FIRE & POLICE

Employees' Retirement System

City of Baltimore, Maryland

Comprehensive Annual Financial Report

A Component Unit
of the City of Baltimore, Maryland

Year Ended June 30, 2018

Baltimore City Fire Department

fire.baltimorecity.gov

For more than 150 years the Baltimore City Fire Department has provided fire protection and emergency medical services to the citizens of the City of Baltimore. The Baltimore City Fire Department with over 1,700 members serves a geographic area of 92 square miles and a population of more than 600,000 residents.

The men and women of the Baltimore City Fire Department take enormous pride in the communities they serve. Residents are encouraged to visit their local fire station to apply for a free smoke alarm, get their blood pressure checked and to get to know the firefighters that serve their community every day.

Baltimore Police Department

baltimorepolice.org

The Baltimore Police Department is the 8th largest municipal police force in the United States, staffed by nearly 3,100 civilian and sworn personnel. The Baltimore Police Department's jurisdiction covers Maryland's largest city, with a population of over 600,000.

The men and women of the Baltimore Police Department are dedicated to the City of Baltimore and the citizens they serve. Members of the police department often visit schools, serve meals to the community and each year the districts and special units of the police department adopt families to help spread the holiday spirit.

The F&P would like to give special thanks to Stan Jaworski, freelance photographer and Gino Inocentes, Public Affairs Section, VIDEOUNIT of the Baltimore Police Department for the photographs in the Comprehensive Annual Financial Report.

FIRE & POLICE

Employees' Retirement System

City of Baltimore, Maryland

Comprehensive
Annual Financial Report

A Component Unit of the
City of Baltimore, Maryland

Year Ended June 30, 2018

Prepared by:
N. Anthony Calhoun, Executive Director
David A. Randall, Deputy Executive Director
Howard I. Mossovitz, Accounting Manager

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
Comprehensive Annual Financial Report
For the Year Ended June 30, 2018

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Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Fire and Police Employees'

Retirement System, City of Baltimore

Maryland

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2017

Christopher P. Morrill

Executive Director/CEO

CITY OF BALTIMORE

CATHERINE E. PUGH, Mayor

FIRE AND POLICE EMPLOYEES' RETIREMENT SYSTEM

N. ANTHONY CALHOUN, Executive Director
7 E. Redwood Street
18th Floor
Baltimore, Maryland 21202

November 16, 2018

The Honorable Members of the Board of Trustees
Fire and Police Employees' Retirement System
Baltimore, Maryland

The Fire and Police Employees' Retirement System of the City of Baltimore (F&P, Plan, System) has just completed fifty-six years of service to the uniformed officers of the Baltimore City Fire and Police Departments. On behalf of the dedicated staff that serves the System's membership, I am pleased to submit the Comprehensive Annual Financial Report of the F&P for the fiscal year ended June 30, 2018. The System's administration is responsible for both the accuracy of the data and the completeness of the presentation, including all disclosures. To the best of my knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of operations of the F&P. The F&P is a component unit of the City of Baltimore.

Established July 1, 1962, by City ordinance, the F&P is a defined benefit plan that covers all uniformed officers of the Baltimore City Fire and Police Departments. The Plan also covers certain Maryland Aviation Administration firefighter/paramedics. These State of Maryland employees were grandfathered into F&P plan coverage by State law.

All System-related administrative and benefit provisions are established by City ordinance, as contained in Article 22 of the Baltimore City Code, and may be amended only by the Mayor and City Council. The F&P provides normal service retirement benefits for members who attain the required age and/or service requirements, and now due to plan amendments passed in June 2010, early service retirement benefits. Coverage for line-of-duty disability benefits is immediate upon entry into the System. Disability benefits for non-duty-related injury or illness are provided after the attainment of five years of membership. Line-of-duty death benefits are provided upon membership for any member whose death results from an injury occurring in the actual performance of duty. After one year of System service, members are also covered for non-duty-related death benefits. Members who do not reach normal or early service retirement benefit eligibility remain vested only in their accumulated member contributions and interest credits which are payable to the member upon termination from employment. A Deferred Retirement Option Plan (DROP) is available to members who entered the F&P prior to July 1, 2003, and who attained twenty or more years of service as of December 31, 2009. Members who do not meet the eligibility requirements for DROP may become eligible to participate in DROP 2 that commenced January 1, 2010. More information concerning the benefit provisions, DROP, and DROP 2, can be found in the Summary of Plan Provisions beginning on page 84.

The Board of Trustees
Fire and Police Employees' Retirement System
Baltimore, Maryland

November 20, 2018

Major Initiatives

The plan's administration and staff successfully completed phase 2 of the Retirement Benefits Advanced Estimator which is located on the F&P website. The Retirement Benefits Advanced Estimator provides members an approximate calculation of their retirement benefit and Deferred Retirement Option Plan (DROP) or DROP 2 retirement benefits and account payouts. The Retirement Benefits Advanced Estimator automatically accesses member information maintained in the F&P's Annual Membership Statement database. The F&P went to great lengths to ensure the security of the information contained in the database. For security reasons, to access the website's advanced estimator a member must use a specific 16 digit access code created just for that member and their employee identification number in order to use the Retirement Benefits Advanced Estimator. The F&P hopes to continue expanding the website portal and future phases will include the submission of forms and other documents through the website.

Also, following a review performed by its investment consultant Summit Strategies, the Board implemented a rebalancing of the asset allocations in order to bring them closer to their targets. The Board approved increasing the private equity allocation from 5% to 10 % and lowering the hedge fund allocation from 10% to 5%. Rebalancing of the asset allocations will not only help the Plan meet its target allocations, but also help meet the 7.25% assumption rate which will aid in improving the Plan's funding status.

Another initiative that was completed in 2018 was the Disability Case Management System. The Disability Case Management System allows the F&P legal affairs section to track the progress of each individual member's disability application. The automation of this system makes tracking the large amount of member data associated with disability cases easier.

The F&P successfully held a Joint Board Retreat with other City of Baltimore Retirement Systems. The purpose of this retreat was to add to the overall education of trustees. The retreat provided a conceptual framework for understanding how technology and national policies disrupt economic markets and the way we approach them. Retreat topics included a global market review, trustee fiduciary responsibilities, private equity performance and the private credit landscape

In addition, the Government Finance Officers Association of the United States and Canada (GFOA) has given an Award for Outstanding Achievement in Popular Annual Financial Reporting to the Fire and Police Employees' Retirement System for the City of Baltimore, Maryland for its Popular Annual Financial Report for the fiscal year ended June 30, 2017. This was the third time that the F&P has submitted a PAFR for review. The Award for Outstanding Achievement in Popular Annual Financial Reporting is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government popular reports.

Financial Information

This report has been prepared in accordance with the principles of governmental accounting and reporting promulgated by the Governmental Accounting Standards Board. The accrual basis of accounting is used to record assets, liabilities, revenues, and expenses. Revenues are recorded when earned, regardless of the date of collection. Expenses are recorded when liabilities are incurred, regardless of when payment is made.

Accounting principles generally accepted in the United States require that management provide a narrative introduction, an overview, and an analysis to accompany the basic financial statements in the form of Management's Discussion and Analysis (MD&A). This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it. The MD&A begins on page 18 immediately following the report of the independent auditor in the Financial Section of this report.

The System's administration is responsible for establishing and maintaining an internal control structure designed to ensure that the assets of the F&P are protected from loss, theft, or misuse and to ensure that adequate accounting data are compiled to allow for the preparation of financial statements in conformity with accounting principles generally accepted in the United States of America. The internal control structure is designed to provide reasonable, but not absolute, assurance that these objectives are met. The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived, and that the valuation of costs and benefits requires estimates and judgments by the System's management. Sufficient internal accounting controls exist to provide reasonable assurance regarding the safekeeping of assets and the fair presentation of the financial statements and supporting schedules.

Investments

As provided for in the plan provisions, the Board of Trustees is authorized to invest the System's assets and to take appropriate action regarding the investment, management, and custodianship of plan assets. The investment responsibilities of the Board include establishing reasonable investment objectives, developing investment policy guidelines, selecting investment managers, and evaluating performance results to assure adherence to guidelines and the achievement of objectives.

