

For the Fiscal Year Ended June 30, 2014



## **Table of Contents**

Introductory Section (Unaudited)
Letter of Transmittal
Certificate of Achievement for Excellence in Financial Reporting
Board of Trustees
Administrative Organization
Organization Chart
Summary of Plan Provisions
Financial Section
Independent Auditors' Report 12
Management's Discussion and Analysis (Unaudited)
Summary Schedule of Plan Fiduciary Net Position 1'
Summary Schedule of Additions and Deductions
Basic Financial Statements
Statement of Fiduciary Net Position
Statement of Changes in Fiduciary Net Position
Notes to the Financial Statements
Required Supplementary Information
Schedule of Changes in Net Pension Liability and Related Ratios
Schedule of Net Pension Liability
Schedule of Employer Contributions
Schedule of Money-Weighted Rate of Return
Additional Supplementary Information
Schedule of Investment and Consultant Expenses
Schedule of Administrative Expenses
Investment Section (Unaudited)
Chief Investment Officer's Letter
Investments by Category and Investment Manager 40
Schedule of Ten Largest Equity and Fixed Income Holdings 40
Schedule of Brokerage Commissions 4'
Investment Summary 44
Actuarial Section (Unaudited)
Actuary's Certification Letter
Summary of Valuation Results
Future Outlook
Summary of Principal Plan Results
Summary of Actuarial Assumptions and Methods
Long Term Assumptions
Analysis of Financial Experience
Schedule of Retirees and Beneficiaries Added To and Removed From Rolls
Solvency Tests
Statistical Sections (Unaudited)
Schedule of Additions by Source 7
Schedule of Deductions by Type 7
Schedule of Benefit Payments by Type
Schedule of Retired Members by Benefit Type
Schedule of Average Monthly Benefit Amounts
Schedule of Average Monthly Benefit by Years of Service



# County of Fairfax, Virginia

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

December 5, 2014

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, 2014. 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 1,226 active members, 80 in the Deferred Retirement Option Program (DROP) and 966 retirees participating in the System as of June 30, 2014. For calculations surrounding the Total Pension Liability and its components, Cheiron used rollforward techniques with the June 30, 2013, valuation as a starting point. As such, their results were based on the active, DROP, and retiree counts disclosed as of that date.

#### Provisions

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

#### **Capital Markets and Economic Conditions**

In fiscal year 2014, the System benefited from strong performance in almost all asset classes. Equity markets were up strongly again in 2014 in the US and internationally as well. Bond markets also performed well, particularly in high-yield bonds, leveraged loans, U.S. credit, and emerging market debt. The System's total portfolio was positive with a return of 16.4% gross of fees (16.2% after fees and expenses). This return was well above the long term target of 7.5% but below the median public fund return of 17.16% and placed in the 59<sup>th</sup> percentile of the BNY



Fairfax County Retirement Systems 10680 Main Street \* Suite 280 \* Fairfax, VA 22030 Phone: 703-279-8200\*1-800-333-1633\*Fax: 703-273-3185 www.fairfaxcounty.gov/retirement/ Mellon universe of public funds. Investment returns for the five-year period ending June 2014 were 14.2% per year, and placed in the  $13^{th}$  percentile.

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

#### **Internal and Budgetary Controls**

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

#### **Investment Policies and Strategies**

The Board of Trustees has adopted a Statement of Investment Objectives and Policy. This Statement establishes the investment goals, guidelines, constraints and performance standards that the Board of Trustees uses when exercising its fiduciary duties to manage the investment assets of the System. The Board operates in conformity with the standard of care required in making investments as stated in the Code of Virginia §51.1-803. Please see Footnote C 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 July 1, 2013, indicated that the ratio of assets accumulated by the System to total actuarial accrued liabilities for benefits showed an increase from 80.5% to 82.1%. The actuarial section contains further information on the results of the July 1, 2013, valuation. For purposes of calculating the net pension liability as of June, 30, 2014, in accordance with Governmental Accounting Standards Board's (GASB) Statement Number 67, the System's funded status was 86.8%. Based on the July 1, 2013, actuarial valuation, the employer contribution rate for 2015 following the adopted corridor-based funding policy was 31.82%, a decrease of 0.9% from the 2014 rate of 32.72%. During establishment of the fiscal year 2015 County budget, however, the Board of Supervisors adopted a higher contribution rate of 36.82%. This was done to improve the funded level of the plan, accomplished by raising the target unfunded liability amortization level from 91% to 93%, and to offset a decrease in the employee contribution rate (discussed further below).

#### **Major Initiatives**

This year's annual report has been revamped and updated to comply with the provisions of GASB Statement Number 67, Financial Reporting for Pension Plans, which specifically regards pension fund financial reporting. Its objective is to improve financial reporting by state and local government pension plans by providing decision-useful information, supporting assessments of accountability and interperiod equity, and creating additional transparency. The significant changes required by GASB 67 are explained in more detail in the Financial Section of this report.

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 2014 and 2015. This was accomplished by increasing the target amortization level for the unfunded liability from 90% in prior years to 91% in 2014. This target was further increased to 93% for the County's 2015 adopted budget.

As part of their adoption of the FY 2015 budget, the Board of Supervisors directed that staff reduce the employee contribution to the System from 10% to 8.65%, effective July 1, 2014. This was done to improve the competitiveness of the police officers' retirement benefits and make the benefits more comparable between the Police Officers' and Uniformed Retirement systems, recognizing that police officers do not participate in Social Security and the benefit structure and contribution rates are different between the two systems.

Finally, on the investment front, a commitment to fund an investment in PIMCO BRAVO II (Bank Recapitalization and Value Opportunities) Fund was approved.

#### 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, 2013. This was the fourth 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.

#### **Other Information**

#### Independent Audit and Actuarial Certifications

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

#### Acknowledgements

The annual report of the Police Officers Retirement System was prepared by the System's staff under the leadership of the Board of Trustees, whom I have the privilege to serve. I must also acknowledge the entire Retirement System's team for their tireless work throughout the year to ensure we live up to our guiding principles:

- Accountability to the leaders and citizens of Fairfax County
- Accurate and timely **Benefits** for all current and future retirees
- Best-possible **Customer Service** for all members and retirees

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

Respectfully submitted,

Jeffrey K. Weiler Executive Director



Government Finance Officers Association

# Certificate of Achievement for Excellence in Financial Reporting

Presented to

**Fairfax County** 

#### **Police Officers Retirement System**

#### Virginia

For its Comprehensive Annual Financial Report for the Fiscal Year Ended

June 30, 2013

fry R. Ener

Executive Director/CEO

Fairfax County Police Officers Retirement System

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.

#### **Board of Trustees**

Aniello A. (Sweeney) DeSantis President Elected Member Trustee Term Expires: December 31, 2014

Edward C. O'Carroll

Vice President and Secretary Elected Member Trustee Term Expires: December 31, 2016

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

#### Brendan D. Harold

Board of Supervisors Appointee Term Expires: December 31, 2014

#### Christopher J. Pietsch

Treasurer Fairfax County Director of Finance Ex officio Trustee

Craig E. Dyson Board of Supervisors Appointee *Term Expires: December 31, 2017* 

Stephen K. Gallagher Board of Supervisors Appointee *Term Expires: June 30, 2018* 

#### Administrative Organization

#### Administrative Staff

Jeffrey K. Weiler *Executive Director* 

Gregory A. Samay Chief Investment Officer Katherine Molnar, CFA Senior Investment Officer Christopher Colandene Acting Retirement Administrator

#### **Professional Services**

#### <u>Actuary</u>

Cheiron Actuaries McLean, VA

#### **Auditor**

KPMG LLP Certified Public Accountants Washington, DC

#### **Investment Managers**

Acadian Asset Management, LLC Boston, MA

> BlackRock, Inc. San Francisco, CA

Bridgewater Associates, L.P. Westport, CT

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

> DoubleLine Capital, L.P. Los Angeles, CA

FrontPoint Partners, LLC Greenwich, CT AQR Capital Management, LLC Greenwich, CT

BlueCrest Capital Management, LLP New York, NY

> The Clifton Group Edina, MN

Czech Asset Management Old Greenwich, CT

First Eagle Investment Management New York, NY

> Gramercy Advisors, LLC Greenwich, CT

Fairfax County Police Officers Retirement System

#### Investment Managers (continued)

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

Oaktree Capital Management, L.P. Los Angeles, CA Loomis, Sayles & Company, L.P. Boston, MA

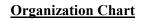
> PIMCO Newport Beach, CA

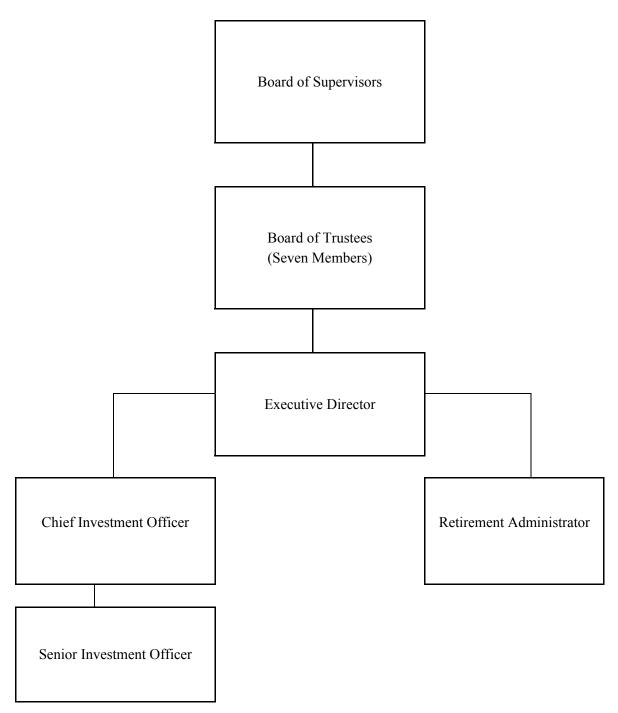
Starboard Value, L.P. New York, NY Standish Mellon Asset Management Co. Pittsburgh, PA

WCM Investment Management Laguna Beach, CA

<u>Custodian Bank</u>

BNY Mellon Asset Servicing Pittsburgh, PA





#### Summary of Plan Provisions

Membership in the Fairfax County Police Officers Retirement System includes full-time sworn law enforcement officers in the Fairfax County Police Department. Members sworn before January 1, 2013, are members of Option A. Members sworn on or after January 1, 2013, are members of Option B.

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

#### **Contribution Rate:**

The member contribution rate is set by the County Ordinance and is currently 10% of base salary. The County contribution rate is set by the actuarial process and was 33.87% for fiscal year 2014. Police Officers do not participate in Social Security.

#### Benefit:

The benefit is 2.8% of average final compensation (highest consecutive three years) multiplied by creditable service including sick leave; and it is then increased by 3%. Option 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:

Normal retirement occurs at either age 55 or at least 25 years of creditable service.

#### **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. Option 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  $66\frac{2}{3}\%$  of the salary, reduced by any Workers' Compensation benefits. These benefits continue during the existence of the disability.

#### Summary of Plan Provisions (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 2,217.12 for the spouse or surviving handicapped child (if there is no spouse), plus each eligible child receives 886.84 up to a maximum total family benefit of 4,434.22 (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  $66^{2}/_{3}$ % 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%,  $66^{2}/_{3}\%$  or 50% 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% or the percentage increase in the Consumer Price Index for the Metropolitan Statistical Area that includes Fairfax County.

<u>Note:</u> Detailed provisions may be found in the Retirement Handbook for Active Employees: http://www.fairfaxcounty.gov/retirement/pdfs/policehandbook.pdf This Page Intentionally Left Blank



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

#### **Independent Auditor's Report**

The Board of Supervisors County of Fairfax, Virginia

The Board of Trustees Fairfax County Employees' Retirement System:

We have audited the accompanying 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, 2014, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

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

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

#### 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. 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.

KPMG LLP is a Delaware limited liability partnership, the U.S. member firm of KPMG International Cooperative ("KPMG International"), a Swiss entity. KPMG

The Board of Supervisors County of Fairfax, Virginia

The Board of Trustees Fairfax County Police Officers Retirement System Fairfax County, VA

December 5, 2014 Page 2 of 3

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, 2014, and the changes in fiduciary net position for the year then ended in accordance with U.S. generally accepted accounting principles.

