FAIRFAX COUNTY
Retirement
SYSTEMS
EMPLOYEES'

COMPREHENSIVE ANNUAL FINANCIAL REPORT

FOR THE FISCAL YEAR ENDED JUNE 30, 2019

A Pension Trust Fund of Fairfax County, Virginia

COMPREHENSIVE ANNUAL FINANCIAL REPORT

FOR THE FISCAL YEAR ENDED JUNE 30, 2019

Three systems...
one team.

FAIRFAX COUNTY Retirement SYSTEMS EMPLOYEES' POLICE Officers UNIFORMED

A Pension Trust Fund of Fairfax County, Virginia

This report was prepared by the financial, administrative and investment staff of the Fairfax County Employees' Retirement System.

Table of Contents

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County of Fairfax, Virginia

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

November 14, 2019

Dear Members of the Board of Trustees:

I am pleased to submit to you the annual report of the Fairfax County Employees' Retirement System (System) for the fiscal year ended June 30, 2019. 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 Supplemental Retirement System was established on July 1, 1955. On February 26, 2001, the name of the System was changed to the Fairfax County Employees' Retirement System. In previous years, Fairfax County Employees' Retirement System reported the plan as a cost-sharing multiple employer defined benefit plan. The System is considered as a single employer public employee retirement system providing defined benefit pension plan coverage to full-time and certain part-time Fairfax County and Fairfax County Public Schools employees who are not covered by the Fairfax County Police Officers Retirement System, the Fairfax County Uniformed Retirement System, the Educational Employees' Supplementary Retirement System of Fairfax County (ERFC) or the Virginia Retirement System (VRS). There were 14,000 active members, 806 in the Deferred Retirement Option Program (DROP), 2,293 terminated vested, and 9,468 retirees participating in the System as of June 30, 2019. For calculations surrounding the Total Pension Liability and its components, Cheiron, the System's actuary, used June 30, 2019, as the measurement date which coincides with the actuarial valuation date.

Provisions

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

Capital Markets and Economic Conditions

In fiscal year 2019, the System's investment returns reflected the continuing and long equity bull market. The System's portfolio investment return for the year was 7.05 percent (6.27 percent, net of fees), slightly below the long term return target of 7.25 percent. This return placed in the 34th percentile of the BNY Mellon Universe of public funds. Over the long term, returns compared more favorably, with investment returns for the ten-year period at 10.25 percent per year, ranking the fund in the 11th percentile of all other public funds in the BNY Mellon Universe. Additional details on the markets and the System's investments are provided in the Investment Section.

FAIRFAX COUNTY Retirement SYSTEMS
EMPLOYEES' POLICE Officers UNIFORMED

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

Internal and Budgetary Controls

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

Investment Policies and Strategies

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

The Board receives quarterly reporting from staff to ensure compliance with its stated objectives and policy. Staff also monitors the performance of the System and its investment managers and updates the Board on a monthly basis throughout the year. Rate of return information is 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 covered payroll, and are adjusted as necessary to accumulate sufficient assets to meet the costs of benefit payments when due. As of the latest annual valuation, performed as of June 30, 2019, the ratio of the market value of assets to total pension liabilities for benefits increased from 70.48 percent to 70.82 percent. The actuarial section contains further information on the results of the June 30, 2019, valuation.

Based on the June 30, 2017, actuarial valuation, the employer contribution rate for 2019 following the adopted corridor-based funding policy was 27.14 percent, an increase of 1.85 percent from the 2018 rate of 25.29 percent. This was done to improve the funded level of the plan, accomplished by raising the target unfunded liability amortization level from 98 percent to 99 percent, and to fund an increase in service-connected disability benefits.

Major Initiatives

Working in concert with the County's Chief Financial Officer, the System's actuary (Cheiron) and other County staff, efforts continue to improve the funded status of the Plan. As a result of this work, and as referenced above, the County has increased the employer contribution rate above what was required by the adopted corridor-based funding policy for four consecutive years.

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

After a multi-year and collaborative study, The Board of Supervisors (BOS) enacted changes to retirement benefits for anyone hired on or after July 1, 2019. From then on, new members will be automatically enrolled in the new Plan E, which staff spent the first half of 2019, preparing systems, documents, and training materials to support.

This year, Staff began the implementation of an investment back office data system. This system will serve as a data retrieval repository for analysis, documentation and reporting.

Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to The Fairfax County Employees' Retirement System for its comprehensive annual financial report for the fiscal year ended June 30, 2018. This was the ninth consecutive year that the System has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both Generally Accepted Accounting Principles and applicable legal requirements.

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

Fairfax County Retirement Systems received the Public Pension Standards Award for the fiscal year ended June 30, 2019, from the Public Pension Coordinating Council (PPCC), in recognition of meeting the professional standards for plan funding as set forth in the Public Pensions Standards. The PPCC is a confederation of the National Association of the State Retirement Administrators (NASRA), the National Conference on Public Employee Retirement Systems (NCPERS) and the National Council on Teacher Retirement (NCTR).

Other Information

Independent Audit and Actuarial Certifications

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

Acknowledgments

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

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

I am very thankful and feel privileged to lead the Retirement Systems team. These fine people work every day to provide the best-possible service and stewardship for the employees, retirees and citizens of Fairfax County. Finally, I must express my deep appreciation, on behalf of the 26,567 members and beneficiaries of the Employees' Retirement System, for your dedicated service as trustees.

Respectfully submitted,

Jeffery K. Weiler
Executive Director

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Fairfax County
Employees' Retirement System
Virginia

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2018

Christopher P. Morrill

Executive Director/CEO

Public Pension Coordinating Council

Recognition Award for Funding 2019

Presented to

Fairfax County Employees' Retirement System

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

Presented by the Public Pension Coordinating Council, a confederation of

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

Alan H Winkle

Alan H. Winkle
Program Administrator

Board of Trustees

Ten members serve on the Fairfax County Employees' Retirement System Board of Trustees. Four of the members are citizens appointed by the Fairfax County Board of Supervisors. Three of the members are elected by Fairfax County Government employees, Fairfax County Public Schools employees, and Fairfax County retirees respectively. The Director of Human Resources, the Director of Finance, and the Coordinator from the Office of Benefit Services, Fairfax County Public Schools serve as Ex Officio members.

Robert C. Carlson - *Chairman*
Board of Supervisors Appointee
Term Expires: July 31, 2020

John M. Yeatman - *Vice Chairman*
Elected Retiree Trustee
Term Expires: December 31, 2022

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

Randy Creller - Elected Member Trustee
Fairfax County Government
Term Expires: June 30, 2021

Terry Kellogg - Ex officio Trustee
Office of Benefit Services
Fairfax County Public Schools

Jon A. Miskell, Jr.
Board of Supervisors Appointee
Term Expires: July 31, 2022

Kevin North
Board of Supervisors Appointee
Term Expires: July 31, 2021

Catherine Spage
Ex Officio Trustee
Fairfax County Director of Human Resources

David Swan - Elected Member Trustee
Fairfax County Public Schools
Term Expires: July 1, 2024

Gordon R. Trapnell, FSA
Board of Supervisors Appointee
Term Expires: June 30, 2023

Administrative Organization

Administrative Staff

Jeffrey K. Weiler
Executive Director

Andrew J. Spellar
Chief Investment Officer

Investment Managers

Aberdeen Asset Management Inc
Philadelphia, PA

AlphaSimplex
Cambridge, MA

AQR Capital Management
Greenwich, CT

Aspect Capital Ltd
London, UK

Axiom International Small Cap
Greenwich, CT

BlackRock, Inc
San Francisco, CA

Brandywine Global Invest. Management, LLC
Philadelphia, PA

Bridgewater Associates, Inc
Westport, CT

Capstone
New York, NY

Cohen & Steers Capital Management, Inc
New York, NY

Crestline Management
Fort Worth, TX

Czech Asset Management, LP
Old Greenwich, CT

DePrince, Race & Zollo
Winter Park, FL

DoubleLine Capital, LP
Los Angeles, CA

DWS
Chicago, IL

EJF Alternative Asset Management
Arlington, VA

Fairfax County Retirement
Fairfax, VA

Hoisington Management
Austin, TX

JP Morgan Investment Management, Inc
New York, NY

Landmark Partners
Boston, MA

Investment Managers

Lazard Asset Management, LLC
New York, NY

Marathon Asset Management, LLP
London, UK

Marathon Asset Management, LP
New York, NY

Maverick Fundamental Quant Neutral, L.P.
New York, NY

Millennium Management, LLC
New York, NY

Morgan Creek Capital Management
Chapel Hill, NC

Neuberger Berman Group, LLC
New York, NY

Parametric Portfolio Associates
Edina, MN

PIMCO
Newport Beach, CA

Pinnacle Asset Management, L.P.
New York, NY

Post Advisory Group, LLC
Los Angeles, CA

QMS Capital Management, LP
Durham, NC

Sands Capital Management, Inc
Arlington, VA

Shenkman Capital Management, Inc
New York, NY

Standish Mellon Asset Management
Pittsburgh, PA

Vanguard
King of Prussia, PA

WCM Investment Management
Laguna Beach, CA

Professional Services

Actuary
Cheiron
Actuaries
McLean, VA

Independent Auditor
Cherry Bekaert, LLP
Certified Public Accountants
Tysons Corner, VA

Custodian Bank
BNY Mellon Asset Servicing
Pittsburgh, PA

Legal Counsel
Morgan, Lewis & Bockius LLP
Washington, DC

Schedule of fees and schedule of commissions are located in the Investment Section, pages 57-58.

Organization Chart

Board of Supervisors
Daniel G. Storck, John C. Cook, Catherine M. Hudgins, Jeffrey C. McKay, Sharon Bulova (Chairman At-Large), County Executive Bryan Hill, Penelope A. Gross (Vice Chairman), John W. Foust, Kathy L. Smith, Linda Q. Smyth, Pat Herrity

Board of Trustees
(Ten Members – see page 7)
Robert C. Carlson, Randy Creller, Terry Kellogg, Jon A. Miskell, Kevin L. North, Christopher J. Pietsch, Catherine Spage, David T. Swan, Gordon R. Trapnell, John M. Yeatman

Executive Director
Jeff Weiler

Chief Investment Officer
Andrew J. Spellar

Investment Analyst
Anthony Vu

Retirement Systems Management Team
Vicky Panlaqui - Accounting and Financial Reporting
Carol Patterson - Communications
John Prather - Membership Services
Pamela Taylor - Technology
Meir Zupovitz - Retiree Services

Investment Operations Manager
Jennifer Snyder

Cherry Bekaert LLP
CPAs & Advisors

Report of Independent Auditor

To the Board of Supervisors
County of Fairfax, Virginia

To the Board of Trustees
Fairfax County Employees' Retirement System

Report on the Financial Statements
We have audited the accompanying financial statements of the Fairfax County Employees' Retirement System (the "System"), a pension trust fund of the County of Fairfax, Virginia, as of and for the year ended June 30, 2019, 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 accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility
Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System as of June 30, 2019, and the changes in fiduciary net position thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, schedule of changes in net pension liability and related ratios, schedule of net pension liability, schedule of money-weighted rate of return, schedule of employer contributions and summary of significant changes to the pension system be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's basic financial statements. The introduction section, schedule of administrative expenses, schedule of investment expenses, schedule of consultant expenses, investment section, actuarial section, and statistical section are presented for purposes of additional analysis and are not a required part of the basic financial statements.

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

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

Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated November 14, 2019, on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the System's internal control over financial reporting and compliance.

Cherry Bekaert LLP

Tysons Corner, Virginia
November 14, 2019

Management's Discussion and Analysis
(Unaudited)

This section presents management's discussion and analysis of the Fairfax County Employees' Retirement System's ("System" or "Plan") financial performance and provides an overview of the financial activities for the fiscal year ended June 30, 2019. The information in this section should be reviewed in conjunction with the Letter of Transmittal located in the Introductory Section.

Overview of Financial Statements and Accompanying Information

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

Financial Statements
The System presents the Statement of Fiduciary Net Position as of June 30, 2019 and Statement of Changes in Fiduciary Net Position for the fiscal year ended June 30, 2019. The Statement of Fiduciary Net Position provides a snapshot of the financial position. It reports the assets, liabilities and resulting net position restricted for pension benefits. The Statement of Changes in Fiduciary Net Position presents the Plan's transactions under the categories of Additions and Deductions. Additions include contributions from the County and by participating employees, net appreciation in the fair value of investments, dividend and interest income. Investment income is reduced by investment-related expenses such as asset management fees, custody charges and consulting fees. Deductions include outlays for monthly pension benefits, death benefits, refunds of contributions to employees and fees paid for professional services and administrative expenses.

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

Note 1 Describes significant accounting policies.

Note 2 Provides a description of the System, the funding policy, and member contributions and benefits.

Note 3 Describes investments and disclosures on fair value hierarchy, interest rate, credit quality, foreign currency risk, derivatives disclosures, and security lending.

Note 4 Describes the net pension liability, actuarial method and assumptions.

Note 5 Explains the System's tax status.

Note 6 Describes subsequent events.

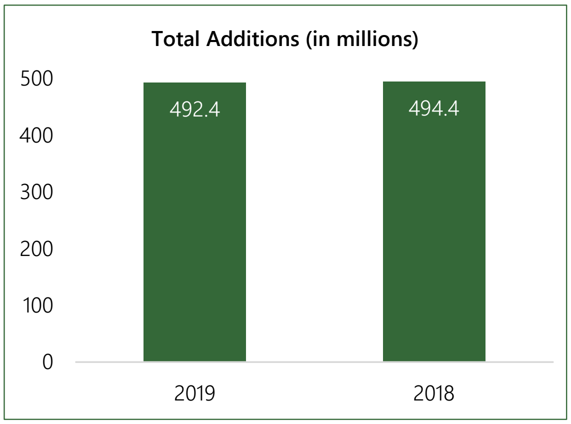
Required Supplementary Information
This section consists of historical trend exhibits such as the Schedule of Changes in Net Pension Liability and Related Ratios, Schedule of Net Pension Liability, Schedule of Employer Contributions accompanied by the Notes to Schedule of Employer Contributions and Schedule of Money-Weighted Rate of Return. These schedules will be presented over 10 years as information becomes available. A Summary of Significant Changes to the Pension System is also included.

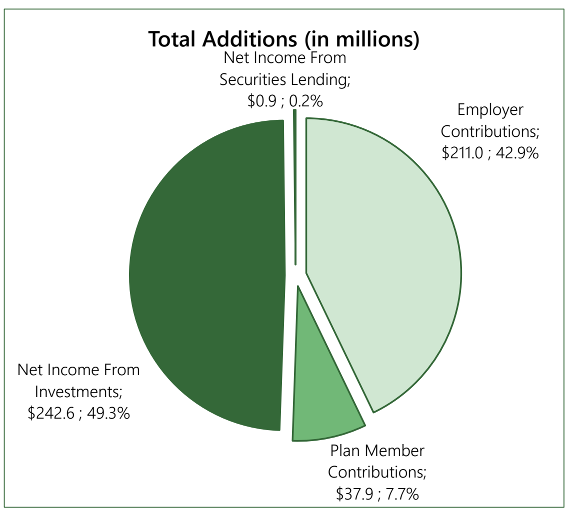
Other Supplementary Information
This section includes the Schedule of Administrative Expenses and the Schedule of Investment and Consultant Expenses. The Required Supplementary Information and Other Supplementary notes are immediately following the Notes to the Financial Statements.

Financial Highlights

The net position restricted for pension benefits as of June 30, 2019, and June 30, 2018, was $4,101.6 million and $3,940.9 million, respectively. The net position representing assets available to pay for current and future member pension benefits, increased by $160.7 million or 4.08 percent.

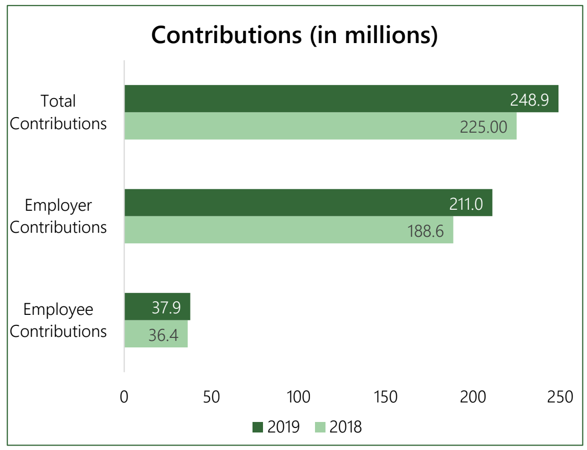
Total additions to net position took a slight downturn by 0.39 percent from $494.4 million in 2018 to $492.4 million in 2019.

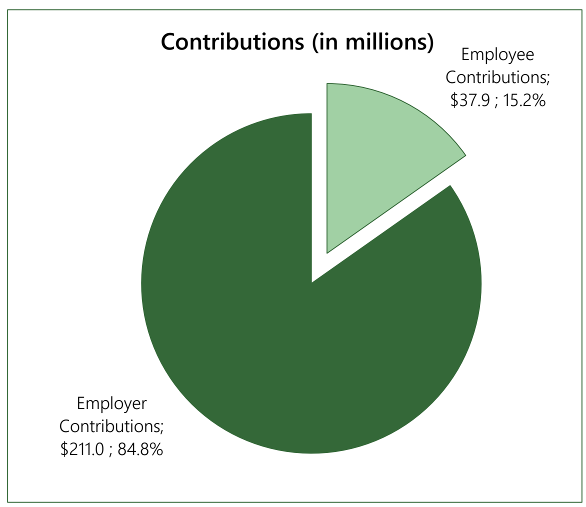




Net income from investments (excluding securities lending) decreased by 9.61 percent from $268.4 million in 2018 to $242.6 million in 2019. The net money-weighted rate of return on investments on a fair value basis was 6.27 percent in fiscal year 2019, and has decreased from 7.27 percent in fiscal year 2018.

