



ERFC
COMPREHENSIVE ANNUAL
2018
FINANCIAL REPORT

For the Fiscal Year Ended June 30, 2018
The Educational Employees' Supplementary Retirement System of Fairfax County
A Component Unit of Fairfax County Public Schools
Fairfax, Virginia



ACHIEVEMENTS

CERTIFICATE OF ACHIEVEMENT FOR EXCELLENCE IN FINANCIAL REPORTING

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to ERFC for its Comprehensive Annual Financial Report for the fiscal year ended June 30, 2017. This was the 21st consecutive year that ERFC 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.



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

**The Educational Employees'
Supplementary Retirement System
of Fairfax County (ERFC), Virginia**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2017

Christopher P. Morill

Executive Director/CEO

2018 ERFC

COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Year Ended June 30, 2018
The Educational Employees' Supplementary
Retirement System of Fairfax County

A Component Unit of
Fairfax County Public Schools, Fairfax, Virginia

BOARD OF TRUSTEES

Daryl Richards, Chairperson and Trustee
Kimberly Adams, Vice Chairperson and Trustee
Leigh Burden, Treasurer and Trustee
Michael Burke, Trustee
Marty K. Smith, Trustee
Kathie Pfeffer-Hahn, Trustee
R Chace Ramey, Trustee

ADMINISTRATION

Eliazer Martinez, Executive Director and CIO
Michael Lunter, Finance Coordinator

PREPARED BY

ERFC Staff
8001 Forbes Place, Suite 300
Springfield, VA 22151-2205

DESIGNED BY

Fairfax County Public Schools
Information Technology
Multimedia Design



MISSION STATEMENT AND PRINCIPLES



The mission of the Educational Employees' Supplementary Retirement System of Fairfax County (ERFC) is to enhance the financial security of our members through prudent financial stewardship of a defined benefit plan while providing outstanding retirement services and education.

ERFC SLOGAN

ERFC: Enter Retirement Feeling Confident

ERFC VISION

To be the leader among peers providing professional and personalized service to our members and beneficiaries to support their efforts to achieve financial independence.

ERFC VALUES

Accountability

We always operate with transparency and a commitment to think strategically while fulfilling fiduciary obligations.

Customer Service

We always respond promptly with quality as we strive to exceed the expectations of our members and their beneficiaries.

Open Communication

We always provide timely and pertinent information that improves processes, removes barriers and establishes accountabilities.

Integrity

We conduct operations by adhering to the highest standards of ethical conduct, striving for accuracy, efficiency and effectiveness.

Continuous Education

Through ongoing education efforts, we enable ERFC employees to continuously improve the service and value they provide to our members; Board of Trustees to more effectively guide and

inform ERFC strategy; and our members to better understand and make the most of their ERFC benefits.

PRUDENT MANAGEMENT

Adequate Funding

To maintain adequate funding of all promised benefits, and to ensure the financial integrity of the System.

Prudent Investments

To adopt comprehensive objectives, methods for evaluation of performance, and policies that ensure the highest possible investment return consistent with the prudent investment of plan assets.

Actuarial Studies

To have an annual actuarial valuation performed by an enrolled actuary in accordance with actuarial standards and to implement an actuarial experience study at least every five years.

Annual Reports

To keep, as part of the public record, annual financial, actuarial, and investment information that will be available for members and elected officers.

Financial Audits

To prepare an annual financial statement in accordance with generally accepted accounting principles, and to implement an annual audit of the System's financial statement in accordance with generally accepted auditing standards.

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ACHIEVEMENTS

PUBLIC PENSION STANDARDS AWARD

This award has been presented to ERFC in recognition of instituting professional standards for public employee retirement systems as established by the Public Pension Coordinating Council. This award represents an exceptionally high level of administration and reporting in the public pension industry.



Public Pension Coordinating Council

***Public Pension Standards Award
For Funding and Administration
2018***

Presented to

**The Educational Employees' Supplementary
Retirement System of Fairfax County**

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

Presented by the Public Pension Coordinating Council, a confederation of

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

A handwritten signature in black ink, appearing to read 'Alan H. Winkle'.

Alan H. Winkle
Program Administrator

INTRODUCTION

UNAUDITED

WE ARE ERFC

The Educational Employees' Supplementary Retirement System of Fairfax County (ERFC) is the retirement arm of FCPS. Our staff is dedicated to delivering outstanding service to its FCPS employee members in the interest of financial wellness. We know that saving for retirement is not always a priority, which is why our goal is to educate members about their guaranteed ERFC retirement benefit. We want our members to understand the value we bring to their financial future and realize that a pension benefit is retirement readiness at its best.

"FINANCIAL FREEDOM IS A MENTAL, EMOTIONAL AND EDUCATIONAL PROCESS." **ROBERT KIYOSAKI**

LETTER OF TRANSMITTAL



8001 Forbes Place, Suite 300
Springfield, VA 22151

December 1, 2018

The Board of Trustees
Educational Employees' Supplementary Retirement System of Fairfax County (ERFC)
Springfield, VA

Dear Chairperson and Members of the Board of Trustees:

It is our privilege to submit the Comprehensive Annual Financial Report (CAFR) for the Educational Employees' Supplementary Retirement System of Fairfax County ("ERFC" or "System") for the fiscal year ended June 30, 2018. The ERFC management holds responsibility for the financial information presented in this report. Proper internal accounting controls exist to provide reasonable assurance for both the safekeeping of assets and the fair presentation of the financial statements. The concept of reasonable assurance recognizes that costs of controls should not exceed the anticipated benefits these controls provide. This CAFR reflects the careful stewardship of the System's assets, and dedicated service provided by the Board and staff. This report is designed to comply with the reporting requirements of Sections 3-4-6(a)(8) of the Fairfax County Code and the Virginia Code. We believe this report also conforms to the Government Finance Officers Association's (GFOA) requirements.

The following provides a summary of the System's historical background, and outlines significant achievements for the Board and management during the fiscal year. A management discussion and analysis (MD&A) narrative is also provided in the Finance Section immediately following the independent auditor's report.

Plan History

The ERFC was established on July 1, 1973, through negotiations conducted between the Fairfax County School Board and the Fairfax Education Association (FEA). The terms under which ERFC operates were later incorporated in a Fairfax County ordinance and the ERFC Plan Document. Historically, ERFC benefits have been designed specifically to supplement the benefits of two primary retirement plans: the Virginia Retirement System (VRS) and the federal Social Security System. In 1987, the VRS introduced major increases to the state's early retirement benefits, which required the ERFC to thoroughly re-examine the complementary structure of its supplemental benefits plan. Effective July 1, 1988, the ERFC significantly altered its Legacy Plan benefit structure in order to rebalance the benefit amounts payable to future ERFC members, while also maintaining and protecting the rights of current members. Thirteen years later, the School Board approved further refinements to the ERFC supplemental retirement program with the introduction of a second retirement plan, ERFC 2001, a streamlined and stand-alone retirement plan structure provided for all eligible FCPS employees hired on or after July 1, 2001. On April

LETTER OF TRANSMITTAL

27, 2017, the School Board voted to modify the ERFC 2001 Plan effective July 1, 2017. For ERFC members hired on or after July 1, 2017, retirement eligibility was raised, the period for calculating a member's final average salary was increased and the cost-of-living adjustment was changed to be based on the Consumer Price Index. For all members, the annual interest rate credited on member accounts was reduced. These modifications helped to mitigate the increase in the employer contribution rate due to actuarial assumption changes.

Administration Updates

ERFC welcomed new Executive Director and CIO Eli Martinez, who has spent more than 15 years in the investment and finance fields helping both individuals and institutional investors navigate financial markets. Mr. Martinez joins ERFC from Santa Barbara, California, where he managed the investment portfolio for the Santa Barbara County Employees' Retirement System (SBCERS). He received his MBA from Kenan-Flagler Business School at the University of North Carolina, Chapel Hill, and an undergraduate degree in business economics, with an emphasis in accounting, from the University of California, Santa Barbara.

Communication activities to increase the understanding and appreciation of the value of ERFC and the total retirement program continued to receive emphasis during the fiscal year. As part of its School Outreach program, ERFC staff visited 31 schools and administrative centers, explaining to members the provisions and importance of their retirement benefits.

The ERFC staff continued its efforts to implement technology innovations that will result in improved efficiencies, cost savings and reduced risk. As part of its goal to increase electronic security, ERFC implemented an annual training program for staff. ERFC continued to promote ERFCDirect, and over 25,000 active and retired members now use the online service, up from 23,000 a year ago.

Strategic Plan

ERFC staff successfully completed the remaining action items included in the 2015 Strategic Plan during the fiscal year. To improve communications with plan members, ERFC continued to expand the Ambassador Program—composed of member volunteers who distribute and guide other members to the appropriate ERFC resources. Staff conducted four training sessions for those who volunteered for the program and the ambassadors now total 89, more than doubling volunteer participation since last year.

In May 2018, the Board of Trustees adopted a new Strategic Plan, which will guide the direction of ERFC for the next three years (2018-2021). The broad priorities for the 2018-2021 Strategic Plan include initiatives for sustainability, marketing, messaging and education.

Plan Financial Condition

The ERFC Fund earned an 8.1 percent net of fees return on investments in fiscal year 2018,

LETTER OF TRANSMITTAL

which exceeded the actuarial assumed return of 7.25 percent that ERFC uses to determine its employer contribution rate. For the year, ERFC also outperformed its policy index by 1.3 percent, driven by positive performance in all asset classes, with the exception of emerging market debt.

ERFC's independent actuary reported that the System's funding ratio increased slightly from 75.2 percent to 75.7 percent for the valuation period ending December 31, 2017. This increase is due to favorable investment performance in the prior 2017 calendar year, lower than anticipated pay increases and favorable demographic experience. The recommended employer contribution rate increased to 6.26 percent of payroll, from 6.24 percent, for fiscal year 2019.

The Financial, Actuarial and Statistical sections of this report provide detailed information regarding the Fund's overall financial condition. In addition, the Required Supplementary Information included in the Financial Section presents historical data to help in assessment of the System's funding status.

Investment Activity

The ERFC's return of 8.1 percent net of fees for FY 2018 outperformed the benchmark index return of 6.8 percent, and outperformed the InvestorForce Public Defined Benefit (funds of \$1 billion to \$5 billion in assets) universe for the fiscal year with the median fund returning 7.6 percent. This peer system outperformance occurred due to higher than peer allocation to fixed income and real estate, which exceeded their respective benchmarks by 1.2 percent and 2.5 percent. The Fund's longer-term return remained strong with the 15-year return of 7.5 percent exceeding the policy index return of 7 percent.

Professional Services

The ERFC Board of Trustees appoints professional services to provide aid in the efficient management of the System. New England Pension Consultants (NEPC), based in Boston, Massachusetts, provides investment consulting services, and Gabriel, Roeder, Smith & Company, of Southfield, Michigan, provides actuarial services. In accordance with county code, the Fairfax County Board of Supervisors appointed Cherry Bekaert LLP, Certified Public Accountants, Richmond, Virginia, to audit the System's financial statements.

Awards

The System proudly announces that the Government Finance Officers Association of the United States and Canada (GFOA) awarded ERFC the **Certificate of Achievement for Excellence in Financial Reporting** for its FY 2017 Comprehensive Annual Financial Report (CAFR). This is the 21st consecutive year ERFC has earned the award. The GFOA certification remains valid for a period of one year and requires, at minimum, that each CAFR satisfy both generally accepted accounting principles and legal requirements. The Public Pension Coordinating Council also honored ERFC recently, granting the System the **Public Pension Standards' 2018 Award**. ERFC earned the award in recognition for meeting or exceeding professional standards for plan design and administration, as set forth in the Public Pension Standards.

LETTER OF TRANSMITTAL

Conclusion

This report is produced through the combined efforts of the ERFC staff and advisors functioning under your leadership. It is intended to provide complete and reliable information that will advance the management decision process, serve as a means for determining compliance with legal requirements and allow for an assessment of the stewardship of the System's funds. We extend our sincere appreciation to all those who contributed to the production of this document.

ERFC distributes this annual report to the members of the Fairfax County School Board, the Fairfax County Public Schools' Leadership Team, its Government Finance Offices and other interested parties. The full report is posted on the ERFC website at www.fcps.edu/erfc. We hope that all recipients find the report informative and useful.

Respectfully submitted,



Eli Martinez
Executive Director
and CIO



Michael Lunter
Finance Coordinator

LETTER FROM THE CHAIRPERSON



8001 Forbes Place, Suite 300
Springfield, VA 22151

December 1, 2018

Dear ERFC Members:

On behalf of the Board of Trustees of the Educational Employees' Supplementary Retirement System of Fairfax County (ERFC), it is a privilege to present the Comprehensive Annual Financial Report for the fiscal year ending June 30, 2018. The ERFC Board and staff continues to commit itself to its mission of financial security of our members through prudent financial stewardship of the System's assets, while providing outstanding retirement services and education to the members of the ERFC.

ERFC's defined benefit plan provides a valuable supplement to FCPS' employee members. The ERFC was designed specifically to reward educational professionals with a pension to supplement the primary benefits they earn and receive separately from the Virginia Retirement System (VRS) and Social Security. As participants and stakeholders in ERFC, you can be assured that the Board of Trustees works collectively on your behalf to provide the supplemental retirement benefits promised to you by Fairfax County Public Schools.

The months subsequent to the fiscal year-end introduced several changes to the composition of ERFC's Board and its officers. Appointed Trustees Susan Quinn and Kristen Michael left their positions with FCPS. The Trustees were replaced with appointed members R Chace Ramey, Assistant Superintendent, FCPS Department of Human Resources, and Leigh Burden, Assistant Superintendent, FCPS Department of Financial Services. The School Board reappointed Marty Smith, FCPS' Chief Operating Officer, and Michael Burke, the individual Trustee, to the Board. The Board looks forward to working together to provide professional and personalized service to its members and beneficiaries.

During the year, the ERFC Board and staff completed all action items included in the 2015 Strategic Plan and adopted a 2018 Strategic Plan. The newly adopted Strategic Plan continues the Board's theme of increasing the understanding and appreciation of the value of ERFC and the total retirement program. The 2018 Strategic Plan supports and guides the ERFC staff's development of sustainability, marketing, messaging and education initiatives.

The Board is pleased with the 8.1 percent net of fees return on investments for the 2018 fiscal year period, which exceeds the assumed actuarial return rate of 7.25 percent. The Board will continue to analyze investment strategies in conjunction with the ERFC staff and its investment advisors to ensure a well-diversified asset mix with a risk-balanced approach. The Board will focus on managing the plan assets with the disciplined oversight required to meet the System's long-term investment goals.

LETTER FROM THE CHAIRPERSON

The School Board increased FCPS' employer contribution rate from 6.24 percent of covered payroll for the 2018 fiscal year to 6.26 percent for the 2019 fiscal year. The combined employee and employer contributions provide significant revenue for the ERFC. However, it is the System's investment earnings that provide the essential factor necessary to fulfill the guarantee of defined member benefits. The Board believes ERFC will continue to prosper by implementing prudent diversified investment strategies designed to spread pension costs over the full span of the employees' careers, while maintaining a solid financial balance during both strong and weak investment periods.

The ERFC Board values your opinions and welcomes your feedback. We encourage you to visit the website at www.fcps.edu/erfc or contact the Trustees directly with any questions regarding your pension fund or payable retirement benefits.

Yours sincerely,



Daryl Richards
FY 2018 Chairperson
ERFC Board of Trustees

BOARD OF TRUSTEES

The Board of Trustees is the governing body of the Educational Employees' Supplementary Retirement System of Fairfax County. The ERFC Board comprises seven members: three appointed by the School Board, three elected by the System's active membership, and one Trustee who is neither affiliated with, nor employed by Fairfax County, the Fairfax County School Board, nor by any union or similar organization

representing teachers or other Fairfax County employees. The initial six Trustees annually select and recommend a seventh ERFC Board member, or "individual Trustee," for approval by the Fairfax County School Board. The ERFC executive committee comprises the chairperson and treasurer. The Board meets monthly throughout the year, excluding August. ERFC Trustees receive no compensation, but are reimbursed for business-related expenses.



Daryl Richards
Chairperson/Trustee
Elected Member



Kimberly Adams
Vice Chairperson/
Trustee
Elected Member



Leigh Burden
Treasurer/Trustee
Appointed Member



Michael Burke
Individual Trustee
Appointed Member



Marty K. Smith
Trustee
Appointed Member

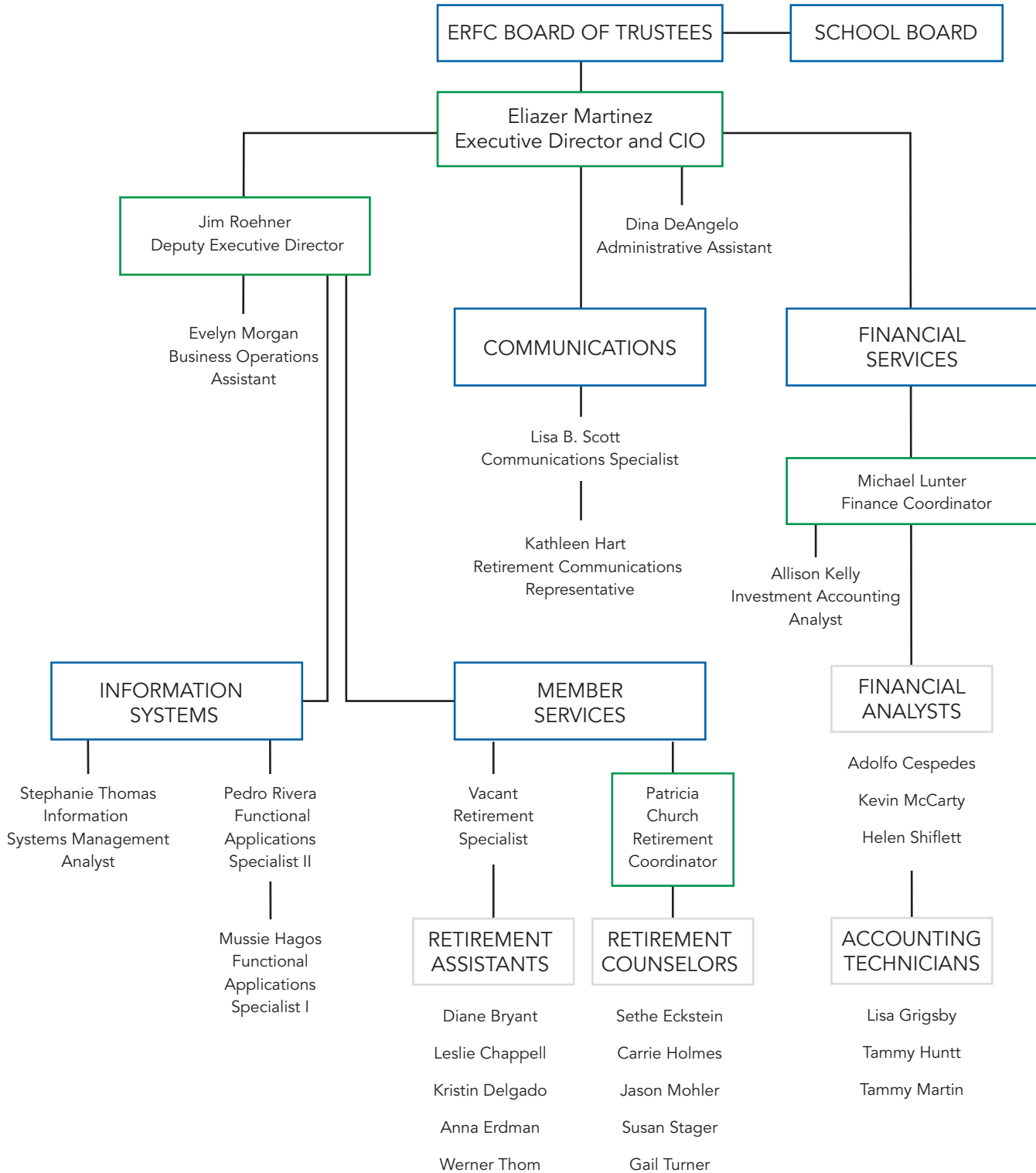


Kathie Pfeffer-Hahn
Trustee
Elected Member



R Chace Ramey
Trustee
Appointed Member

ERFC ADMINISTRATIVE ORGANIZATION



PROFESSIONAL SERVICES

INVESTMENT MANAGERS

DOMESTIC EQUITY

Aronson Johnson Ortiz, LP
Philadelphia, Pennsylvania

Epoch Investment Partners, Inc.
New York, New York

Lazard Asset Management
New York, New York

Mellon Capital Management Corporation
San Francisco, California

T. Rowe Price
Baltimore, Maryland

Westfield Capital Management
Boston, Massachusetts

FIXED INCOME

GAM USA, Inc.
New York, New York

J.P. Morgan Asset Management
New York, New York

Loomis-Sayles & Company
Boston, Massachusetts

Mellon Capital Management Corporation
San Francisco, California

Mondrian Investment Group, Inc.
London, England

GLOBAL ASSET ALLOCATION

Bridgewater Associates, Inc.
Westport, Connecticut

Wellington Management
Boston, Massachusetts

Pacific Investment Management Company
Newport Beach, California

HEDGE FUND

Grosvenor Institutional Partners, L.P.
Chicago, Illinois

PRIVATE EQUITY

Audax Management Company, LLC
New York, New York

Glouston Capital Partners
Boston, Massachusetts

Harbourvest Partners, LLC
Boston, Massachusetts

Lexington Partners
New York, New York

Newstone Capital Partners, LLC
Los Angeles, California

Private Advisors
Richmond, Virginia

INTERNATIONAL EQUITY

Acadian Asset Management
Boston, Massachusetts

Causeway Capital Management, LLC
Los Angeles, California

William Blair and Company, LLC
Chicago, Illinois

REAL ESTATE

Landmark Partners
New York, New York

JP Morgan Asset Management
New York, New York

PGIM Real Estate
Madison, New Jersey

Center Square Investment Management
Plymouth Meeting, Pennsylvania

UBS Realty Investors, LLC
Hartford, Connecticut

OTHER SERVICE PROVIDERS

ACTUARY

Gabriel, Roeder, Smith & Company
Southfield, Michigan

AUDITOR

Cherry Bekaert LLP
Certified Public Accountants
Richmond, Virginia

INVESTMENT CONSULTANT

New England Pension Consultants
Boston, Massachusetts

LEGAL COUNSEL

Bredhoff & Kaiser, P.L.L.C.
Washington, D.C.

Groom Law Group, Chartered
Washington, D.C.

MASTER CUSTODIAN

BNY Mellon
Pittsburgh, Pennsylvania

The Schedule of Brokerage Commissions
can be found on page 50.

The Schedule of Investment Management Fees
can be found on page 52.

