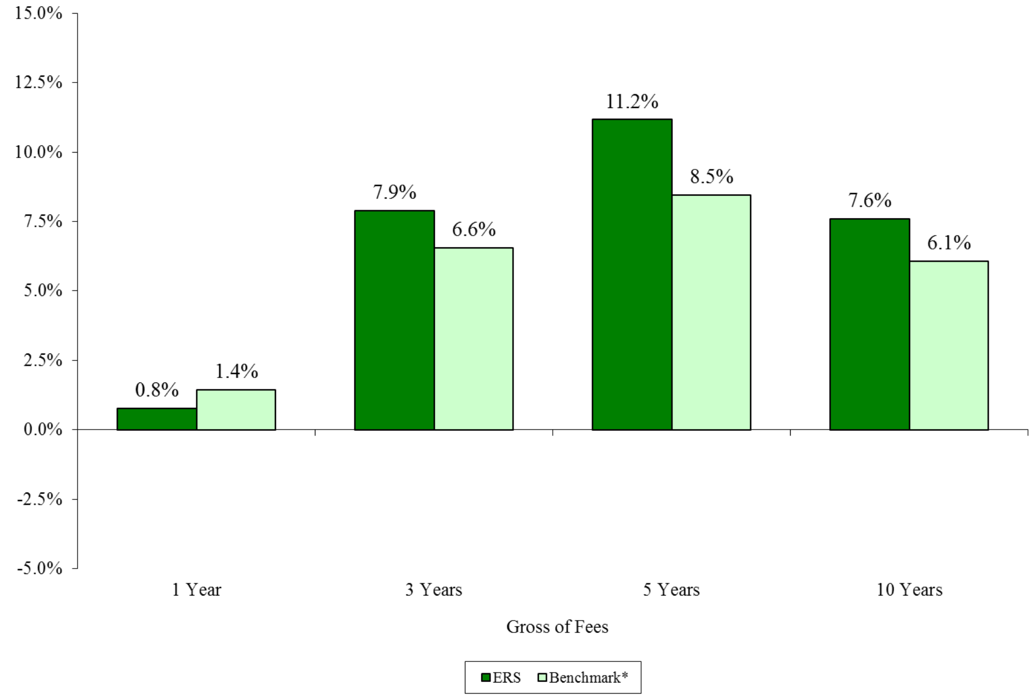
**Actual Allocation of Capital**



**Investment Results**

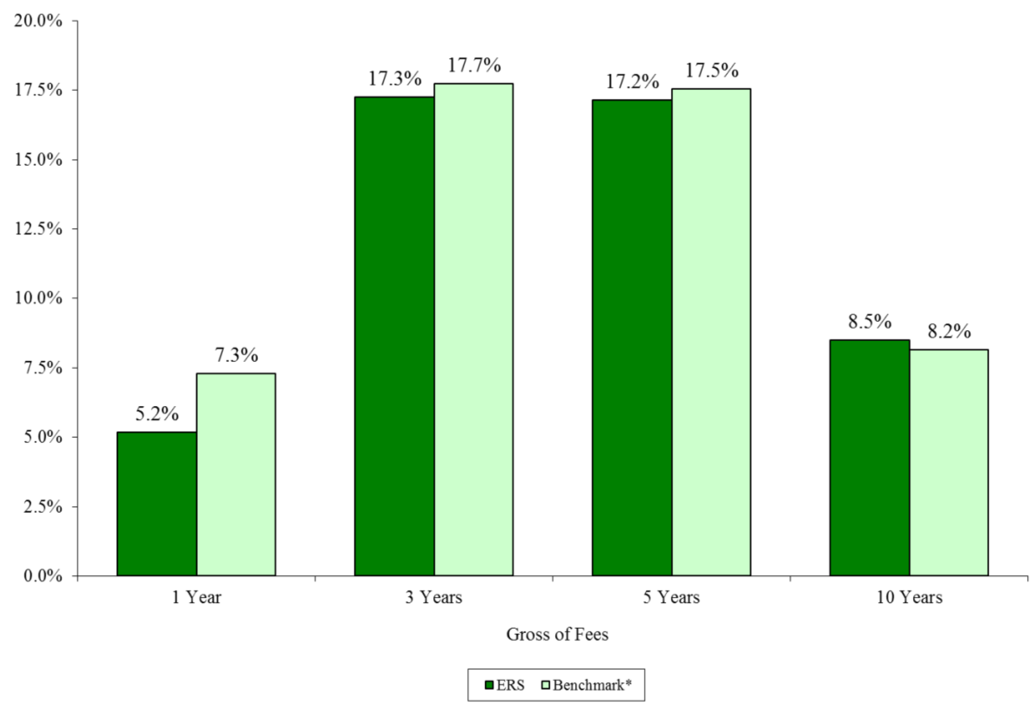
(Time weighted return, gross of fees)

## Total Fund:




*Benchmark: 20% Russell 3000, 7% EAFE, 3% MSCI EMI, 3.75% CSFB High Yield, 3.75% ML High Yield Master, 50% Barclays Agg x 1.5 – 3 Month LIBOR x 0.5, 7.5% NAREIT, 5% Bloomberg Commodity

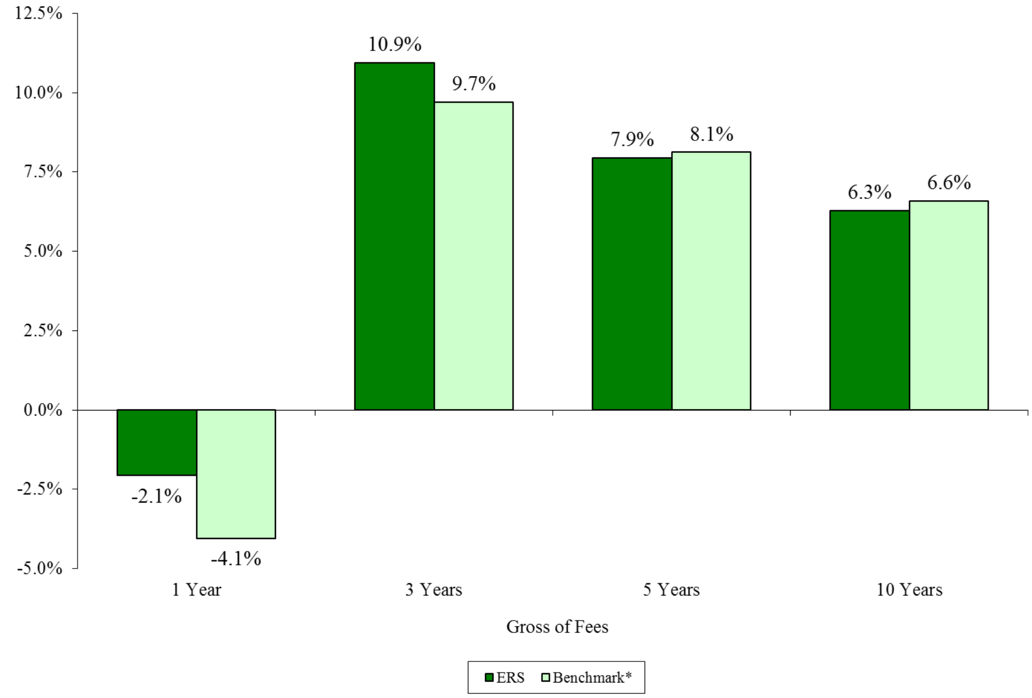
## Domestic Equity:




*Benchmark: Russell 3000

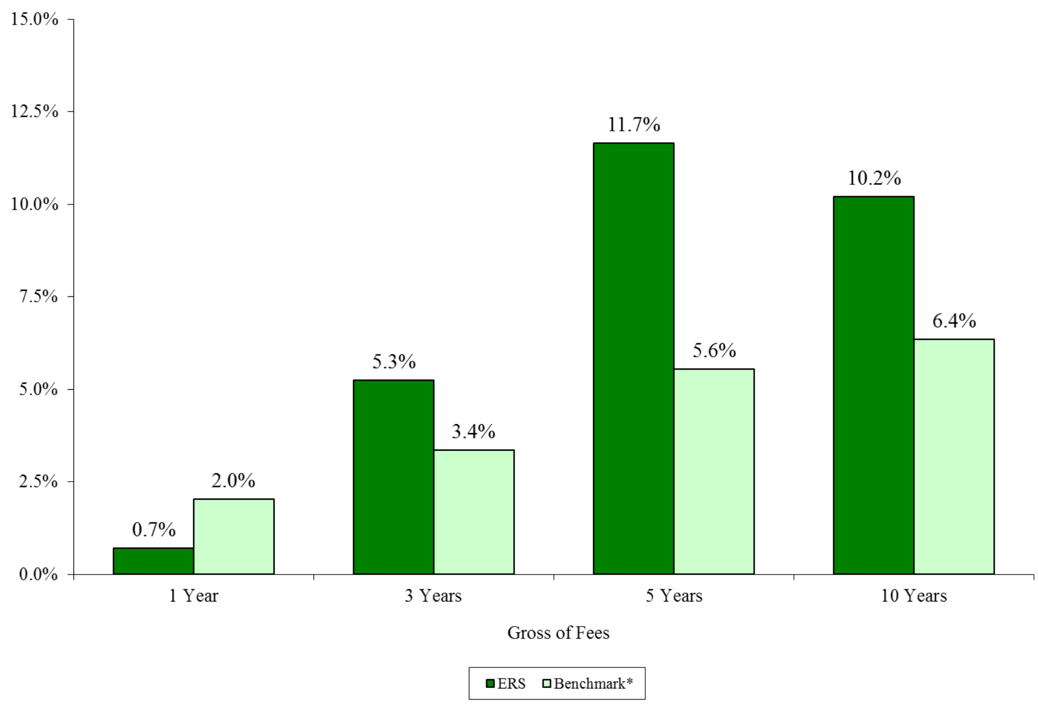
## Investment Results
(Time weighted return, gross of fees)