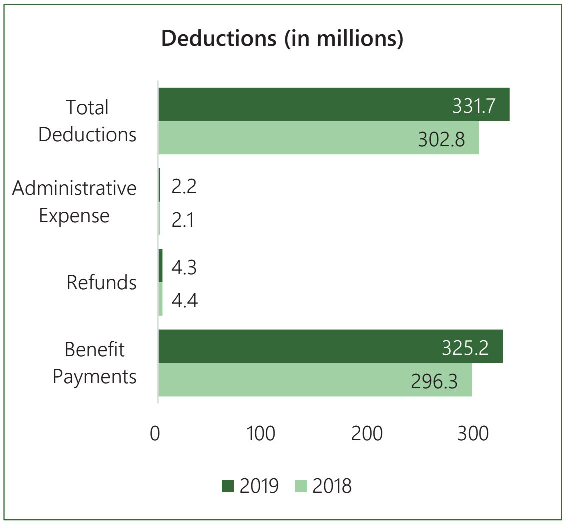
Employer and employee contributions received totaled $248.9 million, an increase of 10.62 percent or $23.9 million compared to 2018 received contributions of $225.0 million. The employer contributions increased by 11.87 percent from $188.6 million in fiscal year 2018 to $211.0 million in fiscal year 2019.

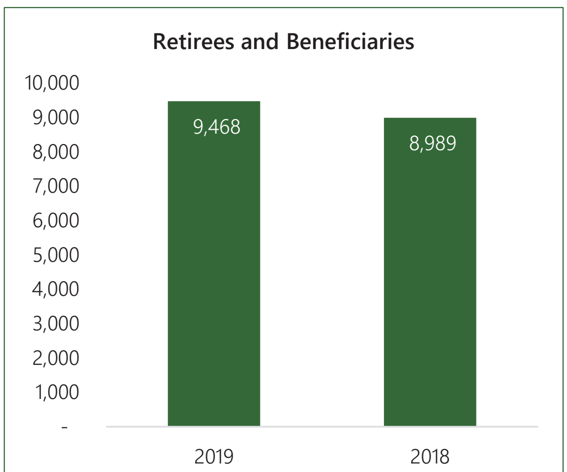




Management's Discussion and Analysis
(continued)

Total deductions from fiduciary net position increased by $28.9 million from $302.8 million in 2018 to $331.7 million in 2019. Member retirement benefit payments of $325.2 million in 2019 make up the majority of total deduction and increased by $28.9 million or 9.76 percent from $296.3 million in 2018. The number of retired members and beneficiaries receiving a benefit payment increased 5.33 percent from 8,989 to 9,468 payees as of June 30, 2019.





The net pension liability as calculated per GASB 67 as of June 30, 2019, and June 30, 2018, was $1,690.0 million and $1,650.3 million, respectively. The net position as a percentage of total pension liability as of June 30, 2019, and June 30, 2018, was 70.82 percent and 70.48 percent, respectively. The net pension liability as a percentage of covered payroll has decreased from 221.32 percent in fiscal year 2018 to 217.42 percent in fiscal year 2019. The covered payroll increased from $745.7 million in 2018 to $777.3 million in 2019.

	2019	2018
Net Pension Liability (in millions)	$1,690.0	$1,650.3
Net Position as Percentage of TPL	70.82%	70.48%
Covered Payroll (in millions)	$777.3	$745.7
Net Pension Liability as Percentage of Covered Payroll	217.42%	221.32%

Financial Analysis

Plan Net Position

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

For fiscal year 2019, the net position of the Employees' Retirement System increased 4.08 percent, resulting in a total net position value of $4,101.6 million, reflecting an increase of $160.7 million over fiscal year 2018.

Total assets as of June 30, 2019, were $4,312.8 million, representing an increase of $63.6 million, or 1.50 percent over the previous fiscal year. The main component of the increase was due to the growth of cash and investment from $3,934.8 million in fiscal year 2018 to $4,121.1 million in fiscal year 2019.

Receivables decreased by $83.7 million or 45.39 percent due to the timing of investment for settled trades that occurred near year end.

Management's Discussion and Analysis
(continued)

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

Net Position for Current and Prior Fiscal Year

Fiscal Year	Ending Balances (millions)	Net Change in Dollars (millions)	Net Change in Percent
2019	$4,101.6	$160.7	4.08%
2018	$3,940.9	$191.5	5.11%

Summary of Plan Fiduciary Net Position

Assets	**2019**	**2018**	**Difference**	**Percentage of Change**
Total Cash and Investments	$4,121,088,472	$3,934,806,719	$186,281,753	4.73%
Cash Collateral, Securities Lending	90,947,924	129,947,304	($38,999,380)	-30.01%
Capital Assets, net	49,056	$53,376	(4,320)	-8.09%
Total Receivables	100,699,503	184,385,747	(83,686,244)	-45.39%
Total Assets	4,312,784,955	4,249,193,146	63,591,809	1.50%
Liabilities				
Purchase of Investments	(110,851,008)	(168,779,495)	57,928,487	-34.32%
Cash Collateral, Securities Lending	(90,947,924)	(129,947,304)	38,999,380	-30.01%
Accounts Payable and Others	(9,348,677)	(9,539,631)	190,954	-2.00%
Total Liabilities	(211,147,609)	(308,266,430)	97,118,821	-31.50%
Net Position Restricted for Pension Benefits	**$4,101,637,346**	**$3,940,926,716**	**$160,710,630**	**4.08%**

Summary of Additions and Deductions

Additions	**2019**	**2018**	**Difference**	**Percentage of Change**
Employer Contributions	$210,964,436	$188,578,414	$22,386,022	11.87%
Plan Member Contributions	37,915,769	36,357,591	1,558,178	4.29%
Net Income from Investments	242,581,953	268,377,071	(25,795,118)	-9.61%
Net Income from Securities Lending	963,592	1,041,086	(77,494)	-7.44%
Total Additions	492,425,750	494,354,162	(1,928,412)	-0.39%
Deductions				
Benefit Payments	325,167,739	296,255,029	28,912,710	9.76%
Refunds	4,349,488	4,386,395	(36,907)	-0.84%
Administrative Expense	2,197,893	2,170,638	27,255	1.26%
Total Deductions	331,715,120	302,812,062	28,903,058	9.54%
Net Increase/(Decrease)	**$160,710,630**	**$191,542,100**	**($30,831,470)**	**-16.10%**

Management's Discussion and Analysis
(continued)

Total liabilities as of June 30, 2019, were $211.1 million, representing a decrease of $97.1 million, or 31.50 percent, over the previous year. The decline in total liabilities is the result of a decrease in payables for unsettled trades at fiscal year end 2019. There was a 13.65 percent decrease in the accrued liability, including the year-end accrual for management fees. In addition, the downturn in the liability is brought by the decline in the securities lending cash collateral by $39.0 million or 30.01 percent.

	2019	2018	Difference	Percentage of Change
Accrued Liabilities (in thousands)	$3,970.3	$4,597.8	($627.4)	-13.65%

The total assets of $4,312.8 million exceeded its liabilities of $211.1 million at the close of the Plan year ended June 30, 2019, with $4,101.6 million in net position restricted for pension benefits.

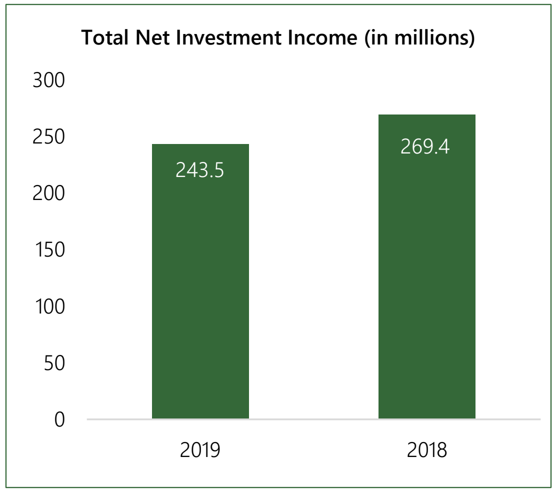
The Plan's investments are exposed to various risks including interest rate, market and credit risks. These risks may be influenced by changes in economic conditions and market conditions. Therefore, it is reasonable to assume that there will be changes in the values of the investments held in trust 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

Total additions to the retirement fund consist of contributions from employers and active members and changes in the value of assets. Total additions decreased by $1.9 million or 0.39 percent, attributed primarily due to smaller investment gains in fiscal year 2019 versus fiscal year 2018. Interest income also experienced a slight decrease. This lower return compared to the previous year's investment performance was due to the less favorable and fluctuating market environment in fiscal year 2019.

Total contributions for the fiscal year ended June 30, 2019, amounted to $248.9 million. This was an increase of $23.9 million when compared with the activity of fiscal year 2018. The employer contributions for fiscal year 2019 increased by 11.87 percent which is consistent with the employer contribution rate rising from 25.29 percent to 27.14 percent of salary. Employee contributions increased by 4.29 percent, due to merit and 1.8 percent COLA increases.

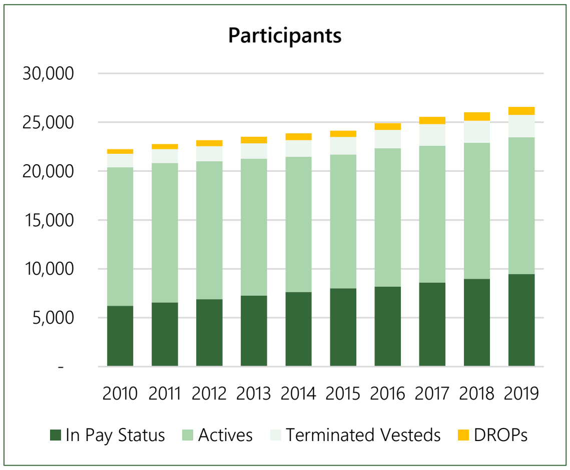
The System experienced 7.44 percent decrease in net income from securities lending as a result of higher rebates paid in lending securities activities during the fiscal year. Investment returns declined for fiscal year 2019, reflecting less favorable returns in the capital markets. Total net investment income (including securities lending) declined from $269.4 million in fiscal year 2018 to $243.5 million in fiscal year 2019, as a result of lower investment performance in a fluctuating market.



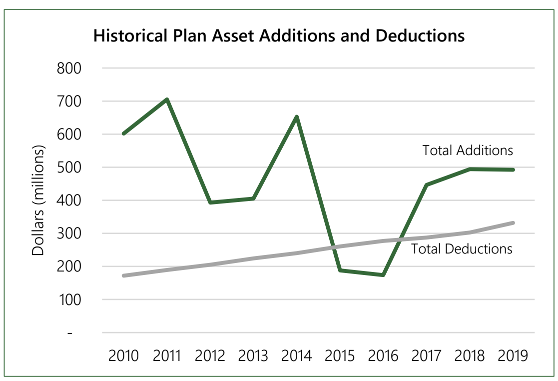
Total deductions of the System consist of the payments of benefits to retirees and beneficiaries, the refund of contributions to former members and the cost of administering the System. The total deductions for fiscal year 2019 were $331.7 million, an increase of $28.9 million, or 9.54 percent, over fiscal year 2018.

Regular pension benefit payments increased as the number of retirees and beneficiaries receiving benefit payments climbed to 9,468 from 8,989 in fiscal year 2019. Benefit payments also increased due to a cost-of-living increase of 1.8 percent and higher average benefits for new retirees. Refunds reflected a 0.84 percent decrease due to lower employee turnover, separation in the current fiscal year, less employees asking for refunds or lower balance of refunded amount.

Participant Count	2019	2018
Actives	14,000	13,904
DROP members	806	858
Terminated vesteds	2,293	2,269
Retirees in payment status	9,468	8,989
Total	**26,567**	**26,020**



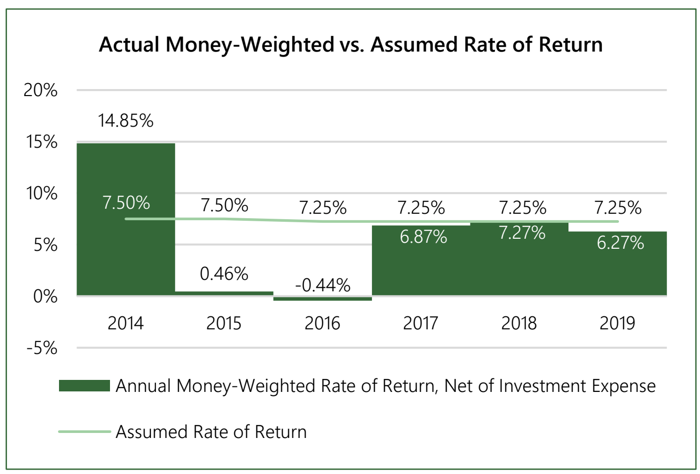
Historical additions to and deductions from fiduciary net position indicate a pattern of steadily increasing deductions as compared to fluctuating additions as a result of the unpredictable market environment.



The System utilizes two methodologies when analyzing investment returns. They may vary from each other in any given period. For GASB 67 accounting valuation purposes, a money-weighted return is used. A money-weighted rate of return calculates the investment performance accounting for all cash flows (contributions and withdrawals) occurring during the performance measurement period. The System's investment returns, net of fees, on a money-weighted rate of return declined from 7.27 percent to 6.27 percent in fiscal year 2019.

For investment performance reporting purposes, the System relies on a time-weighted approach. A time-weighted rate of return minimizes the impact of cash flows occurring throughout the measurement period. This methodology allows the System to compare its investment performance with relevant benchmark returns, as well as its performance with other pension plan. The System's investment returns, net of fees, on a time-weighted rate of return declined from 7.28 percent to 6.33 percent in fiscal year 2019.

The annual money-weighted rate of return of 6.27 percent was below the assumed 7.25 percent rate of return for the year ended June 30, 2019.



An actuarial valuation is performed annually by Cheiron. The actuarial value of the assets as of the last valuation on June 30, 2019, was $4,220.4 million, while actuarial liabilities as of the same period was $5,791.7 million. As of June 30, 2019, the date of the most recent actuarial valuation, the funded ratio of the system was 72.87 percent. This was an increase of 0.07 percent from the July 1, 2018, valuation funded ratio of 72.80 percent.

Under GASB 67 calculation, using the December 31, 2018, data rolled forward to June 30, 2019, the plan fiduciary net position as a percentage of the total pension liability was 70.82 percent. It increased from 70.48 percent in fiscal year 2018, primarily as a result of the growth in Plan Fiduciary Net Position. The Total Pension Liability as of June 30, 2019, and June 30, 2018, was $5,791.7 million and $5,591.2 million, respectively.

(Dollars in millions)	2019	2018
Actuarial Accrued Liability	$5,791.7	$5,591.2
Actuarial Value of Assets	4,220.4	4,070.5
Unfunded Actuarial Liability	$1,571.3	$1,520.7
Funding Ratio	72.87%	72.80%
Total Pension Liability	$5,791.7	$5,591.2
Plan Fiduciary Net Position	4,101.6	3,940.9
Net Pension Liability	$1,690.0	$1,650.3
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	70.82%	70.48%

Investment Management Fees

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

Contacting the System's Financial Management

This financial report is designed to provide our membership, the Board of Trustees and the County's Board of Supervisors with a general overview of the System's financial condition. If you have any questions about this report or need additional information, contact the Fairfax County Retirement System, 12015 Lee Jackson Memorial Highway, Fairfax, VA 22033. This report can also be found on the County's internet site at www.fairfaxcounty.gov/retirement/.

Basic Financial Statements

Statement of Fiduciary Net Position

as of June 30, 2019

Assets		
Cash and Short-Term Investments		
Equity in County's Pooled Cash and Temporary Investments	$9,574,892	
Cash Collateral Received for Securities on Loan	90,947,924	
Short-Term Investments	314,310,897	
Total Cash and Short-Term Investments		$414,833,713
Capital Assets		
Building Improvements, net	20,670	
Equipment, net	28,386	
Total Capital Assets		49,056
Receivables		
Accounts Receivable	10,558,268	
Accrued Interest and Dividends	10,979,923	
Investment Proceeds and Other Receivables	79,161,312	
Total Receivables		100,699,503
Investments, at Fair Value		
Common and Preferred Stock	830,416,016	
Fixed Income		
Asset-Backed Securities	134,624,752	
Corporate and Other Bonds	244,940,950	
U.S. Government Obligations	291,174,296	
Pooled and Mutual Funds	2,296,046,669	
Total Investments		3,797,202,683
Total Assets		4,312,784,955
Current Liabilities		
Investment Purchases and Other Liabilities	110,851,008	
Cash Collateral Received for Securities on Loan	90,947,924	
Accounts Payable and Accrued Expenses	9,083,399	
Compensated Absences, Short-Term	110,349	
Noncurrent Liabilities		
Compensated Absences, Long-Term	154,929	
Total Liabilities		211,147,609
Net Position Restricted for Pension Benefits		**$4,101,637,346**

See accompanying notes to financial statements.

Basic Financial Statements

Statement of Changes in Fiduciary Net Position

For the Year Ended June 30, 2019

Additions		
Contributions		
Employer	$210,964,436	
Plan Members	37,915,769	
Total Contributions		$248,880,205
Investment Income		
Net Appreciation in Fair Value of Investments	228,540,384	
Interest and Other Investment Income	32,818,208	
Dividends	19,461,562	
Total Investment Income	280,820,154	
Investment Activity Expense		
Management Fees	(36,562,038)	
Custodial Fees	(135,565)	
Consulting Fees	(86,942)	
Allocated Administration Expense	(1,453,656)	
Total Investment Expense	(38,238,201)	
Net Income from Investment Activities		242,581,953
Securities Lending Activities		
Securities Lending Income	4,380,486	
Securities Lending Expenses	(3,416,894)	
Net Income from Securities Lending Activities		963,592
Total Net Investment Income		243,545,545
Total Additions		492,425,750
Deductions		
Annuity Benefits	310,161,066	
Disability Benefits	7,888,878	
Survivor Benefits	7,117,795	
Refunds of Employee Contributions	4,349,488	
Administrative Expense	2,197,893	
Total Deductions		331,715,120
Net Increase		160,710,630
Net Position Restricted for Pension Benefits		
Beginning of Fiscal Year		3,940,926,716
End of Fiscal Year		**$4,101,637,346**

See accompanying notes to financial statements.

Notes to the Financial Statements

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

Note 1. Summary of Significant Accounting Policies

A. Basis of Accounting

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

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

B. Method Used to Value Investments

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

C. Equity in County's Pooled Cash and Temporary Investments

The System maintains cash with the County, which invests cash and allocates interest earned, net of a management fee, on a daily basis to the System based on the System's average daily balance of equity in pooled cash. As of June 30, 2019, 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, market and credit risks. Such risks, and the resulting investment security values, may be influenced by changes in economic conditions and market perceptions and expectations. Accordingly, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such change could materially affect the amounts reported in the financial statements.