#### Emphasis of Matter

As discussed in Note 1 to the financial statements, in fiscal year 2014, the System implemented the Governmental Accounting Standards Board Statement No. 67, *Financial Reporting for Pension Plans*. Our opinion is not modified with respect to this matter.

#### **Other Matters**

#### Required Supplementary Information

U.S. generally accepted accounting principles require that management's discussion and analysis on pages 16-18, the schedule of changes in the net pension liability and related ratios on page 33, the schedule of net pension liability on page 34, the schedule of employer contributions on page 35, and the schedule of money weighted rate of return on page 35 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



The Board of Supervisors County of Fairfax, Virginia

The Board of Trustees Fairfax County Police Officers Retirement System Fairfax County, VA

December 5, 2014 Page 3 of 3

assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### Supplemental and Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's basic financial statements. The introductory section on pages 1-11, the additional supplementary information on pages 36, the investment section on pages 37-48, the actuarial section on pages 49-69 and the statistical section on pages 71-73 are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The additional supplementary information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the additional supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

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

KPMG LIP

Washington, DC December 5, 2014

# 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, 2014. The information in this section should be reviewed in conjunction with the letter of transmittal provided at the beginning of this report.

#### **Overview of Financial Statements and Accompanying Information**

**Basic Financial Statements.** The System presents the Statement of Fiduciary Net Position and Statement of Changes in Fiduciary Net Position as of June 30, 2014. These statements reflect the resources available for the payment of benefits as of year-end and the sources and uses of these funds during the year.

**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 immediately follow the basic financial statements.

**Required Supplementary Information.** The Required Supplementary Information include the schedule of changes in net pension liability, schedule of net pension liability, schedule of contribution and the money-weighted rate of investment returns. Additional Supplementary Information for the administrative expense and the schedule of investment and consultant expenses are added. The Required Supplementary Information and Additional Supplementary notes are immediately following the Notes to Financial Statements.

#### **Financial Analysis**

**Plan Net Position.** For fiscal year 2014 the net position of the Police Officers' Retirement System increased 14.4%, resulting in a total net position value of \$1.26 billion, reflecting an increase of \$158.2 million from fiscal year 2013. The increase in net position was due to current year contributions and investment income significantly exceeding benefit payments and expenses. The following table details the Police Officers System's plan net position for the current and prior fiscal year:

	Ending Balances	Net Change in	Net Change in
<u>Fiscal Year</u>	<u>(millions)</u>	Dollars <u>(millions)</u>	Percent
2013	\$1,103	\$85.1	8.4
2014	\$1,261	\$158.2	14.4

Investment returns were higher for fiscal year 2014 reflecting higher returns in the capital markets. The total fiduciary assets as of June 30, 2014 were \$1.27 billion, representing an increase of \$149.4 million, or 13.3%, over the previous fiscal year. The main component of the increase were due primarily to the strong market conditions that resulted to a total investment of \$1.23 billion in fiscal year 2014 as compared to \$1.07 billion in fiscal year 2013.

The actuarial value of the assets as of the last valuation on July 1, 2013, was \$1.1 billion while actuarial liabilities as of the same period were \$1.3 billion. For purposes of funding, this resulted in a funded ratio of 82.1%. However, for purposes of GASB 67, the Total Pension Liability

(TPL) as of July 1, 2013, was \$1.4 billion compared to the Total Net Position of \$1.1 billion, which results in a funding ratio of 79.8%.

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.

Additions and Deductions. The employer contributions for fiscal year 2014 increased by 0.49% due to an increase in the employer contribution rate from 33.15% to 33.87% of salary. The total contributions for the fiscal year ended June 30, 2014, amounted to \$44.3 million. The plan member's contribution decreased by 1.6% as a result of the lower number of active employees from 1,237 in fiscal year 2013 to 1,226 in fiscal year 2014 and the retirement of higher salaried employees.

Deductions to the retirement system consist of the payments of benefits to retirees and beneficiaries, the refund of contributions to former members, and the cost of administering the retirement systems. The total deductions for fiscal year 2014 were \$62.7 million, an increase of \$6.7 million, or 12%, over fiscal year 2013. Regular pension benefits has increased the number of retirees and beneficiaries receiving benefit payments to 907 from 876 in fiscal year 2013. Benefit payments increased due to a cost-of-living increase of 1.4%, an increase in the number of retirees and higher benefits for new retirees. Refunds nearly doubled as a result of employee turnover or separation.

Assets	2014	2013	Difference
Total cash and investments	\$1,262,401,104	\$1,109,656,679	\$ 152,744,425
Total fixed assets	816	1,088	(272)
Total receivables	<u>6,103,015</u>	<u>9,502,089</u>	<u>(3,399,074)</u>
Total assets	1,268,504,935	1,119,159,856	149,345,079
Total liabilities	<u>7,747,720</u>	16,637,773	<u>(8,890,053)</u>
Net position restricted for pension	<u>\$1,260,757,215</u>	<u>\$1,102,522,083</u>	<u>\$158,235,132</u>

#### Summary Schedule of Plan Fiduciary Net Position

Additions	2014	2013	Difference
Contributions			
Employer	\$34,178,960	\$34,011,347	\$167,613
Plan Members	10,091,331	10,258,858	(167,527)
Total investment (loss)/income	176,683,610	<u>96,783,078</u>	<u>79,900,532</u>
Total Additions	220,953,901	141,053,283	79,900,618
Deductions			
Benefit payments	61,715,421	55,266,464	6,448,957
Refunds	572,284	300,847	271,437
Administrative expense	431,064	<u>415,119</u>	<u>15,945</u>
Total deductions	<u>62,718,769</u>	<u>55,982,430</u>	<u>6,736,339</u>
Net increase/(decrease)	<u>\$158,235,132</u>	<u>\$85,070,853</u>	<u>\$73,164,279</u>

#### **Summary Schedule of Additions and Deductions**

#### Contacting the System's Financial Management

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

# **Statement of Fiduciary Net Position** As of June 30, 2014

Assets		
Cash and short-term investments		
Equity in County's pooled cash and temporary		
investments	\$1,578,624	
Cash collateral received for securities on loan	3,198,250	
Short-term investments	25,601,157	
Total cash and short-term investments		\$30,378,031
Fixed Assets		
Equipment, net	<u>816</u>	
Total fixed assets		816
Receivables		
Accounts receivable	1,886,026	
Accrued interest and dividends	1,788,435	
Investment proceeds and other receivables	2,428,554	
Total receivables		6,103,015
Investments, at fair value		
Common and preferred stock	165,752,756	
Fixed income		
Asset-backed securities	77,202,066	
Corporate and other bonds	54,839,708	
U.S. Government obligations	50,920,477	
Pooled and mutual funds	883,308,066	
Total investments		1,232,023,073
Total assets		1,268,504,935
Liabilities		
Purchase of investments	2,853,630	
Cash collateral received for securities on loan	3,198,250	
Investment purchases and other liabilities	<u>1,695,840</u>	
investment purchases and other habilities	1,075,040	
Total liabilities		<u>7,747,720</u>
Net position restricted for pensions		<u>\$1,260,757,215</u>
San accompanying notes to financial statements		

See accompanying notes to financial statements.

#### **Statement of Changes in Fiduciary Net Position**

For the Year Ended June 30, 2014

Additions		
Contributions		
Employer	\$34,178,960	
Plan members	<u>10,091,331</u>	
Total contributions		\$ 44,270,291
Investment income		
Net appreciation in fair value of investments	161,045,013	
Interest and other investment income	12,294,087	
Dividends	<u>5,698,382</u>	
Total investment income	179,037,482	
Investment activity expense		
Management fees	(2,122,891)	
Custodial fees	(69,244)	
Consulting fees	(1,154)	
Allocated administration expense	<u>(197,665)</u>	
Total investment expense	(2,390,954)	
Net income from investment activities		176,646,528
Securities lending activities		
Securities lending income	55,038	
Securities lending expenses	(17,956)	
Net income from securities lending activities	<u>(</u>	37,082
Total net investment income		176,683,610
Total additions		220,953,901
Deductions		
Annuity benefits	56,871,422	
Disability benefits	1,309,868	
Survivor benefits	3,534,131	
Refunds of employee contributions	572,284	
Administrative expense	431,064	
Total deductions		62,718,769
Net increase		158,235,132
Net position restricted for pensions		
Beginning of fiscal year		1,102,522,083
End of fiscal year		<u>\$1,260,757,215</u>
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See accompanying notes to financial statements.

## Notes to the Financial Statements

As of and for the year ended June 30, 2014

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.

#### A. Summary of Significant Accounting Policies

*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. 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.

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.

*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, 2014, 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.

Implementation of New Accounting Pronouncements. In fiscal year 2014, the System implemented GASB Statement No. 65, Items Previously Reported as Assets and Liabilities, issued in March 2012. This statement establishes accounting and financial standards that reclassifies certain items that were previously reported as assets and liabilities as deferred outflows of resources, deferred inflows of resources, or current period outflows and inflows.

Upon careful review, it has been established that the System does not have any applicable reporting changes.

In fiscal year 2014, the System implemented GASB Statement No. 67, *Financial Reporting for Pension Plan*(GASB 67), issued in June 2012. The System adopted the GASB 67 during the fiscal year ended June 30, 2014, which addresses the accounting and financial reporting requirements for pension plans. The requirements for GASB No. 67 require changes in presentation of the financial statements, notes to the financial statements, and required supplementary information. Significant changes include an actuarial calculation of total and net pension liability. It also includes comprehensive footnote disclosure regarding the pension liability, the sensitivity of the net pension liability to the discount rate, and increased investment activity disclosures.

#### **B.** Plan Description, Deferred Retirement Option Program, Contributions and Deductions

*Plan Description.* The System is a single-employer defined benefit pension plan. The plan covers County police officers who are not covered by other plans of the County or the Virginia Retirement System. Benefit provisions are established and may be amended by County ordinance. All benefits vest at five years of service. To be eligible for normal retirement, an individual must meet the following criteria: (a) 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.

Annual cost-of-living adjustments are provided to retirees and beneficiaries equal to the lesser of 4 percent or the percentage increase in the Consumer Price Index for the Washington Consolidated Metropolitan Statistical Area.

*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.

*Membership.* At July 1, 2013, the date of the latest actuarial valuation, membership in the System consisted of:

Retirees and beneficiaries receiving benefits	907
Terminated plan members entitled to but not yet receiving benefits	33
Deferred Retirement Option Program (DROP) participants	89
Active plan members	<u>1,237</u>
Total	<u>2,266</u>

*Deferred Retirement Option Program.* Members eligible for normal retirement may elect to enter Deferred Retirement Option Program (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 addition to the monthly retirement annuity. The DROP balance as of June 30, 2014, was \$7,821,922.

*Contributions*. The contribution requirements of the System's members are established and may be amended by County ordinances. Member contributions are based on 10 percent of compensation for the year ended June 30, 2014. The County is required to contribute at an actuarially determined rate; the rate for the year ended June 30, 2014, was 32.72% of annual covered payroll. The decision was made to commit additional funding and a rate of 33.87% was adopted for fiscal year 2014.

*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.

#### C. Investments

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. While the System is not subject to the provisions of the Employee Retirement Income Security Act (ERISA), the Board has elected to incorporate the standards of ERISA in the System's Statement of Investment Objectives and 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 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, 2014. 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	17.00%
International Equities	12.00%
Fixed Income	30.00%
Real Estate	5.00%
Alternatives	27.00%
Risk Parity	30.00%

*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 organization that represent 5 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.