### International Equity:




*Benchmark: 67% MSCI EAFE, 33% MSCI EM

### Fixed Income:

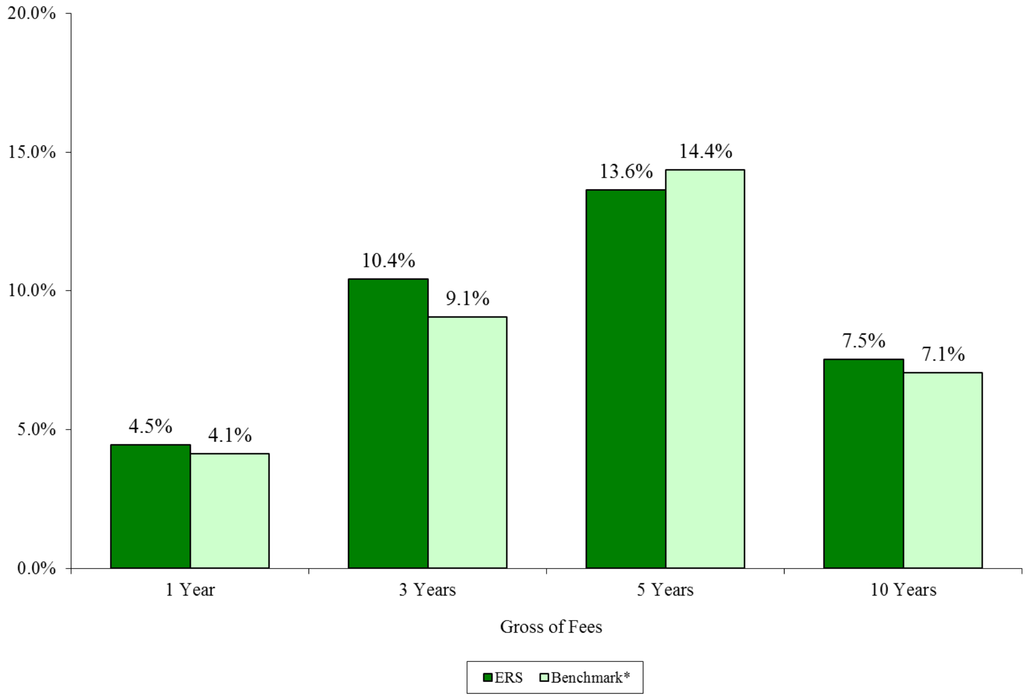



*Benchmark: 81.25% Barclays Agg x 1.5 – 3 Month LIBOR x 0.5, 9.375% CSFB High Yield, 9.375% ML High Yield Master

## Investment Results

(Time weighted return, gross of fees)

**Real Estate:**




*Benchmark: NAREIT Equity Share Price Index

## Schedule of Ten Largest Equity & Fixed Income Holdings*

### Ten Largest Equity Holdings*

| No. Shares | Description | Cost | Fair Value | % of Total Portfolio |
|---|---|---|---|---|
| 102,722 | Simon Property Group Inc | $13,202,700 | $17,772,960 | 0.48% |
| 181,578 | Equity Residential | 10,305,110 | 12,741,328 | 0.34% |
| 109,711 | Vornado Realty Trust | 9,216,093 | 10,414,865 | 0.28% |
| 320,922 | UDR Inc | 8,458,931 | 10,279,132 | 0.28% |
| 45,450 | Valeant Pharmaceuticals | 10,013,090 | 10,096,718 | 0.27% |
| 153,125 | Health Care REIT Inc | 10,310,332 | 10,049,594 | 0.27% |
| 146,000 | Visa Inc | 3,964,816 | 9,803,900 | 0.27% |
| 52,928 | Public Storage | 9,983,070 | 9,758,335 | 0.26% |
| 78,436 | SL Green Realty Corp | 7,012,605 | 8,619,332 | 0.23% |
| 192,243 | Microsoft Corp | 3,575,339 | 8,487,528 | 0.23% |
| | **Total** | **$86,042,086** | **$108,023,692** | **2.91%** |

### Ten Largest Fixed Income Holdings*

| Par Value (in local values) | Description | Cost (in U.S. Dollars) | Fair Value (in U.S. Dollars) | % of Total Portfolio |
|---|---|---|---|---|
| 16,936,944 | U.S. Treas-CPI Inflat, 1.250%, 07/15/2020 | $18,186,476 | $18,122,530 | 0.49% |
| 13,379,405 | U.S. Treas-CPI Inflat, 0.125%, 07/15/2024 | 13,105,688 | 13,047,997 | 0.35% |
| 14,690,000 | U.S. Treasury Bond, 2.500%, 02/15/2045 | 13,597,968 | 12,928,375 | 0.35% |
| 11,047,219 | U.S. Treas-CPI Inflat, 0.625%, 07/15/2021 | 11,422,064 | 11,402,829 | 0.31% |
| 138,800,000 | Mexican Bonos, 7.750%, 11/13/2042 | 11,575,626 | 9,858,558 | 0.27% |
| 106,180,000 | Mexican Bonos, 8.500%, 11/18/2038 | 9,442,016 | 8,094,445 | 0.22% |
| 5,100,000 | Italy Buoni Poliennali De Regs, 5.000%, 08/01/2039 | 5,842,388 | 7,296,750 | 0.20% |
| 6,984,462 | U.S. Treas-CPI Inflat, 0.125%, 04/15/2017 | 7,098,599 | 7,079,381 | 0.19% |
| 93,020,000 | Mexican Bonos, 8.500%, 05/31/2029 | 8,390,771 | 7,063,091 | 0.19% |
| 6,275,400,000 | Korea Treasury Bond, 5.750%, 09/10/2018 | 5,906,104 | 6,297,261 | 0.17% |
| | **Total** | **$104,567,700** | **$101,191,217** | **2.74%** |

*Full disclosure of holdings is available upon request.

## Schedule of Brokerage Commissions

For Year Ended June 30, 2015

| Broker Name | Base Volume | Total Shares | Base Commission | Commission Percentage |
|---|---|---|---|---|
| Kas Bank Nv, Amsterdam | $7,797,176 | 367,781 | $ 11,676 | 0.15% |
| Citigroup Gbl Mkts/Salomon, New York | 7,939,765 | 2,348,560 | 11,025 | 0.14% |
| G-Trade Services Ltd, Hamilton | 11,514,990 | 297,700 | 15,148 | 0.13% |
| Instinet Europe Limited, London | 4,470,570 | 141,664 | 5,301 | 0.12% |
| Goldman Sachs & Co, Ny | 120,092,991 | 2,700,152 | 132,595 | 0.11% |
| Macquarie Bank Ltd, Hong Kong | 6,756,374 | 1,595,011 | 7,412 | 0.11% |
| UBS Warburg Asia Ltd, Hong Kong | 5,783,466 | 1,820,466 | 6,135 | 0.11% |
| JP Morgan Secs Ltd, London | 10,863,080 | 836,265 | 11,303 | 0.10% |
| BNY Convergex Execution Sol, New York | 12,886,792 | 409,553 | 13,003 | 0.10% |
| Instinet Corp, New York | 24,490,865 | 801,283 | 23,871 | 0.10% |
| Leerink Swann & Co, Jersey City | 7,676,656 | 263,406 | 7,473 | 0.10% |
| Merrill Lynch Gilts Ltd, London | 7,612,598 | 216,953 | 7,301 | 0.10% |
| RBC Capital Markets Llc, New York | 6,223,558 | 191,601 | 5,195 | 0.08% |
| Daiwa Secs Amer Inc, New York | 11,397,213 | 697,068 | 9,093 | 0.08% |
| Liquidnet Inc, Brooklyn | 12,401,068 | 340,081 | 9,839 | 0.08% |
| Morgan Stanley & Co Inc, Ny | 107,149,210 | 6,814,856 | 83,785 | 0.08% |
| Credit Lyonnais Secs, Singapore | 8,383,689 | 954,695 | 6,449 | 0.08% |
| Citigroup Gbl Mkts Inc, New York | 53,484,453 | 1,587,846 | 39,033 | 0.07% |
| Credit Suisse (Europe), London | 7,161,117 | 283,309 | 5,156 | 0.07% |
| Merrill Lynch Intl London Equities | 16,104,295 | 3,501,562 | 11,535 | 0.07% |
| Stifel Nicolaus | 11,909,028 | 321,515 | 8,173 | 0.07% |
| Barclays Capital Le, Jersey City | 9,188,145 | 194,058 | 5,810 | 0.06% |
| Jonestrading Instl Svcs Llc, Westlake | 7,179,401 | 289,892 | 4,529 | 0.06% |
| Deustche Bk Secs Inc, Ny | 108,914,822 | 2,148,778 | 68,121 | 0.06% |
| Merrill Lynch Pierce Fenner, Wilmington | 4,886,443 | 756,616 | 3,023 | 0.06% |
| BNY Convergex, New York | 27,467,820 | 668,620 | 16,719 | 0.06% |
| UBS Securities Llc, Stamford | 24,159,159 | 823,101 | 14,665 | 0.06% |
| ISI Group Inc, Ny | 13,215,809 | 235,370 | 7,919 | 0.06% |
| J.P. Morgan Clearing Corp, New York | 97,407,009 | 3,955,610 | 58,185 | 0.06% |
| Credit Suisse, New York | 60,690,369 | 3,389,343 | 35,641 | 0.06% |
| Fox River Execution Tech, Llc, Jersey City | 6,113,666 | 162,270 | 3,245 | 0.05% |
| Weeden & Co, New York | 44,547,940 | 672,398 | 22,436 | 0.05% |
| SG Americas Securities Llc, New York | 10,668,898 | 200,600 | 5,335 | 0.05% |
| Guzman & Company, Coral Gables | 57,224,215 | 851,200 | 28,613 | 0.05% |
| Instinet Corp, Ny | 36,779,731 | 573,314 | 18,390 | 0.05% |
| Rosenblatt Securities Llc, Jersey City | 30,360,991 | 419,300 | 15,180 | 0.05% |
| HSBC Securities (Usa) Inc, New York | 4,797,114 | 237,585 | 2,376 | 0.05% |
| J P Morgan Securities Inc, Brooklyn | 38,658,336 | 785,839 | 19,105 | 0.05% |
| HSBC Secs Inc, New York | 16,877,368 | 1,482,245 | 8,152 | 0.05% |
| BNY Convergex / Ljr, Houston | 78,141,534 | 1,891,294 | 37,329 | 0.05% |
| Bernstein Sanford C & Co, New York | 68,074,794 | 1,152,206 | 31,995 | 0.05% |
| Bloomberg Tradebook Llc, New York | 81,838,678 | 2,323,473 | 34,856 | 0.04% |
| Cap Instl Svcs Inc-Equities, Dallas | 32,025,930 | 469,300 | 11,470 | 0.04% |
| Jefferies & Co Inc, New York | 62,154,469 | 1,033,366 | 21,621 | 0.03% |
| Merrill Lynch Professional Clrg, Purchas | 15,245,031 | 398,820 | 4,794 | 0.03% |
| HSBC Bank Plc (Midland Bk)(Jac), London | 19,311,239 | 904,904 | 5,783 | 0.03% |
| Knight Direct Llc, Jersey City | 17,782,908 | 538,123 | 5,150 | 0.03% |
| Merrill Lynch Pierce Fenner Smith Inc Ny | 117,001,599 | 2,038,771 | 33,800 | 0.03% |
| Pershing Llc, Jersey City | 47,867,048 | 815,428 | 10,198 | 0.02% |
| Investment Technology Group, New York | 148,360,769 | 2,014,577 | 20,248 | 0.01% |
| Other Brokers | 122,438,306 | 19,039,829 | 135,877 | 0.11% |
| **Total** | **$1,871,478,495** | **76,957,557** | **$1,121,066** | **0.06%** |

**Investment Summary**
(Based on Capital Allocation)

| | As of June 30, 2014 | | As of June 30, 2015 | |
|---|---|---|---|---|
| | **Fair Value** | **% Fair Value** | **Fair Value** | **% Fair Value** |
| Domestic Equities | $785,298,885 | 20.8% | $710,455,332 | 19.2% |
| International Equities | 417,555,666 | 11.0% | 377,125,378 | 10.2% |
| Fixed Income | 1,627,591,648 | 43.2% | 1,633,291,249 | 44.2% |
| Alternative Investments | 417,401,835 | 11.1% | 362,133,176 | 9.8% |
| Absolute Return | 443,984,741 | 11.8% | 484,918,079 | 13.2% |
| Short-term | 76,424,688 | 2.1% | 127,053,592 | 3.4% |
| **Total** | **$3,768,257,463** | **100.0%** | **$3,694,976,806** | **100.0%** |

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CHEIRON Classic Values, Innovative Advice.

