FOR THE FISCAL YEAR ENDED JUNE 30, 2017

# COMPREHENSIVE ANNUAL FINANCIAL REPORT

# UNIFORMED

## RETIREMENT SYSTEM

## *2017*

***A Pension Trust Fund of Fairfax County, Virginia***

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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 16, 2017

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, 2017. 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 1,975 active members, 115 in the Deferred Retirement Option Program (DROP), 76 terminated vesteds and 1,309 retirees participating in the System as of June 30, 2017. For calculations surrounding the Total Pension Liability and its components, Cheiron, the System's actuary, used June 30, 2017, as the measurement date which coincides with the actuarial valuation date.

**Provisions**

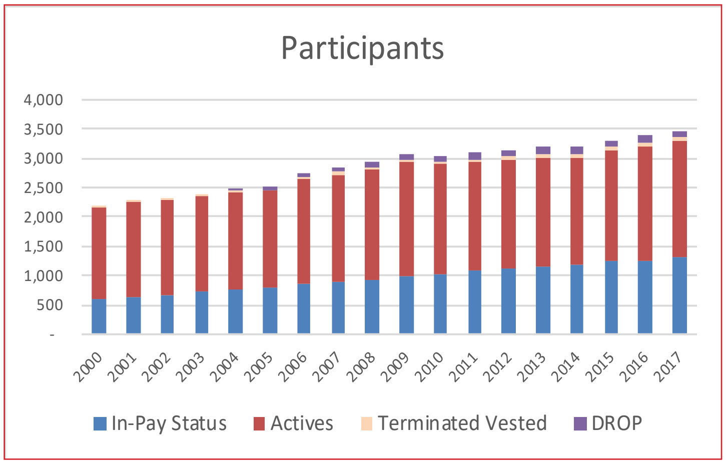
The benefit provisions of the System are established by County Ordinance. The System provides normal service retirement and early service retirement benefits for members who attain age or service requirements. Coverage for service-connected disability benefits is immediate upon membership in the System. 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 2017, the System's investment returns improved positively in a number of asset classes. The System's portfolio investment return for the year was 11.5% (10.9 %, net of fees), exceeding the long term return target of 7.25%. This return placed in the 68th percentile of the BNY Mellon universe of public funds. Over the long term, returns compared less favorably, with investment returns for the ten-year period at 5.7% per year, ranking the fund in the 61st percentile of all other public funds in the BNY Mellon Universe. Additional details on the markets and the System's investments are provided in the Investment Section.

FAIRFAX COUNTY Retirement SYSTEMS
EMPLOYEES' POLICE officers UNIFORMED

**Fairfax County Retirement Systems**
12015 Lee Jackson Memorial Hwy, Suite 350, Fairfax, VA 22033
Phone: 703-279-8200 * 1-800-333-1633 * Fax: 703-273-3185
www.fairfaxcounty.gov/retirement/




## 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, 2017, indicated that the ratio of assets accumulated by the System to total actuarial accrued liabilities for benefits showed a slight increase from 82.5% to 82.8%. The actuarial section contains further information on the results of the June 30, 2017, valuation. For purposes of calculating the net pension liability as of June, 30, 2017, in accordance with Governmental Accounting Standards Board's (GASB) Statement Number 67, the System's funded status was 80.9%.

Based on the June 30, 2015, actuarial valuation, the employer contribution rate for 2017 following the adopted corridor-based funding policy remained unchanged from prior year at 38.83% This was done to improve the funded level of the plan, accomplished by raising the target unfunded liability amortization level from 95% to 97%, 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 97% in 2017.

In an effort to improve financial transparency, staff began a major effort to account for all investment management and performance fees paid to investment management firms. While manager's investment performance has traditionally been evaluated net of these fees, the fees themselves were only previously reported for separately managed accounts.

## 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, 2016. This was the seventh 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, 2017, 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 report of independent auditor and certification from the actuary are included in this report.

*Acknowledgements*

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/.

This annual report for the Uniformed Retirement System is the result of the hard work of the system's Accounting team, as assisted by other members of the Retirement Systems team.

I am very thankful and feel privileged to lead the Retirement Systems team. These fine people work every day to provide the best-possible service and stewardship for the employees, retirees, and citizens of Fairfax County.

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, 2016**

Executive Director/CEO

PPCC

Public Pension Coordinating Council

## *Public Pension Standards Award For Funding and Administration 2017*

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)

Alan H. Winkle

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 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*

**William Friedman**
Elected Member Trustee
*Term Expires: October 31, 2017*

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

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

**Shaughnessy 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*

**Maria Teresa Alva**
Board of Supervisors Appointee
*Term Expires: October 31, 2017*

## 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

Alcentra
London, UK

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

Cohen & Steers Capital Management, Inc
New York, NY

Criterion Capital Management
San Francisco, CA

Czech Asset Management, LP
Old Greenwich, CT

Davidson Kempner Institutional Partners, LP
New York, NY

DoubleLine Capital, LP
Los Angeles, CA

Garcia Hamilton
Houston, TX

Goldentree
Chicago, IL

## Investment Managers
(continued)

Gresham Investment Management, LLC
New York, NY

Harbourvest Partners, LLC
Boston, MA

JP Morgan Investment Management, Inc
New York, NY

Kabouter International
Chicago, IL

King Street Capital Management, LP
New York, NY

Manulife Asset Management
Boston, MA

Marathon Asset Management, LLP
London, UK

Millennium Management, LLC
New York, NY

OrbiMed Healthcare Fund Management
New York, NY

Pantheon Ventures, Inc
San Francisco, CA

Parametric Portfolio Associates
Minneapolis, MN

PIMCO
Newport Beach, CA

Siguler Guff & Company, LP
New York, NY

Standish Mellon Asset Management
Pittsburgh, PA

Starboard Value, LP
New York, NY

Systematica Investments Limited
New York, NY

UBS Realty Investors, LLC
Hartford, CT

Wellington Management Company, LLP
Boston, MA

## Investment Consultant
NEPC
Boston, MA

## Custodian Bank
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, William Friedman, Richard L. Merrell, John Niemiec, Shaughnessy Pierce, Thomas Simcoe, Catherine Spage, Maria Teresa Alva*

**Executive Director**
*Jeff Weiler*

**Senior Investment Officer**
*Brian Morales, CAIA*

**Investment Operations Manager**
*Jennifer Snyder*

**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*

Cherry Bekaert LLP
CPAs & Advisors

## 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 basic financial statements of the Fairfax County Uniformed Retirement System (the "System"), a pension trust fund of the County of Fairfax, Virginia, a pension trust fund of the County of Fairfax, Virginia, as of and for the year ended June 30, 2017, 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.

### *Auditor's Responsibility*

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards,* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free 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, 2017, 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, schedule of contributions, schedule of changes in net pension liability and related ratios, and schedule of investment returns 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.

*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 introduction section, summary of significant changes to the pension system, schedule of administrative expenses, schedule of investment expenses, schedule of professional service fees, investment section, actuarial section, and statistical section are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The summary of significant changes to the pension system, schedule of administrative expenses, schedule of investment expenses, and schedule of professional service fees are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the summary of significant changes to the pension system, schedule of administrative expenses, schedule of investment expenses, and schedule of professional service fees are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introduction section, 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 15, 2017, 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 15, 2017

## Management's Discussion and Analysis
(Unaudited)

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, 2017. 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 statements; (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, 2017 and Statement of Changes in Fiduciary Net Position for the fiscal year ended June 30, 2017. 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 presents 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 include 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 is 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.

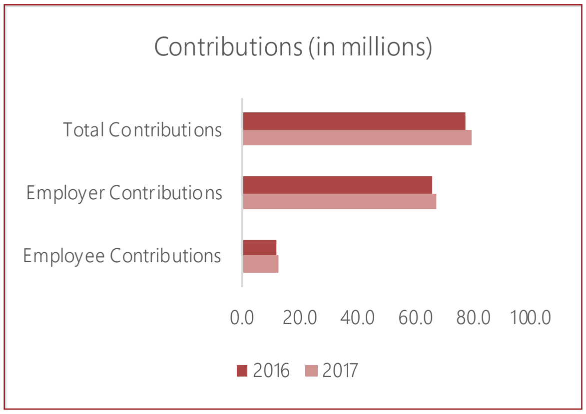
## Financial Highlights

The net position restricted for pension benefits as of June 30, 2017, and June 30, 2016, was $1,645.3 million and $1,498.7 million, respectively. The net position representing assets available to pay for current and future member pension benefits, increased by $146.6 million or 9.8 percent.

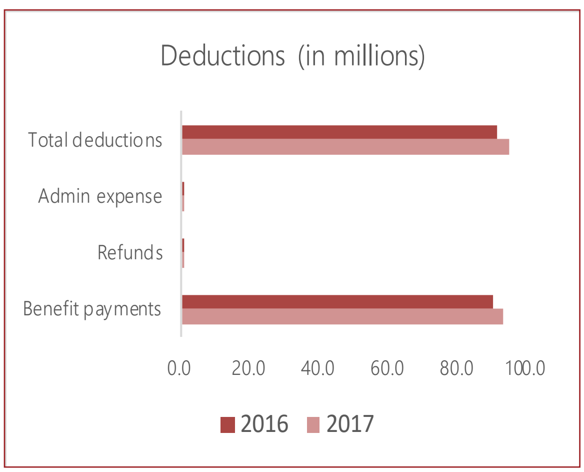
Total additions to net position increased by 275.3 percent from $64.1 million in 2016 to $240.6 million in 2017.

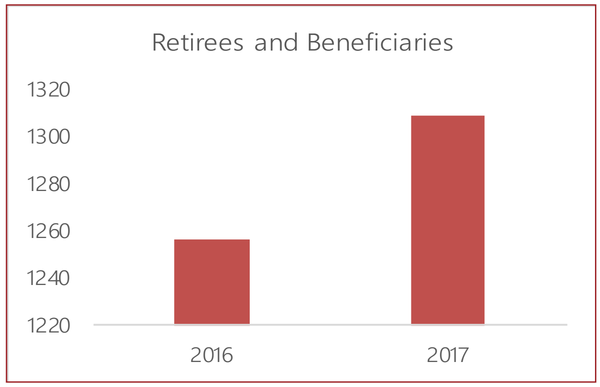
Net investment income increased 1,287.7 percent from -$13.5 million in 2016 to $160.9 million in 2017. The net money-weighted rate of return on investments on a fair value basis was approximately 10.9 percent in fiscal year 2017, and has increased from -0.9 percent in fiscal year 2016.

Employer and employee contributions received totaled $79.6 million, an increase of 2.7 percent or $2.1 million compared to 2016 received contributions of $77.5 million. The employer contributions increased by 2.9 percent from $65.5 million in fiscal year 2016 to $67.4 million in fiscal year 2017.




Total deductions from fiduciary net position increased by $3.1 million from $91.0 million in 2016 to $94.1 million in 2017. Member retirement benefit payments of $92.8 million in 2017 make up the majority of total deduction and increased by $3.1 million or 3.5 percent from $89.7 million in 2016. The number of retired members and beneficiaries receiving a benefit payment increased 4.2 percent from 1,256 to 1,309 payees as of June 30, 2017.




The net pension liability as calculated per GASB 67 as of June 30, 2017, and June 30, 2016, was $388.4 million and $441.8 million, respectively. The net position as a percentage of total pension liability as of June 30, 2017, and June 30, 2016, was 80.9 percent and 77.2 percent, respectively. The net pension liability as a percentage of covered payroll has decreased from 261.7 percent in 2016 to 223.7 percent in fiscal year 2017. The covered employee payroll increased from $168.8 million in 2016 to $173.6 million in 2017.

| | 2017 | 2016 |
|---|---|---|
| Net Pension Liability (in millions) | $388.4 | $441.7 |
| Net Position as Percentage of TPL | 80.9% | 77.2% |
| Covered Employee Payroll (in millions) | $173.6 | $168.8 |
| Net Pension Liability as Percentage of Covered Employee Payroll | 223.7% | 261.7% |

**Plan Net Position.** When viewed over time, increases or decreases in plan net position can be used to measure the financial condition of a pension plan.

