



FOR THE FISCAL YEAR ENDED JUNE 30, 2017

COMPREHENSIVE ANNUAL FINANCIAL REPORT



POLICE Officers RETIREMENT SYSTEM

2017

A Pension Trust Fund of Fairfax County, Virginia

Table of Contents

Introductory Section (Unaudited)

Letter of Transmittal	1
Certificate of Achievement for Excellence in Financial Reporting	5
Public Pension Coordinating Council	6
Board of Trustees	7
Administrative Organization.....	8
Organization Chart	10

Financial Section

Report of Independent Auditor	11
Management's Discussion and Analysis (Unaudited)	14
Summary Schedule of Plan Fiduciary Net Position.....	16
Summary Schedule of Additions and Deductions	17
Basic Financial Statements	
Statement of Fiduciary Net Position	19
Statement of Changes in Fiduciary Net Position.....	20
Notes to the Financial Statements.....	21
Required Supplementary Information (Unaudited)	
Schedule of Changes in Net Pension Liability and Related Ratios	35
Schedule of Net Pension Liability.....	36
Schedule of Money-Weighted Rate of Return.....	36
Schedule of Employer Contributions.....	36
Summary of Significant Changes to the Pension System	37
Other Supplementary Information	
Schedule of Investment and Consultant Expenses.....	38
Schedule of Administrative Expenses.....	38
Report on Internal Control.....	39

Investment Section (Unaudited)

Senior Investment Officer's Letter	41
Investments by Category and Investment Manager	44
Schedule of Ten Largest Equity and Fixed Income Holdings.....	50
Schedule of Brokerage Commissions	51
Investment Summary	52

Actuarial Section (Unaudited)

Actuary's Certification Letter	53
Summary of Valuation Results.....	55
Summary of Actuarial Assumptions and Methods	55
Long Term Assumptions.....	56
Analysis of Financial Experience.....	59
Schedule of Retirees and Beneficiaries Added To and Removed From Rolls.....	59
Solvency Tests.....	60
Schedule of Active Member Valuation.....	60

Statistical Sections (Unaudited)

Schedule of Additions by Source	61
Schedule of Deductions by Type.....	61
Schedule of Benefit Payments by Type.....	62
Schedule of Retired Members by Benefit Type.....	62
Schedule of Average Monthly Benefit Amounts.....	62
Schedule of Average Monthly Benefit by Years of Service	63
Active Participants Count by Age/Service.....	64
Active Participants Total Salary by Age/Service	64
Retirees by Location	65



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 Police Officers 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 Police Officers Retirement System was created under authority granted by Chapter 303 of the Acts of Assembly (law of the Commonwealth of Virginia) on March 29, 1944, to provide defined benefit pension plan coverage for sworn full-time law enforcement officers of the Fairfax County Police Department. In 1981 Fairfax County enacted Article 7 of the Fairfax County Code, which adopted and continued Chapter 303 as amended. There were 1,329 active members, 57 in the Deferred Retirement Option Program (DROP), 63 vested members and 1,082 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

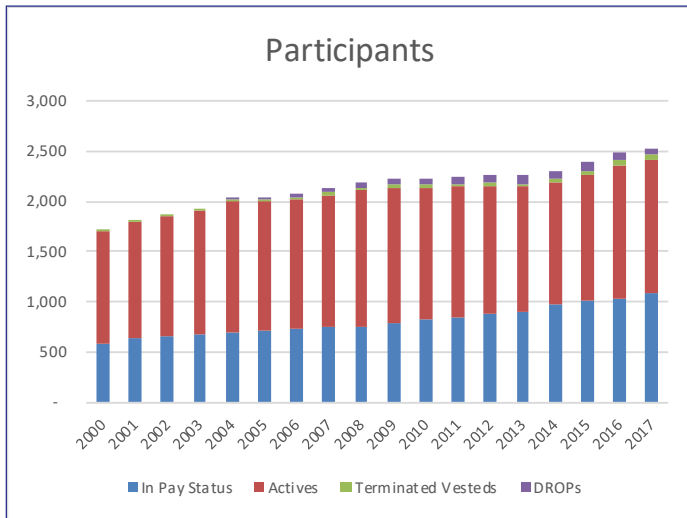
The benefit provisions of the System are established by County Ordinance. The System provides normal service retirement and early service retirement benefits for members who attain age or service requirements. Coverage for service-connected disability benefits is immediate upon membership in the System. 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 return for the year was 10.0% (9.3%, net of fees), exceeding the long term return target of 7.25%. This return placed in the 87th percentile of the BNY Mellon universe of public funds. However, over the long term, returns compared less favorably, with investment returns for the ten-year period were 5.7% per year, ranking the fund in the top 38th 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
 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 to the Financial Section of this report for a description of this standard of care and details on the System’s investment policies and strategies.

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

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

Funded Status

An actuarial valuation of the System to determine funding requirements is performed annually. The System’s funding policy provides for periodic employer contributions at actuarially determined rates which are calculated as a percentage of current payroll, and are adjusted as necessary to accumulate sufficient assets to meet the costs of benefit payments when due. The valuation of the System performed as of June 30, 2017, indicated that the ratio of assets accumulated by the System to total actuarial accrued liabilities for benefits showed a decrease from 85.4% to 85.0%. 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 83.2%.

Based on the June 30, 2015, actuarial valuation, the employer contribution rate for 2017 following the adopted corridor-based funding policy was 38.98%, an increase of 1.0% from the 2016 rate of 37.98%. 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 offset a decrease in the employee contribution rate (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. This target was further increased to 98% for the County's 2018 adopted budget.

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 managers' 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 Police Officers Retirement System for its comprehensive annual financial report for the fiscal year ended June 30, 2016. This was the seventh consecutive year that the System has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

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

Fairfax County Retirement Systems received the Public Pension Standards Award for the fiscal year ended June 30, 2017, from the Public Pension Coordinating Council (PPCC), in recognition of meeting the professional standards for plan funding as set forth in the Public Pensions Standards. The PPCC is a confederation of the National Association of the State Retirement Administrators (NASRA), the National Conference on Public Employee Retirement Systems (NCPERS), and the National Council on Teacher Retirement (NCTR).

Other Information

Independent Audit and Actuarial Certifications

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

Introductory Section

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 Police Officers 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,

A handwritten signature in black ink, appearing to read "J. K. Weiler". The signature is written in a cursive style with a large initial "J" and "K".

Jeffrey K. Weiler
Executive Director



Government Finance Officers Association

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

Presented to

**Fairfax County
Police Officers Retirement System
Virginia**

For its Comprehensive Annual Financial
Report
for the Fiscal Year Ended

June 30, 2016

Executive Director/CEO



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)

A handwritten signature in cursive script that reads "Alan H. Winkle".

Alan H. Winkle
Program Administrator

Seven members serve on the Fairfax County Police Officers Retirement System Board of Trustees. Three of the members are citizens appointed by the Fairfax County Board of Supervisors. Two of the members are elected by Fairfax County Government Employees, and one member is elected by retirees. The Director of Finance serves as an Ex Officio member.

Board of Trustees



Edward C. O'Carroll
President
Elected Member Trustee
Term Expires: December 31, 2020



Rich Barron
Vice President and Secretary
Elected Member Trustee
Term Expires: December 31, 2018



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



James E. Bitner
Board of Supervisors Appointee
Term Expires: June 30, 2018



James R. Dooley, Jr.
Elected Retired Member Trustee
Term Expires: June 30, 2018



Brendan D. Harold
Board of Supervisors Appointee
Term Expires: December 31, 2018



Jay A. Jupiter
Board of Supervisors Appointee
Term Expires: December 31, 2017

Administrative Organization

Administrative Staff

Jeffrey K. Weiler

Executive Director

Katherine Molnar, CFA

Senior Investment Officer

Professional Services

Actuary

Cheiron

Actuaries

Auditor

Cherry Bekaert LLP

Certified Public Accountants

Investment Managers

Acadian Asset Management, LLC

Boston, MA

AlphaSimplex

Boston, MA

AQR Capital Management, LLC

Greenwich, CT

BlackRock, Inc

San Francisco, CA

BlueCrest Capital Management, LLP

New York, NY

Bridgewater Associates, LP

Westport, CT

Cohen & Steers Capital Management, Inc

New York, NY

Czech Asset Management

Old Greenwich, CT

Deutsche Asset Management

Chicago, IL

DoubleLine Capital, LP

Los Angeles, CA

Emerging Sovereign Group

New York, NY

First Eagle Investment Management

New York, NY

King Street Capital Management, LP

New York, NY

Loomis, Sayles & Company, LP

Boston, MA

Investment Managers
(continued)

Neuberger Berman Group, LLC
New York, NY

Parametric Portfolio Associates
Edina, MN

PIMCO
Newport Beach, CA

Sands Capital Management, Inc
Arlington, VA

Standish Mellon Asset Management Co
Pittsburgh, PA

Starboard Value, LP
New York, NY

Solus
New York, NY

WCM Investment Management
Laguna Beach, CA

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

*(Seven Members – see page 7)
Edward C. O’Carroll, Rich Barron, Christopher J. Pietsch
James E. Bitner, James R. Dooley, Jr., Brendan D. Harold, Jay A. Jupiter*



Executive Director
Jeff Weiler



Senior Investment Officer
Katherine Molnar, CFA



Investment Operations Manager
Jennifer Snyder



Investment Analyst
Damien Lee, CFA



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*



Report of Independent Auditor

To Board of Supervisors
County of Fairfax, Virginia

To the Board of Trustees
Fairfax County Police Officers Retirement System

Report on the Financial Statements

We have audited the accompanying basic financial statements of the Fairfax County Police Officers 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.



Tysons Corner, Virginia
November 15, 2017

**Management’s Discussion and Analysis
(Unaudited)**

This section presents management’s discussion and analysis of the Fairfax County Police Officers 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 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, refunds of contributions and fees paid for professional services and administrative expenses.

Notes to Financial Statements. The Notes to Financial Statements are an integral part of the financial statements and include additional information and schedules to provide a better understanding of the financial statements. The Notes to 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. The Required Supplementary Information includes the Schedule of Changes in Net Pension Liability and Related Ratios, Schedule of Net Pension Liability, Schedule of Employer Contributions and Schedule of Money-Weighted Rate of Return. These schedules will be presented over 10 years as information becomes available. A Summary of Significant Changes to the Pension System is also included.

Other Supplementary Information. 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

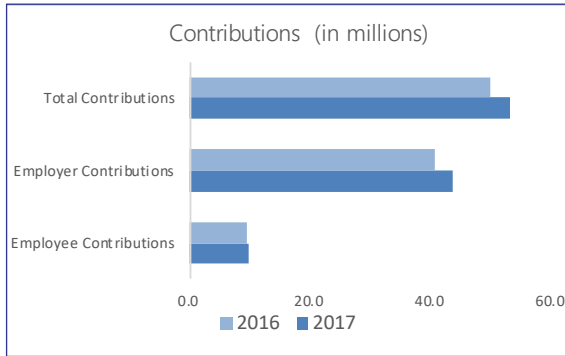
The net position restricted for pension benefits as of June 30, 2017, and June 30, 2016, was \$1,365.8 million and \$1,270.4 million, respectively. The net position representing assets available to pay for current and future member pension benefits, increased by \$95.5 million or 7.5 percent.

Total additions to net position increased by 178.4 percent from \$60.7 million in 2016 to \$169.1 million in 2017 primarily due to positive investment performance this year versus 2016.