August 14, 2015

Fairfax County Employees'
Retirement System
10680 Main Street, Suite 280
Fairfax, Virginia 22030-3812

Dear Members of the Board:

At your request, we have performed an actuarial valuation of the Fairfax County Employees' Retirement System as of July 1, 2014. The results of that valuation are contained in a full actuarial valuation report dated February 9, 2015. The purpose of this actuarial section is to provide key information from that report. For a more complete analysis, please see the full report.

***Funding Objective***

The funding objective of the System is to establish contribution rates that will remain level as a percentage of payroll over time. In order to achieve a more stable contribution rate, the County implemented a corridor funding method on July 1, 2002, (based on the July 1, 2001 valuation results). Under this approach, the current contribution rate is based on the normal cost rate and expense rate developed in the current valuation combined with an unfunded actuarial liability rate (UAL rate) based on assumption and plan changes since July 1, 2001, and a 15-year amortization of any amount by which the System's funded ratio is outside the corridor. The County is taking steps to increase the bottom of the corridor from the originally established 90% up to 100% by 2020. The fiscal year (FY) 2015 contribution was based on a corridor level of 93%.

***Assumptions***

The actuarial assumptions used in performing the July 1, 2014, valuation were recommended by the actuary and adopted by the Board of Trustees based on our most recent review of the System's experience for the five-year period ending June 30, 2010. The assumptions reflect our understanding of the likely future experience of the System and the assumptions as a whole represent our best estimate for the future experience of the System. The results of this report are dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from the underlying assumptions, the results would vary accordingly.

***Reliance on Others***

In preparing our valuation, we relied on information (some oral and some written) supplied by the System. This information includes, but is not limited to, plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standards of Practice No. 23.

***Supporting Schedules***

We are responsible for all supporting schedules provided in this Actuarial Section.

We are also responsible for the disclosures of Net Pension Liability and its components in the Financial Section.

***Compliance with Code of Virginia §51.1-800***

Code of Virginia §51.1-800 requires that the benefits provided to a retiree at age 65 from a local retirement system equal or exceed two-thirds of the allowance to which the employee would be entitled under the provisions of the Virginia Retirement System (VRS).

Although there is no formal procedure for making this comparison, we compared the least valuable rate under the Employees' System to the most valuable accrual rate under the VRS, making adjustments for the fact that employee contributions are required in excess of the VRS 5% rate. We found that the employer-provided accrual rates do exceed two-thirds of the most valuable employer-provided accrual rates under the VRS plan.

We certify that, to the best of our knowledge and understanding, the Fairfax County Employees' Retirement System satisfies the requirements of the Code of Virginia §51.1-800.

***Certification***

To the best of our knowledge, this section and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices that are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinions contained in this section. This section does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

This section was prepared for the Fairfax County Employees' Retirement System for the purposes described herein and for the use by the plan auditor in completing an audit related to the matters herein. Other users of this section are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

Sincerely,
Cheiron

Fiona E. Liston

Fiona E. Liston, FSA
Principal Consulting Actuary

Christian Benjaminson

Christian E. Benjaminson, FSA
Principal Consulting Actuary

Attachment

CHEIRON

## Summary of Valuation Results

### Overview

The primary purposes of performing the July 1, 2014, actuarial valuation of the Fairfax County Employees' Retirement System are to:

- Measure and disclose, as of the valuation date, the financial condition of the System;
- Indicate trends in the financial progress of the System;
- Determine the contribution rate to be paid by the County for fiscal year 2016; and
- Provide specific information and documentation required by the Governmental Accounting Standards Board (GASB).

In this summary of that report, we provide:

- Actuarial commentary;
- Information about the System's assets, liabilities, contributions, and membership experience for the prior year;
- A series of graphs which highlight key trends experienced by the System; and
- A summary of all principal results from the July 1, 2014, valuation, compared to last year's, in a single table, intended for quick reference purposes.

### General Comments

For this System, the funding method employed is the entry age normal funding method with a corridor method. Under this method, there are three components to the County's total contribution: the normal cost rate, the unfunded actuarial liability rate (UAL rate), and the administrative expense rate. As long as the System's actuarial funded ratio remains within a corridor of 90% to 120%, the County's total contribution is equal to the normal cost rate plus the UAL rate (which is determined based on rate changes due to amendments passed or assumption changes adopted since July 1, 2001) plus the expense rate. When the funded ratio falls outside of this corridor, an additional credit (if above 120%) or charge (if below 90%) rate is established based on a 15-year amortization equal to the amount necessary to re-enter the corridor. Once the funded ratio returns to within the corridor, the total contribution rate will return to the sum of the normal cost rate, the expense rate, and the amortization of the post-2001 changes only.

The development of the UAL rate, based on the amortization of the post-2001 changes, is shown in the table on the next page.

| **Changes Since 2001** | **Impact on UAL Rate** |
|---|---|
| 2002 ad-hoc COLA | + 0.13% |
| 2005 Assumption Changes | + 1.23% |
| 2006 DROP Implementation | + 0.10% |
| 2006 DPSC Conversion | - 0.04% |
| 2007 Reduce Disability Offset | + 0.03% |
| 2008 Reduce Disability Offset | + 0.02% |
| 2010 Assumption Changes | + 0.02% |
| 2013 Reduce Disability Offset | + 0.01% |
| 2014 Reduce Disability Offset | + 0.02% |
| 2014 Assumption Changes | + 1.15% |
| **Total Increase** | **+ 2.67%** |

The total County contribution rate for fiscal year 2016 as calculated under this method is 18.71%, including a 7.78% charge rate to amortize the amount by which the System's funded ratio is currently outside of the corridor. This is a 0.36% increase from the fiscal year 2015 total County rate of 18.35%. However, the County is taking steps to increase the 90% corridor floor to 100% and as a result, made their fiscal year 2015 contribution based on a 93% floor, for a total County rate of 20.18% (this rate also reflected the impact of the 2014 service-connected disability benefit offset County Ordinance change). Similarly, it is anticipated that the County will make their fiscal year 2016 contribution based on a 95% floor, for a total County rate of 21.99% instead of the 18.71%.

It is anticipated that the County will continue making their contributions based on raising the corridor floor 1% per year until a 100% corridor floor is reached with the fiscal year 2020 contribution. Once this threshold is reached, the 15-year rolling periods amortizing amounts outside of the corridor will be replaced with closed 15-year layers.

The valuation reflects a change in both liabilities and assets due to assumption changes. The liability is higher by $160.3 million due to changes in the entry age normal funding method, the sick leave assumption, and the service-connected disability benefit changes. As a partial offset to this liability impact, an additional $75 million was recognized into the smoothed value of assets as of July 1, 2014.

The valuation report contains information reported in the June 30, 2014, Comprehensive Annual Financial Report (CAFR) of the System under the new Governmental Accounting Standards Board (GASB) Statement No. 67. These disclosures are based on the use of update procedures to roll forward the 2013 valuation results to June 30, 2014. Note that the 2013 starting point used in these procedures is higher than the funding numbers from 2013 due to reflecting the change in the assumptions and methods in 2013 that were not reflected in the funding numbers until 2014. The calculation of the net pension liability as disclosed for the plan year June 30, 2014 is shown in Section V of the valuation report (and was included in the 2014 System CAFR's financial section). GASB 67 disclosures contained in the financial section of the 2015 CAFR are based on the same roll forward techniques, but use the 2014 valuation as their starting point.

## Trends

The System outperformed the investment assumption during the fiscal year ending in 2014, causing an actuarial gain on the asset side of the System. The actual return on a market value basis was approximately 14.79%. On an actuarial value basis, the assets returned 10.89% (after recognition of the additional $75 million included with this valuation) compared with an assumed rate of return of 7.5%. The investment gain recognized for funding purposes was $113.5 million.

The measurement of liabilities produced a gain in fiscal year 2014 of $3.4 million. This gain was due to experience compared to our assumptions about salary increases, retirement behavior, death, etc. Specific components of the gain include:

- The average salary increase was 4.0% for active participants who were active in both the July 1, 2013, and July 1, 2014 ,valuations. This was less than the expected salary growth based on the actuarial assumption, which averaged 4.9%. This resulted in a liability gain of $26.4 million. The annual payroll was provided as of December 31, 2013, and adjusted to July 1, 2014. For County employees this included the 2.29% increase as of July 1, 2014. For School employees this included annualizing the 2.00% increase as of January 1, 2014.

- The valuation assumed a 2.75% cost-of-living adjustment in 2014 for benefits in pay status. The actual CPI-based COLA was 1.6% last year, creating a liability gain of $25.0 million.

- The 2014 valuation incorporates actual sick leave hours into both eligibility and projected benefits for active participants. The accrual of additional sick leave from 2013 to 2014 resulted in a loss of $6.2 million. The 2014 valuation is the first to include a projection of future sick leave accruals; as such, we anticipate less deviation with this assumption in future valuations.

- An annual component of liability loss is the delayed recognition of new hires throughout the year. This does not contribute to an increase in the System's unfunded liability because both the member and the County make contributions beginning from the date of hire. However, when we look only at the liability side, they are a component of the annual liability loss. In fiscal year 2014, they account for a $3.4 million loss.

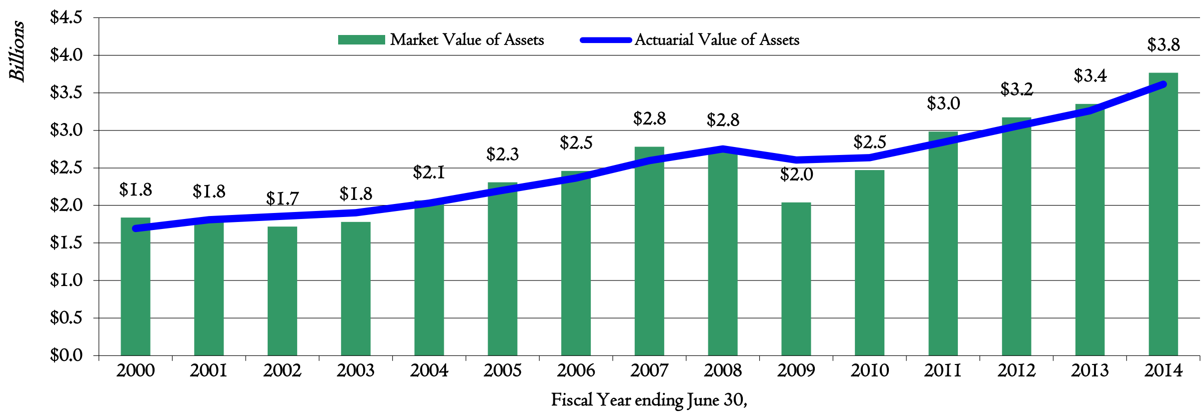
- There was a $38.4 million liability loss component that is made up of various other causes such as members terminating, retiring, dying, or becoming disabled in a way contrary to the assumption. With this valuation, we modified the termination assumption to phase out termination rates as participants approach Rule of 80 (or 85) eligibility. The impact of this assumption change will be realized with next year's valuation.

