

Comprehensive Annual Financial Report

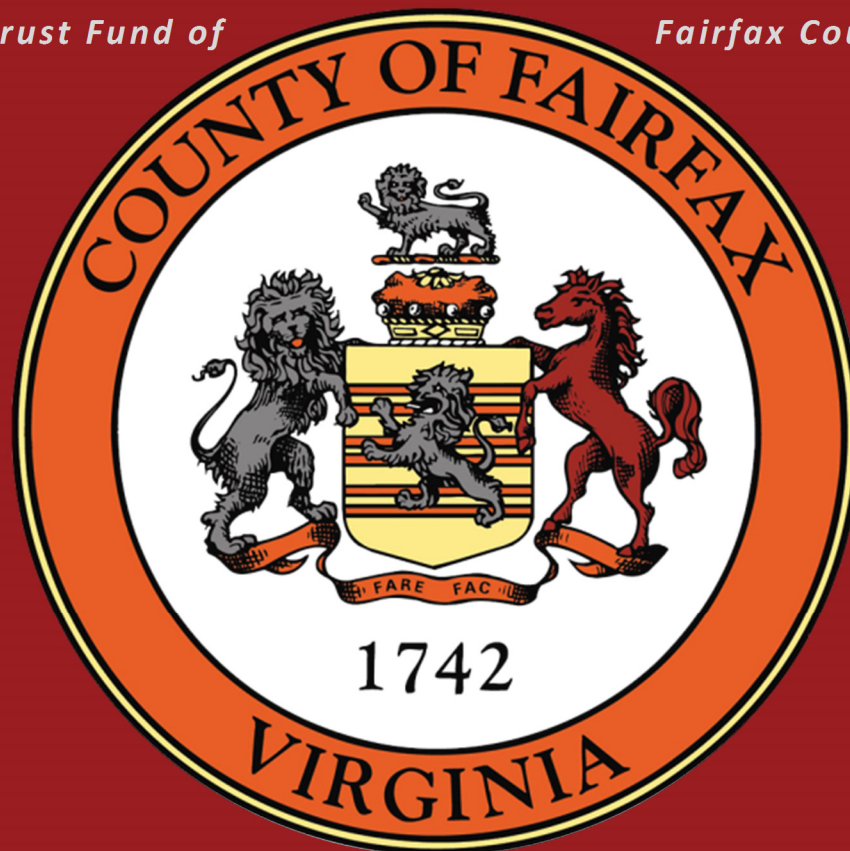
For the Fiscal Year Ended June 30, 2016

FAIRFAX COUNTY

UNIFORMED RETIREMENT SYSTEM

A Pension Trust Fund of

Fairfax County, Virginia



2016

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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 22, 2016

Dear Members of the Board of Trustees:

I am pleased to submit to you the annual report of the Fairfax County Uniformed 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.

History

The Fairfax County Uniformed Retirement System was established on July 1, 1974, as a public employee retirement system providing defined benefit pension plan coverage for uniformed or sworn employees of the Fire and Rescue Department, helicopter pilots, the Sheriff's Department, the animal control division, and certain park police officers. In 2005 membership was extended to employees in non-administrative positions of the Department of Public Safety Communications, formerly included in the Fairfax County Employees' Retirement System. There were 1,948 active members, 123 in the Deferred Retirement Option Program (DROP), 61 terminated vesteds and 1,256 retirees participating in the System as of June 30, 2016. For calculations surrounding the Total Pension Liability and its components, Cheiron, the System's actuary, used June 30, 2016, as the measurement date which coincides with the actuarial valuation 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.

Capital Markets and Economic Conditions

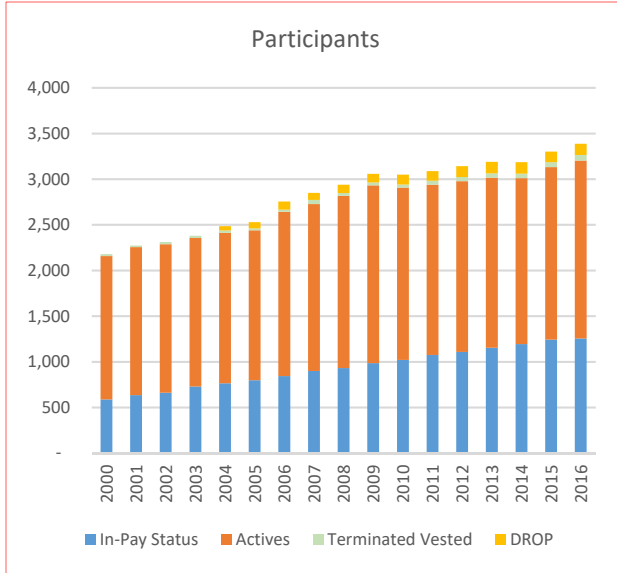
In fiscal year 2016, the System's investment returns were challenged by market downturns in a number of asset classes. The System's portfolio investment return for the year was -0.6% (-0.8 %, net of fees), lagging the long term return target of 7.25%. This return placed in the 66th percentile of the BNY Mellon universe of public funds. However, over the long term, returns compared more favorably, with investment returns for the ten-year period at 5.4% per year, ranking the fund in the 48th percentile of all other public funds in the New England Pension Consultants (NEPC) universe.



Fairfax County Retirement Systems

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Phone: 703-279-8200 * 1-800-333-1633 * Fax: 703-273-3185

www.fairfaxcounty.gov/retirement/



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 adopted a 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 their external consulting firm 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 included in the Investment Section, prepared internally by staff using data from the System’s 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 will remain relatively level over time as a percentage of payroll and will accumulate sufficient assets to meet the costs of benefit payments when due. The valuation of the System performed as of June 30, 2016, indicated that the ratio of assets accumulated by the System to total actuarial accrued liabilities for benefits showed a decrease from 84.0% to 82.5%. The actuarial section contains further information on the results of the June 30, 2016, valuation. For purposes of calculating the net pension liability as of June, 30, 2016, in accordance with Governmental Accounting Standards Board’s (GASB) Statement Number 67, the System’s funded status was 77.2%.

Based on the June 30, 2015, actuarial valuation, the employer contribution rate for 2016 following the adopted corridor-based funding policy was 38.83%, an increase of 0.93% from the 2015 rate of 37.90%. 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, 93% in 2015 and 95% in 2016. This target was further increased to 97% for the County's 2017 adopted budget.

A five-year actuarial experience study was completed by the System's actuary, Cheiron, which entailed a detailed review of trends in salaries, retirement rates, inflation, mortality, investment returns, and other actuarial data. As a result, a number of actuarial assumption changes were adopted by the Board of Trustees.

Several major customer service-related initiatives were completed. The System's website received a major overhaul, in an effort to make it more user-friendly and to ensure that employees and retirees have access to relevant and understandable information. In addition, retirement training and outreach for our County and Schools employees was greatly expanded, again in an effort to ensure that they have all the information they need to plan for their retirement.

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 Uniformed Retirement System for its comprehensive annual financial report for the fiscal year ended June 30, 2015. This was the sixth consecutive year that the government 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, 2016, from the Public Pension Coordinating Council (PPCC), in recognition of meeting the professional standards for plan funding and administration 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

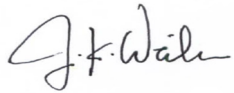
Cherry Bekaert, LLP performed an annual audit of the financial statements of the plan to obtain a reasonable assurance about whether the financial statements are free from material misstatements, whether due from fraud or error. Additionally, Cheiron performed an annual actuarial valuation to assess 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 Uniformed 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
Uniformed Retirement System
Virginia**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2015

A handwritten signature in black ink, which appears to read "Jeffrey R. Egan".

Executive Director/CEO



Public Pension Coordinating Council

***Public Pension Standards Award
For Funding and Administration
2016***

Presented to

***Fairfax County Uniformed
Retirement System***

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

Presented by the Public Pension Coordinating Council, a confederation of

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

A handwritten signature in black ink that reads "Alan H. Winkle". The signature is written in a cursive style with a large, prominent 'A' and 'W'.

Alan H. Winkle
Program Administrator

Ten members serve on the Fairfax County Uniformed Retirement System Board of Trustees. Four of the members are citizens appointed by the Fairfax County Board of Supervisors. Two of the members are elected by the Fairfax County Fire and Rescue Department; one is elected by the Fairfax County Sheriff's Office; and one is elected by retirees. The Director of Human Resources and the Director of Finance serve as Ex Officio members.

Board of Trustees



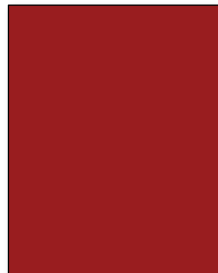
Hank H. Kim
Vice Chairman
 Board of Supervisors Appointee
Term Expires: August 31, 2020



Frank H. Grace, III
Chairman
 Board of Supervisors Appointee
Term Expires: July 31, 2018



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



Vacant
 Board of Supervisors Appointee



Charles E. Formeck
 Elected Member Trustee
Term Expires: October 31, 2016



Richard L. Merrell
 Elected Member Trustee
Term Expires: June 30, 2018



John Niemiec
 Elected Member Trustee
Term Expires: June 30, 2020



Shaughnessy Glennon Pierce
 Board of Supervisors Appointee
Term Expires: June 30, 2018



Thomas Simcoe
 Elected Retiree Trustee
Term Expires: December 31, 2017



Catherine Spage
 Fairfax County
 Director of Human Resources
Ex officio Trustee

Administrative Organization

Administrative Staff

Jeffrey K. Weiler
Executive Director

Brian Morales, CAIA
Senior Investment Officer

Professional Services

Actuary

Cheiron
Actuaries
McLean, VA

Auditor

Cherry Bekaert, LLP
Certified Public Accountants
Tysons Corner, VA

Investment Managers

Acadian Asset Management, LLC
Boston, MA

Anchorage Capital Group, LLC
New York, NY

AQR Investor Services
Greenwich, CT

Ashmore Investment Management Ltd.
New York, NY

Brandywine Global Investment Management, LLC
Philadelphia, PA

Bridgewater Associates, LP
Westport, CT

The Clifton Group
Minneapolis, MN

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

Criterion Capital Management
San Francisco, CA

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

Davidson Kempner Institutional Partners, LP
New York, NY

DoubleLine Capital, L.P.
Los Angeles, CA

Garcia Hamilton
Houston, TX

Gresham Investment Management, LLC
New York, NY

Investment Managers
(continued)

Harbourvest Partners, LLC
Boston, MA

JP Morgan Investment Management, Inc.
New York, NY

King Street Capital Management, L.P.
New York, NY

Marathon Asset Management, LLP
London, UK

Manulife Asset Management
Boston, MA

Millennium Management, LLC
New York, NY

OrbiMed Healthcare Fund Management
New York, NY

Pantheon Ventures, Inc.
San Francisco, CA

PIMCO
Newport Beach, CA

Siguler Guff & Company, L.P.
New York, NY 10022

Standish Mellon Asset Management
Pittsburgh, PA

Starboard Value, L. P.
New York, NY

Systematica Investments Limited
New York, NY

UBS Realty Investors, LLC
Hartford, CT

Wellington Management Company, LLP
Boston, MA

Investment Consultant

Custodian Bank

NEPC
Boston, MA

BNY Mellon Asset Servicing
Pittsburgh, PA

Organization Chart



Board of Supervisors

Left to right: Daniel G. Storck, John C. Cook, Catherine M. Hudgins, Jeffrey C. McKay, Sharon Bulova (Chairman At-Large), Penelope A. Gross (Vice Chairman), John W. Foust, Kathy L. Smith, Linda Q. Smyth, Pat Herrity

Board of Trustees

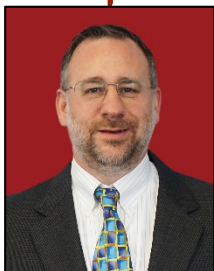
(Ten Members – see page 7)

Frank H. Grace, III, Hank H. Kim, Christopher J. Pietsch, Charles E. Formeck, Richard L. Merrell, John Niemiec, Shaughnessy Glennon Pierce, Thomas Simcoe, Catherine Spage, One vacant position



Executive Director

Jeffrey K. Weiler



Senior Investment Officer
Brian Morales, CAIA



Retirement Systems Management Team

*Back left to right: Wendy Zhi, CPA, Retiree Services;
Vicky Panlaqui, Accounting and Financial Reporting;
Pamela Taylor, Technology;
Front: John Prather, Membership Services;
Carol Patterson, Communications*



Investment Analyst
Damien Lee, CFA



Report of Independent Auditor

To Board of Supervisors
County of Fairfax, Virginia

To the Board of Trustees
Fairfax County Uniformed Retirement System

Report on the Financial Statements

We have audited the accompanying financial statements of the Fairfax County Uniformed Retirement System (the "System"), a pension trust fund of the County of Fairfax, Virginia, as of and for the year-ended June 30, 2016 and the related notes to the financial statements, as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

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 and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free 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 auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of 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.

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, 2016, and the changes in fiduciary net position thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 14-18 and required supplementary information on pages 38-40 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.

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 43-54, the actuarial section on pages 55-60, and the statistical section on pages 61-64 are presented for purposes of additional analysis and are not a required part of the basic financial statements.

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

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated November 18, 2016, on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

Cherry Bekaert LLP

Tysons Corner, Virginia
November 18, 2016

This section presents management's discussion and analysis of the Fairfax County Uniformed Retirement System's ("System" or "Plan") financial performance and provides an overview of the financial activities for the fiscal year ended June 30, 2016. 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

The financial presentation is composed of four parts: (1) the financial statement; (2) notes to the financial statements; (3) required supplementary information and (4) other supplementary information. Below is the summary of the information provided in each of these sections.

Financial Statements. The System presents the Statement of Fiduciary Net Position as of June 30, 2016 and Statement of Changes in Fiduciary Net Position for the fiscal year ended June 30, 2016. 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 present the Plan's transactions under the categories of Additions and Deductions. Additions include contributions from the County and by participating employees, net appreciation in the fair value of investments, dividend and interest income. Investment income is reduced by investment-related expenses such as asset management fees, custody charges and consulting fees. Deductions includes outlays for monthly pension benefits, death benefits, refunds of contributions to employees and fees paid for professional services and administrative expenses

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 fair value hierarchy, 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. This section consists of historical trend exhibits such as the Schedule of Changes in Net Pension Liability and Related Ratios, Schedule of Net Pension Liability, Schedule of Employer Contributions accompanied by the Notes to 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. This section includes the Schedule of Administrative Expenses and the Schedule of Investment and Consultant Expenses. 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, 2016, and June 30, 2015, were \$1,498.7 million and \$1,525.6 million, respectively. The net position representing assets available to pay for current and future member pension benefits, decreased by \$26.9 million or 1.8 percent.

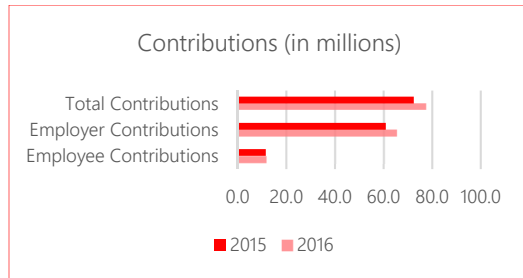
Total additions to net position decreased by 31.9 percent from \$94.2 million in 2015 to \$64.1 million in 2016.