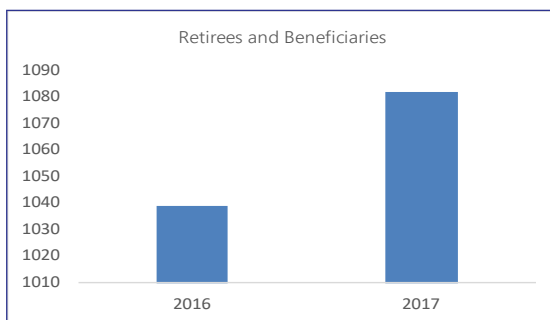
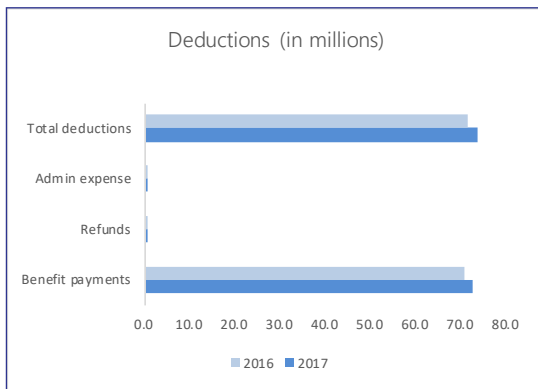
Net investment income increased 982.7 percent from \$10.7 million in 2016 to \$116.1 million in 2017. The net money-weighted rate of return on investments on a fair value basis was 9.3 percent in fiscal year 2017, and has increased from 0.9 percent in fiscal year 2016.

Management’s Discussion and Analysis
(continued)

Employer and employee contributions received totaled \$53.0 million, an increase of 6.2 percent or \$3.1 million compared to 2016 received contributions of \$49.9 million. The total employer contributions increased by 6.9 percent from \$40.6 million in fiscal year 2016 to \$43.4 million in fiscal year 2017.



Total deductions from fiduciary net position increased by \$2.4 million from \$71.3 million in 2016 to \$73.7 million in 2017. Member retirement benefit payments of \$72.5 million in 2017 make up the majority of total deductions and increased by \$2.2 million or 3.1 percent from \$70.4 million in 2016. The number of retired members and beneficiaries receiving a benefit payment increased 4.1 percent from 1,039 to 1,082 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 \$274.8 million and \$290.1 million, respectively. The net position as a percentage of total pension liability as of June 30, 2017, and June 30, 2016, was 83.2 percent and 81.4 percent, respectively. The net pension liability as a percentage of covered payroll has decreased from 271.1 percent in 2016 to 246.9 percent in fiscal year 2017. The covered employee payroll increased from \$107.0 million in 2016 to \$111.3 million in 2017.

	2017	2016
Net Pension Liability (in millions)	\$274.8	\$290.1
Net Pension as Percentage of TPL	83.2%	81.4%
Covered Employee Payroll (in millions)	\$111.3	\$107.0
Net Pension Liability as Percentage of Covered Employee Payroll	246.9%	271.1%

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 Police Officers Retirement System increased 7.5 percent, resulting in a total net position value of \$1,365.8 million, reflecting an increase of \$95.5 million over fiscal year 2016.

Total assets as of June 30, 2017, were \$1,388.8 million, representing an increase of \$100.1 million, or 7.8 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 \$1,364.8 million in fiscal year 2017 as compared to \$1,268.1 million in fiscal year 2016.

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

Management's Discussion and Analysis

(continued)

Summary Statement of Fiduciary Net Position

Assets	<u>2017</u>	<u>2016</u>	<u>Difference</u>	<u>Percentage of Change</u>
Total cash and investments	\$1,364,821,763	\$1,268,051,495	\$96,770,268	7.6%
Cash collateral, securities lending	15,575,860	12,294,528	3,281,332	26.7%
Capital assets, net	0	272	(272)	-100%
Total receivables	<u>8,364,534</u>	<u>8,365,851</u>	<u>(1,317)</u>	-0.0%
Total assets	1,388,762,157	1,288,712,146	100,050,011	7.8%
Liabilities				
Purchase of investments	(4,113,434)	(3,857,400)	(256,034)	6.6%
Securities lending collateral	(15,575,860)	(12,294,528)	(3,281,332)	26.7%
Accounts payables and others	<u>(3,228,603)</u>	<u>(2,170,505)</u>	<u>(1,058,098)</u>	48.7%
Total liabilities	(22,917,897)	(18,322,433)	(4,595,464)	25.1%
Net position restricted for pensions	<u>\$1,365,844,260</u>	<u>\$1,270,389,713</u>	<u>\$95,454,547</u>	<u>7.5%</u>

Net Position for Current and Prior Fiscal Year

Fiscal Year	Ending Balances (millions)	Net change in dollars (millions)	Net Change in Percent
2017	1,365.8	95.4	7.5%
2016	1,270.4	(10.5)	-0.8%

Total liabilities as of June 30, 2017, were \$22.9 million, representing an increase of \$4.6 million, or 25.1 percent, over the previous year. The increase in total liabilities is the result of an increased level of securities lending activity and over 134 percent increase in the accrued liabilities, including the year-end accrual for management fees.

	<u>2017</u>	<u>2016</u>	<u>Difference</u>	<u>Percentage of Change</u>
Accrued Liabilities	\$1,844,300	\$787,109	\$1,057,191	134.3%

Securities lending cash collateral increased by \$3.3 million or 26.7 percent due to an increase in activities in the securities lending program. A separate account structure was implemented in fiscal year 2015 to replace a collective investment pool.

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

Management's Discussion and Analysis

(continued)

Summary of Additions and Deductions

Additions	2017	2016	Difference	Percentage of Change
Employer Contributions	\$43,381,151	\$40,646,884	\$2,734,267	6.7%
Plan Member Contribution	9,631,618	9,324,066	307,552	3.3%
Net income from investments	116,051,427	10,718,655	105,332,772	982.7%
Net income from securities lending	<u>47,923</u>	<u>45,373</u>	<u>2,550</u>	5.6%
Total Additions	169,112,119	60,734,978	108,377,141	178.4%
Deductions				
Benefit payments	\$72,534,389	\$70,352,623	\$2,181,766	3.1%
Refunds	641,609	397,188	244,421	61.5%
Administrative expense	<u>481,574</u>	<u>510,544</u>	<u>(28,970)</u>	-5.7%
Total deductions	<u>73,657,572</u>	<u>71,260,355</u>	<u>2,397,217</u>	3.4%
Net increase/(decrease)	<u>\$95,454,547</u>	<u>(\$10,525,377)</u>	<u>\$105,979,924</u>	<u>1006.9%</u>

Additions and Deductions. Total additions to the retirement fund consist of contributions from employers and active members and changes in the value of assets. Total additions increased by \$108.4 million or 178.4 percent in fiscal year 2017 attributed primarily to \$105.3 million, or 982.7 percent, 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 \$53.0 million. This was an increase of \$3.1 million when compared with the activity of fiscal year 2016. The employer contributions for fiscal year 2017 increased by 6.7 percent due primarily to an increase in the employer contribution rate from 37.9 percent to 38.9 percent of salary. Employee contributions increased by 3.3 percent due to merit and 1.0 percent COLA increase.

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 year. Investment returns were higher for fiscal year 2017 than 2016 reflecting favorable returns in the capital markets. Net investment income increased from \$10.7 million in fiscal year 2016 to \$116.1 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 9.3 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 \$73.7 million, an increase of \$2.4 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 1,082 from 1,039 in fiscal year 2016. Benefit payments also increased due to a cost-of-living increase of 1.0 percent, and higher average benefits for new retirees. Refunds reflected a 61.5 percent increase due to higher employee turnover or separation in the fiscal year.

Participant Counts	2017	2016
Actives	1,329	1,319
DROP members	57	75
Terminated vested	63	47
Retiree in payment status	<u>1,082</u>	<u>1,039</u>
Total	<u>2,531</u>	<u>2,480</u>

Management’s Discussion and Analysis
(continued)

An actuarial valuation is performed annually by Cheiron. The actuarial value of the assets as of the last valuation on June 30, 2017, was \$1,394.3 million, while actuarial liabilities as of the same period were \$1,640.7 million. As of June 30, 2017, the date of the most recent actuarial valuation, the funded ratio of the system was 85.0 percent. This was a decrease of 0.4 percent from the July 1, 2016, valuation funded ratio of 85.4 percent. The combination of liabilities, investment results, and member and employer contributions over the last year led the funding ratio to decrease. Under GASB 67 calculation, using the December 31, 2016, data rolled forward to June 30, 2016, the plan fiduciary net position as a percentage of the total pension liability was 83.2 percent. It increased from 81.4 percent in fiscal year 2016 primarily as a result of the 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 \$1,640.7 million and \$1,560.5 million, respectively.

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 Administration Agency, 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/.

(Dollars in millions)	2017	2016
Actuarial Accrued Liability	\$1,640.7	\$1,560.5
Actuarial Value of Assets	<u>1,394.3</u>	<u>1,333.2</u>
Unfunded Actuarial Liability	<u>246.4</u>	<u>227.3</u>
Funded Ratio	85.0%	85.4%
Total Pension Liability	\$1,640.7	\$1,560.5
Plan Fiduciary Net Position	<u>1,365.8</u>	<u>1,270.4</u>
Net Pension Liability	<u>274.8</u>	<u>\$290.1</u>
Funding Ratio	83.2%	81.4%

Basic Financial Statements

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	\$2,227,097	
Cash collateral received for securities on loan	15,575,860	
Short-term investments	<u>117,164,564</u>	
Total cash and short-term investments		\$134,967,521

Receivables

Accounts receivable	3,078,309	
Accrued interest and dividends	2,308,507	
Investment proceeds and other receivables	<u>2,977,718</u>	
Total receivables		8,364,534

Investments, at fair value

Common and preferred stock	137,217,681	
Fixed income		
Asset-backed securities	77,199,380	
Corporate and other bonds	70,481,535	
U.S. Government obligations	53,688,136	
Pooled and mutual funds	<u>906,843,370</u>	
Total investments		1,245,430,102

Total assets		1,388,762,157
--------------	--	---------------

Current Liabilities

Investment purchases and other liabilities	4,113,434	
Cash collateral received for securities on loan	15,575,860	
Accounts payable and accrued expenses	3,183,616	
Compensated absences, short-term	25,071	

Noncurrent Liabilities

Compensted absences, long-term	<u>19,916</u>	
Total liabilities		<u>22,917,897</u>

Net position restricted for pensions**\$1,365,844,260**

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	\$43,381,151	
Plan members	<u>9,631,618</u>	
Total contributions		\$53,012,769
Investment income from investment activities		
Net appreciation in fair value of investments	114,188,180	
Interest and other investment income	11,678,520	
Dividends	<u>4,307,154</u>	
Total investment income	130,173,854	
Investment activity expense		
Management fees	(13,804,519)	
Custodial fees	(74,160)	
Consulting fees	(13,791)	
Allocated administration expense	<u>(229,957)</u>	
Total investment expense	<u>(14,122,427)</u>	
Net income from investment activities		116,051,427
Securities lending activities		
Total Securities lending income	141,408	
Total securities lending expense	<u>(93,485)</u>	
Net income from securities lending activities		<u>47,923</u>
Total net investment income		116,099,350
Total additions		169,112,119
Deductions		
Annuity benefits	67,080,670	
Disability benefits	1,284,675	
Survivor benefits	4,169,044	
Refunds of employee contributions	641,609	
Administrative expense	<u>481,574</u>	
Total deductions		<u>73,657,572</u>
Net increase		95,454,547
Net position restricted for pensions		
Beginning of fiscal year		<u>1,270,389,713</u>
End of fiscal year		<u>\$1,365,844,260</u>

See accompanying notes to financial statements.

Notes on Financial Statements

The Fairfax County Police Officers Retirement System is a legally separate single-employer defined benefit pension plan established under the Code of Virginia to provide defined pension benefits to certain Fairfax County, Virginia ("County") police. As such, the System is considered part of the 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 basic 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 trade date. These transactions are not finalized until the settlement date, which occurs approximately three business days after the trade date. The amounts of trade receivables and payables are shown as receivables and payables on the Statement of Fiduciary Net Position. Cash received as collateral on securities lending transactions and investments made with such cash are reported as assets along

with a related liability for collateral received. The fair values of private investments and direct real estate are 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 changes 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.

Notes on Financial Statements
(continued)

Compensated Absences	
FY 2017 Beginning Balance	\$39,533
Leave Earned	29,560
Leave Used	24,106
FY 2017 Ending Balance	44,987
Current	25,071

Note 2. Summary of Plan Provisions

A. Plan Description and Provision.

The 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. The general provisions of the Police Officers Retirement System are as follows:

Membership:

The plan covers County police officers who are not covered by other plans of the County or the Virginia Retirement System. Members sworn before January 1, 2013, are members of Plan A. Members sworn on or after January 1, 2013, are members of Plan B.