The portfolio returned slightly above the median of 8.5% which ranked the F&P portfolio in the 54th percentile of the BNY Mellon All Public Plans Total Fund universe at June 30, 2018. The three year, five year, and ten year performance numbers for the portfolio were 6.9% which ranked in the 66th percentile, 7.5% which ranked in the 73rd percentile, and 6.6% which ranked in the 78th percentile.

Plan Funding

As of June 30, 2018, the date of the F&P's last actuarial valuation, the System's funded ratio was 69.8% on an actuarial value of assets basis, compared to a 71.1% actuarial value basis at June 30, 2017. As of June 30, 2018, the market funded ratio is 69.3%, compared to a 68.9% market funded ratio at June 30, 2017. As required by GASB 67, the market funding ratio is calculated using the Entry Age Normal cost method. In prior years, the Projected Unit Credit method of funding was used, however, beginning in fiscal year 2015, the methods of funding are the Entry Age Normal cost method. The required supplementary information that follows immediately after the notes to the basic financial statements provides new information and schedules due to the GASB 67 implementation. The schedules on page 44 show the changes in net pension liability and related ratios as well as the schedule of investment returns. These schedules will have five years of information as of June 30, 2018, but eventually will build up to ten years of information. Also provided is the schedule of required contributions made by the employer.

As a result of the actuarial valuation performed for the fiscal year ended June 30, 2016, a total City and State contribution due to the F&P for fiscal year 2018 was $137.7 million which was paid in full.

Litigation

On August 19, 2016, the fire and police unions and several plan participants and retirees filed a class action lawsuit against the City in the Circuit Court for Baltimore City, claiming that passage by the City of Ordinance 10-306, which became effective June 30, 2010, wrongfully breached the City's contract with plan membership under the contract clause of the plan. Plaintiffs requested judgment against the City awarding monetary damages, equitable relief, and specific performance – including restoration of pre-Ordinance plan provisions, attorney's fees, costs, and judgment interest.

Barring a future court order to the contrary, F&P will continue to administer the F&P plan as amended by Ordinance 10-306. See Note 11 of the Notes to Basic Financial Statements on page 40 for more information.

Independent Audit

The Baltimore City Code stipulates that the Board of Estimates shall select an independent auditor for the F&P and that the auditor shall report their findings annually to the Board of Estimates and to the Board of Trustees. The Board of Estimates elected to have CliftonLarsonAllen, LLP render an opinion on the System's financial statements. The auditor's report is contained in the Financial Section of this report.

Professional Services

The Board of Trustees appoints consultants and investment managers subject to approval by the City's policy making and approval body, the Board of Estimates. These professionals have been chosen based on their ability to provide services that are essential to the effective and efficient operation of the System. All of the professionals who provide service to the Board of Trustees are listed in the Introductory Section on page 14 and in the Investment Section on pages 64 to 67.

Certificate of Achievement

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Fire and Police Employees' Retirement System, City of Baltimore, Maryland for its comprehensive annual financial report for the fiscal year ended June 30, 2017. This was the thirty-fifth consecutive year (fiscal years 1983-2017) that the F&P has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a governmental unit must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both accounting principles generally accepted in the United States and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. I believe that this current report continues to meet the Certificate of Achievement Program requirements. I am submitting it to the GFOA to determine its eligibility for another certificate.

The Board of Trustees
Fire and Police Employees' Retirement System
Baltimore, Maryland

November 20, 2018

Acknowledgments

The preparation of this report could not be accomplished without the dedicated efforts of the System's accounting and communication support staff, investment consultant, and actuarial consultant. I would like to express my appreciation to all who assisted and contributed to its preparation.

This report is intended to provide complete and reliable information as a basis for making management decisions, as a means of determining compliance with legal provisions, and as a means for determining responsible stewardship for the assets contributed by the members and the City of Baltimore.

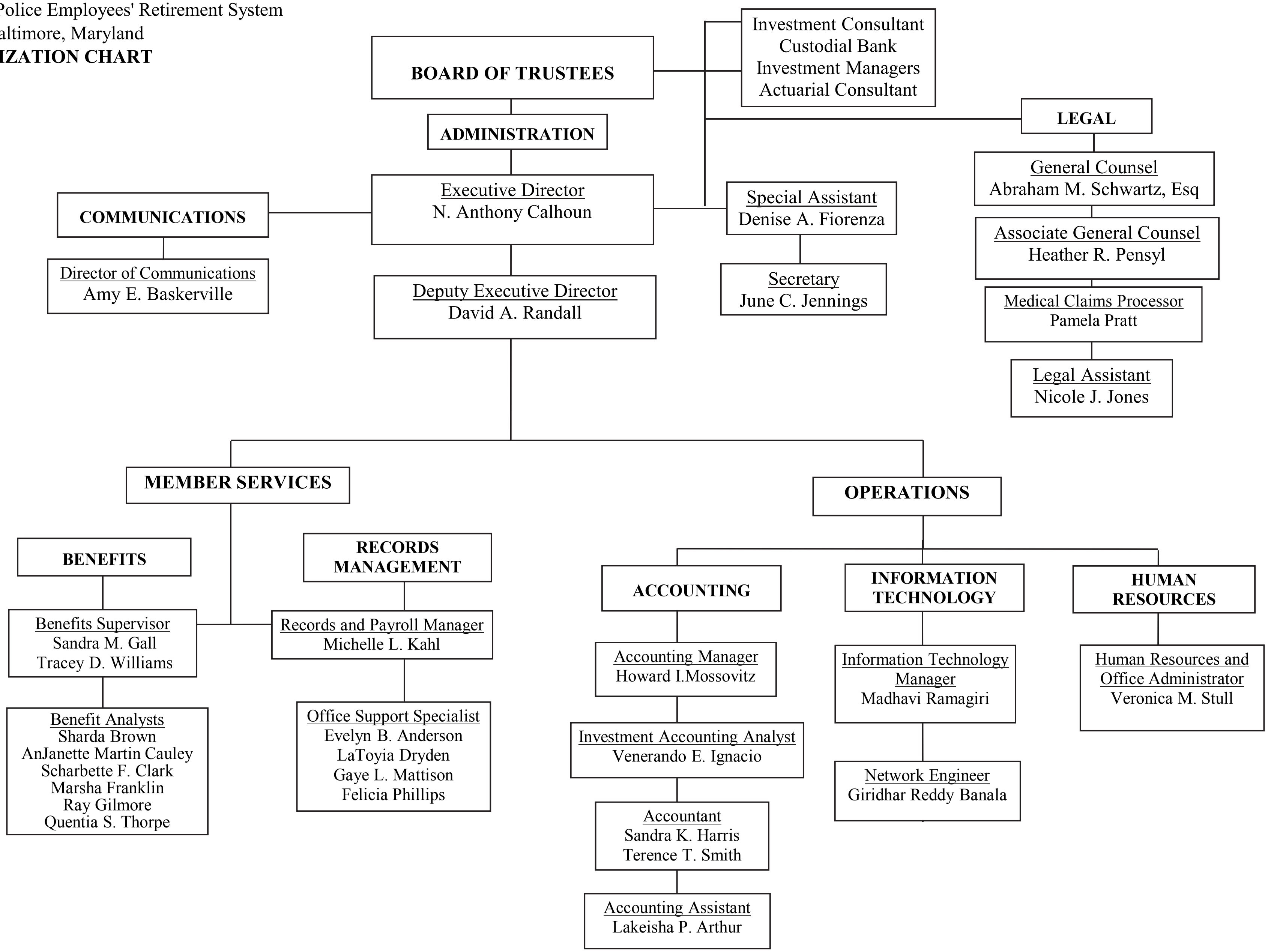
This report is being forwarded to the Mayor, the President of the City Council, the Comptroller, and other members of the Board of Estimates, to all members of the City Council, and to the Fire and Police Departments so that all members of the F&P will have the opportunity to review it. Hopefully, the administration of the City and the membership of the System will find this report both informative and helpful.

I would like to take this opportunity to express my gratitude to the Board of Trustees, the dedicated F&P staff, the System's consultants, investment managers and advisors, all of whom continue to work diligently to assure the successful operation of the System.