Net investment income decreased 162.5 percent from \$21.7 million in 2015 to -\$13.5 million in 2016. The net money-weighted rate of return on investments on a fair value basis was approximately -0.9 percent in fiscal year 2016, and has decreased from 1.5 percent in fiscal year 2015.

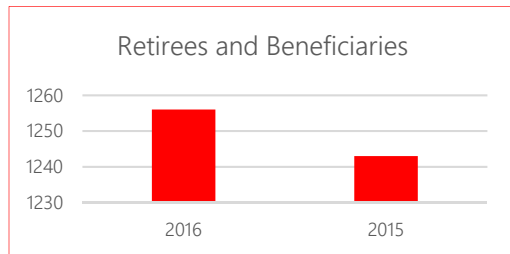
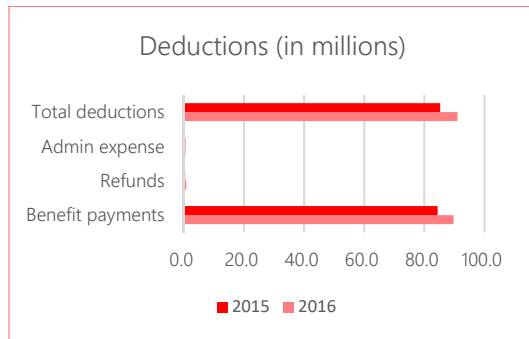
Management’s Discussion and Analysis

(continued)

Employer and employee contributions received totaled \$77.5 million, an increase of 7.0 percent or \$5.1 million compared to 2015 received contributions of \$72.4 million. The employer contributions increased from \$60.9 million in fiscal year 2015 to \$65.5 million in fiscal year 2016.



Total deductions from fiduciary net position increased by \$5.7 million from \$85.3 million in 2015 to \$91.0 million in 2016. Member retirement benefit payments of \$89.7 million in 2016 make up the majority of total deduction and increased by \$5.3 million or 6.3 percent from \$84.4 million in 2015. The number of retired members and beneficiaries receiving a benefit payment increased 1.0 percent from 1,243 to 1,256 payees as of June 30, 2016.



The net pension liability as calculated per GASB 67 as of June 30, 2016, and June 30, 2015, were \$441.8 million and \$358.1 million, respectively. The net position as a percentage of total pension liability as of June 30, 2016, and June 30, 2015, were 77.2 percent and 81.0 percent, respectively. The net pension liability

as a percentage of covered payroll has increased from 222.7 percent in 2015 to 261.7 percent in fiscal year 2016. The covered employee payroll increased from \$160.8 million in 2015 to \$168.8 million in 2016.

Administrative expense have remained stable at 0.03 percent of the value of net position for fiscal year 2015.

	2016	2015
Net Pension Liability (in million)	\$441.7	\$358.1
Net Position as Percentage of TPL	77.2%	81.0%
Covered Employee Payroll (in million)	\$168.8	\$160.8
Net Pension Liability as Percentage of Covered Payroll	261.7%	222.7%

Financial Analysis

Plan Net Position. When viewed overtime, increases or decreases in plan net position can be used to measure the financial condition of a pension plan. As of June 30, 2016, the Uniformed Retirement System held a net position of \$1,498.7 million restricted for pension benefits. Total assets as of June 30, 2016, were \$1,539.6 million, representing a decrease of \$106.6 million, or 6.5 percent over the previous fiscal year. The main component of the decrease was due to deductions exceeding contributions and unfavorable market conditions that resulted in a total investment of 1,495.7 million in fiscal year 2016 as compared to 1,536.8 million in fiscal year 2015.

For fiscal year 2016, the net position of the Uniformed Retirement System decreased 1.8 percent resulting in a total net position value of \$1498.7 million, reflecting a decrease of 26.9 million over fiscal year 2015. The falling-off in net position was primarily due to the deductions exceeding contributions, decrease of securities lending activity by nearly 58.0 percent and unfavorable investment performance that resulted in investment loss from 21.7 million in fiscal year 2015 to -\$13.5 million in fiscal year 2016.

The table in the following page details the Uniformed Retirement System’s net position for the current and prior fiscal year.

Total liabilities as of June 30, 2016, were \$40.9 million, representing a decrease of \$79.7 million, or 66.1 percent, over the previous year. The downturn in total liabilities is the result of a decreased level of securities lending activity resulting in a decrease in cash collateral received for securities on loan.

Management's Discussion and Analysis

(continued)

Summary Schedule of Plan Fiduciary Net Position

	<u>2016</u>	<u>2015</u>	<u>Difference</u>	<u>Percentage of Change</u>
Assets				
Total cash and investments	\$1,495,709,966	\$1,536,822,449	(\$41,112,483)	-2.7%
Cash collateral, securities lending	15,980,331	37,647,651	(21,667,320)	-57.6%
Capital assets, net	272	544	(272)	-50.0%
Total receivables	<u>27,951,545</u>	<u>71,746,957</u>	<u>(43,795,412)</u>	-61.0%
Total assets	1,539,642,114	1,646,217,601	(106,575,487)	-6.5%
Liabilities				
Purchase of investments	(22,170,521)	(80,090,315)	57,919,794	-72.3%
Securities lending collateral	(15,980,331)	(37,647,651)	21,667,320	-57.6%
Accounts payable and others	<u>(2,788,417)</u>	<u>(2,862,155)</u>	<u>73,738</u>	-2.6%
Total liabilities	(40,939,269)	(120,600,121)	79,660,852	-66.1%
Net position restricted for pension	<u>\$1,498,702,845</u>	<u>\$1,525,617,480</u>	<u>(\$26,914,635)</u>	-1.8%

Net Position for Current and Prior Fiscal Year

Fiscal Year	Ending Balances (millions)	Net change in dollars (millions)	Net Change in Percent
2016	\$1,498.7	(\$26.9)	(1.8%)
2015	1,525.6	8.9	0.6%

Securities lending cash collateral decreased by \$21.7 million or 57.6 percent due to the decrease 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 \$43.8 million or 61.0 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 June 30, 2016, was \$1,601.3 million while actuarial liabilities as of the same period were \$1,940.5 million. For purposes of funding, this resulted in a funding ratio of 82.5 percent. However, for purposes of GASB 67, the Total Pension Liability as of June 30, 2016, was \$1,940.5 million compared to the Plan Fiduciary Net Position of \$1,498.7 million, which results in a funding ratio of 77.2 percent.

(Dollars in millions)	2016	2015
Actuarial Accrued Liability	\$1,940.5	\$1,844.7
Actuarial Value of Assets	<u>1,601.3</u>	<u>1,550.3</u>
Unfunded Actuarial Liability	<u>339.1</u>	<u>\$294.4</u>
Funding Ratio	82.5%	84.0%
Total Pension Liability	\$1,940.5	\$1,883.7
Plan Fiduciary Net Position	<u>1,498.7</u>	<u>1,525.6</u>
Net Pension Liability	<u>\$441.8</u>	<u>\$358.1</u>
Funding Ratio	77.2%	81.0%

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.

Management's Discussion and Analysis

(continued)

Summary Schedule of Additions and Deductions

<u>Additions</u>	<u>2016</u>	<u>2015</u>	<u>Difference</u>	<u>Percentage of Change</u>
Employer contributions	\$65,548,338	\$60,928,766	\$4,619,572	7.6%
Plan member contributions	12,020,447	11,473,273	547,174	4.8%
Net income from investments	(13,547,966)	21,668,406	(35,216,372)	-162.5%
Net income from securities lending	<u>100,876</u>	<u>131,855</u>	<u>(30,979)</u>	-23.5%
Total Additions	64,121,695	94,202,300	(30,080,605)	-31.9%
Deductions				
Benefit payments	89,730,185	84,440,939	5,289,246	6.3%
Refunds	805,890	408,486	397,404	97.3%
Administrative expense	<u>500,255</u>	<u>455,440</u>	<u>44,815</u>	<u>9.8%</u>
Total deductions	<u>91,036,330</u>	<u>85,304,865</u>	<u>5,731,465</u>	<u>6.7%</u>
Net increase/(decrease)	<u>(\$26,914,635)</u>	<u>\$8,897,435</u>	<u>(\$35,812,070)</u>	<u>402.5%</u>

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 \$30.1 million or 31.9 percent in fiscal year 2016 attributed primarily due to -\$35.2 million, less appreciation in the fair value of the investments. This is clearly a substantial decline compared to the previous year's investment performance due to the unfavorable market environment in fiscal year 2016.

Total contributions for the fiscal year ended June 30, 2016, amounted to \$77.5 million. This was an increase of \$5.1 million when compared with the activity of fiscal year 2015. The employer contributions for fiscal year 2016 increased by 7.6 percent due primarily to an increase in the employer contribution rate from 37.9 percent to 38.8 percent of salary. Employee contributions increased by 4.3 percent, due to merit and COLA increases.

The system experienced a 23.5 percent decrease in net income from securities lending as a result of borrower rebates paid during the fiscal year, and a substantial decrease in security lending activities. Investment returns were severely lower for fiscal year 2016 than 2015 reflecting unfavorable returns in the capital markets. Net investment income decreased from \$21.7 million in fiscal year 2015 to -\$13.5 million in fiscal year 2016, which is consistent with the decrease in the net money-weighted investment rate of return from 1.5

percent for fiscal year 2015 to -0.9 percent for fiscal year 2016.

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 2016 were \$91.0 million, an increase of \$5.7 million, or 6.7 per cent, over fiscal year 2015. Regular pension benefit payments increased as the number of retirees and beneficiaries receiving benefit payments climbed to 1,256 from 1,243 in fiscal year 2016. Benefit payments also increased due to a cost-of-living increase of 1.0 percent and higher average benefits for new retirees. Refunds reflected a 97.3 percent increase due to higher employee turnover or separation in the current fiscal year.

<u>Participant Counts</u>	<u>2016</u>	<u>2015</u>
Actives	1,948	1,889
DROPS	123	116
Terminated vested	61	55
Retirees in payment status	<u>1,256</u>	<u>1,243</u>
Total	<u>3,388</u>	<u>3,303</u>

Management's Discussion and Analysis
(continued)

An actuarial valuation is performed annually by Cheiron. As of June 30, 2016, the date of the most recent actuarial valuation, the funded ratio of the system was 82.5 percent. This was a decrease to 82.5 percent from the July 1, 2015, valuation funded ratio of 84.0 percent. The combination of liabilities, investment results, and member and employer contributions over the last year led the funding ratio to decrease. Under GASB 67 calculation, using the December 31, 2015 data rolled forward to June 30, 2016, the plan fiduciary net position as a percentage of the total pension liability was 77.2 percent. It decreased from 81.0 percent in fiscal year 2015 primarily as a result of slower growth in the plan fiduciary net position due to low investment returns than forecasted.

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 System, 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/

Basic Financial Statements

Statement of Fiduciary Net Position

as of June 30, 2016

Assets

Cash and short-term investments		
Equity in County's pooled cash and temporary investments	\$1,967,348	
Cash collateral received for securities on loan	15,980,331	
Short-term investments	<u>123,384,810</u>	
Total cash and short-term investments		\$141,332,489
Fixed Assets		
Equipment, net	<u>272</u>	
Total fixed assets		272
Receivables		
Accounts receivable	4,131,912	
Accrued interest and dividends	2,483,724	
Securities sold	<u>21,335,909</u>	
Total receivables		27,951,545
Investments, at fair value		
Common and preferred stock	169,059,146	
Fixed income		
Asset-backed securities	94,558,677	
Corporate and other bonds	121,989,223	
U.S. Government obligations	28,931,620	
Pooled and mutual funds	<u>955,819,142</u>	
Total investments		1,370,357,808
Total assets		1,539,642,114
Current Liabilities		
Investment purchases and other liabilities	(22,170,521)	
Cash collateral received for securities on loan	(15,980,331)	
Accounts payable and accrued expenses	(2,748,884)	
Compensated absences, short-term	(23,582)	
Noncurrent Liabilities		
Compensated absences, long-term	<u>(15,951)</u>	
Total liabilities		<u>(40,939,269)</u>
Net position restricted for pension		<u>\$1,498,702,845</u>

See accompanying notes to financial statements.

Basic Financial Statements
(continued)

Statement of Changes in Fiduciary Net Position

For the Year Ended June 30, 2016

Additions

Contributions		
Employer	\$65,548,338	
Plan members	<u>12,020,447</u>	
Total contributions		\$77,568,785
Investment income from investment activities		
Net depreciation in fair value of investments	(32,235,126)	
Interest	13,085,114	
Dividends	<u>10,213,011</u>	
Total investment income	(8,937,001)	
Investment activity expense		
Management fees	(3,970,311)	
Custodial fees	(76,557)	
Consulting fees	(329,621)	
Allocated administration expense	<u>(234,476)</u>	
Total investment expense	<u>(4,610,965)</u>	
Net income from investment activities		(13,547,966)
From securities lending activities		
Securities lending income	160,209	
Securities lending expenses	<u>(59,333)</u>	
Net income from securities lending activities		<u>100,876</u>
Total net investment income		<u>(13,447,090)</u>
	Total additions	64,121,695
Deductions		
Annuity benefits	80,717,696	
Disability benefits	7,847,743	
Survivor benefits	1,164,746	
Refunds of employee contributions	805,890	
Administrative expense	<u>500,255</u>	
	Total deductions	<u>91,036,330</u>
	Net increase/(decrease)	(26,914,635)
Net position restricted for pension		
Beginning of fiscal year		1,525,617,480
End of fiscal year		<u>\$1,498,702,845</u>

See accompanying notes to financial statements.

Notes to the Financial Statements

The Fairfax County Uniformed 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 plan are recognized in the period in which the contributions are due pursuant to legal requirements. Benefits and refunds are recognized when due in accordance with the terms of the Plan. The cost of administering the plan is paid by the System.

For financial reporting purposes, the System adheres to accounting principles generally accepted in the United States of America. The System apply all applicable pronouncements of the Governmental Accounting Standards Board (GASB).

In February 2015, the Governmental Accounting Standards Board issued its standard on accounting and financial reporting issues related to fair value measurements. GASB no. 72, Fair Value Measurement and Application is applicable primarily to investments made by state and local governments, defines fair valuation and describes how fair value should be measured. This statement requires disclosures to be made about fair value measurements, the level of fair value hierarchy, and valuations techniques. In fiscal year 2016, the system implemented GASB Statement no. 72. Comprehensive footnote disclosures regarding this Statement is found on Note 3.

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 fair 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, 2016, 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

Notes to the Financial Statements

(continued)

values of investment securities will occur in the near term and that such change could materially affect the amounts reported in the financial statements.

D. Compensated Absences

Employees are granted vacation and sick leave based on their length of service. Unused annual and compensatory leave is payable to employees upon termination based on the employees' current rate of pay, up to certain limits. Sick leave does not vest with the employees; however, it is converted to years of service upon retirement. In addition, employees may accrue compensatory leave for hours worked in excess of their scheduled hours. Compensatory leave in excess of 240 hours is forfeited at the end of the calendar year.

Compensated Absences	
FY 2016 Beginning Balance	40,439
Leave Earned	25,448
Leave Used	26,354
FY 2016 Ending Balance	39,533
Due Within One Year	23,582

Note 2. Summary of Plan Provision

A. Plan Description and Provision.

The Uniformed Retirement System is a single employer defined benefit pension plan. Benefit provisions are established and may be amended by County ordinance. All benefits vest at five years of service.