FINANCIAL



What's the best part about a pension benefit? You can plan your future knowing that you have a reliable income stream in retirement. ERFC's finance team ensures that retirees are paid every month throughout their lifetime. The staff manages the day-to-day financial operations including budget development and management, expense tracking and investment accounting. As an FCPS employee, your hard work is rewarded with regular, guaranteed payments that ERFC manages for you worry-free.



"FINANCIAL MANAGEMENT IS AT THE HEART OF ANY BUSINESS." UNKNOWN

REPORT OF INDEPENDENT AUDITOR



Report of Independent Auditor

To the Board of Trustees
Educational Employees' Supplementary Retirement System of Fairfax County

Report on the Financial Statements

We have audited the accompanying basic financial statements of the Educational Employees' Supplemental Retirement System of Fairfax County (the "System"), a pension trust fund of the County of Fairfax, Virginia, as of and for the year ended June 30, 2018, and the related notes to the financial statements, as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

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

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

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System as of June 30, 2018, 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.

REPORT OF INDEPENDENT AUDITOR

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 9, 2018, on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.



Tysons Corner, Virginia
November 9, 2018

MANAGEMENT DISCUSSION AND ANALYSIS

(Unaudited)

This discussion and analysis of the Educational Employees' Supplementary Retirement System of Fairfax County (ERFC) financial performance provides an overview of the financial activities for the fiscal year ended June 30, 2018. The information contained in this section should be reviewed in conjunction with the letter of transmittal provided in the Introduction Section of this document.

FINANCIAL OVERVIEW

For fiscal year 2018 the net-of-fees return on ERFC's assets was 8.1 percent¹. This resulted in a total net position value of \$2.446 billion, which reflects an increase of \$142.0 million over fiscal year 2017's year end total (as reflected in the accompanying chart). Additional detail on this net increase in fund value is outlined in the Summary of Additions and Deductions table contained within this Financial Section. As shown, it is comprised of four major components. They include \$188.1 million in investment gains and \$135.9 million in employee and employer contributions. The net addition is offset by \$173.1 million in retiree benefit payments and \$9.0 million in member refunds and administrative expenses.

ERFC's time-weighted 8.1 percent net-of-fees return exceeded the policy benchmark return of 6.8 percent². Three, five, and ten year returns are 6.4 percent, 7.2 percent, and 6.1 percent, respectively. The time-weighted rate of return measures the compound growth rate of the System's investments, net of investment expense. This method eliminates the distortion caused by cash inflows and outflows and is the industry standard for comparing investment returns to a benchmark. The time-weighted rate of return differs from the money-weighted rate of return described in the Notes to the Financial Statements.

The System's investments are exposed to various risks such as interest rate, market, and credit

ERFC FUND BALANCES (\$ IN MILLIONS)

FISCAL YEAR	ENDING BALANCE	NET CHANGE	
		DOLLARS	PERCENT
2014	2,204.9	248.1	12.7
2015	2,179.7	(25.2)	(1.1)
2016	2,107.6	(72.1)	(3.3)
2017	2,304.3	196.7	9.3
2018	2,446.3	142.0	6.2

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 reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the financial statements. Additional detail regarding investment results can be found in the Investment Section of this report.

At December 31, 2017, the actuarial value of assets totaled \$2.399 billion while liabilities totaled \$3.168 billion. This resulted in a funding ratio of 75.7 percent, a measure used by the Board of Trustees to assess funding progress. ERFC's funding level is consistent with the funding levels of similar plans nationwide and as addressed in the Actuary's Certification Letter contained within this report, ERFC remains in sound financial condition.

1 Time-weighted rate of return as calculated by New England Pension Consultants.

2 Policy Index benchmark is 16.5% Russell 1000, 6.0% Russell 2000, 14% MSCI ACWI Ex-US, 3% MSCI Emerging Markets, 4.0% NAREIT, 4.0% NCREIF, 18% BBgBarc Aggregate, 4.0% BBgBarc Credit, 4.0% BBgBarc Long Credit, 7.5% MS World Net, 7.5% Citi World Govt Bond, 5.0% HFRI FoF, 3.5% Cambridge PE, 3% JPM GBI EM.

MANAGEMENT DISCUSSION AND ANALYSIS

(Unaudited)

In addition, detailed information regarding actuarial assumptions and methods can be found in the Actuarial Section of this report.

USING THIS ANNUAL REPORT

ERFC financial statements are comprised of the Statement of Fiduciary Net Position, Statement of Changes in Fiduciary Net Position, and Notes to the Financial Statements. Also contained in the Financial Section is required supplementary information and other supplementary information, in addition to the basic financial statements.

The Statement of Fiduciary Net Position provides information on all of the System's assets and liabilities, with the difference between the assets and liabilities shown as net position. Ultimately, increases or decreases in net position may be used to measure the financial condition of ERFC over time.

The Statement of Changes in Fiduciary Net Position describes how ERFC's net position changed during the current fiscal year. Additions and deductions represent revenues and expenses, respectively. Additions minus deductions represent the change in net position. Expenses, or deductions, which consisted of benefit payments, refunds, and administrative costs were slightly higher this fiscal year.

The Notes to the Financial Statements provide additional data, which is crucial in understanding the information included in the financial statements. The Notes to the Financial Statements immediately follow the basic financial statements.

In addition to the basic financial statements and accompanying notes, the annual report also provides required supplementary information regarding the System's changes in net pension liability and schedule of employer contributions, which is intended to assess ERFC's ability to accumulate assets to pay retirement benefits when due.

SUMMARY OF FIDUCIARY NET POSITION

	JUNE 30, 2018	JUNE 30, 2017	DIFFERENCE
ASSETS			
Total cash and investments	\$ 2,579,998,120	\$ 2,476,319,109	\$ 103,679,011
Total receivables	5,972,204	9,695,130	(3,722,926)
Other assets	39,369	53,546	(14,177)
TOTAL ASSETS	2,586,009,693	2,486,067,785	99,941,908
LIABILITIES			
Capital leases	21,107	21,991	(884)
Accounts payable	1,992,441	1,990,307	2,134
Securities purchased	3,928,604	9,060,028	(5,131,424)
Securities lending collateral	133,787,644	170,713,805	(36,926,161)
TOTAL LIABILITIES	139,729,796	181,786,131	(42,056,335)
TOTAL NET POSITION RESTRICTED FOR PENSIONS	\$ 2,446,279,897	\$ 2,304,281,654	\$ 141,998,243

MANAGEMENT DISCUSSION AND ANALYSIS

(Unaudited)

FINANCIAL STATEMENTS

As indicated in the Summary of Fiduciary Net Position, the System's net position value increased \$142.0 million or 6.2 percent in fiscal year 2018. The changes in assets and liabilities underlying this change consist of an increase of \$103.7 million in the value of investments, a decrease in receivables of \$3.7 million, a \$5.1 million decrease in the value of payables and a decrease of \$36.9 million in securities lending collateral liabilities.

As reflected in the Summary of Additions and Deductions (below), the net change is due to \$135.9 million in contributions and \$188.1 million in net investment gains, which is offset by \$173.1 million in benefits, \$4.7 million in refunds and \$4.3 million in expenses.

Also presented in the Summary of Additions and Deductions, additional information is provided regarding the differences between the fiscal year 2017 and 2018 results. These differing results are due mainly to a decrease in investment income of \$62.8 million and an increase in contributions of \$12.7 million, offset by an increase in benefits of \$4.3 million.

REQUESTS FOR INFORMATION

This financial information is intended to provide a general overview of the System's finances. Questions concerning any of the information presented in this report or requests for additional financial information should be addressed to either the Executive Director or the Finance Coordinator of the Educational Employees' Supplementary Retirement System of Fairfax County, 8001 Forbes Place, Suite 300, Springfield, Virginia 22151.

SUMMARY OF ADDITIONS AND DEDUCTIONS

	JUNE 30, 2018	JUNE 30, 2017	DIFFERENCE
ADDITIONS			
Contributions			
Employer	\$ 91,704,877	\$ 80,094,538	\$ 11,610,339
Member	44,169,100	43,062,632	1,106,468
Net investment income	188,145,489	250,981,777	(62,836,288)
TOTAL ADDITIONS	324,019,466	374,138,947	(50,119,481)
DEDUCTIONS			
Benefits	173,052,461	168,783,718	4,268,743
Refunds	4,667,835	4,601,865	65,970
Admin. Expenses	4,300,927	4,059,408	241,519
TOTAL DEDUCTIONS	182,021,223	177,444,991	4,576,232
NET INCREASE IN NET POSITION	\$ 141,998,243	\$ 196,693,956	\$ (54,695,713)

STATEMENT OF FIDUCIARY NET POSITION

(As of June 30, 2018)

ASSETS**CASH AND SHORT-TERM INVESTMENTS**

Cash	\$ 2,495,347
Cash with fiscal agent	6,599,337
Cash collateral for securities on loan	133,787,644
Short-term investments	54,453,002

TOTAL CASH AND SHORT-TERM INVESTMENTS 197,335,330**RECEIVABLES**

Interest and dividends	3,128,184
Securities sold	2,844,020

TOTAL RECEIVABLES 5,972,204**INVESTMENTS AT FAIR VALUE**

Stocks	710,610,287
Fixed Income	
Asset and Mortgage Backed	3,001,481
Corporate Bonds	60,982,021
International Bonds	18,358,235
Convertible Securities	5,292,959
U.S. Government Obligations	8,645,113
Preferred Securities	4,505,494
Real Estate	200,098,771
Global Asset Allocation	240,779,487
Better Beta	121,560,075
Hedge Fund of Funds	118,564,588
Private Equity Funds	88,913,409
Commingled Fixed Income Funds	558,234,827
Commingled Equity Funds	243,116,043

TOTAL INVESTMENTS 2,382,662,790**OTHER ASSETS**

Furniture and equipment	141,516
Accumulated depreciation	(102,147)

TOTAL OTHER ASSETS 39,369**TOTAL ASSETS 2,586,009,693****LIABILITIES**

Capital leases	21,107
Accounts payable	1,992,441
Securities purchased	3,928,604
Securities lending collateral	133,787,644

TOTAL LIABILITIES 139,729,796**NET POSITION RESTRICTED FOR PENSIONS \$ 2,446,279,897**

See accompanying Notes to the Financial Statements

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

(For the Fiscal Year Ending June 30, 2018)

ADDITIONS

Contributions	
Employer	\$ 91,704,877
Plan members	44,169,100

TOTAL CONTRIBUTIONS	135,873,977
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Investment income	
Net appreciation in fair value of investments	169,848,297
Interest and dividends	29,445,533
Real estate income	2,498,060

TOTAL INVESTMENT INCOME	201,791,890
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Less investment expenses	
Investment management fees	13,546,457
Investment consulting fees	377,568
Investment custodial fees	202,815
Investment salaries	240,115

TOTAL INVESTMENT EXPENSES	14,366,955
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Income from securities lending activities	
Securities lending income	2,884,832
Securities lending management fees	(2,164,278)

NET SECURITIES LENDING INCOME	720,554
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NET INVESTMENT INCOME	188,145,489
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TOTAL ADDITIONS	324,019,466
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DEDUCTIONS

Benefits	173,052,461
Refunds	4,667,835
Administrative expense	4,300,927

TOTAL DEDUCTIONS	182,021,223
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NET INCREASE	141,998,243
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NET ASSETS HELD IN TRUST FOR PENSION BENEFITS BEGINNING OF YEAR	2,304,281,654
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END OF YEAR	\$ 2,446,279,897
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See accompanying Notes to the Financial Statements

NOTES TO THE FINANCIAL STATEMENTS

(For The Fiscal Year Ending June 30, 2018)

The Educational Employees' Supplementary Retirement System of Fairfax County ("ERFC", "System") is a legally separate single-employer retirement system and fund established under Virginia code to provide pension benefits to all full-time educational and administrative support employees who are employed by the Fairfax County Public Schools (Schools) and who are not covered by another Fairfax County, Virginia (County) plan. As such, and as a fund under the financial control of the School Board, the System's financial statements are included in the Schools' basic financial statements as a pension trust fund.

The System contains two primary benefit structures, *ERFC* and *ERFC 2001*. Both are defined benefit structures. The original structure, *ERFC*, became effective July 1, 1973, and is coordinated with the benefits members expect to receive from the Virginia Retirement System (VRS) and Social Security. It remains in effect; however, it was closed to new members employed after June 30, 2001. Effective July 1, 2001, all newly hired full-time educational and administrative support employees were enrolled in *ERFC 2001*, hereinafter referred to as *ERFC 2001 Tier 1*. It was closed to new members employed after June 30, 2017.

On April 27, 2017, the School Board voted to modify the *ERFC 2001 Tier 1* Plan effective July 1, 2017. For *ERFC* members hired on or after July 1, 2017, members of *ERFC 2001 Tier 2*, retirement eligibility was raised, the period for calculating a member's final average salary was increased and the cost-of-living adjustment was changed to be based on the Consumer Price Index. For all members, the annual interest rate credited on member accounts was reduced.

The Board of Trustees is the governing body of the Educational Employees' Supplementary Retirement System of Fairfax County. The ERFC Board comprises seven members: three

appointed by the School Board, three elected by the System's active membership, and one trustee who is neither affiliated with, nor employed by Fairfax County, the Fairfax County School Board, nor by any union or similar organization representing teachers or other Fairfax County employees. The initial six trustees annually select and recommend a seventh ERFC Board member, or "individual Trustee," for approval by the Fairfax County School Board. The ERFC executive committee comprises the chairperson and treasurer.

Benefit provisions for *ERFC* and *ERFC 2001* are established and may be amended by the System's Board of Trustees subject to approval by the School Board. All members are vested for benefits after five years of service. The *ERFC* benefit formula was revised effective July 1, 1988, following changes to the VRS, which the ERFC has historically supplemented. The benefit structure is designed to supplement VRS and Social Security benefits to provide a level retirement benefit throughout retirement. *ERFC 2001 Tier 1* and *Tier 2* have a stand-alone structure. Member contributions for *ERFC* and *ERFC 2001* are made through an arrangement that results in a deferral of taxes on the contributions. Further details of member contributions may be found in Article III of both Benefit Structure Documents.

At December 31, 2017, the date of the most recent actuarial valuation, the System's membership consisted of:

Retirees and beneficiaries currently receiving benefits	11,729
Terminated employees entitled to benefits but not yet receiving them	4,759
Active plan members	21,841
TOTAL	38,329

ERFC and *ERFC 2001* provide for a variety of benefit payment types. *ERFC*'s payment types include Service Retirement, Reduced Service, Disability,

Notes, continued on next page

NOTES TO THE FINANCIAL STATEMENTS

Death-in-Service, and Deferred Retirement. *ERFC 2001's* payment types include Service Retirement, Death-in-Service, and Deferred Retirement. Minimum eligibility requirements for full service benefits for *ERFC* is either (a) age 65 with 5 years of service or (b) age 55 with 25 years of service. Minimum eligibility requirements for full service benefits for *ERFC 2001 Tier 1* is either (a) age 60 with 5 years of service or (b) any age with 30 years of service. Minimum eligibility requirements for full service benefits from *ERFC 2001 Tier 2* is either (a) age and service equal 90 (the rule of 90) or (b) full Social Security age with five years of service. Annual post-retirement cost-of-living (COLA) increases of 3 percent are effective each March 31 for *ERFC* and *ERFC 2001 Tier 1* members. Participants in their first full year of retirement from *ERFC* and *ERFC 2001 Tier 1* receive a 1.49 percent increase. Participants who retire on or after January 1 receive no COLA increase that first March. Under *ERFC 2001 Tier 2*, the first COLA will equal approximately half of the full COLA amount. Thereafter, the full COLA will equal 100 percent of the Consumer Price Index for all Urban Consumers (CPI-U) for the Washington, D.C. metropolitan area for the period ending in November of each year, capped at 4%. Additional detail regarding all benefit payment types can be found in the actuarial valuation and/or the System Plan Document.

1. SUMMARY OF SIGNIFICANT ACCOUNTING AND OTHER POLICIES

Basis of Accounting

The System's financial statements have been prepared under the accrual basis of accounting in accordance with accounting principles applicable to governmental units in the United States of America. *ERFC* is a unit of Fairfax County Public Schools. Member contributions are recognized in the period in which the contributions are due. Employer contributions are recognized when due, pursuant to GASB Statement No. 67. Benefits and refunds are recognized when due and payable in accordance with the terms of the System. The costs of administering the System are paid for by the use of investment income and employer and employee contributions.

Fair Value Measurements

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

- Level 1 Unadjusted quoted prices for identical instruments in active markets.
- Level 2 Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.
- Level 3 Valuations 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 System's assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset or liability. The table on the following page shows the fair value leveling of the investments for the System.

Short-term securities include investments in money market-type securities reported at cost, which approximates fair value.

Debt and equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities.

Debt and equity securities classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique or a bid evaluation.

Notes, continued on next page

NOTES TO THE FINANCIAL STATEMENTS

Matrix pricing is used to value securities based on the securities relationship to benchmark quoted prices. Bid evaluations may include reported trades, broker/dealer quotes, issuer spreads, two-sided markets, bids, offers, and reference data including market research publications.

Investments measured at fair value and investments measured at net asset value (NAV) are presented below and on the following page.

- **Commingled Large Cap Equity Funds**

The objective of this index fund is to invest in securities and collective funds that together are designed to track the performance of the Russell 1000®.

- **Commingled Emerging Markets Equity Funds**

The fund invests in common stocks and other forms of equity investments issued by emerging market companies of all sizes to obtain long-term capital appreciation.

- **Commingled Domestic Fixed Income Funds**

One fund in this type is an index fund that invests in securities and collective funds that together are designed to track the performance of the Bloomberg Barclays US Aggregate Index. The other fund in this type seeks a high level of current income by investing primarily in a diversified portfolio of high-, medium- and low-grade debt securities.

Notes, continued on next page

INVESTMENTS MEASURED BY FAIR VALUE HIERARCHY LEVEL

		FAIR VALUE MEASURES USING		
		QUOTED PRICES IN ACTIVE MARKETS FOR IDENTICAL ASSETS	SIGNIFICANT OTHER OBSERVABLE INPUTS	SIGNIFICANT UNOBSERVABLE INPUTS
INVESTMENTS BY FAIR VALUE LEVEL	6/30/18	LEVEL 1	LEVEL 2	LEVEL 3
Short-term securities	\$ 54,453,002	\$ 37,884,830	\$ 16,568,172	
Debt securities				
Asset and mortgage backed	3,001,481	-	3,001,481	-
Corporate bonds	60,982,021	-	60,982,021	-
International bonds	18,358,235	-	18,358,235	-
Convertible securities	5,292,959	334,448	4,958,511	-
US Government obligations	8,645,113	-	8,645,113	-
TOTAL DEBT SECURITIES	96,279,809	334,448	95,945,361	-
Equity investments				
Basic industries	133,686,269	133,686,269	-	-
Consumer services	246,472,222	246,472,222	-	-
Financial industries	137,688,564	137,662,571	-	25,993
REITS	10,792,926	10,792,926	-	-
Technology	165,279,454	165,279,454	-	-
Utilities	16,690,852	16,690,852	-	-
Preferred securities	4,505,494	4,384,794	120,700	-
TOTAL EQUITY INVESTMENTS	715,115,781	714,969,088	120,700	25,993
TOTAL INVESTMENT AND SHORT-TERM SECURITIES MEASURED BY FAIR VALUE HIERARCHY LEVEL	\$ 865,848,592	\$ 753,188,366	\$ 112,634,233	\$ 25,993

NOTES TO THE FINANCIAL STATEMENTS

- Commingled Emerging Markets Debt Funds**
 This fund invests in fixed income securities of “emerging” or developing countries to achieve high current income and long-term capital growth.
- Commingled Unconstrained Fixed Income Funds**
 The funds in this type invests in all types of U.S. and non-U.S. fixed income securities in any market (including emerging markets), across a global range of credit, currencies and interest rates to seek positive absolute returns.
- Private Equity Partnerships**
 This type includes investments in limited partnerships, which generally include the following strategies: buyouts, venture capital, mezzanine, distressed debt, growth equity and special situations. These investments have an approximate life of 10 years and are considered illiquid. Redemptions are restricted over the life of the partnership. During the life of the partnerships, distributions are received as underlying partnership investments are realized.

As of June 30, 2018, it is probable that all of the investments in this type will be sold at an amount different from the NAV per share of the plan's ownership interest in partners' capital.

- Commingled Global Asset Allocation Funds**
 This type consists of funds with an unconstrained, non-benchmark oriented investment approach that invests in actively managed mutual funds including developed and emerging bonds and stocks, real estate, commodities, and absolute-return oriented strategies. The objective of this strategy is to provide maximum real return with preservation of capital.
- Commingled Better Beta Funds**
 This fund invests in a broad mix of asset classes including, but not limited to, currencies, fixed income, inflation linked bonds, equities and commodity markets. The objective is to provide attractive returns in any type of economic environment.

Notes, continued on next page

INVESTMENTS MEASURED AT NET ASSET VALUE (NAV)

	6/30/18	UNFUNDED COMMITMENTS	REDEMPTION FREQUENCY	REDEMPTION NOTICE PERIOD
Equity investments				
Commingled large cap equity funds	\$ 151,467,022	\$ -	Daily	None
Commingled emerging markets equity funds	91,649,021	-	Daily	3 days
TOTAL EQUITY INVESTMENTS MEASURED AT THE NAV	243,116,043	-		
Fixed income investments				
Commingled domestic fixed income funds	336,013,020	-	Daily	None
Commingled emerging markets debt funds	66,226,187	-	Monthly	30 days
Commingled unconstrained fixed income funds	155,995,620	-	Daily, Semi-monthly	1-30 days
TOTAL FIXED INCOME INVESTMENTS MEASURED AT THE NAV	558,234,827	-		
Private equity - private equity partnership funds	88,913,409	92,998,478	Not eligible	N/A
Global asset allocation - commingled GAA funds	240,779,487	-	Daily, monthly	1-30 days
Better beta - commingled better beta funds	121,560,075	-	Monthly	5 days
Real estate - commingled real estate equity funds	195,883,957	-	Daily, quarterly	1-90 days
Real estate - private real estate fund	4,214,814	35,514,119	Not eligible	N/A
Absolute return - commingled absolute return funds	118,564,588	-	Monthly	30 days
TOTAL INVESTMENTS MEASURED AT THE NAV	\$1,571,267,200	\$ 128,512,597		
TOTAL INVESTMENTS AND SHORT-TERM SECURITIES	\$2,437,115,792			

NOTES TO THE FINANCIAL STATEMENTS

- **Commingled Real Estate Equity Funds**

One of the funds in this category actively manages a core portfolio of U.S. equity real estate investments to maximize income. The second fund in this category maximizes total return by investing primarily in global, publicly traded companies whose principal business is the ownership, management and/or development of income producing and for-sale real estate properties. The third fund in this category seeks to provide a moderate level of current income and high residual property appreciation by investing in a balanced mix of stabilized value-added properties with appreciation potential. The fourth fund in this category invests primarily in U.S. well-leased retail, warehouse, storage, and residential properties with a focus on income.