D. Compensated Absences

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

Compensated Absences	
FY 2019 Beginning Balance	$260,559
Leave Earned	106,956
Leave Used	102,237
FY 2019 Ending Balance	$265,278
Due Within One Year	$110,349

Note 2. Summary of Plan Provision

A. Plan Description and Provision

The Employees' Retirement System is a single employer defined benefit pension plan which covers employees of the County and its component units. Benefit provisions are established and may be amended by County ordinance. All benefits vest at five years of service. The general provisions of the Employees' Retirement System are as follows:

Membership.

The Plan covers full-time and certain part-time County, Public Schools, Economic Development Authority, Park Authority and Fairfax County Redevelopment and Housing Authority employees who are not covered by other plans of the County or the Virginia Retirement System.

Normal Retirement.

To be eligible for normal retirement, an individual must meet the following criteria: (a) attain the age of 65 with five years of service, (b) for Plan A and B, attain the age of 50 plus years of eligibility service being greater than or equal to 80, or (c) for Plan C and D, attain the age of 55 plus years of eligibility service being greater than or equal to 85.

For Plan A and C, the benefit is the sum of 1.8 percent average final compensation (i.e., the highest consecutive three years) up to the Social Security breakpoint plus 2 percent of average final compensation in excess of the breakpoint, all multiplied by credited service, and increased by 3 percent.

For Plan B and D, the benefit is 2 percent of average final compensation multiplied by credited service, increased by 3 percent.

Pre-Social Security Supplement for all Plans is 1 percent of average final compensation up to the Social Security breakpoint times credited service, and increased by 3 percent. This benefit is payable from normal retirement age until the participant is eligible to receive the unreduced Social Security benefits.

Early Retirement.

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

Deferred Retirement Option Program (DROP).

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

Deferred Vested Retirement.

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

Service-Connected Disability Retirement.

Service-connected disability retirement is available for members, regardless of their length of service, who become disabled as a result of a job-related illness or injury. Benefits are 66.67 percent of average final compensation, less an offset for a workers' compensation award, less 5.0 percent of the initial award amount of a member's Social Security benefit.

Ordinary Disability Retirement.

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

Notes to the Financial Statements
(continued)

Contribution Rates		
Member	Plan A & C	The contribution rate for Plan A is 4.0% of creditable compensation up to the Social Security taxable wage base, plus 5.33% of creditable compensation in excess of the Social Security taxable wage base
	Plan B & D	The contribution rate for Plan B is 5.33% of creditable compensation
Employer	Plan A, B, C, and D	The contribution rate for all four plans for Fiscal Year 2019 was 27.14%

Death Benefits.
If death occurs prior to retirement:

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

If death occurs after retirement:

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

If death occurs because of a job-related illness or injury:

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

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

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

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

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

Notes to the Financial Statements
(continued)

C. Membership
At June 30, 2019, the date of the latest actuarial valuation, membership in the System consisted of:

Retirees and Beneficiaries Receiving Benefits	9,468
Terminated Vesteds	2,293
Deferred Retirement Option Program (DROP) Participants	806
Active Plan Members	14,000
Total	**26,567**

D. Deferred Retirement Option Program
Members eligible for normal retirement may elect to enter the DROP. As a DROP member, he or she will continue to work and receive a salary for a maximum period of three years while an amount equal to what could have been received as a retirement benefit is credited to his or her DROP account. (No pre-Social Security Supplements are paid into DROP accounts for Plans C & D). The monthly benefit that will be credited to the DROP account is determined by the years of service and Average Final Compensation at the DROP entry date. During the DROP period, the retirement plan accumulates his or her accrued monthly benefit which is payable at the end of the DROP period. The DROP account balance is credited at an annual interest rate of 5 percent, compounded monthly. At the end of the DROP period, the DROP member must terminate employment with the Fairfax County Government and will begin receiving his or her monthly retirement benefit. Upon DROP exit, the retiree can elect to receive the balance of the DROP account in the form of a lump sum distribution, a rollover to another qualified plan (or IRA), or as an addition to the monthly retirement annuity. The DROP balance as of June 30, 2019, was $62.2 million.

E. Contributions
The contribution requirements of the System members are established and may be amended by County ordinances. Employees hired prior to January 1, 2013 are members of Plan A or Plan B. All eligible employees whose County or school board employment commenced by reporting to work on or after January 1, 2013, may elect to join Plan C or Plan D. Plan A and C require member contributions of 4 percent of compensation up to the social security wage base and 5.33 percent of compensation in excess of the wage base. Plan B and D require member contributions of 5.33 percent of compensation. The County is required to contribute at an actuarially determined rate; the rates for the year ended June 30, 2019, was 20.03 percent of annual covered payroll. The decision was made to commit additional funding and a rate of 27.14 percent was adopted for fiscal year 2019. Total contributions for the fiscal year ended June 30, 2019, amounted to $248.9 million.

F. Deductions
The deductions from the System included the payment of retiree and beneficiary payments, the refund of employee contributions to former members and administrative expenses. The total deductions for the fiscal year ended June 30, 2019, amounted to $331.7 million.

Note 3. Investments

A. Investment Policy
The authority to establish the System is set forth in Section 51.1-800 Code of Virginia (Code). Section 51.1-803 of the Code authorizes fiduciaries of the System *to purchase investments with the care, skill, prudence and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of like character and with the same aims. The Board shall also diversify such investments as to minimize the risk of large losses unless under the circumstances it is clearly prudent not to do so.*

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

The following was the System's adopted asset allocation policy as of June 30, 2019. The asset allocation policy commonly exceeds 100 percent because we monitor the target exposures to both direct investments in asset classes plus notional exposure to asset classes through derivative positions such as Futures held at the portfolio level. Also, the System commonly includes 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
Absolute Return	20.0%
Global Equity	27.5%
Global Fixed Income	40.0%
Global Multi-Asset	20.0%
Global Real Assets	12.5%

B. Concentrations

The investment policy states that the securities of any one issuer shall not exceed 10.0 percent at fair value. At June 30, 2019, the System did not have investments (other than U.S. Government and U.S. Government guaranteed obligations) in any one issuer that represents 5.0 percent or more of net position available for benefits. All investments, except for the pooled and mutual funds, short-term investment fund and a short-term collateral investment pool are held by an unaffiliated custodian. There is no custodial credit risk since the custodian's records establish the System's interest in the securities.

C. Rate of Return

For the year ended June 30, 2019, the annual money-weighted rate of return on pension plan investment, net of pension plan investment expense, was 6.27 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

D. Fair Value Hierarchy

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

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

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

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

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

Fair Value Hierarchy				
		Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs
Investments by Fair Value Level	**6/30/2019**	**Level 1**	**Level 2**	**Level 3**
Asset-Backed Securities	$134,624,752	$ -	$134,624,752	$ -
Equity	828,206,089	828,206,089	-	-
Corporate and Other Bonds	231,273,023	7,300,455	223,548,368	424,200
Futures Contracts	13,667,927	13,667,927	-	-
Preferred Securities	2,209,927	2,182,282	-	27,645
Short-Term Investments	314,310,897	26,835,140	18,742,131	268,733,626
U.S. Government Obligations	291,174,296	-	291,174,296	-
Total Investments by Fair Value Level	**$1,815,466,911**	**$878,191,893**	**$668,089,547**	**$269,185,471**
Investments Measured at Net Asset Value (NAV)				
Absolute Return	$752,738,190			
Global Equity	329,689,505			
Global Fixed Income	599,042,768			
Global Multi-Asset	453,911,475			
Global Real Assets	160,664,731			
Total Investments Measured at NAV	**$2,296,046,669**			
Total Investments	**$4,111,513,580**			

Investment Measured at NAV				
	Fair Value	**Unfunded Commitments**	**Redemption Frequency**	**Redemption Notice Period**
Absolute Return	$752,738,190	$-	Monthly, Quarterly	3 - 90 days
Global Equity	329,689,505	46,505,823	Daily, Monthly, None	3 - 15 days
Global Fixed Income	599,042,768	222,532,156	Daily, Semi-Annually, None	5 - 90 days
Global Multi- Asset	453,911,475	-	Daily, Monthly, Quarterly	1 - 30 days
Global Real Assets	160,664,731	46,968,005	Daily, None	5 - 20 days
Total Investments Measured at NAV	**$2,296,046,669**	**$316,005,984**		

Absolute Return.

Relative Value:

This type includes six hedge funds which implement long and short relative value strategies to capture these structural returns across multiple asset classes including: equity sectors, equity indices, fixed income, currency, and commodities. The fair values of each of these hedge funds has been determined monthly using NAV per share of the investments.

Global Macro:

This type includes five hedge funds that invest long and short across fixed income, currency, equity and commodity markets. The process is equally driven by analysis of the macro environment, flows of capital, the expected reaction to changes in interest rates, trend following and other drivers. The fair values of the investments in this type have been determined monthly using NAV per share (or its equivalent) of the investments.

Global Equity.

Domestic Equity:

This type includes a fund that uses derivative instruments to replace long equity exposure.

International Equity:

This type includes two funds providing traditional long-only international equity exposure. The fair values of the investments in this type have been determined monthly using NAV per share (or its equivalent) of the investments.

Private Equity:

This type includes two private funds. This first fund purchases private equity stakes in investment management firms and thus a share of the firm's revenues and capital appreciation. The second private fund invests in blockchain technology, its many other industry uses, and the infrastructure for crypto currency markets (index rights, wallet, settlement and custody platforms, etc.).

Global Fixed Income.

Fixed Income:

This type includes two funds providing leveraged exposure to US and international government issued inflation-linked bonds as a capital efficient way to gain the exposure. This type also includes an emerging market debt fund. The fair values of the investments in this type have been determined monthly using NAV per share (or its equivalent) of the investments.

Direct Lending:

This type includes three private debt funds conducting middle market corporate direct lending with negotiated senior secured loans to borrowers that are too small to attract the attention of conventional banks and lenders. These investments cannot be redeemed. Instead, the nature of the investments in these private debt funds are that distributions are received through the liquidation of underlying assets of the funds over a period of years as per the terms of the fund. Loan payments are also distributed on a monthly or quarterly basis. The loans are held at book value unless a payment default has occurred at which time a third-party appraisal value is determined.

Opportunistic Credit:

This type includes ten opportunistic /distressed funds investing in public and private debt, equity and real estate as opportunities present themselves. All but one of these investments cannot be redeemed. Instead, the nature of the investments in these private debt funds are that distributions are received through the liquidation of underlying assets of the funds over a period of years as per the terms of the fund. The fair values of the investments in this type have been determined monthly or quarterly using NAV per share (or its equivalent) of the investments.

Global Multi-Asset.

This type includes two funds that invest in a relatively passive manner across multiple asset classes using a risk balanced approach in their asset allocation and one fund that is active in its approach. The main goal is to construct a portfolio that achieves the best risk adjusted return at a given expected level of volatility which varies by fund. This is achieved through the use of derivatives and liquid long positions across multiple asset classes. The fair values of the investments in this type have been determined monthly using NAV per share (or its equivalent) of the investments.

Notes to the Financial Statements
(continued)

Global Real Assets.
This type includes four funds. The first fund owns and operates a fleet of commercial bulk container and tanker vessels. A second fund purchases interests in other private real estate funds on the secondary market. The third fund owns and operates the real estate, infrastructure and inventory of a cattle feeding operation. These investments cannot be redeemed. Instead, the nature of the investments in these private debt funds are that distributions are received through the liquidation of underlying assets of the funds over a period of years as per the terms of the fund. The fair values of the investments in this type have been determined quarterly using NAV per share (or its equivalent) of the investments. The fourth fund focuses on publicly traded REITs, listed infrastructure, commodities, MLPs, natural resource equities (including timber and agriculture), precious metals, TIPS, and floating rate/bank loans. The strategy will set long term strategic allocations to those asset classes with broad ranges and the portfolio will be tactically reviewed on a quarterly basis.

E. Quality Ratings

The System's investment quality ratings at June 30, 2019, for the separately managed fixed income accounts, were as follows:

Type of Investment	Fair Value	Ratings	Percentage of Fixed
U.S. Government Obligations	$291,174,296		43.41%
Asset-Backed Securities	1,630,846	AAA	0.25%
	22,829,968	AA	3.40%
	389,282	A	0.06%
	1,687,542	BBB	0.25%
	4,896,267	BB	0.73%
	5,357,722	B	0.80%
	5,660,962	CCC	0.84%
	1,631,618	CC	0.24%
	9,792,179	D	1.46%
	80,748,366	Unrated	12.04%
Corporate and Other Bonds	619,106	AAA	0.10%
	7,584,916	AA	1.13%
	30,773,001	A	4.59%
	25,853,184	BBB	3.85%
	72,647,604	BB	10.83%
	41,193,455	B	6.14%
	6,351,604	CCC	0.95%
	59,918,080	Unrated	8.93%
Total Fixed Income	**$670,739,998**		**100.0%**
Short-Term Investments			
Cash and Cash Equivalents	$11,089,986	Unrated	
Employees' STIF*	276,385,771	Unrated	
U.S. Treasury Bill	26,835,140		
Total Short-Term Investments	**$314,310,897**		

*Short-Term Investment Funds

As of June 30, 2019, the fixed income portfolio, excluding pooled funds, consisted of 17.51 percent invested in investment grade securities, 21.99 percent invested in below-investment- grade securities and 60.50 percent invested in unrated securities.

The Barclays Capital Aggregate Bond Index (BCAG) is the standard benchmark against which the industry and the System's Board measures its fixed income portfolio performance and volatility. The System's fixed income managers have discretion, within circumscribed limits, to extend the duration of their portfolios beyond that of the BCAG if they forecast falling interest rates (and thus higher bond prices). Conversely, if managers anticipate that the general level of interest rates will rise, they have the ability to shorten the duration of their portfolio and thus reduce the portfolio's sensitivity to rising rates.

Notes to the Financial Statements
(continued)

F. Sensitivity to Interest Rate Risk
The System's investments' sensitivity to interest rates at June 30, 2019, were as follows:

Investment Type	Fair Value	Option Adjusted Duration (yrs)	Percentage of Fixed
U.S. Government Obligations	$291,174,296	14.3	43.41%
Corporate and Other Bonds	244,940,950	3.7	36.52%
Asset-Backed Securities	134,624,752	3.6	20.07%
Total Fixed Income	**$670,739,998**	8.3	**100.00%**
Short-Term Investments			
Cash and Cash Equivalents	11,089,986	0.1	
Employees' STIF*	276,385,771	0.1	
U.S. Treasury Bill	26,835,140	0.3	
Total Short-Term Investments	**$314,310,897**		

*Short-Term Investment Funds

The duration of the System's overall fixed income portfolio excluding the pooled funds was 8.3 years for the separately managed accounts. BCAG's years of duration is 5.53 years.

G. Short-term Investment
The Short-Term Investments of $314.3 million includes a position of $276.4 million of commingled cash held by our investment managers and cash held by the System in an enhanced short term investment fund managed by our custodian.

H. Foreign Currency Risk
The Foreign Currency Risk is the risk that changes in exchange rates will adversely affect the fair value of the international investments. The System's investments at June 30, 2019, held in currencies other than U.S. dollars, were as follows:

International Securities	Short-Term & Other Investments	Convertible & Fixed Income	Equity	Total
Australian Dollar	$441,131	$7,031,149	$14,735,695	$22,207,975
Brazil Real	1,302	8,319,290	5,720,930	14,041,522
Canadian Dollar	465,221	386,874	8,405,441	9,257,536
Colombian Peso	36	7,089,435	-	7,089,471
Danish Krone	12,173	-	6,966,553	6,978,726
Euro Currency Unit	157,559	1,047,719	65,113,627	66,318,905
Hong Kong Dollar	-	-	26,227,279	26,227,279
Indian Rupee	-	-	3,792,023	3,792,023
Indonesian Rupiah	-	4,892,133	1,067,971	5,960,104
Japanese Yen	85,109	-	40,730,534	40,815,643
Malaysian Ringgit	-	8,275,602	-	8,275,602
Mexican Peso	28	17,365,673	4,071,354	21,437,055
New Taiwan Dollar	-	-	4,344,597	4,344,597
Norwegian Krone	-	-	3,606,202	3,606,202
Polish Zloty	-	8,440,614	-	8,440,614
Pound Sterling	60,521	1,608,726	27,700,553	29,369,800
Singapore Dollar	1,950	1,224,414	2,619,648	3,846,012
South African Rand	25	6,691,293	-	6,691,318
Swedish Krona	(3,777)	-	10,506,434	10,502,657
Swiss Franc	83	-	13,398,142	13,398,225
Other	1,833	6,316,926	3,674,094	9,992,853
Grand Total	**$1,223,194**	**$78,689,848**	**$242,681,077**	**$322,594,119**

Notes to the Financial Statements
(continued)

I. Derivative Financial Instruments
In accordance with the Board's investment policies, the System regularly invests in derivative financial instruments in the normal course of its investing activities to enhance return on investment and manage exposure to certain risks within the System. The System also enters into derivative transactions to gain exposure to currencies and markets where derivatives are the most cost-effective instrument. Derivative instruments are financial contracts whose values depend on the values of one or more underlying assets, reference rates or financial indices. During fiscal year 2019, the System had exposure to various derivatives including asset-backed securities, collateralized mortgage obligations, exchange-traded futures contracts, forward currency contracts, options, swaps and floating rate securities. Some securities, such as structured notes, can have derivative-like characteristics where the return may be linked to one or more indexes. Asset-backed securities, such as collateralized mortgage obligations (CMOs), are sensitive to changes in interest rates and pre-payments. It should also be noted that the System also has exposure to derivatives indirectly through its ownership interests in certain hedge funds, mutual funds and commingled funds which may use, hold, or write derivative financial instruments.

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 the fluctuations in interest rates and currency rates. The credit risk of these investments is associated with the creditworthiness of the related parties to the contracts. The System could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. Holders of futures contracts look to the exchange for performance under the contract and not to the other party holding the offsetting futures position. Accordingly, the amount at risk due to nonperformance of counterparties to futures contracts is minimal. For counterparties involving over the counter derivatives, the Board seeks to control this risk through counterparty credit evaluations, counterparty credit limits and exposure monitoring procedures conducted by investment managers and staff.

At June 30, 2019, the System held the following four types of derivative financial instruments: futures, currency forwards, options and swaps. These four types of derivatives provide the System with the opportunity to build passive benchmark positions, enhance returns, and gain market exposure to various indices in a more efficient way and at lower transaction costs. Credit risks depend on whether the contracts are exchange-traded or exercised over-the-counter. Market risks arise from adverse changes in market prices, interest rates and foreign exchange rates.