Membership.

The plan includes most uniformed or sworn employees of the Fire and Rescue Department, the Sheriff's Department, the Animal Control Division, the Department of Public Safety Communications, helicopter pilots, and former park police officers who elected to remain in the System rather than transfer to the Police Officers Retirement System

The System consists of five plans, commonly known as Plan A, Plan B, Plan C, Plan D and Plan E, which have different employee contribution rates and different benefits. Members hired after, April 1, 1997, and before January 1, 2013, are enrolled in Plan D. Members hired on or after January 1, 2013, are members of Plan E.

Contribution Rate

Member	Plan A	4.0% of base salary up to the maximum Social Security wage base plus 5.75% of base salary over the wage base.
	Plan B	7.08% of base salary up to the maximum Social Security wage base plus 8.83% of base salary over the wage base.
	Plan C	4.0% of creditable compensation.
	Plan D and E	7.08% of creditable compensation.
Employer	Plan A, B, C, D and E	The rate for Fiscal Year 2015 was 38.8% of covered payroll for all plans.

Benefit.

Plans A and B – 2.0% of average final compensation (AFC) (highest consecutive three years) multiplied by the number of years of creditable service; and it is then increased by 3.0 percent.

A *supplemental benefit* is payable up to age 62. The amount of the supplemental benefit is based on the primary Social Security benefit the member would

have been entitled to if the member were 65 on the date of retirement. For members hired on or after July 1, 1976, this basic amount is equal to a percentage of the Social Security benefit. That percentage is determined by dividing the member's creditable service by 25. The exact amount of this benefit also depends on the member's age and Plan (see below).

Notes to the Financial Statements

(continued)

Plan A Pre-62 Supplemental Benefit – If the member is less than age 55, no supplemental benefit is payable. From age 55 to 62, the full basic amount of the supplement is payable. After age 62, the benefit payable is any excess of the full basic amount which exceeds the member's actual earliest Social Security benefit payable.

Plan B Pre-62 Supplemental Benefit – If the member is less than age 55, one-half of the basic amount of the supplemental benefit is payable. From age 55 to 62, the full basic amount of the supplement is payable. After age 62, the benefit payable is any excess of the full basic amount which exceeds the member's actual earliest Social Security benefit payable.

In addition, a *Pre-Social Security Supplement* is payable to members of Plan A & B until the first month after the member attains the age of eligibility for unreduced Social Security retirement benefits. The amount of the Pre-Social Security Supplement is 0.2 percent of AFC multiplied by the number of years of creditable service, increased by 3.0 percent.

Plan C, D and E – 2.5 percent of average final compensation (highest consecutive three years) multiplied by the number of years of creditable service; and it is then increased by 3.0 percent. No Pre-62 Supplemental Benefits are payable under Plan C, D or E. In addition, a *Pre-Social Security Supplement* is payable to members of Plan C, D & E until the first month after the member attains the age of eligibility for unreduced Social Security retirement benefits. The amount of the Pre-Social Security Supplement is 0.3 percent of AFC multiplied by the number of years of creditable service, increased by 3.0 percent.

Normal Retirement.

To be eligible for normal retirement, an individual must meet the following criteria: (a) attain the age of 55 with six years of service, or (b) complete 25 years of service. The normal retirement benefit 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. Those who commenced employment on or after January 1, 2013, may not use more than 2,080 hours of accrued sick leave toward service credit for retirement or deferred retirement option program (DROP) entry. Unused sick leave is also used to increase years of service for calculating benefits and determining retirement eligibility.

Early Retirement.

A member is eligible for early retirement upon attaining 20 years of service. Reduction factors are applied to the basic formula.

Deferred Retirement Option Program (DROP).

Those eligible for normal retirement may enter DROP for up to three years. While participating 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. Plan E members who enter DROP may use a maximum of 2,080 hours of sick leave towards retirement service credit and are not paid a Pre-Social Security benefit while in DROP.

Deferred Vested Retirement.

Deferred vested retirement is available for vested members who leave their contributions in the System when they terminate County service. Vesting occurs at 5 years of creditable service. At age 55, these members are entitled to their normal retirement benefit based on County service.

Service-Connected Disability Retirement.

Service-connected disability retirement is available for members, regardless of length of service, who become disabled as a result of a job-related illness or injury. The benefit is 40.0 percent of final compensation less workers' compensation, and less 15.0 percent of the Social Security disability benefit. The benefit for members retired on a severe service-connected disability is calculated at 90.0 percent of salary at the

Notes to the Financial Statements

(continued)

time of retirement less the workers' compensation benefit, and less 15.0 percent of any 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. Normal retirement benefits are paid.

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 percent of the normal retirement benefit earned as of the date of the member's death. If the 50 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: Refunds of any of the member's contributions and interest not already paid out in benefits will be paid to the named beneficiary(ies) unless the member 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 is service-connected: 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 (COLAs) 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. Members of Option A and C receive COLA increases beginning at age 55. Members of Option B and D receive COLAs beginning at retirement. COLAs are not applied to the Pre-Social Security Supplements, or other Supplemental Benefits.

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.

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

B. Board of Trustees.

Ten members serve on the Fairfax County Uniformed Retirement System. Four of the members are citizens appointed by the Fairfax County Board of Supervisors. Two of the members are elected by Fairfax County Fire and Rescue Department; and two are elected by the Fairfax County Sheriff's Office. The Director of Human Resources and the Director of Finance also serve as Ex Officio members.

C. Membership.

At June 30, 2016, the date of the latest actuarial valuation, membership in the System consisted of:

Retirees and beneficiaries receiving benefits	1256
Terminated plan members entitled to but not yet receiving benefits	61
Deferred Retirement Option Program (DROP) participants	123
Active plan members	<u>1,948</u>
Total	<u>3,388</u>

D. Deferred Retirement Option Program.

Members eligible for normal retirement may elect to enter the DROP. As a DROP member, he or she will

Notes to the Financial Statements

(continued)

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 Plan E). 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, 2016, was \$13.6 million.

E. Contributions.

The contribution requirements of the System's members are established and may be amended by County ordinances. Plan A members were given the opportunity to join Plan B as of July 1, 1981, and to enroll in Plan C as of April 1, 1997. From July 1, 1981, until March 31, 1997, all new hires were enrolled in Plan B. Plan B members were given the opportunity to enroll in Plan D as of April 1, 1997. From April 1, 1997, through December 31, 2012, all new hires were enrolled in Plan D. All eligible employees whose County employment commenced by reporting to work on or after January 1, 2013, are automatically enrolled in Plan E. Option A requires member contributions of 4.0 percent up to the Social Security wage base and 5.75 percent of compensation in excess of the wage base. Option B requires member contributions of 7.08 percent of compensation up to the Social Security wage base and 8.83 percent of

compensation in excess of the wage base. Plan C requires member contributions of 4.0 percent of compensation. Plan D and E require contributions of

7.08 percent of compensation. The County is required to contribute at an actuarially determined rate; the rate for the year ended June 30, 2016, was 38.83 percent of annual covered payroll. The decision was made to commit additional funding and a rate of 38.8 percent was adopted for fiscal year 2016. The total contributions for the fiscal year ended June 30, 2015, amounted to \$77.5 million.

F. Deductions.

The deductions from the System include 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, 2016, amounted to \$91.0 million.

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 a Statement of Investment Objectives and Policies whose general investment philosophy is to maintain a well-diversified, high-quality investment program that can meet the long-term needs of the members of the System. The Board of Trustees believes that the retention of experienced money management professionals with proven investment disciplines is the best means of attaining the System's investment goals and that the investment program should be sufficiently flexible to adapt to changes in the financial markets. Investment decisions for these assets are made by the Board of Trustees or investment managers selected by the Board. The Board of Trustees has the authority to amend the

Notes to the Financial Statements
(continued)

investment policy. The overall investment policies do not address specific levels of credit risk, interest rate risk or foreign currency risk. Each individual investment portfolio is managed by an investment management firm selected by the Board. Each investment portfolio has a specific benchmark and investment guidelines. While the overall investment guidelines do not specifically address concentration of credit risk, managers have specific quality and concentration limits 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, 2016. 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	15.0%
International Equities	16.0%
Private Equities	5.0%
Fixed Income	26.0%
Real Estate	8.0%
Alternatives	22.0%
Risk Parity	12.0%

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, 2016, the System does 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 managers’ 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.

C. Rate of Return.

For the year ended June 30, 2016, the annual money-weighted rate of return on pension plan investment, net of pension plan investment expense, was -0.9 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Notes to the Financial Statements
(continued)

D. Fair Value Hierarchy

		Fair Value Measurements Using			
Investments by Fair Value Level	6/30/2016	Quoted Prices in Active markets for Identical Assets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3	
Asset-backed securities	\$94,558,677		\$94,558,677		
Convertible or exchangeable securities	\$36,800		\$36,800		
Convertible securities	27,137	\$27,137			
Corporate and other bonds	121,952,315		121,952,315		
Equity	167,022,472	167,022,472			
Fixed income securities	39,957,309	39,957,309			
Futures contracts	(27,028)	(27,028)			
Preferred securities	2,036,674	516,275	1,520,399		
Short-term investments	107,610,301		2,105,384	\$105,504,917	
US Government obligations	28,931,620	28,931,620			
US Treasury bill	<u>10,795,842</u>	<u>10,795,842</u>			
	\$572,902,119	\$247,223,627	\$220,173,575	\$105,504,917	
Investment measured at the net asset value (NAV)					
Alternative investments	\$261,474,239				
Balanced portfolios	293,221,048				
Fixed income	121,277,360				
Inflation hedges	46,316,496				
International equities	67,852,746				
Private equity	33,310,145				
Real estate	<u>92,409,798</u>				
Total investments measured at the NAV	\$915,861,832				
Total investments measured at Fair Value	<u>\$1,488,763,951</u>				

The System measures and records its investments using fair value hierarchy measurement guidelines established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and give the highest level to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurements) and the lowest level to unobservable inputs (level 3 measurements).

- Level 1** Unadjusted quoted prices for identical instruments in active markets.
- Level 2** Observable inputs other than quoted market prices; and,
- Level 3** Valuation derived from valuation techniques in which significant inputs are unobservable.

Investments that are measured at fair value using the

net asset value per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy.

In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The table above shows the fair value leveling of the investments.

Equities and fixed income securities classified in Level 1 are valued using prices quoted in the active markets for those securities. Securities in Level 2 and Level 3 are valued using either a bid evaluation or a matrix pricing technique. Bid evaluations may include market quotations, yields, maturities, call features and ratings. Matrix pricing is used to value securities based on the securities' relationships to benchmark quoted prices. Level 3 securities use proprietary information or single source pricing.

Notes to the Financial Statements

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Investments Measured at NAV

	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Alternative investments	\$261,474,239		Monthly, Quarterly	5 - 90 days
Balanced portfolios	293,221,048		Monthly	5 - 15 days
Fixed income	121,277,360	\$21,321,307	None, Quarterly	45 - 65 days and N/A
Inflation hedges	46,316,496		Monthly	30 days
International equities	67,852,746		Monthly	30 days
Private equity	33,310,145	55,733,208	None	None
Real estate	<u>92,409,798</u>	<u>10,015,000</u>	None, Quarterly	60 days and N/A
Total investments measured at the NAV	<u>\$915,861,832</u>	<u>\$87,069,515</u>		

Alternative Investment:

Equity long/short hedge funds: This type includes investments in 3 hedge funds that invest both long and short primarily in the U.S. common stock market. Each of the 3 funds have different strategies. The first one is a long/short sector fund focused on Technology, Media, and Telecom industries. The fund is run with a relatively high gross exposure between 100% to 200% and a relatively low net exposure of + or - 20%. They use fundamental analysis to build a portfolio of 40 to 60 long positions and 80 to 120 short positions. The second one is a long/short healthcare fund that focuses on event-driven investments such as clinical trial outcomes, new product launches, and M&A activity. The Fund is diversified across all areas of healthcare, company stages, geographies, and strategies (equities, debt, royalties, option overlay) to mitigate risk. The third one is a U.S. small cap deep value long/short equity fund. The team looks for companies with management or capital structure issues. They identify undervalued companies and then perform a fundamental value analysis to find catalysts that may spark change in the company. The Fund will then, on its own or together with other members of a group, acquire a controlling interest in the company and then force management to enact the changes they feel are necessary for a turnaround. The fair values of each of these hedge funds has been determined using the NAV per share of the investments. The nature of each of the hedge fund strategies requires a longer hold period to realize value so each fund has quarterly liquidity and 45 day notice period for redemptions.

Relative Value: This type includes investment in a hedge fund that seeks to harvest risk premium from four return sources that have traditionally shown up as alpha, but as investors and attribution modeling have become more sophisticated, have become increasingly characterized as alternative or "style" premiums such as: Value – Tendency for relatively cheap assets to outperform relatively expensive ones; Momentum – Tendency for recent relative performance to continue in the near future; Carry – Tendency for higher-yielding assets to provide higher returns than lower; Defensive – Tendency for lower-risk, high-quality assets to generate higher returns. They implement long and short relative value strategies to capture these structural returns across multiple asset classes including: equity sectors, equity indices, fixed income, currency, and commodities. The fair values of each of this hedge fund has been determined using the NAV per share of the investments.

Multi-strategy: This type includes investment in two hedge funds one that is an event-driven multi-strategy fund that invests in distressed debt, risk arbitrage, event equities, convertible arbitrage, and volatility trades. The distressed portfolio seeks opportunities arising from distressed and stressed financial markets as well as bankruptcy, liquidations, and restructuring. Risk arbitrage strategy typically invests in large publicly announced merger deals and other arbitrage opportunities. The Fund tries to capture event equities opportunities across a range of soft events such as corporate restructuring, spin-offs, tender offers, and others. The majority of the assets are invested in U.S.

Notes to the Financial Statements

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and Western Europe. The second hedge fund in this group uses a bottom-up, multi-manager trading platform structured across four core strategies, (Strat Arb., Relative Value Equity, Merger Arb/Event Driven, Fixed Income) with an aim to deliver repeatable alpha-driven returns with minimal volatility and market correlation. Risk management infrastructure with proprietary systems for monitoring of team limits and exposure mitigate risks. Trading technology designed to attract and support industry expertise. The fair values of each of these hedge funds has been determined using the NAV per share of the investments.

Global Macro: This type includes one hedge fund that has a 100 active ideas across fixed income, currencies, equities and commodities. The process is equally driven by analysis of the macro environment, flows of capital, and the expected reaction to changes in interest rates and other drivers. The fair values of the investments in this type have been determined using NAV per share (or its equivalent) of the investments.

Trend Following: This type includes one hedge fund that is a Commodity Trading Advisor (CTA) that analyzes market prices to determine trends then uses tactical asset allocation to capture and ride market trends. The Fund is a diversified portfolio with exposure to currencies, commodities, bonds and short interest rates, and equity indices at various times. These exposures are typically achieved through the use of derivatives which allows quick response because of the high liquidity in the derivative markets. The fair values of the investments in this type have been determined using NAV per share (or its equivalent) of the investments.

Balanced Portfolios:

This type includes two funds that invests across asset classes using a risk balanced approach in their asset allocation of the Funds with the intent to balance risk across all four combinations of Rising and Falling Growth and Inflation. The main goal is to construct a portfolio that achieves the best risk adjusted return at a 10% expected volatility by overweighting the lower risk asset classes and balance expected returns in

inflationary, deflation, high growth and low growth periods. This is achieved through the use of derivatives and liquid long positions across multiple asset classes. The fair values of the investments in this type have been determined using NAV per share (or its equivalent) of the investments.