- **Private Real Estate**

This fund is a limited partnership that makes secondary investments in various types of real estate and real estate related entities, such as commingled real estate funds, limited partnerships, joint ventures, real estate operating companies and non-traded REIT vehicles.

- **Commingled Absolute Return Funds**

The fund in this category invests in actively managed funds which invest in a broad range of securities and alternative investments across global markets. The fund seeks to provide high absolute and risk-adjusted returns.

Cash

ERFC maintains its 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. For the fiscal year ended June 30, 2018, the cash balance of \$2,495,347 represents funds that could not be invested in the County's enhanced cash fund until July 1, 2018.

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. As of June 30, 2018, cash with the fiscal agent totaled \$6,599,337. This cash is insured and

represents receipts from investment sales occurring on the last day of the month.

Cash received as collateral on securities lending transactions and investments with such cash are reported as assets along with the related liability for collateral received.

2. CONTRIBUTION REQUIREMENTS

The contribution requirements for *ERFC* and *ERFC 2001* members are established and may be amended by the System's Board of Trustees with the approval of the School Board. The requirements are based upon a fundamental financial objective of having rates of contribution that remain relatively level from generation to generation of employees. To determine the appropriate employer contribution rates and to assess the extent to which the fundamental financial objective is being achieved, the System has actuarial valuations prepared annually.

Members are required to contribute 3 percent of annual salary. The employer is required to contribute at an actuarially determined rate which was 6.24 percent for fiscal year 2018. The actuarial valuations as of odd numbered years are used to set the employer contribution rate for the two-year period beginning 18 months after the valuation date. As such, the December 31, 2015 valuation recommended that the contribution rate for the two-year period beginning July 1, 2017 to June 30, 2019 be increased from 5.6 to 6.24 percent. Restructuring of the VRS employee contribution rate caused the School Board to decrease the ERFC member contribution rate to 3 percent beginning in fiscal year 2013.

3. NET PENSION LIABILITY DISCLOSURES

Total Pension Liability	\$ 3,238,436,290
Plan Fiduciary Net Position	2,446,279,897
Net Pension Liability	\$ 792,156,393
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	75.54%

Notes, continued on next page

NOTES TO THE FINANCIAL STATEMENTS

The components of ERFC's net pension liability at June 30, 2018 were as follows:

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of December 31, 2017, using update procedures to roll forward the total pension liability to the plan's fiscal year end. The actuarial assumptions applied to all periods in the measurement.

Single Discount Rate

A single discount rate of 7.25% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 7.25%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these 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.

Long-Term Expected Return on Plan Assets

The long-term expected rate of return on pension plan investments was determined in conjunction with a formal study of experience during the period January 1, 2010 to December 31, 2014. Based on the analysis of expected investment return, asset allocation and relevant Actuarial Standards of Practice, the rate was lowered to 7.25%.

Best estimates of arithmetic real rates of return as of the measurement date are summarized in the table on the following page. New England Pension Consultants supplied the information in the table.

The investment consultant's inflation expectation is 2.75%. The Global Asset Allocation category is a blend of Global Equity, Global Fixed Income, and Inflation Sensitive Assets (commodities).

Pension Liability Sensitivity

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the table on the following page presents the plan's net pension liability, calculated using a single discount rate of 7.25% as well as what the plan's net pension liability would be if it were calculated using a single discount rate that is 1-percentage-point lower (6.25%) or 1-percentage-point higher (8.25%):

Notes, continued on next page

METHODS AND ASSUMPTIONS USED TO DETERMINE FY 2018 TOTAL PENSION LIABILITY:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage of Payroll, Closed
Remaining Amortization Period	22 years from July 1, 2018.
Asset Valuation Method	5-Year smoothed market; 25.0% corridor
Inflation	2.75%—approximate; No explicit price inflation assumption is used in this valuation.
Salary Increases	3.75% to 9.05% including inflation
Investment Rate of Return	7.25%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition.
Mortality	RP-2014 mortality healthy annuitant total data set table with fully generation two-dimensional sex distinct MP-2016 projection scale.

NOTES TO THE FINANCIAL STATEMENTS

Sensitivity results at 6.25% interest were based upon computer runs. Results at 8.25% were based upon the 6.25% results and estimation techniques.

SENSITIVITY OF THE NET PENSION LIABILITY TO THE SINGLE DISCOUNT RATE ASSUMPTION

CURRENT SINGLE RATE:

1% Decrease	Assumption	1% Increase
6.25%	7.25%	8.25%
\$ 1,167,815,003	\$ 792,156,393	\$ 416,497,783

The Schedule of Changes in Net Pension Liability and Related Ratios, presented as RSI following the Notes to the Financial Statements, presents multi-year trend information about whether the plan's net position is increasing or decreasing over time relative to the total pension liability.

4. INVESTMENTS

The authority to establish pension funds is set forth in sections 51.1-800 of the Code of Virginia (Code) which provides that the County may purchase investments for pension funds (including common and preferred stocks and corporate bonds) that meet the standard of judgment and care set forth in Section 51.1-124 of the Code.

The System does not have investments (other than U.S. government and U.S. government guaranteed obligations) in any one organization that represents 5 percent or more of net position restricted for pensions.

Investment Policy

The System's investment policy is established by the Board of Trustees based on information and/or recommendations provided by ERFC's investment consultant and ERFC staff. The policy may be amended as necessary by the Board of Trustees and is reviewed at least annually. There were

Notes, continued on next page

ASSET ALLOCATION

ASSET CLASS	LONG-TERM EXPECTED REAL RATE OF RETURN
Domestic Large Cap Equity	5.92%
Domestic Small Cap Equity	6.71%
International Equity	6.71%
Emerging Market Equity	9.46%
Real Estate	4.98%
Core Fixed Income	1.14%
Diversified Fixed Income	2.50%
Absolute Return Fixed Income	1.67%
Emerging Market Debt (Local)	4.38%
Global Asset Allocation	4.76%
Absolute Return	3.86%
Private Equity	8.73%
Risk Parity	4.45%

NOTES TO THE FINANCIAL STATEMENTS

SECURITY CLASS	STRATEGIC TARGETS AS OF JUNE 30, 2018
Domestic Large Cap Equity	13.0 %
Domestic Small Cap Equity	5.5
International Equity	17.0
Real Estate	7.5
Fixed Income	29.0
Global Asset Allocation/ Better Beta	15.0
Absolute Return	8.0
Private Equity	5.0
Cash	-
TOTAL	100.0 %

no significant investment policy changes during the fiscal year. The Fund's asset structure is enumerated in the investment policy and reflects a proper balance of the Fund's needs for liquidity, growth of assets and the risk tolerance of the Trustees. The target asset mix, consistent with the achievement of the long-term objective of the Fund is presented above.

Rate of Return

For the year ended June 30, 2018, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 8.29% percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. This method differs from the time-weighted rate of return calculation referenced at the beginning of the Management Discussion and Analysis, which is performed on a gross basis.

Derivative Financial Instruments

As permitted by the Code described above, ERFC invests in derivative instruments on a limited basis in accordance with the Board of Trustees' investment policy. Investment in derivatives allows the System to increase earnings and/or hedge against potential losses. The risks associated with

derivative investments include market risk resulting from fluctuations in interest and currency rates, the credit worthiness of counter parties to any contracts entered into, and the credit worthiness of mortgages related to collateralized mortgage obligations (CMOs). Specific authorization by the Trustees is required should investment managers seek to purchase securities on margin or leverage.

The System had indirect investments in derivatives through its ownership interest in the Better Beta fund, one Private Equity manager, two of the Real Estate managers, three of the fixed income managers, and one of the Global Asset Allocation managers. These portfolios are commingled funds in which ERFC has a percentage ownership. Derivatives in these portfolios consisted of interest rate swaps and caps, which reduce the effect of interest rate fluctuations by converting floating rate financing into fixed rate loans for real estate investments. Futures, because they are more liquid than over the counter derivatives, have among the lowest transaction costs available, carry minimal counterparty risk and are de facto currency hedged. Non Deliverable Forward's (NDFs) obtain exposure to a currency and its interest rate where the actual purchase of onshore debt is difficult. The interest rate exposure comes through the difference between the spot foreign exchange (F/X) rate and the forward F/X rate, and through investing the US dollar (USD) cash used as collateral in short dated US bonds. Forward commodity contracts hedge changes in cash flows due to market price fluctuations related to the expected purchase of a commodity. Currency forwards are used for hedging non-USD denominated physical instruments back to the base currency. Options are contracts that give the buyer the right, but not the obligation, to buy or sell an underlying asset at a specific price on or before a certain date. Credit Default Swaps (CDS) are contracts that offer guarantees against the non-payment of loans. At June 30, 2018, exposure to interest rate swaps

Notes, continued on next page

NOTES TO THE FINANCIAL STATEMENTS

was \$(3,966,564), exposure to interest rate caps was \$1,940,603, exposure to futures contracts was \$15,547,469, exposure to NDFs was \$(26,449), exposure to forward commodity contracts was \$(561,088), exposure to currency forward contracts was \$6,510,951, exposure to options was \$7,763,906, and exposure to CDS was \$809,911.

Regarding certain risk factors, the Governmental Accounting Standards Board Statement No. 40, *Deposit and Investment Risk Disclosures*, requires that state and local governments report their exposure to investment risks in four categories: interest rate risk, credit risk, concentration of credit risk, and foreign currency risk.

Interest Rate Risk

Three of ERFC's five fixed income managers use the modified duration method to control interest rate risk. The other two fixed income managers use the effective duration method. Regarding maturity, ERFC does not place limits on these fixed income managers. However, it does expect the average duration to be within 30 percent of the portfolio's

benchmark. One of the managers utilizing the effective duration method is expected to be within 50 percent of the Bloomberg Barclays Capital Government/Credit Index.

Credit Risk

The System's policy on credit quality states that the average credit quality of the portfolio must be at least A. Up to 20 percent of the portfolio may be invested in below investment grade (that is, Moody's Baa or Standard & Poor's BBB ratings). If a security has a split rating, the lower rating will be considered in meeting the minimum quality standard. One of ERFC's fixed income managers may invest up to 35 percent in below investment grade securities. For this manager, if a security has a split rating, the higher rating shall be considered.

As of June 30, 2018, the System had four active fixed income managers and one passive fixed income manager. The Credit Quality Summary lists the ratings of all of ERFC's fixed income investments, excluding pooled funds, according to Moody's Investment Services and Standard & Poor's.

Notes, continued on next page

INVESTMENT COMBINED DURATION AS OF JUNE 30, 2018

INVESTMENT CATEGORY	AMOUNT	EFFECTIVE DURATION	PERCENTAGE OF FIXED
Asset Backed	3,001,481	5.86	3.1%
Convertible Securities	5,292,959	3.28	5.5%
Corporate Bonds	60,982,021	5.71	63.3%
International Bonds	18,358,235	5.52	19.1%
US Government Obligations	8,645,113	10.14	9.0%
TOTAL	\$ 96,279,809		100.00%

* Weighted Duration in years: 5.94

SHORT-TERM

Short-term Investment Funds	16,568,172	0.00
US Treasury Bills	37,884,830	0.32
TOTAL SHORT-TERM	\$ 54,453,002	

NOTES TO THE FINANCIAL STATEMENTS

CREDIT QUALITY SUMMARY

As of June 30, 2018

INVESTMENT TYPE	AMOUNT	RATING	PERCENT OF FIXED
US Government Obligations	\$ 8,645,113	AAA	9.0%
Asset and Mortgage Backed	3,001,481	A	3.1%
Convertible Securities	316,598	A	0.3%
	131,939	BBB	0.1%
	4,206,101	BB	4.4%
	638,321	CCC	0.7%
Corporate Bonds	1,397,720	AAA	1.5%
	1,739,213	AA	1.8%
	12,231,935	A	12.7%
	19,481,147	BBB	20.2%
	16,761,718	BB	17.4%
	6,606,074	B	6.9%
	2,764,214	CCC	2.9%
International Bonds	840,575	AAA	0.9%
	1,233,376	AA	1.3%
	6,293,637	A	6.5%
	5,578,087	BBB	5.8%
	3,020,827	BB	3.1%
	1,391,733	B	1.4%
TOTAL FIXED INCOME	\$ 96,279,809		100.0%
SHORT-TERM			
Short-term Investment Funds	16,568,172	Unrated	
US Treasury Bills	37,884,830	AAA	
TOTAL SHORT-TERM	\$ 54,453,002		

Notes, continued on next page

NOTES TO THE FINANCIAL STATEMENTS

Concentration of Credit Risk

The System's policy limits the securities of any one issuer to 10% at cost and 15% at market of each fixed income portfolio. The policy allows an exception for government securities and its agencies.

At June 30, 2018, and as addressed previously, the System had four active fixed income managers and one passive fixed income manager. The active manager portfolios had values of \$101.6 million, \$238.9 million, \$197.2 million and \$66.2 million. The indexed portfolio had a value of \$97.1 million. The fair value of the largest issue other than the U.S. Government in the portfolios of the active managers, excluding pooled funds, was only 2.50 percent of that portfolio.

Deposits

At June 30, 2018, short-term investments with the custodial bank totaled \$54,453,002. These investments are collateralized with securities held by the agent in the System's name or are in a short-term investment pool.

Securities Lending

The System's Board of Trustees' policy permits the fund to participate in a securities lending program. The securities lending program is administered by the System's custodian. Certain securities of the System are loaned to approved broker/dealers who borrow the securities and provide collateral in the form of cash, U.S. Treasury or Government Agency Securities, letters of credit issued by approved banks, or other securities of a quality specified

in the securities lending agreement. Collateral must be provided in the amount of 102 percent of fair value for domestic securities and 105 percent for international securities. The System did not impose any restrictions during the period on the number of loans the custodian made on its behalf. The custodian provides for 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 for income of the securities while on loan. The fair value of collateral is monitored daily by the custodian.

Cash collateral is invested in a fund maintained by the custodian or its affiliate. Per stated custodian policy, the maximum weighted average maturity of the fund is 60 days. Investment income from the securities lending program is shared 75/25 by ERFC and the custodian, respectively. At year-end, the System had no overall credit risk exposure to borrowers because the amounts the System owed the borrowers exceeded the amounts the borrowers owed the System.

Notes, continued on next page

SUMMARY OF SECURITY LENDING JUNE 30, 2018

SECURITIES	FAIR VALUE	CASH COLLATERAL
Domestic corporate bonds	\$ 15,732,035	\$ 16,117,989
International stock	6,886,581	6,947,612
Domestic stock	100,727,848	103,150,753
US Government	7,418,749	7,571,290
TOTAL	\$ 130,765,213	\$ 133,787,644

NOTES TO THE FINANCIAL STATEMENTS

Cash received as collateral and the related liability of \$133,787,644 as of June 30, 2018, are shown on the Statement of Fiduciary Net Position. As of June 30, 2018, the fair value of securities on loan for cash collateral was \$130,765,213. Securities received as collateral are not reported as assets and liabilities since ERFC does not have the ability to pledge or sell the collateral securities absent borrower default.

Custodial Credit Risk

Custodial credit risk is the risk that in the event of a bank failure, the system's funds will be lost. However, the System's investments and deposits are not exposed to custodial credit risk since they are held by the agent in the System's name. Other investments such as mutual funds, a short-term investment pool and a cash collateral investment pool which invests cash collateral for securities on loan, are not exposed to custodial risk due to their non-physical form. As such, the System does not have a custodial credit risk policy.

Foreign Currency Risk

Foreign currency risk is the risk that changes in

exchange rates will adversely affect the fair value of an investment. The System's currency risk exposures primarily exist in the international equity and active fixed income holdings. At the present time, there are no specific foreign currency guidelines for equities or active fixed income investments, however, equity and fixed income managers are all measured against specific performance standards and risk guidelines identified in ERFC's investment policy. The chart on the following page provides a summary of ERFC's foreign currency risk.

5. INCOME TAXES

The Internal Revenue Service (IRS) issued a determination letter on December 15, 2016, 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. In the opinion of the plan administrator, the System and its underlying trust have operated within the terms of the IRS regulations and are qualified under the applicable provisions of the Internal Revenue Code.

Notes, continued on next page

INVESTMENTS WITH THE CUSTODIAN

AS OF JUNE 30, 2018, INCLUDED THE FOLLOWING:

INVESTMENT TYPE	FAIR VALUE
Stocks	\$ 710,610,287
Bonds and Mortgage Securities	87,634,696
US Government Obligations	8,645,113
Preferred Securities	4,505,494
Real Estate	200,098,771
Global Asset Allocation	240,779,487
Better Beta	121,560,075
Hedge Fund of Funds	118,564,588
Private Equity	88,913,409
Commingled Fixed Income Funds	558,234,827
Commingled Equity Funds	243,116,043
SUBTOTAL INVESTMENTS	\$ 2,382,662,790
Cash collateral for securities on loan	133,787,644
TOTAL	\$ 2,516,450,434

NOTES TO THE FINANCIAL STATEMENTS

FAIR VALUE OF FOREIGN CURRENCY RISK

As of June 30, 2018

CURRENCY	CASH & CASH EQUIVALENTS	EQUITY	FIXED INCOME SECURITIES	PREFERRED SECURITIES	GRAND TOTAL
AUSTRALIAN DOLLAR	\$ 21,642	\$ 10,745,722	\$ 283,059	\$ -	\$ 11,050,423
BRAZIL REAL	28,268	2,474,203	-	271,344	2,773,815
CANADIAN DOLLAR	88,470	27,822,630	748,504	-	28,659,604
CHILEAN PESO	10,948	630,941	-	-	641,889
DANISH KRONE	36,634	3,851,341	-	-	3,887,975
EURO CURRENCY UNIT	452,691	76,482,268	-	3,962,913	80,897,872
HONG KONG DOLLAR	74,292	12,805,088	-	-	12,879,380
INDONESIAN RUPIAH	3,402	463,665	-	-	467,067
ISRAELI SHEKEL	4,575	187,253	-	-	191,828
JAPANESE YEN	191,675	43,117,602	-	-	43,309,277
MALAYSIAN RINGGIT	1,412	4,047,514	-	-	4,048,926
MEXICAN PESO	17,032	931,742	3,453,651	-	4,402,425
NEW TAIWAN DOLLAR	3,605	4,291,224	-	-	4,294,829
NEW ZEALAND DOLLAR	8,270	496,716	534,248	-	1,039,234
NORWEGIAN KRONE	52,636	5,568,794	269,065	-	5,890,495
PHILIPPINES PESO	3,159	146,491	-	-	149,650
POLISH ZLOTY	519	77,601	-	-	78,120
POUND STERLING	149,602	51,340,234	-	-	51,489,836
QATARI RIYAL	4,813	99,989	-	-	104,802
SINGAPORE DOLLAR	-	2,130,572	-	-	2,130,572
SOUTH AFRICAN RAND	23,702	2,751,024	-	-	2,774,726
SOUTH KOREAN WON	38,755	13,094,706	-	35,103	13,168,564
SWEDISH KRONA	1	5,158,341	-	-	5,158,342
SWISS FRANC	377,074	16,848,391	-	-	17,225,465
THAILAND BAHT	736	5,455,574	-	-	5,456,310
TURKISH LIRA	18,464	1,532,649	-	-	1,551,113
UAE DIRHAM	-	59,805	-	-	59,805
GRAND TOTAL	\$1,612,377	\$292,612,080	\$5,288,527	\$4,269,360	\$303,782,344

REQUIRED SUPPLEMENTARY INFORMATION

(Unaudited)

Historical contribution information is presented herein for the last ten fiscal years. This information is intended to help users assess the System's funding status on a going-concern basis, assess progress made in accumulating assets to pay benefits when due, and make comparisons with other public employee retirement systems. Actuarially determined employer contribution rates are calculated as of December 31 of odd numbered years, and determine the contribution rate for the two year period beginning 18 months after the valuation date. In particular, the December 31, 2015 valuation determined the contribution rates for fiscal years 2018 and 2019.

Analysis of the dollar amounts of plan net position, total pension liability, and net pension liability in isolation can be misleading. Expressing plan net position as a percentage of the total pension liability provides one indication of the System's funding status. Analysis of this percentage over time indicates whether the system is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the system.

Trends in the net pension liability and covered employee payroll are both affected by inflation. Expressing the net pension liability as a percentage of covered employee payroll approximately adjusts for the effects of inflation and aids in the analysis of the System's progress made in accumulating sufficient assets to pay benefits when due. Generally, the smaller the percentage, the stronger the system.

The Schedule of Changes in Net Pension Liability and Related Ratios on the following page illustrates whether the plan's net position is increasing or decreasing over time relative to the total pension liability, and the net pension liability as it relates to covered employee payroll. As addressed previously, the most recent actuarial valuation was effective December 31, 2017. The Schedule of Changes in Net Pension Liability and Related Ratios was prepared using procedures to roll forward the results of the most recent actuarial valuation to the fiscal year end June 30, 2018. This schedule presents information that is currently available. Additional years will be added until 10-year trend information can be presented.

SCHEDULE OF CONTRIBUTIONS

(Last 10 Fiscal Years)

FY ENDING JUNE 30	ACTUARIALLY DETERMINED CONTRIBUTION	ACTUAL CONTRIBUTION	CONTRIBUTION DEFICIENCY (EXCESS)	COVERED PAYROLL	ACTUAL CONTRIBUTION AS A % OF COVERED PAYROLL
2009	\$ 37,281,658	\$ 40,012,480	\$ (2,730,822)	\$ 1,187,313,947	3.37%
2010	35,146,816	37,868,623	(2,721,807)	1,183,394,469	3.20%
2011	47,118,111	47,118,111	-	1,166,289,876	4.04%
2012	50,738,815	52,934,245	(2,195,430)	1,219,683,057	4.34%
2013	68,242,010	67,734,634	507,376	1,268,438,838	5.34%
2014	72,748,999	74,174,082	(1,425,083)	1,324,537,175	5.60%
2015	74,791,177	74,324,396	466,781	1,328,419,881	5.59%
2016	76,069,503	76,599,695	(530,192)	1,374,735,094	5.57%
2017	80,305,269	80,094,538	210,731	1,430,259,607	5.60%
2018	93,543,467	91,704,877	1,838,590	1,469,629,439	6.24%

Covered payroll in 2016 and later is reported in accordance with GASB 82. The ratio in the last row cannot always be compared to contributions required by the ERF Board's funding policy.