Respectfully submitted,

N. Anthony Calhoun
Executive Director

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
ORGANIZATION CHART



Fire and Police Employees' Retirement System
City of Baltimore, Maryland
BOARD OF TRUSTEES

The Board Chairman, Vice-Chairman, and members of the Investment Committee are elected by the members of the Board of Trustees. The ex-officio members to the Board are the City Comptroller, the Director of Finance, the Police Commissioner and the Fire Chief, all of whom may appoint a Deputy to represent her or him on the Board. Trustees appointed by the Mayor serve terms concurrent with the Mayor's term. Appointed Trustees continue to serve until replaced by the Mayor, or until the expiration of two consecutive full terms. Elected active and retired member Trustees serve four-year terms. There are no term limits for Trustees elected by the active or retired members.

CITY OF BALTIMORE

CATHERINE E. PUGH, Mayor

FIRE AND POLICE EMPLOYEES' RETIREMENT SYSTEM

N. ANTHONY CALHOUN, Executive Director
7 E. Redwood Street
18th Floor
Baltimore, Maryland 21202

October 25, 2018

To All Members, Retirees, and Beneficiaries
Fire and Police Employees' Retirement System
Baltimore, Maryland

This comprehensive financial report covers the fiscal year ending June 30, 2018.

The past year was another strong one financially for the F&P. Volatile financial markets, reduced government budgets, limited salary increases for active employees, reduced numbers of active employees contributing to retirement systems, larger numbers of retirees, and longer lifespans for retirees all complicate the goal of making public pensions fully funded. Many cities and states are grappling with chronically-underfunded pension systems and have cut pension benefits. Fortunately, the F&P continues to get stronger.

Over the past year our investments earned 8.5%, a result that is above our assumed rate of return. To help ensure the future soundness of our retirement system, during the year the Board also voted to reduce the assumed rate of return from 7.5% to 7.25%, consistent with the actions of many public pension plans across the country. The financial markets are quite erratic, as demonstrated by our investment returns for Fiscal Years 2014 through 2017 of 16.5%, 2.3%, 0.6% and 12.1%, respectively. Our investment return for the past year roughly matched the median of public plans. Our funded status on a market value of assets basis improved to 69.3%. The market value of our highly-diversified investment portfolio as of June 30, 2018 was approximately $2.7 billion, the highest in the F&P's history. During the fiscal year the plan paid nearly $247.0 million in retirement benefits, also the highest figure ever.

During the fiscal year ending June 30, 2018, the City contributed $136.0 million to the F&P. This was the largest annual contribution ever made by the City, more than twice what the City contributed a decade ago. The annual City contribution will continue to grow. The City's contribution is expected to be $140.9 million for FY 2019 and $146.3 million for FY 2020. We continue to focus on our essential long-term goal: to make our plan fully-funded, so that our members, retirees and beneficiaries will continue to receive their full benefits in the years to come. We have made progress over the past few years in raising our funded status, but it will take many more years of continued hard work, City and member contributions, and careful planning before we can achieve our goal of 100% funded status.

To All Members, Retirees, and Beneficiaries
Fire and Police Employees' Retirement System
Baltimore, Maryland
October 25, 2017
Page 2

Our Executive Director, Mr. N. Anthony Calhoun; our Deputy Executive Director, Mr. David A. Randall; and the F&P staff appreciate the privilege of working with you. Our staff worked hard over the past year to control administrative expenses, which were well under budget, and to improve service to you. Hopefully you have visited the website for the F&P at www.bcfpers.org, where you will find useful information about your retirement, including the Active Member Benefits Advanced Estimator to help you calculate your future benefits.

On behalf of the F&P Board of Trustees and the F&P staff, thank you for your dedicated service to the City. We will continue to work hard to protect your retirement benefits.

Sincerely,

Peter E. Keith

Peter E. Keith, Esq.
Chairman
Board of Trustees

LEGAL AND GENERAL COUNSEL, ACTUARY, AND INDEPENDENT AUDITOR

LEGAL COUNSEL

Law Department
City of Baltimore
Andre M. Davis, Esq.

GENERAL COUNSEL

Fire and Police Employees' Retirement System
City of Baltimore
Abraham M. Schwartz, Esq.

ACTUARY

Cheiron
Fiona E. Liston, F.S.A.
McLean, Virginia

INDEPENDENT AUDITOR

CliftonLarsonAllen
Timonium, Maryland

See page 63 in the Investment Section for a list of fees and commissions.
See pages 64 to 67 in the Investment Section for a list of investment professionals.

FINANCIAL SECTION

CliftonLarsonAllen

CliftonLarsonAllen LLP
CLAconnect.com

INDEPENDENT AUDITORS' REPORT

The Honorable Joan M. Pratt, Comptroller,
Other Members of the Board of Estimates of the City of Baltimore and the
Board of Trustees of the Fire and Police Employees' Retirement System
Baltimore, Maryland

Report on the Financial Statements

We have audited the accompanying financial statements of the Fire and Police Employees' Retirement System of the City of Baltimore (the System), which comprise the statement of fiduciary net position as of June 30, 2018, and the related statement of changes in fiduciary net position for the year then ended, 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.

Auditors' 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 auditors' 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 financial position of the System as of June 30, 2018, and the respective changes in its financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

The financial statements include alternative investments valued at $724 million (27% percent of net position), and as explained in Note 2, their fair values have been estimated by management in the absence of readily determinable fair values. Management's estimates are based on information provided by the fund managers or the general partners.

The Honorable Joan M. Pratt, Comptroller,
Other Members of the Board of Estimates of the City of Baltimore and the
Board of Trustees of the Fire and Police Employees' Retirement System

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and the schedules of changes in net pension liability and related ratios, investment returns and employer contributions and related notes, as listed in the table of contents, be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the 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 financial statements, and other knowledge we obtained during our audit of the 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 System's financial statements. The schedules of administrative expenses, investment expenses and payments to consultants, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the financial statements.

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

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

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated November 16, 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 solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

CliftonLarsonAllen LLP

CliftonLarsonAllen LLP

Baltimore, Maryland
November 16, 2018

The following overview and analysis of the financial activities of the Fire and Police Employees' Retirement System (F&P, Plan, System) is provided for the fiscal year ended June 30, 2018. Readers are encouraged to consider the information presented here in conjunction with additional information furnished in the Transmittal Letter, which begins on page 5 of this report.

Financial Summary

- The net position restricted for pension benefits increased by $128.7 million during the fiscal year from $2,562.6 million at June 30, 2017, to $2,691.3 million at June 30, 2018. The increase in fiscal year 2018 was mainly due to the relative strong performance across the entire portfolio.

- Additions to Net Position (Revenues) for the year were $380.7 million, a decrease of $53.3 million from the prior year revenues of $434.0 million. The decrease in revenues was caused by lower investment earnings that were uniformly down across all asset classes for fiscal year 2018 compared to the prior year.

- Deductions from Net Position (Expenses) were $252.0 million in the current year, an increase of $2.6 million from the prior year expenses of $249.4 million. The increase in expenses was driven by post-retirement benefit increases, effective January 2018, increased retirement allowance payments, and increased administrative expenses.

- The investment portfolio's total time-weighted rate of return of 8.5% for the one year period ended June 30, 2018, was slightly above the median public fund performance of 7.8%. The performance placed the F&P in the 54th percentile of the BNY Mellon Public Fund – Total Fund universe.

- The portfolio performance for the three year period ended June 30, 2018, was 6.6% which was above the median public plan performance of 6.3%.

- The System's real estate portfolio composite performance had a return of 12.3% for fiscal year 2018. The real estate composite outperformed the NCREIF Property Index of 7.2%.

- The energy master limited partnership (MLP) portfolio composite provided a return of -0.2% for fiscal year 2018. The energy MLP composite outperformed the S&P MLP Index by 1.6%.

- The U.S. equity composite provided a 16.3% rate of return which ranked above the median 14.8% rate of return for the BNY Mellon All Master Trust – U.S. Equity Segment universe.

- The international equity composite provided a 8.7% rate of return which outperformed the MSCI All Country World Ex-U.S. Index by 1.4%.

- The System's fixed income composite portfolio provided a -0.6% rate of return which ranked below the -0.3% median portfolio performance of the BNY Mellon All Master Trust – U.S. Fixed Income Segment universe.