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

*Rate of Return.* For the year ended June 30, 2014, the annual money-weighted rate of return on pension plan investment, net of pension plan investment expense, was 16.20%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

<u>Type of Investment</u>	<u>Fair Value</u>	<b>Ratings</b>	<b>Percent of Fixed</b>
U.S. Government obligations	\$50,920,477	AA	27.8%
	562 529		0.20/
Corporate & other bonds	563,538	AAA	0.3%
	3,541,602	А	1.9%
	8,743,075	BBB	4.9%
	15,609,341	BB	8.5%
	11,723,084	В	6.4%
	5,119,145	CCC	2.8%
	40,000	D	0.0%
	9,499,923	Unrated	5.2%
Asset-backed securities	816,746	AAA	0.4%
	30,316,926	AA	16.6%
	648,654	А	0.4%
	4,144,122	BBB	2.3%
	1,366,119	BB	0.7%
	1,085,883	В	0.6%
	9,872,668	CCC	5.4%
	511,254	CC	0.3%
	13,064,369	D	7.1%
	15,375,325	Unrated	8.4%
Total fixed income	<u>\$182,962,251</u>		100.0%
Short-term investments	<u>\$25,601,157</u>	Unrated	

The System's investment quality ratings at June 30, 2014, were as follows:

As of June 30, 2014, the fixed income portfolio consisted of 54.6% invested in investment grade securities, 31.8% invested in securities rated below-investment-grade and 13.6% 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.

The System's investments' sensitivity to interest rates at June 30, 2014, follows:

		<b>Option</b> -	Percentage
		Adjusted	of
<u>Investment Type</u>	<u>Fair Value</u>	<b>Durations</b> (yrs)	<b>Fixed</b>
U.S. Government obligations	\$50,920,477	7.3	27.8%
Corporate and other bonds	54,839,708	5.2	30.0%
Asset-backed securities	77,202,066	<u>4.5</u>	<u>42.2%</u>
Total fixed income	<u>\$182,962,251</u>	<u>5.5</u>	<u>100.00%</u>
Short-term investments	<u>\$25,601,157</u>	<u>0.1</u>	

As of June 30, 2014, the System's overall fixed income portfolio option-adjusted duration was 5.5 years. BCAG's established option-adjusted duration was also 5.5 years.

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, 2014, held in currencies other than U.S. dollars were as follows:

	Short Term		Convertible	
	Investments		and Fixed	
<b>International Securities</b>	<u>&amp; Other</u>	<b>Equity</b>	<b>Income</b>	<u>Total</u>
Japanese Yen	\$11,182	\$12,781,730		\$ 12,792,912
Euro Currency	8,863	11,320,278	\$784,927	12,114,068
Hong Kong Dollar		8,679,207		8,679,207
Pound Sterling	2,700	8,196,144	369,821	8,568,665
Danish Krone		5,404,897		5,404,897
Australian Dollar	759	4,694,966	615,572	5,311,297
Mexican New Peso		972,017	2,581,453	3,553,470
Swiss Franc		3,378,223		3,378,223
Canadian Dollar		3,162,590		3,162,590
Singapore Dollar		2,646,557		2,646,557
Swedish Krona		1,870,792		1,870,792
Brazil Real			1,411,869	1,411,869
Philippines Peso			1,102,067	1,102,067
S African Comm Rand		792,252		792,252
Indian Rupee			563,538	563,538
Chilean Peso			305,665	305,665
Norwegian Krone		266,236		266,236
Colombian Peso			<u>88,303</u>	<u>88,303</u>
Total International	<u>\$23,504</u>	<u>\$64,165,889</u>	<u>\$7,823,215</u>	<u>\$72,012,608</u>

Derivative Financial Instruments. In accordance with the Board's investment policies, the System regularly invests in derivative financial instruments with off-balance-sheet risk in the normal course of its investing activities to enhance return on investment and manage exposure to certain risks within the fund. 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 2014, the System invested directly in various derivatives including asset-backed securities, collateralized mortgage obligations, exchange-traded futures contracts, forward currency contracts, options, swaps, and floating rate securities. Some securities, such as structured notes, can have derivative-like characteristics where the return may be linked to one or more indexes. 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. To address counterparty risk, the System instructs our investment managers who use swaps, forwards, and options to only enter into contracts with counterparties rated at investment grade of BBB or better by at least one nationally recognized rating agency.

At June 30, 2014, the System held the following two types of derivative financial instruments: futures and currency forwards. Futures and currency forwards contracts provide the System with the opportunity to build passive benchmark positions, enhance returns, and gain market exposure to various indices in a more efficient way and at lower transaction costs. Credit risks depend on whether the contracts are exchange-traded or exercised over-the-counter. Market risks arise from adverse changes in market prices, interest rates and foreign exchange rates.

Investment managers are prohibited from purchasing securities on margin or using leverage unless specifically permitted within the investment manager's guidelines. Derivative instruments covered under the scope GASB 53 are reported at fair value. The change in fair value of derivative instruments that are used for investment purposes are reported within the investment revenue classification. Gains and losses on derivative securities are determined based upon fair market 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. The notional value of the System's investment in futures contracts at June 30, 2014, is as follows.

Equity Futures:	<b>Base Exposure</b>	<u>Notional Cost</u>
Long	\$93,617,580	\$92,217,226
Total Equity Futures:	\$93,617,580	\$92,217,226

*Currency Forwards.* Currency forwards represent foreign exchange contracts and are used to effect settlements and to protect the base currency value of portfolio assets denominated in foreign currencies against fluctuations in the exchange rates of those currencies or to gain exposure to the change in market value of a specific currency. A forward foreign currency exchange contract is a commitment to purchase or sell a foreign currency at a future date and at a negotiated price. The credit risk of currency contracts that are exchange-traded lies with the clearinghouse of the exchange where the contracts are traded. The credit risk of currency contracts traded over-the counter lies with the counterparty, and exposure usually is equal to the unrealized profit on in-the money contracts. All counterparties are rated A or better. The market risk in foreign currency exchange rates.

The following is the summary information on the System's currency forwards contracts at June 30, 2014.

Foreign Currency Contracts Purchased Euro Currency Unit	Notional (Local Currency) (810,000)	Unrealized Gain/(Loss) (\$US) \$12,246
		\$12,246
Foreign Currency Contracts Sold Euro Currency Unit	Notional (Local Currency) 260,000	<u>Unrealized Gain/(Loss) (\$US)</u> \$1,132
Not Unrealized Coin (Loss) on Fourier	Common on Su of	\$1,132
Net Unrealized Gain (Loss) on Foreign and Forward Contracts	Currency Spot	<u>\$13,378</u>

*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% and international securities of 105%. The custodian receives cash or securities as collateral from the borrower. All securities loans can be terminated on demand by either the System or the borrower. Securities received as collateral are not reported as assets and liabilities on balance sheets since the Retirement Administration Agency does not have the ability to pledge or sell the collateral securities absent borrower default.

The following represents the balances relating to the securities lending transactions at June 30, 2014.

Securities Lent	Underlying <u>Securities</u>	Cash Collateral <u>Investment Value</u>	Securities Collateral <u>Investment Value</u>
Lent for cash collateral			
Common and preferred stock	\$3,034,155	\$3,198,250	
Lent for securities collateral			
US Government securities	906,838		\$949,211
Common and preferred stock	<u>17,501,226</u>		19,426,346
Total	<u>\$21,442,219</u>	<u>\$3,198,250</u>	<u>\$20,375,557</u>

The System did not impose any restrictions during fiscal year 2014 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 the lending agent's collective investment pool which at June 30, 2014, had a weighted-average maturity of two days. The maturities of the resulting investments generally match the maturities of the securities lending arrangements. While the System bears no credit risk from the failure of a borrower to return a borrowed security, it does bear risk from investing the collateral. As noted above, cash collateral is invested in the lending agent's collective investment pool experience a period of poor investment returns due to market turbulence or other reasons, the System can record unrealized losses on a mark-to-market basis or realized losses from the default of securities in the investment pool.

#### **D.** Net Pension Liability

*Net Pension Liability*. The components of the net pension liability at June 30, 2014, were as follows:

Total pension liability	\$1,453,060,383
Plan fiduciary net position	<u>(1,260,757,215)</u>
Net pension liability	\$192,303,168

Plan fiduciary net position as a percentage of the total pension liability 86.8%

Actuarial Methods and Assumptions Information. The Total Pension Liability was determined by an actuarial valuation as of June 30, 2013, using the following actuarial assumptions, applied to all periods included in the measurement.

Discount rate, net of plan investment expenses	7.500%
Inflation	3.000%
Salary increases, including inflation	3.0% + merit
Investment rate of return, net of plan investment expenses	7.50%
Municipal bond rate	N/A
Projected period of unfunded benefit payments	None

The actuarial assumptions used have been recommended by the actuary and adopted by the System's Board of Trustees based on the most recent review of the System's experience completed in 2011. In the Schedule of Changes in Net Pension Liability, the beginning of year amount differs from the actuarial accrued liability listed in the July 1, 2013, actuarial valuation report due to differences in the funding method and assumption changes. GASB Statement No. 67 requires the use of a very specific funding method, which was not used in the previous valuations. The actuary recommended and the Board of Trustees adopted refinements for the recognition of unused sick leave balances in the development of the TPL.

The rate of employer contributions to the plan 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 plan's actual administrative expenses.

The County is required to contribute at an actuarially determined rate; the rate for the year ended June 30, 2014 was 32.72 percent of annual covered payroll. The decision was made to commit additional funding and a rate of 33.87 percent was adopted for fiscal year 2014. 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 percent, the contribution rate includes a margin to amortize this shortfall back to the 90 percent level. In fiscal year 2011 the target was increased to a 91 percent level and with the 2015 fiscal year contribution it will be increased again to 93 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 2022.

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

For purposes of the GASB 67, the Total Pension Liability (TPL) was determined by applying standard update procedures to roll forward to the June 30, 2014, fiscal year-end, amounts from an actuarial valuation as of June 30, 2013.

The actuarial assumptions used in the June 30, 2013, valuation were based on the results of an actuarial experience study for the period July 1, 2005–June 30, 2010.

Long Term Expected Rate of Return. The long term rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of arithmetic real rates of return for each major asset class included in the System's target asset allocation as of June 30, 2014, are summarized below.

	Long Term Expected
<u>Asset Class</u>	<b>Real Rate of Return</b>
U.S. Equities	4.50%
International Equities	5.10%
Fixed Income	2.00%
Real Estate	5.30%
Alternatives	6.00%
Risk Parity	6.00%

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

In making this determination we assumed the outflows would equal the anticipated benefit payments from the 2013 actuarial valuation. The administrative expenses attributable to current actives were assumed to equal 0.30% of payroll. The inflows to the plan were assumed to continue at the average aggregate rate for the 2013 active population of 8.65% of payroll and County contributions were projected at 36.82% for fiscal years 2015 through 2036. After that

time the County contribution was assumed to drop to the normal cost plus expenses (21.46%) since the unfunded actuarial liability is expected to be paid off by that time.

We also used the actual Fiduciary Net Position at June 30, 2014, in the projections.

*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 7.5 percent, as well as what the County's net pension liability would be it if were calculated using the discount rate that is 1-percentage- point lower (6.5 percent) or 1-percentage-higher (8.5percent) than the current rate.

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

	1% Decrease	<b>Discount Rate</b>	1% Increase
	<u>6.50%</u>	<u>7.50%</u>	<u>8.50%</u>
Total Pension Liability	\$1,705,162,383	\$1,453,060,383	\$1,255,039,056
Plan Fiduciary Net Position	1,260,757,215	1,260,757,215	<u>1,260,757,215</u>
Net Pension Liability	\$444,405,168	\$192,303,168	(\$5,718,159)
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	73.9%	86.8%	100.5%

#### E. 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

For the fiscal year ending June 30, 2014

Total Pension Liability	
Service cost	\$30,858,609
Interest	102,492,490
Changes in benefit terms	0
Differences between expected and actual experience	0
Changes in assumptions	0
Benefit payments, including refunds of member contributions	(62,287,705)
Net change in Total Pension Liability	71,063,394
Total Pension Liability - beginning	<u>1,381,996,989</u>
Total Pension Liability - ending (a)	<u>\$1,453,060,383</u>
Plan Fiduciary Net Position	
Contributions - employer	\$34,178,960
Contributions - member	10,091,331
Net investment income	176,683,610
Benefit payments, including refunds of member contributions	(62,287,705)
Administrative expenses	<u>(431,064)</u>
Net change in Plan Fiduciary Net Position	158,235,132
Plan Fiduciary Net Position - beginning	1,102,522,083
Plan Fiduciary Net Position - ending (b)	<u>\$1,260,757,215</u>
Net Pension Liability (Asset) - ending (a)-(b)	<u>\$192,303,168</u>
Plan Fiduciary Net Position as a Percentage of the	
Total Pension Liability	86.8%
Covered Employee Payroll (from AVR 7/1/13)	\$100,912,194
Not Dension Liebility of a Densenters of several	
Net Pension Liability as a Percentage of covered Employee Payroll	190.56%
Employee ruyion	170.5070

The total pension liability contained in this schedule was provided 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 Systems.