Finally, the County Ordinance changed the service-connected disability benefit offset from 25% to 15% of any primary Social Security benefit during fiscal year 2014. The change increased the normal cost rate by 0.01% of payroll and the unfunded liability rate by 0.02% of payroll (i.e. $1.5 million). The impact of this was already included in the fiscal year 2015 contribution rate of 20.18%.

The combination of liability and investment experience and County plus member contributions over the last year led to the System's funded ratio (actuarial value of assets over actuarial liability) increasing from 72.9% as of July 1, 2013, to 75.3% as of July 1, 2014. For purposes of measuring whether the System remains within the funding corridor, an adjusted funding ratio is used. In this ratio, there is an additional asset recognized in the amount of the unfunded actuarial liability payments being made by the County to pay for benefit increases and assumption changes. On this basis, the System's actuarial funded ratio increased from 74.2% as of July 1, 2013, to 78.2% as of July 1, 2014.

It is important to take a step back from the latest results and view them in the context of the System's recent history. On the next three pages, we present a series of charts that display key factors in the valuations over the last 15 years. After the historical review, we present a few projection graphs, showing the possible condition of the System over the next 15 years under various market return scenarios.

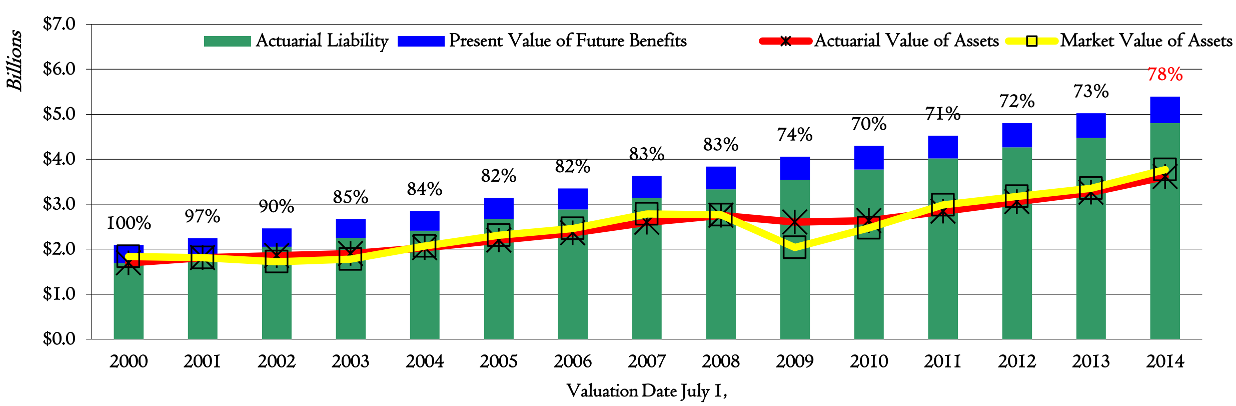
Growth in Assets




There was an increase in the market value of assets over last year equal to a return of 14.8%. The actuarial value of assets increased due to the continued recognition of recent asset gains. For the 2014 valuation, the System recognized an additional $75 million of stored asset gains in order to reduce the total unfunded liability based on the actuarial value of assets. The System still has $152 million in unrecognized gains as of July 1, 2014, that will be recognized over the next few years.

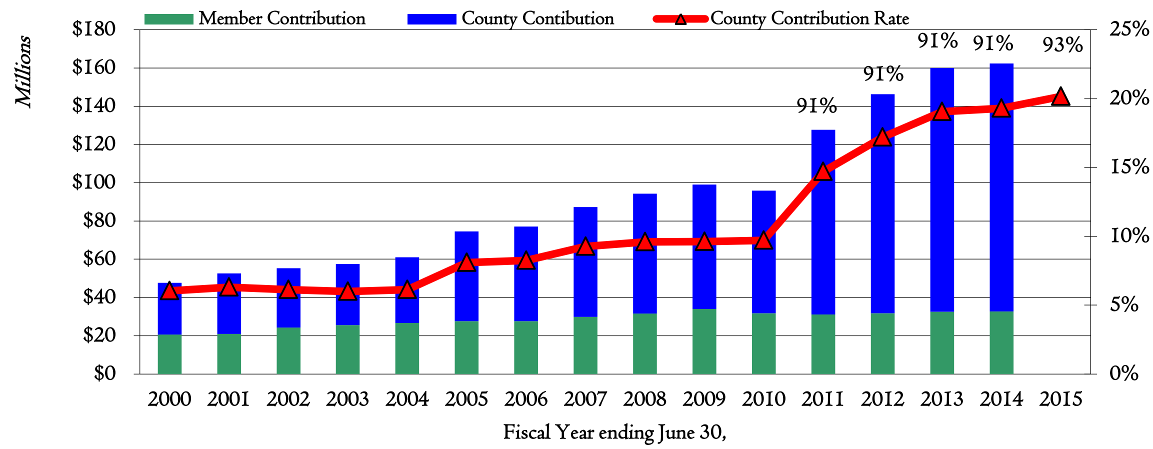
Over the period July 1, 2000, to June 30, 2014, the System's assets returned approximately 7.4% per year measured at actuarial value, which is in line with the current valuation assumption of 7.5% per year.

Assets and Liabilities




The two colored bars represent the two different measures of liability developed in the valuation. The amount represented by the top of the blue bars, the present value of future benefits (PVFB), is the amount needed to provide all benefits for the current participants and their beneficiaries. If the System had assets equal to the PVFB, no contributions would be needed for the current members if all assumptions were exactly met. The green bars represent the actuarial liability, or the funding target. Through the 2013 valuation, we compared the actuarial value of assets to this measure of liability in developing these funded ratios (black #s). Starting in 2014, this comparison uses the market value of assets (red #s).

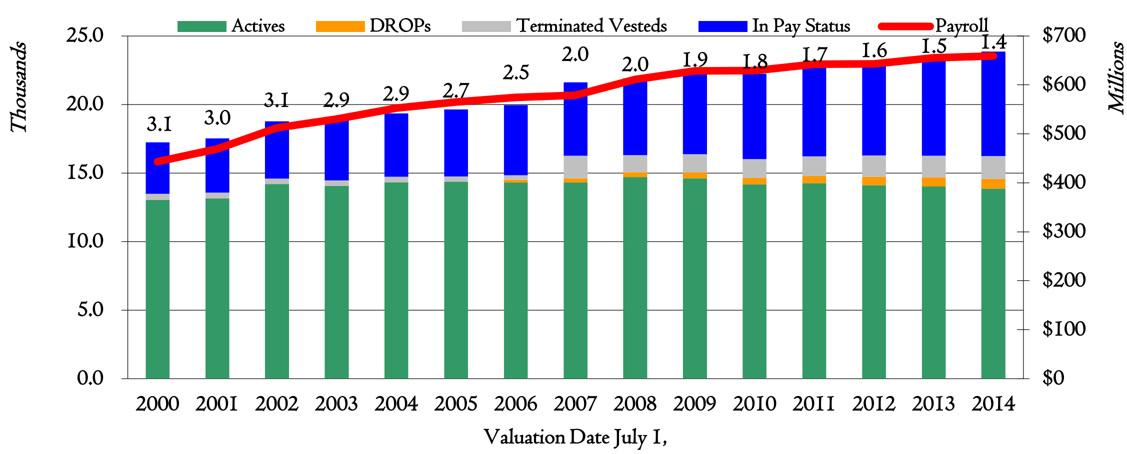
Contributions




The stacked bars in the above graph show the contribution amounts made by both the County and the members (left hand scale). The red line shows the County contribution rate as a percentage of payroll (right hand scale).

The member contribution rate is set by the County Ordinance. The County contribution rate is set by the funding process as described under General Comments. Note there is a lag in the rates shown. For example, the 2014 value is the rate prepared by the 2012 valuation and implemented for the period July 1, 2013, to June 30, 2014.

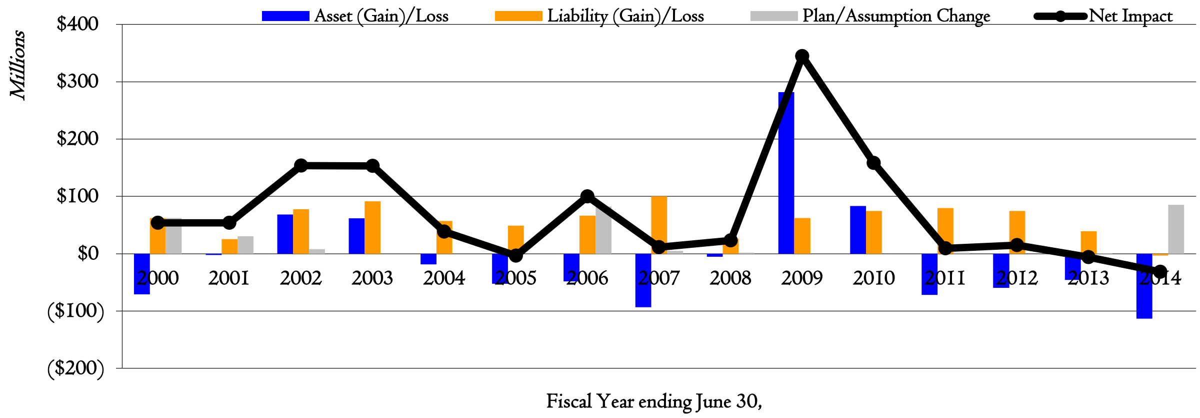
Participant Trends




As with many funds in this country, there has been a steady growth in the number of retired members as the System has matured. The active-to-inactive ratio has decreased from 3.1 actives to each inactive in 2000 to 1.4 actives for each inactive as of June 30, 2014. While this would be an alarming trend in a pay-as-you-go system, the pool of invested assets has been established in anticipation of this development. The red line on the graph shows the covered payroll and is read using the right-hand scale.

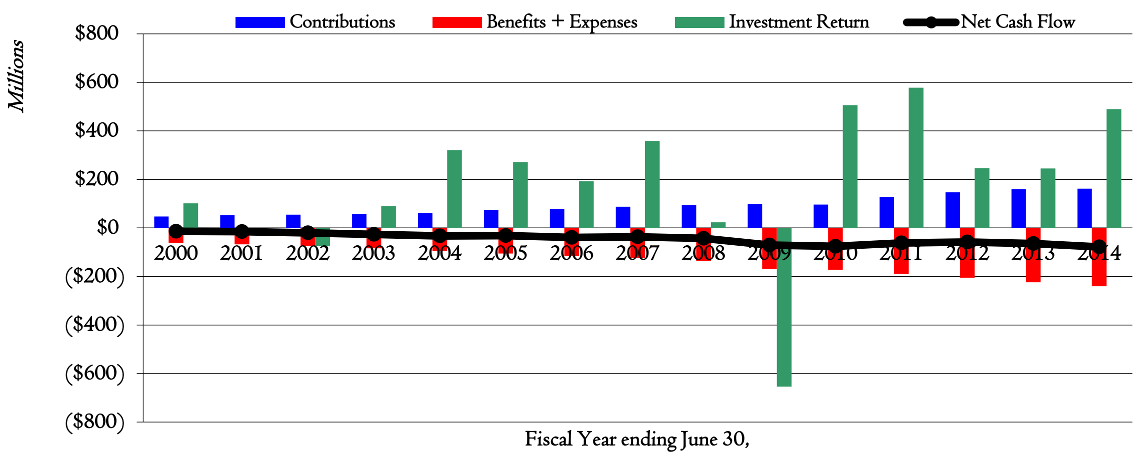
Starting in 2006, the above graph also shows the number of DROP participants. Neither County nor member contributions are made on their behalf, which leads to a slightly lower growth in effective covered payroll for this System.