- The System's private equity fund-of-funds portfolio composite and the direct hedge funds portfolio composite provided returns of 17.9% and 4.2%, respectively, for fiscal year 2018.

- Employer contributions made to the F&P were $137.7 million in fiscal year 2018, up from the employer contribution made in fiscal year 2017.

- Member contributions to the F&P increased by $1.4 million in fiscal year 2018 due to an increase in the member's covered payroll.

- The F&P's funding objective is to meet benefit obligations through investment income, employer contributions, and member contributions. The earnings assumption rate for FY 2018 was 7.25%.

- As of June 30, 2018, the date of the F&P's last actuarial valuation, the System's funded ratio is 69.8% on an actuarial value of assets basis, compared to 71.1% at June 30, 2017. The System's Plan Fiduciary Net Position as a percentage of the Total Pension Liability at June 30, 2018 is 69.3% compared to 68.9% at June 30, 2017. Both ratios are calculated using the Entry Age Normal cost method.

- Capital assets are recorded at cost, net of depreciation, and include leasehold improvements, computer equipment, and office furniture.

Overview of Financial Statements

The following discussion and analysis is intended to serve as an introduction to the F&P financial statements and the Financial Section of this report. The statements and the notes are in conformity with accounting principles generally accepted in the United States. These principles require certain financial statement presentations and disclosures including the use of the accrual basis of accounting to record assets and liabilities, and revenues and expenses.

The **Statement of Fiduciary Net Position** provides a snapshot of the financial position of the F&P at June 30, 2018, the end of the plan's financial year. It indicates the total assets, current liabilities, and the net assets available for future payment of retirement benefits and operating expenditures at June 30, 2018. The assets comprise cash and cash equivalents, which are fixed income instruments with a maturity date of three months or less; receivables, which are primarily from investment activity; investments at fair value; securities lending collateral; and capital assets, which includes leasehold improvements, computer equipment, and office furniture. Securities traded on national or international exchanges are valued at the last reported sale price at current exchange rates. Purchases and sales of investments are recorded on a trade date basis. The current liabilities comprise of payables for securities lending collateral, certain investment activity, retirement benefits, lump sums payable to members, and administrative expenses.

The **Statement of Changes in Fiduciary Net Position** summarizes the F&P financial activities that occurred during the plan's fiscal year from July 1, 2017, through June 30, 2018. Employer contributions are recognized when a formal commitment has been made by the employer to provide the contributions. Member contributions are recognized in the period in which the contributions are due. The net appreciation (depreciation) in fair value of investments consists of the realized gains or losses and the unrealized increase or decrease in fair value of investments during the year. Realized gains and losses on sales of investments are computed based on the difference between the sales price and the original cost of the investment sold. Realized gains and losses on investments that had been held in more than one fiscal year and sold in the current fiscal year were included as a change in the fair value of investments reported in the prior year(s) and the current year. Unrealized increase or decrease is computed based on changes in the fair value of investments between years. Security transactions are accounted for on a trade date basis. Interest income is recognized when earned and dividend income is recorded on the ex-dividend date. Retirement benefits and refunds are recognized when due and payable in accordance with the terms of the plan provisions.

The **Notes to Basic Financial Statements** provide additional information that is essential to a full understanding of the data provided in the financial statements. The notes are an integral part of the financial statements and include detailed information not readily evident in the basic financial statements.

The **Required Supplementary Information** that follows immediately after the notes to the basic financial statements provides information and schedules required by GASB 67. The schedules on page 44-45 show the changes in net pension liability and related ratios as well as the schedule of investment return. Also provided is the schedule of required contributions made by the employer. See the Required Supplementary Information beginning on page 43 of this report.

The remaining supplemental schedules provide additional detailed information concerning operating expenses, investment expenses and payments to consultants. All of this information is considered useful in understanding and evaluating the financial activities of the F&P.

Financial Analysis

The examination of fiduciary net position over time may serve as a useful indicator of the financial position of the F&P. At June 30, 2018, assets, as displayed below, exceeded current liabilities by $2.7 billion, an increase of $128.7 million over the prior year. Prior to the passage of Ordinance 10-306 of June 2010, it was mandated that the total assets of two reserves, the Paid-Up Benefit Reserve and the Contingency Reserve, were to be segregated and separately invested from the general plan assets. As required, the assets of these two reserves were dedicated to the payment of certain post-retirement benefit increases. With the passage of Ordinance 10-306, the assets of the two aforementioned reserves are to be included in the general asset pool as there is no longer a requirement to maintain those reserves and invest those assets separately. As of June 30, 2018, total assets increased by 4.5% from the prior year mainly due to an increase in investments at fair value. Total current liabilities were lower at June 30, 2018, from the prior fiscal year, mainly due to a decrease in securities lending collateral.

Fiduciary Net Position
June 30, 2018 and 2017

	2018	2017	Increase (Decrease)	Percentage Change
Cash and receivables	$ 66,592,255	$ 85,595,031	$ (19,002,776)	(22.2)
Investments	2,669,612,181	2,532,726,459	136,885,722	5.4
Capital assets	735,760	891,180	(155,420)	(17.4)
Total Assets	**2,736,940,196**	**2,619,212,670**	**117,727,526**	4.5
Current liabilities	45,638,180	56,648,008	(11,009,828)	(19.4)
Total Liabilities	**45,638,180**	**56,648,008**	**(11,009,828)**	**(19.4)**
Net Position	**$ 2,691,302,016**	**$ 2,562,564,662**	**$ 128,737,354**	5.0

Investment Assets

The asset portfolio is invested in domestic and foreign fixed income, domestic and international equities, real estate limited partnerships, direct hedge funds, private equity fund-of-funds and energy master limited partnerships. All assets are managed by external investment management firms selected by the Board of Trustees and approved by the City's policy making body, the Board of Estimates. BNY Mellon Asset Servicing, the F&P's custodian bank, holds in custody all marketable securities except securities held in commingled management accounts, direct hedge funds, private equity fund-of-funds, and the assets held by the real estate portfolios. The System participates in a securities lending program that is managed by BNY Mellon Asset Servicing. The Board of Trustees retains the services of the Summit Strategies Group, an investment consulting services firm that provides investment allocation advice, manager selection advice, manager and portfolio performance calculations and peer comparisons, performance analytics, asset-liability studies, and other related services. As the result of an asset-liability study concluded in fiscal year 2016, the Board expanded its investment opportunity set to include target allocations for direct hedge fund investments. With the assistance of the Summit Strategies Group, the Board filled its direct hedge funds allocation targets and restructured the dedicated variable benefit portfolios.

All investments are stated at fair value and include the recognition of unrealized gains and losses in the current period. The time-weighted rate of return on the total assets for the year ended June 30, 2018, was 8.5%. The median public plan performance was 7.8%. The portfolio annualized rates of return for the last three-year, five-year, and ten-year periods ended June 30, 2018, were 6.9%, 7.5%, and 6.6%, respectively.

The Board has diversified the assets across multiple classes and strategies as it seeks to maximize investment opportunities and return at an acceptable level of investment risk. However, as evidenced by the variation in rates of return from year to year, the Board's investment allocation plan is not immune to market volatility. The F&P's long-term actuarial investment return assumption was 7.25% for fiscal year 2018, as the result of an actuarial experience study concluded in fiscal year 2018, and as recommended and adopted by the Mayor and City Council.

Beginning on page 51 of this report, the Investment Section gives detailed information on the F&P investment policies. See page 60 for the comparison of the asset allocation targets established by the Board of Trustees to the actual asset allocation at June 30, 2018.

Liabilities

Reported on the Statement of Fiduciary Net Position, the current liabilities are payables incurred mainly from investment portfolio transaction activity. Liabilities at June 30, 2018, were $45.6 million, $11.0 million less than the $56.6 million in liabilities at June 30, 2017. Payables for the settlement of investment purchases increased $3.0 million to $15.2 million. However, the securities lending collateral payable decreased by $9.2 million from $35.4 million at June 30, 2017, to $26.2 million at June 30, 2018, and served as a reason for the overall decrease in current liabilities at June 30, 2018.