Investment managers are prohibited from purchasing securities on margin or using leverage unless specifically permitted within the investment manager's guidelines. Derivative instruments covered under the scope of GASB 53 are reported at fair value. The changes in fair value of derivative instruments that are used for investment purposes are reported within the investment revenue classification. Gains and losses on derivative securities are determined based upon fair 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, 2019, were as follows:

Types of Futures	Base Exposure	Notional Cost
Cash and Cash Equivalents		
Short	($186,745,514)	($185,423,045)
Commodity		
Long	111,884,655	108,580,392
Equity		
Long	310,553,565	304,695,670
Short	(130,880,565)	(127,316,190)
Fixed Income Securities		
Long	618,859,592	607,035,120
Short	(51,468,791)	(50,370,458)
Total	**$672,202,942**	**$657,201,489**

Swaps.
The System enters into several types of swap contracts, in which two counterparties agree to exchange one stream of payments for another over some agreed to period of time. Swaps are used to manage risk and enhance returns. All counterparties are rated A or better. The following is the information on the System's swap contracts outstanding at June 30, 2019:

Equity Swaps	Fair Value	Base Exposure
Total Return Swaps	$-	$2,730,314
Fixed Income Securities Swaps		
Cleared Interest Rate Swaps	7,182,378	7,462,341
Cleared Credit Default Swaps	4,882,728	4,980,975
Cleared Inflation Swaps	(65,098)	(80,509)
Cleared Zero Coupon Swaps	532,584	551,564
Credit Default Swaps	5,775	5,775
Inflation Swaps	(44,349)	(44,349)
Interest Rate Swaps	(85,050)	(85,050)
Total	**$12,408,968**	**$15,521,061**

Notes to the Financial Statements
(continued)

Currency Forwards.

Currency forwards represent foreign exchange contracts. They used to affect settlements and to protect the base currency value of portfolio assets denominated in foreign currencies against fluctuations in the exchange rates of those currencies, or to gain exposure to the change in fair value of a specific currency. A forward foreign currency exchange contract is a commitment to purchase or sell a foreign currency at a future date and at a negotiated price. The credit risk of currency contracts that are exchange-traded lies with the clearinghouse of the exchange where the contracts are traded. The credit risk of currency contracts traded over-the-counter lies with the counterparty, and exposure usually is equal to the unrealized profit on in-the-money contracts. All counterparties are rated A or better. The market risk in foreign currency contracts is related to adverse movements in currency exchange rates. The following is the summary information on the System's currency forward contracts at June 30, 2019:

Foreign Currency Contracts Purchased	**Notional (Local Currency)**	**Cost**	**Fair Value Payable in U.S.Dollars**	**Unrealized Gain/(Loss)**
Australian Dollar	(910,000)	($628,041)	($639,716)	($11,675)
Mexican Peso	(4,079,000)	(205,579)	(210,825)	(5,246)
New Zealand Dollar	(88,000)	(57,778)	(59,105)	(1,327)
Polish Zloty	(3,270,000)	(857,053)	(877,098)	(20,045)
Pound Sterling	(2,918,000)	(3,700,141)	(3,716,627)	(16,486)
South African Rand	(107,100,000)	(7,249,021)	(7,549,910)	(300,889)
		($12,697,613)	($13,053,281)	($355,668)

Foreign Currency Contracts Sold	**Notional (Local Currency)**	**Cost**	**Fair Value Receivable in U.S. Dollars**	**Unrealized Gain/(Loss)**
Australian Dollar	5,630,000	$4,011,548	$3,955,286	($56,262)
Chilean Peso	5,940,000,000	8,754,291	8,753,799	(492)
Czech Koruna	59,800,000	2,675,111	2,680,069	4,958
Euro Currency Unit	5,010,000	5,723,825	5,737,903	14,078
Indonesian Rupiah	19,800,000,000	1,388,159	1,398,355	10,196
Mexican Peso	4,071,755	207,843	208,518	675
New Zealand Dollar	8,030,000	5,344,325	5,400,706	56,381
Norwegian Krone	103,000,000	11,838,293	12,103,519	265,226
Pound Sterling	1,459,000	1,850,530	1,856,869	6,339
Russian Ruble	112,000,000	1,698,436	1,764,905	66,469
South African Rand	18,800,000	1,265,539	1,326,089	60,550
South Korean Won	6,145,000,000	5,341,017	5,321,539	(19,478)
Swedish Krona	104,200,000	11,019,305	11,281,198	261,893
		$61,118,222	$61,788,755	$670,533
Net Unrealized Gain/(Loss) on Foreign Currency Spot and Forward Contracts				**$314,865**

Options.
Option contracts may be exchanged traded or negotiated directly in over the counter transaction between two counterparties. Options holders have the right, but not the obligation, to purchase (call) or sell (put) a financial instrument at a future price and time. The System can both purchase and write options.

Exchange traded options rely on the exchange for performance and the risk to non-performance of counterparties is minimal. All counterparties for over the counter options are rated A or better. The following table provides information on the System's option contracts at June 30, 2019:

Option Types	Position	Call/Put	Cost	Fair Value	Total Unrealized Gain (Loss)
Fixed Income	Written	Call	($13,684)	($666)	$13,018
		Put	(14,922)	(5,206)	9,716
Total Options			**($28,606)**	**($5,872)**	**$22,734**

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

The System did not impose any restrictions during fiscal year 2019 on the amounts of loans the lending agent made on its behalf. At June 30, 2019, the System had no credit risk exposure to borrowers because the amounts the System owed the borrowers exceeded the amounts the borrowers owed the System. The custodian provides full indemnification to the System for any losses that might occur in the program due to the failure of a broker/dealer to return a borrowed security or failure to pay the System income earned on the securities while on loan. Cash collateral is invested in a separate account with the lending agent which includes a larger allocation to equity repurchase securities.

At June 30, 2019, cash collateral had a weighted-average maturity of one day. The maturities of the resulting investments generally match the maturities of the securities lending arrangements. While the System bears no credit risk from the failure of a borrower to return a borrowed security, it does bear risk from investing the collateral.

Notes to the Financial Statements
(continued)

The following represents the balances relating to the securities lending transactions at June 30, 2019:

Securities Lent	Underlying Securities	Cash Collateral Investment Value	Securities Collateral Investment Value
Lent for Cash Collateral			
U.S. Government Securities	$554,450	$566,250	
Corporate and Other Bonds	36,610,462	37,600,619	
Common and Preferred Stock	51,140,966	52,781,055	
Lent for Securities Collateral			
U.S. Government Securities	33,972,339	-	$34,896,543
Corporate and Other Bonds	1,318,924	-	1,403,737
Common and Preferred Stock	244,829,210	-	268,002,093
Total Securities Lent	**$368,426,351**	**$90,947,924**	**$304,302,373**

K. Reclassifications

During the fiscal year 2019, the System requested that investment managers for commingled funds provide the management fees associated with commingled funds. Previously, such management fees had been netted against investment income. Accordingly, the System revised the classification to report these management fees as an investment activity expense on the Statement of Changes in Fiduciary Net Position, rather than netting the management fees against investment income. This change in classification has no effect on the financial statements for any period.

Note 4. Net Pension Liability, Actuarial Methods and Assumptions

A. Net Pension Liability

The components of the net pension liability at June 30, 2019, were as follows:

Total Pension Liability	$5,791,680,570
Plan Fiduciary Net Position	4,101,637,346
Net Pension Liability	$1,690,043,224
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	70.82%

B. Actuarial Methods and Assumptions

The Total Pension Liability was determined by an actuarial valuation as of June 30, 2019, using the following actuarial assumptions, applied to all periods included in the measurement.

Discount Rate, Net of Plan Investment Expenses	7.25%
Inflation	2.75%
Salary Increase; Including Inflation	2.75% + merit
Investment Rate of Return, Net of Plan Investment Expenses	7.25%
Municipal Bond Rate	N/A
Projected Period of Unfunded Benefit Payments	None

The actuarial assumptions used have been recommended by the actuary and adopted by the System's Board of Trustees based on the most recent review of the System's experience presented at a Board meeting on April 20, 2016.

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

The County is required to contribute at an actuarially determined rate; the rate for the year ended June 30, 2019, was 21.15 percent of annual covered payroll. The decision was made to commit additional funding and a rate of 27.14 percent was adopted for fiscal year 2019. Since the Systems' adjusted funded ratio (the ratio of the sum of the actuarial value of assets and commitments already made to fund changes to the actuarial accrued liability) has fallen below 90.0 percent, the contribution rate includes a margin to amortize this shortfall back to the 90.0 percent level. In fiscal year 2011 the target was increased to a 91.0 percent level, and each year the target has been increased with the 2019 fiscal year contribution target being 99.0 percent. The intent of the County is to continue increasing the amortization target until full actuarial funding has been restored. The goal is to reach an amortization to 100 percent in contributions at or before fiscal year 2020.

Mortality rates with adjustments for mortality improvements were based on 110% and 100% of the RP-2014 Healthy Annuitant Mortality Table for males and females respectively, projected using the RPEC-2015 model, with an ultimate rate of 0.65% for ages 20-85 grading down to an ultimate rate of 0% for ages 115-120 and convergence to the ultimate rate in the year 2015. Five percent of pre-retirement deaths are assumed to be service-connected.

The actuarial assumptions used in the June 30, 2019, valuation were based on the results of an actuarial experience study for the period July 1, 2010 to June 30, 2015.

C. Long Term Expected Rate of Return

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

Best estimates of arithmetic excess rates of return (over cash) for each major asset class included in the System's target asset allocation as of June 30, 2019, are summarized below:

Asset Class	Long Term Expected Real Rate of Return
Absolute Return	7.00%
Core Fixed Income	1.80%
High Yield	4.25%
International Developed Mkt. Equities	4.35%
International Emerging Mkt. Equities	7.05%
Real Assets	4.65%
Risk Parity	6.00%
U.S. Equities	4.65%

D. Discount Rate

The discount rate used to measure the total pension liability was 7.25 percent. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that County contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

In making this determination, we assumed the outflows would equal the anticipated benefit payments from the 2019 actuarial valuation. The administrative expenses attributable to current actives were assumed to equal 0.25 percent of covered payroll. The inflows to the plan were assumed to increase to the average aggregate rate for the 2019 active population of 5.33 percent of payroll and County contributions were projected at 28.35 percent for fiscal year 2020, with continued increases to 29.02 percent contributed until 2033. After that time the County contribution is assumed to decrease to the normal cost plus expenses (6.74 percent) and amortization of any remaining experience gains and losses.

E. Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of the County, calculated using the discount rate of 7.25 percent, as well as what the County's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25 percent) or 1-percentage-point higher (8.25 percent) than the current rate.

Sensitivity of Net Pension Liability

	1% Decrease 6.25%	Discount Rate 7.25%	1% Increase 8.25%
Total Pension Liability	$6,480,539,362	$5,791,680,570	$5,214,483,146
Plan Fiduciary Net Position	4,101,637,346	4,101,637,346	4,101,637,346
Net Pension Liability	$2,378,902,016	$1,690,043,224	$1,112,845,800
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	63.29%	70.82%	78.66%

Note 5. Income Taxes

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

Note 6. Subsequent Events

On December 4, 2018, the Board of Supervisors approved changes to the retirement Systems' Code to create new plans in each system. Effective July 1, 2019, new employees hired on or after July 1, 2019 will be in Plan E, which is exactly the same as Plan D, except that the benefit formula will no longer include the 3 percent one-time add-on factor and there will be no Pre-Social Security Benefit.

Required Supplementary Information
(Unaudited)

Schedule of Changes in the Net Pension Liability and Related Ratios

Year Ended June 30

	2019	2018	2017	2016	2015	2014
Total Pension Liability						
Service Cost	$99,758,925	$96,662,966	$93,128,267	$85,498,714	$84,153,689	$84,074,831
Interest	400,860,241	385,504,765	367,586,251	361,073,638	353,621,871	340,919,519
Changes in Benefit Terms	-	603,265	582,418	773,066	1,462,698	-
Differences Between Expected and Actual Experience	29,354,840	41,362,698	74,947,987	(104,260,427)	(8,616,589)	-
Changes in Assumptions	-	-	-	68,573,373	-	-
Benefit Payments, Including Refunds of Member Contributions	(329,517,227)	(300,641,424)	(284,930,573)	(274,901,942)	(258,834,581)	(238,560,893)
Net Change in Total Pension Liability	$200,456,779	$223,492,270	$251,314,350	$136,756,422	$171,787,088	$186,433,457
Total Pension Liability - Beginning	5,591,223,791	5,367,731,521	5,116,417,171	4,979,660,749	4,807,873,661	4,621,440,204
Total Pension Liability - Ending (a)	$5,791,680,570	$5,591,223,791	$5,367,731,521	$5,116,417,171	$4,979,660,749	$4,807,873,661
Plan Fiduciary Net Position						
Contributions - Employer	$210,964,436	$188,578,414	$167,311,608	$155,780,373	$138,493,099	$129,618,309
Contributions - Member	37,915,769	36,357,591	35,476,023	34,627,061	33,193,593	32,758,587
Net Investment Income	243,545,545	269,418,157	243,496,177	(16,668,287)	16,342,457	490,196,386
Benefit Payments, Including Refunds of Member Contributions	(329,517,227)	(300,641,424)	(284,930,573)	(274,901,942)	(258,834,581)	(238,560,893)
Administrative Expenses	(2,197,893)	(2,170,638)	(2,050,848)	(2,112,595)	(1,896,614)	(1,884,827)
Net Change in Plan Fiduciary Net Position	$160,710,630	$191,542,100	$159,302,387	($103,275,390)	($72,702,046)	$412,127,562
Plan Fiduciary Net Position - Beginning	3,940,926,716	3,749,384,616	3,590,082,229	3,693,357,619	3,766,059,665	3,353,932,103
Plan Fiduciary Net Position - Ending (b)	$4,101,637,346	$3,940,926,716	$3,749,384,616	$3,590,082,229	$3,693,357,619	$3,766,059,665
Net Pension Liability - Ending (a)-(b)	$1,690,043,224	$1,650,297,075	$1,618,346,905	$1,526,334,942	$1,286,303,130	$1,041,813,996
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	70.82%	70.48%	69.85%	70.17%	74.17%	78.33%
Covered Payroll	$777,319,219	$745,663,954	$730,618,376	$708,414,611	$686,288,895	$671,597,456
Net Pension Liability as a Percentage of Covered Payroll	217.42%	221.32%	221.50%	215.46%	187.43%	155.12%

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

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

Required Supplementary Information
(continued)

Schedule of Net Pension Liability

Year Ended June 30

	2019	2018	2017	2016	2015	2014
Total Pension Liability	$5,791,680,570	$5,591,223,791	$5,367,731,521	$5,116,417,171	$4,979,660,749	$4,807,873,661
Plan Fiduciary Net Position	4,101,637,346	3,940,926,716	3,749,384,616	3,590,082,229	3,693,357,619	3,766,059,665
Net Pension Liability	$1,690,043,224	$1,650,297,075	$1,618,346,905	$1,526,334,942	$1,286,303,130	$1,041,813,996
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	70.82%	70.48%	69.85%	70.17%	74.17%	78.33%
Covered Payroll	$777,319,219	$745,663,954	$730,618,376	$708,414,611	$686,288,895	$671,597,456
Net Pension Liability as a Percentage of Covered Payroll	217.42%	221.32%	221.50%	215.46%	187.43%	155.12%

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

Schedule of Money-Weighted Rate of Return

Fiscal Year	Annual Money-Weighted Rate of Return, Net of Investment Expense
2019	6.27%
2018	7.27%
2017	6.87%
2016	-0.44%
2015	0.46%
2014	14.85%
2013	7.60%
2012	8.53%
2011	23.60%
2010	25.20%

Required Supplementary Information
(continued)

Schedule of Employer Contributions					
Fiscal Year	Actuarially Determined Contributions	Contributions in Relation to the Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2019	$210,964,436	$210,964,436	$ -	$777,319,219	27.14%
2018	188,578,414	188,578,414	-	745,663,954	25.29%
2017	167,311,608	167,311,608	-	730,618,376	22.90%
2016	155,780,373	155,780,373	-	708,414,611	21.99%
2015	138,493,099	138,493,099	-	686,288,895	20.18%
2014	129,618,309	129,618,309	-	671,597,456	19.30%
2013	127,448,018	127,448,018	-	669,018,467	19.05%
2012	114,682,538	114,682,538	-	666,758,942	17.20%
2011	96,607,535	96,607,535	-	657,194,116	14.70%
2010	64,069,102	64,069,102	-	659,825,973	9.71%

Notes to Schedule	
Valuation Date	6/30/2017
Timing	Actuarially determined contribution rates are calculated based on the actuarial valuation one year prior to the beginning of the plan year
Key Methods and Assumptions Used to Determine Contribution Rates:	
Actuarial cost method	Entry Age
Asset valuation method	3-year smoothed market
Amortization method	Corridor method, amortize liability outside 99% corridor over an open 15-year period with level % of payroll.
Discount rate	7.25%
Amortization growth rate	2.75%
Price inflation	2.75%
Salary increases	2.75% plus merit component based on employee's years of service
Mortality	110% and 100% of the RP-2014 Healthy Annuitant Mortality Table for males and females respectively projected using the RPEC-2015 model, with an ultimate rate of 0.75% for ages 20-85 grading down to an ultimate rate of 0% for ages 115-120 and convergence to the ultimate rate in the year 2015

A complete description of the methods and assumptions used to determine contribution rates for the year ending June 30, 2019 can be found in the June 30, 2017 actuarial valuation report.

Required Supplementary Information

Summary of Significant Changes to the Pension System

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

Contribution Rates		
Fiscal Year	**Employer**	**Employee**
2019	27.14%	4%, 51/3%
2018	25.29%	4%, 51/3%
2017	22.90%	4%, 51/3%
2016	21.99%	4%, 51/3%
2015	20.18%	4%, 51/3%

December 2018	Retirement Board of Trustees approved a new plan for all employees hired on or after July 1, 2019
July 2017	Social Security offset reduced from 10 percent to 5 percent.
July 2016	Social Security offset reduced from 15 percent to 10 percent.
January 2014	Service-Connected Disability Social Security offset was reduced from 25.0 percent to 15.0 percent.