For fiscal year 2017, the net position of the Uniformed Retirement System increased 9.8 percent, resulting in a total net position value of $1,645.3 million, reflecting an increase of 146.6 million over fiscal year 2016. Total assets as of June 30, 2017, were $1,718.7 million, representing an increase of $179.0 million, or 11.6 percent over the previous fiscal year. The main component of the increase was due to favorable market conditions that resulted in a total cash and investment of 1,646.1 million in fiscal year 2017 as compared to 1,495.7 million in fiscal year 2016.

The table below details the Uniformed Retirement System's net position for the current and prior fiscal year.

**Summary Schedule of Plan Fiduciary Net Position**

| Assets | 2017 | 2016 | Difference | Percentage of Change |
|---|---|---|---|---|
| Total cash and investments | $1,646,073,665 | $1,495,709,966 | 150,363,699 | 10.1% |
| Cash collateral, securities lending | 26,099,015 | 15,980,331 | 10,118,684 | 63.3% |
| Capital assets,net | 0 | 272 | (272) | -100.0% |
| Total receivables | 46,501,006 | 27,951,545 | 18,549,461 | 66.4% |
| **Total assets** | 1,718,673,686 | 1,539,642,114 | 179,031,572 | 11.6% |
| **Liabilities** | | | | |
| Purchase of investments | ($43,651,043) | ($22,170,521) | ($21,480,522) | 96.9% |
| Securities lending collateral | (26,099,015) | (15,980,331) | (10,118,684) | 63.3% |
| Accounts payable and others | (3,659,784) | (2,788,417) | (871,367) | 31.2% |
| **Total liabilities** | (73,409,842) | (40,939,299) | (32,470,573) | 79.3% |
| **Net position restricted for pension** | **$1,645,263,8454** | **$1,498,702,845** | **$146,560,999** | **9.8%** |

**Net Position for Current and Prior Fiscal Year**

| Fiscal Year | Ending Balances (millions) | Net Change in Dollars (millions) | Net Change in Percent |
|---|---|---|---|
| 2017 | 1,645.3 | 146.6 | 9.8% |
| 2016 | 1,498.7 | (26.9) | -1.8% |

Receivables increased by $18.5 million or 66.4 percent due to the timing of investment for settled trades that occurred near year end.

Total liabilities as of June 30, 2017, were $73.4 million, representing an increase of $32.5 million, or 79.3 percent, over the previous year. The upturn in total liabilities is the result of an increased level of securities lending activity, and nearly 100 percent increase in the accrual liability, including the year end accrual for management fees.

| | 2017 | 2016 | Difference | Percentage of Change |
|---|---|---|---|---|
| Accrued Liabilities | $1,894,374 | $969,651 | $924,723 | 95.4% |

Securities lending cash collateral increased by $10.1 million or 63.3 percent due to the increase in activities in the securities lending program. A separate account structure was implemented in fiscal year 2015 to replace a collective investment pool.

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

**Summary Schedule of Additions and Deductions**

| **Additions** | 2017 | 2016 | Difference | Percentage of Change |
|---|---|---|---|---|
| Employer Contributions | $67,410,252 | $65,548,338 | $1,861,914 | 2.8% |
| Plan Member contributions | 12,223,468 | 12,020,447 | 203,021 | 1.7% |
| Net income from investments | 160,907,219 | (13,547,966) | 174,455,185 | 1287.7% |
| Net income from securities lending | 106,495 | 100,876 | 5,619 | 5.6% |
| **Total Additions** | 240,647,434 | 64,121,695 | 176,525,739 | 275.3% |
| **Deductions** | | | | |
| Benefit payments | $92,844,624 | $89,730,185 | $3,114,439 | 3.5% |
| Refunds | 764,247 | 805,890 | (41,643) | -5.2% |
| Administrative expense | 477,564 | 500,255 | (22,691) | -4.5% |
| **Total deductions** | 94,086,435 | 91,036,330 | 3,050,105 | 3.4% |
| **Net increase/(decrease)** | **$146,560,999** | **($26,914,635)** | **$173,475,634** | **644.5%** |

**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 increased by $176.5 million or 275.3 percent in fiscal year 2017 attributed primarily due to $174.5 million appreciation in the fair value of the investments. This is clearly a substantial growth compared to the previous year's investment performance due to the favorable market environment in fiscal year 2017.

Total contributions for the fiscal year ended June 30, 2017, amounted to $79.6 million. This was an increase of $2.1 million when compared with the activity of fiscal year 2016. The employer contributions for fiscal year 2017 increased by 2.9 percent only as employer contribution rate remained at 38.83 percent of salary. Employee contributions increased by 1.7 percent, due to merit and 1.0 percent COLA increases.

The System experienced a 5.6 percent increase in net income from securities lending as a result of an upturn in lending activities during the fiscal year. Investment returns were higher for fiscal year 2017 than 2016 reflecting favorable returns in the capital markets. Net investment income increased from -$13.5 million in fiscal year 2016 to $160.9 million in fiscal year 2017, which is consistent with the increase in the net money-weighted investment rate of return from -0.9 percent for fiscal year 2016 to 10.9 percent for fiscal year 2017.

Total deductions of the System consist of the payments of benefits to retirees and beneficiaries, the refund of contributions to former members, and the cost of administering the System. The total deductions for fiscal year 2017 were $94.1 million, an increase of $3.1 million, or 3.4 percent, over fiscal year 2016. Regular pension benefit payments increased as the number of retirees and beneficiaries receiving benefit payments climbed to 1,309 from 1,256 in fiscal year 2017. 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 slight decrease as compared to previous year.

| **Participant Counts** | **2017** | **2016** |
|---|---|---|
| Actives | 1,975 | 1,948 |
| DROP members | 115 | 123 |
| Terminated vested | 76 | 61 |
| Retirees in payment status | 1,309 | 1,256 |
| Total | 3475 | 3,388 |

An actuarial valuation is performed annually by Cheiron. The actuarial value of the assets as of the last valuation on June 30, 2017, was $1,683.4 million, while actuarial liabilities as of the same period were $2,033.7 million. As of June 30, 2017, the date of the most recent actuarial valuation, the funded ratio of the system was 82.8 percent. This was an increase to 0.3 percent from the July 1, 2016, valuation funded ratio of 82.5 percent. The combination of liabilities, investment results, and member and employer contributions over the last year led the funding ratio to an increase. Under GASB 67 calculation, using the December 31, 2016 data rolled forward to June 30, 2017, the plan fiduciary net position as a percentage of the total pension liability was 80.9 percent. It increased from 77.2 percent in fiscal year 2016 primarily as a result of growth in the plan fiduciary net position due to higher investment returns. In addition, the Total Pension Liability as of June 30, 2017, and June 30, 2016, was $2,033.7 million and $1,940.5 million, respectively.

| (Dollars in millions) | 2017 | 2016 |
|---|---|---|
| Actuarial Accrued Liability | $2,033.7 | $1,940.5 |
| Actuarial Value of Assets | 1,683.4 | 1,601.3 |
| Unfunded Actuarial Liability | 350.3 | 339.1 |
| Funding Ratio | 82.8% | 82.5% |
| Total Pension Liability | $2,033.7 | $1,940.5 |
| Plan Fiduciary Net Position | 1,645.3 | 1,498.7 |
| Net Pension Liability | $388.4 | $441,8 |
| Funding Ratio | 80.9% | 77.2% |

## Investment Management Fees

Investment management fees appear to be higher than the prior year due to a reclassification of management fees associated with commingled funds. In an effort to provide a greater level of transparency, investment managers for commingled funds were requested to provide the management fees rather than netting the management fees against investment activities. The fees have not suddenly and significantly increased. This reclassification did not affect the net investment performance.

## 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, 12015 Lee Jackson Memorial Highway, Fairfax VA 22030. This report can also be found on the County's internet site at www.fairfaxcounty.gov/retirement/

## Statement of Fiduciary Net Position

As of June 30, 2017

| | | |
|---|---|---|
| **Assets** | | |
| Cash and short-term investments | | |
| Equity in County's pooled cash and temporary investments | $2,674,546 | |
| Cash collateral received for securities on loan | 26,099,015 | |
| Short-term investments | 125,249,878 | |
| Total cash and short-term investments | | $154,023,439 |
| Receivables | | |
| Accounts receivable | 4,442,240 | |
| Accrued interest and dividends | 2,562,346 | |
| Securities sold | 39,496,420 | |
| Total receivables | | 46,501,006 |
| Investments, at fair value | | |
| Common and preferred stock | 265,154,092 | |
| Fixed income | | |
| Asset-backed securities | 77,724,391 | |
| Corporate and other bonds | 102,440,500 | |
| U.S. Government obligations | 24,325,473 | |
| Pooled and mutual funds | 1,048,504,785 | |
| Total investments | | 1,518,149,241 |
| Total assets | | 1,718,673,686 |
| **Current Liabilities** | | |
| Investment purchases and other liabilities | 43,651,043 | |
| Cash collateral received for securities on loan | 26,099,015 | |
| Accounts payable and accrued expenses | 3,614,798 | |
| Compensated absences, short-term | 25,070 | |
| **Noncurrent Liabilities** | | |
| Compensated absences, long-term | 19,916 | |
| Total liabilities | | 73,409,842 |
| **Net position restricted for pension** | | **$1,645,263,844** |

See accompanying notes to financial statements.

## Basic Financial Statements
(continued)

### Statement of Changes in Fiduciary Net Position
For the Year Ended June 30, 2017

| | | |
|---|---|---|
| **Additions** | | |
| Contributions | | |
| Employer | $67,410,252 | |
| Plan members | 12,223,468 | |
| Total contributions | | $79,633,720 |
| Investment income from investment activities | | |
| Net depreciation in fair value of investments | 148,471,944 | |
| Interest | 12,057,848 | |
| Dividends | 12,308,029 | |
| Total investment income | 172,837,821 | |
| Investment activity expense | | |
| Management fees | (11,309,062) | |
| Custodial fees | (74,160) | |
| Consulting fees | (321,753) | |
| Allocated administration expense | (225,627) | |
| Total investment expense | (11,930,602) | |
| Net income from investment activities | | 160,907,219 |
| Securities lending activities | | |
| Securities lending income | 286,091 | |
| Securities lending expenses | (179,596) | |
| Net income from securities lending activities | | 106,495 |
| Total net investment income | | 161,013,714 |
| Total additions | | 240,647,434 |
| **Deductions** | | |
| Annuity benefits | 83,777,110 | |
| Disability benefits | 7,884,990 | |
| Survivor benefits | 1,182,524 | |
| Refunds of employee contributions | 764,247 | |
| Administrative expense | 477,564 | |
| Total deductions | | 94,086,435 |
| Net increase | | 146,560,999 |
| Net position restricted for pension | | |
| Beginning of fiscal year | | 1,498,702,845 |
| **End of fiscal year** | | **$1,645,263,844** |

See accompanying notes to financial statements.

# Notes on 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 applies all applicable pronouncements of the Governmental Accounting Standards Board (GASB).

*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 private real estate are generally lagged by at least 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, 2017, the bank balance of the County's public deposits was either insured by the Federal Deposit Insurance Corporation or through the State Treasury Board pursuant to the provisions of the Security for Public Deposit Act. The County's investments are exposed to various risks such as interest rate risk, market and credit risks. Such risks, and the resulting investment security values, may be influenced by changes in economic conditions and market perceptions and expectations. Accordingly, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such change could materially affect the amounts reported in the financial statements.

*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 | |
|---|---|
| FY2017 Beginning Balance | 39,533 |
| Leave Earned | 29,560 |
| Leave Used | 24,106 |
| FY 2017 Ending Balance | 44,987 |
| Due Within One Year | 25,071 |

## 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.

*Benefit.*
Plan 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).

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 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.

### 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 an E | The rate for Fiscal Year 2017 was 38.8% of covered payroll for all plans. |

*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, 2017, the date of the latest actuarial valuation, membership in the System consisted of:

| | |
|---|---|
| Retirees and beneficiaries receiving benefits | 1,975 |
| Terminated plan members entitled to but not yet receiving benefits | 76 |
| Deferred Retirement Option Program (DROP) participants | 115 |
| Active plan members | 1,309 |
| **Total** | **3,475** |

*D. Deferred Retirement Option Program.*
Members eligible for normal retirement may elect to enter the DROP. As a DROP member, he or she will continue to work and receive a salary for a maximum period of three years while an amount equal to what could have been received as a retirement benefit is credited to his or her DROP account (no pre-Social Security Supplements are paid into DROP accounts for 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, 2017, was $14.0 million.