Gains and Losses




This graph shows the annual gains and losses experienced by the System, along with the change in unfunded actuarial liability (UAL) due to plan amendments and changes in assumptions. The black line shows the net impact of all such changes in a given year. Positive numbers represent increases in the UAL, while negative numbers show reductions.

Cash Flow




The graph above shows the annual cash flows into and out of the System. The graph shows the magnitude of the investment returns on the market value (green bars) compared to the contributions (blue bars). The net cash flow (line) is comparing the contributions to benefits and expenses (red bars), and is independent of the investment returns. Negative cash flows are expected for a mature plan such as this one. An implication of negative cash flows in a plan is that the impact of market fluctuations can be more severe. This is because as assets are being depleted to pay benefits in down markets, less principal is available to be reinvested during periods of favorable returns.

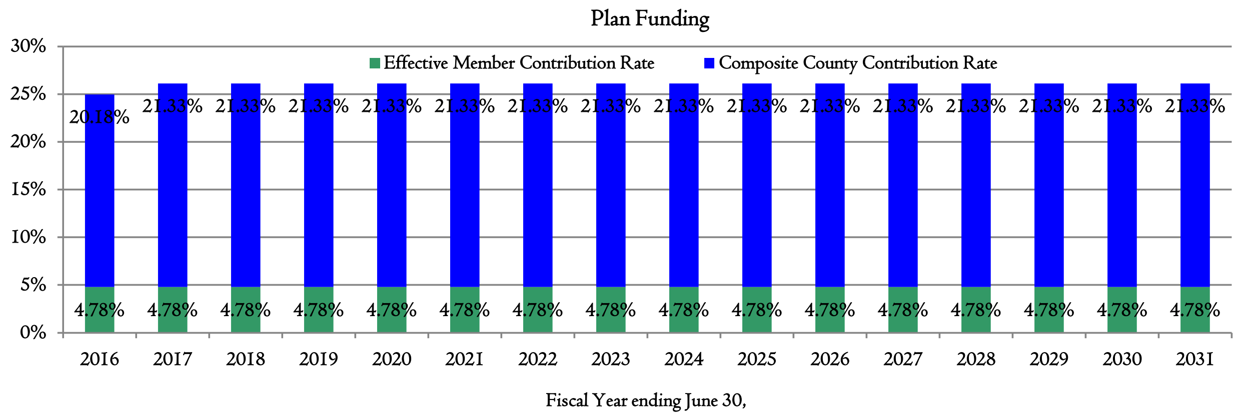
## Future Outlook

Baseline Projections

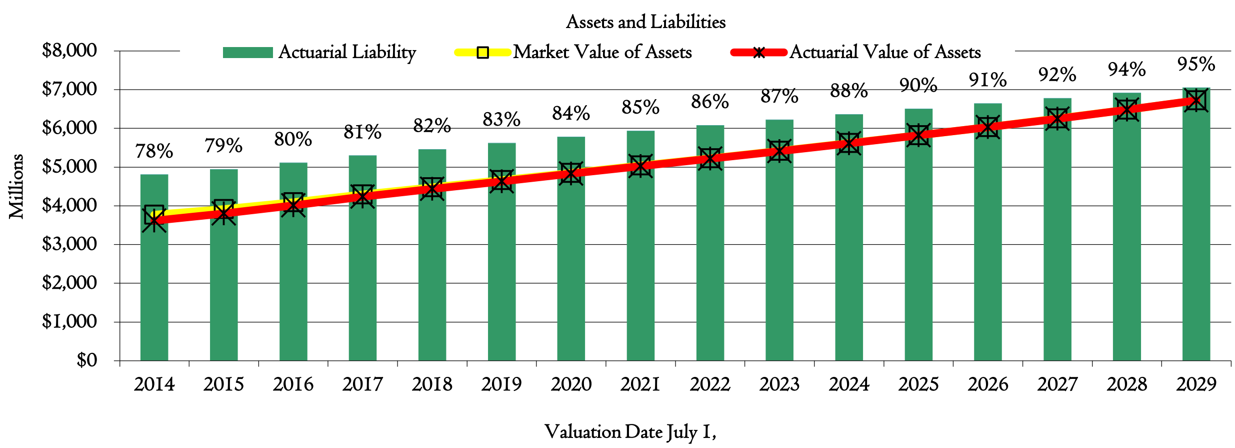
The two graphs below show the expected progress of the System over the next 15 years, assuming the System's assets earn 7.5% annually on their *market value* and all other assumptions are exactly met.

While the County's policy is to contribute based on a 90% corridor floor, for fiscal year 2016, the County actually plans to contribute an amount based a higher corridor floor rate, with continued increases until the amortization target is 100% in fiscal year 2020. In addition to the increasing corridor floor, the County does not intend to reduce the contribution rate relative to the prior year until the System is 100% funded.

For purposes of the 2014 valuation report, we reflected a 1% increase in the corridor floor, with continued increases thereafter. The graph below entitled "Plan Funding" shows the contribution rates remaining at the 21.33% level throughout the projection period.




The "Assets and Liabilities" graph shows the projected funded ratios over the next 15 years. The funded ratio gradually increases for the entire projection period ultimately reaching 95% funded as of 2029.



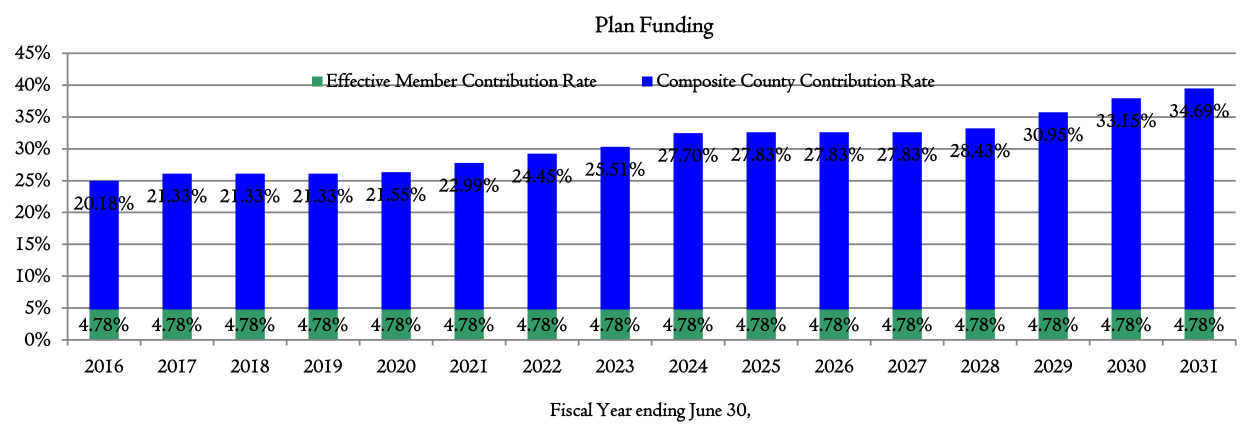
The future funding status of the System will be influenced by its investment earnings. The prior projection assumed the System would earn 7.5% each and every year, which is extremely unlikely.

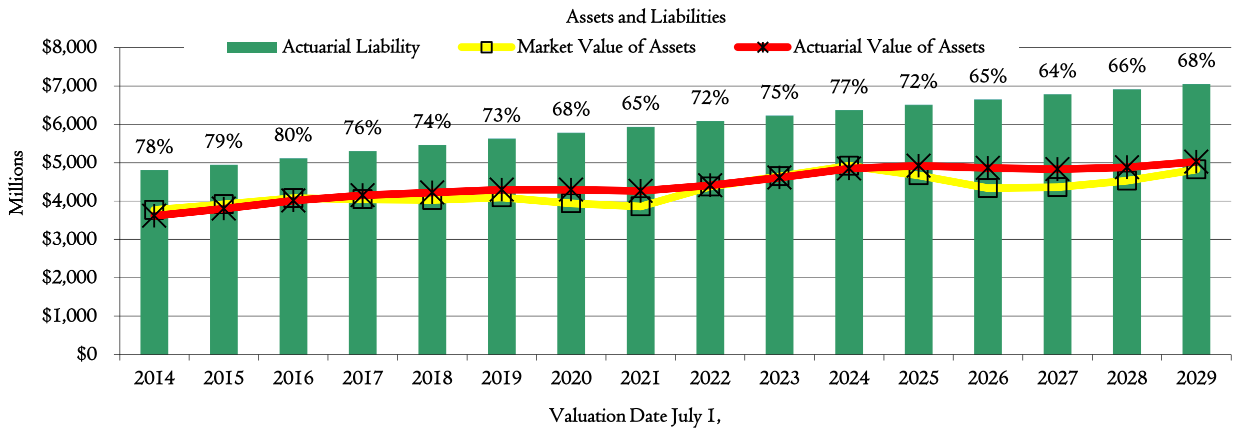
In the projections that follow, we show the risk to the System under volatile markets. In the following charts, we show results assuming returns over the next 15 years average 5.0%, 7.5%, and 10.0%. Different patterns of returns will produce different results from those shown here. In these scenarios, we continue to assume that all other assumptions are exactly met.

| Fiscal Year Ending June 30, | Average 5.0% | Average 7.5% | Average 10.0% |
|---|---|---|---|
| 2015 | 7.67% | 2.34% | -5.85% |
| 2016 | 7.05% | 7.17% | 4.54% |
| 2017 | 1.67% | 17.72% | 18.15% |
| 2018 | 2.98% | 30.01% | 32.56% |
| 2019 | 5.16% | 19.42% | -8.98% |
| 2020 | -0.19% | 5.61% | 12.47% |
| 2021 | 1.48% | 11.03% | 17.81% |
| 2022 | 17.59% | 4.30% | -13.95% |
| 2023 | 9.50% | 15.60% | 15.19% |
| 2024 | 9.25% | -0.44% | 14.83% |
| 2025 | -2.11% | 2.05% | 28.45% |
| 2026 | -3.75% | -8.37% | 24.92% |
| 2027 | 4.20% | 4.65% | 3.95% |
| 2028 | 7.27% | -0.59% | 7.37% |
| 2029 | 9.17% | 7.83% | 10.22% |
| **Average** | **5.00%** | **7.50%** | **10.00%** |