Other Supplementary Information

Schedule of Investment & Consultant Expenses	
For the Year Ended June 30, 2019	
Investment Activity Expenses	
Investment Manager Fees	$36,562,038
Custodial Fees	135,565
Consultant Expenses	
Consultant Expenses	86,942
Allocated Administration Expense	1,453,656
Total Investment and Consultant Expenses	**$38,238,201**

Schedule of Administrative Expenses		
For the Year Ended June 30, 2019		
Personnel Services		
Salaries and Wages	$1,091,248	
Fringe Benefits	480,438	
Professional Services		$1,571,686
Professional Services		
Actuarial	66,749	
Audit	30,747	
Legal	14,937	
Total Professional Services		112,433
Communications		
Phone Charges	14,580	
Printing, Binding and Copying	10,986	
Postage	15,676	
Total Communications		41,242
Supplies		
Office Supplies	7,377	
Total Supplies		7,377
Other Services and Charges		
Staff Travel and Development	6,011	
Professional Membership	4,960	
Professional Subscriptions	1,831	
Insurance	51,248	
Building Rent	154,035	
Depreciation Expense	2,880	
Computer System	182,192	
Other Operating	61,998	
Total Other Services and Charges		465,155
Total Administrative Expenses		**$2,197,893**

Report of Independent Auditor on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements

Performed in Accordance with Government Auditing Standards

To the Board of Supervisors
County of Fairfax, Virginia

To the Board of Trustees
Fairfax County Employees' Retirement System

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards issued by the Comptroller General of the United States, the financial statements of the Fairfax County Employees' Retirement System (the "System"), a pension trust fund of the County of Fairfax, Virginia, as of and for the year ended June 30, 2019 and the related notes to the financial statements, and have issued our report thereon dated November 14, 2019.

Internal Control over Financial Reporting

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

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

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

Compliance and Other Matters

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

Purpose of this Report

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

Cherry Bekaert LLP

Tysons Corner, Virginia

November 14, 2019

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County of Fairfax, Virginia

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

October 8, 2019

Dear Members of the Board of Trustees:

The U.S. economy continued its historically long growth streak over the fiscal year that ended June 30, 2019, providing an accommodative backdrop for capital markets. Midway through the year, the Federal Reserve reversed course and adopted a more dovish stance, signaling the potential to cut rates in the near future. The Fed mirrored most other central banks whose accommodative policies are expected to persist in 2019 and, perhaps, beyond. As a result, risk assets pushed higher across the board. Domestic stocks, as measured by the S&P 500 Index, capped off the fiscal year on a record high. U.S. equities outperformed their international counterparts by 9.3%, with the S&P 500 and MSCI EAFE (net) indexes returning 10.4% and 1.1%, respectively. Developed international equity markets were in the black despite a strengthening U.S. dollar and concerns around U.S. trade policy. In particular, emerging market equities underperformed the U.S. but modestly outpaced developed international equities. The dovish pivot by the Fed also bolstered fixed income returns, broadly causing yields to decline. In the U.S., high-quality fixed income, as measured by the Bloomberg Barclays U.S. Aggregate Bond Index, returned 7.9%. Credit spreads also narrowed amid a sustained appetite for risk, resulting in the Barclays U.S. High Yield Index returning 7.5%.

During the quarter ended September 30, 2018, global markets rose led primarily by the U.S. and, more specifically, growth stocks. The S&P 500 gained 7.7% in the three months ended September 30 while healthcare led sector performance. Japanese equities were also a strong performer, driven by continued reforms and the reelection of its prime minister. Meanwhile, stocks didn't fare as well in the U.K. as concerns mounted around Brexit; emerging markets were hurt by a currency crisis in Turkey and tensions related to U.S.-China trade relations. U.S. credit was affected by higher interest rates and the ongoing trade war. The rate hike in September pushed the Fed Funds rate to its peak since October 2008. The Bloomberg Barclays High Yield Index finished the third quarter ending September 30th, 2018 up 2.4% and the S&P LSTA Leveraged Loan Index gained 1.3%; loans remained in the lead for the 2018 year with gains of 4% compared to 2.6% for high yield. The U.S. Long Credit Index was up 1.3%, and the U.S. Long Treasury lost 2.9% with the yield on the 10-year Treasury increasing 20 basis points to close at 3.06%. In emerging markets, U.S. dollar-denominated debt was up 1.5%, according to the JPM EMBI Index, while local currency debt lost 1.8%, according to the JPM GBI-EM Index.

Global equities across the board took a severe beating in the fourth quarter of 2018 with the MSCI ACWI Index down -12.8%; energy, the worst performing sector, lost -20.2%. The MSCI EAFE Index was in the red at -12.5%. In the U.S., stocks recorded their worst quarter in more than seven years with the S&P 500 bleeding -13.5% as investors fretted over the trade dispute between the United States and China, and the pace of interest rate increases. Domestic equities also posted their worst December since the 1930's as large-cap equities outperformed small-caps and value bested growth. Emerging market stocks, which underwent a correction earlier in the 2018 calendar year, outperformed developed markets with the MSCI EM Index falling -7.47% for the quarter. Brazil was the best performing country, buoyed by President-elect Jair Bolsonaro's pick for chief economic advisor and his pledge to sell

FAIRFAX COUNTY Retirement SYSTEMS
EMPLOYEES' POLICE Officers UNIFORMED

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

state-owned companies. Asia lagged, pulled down by declines in China, Korea and Taiwan. Healthcare and information technology were among the worst performing sectors, losing -15.4% and -15.1%, respectively. In the U.S., high-yield spreads – particularly in the lower-rated CCC segment – widened significantly in the fourth quarter of 2018. The burgeoning BBB-rated segment is a concern for investment-grade and high-yield debt investors. Double the size of the high-yield market, the growth in the BBB-segment has been driven largely by issuance, an increase in mergers and acquisitions, and credit downgrades from A to BBB. Widespread downgrades among BBBs could lead to an oversupply in high-yield securities and pressure prices. For the three months ended December 31, the Bloomberg Barclays Aggregate rose 1.6% and the Bloomberg Barclays U.S. Long Treasury was up 4.2%. The Bloomberg Barclays High Yield fell -4.5% and the S&P LSTA Leveraged Loan Index lost -3.5% during the same period. Outside the U.S., emerging markets were in the red for calendar year 2018 with local debt, the worst performing, down -6.2% for the calendar year. However, local currency debt proved to be one of the few bright spots for the quarter ended December 31, 2018, posting a gain of 2.1%

Volatility spiked at the end of calendar year 2018, driving U.S. stocks sharply lower in the fourth quarter. The sell-off was largely due to slowing economic growth, heightened trade tensions between the United States and China, and expectations of additional rate hikes by the Fed. U.S. equities quickly recovered in the beginning of 2019 as the Fed assumed a more dovish tone, restoring confidence and providing a powerful tailwind to investor sentiment.

Global equities led the way with gains in the first quarter of 2019. The MSCI ACWI Index rallied 12.2%, with the technology sector up 18.9%. The MSCI China A International Index returned 31% in the first quarter of 2019, recovering from losses of 31.8% in calendar year 2018. During the same period, the HFRI Equity Hedge Index gained 7.7%, its strongest quarterly return since 2009. Emerging Asia hedge funds were up 10.4% while those focused on China gained 14.9%; strategies concentrating on North America and Europe lagged the broader index with returns of 6.6% and 2.9%, respectively. Within sectors, hedge funds focusing on healthcare led performance while technology lagged. Capital flows from hedge funds indicate more cautious positioning with net selling in most cyclical sectors during the quarter; within regions, the positioning was more aggressive with inflows into emerging markets in Asia, especially China. In fixed income, spreads narrowed across the board amid an increased appetite for risk, pausing only momentarily with the inversion of the Treasury yield curve. Spreads on high yield debt tightened to around 400 basis points in the first quarter ending March 31, 2019 from their peak of 530 basis points at the end of 2018; the Bloomberg Barclays High Yield Index gained 7.3% for the three months ended March 31. During the same period, risk premiums on investment grade credit narrowed about 30 basis points to 120 basis points; the Bloomberg Barclays Aggregate Index rose 2.9% and the Bloomberg Barclays US Long Treasury Index gained 4.7% in the first quarter or 2019. Leveraged loans also ended the quarter in the black with returns of 4%, according to the S&P LSTA Leveraged Loan Index.

In the U.S., large-cap financials led the charge with returns of 8.4% in the second quarter of 2019. The MSCI ACWI Index increased 3.6%, with financials up 6.6%; energy was the only outlier, losing -0.8%. During the same period, the HFRI Equity Hedge Index gained 1.7%. Earnings for S&P 500 companies for the second quarter of 2019 are estimated to fall -3.0% from a year ago; this forecast comes on the back of a -4.1% fall in the first quarter, according to FactSet data. The last time around earnings were down two consecutive quarters was in 2016. In fixed income, spreads for investment-grade credit were little changed, at 119 basis points, amid steady demand. In contrast, spreads on the riskier CCC-rated segment of high-yield debt widened as much as 70 basis points, underscoring investor concerns around credit risk associated with the late stage of an economic cycle. The Bloomberg Barclays Aggregate and the Bloomberg Barclays U.S. Long Treasury indexes were up 3.1% and 6.0%, respectively, in the second quarter. The Bloomberg Barclays High Yield Index gained 2.5% and leveraged loans returned 1.6%, according to the S&P LSTA Leveraged Loan Index. Net outflows continued for high yield and levered loan funds, while investment-grade funds experienced net inflows during the quarter.

Employees' Retirement System

For fiscal year 2018 the Employees' Retirement System continued to focus on optimizing and diversifying the portfolio and implementing a diversified investment program to achieve the System's strategic long-term goals. This disciplined investment process has been effective in achieving a long-term record of consistent asset growth.

As of June 30th, 2019, the Fairfax County Employees' Retirement System stood at $4.102 billion, up from $3.941 billion at the end of fiscal year 2018. Calculating performance using a time-weighted rate of return for the year ending June 30th, 2019, the system returned +7.13%, gross of fees (+6.33% net of fees), ranking in the 32nd percentile of all public funds in the BNY Mellon Total Public Fund Universe. For the three, five, and ten-year periods (annualized), the system returned gross of fees, +7.55% (+6.84% net of fees), ranking in the 87th percentile, +4.62% gross of fees (+4.06% net of fees) ranking in the 92nd percentile, and +10.25% gross of fees (+9.74% net of fees) ranking in the 15th percentile respectively.

During the past twelve months, the System continued to focus on further diversifying risk and implementing the previously adopted changes to long term asset allocation targets. Aspect Capital and Maverick Capital were added to the Absolute Return lineup, while PIMCO Absolute Return Fund IV was terminated at the portfolio level; Dyal Capital Fund IV and Morgan Creek Blockchain were added to the Global Equity lineup; EJF Debit Opportunity Fund and Crestline Fund III Europe were added to the Credit Fixed Income lineup.

Sincerely,

Andrew J. Spellar
Chief Investment Officer
Fairfax County Employees' Retirement System

Investments by Category and Investment Manager**

For Year Ended June 30, 2019

Asset Class Manager	Investment Style	Fair Value	% of Total Portfolio
Absolute Return			
AlphaSimplex Group*	Global Macro	$63,858,979	1.56%
AQR Style Premia*	Relative Value	57,156,750	1.39%
Aspect*	Global Macro	55,091,133	1.34%
BlackRock GlobalAlpha Fund*	Relative Value	79,708,223	1.94%
Bridgewater Pure Alpha*	Global Macro	206,694,072	5.04%
Bridgewater Pure Alpha Major Markets*	Global Macro	5,800,328	0.14%
Maverick Fun Quant*	Relative Value	44,563,890	1.08%
Millennium Management*	Relative Value	83,952,132	2.05%
PIMCO Global Credit Opportunity*	Relative Value	79,134,084	1.93%
QMS Global Macro*	Global Macro	76,778,599	1.87%
Global Equity			
Aberdeen Asset Management*	Int'l Emerging Markets	62,811,544	1.53%
Axiom International Investors	Int'l Developed Small Cap	120,800,617	2.95%
Capstone Investment Advisors*	U.S. Large Cap Value	90,528,856	2.21%
DePrince, Race & Zollo	U.S. Large Cap Value	108,151,511	2.64%
Dyal Capital Partners II*	Private Markets Equity	25,542,144	0.62%
First Eagle Investment Management	Int'l Developed Markets Value	53,433	0.00%
International Equity ETF Portfolio	Int'l Developed Markets Value	57,497,074	1.40%
LSV International Equity	Int'l Developed Markets Value	43,824	0.00%
Marathon Asset Management*	Int'l Developed Markets	143,910,586	3.51%
Morgan Creek*	Private Markets Equity	6,896,375	0.17%
Sands Capital Management	U.S. Large Cap Growth	107,904,870	2.63%
US Equity ETF Portfolio	U.S. Large Cap Value	62,136,469	1.52%
Vanguard Emerging Markets ETF	Int'l Emerging Markets	48,880,902	1.19%
WCM Investment Management	Int'l Developed Markets Growth	119,872,979	2.92%
Global Fixed Income			
BlackRock Multi-Alternative Opportunities Fund*	Private Markets Credit	14,361,529	0.35%
Brandywine Asset Management	Global Bonds	134,914,035	3.29%
Bridgewater Associates*	Inflation-Linked	134,792,748	3.29%
Crestline Management, III L.P.*	Private Markets Credit	40,170,431	0.98%
Czech Asset Management*	Private Markets Credit	31,927,030	0.78%
Doubleline Mortgage*	Private Markets Credit	42,398,062	1.03%
Double Line Capital Opp CMBS*	Private Markets Credit	36,430,521	0.89%
DoubleLine Capital SMBS	Mortgage-Backed Securities	136,943,583	3.34%
EJF Debt Opportunities*	Opportunistic	62,317,125	1.52%
Hoisington Investment Management Company	U.S. Treasuries	151,570,047	3.70%
Lazard Asset Management*	Emerging Markets Debt	80,988,733	1.98%
Marathon European Credit Opportunity Fund III*	Private Markets Credit	40,494,514	0.99%
PIMCO BRAVO*	Private Markets Credit	66,862,327	1.63%
PIMCO Tactical Opportunities*	Opportunistic	48,299,848	1.18%
Post Advisory	High Yield Bonds	13,089	0.00%
Shenkman Capital Management	High Yield Bonds	122,326,821	2.98%
Global Multi-Asset			
AQR Global Risk Premium*	Core Risk Parity	97,464,537	2.38%
BlackRock Market Advantage*	Core Risk Parity	152,974,381	3.73%
Bridgewater Optimal Portfolio*	Active Risk Parity	203,472,557	4.96%
Parametric & FCERS Dynamic Balanced Risk	Active Risk Parity	205,420,907	5.01%
Global Real Assets			
Cohen & Steers Capital Management	U.S. Real Estate Securities	133,199,494	3.25%
Cohen & Steers Capital Management (Intl)	Int'l Real Estate Securities	61,312,801	1.50%
Deutsche Asset Management*	Multi-Real Asset	88,195,838	2.15%
JPMorgan Global Maritime Fund*	Real Assets	15,860,121	0.39%
Landmark Partners*	Real Estate	11,446,965	0.28%
PIMCO All Asset All Authority	Private Markets Real Assets	65,881,753	1.61%
Pinnacle Associates GP, LLC*	Private Markets Real Assets	45,161,808	1.10%
Short Term and Others			
BNY Mellon Cash Management	Plan Level Cash Account	4,407,008	0.11%
BNY Mellon Cash Investment Strategies STIF	Plan Level Cash Account	6,605,196	0.16%
Cash Held at County Treasurer	Operating Cash Account	9,631,367	0.23%
FCERS Orphan Securities Account	Operating Cash Account	249,310	0.01%
Parametric Portfolio Associates LLC	Overlay	146,514,839	3.57%
Total Investments		$4,100,378,699	100.00%

* Pooled Funds

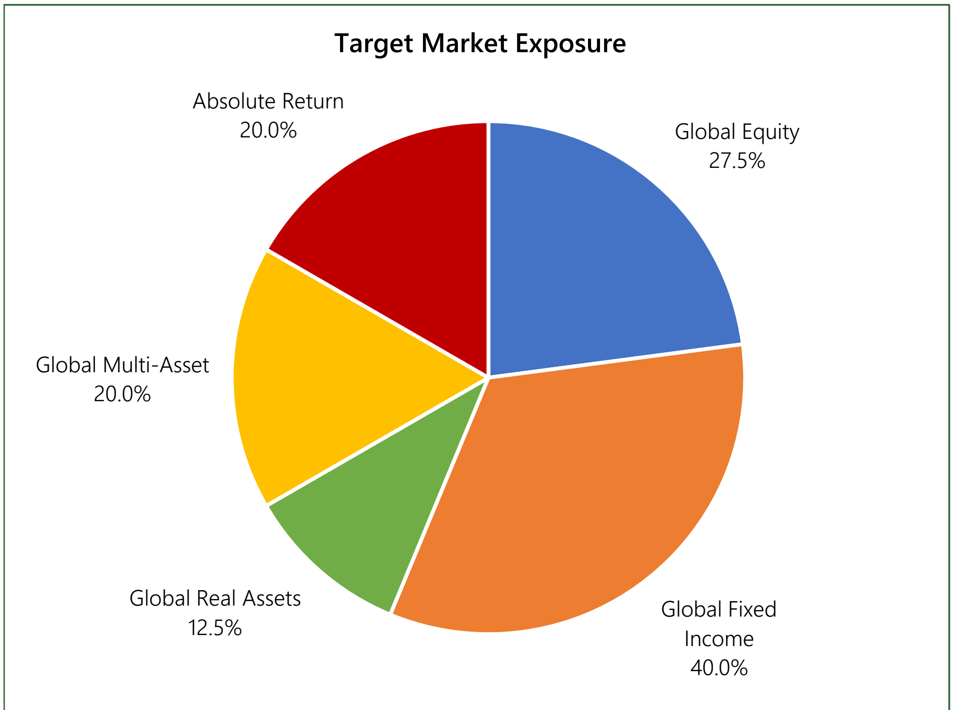
** See pages 8-9 for complete listing of investment professionals

Employees' Retirement System – Allocation of Market Exposures

Target Market Exposures

The asset structure shown below represents the Trustees' assessment of their optimal asset allocation as of June 30, 2019. 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, 2019.