Changes in Fiduciary Net Position
For Fiscal Years Ended June 30, 2018 and 2017

	2018	2017	Increase (Decrease)
Additions			
Net investment income	$ 211,182,141	$ 273,800,787	$ (62,618,646)
Employer contributions	137,738,323	129,688,977	8,049,346
Member contributions	31,285,881	29,901,791	1,384,090
Net securities lending income	485,802	586,818	(101,016)
Total Additions	**380,692,147**	**433,978,373**	**(53,286,226)**
Deductions			
Retirement allowances	228,774,485	223,772,460	5,002,025
Lump sum DROP payments	14,429,983	17,790,724	(3,360,741)
Administrative expenses	4,984,228	4,328,135	656,093
Refunds of member contributions	3,542,713	3,069,464	473,249
Death benefits	223,384	447,433	(224,049)
Total Deductions	**251,954,793**	**249,408,216**	**2,546,577**
Net Increase (Decrease)	**$ 128,737,354**	**$ 184,570,157**	**$ (55,832,803)**

Investment Income

The F&P's total composite portfolio achieved an 8.5% time-weighted rate of return which ranked the F&P asset performance in the 54th percentile when compared to other public pension plans in the BNY Mellon Public Fund–Total Fund universe. Strong performance across the entire portfolio was a major contributor to the overall rate of return.

The System's U.S. equity composite returned 16.3% for fiscal year 2018, which ranked the domestic equity composite in the 15th percentile of the BNY Mellon All Master Trust – U.S. Equity Segment universe. The domestic equity composite outperformed its Russell 3000 comparative index by 1.5%.

The international equity composite posted 8.7% rate of return which ranked in the 33rd percentile of the BNY Mellon All Master Trust – International Equity Segment universe. The international equity composite outperformed its MSCI All Country World Ex-U.S. comparative index by 1.4%.

The fixed income composite earned -0.6% for the fiscal year which ranked in the 83rd percentile of the BNY Mellon All Master Trust – U.S. Fixed Income Segment universe. The fixed income portfolio underperformed its Barclays Capital Aggregate index benchmark of -0.3% by -0.3%.

The real estate composite portfolio continued to earn good rates of return with performance of a strong 12.3% for the fiscal year. The real estate portfolio continued its recovery from the 2008-2009 liquidity crises, as it outperformed the comparative NCREIF Property Index, which returned 7.2% this fiscal year, by 5.1%.

The System's alternative asset portfolios, direct hedge funds, and private equity fund-of-funds, had negative performance. The direct hedge funds composite earned 4.2%, and performed 0.9% below its comparative HFRI Fund-of-Funds Composite Index of 5.1% for the fiscal year ended June 30, 2018. The direct hedge funds composite portfolio is expected to provide investment returns which, over a market cycle, generally are greater than bonds and less than stocks, but with less volatility than that of stocks and more like that of fixed income investments.

The System invests in various private equity fund-of-funds. The private equity composite achieved a 17.9% return for the fiscal year and outperformed the S&P 500 Index performance of 14.4% for the same time period. The private equity portfolio funds are diversified by strategy and vintage year; and many of the underlying investments are still very young in their investment lifecycle. The goal of the private equity portfolio is to outperform the S&P 500 index over a market cycle. The private equity composite is reviewed over rolling three and five year periods and the composite performance outperformed the index in both of the last three and five year period.

For the year ended June 30, 2018, the MLPs composite achieved a -0.2% rate of return which exceeded the S&P MLP Index by 1.6%. The MLPs are expected to have low correlation to other asset classes which makes them a good diversifier for overall portfolio performance. Long term, the Board expects the MLPs to continue to outperform the domestic equity composite with lower risk.

The investment income is reduced by investment expenses which include the fees paid to firms hired by the Board to manage the System's assets, the Board's investment consulting firm, and the System's custodian bank which tracks the investment activity of the F&P's investment managers, values the System's assets, and provides accounting reports to System staff and the Board's investment consultant. Investment expenses increased from $14.3 million in fiscal year 2017 to $15.3 million in fiscal year 2018. The increase in investment expenses was caused by the increase in the System's assets.

Member and Employer Contributions

Member contributions were made at 10.0% of regular compensation during fiscal year 2018. During the current fiscal year, the member's contributions increased by $1.4 million due to an increase in the number of active members and an increase in salaries. Overtime pay is not subject to the mandatory member contribution rate and it is not included in the member's average final compensation calculation. The number of active members increased from 4,012 at June 30, 2017, to 4,049 at June 30, 2018. Should the active member population remain stable, member contributions are expected to increase, in conjunction with increased salaries.

Employer contributions requirements are determined by the results of an actuarial valuation process which is performed following the end of each fiscal year. The valuation results determine the contribution requirements due on July 1 two fiscal years hence. The employer contribution is comprised of the contribution made by the City of Baltimore and the contribution made by the State of Maryland for a small fixed number of State employees whose F&P coverage is mandated by State law. The contribution required from the City of Baltimore for fiscal year 2018 was $136.8 million.

The City's employer contribution requirement will increase to $140.9 million for fiscal year 2019 and to $146.3 million for fiscal year 2020, the latter mainly due to the increase in the unfunded actuarial liability and the actuarial losses.

Retirement Benefits and Administrative Expenses

The F&P was created to provide lifetime service retirement and permanent disability retirement benefits for eligible members and survivor benefits and death benefits to eligible beneficiaries. The cost of such programs includes recurring retirement benefit payments, post-retirement benefit increases, lump-sum payments to Deferred Retirement Option Plan (DROP and DROP 2) participants, lump sum death benefits, refunds of accumulated member contributions and interest to non-retirement eligible members who leave F&P covered employment, and the costs of administering the System.

The primary expense during fiscal year 2018 was for the payment of continuing retirement benefits totaling $228.8 million, an increase of $5.0 million over the $223.8 million in retirement allowances paid in fiscal year 2017. The increase in retirement allowances was mainly due to higher benefit levels paid to newly retired members, post-retirement increases, and minimum benefit amounts paid to certain beneficiaries.

Lump sum DROP and DROP 2 distributions decreased $3.4 million from $17.8 million in fiscal year 2017 to $14.4 million in fiscal year 2018 due to a decrease in the number of DROP and DROP 2 participant service retirements. The number of DROP participants continues to decrease as the eligibility for DROP was frozen in 2009. DROP 2 became effective January 1, 2010; the number of DROP 2 participants also decreased in FY 2018.

Administrative expenses are comprised primarily of personnel costs and other professional services costs including information technology consultants. Administrative expenses increased by $656,093 from fiscal year 2017 to fiscal year 2018. The increase in administrative expenses was mainly due to an increase in in payroll and other personnel costs. The retirement system also filled vacant positions.

Litigation

On August 19, 2016, the fire and police unions and several plan participants and retirees filed a class action lawsuit against the City in the Circuit Court for Baltimore City, claiming that passage by the City of Ordinance 10-306, which became effective June 30, 2010, wrongfully breached the City's contract with plan membership under the contract clause of the plan. Plaintiffs requested judgment against the City awarding monetary damages, equitable relief, specific performance – including restoration of pre-Ordinance plan provisions - attorney's fees, costs, and judgment interest.

On January 2, 2018, the Circuit Court ruled that the City unlawfully diminished the rights of retired and retirement-eligible F&P members as of June 30, 2010 to the variable benefit and thus breached its contract with them but that the City may have been entitled to make reasonable modifications affecting active members of the F&P plan as long as each change to benefits represented a diminution of contractual rights balanced by other new benefits or justified by countervailing equities for the public's welfare. A trial to determine the legality of the Ordinance 10-306 benefit modifications affecting active members was held in Circuit Court on October 29, 2018.

It is likely that both the City and the unions will appeal any final decision rendered by the Circuit Court to the Court of Special Appeals of Maryland and, ultimately, to the Maryland Court of Appeals.

Barring a final decision from the Court of Appeals rendering Ordinance 10-306 invalid, F&P will continue to administer the F&P plan in accordance with Ordinance 10-306. See Note 10 of the Notes to Basic Financial Statements on page 40 for more information.