## Notes on Financial Statements
(continued)

*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, 2017, was 31.49 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 2017. The total contributions for the fiscal year ended June 30, 2017, amounted to $79.6 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, 2017, amounted to $94.1 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 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, 2017. 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 | 15.5% |
| International Equities | 16.0% |
| Private Equities | 5.0% |
| Fixed Income | 27.0% |
| Real Assets | 12.0% |
| Alternatives | 18.0% |
| 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, 2017, 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.

*C. Rate of Return.*

For the year ended June 30, 2017, the annual money-weighted rate of return on pension plan investment, net of pension plan investment expense, was 10.9 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

*D. Fair Value Hierarchy.*

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.

**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.

| | | Fair Value Measurements Using | | |
|---|---|---|---|---|
| | | Quoted Prices in Active Markets for Identical Assets | Significant Other Observable Inputs | Significant Unobservable Inputs |
| Investments by Fair Value Level | **6/30/2017** | **Level 1** | **Level 2** | **Level 3** |
| Asset-backed securities | $77,724,391 | $ - | $77,724,391 | $ - |
| Convertible or exchangeable securities | 40,125 | - | 40,125 | - |
| Convertible securities | 139,581 | $139,581 | - | - |
| Equity | 263,069,019 | 263,069,019 | - | - |
| Fixed income securities | 168,285,793 | 66,024,999 | 102,235,565 | $25,229 |
| Preferred securities | 2,085,074 | 788,143 | 1,296,931 | - |
| Short-term investments | 122,155,146 | - | 12,733,271 | 109,421,875 |
| US Government obligations | 24,325,473 | - | 24,325,473 | - |
| Total investment by fair value level | $657,824,602 | $330,021,742 | $218,355,756 | $109,447,104 |
| **Investment measured at the net asset value (NAV)** | | | | |
| Alternative investments | $274,320,403 | | | |
| Balanced portfolios | 207,714,023 | | | |
| Fixed income | 147,043,226 | | | |
| Inflation hedges | 59,144,772 | | | |
| International equities | 159,406,103 | | | |
| Private equities | 35,891,025 | | | |
| Real estate | 98,960,234 | | | |
| **Total investments measured at the NAV** | **$982,479,786** | | | |
| **Total investments measured at fair value** | **$1,640,304,388** | | | |

**Investment Measured at NAV**

| | Fair Value | Unfunded Commitments | Redemption Frequency | Redemption Notice Period |
|---|---|---|---|---|
| Alternative investments | $274,320,403 | $ - | Monthly,Quarterly | 5 - 90 days |
| Balanced portfolios | 207,714,023 | - | Monthly | 5 - 15 days |
| Fixed income | 147,043,226 | 31,437,989 | None, Quarterly | 45 - 65 days and N/A |
| Inflation hedges | 59,144,772 | - | Monthly | 30 days |
| International equities | 159,406,103 | - | Monthly | 30 days |
| Private equities | 35,891,025 | 50,010,751 | None | None |
| Real estate | 98,960,234 | 8,995,000 | None, Quarterly | 60 days and N/A |
| Total investments measured at the NAV | $982,479,786 | $90,443,740 | | |

***Alternative Investments:***

*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 has 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 have 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.

*Multi-strategy:* This type includes investment in a hedge fund 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. and Western Europe.

*Global Macro:* This type includes investment in four hedge funds. The first hedge fund in this group has 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. The second hedge fund in this group 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. The third 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 have been determined using the NAV per share of the investments. The fourth hedge fund in this group 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 these hedge fund have been determined using the NAV per share 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 four hedge funds and three private debt funds. The hedge funds are long/short credit focused strategies. Three of which focus on the high yield segment of the debt market and the fourth 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 three 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.

***Real Assets:***
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, 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.

***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 availability of capital. The second fund is a distressed real estate fund-of-funds that invests in local real estate managers that purchase distressed 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 on an appraisal basis using assessments of similar real estate that has recently sold.

***International Equity:***
This type includes investment in 2 international equity funds. The first fund in this group is an 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 these fund have been determined using the NAV per share of the investments.

***Private Equity:***
This type includes eight private equity fund-of-funds that invest as limited partners with private equity managers that then invest directly in underlying companies. The eight 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 tier private equity funds. Top tier 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.

*E. Quality Rating.*
The System's investment quality ratings at June 30, 2017, for separately managed fixed income accounts were as follows:

| Type of Investment | Fair Value | Ratings | Percentage of Fixed |
|---|---|---|---|
| US Government obligations | $24,325,473 | | 11.9% |
| Corporate and other bonds | 1,424,296 | AAA | 0.7% |
| | 30,500,016 | AA | 14.9% |
| | 23,181,212 | A | 11.3% |
| | 21,629,195 | BBB | 10.6% |
| | 6,287,533 | BB | 3.0% |
| | 2,029,480 | B | 1.0% |
| | 330,502 | CCC | 0.2% |
| | 2,425,000 | D | 1.2% |
| | 14,633,266 | Unrated | 7.2% |
| Asset-backed securities | 2,742,276 | AAA | 1.3% |
| | 31,712,674 | AA | 15.5% |
| | 756,393 | A | 0.4% |
| | 3,612,420 | BBB | 1.8% |
| | 1,232,866 | BB | 0.6% |
| | 1,784,510 | B | 0.9% |
| | 3,422,251 | CCC | 1.7% |
| | 6,460,916 | D | 3.1% |
| | 26,000,085 | Unrated | 12.7% |
| **Total fixed income** | **$204,490,364** | | **100.0%** |
| **Short-term investments** | | | |
| Cash and cash equivalents | $6,262,115 | Unrated | |
| Uniformed STIF* | 109,421,875 | Unrated | |
| US Treasury bills | 9,565,888 | AA | |
| Total Short-term investments | **$125,249,878** | | |
| *Short-term investment funds | | | |

As of June 30, 2017 the fixed income portfolio, excluding pooled funds consisted of 68.4 percent invested in investment grade securities, 11.7 percent invested in below-investment-grade securities and 19.9 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.

*F. Sensitivity to Interest Rate Risk.*
As of June 30, 2017, duration of the System's overall fixed income portfolio excluding pooled fund was 5.5 years compared with the 6.0 years duration of the BCAG. The System's investments' sensitivity to interest rates at June 30, 2017 were as follows:

| Investment Type | Fair Value | Option Adjusted Duration (yrs) | Percentage of Fixed |
|---|---|---|---|
| US Government obligations | $24,325,473 | 17.1 | 11.9% |
| Corporate and Other Bonds | 102,440,500 | 4.2 | 50.1% |
| Asset-backed securities | 77,724,391 | 3.6 | 38.0% |
| **Total fixed income** | $204,490,364 | 5.5 | 100% |
| **Short term investments** | | | |
| Cash and cash equivalents | $6,262,115 | 0.0 | |
| Uniformed STIF | 109,421,875 | 0.0 | |
| US Treasury bills | 9,565,888 | 0.3 | |
| **Total Short-term Investments** | **$125,249,878** | | |

*short-term investment funds

*G. Short-term Investments.*
The Short term investments of $125.2 million includes a position of $109.4 million of commingled 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.*

The foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of the investment. The System hedges away 50 percent of the currency risk for the whole portfolio through the use of currancy derivatives. The System's investments at June 30, 2017, held in currencies other than U.S. dollars were as follows:

| International Securities | Short-term & Other Investments | Convertible & Fixed Income | Equity | Total |
|---|---|---|---|---|
| Australian Dollar | $ - | $2,598,807 | $6,125,711 | $8,724,518 |
| Brazil Real | - | 2,101,754 | 246,199 | 2,347,953 |
| Canadian Dollar | - | - | 684,239 | 684,239 |
| Danish Krone | - | - | 8,173,335 | 8,173,335 |
| Euro Currency Unit | 124 | 2,587,423 | 44,281,307 | 46,868,854 |
| Hong Kong Dollar | 756 | - | 7,644,919 | 7,645,675 |
| Indonesian Rupiah | - | 2,145,162 | 138,917 | 2,284,079 |
| Japanese Yen | 867,395 | - | 50,627,980 | 51,495,375 |
| Malaysian Ringgit | - | 2,508,880 | 47,552 | 2,556,432 |
| Mexican Peso | - | 6,523,533 | - | 6,523,533 |
| New Taiwan Dollar | 18,757 | - | 1,474,872 | 1,493,629 |
| New Zealand Dollar | - | - | 125,117 | 125,117 |
| Norwegian Krone | - | - | 1,534,658 | 1,534,658 |
| Philippines Peso | - | - | 149,700 | 149,700 |
| Polish Zloty | - | 2,870,450 | - | 2,870,450 |
| Pound Sterling | 1,215,903 | 3,040,489 | 51,549,981 | 55,806,373 |
| Singapore Dollar | - | - | 697,591 | 697,591 |
| South African Rand | 5 | 2,224,984 | 108,248 | 2,333,237 |
| South Korean Won | - | - | 3,621,585 | 3,621,585 |
| Swedish Krona | - | - | 5,914,131 | 5,914,131 |
| Swiss Franc | - | - | 9,736,703 | 9,736,703 |
| Thailand Baht | - | - | 498,375 | 498,375 |
| Turkish Lira | - | 133,036 | - | 133,036 |
| | $2,102,940 | $26,734,518 | $193,381,120 | $222,218,578 |

*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 2017, 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.

At June 30, 2017, 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 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, 2017, is shown at the table below:

| Types of Futures | Base Exposure | Notional Cost |
|---|---|---|
| Cash and cash equivalents | | |
| Short | ($74,546,044) | ($74,814,989) |
| Equity | | |
| Long | 206,018,590 | 206,810,584 |
| Fixed income | | |
| Short | (20,879,828) | (21,096,625) |
| **Total** | **$110,592,718** | **$110,898,970** |

*Currency Forwards.*
Currency forwards represent foreign exchange contracts. They 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, 2017:

| **Foreign Currency Contracts Purchased** | **Notional (local currency)** | **Fair Value Payable in U.S. Dollars** | **Unrealized Gain(loss)** |
|---|---|---|---|
| Euro currency Unit | ($10,570,000) | ($12,079,512) | ($397,681) |
| Japanese Yen | (516,710,000) | (4,604,613) | 61,115 |
| South Korean Won | (2,100,000,000) | (1,836,093) | 37,569 |
| New Taiwan Dollar | (132,500,000) | (4,355,625) | 37,174 |
| | | ($22,875,843) | ($261,823) |

| **Foreign Curency Contracts Sold** | **Notional (local currency)** | **Fair Value Receivable in U.S. Dollars** | **Unrealized Gain(loss)** |
|---|---|---|---|
| Australian Dollar | $1,550,000 | $1,188,272 | $43,944 |
| Canadian Dollar | 1,930,000 | 1,487,017 | 26,512 |
| Indian Rupee | 145,000,000 | 2,223,858 | 2,113 |
| Norwegian Krone | 27,300,000 | 3,260,675 | 81,521 |
| Pound Sterling | 3,420,000 | 4,452,343 | 28,607 |
| Swedish Krona | 26,200,000 | 3,109,692 | 172,481 |
| | | $15,721,857 | $355,178 |
| **Net Unrealized Gain on Foreign Currency Spot and Forward Contracts** | | | **$93,355** |

*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 the 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 2017 on the amounts of loans the lending agent made on its behalf. At June 30, 2017, 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, 2017, cash collateral had a weighted-average maturity of two 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, 2017:

| **Securities Lent** | **Underlying Securities** | **Cash Collateral Investment Value** | **Securities Collateral Investment Value** |
|---|---|---|---|
| Lent for Cash Collateral | | | |
| US Government securities | $12,241,048 | $12,510,475 | |
| Corporate and other bonds | 5,514,888 | 5,662,666 | |
| Common and preferred stock | 7,418,489 | 7,925,875 | |
| | | | |
| Lent for Securities Collateral | | | |
| US Government securities | 2,419,255 | | $2,498,207 |
| Corporate and other bonds | 2,853,384 | | 2,924,500 |
| Common and Preferred Stock | 21,237,333 | | 23,361,418 |
| Total Securities lent | **$51,684,397** | **$26,099,016** | **$28,784,125** |

*K. Reclassifications.*
During the second quarter, the System requested that investment managers for commingled funds provide the management fees associated with commingled funds. Previously, such management fees had been netted against investment income. Accordingly, the System revised the classification to report these management fees as an investment activity expense on the Statement of Changes in Fiduciary Net Position, rather than netting the management fees against investment income. This change in classification has no effect on the financial statements for any period.