REQUIRED SUPPLEMENTARY INFORMATION

(Unaudited)

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

FY ENDING JUNE 30	2018	2017	2016	2015	2014
Total pension liability					
Service Cost	\$ 88,599,697	\$ 78,925,763	\$ 77,760,915	\$ 77,493,999	\$ 75,787,752
Interest on the Total Pension Liability	221,106,804	209,515,636	205,720,047	198,938,575	192,723,577
Changes of benefit terms	-	(1,038,793)	-	-	-
Difference between expected and actual experience of the Total Pension Liability	12,140,768	19,857,344	(11,011,883)	(17,051,192)	(19,051,630)
Changes of assumptions	-	23,334,195	45,752,095	-	-
Benefit payments, including refunds of employee contributions	(177,720,296)	(173,385,583)	(170,347,847)	(167,842,576)	(167,049,790)
Net Change in Total Pension Liability	144,126,973	157,208,562	147,873,327	91,538,806	82,409,909
Total Pension Liability - Beginning	3,094,309,317	2,937,100,755	2,789,227,428	2,697,688,622	2,615,278,713
Total Pension Liability - Ending (a)	\$ 3,238,436,290	\$3,094,309,317	\$2,937,100,755	\$2,789,227,428	\$2,697,688,622
Plan Fiduciary Net Position					
Contributions - Employer	\$ 91,704,877	\$ 80,094,538	\$ 76,599,695	\$ 74,324,396	\$ 74,174,082
Contributions - Employee	44,169,100	43,062,632	41,383,642	39,982,963	40,018,590
Net Investment Income	188,145,489	250,981,777	(15,766,967)	32,083,908	304,640,803
Benefit Payments, including refunds of employee contributions	(177,720,296)	(173,385,583)	(170,347,847)	(167,842,576)	(167,049,790)
Pension Plan Administrative Expense	(4,300,927)	(4,059,408)	(4,004,882)	(3,751,825)	(3,629,320)
Net Change in Plan Fiduciary Net Position	141,998,243	196,693,956	(72,136,359)	(25,203,134)	248,154,365
Plan Fiduciary Net Position - Beginning	2,304,281,654	2,107,587,698	2,179,724,057	2,204,927,191	1,956,772,826
Plan Fiduciary Net Position - Ending (b)	2,446,279,897	2,304,281,654	2,107,587,698	2,179,724,057	2,204,927,191
Net Pension Liability - Ending (a) - (b)	792,156,393	790,027,663	829,513,057	609,503,371	492,761,431
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	75.54 %	74.47%	71.76%	78.15%	81.73%
Covered Employee Payroll	\$ 1,469,629,439	\$1,430,259,607	\$1,374,735,094	\$1,366,029,848	\$1,324,537,175
Net Pension Liability as a Percentage of Covered Employee Payroll	53.90 %	55.24%	60.34%	44.62%	37.20%

This schedule presents information for available years. Additional years will be added prospectively until 10 years of information is available.

REQUIRED SUPPLEMENTARY INFORMATION

(Unaudited)

SCHEDULE OF INVESTMENT RETURNS

FY ENDING JUNE 30	ANNUAL RETURN¹
2014	15.91%
2015	1.49%
2016	(0.63)%
2017	12.14%
2018	8.29%

This schedule presents information for available years. Additional years will be added prospectively until 10 years of information is available.

¹ Annual money-weighted rate of return, net of investment expenses.

OTHER SUPPLEMENTARY INFORMATION

(Unaudited)

SUMMARY OF SIGNIFICANT CHANGES TO THE PENSION SYSTEM

The following provides a summary of the composite employer and employee contribution rates and other significant changes to the pension system during the past fiscal years.

CONTRIBUTION RATES

As a percent of salary

Fiscal Year	Composite Employer	Employee	Total
June 2006	3.37	4.00	7.37
2007	3.37	4.00	7.37
2008	3.37	4.00	7.37
2009	3.37	4.00	7.37
2010	3.20	4.00	7.20
2011	4.04	4.00	8.04
2012	4.34	4.00	8.34
2013	5.34	3.00	8.34
2014	5.60	3.00	8.60
2015	5.60	3.00	8.60
2016	5.60	3.00	8.60
2017	5.60	3.00	8.60
2018	6.24	3.00	9.24

- July 1, 2006 — The implementation of a Benefit Restoration Plan in order to make benefit payments in excess of the limits established by Section 415 of the Internal Revenue Code.
- April 29, 2004 – The Board of Trustees agreed to transition to calendar year actuarial valuations.
- December 18, 2003 — Effective July 1, 2004, members hired prior to July 1, 2001 (ERFC Benefit Structure), are eligible for a Level Lifetime Benefit (LLB) that is calculated by determining the annuitized value of the greater of their accumulated contribution balance or the present value of the currently provided defined benefit. The following changes apply to members hired on or after July 1, 2001 (ERFC 2001 Benefit Structure):
 - The defined contribution component of the benefit structure that was to be offered as an option to members on July 1, 2006, was eliminated.
 - The matching contribution provisions of the benefit structure were eliminated effective July 1, 2004. Members who met the requirements for a contribution match as of June 30, 2004, had the match credited to their accounts on June 30, 2004.
 - Beginning July 1, 2004, members who retire are eligible for a minimum benefit that is calculated by determining the annuitized value of their accumulated contribution balance.
- July 24, 2003 – The Working After Retirement (WAR) program is closed to new entrants, effective June 30, 2004, which is two years earlier than originally planned.
- April 27, 2017 - ERFC members hired on or after July 1, 2017 are members of *ERFC 2001 Tier 2*. For all members, the annual interest rate credited on member accounts was reduced.

OTHER SUPPLEMENTARY INFORMATION

(Unaudited)

SCHEDULE OF ADMINISTRATIVE EXPENSES

Year Ended June 30, 2018

PERSONNEL SERVICES	
Salaries and wages	\$ 2,151,208
Retirement contributions	534,628
Insurance	367,501
Social security	174,669
TOTAL PERSONNEL SERVICES	3,228,006
PROFESSIONAL SERVICES	
Actuarial	247,328
Legal	112,991
Payroll disbursement	50,898
Plan automation support	156,088
Strategic planning	18,600
Audit	53,540
TOTAL PROFESSIONAL SERVICES	639,445
COMMUNICATIONS	
Printing	26,086
Postage	7,215
TOTAL COMMUNICATIONS	33,301
SUPPLIES	
Office supplies	12,460
Dues and subscriptions	7,389
TOTAL SUPPLIES	19,849
OTHER SERVICES AND CHARGES	
Board travel and staff development	24,360
Equipment	24,649
Building rent	284,204
Depreciation expense and asset disposal	26,033
Miscellaneous	21,080
TOTAL OTHER SERVICES AND CHARGES	380,326
TOTAL ADMINISTRATIVE EXPENSES	\$ 4,300,927

OTHER SUPPLEMENTARY INFORMATION

(Unaudited)

SCHEDULE OF INVESTMENT EXPENSES

Year Ended June 30, 2018

INVESTMENT MANAGEMENT FEES

Fixed income managers	
Loomis-Sayles and Company, L.P.	\$ 643,477
GAM USA, Inc.	624,482
J.P. Morgan Asset Management	593,938
Mellon Capital Management Corporation	52,177
Mondrian Investment Partners (US), Inc.	396,641
Equity managers	
Epoch Investment Partners, Inc.	502,948
Lazard Asset Management	377,011
T. Rowe Price Associates, Inc.	522,231
Westfield Capital Management	360,954
International managers	
Acadian Asset Management, Inc.	786,181
Causeway Capital Management, LLC	606,188
William Blair & Company	1,007,329
Real Estate managers	
J.P. Morgan Asset Management	555,784
Landmark Real Estate Partners LP	235,581
Prudential Financial	334,235
UBS Realty Investors, LLC	323,689
CenterSquare Investment Management	507,114
Global Asset Allocation managers	
Pacific Investment Management Company	1,035,672
Wellington Management Company LLP	956,660
Better Beta	
Bridgewater Associates	569,483
Hedge fund of funds	
Grosvenor Capital Management, L.P.	1,007,658
Permal Investment Management Services. Ltd.	
Private equity	
Audax Mezzanine Fund III, L.P.	82,951
HarbourVest Partners IX - Buyout Fund L.P.	141,888
HarbourVest Partners IX - Credit Fund L.P.	72,487
HarbourVest Partners IX - Venture Fund L.P.	130,880
HarbourVest Partners X - Buyout Fund L.P.	286,257
HarbourVest Partners X - Venture Fund L.P.	133,249
HIPEP VII Partnership Fund L.P.	123,477
HIPEP VIII Partnership Fund L.P.	78,736
Lexington Capital Partners VII L.P.	41,859
Lexington Capital Partners VIII L.P.	101,427
Newstone Capital Partners II, L.P.	35,125
Glouston Private Equity Opportunities IV, L.P.	58,649
Glouston Private Equity Opportunities V, L.P.	98,789
Private Advisors Buyout Fund IV, L.P.	71,250
Private Advisors Buyout Fund V, L.P.	90,000

TOTAL INVESTMENT MANAGEMENT FEES **13,546,457**

Other investment service fees	
Custodial fees - Mellon Trust	202,815
Investment consultant fees—New England Pension Consulting, Inc.	374,386
Foreign tax consulting—Pricewaterhouse Coopers	3,182
Investment salaries	240,115

TOTAL OTHER INVESTMENT SERVICE FEES **820,498**

TOTAL INVESTMENT EXPENSES **\$ 14,366,955**

OTHER SUPPLEMENTARY INFORMATION

(Unaudited)

SCHEDULE OF PROFESSIONAL SERVICE FEES

Year Ended June 30, 2018

SERVICE PROVIDER	NATURE OF SERVICE	AMOUNT
Gabriel, Roeder, Smith & Company	Actuary	\$ 214,078
Cheiron, Inc.	Actuary	33,250
Levi, Ray & Shoup, Inc.	Plan automation support	156,088
Bredhoff & Kaiser, PLLC	Legal counsel	85,148
Groom Law Group, Chartered	Legal counsel	27,843
ADP payroll services	Pension disbursements	50,898
Cherry Bekaert LLP	Audit	53,540
Strategy Compass LLC	Strategic Planning	18,600
TOTAL PROFESSIONAL SERVICE FEES		\$ 639,445

INVESTMENT

UNAUDITED



ERFC retirement counselors take care of every detail regarding an individual's retirement from FCPS. Time is their dedicated investment in guiding members through the transition from work to the rest of their lives. From preparing estimates and meeting with current employees, to calculating a member's benefit and processing the necessary paperwork, our counselors take pride in making sure each member's retirement proceeds as planned.

*"BEING ABLE TO HELP
SOMEONE LEARN SOMETHING
IS A TALENT."* **MARGARET RIEL**



CONSULTANT REPORT ON INVESTMENT ACTIVITY



NEPC, LLC

October 30, 2018

The Board of Trustees
 The Educational Employees' Supplementary Retirement System of Fairfax County
 8001 Forbes Place, Suite 300
 Springfield, Virginia 22151

Dear Board Members,

This letter summarizes the structure and performance of the Educational Employees' Supplementary Retirement System of Fairfax County ("ERFC") Fund through the fiscal year ending June 30, 2018.

As of the June 30th fiscal year-end, the Fund was in compliance with policy target ranges with 40% in equities, 8% in real estate, 29% in fixed income, 5% in hedge fund strategies, 4% in private equity, 15% in global asset allocation/better beta strategies, and 0.1% in cash. On a net of fee basis, the Fund earned a return of 8.1% for the one-year period ending June 30, 2018 and ranked in the 31st percentile of all public funds within the InvestorForce Universe. Over the same period, ERFC outperformed its assumed actuarial return target of 7.25% by 0.85%. The Fund's assets increased from \$2.3 billion as of fiscal year-end 2017 to approximately \$2.4 billion as of fiscal year-end 2018.

Market Commentary and Fund Performance:

The U.S. economy continued its near historically long growth streak as the Federal Reserve Bank maintained its path of methodically tightening monetary policy through increasing interest rates, while the Tax Cuts and Jobs Act of 2017 provided fiscal stimulus and expectations of further economic growth. Global capital markets continued to be largely driven by accommodative Central Bank policies. U.S. Equities, as a result, posted their ninth consecutive year of positive returns and outperformed international equities. Volatile global markets became a mainstay for the one-year period ending June 30, 2018, as concerns over anti-establishment political change, historically low and broadly negative real interest rates and fears over U.S. trade policy caused uncertainty to enter into investor sentiment. Uncertainty related to these risks was reflected in market volatility, yet these risks were largely shrugged off by markets, resulting in U.S. equities posting a robust return. International developed-markets equities performed well, but underperformed domestic equities. Underperformance in international developed-markets was driven by political and economic growth uncertainty in Europe. Emerging markets equities underperformed U.S. equities, but outperformed developed-international equities though volatility saw an uptick toward the end of the year as markets reacted to U.S. Dollar strength and trade policy uncertainty. Driven by increasing interest rates, U.S. high quality fixed income investments produced a negative return for the second consecutive year.

Global Equity:

Volatile global markets became a mainstay during fiscal year 2018, as concerns over anti-establishment political change, historically low and broadly negative real interest rates and fears over U.S. trade policy caused uncertainty to creep up in investor sentiment. Uncertainty related to these risks was reflected in market volatility. Despite this, international developed-markets equities were up 6.8% as measured by the MSCI EAFE benchmark, but

CONSULTANT REPORT ON INVESTMENT ACTIVITY



underperformed domestic equities by a margin of 7.6%. Underperformance in international developed-markets was driven by political and economic growth uncertainty in Europe. Emerging market equities experienced a similar trajectory due to initial fears and negative sentiment associated with U.S.-China trade tensions. Emerging market equities underperformed the U.S. but outperformed developed-international equities though volatility saw an uptick toward the end of the fiscal year as markets reacted to U.S. Dollar strength and trade policy uncertainty.

Domestic Equity Portfolio:

For the fiscal year 2018, the equity composite held \$562 million (23% of the total fund) in domestic equities. The Total Domestic Equity Portfolio returned 16.3%, outperforming the Russell 3000 Index return of 14.8%, by 150 basis points for the year. For the same period, the composite ranked in the 36th percentile of the *eVestment* All US Equity Net Median peer universe.

International Developed Equity Portfolio:

For the fiscal year 2018, the international developed equity composite held \$335 million (14% of the total fund). The total international equity portfolio returned 9.8%, outperforming the MSCI ACWI ex USA return of 7.3%, by 250 basis points. For the fiscal year end, the composite ranked in the 43rd percentile of the *eVestment* ACWI ex-US All Cap Equity Net Median peer universe.

Emerging Market Equity Portfolio:

The emerging market equity composite held \$71.8 million (3% of the total fund). The total emerging market equity composite returned 11.7%, outperforming the MSCI Emerging Market Index return of 8.2% by 350 basis points. For the fiscal year end, the composite ranked in the 16th percentile of the *eV* Emerging Market Equity Net Median peer universe.

Fixed Income:

The U.S. Treasury yield curve continued to flatten over the fiscal year as the second Fed rate hike of 2018 pushed short-term interest rates higher. Higher interest rates resulted in a second year of negative returns for U.S. high quality fixed income, with the Bloomberg Barclays US Aggregate Bond Index declining by 0.4%. The Federal Reserve signaled two more possible increases in the 2018 calendar year, reflecting its optimistic outlook on the U.S. economy. Emerging market debt issues experienced negative results during the fiscal year as emerging currencies weakened and the JPM GBI-EM Global Diversified Index returned -2.3%.

Domestic Fixed Income Portfolio:

For the fiscal year 2018, the total domestic fixed income composite held \$478.8 million (20% of the total fund). The composite returned 0.5%, outperforming the Barclays US Aggregate return of -0.4%, by 90 basis points. For the fiscal year end, the composite ranked in the 45th percentile of the *eVestment* All US Fixed Income Net Median peer universe.

Emerging Market Debt Portfolio:

For the fiscal year 2018, the total emerging market debt composite held \$66 million (3% of the total fund). The composite returned -1.3%, outperforming the JP Morgan GBI-EM index return of -2.3% by 100 basis points. For the fiscal year end, the composite ranked in the 36th percentile of the *eVestment* Emerging Markets Fixed Income Unhedged Net Median peer universe.

CONSULTANT REPORT ON INVESTMENT ACTIVITY



Unconstrained Fixed Income Portfolio:

For the fiscal year 2018, the total unconstrained fixed income composite held \$155 million (6% of the total fund). The composite returned 1.8%, underperforming the 3-Month LIBOR +3% index return of 4.8% by 300 basis points.

Real Estate:

The real estate market continued to post positive returns in fiscal year 2018. The NCREIF NFI ODCE Index Non-Lagged (representing 36 open-end commingled funds pursuing a core investment strategy) generated a 7.5% net return. In real estate, fundamentals remain healthy in most US core property markets. US real estate investment trusts (REITs) returned 10% in the three months ended June 30. Across non-core real estate strategies, we continue to see relative value opportunities and favor demographically driven property types with managers focused on cash flow and duration risk. We believe real estate debt strategies are attractive for investors seeking current income with some stability and downside protection as asset appreciation slows.

Real Estate Portfolio:

For the fiscal year 2018, the total real estate composite held \$200 million (8% of the total fund). The composite returned 9.0%, outperforming ERFC's blended real estate (custom) index return of 6.5% by 250 basis points.

Hedge Funds:

Equity hedge funds, as measured by the HFRI Equity Index, were the top performing hedge funds for the fiscal year, returning 8.2%. Short bias hedge funds, as measured by the HFRI Short Bias index, were the laggards for the fiscal year, returning -9.7% for the fiscal year end.

Hedge Fund Portfolio:

For the fiscal year 2018, the total hedge fund composite held \$118 million (5% of the total fund). The composite returned 7.4%, outperforming the HFRI Fund of Fund Composite Index return of 5.1% by 230 basis points.

The Investment Committee and Board adopted a new asset allocation policy in April 2017, and this policy shifted assets from hedge funds to private equity and real estate investments. The portfolio continues to be diversified across asset classes and remains in compliance with policy targets. During fiscal year 2018, the Plan made a \$40 million allocation to Landmark Real Estate Partners.

Sincerely,

Douglas Moseley, Partner

Margaret Belmondo, CIMA®, Sr. Consultant

STRATEGIC REVIEW AND INVESTMENT POLICY

INTRODUCTION

The members of the ERFC Board of Trustees have jurisdiction over and ultimate fiduciary responsibility for the investment of the System's assets. In carrying out their responsibilities, they must adhere to applicable laws, regulations, and rulings with respect to the duties of investment fiduciaries. Accordingly, they are required to "discharge their duties in the interest of plan participants" and "act with the same care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a similar capacity and familiar with those matters would use in the conduct of a similar enterprise with similar aims." The Board of Trustees has established a Statement of Investment Policy that identifies a set of investment objectives, guidelines, and performance standards for the assets of the fund. The objectives are formulated in response to the following:

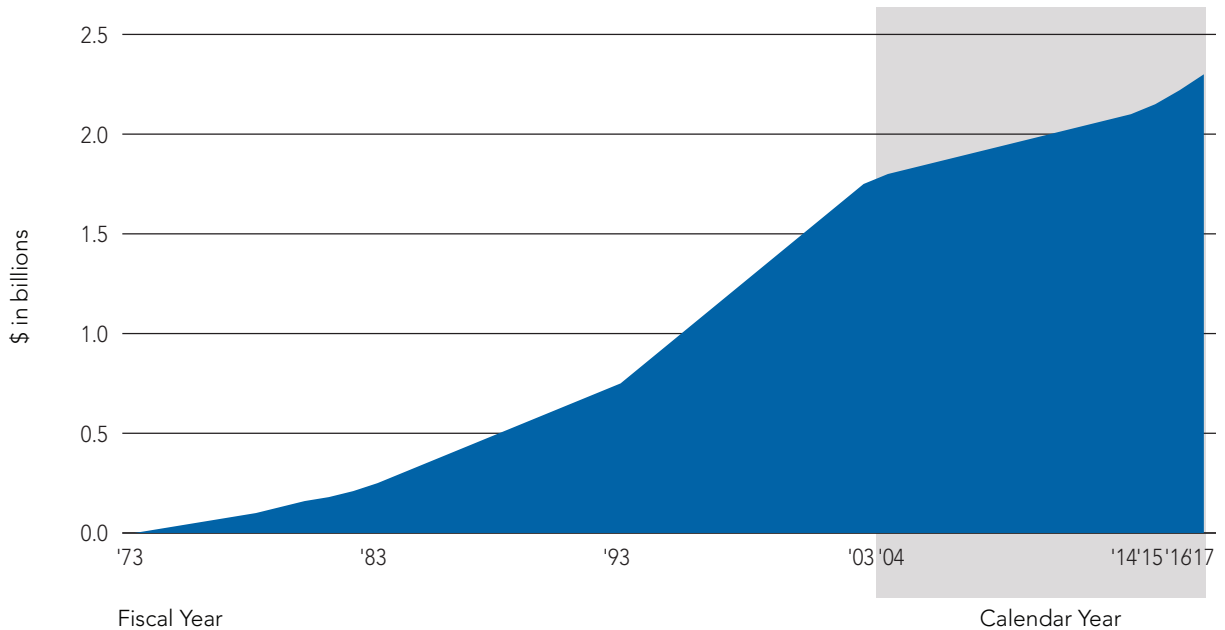
- the anticipated financial needs of the ERFC
- consideration of risk tolerance; and
- the need to document and communicate objectives, guidelines and standards to the investment managers.

INVESTMENT OBJECTIVES

The investment objective of the ERFC is to ensure, over the long-term life of the fund, an adequate level of assets to fund the benefits for ERFC members and their beneficiaries at the time they are payable. The Trustees seek to achieve a high level of total investment return consistent with a prudent level of portfolio risk. The fund's actuary uses an investment return assumption of 7.25 percent, compounded annually, of which 3.25 percent constitutes an assumed rate of inflation and 4.0 percent reflects an assumed real rate of return on investments. The fund's objective is to meet or exceed the assumed real rate of return over time, while preserving the fund's principal.