Requests for Information

This report is designed to provide a general overview of the F&P's financial activity. Questions concerning information provided in this report or requests for additional financial information should be addressed to:

N. Anthony Calhoun
Executive Director
Fire and Police Employees' Retirement System
7 East Redwood Street, 19th Floor
Baltimore, Maryland 21202

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
STATEMENT OF FIDUCIARY NET POSITION
June 30, 2018

Assets		
Cash and cash equivalents		$ 44,929,708
Receivables		
Accrued income	$ 14,217,147	
Investments sold	4,967,911	
Forward foreign contracts	1,732,076	
Receivable - members	745,413	
Total receivables		21,662,547
Investments, at fair value		
Stocks	1,468,751,506	
Bonds	450,428,224	
Private equity funds	264,707,377	
Real estate funds	263,578,427	
Hedge funds	195,933,446	
Total investments		2,643,398,980
Capital assets, net of depreciation		
Leasehold improvements	396,166	
Computer equipment	260,029	
Office furniture	79,565	
Total capital assets, net of depreciation		735,760
Securities lending collateral		26,213,201
Total assets		2,736,940,196
Liabilities		
Securities lending collateral	26,213,201	
Investments purchased	15,175,597	
Forward foreign contracts	1,733,173	
Investment management fees payable	1,649,985	
Administrative expenses payable	451,219	
Lump sums payable to members	367,150	
Other accounts payable	47,855	
Total liabilities		45,638,180
Fiduciary Net Position Restricted for Pension Benefits		$ 2,691,302,016

The notes to the basic financial statements are an integral part of this statement.

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
STATEMENT OF CHANGES IN FICUCIARY NET POSITION
For the Year Ended June 30, 2018

Additions		
Contributions		
Employer	$ 136,832,361	
Plan members	31,285,881	
State of Maryland/Airport	905,962	
Total contributions		$ 169,024,204
Investment income		
Net appreciation in fair value of investments	139,882,286	
Interest and dividends	37,646,553	
Private equity income	35,210,906	
Real estate income	8,043,907	
Hedge funds income	5,655,434	
Less: investment expenses	(15,256,945)	
Net investment income		211,182,141
Securities lending income	647,653	
Less: securities lending expenses	(161,851)	
Net securities lending income		485,802
Total additions		380,692,147
Deductions		
Retirement allowances	228,774,485	
Lump sum DROP payments	14,429,983	
Administrative expenses	4,984,228	
Refunds of member contributions	3,542,713	
Death benefits	223,384	
Total deductions		251,954,793
Net Increase in Fiduciary Net Position		128,737,354
Fiduciary Net Position Restricted for Pension Benefits		
June 30, 2017		2,562,564,662
June 30, 2018		$ 2,691,302,016

The notes to the basic financial statements are an integral part of this statement.

1. Plan Description:

The Fire and Police Employees' Retirement System of the City of Baltimore (F&P, Plan, System) is the administrator of a single employer defined benefit local government retirement plan. Established July 1, 1962, the Plan covers all uniformed personnel of the Baltimore City Fire and Police Departments. In addition, the Plan includes three active fire officers who are employees of the State of Maryland; this contingent emanated from when the City of Baltimore owned the Baltimore/Washington International Thurgood Marshall Airport. Based on criteria established by the Governmental Accounting Standards Board, the F&P is a component unit of the City of Baltimore and is included in the City's financial report as a public employees' retirement system (PERS).

At June 30, 2018, the F&P membership consisted of:

Retirees and beneficiaries currently receiving benefits	6,296
Active plan members	4,049
Total	10,345

The F&P provides normal service retirement benefits, as well as, death and disability benefits in accordance with Article 22 of the Baltimore City Code, which may be amended only by the Mayor and City Council. Certain provisions were amended by Ordinance 11-444, as noted in the Summary of Plan Provisions beginning on page 84. Membership in the System is mandatory upon employment. The System does not have a vested benefit plan; however, members have vested rights to their contributions and interest.

Post-retirement benefit increases are provided to retirees and beneficiaries based on age, type of retirement and having received benefits for two or more years as of each June 30 eligibility determination date.

2. Summary of Significant Accounting Policies:

Basis of Presentation:
The accounting and financial reporting policies of the F&P included in this report conform to accounting principles generally accepted in the United States and reporting standards as promulgated by the Governmental Accounting Standards Board, which designates accounting principles and financial reporting standards applicable to PERS. This report includes solely the accounts of the F&P, a component unit of the City of Baltimore.

There are no component units of the F&P based on the nature of operational or financial relationships.

Basis of Accounting:
These financial statements have been prepared on the accrual basis of accounting, whereby revenues are recorded when they are earned, expenses are recorded when liabilities are incurred, and investment purchases and sales are recorded as of their trade date. Member contributions are recognized in the period in which the contributions are due. Employer contributions are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

Use of Estimates in Preparing Financial Statements:
The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires the Board to make estimates and assumptions that affect the reported amounts of assets, liabilities, additions and deductions to net position held in trust for pension benefits and disclosure of contingent assets and liabilities at the date of the financial statements and during the reporting period. Actual results could differ from those estimates.

Method Used to Value Investments:
Investments are reported at fair value. Securities traded on national or international exchanges are valued at the last reported sales price at the current exchange rates. The real estate holdings are based on the most recent appraisal (either internal to the manager or third party) as then presently available. For alternative investments, which include private equity, private energy, and hedge funds where no readily ascertainable fair value exists, management, in consultation with the general partner and investment advisors, has determined the fair values for the individual investments based upon the partnership’s most recent available financial information. Foreign exchange contracts are marked-to-market daily based on published market prices and quotations from national securities exchanges or securities pricing services. The changes in fair value are recognized as part of net appreciation/depreciation in the fair value of investments. Initial margin requirements for such financial instruments are provided by investment securities pledged as collateral or by cash.

Investment income consists of realized and unrealized appreciation (depreciation) in the fair value of investments, and interest and dividend income earned, less investment expenses. Interest income is recorded on the accrual basis and dividends are recorded on the ex-dividend date. Securities and securities transactions are reflected in the financial statements on a trade-date basis.

GASB 72 is effective for fiscal years beginning after June 15, 2015. This statement addresses accounting and financial reporting requirements related to fair value measurements. GASB 72 requires measurement of certain assets and liabilities at fair value using a consistent and detailed definition of fair value and accepted valuation techniques. It also enhances disclosures about fair value measurements, the level of fair value hierarchy, and valuation techniques. Additional disclosures are also required for investments in certain entities that calculate net asset value per share (or its equivalent)

3. Contributions and Reserves:

F&P members are required to contribute 10.0% of their regular compensation through payroll deduction. The employer contributions are determined through an actuarial valuation. According to the plan provisions, contribution requirements of the plan members and the City are established and may be amended by the Mayor and City Council. The valuation method is stipulated in the plan provisions. An expense load of 1.5% of covered payroll is included in the annual employer contribution requirement to cover administrative plan costs.

The plan provisions, Article 22 of the Baltimore City Code, established the following reserves:

Annuity Savings Reserve - Accumulated in this reserve are members' contributions inclusive of interest credits, less amounts distributed upon termination of employment or death, or transferred to another reserve for retirement.

Annuity Reserve - Upon retirement, the accumulated contributions of members are transferred to this reserve. From this reserve, the members’ accumulated contributions are paid as a life annuity.

Pension Accumulation Reserve - Employer contributions are credited and accumulated with earnings in this reserve. DROP benefits and certain death benefits are paid from here. In addition, when a member retires, an amount equal to the member’s pension reserve is transferred from this reserve to the Pension Reserve.

Pension Reserve - From this reserve is paid the pension portion of the retirement allowance. The pension represents benefits for life derived from employer contributions and investment income.

At June 30, 2018, the balances in the legally required reserves are as follows:

Reserves	Balance
Annuity savings reserve	$ 341,791,801
Annuity reserve	400,736,065
Pension accumulation reserve	(216,625,334)
Pension reserve	2,165,399,484
Total Reserves	$ 2,691,302,016

4. Securities Lending:

The Board of Trustees (the Board) entered into a Securities Lending Authorization Agreement with the System's custodian bank, BNY Mellon Asset Servicing. All individual securities which are readily marketable and which are not restricted due to an outstanding short option are eligible for loan at the discretion of the custodian bank. The investment manager may loan securities held in custody of commingled accounts if authorized in the manager's contract with the F&P.