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

*A. Net Pension Liability.*
The components of the net pension liability at June 30, 2017, were as follows:

| | |
|---|---|
| Total pension liability | $2,033,689,452 |
| Plan fiduciary net position | 1,645,263,844 |
| Net pension liability | $388,425,608 |
| Plan fiduciary net position as a percentage of the total pension liability | 80.9% |

*B. Actuarial Methods and Assumptions.*
The Total Pension Liability was determined by an actuarial valuation as of June 30, 2017, 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.

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, 2017, was 31.49 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 2017. Since the URS'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, with the 2016 fiscal year contribution it was increased to 95.0 percent, and with the 2017 fiscal year contribution it was increased again to 97.0 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 0.65% 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 of deaths are assumed to be service-connected.

The actuarial assumptions used in the June 30, 2017, valuation were based on the results of an actuarial experience study for the period July 1, 2010 to June 30, 2015.

*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 excess rates of return (over cash) for each major asset class included in the System's target asset allocation as of June 30, 2017, are summarized below:

| Asset Class | Long Term Expected Real Rate of Return |
|---|---|
| U.S. Equities | 4.65% |
| International Equities | 4.50% |
| Fixed Income | 2.00% |
| High Yield | 4.25% |
| Real Assets | 4.65% |
| Commodity | 4.65% |
| Risk Parity | 6.00% |
| Absolute Return | 7.00% |

*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 2016 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 2016 active population of 7.05 percent of payroll and County contributions were projected at 39.28 percent for fiscal years 2017 with increases to 40.00 percent to be contributed until 2033. After that time the County contribution was assumed to drop to the normal cost plus expenses (16.94 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-point 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 | $654,516,237 | $388,425,608 | $162,089,717 |
| Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | 71.5% | 80.9% | 91.0% |

## 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.

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

**Year Ended June 30**

| | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|
| Total Pension Liability | | | | |
| Service cost | $39,667,968 | $43,407,620 | $41,720,784 | $39,647,527 |
| Interest | 140,285,987 | 136,679,066 | 132,950,836 | 125,659,578 |
| Changes in benefit terms | 839,465 | 806,226 | 1,702,105 | - |
| Differences between expected and actual experience | 6,047,673 | (54,053,500) | 11,019,203 | - |
| Changes in assumptions | - | 20,479,405 | - | - |
| Benefit payments, including refunds of member contributions | (93,608,871) | (90,536,075) | (84,849,425) | (78,916,881) |
| Net Change in Total Pension Liability | $93,232,222 | $56,782,742 | $102,543,503 | $86,390,224 |
| Total Pension Liability - beginning | 1,940,457,230 | 1,883,674,488 | 1,781,130,985 | 1,694,740,761 |
| Total Pension Liability - ending (a) | $2,033,689,452 | $1,940,457,230 | $1,883,674,488 | $1,781,130,985 |
| Plan Fiduciary Net Position | | | | |
| Contributions - employer | $67,410,252 | $65,548,338 | $60,928,766 | $56,094,690 |
| Contributions - member | 12,223,468 | 12,020,447 | 11,473,273 | 10,905,744 |
| Net investment income | 161,013,714 | (13,447,090) | 21,800,261 | 210,256,032 |
| Benefit payments, including refunds of member contributions | (93,608,871) | (90,536,075) | (84,849,425) | (78,916,881) |
| Administrative expenses | (477,564) | (500,255) | (455,440) | (433,541) |
| Net Change in Plan Fiduciary Net Position | $146,560,999 | ($26,914,635) | $8,897,435 | $197,906,044 |
| Plan Fiduciary Net Position - beginning | 1,498,702,845 | 1,525,617,480 | 1,516,720,045 | 1,318,814,001 |
| Plan Fiduciary Net Position - ending (b) | $1,645,263,844 | $1,498,702,845 | $1,525,617,480 | $1,516,720,045 |
| Net Pension Liability (Asset) - ending (a)-(b) | $388,425,608 | $441,754,385 | $358,057,008 | $264,410,940 |
| Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | 80.9% | 77.2% | 81.0% | 85.2% |
| Covered Employee Payroll | $173,603,533 | $168,808,493 | $160,761,916 | $153,979,385 |
| Net Pension Liability as a Percentage of Covered Employee Payroll | 223.7% | 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 Uniformed Retirement System.

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

## Required Supplementary Informaiton
(continued)

### Schedule of Net Pension Liability

| Year Ended June 30 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|
| Total Pension Liability | $2,033,689,452 | $1,940,457,230 | $1,883,674,488 | $1,781,130,985 |
| Plan Fiduciary Net Position | 1,645,263,844 | 1,498,702,845 | 1,525,617,480 | 1,516,720,045 |
| Net Pension Liability | $388,425,608 | $441,754,385 | $358,057,008 | $264,410,940 |
| Plan Fiduciary Net Position as a Percentage of the Total Plan Liability | 80.9% | 77.2% | 81.0% | 85.2% |
| Covered Employee Payroll | $173,603,533 | $168,808,493 | $160,761,916 | $153,979,385 |
| Net Pension Liability as a Percentage of Covered Payroll | 223.7% | 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 |
|---|---|
| 2017 | 10.9% |
| 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 | Actuarially Determined Contribution | Contributions in Relation to the Actuarially Determined Contribution | Contribution Deficiency (Excess) | Covered Employee Payroll | Contributions as a Percentage of Employee Covered Payroll |
|---|---|---|---|---|---|
| 2017 | $67,410,252 | $67,410,252 | $- | $173,603,533 | 38.83% |
| 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

The notes below summarize the key methods and assumptions used to determine the Actuarially Determined Contributions for fiscal year ending 2017.

| | |
|---|---|
| Valuation Date | 6/30/2015 |
| 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 97% corridor over an open 15 year period with level % of payroll. |
| Discount rate | 7.50% |
| Amortization growth rate | 3.00% |
| Price inflation | 3.00% |
| Salary increases | 3.0% plus merit component based on employee's years of service |
| Mortality | Sex distinct RP-2000 Combined Mortality projected 20 2015 using Scale AA |

A complete description of the methods and assumptions used to determine contribution rates for the year ending June 30, 2017, can be found in the June 30, 2015, 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 |
|---|---|---|
| 2017 | 38.83% | 7.08%, Option B 8.83% in excess of Social Security taxable wage base. |
| 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. |

| | |
|---|---|
| **July 2016** | Service-Connected Disability Social Security offset reduced from 15% to 10%. |
| **January 2014** | Service-Connected Disability Social Security offset was reduced from 25.0 percent to 15.0 percent. The Board of Trustees 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. |

**Schedule of Investment & Consultant Expenses**

For the Year Ended June 30, 2017

| | |
|---|---|
| Investment Activity Expenses | |
| Investment manager fees | $11,309,062 |
| Custodial fees | 74,160 |
| Consultant Expenses | |
| Consultant expenses | 321,753 |
| Allocated administration expense | 225,627 |
| **Total investment and consulting expenses** | **$11,930,602** |

**Schedule of Administrative Expenses**

June 30, 2017

| | | |
|---|---|---|
| Personnel services | | |
| Salaries and wages | $227,231 | |
| Fringe benefits | 96,889 | |
| Total personnel services | | $324,120 |
| Professional services | | |
| Actuarial | 36,896 | |
| Audit | 6,606 | |
| Total professional services | | 43,502 |
| Communications | | |
| Phone charges | 4,549 | |
| Printing, binding and copying | 1,442 | |
| Postage | 3,395 | |
| Total communications | | 9,386 |
| Supplies | | |
| Office supplies | 2,876 | |
| Total supplies | | 2,876 |
| Other services and charges | | |
| Board and staff travel and development | 17,437 | |
| Professional membership | 1,210 | |
| Professional Subscription | 40 | |
| Insurance | 8,068 | |
| Building rent | 19,777 | |
| Equipment | 181 | |
| Computer system | 34,967 | |
| Other operating | 16,000 | |
| Total other services and charges | | 97,680 |
| **Total Administrative Expenses** | | **$477,564** |

Cherry Bekaert LLP
CPAs & Advisors

**Report of Independent Auditor on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards***

To Board of Supervisors
County of Fairfax, Virginia

To the Board of Trustees
Fairfax County Uniformed Retirement System

We have audited, in accordance with the auditing standards generally accepted in the United States of America, the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States the 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, 2017 and the related notes to the financial statements, and have issued our report thereon dated November 15, 2017.

## Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered the System's internal control over financial reporting ("internal control") to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we do not express an opinion on the effectiveness of the System's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or, significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

## Compliance and Other Matters

As part of obtaining reasonable assurance about whether the System's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

### Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Cherry Bekaert LLP

Tysons Corner, Virginia
November 15, 2017

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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 16, 2017

Dear Members of the Board of Trustees:

U.S. equity markets continued on their upward path in the fiscal year 2017 as international stocks joined the rally despite episodes of uncertainty in the White House and political upheaval across the pond. Domestic equities dominated the first half of the fiscal year, getting a boost after the U.S. election, but ultimately gave way to international stocks in 2017 as receding political fears in Europe and solid growth in emerging markets spurred outperformance. Throughout the fiscal year positive global and U.S. growth developments gave the Fed the indicators it needed to finally embark on a path of raising rates and curtailing its easing program. This ultimately led to modest and even negative fixed income returns, though U.S. credit issues experienced spread compression and performed well. After the surprise outcomes of the UK Brexit vote and U.S. elections, financial markets have been marked by confounding low volatility.

The large cap domestic equity market, as measured by the S&P 500 Index, capped off the fiscal year with a +17.9% return with all smaller cap domestic equity indices posting even greater returns. The domestic bond market, as measured by the Barclays Aggregate Bond Index, returned -0.3% over the same period. The global equity market, as measured by the MSCI All Country World Index (net), returned 18.8% for the fiscal year, proving to be one of the higher yielding asset classes and emerging markets posted even higher returns with the MSCI EM of 23.7% over the fiscal year.

During the quarter ended September 30th, 2016, domestic equities reversed course with the S&P 500 returning 3.9% and the Russell 2000 gaining 9.0%. Growth outpaced value across all capitalizations. Technology was the best performing sector while utilities and consumer staples lagged behind. Volatility, as measured by the VIX, dropped 15% during the quarter. Outside the United States, developed markets had their best quarter of 2016, returning 6.4%. Investors shrugged off fears surrounding Brexit and monetary policies remained accommodative. Sector results were mixed with materials leading the pack with gains of 16% while healthcare declined 2%. In the United Kingdom, the market rebounded in local currency terms, but the pound continued to sell off and was at a 30-year low relative to the dollar. Elsewhere, emerging markets rose around 9%, according to the MSCI Emerging Market Index. China—among the better performing countries—gained 13.9% in the third quarter. One-third of global developed sovereign debt yields were negative and two-thirds yielded below 1% in the third quarter. On the other hand, domestic high yield fixed-income securities and hard currency emerging market debt were up 5.6% and 4%, respectively, for the three months ended September 30. So far this year, U.S. high-yield debt and hard currency emerging market issues have returned around 15%, second only to gains of 17.1% by local currency emerging market debt. The U.S. Barclays Aggregate Index returned 0.5% this quarter, driven primarily by the corporate credit component of the index.