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

# Schedule of Net Pension Liability

	Date	6/30/2014
	Total Pension Liability	\$1,453,060,383
	Plan Fiduciary Net Position	\$1,260,757,215
	Net Pension Liability	\$192,303,168
	Plan Fiduciary Net Position as a	
	Percentage of the Total Plan Liability	86.8%
	Covered employee payroll	\$100,912,194
	Net pension Liability as a percentage of	
	covered payroll	190.56%
bodulo	is intended to show information for 10 years Addi	tional years will be displayed as they bee

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

		Contributions in relations to			Contributions as a	
Fiscal	Actuarial Determined	the Actuarial Determined	Contribution Deficiency	Covered Employee	Percentage of Covered	
Year	Contribution	Contribution	(Excess)	Payroll	Payroll	
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%	
2007	19,222,753	19,222,753	-	98,326,102	19.55%	
2006	16,727,287	16,727,287	-	90,711,969	18.44%	
2005	14,901,070	14,901,070	-	84,569,069	17.62%	
Notes to Se	chedule					
Valuation		6/30/2013				
Timing		Actuarially determined contribution rates are calculated based on the actuarial valuation one year prior to the beginning of the plan year				
Key Meth	ods and Assumpti	ons Used to Determ	ine Contribution	Rates:		
Actuarial	cost method	Entry Age Normal				
Asset valu	ation method	3-year smoothed market				
Amortizat	tion method	Corridor method, amortize liability outside of 90% corridor over an open 15 year period with level % of payroll. In fiscal year 2011 through 2014 the target was increased to a 91% level.				
Discount	rate	7.50%				
Amortizat	tion growth rate	3.00%				
Price infla	U	3.00%				
Salary inc	10000	3.00% plus merit component based on employee's years of service Sex distinct RP-2000 Combined Mortality projected to 2015 using Scale AA				
Mortality		Sex distinct KP-200	JU Combined Mo	onanty projected	1 to 2015 using Scale AA	

#### **Schedule of Employer Contributions**

A complete description of the methods and assumptions used to determine contribution rates for the year ending June 30, 2014, can be found in the June 30, 2012, actuarial valuation report.

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

	Annual Money-Weighted Rate of		
Fiscal Year	<b>Return, Net of Investment Expense</b>		
2014	16.20%		

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

# **Additional Supplementary Information**

# Schedule of Investment & Consultant Expenses

For the Year Ended June 30, 2014

Activity	
Investment expenses	
Investment manager Fees	\$2,122,891
Custodial Fees	69,244
Other consultant expenses	
Diligence Review	<u>1,154</u>
Total Investment and Consulting Fees	<u>\$2,193,289</u>

# **Schedule of Administrative Expenses**

For the Year ended June 30, 2014

Personnel services		
Salaries and wages	\$213,054	
Fringe benefits	88,142	
Total personnel services		\$301,196
Professional services		
Actuarial	30,144	
Audit	<u>7,611</u>	
Total professional services		37,755
Communications		
Phone charges	3,028	
Printing, binding and copying	2,276	
Postage	4,067	
Total communications		9,371
Supplies		
Office supplies	<u>2,869</u>	
Total supplies		2,869
Other services and charges		
Board and staff travel and development	13,120	
Professional memberships	531	
Professional subscription	314	
Insurance	6,854	
Building rent	17,687	
Depreciation Expense	181	
Computer systems	36,860	
Other operating	<u>4,326</u>	
Total other services and charges		<u>79,873</u>
Total Administrative Expenses		<u>\$431,064</u>



# County of Fairfax, Virginia

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

December 5, 2014

Dear Members of the Board of Trustees:

Fiscal year 2014 followed a strong 2013 and the System benefited from strong performance across almost all asset classes. Global equities and fixed income assets ended in the black and their gains came amidst startlingly low volatility. Investors embraced risk-on trades as the Federal Reserve focused on creating jobs and kept in place an accommodative monetary policy. Investors showed resilience to headline risks related to the government shutdown, uncertainty as to Bernanke's successor, a severe downward revision to U.S. GDP, a reduction in the Fed quantitative easing program, and geopolitical tensions arising from Russia and the Middle East.

As the 2013 calendar year came to a close, the U.S. economy appeared to be picking up steam with rising growth and falling unemployment even as the Fed began to modestly taper its monetary stimulus. Investor sentiment turned positive in September 2013 when Janet Yellen emerged as the favored candidate to serve as the chair of the Federal Reserve. The U.S. consumer was a key driver to the strengthening economy with consumption, income and retail sales all achieving all time highs in the last fiscal quarter of 2014. U.S. Federal public debt continues to grow and now exceeds 100% of GDP, however higher debt levels, here and across the Globe, prove to be manageable in what many fear is an artificially low interest rate environment. In the final quarter of the fiscal year, all major asset classes moved higher - overlooking a severe revision downward for the first quarter U.S. GDP growth to -1.0%, attributed to poor weather.

Macro policy and politics affected global markets with fears of a slowdown in China's growth, European debt woes, and slowing growth in emerging markets. Most of the world's leading central banks maintained their supportive monetary policies. Following a strong fiscal 2013, growth assets in developed markets continued their upward trajectory, while emerging market stocks and bonds rallied in the last fiscal quarter to offset the weak performance in the prior quarter. Markets mostly shrugged off the geopolitical tensions arising from Russia taking control of Crimea, and the sustained economic slowdown in emerging economies. Emerging market assets continued their recovery with large inflows pouring into equity and debt during the last quarter as investors dismissed balance of payment concerns.

## **Domestic Equity Markets**

U.S. equity markets were up strongly in 2014 fiscal year, producing positive returns across the board and outpacing a strong 2013. Throughout the year, investors shrugged off the "fiscal cliff", the change in leadership at the Federal Reserve, the "taper tantrum", the government shutdown,



Fairfax County Retirement Systems 10680 Main Street \* Suite 280 \* Fairfax, VA 22030 Phone: 703-279-8200\*1-800-333-1633\*Fax: 703-273-3185 www.fairfaxcounty.gov/retirement/ and geopolitical tensions in the Middle East. Large cap stocks outperformed small cap stocks by +1.0% as the S&P 500 returned +24.6% for the fiscal year and finished the year by posting its 6<sup>th</sup> consecutive quarter of gains and the Russell 2000 returned +23.6% for the fiscal year. Large cap growth outperformed large cap value with the Russell 1000 Growth up 26.9% compared to +23.1% for the Russell 1000 Value. The same trend held true in smaller cap names as the Russell 2000 Growth returned +24.7 as compared with the Russell 2000 Value Index return of +22.5%.

#### **Domestic Fixed Income Markets**

Bond markets rallied for the fiscal year, with the star performers being high-yield bonds, leveraged loans, and U.S. credit. Credit spreads tightened significantly while the 10-Year U.S. Treasury bond yielding 2.5% finished the fiscal year essentially flat with the beginning of the year. For the fiscal year the Barclays Aggregate Bond Index returned +2.0% while high yield bonds posted strong gains returning +11.7%. Demand for floating-rate assets climbed through the year. With concern around rising interest rates, bank loans ended the year with gains of +5.6%, according to the S&P LSTA Loan Index. Despite record new supply, investment grade credit posted strong performance, with Barclays U.S. credit gaining +7.4% for the one-year period ended June 30, 2014.

## **International Markets**

International equity markets were boosted by improving economic data and lower debt yields in Europe, especially in some of the more troubled regions such as Greece, Italy, and Spain. International developed market equities as measured by the MSCI EAFE Index (a broad index of the international developed market equities) returned +24.1% for the year with the strongest contribution coming from Europe and the UK. Emerging market investments were bolstered by improving confidence in Latin America, positive election results in India, and better economic conditions in China. Emerging markets equities, as measured by the MSCI Emerging Markets Index, returned +14.7% for the year with the strongest results coming from Asia.

International fixed income markets were generally positive with the Barclay's Global Aggregate Bond Index up +7.4%. Emerging market debt was also a clear winner in the first half of 2014 following a challenging 2013. In addition to the accommodative action by the ECB, declining Treasury yields and economic stability in several emerging market countries provided a tailwind for the asset class. According to the JPM GBI-EM Global Diversified Index, emerging market debt had a stellar year, returning +11.6%.

#### **Officers 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 2014, investments provided a return of 16.4%, gross of fees (16.2%, net of fees). The System's annualized rates of return, gross of fees, were 8.4% (8.2%, net of fees) over the last three years and 14.2%, (13.9%, net of fees), over the last five years. These System returns ranked in the 59th percentile of The Bank of New York Mellon universe of public plans in 2014, in the 90th percentile for the latest 3-year period, and in the 13th percentile of public plans for the last 5 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. A commitment to fund an investment in PIMCO BRAVO II (Bank Recapitalization and Value Opportunities) Fund was approved during the fiscal year. We continue to maintain a well diversified portfolio with a balanced risk share to all major asset classes. This risk balancing investment strategy (also known as "risk parity") attempts to balance risk by allocating investments across a wide range of asset types including stocks, government bonds, credit-related securities, commodities, real estate, inflation-protected bonds, and a basket of alternative managers, while maximizing returns. As part of this strategy, the System maintains a significant allocation to dedicated risk parity managers.

Sincerely,

Gregory A. Samay Chief Investment Officer

# Investments by Category and Investment Manager \*\* June 30, 2014

Asset Class Manager	Investment Style	Total Fair Market Value	% of Total Portfolio
U.S. Equities			
AQR Capital Management*	Small Cap Core	\$38,895,569	3.1%
FrontPoint Partners*	Enhanced S&P 500 Index	251,425	0.0%
PIMCO StocksPlus PARS*	Enhanced S&P 500 Index	68,436,508	5.4%
Starboard Value and Opportunity*	Small Cap Value Activist	33,457,962	2.7%
International Equities			
Acadian Asset Management*	Developed Markets Small Cap	18,372,569	1.5%
Acadian Asset Management*	Emerging Markets	28,586,717	2.3%
First Eagle*	Developed Markets Value	46,430,548	3.7%
WCM Investment Management	Developed Markets Growth	46,177,860	3.7%
Fixed Income			
DoubleLine Capital	Mortgage-Backed Securities	81,480,820	6.5%
Gramercy*	Emerging Markets Multi-Strategy	26,545,079	2.1%
Loomis, Sayles & Company	High Yield Bonds	64,397,144	5.1%
Oaktree Capital Management*	Convertible Bonds	30,238,873	2.4%
Pacific Investment Management Co. (PIMCO)*	Bank Recapitalization/Value	7,632,472	0.6%
Pacific Investment Management Co. (PIMCO)*	Distressed Senior Credit	35,172,114	2.8%
Pacific Investment Management Co. (PIMCO)*	Enhanced Barclays Aggregate Index	48,370,167	3.8%
SJC Direct Lending Fund*	Direct Lending	11,443,757	0.9%
The Clifton Group	TIPS	51,628,764	4.1%
Real Estate			
Cohen & Steers Capital Management	Global Real Estate Securities	73,700,119	5.8%
Alternatives			
BlueCrest Capital Management*	Global Macro Absolute Return Fund	26,476,715	2.1%
BlueCrest Capital Management*	Multi-Strategy Fund	36,846,583	2.9%
Bridgewater Pure Alpha*	Global Macro Absolute Return Fund	50,809,888	4.0%
King Street Capital*	Long/Short Credit, Event Driven	45,637,324	3.6%
Risk Parity			
AQR Global Risk Premium*	Risk Parity	132,515,003	10.5%
Blackrock Market Advantage*	Risk Parity	113,167,187	9.0%
Bridgewater All Weather*	Risk Parity	124,555,523	9.9%
Short-term			
The Clifton Group	Beta Manager	15,859,356	1.3%
Cash Held at County Treasurer BNY Mellon Cash Investment Strategies	Operating Cash Account Plan Level Cash Accounts	1,581,784 <u>1,898,383</u>	0.1% <u>0.1%</u>
-			
Total Investments		<u>\$1,260,566,213</u>	<u>100.0%</u>
* Pooled fund			

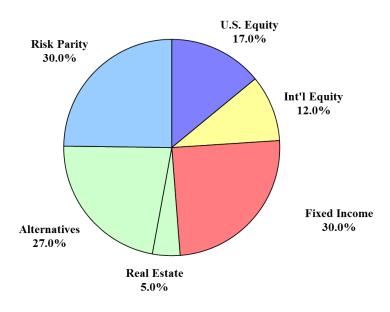
\*\* Refer to pages 7-8 for complete listing of investment professionals.