Collateral received in exchange for securities loaned is collected in an escrow account for the F&P's benefit for the duration of the loan. At no time will the System lose custody of the loaned securities. Collateral in exchange for the principal loaned may be in the form of cash, or securities issued or guaranteed by the U.S. government, its agencies or instrumentalities. Irrevocable Letters of Credit from banks approved by the custodian may not be used as collateral. The minimum levels of collateral will be set at 102% of the fair value of domestic securities loaned, including all accrued income, and 105% of the fair value of international securities loaned, including all accrued income. If the fair value of the collateral falls below 100% of the loaned securities, additional collateral will be collected to maintain the appropriate minimum level. All collateral amounts will be marked to market daily. The F&P does not have the right to sell or pledge securities received as collateral without borrower default.

At June 30, 2018, the F&P had no credit risk exposure to borrowers because the amounts the F&P owed borrowers exceeded the amounts the borrowers owed the F&P. The fair value of securities on loan at June 30, 2018, was $190,978,031 and the fair value of the collateral received for those securities on loan was $207,320,517. The securities purchased with cash collateral are reported at amortized cost. The terms of the Securities Lending Authorization Agreement require that the custodian indemnify the F&P against: (1) the failure to demand adequate and appropriate collateral from a borrower; (2) the failure to comply with the investment guidelines in connection with the investment and reinvestment of cash collateral; (3) the failure to obtain and perfect a security interest or rights equivalent thereto in and to the collateral; and (4) the failure to make a reasoned determination of the creditworthiness of any borrower.

Substantially all securities loans can be terminated on demand either by the custodian or by the borrower, although generally the average term of these loans is one week. Cash collateral is invested in the custodian's short-term investment account, specific to the F&P. The short-term investment account guidelines specify that a minimum of 20.0% of the invested cash collateral is to be available each business day and the dollar weighted average maturity of holdings should not exceed 90 days.

The custodian's lending program does not operate the collateral investments as a "matched program" where the length of the loaned assets would be specifically matched to the length of the portfolio investments. Because the System's active investments are currently engaged in the overnight investment fund, all assets in the portfolio mature within a 24 hour period.

The following represents the balances relating to the securities lending transactions as of June 30, 2018:

Types of Securities On Loan	Market Value of Securites On Loan	Market Value of Collateral Received	Type of Collateral
Domestic equities	$12,920,296	$13,197,200	Cash
U.S. treasury notes and bonds	5,929,754	6,066,946	Cash
Corporate Bonds	3,831,813	3,928,213	Cash
International equities	3,531,338	3,685,089	Cash
Total cash collateral	26,213,201	26,877,448	
Domestic equities	$117,917,581	$129,741,076	Securities
International equities	24,886,721	28,130,878	Securities
U.S. Government agency bonds	21,417,223	22,001,725	Securities
Corporate Bonds	543,305	569,390	Securities
Total securities collateral	164,764,830	180,443,069	
Total Securities on Loan	$ 190,978,031	$ 207,320,517	

5. Cash and Investments:

The System's cash deposits are entirely covered by federal depository insurance at all times. The System classifies cash on deposit in the custodian institution, BNY Mellon, as well as the cash management pool held by BNY Mellon as cash and cash equivalents. The System also classifies certain short-term highly liquid securities as cash equivalents if the date of maturity is three months or less from the date of acquisition.

The Board of Trustees of the F&P is authorized by the Baltimore City Code to make investments in accordance with the guidelines and limitations set forth in the Code. The Board accomplishes the daily management of the System's investments through an external investment consultant who acts as a fiduciary for the System and through external investment managers. The Board invests the assets of the F&P using the "prudent person standard" which allows the Board to consider the probable safety of investments, avoid speculative investments, and invest as people of prudence, discretion, and intelligence would in a similar situation. The Board has adopted an investment policy and guidelines to formally document its investment objectives and responsibilities.

Fair Value Measurements

The System categorizes their 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 (level 1) and the lowest priority to unobservable inputs (level 3). The categorization of investments within the hierarchy is based upon the pricing transparency of the instruments and should not be perceived as the particular investment risk.

The F&P invested assets measured at fair value at June 30, 2018 are presented below:

Investment by Fair Value Level		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Debt Securities:				
Corporate bonds	$ 152,443,756		$ 152,443,756	
U.S. treasury notes and bonds	67,690,743	$ 67,690,743		
U.S. Government agency bonds	55,784,232		55,784,232	
Total debt securities	275,918,731	67,690,743	208,227,988	
Equity securities:				
International equities	476,350,911	476,350,911		
Domestic equities	365,647,317	365,647,317		
Energy master limited partnerships	140,641,697	140,641,697		
Dynamic US equity fund	143,840,408	143,840,408		
Total equity securities	1,126,480,333	1,126,480,333		
Total Investments by Fair Value Level	1,402,399,064	$ 1,194,171,076	$ 208,227,988	
Investments Measured at the Net Asset Value (NAV)				
Commingled equity funds	342,271,173			
Real estate funds	263,578,427			
Hedge funds	195,933,446			
Private equity funds	186,913,181			
Commingled debt funds	174,509,493			
Private energy funds	77,794,196			
Total investments measured at the net asset value	1,240,999,916			
Total investments	$ 2,643,398,980			

The valuation method for investments measured at the net asset value (NAV) per share, or equivalent, is presented in the table below:

		Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Investments Measured at the Net Asset Value (NAV)				
Commingled equity funds [5]	$ 342,271,173	$ -	Daily, monthly	2 - 30 days
Real estate funds [2]	263,578,427	22,518,349	Not eligible, quarterly	N/A, 45 days
Hedge funds [1]	195,933,446	-	Daily, quarterly, semi-annual, annual	3 - 90 days
Private equity funds [3]	186,913,181	94,432,924	Not eligible	N/A
Commingled debt funds [6]	174,509,493	-	Daily, bi-monthly, monthly	2 - 30 days
Private energy funds [4]	77,794,196	32,578,387	Not eligible	N/A
Total investments measured at the net asset value	$ 1,240,999,916			

(1) The System invests in direct hedge funds utilizing 5 direct hedge fund managers. The investment strategies consist of event driven composites, relative value composites and tactical trading composites. These investments are eligible for redemption with various frequency terms ranging from daily to annual and a 3 - 90 day notice period.

(2) The System's real estate investments consist of 2 core real estate funds and 12 real estate partnerships. The real estate partnerships consist of non-core, value added and opportunistic stratgies. For the most part, the real estate investments are illiquid and redemptions are restricted, however the core funds of $147 million are liquid and the redemption frequency is quarterly, and a 45 day notice period.

(3) The System's private equity investments consist of 23 funds, invested in Diversified, Venture Capital, Distressed Debt, Buyouts, International, Growth Equity and Special Situations strategies. These investments are considered illiquid as redemptions are restricted over the life of the investment.

(4) The System's private energy investments consist of 6 funds, invested in Natural Resources and Energy Partnerships. These investments are considered illiquid as redemptions are restricted over the life of the investment.

(5) The System's commingled equity funds consist of 2 index funds and 1 emerging markets collective funds. These investments are liquid.

(6) The System's commingled debt funds consist of 1 index fund, 1 mortgage backed securities fund, 1 commingled bank loan fund, and 1 emerging markets debt fund. These investments are liquid.

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of a plan’s investment in a single issuer. As of June 30, 2018, the F&P has no single issuer that exceeds 5% of total investments. Investments issued or explicitly guaranteed by the U.S. government and investments in mutual funds, external investment pools, and other pooled investments are excluded.

Foreign Currency Risk Exposure

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. It is the Board’s policy that external managers demonstrate sensitivity to foreign currency risk. The foreign currency exposure of the System may be hedged back to the U.S. dollar using forward foreign exchange contracts. From 0% to 100% of the foreign currency exposure of a portfolio may be hedged. Cross-hedging to currency other than the U.S. dollar may reach 25% of the total portfolio. Currency speculation is not permitted.