Alternative Projection -- with average return of 5.0% in the period

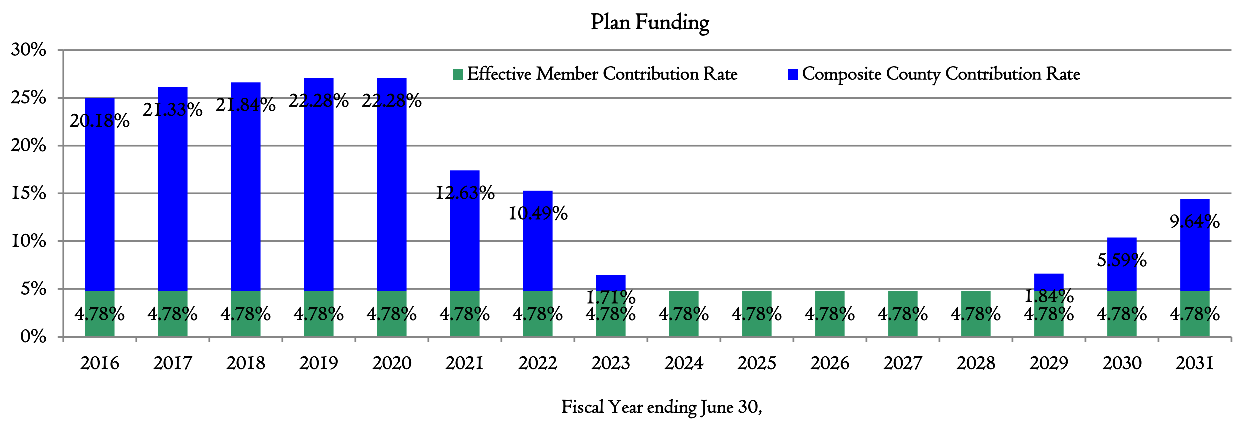
Under this scenario, the corridor contribution rate increases from 20% to about 35% of payroll by the end of the projection period. Further, the System's funded ratio drops to 64% at the lowest projected point, even with the ramping up of contributions.

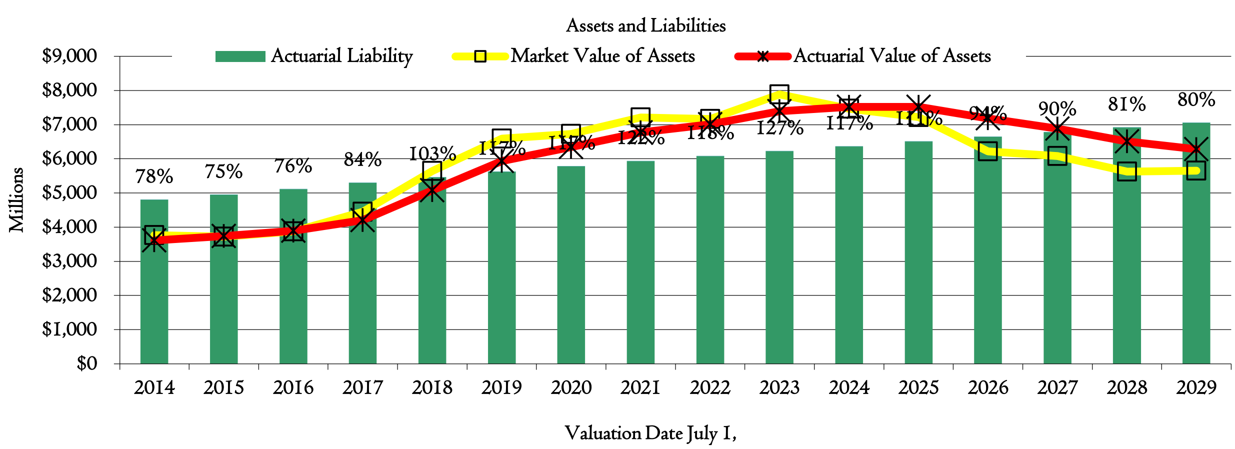





Alternative Projection – with average return of 7.5% in the period

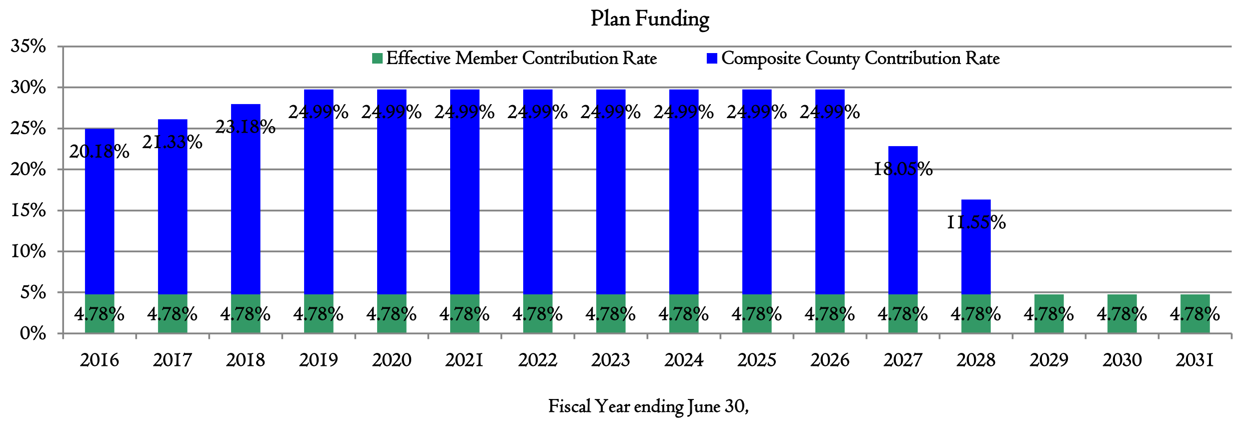
Under this scenario, in which the System is assumed to enjoy higher than average returns in the first few years, the corridor contribution rate remains at 21.33% until the System reaches full funding in 2018. After that time, the contribution drops dramatically as returns continue to push the funded percent higher.

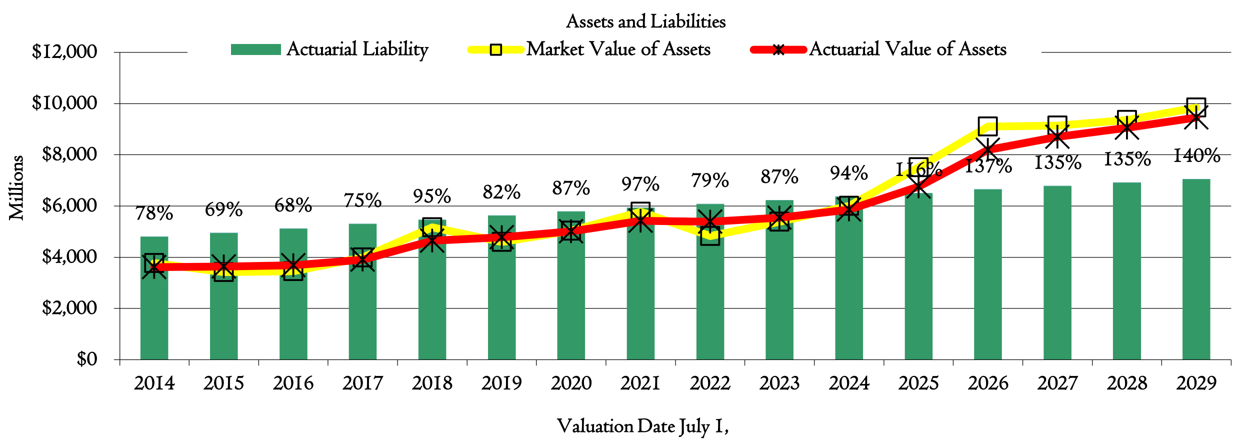


Alternative Projection -- with average return of 10.0% in the period

Under this scenario, in which the System is assumed to face lower returns in the first two years but significantly higher returns thereafter, the corridor contribution rate ticks up at first before dropping off once the System reaches 100% funding.



| Summary of Principal Plan Results<br>**Valuation as of:** | | **7/1/2013** | | **7/1/2014** | **% Chg** |
|---|---|---|---|---|---|
| **Participant Counts** | | | | | |
| Actives (excluding DROPs) | | 14,011 | | 13,862 | -1.1% |
| DROPs | | 670 | | 705 | 5.2% |
| Terminated Vesteds | | 1,576 | | 1,677 | 6.4% |
| In Pay Status | | 7,263 | | 7,626 | 5.0% |
| Total | | 23,520 | | 23,870 | 1.5% |
| | | | | | |
| Annual Payroll of Active Members | $ | 655,612,800 | $ | 659,360,128 | 0.6% |
| | | | | | |
| Annual Retirement Allowances for In Pay Status (Base amount only – not supplements) | $ | 173,400,323 | $ | 185,919,600 | 7.2% |
| | | | | | |
| **Assets and Liabilities** | | | | | |
| Actuarial Liability (AL) | $ | 4,473,830,654 | $ | 4,800,719,770 | 7.3% |
| Actuarial Value of Assets (AVA) | | 3,261,923,577 | | 3,614,067,515 | 10.8% |
| Unfunded Actuarial Liability (UAL) | $ | 1,211,907,077 | $ | 1186,652,255 | -2.1% |
| Funded Ratio | | 72.9% | | 75.3% | |
| | | | | | |
| Present Value of Accrued Benefits (PVAB) | $ | 3,862,092,452 | $ | 4,133,674,068 | 7.0% |
| Market Value of Assets (MVA) | | 3,353,932,103 | | 3,766,059,665 | 12.3% |
| Unfunded Accrued Liability (not less than $0) | $ | 508,160,349 | $ | 367,614,403 | -27.7% |
| Accrued Benefit Funded Ratio | | 86.8% | | 91.1% | |
| | | | | | |
| **Contributions as a Percentage of Payroll** | | **Fiscal Year 2015** | | **Fiscal Year 2016** | |
| **Corridor Method:** | | | | | |
| Normal Cost Contribution | | 6.91% | | 8.06% | |
| Increase Due to Amortized Changes | | 1.50% | | 2.67% | |
| Administrative Expense Contribution | | 0.20% | | 0.20% | |
| Base Rate | | 8.61% | | 10.93% | |
| | | | | | |
| Amortize to 93% | | 20.15%[1] | | 20.68% | |
| Amortize to 94% | | 20.77% | | 21.33% | |
| Amortize to 95% | | 21.38% | | 21.99%[2] | |

[1] The actual contribution rate paid by the County in fiscal year 2015 was 20.15%, which was based on amortizing to a 93% corridor floor plus the adjustment for the change to the service-connected disability benefit offset.

[2] The actual contribution rate paid by the County for fiscal year 2016 is expected to be either 21.33% or 21.99%, based on amortizing to a 94% or a 95% corridor floor, respectively.

# Summary of Actuarial Assumptions and Methods

## Funding Method

The entry age normal funding method is used to determine costs. Under this method, the County contribution has three components: the normal cost, the payment toward the unfunded actuarial liability, and the expense rate.

The normal cost is a level percent of pay cost which, along with the member contributions, will pay for projected benefits at retirement for each plan participant.

The actuarial liability is that portion of the present value of future benefits that will not be paid by future County normal costs or member contributions. The difference between this liability and funds accumulated as of the same date is referred to as the unfunded actuarial liability.

The expense rate is added to cover the System's administrative expenses.