#### **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, 2014. 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, 2014.



# **Target Market Exposure**

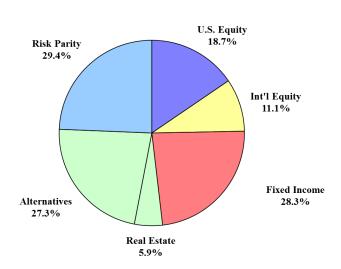
Total Exposure exceeds 100% from the addition of futures and other derivative instruments

#### Actual Asset Allocation as of June 30, 2014

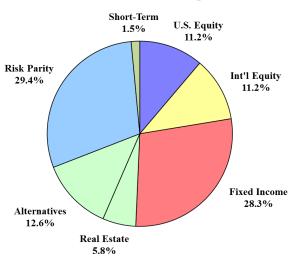
The asset structure of Police Officers Retirement System has historically reflected a proper balance of the System's needs for liquidity, growth of assets, and risk tolerance. The System's investment policy is designed to continue to meet its long-term investment objectives while, at the same time, providing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

**Actual Market Exposure** 

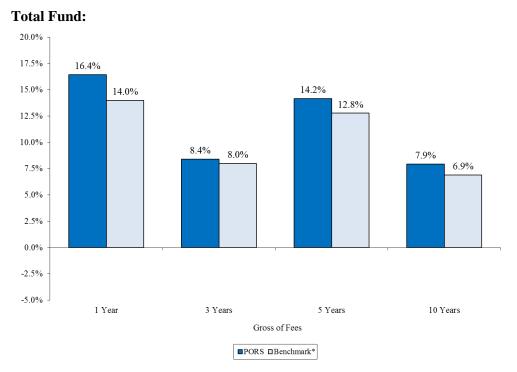
The pie chart below details the actual asset allocation as of June 30, 2014.



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



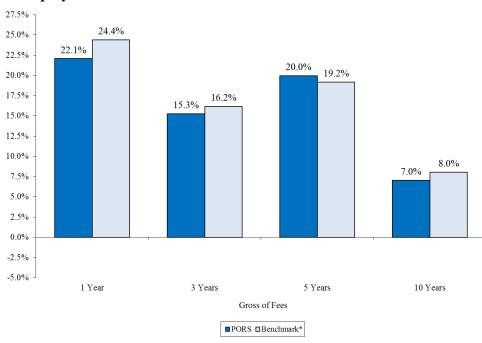
#### **Actual Allocation of Capital**



# Investment Results

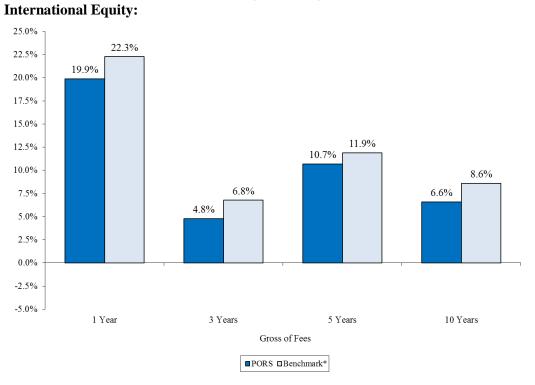
(Time weighted return, gross of fees)

\*Blended Benchmark. Current Benchmark: 30% Risk Parity Benchmark (25% MSCI World Net Div Local, 75% Citi WGBI US Hedged, 37.5% BC Global Agg Credit, 37.5% BC World Govt Inf-Linked All Mat USD Hedge, 15% DJ UBS Comm TR, 10% FTSE EPRA/NAREIT Dev, -100% LIBOR 3 Month), 12% S&P 500, 5% R2000, 9.5% MSCI EAFE, 2.5% MSCI Emerging Markets, 15% BC Aggregate Bond Index, 5% B of A Merrill Lynch High Yield Master, 5% FTSE EPRA/NAREIT Developed, 16% LIBOR +3%



**U.S. Equity:** 

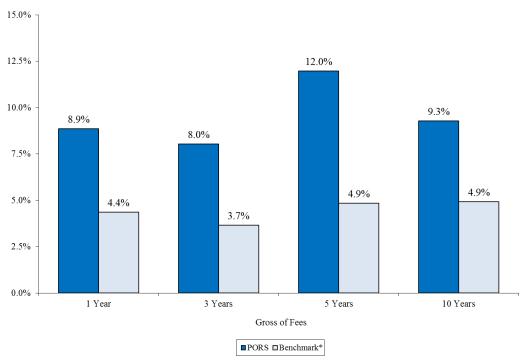
\*Benchmark: 70% S&P 500, 30% Russell 2000



#### **Investment Results**

(Time weighted return, gross of fees)

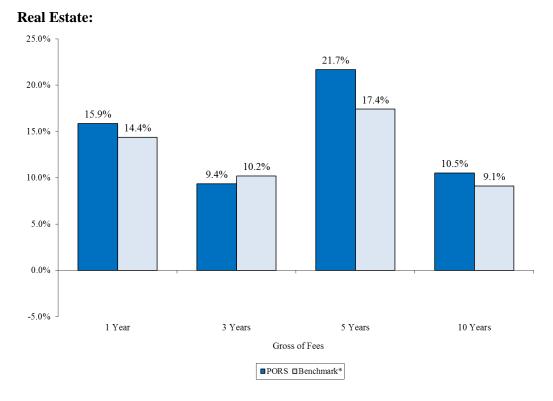
\*Benchmark: 80% MSCI EAFE, 20% MSCI Emerging Markets



# **Fixed Income:**

\*Benchmark: Barclays Aggregate

Investment Results (Time weighted return, gross of fees)



\*Benchmark: FTSE EPRA/NAREIT Developed Index

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

#### Ten Largest Equity Holdings\*

Largest Equit	y Holdings			% of Total
<u>No. Shares</u>	Description	Cost	Fair Value	Portfolio
24,093	Simon Property Group Inc	\$2,511,171	\$4,006,184	0.32%
80,244	Mitsui Fudosan Co	2,342,962	2,705,824	0.21%
114,520	Taiwan Semiconductor Mfg Co Ltd	1,887,192	2,449,583	0.19%
50,050	Novo Nordisk	1,648,650	2,303,410	0.18%
12,685	Canadian Pacific Railway Ltd	1,548,260	2,297,761	0.18%
89,821	Mitsubishi Estate Co Ltd	2,125,393	2,217,485	0.18%
35,162	Equity Residential	2,013,879	2,215,206	0.18%
24,110	Coviden Plc	1,315,798	2,174,240	0.17%
218,986	Hammerson Ord	1,783,768	2,171,713	0.17%
31,400	Canadian National Railway Co	<u>1,365,788</u>	2,045,871	0.16%
	Total	<u>\$18,542,862</u>	<u>\$24,587,277</u>	<u>1.94%</u>

#### **Ten Largest Fixed Income Holdings\***

Par Value (in local values)	Description	Cost <u>(in U.S. Dollars)</u>	Fair Value <u>(in U.S. Dollars)</u>	% of Total <u>Portfolio</u>
12,364,446	U.S. Treas-CPI Inflation Index, 0.125%, 07/15/2022	\$12,114,717	\$12,448,524	0.99%
8,473,819	U.S. Treas-CPI Inflation Index, 2.375%, 01/15/2027	10,036,690	10,398,308	0.82%
7,852,588	U.S. Treas-CPI Inflation Index, 2.500%, 07/15/2016	8,555,721	8,521,315	0.68%
6,638,828	U.S. Treas-CPI Inflation Index, 0.125%, 04/15/2018	6,820,354	6,857,710	0.54%
5,623,454	U.S.Treas-CPI Inflation Index, 1.375%, 01/15/2020	6,071,214	6,168,255	0.49%
4,719,482	U.S. Treas-CPI Inflation Index, 2.125%, 02/15/2041	5,658,441	6,051,981	0.48%
2,884,878	FHLMC Multi-Class Mtg, Var Rt, 07/15/2043	2,239,387	2,470,552	0.20%
3,245,448	Morgan Stanley Re-R R3 3C 144A, Var Rt, 06/26/2036	908,658	2,013,599	0.16%
2,563,221	GNMA Gtd Remic P/T 13-88 Lz, 2.500%, 06/16/2043	1,996,034	1,964,043	0.16%
1,934,623	FHLMC Mutli-Class Mtg, Var Rt, 05/15/2041	<u>1,530,718</u>	<u>1,931,547</u>	<u>0.15%</u>
	Total	<u>\$55,931,934</u>	<u>\$58,825,834</u>	<u>4.67%</u>

\*Full disclosure of holdings is available upon request.

# Schedule of Brokerage Commissions Year Ended June 30, 2014

Broker Name	Base Volume	Total Shares	Base <u>Commission</u>	Commission <u>Percentage</u>
National Finl Svcs Corp, New York	\$404,830	46,129	\$1,041	0.26%
Janney Montgomery Scott, Philadelphia	77,398	5,971	179	0.23%
Jonestrading Instl Svcs Llc, Westlake	12,263	886	27	0.22%
Morgan Stanley & Co, London	377,987	179,826	758	0.20%
Standard Chartered Bank, Hong Kong	414,489	249,800	831	0.20%
Daiwa Secs (HK) Ltd, Hong Kong	423,447	152,359	848	0.20%
Hong Kong & Shanghai Bkg Corp, Singapore	524,141	232,870	1,049	0.20%
Hong Kong & Shanghai Bkg Corp, Hong Kong	622,550	241,400	1,245	0.20%
Standard Chartered Bank Ltd, Hong Kong	159,104	38,074	318	0.20%
JPMorgan Secs, Singapore	472,596	212,067	944	0.20%
Instinet Pacific Ltd, Hong Kong	132,294	36,900	264	0.20%
China Intl Cap Corp HK Secs, Hong Kong	182,866	38,736	365	0.20%
DBS Vickers (Hong Kong) Ltd, Hong Kong	144,789	68,042	270	0.19%
JPMorgan Secs Asia Pacific, Hong Kong	1,328,186	845,079	2,433	0.18%
Macquarie Securities (USA) Inc Jersey City	796,519	47,266	1,455	0.18%
DBS Vickers Sec Pte Ltd, Singapore	130,626	72,527	227	0.17%
Deutsche Bk Secs Inc, NY	3,079,113	1,062,458	5,325	0.17%
Macquarie Bank Ltd, Hong Kong	2,092,714	918,802	3,462	0.17%
Barclays Capital Inc/Le, New Jersey	232,073	14,805	375	0.16%
Deutsche Bk Ag, New York	36,601	2,234	56	0.15%
RBC Capital Markets Llc, New York	1,114,889	51,310	1,690	0.15%
Skandinaviska Enskilda, Stkhlm	28,260	115	42	0.15%
Commonwealth Bk of Australia, Sydney	15,313	9,256	23	0.15%
Mitsubishi Ufj Sec (USA), New York	1,373,428	41,763	2,062	0.15%
Penson Financial Serv Australia Sydney	233,869	52,129	351	0.15%
Nomura Secs Intl Inc, New York	1,992,958	60,979	2,991	0.15%
SMBC Securities, Inc New York	2,091,500	70,498	3,137	0.15%
Mizuho Securities USA Inc. New York	1,673,223	83,030	2,509	0.15%
Citibank Ltd, Melbourne	1,088,296	489,651	1,632	0.15%
Pershing Securities Ltd, London	1,205,136	39,715	1,806	0.15%
Sg Sec (London) Ltd, London	360,325	2,851	539	0.15%
Green Street Advisors (UK) Ltd, London	503,468	49,461	753	0.15%
Oriel Securities Ltd, London	259,443	26,225	388	0.15%
Jefferies & Co Ltd, London	320,658	32,709	479	0.15%
Exane, Paris	483,455	37,852	722	0.15%
Clsa Australia Pty Ltd, Sydney	731,306	295,108	1,076	0.15%
Citigroup Gbl Mkts/Salomon, New York	2,806,348	626,547	4,126	0.15%
UBS Warburg Asia Ltd, Hong Kong	3,706,538	1,091,695	5,430	0.15%
Fidelity Clearing Cananda Ulc, Tor	175,614	8,737	248	0.14%
G-Trade Services Ltd, Hamilton	6,977,173	1,496,010	9,762	0.14%
CIBC World Mkts Inc, Toronto	86,855	3,970	120	0.14%
Barclays Capital, London	1,680,226	84,386	2,281	0.14%
Banque Paribas, Paris	735,113	12,868	989	0.13%
Merrill Lynch Gilts Ltd, London	1,157,783	62,694	1,513	0.13%
Macquarie Equities Ltd, Sydney	2,866,629	1,072,398	3,698	0.13%
RBC Dominion Secs Inc, Toronto	1,227,298	54,006	1,547	0.13%
Kas Bank NV, Amsterdam	2,220,230	144,450	2,797	0.13%
Merrill Lynch Intl London Equities	4,928,838	2,145,668	6,166	0.13%
Baird, Robert W & Co Inc, Milwaukee	548,828	24,280	680	0.12%
Wells Fargo Securities Llc, Charlotte	1,980,944	74,886	2,446	0.12%
Other Brokers	1 09,947,025	7,929,653	98,438	0.09%
Total	<u>\$166,165,555</u>	<u>20,641,131</u>	<u>\$181,913</u>	<u>0.11%</u>