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www.fairfaxcounty.gov/retirement/

U.S. equities led the pack in the fourth quarter of 2016 as concerns around potential changes to U.S. trade policy under President Trump dragged down overseas markets. Small-cap equities bested large-cap securities with the Russell 2000 Index returning 8.8% compared to 3.8% for the S&P 500. Value stocks outshone growth for the quarter and the year. Outside the U.S., developed market equities fell 0.7%, according to the MSCI EAFE Index. Rising interest rates in the U.S. and a strong dollar pulled down emerging market stocks, which lost 4.2% in the fourth quarter, according to the MSCI Emerging Markets Index. Still, they ended the year in the black, posting gains of 11.2%. Domestic fixed-income securities turned in a solid performance in 2016 with the Barclays Aggregate Bond Index up 2.7% and the Barclays High Yield Bond Index returning 17.1%. Risk-takers were rewarded while investors tilting toward safety lagged. This trend was especially prominent in the fourth quarter when risk premiums tightened across sectors, with commodities experiencing the most pronounced spread compression. While the credit cycle could go on for longer, we advise caution as valuations have moved to the tighter end of the band. Overseas, emerging market debt was also a strong performer in 2016 with local-currency debt leading for most of the year but faltering in the aftermath of the U.S. elections. It racked up gains of 9.4%, finishing behind emerging market hard-currency issues which returned 10.2% last year. Emerging market debt remains appealing in terms of rates and currencies.

Being in the ninth year of a bull market, U.S. equities had another solid quarter at the start of 2017 with the S&P 500 gaining 6.1% and the Russell 2000 Index returning 2.5% for the three months ended March 31 2017. Growth bested value; healthcare and information technology led the pack while energy and telecom lagged. Outside the United States, the MSCI EAFE Index was up 7.3% in the first quarter. Europe outperformed Japan; information technology, healthcare and consumer discretionary led performance while energy trailed. Emerging markets also had a strong showing buoyed by India's state election results and economic growth prospects in China. The MSCI Emerging Markets Index gained 11.4% and the MSCI Emerging Markets Small Cap Index was up 13%. So far this year, emerging markets have staged a robust comeback from the fourth quarter when they were beaten down by concerns around the U.S. presidential election results. Information technology led sector performance, while Poland and India were the strongest performing countries. U.S. fixed-income markets took in stride a well telegraphed hike in the Federal Funds rate in March, and are pricing in two more the first half of 2017. The Bloomberg Barclays U.S. Aggregate returned 0.8% in the first quarter, trailing domestic high-yield securities which returned 2.7%. As LIBOR inches higher, bank loans maintain their relative attractiveness against high-yield debt despite discount margins dipping below their historical median level. Meanwhile, emerging market debt rebounded from a tough fourth quarter as fundamentals continued to improve and the dust settled on the U.S. election results. Local currency debt was the top performer, gaining 6.6%.

Global equities recorded another quarter of gains amid a solid corporate earnings season and generally positive economic data in the second quarter of 2017. Similar to the first quarter, growth stocks outperformed value and large-cap stocks bested small-cap equities. The S&P 500 Index returned 3.1% despite some mixed economic data and political uncertainty around the ability of the White House to push through its policies. Healthcare stocks rallied as the Senate proposed a new industry-friendly plan to reform the nation's healthcare system. Non-U.S. developed markets posted gains of 6.1%, according to the MSCI EAFE Index. France and Switzerland led the pack with gains of around 9.0%, while Australia lagged with losses of 1.9%. The euro's appreciation versus the U.S. dollar remained a tailwind for U.S. dollar-centric investors. Emerging market equities led the fray with gains of 6.3%, according to the MSCI EM Index. China, Korea and Taiwan were the biggest winners with returns of 10.7%, 10% and 9.2%, respectively; Russia fell behind, losing 9.8%. Within sectors, information technology gained 15.5% and consumer discretionary returned 8.4%; energy lost 4.8% while utilities declined by 1.6%. Fixed income gained 1.4% in the second quarter, according to the Barclays Aggregate Index, bringing the index's year-to-date performance to 2.3%. High-yield debt outperformed bank loans, returning nearly 5% so far this year compared to 2% for bank loans. Emerging markets debt in hard currency gained 2.4% in the second quarter; local currency-denominated securities outperformed, up 3.6%, fueled by a boost to emerging market currencies (which returned 1.9% in the quarter), bringing total returns for the JP GBI-EM Index to over 10% in 2017.

**Uniformed System**

For fiscal year 2017 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 2017, investments provided a return of 11.5%, gross of fees (10.9%, net of fees). The System's annualized rates of return, gross of fees, were 4.1% (3.7%, net of fees) over the last three years, 7.7% (7.3%, net of fees) over the last five years, and 5.1% (4.8%, net of fees) over the last ten years. The System's returns ranked in the 68th percentile of The Bank of New York Mellon Universe of Public Funds in 2017, in the 86th percentile for the latest 3-year period, in the 78th percentile for the last 5 years, and in the 61st percentile for the last 10 years.

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. Wellington Management company was added to the Domestic Equities lineup and Kabouter Management was added to the International Equities lineup. In addition, Alcentra and GoldenTree Asset Management were added to the Fixed Income manager lineup.

Sincerely,

Brian Morales

Brian Morales
Senior Investment Officer

## Investments by Category and Investment Manager**

June 30, 2017

| Asset Class<br>Manager | Investment Style | Total Fair Values | % of Total Portfolio |
|---|---|---|---|
| Domestic Equities | | | |
| Wellington Management Company | U.S. SMid Cap | 44,855,687 | 2.73% |
| International Equities | | | |
| Acadian Asset Management* | Emerging Markets | 114,378,510 | 6.96% |
| Kabouter Management* | Developed Small Cap | 45,027,593 | 2.74% |
| Marathon Asset Management - London | Developed Markets | 176,995,819 | 10.76% |
| Private Equities | | | |
| HarbourVest Private Equity* | Private Equity | 19,353,451 | 1.18% |
| J.P. Morgan Private Equity* | Private Equity | 4,812,331 | 0.29% |
| Pantheon Private Equity* | Private Equity | 11,725,243 | 0.71% |
| Fixed Income | | | |
| Alcentra* | European Direct Lending | 11,274,310 | 0.69% |
| Anchorage Capital Partners* | Long/Short Credit | 35,068,980 | 2.13% |
| Ashmore Investment Management* | Emerging Markets Debt | 66,024,999 | 4.01% |
| Brandywine Asset Management | Global Bonds | 47,712,810 | 2.90% |
| DoubleLine Capital | Mortgage-Backed Securities | 61,131,703 | 3.72% |
| Garcia Hamilton & Associates | Domestic Core Bonds | 62,891,686 | 3.82% |
| GoldenTree Asset Management* | High Yield Bonds | 35,778,239 | 2.18% |
| King Street Capital* | High Yield Bonds | 2,836,217 | 0.17% |
| Manulife Asset Management | Domestic Core Bonds | 42,809,838 | 2.60% |
| Pacific Investment Management Co. (PIMCO)* | Distressed Senior Credit | 44,843,638 | 2.73% |
| SJC Direct Lending Fund* | Direct Lending | 17,241,841 | 1.05% |
| Real Estate | | | |
| Cohen & Steers Capital Management | Global Real Estate Securities | 49,189,192 | 3.00% |
| Sigular Guff* | Direct Real Estate | 26,623,168 | 1.62% |
| UBS Realty* | Direct Real Estate | 72,337,066 | 4.40% |
| Alternative Investments | | | |
| AQR Style Premia* | Global Macro Absolute Return Fund | 33,726,928 | 2.05% |
| Bridgewater Associates* | Global Macro Absolute Return Fund | 45,796,198 | 2.78% |
| Criterion Capital Management* | Long/Short Technology Fund | 33,500,594 | 2.04% |
| Davidson Kempner Capital Management* | Mutli-Strategy Fund | 32,347,211 | 1.97% |
| Millennium Management* | Global Macro Absolute Return Fund | 35,701,672 | 2.17% |
| Orbimed Advisors* | Long/Short Absolute Return Fund | 28,364,728 | 1.72% |
| Starboard Value and Opportunity* | Small Cap Value Activist | 36,972,528 | 2.25% |
| Systematica Investment Services* | Global Macro Absolute Return Fund | 27,910,545 | 1.70% |
| Inflation Hedges | | | |
| Gresham Inflation Hedges* | Commodities | 28,522,828 | 1.73% |
| Wellington Diversified Inflation Hedges* | Commodities | 30,621,944 | 1.86% |
| Balanced Portfolios | | | |
| AQR Market Advantage* | Risk Parity | 104,832,763 | 6.37% |
| Bridgewater All Weather* | Risk Parity | 102,881,260 | 6.26% |
| Cash and Short-term investments | | | |
| BNY Mellon Cash Investment Strategies | Plan Level Cash Accounts | 18,709,561 | 1.14% |
| Cash Held at County Treasurer | Operating Cash Account | 2,685,329 | 0.16% |
| Parametric | Beta Manager | 88,994,977 | 5.41% |
| Total Investments | | $1,644,481,387 | 100.00% |

* Pooled fund

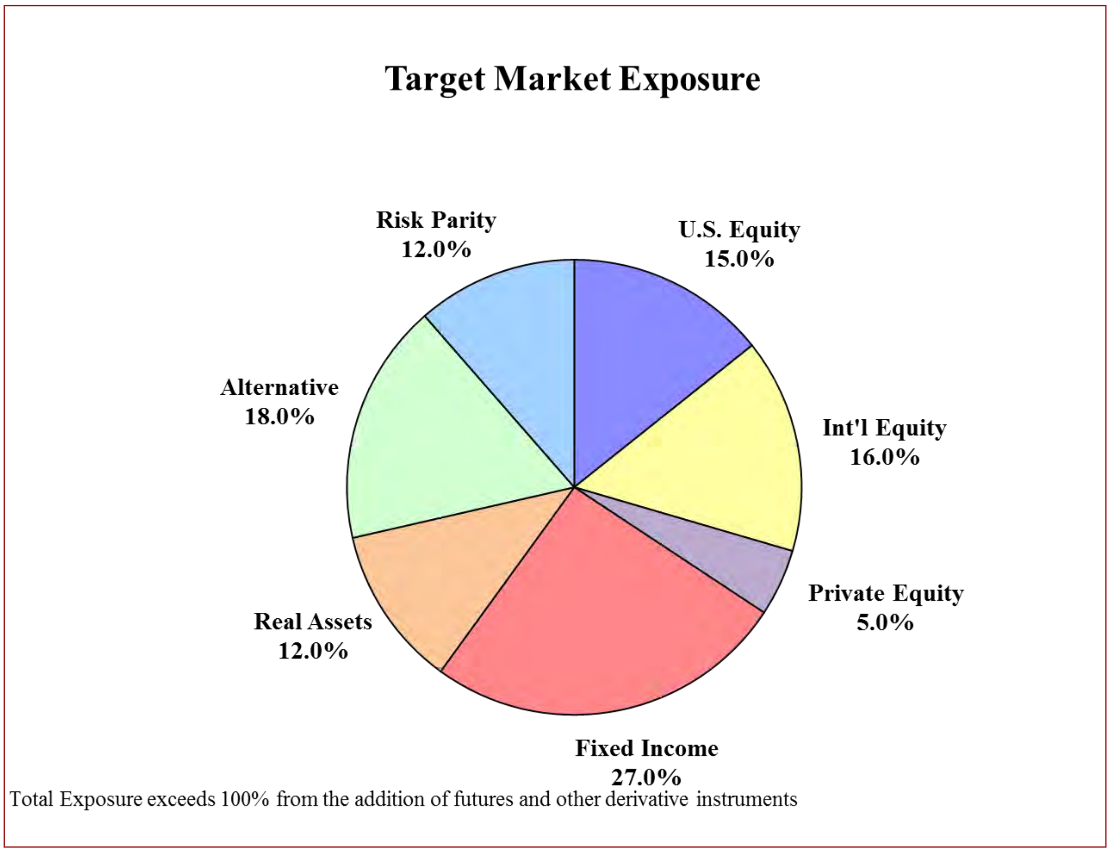
**See Pages 8-9 for complete listing of investment professionals.