Fixed Income:

This type includes three hedge funds and two private debt funds. The hedge funds are long/short credit focused strategies. Two of which focus on the high yield segment of the debt market and the third invests in Mortgage Backed, Asset Backed and other distressed securities believed to be priced below the fundamental credit risk inherent in those securities. The fair values of the investments in these hedge funds have been determined using NAV per share (or its equivalent) of the investments. The two private debt funds are middle market direct lending funds that negotiate senior secured loans to borrowers that are too small to attract the attention of conventional banks and lenders. These investments cannot be redeemed. Instead, the nature of the investments in these private debt funds are that distributions are received through the liquidation of underlying assets of the funds over four to five years. Loan payments are also distributed on a quarterly basis. The loans are held at book value unless a payment default has occurred.

Inflation Hedges:

This type includes two funds that invest in inflation sensitive asset classes to help hedge against inflation risks in the broader portfolio. One of the Funds uses a diversified commodity portfolio to lower commodity volatility more than equities, provide an inflation hedge, and perform better in most economic environments, except for recessions. The Fund uses \$U.S. denominated futures to invest across six sectors energy, agricultural, livestock, industrial metals, precious metals, and food & fibers. The second Fund's goal is to provide strong relative performance vs. broad equity and fixed income markets during rising inflation. The portfolio is invested in inflation sensitive assets and inflation linked assets. Exposure to the inflation sensitive assets is achieved through global equity and derivative positions in precious metals,

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metal's and mining, agriculture, energy, and other commodities and commodity dependent equities. Global inflation linked bonds such as TIPS and emerging market inflation linked bonds provide exposure to the assets directly linked to inflation. The fair values of the investments in this type have been determined using NAV per share (or its equivalent) of the investments.

International Equity:

This type includes one emerging markets equity fund. The Fund is a long only emerging markets equity fund that uses both quantitative and qualitative analysis to build a diversified portfolio of around 300 stocks. They use a bottom-up multi-factor quantitative relative value analysis to find companies with value characteristics and with improving growth prospects. A top-down qualitative approach is used to do a peer group forecast relative to the world equity markets to determine country and industry allocations. The fair values of each of the fund has been determined using the NAV per share of the investments.

Private Equity:

This type includes six private equity fund-of-funds that invests as limited partners with private equity managers that then invest directly in underlying companies. The six fund-of-funds are diversified by vintage year and investment type. They are invested in management buy-in, management buy-out, leveraged buy-out, venture capital, growth and expansion capital, mezzanine, distressed and venture debt, special situation, recapitalization and other private equity funds. The intent is to build a diversified portfolio of top tear private equity funds. Top tear private equity funds are extremely hard to access

because of high demand so relationships and connections play a key role in gaining access to the best managers. These investments cannot be redeemed. Instead, the nature of the investments in this type are that distributions are received through the liquidation of underlying assets of the funds over five to ten years. The fair values of these funds are determined via a mark-to-market basis using assessments of similar companies that are traded in the liquid markets.

Real Estate funds:

This type includes two real estate funds. One fund is primarily a core portfolio of U.S. equity real estate with a goal to provide good returns while limiting downside risk through property type, geographic, and economic diversification with moderate leverage. The Fund is focused on owning and managing high-quality, well leased properties, or properties with expansion and/or rehabilitation potential, and, to a limited extent, make forward commitments on to-be-built properties. The Fund is structured as a \$U.S. denominated open-ended fund with quarterly liquidity, subject to available of capital. The second fund is a distressed real estate fund-of-funds that invest in local real estate managers that purchase distresses properties and renovate them. These investments cannot be redeemed. Instead, the nature of the investment in this fund is that distributions are received through the liquidation of the underlying properties in the funds over five to ten years. Rental income is received as a current yield from the underlying funds. The fair values of these funds are determined an appraisal basis using assessments of similar real estate that has recently sold.

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E. The System's investment quality ratings at June 30, 2016, were as follows:

Type of Investment	Fair Value	Ratings	Percent of Fixed
US Government obligations	\$28,931,620	AA	11.8%
Corporate and other bonds	3,758,265	AAA	1.5%
	43,771,503	AA	17.8%
	19,825,203	A	8.1%
	20,897,951	BBB	8.5%
	10,119,194	BB	4.1%
	1,378,449	B	0.6%
	338,775	CCC	0.1%
	2,670,080	CC	1.1%
	197,095	D	0.1%
	19,032,708	Unrated	7.8%
Asset-backed securities	4,022,124	AAA	1.6%
	49,553,927	AA	20.2%
	1,037,958	A	0.4%
	4,566,829	BBB	1.9%
	1,120,387	BB	0.5%
	1,069,489	B	0.4%
	4,958,961	CCC	2.0%
	1,734,729	CC	0.7%
10,238,409	D	4.2%	
<u>16,255,864</u>	Unrated	<u>6.6%</u>	
Total fixed income	\$245,479,520		100.0%
Short-term investments			
Cash and cash equivalents	\$7,084,052	Unrated	
Uniformed Enhanced STIF*	105,504,916	Unrated	
US Treasury bill	<u>10,795,842</u>	AA	
	\$123,384,810		

*Short-term investment funds

As of June 30, 2016 the fixed income portfolio, excluding pooled funds consisted of 71.8 percent invested in investment grade securities, 13.8 percent invested in below-investment-grade securities and 14.4 percent 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 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 and thus reduce the portfolio's sensitivity to rising rates.

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F. As of June 30, 2016, duration of the System's overall fixed income portfolio excluding pooled fund was 5.5 years compared with the 5.47 years duration of the BCAG. The System's investments' sensitivity to interest rates at June 30, 2016 were as, follows:

Investment Type	Fair Value	Option Adjusted Duration (yrs)	Percentage of Fixed
US Government obligations	\$28,931,620	15.4	11.8%
Corporate and other bonds	121,989,223	5.4	49.7%
Asset-backed securities	<u>94,558,677</u>	<u>2.6</u>	<u>38.5%</u>
Total fixed income	<u>\$245,479,520</u>	<u>5.5</u>	<u>100%</u>
Short term investments			
Cash and cash equivalents	\$7,084,052	0.0	
Uniformed Enhanced STIF	105,504,916	0.0	
US Treasury bill	<u>10,795,842</u>	0.2	
	<u>\$123,384,810</u>		

*Short-term investment funds

G. Short term investments of \$123.4 million includes a position of \$105.5 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.

H. 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, 2016, held in currencies other than U.S. dollars were as follows:

International Securities	Short-term Investments & Other	Convertible & Fixed Income	Equity	Total
Australian Dollar	\$2	\$5,442,417	\$4,816,001	\$10,258,420
Brazil Real		3,912,710		3,912,710
Canadian Dollar	33,816		1,498,660	1,532,476
Danish Krone			6,027,669	6,027,669
Euro Currency Unit	17,381	3,520,213	30,647,698	34,185,292
Hong Kong Dollar	43,134		6,178,595	6,221,729
Hungarian Forinth		2,566,083		2,566,083
Indonesian Rupiah		3,375,699	28,645	3,404,344
Japanese Yen	1,237,899		42,930,219	44,168,118
Malaysian Ringgit		3,498,491	25,331	3,523,822
Mexican Peso		10,956,334		10,956,334
New Taiwan Dollar	77,880		505,608	583,488
New Zealand Dollar		2,775,594	88,870	2,864,464
Norwegian Krone			945,510	945,510
Philippine Peso	675		147,189	147,864
Polish Zloty		1,646,289		1,646,289
Pound Sterling	626,067	4,221,117	36,376,241	41,223,425
Singapore Dollar			752,343	752,343
South African Rand		2,471,857	63,815	2,535,672
South Korean Won			1,838,844	1,838,844
Swedish Krona			3,966,409	3,966,409
Swiss Franc			6,393,851	6,393,851
Thailand Baht			<u>247,516</u>	<u>247,516</u>
	<u>\$2,036,854</u>	<u>\$44,386,804</u>	<u>\$143,479,014</u>	<u>\$189,902,672</u>

Notes to the Financial Statements

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I. Derivative Financial Instruments.

In accordance with the Board's investment policies, the System regularly invests in derivative financial instruments 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 2016, the System had exposure to various derivatives including asset-backed securities, collateralized mortgage obligations, exchange-traded futures contracts, and forward currency contracts. Some securities, such as structured notes, can have derivative-like characteristics where the return may be linked to one or more indexes. Others such as asset-backed securities like 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.

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, 2016, the System held two types of derivative financial instruments: futures and currency forwards. Futures and currency forwards contracts provide the System with the opportunity to build passive benchmark positions, 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 value as determined by our custodian and recorded in the Statement of Changes in Fiduciary Net Position.

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

Notes to the Financial Statements

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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, 2016, is shown at the table at the right:

Types of Futures	Base Exposure	Notional Cost
Cash and cash equivalents		
Short	(\$55,944,506)	(\$57,209,302)
Equity		
Long	<u>194,545,950</u>	<u>195,837,774</u>
Total	<u>\$138,601,444</u>	<u>\$138,628,472</u>

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 fair 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 a summary information on the System's currency forward contracts at June 30, 2016:

Foreign Currency Contracts Purchased	Notional (local currency)	Fair Value Payable in U.S. Dollars	Unrealized Gain(loss)
U.S. Dollar	(\$19,128,286)	(\$19,128,286)	\$0
Foreign Currency Contracts Sold	Notional (local currency)	Fair Value Receivable in U.S. Dollars	Unrealized Gain(loss)
Chilean Peso	\$2,293,100,000	\$3,452,011	\$133,432
Euro Currency Unit	4,150,000	4,616,522	(133,194)
Indian Rupee	218,000,000	3,187,890	(28,825)
Norwegian Krone	18,400,000	2,198,841	(36,706)
Swedish Krona	45,600,000	5,388,267	<u>(219,462)</u>
Net Unrealized Gain/(loss) on Foreign Currency Spot and Forward Contracts			<u>(\$284,755)</u>

Notes to the Financial Statements

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J. Securities Lending.

The Board of Trustees' 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. 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 System did not impose any restrictions during fiscal year 2016 on the amounts of loans the lending agent made on its behalf. At June 30, 2016, 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, 2016, cash collateral had a weighted-average maturity of one day. The maturities of the resulting investments generally match the maturities of the securities lending arrangements. While the System bears no risk from the failure of a borrower to return a borrowed security, it does bear risk from investing the collateral.

The following represents the balances relating to the securities lending transactions at June 30, 2016:

Securities Lent	Underlying Securities	Cash Collateral Investment Value	Securities Collateral Investment Value
Lent for Cash Collateral			
US Government securities	\$112,319	\$114,675	
Corporate and other bonds	6,141,649	6,304,943	
Common and preferred stock	8,735,189	9,560,713	
Lent for Securities Collateral			
US Government securities	13,835,945		\$14,247,820
Corporate and other bonds	68,957		70,480
Common and preferred stock	<u>20,065,357</u>		<u>22,249,102</u>
Total Securities Lent	<u>\$48,959,416</u>	<u>\$15,980,331</u>	<u>\$36,567,402</u>

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

The components of the net pension liability at June 30, 2016, were as follows:

Total pension liability	\$1,940,457,230
Plan fiduciary net position	1,498,702,845
Net pension liability	\$441,754,385
Plan fiduciary net position as a percentage of the total pension liability	77.2%

B. Actuarial Methods and Assumptions.

The Total Pension Liability was determined by an actuarial valuation as of June 30, 2016, using the following actuarial assumptions, applied to all periods included in the measurement.

Discount rate, net of plan investment expenses	7.25%
Inflation	2.75%
Salary increases, including inflation	2.75% + merit
Investment rate of return, net of plan investment expenses	7.25%
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 presented at a board meeting on April 27, 2016. 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, 2015, actuarial valuation report because GASB 67 disclosures use a roll-forward methodology and did not include the liability gain that was measured in the 2015 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, 2016, was 33.56 percent of annual covered payroll. The decision was made to commit additional funding and a rate of 38.83 percent was adopted for fiscal year 2016. Since the System'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 contributions at or before fiscal year 2020.

Mortality rates with adjustments for mortality improvements were based on 110% and 100% of the RP-2014 Healthy Annuitant Mortality Table for males and females respectively, projected using the RPEC-2015 model, with an ultimate rate of 0.75% for ages 20-85 grading down to an ultimate rate of 0% for ages 115-120 and convergence to the ultimate rate in the year 2015. Five percent deaths are assumed to be service-connected.

The actuarial assumptions used in the June 30, 2016, valuation were based on the results of an actuarial experience study for the period July 1, 2010 to June 30, 2015.

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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, 2016, are summarized below:

<u>Asset Class</u>	<u>Long Term Expected Real Rate of Return</u>
U.S. Equities	4.65%
International Equities	4.50%
Core Fixed Income	2.40%
High Yield	4.20%
Real Estate	4.65%
Commodity	4.65%
Risk Parity	6.00%
Absolute Return	9.85%

D. Discount Rate.

The discount rate used to measure the total pension liability was 7.25 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 2015 actuarial valuation. The

administrative expenses attributable to current actives were assumed to equal 0.25 percent of covered payroll. The inflows to the plan were assumed to continue at the average aggregate rate for the 2015 active population of 7.07 percent of payroll and County contributions were projected at 38.83 percent for fiscal year 2016 and 2017, and 39.94 percent for fiscal years 2018 through 2028. After that time the County contribution was assumed to drop to the normal cost plus expenses (20.12 percent) since the unfunded actuarial liability is expected to be fully funded by that time.

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 7.25 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-point lower (6.25 percent) or 1-percentage-higher (8.25 percent) than the current rate.

Sensitivity of Net Pension Liability to Changes in Discount Rate			
	1% Decrease	Discount Rate	1% Increase
	6.25%	7.25%	8.25%
Net Pension Liability	\$666,157,654	\$441,754,385	\$202,649,461
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	69.2%	77.2%	88.1%

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)

	Year Ended June 30		
	2016	2015	2014
Total Pension Liability			
Service cost	\$43,407,620	\$41,720,784	\$39,647,527
Interest	136,679,066	132,950,836	125,659,578
Changes in benefit terms	806,226	1,702,105	0
Differences between expected and actual experience	(54,053,500)	11,019,203	0
Changes in assumptions	20,479,405	0	0
Benefit payments, including refunds of member contributions	<u>(90,536,075)</u>	<u>(84,849,425)</u>	<u>(78,916,881)</u>
Net Change in Total Pension Liability	56,782,742	102,543,503	86,390,224
Total Pension Liability - beginning	<u>1,883,674,488</u>	<u>1,781,130,985</u>	<u>1,694,740,761</u>
Total Pension Liability - ending (a)	<u>\$1,940,457,230</u>	<u>\$1,883,674,488</u>	<u>\$1,781,130,985</u>
Plan Fiduciary Net Position			
Contributions - employer	\$65,548,338	\$60,928,766	\$56,094,690
Contributions - member	12,020,447	11,473,273	10,905,744
Net investment income	(13,447,090)	21,800,261	210,256,032
Benefit payments, including refunds of member contributions	(90,536,075)	(84,849,425)	(78,916,881)
Administrative expenses	<u>(500,255)</u>	<u>(455,440)</u>	<u>(433,541)</u>
Net Change in Plan Fiduciary Net Position	(26,914,635)	8,897,435	197,906,044
Plan Fiduciary Net Position - beginning	<u>1,525,617,480</u>	<u>1,516,720,045</u>	<u>1,318,814,001</u>
Plan Fiduciary Net Position - ending (b)	<u>\$1,498,702,845</u>	<u>\$1,525,617,480</u>	<u>\$1,516,720,045</u>
Net Pension Liability (Asset) - ending (a)-(b)	<u>\$441,754,385</u>	<u>\$358,057,008</u>	<u>\$264,410,940</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	77.2%	81.0%	85.2%
Covered Employee Payroll	<u>\$168,808,493</u>	<u>\$160,761,916</u>	<u>\$153,979,385</u>
Net Pension Liability as a Percentage of Covered Employee Payroll	261.7%	222.7%	171.7%

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.