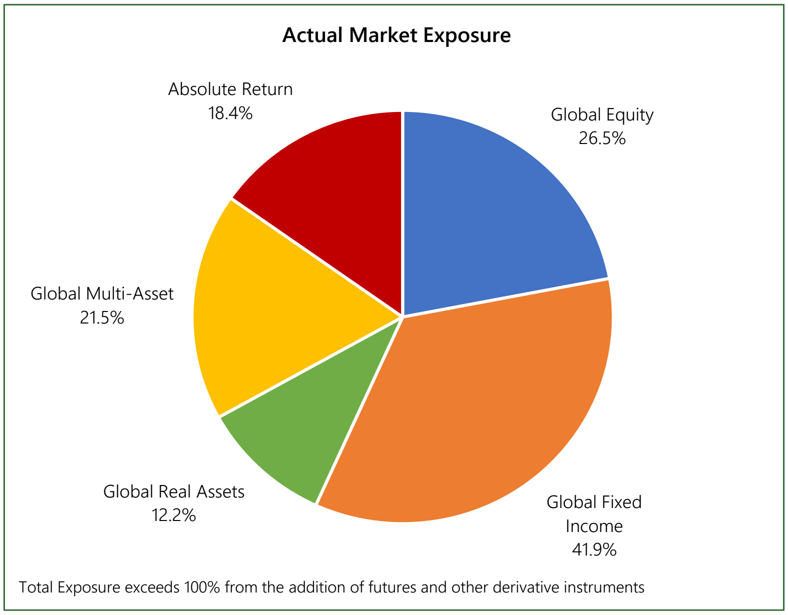


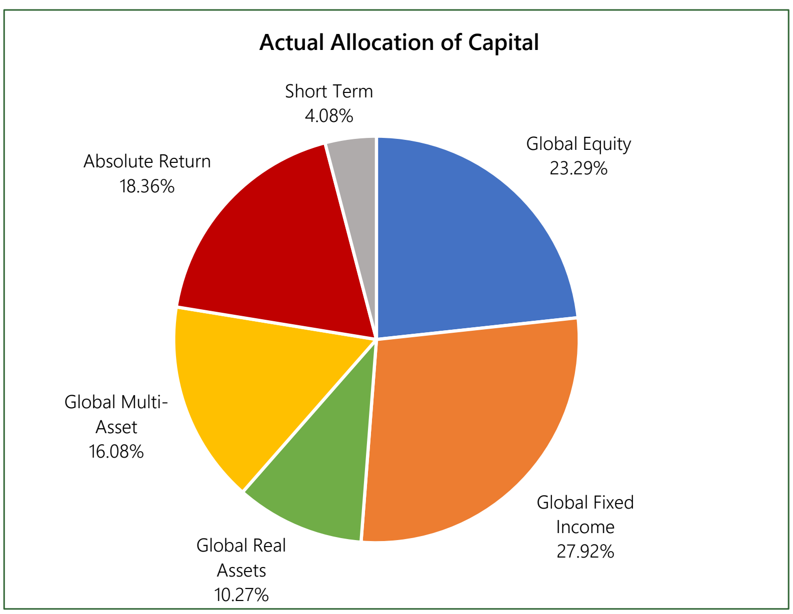
Total Exposure exceeds 100% from the addition of futures and other derivative instruments

Actual Allocations as of June 30, 2019

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

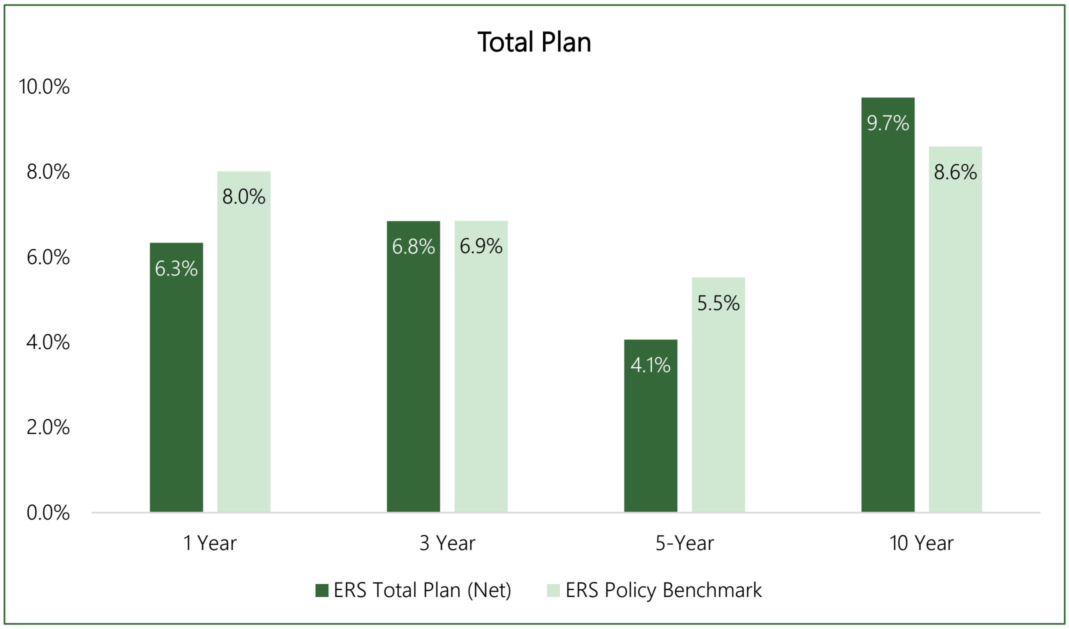
The pie chart below details the actual asset allocations as of June 30, 2019.



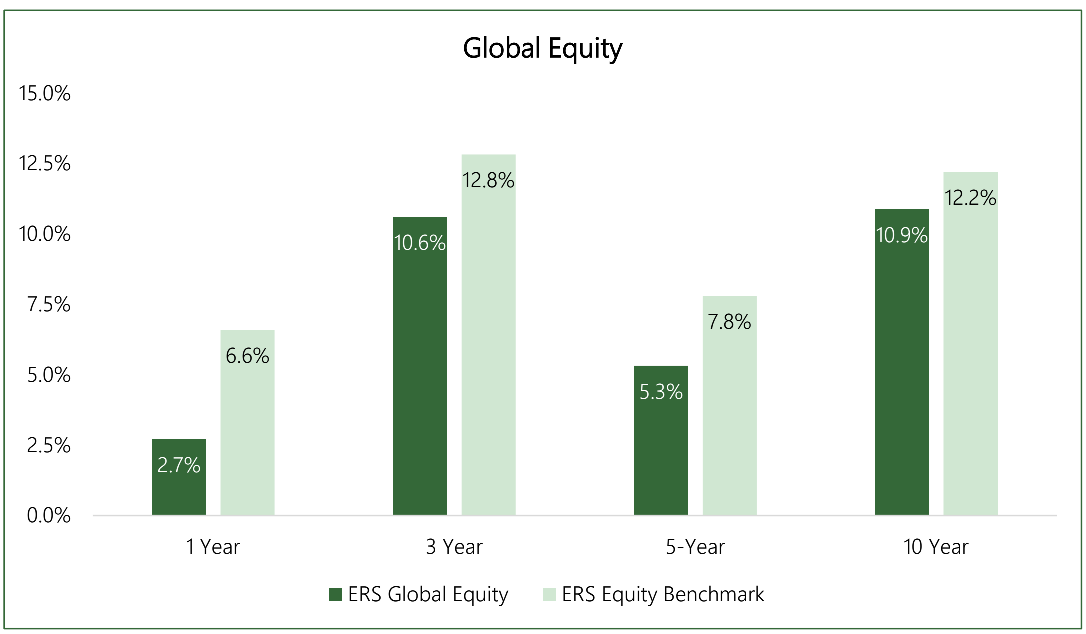


Investment Results

(Time-Weighted Return, net of Fees)

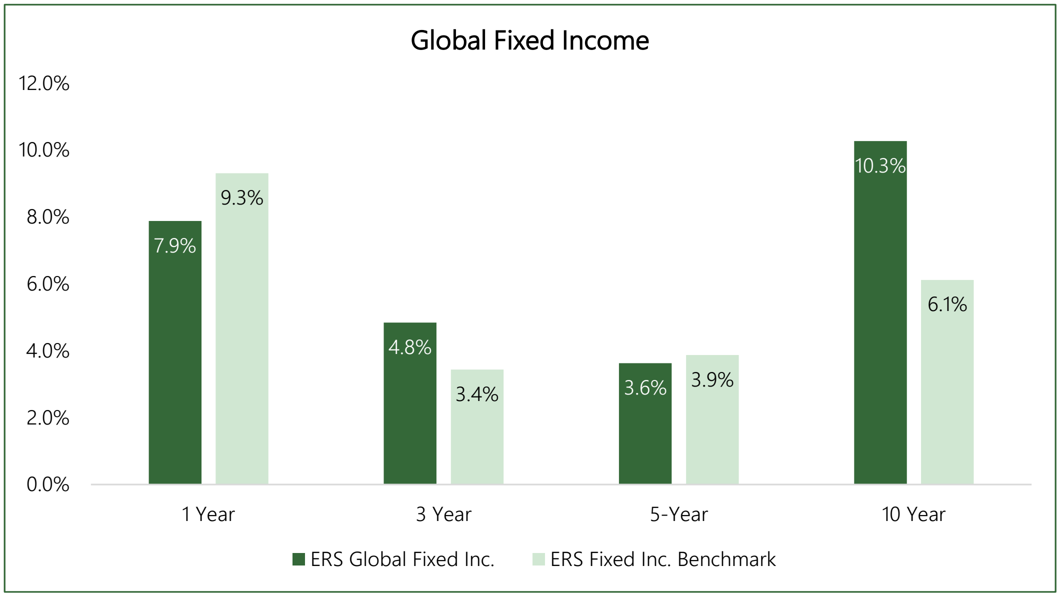


*Current Benchmark: Russell 3000 – 16.5%; MSCI World ex-US – 8.25%; MSCI EM – 2.75%; Bloomberg Barclays Agg. x1.33 minus ICE 3-Mo. LIBOR x0.33 – 27.5%; Bloomberg Barclays High Yield – 12.5%; Real Asset Blended Benchmark – 12.5%; Risk Parity 10% Vol. Benchmark – 20.0% (Benchmark has been revised through time)

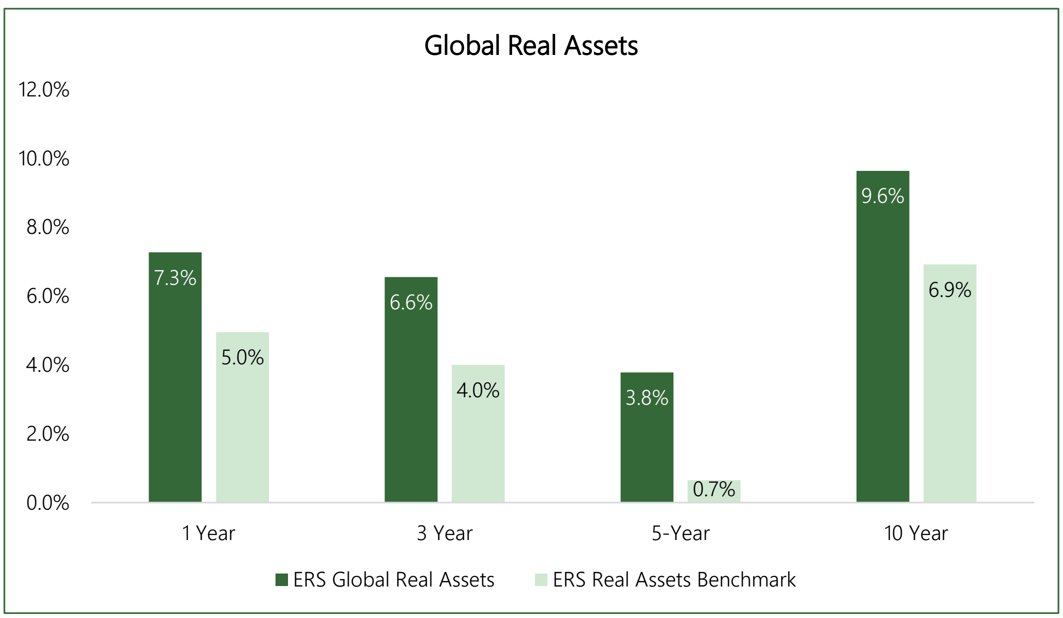


*Current Benchmark: Russell 3000 – 60.0%; MSCI World ex-US – 30.0%; MSCI EM – 10.0; ($Gross) (Benchmark has been revised through time)

Investment Results
(Time-Weighted Return, net of Fees)

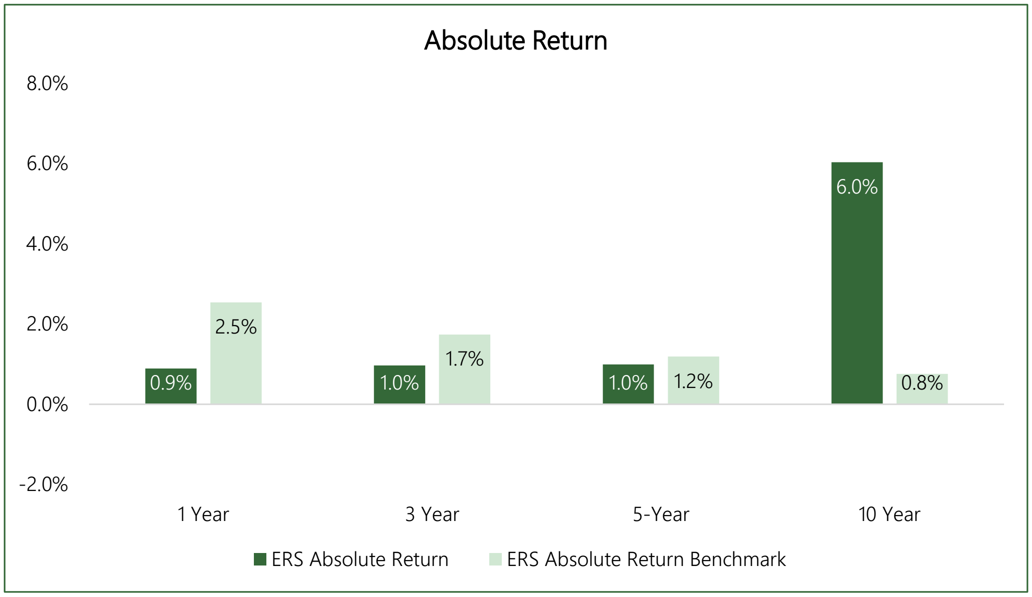


*Current Benchmark: Bloomberg Barclays Agg. x1.33 minus ICE 3-Mo. LIBOR x0.33 – 68.75%; Bloomberg Barclays High Yield – 31.25% (Benchmark has been revised through time)

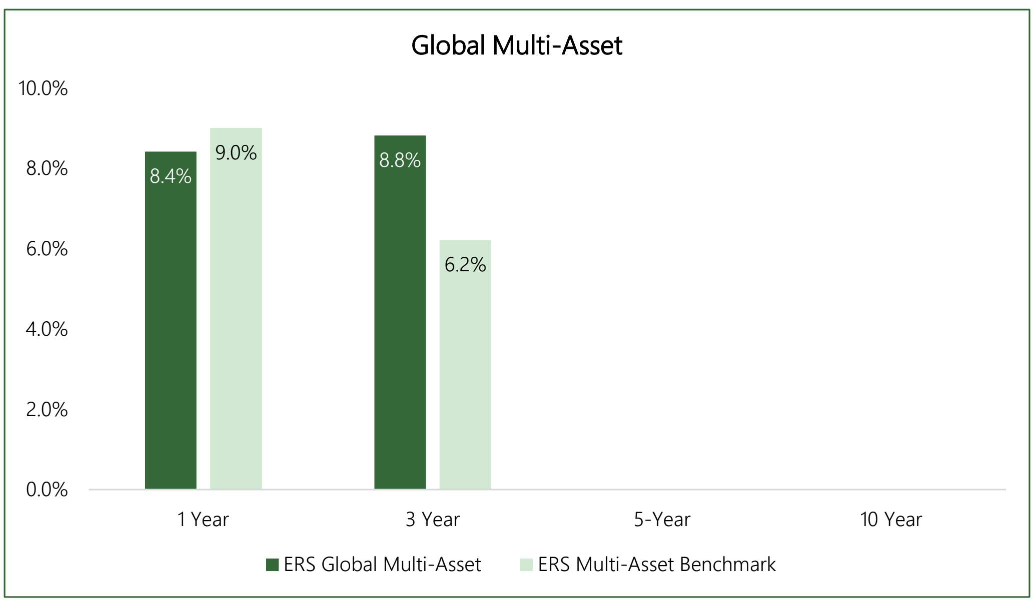


*Current Benchmark: FTSE/NAREIT Developed – 33.3%; DJ Brookfield Infrastructure – 33.3%; Bloomberg Commodity 33.3% (Benchmark has been revised through time)

Investment Results
(Time-Weighted Return, net of Fees)



*Current Benchmark: ICE 3-Mo. LIBOR (Benchmark has been revised through time)



*Current Benchmark: MSCI ACWI Index (Local) – 25.0%; Bloomberg Commodity – 25.0%; Barclays World I/L Bonds – 75.0%; Barclays Gbl TSY 7-10yr (H) – 75.0%; ICE 3-Month LIBOR – -100%; (Benchmark has been revised through time)

Schedule of Ten Largest Equity & Fixed Income Holdings

Ten Largest Equity Holdings*

No. Shares	Description	Cost	Fair Value	% of Total Portfolio
49,200	American Tower Corp	$8,604,657	$10,058,940	0.25%
18,632	Equinix Inc	6,833,639	9,395,931	0.23%
52,500	Visa Inc	1,425,704	9,111,375	0.22%
33,000	Servicenow Inc	3,420,509	9,060,810	0.22%
4,695	Amazon.Com Inc	3,005,702	8,890,593	0.22%
105,391	Welltower Inc	6,723,868	8,592,528	0.21%
165,403	Udr Inc	4,794,097	7,424,941	0.18%
32,458	Sba Communications Corp	6,320,451	7,297,857	0.18%
88,995	Prologis Inc	4,972,484	7,128,500	0.17%
41,500	Alibaba Group Holding Ltd Adr	4,502,484	7,032,175	0.17%
	Total	$50,603,595	$83,993,650	2.05%

*Full disclosure of holdings is available upon request.