## 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, 2017. 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.

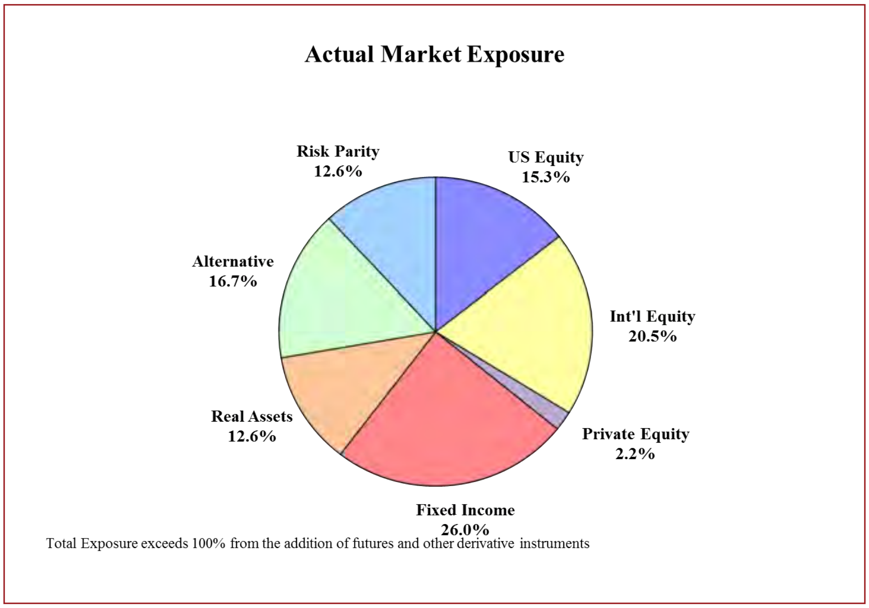
The pie chart below details the target asset mix, consistent with the achievement of the long-term objectives of the System, as of June 30, 2017.

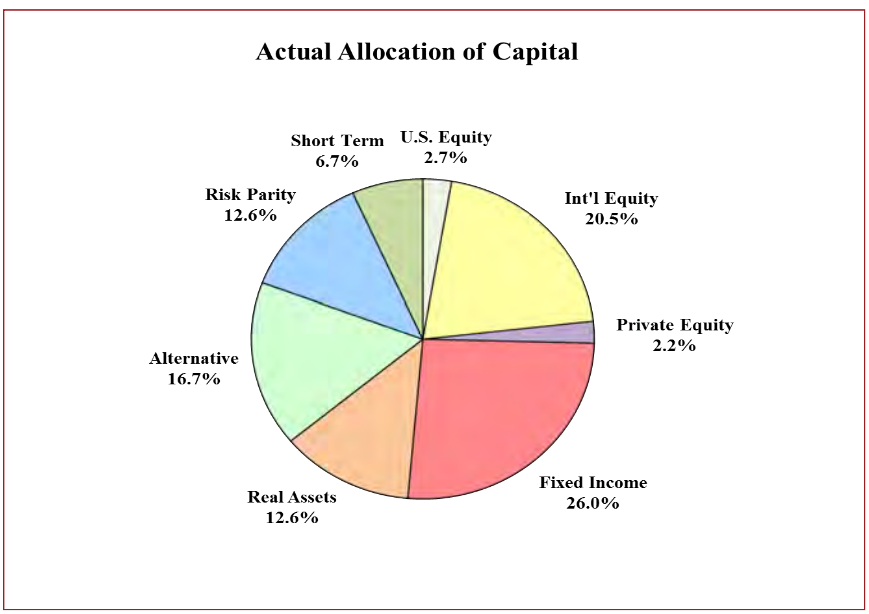


### Actual Asset Allocation as of June 30, 2017

The asset structure of Uniformed Retirement System 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, 2017.

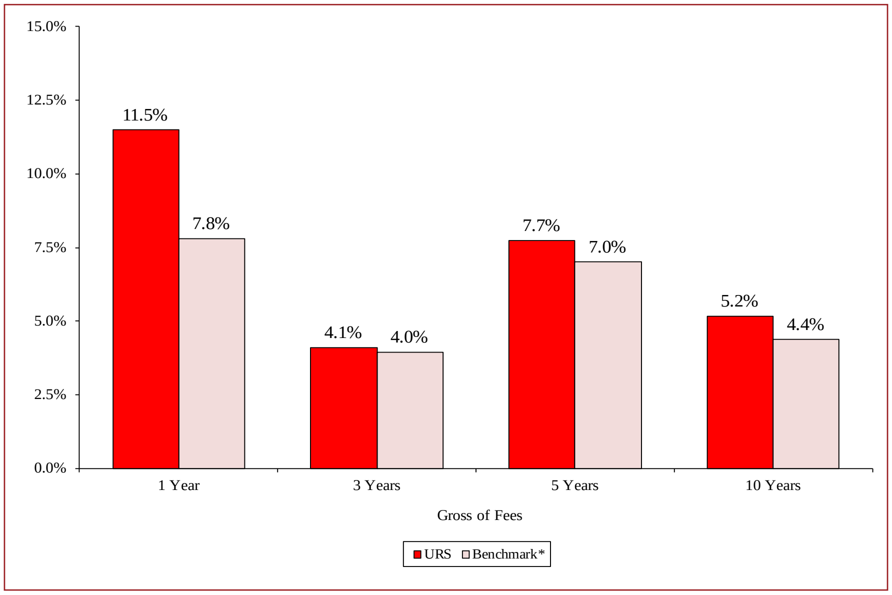


# Investment Results

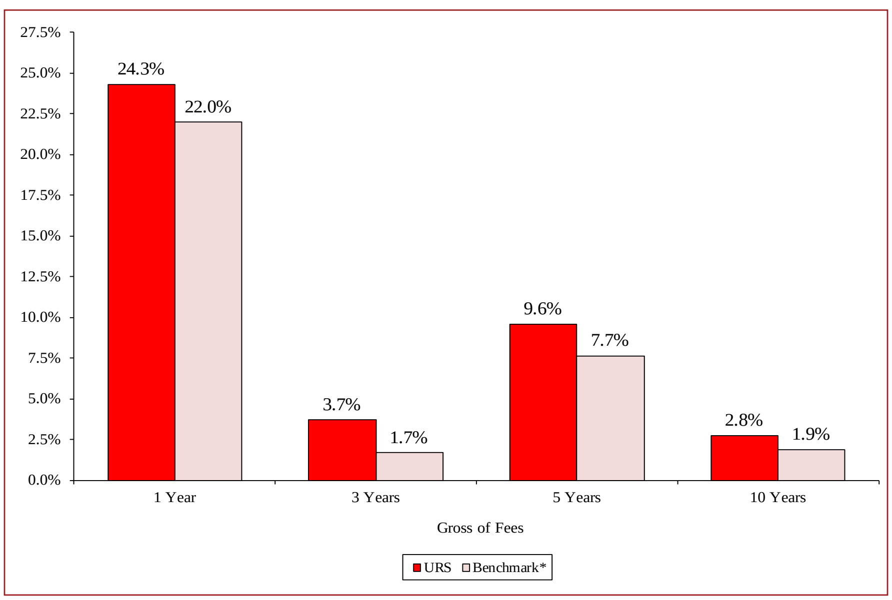
(Time weighted return, gross of fees)

## Total Fund:




*Blended Benchmark. Current Benchmark: 5% MSCI Emerg Mkt Net, 3% JP Morgan Emerg Mkt Bond Index GD, 4% FTSE EPRA/NAREIT Developed Index, 4% NCREIF Open End Diversified Core, 5% Citigroup Wolrd 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:

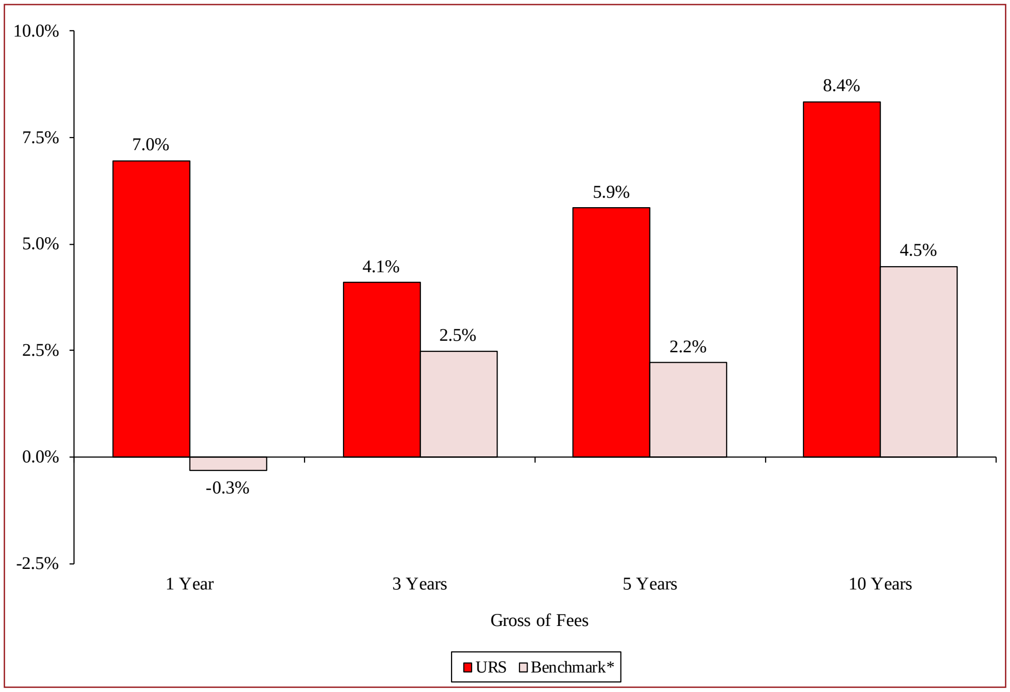



*Benchmark: 66.7% MSCI EAFE, 33.3% MSCI Emerging Markets Free Gross

# Investment Results

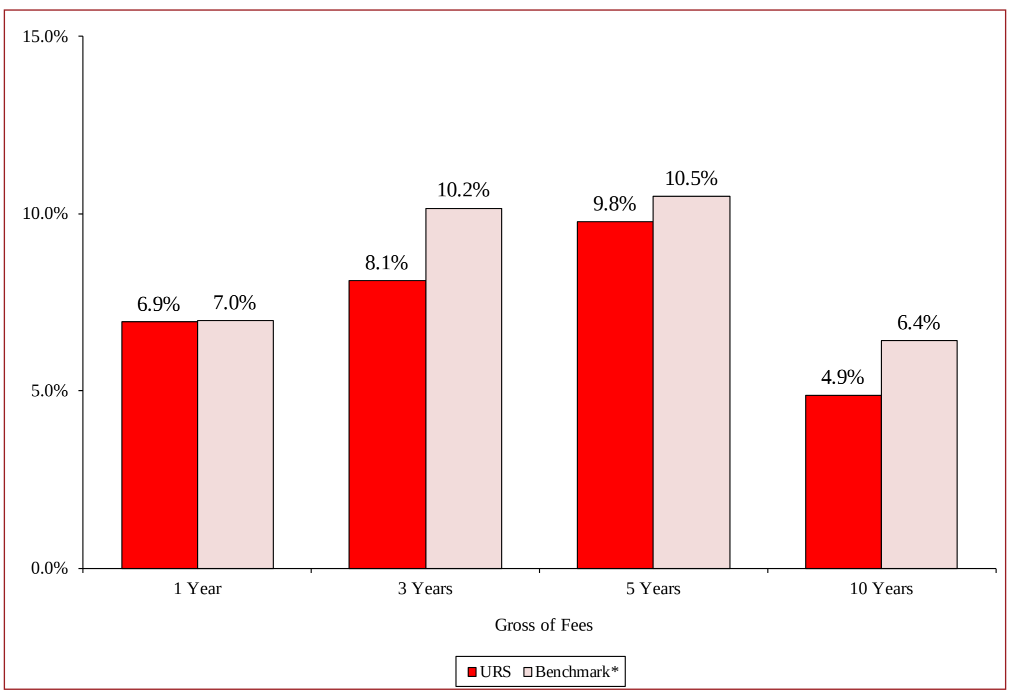
(Time weighted return, gross of fees)