Required Supplementary Information
(continued)

Schedule of Net Pension Liability			
Year Ended June 30			
	2016	2015	2014
Total Pension Liability	\$1,940,457,230	\$1,883,674,488	\$1,781,130,985
Plan Fiduciary Net Position	<u>1,498,702,845</u>	<u>1,525,617,480</u>	<u>1,516,720,045</u>
Net Pension Liability	<u>\$441,754,385</u>	<u>\$358,057,008</u>	<u>\$264,410,940</u>
Plan Fiduciary Net Position as a Percentage of the Total Plan Liability	77.2%	81.0%	85.2%
Covered Employee Payroll	\$168,808,493	\$160,761,916	\$153,979,385
Net Pension Liability as a Percentage of Covered Payroll	261.7%	222.7%	171.7%

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
2016	-0.9%
2015	1.5%
2014	16.1%

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

Schedule of Employer Contributions					
Fiscal Year	Actuarial Determined Contribution	Contributions in Relations to the Actuarial		Covered Employee Payroll	Contributions as a Percentage of Covered Payroll
		Determined Contribution	Contribution Deficiency (Excess)		
2016	\$65,548,338	\$65,548,338	\$-	\$168,808,493	38.83%
2015	60,928,766	60,928,766	-	160,761,916	37.90%
2014	56,094,690	56,094,690	-	153,979,385	36.43%
2013	53,722,160	53,722,160	-	153,491,886	35.00%
2012	50,351,335	50,351,335	-	148,924,386	33.81%
2011	45,817,015	45,817,015	-	149,924,787	30.56%
2010	40,771,184	40,771,184	-	154,086,107	26.46%
2009	40,855,102	40,855,102	-	154,403,258	26.46%
2008	39,085,662	39,085,662	-	148,445,355	26.33%
2007	36,486,832	36,486,832	-	140,280,015	26.01%

Required Supplementary Information

(continued)

Notes to Schedule

Valuation Date 6/30/2014
 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
 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.
 Discount rate 7.5%
 Amortization growth rate 3.00%
 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, 2016, can be found in the June 30, 2016, Actuarial Valuation Report.

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
2016	38.83%	7.08%, Option B 8.83 % in excess of Social Security taxable wage base.
2015	37.90%	7.08%, Option B 8.83 % in excess of Social Security taxable wage base.
2014	36.43%	7.08%, Option B 8.83 % in excess of Social Security taxable wage base.
2013	35.00%	7.08%, Option B 8.83 % in excess of Social Security taxable wage base.
2012	33.81%	7.08%, Option B 8.83 % in excess of Social Security taxable wage base.
2011	30.56%	7.08%, Option B 8.83 % in excess of Social Security taxable wage base.

January 2014 Service-Connected Disability Social Security offset was reduced from 25.0 percent to 15.0 percent. Board of Trustee increased from 8 to 10 members, one is appointed and one is elected by the retirees of the System.

January 2013 Employees hired on or after January 1, 2013, will be automatically enrolled in Option E. The maximum amount of accrued sick leave is capped at 2,080 hours; DROP does not include the Pre-Social Security Benefit.

Other Supplementary Information

Schedule of Investment & Consultant Expenses

For the Year Ended June 30, 2016

Investment Activity Expenses	
Investment manager fees	\$3,970,311
Custodial fees	76,557
Consultant Expenses	
Consultant expenses	<u>329,621</u>
Total Investment and Consulting Expenses	<u>\$4,376,489</u>

Schedule of Administrative Expenses

June 30, 2016

Personnel services		
Salaries and wages	\$224,939	
Fringe benefits	<u>100,059</u>	
Total personnel services		\$324,998
Professional services		
Actuarial	63,634	
Audit	<u>6,276</u>	
Total professional services		69,910
Communications		
Phone charges	4,792	
Printing, binding and copying	2,914	
Postage	<u>3,539</u>	
Total communications		11,245
Supplies		
Office supplies	<u>2,278</u>	
Total supplies		2,278
Other services and charges		
Board and staff travel and development	21,722	
Professional membership	1,043	
Professional subscription	178	
Insurance	7,889	
Building rent	18,882	
Equipment	181	
Computer system	36,519	
Other operating	<u>5,410</u>	
Total other services and charges		<u>91,824</u>
Total Administrative Expenses		<u>\$500,255</u>

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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 14, 2016

Dear Members of the Board of Trustees:

U.S. equity markets provided mixed returns in the fiscal year 2016 as episodes of heightened market volatility interrupted an otherwise positive market environment. Domestic bond markets proved attractive during these periods of disruption providing a desired safe haven for investors and delivering strong returns. On the international side, non-U.S. developed equities edged lower as U.S. dollar strength cut into returns and political turmoil led by the U.K.'s decision to leave the EU sent a wave of volatility through the market. Despite easy policy from central banks in Europe and Japan, continuing growth concerns also contributed to negative equity returns. The U.S. economy appeared to exhibit continued resilience in the face of global market conditions and geo-political events. More consistently positive economic news for the U.S. helped push domestic equity prices higher. Notwithstanding, yields on most fixed income securities narrowed on greater demand for safe haven assets, even as the economy grew at a moderately-healthy pace and unemployment receded further. The large-cap domestic equity market, as measured by the S&P 500 Index, capped off the fiscal year with a +4.0% return even as most smaller-cap domestic indices posted losses. The domestic bond market, as measured by the Barclays Aggregate Bond Index, returned +6.0% over the same period. The global equity market, as measured by the MSCI All Country World Index (net), returned -3.7% for the fiscal year, reflecting a blend of the positive results in the U.S. and the negative performance in the non-U.S. developed markets (MSCI EAFE down -10.2% for the trailing year) and emerging markets (MSCI EM down 12.1%).

During the quarter ended September 30, 2015, international equities contracted sharply with developed markets down around 10% and emerging markets losing nearly 18%. Fear of a pending rate hike by the Fed and negative headlines from China and Greece helped fuel the selloff. Greece and Brazil were among the hardest hit emerging economies, trading down 35% and 33%, respectively. Emerging market small-cap stocks continued to outpace their larger-cap peers. Within developed markets, European equities were down 8%, while Japanese stocks lost 10%. At home, equities suffered their worst quarterly loss in four years. The S&P 500 Index declined 6.4% in the third quarter, erasing its gains for the year; the Russell 2000 Index lost 11.9%. Within large-cap stocks, growth bested value, while value stocks lost less in the small-cap space. Overall, energy and healthcare were among the worst performing sectors. Within the U.S., Treasuries and other high-grade assets rallied as lower quality securities sold off amid the market volatility. To this end, the Barclays U.S. Aggregate Bond Index gained 1.2% in the third quarter. Risk premiums widened with U.S. investment-grade corporate spreads increasing 24 basis points to 169 basis points. High-yield bond spreads spiked 160 basis points to 630 basis points with the Barclays U.S. Corporate High Yield Index losing 4.8%. The Treasury curve flattened over the quarter; the yield on the 30-year Treasury fell 24 basis points to 2.90%, while the yield on the one-year Treasury increased by six basis points to 0.34%. Outside the U.S., developed market bonds rallied as investors shunned risk; the Citigroup WGBI Index rose 1.7% in the third quarter. Meanwhile, emerging market debt faced headwinds.



Fairfax County Retirement Systems

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Weakening currencies continue to be the principal drag on emerging market debt. Consequently, debt denominated in local currency declined the most, losing 10.5%, while hard-currency sovereign debt fell 1.7%, according to the JP Morgan EMBI Index. In general, the debt of exporters of oil and commodities underperformed during the quarter. Brazilian debt was also sharply lower, rocked by a ratings downgrade by Standard & Poor's Ratings Services and continued economic weakness.

U.S. equities ended a volatile 2015 on a strong note. Despite a solid fourth quarter, the year saw the lowest gains for the S&P 500 since 2008 and for the Russell 2000 since 2011. Earlier in the quarter, equities rallied amid robust corporate earnings and macroeconomic data. Subsequently, stocks faltered amid plunging oil prices and concerns around the impact of a stronger U.S. dollar as the Fed tightens monetary policy. The consumer discretionary sector led performance in large caps in 2015 while healthcare dominated small caps; energy was the worst performing sector in both. Growth bested value in large and small equities. Meanwhile, developed markets recouped a portion of their third quarter losses, gaining 4.8% in the last quarter. For the calendar year, international equities were down around 0.4%. The energy and materials sectors drove losses, trading down over 16% in 2015; consumer staples and healthcare were the strongest performers, up over 8%. Emerging economies returned 0.7% as the Fed's 25 basis points rate hike—its first since 2006—drove markets lower; healthcare and consumer discretionary sectors gained during the quarter while industrials and staples lagged. For 2015, the materials sector—down over 20%—was a major detractor of performance. Brazil traded off 41% as the real declined sharply amid the country's political and economic problems. At home, the Fed's well telegraphed rate hike drove government yields higher in the fourth quarter, resulting in losses for Treasuries with maturities of less than one year. Within corporate credit, the precipitous selloff in commodity-related sectors was unrelenting. Consequently, high-yield debt was the worst performer during the quarter and in 2015, losing 2.07% and 4.47%, respectively; in high yield, energy and metals and mining lost nearly 25% last year. Investment-grade credit spreads widened 34 basis points over the course of 2015 to 165 basis points; contributors included global growth concerns, falling commodity prices, and record issuance of \$1.3 trillion which hampered liquidity. Abroad, emerging market debt remained hindered by a strengthening U.S. dollar, causing the local currency index to lose 0.01% compared to returns of 1.25% for the dollar-denominated index. Within developed markets, weakening currencies aided losses of 1.23%, according to the Citigroup WGBI Index.

Concerns around global growth and the precipitous decline in oil prices roiled stocks initially in the first quarter of 2016 but reassuring economic data triggered a dramatic reversal in March. The Standard & Poor's 500 Index posted its best return in March since 2009, putting it back in the black for the year. The S&P 500 ended the quarter with gains of 1.3%, while the Russell 2000 Index was down 1.5%. Returns were generally driven by the beaten down areas of the market, including smaller, lower-quality and commodity-related equities; however, high-quality stocks still lead for the year. Defensive bond-proxy sectors, for instance, telecom and utilities, were the best performers; value outperformed growth. Across the pond, developed markets also sold off earlier in the year and then rebounded following further rate cuts by the European Central Bank and comments from the Federal Reserve on a slowing pace for raising rates that fueled a weaker dollar. Non-U.S. markets lost 3%, according to the MSCI EAFE Index. European banks were hit the hardest during the quarter leading to losses of 9.6% for the financial sector. Energy, a laggard in 2015, was the best performing sector with returns of 4.7%. Japan experienced the worst results, selling off 6.5% in the first quarter. Similarly, emerging markets started the year with a sharp selloff, subsequently reversing course. As a result, emerging markets returned 13% in March—their best month since 2011. For the quarter, emerging markets gained 5.7%, besting other equity markets. Strongest performers included Brazil with gains of 27.4%. Global fixed-income markets staged a dramatic comeback in the second half of the quarter. Global yields were pushed lower with the ECB and Bank of Japan cutting rates deeper into negative territory. Further stimulus from the ECB, a dovish Fed statement and improvements in macroeconomic data bolstered performance. Global investment-grade spreads tightened during the period led by the industrials sector, while global high-yield debt sharply rebounded; at home, high-yield issues gained 3.2%. Given the rebound in commodities, commodity-related sectors led performance. Returns were positive across emerging markets with local sovereign debt markets leading the way as rates fell and currencies appreciated.

Markets witnessed quite a surprise in the second quarter of 2016 as the United Kingdom voted to leave the European Union. Concerns of increased political risk in the U.K. and Europe briefly jolted equity and currency markets across the globe. Risk assets sharply sold off but quickly reversed as market concerns abated. U.S. markets

followed suit and ultimately continued their rally as the S&P 500 ended the quarter up 2.5%. Outside the U.S., emerging markets demonstrated resiliency to finish the quarter in positive territory. Developed market equities modestly recovered with the MSCI EAFE down only 1.5%. The Russell 2000 had a strong quarter as 9 out of the 10 economic sectors registered positive returns. From a sector basis, the more defensive sectors led the market higher with energy, telecommunications, utilities and health care. Sectors lagging in the quarter were consumer discretionary, information technology and industrials. Across the developed world, equity markets declined following the U.K.'s decision to leave the EU before rallying in the final days of the quarter. Ireland and Italy led developed markets lower, selling off 9.9% and 9.7%, respectively. In local terms, Japanese equity markets declined nearly 7%, while, for U.S. dollar investors, Japan equities returned a positive 1% as the yen approached a 2 year high against the dollar. The yen has rallied considerably for the year and continues to benefit from its perceived safe-haven status. Similar to the U.S., energy was the top sector in developed markets, returning roughly 11.5% while consumer discretionary stocks were one of the weakest returning -8.2% for the quarter. Within emerging markets, investors looked past the Brexit fears and recognized ongoing positive developments. Latin America was a particular focus, where favorable election results in Peru and further progress in the impeachment process in Brazil led to those markets returning 16.9% and 13.3%, respectively. In contrast, China equity markets continued to waver, trailing the broader benchmark with a return of -1.7%. From a sector perspective, consumer staples stocks performed the best, returning 4.2% for the quarter. The second quarter illustrated the current dichotomy within fixed income: safe-haven assets rallied significantly, while risky assets also outperformed as investors continued to search for yield. Globally, the 10 year German bund broke into negative territory, falling 28 bps to -0.13%. In Japan, 10-year bond yields continued to move lower, settling at -0.22%. At home, the U.S. 10 year Treasury yield compressed 29 bps, nearing its all-time low at 1.49%. The Barclays Aggregate returned 2.2%, while U.S. High Yield returned 5.5% for the quarter. Overall, credit was broadly supported by lower quality sectors. Non-credit risk assets also performed well, as emerging market local debt returned 2.7% in the quarter with a strong rebound in June of 5.9%. For the year, emerging local debt remains one of the best performing risk assets in fixed income, returning over 14%.

Uniformed System

For fiscal year 2016 the Uniformed Retirement System continued to focus on optimizing and diversifying the portfolio and implementing a diversified investment program to achieve the System's strategic long-term goals. This disciplined investment process has been effective in achieving a long-term record of consistent asset growth.

For fiscal 2016, investments provided a return of -0.6%, gross of fees (-0.8%, net of fees). The System's annualized rates of return, gross of fees, were 5.6% (5.3%, net of fees) over the last three years, 5.4% (5.1%, net of fees) over the last five years, and 5.8% (5.4%, net of fees) over the last five years. The System's returns ranked in the 73rd percentile of The NEPC universe in 2016, in the 73rd percentile for the latest 3-year period, in the 84th percentile for the last 5 years, and in the 48th percentile for the last 10 years (performance are calculated using time-weighted rate of return).