# Investment Summary (Based on Capital Allocation)

	As of Jur	<u>As of June 30, 2013</u>		<u>e 30, 2014</u>
	<u>Market Value</u>	<u>% Market Value</u>	<u>Market Value</u>	<u>% Market Value</u>
U.S. Equities	\$203,009,668	18.4%	\$141,041,464	11.2%
International Equities	116,895,039	10.7%	139,567,694	11.2%
Fixed Income	264,983,165	24.0%	356,909,190	28.3%
Real Estate	63,987,531	5.8%	73,700,119	5.8%
Alternatives	133,075,181	12.0%	159,770,510	12.6%
Risk Parity	313,167,940	28.4%	370,237,713	29.4%
Short-term	7,325,190	0.7%	19,339,523	<u>1.5%</u>
Total	<u>\$1,102,413,714</u>	<u>100.0%</u>	<u>\$1,260,566,213</u>	<u>100.0%</u>



March 24, 2014

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 conducted our annual actuarial valuation of the Fairfax County Police Officers Retirement System as of July 1, 2013. The results of the valuation are contained in this report.

#### Funding Objective

The funding objective of the System is to establish contribution rates which, over time, will remain level as a percent of payroll and will fully fund the actuarially determined contribution. 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 contribution rate is based on the normal cost rate and expense rate on July 1, 2001, adjusted for subsequent plan changes, including a 15 year amortization of any UAL impact. This rate includes an additional charge once the actuarial funded ratio falls below 90%. Originally this additional charge was designed to amortize the amount of underfunding to the 90% threshold. The actuary and Board have recommended and the Employer has taken steps to increase this target from 90% until it reaches a target of 100%.

#### Assumptions

The actuarial assumptions used in performing the July 1, 2013, valuation were recommended by the actuary and adopted by the Board of Trustees based on our most recent review of the System's experience for the five year period ending June 30, 2010. The assumptions reflect our understanding of the likely future experience of the System and the assumptions as a whole represent our best estimate for the future experience of the System. The results of this report are dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from the underlying assumptions, the results would vary accordingly.

The assumptions and methods used in determining the assets, liabilities, and the annual required contributions of the employer as defined by the Government Accounting Standards Board (GASB) meet the parameters set by GASB Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contributions Plans.* 

#### **Reliance on Others**

In preparing our report, we relied on information (some oral and some written) supplied by the Retirement 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.





Classic Values, Innovative Advice

March 24, 2014 Fairfax County Police Officers' Retirement System Page 2

#### Supporting Schedules

We are responsible for all supporting schedules to be found in the Actuarial Section.

We are responsible for the 2004 through 2013 information shown in historical sections of this report. All data shown prior to 2004 was prepared by the prior actuary.

#### 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' System to the most valuable accrual rate under the VRS, making adjustments for the fact that employee contributions are required in excess of the VRS 5% rate. The employer provided accrual rates do exceed two-thirds of the 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

We are consulting actuaries for Cheiron. We are also Members of the American Academy of Actuaries and meet their Qualification Standards to render the actuarial opinion contained herein.

We hereby certify that, to the best of our knowledge, this report and its contents, have been prepared in accordance with generally recognized and accepted actuarial principles and practices which 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 herein.

Sincerely, Cheiron

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Fiona E. Liston, FSA Principal Consulting Actuary

Christian E. Benjamin on, FSA Principal Consulting Actuary



# **Summary of Valuation Results**

# Overview

This report presents the results of the July 1, 2013, actuarial valuation of the Fairfax County Police Officers Retirement System. The primary purposes of performing the annual actuarial valuation are to:

- Measure and disclose, as of the valuation date, the financial condition of the System;
- Indicate trends in the financial progress of the System;
- Determine the contribution rate to be paid by the County for Fiscal Year 2015; and
- Provide specific information and documentation required by the Governmental Accounting Standards Board (GASB).

This section of the report presents a summary of the above information in the form of:

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

# **General Comments**

Fairfax County's annual contribution to this System is determined by using a corridor funding method. Under this funding approach, the County's contribution rate is based on the normal cost rate plus expense rate determined as of the implementation date of the corridor method (July 1, 2001) 17.00% of payroll, plus an expense rate, currently 0.30% of payroll. This rate is adjusted for benefit and assumption changes. The rate includes an additional charge once the actuarial funded ratio falls below 90%. Originally this additional charge was designed to amortize the amount of underfunding to the 90% threshold. The actuary and Board have recommended and the Employer has taken steps to increase this target from 90% until it reaches a target of 100%.

The County's contribution rate will change when benefits are increased or modified or assumptions are changed. The new rate will reflect the change in normal cost rate and the change in actuarial liability amortized over 15 years. Since the inception of the corridor funding method the normal cost rate has increased by 3.09% and the UAL rate has increased by 4.24%, the specific changes are summarized in the table on the next page:

	Impact on		
	Normal Cost	UAL	
Changes Since 2001	<u>Rate</u>	<u>Rate</u>	
2002 ad-hoc COLA	N/A	+0.32%	
2004 ad-hoc COLA	N/A	+0.48%	
2005 Implementation of DROP	+0.18%	+0.16%	
2005 ad-hoc COLA	N/A	+0.46%	
2005 Assumption Changes	- 0.18%	+0.83%	
2006 ad-hoc COLA	N/A	+0.45%	
2007 ad-hoc COLA	N/A	+0.45%	
2007 Remove 30 year service cap on benefits	+0.04%	+0.07%	
2007 Change member contribution rate to 11%	+0.89%	N/A	
2008 Change member contribution rate to 10%	+0.89%	N/A	
2008 ad-hoc COLA	N/A	+0.50%	
2010 Assumption Changes	+ 1.27 %	+0.52%	
Total Increase	+ 3.09%	+ 4.24%	

The basic corridor funding contribution is currently 24.63% of payroll. The normal cost rate and actuarial accrued liability will continue to be measured using the entry age funding method. If the funded status falls outside the corridor, a credit (if above 120%) or charge (if below 90%, or other higher amounts) will be established based on a 15-year amortization equal to the amount necessary to re-enter the corridor. Once the funded status is within the corridor, the contribution rate will return to the normal cost rate plus expense rate and any remaining amortization for benefit or assumption changes.

The valuation as of July 1, 2013, shows that the actuarial funded ratio (including a credit for the amortization of prior benefit increases and assumption changes) remains outside of the corridor.

The employer contribution rate for FY 2015 as calculated under this method decreases from 32.72% to 31.82% of payroll, on the basis of this year's valuation results. The County's FY 2014 contribution was actually based on amortizing to reach 91% funded, rather than amortizing just to re-enter the corridor and in FY 2015 the actuary and Board have recommended they contribute an amount to amortize to 93% funded. On that basis, the contribution in FY 2014 was 33.87% and for FY 2015 it will be 35.55%.

The calculated contribution rate for Governmental Accounting Standards Board (GASB) purposes is based on a rolling 15-year amortization of the actuarial unfunded liability.

# Trends

The System outperformed the investment assumption during the fiscal year ending in 2013, causing an actuarial gain on the asset side of the System. The actual return on a market value basis was approximately 9.57%. On an actuarial value basis, the assets returned 7.55% compared with an assumed rate of return of 7.5%. The gain recognized for funding purposes was \$0.5 million.

The measurement of liabilities produced a gain this year in the amount of \$17.3 million. This gain was due to experience not meeting our assumptions about salary increases, retirement behavior, death, etc. Specific components of the gain include:

- The average salary increase was 0.8% for active participants who were in both the July 1, 2012 and July 1, 2013, valuations. This was less than the expected salary growth based on the actuarial assumption, which worked out to average 5.6%, which resulted in a gain of \$15.7 million. The annual payroll was provided as of December 31, 2012, and adjusted to July 1, 2013, which included annualizing the 2.18% increase from July 1, 2012.
- The valuation assumed a 2.75% cost-of-living adjustment in 2013 for benefits in pay status (per the most recent experience study). The actual CPI-based COLA was 1.4% last year, creating a liability gain of \$9.8 million.
- The 2013 valuation incorporates actual sick leave hours into both eligibility and projected benefits for active participants. The accrual of additional sick leave from 2012 to 2013 produced a loss of \$2.4 million, as we do not currently include an assumption regarding sick leave accrual.
- An annual component of liability loss is the delayed recognition of new hires throughout the year. This does not contribute to an increase in the System's unfunded liability because both the member and the employer make contributions from the date of hire. However, when we look only at the liability side, they are a component of the annual liability loss, and this year they contributed \$0.6 million to that number.
- There was a \$5.2 million liability loss component that is made up of various other causes such as members terminating, retiring, dying or becoming disabled in a way contrary to the assumption and also data changes from previous years.

The combination of liability and investment experience and County plus member contributions over the last year led to the System's funding ratio (actuarial value of assets over actuarial accrued liability) increasing from 80.5% at July 1, 2012, to 82.1% at July 1, 2013. For purposes of measuring whether the System remains within the funding corridor, an adjusted funding ratio is used. In this ratio, there is an additional asset recognized in the amount of the unfunded actuarial liability (UAL) payments being made by the County to pay for benefit increases and assumption changes. On this basis, the System's actuarial funded ratio increased from 82.9% at July 1, 2012, to 84.2% at July 1, 2013.

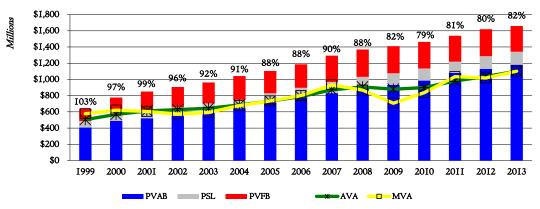
It is important to take a step back from the latest results and view them in the context of the System's recent history. On the next two pages, we present a series of charts which display key factors in the valuations over the last 15 years. After the historical review, we present a few projection graphs,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

Growth in Assets



There was an increase in the market value of assets (MVA) over last year due to a return of 9.57%. The actuarial value of assets (AVA) increased as prior gains are phased-in. There are only \$1 million left of unrecognized gains under this asset smoothing method, so the market and actuarial values of assets are almost equal.

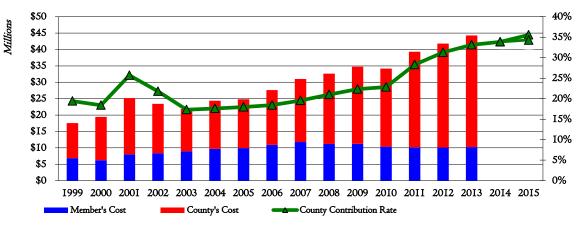
Over the period of July 1, 1999, to June 30, 2013, the System's assets returned approximately 6.50% per year measured at actuarial value, compared to a valuation assumption of 7.5% per year.