Ten Largest Fixed Income Holdings*

Par Value (in local values)	Description	Cost	Fair Value	% of Total Portfolio
41,680,000	U.S. Treasury Bond 2.250% 08/15/2046 Dd 08/15/16	$36,453,779	$39,378,014	0.96%
34,000,000	U.S. Treasury Bond 2.500% 02/15/2046 Dd 02/15/16	31,145,199	33,822,180	0.82%
31,990,000	U.S. Treasury Bond 2.500% 05/15/2046 Dd 05/15/16	31,138,222	31,805,098	0.78%
38,900,000	U.S. Treasury Bd Prin Strip 0.000% 11/15/2045 Dd 11/16/15	18,747,514	19,725,023	0.48%
18,960,001	U.S. Treas-Cpi Inflat 0.125% 07/15/2024 Dd 07/15/14	18,148,443	18,927,011	0.46%
18,570,000	U.S. Treasury Note Var Rt 04/30/2021 Dd 04/30/19	18,567,138	18,555,144	0.45%
18,395,576	U.S. Treas-Cpi Inflat 0.625% 07/15/2021 Dd 07/15/11	18,505,066	18,508,893	0.45%
33,750,000	U.S. Treasury Bd Prin Strip 0.000% 08/15/2045 Dd 08/17/15	16,554,558	17,202,375	0.42%
16,593,178	U.S. Treas-Cpi Inflat 0.125% 07/15/2026 Dd 07/15/16	16,350,022	16,479,847	0.40%
9,109,283	U.S. Treas-Cpi Inflat 3.875% 04/15/2029 Dd 04/15/99	12,093,570	12,192,320	0.30%
	Total	$217,703,511	$226,595,905	5.52%

*Full disclosure of holdings is available upon request.

Schedule of Brokerage Commissions
For Year Ended June 30, 2019

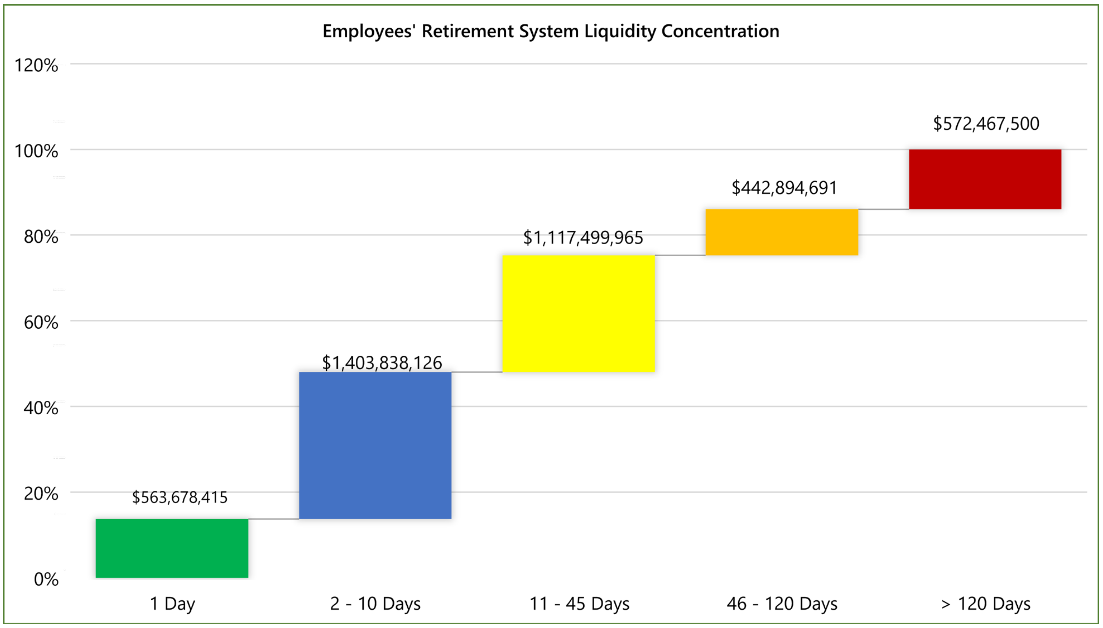
Broker Name	Base Volume	Total Shares	Base Commission	Commission Percentage
PEREGRINE SECS PHILIPPINES INC, MANILA	$95,751	119,100	$290	0.30%
KIM ENG SEC, BANGKOK	466,319	762,730	1,166	0.25%
DAIWA SECS SMBC CATHAY CO, TAIPEI	3,367,211	421,000	8,421	0.25%
KT ZMICO SECURITIES CO LTD, BANGKOK	113,124	163,200	282	0.25%
KIM ENG SECS PT, JAKARTA	8,682	104,100	22	0.25%
CIMB SECURITIES (USA), INC, NEW YORK	128,780	1,385,700	308	0.24%
CIBC WORLD MKTS INC, TORONTO	543,393	41,100	1,248	0.23%
TORONTO DOMINION SEC, TORONTO	442,776	31,000	947	0.21%
UBS WARBURG SEC,TAIWAN	3,597,189	350,000	7,412	0.21%
BANCO ITAU, SAO PAULO	4,654,865	466,858	9,582	0.21%
DAIWA SEC, SEOUL	725,898	12,181	1,459	0.20%
AMBIT CAPITAL PRIVATE LTD, MUMBAI	947,218	112,246	1,901	0.20%
BOFA SECURITIES, INC, NEW YORK	101,134	21,200	203	0.20%
ESPIRITO SANTO SECS INDIA PVT, MUMBAI	2,621,970	321,416	5,248	0.20%
BANCO BTG PACTUAL SA, RIO DE JANEIRO	724,518	133,200	1,450	0.20%
HYUNDAI SECURITIES, SEOUL	3,053,285	60,694	6,105	0.20%
DAIWA SEC SMBC INDIA PRIV LTD,MUMBIA	6,438,602	871,390	12,874	0.20%
BANCO SANTANDER, NEW YORK	209,984	32,800	419	0.20%
MIRAE ASSET SECURITIES, SEOUL	1,091,708	27,922	2,179	0.20%
CREDIT LYONNAIS SEC, SEOUL	174,979	3,935	349	0.20%
GOLDMAN SACHS DO BRASIL, SAO PAULO	55,923	9,900	112	0.20%
BRASIL PLURAL CCTVM SA, SAO PAULO	255,303	44,600	509	0.20%
MERRILL LYNCH PIERCE FENNER, WILMINGTON	1,841,462	309,619	3,530	0.19%
J.P. MORGAN SECURITIES, HONG KONG	2,368,979	448,538	4,527	0.19%
INSTINET PACIFIC LTD, HONG KONG	1,387,571	70,513	2,565	0.18%
JPMORGAN SECURITIES INC, NEW YORK	1,095,665	169,097	1,967	0.18%
SCOTIA CAPITAL MKTS, TORONTO	1,590,216	76,600	2,754	0.17%
BRADESCO S.A. CTVM, SAO PAULO	566,472	29,234	964	0.17%
MORGAN STANLEY & CO, LONDON (MSLNGB2X)	48,563	14,000	82	0.17%
WARBURG DILLON READ SEC, MUMBAI	1,773,219	269,545	2,986	0.17%
DEUTSCHE BK SECS INC, NY (NWSCUS33)	5,212,801	2,562,506	8,712	0.17%
D CARNEGIE AB, STOCKHOLM	8,146,863	331,853	13,173	0.16%
J P MORGAN SEC LTD/STOCK LENDING, LONDON	405,735	5,055	648	0.16%
CREDIT SUISSE, SAO PAULO	182,033	37,414	279	0.15%
HAITONG INTL SEC CO LTD, HONG KONG	5,426,942	5,592,500	8,307	0.15%
BERENBERG GOSSLER & CIE, HAMBURG	8,417,056	553,022	12,755	0.15%
CITIGROUP GLOBAL MARKETS U.K., LONDON	25,288	1,881	38	0.15%
J & E DAVY, DUBLIN	53,272	25,924	80	0.15%
J AND E DAVY, LONDON	243,456	122,925	366	0.15%
CANACCORD GENUITY LTD, LONDON	290,194	25,504	436	0.15%
BANK J VONTOBEL & CO LTD, ZURICH	492,892	1,526	740	0.15%
MACQUARIE CAPITAL LTD, LONDON	225,203	12,099	338	0.15%
STIFEL NICOLAUS EUROPE LIMITED, LONDON	127,785	10,118	192	0.15%
LIBERUM CAPITAL INC, NEW YORK	16,443	5,339	25	0.15%
CREDIT MUTUEL-CIC BANQUES, PARIS	36,977	1,064	56	0.15%
CITIBANK LTD, MELBOURNE	1,075,411	178,880	1,615	0.15%
CHINA INTL CAP CORP HK SECS, HONG KONG	1,951,618	2,907,000	2,931	0.15%
MAINFIRST BANK AG,FRANKFURT AM MAIN	783,862	13,520	1,176	0.15%
CREDIT INDUSTRIEL ET COMMERCIAL, PARIS	2,048,507	202,295	3,073	0.15%
OKASAN INTERNATIONAL (ASIA), HONG KONG	17,537,354	656,100	26,309	0.15%
Other Brokers	1,509,541,481	76,295,795	956,962	0.06%
Total	**$1,602,731,933**	**96,425,738**	**$1,120,072**	**0.07%**

Schedule of Management Fees by Asset Class For Year Ended June 30, 2019		
Asset Class	**Fair Value**	**Management Fees**
Absolute Return	$752,738,190	$13,796,656
Global Equity	955,031,184	5,809,607
Global Fixed Income	1,144,810,443	7,806,868
Global Multi-Asset	659,332,382	4,038,609
Global Real Assets	421,058,780	3,992,000
Short Term and Others	167,407,720	1,118,298
Total	**$4,100,378,699**	**$36,562,038**

Investment Summary (Based on Capital Allocation)				
	As of June 30, 2019		**As of June 30, 2018**	
	Fair Value	**% Fair Value**	**Fair Value**	**% Fair Value**
Absolute Return	$752,738,190	18.34%	$749,468,041	19.02%
Global Equity	955,031,184	23.29%	946,361,060	24.01%
Global Fixed Income	1,144,810,443	27.93%	1,058,403,200	26.86%
Global Multi-Asset	659,332,382	16.08%	608,142,960	15.43%
Global Real Assets	421,058,780	10.28%	410,487,654	10.42%
Short Term and Others	167,407,720	4.08%	168,031,480	4.26%
Total	**$4,100,378,699**	**100.00%**	**$3,940,894,395**	**100.00%**

Liquidity Snap Shot on June 30, 2019

The below liquidity chart for the Employees' Retirement System demonstrates how the pension fund's capital has been allocated to ensure sufficient liquidity to support short term uses of cash, such as retirement distributions, capital calls, potential daily margin calls and coverage ratio requirements on derivative notional balances. It details the liquidity concentration of the System's total capital allocated to investments by their redemption schedule (monthly, quarterly, annually or none), including the number of calendar days' notice that must be provided before the redemption of funds can be made.



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CHEIRON Classic Values, Innovative Advice.

October 15, 2019

Fairfax County Employees'
Retirement System
12015 Lee Jackson Memorial Hwy, Suite 350
Fairfax, Virginia 22033

Dear Members of the Board:

At your request, we have performed an actuarial valuation of the Fairfax County Employees' Retirement System as of June 30, 2019. The full results and analysis of that annual valuation will be presented in a full actuarial valuation report. The purpose of this actuarial section is to provide key information from that report and support the disclosure of Total Pension Liability that is presented in the Financial Section of this CAFR. For a more complete analysis, please see the full report.

Funding Objective

The funding objective of the System is to establish contribution rates that will remain level as a percentage of payroll over time. In order to achieve a more stable contribution rate, the County implemented a corridor funding method on July 1, 2002 (based on the July 1, 2001 valuation results). Under this approach, the current contribution rate is based on the normal cost rate and expense rate developed in the current valuation combined with an unfunded actuarial liability rate (UAL rate) based on assumption and plan changes since July 1, 2001 and a 15-year amortization of any amount by which the System's funded ratio is outside the corridor. The County is taking steps to increase the bottom of the corridor from the originally established 90% up to 100% by 2020. The Fiscal Year (FY) 2019 contribution was developed in the 2017 valuation report and was based on a corridor level of 99%.

Assumptions

The actuarial assumptions used in performing the June 30, 2019 valuation were recommended by the actuary and adopted by the Board of Trustees based on our most recent review of the System's experience for the five-year period ending June 30, 2015. The assumptions and methods used for funding purposes were developed in compliance with the actuarial standards of practice as they relate to pension plans. The assumptions reflect our understanding of the likely future experience of the System and the assumptions both individually and as a whole represent our best estimate for the future experience of the System. The results of this report are dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from the underlying assumptions, the results would vary accordingly.

Reliance on Others

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

Supporting Schedules

As a part of the 2019 actuarial valuation, Cheiron prepared the Analysis of Financial Experience, Schedule of Retirees and Beneficiaries Added to and Removed from the Rolls and Liability by Type provided in this Actuarial Section.

We are also responsible for the disclosures of Net Pension Liability and its components in the Financial Section. The information provided in Note 4 of the Financial Section comes from the Actuarial Valuation as of June 30, 2019.

Compliance with Code of Virginia §51.1-800

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

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

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

Certification

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

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

Sincerely,
Cheiron

Fiona E. Liston

Coralie Taylor

Fiona E. Liston, FSA
Principal Consulting Actuary

Coralie A. Taylor, FSA
Consulting Actuary

CHEIRON

Summary of Valuation Results

The Actuarially Determined Contribution rate for Fiscal Year (FY) 2019 was developed in the 2017 valuation report and was based on a corridor floor of 99%. For more information on the Corridor method please see the Funding Method section of this report.

Amounts disclosed in Note 4 of the Financial Section were developed in conjunction with the 2019 valuation.

Summary of Actuarial Assumptions and Methods

Funding Method

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

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

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

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

Under the corridor funding method, the County's total contribution rate is equal to the normal cost rate plus the UAL amortization rates for changes due to assumption changes or amendments passed since July 1, 2001 plus the expense rate as long as the System's actuarial funded ratio remains within a corridor of 90% to 120%. If the funded ratio falls outside this corridor, a credit (if above 120%) or charge (if below 90%) will be established based on a 15-year amortization equal to the amount necessary to re-enter the corridor. Once the funded ratio is within the corridor, the contribution rate will return to the normal cost rate plus amortization of post-2001 changes plus expense rate. The County is taking steps to increase the bottom of the corridor from the originally established 90% up to 100% by Fiscal Year (FY) 2020. The FY 2019 contribution was based on a corridor level of 99%.

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

Annual 15-year closed amortization bases are now being established to calculate the contribution rate.

Long Term Assumptions Used to Determine System Costs and Liabilities

Demographic Assumptions
Healthy Mortality

Annual Deaths Per 10,000 Members Mortality Projected to 2019		
Age	Male	Female
20	4	2
25	5	2
30	5	2
35	6	3
40	7	4
45	11	7
50	45	27
55	63	36
60	85	54
65	123	83
70	189	132
75	305	216
80	514	365
85	896	646
90	1,591	1,167
95	2,521	1,935
100	3,578	2,870

Post-retirement mortality shown

110% and 100% of the RP-2014 Healthy Annuitant Mortality Table for males and females, respectively, backed down to 2006 then projected using the RPEC-2015 model, with an ultimate rate of 0.65% for ages 20-85 grading down to an ultimate rate of 0% for ages 115-120 and convergence to the ultimate rate in the year 2015. The valuation uses fully generational projection of mortality improvements. Sample rates shown are those projected through the valuation date.

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

Disabled Mortality

Annual Deaths Per 10,000 Disabled Members Mortality Projected to 2019		
Age	Male	Female
45	172	104
50	206	134
55	233	168
60	265	203
65	321	247
70	412	333
75	561	487
80	801	735

100% and 115% of the RP-2014 Disabled Annuitant Mortality Table for males and females, respectively, backed down to 2006 then projected using the RPEC-2015 model, with an ultimate rate of 0.65% for ages 20-85 grading down to an ultimate rate of 0% for ages 115-120 and convergence to the ultimate rate in the year 2015. The valuation uses fully generational projection of mortality improvements. Sample rates shown are projected through the valuation date.

Termination of Employment
(Prior to Normal Retirement Eligibility)

Annual Termination Rates Per 1,000 Members - County	
Service	Termination
0	176
5	72
10	39
15	19
20	10
25	4
30	0

Annual Termination Rates Per 1,000 Members - Schools	
Service	**Termination**
0	250
5	45
10	28
15	18
20	12
25	10
30	0

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

Termination rates drop to zero three years prior to reaching Rule of 80 (or Rule of 85 for Plans C and D) retirement.

Disability

Annual Disabilities Per 10,000 Members*		
Age	**Male**	**Female**
25	2	1
30	2	1
35	2	1
40	3	2
45	7	6
50	14	11
55	21	17
60	27	21

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

No disability is assumed to occur once members reach eligibility for retirement.

Retirement/DROP

Annual Retirements/DROPs Per 1,000 Eligible Members* (Male and Female)	
Age	**Normal**
50	190
51	200
52	200
53	230
54	240
55	275
56	250
57	300
58	250
59	250
60	250
61	275
62	300
63	250
64	350
65	400
66	250
67	250
68	200
69	250
70	250
71	250
72	250
73	250
74	250
75	1,000

*Those who leave under this decrement are assumed to DROP in accordance with the percentages below. Those who do not take DROP are assumed to take immediate retirement. DROP participants are assumed to remain in DROP for three years and receive interest at 5% per annum on their DROP deferrals.

Percentage of Retirements/DROP who are assumed to be DROP	
Age	**DROP**
50	70%
55	68
60	63
65	30
70	30
75	30

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

County	
Service	**Merit/ Seniority Increase**
0	4.00%
5	1.55
10	1.3
15	1.05
20	0.8
25	0.55
30	0.5

Schools	
Service	**Merit/ Seniority Increase**
0	5.20%
5	2.1
10	1.5
15	1.1
20	0.8
25	0.6
30	0.6

Family Composition

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

Sick Leave Credit

Unused sick leave balances as reported for each active member are used as of the valuation date. Future sick leave accruals for members hired prior to 2013 are assumed to accrue at 100% of each participant's annual average but are capped at 124 hours per year.