Contribution Rate:

The member contribution rate is set by the County Ordinance and is currently 8.65 percent of base salary. The County contribution rate is set by the actuarial process and was 38.98 percent for fiscal year 2017. Police Officers do not participate in Social Security.

Benefit:

The benefit is 2.8 percent of average final compensation (highest consecutive three years) multiplied by creditable service including sick leave; and it is then increased by 3.0 percent. Plan B members have a cap of 2,080 hours of sick leave that will count towards retirement service credit.

Benefit Limit:

The benefit is 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 amount in excess of the Section 415 limit.

Normal Retirement:

To be eligible for normal retirement, an individual must meet the following criteria: (a) if employed before July 1, 1981; attained the age of 55 or completed 20 years of service, or (b) if employed on or after July 1, 1981; attained the age of 55 or completed 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 sworn 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.

Deferred Retirement Option Program (DROP):

Those eligible for normal retirement may enter DROP for a period of 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 B members who enter DROP may use a maximum of 2,080 hours of sick leave towards retirement service credit.

Early Retirement:

A member is eligible for early retirement upon attaining at least 20 years of creditable service.

Deferred Vested Retirement:

Deferred vested retirement is available for vested members (vesting is at 5 years of service) who leave their contributions in the System when they terminate employment. At age 55, these members are entitled to their normal retirement benefit based on service with the Police Department.

Service-Connected Disability Retirement:

Service-connected disability retirement is available for members, regardless of their length of service, who become disabled as a result of a job-related illness or injury. Benefits for total disability are 66.67 percent of the salary, reduced by any Workers' Compensation benefits. These benefits continue during the existence of the disability.

Notes on Financial Statements

(continued)

Non-Service Connected Disability Retirement:

Non-service connected 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: An automatic monthly benefit is payable to the member's spouse and children. This benefit equals \$2,309.28 for the spouse or surviving handicapped child (if there is no spouse), plus each eligible child receives \$923.71 up to a maximum total family benefit of \$4,618.56 (these benefits are indexed to inflation). If the death occurred in the line of duty, the spouse or surviving handicapped child (if there is no spouse) may elect to receive 66.67 percent of the member's regular salary at the time of death in lieu of the automatic benefits.

If death occurs after retirement: In addition to the automatic benefit detailed above, at the time the member retires, the plan provides for the member to elect survivor benefit options for the Surviving Spouse or a Handicapped Child at 100 percent, 66.67 percent or 50.0 percent of the retiree's benefit.

Cost of Living Benefit:

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

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

B. Board of Trustees.

Seven members serve on the Fairfax County Police Officers Retirement System. Three of the members are citizens appointed by the Fairfax County Board of Supervisors. Two of the members are elected by Fairfax County Government Employees, and one of the members is elected by retiree representatives. The Director of Finance also serves as an Ex Officio member.

C. Membership.

At June 30, 2017, the date of the latest actuarial valuation, membership in the System consisted of:

Retirees and beneficiaries receiving benefits	1,082
Terminated plan members entitled to but not yet receiving benefits	63
Deferred Retirement Option Program (DROP) participants	57
Active plan members	<u>1,329</u>
Total	<u>2,531</u>

D. Deferred Retirement Option Program.

Members eligible for normal retirement may elect to enter the DROP. As a DROP member, he or she will 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. 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%, 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 \$7.2 million.

E. Contributions.

The contribution requirements of the System's members are established and may be amended by County ordinances. Member contributions are based on 8.65 percent of compensation for the year ended June 30, 2017. The County is required to contribute at an actuarially determined rate; the rate for the year ended June 30, 2017, was 29.63 percent of annual covered payroll. The decision was made to commit additional funding and a rate of 38.98 percent was adopted for fiscal year 2017. Total contributions for the fiscal year ended June 30, 2017, amounted to \$53.0 million.

Notes on Financial Statements

(continued)

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 \$73.7 million.

Note 3. Investments

A. Investment Policy.

The authority to establish the System is set forth in Chapter 303 of the Acts of Assembly (law of the Commonwealth of Virginia). Section 26-45.1 of the Code of Virginia (Code), and updated by Section 51.1-803 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's Board of Trustees has adopted a Statement of Investment Objectives and Policy which establishes a broad set of investment objectives, guidelines, risk tolerance and performance standards for the assets of the System. The Board of Trustees has the authority to amend the investment policy. The Board recognizes that investing in worldwide capital markets inherently entails the assumption of risk. The Board believes that part of the risk involved in managing the System's assets can be reduced by investing in diversified, lowly-correlated asset classes and employing different philosophies and investment management styles. The Board has selected a long-term strategic asset allocation strategy which provides a high degree of diversification, maintains appropriate asset coverage of plan liabilities, and also optimizes investment return. Investment decisions for these assets are made by the Board of Trustees or investment managers selected by the Board. The Board hires each of its investment advisory firms on the basis of its specific area of expertise as well as its fit with the total risk and return objectives of the System. Each manager exercises investment discretion

around specifically mandated quality, concentration, benchmark and performance guidelines, and practices active risk controls in order to achieve the System's investment expectations.

The following was the System's adopted asset allocation policy as of June 30, 2017. Our asset allocation policy commonly exceeds 100% 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	17.0%
International Equities	12.0%
Fixed Income	30.0%
Real Assets	8.0%
Alternative	37.0%
Risk Parity	30.0%

B. Concentrations.

For the most part, the overall investment policy does not identify a specific level of credit risk, interest rate risk or foreign currency risk. That is addressed at the individual account level. The guideline for "concentration of risk" is system-wide, however. The System does not hold investments (other than U.S. Government and U.S. Government-guaranteed obligations) in any one security that represent 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 and the custodian provides insurance for all custody assets.

Notes on Financial Statements

(continued)

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 9.3 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.

	6/30/2017	Fair Value Measurements Using		
		Quoted Prices in Active Markets for Identical Assets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3
Investments by Fair Value Level				
Asset-backed securities	\$77,199,380	\$ -	\$77,199,380	\$ -
Convertible or exchangeable securities	5,443,674	-	5,443,674	-
Convertible securities	127,563	127,563	-	-
Corporate and other bonds	64,910,298	-	64,910,298	-
Equity	133,573,884	133,573,884	-	-
Natural resources	3,352,347	-	-	3,352,347
Preferred securities	291,450	-	291,450	-
Short-term investments	116,452,146	-	4,063,339	112,388,807
U.S. Government obligations	53,688,136	-	53,688,136	-
Total investment by fair value level	<u>\$455,038,878</u>	<u>\$133,701,447</u>	<u>\$205,596,277</u>	<u>\$115,741,154</u>
Investment measured at the net asset value (NAV)				
Alternative investments	\$184,645,344			
Fixed income	93,647,567			
International equities	60,309,151			
Real assets	67,456,000			
Risk parity	363,296,758			
US equities	131,521,953			
Total investments measured at the NAV	<u>\$900,876,773</u>			
Total investments measured at fair value	<u>\$1,355,915,651</u>			

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

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

Notes on Financial Statements
(continued)

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 tables in the previous page show 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.

Investment Measured at NAV

	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Alternative investments	\$184,645,344	\$25,912,012	Monthly, Quarterly	60 days
Fixed income	93,647,567	36,494,467	Monthly, Semi-annual	10 - 90 days
International equities	60,309,151	-	Daily, Monthly;	1 - 15 days
Real assets	67,456,000	-	Daily	20 days
Risk parity	363,296,758	-	Monthly	3 - 15 days
US equities	<u>131,521,953</u>	<u>-</u>	Monthly, Quarterly	15- 90 days
Total investment measured at NAV	<u>\$900,876,773</u>	<u>\$62,406,479</u>		

Alternative Investments:

Global Macro: This type includes four hedge funds. The first one 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 funds has been determined using the NAV per share of the investments. The second one 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 third one focuses on China, investing in equity, credit, interest rate, currency and commodity products. The fund has monthly liquidity and 30 day notice period for redemptions. The fourth one 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.

Notes on Financial Statements

(continued)

Multi-strategy: This type includes two hedge funds. The first one uses quantitative and qualitative tools to optimize return per unit of volatility. The fair values of each of this hedge fund has been determined using the NAV per share of the investments. The fund has quarterly liquidity and 33 day notice period for redemptions. The second one focuses on acquiring minority equity stakes in institutionalized hedge fund firms with assets under management in excess of \$1.0 billion.

Event Driven: This type includes two hedge funds. The first one focuses on global long/short credit and event driven positions. The fair values of the investments in this type have been determined using NAV per share (or its equivalent) of the investments. The fund has quarterly liquidity and 65 day notice period for redemptions. The second one focuses on fundamental value investing across the capital structure. The fund is directionally agnostic and over time has been net long and opportunistically net short.

Fixed Income:

This type includes two funds and two private debt funds. The first one is a directional opportunistic global credit fund investing in public and private credit across commercial real estate, residential real estate, corporate, other. The fund invests principally in performing, stressed or distressed securities and loans of any type and within any sector across the global fixed income markets. The second one focuses on distressed residential and commercial real estate related debt and equity securities. The fund seeks to take advantage of global financial institutions which are deleveraging to comply with widespread regulatory reform and continuing to make non-economic asset sales decisions. The two private debt funds are middle market direct lending funds that negotiate senior secured loans to borrowers that are too small to attract the attention of conventional banks and lenders. These investments cannot be redeemed. Instead, the nature of the investments in these private debt funds are that distributions are received through the liquidation of underlying assets of the funds over four to five years. Loan payments are also distributed on a quarterly basis. The loans are held at book value unless a payment default has occurred.

International Equities:

This type includes two funds. The first one is an international small cap fund that uses a quantitative approach. In addition to traditional value measures such as price/earnings and price/book ratios, the firm also considers growth-related factors, such as price momentum and trends in analysts' earnings estimates, to target undervalued companies that have strong prospects for future outperformance. The fund has daily liquidity. The second one seeks long term capital appreciation by investing primarily in companies located in emerging market countries and opportunistically, in frontier market countries. The portfolio typically holds 30-50 companies within global emerging markets. Country and sector exposures are primarily a by-product of individual stock selection. The fund has monthly liquidity and 15 day notice period for redemptions.

Real Assets:

This type includes a fund that focuses on publicly traded REITs, listed infrastructure, commodities, MLPs, natural resource equities (including timber and agriculture), precious metals, TIPS, and floating rate/bank loans. The strategy will set long term strategic allocations to those asset classes with broad ranges and the portfolio will be tactically reviewed on a quarterly basis.

Risk Parity:

This type includes three funds that invest 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.

Notes on Financial Statements
(continued)

U.S. Equities:

This type includes three hedge funds. The first one is a bundled portable alpha mandate which uses futures on the S&P 500 Index and ports it to a fundamental global macro/fixed income fund. The fund has exposure to interest rates, Foreign exchange, equity indices and commodities. However, the majority of its exposure is generally to interest rates. It differs from the average macro fund in that it will also have exposure (albeit very limited) to credit (both IG & HY), mortgages (Residential Mortgage Backed Securities & Commercial Mortgage Backed Securities) and Asset-Backed Securities. The second one is a U.S. small cap deep value long/short equity fund. The team looks for companies with management or capital structure issues. They identify undervalued companies and then perform a fundamental value analysis to find catalysts that may spark change in the company. The Fund will then, on its own or together with other

members of a group, acquire a controlling interest in the company and then force management to enact the changes they feel are necessary for a turnaround. The fair values of each of these hedge funds has been determined using the NAV per share of the investments. The fund has quarterly liquidity and 90 day notice period for redemptions. The third one is based on the fundamental concepts of value (buying securities that are cheap and selling those that are expensive) and momentum (buying securities that are getting better and selling those that are getting worse) investing. The fund applies both concepts through the use of numerous proprietary indicators across many sectors, while generally giving more weight to value than momentum. This is a long/short strategy that maintains a net 100% invested position by investing 130% of portfolio assets in long positions and 30% in short positions. The fund has monthly liquidity and 15 day notice period for redemptions.