# Assets and Liabilities

The three colored bars represent the three different measures of liability mentioned in this report. The amount represented by the top of the red bars, the present value of future benefits (PVFB), is the amount needed to provide all benefits for the current participants and their beneficiaries. If the System had assets equal to the PVFB, no contributions would, in theory, be needed for the current members. For funding purposes, the target amount is represented by the top of the gray bar. We compare the actuarial value of assets to this measure of liability in developing the funded percent. These are the percentages shown in the graph labels.

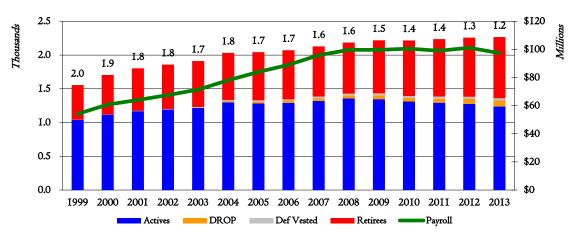
Since 2007, the System's funded status has declined from 90% to 82% as a result of investment gains and losses, liability gains and losses, and the underfunding inherent in the corridor method once it falls below 90%.



**Contribution Rates** 

The stacked bars in this graph show the contributions made by both the County and the members (left hand scale). The green line shows the County contribution rate as a percent of payroll (right hand scale).

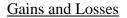
The member contribution rate is set by the County Ordinance. The County contribution rate is set by the actuarial process, as constrained by the corridor method. Note there is a lag in the rate shown. For example, the 2013 value is the rate prepared by the 2011 valuation and implemented for the period July 1, 2012, to June 30, 2013. For FY 2015, the graph shows both the base corridor contribution rate and the anticipated rate using an "amortize to 93%" approach.

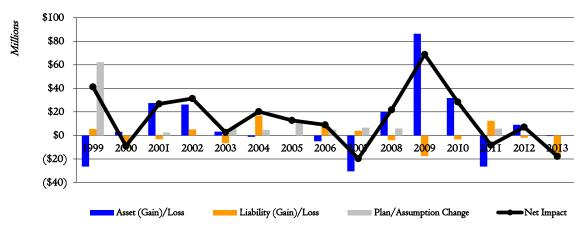


Participant Trends

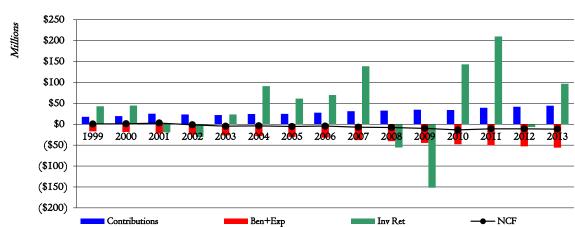
As with many funds in this country, there has been a steady growth in the number of retired members as the System has matured. The active-to-inactive ratio has decreased from 2.0 actives to each inactive in 1999 to 1.2 actives for each inactive today. While this would be an alarming trend in a pay-as-you-go system, the pool of invested assets has been established in anticipation of this development.

Starting in 2004, the chart also shows the number of DROP participants. Neither County nor member contributions are made on their behalf, which leads to a slightly lower growth in effective covered payroll for this System.





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



Cash Flow

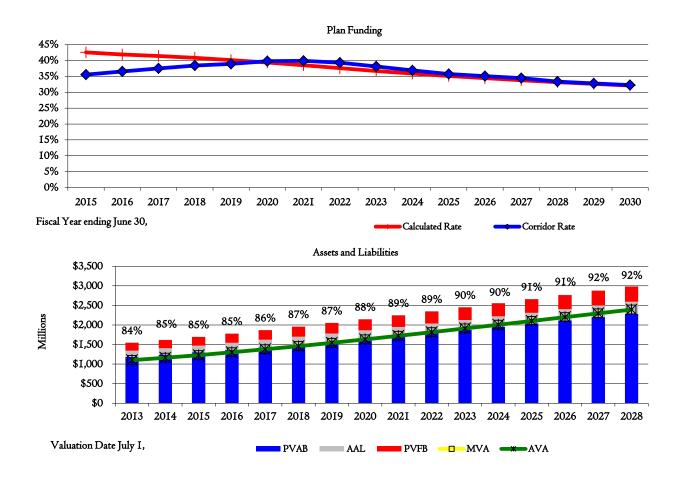
The graph shows the annual cash flows into and out of the System. The graph shows the magnitude of the investment returns on the market value (green bars) compared to the contributions (blue bars). The net cash flow (line) is comparing the contributions to benefits and expenses (red bar). Negative cash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

# **Future Outlook**

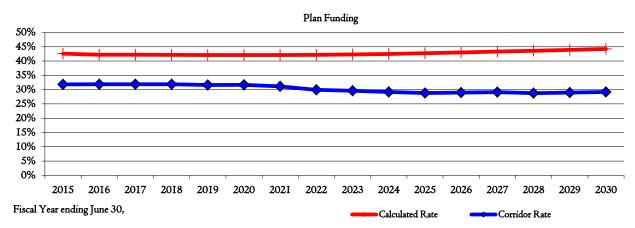
# **Base-line Projections**

The two graphs below show the expected progress of the System over the next 15 years assuming the System's assets earn 7.5% on their *market value*.

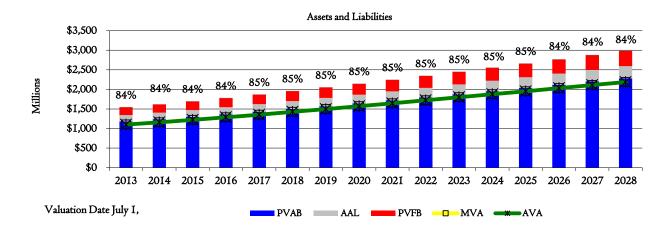
The graph entitled "Plan Funding" shows the projected contribution rates assuming the target corridor percent is increased each year from 93% to 100%. The corridor contribution rate is projected to decline over the period as plan change bases becoming fully amortized and dropping out, but the System does not re-enter the corridor (if all other actuarial assumptions are met as well as the 7.5% interest rate). The red line shows the actuarially calculated rate if the corridor were not in place.



The System ordinance calls for amortizing to 90% of the corridor. The following graphs show the impact on County contributions and System funded status if the corridor target is not changed. Under these projections the County contribution decreases even more but at the expense of the System's funded ratio.



The "Assets and Liabilities" graph shows the projected funding status over the next decade. The System's funded status is projected to increase from the current level of 82% to 84% by 2018. After that, the corridor method basically marks time and keeps the System around 84% funded.



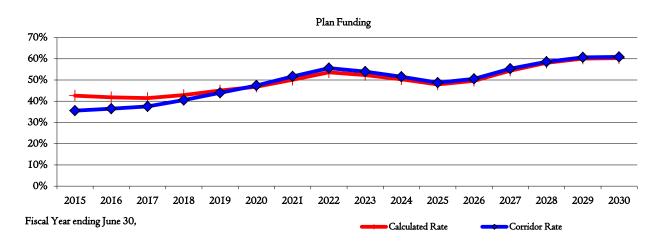
The future funding status of this System will be influenced by the investment earnings. The prior projection assumed the System would earn 7.5% each and every year, which is extremely unlikely.

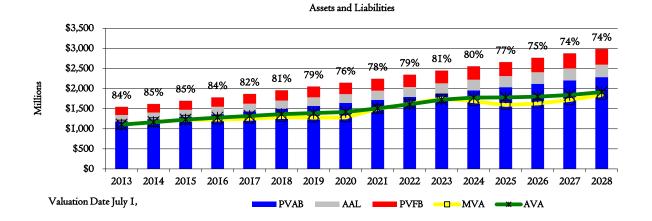
In the projections that follow, we show the risk to the System under volatile markets. Since 1980, the System has averaged 9.95% return per year. In the following charts, we show results assuming returns over the next 15 years average 5.0%, 7.5% and 10.0%. Different patterns of returns will produce different results from those shown here.

Fiscal Year Ending June 30,	Average 5.0%	Average 7.5%	Average 10.0%
2013	7.67%	2.34%	-5.85%
2014	7.05%	7.17%	4.54%
2015	1.67%	17.72%	18.15%
2016	2.98%	30.01%	32.56%
2017	5.16%	19.42%	-8.98%
2018	-0.19%	5.61%	12.47%
2019	1.48%	11.03%	17.81%
2020	17.59%	4.30%	-13.95%
2021	9.50%	15.60%	15.19%
2022	9.25%	-0.44%	14.83%
2023	-2.11%	2.05%	28.45%
2024	-3.75%	-8.37%	24.92%
2025	4.20%	4.65%	3.95%
2026	7.27%	-0.59%	7.37%
2027	9.17%	7.83%	10.22%
Average	5.00%	7.50%	10.00%

<u>Alternative Projection – with average return of 5.0% in the period</u>

Under this scenario, the corridor contribution rate increases from 35% to 60% of payroll. The System funding drops to 74%, even with the ramping up of contributions from 93% of the corridor to 100%.

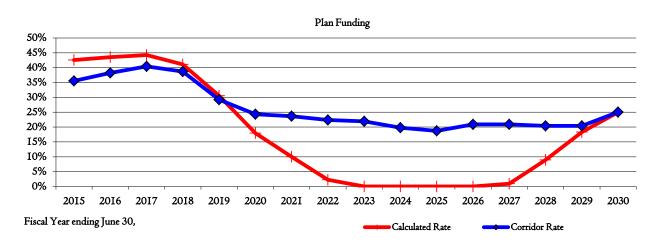


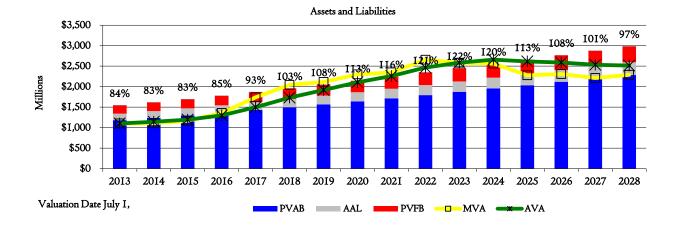


Fairfax County Police Officers Retirement System

# Alternative Projection -- with average return of 7.5% in the period

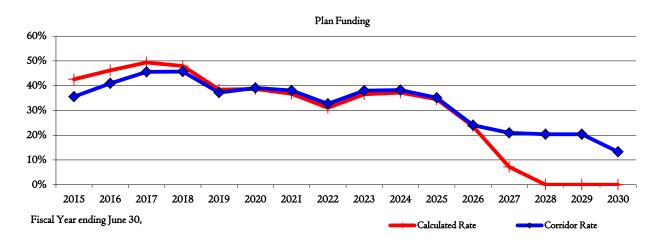
Under this scenario, the corridor contribution rate increases until the System re-enters the corridor in 2017 and reaches full funding in 2018. This is a different pattern of returns than that shown earlier. The timing of the return pattern can significantly influence the projected funding ratios and contribution levels.

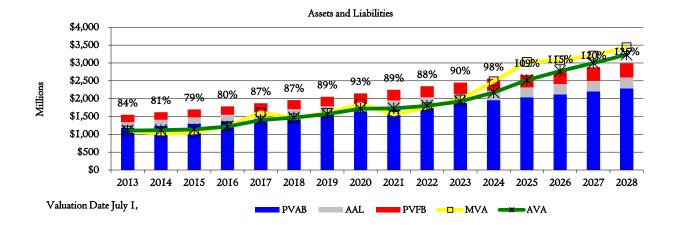




## <u>Alternative Projection – with average return of 10.0% in the period</u>

Under this scenario, the corridor contribution rate declines most years of the projection period until reaching the level of just paying normal cost by 2028.