Economic Assumptions

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

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

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

Changes since Last Valuation

None

Analysis of Financial Experience
Gain and Loss in Accrued Liability during Years Ended June 30[1]
Resulting from Differences between Assumed Experience and Actual Experience

Type of Activity	Investment Income	Combined Liability Experience	Gain (or Loss) During Year from Financial Experience	Non-Recurring Items	Composite Gain (or Loss) During Year
2010	($83,485,934)	($74,720,305)	($158,206,239)	$-	($158,206,239)
2011	26,496,140	(12,495,024)	14,001,116	(5,795,987)	8,205,129
2012	59,620,255	(74,547,089)	(14,926,834)	-	(14,926,834)
2013	46,004,262	39,401,877	6,602,385	(727,193)	5,875,192
2014	113,443,149	3,445,687	116,888,836	(1,462,698)	115,426,138
2015	(33,127,096)	73,129,057	40,001,961	-	40,001,961
2016	(120,548,533)	34,314,735	(86,233,798)	(69,346,439)	(155,580,237)
2017	(90,769,788)	(74,947,986)	(165,717,774)	(582,418)	(166,300,192)
2018	(64,779,936)	(41,362,698)	(106,142,634)	(603,265)	(106,745,899)
2019	(59,391,458)	(29,354,840)	(88,746,298)	-	(88,746,298)

[1] Schedule comes from the Actuarial Valuation as of June 30, 2019.

Schedule of Retirees and Beneficiaries
Added To and Removed From Rolls[2]

Year Ended June 30,	Added to Rolls No.	Added to Rolls Annual Allowance	Removed From Rolls No.	Removed From Rolls Annual Allowance	On Rolls @ Yr. End No.	On Rolls @ Yr. End Annual Allowance	% Increase Allowance	Average Allowance
2010	450	$14,483,584	163	$2,748,741	6,218	$156,867,413	8.09%	$25,228
2011	518	18,345,093	168	2,885,600	6,568	172,326,906	9.86%	26,237
2012	472	17,441,822	152	2,971,259	6,888	186,797,469	8.40%	27,119
2013	559	17,469,060	184	3,336,404	7,263	200,930,125	7.57%	27,665
2014	547	17,306,458	184	3,482,147	7,626	214,754,436	6.88%	28,161
2015	625	18,026,882	230	4,321,038	8,021	228,460,280	6.38%	28,483
2016	307	9,011,712	139	3,011,824	8,189	234,460,168	2.63%	28,631
2017	639	21,100,152	225	3,847,450	8,603	251,712,870	7.36%	29,259
2018	628	18,659,672	242	5,140,831	8,989	265,231,711	5.37%	29,506
2019	730	25,375,866	251	5,074,323	9,468	285,533,254	7.65%	30,158

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

Schedule of Funded Liabilities by Type[1]

	Aggregate Accrued Liabilities For						
	(1)	(2)	(3)		(1)	(2)	(3)
Valuation Date June 30,	Active Member Contributions	Retirees, Vested Terms, Beneficiaries & DROP	Active Members (County Financed Portion)	Reported Assets	Portion of Accrued Liabilities by Reported Assets		
2010	$329,166,585	$1,985,373,546	$1,456,519,392	$2,636,051,959	100%	100%	22%
2011	339,170,151	2,177,027,867	1,502,726,115	2,841,466,151	100%	100%	22%
2012	332,723,684	2,411,862,623	1,519,589,131	3,053,412,085	100%	100%	20%
2013	355,254,873	2,587,007,980	1,531,567,801	3,261,923,577	100%	100%	21%
2014	363,335,228	2,769,188,984	1,668,195,558	3,614,067,515	100%	100%	29%
2015	372,037,954	2,884,906,681	1,649,587,057	3,759,611,811	100%	100%	30%
2016	396,434,811	2,987,100,852	1,732,881,508	3,831,179,295	100%	100%	26%
2017	380,179,076	3,216,480,052	1,771,072,393	3,930,924,191	100%	100%	26%
2018	397,692,499	3,444,004,357	1,749,526,935	4,070,486,587	100%	100%	13%
2019	404,341,900	3,624,784,344	1,762,554,326	4,220,420,263	100%	100%	11%

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

Schedule of Funding Progress

Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liabilities (b)	Unfunded Actuarial Accrued Liabilities (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) - (a)] / (c)
2010	$2,636,051,959	$3,771,059,523	$1,135,007,564	70%	$629,248,592	180%
2011	2,841,466,151	4,018,924,133	1,177,457,982	71%	642,073,198	183%
2012	3,053,412,085	4,264,175,438	1,210,763,353	72%	642,638,926	188%
2013	3,261,923,577	4,473,830,654	1,211,907,077	73%	655,612,800	185%
2014	3,614,067,515	4,800,719,770	1,186,652,255	75%	659,360,128	180%
2015	3,759,611,811	4,906,531,692	1,146,919,881	77%	663,896,916	173%
2016	3,831,179,295	5,116,417,171	1,285,237,876	75%	702,787,358	183%
2017	3,930,924,191	5,367,731,521	1,436,807,330	73%	728,022,176	197%
2018	4,070,486,587	5,591,223,791	1,520,737,204	73%	754,080,802	202%
2019	4,220,420,263	5,791,680,570	1,571,260,307	73%	789,790,124	199%

Schedule of Active Member Valuation Data

	Valuation Date June 30,	Number of Active Members[1]	Covered Payroll	Average Annual Salary	Percentage Increase in Average Pay
School					
	2010	6,024	$177,595,319	$29,481	
	2011	5,868	176,955,893	30,156	2.29%
	2012	5,855	169,890,909	29,016	-3.78%
	2013	5,901	181,728,377	30,796	6.13%
	2014	5,869	181,560,970	30,936	0.45%
	2015	5,692	179,763,202	31,582	2.09%
	2016	5,927	189,237,256	31,928	1.10%
	2017	5,836	194,881,548	33,393	4.59%
	2018	5,665	196,161,116	34,627	3.70%
	2019	5,731	213,750,342	37,297	7.71%
County					
	2010	8,145	457,813,306	56,208	
	2011[2]	8,388	465,117,303	55,450	-1.35%
	2012	8,252	472,748,020	57,289	3.32%
	2013	8,110	473,884,424	58,432	2.00%
	2014	7,993	477,799,159	59,777	2.30%
	2015	7,977	484,133,722	60,691	1.53%
	2016	8,244	513,551,736	62,294	2.64%
	2017	8,150	533,140,400	65,416	5.01%
	2018	8,239	557,919,686	67,717	3.52%
	2019	8,269	576,039,782	69,663	2.87%

[1] Excludes DROP participants.

[2] Includes 410 New Entrants not classified as County or Schools at time of valuation.

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

Schedule of Additions by Source

Fiscal Year	Plan Member Contributions	Employer Contributions	Employer Contributions % of Covered Payroll	Net Investment Income (Loss)	Total Additions
2010	$31,733,516	$64,069,102	9.71%	$506,165,571	$601,968,189
2011	31,041,076	96,607,535	14.70%	577,459,169	705,107,780
2012	31,702,075	114,682,538	17.20%	246,376,212	392,760,825
2013	32,551,927	127,448,018	19.05%	245,374,617	405,374,562
2014	32,758,587	129,618,309	19.30%	490,196,386	652,573,282
2015	33,193,593	138,493,099	20.18%	16,342,457	188,029,149
2016	34,627,061	155,780,373	21.99%	(16,668,287)	173,739,147
2017	35,476,023	167,311,608	22.90%	243,496,177	446,283,808
2018	36,357,591	188,578,414	25.29%	269,418,157	494,354,162
2019	37,915,769	210,964,436	27.14%	243,545,545	492,425,750

Schedule of Deductions by Type

Fiscal Year	Benefit Payments	Refunds of Contributions	Administrative Expenses	Total Deductions
2010	$166,271,110	$4,075,162	$1,593,223	$171,939,495
2011	183,800,128	3,884,082	1,640,016	189,324,226
2012	199,503,336	3,781,497	1,687,040	204,971,873
2013	219,229,038	2,988,397	1,877,620	224,095,055
2014	235,204,611	3,356,282	1,884,827	240,445,720
2015	254,875,795	3,958,786	1,896,614	260,731,195
2016	270,800,631	4,101,311	2,112,595	277,014,537
2017	281,258,687	3,671,886	2,050,848	286,981,421
2018	296,255,029	4,386,395	2,170,638	302,812,062
2019	325,167,739	4,349,488	2,197,893	331,715,630

Schedule of Benefit Payments by Type

Fiscal Year	Service Annuity	Service-Connected Disability	Ordinary Disability	Survivor Benefit	Total
2010	$155,512,982	$3,232,803	$3,939,896	$3,585,429	$166,271,110
2011	172,362,105	3,176,876	4,232,345	4,028,802	183,800,128
2012	187,702,064	3,187,892	4,353,983	4,259,397	199,503,336
2013	206,701,293	3,436,007	4,490,924	4,600,814	219,229,038
2014	222,547,552	3,416,714	4,412,110	4,828,235	235,204,611
2015	241,694,202	3,498,363	4,444,633	5,238,597	254,875,795
2016	257,182,159	3,482,679	4,371,713	5,764,080	270,800,631
2017	267,245,571	3,501,643	4,323,112	6,188,361	281,258,687
2018	281,675,071	3,467,455	4,413,607	6,698,896	296,255,029
2019	310,161,066	3,520,311	4,368,567	7,117,795	325,167,739

Schedule of Retired Members by Benefit Type

Fiscal Year	Service Annuity	Service-Connected Disability	Ordinary Disability	Survivor Benefit	Total
2010	5,392	157	389	280	6,218
2011	5,712	153	400	303	6,568
2012	6,030	152	396	310	6,888
2013	6,392	153	390	328	7,263
2014	6,757	149	374	346	7,626
2015	7,139	149	368	365	8,021
2016	7,300	149	359	381	8,189
2017	7,691	146	358	408	8,603
2018	8,058	139	354	438	8,989
2019	8,520	145	348	455	9,468

Schedule of Average Monthly Benefit Amounts

Fiscal Year	Service Annuity	Service-Connected Disability	Ordinary Disability	Survivor Benefit	Average
2010	$2,250	$1,708	$872	$1,193	$2,102
2011	2,339	1,761	896	1,225	2,186
2012	2,409	1,857	935	1,247	2,260
2013	2,450	1,913	941	1,274	2,305
2014	2,503	2,105	968	1,284	2,364
2015	2,506	2,148	988	1,323	2,376
2016	2,521	2,272	1,005	1,360	2,396
2017	2,568	2,103	995	1,344	2,436
2018	2,586	2,172	1,010	1,348	2,457
2019	2,630	2,200	1,034	1,383	2,505

Schedule of Average Benefit Payment

Years of Credited Service *

	2-4	5-9	10-14	15-19	20-24	25-29	30+
Period 7/1/2008 to 6/30/2009							
Average Monthly Benefit **	$199	$541	$911	$1,732	$2,298	$3,150	$3,603
Average of Final Monthly Salaries	$3,118	$4,098	$3,923	$5,046	$5,539	$6,082	$6,064
Number of Retirees	32	72	46	81	101	92	48
Period 7/1/2009 to 6/30/2010							
Average Monthly Benefit **	196	496	928	1,553	2,205	2,945	3,880
Average of Final Monthly Salaries	3,088	3,451	4,034	4,678	5,409	5,646	6,346
Number of Retirees	24	60	47	66	87	43	34
Period 7/1/2010 to 6/30/2011							
Average Monthly Benefit **	243	564	972	1,823	2,504	2,940	3,633
Average of Final Monthly Salaries	3,317	3,772	4,278	5,416	5,796	5,855	6,164
Number of Retirees	29	57	59	75	112	67	46
Period 7/1/2011 to 6/30/2012							
Average Monthly Benefit **	259	525	970	1,690	2,565	3,042	3,699
Average of Final Monthly Salaries	3,712	3,764	4,147	5,145	6,145	6,060	6,252
Number of Retirees	25	52	54	65	89	80	30
Period 7/1/2012 to 6/30/2013							
Average Monthly Benefit **	207	581	990	1,832	2,514	3,123	4,569
Average of Final Monthly Salaries	2,847	4,114	4,278	5,430	5,860	6,300	7,428
Number of Retirees	34	66	54	69	113	77	37
Period 7/1/2013 to 6/30/2014							
Average Monthly Benefit **	243	538	1,012	1,746	2,512	3,173	3,918
Average of Final Monthly Salaries	3,693	3,835	4,501	5,445	5,964	6,214	6,543
Number of Retirees	30	68	69	57	88	88	39
Period 7/1/2014 to 6/30/2015							
Average Monthly Benefit **	243	598	1,035	1,784	2,596	3,061	4,010
Average of Final Monthly Salaries	3,146	4,053	4,450	5,328	6,108	6,071	6,532
Number of Retirees	20	79	70	68	108	110	42
Period 7/1/2015 to 12/31/2015							
Average Monthly Benefit **	171	532	1,132	1,708	2,423	3,316	3,540
Average of Final Monthly Salaries	2,784	3,682	4,751	5,117	5,640	6,581	5,826
Number of Retirees	7	37	42	34	55	51	19
Period 1/1/2016 to 12/31/2016							
Average Monthly Benefit **	285	645	1,001	1,777	2,753	3,458	4,504
Average of Final Monthly Salaries	4,220	4,481	4,332	5,276	6,520	6,773	7,267
Number of Retirees	24	89	90	85	89	128	65
Period 1/1/2017 to 12/31/2017							
Average Monthly Benefit **	261	549	1,055	1,670	2,662	3,443	4,544
Average of Final Monthly Salaries	3,541	3,718	4,570	5,005	6,278	6,773	7,375
Number of Retirees	33	102	99	86	81	94	52
Period 1/1/2018 to 12/31/2018							
Average Monthly Benefit **	245	574	1,118	1,719	2,706	3,545	4,489
Average of Final Monthly Salaries	3,664	4,258	4,606	5,311	6,216	6,816	7,346
Number of Retirees	32	81	115	104	88	123	57

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

** Does not include supplements.

Active Participants Count by Age/Service

	Service								
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	Total
Under 25	87	75	2	-	-	-	-	-	164
25 to 29	215	489	68	1	-	-	-	-	773
30 to 34	270	531	345	106	-	-	-	-	1252
35 to 39	260	536	302	317	84	3	-	-	1502
40 to 44	249	478	298	337	202	48	1	-	1613
45 to 49	240	543	394	375	284	171	63	16	2086
50 to 54	213	506	421	367	300	193	140	53	2193
55 to 59	174	494	484	461	342	169	49	54	2227
60 to 64	103	319	376	358	203	59	40	35	1493
65 & up	51	154	194	138	77	43	19	21	697
Total	1,862	4,125	2,884	2,460	1,492	686	312	179	14,000

Active Participants Total Salary by Age/ Service

	Service								
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	Total
Under 25	$3,423,926	$2,949,694	$100,081	$-	$-	$-	$-	$-	$6,473,701
25 to 29	9,192,160	23,948,707	3,680,975	34,149	-	-	-	-	36,855,991
30 to 34	12,820,461	27,656,841	19,803,642	5,922,089	-	-	-	-	66,203,033
35 to 39	10,875,952	29,500,624	18,096,080	19,461,135	5,316,098	213,633	-	-	83,463,522
40 to 44	10,458,646	23,766,435	17,813,072	21,398,341	13,565,214	3,334,852	48,133	-	90,384,693
45 to 49	8,540,623	24,151,552	19,900,840	23,146,162	19,789,118	13,398,709	5,525,825	1,245,831	115,698,660
50 to 54	7,066,302	20,574,831	18,986,650	22,314,472	20,780,193	15,146,042	12,263,169	4,542,269	121,673,928
55 to 59	6,376,617	20,247,578	21,797,767	27,089,296	22,861,095	12,763,328	3,986,308	4,951,009	120,072,998
60 to 64	3,190,682	11,894,380	16,909,970	20,871,136	13,105,207	4,326,487	3,265,448	3,342,331	76,905,641
65 & up	1,485,579	5,267,041	7,971,435	6,852,305	4,617,159	2,908,909	1,346,998	2,082,360	32,531,786
Total	$73,430,948	$189,957,683	$145,060,512	$147,089,085	$100,034,084	$52,091,960	$26,435,881	$16,163,800	$750,263,953

Retirees by Location

Retirees By State

State	% of Total
Virginia	83.22%
Florida	4.04%
Maryland	3.71%
North Carolina	3.01%
South Carolina	1.89%
West Virginia	1.65%
Pennsylvania	0.83%
Texas	0.61%
California	0.53%
Georgia	0.51%

Retirees in Virginia

	% of Total
Other Counties	63.61%
Fairfax County	36.39%
Total	**100.00%**

Retirees by Fairfax County City

City	% of Total
Fairfax	4.44%
Springfield	4.41%
Alexandria	4.95%
Centreville	3.21%
Falls Church	2.68%
Herndon	2.41%
Annandale	2.20%
Burke	2.11%
Reston	1.97%
Vienna	1.95%
Lorton	1.33%
Chantilly	1.18%
Clifton	1.11%
McLean	0.83%
Fairfax Station	0.74%
Oakton	0.45%
Great Falls	0.29%
Fort Belvoir	0.07%
Dunn Loring	0.03%
Merrifield	0.03%

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Check out Fairfax County Retirement Systems video library at:
www.fairfaxcounty.gov/retirement/retirement-videos

New Employee – "Understanding Your Retirement System" for those after July 1, 2019.

New Public Safety Employees – "Understanding Your Retirement System" for Police Officers and Uniformed employees hired after July 1, 2019.

How to Use the Online Retirement Benefit Estimator – This video helps members walk through the process of creating their own Retirement Benefit Estimates.

Eligibility Service vs. Benefit Service – What's the difference between Eligibility Service and Benefit Service?

Unused Sick Leave and Retirement – How does unused sick leave benefit my retirement? Review the Unused Sick Leave video to find out the three ways sick leave can increase your retirement benefit.

Part Time School Employee – A large portion of our school employees work part time. Review the Part Time Employee video to find out more about how part time employment impacts your retirement.

Joint & Last Survivor Option – (Joint & Contingent Spouse and Handicapped Child Option) Can I leave my spouse my benefit if I die before them in retirement?

What is DROP? – This brief video helps members understand what DROP means and how it works.

DROP Counseling – Group counseling session, covering the Deferred Retirement Option Program (DROP), including information about how DROP works, eligibility, and benefits.

Plan Basics – "Your Retirement System" for those hired PRIOR to July 1, 2019.

Fairfax County Retirement Systems
12015 Lee Jackson Memorial Highway, Suite 350
Fairfax, VA 22033
703.279.8200
www.fairfaxcounty.gov/retirement