E. Quality Ratings.

The System's investment quality ratings at June 30, 2017, for the separately managed fixed income accounts, were as follows:

Type of Investment	Fair Value	Ratings	Percentage of Fixed
US Government obligations	\$53,688,136		26.7%
Corporate and other bonds	1,680,769	AAA	0.8%
	6,092,484	AA	3.0%
	1,534,664	A	0.8%
	7,297,131	BBB	3.6%
	23,871,641	BB	11.9%
	17,243,139	B	8.6%
	2,709,768	CCC	1.3%
	33,300	C	0.0%
	3,406,593	D	1.7%
	6,612,046	NR	3.3%
	Asset-backed securities	24,121,442	AA
229,449		A	0.1%
2,483,412		BBB	1.2%
1,188,473		BB	0.6%
1,426,621		B	0.7%
5,741,430		CCC	2.9%
597,421		CC	0.3%
12,341,443		D	6.1%
<u>29,069,689</u>		NR	<u>14.4%</u>
Total fixed income	<u>\$201,369,051</u>		100.0%
Short-term investments			
Cash and cash equivalents	\$3,417,132	Unrated	
Police Enhanced STIF*	112,388,807	Unrated	
US Treasury bills	<u>1,358,625</u>	AA	
Total short-term investments	<u>\$117,164,564</u>		

*Short-term investment funds

As of June 30, 2017, the fixed income portfolio consisted of 48.2 percent invested in investment grade securities, 34.1 percent invested in securities rated below-investment-grade and 17.7 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.

Notes on Financial Statements

(continued)

F. Sensitivity to Interest Rate Risk.

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	\$53,688,136	6.6	26.7%
Corporate and Other Bonds	70,481,535	5.6	35.0%
Asset-backed Securities	<u>77,199,380</u>	<u>4.2</u>	<u>38.3%</u>
Total fixed income	<u>\$201,369,051</u>	<u>5.4</u>	<u>100%</u>
Short-term investments			
Cash and cash equivalents	\$3,417,132	0.0	
Police Enhanced STIF*	112,388,807	0.1	
US Treasury bills	<u>1,358,625</u>	<u>0.4</u>	
Total Short-term Investment	<u>\$117,164,564</u>		

*short-term investment funds

As of June 30, 2017, the System's overall fixed income portfolio option-adjusted duration was 5.4 years for the separately managed accounts. BCAG's established option-adjusted duration was 6.01 years.

G. Short-term Investments.

The short-term investments of \$117.2 million includes a position of \$112.4 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'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
Argentina Peso	\$ -	\$545,394	\$ -	\$545,394
Australian Dollar	179	-	5,226,933	5,227,112
Brazil Real	4	118,313	1,633,521	1,751,838
Canadian Dollar	22	67,022	1,637,663	1,704,707
Colombian Peso	-	678,429	-	678,429
Danish Krone	-	-	4,843,505	4,843,504
Euro Currency Unit	-10	63,319	20,561,147	20,624,456
Hong Kong Dollar	6	-	8,889,570	8,889,576
Indian Rupee	-	698,349	-	698,349
Indonesian Rupiah	-	39,268	-	39,268
Israeli Shekel	-	-	121,143	121,143
Japanese Yen	17,526	-	19,025,943	19,043,469
Malaysian Ringgit	-	17,254	-	17,254
Mexican Peso	-	2,142,364	1,643,556	3,785,919
Norwegian Krone	-	-	764,759	764,759
Polish Zloty	1	129,875	-	129,876
Pound Sterling	-	158,532	12,197,027	12,355,559
Singapore Dollar	-	333,818	531,169	864,987
South Korean Won	-	-	2,993,476	2,993,476
Swedish Krona	-	-	2,760,157	2,760,157
Swiss Franc	-3	-	4,939,949	4,939,946
Thailand Baht	-	-	389,968	389,968
Turkish Lira	<u>1</u>	<u>721,529</u>	<u>131,717</u>	<u>853,247</u>
	<u>\$17,725</u>	<u>\$5,713,466</u>	<u>\$88,291,203</u>	<u>\$94,022,394</u>

Notes on Financial Statements

(continued)

I. Derivative Financial Instruments.

In accordance with the Board's investment policies, the System regularly invests in derivative financial instruments in the normal course of its investing activities to enhance return on investment and manage exposure to certain risks within the System. The System also enters into derivative transactions to gain exposure to currencies and markets where derivatives are the most cost-effective instrument. Derivative instruments are financial contracts whose values depend on the values of one or more underlying assets, reference rates or financial indices. During fiscal year 2017, the System had exposure to various derivatives including asset-backed securities, collateralized mortgage obligations, exchange-traded futures contracts, forward currency contracts, options, swaps, and floating rate securities. Some securities, such as structured notes, can have derivative-like characteristics where the return may be linked to one or more indexes. 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 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 the following three types of derivative financial instruments: futures, swaps and currency forwards. Futures, swaps and currency forwards contracts provide the System with the opportunity to build passive benchmark positions, manage portfolio durations in relation to various benchmarks, adjust portfolio yield curve exposure, enhance returns, and gain market exposure to various indices in a more efficient way and at lower transaction costs. Credit risks depend on whether the contracts are exchange-traded or exercised over-the-counter. Market risks arise from adverse changes in market prices, interest rates and foreign exchange rates.

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

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.

Notes on Financial Statements

(continued)

The notional value of the System's investment in futures contracts at June 30, 2017, was as follows:

Types of Futures	Base Exposure	Notional Cost
Cash and cash equivalents- Short	(\$63,920,121)	(\$63,715,027)
Equity -Long	153,649,235	154,196,061
Fixed income securities- Long	<u>87,349,500</u>	<u>87,381,170</u>
Total	<u>\$177,078,614</u>	<u>\$177,862,204</u>

Swaps.

The System enters into several types of swap contracts, in which two counterparties agree to exchange one stream of payments for another over some agreed to period of time. Swaps are used to manage risk and enhance returns. All counterparties are rated A or better. The following is the information on the System's swap contracts outstanding at June 30, 2017:

Fixed income securities	Base Exposure	Fair Value
Cleared credit default swaps	\$2,094,510	\$2,051,312

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 market value of a specific currency. A forward foreign currency exchange contract is a commitment to purchase or sell a foreign currency at a future date and at a negotiated price. The credit risk of currency contracts that are exchange-traded lies with the clearinghouse of the exchange where the contracts are traded. The credit risk of currency contracts traded over-the counter lies with the counterparty, and exposure usually is equal to the unrealized profit on in-the money contracts. All counterparties are rated A or better. The market risk in foreign currency contracts is related to adverse movements in currency exchange rates. The following is the 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	(\$1,060,000)	(\$1,216,733)	(\$37,589)
Japanese Yen	(128,025,000)	(1,141,666)	(164)
Pound Sterling	(72,000)	<u>(93,584)</u>	<u>(844)</u>
		<u>(\$2,451,983)</u>	<u>(\$38,597)</u>

Notes on Financial Statements

(continued)

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 sheets 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 year end, 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 than last year to equity repurchase securities.

At June 30, 2017, cash collateral had a weighted-average maturity of one day. The maturities of the resulting investments generally match the maturities of the securities lending arrangements. While the System bears no credit 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	\$7,389,744	\$7,542,050	
Corporate and other bonds	525,171	540,750	
Common and preferred stocks	7,310,681	7,493,060	
Lent for Securities Collateral			
US Government	6,311,321		\$6,451,725
Common and Preferred Stock	<u>10,205,548</u>		<u>11,157,260</u>
Total Securities lent	<u>\$31,742,465</u>	<u>\$15,575,860</u>	<u>\$17,608,985</u>

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.

Notes on Financial Statements

(continued)

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	\$1,640,669,401
Plan fiduciary net position	<u>1,365,844,260</u>
Net pension liability	<u>\$274,825,141</u>
Plan fiduciary net position as a percentage of the total pension liability	83.2%

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 13, 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, 2016, was 29.63 percent of annual covered payroll. The decision was made to commit additional funding and a rate of 38.98 percent was adopted for fiscal year 2017. Since the PORS'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 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. Twenty 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.

Notes on Financial Statements
(continued)

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 2015 actuarial valuation. The administrative

expenses attributable to current actives were assumed to equal 0.40 percent of covered payroll. The inflows to the plan were assumed to continue at the average aggregate rate for the 2016 active population of 8.65 percent of payroll and County contributions were projected at 38.98 percent for fiscal year 2017, with continued increases to 41.78 percent to be contributed until 2033. After that time the County contribution was assumed to drop to the normal cost plus expenses (18.38 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 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		
	1% Decrease 6.25%	Discount Rate 7.25%	1% Increase 8.25%
Net Pension Liability	\$505,192,335	\$274,825,141	\$86,592,564
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	73.0%	83.2%	94.0%

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.

Required Supplementary Information (Unaudited)

Schedule of Changes in the Net Pension Liability and Related Ratios				
Year Ended June 30				
	2017	2016	2015	2014
Total Pension Liability				
Service cost	\$29,051,739	\$30,913,269	\$30,389,897	\$30,858,609
Interest	112,637,566	110,362,493	106,739,905	102,492,490
Changes in benefit terms	-	-	-	-
Differences between expected and actual experience	11,638,382	(30,820,874)	(11,515,790)	-
Changes in assumptions	-	9,895,400	-	-
Benefit payments, including refunds of member contributions	<u>(73,175,998)</u>	<u>(70,749,811)</u>	<u>(67,757,160)</u>	<u>(62,287,705)</u>
Net Change in Total Pension Liability	\$80,151,689	\$49,600,477	\$57,856,852	\$71,063,394
Total Pension Liability - beginning	<u>1,560,517,712</u>	<u>1,510,917,235</u>	<u>1,453,060,383</u>	<u>1,381,996,989</u>
Total Pension Liability - ending (a)	<u>\$1,640,669,401</u>	<u>\$1,560,517,712</u>	<u>\$1,510,917,235</u>	<u>\$1,453,060,383</u>
Plan Fiduciary Net Position				
Contributions - employer	\$43,381,151	\$40,646,884	\$37,867,181	\$34,178,960
Contributions - member	9,631,618	9,324,066	8,889,931	10,091,331
Net investment income	116,099,350	10,764,028	41,601,153	176,683,610
Benefit payments, including refunds of member contributions	(73,175,998)	(70,749,811)	(67,757,160)	(62,287,705)
Administrative expenses	<u>(481,574)</u>	<u>(510,544)</u>	<u>(443,230)</u>	<u>(431,064)</u>
Net Change in Plan Fiduciary Net Position	\$95,454,547	(\$10,525,377)	\$20,157,875	\$158,235,132
Plan Fiduciary Net Position - beginning	<u>1,270,389,713</u>	<u>1,280,915,090</u>	<u>1,260,757,215</u>	<u>1,102,522,083</u>
Plan Fiduciary Net Position - ending (b)	<u>\$1,365,844,260</u>	<u>\$1,270,389,713</u>	<u>\$1,280,915,090</u>	<u>\$1,260,757,215</u>
Net Pension Liability (Asset) - ending (a)-(b)	<u>\$274,825,141</u>	<u>\$290,127,999</u>	<u>\$230,002,145</u>	<u>\$192,303,168</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	83.2%	81.4%	84.8%	86.8%
Covered Employee Payroll	<u>\$111,290,793</u>	<u>\$107,021,811</u>	<u>\$102,844,055</u>	<u>\$100,912,194</u>
Net Pension Liability as a Percentage of Covered Employee Payroll	246.9%	271.1%	223.6%	190.6%

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 Police Officers Retirement System.