ERFC TOTAL FUND GROWTH — VALUATION ASSETS SINCE INCEPTION

(As reflected in the December 31, 2017 actuarial valuation)



INVESTMENT

INVESTMENT MANAGERS

ASSETS UNDER MANAGEMENT

As of June 30, 2018 (\$ in millions)

INVESTMENT MANAGER	INVESTMENT TYPE	AMOUNT
EQUITIES		
Large Capitalization		
Aronson Johnson Ortiz	Value	\$ 128.1
Mellon Capital Management Corp.	Core Index (Russell 1000)	156.7
T. Rowe Price	Growth	127.6
Small/Mid Capitalization		
Epoch Investment Partners, Inc.	Value	48.7
Lazard Asset Management	Core	50.6
Westfield Capital Management	Growth	49.0
International		
Acadian Asset Management	Core	136.4
Causeway Capital	Value	104.1
William Blair & Company	Growth	101.9
William Blair & Company	Emerging Market	72.0
FIXED INCOME		
Loomis-Sayles & Company	Core Plus	143.6
Mellon Capital Management Corp.	Core Index	97.1
JP Morgan Asset Management	Core Plus	239.2
Mondrian Investments	Emerging Market	67.5
GAM Fund Management	Unconstrained	102.0
Loomis-Sayles & Company	Unconstrained	54.8
GLOBAL ASSET ALLOCATION/BETTER BETA		
Bridgewater Associates, Inc.	Better Beta	121.4
Wellington Management Co.	Global Asset Allocation	123.2
Pacific Investment Management Co.	Global Asset Allocation	120.4
HEDGE FUND OF FUNDS		
Grosvenor Institutional Partners	Hedge Fund of Funds	118.9
PRIVATE EQUITY		
Audax	Private	2.0
Lexington	Private	11.8
Newstone	Private	1.6
Glouston	Private	6.0
Private Advisors	Private	15.1
HarbourVest	Private	53.5
REAL ESTATE		
JP Morgan Asset Management	Private	36.7
PGIM Real Estate	Private	35.4
UBS Trumbull Realty Investors	Private	37.5
Center Square Investment Management	Public	87.4
Landmark	Public	6.1
CASH (TEMPORARY CASH)		4.5
TOTAL		\$ 2,460.8

ASSET STRUCTURE

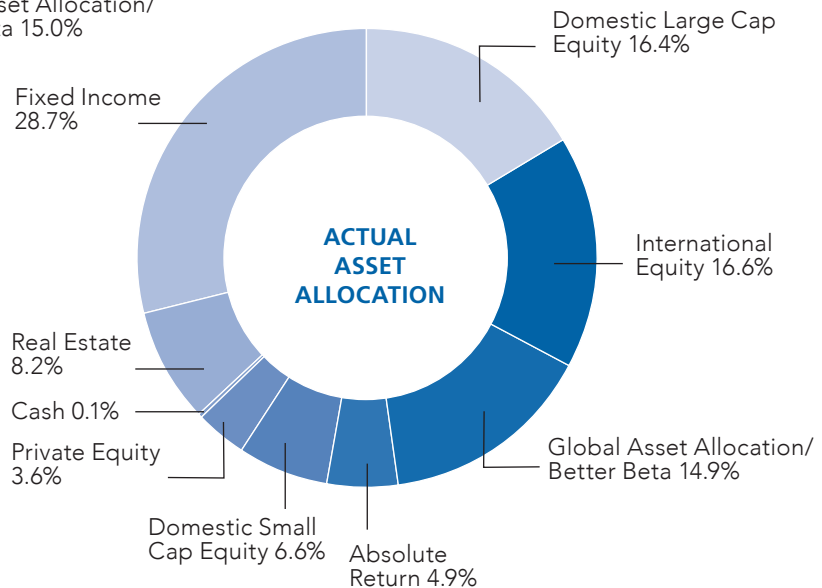
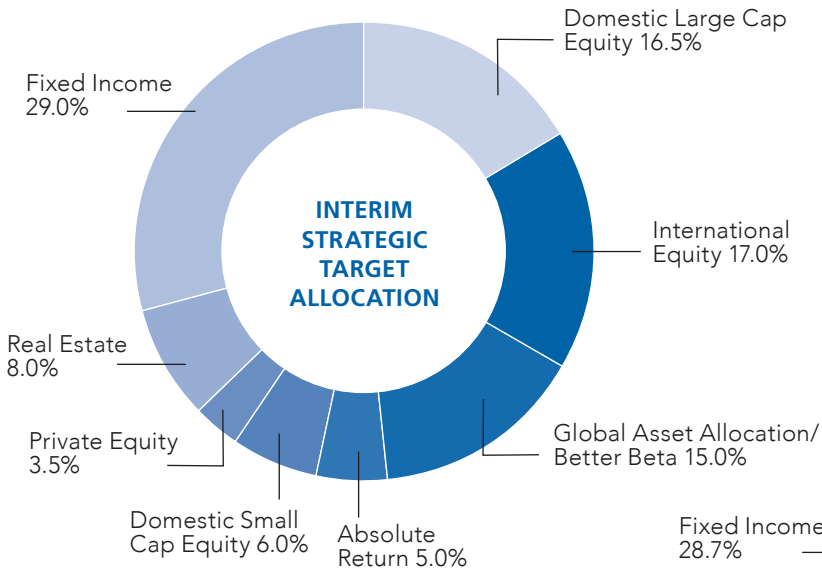
INTERIM STRATEGIC TARGET ALLOCATION AS OF JUNE 30, 2018

The asset structure shown below represents the Trustees' assessment of their optimal asset allocation as of June 30, 2018. This interim strategic allocation provides a reasonable expectation that the fund's investment objective can be achieved based on historic relationships of asset class performance.

The table below provides a comparison between the target asset mix, consistent with the achievement of the long-term objective of the fund, and the actual asset allocation as of June 30, 2018.

ACTUAL ASSET ALLOCATION AS OF JUNE 30, 2018

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

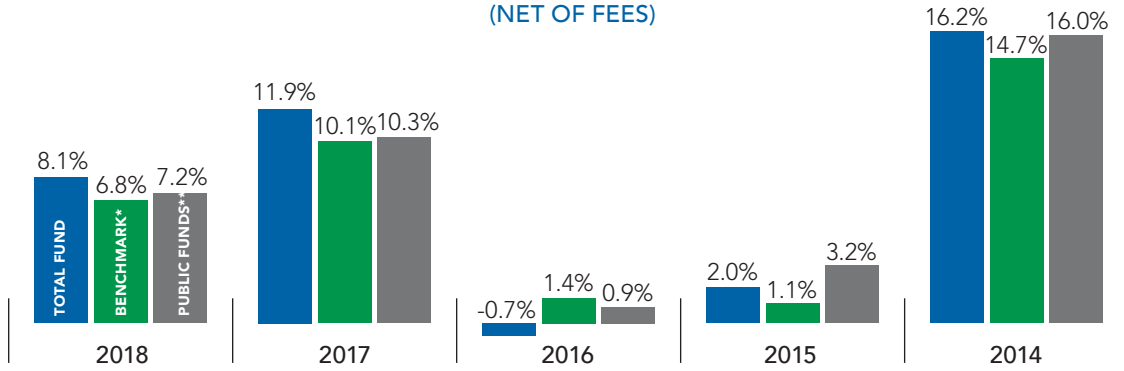


INVESTMENT

INVESTMENT RESULTS

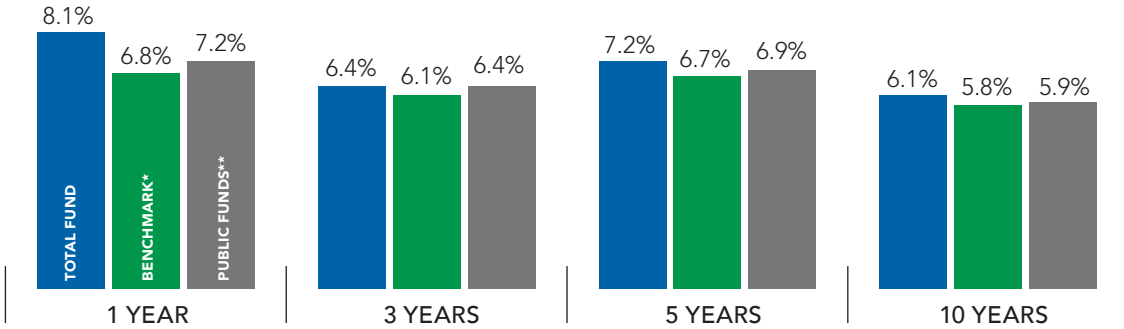
TOTAL FUND RETURNS

FISCAL YEARS ENDING JUNE 30
(NET OF FEES)



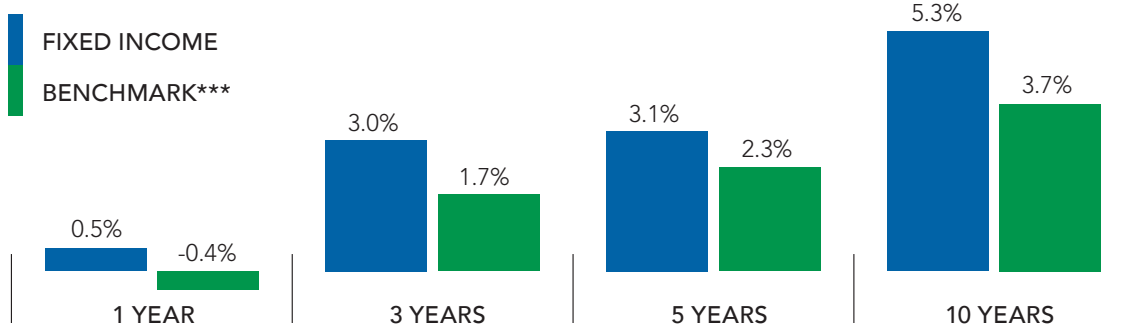
TOTAL FUND

FOR THE PERIODS ENDING JUNE 30, 2018
(NET OF FEES)



DOMESTIC FIXED INCOME

FOR THE PERIODS ENDING JUNE 30, 2018
(NET OF FEES)



* Diversified benchmark is 16.5% Russell 1000, 6.0% Russell 2000, 14% MSCI ACWI Ex-US, 3.0% MSCI Emerging Markets, 4.0% FTSE EPRA/NAREIT, 4.0% NCREIF, 18.0% BC Aggregate, 4.0% BC Credit, 4.0% BC Long Credit, 7.5% MSCI World, 7.5% CitiWorld Govt Bond, 5.0% HFRI FoF, 3.5% Cambridge PE, 3.0% JPM GBI EM

** Investor Force Public Defined Benefit Plan Universe

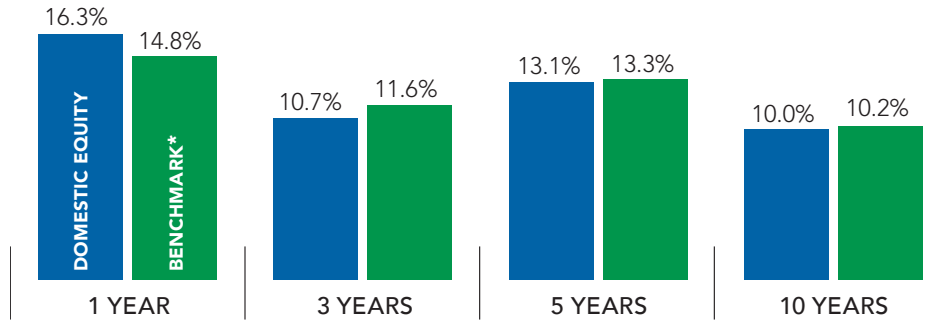
*** Bloomberg Barclays Aggregate Bond

INVESTMENT RESULTS

(For the Periods Ending June 30, 2018)

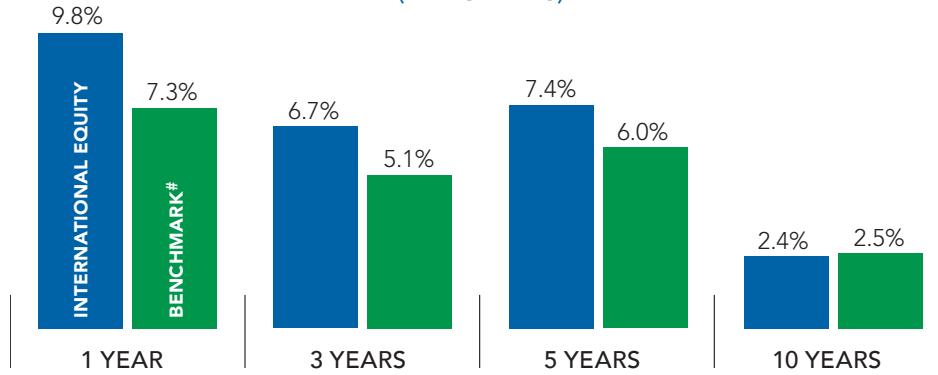
DOMESTIC EQUITY

(NET OF FEES)



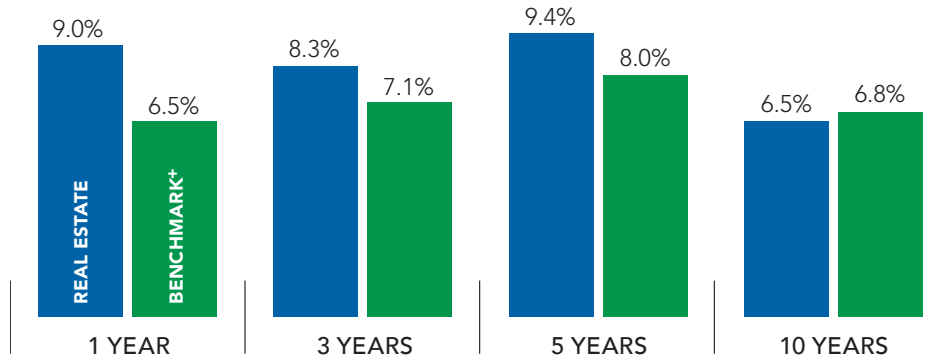
INTERNATIONAL EQUITY

(NET OF FEES)



REAL ESTATE

(NET OF FEES)



* Benchmark: Russell 3000 Index

Benchmark: MSCI/ACWI Ex-USA Index

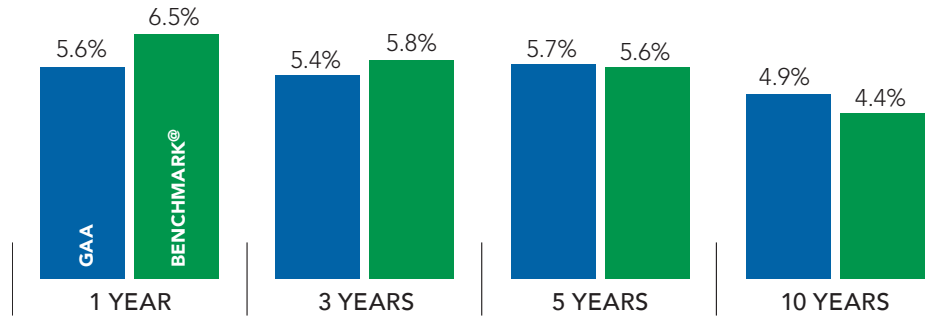
+ Benchmark: 50% FTSE EPRA/ NAREIT; 50% NCREIF

INVESTMENT RESULTS

(For the Periods Ending June 30, 2018)

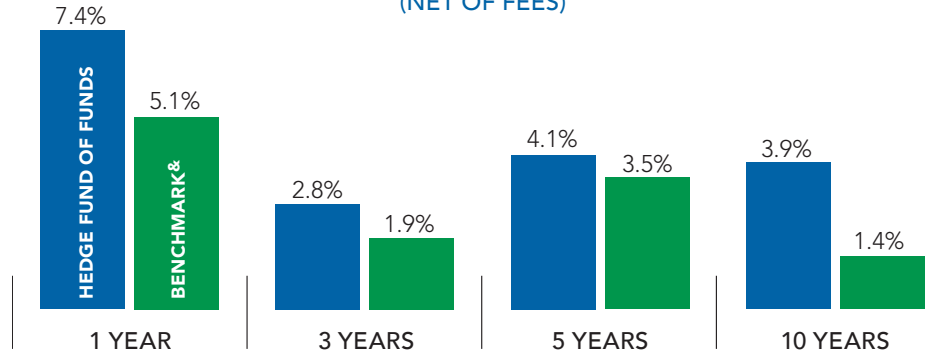
GLOBAL ASSET ALLOCATION

(NET OF FEES)



HEDGE FUND

(NET OF FEES)



Note: All investment performance figures were calculated using a time-weighted rate of return based on market values.

@ Benchmark: 50% MSCI World / 50% Citi World Govt Bond Index

& Benchmark: HFRI Fund of Funds Composite Index

SCHEDULES OF TEN LARGEST EQUITY & FIXED INCOME HOLDINGS

(As of June 30, 2018)

TEN LARGEST EQUITY HOLDINGS*

NO. SHARES	DESCRIPTION	COST	FAIR VALUE	% OF TOTAL PORTFOLIO
5,274	Amazon.com Inc	\$ 2,744,184	\$ 8,964,745	0.37%
34,591	Facebook Inc	3,317,003	6,721,723	0.27%
60,510	Microsoft Corp	3,447,117	5,966,891	0.24%
4,591	Alphabet Inc-Cl C	2,803,358	5,121,949	0.21%
2,484	Booking Holdings Inc	3,195,297	5,035,292	0.21%
24,253	Alibaba Group Holding Ltd	2,629,158	4,499,659	0.18%
31,706	Visa Inc	2,038,607	4,199,460	0.17%
12,368	Boeing Co/The	2,132,304	4,149,588	0.17%
34,146	Johnson & Johnson	3,474,264	4143,276	0.17%
90,350	Samsung Electronics Co Ltd	1,866,062	3,781,809	0.15%
TOTAL		\$ 27,647,354	\$ 52,584,391	2.15%

TEN LARGEST FIXED INCOME HOLDINGS*

PAR VALUE	SECURITY	COUPON	MATURITY	COST	FAIR VALUE	% OF TOTAL PORTFOLIO
5,000,000	U S Treasury Note	0.750%	9/30/18	\$ 4,998,828	\$ 4,984,800	0.20%
4,250,000	U S Treasury Bond	2.250%	8/15/46	4,031,855	3,660,313	0.15%
3,630,000	Ford Motor Credit Co Llc	4.389%	1/8/26	3,630,000	3,566,693	0.15%
2,400,000	Bank Of America Corp	6.110%	1/29/37	2,064,106	2,756,880	0.11%
1,555,000	Georgia-Pacific Llc	7.750%	11/15/29	1,381,225	2,082,285	0.09%
37,450,000	Mexican Bonos	8.000%	12/7/23	3,347,568	1,932,598	0.08%
2,050,000	Qwest Capital Funding Inc	6.875%	7/15/28	1,833,890	1,873,803	0.08%
1,455,000	Weyerhaeuser Co	7.375%	3/15/32	1,446,899	1,849,451	0.08%
1,761,080	Trinity Rail Leasing	5.194%	10/16/40	1,761,080	1,848,888	0.08%
1,860,000	Navient Corp	5.625%	8/1/33	1,527,496	1,571,700	0.06%
TOTAL				\$ 26,022,949	\$ 26,127,409	1.07%

* A detailed list of the portfolio's equity and fixed income holdings are available upon request.

SCHEDULE OF BROKERAGE COMMISSIONS

(Year Ended June 30, 2018)

BROKER NAME	BASE VOLUME	TOTAL SHARES	BASE COMMISSION	COMMISSION PERCENTAGE
CITIGROUP GBL MKTS INC, NEW YORK	\$ 56,613,909	1,344,827	\$ 20,097	0.01
DEUTSCHE BK SECS INC, NY	45,662,795	5,266,534	16,078	0.00
MERRILL LYNCH PIERCE FENNER SMITH INC NY	38,185,621	958,713	15,434	0.02
J.P. MORGAN CLEARING CORP, NEW YORK	35,802,277	453,769	5,619	0.01
GOLDMAN SACHS & CO, NY	32,899,122	1,799,656	22,686	0.01
MERRILL LYNCH INTL LONDON EQUITIES	29,828,729	3,097,944	19,499	0.01
CREDIT SUISSE, NEW YORK	27,165,321	1,998,572	14,416	0.01
MORGAN STANLEY & CO INC, NY	25,995,762	2,004,950	17,939	0.01
J.P MORGAN SECURITIES INC, NEW YORK	23,834,843	528,929	6,521	0.01
ICBC FINCL SVCS, NEW YORK	22,735,663	522,626	4,428	0.01
JEFFERIES & CO INC, NEW YORK	22,124,953	406,303	8,468	0.02
INSTINET CLEARING SER INC, NEW YORK	21,694,175	464,411	4,737	0.01
BERNSTEIN SANFORD C & CO, NEW YORK	19,615,960	664,456	6,208	0.01
UBS WARBURG, LONDON	18,878,293	1,018,482	10,234	0.01
INVESTMENT TECH GROUP INC, NEW YORK	18,365,079	383,967	4,685	0.01
INSTINET EUROPE LIMITED, LONDON	18,198,640	1,159,556	8,673	0.01
SG AMERICAS SECURITIES LLC, NEW YORK	17,913,823	693,442	5,770	0.01
LIQUIDNET INC, NEW YORK	17,075,439	432,785	9,511	0.02
INSTINET CORP, NEW YORK	16,706,715	456,523	4,760	0.01
UBS SECURITIES LLC, STAMFORD	13,652,510	318,152	7,856	0.02
RBC CAPITAL MARKETS LLC, NEW YORK	12,640,849	274,654	3,128	0.01
J P MORGAN SECS LTD, LONDON	10,252,879	529,276	7,723	0.01
SG SEC (LONDON) LTD, LONDON	9,624,826	991,644	6,747	0.01
STIFEL NICOLAUS	8,668,317	122,872	2,638	0.02
BARCLAYS CAPITAL LE, NEW YORK	8,464,549	143,909	3,210	0.02
SOCIETE GENERALE LONDON BRANCH, LONDON	8,161,027	412,178	3,819	0.01
NATIONAL FINL SVCS CORP, NEW YORK	8,080,407	172,572	2,709	0.02
MACQUARIE BANK LTD, HONG KONG	7,647,389	16,856,000	5,094	0.00
INVESTMENT TECHNOLOGY GROUP LTD,DUBLIN	7,246,617	290,680	3,519	0.01
HSBC BANK PLC (MIDLAND BK)(JAC), LONDON	7,176,559	1,015,924	4,881	0.00
BARCLAYS CAPITAL INC./LE, NEW JERSEY	6,957,354	170,703	3,608	0.02
CITIGROUP GLOBAL MARKETS LTD, LONDON	6,510,799	587,234	4,983	0.01
DAIWA SECS AMER INC, NEW YORK	6,436,447	222,100	4,505	0.02
UBS WARBURG ASIA LTD, HONG KONG	6,402,504	684,700	5,573	0.01
INSTINET PACIFIC LTD, HONG KONG	6,224,681	4,786,928	3,669	0.00
GOLDMAN SACHS INTL, LONDON	5,913,114	375,286	3,835	0.01
CITIGROUP GBL MKTS/SALOMON, NEW YORK	5,548,792	388,407	4,420	0.01
CREDIT SUISSE (EUROPE), LONDON	5,384,603	348,984	4,949	0.01
ITG INC, NEW YORK	5,211,684	125,067	1,958	0.02
BNY CONVERGEX, NEW YORK	4,793,956	155,465	2,473	0.02
BAIRD, ROBERT W & CO INC, MILWAUKEE	4,769,802	76,319	2,161	0.03
GUZMAN AND COMPANY, NEW YORK	4,638,246	93,449	951	0.01
COWEN AND CO LLC, NEW YORK	4,566,847	61,932	1,138	0.02
ITG CANADA CORP, TORONTO	4,068,611	95,414	999	0.01
PERSHING LLC, JERSEY CITY	3,746,638	120,254	2,970	0.02
OTHER BROKERS	120,157,523	21,926,144	88,448	0.00
Total	\$ 812,244,652	75,002,692	\$ 393,726	

INVESTMENT SUMMARY

	As of June 30, 2018		As of June 30, 2017	
	FAIR VALUE	% FAIR VALUE	FAIR VALUE	% FAIR VALUE
FIXED INCOME				
U.S. Government obligations	\$ 8,645,113	0.4%	\$ 18,415,390	0.8%
Mortgage-backed securities	3,001,481	0.1%	1,990,909	0.1%
Domestic corporate bonds	60,982,021	2.5%	63,390,793	2.8%
Convertible bonds	5,292,959	0.2%	8,218,114	0.4%
International bonds	18,358,235	0.8%	28,471,264	1.2%
Preferred stocks	4,505,494	0.2%	5,232,652	0.2%
Index / Commingled fund	558,234,827	22.9%	493,892,323	21.4%
Total fixed income	659,020,130	27.1%	619,611,445	26.9%
DOMESTIC EQUITY				
Basic industry	54,753,694	2.2%	52,723,142	2.3%
Consumer services	133,990,872	5.5%	136,116,165	5.9%
Financial and utility	88,459,281	3.6%	96,996,403	4.2%
Technological	99,146,423	4.1%	109,837,658	4.8%
Index / Commingled fund	151,467,022	6.2%	188,864,262	8.2%
Total domestic equity	527,817,292	21.6%	584,537,630	25.4%
International Equity				
Basic industry	78,932,576	3.2%	66,825,748	2.9%
Consumer and services	112,481,348	4.6%	98,220,368	4.3%
Financial and utility	76,713,062	3.1%	71,059,921	3.1%
Technological	66,133,031	2.7%	49,341,191	2.1%
Index / Commingled fund	91,649,021	3.8%	91,905,819	4.0%
Total international equity	425,909,038	17.4%	377,353,047	16.4%
Real Estate				
Commercial	72,892,877	3.0%	67,723,558	2.9%
Commingled	122,991,079	5.0%	112,513,587	4.9%
Private	4,214,814	0.2%	-	0.0%
Total real estate	200,098,771	8.2%	180,237,145	7.8%
Alternative investments				
Better beta	121,560,075	5.0%	112,371,447	4.9%
Global asset allocation	240,779,487	9.9%	236,687,821	10.3%
Hedge fund of funds	118,564,588	4.9%	90,512,487	3.9%
Limited partnerships	88,913,409	3.6%	68,818,151	3.0%
Total alternative investments	569,817,559	23.4%	508,389,906	22.1%
Subtotal investments at fair value	2,382,662,790	97.7%	2,270,129,173	98.6%
Short-term Investments				
Money Market	54,453,002	2.3%	33,852,955	1.4%
Total short-term investments	54,453,002	2.3%	33,852,955	1.4%
Total	\$ 2,437,115,792	100.0%	\$ 2,303,982,128	100.0%

Note: This summary is comprised of investments at fair value and short-term investments.