## 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 |
|---|---|---|---|---|
| 48,900 | Nippon Telegraph & Telephone Co | $1,352,390 | $2,310,956 | 0.14% |
| 24,223 | Vestas Wind Systems A/s | 582,434 | 2,233,237 | 0.14% |
| 20,109 | Reckitt Benckiser Group Plc | 785,205 | 2,033,226 | 0.12% |
| 36,651 | Intertek Group Plc | 705,265 | 2,007,622 | 0.12% |
| 38,458 | Sampo Oyj | 716,848 | 1,968,145 | 0.12% |
| 10,203 | Avalonbay Communities Inc | 1,822,765 | 1,960,711 | 0.12% |
| 90,769 | Compass Group Plc | 837,568 | 1,910,051 | 0.12% |
| 84,605 | Assa Abloy Ab | 657,143 | 1,856,695 | 0.11% |
| 3,946 | Geberit Ag | 647,581 | 1,842,689 | 0.11% |
| 33,154 | Rightmove Plc | 725,003 | 1,830,279 | 0.11% |
| | **Total** | **$8,832,202** | **$19,953,611** | **1.21%** |

### 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 |
|---|---|---|---|---|
| 9,340,000 | U.S. Treasury Bond, 2.875%, 08/15/2045 | $8,968,776 | $9,392,211 | 0.57% |
| 5,256,028 | Fnma Gtd Remic P/t 15-79 Za, 3.000%, 11/25/2045 | 5,009,024 | 4,907,395 | 0.30% |
| 4,070,000 | Federal Home Ln Mtg Corp, Var Rt, 07/05/2019 | 4,070,000 | 4,070,000 | 0.25% |
| 4,060,000 | U.S. Treasury Bond, 2.750%, 08/15/2042 | 3,978,035 | 4,015,584 | 0.24% |
| 3,190,000 | Federal Farm Cr Bk Cons Bd, Var Rt, 05/25/2018 | 3,190,365 | 3,196,986 | 0.19% |
| 3,110,000 | Federal Farm Cr Bk Cons Bd, Var Rt, 04/09/2018 | 3,108,718 | 3,114,572 | 0.19% |
| 2,855,000 | Wells Fargo & Co, Var Rt, 07/26/2021 | 2,877,635 | 2,908,531 | 0.18% |
| 2,641,345 | Fhlmc Pool #G3-0810, 4.500%, 01/01/2032 | 2,888,145 | 2,833,635 | 0.17% |
| 2,150,000 | United Kingdom Gilt Regs, 1.250%, 07/22/2018 | 3,120,553 | 2,819,863 | 0.17% |
| 2,363,243 | Fhlmc Pool #G3-0491, 4.500%, 04/01/2030 | 2,572,242 | 2,532,592 | 0.15% |
| | **Total** | **$39,783,493** | **$39,791,369** | **2.41%** |

*Full disclosure holding is available upon request.

Schedule Brokerage Commissions
For Year Ended June 30, 2017

| Broker Name | Base Volume | Total Shares | Base Commission | Commission Percentage |
|---|---|---|---|---|
| Morgan Stanley & Co Inc, Ny | $3,743,814 | 413,214 | $5,883 | 0.16% |
| J P Morgan Sec, Sydney | 646,845 | 224,998 | 970 | 0.15% |
| Deutsche Bk Intl Eq, London | 711,294 | 1,021,207 | 1,025 | 0.14% |
| Pershing Securities Ltd, London | 646,376 | 197,422 | 888 | 0.14% |
| Clsa Australia Pty, Sydney | 987,563 | 278,329 | 1,348 | 0.14% |
| Citibank Ltd, Melbourne | 495,790 | 127,997 | 672 | 0.14% |
| Goldman Sachs Intl, London | 516,608 | 114,420 | 659 | 0.13% |
| Macquarie Bank Ltd, Hong Kong | 1,995,227 | 417,344 | 2,504 | 0.13% |
| Ubs Warburg Asia Ltd, Hong Kong | 1,862,314 | 291,235 | 2,284 | 0.12% |
| Morgan Stanley & Co, London | 660,677 | 46,879 | 783 | 0.12% |
| Citigroup Gbl Mkts Inc, New York | 2,345,694 | 88,767 | 2,745 | 0.12% |
| Merrill Lynch Intl London Equities | 3,533,904 | 531,731 | 4,102 | 0.12% |
| Citigroup Gbl Mkts/Salomon, New York | 1,608,208 | 357,070 | 1,858 | 0.12% |
| Sanford C Bernstein & Co Inc, London | 1,011,805 | 269,839 | 1,137 | 0.11% |
| Daiwa Secs Amer Inc, New York | 688,900 | 25,705 | 764 | 0.11% |
| Credit Suisse, New York | 2,223,356 | 257,911 | 2,436 | 0.11% |
| J P Morgan Secs Ltd, London | 2,491,938 | 109,274 | 2,721 | 0.11% |
| Rbc Dominion Secs Inc, Toronto | 569,598 | 23,952 | 622 | 0.11% |
| Credit Lyonnais Secs, Singapore | 639,822 | 200,951 | 697 | 0.11% |
| Societe Generale London Branch, London | 4,137,386 | 299,774 | 4,136 | 0.10% |
| Daiwa Sec Smbc Europe Ltd, London | 1,756,210 | 142,200 | 1,666 | 0.09% |
| Citigroup Gbl Mkts Inc, Taipei | 519,141 | 118,137 | 477 | 0.09% |
| Merrill Lynch Gilts Ltd, London | 1,971,059 | 93,932 | 1,807 | 0.09% |
| Stifel Nicolaus | 653,300 | 19,561 | 582 | 0.09% |
| Mizuho Securities Usa Inc. New York | 1,251,841 | 34,176 | 1,001 | 0.08% |
| Keb Salomon Smith Barney Secs, Seoul | 683,992 | 11,788 | 543 | 0.08% |
| Smbc Securities, Inc New York | 616,215 | 9,181 | 485 | 0.08% |
| Mizuho International Plc, London | 891,891 | 57,400 | 629 | 0.07% |
| Cantor Fitzgerald Europe, London | 868,488 | 128,685 | 608 | 0.07% |
| Deutsche Bk Secs Inc, Ny | 1,880,317 | 60,617 | 1,248 | 0.07% |
| Wells Fargo Securities Llc, Charlotte | 1,221,887 | 27,174 | 808 | 0.07% |
| Ubs Securities Llc, Stamford | 1,619,880 | 39,053 | 1,062 | 0.07% |
| Goldman Sachs & Co, Ny | 96,334,630 | 1,470,217 | 62,326 | 0.06% |
| Smbc Nikko Capital Markets Ltd, London | 631,189 | 44,200 | 401 | 0.06% |
| Merrill Lynch Pierce Fenner Smith Inc Ny | 6,558,431 | 177,082 | 4,164 | 0.06% |
| Mitsubishi Ufj Secs Intl Plc, London | 933,244 | 74,400 | 579 | 0.06% |
| J.P. Morgan Clearing Corp, New York | 8,783,770 | 469,358 | 5,373 | 0.06% |
| Jefferies & Co Inc, New York | 681,490 | 16,816 | 385 | 0.06% |
| Instinet Europe Limited, London | 2,964,376 | 147,590 | 1,645 | 0.06% |
| Ubs Warburg, London | 1,944,554 | 191,331 | 1,069 | 0.05% |
| Barclays Capital Le, Jersey City | 988,842 | 34,739 | 521 | 0.05% |
| National Finl Svcs Corp, New York | 3,053,955 | 55,919 | 1,573 | 0.05% |
| Pershing Llc, Jersey City | 523,219 | 13,111 | 262 | 0.05% |
| Rbc Capital Markets Llc, New York | 1,802,341 | 48,551 | 833 | 0.05% |
| Barclays Capital Inc./Le, New Jersey | 3,238,825 | 86,796 | 1,424 | 0.04% |
| Bernstein Sanford C & Co, New York | 6,188,344 | 163,429 | 2,536 | 0.04% |
| Credit Suisse (Europe), London | 18,728,343 | 3,399,753 | 7,184 | 0.04% |
| Citigroup Global Markets Ltd, London | 16,651,431 | 1,661,235 | 5,630 | 0.03% |
| Hsbc Bank Plc (Midland Bk), London | 1,306,824 | 165,538 | 435 | 0.03% |
| Ubs Equities, London | 11,150,114 | 1,431,717 | 3,075 | 0.03% |
| Other Brokers | 9,274,451 | 1,515,475 | 8,606 | 0.09% |
| Total | $237,189,713 | 17,207,180 | $157,171 | 0.09% |

## Investment Summary

(Based on Capital Allocation)

| | As of June 30, 2016 | | As of June 30, 2017 | |
|---|---|---|---|---|
| | Fair Value | % Fair Value | Fair Value | % Fair Value |
| Domestic Equities | $0 | 0.00% | $44,855,687 | 2.73% |
| International Equities | 192,177,406 | 12.83% | 336,401,922 | 20.46% |
| Private Equities | 33,310,145 | 2.22% | 35,891,025 | 2.18% |
| Fixed Income | 416,803,295 | 27.86% | 427,614,261 | 26.00% |
| Real Assets | 185,362,619 | 12.37% | 207,294,198 | 12.61% |
| Alternative Investments | 261,474,240 | 17.46% | 274,320,404 | 16.68% |
| Risk-Balanced Portfolios | 293,221,048 | 19.58% | 207,714,023 | 12.63% |
| Short Term | 115,010,325 | 7.68% | 110,389,867 | 6.71% |
| Total | **$1,497,359,078** | **100.00%** | **$1,644,481,387** | **100.00%** |

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October 24, 2017

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, 2017. 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) 2017 contribution was developed in the 2015 valuation report and was based on a corridor level of 97%.

***Assumptions***

The actuarial assumptions used in performing the June 30, 2017 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 and methods used for funding purposes were developed in compliance with the actuarial standards of practice as they relate to pension plans. 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 2017 actuarial valuation, Cheiron prepared the Analysis of Financial Experience, Schedule of Retirees 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, 2017.

***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

Fiona E. Liston, FSA
Principal Consulting Actuary

Coralie Taylor

Coralie A. Taylor, FSA
Associate Actuary

CHEIRON

## Summary of Valuation Results

The Actuarially Determined Contribution rate for Fiscal Year (FY) 2017 was developed in the 2015 valuation report and was based on a corridor floor of 97%. 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 2017 valuation.

## 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 unfunded actuarial liability (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) 2017 contribution was based on a corridor level of 97%.

**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**

None

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

### Demographic Assumptions
### Healthy Mortality

Annual Deaths Per 10,000 Members

Mortality Projected to 2017

| Age | Male | Female |
|---|---|---|
| 20 | 4 | 2 |
| 25 | 5 | 2 |
| 30 | 5 | 2 |
| 35 | 6 | 3 |
| 40 | 7 | 4 |
| 45 | 11 | 7 |
| 50 | 46 | 27 |
| 55 | 64 | 37 |
| 60 | 86 | 55 |
| 65 | 125 | 84 |
| 70 | 191 | 134 |
| 75 | 309 | 219 |
| 80 | 521 | 370 |
| 85 | 908 | 655 |
| 90 | 1,602 | 1,175 |
| 95 | 2,524 | 1,937 |
| 100 | 3,581 | 2,873 |

110% and 100% of the RP-2014 Healthy Annuitant Mortality Table for males and females, respectively, backed down to 2006 then projected using the RPEC-2015 model, with an ultimate rate of 0.65% 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. The valuation uses fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

Fiver percent of pre-retirement deaths are assumed to be service-connected.

### Disabled Mortality

Annual Deaths Per 1,000 Members

Mortality Projected to 2017

| Age | Male | Female |
|---|---|---|
| 45 | 174 | 106 |
| 50 | 209 | 135 |
| 55 | 237 | 170 |
| 60 | 269 | 205 |
| 65 | 326 | 251 |
| 70 | 418 | 337 |
| 75 | 569 | 493 |
| 80 | 811 | 745 |

100% and 115% of the RP-2014 Disabled Annuitant Mortality Table for males and females, respectively, backed down to 2006 then projected using the RPEC-2015 model, with an ultimate rate of 0.65% 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. The valuation uses fully generational projection of mortality improvements. Sample rates shown are projected through the valuation date.