During the past twelve months, the System continued to focus on further diversifying risk and implementing the previously adopted changes to long term asset allocation targets. Millennium Management was added to the Alternative Investments lineup. Garcia Hamilton and Manulife were added to the Fixed Income manager lineup replacing the PIMCO Total Return Fund. The SJC Direct Lending Fund III was also added to the Fixed Income manager lineup. Finally, Advisory Research was removed from the Equity manager lineup.

Sincerely,



Brian Morales, CAIA
Senior Investment Officer

Investments by Category and Investment Manager**

June 30, 2016

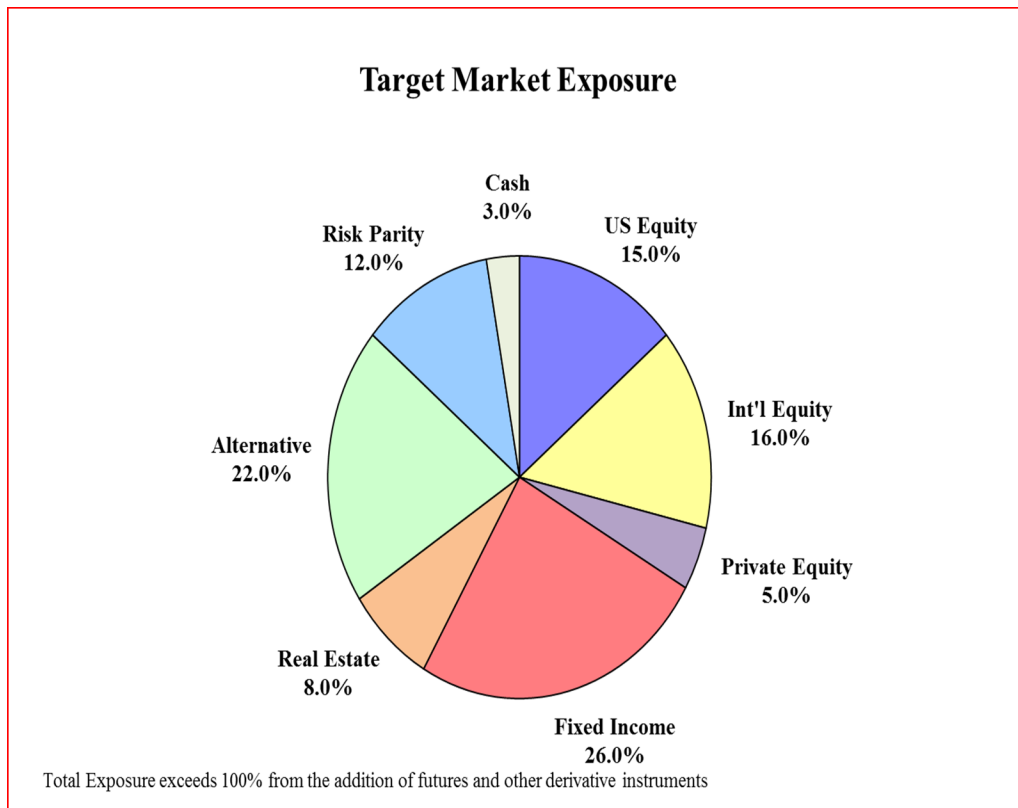
<i>Asset Class</i>			
<i>Manager</i>	<i>Investment Style</i>	<i>Total Fair Values</i>	<i>% of Total Portfolio</i>
<i>International Equities</i>			
Acadian Asset Management*	Emerging Markets	\$67,852,746	4.53%
Marathon Asset Management - London	Developed Markets	124,324,660	8.30%
<i>Private Equities</i>			
HarbourVest Private Equity*	Private Equity	17,585,134	1.17%
J.P. Morgan Private Equity*	Private Equity	6,550,341	0.44%
Pantheon Private Equity*	Private Equity	9,174,670	0.61%
<i>Fixed Income</i>			
Anchorage Capital Partners*	Long/Short Credit	33,003,842	2.21%
Ashmore Investment Management*	Emerging Markets Debt	39,957,309	2.67%
Brandywine Asset Management	Global Bonds	79,651,294	5.32%
DoubleLine Capital	Mortgage-Backed Securities	71,349,246	4.77%
Garcia Hamilton & Associates	Domestic Core Bonds	62,978,089	4.21%
King Street Capital*	High Yield Bonds	29,141,825	1.95%
Manulife Asset Management	Domestic Core Bonds	41,589,997	2.78%
Pacific Investment Management Co. (PIMCO)*	Distressed Senior Credit	38,301,826	2.56%
SJC Direct Lending Fund*	Direct Lending	20,829,867	1.39%
<i>Real Estate</i>			
Cohen & Steers Capital Management	Global Real Estate Securities	46,636,325	3.11%
Sigular Guff*	Direct Real Estate	23,191,107	1.55%
UBS Realty*	Direct Real Estate	69,218,691	4.62%
<i>Alternative Investments</i>			
AQR Style Premia*	Global Macro Absolute Return Fund	32,976,150	2.20%
Bridgewater Associates*	Global Macro Absolute Return Fund	40,403,462	2.70%
Criterion Capital Management*	Long/Short Technology Fund	30,996,027	2.07%
Davidson Kempner Capital Management*	Mutli-Strategy Fund	29,848,500	1.99%
Millennium Management*	Global Macro Absolute Return Fund	33,244,745	2.22%
Orbimed Advisors*	Long/Short Absolute Return Fund	25,460,695	1.70%
Starboard Value and Opportunity*	Small Cap Value Activist	34,972,305	2.34%
Systematica Investment Services*	Global Macro Absolute Return Fund	33,572,356	2.24%
<i>Inflation Hedges</i>			
Gresham Inflation Hedges*	Commodities	19,496,317	1.30%
Wellington Diversified Inflation Hedges*	Commodities	26,820,179	1.79%
<i>Balanced Portfolios</i>			
AQR Market Advantage*	Risk Parity	143,514,449	9.58%
Bridgewater All Weather*	Risk Parity	149,706,599	10.00%
<i>Cash and Short-term investments</i>			
BNY Mellon Cash Investment Strategies	Plan Level Cash Accounts	15,731,385	1.05%
Cash Held at County Treasurer	Operating Cash Account	1,973,470	0.13%
Parametric	Beta Manager	<u>97,305,470</u>	<u>6.50%</u>
Total Investments		\$1,497,359,078	100.00%
* Pooled fund		**See Pages 8-9 for complete listing of investment professionals.	

Uniformed Retirement System – Allocation of Market Exposures

Target Asset Allocation

The asset structure shown below represents the Trustees' assessment of their optimal asset allocation as of June 30, 2016. 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.

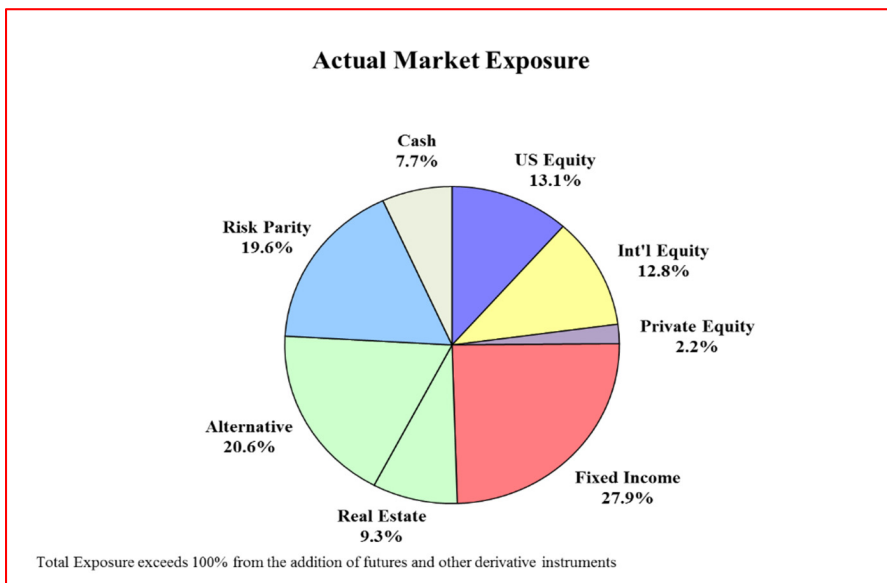
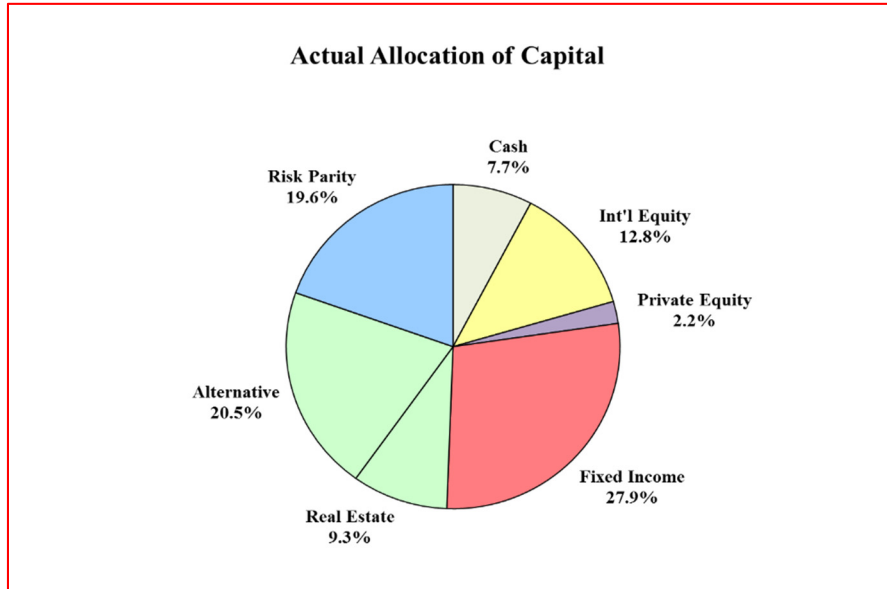
The pie chart below details the target asset mix, consistent with the achievement of the long-term objectives of the System, as of June 30, 2016.



Actual Asset Allocation as of June 30, 2016

The asset structure of URS 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.

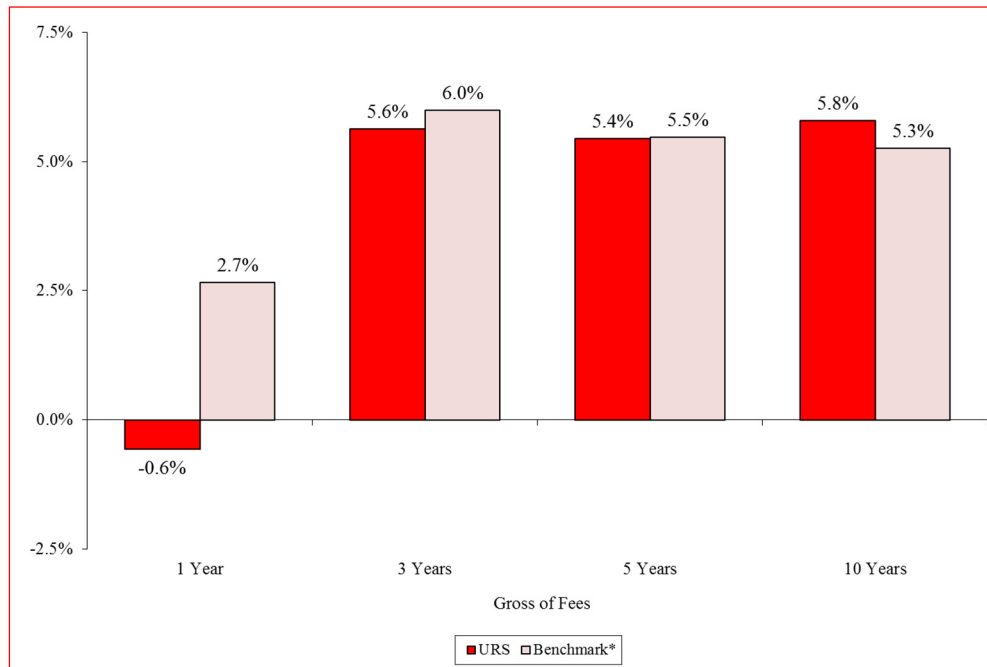
The pie chart below details the actual asset allocation as of June 30, 2016.



Investment Results

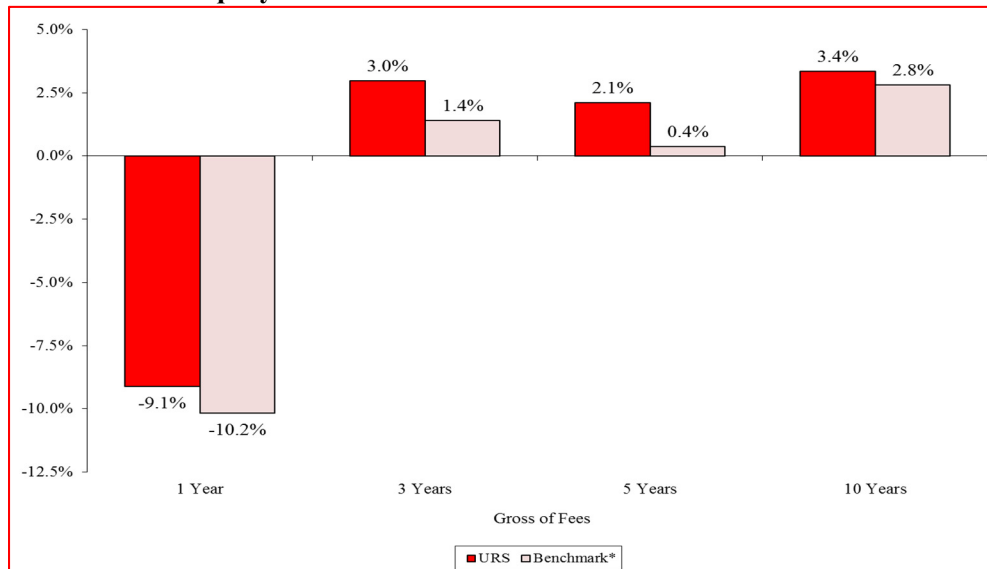
(Time weighted return, gross of fees)

Total Fund:



*Blended Benchmark. Current Benchmark: 5% MSCI Emerg Mkt Net Div, 3% JP Morgan Emerg Mkt Bond Index GD, 4% FTSE EPRA/NAREIT Developed Index, 4% NCREIF Open End Diversified Core, 5% Citigroup Woldr Govt, 5% Credit Suisse High Yield, 12% Barclays US Aggregate, 3% Russell 2000, 9% MSCI EAFE Net Div, 10% S&P500, 2% Barclays US Treasury US TIPS, 2% Bloomberg Commodity, 3% Cambridge Associates US Private Eq, 20% Risk Parity Benchmark (-50% LIBOR BBA USD 3 Month Index, 90% Barclays Global Aggregate (USDH), 30% MSCI All Country World Net Index, 10% Bloomberg Commodity Index Total Return, 20% Barclays World Govt Inflation-Linked All Maturities USD Hdg), 13% 90 Day T-bill + 300bps