Under the corridor funding method, the County's total contribution rate is equal to the normal cost rate plus the UAL amortization rates for changes due to assumption changes or amendments passed since July 1, 2001 plus the expense rate as long as the System's actuarial funded ratio remains within a corridor of 90% to 120%. If the funded ratio falls outside this corridor, a credit (if above 120%) or charge (if below 90%) will be established based on a 15-year amortization equal to the amount necessary to re-enter the corridor. Once the funded ratio is within the corridor, the contribution rate will return to the normal cost rate plus amortization of post-2001 changes plus expense rate. The County is taking steps to increase the bottom of the corridor from the originally established 90% up to 100% by 2020. The fiscal year (FY) 2015 contribution was based on a corridor level of 93%.

## Actuarial Value of Assets

For purposes of determining the County contribution to the System, we use an actuarial value of assets. The asset adjustment method dampens the volatility in asset values that could occur because of fluctuations in market conditions. Use of an asset smoothing method is consistent with the long-term nature of the actuarial valuation process.

In determining the actuarial value of assets, we calculate an expected actuarial value based on cash flow for the year and imputed returns at the actuarial assumption. This expected value is compared to the market value, and one-third of the difference is added to the preliminary actuarial value to arrive at the final actuarial value.

In 2014, there was an additional recognition of $75 million of the remaining balance of past investment gains.

## Changes since Last Valuation

The System moved from the new entrant variation of the entry age normal funding method to the individual method.

In addition to the standard recognition from the System's actuarial valuation method, there was an additional recognition of $75 million of the past investment gains.

## Long Term Assumptions Used to Determine System Costs and Liabilities

### Demographic Assumptions

### Non-Disabled Mortality

| Annual Deaths Per 10,000 Members<br>RP 2000 Mortality Projected to 2015* | | |
|---|---|---|
| **Age** | **Male** | **Female** |
| 20 | 3 | 2 |
| 25 | 3 | 2 |
| 30 | 4 | 2 |
| 35 | 7 | 4 |
| 40 | 10 | 6 |
| 45 | 12 | 9 |
| 50 | 16 | 13 |
| 55 | 27 | 24 |
| 60 | 53 | 47 |
| 65 | 103 | 90 |
| 70 | 177 | 155 |
| 75 | 306 | 249 |
| 80 | 554 | 413 |
| 85 | 997 | 708 |
| 90 | 1,727 | 1,259 |
| 95 | 2,596 | 1,888 |
| 100 | 3,394 | 2,339 |
| 105 | 3,979 | 2,931 |

* 5% of deaths are assumed to be service-connected.

### Disabled Mortality

| Annual Deaths Per 1,000 Disabled Members<br>RP 2000 Mortality Projected to 2015 with Ages Set Forward 5 Years | | |
|---|---|---|
| **Age** | **Male** | **Female** |
| 45 | 16 | 13 |
| 50 | 27 | 24 |
| 55 | 53 | 47 |
| 60 | 103 | 90 |
| 65 | 177 | 155 |
| 70 | 306 | 249 |
| 75 | 554 | 413 |
| 80 | 997 | 708 |

## **Termination of Employment** (Prior to Normal Retirement Eligibility)

**Annual Termination Rates Per 1,000 Members – Male**
**Years of Employment with County**

| Age | 0-2 | 3-4 | 5+ |
|---|---|---|---|
| 20 | 283 | 174 | 80 |
| 25 | 270 | 150 | 80 |
| 30 | 210 | 122 | 65 |
| 35 | 130 | 103 | 50 |
| 40 | 125 | 89 | 35 |
| 45 | 125 | 74 | 20 |
| 50 | 125 | 59 | 20 |
| 55 | 125 | 50 | 20 |

**Annual Termination Rates Per 1,000 Members – Female**
**Years of Employment with County**

| Age | 0-2 | 3-4 | 5+ |
|---|---|---|---|
| 20 | 333 | 150 | 150 |
| 25 | 320 | 150 | 150 |
| 30 | 260 | 150 | 150 |
| 35 | 180 | 138 | 100 |
| 40 | 175 | 125 | 50 |
| 45 | 168 | 113 | 50 |
| 50 | 160 | 100 | 50 |
| 55 | 153 | 100 | 50 |

It is assumed that members who terminate before the earlier of age 45 or with age plus service equal to 60 elect to receive a refund of contributions instead of vested benefits.

Termination rates are gradually phased out as a member approaches Rule of 80 (or Rule of 85 for Plans C and D) retirement. Within two years of reaching Rule of 80 (85), members are not expected to terminate from the System and three years prior to Rule of 80 (85) eligibility, the decrement rate is reduced to only 20% of the rate shown above. Likewise, the final decrement rate is 40% of the rate above for four years prior to Rule of 80 (85), 60% for five years and 80% for six years.

## Disability

**Annual Disabilities Per 10,000 Members***

| Age | Male | Female |
|---|---|---|
| 25 | 3 | 2 |
| 30 | 3 | 2 |
| 35 | 3 | 3 |
| 40 | 6 | 4 |
| 45 | 15 | 12 |
| 50 | 28 | 22 |
| 55 | 43 | 34 |
| 60 | 53 | 43 |

* 30% of disabilities are assumed to be service-connected. Of these, 5% are assumed to receive Social Security benefits and 31% are assumed to receive Workers' Compensation benefits.

### Retirement

| Annual Retirements Per 1,000 Eligible Members* (Male and Female) Age | Normal |
|---|---|
| 50 | 500 |
| 51 | 400 |
| 52 | 300 |
| 53 | 300 |
| 54 | 300 |
| 55 | 350 |
| 56 | 350 |
| 57 | 350 |
| 58 | 400 |
| 59 | 400 |
| 60 | 500 |
| 61 | 550 |
| 62 | 450 |
| 63 | 450 |
| 64 | 600 |
| 65 | 400 |
| 66 | 300 |
| 67 | 200 |
| 68 | 200 |
| 69 | 200 |
| 70 | 200 |

To further account for unused sick leave, we are assuming that members can retire on Rule of 79 (instead Rule of 80).

### Deferred Retirement Option Program (DROP)

50% of retirees are assumed to enter DROP instead of immediate retirement. DROP participants are assumed to remain in DROP for three years and receive interest at 5% per annum on their DROP deferrals.

**Merit/Seniority Salary Increase** (in addition to across-the-board increase)

| Service | Merit/Seniority Increase |
|---|---|
| 0 | 7.00% |
| 5 | 2.00 |
| 10 | 1.80 |
| 15 | 1.70 |
| 20 | 1.20 |
| 25 | 1.00 |
| 30 | 1.00 |

## Family Composition

For purposes of valuing the pre-retirement death benefit, an assumption is made concerning how many employees are married. The assumption used in this valuation is that 80% of employees are married at death while active and that the female spouse is three years younger than the male spouse is.

### Sick Leave Credit

Unused sick leave balances as reported for each active member are used as of the valuation date. Future sick leave accruals are assumed to accrue at 50% of each participant's annual average, but capped at 124 hours per year.

## Economic Assumptions

| | |
|---|---|
| Investment Return: | 7.50% compounded per annum. |
| Rate of General Wage Increase: | 3.00% compounded per annum.* |
| Rate of Increase in Cost-of-Living: | 2.75% compounded per annum.** |
| Total Payroll Increase (For amortization): | 3.00% compounded per annum. |
| Administrative Expenses: | 0.20% of payroll. |

* General Wage Increase assumption applies for projecting contributions and developing Social Security benefits.

** Benefit increases are limited to 4% per year.

## Changes since Last Valuation

Termination rates were phased out as the participant approaches Rule of 80 (or 85) to reflect more recent experience.

A sick leave accrual assumption has been added to project sick leave as part of future benefit and service accruals.

## Analysis of Financial Experience

### Gain and Loss in Accrued Liability during Years Ended June 30
### Resulting from Differences between Assumed Experience and Actual Experience

| Type of Activity | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|
| Investment Income | $ (282,116,118) | $(83,485,934) | $71,698,746 | $59,620,255 | $46,004,262 | $113,443,149 |
| Combined Liability Experience | (62,427,360) | (74,720,305) | (79,444,131) | (74,547,089) | (39,401,877) | 3,445,687 |
| **Gain (or Loss) During Year from Financial Experience** | **$ (344,543,478)** | **$(158,206,239)** | **$(7,745,385)** | **$(14,926,834)** | **$6,602,385** | **$116,888,836** |
| Non-Recurring Items | 0 | 0 | (1,602,061) | 0 | (727,193) | (85,258,729) |
| **Composite Gain (or Loss) During Year** | **$ (344,543,478)** | **$(158,206,239)** | **$(9,347,446)** | **$(14,926,834)** | **$5,875,192** | **$31,630,107)** |

### Schedule of Retirees and Beneficiaries
### Added To and Removed From Rolls

| Year Ended June 30, | Added to Rolls No. | Added to Rolls Annual Allowance | Removed From Rolls No. | Removed From Rolls Annual Allowance | On Rolls @ Yr. End No. | On Rolls @ Yr. End Annual Allowance | % Increase Allowance | Average Allowance |
|---|---|---|---|---|---|---|---|---|
| 2009 | 533 | $14,697,864 | 187 | $3,032,662 | 5,931 | $145,132,570 | 8.74% | $24,470 |
| 2010 | 450 | 14,483,584 | 163 | 2,748,741 | 6,218 | 156,867,413 | 8.09% | 25,228 |
| 2011 | 518 | 18,345,093 | 168 | 2,885,600 | 6,568 | 172,326,906 | 9.86 % | 26,237 |
| 2012 | 472 | 17,441,822 | 152 | 2,971,259 | 6,888 | 186,797,469 | 8.40% | 27,119 |
| 2013 | 559 | 17,469,060 | 184 | 3,336,404 | 7,263 | 200,930,125 | 7.57% | 27,665 |
| 2014 | 547 | 17,306,458 | 184 | 3,482,147 | 7,626 | 214,754,436 | 6.88% | 28,161 |

### Solvency Tests
### Aggregate Accrued Liabilities For

| Valuation Date July 1, | (1) Active Member Contributions | (2) Retirees, Vested Terms, Beneficiaries & DROP | (3) Active Members (County Financed Portion) | Reported Assets | Portion of Accrued Liabilities by Reported Assets (1) | (2) | (3) |
|---|---|---|---|---|---|---|---|
| 2009 | $312,357,412 | $1,813,482,907 | $1,410,033,226 | $2,603,283,631 | 100% | 100% | 34% |
| 2010 | 329,166,585 | 1,985,373,546 | 1,456,519,392 | 2,636,051,959 | 100% | 100% | 22% |
| 2011 | 339,170,151 | 2,177,027,867 | 1,502,726,115 | 2,841,466,151 | 100% | 100% | 22% |
| 2012 | 332,723,684 | 2,411,862,623 | 1,519,589,131 | 3,053,412,085 | 100% | 100% | 20% |
| 2013 | 355,254,873 | 2,587,007,980 | 1,531,567,801 | 3,261,923,577 | 100% | 100% | 21% |
| 2014 | 363,335,228 | 2,769,188,984 | 1,668,195,558 | 3,614,067,515 | 100% | 100% | 29% |

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# Statistical Section (unaudited)

The Statistical Section presents historical information regarding the retirement plan. This information includes a ten-year analysis of the sources of change in plan net assets, benefit payments, the number of retired members and average monthly benefits. Sources of additions include employer and plan member contributions and net investment income; deductions include benefit payments to retirees and beneficiaries, refunds of employee contributions and administrative expenses. The amounts of benefits paid, the count of benefit recipients and the average benefit payments are provided by type of benefit, including service retirement annuities, service-connected and ordinary disability benefits and survivor benefits.