SCHEDULE OF INVESTMENT MANAGEMENT FEES

(Year Ended June 30, 2018)

INVESTMENT CATEGORY	ASSETS UNDER MANAGEMENT	EXPENSE
Better beta	\$ 121,560,075	\$ 569,483
Domestic equity managers	527,817,292	1,763,144
Fixed income managers	659,020,130	2,310,715
Global asset allocation managers	240,779,487	1,992,332
Hedge fund of funds	118,564,588	1,007,658
International equity managers	425,909,038	2,399,698
Private equity	88,913,409	1,547,024
Real estate managers	200,098,771	1,956,403
Total	\$ 2,382,662,790	\$ 13,546,457

Note: Excludes cash and cash equivalents

ACTUARIAL

UNAUDITED



Retirement assistants are the first point of contact for ERFC members. Whether it's a phone inquiry routed through our call center agents or a face-to-face greeting with a visiting member, the team is readily available to answer, educate and direct our members to the resources they need and the services they deserve.



"QUALITY IN A SERVICE OR PRODUCT IS NOT WHAT YOU PUT INTO IT. IT IS WHAT THE CLIENT OR CUSTOMER GETS OUT OF IT."

PETER DRUCKER

ACTUARY'S CERTIFICATION LETTERS



800.521.0498 | P: 248.799.9000 | F: 248.799.9020 | www.grsconsulting.com

October 26, 2018

Board of Trustees
Educational Employees' Supplementary Retirement System
of Fairfax County (ERFC)
8001 Forbes Place, Suite 300
Springfield, Virginia 22151

Dear Board Members:

The basic financial objective of ERFC is to establish and receive contributions which,

- when expressed in terms of percents of active member payroll will remain approximately level from generation to generation, and
- when combined with present assets and future investment return will be sufficient to meet the financial obligations of ERFC to present and future retirees and beneficiaries.

The financial objective is addressed within the annual actuarial valuation. The valuation process develops contribution rates that are sufficient to fund the plan's current cost (i.e., the costs assigned by the valuation method to the year of service about to be rendered) as well as to fund unfunded actuarial accrued liabilities as a level percent of active member payroll over a finite period. The most recent valuation was completed based upon population data, asset data, and plan provisions as of December 31, 2017; all calculations were made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

The plan's administrative staff provides the actuary with data for the actuarial valuation. The actuary relies on the data after reviewing it for internal and year-to-year consistency. The actuary summarizes and tabulates population data in order to analyze longer term trends. The plan's external auditor audits the actuarial data annually.

The actuary prepared information that was used for the following schedules for the Comprehensive Annual Financial Report.

Actuarial Section

Summary of Actuarial Assumptions and Methods
Sample Pay Increase Assumptions for an Individual Member
Sample Rates of Separation from Active Employment Before Retirement
Probability of Retirement for Members Eligible to Retire
Single Life Retirement Values

One Towne Square | Suite 800 | Southfield, Michigan 48076-3723

ACTUARY'S CERTIFICATION LETTERS

Board of Trustees
 Educational Employees' Supplementary Retirement System
 of Fairfax County (ERFC)
 October 26, 2018
 Page 2

Actuarial Section (Concluded)

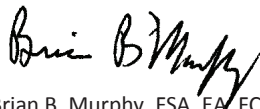
Summary of Member Data Included in Valuation as of December 31, 2017
 Historical Information for All Members (last 8 years)
 All Active Members in Valuation on December 31, 2017 by Attained Age and Years of Service
 Active Members by Years of Service, Salaries and Ages
 Retirees and Beneficiaries Added and Removed
 Short-Term Solvency Test
 Analysis of Financial Experience Including Experience Gains and Losses by Risk Area
 ERFC Contribution Rates

Assets are valued on a fair value-related basis that recognizes each year's difference between actual and assumed investment return over a closed five-year period, subject to a 75% to 125% corridor on fair value.

Actuarial valuations are based upon assumptions regarding future activity in specific risk areas including the rates of investment return and payroll growth, eligibility for the various classes of benefits, and longevity among retired lives. These assumptions are adopted by the Board after considering the advice of the actuary and other professionals. Each actuarial valuation takes into account all prior differences between actual and assumed experience in each risk area and adjusts the contribution rates as needed. The December 31, 2017 valuation was based upon assumptions that were recommended in connection with a study of experience during the period from January 1, 2010 to December 31, 2014 and further analysis in July 2017. The assumptions and methods used in the valuation for funding purposes meet the parameters set by the Actuarial Standards of Practice.

Based upon the results of the December 31, 2017 valuation, we are pleased to report to the Board that the Educational Employees' Supplementary Retirement System of Fairfax County (ERFC) is meeting its basic financial objective and continues to operate in accordance with actuarial principles of level percent-of-payroll financing. Continued receipt of contributions at actuarially determined levels remains extremely important. In order to obtain a more complete understanding of the condition of the Retirement System, it is important to obtain and read a copy of the full actuarial report.

Respectfully submitted,



Brian B. Murphy, FSA, EA, FCA, MAAA, PhD



Heidi G. Barry, ASA, FCA, MAAA

BBM/HGB:clh:dj



ACTUARY'S CERTIFICATION LETTERS



November 16, 2018

Board of Trustees
Educational Employees' Supplementary Retirement System of Fairfax County (ERFC)
8001 Forbes Place, Suite 300
Springfield, VA 22151

Dear Board Members:

As part of its regular financial reporting requirements, the Educational Employees' Supplementary Retirement System of Fairfax County ("ERFC") is required to disclose certain financial information under Governmental Accounting Standards Board ("GASB") Statement Numbers 67 and 68. To assist with these requirements, Aon prepared an accounting valuation report based on a measurement date of June 30, 2018 for GASB Statement Numbers 67 and 68.

The accounting report was based on information previously reported by GRS Consulting in prior years, most notably the funding valuation report that was prepared as of December 31, 2017 and the accounting valuation report that was prepared as of June 30, 2017. In addition to these reports, the plan's administrative staff provided Aon with supplementary data that was needed for the GASB financial reporting information, including asset performance information. Aon relied on the data after reviewing it for internal consistency and after comparing it with information that was previously reported.

It is our understanding that the information prepared by Aon was used by ERFC for the following schedules in their fiscal year 2018 Comprehensive Annual Financial Report:

- Notes to the Schedule of Contributions;
- Sensitivity of the Net Pension Liability to the Single Discount Rate Assumption;
- Schedule of Contributions; and
- Schedule of Changes in Net Pension Liability and Related Ratios.

When determining the Net Pension Liability under GASB Statement No. 67, assets are valued on a market basis. The long term assumed rate of investment return on pension fund assets is 7.25%. Based upon the results of a projection performed in accordance with GASB Statement No. 67 parameters by GRS Consulting and reported in the December 31, 2017 Actuarial Report, the Single Discount Rate for purposes of discounting pension liabilities for pension financial reporting purposes is also 7.25%.

ACTUARY'S CERTIFICATION LETTERS



ERFC Board of Trustees
Page 2
November 16, 2018

Based on the information provided, we believe that the ERFC is meeting its basic financial reporting requirements and that the information presented by Aon in the June 30, 2018 accounting report meets all applicable Actuarial Standards of Practice.

Please let us know if you have any questions.

Regards,

Aon

A handwritten signature in black ink, appearing to read "Al-Karim Alidina".

Al-Karim Alidina, FSA, EA

AA:jsf

cc: Robert Burrell, Aon

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

The actuarial assumptions and methods used in making the annual actuarial valuation are summarized in this section. The assumptions were adopted by the Trustees following a study of experience covering the five-year period ending December 31, 2014, with further adjustments to the mortality and salary assumptions adopted by the Board for the December 31, 2016 valuation.

ECONOMIC ASSUMPTIONS

The **investment return rate** used in making the valuation was 7.25 percent per year, compounded annually (net of investment expenses). The real rate of return is the portion of total investment return, which is more than the wage inflation rate. Based upon an assumed wage inflation rate of 3.25 percent, the 7.25 percent investment return rate translates to an **assumed real rate of return over wages of 4.0 percent**.

Pay increase assumptions for individual active members are shown by years of service on Table A. Part of the assumption is for merit and/or seniority increase, and the other 3.25 percent recognizes price inflation and real wage growth.

The **number of active members** is assumed to continue at the present number.

Total active member payroll is assumed to increase 3.25 percent annually, which is the portion of the individual pay increase assumptions attributable to wage inflation. This assumed increase is recognized in the funding of unfunded actuarial accrued liabilities.

Non-Economic Assumptions

The **probabilities of retirement** for members eligible to retire are shown on Table C.

The **mortality table** used to measure retired life mortality was 90% of the male rates and 79% of the female rates of the RP-2014 mortality Total Data Set Healthy Annuitant Mortality tables, adjusted for mortality improvement back to the base year of 2006. Related values are shown on Table D.

The **probabilities of withdrawal** from service, death-in-service, and disability are shown for sample ages on Table B.

The **individual entry age actuarial cost method of valuation** was used for determining actuarial accrued liabilities and normal cost.

Actuarial gains and losses reduce or increase the unfunded liability. The unfunded actuarial accrued liabilities are amortized to produce contribution amounts (principal and interest) which are level percent of payroll contributions.

Present assets (cash and investments) are valued on a market-related basis *effective June 30, 1986*. The asset valuation method has been adjusted at various times in the past to reduce volatility (set to market, corridor implementation/adjustment, etc.).

The data about persons now covered and about present assets was furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA).

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

TABLE A: SAMPLE PAY INCREASE ASSUMPTIONS FOR AN INDIVIDUAL MEMBER

SERVICE INDEX	PAY INCREASE ASSUMPTION		
	MERIT & SENIORITY	BASE (ECONOMY)	INCREASE NEXT YEAR
0-1	5.80%	3.25%	9.05%
1-2	4.00%	3.25%	7.25%
2-3	3.30%	3.25%	6.55%
3-4	3.10%	3.25%	6.35%
4-5	2.50%	3.25%	5.75%
5-6	2.40%	3.25%	5.65%
6-7	2.30%	3.25%	5.55%
7-8	1.70%	3.25%	4.95%
8-9	1.60%	3.25%	4.85%
9-14	1.40%	3.25%	4.65%
14-15	0.90%	3.25%	4.15%
15-16	0.80%	3.25%	4.05%
16-17	0.70%	3.25%	3.95%
17-19	0.50%	3.25%	3.75%
19-20	0.40%	3.25%	3.65%
20-21	0.30%	3.25%	3.55%
21-24	0.20%	3.25%	3.45%
24- 25	0.00%	3.25%	3.25%

TABLE B: SAMPLE RATES OF SEPARATION FROM ACTIVE EMPLOYMENT BEFORE RETIREMENT

SAMPLE AGES	PERCENT OF ACTIVE MEMBERS SEPARATING WITHIN NEXT YEAR							
	DEATH				DISABILITY			
	ORDINARY		DUTY		ORDINARY		DUTY	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
25	0.0228%	0.0071%	0.0023%	0.0007%	0.0146%	0.0082%	0.0036%	0.0020%
30	0.0215	0.0091	0.0022	0.0009	0.0158	0.0122	0.0040	0.0031
35	0.0252	0.0121	0.0025	0.0011	0.0234	0.0214	0.0059	0.0054
40	0.0298	0.0163	0.0030	0.0015	0.0339	0.0308	0.0085	0.0077
45	0.0456	0.0267	0.0046	0.0025	0.0520	0.0456	0.0130	0.0114
50	0.0789	0.0454	0.0079	0.0042	0.0842	0.0726	0.0210	0.0181
55	0.1333	0.0704	0.0133	0.0065	0.1469	0.1228	0.0367	0.0307
60	0.2279	0.1016	0.0228	0.0095	0.2447	0.1770	0.0612	0.0443

ACTUARIAL

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

TABLE C: PROBABILITY OF RETIREMENT FOR MEMBERS ELIGIBLE TO RETIRE

AGE	ERFC LEGACY (HIRED BEFORE 7/1/2001)		ERFC 2001 TIER 1 (HIRED 7/1/2001-6/30/2017)			ERFC 2001 TIER 2 (HIRED ON/AFTER 7/1/2017)	
	TYPE OF RETIREMENT					AGE BASED RULE OF 90 MET?	
	Service	Reduced Service	Age Based	Service	Service Based	Yes	No
45		2%					
46		2					
47		2					
48		2					
49		2					
50		2					
51		3					
52		6					
53		7					
54		8					
55	35%	6	17.5%	30	17.5%		
56	35	4	17.5	31	17.5	35%	0%
57	25	4	12.5	32	12.5	35	0
58	25	4	12.5	33	12.5	35	0
59	25	4	12.5	34	12.5	35	0
60	25	7	10.0	35	10.0	35	0
61	30	8	10.0	36	10.0	35	0
62	30	13	10.0	37	10.0	35	0
63	30	13	10.0	38	25.0	35	0
64	30	13	20.0	39	40.0	35	0
65	30		25.0	40 & Up	100.0	35	0
66	30		30.0			35	0
67	25		25.0			35	30
68	25		15.0			35	15
69	20		15.0			35	15
70	20		15.0			35	15
71	20		15.0			35	15
72	20		15.0			35	15
73	30		15.0			35	15
74	30		15.0			35	15
75 & Over	100		100.0			100	100

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

TABLE D: SINGLE LIFE RETIREMENT VALUES

Mortality rates for a particular calendar year are determined by applying the fully generational MP-2016 Mortality Improvement scale to the above-described tables. Tables were extended below age 50 with a cubic spline to published Juvenile rates. These tables were first used in the December 31, 2016 valuation. The rationale for the mortality assumption is based on the 2010-2014 Experience Study issued November 10, 2015 and further analysis done in July 2017.

MORTALITY

FUTURE LIFE EXPECTANCY (YEARS)		
SAMPLE AGES IN 2016	MALE	FEMALE
55	30.77	34.44
60	26.16	29.58
65	21.76	24.90
70	17.61	20.42
75	13.74	16.20
80	10.27	12.38

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

TABLE E: RATES OF FORFEITURE FOLLOWING VESTED SEPARATION

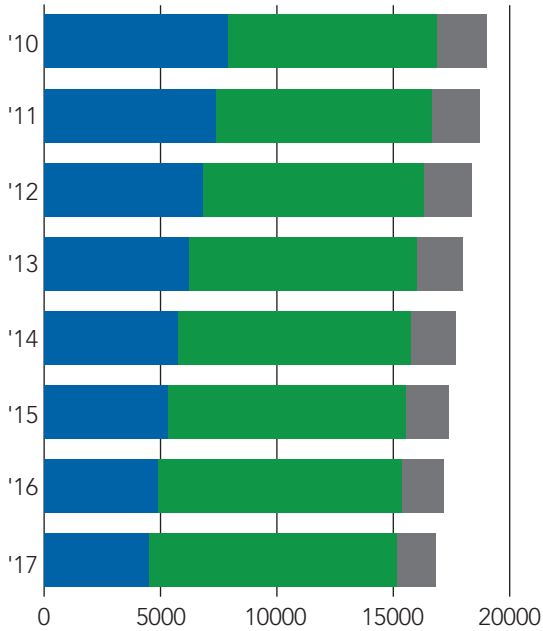
Forfeiture occurs when a vested person separates from service and withdraws contributions thereby forfeiting future rights to an employer financed benefit. The total probability of forfeiture is obtained by multiplying the probability of withdrawal by 10.0%. The table does not apply to individuals who are eligible for retirement at the time of termination.

% OF ACTIVE PARTICIPANTS WITHDRAWING		
SERVICE	MALE	FEMALE
0-1	13%	15%
1-2	12%	14%
2-3	11%	13%
3-4	9%	11%
4-5	7%	9%
5-6	6%	9%
6-7	5%	9%
7-8	4%	9%
8-9	4%	6%
9-10	4%	5%
10-11	4%	5%
11-12	3%	4%
12-13	3%	4%
13-14	3%	3%
14-15	2%	3%
15-16	2%	3%
16-17	1%	3%
17-18	1%	2%
18-19	1%	2%
19-20	1%	2%
20-21	1%	2%
21-22	1%	2%
22-23	1%	2%
23-24	1%	2%
24-25	1%	2%

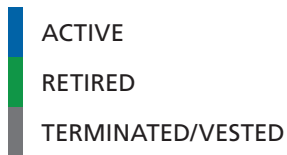
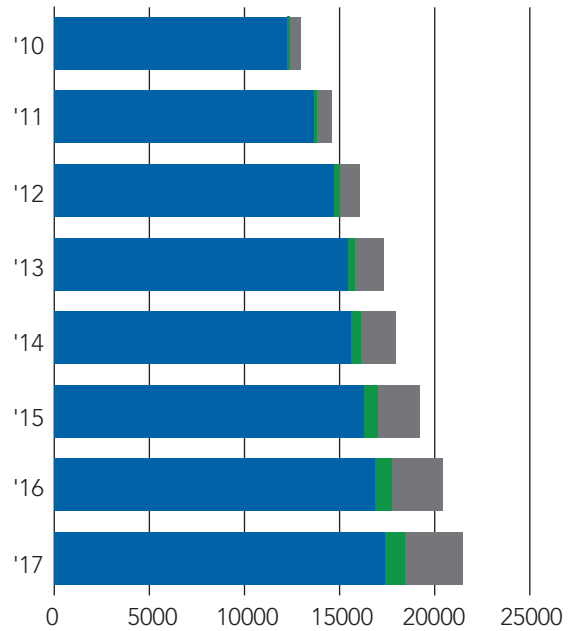
SUMMARY OF MEMBER DATA

(Last Eight Years)

ERFC MEMBERSHIP



ERFC 2001 MEMBERSHIP



YEAR	ERFC			ERFC 2001			TOTAL
	ACTIVE	RETIRED	TERMINATED/ VESTED	ACTIVE	RETIRED	TERMINATED/ VESTED	
Calendar Year 2010	7,900	8,968	2,137	12,241	113	582	31,941
(As of December 31) 2011	7,353	9,293	2,063	13,623	174	798	33,304
2012	6,801	9,524	2,029	14,718	264	1,070	34,406
2013	6,221	9,776	2,009	15,422	380	1,500	35,308
2014	5,754	10,006	1,917	15,598	518	1,844	35,637
2015	5,292	10,253	1,845	16,293	684	2,254	36,621
2016	4,892	10,476	1,778	16,856	891	2,668	37,561
2017	4,488	10,657	1,705	17,353	1,072	3,054	38,329

ACTUARIAL

SUMMARY OF MEMBER DATA

(As of December 31, 2017)

ACTIVE ERFC MEMBERS BY ATTAINED AGE AND YEARS OF SERVICE

AGE GROUP	YEARS OF SERVICE TO VALUATION DATE							TOTALS		
	0-4	5-9	10-14	15-19	20-24	25-29	30 & UP	NO.	SALARY	AVERAGE
35-39	-	2	3	30				35	\$ 2,745,182	\$ 78,434
40-44	3	30	58	380	46			517	46,402,717	89,754
45-49	9	35	86	416	397	37	1	981	91,671,874	93,447
50-54	11	36	48	322	301	202	23	943	86,268,153	91,483
55-59	1	8	39	305	270	159	58	840	72,283,753	86,052
60	2		5	73	55	26	9	170	14,458,878	85,052
61		2	5	58	46	30	10	151	12,548,826	83,105
62			1	63	53	28	8	153	12,330,729	80,593
63		3	4	66	41	25	13	152	12,833,231	84,429
64	1		2	63	34	18	7	125	10,295,540	82,364
65			1	59	36	19	7	122	9,743,216	79,862
66		1	2	33	26	17	14	93	7,544,668	81,125
67			1	18	15	6	5	45	3,729,142	82,870
68				15	14	7	3	39	3,280,724	84,121
69			1	12	11	4	7	35	2,769,236	79,121
70			1	12	4	1	3	21	1,717,556	81,788
71			1	7	5	2	1	16	1,106,276	69,142
72				2	6	4		12	1,170,662	97,555
73				3	4	2	1	10	880,692	88,069
74				3	1	1	1	6	432,377	72,063
75 & over				4	6	4	8	22	1,789,300	81,332
TOTAL	27	117	258	1,944	1,371	592	179	4,488	\$396,002,732	\$88,236

SUMMARY OF MEMBER DATA

(As of December 31, 2017)