International Equity:

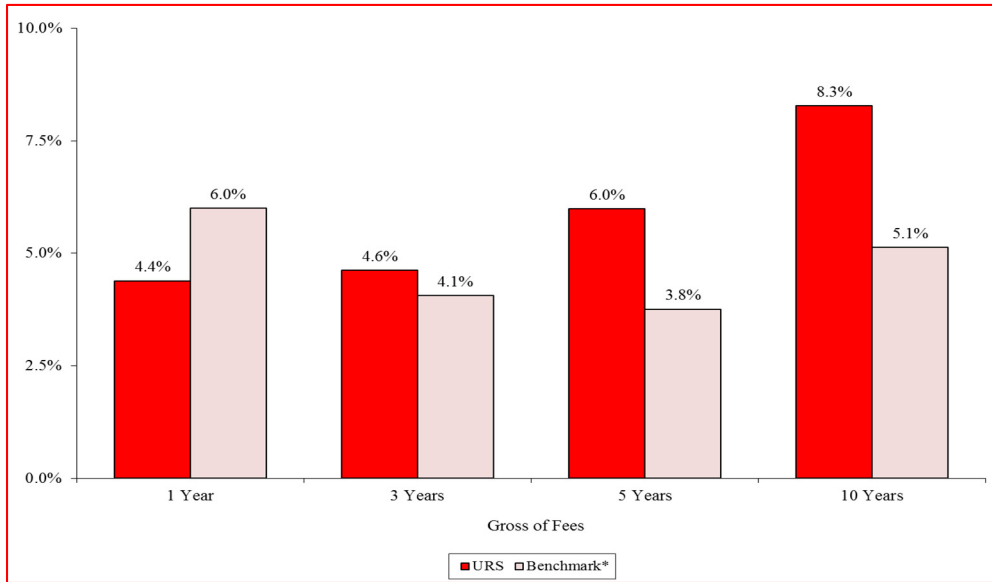


*Benchmark: 66.7% MSCI EAFE, 33.3% MSCI Emerging Markets Free Gross

Investment Results

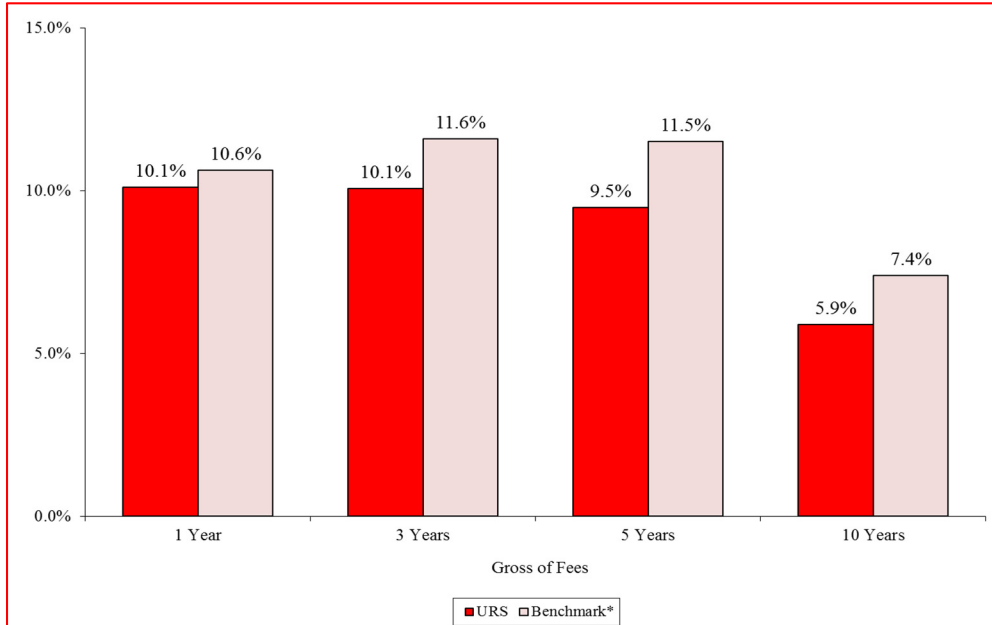
(Time weighted return, gross of fees)

Fixed Income:



*Benchmark: Barclays Aggregate

Real Estate:



*Benchmark: NCREIF Property Index

Schedule of Ten Largest Equity & Fixed Income Holdings*

Ten Largest Equity Holdings*				
No. Shares	Description	Cost	Fair Value	% of Total Portfolio
12,958	Simon Property Group Inc	\$2,468,771	\$2,810,590	0.19%
49,400	Nippon Telegraph & Telephone Co	1,190,640	2,311,336	0.15%
41,421	Klepierre	1,807,879	1,833,764	0.12%
96,000	Mitsubishi Estate Co Ltd	1,937,006	1,752,685	0.12%
45,000	Fujifilm Holdings Corp	870,554	1,729,993	0.12%
16,525	Reckitt Benckiser Group Plc	430,342	1,654,587	0.11%
24,382	Vestas Wind Systems A/s	273,247	1,647,482	0.11%
46,535	HCP Inc	1,552,356	1,646,408	0.11%
89,200	Kirin Holdings Co Ltd	1,198,348	1,498,115	0.10%
77,438	Compass Group Plc	504,464	1,472,042	0.10%
	Total	<u>\$12,223,607</u>	<u>\$18,357,002</u>	<u>1.23%</u>

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
10,850,000	U.S. Treasury Bond, 2.750%, 08/15/2042	\$10,608,115	\$11,954,530	0.80%
5,100,879	Fnma Gtd Remic P/t 15-79 Za, 3.000%, 11/25/2045	4,866,724	5,036,557	0.34%
4,655,000	U.S. Treasury Bond, 2.500%, 02/15/2045	4,283,128	4,846,460	0.32%
73,700,000	Mexican Bonos, 7.750%, 11/13/2042	5,984,081	4,646,588	0.31%
4,640,000	Federal Farm Cr Bk Cons Bd, Var Rt, 04/09/2018	4,638,088	4,632,112	0.31%
4,320,000	Federal Natl Mtg Assn, Var Rt, 10/05/2017	4,314,752	4,314,600	0.29%
3,090,000	United Kingdom Gilt Regs, 1.250%, 07/22/2018	4,556,524	4,221,117	0.28%
3,461,491	Fhlmc Pool #G3-0810, 4.500%, 01/01/2032	3,784,924	3,798,260	0.25%
3,139,741	Fhlmc Pool #G3-0491, 4.500%, 04/01/2030	3,417,412	3,427,404	0.23%
49,700,000	Mexican Bonos, 8.500%, 05/31/2029	<u>4,205,470</u>	<u>3,351,056</u>	<u>0.22%</u>
	Total	<u>\$50,659,218</u>	<u>\$50,228,684</u>	<u>3.35%</u>

Schedule of Brokerage Commissions

For Year Ended June 30, 2016

Broker Name	Base Volume	Total Shares	Base Commission	Commission Percentage
Kas Bank Nv, Amsterdam	\$867,676	119,741	\$1,300	0.15%
Green Street Advisors (Uk) Ltd, London	880,280	76,414	1,316	0.15%
Citigroup Gbl Mkts/Salomon, New York	2,197,321	651,814	3,177	0.14%
Sanford C Bernstein & Co Inc, London	782,035	173,132	1,110	0.14%
Deutsche Bk Intl Eq, London	1,844,128	500,760	2,531	0.14%
Macquarie Bank Ltd, Hong Kong	2,261,016	848,165	2,942	0.13%
Credit Suisse (Europe), London	2,813,390	513,728	3,496	0.12%
Merrill Lynch Intl London Equities	5,236,768	1,070,235	6,224	0.12%
Cantor Fitzgerald & Co Inc, New York	1,379,068	51,708	1,551	0.11%
Credit Lyonnais Secs (Asia), Hong Kong	899,026	177,543	1,008	0.11%
Credit Lyonnais Secs, Singapore	887,582	116,745	990	0.11%
J P Morgan Secs Ltd, London	3,324,451	279,524	3,598	0.11%
Weeden & Co, New York	1,768,285	78,869	1,879	0.11%
Mitsubishi Ufj Secs Intl Plc, London	846,161	98,730	868	0.10%
Bny Convergenx / Ljr, Houston	14,174,074	483,315	14,499	0.10%
Societe Generale London Branch, London	789,227	32,188	789	0.10%
Daiwa Sec Smbc Europe Ltd, London	1,481,912	166,700	1,471	0.10%
SMBC Securities, Inc New York	921,954	11,769	904	0.10%
Credit Suisse, New York	2,383,852	196,338	2,306	0.10%
Daiwa Secs Amer Inc, New York	3,019,159	229,387	2,917	0.10%
SMBC Nikko Capital Markets Ltd, London	950,881	120,100	912	0.10%
Citigroup Global Markets Ltd, London	2,945,377	430,674	2,824	0.10%
UBS Warburg Asia Ltd, Hong Kong	2,686,768	585,510	2,559	0.10%
Merrill Lynch Gilts Ltd, London	2,867,573	130,148	2,687	0.09%
Mizuho Securities Usa Inc. New York	1,100,607	34,210	1,029	0.09%
Mizuho International Plc, London	1,430,164	191,750	1,336	0.09%
Baird, Robert W & Co Inc, Milwaukee	918,043	30,663	842	0.09%
RBC Dominion Secs Inc, Toronto	766,352	29,050	698	0.09%
Morgan Stanley & Co, London	1,061,112	118,263	953	0.09%
Citigroup Gbl Mkts Inc, New York	3,484,540	102,517	3,106	0.09%
Deutsche Bk Secs Inc, Ny	2,896,282	178,215	2,562	0.09%
Instinet Europe Limited, London	3,938,255	389,071	3,401	0.09%
Barclays Capital Inc, New York	966,654	24,206	763	0.08%
UBS Securities Llc, Stamford	1,036,895	18,120	804	0.08%
Morgan Stanley & Co Inc, Ny	3,961,578	454,993	2,938	0.07%
Jefferies & Co Inc, New York	1,240,205	40,849	916	0.07%
Goldman Sachs & Co, Ny	46,864,178	198,154	33,811	0.07%
UBS Warburg, London	4,589,258	858,146	3,184	0.07%
National Finl Svcs Corp, New York	3,746,551	84,317	2,573	0.07%
William Blair & Co, Chicago	1,299,199	43,519	870	0.07%
UBS Equities, London	3,313,117	568,261	2,175	0.07%
J.P. Morgan Clearing Corp, New York	14,308,006	861,549	8,768	0.06%
Wells Fargo Securities Llc, Charlotte	1,010,943	29,893	598	0.06%
Citation Group/Bcc Clrg, New York	5,305,220	148,272	2,965	0.06%
Goldman Sachs Execution & Clearing, Ny	996,596	26,342	527	0.05%
Credit Suisse Securities (Usa) Llc, Ny	2,059,886	53,096	1,071	0.05%
RBC Capital Markets Llc, New York	1,221,828	29,160	575	0.05%
Merrill Lynch Pierce Fenner Smith Inc Ny	42,834,971	1,242,978	16,649	0.04%
Bernstein Sanford & Co, New York	4,443,319	104,210	1,613	0.04%
Raymond James & Assoc Inc, St Petersburg	2,199,787	31,673	633	0.03%
Other Brokers	<u>14,113,195</u>	<u>2,436,239</u>	<u>15,375</u>	<u>0.11%</u>
Total	<u>\$229,314,705</u>	<u>15,470,953</u>	<u>\$174,593</u>	<u>0.08%</u>

Investment Summary				
(Based on Capital Allocation)				
	As of June 30, 2015		As of June 30, 2016	
	Fair Value	% Fair Value	Fair Value	% Fair Value
Domestic Equities	\$53,507,583	3.50%	\$0	0.00%
International Equities	207,172,343	13.50%	192,177,406	12.83%
Private Equities	34,975,909	2.30%	33,310,145	2.22%
Fixed Income	397,034,281	26.00%	416,803,295	27.86%
Real Estate	122,533,550	8.00%	139,046,123	9.28%
Alternative Investments	322,483,217	21.20%	307,790,736	20.55%
Risk-Balanced Portfolios	293,676,748	19.30%	293,221,048	19.58%
Short Term	<u>93,903,350</u>	<u>6.20%</u>	<u>115,010,325</u>	<u>7.68%</u>
Total	<u>\$1,525,286,981</u>	<u>100.00%</u>	<u>\$1,497,359,078</u>	<u>100.00%</u>

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*Classic Values, Innovative Advice.*

November 1, 2016

Fairfax County Uniformed
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 Uniformed Retirement System as of June 30, 2016. The full results and analysis of that annual valuation will be presented in a full actuarial valuation report. The purpose of this actuarial section is to provide key information from that report and support the disclosure of Total Pension Liability that is presented in the Financial Section of this CAFR. 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) 2016 contribution was developed in the 2014 valuation report and was based on a corridor level of 95%.

Assumptions

The actuarial assumptions used in performing the June 30, 2016 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, 2015. The assumptions reflect our understanding of the likely future experience of the System and the assumptions both individually and 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

As a part of the 2015 actuarial valuation, Cheiron prepared the Analysis of Financial Experience, Schedule of Retirants and Beneficiaries Added to and Removed from the Rolls and Solvency Test provided in this Actuarial Section.

We are also responsible for the disclosures of Net Pension Liability and its components in the Financial Section. The information provided in Note 4 of the Financial Section comes from the Actuarial Valuation as of June 30, 2016.

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 Uniformed Retirement 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. The employer-provided accrual rates in the System 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 Uniformed 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 Uniformed 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, FSA
Principal Consulting Actuary



Coralie A. Milligan, FSA
Associate Actuary

Attachment



Summary of Valuation Results

The Actuarially Determined Contribution rate for Fiscal Year (FY) 2016 was developed in the 2014 valuation report and was based on a corridor floor of 95%. For more information on the Corridor method please see the Funding Method section of this report.

Amounts disclosed in Note 4 of the Financial Section were developed in conjunction with the 2016 valuation. Prior to performing the 2016 valuation, a full experience study was performed using data from 2010-2015. As a result of this study many of the actuarial assumptions have been changed since the 2015 financial reporting. The impact of the changes can be found in the Schedule of Changes in the Net Pension Liability, as disclosed in the Financial Section. For more detail on the changes and analysis we would refer you to the experience study report.

The System historically used a July 1 date for both funding calculations and for accounting disclosures. While the System and the County disclosed liabilities under the Governmental Accounting Standards Board (GASB) Statements Numbers 25 and 27, this was an appropriate technique because this statement allowed for disclosure of liability and assets as of the prior year. Once GASB's Statements Numbers 67 and 68 required the System to disclose their best estimate of the liability as of the plan year-end, along with assets at the same date, the disclosure of year-end liabilities was moved to using rollforward techniques. This has led to a situation where the June 30, 2015 TPL was estimated while the July 1, 2015 actuarial liability for funding purposes was calculated using more recent data. The two liability measures ceased to match one another.

In order to address this discrepancy, starting with 2016 the Board has elected to use a June 30 valuation date based on collecting data and valuing liabilities figures as of December 31 and adjusting the resulting liabilities for a six month period to the following June 30. These June 30 liability figures are then compared to the June 30 assets for purposes of both the funding and financial accounting disclosures. The same liability results will now be used for both the actuarial funding valuation and financial reports removing a source of confusion.