Summary of Principal Plan Results							
Valuation as of:	7/1/2012	7/1/2013	% Chg				
Participant Counts							
Actives (excluding DROP)	1,276	1,237	-3.1%				
DROPs	73	89	21.9%				
Terminated Vesteds	33	33	0.0%				
In Pay Status	876	907	3.5%				
Total	2,258	2,266	0.4%				
Annual Salaries of Active Members	\$ 101,121,159	\$ 97,361,728	-3.7%				
Annual Retirement Allowances for							
Retired Members and Beneficiaries	\$ 51,266,257	\$ 54,193,186	5.7%				
Assets and Liabilities							
Actuarial Accrued Liability	\$ 1,286,840,665	\$ 1,341,129,495	4.2%				
Assets for Valuation Purposes	1,035,444,171	1,101,474,728	6.4%				
Unfunded Actuarial Liability	\$ 251,396,494	\$ 239,654,767	-4.7%				
Funding Ratio	80.5%	82.1%					
Present Value of Accrued Benefits	\$ 1,128,574,246	\$ 1,181,327,846	4.7%				
Market Value of Assets	1,017,451,230	1,102,522,083	8.4%				
Unfunded Accrued Liability	\$ 111,123,016	\$ 78,805,763	-29.1%				
(not less than \$0)							
Accrued Benefit Funding Ratio	90.2%	93.3%					
<u>Contributions as a Percentage of Payroll</u> GASB Method:	Fiscal Year 2014	Fiscal Year 2015					
Normal Cost Contribution	20.09%	20.09%					
Unfunded Actuarial Liability Contribution	22.41%	22.19%					
Administrative Expense	0.30%	0.30%					
Total Contribution	42.80%	42.58%					
Corridor Method:							
Normal Cost Contribution	20.09%	20.09%					
Increase Due to Amortized Changes	4.24%	4.24%					
Amortization of Amount Outside Corridor	8.09%	7.19%					
Administrative Expense	0.30%	0.30%					
Corridor Method	32.72% <sup>1</sup>	31.82% <sup>2</sup>					

 <sup>1</sup> The actual contribution rate being paid by the County in FY 2014 is 33.87%.
<sup>2</sup> Corridor Method based on amortization to 90% per current funding policy. Alternative rate calculations developed by amortizing to 93% is 35.55%.

# **Summary of Actuarial Assumptions and Methods**

# **Funding Method**

The funding method used for GASB disclosure purposes is the "aggregate accrual modification of the Entry Age Normal Cost method." Under this method, the employer 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 level percent developed is called the normal cost rate, and the product of that rate and payroll is the normal cost.

The actuarial liability is that portion of the present value of projected benefits that will not be paid by future employer 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.

The employer contributions are calculated using the same basic actuarial method (EAN). However, in order to produce a more level contribution rate, the System has adopted a Corridor Funding Method.

Under the Corridor Funding Method, the employer's total contribution rate is equal to the normal cost rate, plus rate changes due to assumption changes or amendments passed since July 1, 2001 plus the expense rate as long as the System's actuarial funded status remains within a corridor of 90% to 120%. If the funded status falls outside the 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 status is within the corridor, the contribution rate will return to normal cost rate, plus post-2001 changes, plus expense rate.

# **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**

There have been no changes since the last valuation to the Funding Method or Actuarial Value of Assets.

# Long Term Assumptions Used to Determine System Costs and Liabilities

# **Demographic Assumptions**

# Mortality

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

\* 20% of deaths are assumed to be service-connected.

Annual Deaths Per 10,000 Disabled Members RP-2000 Mortality Project to 2015 with Ages Set Forward 5 Years				
Age	Male	Female		
40	12	9		
45	16	13		
50	27	24		
55	53	47		
60	103	90		
65	177	155		
70	306	249		
75	554	413		
80	997	708		

Annual Terminations	
Years of Service	Terminations
0	70
1	40
2	45
3	50
4	40
5	30
6	20
7	15
8	14
9	13
10	12
11	11
12	10
13	10
14	10
15	8
16	6
17	4
18	2
19	2 2
20 or more	2

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

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 Disabiliti Age	ies Per 1,000 Members* Male and Female
20	2
25	2
30	2
35	2
40	2
45	4
50	6
55	6
60	6

\* 70% of disabilities are assumed to be service-connected.

Of these, 100% are assumed to receive Workers' Compensation benefits.

Probability of Retirement*					
Years of Service	Hired Pre - 7/1/81	Hired Post - 7/1/81			
Service	Pre - //1/81	Post - //1/81			
20	40%	N/A			
21	40	N/A			
22	40	N/A			
23	40	N/A			
24	40	N/A			
25	40	40%			
26	40	40			
27	40	40			
28	40	40			
29	40	40			
30	40	40			
31+	100	100			

#### Retirement

\* 50% are assumed to DROP.

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

Years of Service	Merit/Seniority Increase*
0	8.0%
5	4.3
10	1.0
15	3.0
20	1.8
25	1.8
30	1.8

There is a spike of 3.5% at 19 years of service.

## **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

Unused sick leave balances as reported for each active member will be used as the unused sick leave balance throughout the remaining active period.

# **Economic Assumptions**

Investment Return:	7.50% compounded per annum.
Rate of General Wage Increase:	3.00% compounded per annum.
Rate of Increase in Cost-of-Living:	2.75% compounded per annum.*
Total Payroll Increase (For amortization):	3.00% compounded per annum.
Administrative Expenses:	0.30% of payroll.

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

# **Changes Since Last Valuation**

There have been no changes since the last valuation to the Actuarial Assumptions.

# **Analysis of Financial Experience**

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

<u>Type of Activity</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
Investment						
Income	\$(19,958,077)	\$(86,460,572)	\$(31,755,165)	\$26,496,140	\$(8,996,470)	\$523,678
Combined						
Liability						
Experience	4,139,287	17,649,316	3,313,576	(12,495,024)	<u>1,919,058</u>	17,282,544
Gain (or Loss)						
During Year						
from Financial						
Experience	\$(15,818,790)	\$(68,811,256)	\$(28,441,589)	\$14,001,116	\$(7,077,412)	\$17,806,222
Non-Recurring				. , ,		
Items	(5,902,768)	<u>0</u>	<u>0</u>	(5,795,987)	<u>0</u>	<u>0</u>
Composite Gain		_	_		—	_
(or Loss) During						
Year	\$(21,721,558)	\$(68,811,256)	\$(28,441,589)	\$8,205,129	\$(7,077,412)	\$17,806,222

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

Year Ended <u>June 30,</u>	Ado <u>No.</u>	ded to Rolls Annual <u>Allowance</u>	Remo <u>No.</u>	ved From Rolls Annual <u>Allowance</u>	On Ro <u>No.</u>	olls @ Yr. End Annual <u>Allowance</u>	% Increase <u>Allowance</u>	Average <u>Allowance</u>
2008	33	\$3,504,943	19	\$611,148	757	\$39,794,362	7.84%	\$52,569
2009	36	2,347,460	5	214,258	788	41,927,564	5.36%	53,208
2010	48	3,725,160	12	574,000	824	45,078,724	7.52%	54,707
2011	34	3,623,899	8	306,852	850	48,395,771	7.36%	56,936
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

#### Solvency Tests

Aggregate A	Accrued	Liabilities	For
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Valuation Date	(1) Active Member	(2) Retirees, Vested Terms, Beneficiaries	(3) Active Members (Employer	Reported	Portion of Accrued Liabilities by Reported Assets		ets
<u>July 1,</u>	<u>Contributions</u>	<u>&amp; DROP</u>	<b>Financed Portion</b> )	<u>Assets</u> *	<u>(1)</u>	<u>(2)</u>	<u>(3)</u>
2008	\$92,223,155	\$623,812,098	\$315,297,859	\$908,077,197	100%	100%	61%
2009	96,351,833	658,492,487	321,194,627	879,543,429	100%	100%	39%
2010	100,709,756	695,041,990	339,263,552	899,543,387	100%	100%	31%
2011	104,188,027	732,172,476	383,248,604	982,153,681	100%	100%	38%
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%

\* Based on the Actuarial Value of Assets

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# **Statistical Section (unaudited)**

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

#### Schedule of Additions by Source

			Employer Contributions	Net	
Fiscal	Plan Member	Employer	% of Covered	Investment	Total
Year	<b>Contributions</b>	<b>Contributions</b>	<b>Payroll</b>	Income (loss)	<b>Additions</b>
2005	\$9,930,883	\$14,901,070	17.96%	\$61,323,112	\$86,155,065
2006	10,899,659	16,727,287	18.44%	69,755,418	97,382,364
2007	11,796,129	19,222,753	19.55%	138,659,208	169,678,090
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

#### **Schedule of Deductions by Type**

Fiscal	Benefit	<b>Refunds of</b>	Administrative	Total
Year	<b>Payments</b>	<b>Contributions</b>	<b>Expenses</b>	<b>Deductions</b>
2005	\$29,242,384	\$739,440	\$228,780	\$30,210,604
2006	31,302,806	528,718	218,347	32,049,871
2007	37,310,748	435,566	429,093	38,175,407
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

Schedule of Benefit Payments by Type								
		Service-						
Fiscal	Service	Connected	Ordinary	Survivor				
<u>Year</u>	<u>Annuity</u>	<u>Disability</u>	<b>Disability</b>	<u>Benefit</u>	<u>Total</u>			
2004	\$24,982,292	\$1,110,494	\$159,948	\$1,429,629	\$27,682,363			
2005	26,542,408	1,043,212	164,651	1,492,113	29,242,384			
2006	28,426,759	1,134,848	144,476	1,596,723	31,302,806			
2007	34,077,659	1,194,359	124,092	1,914,638	37,310,748			
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			

# Please note, the following charts represent the same data as provided last year which is consistent with the underlying data used to determine the liability in both the financial and actuarial sections. Data for fiscal year 2014 will be updated next year.

<u>Schee</u>	dule of Retired N	<b>Jembers by Ben</b>	<u>efit Type</u>	
	Service-			
Service	Connected	Ordinary	Survivor	
<u>Annuity</u>	<b>Disability</b>	<u>Disability</u>	<u>Benefit</u>	<u>Total</u>
582	32	9	75	698
597	32	9	77	715
608	32	8	79	727
618	32	7	86	743
634	30	6	87	757
660	30	6	92	788
691	30	6	97	824
716	30	7	97	850
735	30	7	104	876
764	30	6	107	907
	Service <u>Annuity</u> 582 597 608 618 634 660 691 716 735	Service     Service-       Service     Connected       Annuity     Disability       582     32       597     32       608     32       618     32       634     30       660     30       691     30       716     30       735     30	Service-     Connected     Ordinary       Annuity     Disability     Disability       582     32     9       597     32     9       608     32     8       618     32     7       634     30     6       691     30     6       716     30     7       735     30     7	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

		Service-			
Fiscal	Service	Connected	Ordinary	Survivor	
<u>Year</u>	<u>Annuity</u>	<b>Disability</b>	<b>Disability</b>	<u>Benefit</u>	<u>Average</u>
2004	\$3,713	\$2,699	\$1,525	\$1,609	\$3,412
2005	3,895	2,908	1,599	1,691	3,584
2006	4,063	3,111	1,467	1,825	3,750
2007	4,511	3,266	1,401	2,013	4,139
2008	4,752	3,453	1,256	2,208	4,381
2009	4,805	3,439	1,261	2,031	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

## Schedule of Average Monthly Benefit Amounts

#### Schedule of Average Monthly Benefits by Years of Service

Years of Credited Service*	2-4	5-9	10-14	15-19	20-24	25-29	30+
Period 7/1/2009 to 6/30/2010							
Average Monthly Benefit Average of Final Monthly	-	-	3,069	-	4,278	5,307	-
Salaries	-	-	5,936	-	7,866	7,182	-
Number of Retirees	-	-	2	-	4	32	-
Period 7/1/2010 to 6/30/2011							
Average Monthly Benefit Average of Final Monthly	-	4,163	-	4,580	4,169	6,193	6,504
Salaries	-	6,062	-	6,669	7,099	8,246	7,576
Number of Retirees	-	1	-	1	8	20	2
Period 7/1/2011 to 6/30/2012							
Average Monthly Benefit Average of Final Monthly	-	600	-	-	4,565	5,800	-
Salaries	-	3,711	-	-	7,437	7,661	-
Number of Retirees	-	1	-	-	4	17	-
Period 7/1/2012 to 6/30/2013							
Average Monthly Benefit Average of Final Monthly	-	-	4,339	-	4,070	5,702	7,525
Salaries	-	-	6,319	-	7,416	8,056	8,661
Number of Retirees	-	-	1	-	4	27	3

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

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