ACTIVE ERFC 2001 (TIER 1) MEMBERS BY ATTAINED AGE AND YEARS OF SERVICE

AGE GROUP	YEARS OF SERVICE TO VALUATION DATE				TOTALS		AVERAGE
	0-4	5-9	10-14	15 & UP	NO.	SALARY	
20-24	202				202	\$ 9,176,568	\$ 45,429
25-29	1,916	350			2,266	120,437,962	53,150
30-34	1,088	1,287	212		2,587	155,507,501	60,111
35-39	651	754	916	126	2,447	169,137,987	69,121
40-44	618	392	560	210	1,780	125,794,734	70,671
45-49	627	528	516	162	1,833	124,626,399	67,990
50-54	531	478	503	129	1,641	104,738,163	63,826
55-59	403	435	556	181	1,575	98,929,483	62,812
60	35	68	98	44	245	16,635,476	67,900
61	39	61	64	36	200	13,437,292	67,186
62	24	42	78	30	174	10,869,722	62,470
63	24	42	69	22	157	10,247,163	65,269
64	16	36	67	26	145	9,758,671	67,301
65	22	22	53	8	105	6,888,947	65,609
66	9	15	43	11	78	5,390,761	69,112
67	11	10	20	12	53	3,380,759	63,788
68	8	11	18	8	45	2,915,652	64,792
69	1	9	18	6	34	1,938,129	57,004
70	4	7	8	5	24	1,440,466	60,019
71	3	1	5	2	11	746,263	67,842
72	4	2	2		8	425,585	53,198
73	1		3	2	6	264,405	44,068
74			3	2	5	421,477	84,295
75 & over	2	1	3	2	8	484,432	60,554
TOTAL	6,239	4,551	3,815	1,024	15,629	\$993,593,997	\$63,574

ACTUARIAL

SUMMARY OF MEMBER DATA

(As of December 31, 2017)

ACTIVE ERFC 2001 (TIER 2) MEMBERS BY ATTAINED AGE AND YEARS OF SERVICE

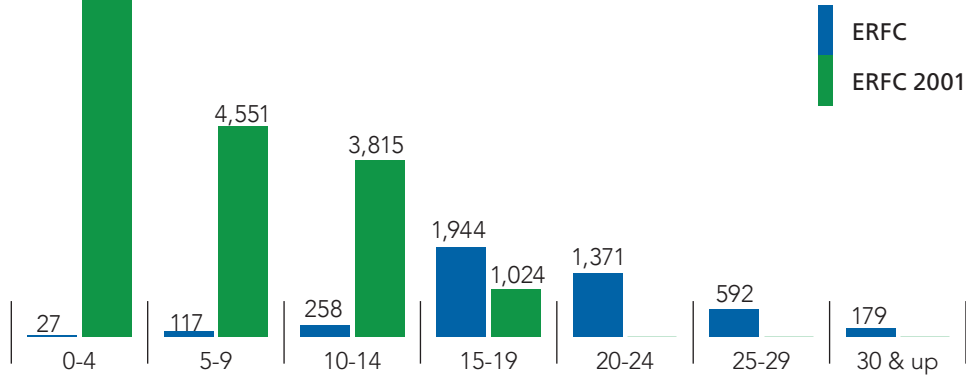
AGE GROUP	YEARS OF SERVICE TO VALUATION DATE				TOTALS		AVERAGE
	0-4	5-9	10-14	15 & UP	NO.	SALARY	
15-19	1				1	\$ 22,159	\$ 22,159
20-24	321				321	14,664,313	45,683
25-29	419				419	20,097,145	47,965
30-34	240				240	12,156,386	50,652
35-39	186				186	10,459,458	56,234
40-44	170				170	9,256,839	54,452
45-49	181				181	9,302,455	51,395
50-54	93				93	4,348,169	46,755
55-59	74				74	3,654,293	49,382
60	9				9	356,290	39,588
61	5				5	191,172	38,234
62	8				8	441,264	55,158
63	6				6	250,077	41,680
65	4				4	238,194	59,549
66	1				1	40,689	40,689
67	3				3	217,335	72,445
68	1				1	22,159	22,159
71	1				1	53,707	53,707
72	1				1	80,353	80,353
	1,724				1,724	\$85,852,457	\$49,798

SUMMARY OF MEMBER DATA

(As of December 31, 2017)

ACTIVE MEMBER YEARS OF SERVICE

Average Service = 9.4 years



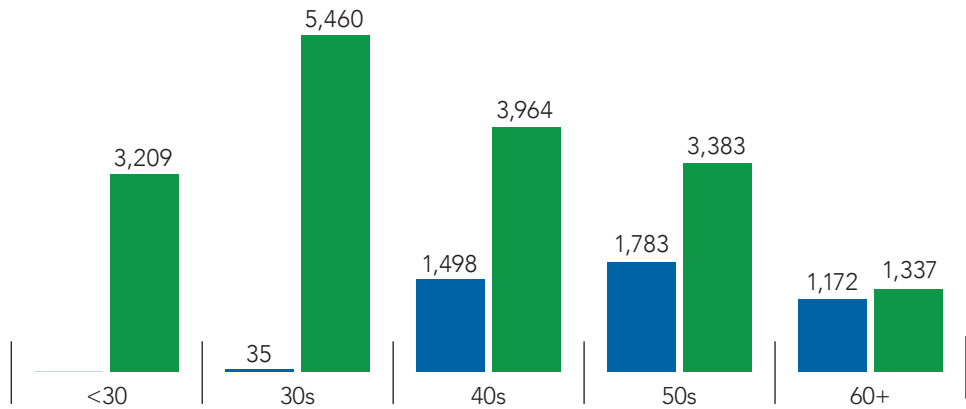
ACTIVE MEMBER SALARIES (\$ IN THOUSANDS)

Average Annual Pay = \$67,554



ACTIVE MEMBER AGES

Average Age = 43.9 years | Total Active Members = 21,841



ACTUARIAL

SUMMARY OF MEMBER DATA

(Last 10 Years)

ACTIVE MEMBER VALUATION DATA

ANNUAL VALUATION DATE	ANNUAL NUMBER	ANNUAL PAYROLL	% INCREASE IN AVERAGE PAY	AVG. ANNUAL PAY
December 31, 2008	19,731	\$ 1,211,140,009	\$ 61,383	3.6
December 31, 2009	19,891	1,208,092,606	60,735	(1.1)
December 31, 2010	20,141	1,191,290,190	59,148	(2.6)
December 31, 2011	20,976	1,246,973,240	59,448	0.5
December 31, 2012	21,519	1,297,536,507	60,297	1.4
December 31, 2013	21,643	1,320,308,508	61,004	1.2
December 31, 2014	21,352	1,340,343,666	62,774	2.9
December 31, 2015	21,585	1,373,095,719	63,613	1.3
December 31, 2016	21,748	1,436,587,994	66,056	3.8
December 31, 2017	21,841	1,475,449,186	67,554	2.3

RETIRANTS AND BENEFICIARIES ADDED AND REMOVED (10 YEARS)

Year	ADDED TO PAYROLL		REMOVED FROM PAYROLL		PAYROLL AT END OF YEAR			
	No.	Annualized Monthly Benefit	No.	Annualized Monthly Benefit	No.	Annualized Monthly Benefit	Average Annualized Monthly Benefit	% Increase in Monthly Benefit
(As of December 31)								
2008	461	\$ 660,186	220	\$ 147,638	8,595	\$ 11,189,751	\$ 1,302	4.52
2009	426	596,102	249	162,485	8,772	11,565,358	1,318	3.36
2010	563	774,606	254	170,078	9,081	11,916,352	1,312	3.03
2011	629	851,853	243	169,704	9,467	12,410,208	1,311	4.14
2012	636	821,485	315	194,842	9,788	12,867,671	1,315	3.69
2013	653	773,322	285	230,145	10,156	13,065,714	1,287	1.54
2014	629	738,766	261	213,231	10,524	13,206,280	1,255	1.08
2015	677	798,525	264	230,255	10,937	13,439,526	1,229	1.77
2016	672	715,048	242	228,976	11,367	13,682,009	1,204	1.80
2017	646	825,458	284	268,684	11,729	14,008,708	1,194	2.39

ANALYSIS OF FINANCIAL EXPERIENCE

Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.

Investment Return. If there is a greater investment return than assumed, there is a gain. If smaller return, a loss.

Age & Service Retirement. If members retire at older ages than assumed, there is a gain. If at younger ages, a loss.

Disability & Death in Service. If disability claims are less than assumed, there is a gain. If claims are more, a loss. If survivor claims are less than assumed, there is a gain. If claims are more, a loss.

Other Separations. If more liabilities are released by other separations than assumed, there is a gain. If smaller releases, a loss.

EXPERIENCE GAINS AND LOSSES BY RISK AREA

(Dollars in Millions)

ECONOMIC RISK AREA				DEMOGRAPHIC RISK AREA			TOTAL GAIN (LOSS)	
Experience Period	Pay Increases	Investment Return	Age and Service Retirement	Disability and Death-in Service	Other Separations	Other&	Amount	Percent of Liabilities
For Periods Ending June 30								
#1997-98	\$ (2.6)	\$ 81.1	\$ 5.9	\$ (0.5)	\$ 6.4	\$ (13.9)	\$ 76.4	6.3%
*1998-99	(8.4)	95.4	0.3	(1.0)	6.5	(3.8)	89.0	7.0
1999-00	(17.6)	62.3	3.8	(1.2)	12.9	38.9	99.1	7.4
2000-01	(9.1)	17.6	(0.3)	(1.0)	13.0	(19.5)	0.7	0.0
2001-02	3.0	(50.4)	3.5	(1.1)	2.6	(29.9)	(72.3)	(4.7)
2002-03	18.5	(92.5)	11.0	(0.3)	4.0	(23.3)	(82.6)	(4.9)
For Periods Ending December 31								
@2003-04	<i>Due to transition to calendar year valuations, a gain/loss analysis was not conducted for this valuation period.</i>							
#2005	(7.1)	1.9	1.0	0.1	0.0	(3.2)	(7.3)	(0.4)
2006	(4.7)	23.6	2.0	0.0	(0.8)	2.6	22.7	1.1
2007	10.0	25.1	1.9	(0.2)	(2.2)	(7.2)	27.4	1.4
2008	4.1	(277.5)	5.2	(0.4)	(4.0)	13.5	(259.1)	(11.8)
2009	45.0	(34.6)	8.8	(0.8)	(10.0)	(11.6)	(3.2)	(0.1)
#2010	53.1	(16.9)	5.2	0.2	(5.3)	(4.2)	32.1	1.4
2011	18.8	(30.6)	5.3	(0.2)	(4.2)	(4.8)	(15.7)	(0.7)
2012	12.3	(10.8)	4.6	(0.3)	(3.4)	(10.2)	(7.8)	(0.3)
2013	16.6	7.6	5.7	0.0	2.9	(5.1)	27.7	1.1
2014	8.5	(2.8)	5.8	(0.1)	0.6	2.8	14.8	0.6
#2015	17.7	(40.2)	5.9	(0.4)	1.0	(12.4)	(28.4)	(1.0)
2016	(14.2)	(13.9)	5.1	0.2	6.6	(5.6)	(21.8)	(0.8)
2017	8.8	2.7	3.3	0.0	2.6	(19.6)	(2.2)	(0.1)

Experience Study

* Updated Gain Formulas

@ Gain Loss analysis not performed

SUMMARY OF BENEFIT PROVISIONS

Available to a Member Retiring with Some Service Before July 1, 1988 (*ERFC* Members)

Service Retirement: Alternate Amount After Social Security Normal Retirement Age.

By election at time of retirement, a member with service before July 1, 1988, may elect to receive 1988 new benefits with a special alternate amount for payment periods after the age the member becomes eligible for full Social Security benefits. The alternate amount is 103 percent of the total of:

- 1) the amount payable under June 30, 1987 benefit provisions,
- 2) plus, if the retiring member is younger than age 65 and if creditable Virginia service is less than 30 years, 1.65 percent of VRS average final compensation in excess of \$1,200, multiplied by years of creditable Virginia service, and further multiplied by a certain percent based upon the number of months that retirement occurs before reaching the earlier of the above two conditions; such percent is half of one percent for each of the first 60 such months and 4/10 of one percent for each of the next 60 such months, if any.

Reduced Service Retirement: With 25 Years Service. By election at time of retirement, such a member may elect to receive 103 percent of the following combination of benefits:

- **To age 55**, 2.85 percent of the 3-year average annual salary multiplied by years of credited service, then actuarially reduced to reflect retirement age younger than age 55; and
- **From age 55 to Social Security Normal Retirement Age**, the amount to age 55 reduced by: 1.65 percent of the portion of VRS average final compensation in excess of \$1,200, multiplied by applicable years of creditable Virginia service; provided if creditable Virginia service is less than 30 years, the result of such multiplication shall be actuarially reduced for each month before the earlier of (1) attainment of age 65, and (2) the date when 30 years service would have been completed; and
- **From Social Security Normal Retirement Age for life**, the amount payable at age 65 according to June 30, 1987 provisions or the amount payable at age 65 according to July 1, 1988 provisions.

SUMMARY OF BENEFIT PROVISIONS

For a Person Becoming a Member after July 1, 1988 but Before July 1, 2001 (*ERFC* Members)

Final Average Compensation (FAC):

A member's final average compensation is the average of the 3 highest consecutive years of salary during eligible employment.

Service Retirement Eligibility: A member may retire any time after reaching the service retirement date, which is either (i) age 65 with 5 years service or (ii) age 55 with 25 years of service.

Service Retirement Pension: For payment periods during the retired member's lifetime 103 percent times (i) minus (ii) where:

- (i) means 1.85 percent of the FAC multiplied by years of credited service, and
- (ii) means 1.65 percent of the portion of VRS FAC in excess of \$1,200, multiplied by applicable years of creditable Virginia service; provided if the member is younger than age 65 and if creditable Virginia service is less than 30 years, the result of such multiplication shall be reduced for each month before the earlier of:
 - 1) attainment of age 65, and
 - 2) the date when 30 years service would have been completed.

The reduction shall be one-half of 1 % for each of the first 60 months and four-tenths of one percent for each month beyond 60 months, if any.

For payment periods, if any, before the age the member becomes eligible for full Social Security benefits, an additional temporary benefit equal to 1 percent of the FAC multiplied by years of credited service.

Reduced Service Retirement: A member with 25 years service but younger than age 55 may retire after age 45. A member with less than 25 years service and younger than age 65 may retire after age 55.

Reduced Service Retirement: Amount After 25 Years Service. Service Retirement amount reduced to reflect retirement age younger than age 55.

Reduced Service Retirement: Amount After 5-24 Years Service. For payment periods during the retired member's lifetime, the Service Retirement amount payable at age 65 reduced to reflect that the retirement age younger than age 65. For payment periods before the age the member becomes eligible for full Social Security benefits, an additional temporary benefit equal to the Service Retirement temporary benefit reduced to reflect that the retirement age is younger than age 65.

Disability Retirement: An active member with 5 or more years of service who becomes totally and permanently disabled may be retired and receive a disability pension. The 5 year service requirement is waived if the disability is service-connected.

The amount is 103 percent times a lifetime pension equal to 0.25 percent of the FAC multiplied by years of credited service. Credited service shall be increased by the time period from disability retirement to the date when member would have reached service retirement date. The minimum pension payable is 2.5 percent of FAC.

Death-in-Service Benefits: An active member with 5 or more years of service who dies will have benefits payable to the surviving spouse or other eligible beneficiary. The 5 year service requirement is waived if the death is service-connected.

Deferred Retirement: Calculated in the same manner as reduced service retirement.

Member Contributions: Members contribute 3 percent of their salaries. Interest credits of 5 percent are added annually through June 30, 2017, and 4 percent annually thereafter. If

a member leaves covered employment before becoming eligible to retire, accumulated contributions are returned upon request. Members who receive a refund of contributions and are later rehired become members of ERF 2001 Tier 2.

Post-Retirement Increases: On March 31, most pensions are increased by 3 percent. These increases are compounded each year. Pensions of members or beneficiaries who retired in the immediately preceding calendar year are increased by 1.489 percent ($\frac{1}{2}$ of a year's increase).

Lifetime Level Benefit: Members retiring after July 1, 2004 are eligible for a lifetime level benefit (LLB) that is calculated by determining the annuitized value of the greater of their accumulated contribution balance or the present value of the currently provided benefit.

Optional Forms of Payment:

- Option A — 100 percent joint and survivor.
- Option B — 50 percent joint and survivor.
- Option C — 10 years certain and life.
- Option D — Single sum payment not exceeding member's accumulated contribution balance, plus a single life annuity actuarially reduced from the pension amount otherwise payable.

SUMMARY OF BENEFIT PROVISIONS

For a Person Becoming a Member July 1, 2001 but before July 1, 2017 (ERFC 2001 Tier 1)

Final Average Compensation (FAC):

A member's final average compensation is the average of the 3 highest consecutive years of salary during eligible employment.

Service Retirement Eligibility: A member may retire at age 60 with 5 years service, or after 30 years of credited service, regardless of age.

Service Retirement Pension: The amount is a lifetime pension equal to 0.8 percent of the FAC multiplied by years of credited service. If necessary, the pension will be increased to make the reserve value of the pension equal to the member's accumulated contributions as of the retirement effective date.

Death-in-Service Benefits: Any member with 5 or more years of credited service who dies before beginning to receive a pension will have benefits payable to the nominated beneficiary.

The amount is a pension equal to 0.8 percent of the 3-year average annual salary multiplied by years of credited service at date of death, reduced in accordance with an option A election and payable at age 60. Beneficiaries may elect

to receive benefits before age 60 if benefits are further reduced as follows:

- an additional reduction of the smaller of
 - 1) $\frac{1}{2}$ of 1 percent for the first 60 months and $\frac{4}{10}$ of 1 percent for each additional month between the member's age at the date of death and age 60, and
 - 2) $\frac{1}{2}$ of 1 percent for the first 60 months and $\frac{4}{10}$ of 1 percent for each additional month between the member's service at the date of death and 30 years.

Deferred Retirement: Any member with 5 or more years of credited service who terminates employment prior to the service retirement date, will be entitled to a pension with payments beginning at age 60, provided accumulated contributions are left on deposit with the Plan.

The amount is equal to 0.8 percent of FAC at retirement multiplied by years of credited service. If necessary, the pension will be increased to make the reserve value of the pension equal to

Before July 1, 2017, continued on next page

the member's accumulated contributions as of the effective retirement date.

Member Contributions: Members contribute 3 percent of their salaries. Interest credits of 5 percent are added annually through June 30, 2017, and 4 percent annually thereafter. If a member leaves covered employment before becoming eligible to retire, accumulated contributions are returned upon request.

Members who receive a refund of contributions and are later rehired become members of ERFC 2001 Tier 2.

Post-Retirement Increases: On March 31, most pensions are increased by 3 percent. These increases are compounded each year. Pensions of members or beneficiaries who retired in the immediately preceding calendar year are increased by 1.489 percent.

SUMMARY OF BENEFIT PROVISIONS

For a Person Hired On/After July 1, 2017 (ERFC 2001 Tier 2)

Final Average Compensation (FAC): A member's Final Average Compensation is the average of the 5 highest years of salary during eligible employment.

Service Retirement Eligibility: A member may retire at Full Social Security Age (FSSA) with 5 or more years of credited service, or when the sum of age plus service is greater than or equal to 90 (i.e., Rule of 90).

Service Retirement Pension: The amount is a lifetime pension equal to 0.8 percent of FAC at retirement multiplied by years of credited service. If necessary, the pension will be increased to make the reserve value of the pension equal to the member's accumulated contributions as of the retirement effective date.

Death-in-Service Benefits: Any member with 5 or more years of credited service who dies before beginning to receive a pension will have benefits payable to the named beneficiary.

The amount is a lifetime pension equal to 0.8 percent of FAC multiplied by years of credited service at the date of death. If necessary, the pension will be increased to make the reserve value of the pension equal to the member's accumulated contributions as of the date of death. The pension will be adjusted in accordance

with an Option A (in the case of a spouse or an ex-spouse subject to a Domestic Relations Order (DRO)) or Option B (in case of another eligible beneficiary) election payable immediately unless the member did not reach the service retirement eligibility prior to death, in which case the pension is reduced for each month that the member was younger than service retirement eligibility on the date of death in the following manner:

- 1) one-half of 1% for each of the first 60 months and four-tenths of one percent for each month beyond 60 months (the number of months used for reduction is based on the lesser of FSSA or the age the member would have attained "Rule of 90.")

Deferred Retirement: Any member with 5 or more years of credited service who terminates employment prior to the service retirement date, will be eligible to receive a deferred vested pension commencing at FSSA, provided accumulated contributions are left on deposit with the Plan.

The amount is a lifetime pension equal to 0.8 percent of FAC at termination multiplied by years of credited service. If necessary, the pension will be increased to make the reserve value of the pension equal to the member's accumulated contributions as of the effective retirement date.

Members Contributions: Members contribute 3 percent of their salaries. Interest credits are 4 percent annually. If a member leaves covered employment before becoming eligible to retire, accumulated contributions are returned upon request.

Cost-of-Living Adjustments: The amount of the monthly benefit is adjusted each March 31, by 100 percent of the Consumer Price Index (CPI-U) for the Washington, D.C. metropolitan area for the period ending in November (with a cap of 4 percent) compounded annually, beginning with the March 31 which is more than three full months after the members effective retirement date. Pensions of members that retire in the immediately preceding calendar year are increased by one-half a year's increase.

Optional Methods of Payment: Before the effective retirement date, a retiring member may elect one of the following options:

- Option A — 100 percent joint and survivor benefit. Benefit is 85 percent of the straight life amount adjusted for the difference in age between the retiree and beneficiary. The maximum benefit is 94 percent of the straight life amount.
- Option B — 50 percent joint and survivor benefit. Benefit is 91 percent of the straight life amount adjusted for the difference in age between the retiree and beneficiary. The maximum benefit is 97 percent of the straight life amount.
- Option C — 10 years certain and life. Benefit is 96 percent of the straight life amount.

ERFC CONTRIBUTION RATES

(Last 20 years)

SUPPORT EMPLOYEES				INSTRUCTIONAL EMPLOYEES		
FISCAL YEAR	EMPLOYEE	EMPLOYER	TOTAL	EMPLOYEE	EMPLOYER	TOTAL
1999	2.00%	5.58%	7.58%	2.00%	6.03%	8.03%
ERFC began using composite rates effective July 1, 1999						
2000	2.00	4.99	6.99			
2001	2.00	3.69	5.69			
2002	2.00	3.69	5.69			
2003	2.00	4.00	6.00			
2004						
7/1 to 5/30	2.00	4.29	6.29			
6/1 to 6/30	4.00	2.53	6.53			
2005	4.00	3.37	7.37			
2006	4.00	3.37	7.37			
2007	4.00	3.37	7.37			
2008	4.00	3.37	7.37			
2009	4.00	3.37	7.37			
2010	4.00	3.20	7.20			
2011	4.00	4.04	8.04			
2012	4.00	4.34	8.34			
2013	3.00	5.34	8.34			
2014	3.00	5.60	8.60			
2015	3.00	5.60	8.60			
2016	3.00	5.60	8.60			
2017	3.00	5.60	8.60			
2018	3.00	6.24	9.24			

SUMMARY OF PLAN CHANGES

There were no significant plan changes during the valuation period ending December 31, 2017.