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

Required Supplementary Information
(continued)

Schedule of Net Pension Liability

Year Ended June 30

	2017	2016	2015	2014
Total Pension Liability	\$1,640,669,401	\$1,560,517,712	\$1,510,917,235	\$1,453,060,383
Plan Fiduciary Net Position	<u>1,365,844,260</u>	<u>1,270,389,713</u>	<u>1,280,915,090</u>	<u>1,260,757,215</u>
Net Pension Liability	<u>\$274,825,141</u>	<u>\$290,127,999</u>	<u>\$230,002,145</u>	<u>\$192,303,168</u>
Plan Fiduciary Net Position as a Percentage of the Total Plan Liability	83.2%	81.4%	84.8%	86.8%
Covered Employee Payroll	\$111,290,793	\$107,021,811	\$102,844,055	\$100,912,194
Net Pension Liability as a Percentage of Covered Employee Payroll	246.9%	271.1%	223.6%	190.6%

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	9.3%
2016	0.9%
2015	3.4%
2014	16.2%

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 Covered Employee Payroll
2017	\$43,381,151	\$43,381,151	\$-	\$111,290,793	38.98%
2016	40,646,884	40,646,884	-	107,021,811	37.98%
2015	37,867,181	37,867,181	-	102,844,055	36.82%
2014	34,178,960	34,178,960	-	100,912,194	33.87%
2013	34,011,347	34,011,347	-	102,598,332	33.15%
2012	31,700,690	31,700,690	-	101,280,160	31.30%
2011	29,174,611	29,174,611	-	103,054,083	28.31%
2010	23,766,626	23,766,626	-	104,057,032	22.84%
2009	23,508,402	23,508,402	-	102,926,454	22.84%
2008	21,447,907	21,447,907	-	102,132,890	21.00%

Required Supplementary Information

(continued)

Notes to Schedule

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
<u>Key Methods and Assumptions Used to Determine Contribution Rates:</u>	
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	38.98%	8.65%
2016	37.98%	8.65%
2015	36.82%	8.65%
2014	33.87%	10%
2013	33.15%	10%
2012	31.30%	10%

July 2014 Member contribution rate decreased from 10% to 8.65%.

January 2013 Police officers sworn on or after January 1, 2013, will be automatically enrolled in Option B. The maximum of accrued sick leave is capped at 2,080 hours.

Other Supplementary Information

Schedule of Investment & Consultant Expenses

For the Year Ended June 30, 2017

Investment Activity Expenses		
Investment manager fees		\$13,804,519
Custodial fees		74,160
Consultant Expenses		
Consultant expenses		13,791
Allocated administration expense		<u>229,957</u>
Total investment and consulting expenses		<u>\$14,122,427</u>

Schedule of Administrative Expenses

June 30, 2017

Personnel services		
Salaries and wages	\$227,230	
Fringe benefits	<u>96,889</u>	
Total personnel services		324,119
Professional services		
Actuarial	34,391	
Audit	6,606	
Legal	<u>0</u>	
Total professional services		40,997
Communications		
Phone charges	4,698	
Printing, binding and copying	1,449	
Postage	<u>3,395</u>	
Total communications		9,542
Supplies		
Office supplies	<u>2,876</u>	
Total supplies		2,876
Other services and charges		
Board and staff travel and development	27,058	
Professional membership	1,134	
Professional Subscription	40	
Insurance	8,068	
Building rent	19,776	
Equipment	181	
Computer system	34,967	
Other operating	<u>12,816</u>	
Total other services and charges		<u>104,040</u>
Total Administrative Expenses		<u>\$481,574</u>



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 Police Officers 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 Police Officers 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.



Tysons Corner, Virginia
November 15, 2017



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



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/

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.

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 this year (as of the first quarter). 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.

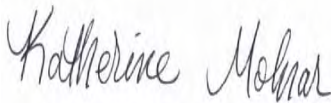
Police Officers Retirement System

The Police Officers Retirement System operates a balanced and diversified investment program with disciplined asset re-balancing to achieve strategic long-term goals. This disciplined investment process has been effective in achieving a long-term record of consistent asset growth.

For fiscal year 2017, investments provided a return of 10.0%, gross of fees (9.3%, net of fees). The System's annualized rates of return, gross of fees, were 4.8% (4.5%, net of fees) over the last three years and 8.0%, (7.7%, net of fees), over the last five years, 5.7%, (5.4%, net of fees), over the last ten years. The System's returns ranked in the 87th percentile of The Bank of New York Mellon universe of public plans in 2017, in the 73rd percentile for the latest 3-year period, in the 70th percentile for the last 5 years, and in the 38th percentile of public plans for the past 10 years.

During the past twelve months, we continue to focus on overall portfolio management, monitoring the financial markets and maintaining a high quality group of investment managers. AlphaSimplex Group was added to the Alternatives manager lineup replacing Systematica Investment Services. In addition, Solus Alternative Asset Management was added to the Alternatives manager lineup and Deutsche Asset Management was added to the Real Assets manager lineup. Oaktree Capital Management and The Vanguard Group were removed from the Fixed Income manager lineup.

Sincerely,



Katherine Molnar, CFA
Senior Investment Officer

Investment Section

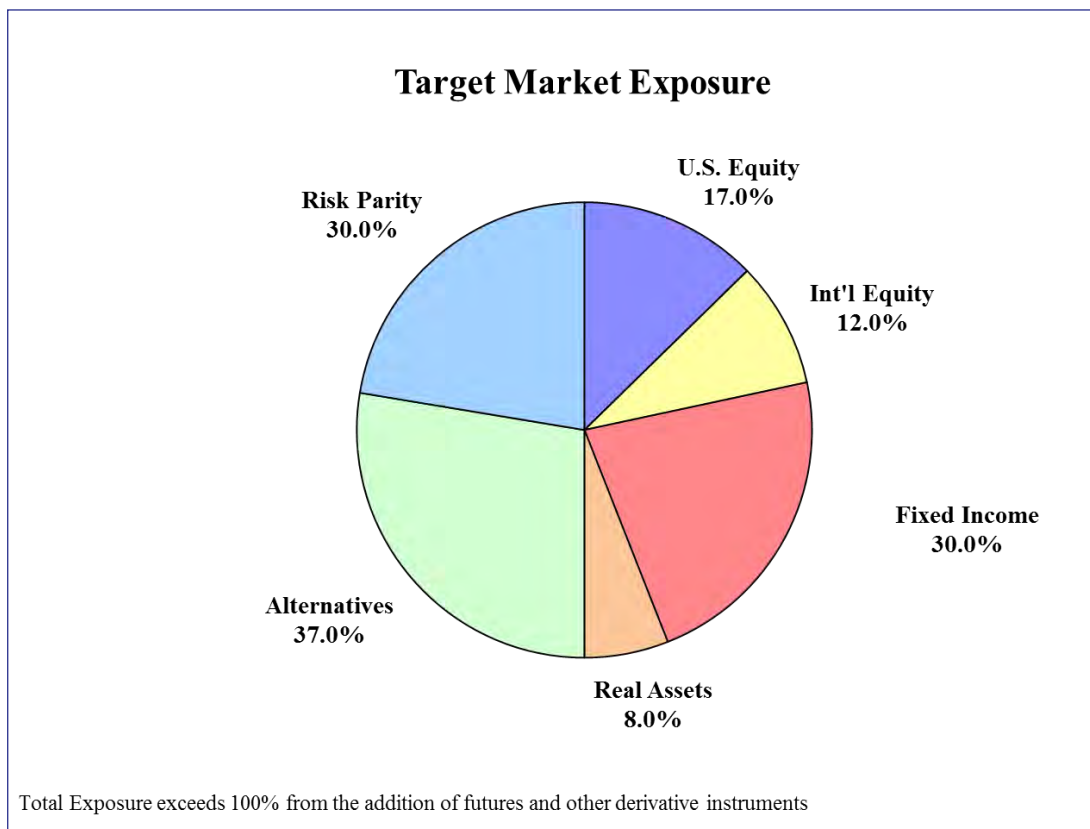
Investments by Category and Investment Manager **				
June 30, 2017				
Asset Class				% of Total
Manager	Investment Style	Total Fair Values	Portfolio	
U.S. Equities				
AQR Capital Management*	Small Cap Core	\$36,872,931	2.70%	
PIMCO StocksPlus PARS*	Enhanced S&P 500 Index	55,208,064	4.04%	
Starboard Value and Opportunity*	Small Cap Value Activist	39,440,959	2.89%	
International Equities				
Acadian Asset Management*	Developed Markets Small Cap	22,180,054	1.62%	
First Eagle Investment Management	Developed Markets Value	50,575,305	3.70%	
Sands Capital Management*	Emerging Markets	38,129,096	2.79%	
WCM Investment Management	Developed Markets Growth	57,038,520	4.18%	
Fixed Income				
DoubleLine Capital	Mortgage-Backed Securities	93,311,956	6.83%	
Loomis, Sayles & Company	High Yield Bonds	71,312,656	5.22%	
PIMCO BRAVO II*	Bank Recapitalization/Value	34,382,544	2.52%	
PIMCO Tactical Opportunities*	Directional Opportunistic Global Credit	29,201,132	2.14%	
Czech Asset Management*	Direct Lending	30,063,891	2.20%	
Parametric Portfolio Associates	TIPS	51,809,895	3.79%	
Real Assets				
Cohen & Steers Capital Management	Global Real Estate Securities	43,303,545	3.17%	
Deutsche Asset Management*	Multi-Real Asset	67,456,000	4.94%	
Alternatives				
AlphaSimplex Group*	Global Macro Absolute Return Fund	26,161,790	1.92%	
AQR Style Premia*	Global Macro Absolute Return Fund	58,663,375	4.29%	
BlueCrest Capital Management*	Multi-Strategy Fund	697,858	0.05%	
Bridgewater Pure Alpha*	Global Macro Absolute Return Fund	51,474,203	3.77%	
Dyal Capital Partners*	Multi-Strategy Fund	9,016,068	0.66%	
Emerging Sovereign Group*	Global Macro Absolute Return Fund	5,255,357	0.38%	
King Street Capital*	Event Driven	7,644,516	0.56%	
Solus Alternative Asset Management*	Event Driven	27,123,508	1.99%	
Risk Parity				
AQR Global Risk Premium*	Risk Parity	144,766,200	10.60%	
Blackrock Market Advantage*	Risk Parity	92,094,667	6.74%	
Bridgewater Optimal Portfolio*	Risk Parity	126,435,890	9.26%	
Short-term				
Parametric Portfolio Associates	Beta Manager	70,797,795	5.18%	
Cash Held at County Treasurer	Operating Cash Account	2,234,400	0.16%	
BNY Mellon Cash Investment Strategies	Plan Level Cash Accounts	<u>23,342,379</u>	<u>1.71%</u>	
Total Investments		<u>\$1,365,994,554</u>	<u>100.00%</u>	
*pooled fund				

Police Officers Retirement System – Allocation of Capital 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.

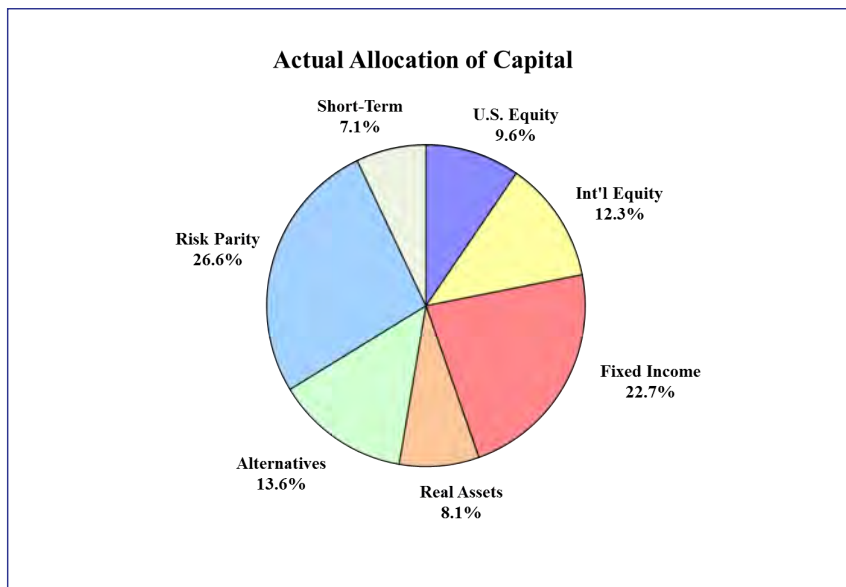
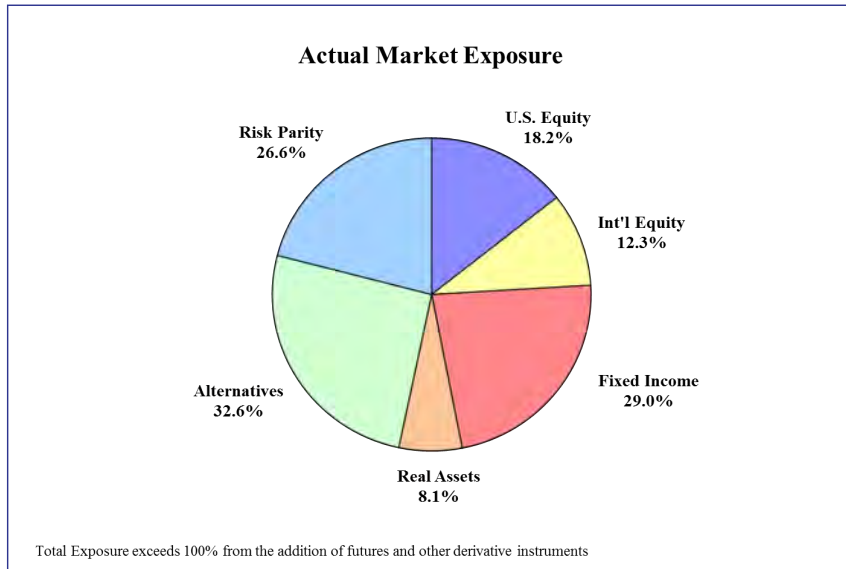
The pie chart below details the target asset mix, consistent with the achievement of the long-term objectives of the System, as of June 30, 2017.