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) 2016 contribution was based on a corridor level of 95%.

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.

Changes since Last Valuation

The funding liabilities are calculated as of December 31 of the prior year and adjusted using standard actuarial techniques to the June 30 valuation date.

Long Term Assumptions Used to Determine System Costs and Liabilities

Demographic Assumptions

Healthy Mortality

Annual Deaths Per 10,000 Members Mortality Projected to 2016		
Age	Male	Female
20	6	2
25	6	2
30	5	2
35	6	3
40	8	5
45	13	8
50	52	29
55	67	38
60	90	59
65	139	98
70	223	156
75	364	251
80	605	414
85	1,032	726
90	1,768	1,281
95	2,720	2,072
100	3,788	3,022

* Post-retirement mortality shown

110% and 100% of the RP-2014 Healthy Annuitant Mortality Table for males and females respectively, projected using the RPEC-2015 model, with an ultimate rate of 0.75% for ages 20-85 grading down to an ultimate rate of 0% for ages 115-120 and convergence to the ultimate rate in the year 2015. 5% of deaths are assumed to be service-connected.

Disabled Mortality

Annual Deaths Per 1,000 Disabled Members Mortality Projected to 2016		
Age	Male	Female
45	19	11
50	22	14
55	23	15
60	25	19
65	31	25
70	42	34
75	58	50
80	82	74

100% and 115% of the RP-2014 Disabled Annuitant Mortality Table for males and females respectively, projected using the RPEC-2015 model, with an ultimate rate of 75% for ages 20-85 grading down to an ultimate rate of 0% for ages 115-120 and convergence to the ultimate rate in the year 2015.

Termination of Employment (Prior to Normal Retirement Eligibility)

Annual Terminations	
Service	Male and Female
0	122
5	25
10	8
15	5
20	5
25	0

It is assumed that members who terminate before normal or early retirement age elect to receive a refund of contributions instead of vested benefits.

Disability

Annual Disabilities Per 1,000 Members*	
Age	Male and Female
20	1
25	1
30	1
35	1
40	2
45	3
50	5
55	8
60	8

* Disabilities are assumed to be all service-connected. Of these, 30% are assumed to receive Social Security benefits and 38% are assumed to receive Workers' Compensation benefits.

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

Year of Service	Merit/Seniority Increase*
0	6.50%
5	3.00%
10	1.55%
15	3.00%
20	3.00%
25+	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.

Retirement/DROP

Year of Service	Retirement/DROP*
5-24	20%
25	30
26	30
27	27
28	25
29	28
30	25
31	30
32	35
33	35
34	35
35+	100

* 75% of those who leave under this decrement are assumed to DROP, with the other 25% taking immediate retirement.

Sick Leave Credit

The unused sick leave balance as reported for each active member is used as of the valuation date. Future sick leave accruals are assumed to accrue at 100% of each participant's annual average, but capped at 124 hours per year.

Economic Assumptions

Investment Return:	7.25% compounded per annum.
Rate of General Wage Increase:	2.75% compounded per annum.*
Rate of Increase in Cost of Living:	2.50% compounded per annum.**
Total Payroll Increase (for Amortization):	2.75% compounded per annum.
Administrative Expenses:	0.25% 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

All assumptions have been updated in accordance with the 2015 experience study.

Please see the experience study report for details on the analysis and the assumptions before and after adoption.

Analysis of Financial Experience
Gain and Loss in Accrued Liability during Years Ended June 30¹
Resulting from Differences between Assumed Experience and Actual Experience

Type of Activity	Investment Income	Combined Liability Experience	Gain (or Loss) During Year from Financial Experience	Non-Recurring Items	Composite Gain (or Loss) During Year
2010	(\$52,003,538)	\$5,509,116	(\$46,494,422)	\$0	(\$46,494,422)
2011	17,409,148	(13,747,922)	3,661,226	(2,808,343)	852,883
2012	(19,330,917)	(1,456,752)	(20,787,669)	0	(20,787,669)
2013	(3,805,385)	24,088,845	20,283,460	(813,016)	19,470,444
2014	34,542,175	(9,026,264)	25,515,911	(20,177,168)	5,338,743
2015	(12,354,967)	38,954,945	26,599,978	0	26,599,978
2016	(51,308,849)	15,038,096	(36,270,753)	(21,285,640)	(57,556,393)

¹ Schedule comes from the Actuarial Valuation as of June 30, 2016.

Schedule of Retirees and Beneficiaries
Added To and Removed From Rolls

Year Ended June 30,	Added to Rolls		Removed From Rolls		On Rolls @ Yr. End		% Increase Allowance	Average Allowance
	No.	Annual Allowance	No.	Annual Allowance	No.	Annual Allowance		
2010	51	\$4,614,464	17	\$549,813	1,021	\$53,499,626	8.22%	\$52,399
2011	66	5,869,824	12	546,541	1,075	58,822,909	9.95%	54,719
2012	45	4,704,657	11	481,168	1,109	63,046,398	7.18%	56,850
2013	57	5,446,162	11	610,907	1,155	67,881,653	7.67%	58,772
2014	64	5,865,807	25	1,033,836	1,194	72,713,625	7.12%	60,899
2015	61	4,908,201	12	618,655	1,243	77,003,170	5.90%	61,949
2016	25	1,745,424	12	467,322	1,256	78,281,273	1.66%	62,326

Solvency Test²

Aggregate Accrued Liabilities For							
Valuation Date June 30,	-1	-2	-3	Reported Assets *	-1	-2	-3
	Active Member Contributions	Retirees, Vested Terms, Beneficiaries & DROP	Active Members (County Financed Portion)		Portion of Accrued Liabilities by Reported Assets		
2010	\$113,757,792	\$813,049,990	\$500,808,928	\$1,095,079,616	100%	100%	34%
2011	120,040,592	896,003,321	510,174,331	1,185,593,678	100%	100%	33%
2012	120,373,016	981,922,550	511,358,566	1,247,526,438	100%	100%	28%
2013	130,979,546	1,042,085,650	503,200,502	1,326,424,772	100%	100%	30%
2014	137,482,080	1,094,584,634	561,785,579	1,466,110,756	100%	100%	42%
2015	145,293,199	1,126,142,315	573,284,029	1,550,327,414	100%	100%	49%
2016	155,579,540	978,657,862	806,219,828	1,601,320,543	100%	100%	58%

² Schedule uses actuarial value of assets. Results would be different if market value of assets were used. Despite the name of this exhibit, the liabilities presented in this schedule are not an appropriate measurement of the settlement value of the System.

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
2007	\$9,988,515	\$36,486,832	26.01%	\$167,240,928	\$213,716,275
2008	10,535,823	39,085,662	26.33%	(27,523,779)	22,097,706
2009	11,750,810	40,855,102	26.46%	(211,603,541)	(158,997,629)
2010	11,094,505	40,771,184	26.46%	131,320,268	183,185,957
2011	10,521,525	45,817,015	30.56%	238,039,247	294,377,787
2012	10,603,097	50,351,335	33.81%	(4,168,239)	56,786,193
2013	10,937,857	53,722,160	35.00%	120,417,604	185,077,621
2014	10,905,744	56,094,690	36.43%	210,256,032	277,256,466
2015	11,473,273	60,928,766	37.90%	21,800,261	94,202,300
2016	12,020,447	65,548,338	38.83%	(13,447,090)	64,121,695

Schedule of Deductions by Type

Fiscal Year	Benefit Payments	Refunds of Contributions	Administrative Expenses	Total Deductions
2007	\$47,194,476	\$737,506	\$421,390	\$48,353,372
2008	47,544,913	833,454	440,564	48,818,931
2009	54,122,953	656,683	325,469	55,105,105
2010	58,356,915	597,955	345,766	59,300,636
2011	63,822,794	853,906	361,654	65,038,354
2012	67,361,605	599,188	372,770	68,333,563
2013	73,914,711	779,395	434,117	75,128,223
2014	78,358,943	557,938	433,541	79,350,422
2015	84,440,939	408,486	455,440	85,304,865
2016	89,730,185	805,890	500,255	91,036,330

Schedule of Benefit Payments by Type

Fiscal Year	Service Annuity	Service-Connected Disability	Ordinary Disability	Survivor Benefit	Total
2007	\$39,729,752	\$6,669,085	\$309,674	\$485,965	\$47,194,476
2008	39,604,805	7,077,598	333,440	529,070	47,544,913
2009	45,854,076	7,323,730	343,405	601,742	54,122,953
2010	50,139,482	7,275,973	300,836	640,624	58,356,915
2011	55,344,665	7,513,492	317,253	647,384	63,822,794
2012	58,531,116	7,751,042	339,101	740,346	67,361,605
2013	64,917,112	7,771,437	341,271	884,891	73,914,711
2014	69,212,758	7,808,253	356,140	981,792	78,358,943
2015	75,228,455	7,771,270	330,343	1,110,871	84,440,939
2016	80,717,696	7,515,341	332,402	1,164,746	89,730,185

Schedule of Retired Members by Benefit Type

Fiscal Year	Service Annuity	Service-Connected Disability	Ordinary Disability	Survivor Benefit	Total
2007	672	190	17	21	900
2008	706	186	18	22	932
2009	758	187	18	24	987
2010	798	185	16	22	1021
2011	845	186	18	26	1075
2012	878	187	18	26	1109
2013	925	185	17	29	1156
2014	967	176	17	34	1194
2015	1021	171	17	34	1243
2016	1038	168	18	32	1256

Schedule of Average Monthly Benefit Amounts

Fiscal Year	Service Annuity	Service-Connected Disability	Ordinary Disability	Survivor Benefit	Average
2,007	\$4,252	\$2,908	\$1,596	\$1,936	\$3,864
2,008	4,434	3,199	1,606	1,997	4,076
2,009	4,532	3,233	1,596	2,123	4,174
2,010	4,726	3,339	1,505	2,045	4,367
2,011	4,945	3,439	1,570	2,122	4,560
2,012	5,127	3,571	1,614	2,122	4,737
2,013	5,285	3,607	1,624	2,422	4,891
2,014	5,457	3,809	1,609	2,492	5,075
2,015	5,533	3,826	1,614	2,530	5,162
2,016	5,563	3,800	1,576	2,576	5,194

Schedule of Average Benefit Payments

Years of Credited Service*	2 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+
<u>Period 7/1/2006 to 6/30/2007</u>							
Average Monthly Benefit **	\$432	\$655	\$1,990	\$2,555	\$2,970	\$4,812	\$6,077
Average of Final Monthly Salaries	4,757	3,165	5,418	5,953	6,348	6,964	7,017
Number of Retirees	1	1	3	5	6	47	16
<u>Period 7/1/2007 to 6/30/2008</u>							
Average Monthly Benefit **	-	745	1,409	2,941	3,423	5,110	5,646
Average of Final Monthly Salaries	-	4,483	6,026	6,190	7,129	7,770	6,990
Number of Retirees	-	3	1	2	12	24	1
<u>Period 7/1/2008 to 6/30/2009</u>							
Average Monthly Benefit **	4,041	1,342	1,710	2,435	3,679	5,499	6,363
Average of Final Monthly Salaries	3,661	5,159	5,429	6,861	7,134	8,117	8,328
Number of Retirees	1	4	4	1	10	28	6
<u>Period 7/1/2009 to 6/30/2010</u>							
Average Monthly Benefit **	-	818	-	2,230	3,924	5,326	8,098
Average of Final Monthly Salaries	-	4,293	-	5,798	8,113	8,047	9,781
Number of Retirees	-	1	-	3	7	31	8
<u>Period 7/1/2010 to 6/30/2011</u>							
Average Monthly Benefit **	477	1,980	1,944	2,527	4,331	5,381	6,873
Average of Final Monthly Salaries	4,144	4,950	6,538	6,318	7,929	8,239	8,612
Number of Retirees	1	1	3	1	10	38	7
<u>Period 7/1/2011 to 6/30/2012</u>							
Average Monthly Benefit **	-	760	2,455	-	3,732	5,262	7,355
Average of Final Monthly Salaries	-	4,321	6,137	-	7,510	8,205	9,284
Number of Retirees	-	2	1	-	3	30	6
<u>Period 7/1/2012 to 6/30/2013</u>							
Average Monthly Benefit **	458	-	2,188	3,155	4,343	5,871	7,410
Average of Final Monthly Salaries	5,345	-	5,470	7,119	7,631	9,044	9,875
Number of Retirees	1	-	1	1	4	37	7
<u>Period 7/1/2013 to 6/30/2014</u>							
Average Monthly Benefit **	-	940	2,094	4,189	4,895	5,419	7,983
Average of Final Monthly Salaries	-	4,640	6,514	8,674	7,872	8,363	10,169
Number of Retirees	-	2	2	1	6	33	9
<u>Period 7/1/2014 to 6/30/2015</u>							
Average Monthly Benefit **	-	2,038	1,693	3,024	4,200	5,530	8,312
Average of Final Monthly Salaries	-	5,501	6,658	7,374	7,706	8,888	10,985
Number of Retirees	-	1	1	3	6	30	9
<u>Period 7/1/2015 to 12/31/2015</u>							
Average Monthly Benefit **	-	925	-	2,853	2,923	5,501	8,072
Average of Final Monthly Salaries	-	5,975	-	7,817	7,595	8,519	9,596
Number of Retirees	-	1	-	1	1	16	6

* 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.

Active Participants Count by Age/Service

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	23	33	0	0	0	0	0	0	56
25 to 29	48	139	41	1	0	0	0	0	229
30 to 34	38	91	145	64	0	0	0	0	338
35 to 39	12	37	108	137	38	1	0	0	333
40 to 44	4	14	48	99	114	34	1	0	314
45 to 49	1	9	22	75	124	107	27	1	366
50 to 54	2	5	14	37	37	57	49	15	216
55 to 59	1	4	3	12	12	18	13	15	78
60 to 64	0	0	4	3	6	0	0	1	14
65 & up	0	0	0	1	1	1	0	1	4
Total	129	332	385	429	332	218	90	33	1,948

Active Participants Total Salary by Age/Service

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	\$1,266,466	\$1,917,031	\$0	\$0	\$0	\$0	\$0	\$0	\$3,183,497
25 to 29	2,484,834	8,387,241	2,827,076	74,413	0	0	0	0	13,773,564
30 to 34	1,948,723	5,628,235	10,037,432	5,134,068	0	0	0	0	22,748,458
35 to 39	690,086	2,348,387	7,576,282	11,861,509	3,687,081	154,386	0	0	26,317,731
40 to 44	221,506	834,293	3,314,499	8,579,220	11,636,596	4,003,866	142,164	0	28,732,144
45 to 49	65,717	613,144	1,586,005	6,410,390	12,205,980	12,091,309	3,249,241	148,232	36,370,018
50 to 54	99,265	287,774	1,020,097	2,960,419	3,584,238	6,234,516	5,663,995	1,798,163	21,648,467
55 to 59	11,956	374,852	193,786	940,248	1,170,649	1,969,003	1,392,843	1,839,039	7,892,376
60 to 64	0	0	279,864	217,559	507,196	0	0	99,465	1,104,084
65 & up	0	0	0	67,624	97,608	99,118	0	120,725	385,075
Total	\$6,788,553	\$20,390,957	\$26,835,041	\$36,245,450	\$32,889,348	\$24,552,198	\$10,448,243	\$4,005,624	\$162,155,414

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EMPLOYEES' POLICE Officers UNIFORMED

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