### 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 meeting 5 years of service 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 all be service-connected. Of these, 30% are assumed to receive Social Security benefits and 38% are assumed to receive Workers' Compensation benefits.

### 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.

### Merit/Seniority Salary Increase (in addition to accross-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.

**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 for those hired before 2012 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

None

## Analysis of Financial Experience

### Gain and Loss in Accrued Liability during Years Ended June 30[1]

### 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 |
|---|---|---|---|---|---|
| 2012 | ($19,330,917) | ($1,456,752) | ($20,787,669) | $0 | ($20,787,669) |
| 2013 | (3,805,385) | 24,088,845 | 20,283,460.00 | (813,016) | 19,470,444 |
| 2014 | 34,542,175 | (9,026,264) | 25,515,911.00 | (20,177,168) | 5,338,743 |
| 2015 | (12,354,967) | 38,954,945 | 26,599,978.00 | - | 26,599,978 |
| 2016 | (51,308,849) | 15,038,096 | (36,270,753.00) | (21,285,640) | (57,556,393) |
| 2017 | (19,058,604) | (6,047,672) | (25,106,276.00) | (839,465) | (25,945,741) |

[1]Schedule comes from the Actuarial Valuation as of June 30, 2017.

## Schedule of Retirees and Beneficiaries

### Added To and Removed From Rolls[2]

| 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 | | |
| 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 |
| 2017 | 72 | 6,284,796 | 19 | 850,639 | 1,309 | 83,715,430 | 6.94% | 63,954 |

[2]Prior to 2016, amounts are based on June 30 benefits adjusted for known COLA effective July 1. Post-2015, amounts reported are based on benefits on December 31 prior to the valuation date.

## Solvency Test[1]

| | Aggregate Accrued Liabilities For | | | | | | |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | | (1) | (2) | (3) |
| Valuation Date June 30, | Active Member Contributions | Retirees, Vested Terms, Beneficiaries & DROP | Active Members (County Financed Portion) | Reported Assets | Portion of Accrued Liabilities by Reported Assets | | |
| 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% |
| 2017 | 154,777,842 | 1,046,091,139 | 832,820,471 | 1,683,381,052 | 100% | 100% | 58% |

[1]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.

## Schedule of Active Member Valuation Data

| Valuation Date June 30, | Number of Active Members[2] | Covered Payroll | Average Annual Salary | Percentage Increase in Average Pay |
|---|---|---|---|---|
| 2017 | 1,975 | $174,888,440 | $88,551 | 2.70% |
| 2016 | 1,948 | 167,965,582 | 86,225 | 2.30% |
| 2015 | 1,889 | 159,216,907 | 84,286 | -0.20% |
| 2014 | 1,817 | 153,456,176 | 84,456 | 7.27% |
| 2013 | 1,862 | 146,597,688 | 78,731 | -0.68% |
| 2012 | 1,870 | 148,235,740 | 79,270 | 0.35% |
| 2011 | 1,865 | 147,326,067 | 78,995 | 1.56% |
| 2010 | 1,887 | 146,776,955 | 77,783 | 2.86% |
| 2009 | 1,945 | 147,082,768 | 75,621 | -0.13% |
| 2008 | 1,885 | 142,724,099 | 75,716 | |

[2]Excludes DROP participants.

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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 |
|---|---|---|---|---|---|
| 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 |
| 2017 | 12,223,468 | 67,410,252 | 38.83% | 161,013,714 | 240,647,434 |

### Schedule of Deductions by Type

| Fiscal Year | Benefit Payments | Refunds of Contributions | Administrative Expenses | Total Deductions |
|---|---|---|---|---|
| 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 |
| 2017 | 92,844,624 | 764,247 | 477,564 | 94,086,435 |

## Schedule of Benefit Payment by Type

| Fiscal Year | Service Annuity | Service-Connected Disability | Ordinary Disability | Survivor Benefit | Total |
|---|---|---|---|---|---|
| 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 |
| 2017 | 83,777,110 | 7,556,874 | 328,116 | 1,182,524 | 92,844,624 |

## Schedule of Retired Members by Benefit Type

| Fiscal Year | Service Annuity | Service Connected Disability | Disability | Survivor Benefit | Total |
|---|---|---|---|---|---|
| 2008 | 706 | 186 | 18 | 22 | 932 |
| 2009 | 758 | 187 | 18 | 24 | 987 |
| 2010 | 798 | 185 | 16 | 22 | 1,021 |
| 2011 | 845 | 186 | 18 | 26 | 1,075 |
| 2012 | 878 | 187 | 18 | 26 | 1,109 |
| 2013 | 925 | 185 | 17 | 29 | 1,156 |
| 2014 | 967 | 176 | 17 | 34 | 1,194 |
| 2015 | 1,021 | 171 | 17 | 34 | 1,243 |
| 2016 | 1,038 | 168 | 18 | 32 | 1,256 |
| 2017 | 1,097 | 163 | 17 | 32 | 1,309 |

## Schedule of Average Monthly Benefit Amounts

| Fiscal Year | Service Annuity | Service-Connected Disability | Ordinary Disability | Survivor Benefit | Average |
|---|---|---|---|---|---|
| 2008 | $4,434 | $3,199 | $1,606 | $1,997 | $4,076 |
| 2009 | 4,532 | 3,233 | 1,596 | 2,123 | 4,174 |
| 2010 | 4,726 | 3,339 | 1,505 | 2,045 | 4,367 |
| 2011 | 4,945 | 3,439 | 1,570 | 2,122 | 4,560 |
| 2012 | 5,127 | 3,571 | 1,614 | 2,122 | 4,737 |
| 2013 | 5,285 | 3,607 | 1,624 | 2,422 | 4,891 |
| 2014 | 5,457 | 3,809 | 1,609 | 2,492 | 5,075 |
| 2015 | 5,533 | 3,826 | 1,614 | 2,530 | 5,162 |
| 2016 | 5,563 | 3,800 | 1,576 | 2,576 | 5,194 |
| 2017 | 5,674 | 3,933 | 1,608 | 2,604 | 5,329 |

**SCHEDULE OF AVERAGE BENEFIT PAYMENTS**

| Period | 2-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ |
|---|---|---|---|---|---|---|---|
| | Years of Credited Service * | | | | | | |
| 7/1/2006 to 6/30/2007 | | | | | | | |
| 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 |
| 7/1/2007 to 6/30/2008 | | | | | | | |
| 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 |
| 7/1/2008 to 6/30/2009 | | | | | | | |
| 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 |
| 7/1/2009 to 6/30/2010 | | | | | | | |
| 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 |
| 7/1/2010 to 6/30/2011 | | | | | | | |
| 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 |
| 7/1/2011 to 6/30/2012 | | | | | | | |
| 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 |
| 7/1/2012 to 6/30/2013 | | | | | | | |
| 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 |
| 7/1/2013 to 6/30/2014 | | | | | | | |
| 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 |
| 7/1/2014 to 6/30/2015 | | | | | | | |
| 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 |
| 7/1/2015 to 12/31/2015 | | | | | | | |
| 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 |
| 1/1/2016 to 12/31/2016 | | | | | | | |
| Average Monthly Benefit ** | - | 671 | 1,282 | 2,373 | 3,587 | 5,686 | 7,115 |
| Average of Final Monthly Salaries | - | 4,410 | 4,678 | 6,706 | 7,923 | 8,900 | 9,681 |
| Number of Retirees | - | 1 | 2 | 5 | 8 | 47 | 7 |

*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 | Under 1 | 1 to 4 | 5 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30 & Up | Total |
|---|---|---|---|---|---|---|---|---|---|
| | Service | | | | | | | | |
| Under 25 | 35 | 43 | 1 | 0 | 0 | 0 | 0 | 0 | 79 |
| 25 to 29 | 53 | 139 | 46 | 3 | 0 | 0 | 0 | 0 | 241 |
| 30 to 34 | 19 | 105 | 140 | 83 | 0 | 0 | 0 | 0 | 347 |
| 35 to 39 | 13 | 33 | 82 | 158 | 57 | 0 | 0 | 0 | 343 |
| 40 to 44 | 6 | 16 | 40 | 92 | 120 | 36 | 1 | 0 | 311 |
| 45 to 49 | 1 | 7 | 22 | 74 | 98 | 133 | 31 | 1 | 367 |
| 50 to 54 | 3 | 5 | 8 | 40 | 29 | 61 | 31 | 20 | 197 |
| 55 to 59 | 1 | 3 | 4 | 9 | 13 | 25 | 6 | 10 | 71 |
| 60 to 64 | 0 | 2 | 1 | 4 | 4 | 0 | 0 | 2 | 13 |
| 65 & up | 0 | 0 | 1 | 2 | 0 | 2 | 0 | 1 | 6 |
| Total | 131 | 353 | 345 | 465 | 321 | 257 | 69 | 34 | 1,975 |

## Active Participants Total Salary by Age/Service

| | Service | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Age | Under 1 | 1 to 4 | 5 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30 & Up | Total |
| Under 25 | $1,849,851 | $2,589,980 | $65,737 | $0 | $0 | $0 | $0 | $0 | $4,505,568 |
| 25 to 29 | 2,785,692 | 8,644,775 | 3,250,267 | 219,496 | 0 | 0 | 0 | 0 | 14,900,230 |
| 30 to 34 | 1,051,835 | 6,543,082 | 9,993,624 | 7,003,832 | 0 | 0 | 0 | 0 | 24,592,373 |
| 35 to 39 | 686,187 | 2,070,658 | 5,924,116 | 13,517,682 | 5,712,625 | 0 | 0 | 0 | 27,911,268 |
| 40 to 44 | 339,556 | 985,428 | 2,857,699 | 7,992,181 | 12,295,309 | 4,269,719 | 111,378 | 0 | 28,851,270 |
| 45 to 49 | 54,445 | 501,709 | 1,547,373 | 6,486,582 | 9,943,845 | 15,205,197 | 3,767,164 | 150,236 | 37,656,551 |
| 50 to 54 | 186,214 | 303,298 | 568,950 | 3,299,233 | 2,743,755 | 6,712,970 | 3,403,522 | 2,479,235 | 19,697,177 |
| 55 to 59 | 51,422 | 331,056 | 301,459 | 718,541 | 1,250,399 | 2,807,981 | 616,949 | 1,241,314 | 7,319,121 |
| 60 to 64 | 0 | 124,912 | 75,131 | 322,492 | 350,975 | 0 | 0 | 244,688 | 1,118,198 |
| 65 & up | 0 | 0 | 56,033 | 137,890 | 0 | 202,818 | 0 | 122,182 | 518,923 |
| Total | $7,005,202 | $22,094,898 | $24,640,389 | $39,697,929 | $32,296,908 | $29,198,685 | $7,899,013 | $4,237,655 | $167,070,679 |

## Retirees By Location

| Top 10 States | Uniformed |
|---|---|
| Virginia | 68.26% |
| Florida | 6.25% |
| Maryland | 6.10% |
| North Carolina | 4.38% |
| South Carolina | 3.13% |
| West Virginia | 2.81% |
| Pennsylvania | 1.49% |
| Texas | 0.63% |
| California | 0.39% |
| Washington, D.C. | 0.47% |

| | Uniformed |
|---|---|
| Fairfax County | 14.98% |

| Within Fairfax County | Uniformed |
|---|---|
| Alexandria | 2.85% |
| Fairfax | 1.19% |
| Springfield | 1.66% |
| Centreville | 2.38% |
| Herndon | 1.35% |
| Falls Church | 0.79% |
| Annandale | 0.40% |
| Burke | 0.48% |
| Vienna | 0.63% |
| Reston | 0.48% |
| Lorton | 0.63% |
| Chantilly | 0.63% |
| Clifton | 0.32% |
| Fairfax Station | 0.55% |
| McLean | 0.16% |
| Oakton | 0.32% |
| Great Falls | 0.16% |
| Fort Belvoir | 0.00% |
| Dunn Loring | 0.00% |
| Merrifield | 0.00% |

# UNIFORMED
## RETIREMENT SYSTEM

A Fairfax County, Va., publication

**Fairfax County Retirement Systems**
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