Actual Asset Allocation as of June 30, 2017

The asset structure of Police Officers 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.

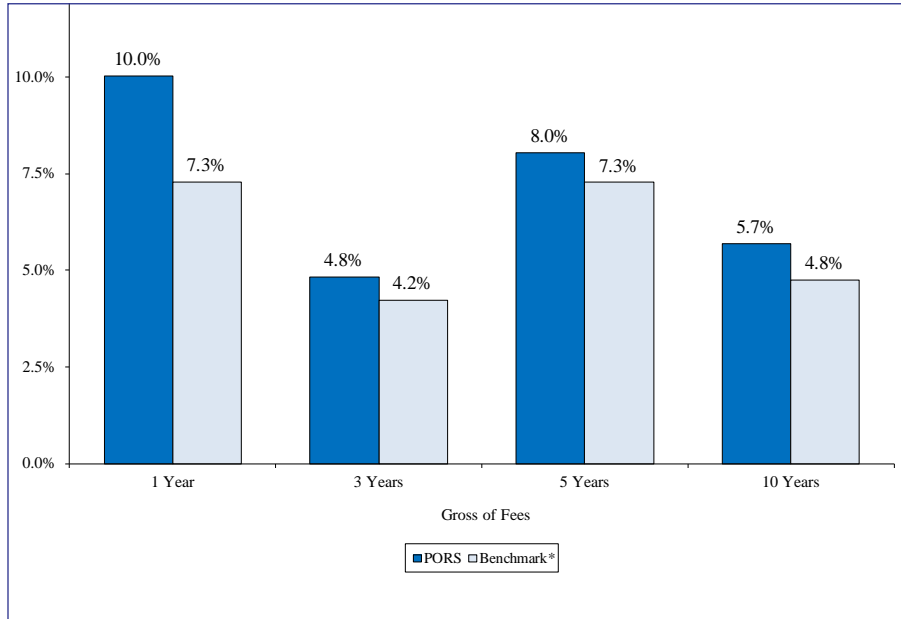
The pie chart below details the target asset mix, consistent with the achievement of the long-term objectives of the System, as of June 30, 2017.



Investment Results

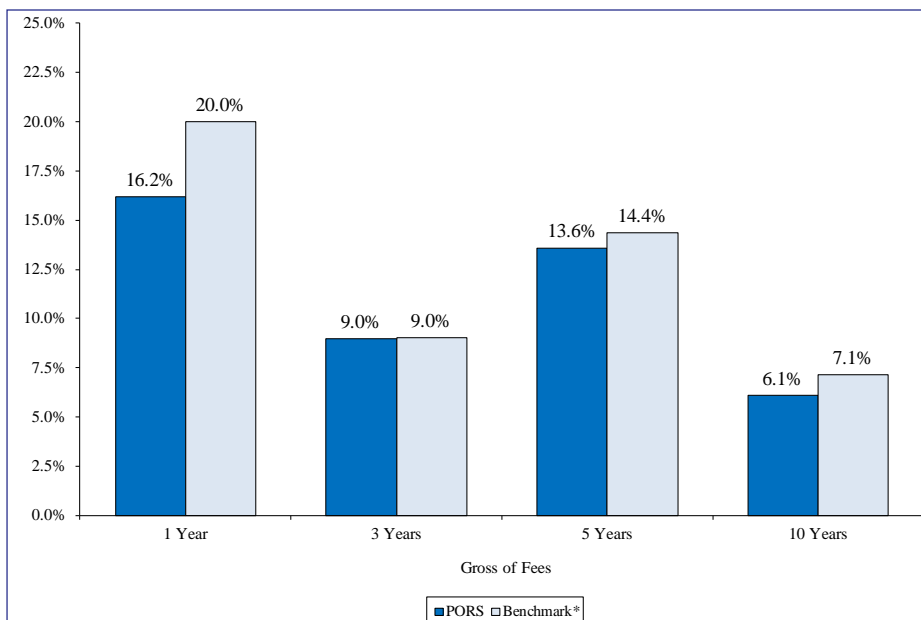
(Time weighted return, gross of fees)

Total Fund:



*Current Blended Benchmark. Current Benchmark: 30% Risk Parity Benchmark (25% MSCI AC World Index (Local), 75% Barclays Global Treasury 7-10 Year Index (Hedged), 75% Barclays World Government Inflation Linked Bond Index (Hedged), 25% Bloomberg Commodity Index -100% LIBOR 3 Month), 12% S&P 500, 5% R2000, 9.5% MSCI EAFE, 2.5% MSCI Emerging Markets, 25% BC Aggregate Bond Index, 5% B of A Merrill Lynch High Yield Master, 8% Real Assets Benchmark (33.3% EPRA/NAREIT Developed Index, 33.3% Dow Jones Brookfield Global Infrastructure Index, 33.3% Bloomberg Commodity Index), 3% LIBOR +3% (Benchmark has been revised through time)

U.S. Equity:

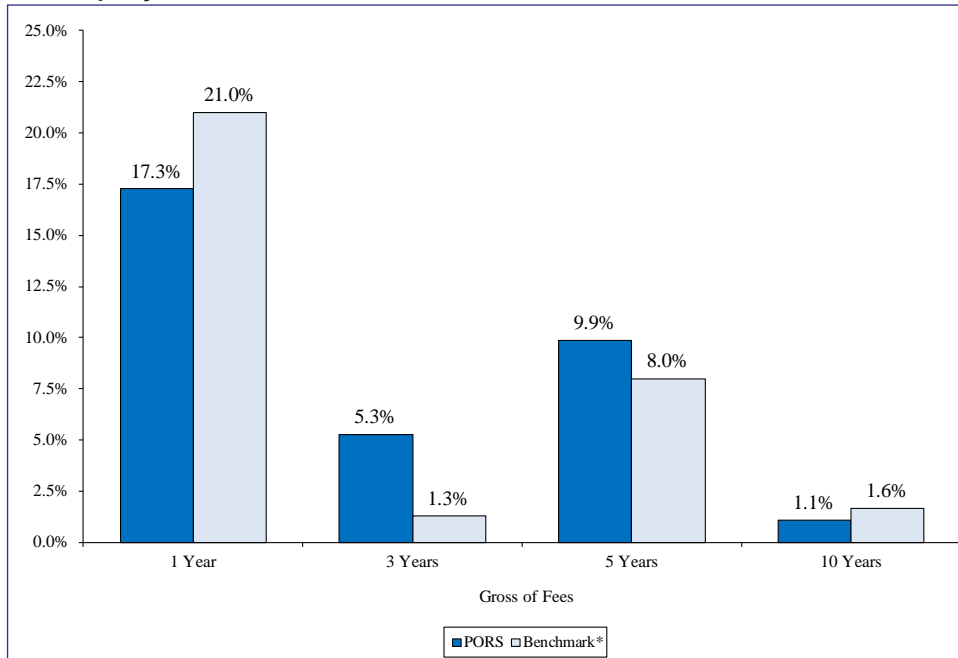


*Current Benchmark: 70% S&P 500, 30% Russell 2000 (Benchmark has been revised through time)

Investment Results

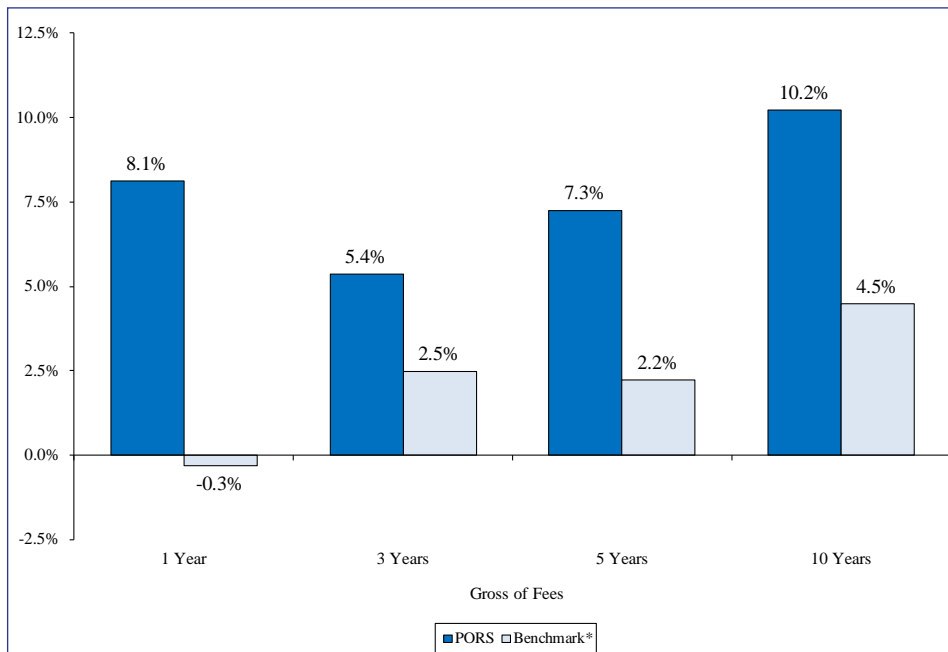
(Time weighted return, gross of fees)

International Equity:



*Current Benchmark: MSCI All Country World ex U.S. (Benchmark has been revised through time)

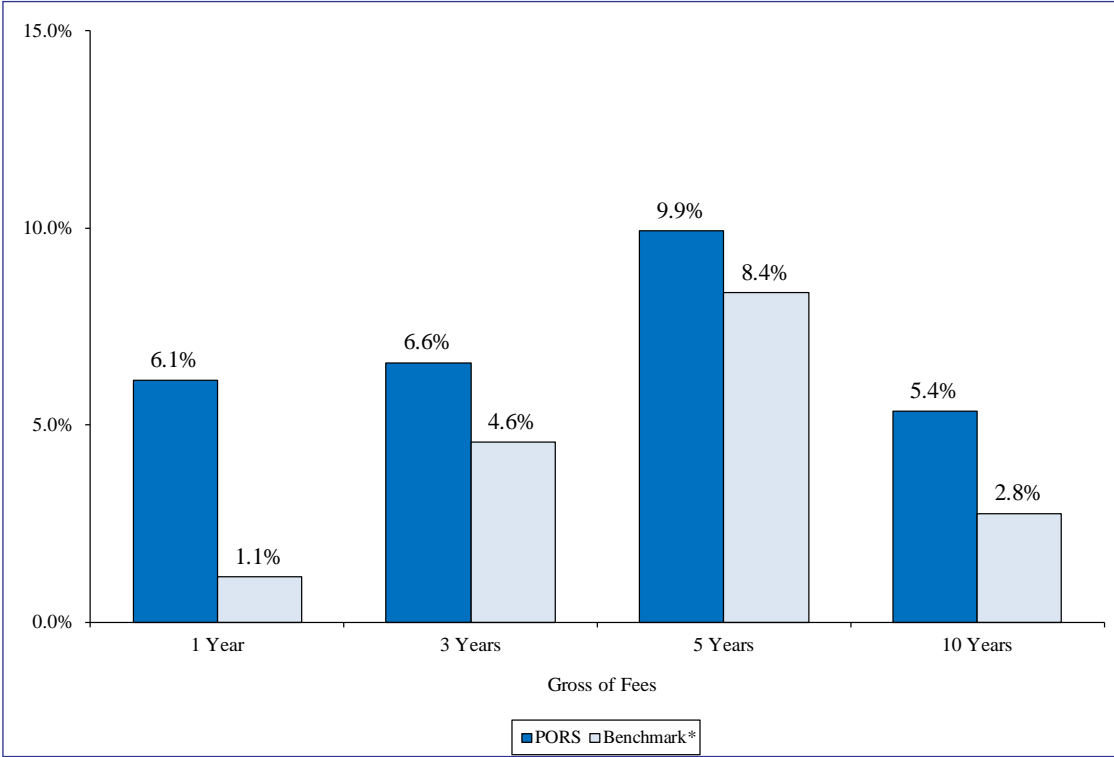
Fixed Income:



*Current Benchmark: Barclays Aggregate (Benchmark has been revised through time)

Investment Results (Time weighted return, gross of fees)

Real Estate:



*Current Benchmark: FTSE EPRA/NAREIT Developed Index (Benchmark has been revised through time)

Schedule of Ten Largest Equity & Fixed Income Holdings*				
Ten Largest Equity Holdings*				
No. Shares	Description	Cost	Fair Value	% of Total Portfolio
37,615	Nestle Sa	\$2,536,434	\$3,277,786	0.24%
6,500	Keyence Corp	1,610,673	2,854,307	0.21%
25,800	Csl Ltd	1,856,454	2,731,599	0.20%
24,865	Reckitt Benckiser Group Plc	2,184,542	2,514,107	0.18%
17,000	Chubb Ltd	1,335,695	2,471,460	0.18%
64,500	Tencent Holdings Ltd	416,592	2,306,862	0.17%
103,177	Compass Group Plc	1,869,956	2,171,153	0.16%
13,350	Canadian Pacific Railway Ltd	1,653,933	2,146,814	0.16%
102,060	Experian Plc	1,762,596	2,087,991	0.15%
16,716	Accenture Plc	<u>1,929,761</u>	<u>2,067,435</u>	<u>0.15%</u>
	Total	<u>\$17,156,636</u>	<u>\$24,629,514</u>	<u>1.80%</u>

Ten Largest Fixed Income Holdings*				
Par Value (in local values)	Description	Cost (in U.S. Dollars)	Fair Value (in U.S. Dollars)	% of Total Portfolio
12,257,017	U.S. Treas-CPI Inflation Index, 2.000%, 01/15/2026	\$13,957,915	\$13,735,336	1.01%
10,069,299	U.S. Treas-CPI Inflation Index, 0.625%, 07/15/2021	10,375,788	10,319,521	0.76%
7,683,621	U.S. Treas-CPI Inflation Index, 1.875%, 07/15/2019	8,084,976	8,008,331	0.59%
6,561,141	U.S. Treas-CPI Inflation Index, 1.375%, 02/15/2044	7,341,751	7,137,143	0.52%
6,984,588	U.S.Treas-CPI Inflation Index, 0.375%, 07/15/2023	7,129,497	7,029,569	0.51%
6,307,233	Fnma Gtd Remic P/t 15-79 Za, 3.000%, 11/25/2045	6,026,247	5,888,874	0.43%
3,884,801	U.S.Treas-CPI Inflation Index, 3.875%, 04/15/2029	5,324,163	5,273,968	0.39%
5,000,000	Puerto Rico Cmwth, 8.000%, 07/01/2035	3,841,375	3,031,250	0.22%
3,035,262	Bcap Llc 2011-Rr1 R11 2A4 144A, 5.550%, 12/26/2035	1,258,947	2,512,053	0.18%
2,762,640	Gnma Gtd Remic P/t 13-88 Lz, 2.500%, 06/16/2043	<u>2,195,452</u>	<u>2,493,973</u>	<u>0.18%</u>
	Total	<u>\$65,536,111</u>	<u>\$65,430,018</u>	<u>4.79%</u>

*Full disclosure of holdings is available upon request.

**Schedule Brokerage Commissions
For Year Ended June 30, 2017**

<u>Broker Name</u>	<u>Base Volume</u>	<u>Total Shares</u>	<u>Base Commission</u>	<u>Commission Percentage</u>
Korea Investment And Sec Co. Ltd. Seoul	\$1,668,339	6,728	\$3,303	0.20%
Banco Itau, Sao Paulo	847,460	48,013	1,663	0.20%
J.P. Morgan Securities, Hong Kong	597,068	75,500	1,018	0.17%
Oddo Et Cie, Paris	601,676	15,212	904	0.15%
Kas Bank Nv, Amsterdam	712,332	47,239	1,069	0.15%
J P Morgan Sec, Sydney	991,416	353,159	1,487	0.15%
Macquarie Bank Ltd, Hong Kong	1,986,960	555,124	2,969	0.15%
Pershing Llc, Jersey City	4,842,505	689,480	7,140	0.15%
Ubs Warburg, London	675,009	47,951	969	0.14%
Pershing Securities Ltd, London	1,132,429	576,779	1,580	0.14%
Clsa Australia Pty Ltd, Sydney	1,410,771	392,152	1,949	0.14%
Citibank Ltd, Melbourne	830,952	203,753	1,134	0.14%
Morgan Stanley & Co Inc, Ny	6,483,674	880,519	8,123	0.13%
Ubs Warburg Asia Ltd, Hong Kong	2,785,601	475,979	3,395	0.12%
Credit Lyonnais Secs (Asia), Hong Kong	702,352	50,004	855	0.12%
Berenberg Gossler & Cie, Hamburg	2,313,260	60,174	2,790	0.12%
J P Morgan Secs Ltd, London	4,395,795	164,863	5,233	0.12%
Citigroup Gbl Mkts Inc, New York	3,099,033	118,273	3,687	0.12%
Citigroup Gbl Mkts/Salomon, New York	2,327,927	547,188	2,732	0.12%
Daiwa Secs Amer Inc, New York	2,009,279	209,640	2,347	0.12%
D Carnegie Ab, Stockholm	1,142,980	34,145	1,333	0.12%
Barclays Capital, London	906,181	59,068	1,039	0.11%
Rbc Dominion Secs Inc, Toronto	914,024	38,072	1,016	0.11%
Credit Suisse, New York	3,584,089	368,706	3,918	0.11%
Goldman Sachs & Co, NY	40,334,662	250,332	44,036	0.11%
Merrill Lynch Intl London Equities	8,063,004	1,042,737	8,576	0.11%
Credit Lyonnais Secs, Singapore	989,408	57,064	1,036	0.10%
Instinet Europe Limited, London	1,955,164	57,276	2,018	0.10%
Societe Generale London Branch, London	11,057,962	870,378	11,061	0.10%
Deutsche Bk Secs Inc, Ny	5,194,308	159,636	4,853	0.09%
Sanford C Bernstein & Co Inc, London	724,323	46,980	629	0.09%
Merrill Lynch Gilts Ltd, London	5,390,507	182,242	4,579	0.08%
Mizuho Securities Usa Inc. New York	1,737,108	45,608	1,465	0.08%
Ubs Securities Llc, Stamford	2,681,464	82,657	2,175	0.08%
Wells Fargo Securities Llc, Charlotte	2,092,448	52,285	1,658	0.08%
Smbc Securities, Inc New York	932,639	14,272	735	0.08%
Merrill Lynch Pierce Fenner Smith Inc Ny	20,129,601	536,161	15,205	0.08%
Stifel Nicolaus	903,147	24,041	674	0.07%
Abg Sec As (Norge), Filial, Stockholm	665,859	33,956	466	0.07%
Cantor Fitzgerald Europe, London	1,300,178	220,192	910	0.07%
Jefferies & Co Inc, New York	986,415	25,610	625	0.06%
J.P. Morgan Clearing Corp, New York	13,127,990	617,041	7,896	0.06%
Bny Convergenx Execution Sol, New York	563,173	7,540	313	0.06%
Barclays Capital Le, Jersey City	1,507,611	53,642	805	0.05%
National Finl Svcs Corp, New York	5,115,446	92,181	2,486	0.05%
Rbc Capital Markets Llc, New York	2,579,291	71,164	1,218	0.05%
Barclays Capital Inc./Le, New Jersey	4,923,539	131,160	2,217	0.05%
Bernstein Sanford C & Co, New York	8,602,033	225,241	3,423	0.04%
Converge Llc, New York	1,051,507	23,416	351	0.03%
Jpmorgan Securities Inc, New York	1,327,410	5,431	95	0.01%
Other Brokers	<u>8,763,792</u>	<u>1,135,699</u>	<u>8,395</u>	<u>0.10%</u>
Total	<u>\$199,661,101</u>	<u>12,081,663</u>	<u>\$189,553</u>	<u>0.10%</u>

Investment Summary				
(Based on Capital Allocation)				
	As of June 30, 2016		As of June 30, 2017	
	Fair Value	% Fair Value	Fair Value	% Fair Value
U.S. Equities	\$122,026,678	9.61%	\$131,521,954	9.63%
International Equities	144,470,617	11.38%	167,922,975	12.29%
Fixed Income	323,798,540	25.48%	310,082,074	22.70%
Real Assets	69,810,332	5.50%	110,759,545	8.11%
Alternatives	201,974,313	15.92%	186,036,675	13.62%
Risk Parity	365,133,220	28.75%	363,296,757	26.60%
Short-term	<u>42,679,787</u>	<u>3.36%</u>	<u>96,374,574</u>	<u>7.05%</u>
Total	<u>\$1,269,893,487</u>	<u>100.00%</u>	<u>\$1,365,994,554</u>	<u>100.00%</u>



October 24, 2017

Fairfax County Police Officers
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 Police Officers 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 Police Officers 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. We found that the employer-provided accrual rates do exceed two-thirds of the most valuable employer-provided accrual rates under the VRS plan.

We certify that, to the best of our knowledge and understanding, the Fairfax County Police Officers 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 Police Officers 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,



Fiona E. Liston, FSA
Principal Consulting Actuary



Coralie A. Taylor, FSA
Associate Actuary

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.

20% 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 Per 1,000 Members	
Years of Service	Terminations
0	70
1	50
2	40
3	33
4	28
5	23
6	20
7	15
8	14
9	11
10	8
11	7
12	6
13	6
14	5
15	5
16	4
17	4
18	3
19	3
20	2
21	2
22	1
23	1
24	1
25 or more	0

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

Disability

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

* 70% of disabilities are assumed to be service-connected. Of these, 100% are assumed to receive Workers' Compensation benefits.

Retirement/DROP

Years of Service	Retirement/DROP*
5-24	5%
25	40%
26	40%
27	40%
28	40%
29	40%
30	40%
31	40%
32	40%
33	40%
34	40%
35+	100%

*70% of those who leave under this decrement are assumed to DROP, with the other 30% taking immediate retirement.

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

Years of Service	Merit/Seniority Increase*
0	7.00%
1	6.00
2	5.00
3	4.00
4	3.00
5	2.00
6+	1.00

Changes since Last Valuation

None

Family Composition

For purposes of valuing the pre-retirement death benefit, an assumption concerning how many employees are married is needed. The assumption used in this valuation is that 80% of active employees are married at death and that the female spouse is five years younger than the male spouse. In addition, each married employee is assumed to have two children, 22 and 24 years younger than the employee.

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:	0.40% of payroll.

* Benefit increases are limited to 4% per year.