## Schedule of Additions by Source

| Fiscal Year | Plan Member Contributions | Employer Contributions | Employer Contributions % of covered Payroll | Net Investment Income (loss) | Total Additions |
|---|---|---|---|---|---|
| 2006 | $27,605,933 | $49,436,463 | 8.24% | $204,149,213 | $281,191,609 |
| 2007 | 29,805,266 | 57,452,711 | 9.25% | 358,779,626 | 446,037,603 |
| 2008 | 31,583,496 | 62,636,121 | 9.59% | 23,018,667 | 117,238,284 |
| 2009 | 33,927,190 | 65,110,832 | 9.62% | (653,558,145) | (554,520,123) |
| 2010 | 31,733,516 | 64,069,102 | 9.71% | 506,165,571 | 601,968,189 |
| 2011 | 31,041,076 | 96,607,535 | 14.70% | 577,459,169 | 705,107,780 |
| 2012 | 31,702,075 | 114,682,538 | 17.20% | 246,376,212 | 392,760,825 |
| 2013 | 32,551,927 | 127,448,018 | 19.05% | 245,374,617 | 405,374,562 |
| 2014 | 32,758,587 | 129,618,309 | 19.30% | 490,196,386 | 652,573,282 |
| 2015 | 33,193,593 | 138,493,099 | 20.18% | 16,342,457 | 188,029,149 |

## Schedule of Deductions by Type

| Fiscal Year | Benefit Payments | Refunds of Contributions | Administrative Expenses | Transfers | Total Deductions |
|---|---|---|---|---|---|
| 2006 | $108,735,741 | $6,059,597 | $1,016,292 | $11,750,084 | $127,561,714 |
| 2007 | 117,885,907 | 3,935,886 | 1,866,410 | - | 123,688,203 |
| 2008 | 130,453,013 | 4,376,612 | 1,832,903 | - | 136,662,528 |
| 2009 | 165,529,137 | 3,256,153 | 1,519,846 | - | 170,305,136 |
| 2010 | 166,271,110 | 4,075,162 | 1,593,223 | - | 171,939,495 |
| 2011 | 183,800,128 | 3,884,082 | 1,640,016 | - | 189,324,226 |
| 2012 | 199,503,336 | 3,781,497 | 1,687,040 | - | 204,971,873 |
| 2013 | 219,229,038 | 2,988,397 | 1,877,620 | - | 224,095,055 |
| 2014 | 235,204,611 | 3,356,282 | 1,884,827 | - | 240,445,720 |
| 2015 | 254,875,795 | 3,958,786 | 1,896,614 | - | 260,731,195 |

The transfer in FY 2006 was a transfer of assets supporting the future benefits for the employees of the Department of Public Safety Communications who elected to leave the Employees' Retirement System and transfer to the Fairfax County Uniformed Retirement System.

## Schedule of Benefit Payments by Type

| Fiscal Year | Service Annuity | Service-Connected Disability | Ordinary Disability | Survivor Benefit | Total |
|---|---|---|---|---|---|
| 2006 | $100,083,209 | $2,736,141 | $3,479,564 | $2,436,827 | $108,735,741 |
| 2007 | 108,782,484 | 2,768,116 | 3,646,607 | 2,688,700 | 117,885,907 |
| 2008 | 120,689,116 | 2,958,765 | 3,835,111 | 2,970,020 | 130,453,012 |
| 2009 | 155,179,988 | 3,200,844 | 3,845,105 | 3,303,200 | 165,529,137 |
| 2010 | 155,512,982 | 3,232,803 | 3,939,896 | 3,585,429 | 166,271,110 |
| 2011 | 172,362,105 | 3,176,876 | 4,232,345 | 4,028,802 | 183,800,128 |
| 2012 | 187,702,064 | 3,187,892 | 4,353,983 | 4,259,397 | 199,503,336 |
| 2013 | 206,701,293 | 3,436,007 | 4,490,924 | 4,600,814 | 219,229,038 |
| 2014 | 222,547,552 | 3,416,714 | 4,412,110 | 4,828,235 | 235,204,611 |
| 2015 | 241,694,202 | 3,498,363 | 4,444,633 | 5,238,597 | 254,875,795 |

Please note, the following charts represent information which is consistent with the underlying data used to determine the liability in both the financial and actuarial sections. Data for fiscal year 2015 will be updated next year.

## Schedule of Retired Members by Benefit Type

| Fiscal Year | Service Annuity | Service-Connected Disability | Ordinary Disability | Survivor Benefit | Total |
|---|---|---|---|---|---|
| 2005 | 4,137 | 167 | 378 | 207 | 4,889 |
| 2006 | 4,365 | 156 | 378 | 220 | 5,119 |
| 2007 | 4,566 | 167 | 386 | 236 | 5,355 |
| 2008 | 4,791 | 161 | 383 | 250 | 5,585 |
| 2009 | 5,133 | 153 | 383 | 262 | 5,931 |
| 2010 | 5,392 | 157 | 389 | 280 | 6,218 |
| 2011 | 5,712 | 153 | 400 | 303 | 6,568 |
| 2012 | 6,030 | 152 | 396 | 310 | 6,888 |
| 2013 | 6,392 | 153 | 390 | 328 | 7,263 |
| 2014 | 6757 | 149 | 374 | 346 | 7,626 |

## Schedule of Average Monthly Benefit Amounts

| Fiscal Year | Service Annuity | Service-Connected Disability | Ordinary Disability | Survivor Benefit | Average |
|---|---|---|---|---|---|
| 2005 | $1,932 | $1,401 | $740 | $939 | $1,780 |
| 2006 | 1,987 | 1,460 | 777 | 998 | 1,839 |
| 2007 | 2,061 | 1,502 | 816 | 1,030 | 1,908 |
| 2008 | 2,144 | 1,619 | 845 | 1,070 | 1,991 |
| 2009 | 2,187 | 1,710 | 841 | 1,092 | 2,039 |
| 2010 | 2,250 | 1,708 | 872 | 1,193 | 2,102 |
| 2011 | 2,339 | 1,761 | 896 | 1,225 | 2,186 |
| 2012 | 2,409 | 1,857 | 935 | 1,247 | 2,260 |
| 2013 | 2,450 | 1,913 | 941 | 1,274 | 2,305 |
| 2014 | 2,503 | 2,105 | 968 | 1,284 | 2,364 |

## Schedule of Average Benefit Payments

| Years of Credited Service* | 2-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ |
|---|---|---|---|---|---|---|---|
| **Period 7/1/2005 to 6/30/2006** | | | | | | | |
| Average Monthly Benefit ** | $152 | $466 | $829 | $1,404 | $1,957 | $2,690 | $2,952 |
| Average of Final Monthly Salaries | 1,907 | 4,116 | 3,765 | 4,237 | 4,592 | 5,159 | 4,947 |
| Number of Retirees | 33 | 45 | 50 | 74 | 45 | 58 | 28 |
| **Period 7/1/2006 to 6/30/2007** | | | | | | | |
| Average Monthly Benefit ** | 303 | 446 | 828 | 1,509 | 2,068 | 2,964 | 2,775 |
| Average of Final Monthly Salaries | 3,289 | 3,096 | 3,828 | 4,385 | 5,093 | 5,770 | 4,682 |
| Number of Retirees | 36 | 50 | 55 | 66 | 69 | 59 | 27 |
| **Period 7/1/2007 to 6/30/2008** | | | | | | | |
| Average Monthly Benefit ** | 190 | 530 | 1,026 | 1,712 | 2,255 | 2,819 | 3,229 |
| Average of Final Monthly Salaries | 2,997 | 3,539 | 4,093 | 5,045 | 5,276 | 5,652 | 5,317 |
| Number of Retirees | 26 | 60 | 43 | 70 | 69 | 58 | 31 |
| **Period 7/1/2008 to 6/30/2009** | | | | | | | |
| Average Monthly Benefit ** | 199 | 541 | 911 | 1,732 | 2,298 | 3,150 | 3,603 |
| Average of Final Monthly Salaries | 3,118 | 4,098 | 3,923 | 5,046 | 5,539 | 6,082 | 6,064 |
| Number of Retirees | 32 | 72 | 46 | 81 | 101 | 92 | 48 |
| **Period 7/1/2009 to 6/30/2010** | | | | | | | |
| Average Monthly Benefit ** | 196 | 496 | 928 | 1,553 | 2,205 | 2,945 | 3,880 |
| Average of Final Monthly Salaries | 3,088 | 3,451 | 4,034 | 4,678 | 5,409 | 5,646 | 6,346 |
| Number of Retirees | 24 | 60 | 47 | 66 | 87 | 43 | 34 |
| **Period 7/1/2010 to 6/30/2011** | | | | | | | |
| Average Monthly Benefit ** | 243 | 564 | 972 | 1,823 | 2,504 | 2,940 | 3,633 |
| Average of Final Monthly Salaries | 3,317 | 3,772 | 4,278 | 5,416 | 5,796 | 5,855 | 6,164 |
| Number of Retirees | 29 | 57 | 59 | 75 | 112 | 67 | 46 |
| **Period 7/1/2011 to 6/30/2012** | | | | | | | |
| Average Monthly Benefit ** | 259 | 525 | 970 | 1,690 | 2,565 | 3,042 | 3,699 |
| Average of Final Monthly Salaries | 3,712 | 3,764 | 4,147 | 5,145 | 6,145 | 6,060 | 6,252 |
| Number of Retirees | 25 | 52 | 54 | 65 | 89 | 80 | 30 |
| **Period 7/1/2012 to 6/30/2013** | | | | | | | |
| Average Monthly Benefit ** | 207 | 581 | 990 | 1,832 | 2,514 | 3,123 | 4,569 |
| Average of Final Monthly Salaries | 2,847 | 4,114 | 4,278 | 5,430 | 5,860 | 6,300 | 7,428 |
| Number of Retirees | 34 | 66 | 54 | 69 | 113 | 77 | 37 |
| **Period 7/1/2013 to 6/30/2014** | | | | | | | |
| Average Monthly Benefit ** | 243 | 538 | 1,012 | 1,746 | 2,512 | 3,173 | 3,918 |
| Average of Final Monthly Salaries | 3,693 | 3,835 | 4,501 | 5,445 | 5,964 | 6,214 | 6,543 |
| Number of Retirees | 30 | 68 | 69 | 57 | 88 | 88 | 39 |

* The Years of Credited Service is the service used in the determination of benefits, which may be different than service for eligibility.

** Does not include supplements.

FAIRFAX COUNTY

# EMPLOYEES'

RETIREMENT SYSTEM

*A Fairfax County, Va., publication*

FAIRFAX COUNTY Retirement SYSTEMS

EMPLOYEES' POLICE Officers UNIFORMED

*10680 Main Street, Suite 280, Fairfax, VA 22030*