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STATISTICAL

UNAUDITED



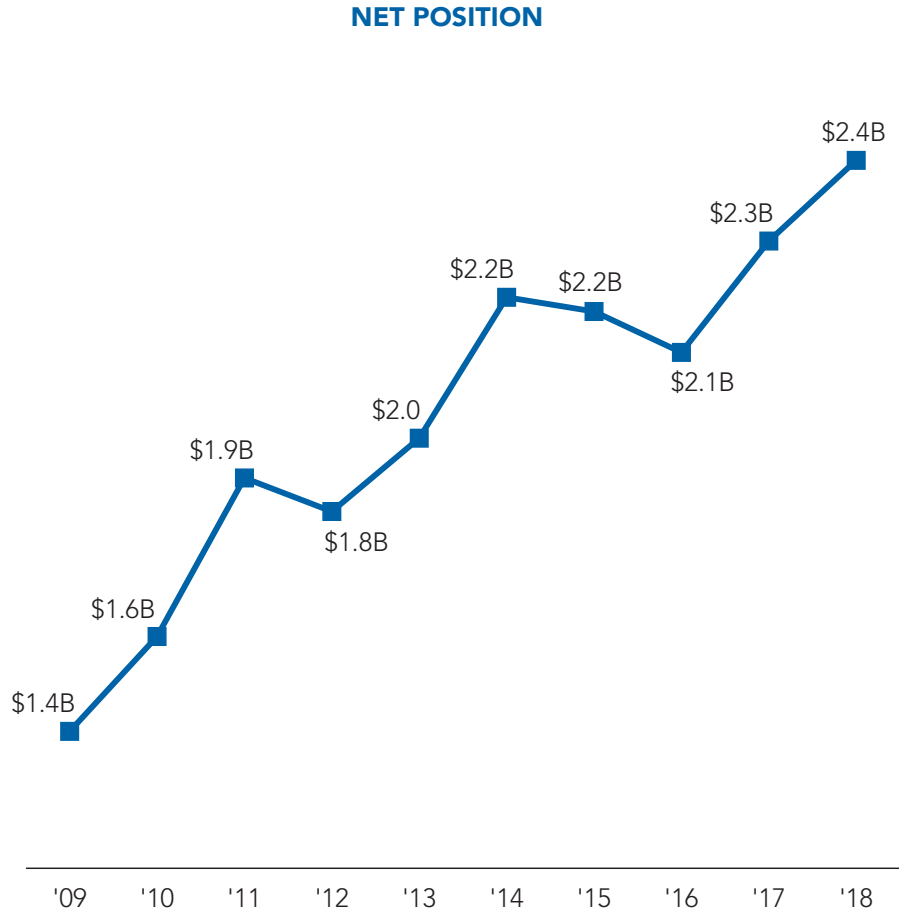
ERFC's IT staff maintains the pension administration software system and our convenient online self-serve portal, ERFCDirect. The team supports both staff and members, ensuring the efficient management and safety of member data. IT stays on top of the latest hardware and software technology trends to support the ERFC mission of outstanding retirement services.

"GREAT THINGS IN BUSINESS ARE NEVER DONE BY ONE PERSON. THEY'RE DONE BY A TEAM OF PEOPLE." **STEVE JOBS**



NET POSITION

Last 10 Fiscal Years



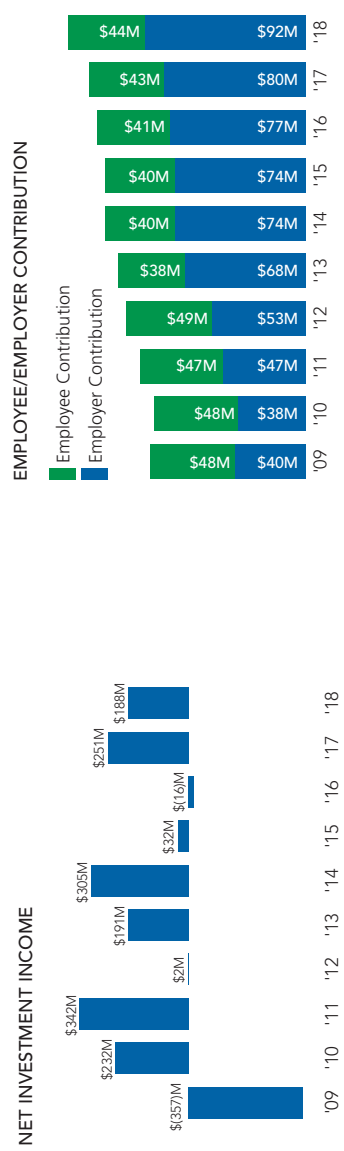
FISCAL YEARS	NET POSITION
2009	\$1,441,434,430
2010	1,607,663,423
2011	1,886,968,119
2012	1,827,768,322
2013	1,956,772,826
2014	2,204,927,191
2015	2,179,724,057
2016	2,107,587,698
2017	2,304,281,654
2018	2,446,280,020

CHANGES IN NET POSITION

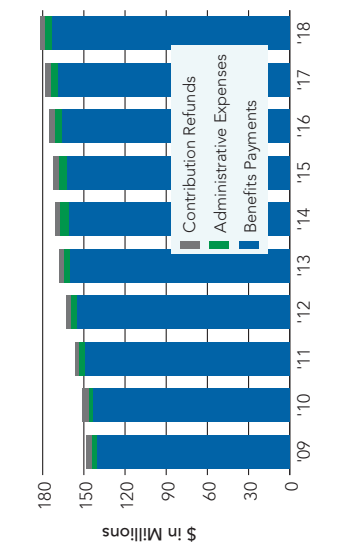
Last 10 Fiscal Years

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ADDITIONS										
Employee contributions	\$47,996,408	\$47,918,341	\$47,167,129	\$49,142,379	\$38,428,367	\$40,018,590	\$39,982,963	\$41,383,642	\$43,062,632	\$44,169,100
Employer contributions	40,012,480	37,868,623	47,118,111	52,934,245	67,734,634	74,174,082	74,324,396	76,599,695	80,094,538	91,704,877
Investment income (net of expenses)	(357,672,266)	231,574,404	341,669,367	1,635,435	190,947,851	304,640,803	32,083,908	(15,766,967)	250,981,777	188,139,560
Gain/loss from sale of capital assets	(5,494)	—	(1,503)	—	—	—	—	—	—	—
TOTAL ADDITIONS TO PLAN NET POSITION	(269,668,872)	317,361,368	435,953,104	103,712,059	297,110,852	418,833,475	146,391,267	102,216,370	374,138,947	324,013,537
DEDUCTIONS										
Benefit payments	139,594,144	143,128,569	149,046,042	155,041,762	160,098,128	161,276,831	162,145,265	165,721,790	168,783,718	173,052,461
Contribution refunds	3,975,907	3,339,910	4,258,033	4,295,171	4,419,806	5,772,959	5,697,311	4,626,057	4,601,865	4,667,835
Administrative expenses	3,898,620	4,663,896	3,344,333	3,574,923	3,588,414	3,629,320	3,751,825	4,004,882	4,059,408	4,294,875
TOTAL DEDUCTIONS TO PLAN NET POSITION	147,468,671	151,132,375	156,648,408	162,911,856	168,106,348	170,679,110	171,594,401	174,352,729	177,444,991	182,015,171
CHANGE IN NET POSITION NET OF EXPENSES	\$(417,137,543)	\$166,228,993	\$279,304,696	\$(59,199,797)	\$129,004,504	\$248,154,365	\$(25,203,134)	\$(72,136,359)	\$196,693,956	\$141,998,366

ADDITIONS BY SOURCE



DEDUCTIONS BY TYPE



ASSETS AND LIABILITIES COMPARATIVE STATEMENT

Last 20 Years—Dollars in Thousands

Valuation Date	Active Member Payroll	COMPUTED LIABILITIES			Valuation Assets	[Excess of Assets] Unfunded Accrued Liabilities	Funded Percent
		Retired	Members	Total			
# 6/30/1998	\$ 582,755	\$ 490,261	\$ 788,111	\$ 1,278,372	\$ 1,194,556	\$ 83,816	93.4 %
6/30/1999	626,015	539,917	805,742	1,345,659	1,365,417	(19,758)	101.5
6/30/2000	678,937	614,739	752,632	1,367,371	1,505,231	(137,860)	110.1
* 6/30/2001	759,906	667,605	884,953	1,552,558	1,599,219	(46,661)	103.0
6/30/2002	781,756	699,251	994,705	1,693,956	1,619,889	74,067	95.6
* 6/30/2003	866,502	903,963	868,455	1,772,418	1,597,459	174,959	90.1
12/31/2004	977,817	1,043,677	853,565	1,897,242	1,640,216	257,026	86.5
# 12/31/2004	977,817	1,083,988	851,594	1,935,582	1,643,020	292,562	84.9
12/31/2005	1,050,271	1,130,378	892,584	2,022,962	1,718,399	304,563	84.9
12/31/2006	1,111,828	1,176,979	928,573	2,105,552	1,818,930	286,662	86.4
12/31/2007	1,161,432	1,221,969	964,832	2,186,801	1,924,886	261,915	88.0
@ 12/31/2008	1,211,140	1,237,613	1,017,685	2,255,298	1,733,946	521,352	76.9
12/31/2009	1,208,093	1,264,675	1,049,607	2,314,282	1,769,540	544,742	76.5
# 12/31/2009	1,208,093	1,314,885	1,024,984	2,339,869	1,769,540	570,329	75.6
12/31/2010	1,191,290	1,355,093	1,028,968	2,384,061	1,822,603	561,458	76.5
* 12/31/2011	1,246,973	1,401,877	1,069,087	2,470,964	1,866,952	604,012	75.6
12/31/2012	1,297,537	1,448,291	1,117,837	2,566,128	1,935,292	630,836	75.4
12/31/2013	1,320,309	1,482,770	1,162,730	2,645,500	2,029,005	616,495	76.7
12/31/2014	1,340,344	1,510,717	1,223,128	2,733,845	2,123,910	609,935	77.7
# 12/31/2015	1,373,096	1,590,489	1,290,214	2,880,703	2,188,037	692,666	76.0
*# 12/31/2016	1,436,588	1,668,485	1,364,018	3,032,503	2,279,741	752,762	75.2
12/31/2017	1,475,449	1,733,431	1,434,510	3,167,941	2,398,668	769,273	75.7

@ After change in asset valuation method.

* After change in benefits.

After changes in actuarial assumptions.

BENEFIT DEDUCTIONS FROM NET POSITION BY TYPE

Last 10 Years

	SERVICE BENEFITS				DEATH BENEFITS		DISABILITY BENEFITS		NON-DUTY		TOTAL	
	NORMAL		EARLY		DUTY/NON-DUTY		DUTY		NON-DUTY			
	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT		
Calendar Years												
2009	4,615	\$ 96,983,027	3,791	\$ 38,266,346	134	\$ 1,105,438	24	\$ 294,234	208	\$ 1,043,259	8,772	\$ 137,692,304
Fiscal Years												
2010	4,600	100,020,271	3,783	40,614,214	145	1,167,515	23	308,454	194	1,018,115	8,745	143,128,569
2011	4,717	104,792,727	3,990	41,654,507	160	1,276,445	22	300,684	189	1,021,679	9,078	149,046,042
2012	4,999	106,487,568	4,050	45,946,862	171	1,341,323	21	276,421	177	989,588	9,418	155,041,762
2013	5,124	110,634,206	4,232	46,926,222	169	1,308,058	21	265,153	173	964,489	9,719	160,098,128
2014	5,354	111,429,145	4,422	47,263,400	176	1,357,852	20	272,888	170	953,108	10,142	161,276,393
2015	5,557	112,009,606	4,590	47,509,606	181	1,401,710	20	272,296	165	952,482	10,513	162,145,700
2016	5,803	114,503,622	4,793	48,567,459	191	1,516,843	17	212,462	161	921,404	10,965	165,721,790
2017	6,008	116,586,070	4,963	49,450,743	204	1,675,274	17	160,378	158	911,253	11,350	168,783,718
2018	7,572	133,158,976	3,769	37,084,034	216	1,733,802	17	165,189	154	910,459	11,728	173,052,460

BENEFIT REFUNDS BY TYPE

Last 10 Years

FISCAL YEAR	SEPARATION		DEATHS		TOTAL	
	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT
2009	722	\$ 3,644,789	25	\$ 331,118	747	\$ 3,975,907
2010	648	3,201,604	15	138,306	663	3,339,910
2011	725	4,046,929	26	211,104	751	4,258,033
2012	659	3,934,877	26	360,294	685	4,295,171
2013	634	4,081,157	19	338,649	653	4,419,806
2014	727	5,164,862	40	608,097	767	5,772,959
2015	718	5,300,442	22	396,869	740	5,697,311
2016	521	4,271,678	27	354,379	548	4,626,057
2017	465	4,392,979	16	208,886	481	4,601,865
2018	427	4,089,420	39	578,415	466	4,667,835

RETIRED MEMBERS BY TYPE OF BENEFIT

(As of December 31, 2017)

AMOUNT OF MONTHLY BENEFIT	NUMBER OF RETIRED MEMBERS	TYPE OF RETIREMENT*					OPTION SELECTED**					
		1	2	3	4	5	BASIC BENEFIT	1	2	3	4	5
\$ 1-\$ 250	1,946	592	1,295	29	26	4	1,436	132	4	54	45	275
251-500	2,206	1,075	1,001	25	98	7	1,666	195	5	85	49	206
501-750	1,176	663	474	7	29	3	867	94	9	40	25	141
751-1,000	839	511	317	5	6	0	530	39	9	46	13	202
1,001-1,250	1,087	743	333	4	7	0	698	40	20	61	7	261
1,251-1,500	896	673	216	2	5	0	615	50	8	43	10	170
1,501-1,750	633	519	112	1	1	0	419	24	6	43	8	133
1,751-2,000	645	555	88	2	0	0	388	35	7	44	4	167
Over 2,000	2,301	1,902	392	4	3	0	1,405	128	16	175	24	553
TOTAL	11,729	7,233	4,228	79	175	14	8,024	737	84	591	185	2,108

*** TYPE OF RETIREMENT:**

- 1 Full Service
- 2 Reduced Service
- 3 Ordinary Death
- 4 Ordinary Disability
- 5 Service Connected Disability

**** OPTION SELECTED:**

- Basic Benefit
- 1 Beneficiary receives 100% of member's reduced monthly benefit
- 2 Beneficiary receives 67% of member's reduced monthly benefit
- 3 Beneficiary receives 50% of member's reduced monthly benefit
- 4 Beneficiary receives a specified number of payments equal to 120 minus the number of payments the member has received.
- 5 Member receives partial lump sum and reduced monthly benefit

Note: The source of information presented above is from the most recent actuarial valuation report.

AVERAGE BENEFIT PAYMENTS BY YEARS OF SERVICE

	YEARS CREDITED SERVICE					
	5-10	10-15	15-20	20-25	25-30	30+
RETIREMENT EFFECTIVE DATES						
Period 1/1/13 to 12/31/13						
Avg Monthly Benefit	\$ 280.13	\$ 427.87	\$ 650.93	\$ 935.23	\$ 2,134.83	\$ 2,701.66
Avg Final Average Salary	\$ 5,190.10	\$ 5,292.03	\$ 6,089.14	\$ 6,206.50	\$ 6,784.33	\$ 7,862.51
No. of Retired Members	100	115	125	96	136	81
Period 1/1/14 to 12/31/14						
Avg Monthly Benefit	\$ 294.80	\$ 463.79	\$ 703.01	\$ 968.54	\$ 2,216.21	\$ 2,518.11
Avg Final Average Salary	\$ 4,965.46	\$ 5,477.16	\$ 5,963.68	\$ 6,310.28	\$ 7,418.79	\$ 7,816.52
No. of Retired Members	86	137	118	64	124	82
Period 1/1/15 to 12/31/15						
Avg Monthly Benefit	\$ 286.55	\$ 473.64	\$ 698.48	\$ 915.92	\$ 2,109.75	\$ 2,614.66
Avg Final Average Salary	\$ 5,088.12	\$ 5,192.36	\$ 5,988.36	\$ 6,524.08	\$ 7,210.20	\$ 7,955.96
No. of Retired Members	89	123	151	79	127	100
Period 1/1/16 to 12/31/16						
Avg Monthly Benefit	\$ 258.61	\$ 506.32	\$ 576.68	\$ 882.85	\$ 2,146.62	\$ 2,563.33
Avg Final Average Salary	\$ 4,772.48	\$ 5,492.86	\$ 5,502.74	\$ 6,690.51	\$ 7,579.43	\$ 8,086.32
No. of Retired Members	105	146	128	77	120	77
Period 1/1/17 to 12/31/17						
Avg Monthly Benefit	\$ 275.61	\$ 526.17	\$ 700.78	\$ 937.41	\$ 2,299.37	\$ 2,743.94
Avg Final Average Salary	\$ 4,772.48	\$ 5,460.84	\$ 5,939.78	\$ 6,912.77	\$ 7,777.73	\$ 8,327.61
No. of Retired Members	81	109	127	80	128	100

AVERAGE COMPOSITE MONTHLY BENEFIT PAYMENTS FOR RETIREES

Last 10 Years

BY TYPE OF BENEFIT BEING PAID

	YEAR	SERVICE RETIREMENT	REDUCED SERVICE	ORDINARY DISABILITY
Calendar Year	2008	\$ 1,760	\$ 829	\$ 469
	2009	1,751	841	480
	2010	1,727	849	495
	2011	1,717	853	492
	2012	1,688	839	570
	2013	1,626	815	575
	2014	1,557	799	583
	2015	1,523	807	579
	2016	1,478	794	595
	2017	1,462	788	594

RETIREES AND BENEFICIARIES CURRENT ANNUAL BENEFITS TABULATED BY ATTAINED AGES

(As of December 31, 2017)

ATTAINED AGES	TOTAL	
	NO.	ANNUAL AMOUNT
Under 40	2	\$ 6,388
40 - 44	4	13,099
46	2	7,914
47	3	19,409
48	3	15,595
49	3	30,988
50	5	36,849
51	5	113,074
52	14	359,542
53	17	487,192
54	26	677,598
55	71	1,789,524
56	98	2,255,977
57	94	2,299,722
58	119	3,170,802
59	167	4,261,022
60	258	5,677,549
61	287	6,056,816
62	356	7,373,337
63	449	9,274,688
64	454	9,602,325
65	555	11,670,646
66	550	5,491,991
67	618	6,188,625
68	656	6,693,431
69	677	7,193,305
70 - 74	2,826	31,959,479
75 - 79	1,648	20,637,342
80 & Up	1,762	24,457,080
GRAND TOTAL	11,729	\$ 167,821,309

Note: This source of information presented is from the most recent actuarial valuation report.

INACTIVE VESTED MEMBERS DEFERRED BENEFITS BY ATTAINED AGES

(As of December 31, 2017)

ATTAINED AGES	TOTAL	
	NO.	ANNUAL AMOUNT
27	10	\$ 19,604
28	33	70,778
29	67	152,171
30	82	208,528
31	111	292,608
32	110	311,048
33	145	453,369
34	178	592,227
35	190	670,622
36	218	773,409
37	208	790,356
38	219	859,276
39	220	822,104
40	183	606,949
41	183	626,217
42	163	537,654
43	169	484,338
44	161	502,945
45	152	455,138
46	190	646,414
47	165	545,449
48	149	486,804
49	138	473,057
50	135	457,337
51	118	386,788
52	117	378,970
53	120	391,860
54	122	476,225
55	91	310,086
56	92	367,963
57	104	395,008
58	85	334,802
59	86	375,077
60	54	231,699
61	38	199,568
62	24	104,420
63	25	118,599
64	28	161,980
65 & Over	63	159,400
GRAND TOTAL	4,746	\$ 16,230,847

Note: This source of information presented is from the most recent actuarial valuation report. It does not include 13 additional inactive vested members from the 1973 Plan.

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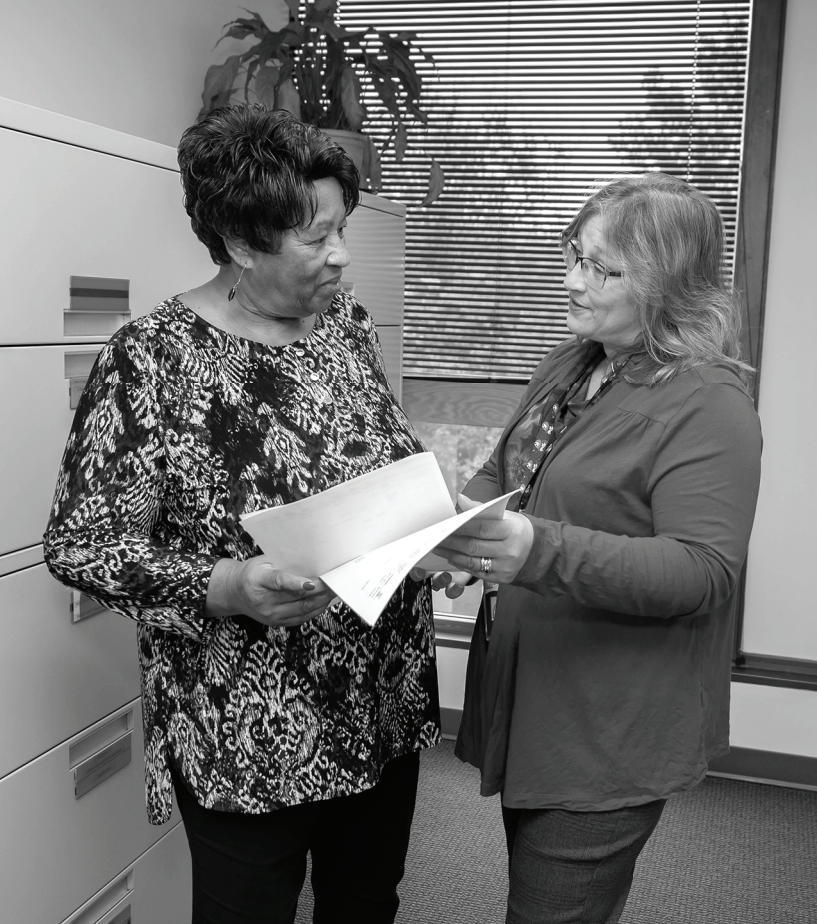




Keeping our members informed about their retirement benefits provides a challenge for the ERFC communications team. Retirement information needs to be relevant, salient and actionable, and determining the most efficient communication channels to convey our messaging is the key to keeping our members apprised and engaged.



"The art of communication is the language of leadership"
James Humes



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