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

Type of Activity	Investment Income	Combined Liability Experience	Gain (or Loss) During Year from Financial Experience	Composite Gain (or Loss) During Year
2012	(\$8,996,470)	\$1,919,058	(\$7,077,412)	(\$7,077,412)
2013	523,678	17,282,544	17,806,222	17,806,222
2014	31,937,393	11,575,441	43,512,834	40,310,185
2015	(4,528,707)	19,857,201	15,328,494	15,328,494
2016	(31,414,324)	10,963,818	(20,450,506)	(30,345,906)
2017	(14,213,085)	(11,638,382)	(25,851,467)	(25,851,467)

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

Schedule of Retirees and Beneficiaries
Added To and Removed From Rolls²

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	37	\$3,304,118	11	\$433,632	876	\$51,266,257	5.93%	\$58,523
2013	51	3,747,038	20	820,110	907	54,193,185	5.71%	59,750
2014	71	5,441,901	12	671,616	966	58,963,469	8.80%	61,039
2015	62	4,149,523	16	534,130	1,012	62,578,862	6.15%	61,837
2016	35	1,828,843	8	288,260	1,039	64,119,445	2.46%	61,713
2017	55	3,992,713	12	600,334	1,082	67,511,824	5.29%	62,395

²Prior 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 Test¹

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	\$107,411,328	\$798,639,061	\$380,790,276	\$1,035,444,171	100%	100%	34%
2013	107,211,514	859,305,980	374,612,001	1,101,474,728	100%	100%	36%
2014	106,872,811	913,113,803	421,557,979	1,224,882,430	100%	100%	49%
2015	105,765,035	961,692,517	423,602,482	1,289,972,504	100%	100%	53%
2016	110,961,165	995,104,603	454,451,944	1,333,218,360	100%	100%	50%
2017	114,966,811	1,022,296,636	503,472,954	1,394,270,429	100%	100%	51%

¹Schedule 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	1,329	\$108,286,390	\$81,480	2.25%
2016	1,319	105,103,104	79,684	-1.33%
2015	1,246	100,619,957	80,754	0.67%
2014	1,226	98,346,858	80,218	1.92%
2013	1,237	97,361,728	78,708	-0.68%
2012	1,276	101,121,159	79,249	2.21%
2011	1,293	100,251,171	77,534	1.03%
2010	1,312	100,689,672	76,745	3.47%
2009	1,347	99,912,937	74,174	0.76%
2008	1,357	99,899,264	73,618	

²Excludes DROP participants.

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	Contributions % of Covered Payroll	Net Investments Income (loss)	Total Additions
2008	\$11,175,450	\$21,447,907	21.00%	-\$55,802,375	-\$23,179,018
2009	11,246,986	23,508,402	22.34%	-151,727,685	-116,972,297
2010	10,389,241	23,766,626	22.84%	143,107,767	177,263,634
2011	10,142,459	29,174,611	28.31%	210,054,206	249,371,276
2012	10,109,068	31,700,690	31.30%	-6,731,294	35,078,464
2013	10,258,858	34,011,347	33.15%	96,783,078	141,053,283
2014	10,091,331	34,178,960	33.87%	176,683,610	220,953,901
2015	8,889,931	37,867,181	36.82%	41,601,153	88,358,265
2016	9,324,066	40,646,884	37.98%	10,764,028	60,734,978
2017	9,631,618	43,381,151	38.98%	116,099,350	169,112,119

Schedule of Deductions by Type

Fiscal Year	Benefit Payments	Refunds of Contributions	Administrative Expenses	Total Deductions
2008	\$39,533,485	\$607,913	\$445,751	\$40,587,149
2009	43,467,322	761,803	337,334	44,566,459
2010	47,096,822	406,863	349,179	47,852,864
2011	49,429,119	466,363	362,889	50,258,371
2012	52,043,157	357,901	372,137	52,773,195
2013	55,266,464	300,847	415,119	55,982,430
2014	61,715,421	572,284	431,064	62,718,769
2015	67,276,713	480,447	443,230	68,200,390
2016	70,352,623	397,188	510,544	71,260,355
2017	72,534,389	641,609	481,574	73,657,572

Schedule of Benefit Payments by Type

Fiscal Year	Service Annuity	Service-Connected Disability	Ordinary Disability	Survivor Benefit	Total
2008	\$36,099,484	\$1,228,039	\$94,230	\$2,111,932	\$39,533,685
2009	39,708,613	1,241,328	90,442	2,426,939	43,467,322
2010	43,069,896	1,218,305	90,804	2,717,817	47,096,822
2011	45,302,801	1,173,023	109,018	2,844,277	49,429,119
2012	47,757,201	1,180,749	149,163	2,956,044	52,043,157
2013	50,784,313	1,212,826	147,739	3,121,586	55,266,464
2014	56,871,422	1,179,687	130,181	3,534,131	61,715,421
2015	62,221,104	1,182,810	134,897	3,737,902	67,276,713
2016	65,061,094	1,262,170	135,167	3,894,192	70,352,623
2017	67,080,670	1,148,156	136,519	4,169,044	72,534,389

Schedule of Retired Members by Benefit Type

Fiscal Year	Service Annuity	Service-Connected Disability	Ordinary Disability	Survivor Benefit	Total
2008	634	30	6	87	757
2009	660	30	6	92	788
2010	691	30	6	97	824
2011	716	30	7	97	850
2012	735	30	7	104	876
2013	764	30	6	107	907
2014	813	29	6	118	966
2015	862	29	6	115	1012
2016	880	30	6	123	1039
2017	915	30	6	131	1082

Schedule of Average Monthly Benefit Amounts

Fiscal Year	Service Annuity	Service-Connected Disability	Ordinary Disability	Survivor Benefit	Average
2008	\$4,752	\$3,453	\$1,256	\$2,208	\$4,381
2009	4,805	3,439	1,261	2,301	4,434
2010	4,956	3,360	1,290	2,305	4,559
2011	5,154	3,284	1,776	2,392	4,745
2012	5,320	3,370	1,825	2,385	4,877
2013	5,427	3,334	1,844	2,418	4,979
2014	5,551	3,385	1,874	2,469	5,087
2015	5,592	3,236	1,877	2,515	5,153
2016	5,599	3,556	1,877	2,424	5,143
2017	5,664	3,350	1,896	2,493	5,200

SCHEDULE OF AVERAGE BENEFIT PAYMENTS

Period	Years of Credited Service *						
	2-4	5-9	10-14	15-19	20-24	25-29	30+
<u>7/1/2006 to 6/30/2007</u>							
Average Monthly Benefit	\$0	\$0	\$0	\$0	\$4,615	\$5,536	\$5,426
Average of Final Monthly Salaries	\$0	\$0	\$0	\$0	\$6,524	\$6,921	\$6,170
Number of Retirees	-	-	-	-	7	29	3
<u>7/1/2007 to 6/30/2008</u>							
Average Monthly Benefit	-	-	2,178	3,084	4,964	5,043	5,388
Average of Final Monthly Salaries	-	-	5,725	5,696	7,390	6,770	5,959
Number of Retirees	-	-	1	1	11	13	1
<u>7/1/2008 to 6/30/2009</u>							
Average Monthly Benefit	-	4,163	-	1,559	4,494	5,823	-
Average of Final Monthly Salaries	-	5,810	-	3,929	6,992	7,269	-
Number of Retirees	-	1	-	1	12	13	-
<u>7/1/2009 to 6/30/2010</u>							
Average Monthly Benefit	-	-	3,069	-	4,278	5,307	-
Average of Final Monthly Salaries	-	-	5,936	-	7,866	7,182	-
Number of Retirees	-	-	2	-	4	32	-
<u>7/1/2010 to 6/30/2011</u>							
Average Monthly Benefit	-	4,163	-	4,580	4,169	6,193	6,504
Average of Final Monthly Salaries	-	6,062	-	6,669	7,099	8,246	7,576
Number of Retirees	-	1	-	1	8	20	2
<u>7/1/2011 to 6/30/2012</u>							
Average Monthly Benefit	-	600	-	-	4,565	5,800	-
Average of Final Monthly Salaries	-	3,711	-	-	7,437	7,661	-
Number of Retirees	-	1	-	-	4	17	-
<u>7/1/2012 to 6/30/2013</u>							
Average Monthly Benefit	-	-	4,339	-	4,070	5,702	7,525
Average of Final Monthly Salaries	-	-	6,319	-	7,416	8,056	8,661
Number of Retirees	-	-	1	-	4	27	3
<u>7/1/2013 to 6/30/2014</u>							
Average Monthly Benefit	-	-	-	3,147	4,041	5,795	6,965
Average of Final Monthly Salaries	-	-	-	6,728	7,192	8,016	7,837
Number of Retirees	-	-	-	2	9	37	7
<u>7/1/2014 to 6/30/2015</u>							
Average Monthly Benefit	-	997	3,202	3,758	4,059	5,624	8,047
Average of Final Monthly Salaries	-	5,519	6,235	6,925	7,507	7,840	8,698
Number of Retirees	-	1	2	2	3	32	5
<u>7/1/2015 to 12/31/2015</u>							
Average Monthly Benefit	-	3,726	-	3,113	3,590	5,792	8,409
Average of Final Monthly Salaries	-	5,589	-	6,492	6,977	7,982	9,192
Number of Retirees	-	1	-	1	1	15	5
<u>1/1/2016 to 12/31/2016</u>							
Average Monthly Benefit	-	967	3,416	2,999	3,876	5,739	6,814
Average of Final Monthly Salaries	-	6,031	6,565	6,478	7,386	7,976	7,628
Number of Retirees	-	1	2	1	5	33	3

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

Active Participants Count by Age/Service

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	35	54	1	0	0	0	0	0	90
25 to 29	29	127	29	2	0	0	0	0	187
30 to 34	3	49	68	81	0	0	0	0	201
35 to 39	4	15	24	116	66	0	0	0	225
40 to 44	1	8	18	54	136	46	0	0	263
45 to 49	0	2	4	33	72	113	21	0	245
50 to 54	1	1	4	11	15	31	22	7	92
55 to 59	0	0	(1)	7	1	4	1	5	18
60 to 64	0	1	1	0	1	2	1	1	7
65 & up	0	0	0	0	1	0	0	0	1
Total	73	257	149	304	292	196	45	13	1,329

Active Participants Total Salary by Age/Service

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	\$2,000,703	\$3,157,135	\$61,476	\$0	\$0	\$0	\$0	\$0	\$5,219,314
25 to 29	1,658,493	8,117,170	1,981,185	141,174	0	0	0	0	11,898,022
30 to 34	165,787	3,248,223	5,037,571	6,550,221	0	0	0	0	15,001,802
35 to 39	251,566	1,007,000	1,795,119	9,502,081	5,846,973	0	0	0	18,402,739
40 to 44	56,153	556,451	1,360,811	4,439,441	12,190,472	4,527,448	0	0	23,130,776
45 to 49	0	127,619	311,529	2,758,798	6,317,117	11,207,652	2,486,725	0	23,209,440
50 to 54	56,155	75,909	296,169	897,941	1,305,296	2,971,960	2,371,819	823,837	8,799,086
55 to 59	0	0	(1)	560,007	85,957	406,750	94,849	632,554	1,780,116
60 to 64	0	73,614	82,250	0	83,066	201,499	104,875	216,798	762,102
65 & up	0	0	0	0	82,993	0	0	0	82,993
Total	\$4,188,857	\$16,363,121	\$10,926,109	\$24,849,663	\$25,911,874	\$19,315,309	\$5,058,268	\$1,673,189	\$108,286,390

Retirees by Location

Top 10 States	Police
Virginia	72.96%
Florida	7.31%
Maryland	2.61%
North Carolina	4.18%
South Carolina	2.51%
West Virginia	1.04%
Pennsylvania	1.25%
Texas	1.36%
California	0.52%
Washington, D.C.	0.21%

	Police
Fairfax County	16.83%

Within Fairfax County	Police
Alexandria	0.95%
Fairfax	1.80%
Springfield	1.80%
Centreville	4.02%
Herndon	1.48%
Falls Church	0.32%
Annandale	0.32%
Burke	0.85%
Vienna	0.85%
Reston	0.53%
Lorton	0.74%
Chantilly	0.63%
Clifton	1.06%
Fairfax Station	1.06%
McLean	0.00%
Oakton	0.32%
Great Falls	0.11%
Fort Belvoir	0.00%
Dunn Loring	0.00%
Merrifield	0.00%

POLICE Officers RETIREMENT SYSTEM



A Fairfax County, Va., publication

Fairfax County Retirement Systems
12015 Lee Jackson Memorial Highway, Suite 350
Fairfax, VA 22033