The F&P exposure to foreign currency risk is presented on the following table:

Currency	Fair Value (USD)
Euro Currency Unit	$ 117,699,791
British Pound Sterling	105,980,168
Japanese Yen	63,901,876
Swiss Franc	31,210,625
Canadian Dollar	26,445,245
Hong Kong Dollar	21,870,366
Swedish Krona	8,708,739
Danish Krone	7,117,138
Australian Dollar	3,529,626
South Korean Won	3,091,281
New Taiwan Dollar	1,853,549
Indonesian Rupiah	1,741,836
South African Comm Rand	1,669,971
Norwegian Krone	1,261,334
Brazil Real	467,487
Thailand Baht	282,768
Singapore Dollar	272,147
Mexican Peso	62,437
Total Foreign Currency	$ 397,166,384
U.S. Dollars (held in International Equity)	$ 255,737,816

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates of debt investments will adversely affect the fair value of an investment. F&P uses the Option Adjusted Duration as a measure of interest rate sensitivity for bonds. Duration is a measure of the approximate sensitivity of a bond's value to interest rate changes. The Board's fixed income interest rate policy states that the effective duration of a portfolio may not exceed 120% of the effective duration of the underlying Barclay Capital Aggregate benchmark.

Asset Type	Option Adjusted Duration (in years)	Fair Value
Corporate bonds	4.44	$152,443,756
Emerging markets debt fund	5.45	127,933,130
U.S. treasury notes and bonds	6.81	67,690,743
U.S. Government agency bonds	3.87	55,784,232
NHIT agency mbs trust	5.66	22,659,180
Barclay aggregate index	6.01	18,504,876
Senior floating rate fund	0.10	5,412,307
Total debt securities		$450,428,224

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Credit Risk by Quality

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligation. The Board has not adopted a formal policy to limit credit risk. The F&P's rated debt investments as of June 30, 2018, were rated by Standard & Poor's, and for securities with no S&P rating, the Moody Quality ratings were used.

Asset Type	Quality Ratings	Fair Value
Corporate bonds	AAA	$ 30,638,445
	AA	12,749,879
	A	34,402,084
	BBB	55,888,341
	BB	8,555,538
	B	5,404,517
	Not Rated	4,804,952
Total corporate bonds		152,443,756
Emerging markets debt fund	BBB	127,933,130
U.S. treasury notes and bonds	AA	67,690,743
U.S. Government agency bonds	AA	49,679,531
U.S. Government agency bonds	AAA	3,682,763
U.S. Government agency bonds	Not Rated	2,421,938
NHIT agency mbs trust	AAA	22,659,180
Barclay aggregate index	AA	18,504,876
Senior floating rate fund	BB	5,412,307
Total debt securities		$ 450,428,224

Investment Policy

The System's investment policy is to preserve the capital value of the System adjusted for inflation; to ensure adequate liquidity to meet benefit liabilities as they fall due; to meet the actuarial interest rate assumptions over the longer term while maintaining appropriate risk levels; and to exceed the investment return by the astute management of System assets. The System's investment policy is designed to provide broad diversification among asset classes in order to maximize returns at a prudent level of risk. In addition, asset allocation ranges, target allocations and a process of periodic rebalancing are used to maintain compliance with policy. The long-term expected rate of return was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The following is the Board's adopted target asset allocation and the best estimates of arithmetic real rates of return by asset class.

Asset Class	**Allocation Target**	**Long-Term Expected Real Rate of Return**
US Equity	22.5%	4.5%
International Equity	24.5%	5.2%
Private Equity	10.0%	7.3%
Fixed Income	13.0%	3.1%
Real Estate	10.0%	4.6%
Hedge Funds	10.0%	3.5%
Energy MLP	5.0%	6.0%
Private Energy	5.0%	7.3%
Cash	0.0%	1.5%
Total Portfolio	***100.0%***	

Rate of return

For the year ended June 30, 2018, the annual money-weighted rate of return of the Plan, calculated as the internal rate of return on investments, net of investment expenses, was 7.99%. The money-weighted rate of return expresses the Plan's investment performance, net of investment expenses, adjusted for the changing amounts actually invested.

6. Deferred Retirement Option Program (DROP):

The System has two DROP programs, DROP and DROP 2. DROP became effective July 1, 1996 and DROP 2 became effective January 1, 2010. The DROP balance as of June 30, 2018, is $49,754,133. The DROP 2 balance as of June 30, 2018, is $62,687,472.

DROP

Members with more than 20 years of service on or before December 31, 2009 can elect to participate in DROP at any time. A member's DROP participation period can be for one, two or three years. During that time the member will accrue no additional service. A member who continues employment at the end of his/her DROP participation period shall begin to earn additional service credit.

If a member retires during his/her DROP participation period or immediately at the end of this period, he/she shall be entitled to a Basic DROP Retirement Benefit. This shall equal:

1) The retirement benefit that would have been paid had the member retired at the time he/she began his/her DROP participation, plus

2) A lump sum equal to the member's DROP account. This equals the accumulation of the annuity payments the member would have received had he/she retired at the time his/her DROP participation began receiving benefits, plus the member contributions paid during his/her DROP participation period, plus interest at 8.25%.

If a member retires later than the end of the three-year DROP period but less than 18 months after the conclusion of his/her DROP participation period, he/she is entitled to an Intermediate DROP Retirement Benefit. This shall equal:

1) The retirement benefit that would have been paid had the member retired at the time he/she began his/her DROP participation, plus

2) Benefit accrual of 2% plus an extra 1.5% per year (not to exceed 18 months) for service after the DROP participation period.

3) A lump sum equal to the DROP account. No additions (other than interest) are added after the conclusion of the DROP participation period.

If a member retires more than 18 months after the conclusion of his/her DROP participation period, he/she is entitled to a Full DROP Retirement Benefit. This shall equal:

1) The retirement benefit based on current average final compensation and all service excluding service while a participant is in DROP.

2) Benefit accrual includes an extra 1.5% per year (not to exceed four years) for service after the DROP participation period.

3) A lump sum equal to the DROP account. No additions (other than interest) are added after the conclusion of the DROP participation period.

DROP 2

Members with more than 20 years of service on or after January 1, 2010, but not before December 31, 2009, can elect to participate in DROP 2. Effective July 1, 2010, the 20-year requirement was moved to 25 years for non-grandfathered members. A member's DROP 2 participation period can be for one, two or three years. The participant must remain in DROP 2 for at least one year. Those participants who retire prior to the end of the first year are not entitled to receive any amounts accumulated in the DROP 2 account. No additional service is accrued during DROP 2 participation. A member who continues employment at the end of the DROP 2 participation period shall begin to earn additional service credit.

If a member retires during the DROP 2 participation period or immediately at the end of this period, the member is entitled to an Early DROP 2 Retirement Benefit. This is equal to:

1) The retirement benefit that would have been paid had the member retired at the time he/she began his/her DROP 2 participation, plus

2) A lump sum equal to the member's DROP 2 account. This equals the accumulation of the annuity payments the member would have received had he/she retired at the time his/her DROP 2 participation began plus the member contributions paid during his/her DROP 2 participation period, plus interest at 5.5% for grandfathered participants and 3.0% for non-grandfathered participants.

If a member retires later than the end of the three-year DROP 2 period but less than 3.5 years for police employees or five years for fire employees after the conclusion of his/her DROP 2 participation period, he/she is entitled to a Mid DROP 2 Retirement Benefit. This is equal to:

1) The retirement benefit that would have been paid had the member retired at the time he/she began his/her DROP 2 participation, plus

2) Benefit accrual of 2% for service after the DROP 2 participation period began.

3) An additional benefit accrual of 1.5% per year (not to exceed four years) for service after the DROP 2 participation period for fire employees only. Police employees do not receive an additional benefit accrual.

4) A lump sum equal to the DROP 2 account. No additions (other than interest) are added after the conclusion of the DROP 2 participation period.

If a member retires more than 3.5 years for police employees or five years for fire employees after the conclusion of his/her DROP 2 participation period, he/she is entitled to a Complete DROP 2 Retirement Benefit. This shall equal:

1) The retirement benefit based on current average final compensation and all service excluding service while a participant is in DROP 2.

2) Benefit accrual includes an extra 1.5% per year (no to exceed four years) for service after the DROP 2 participation period for fire employees only. Police employees do not receive an additional benefit accrual.

3) A lump sum equal to the DROP 2 account. No additions (other than interest) are added after the conclusion of the DROP 2 participation period.

7. Capital Assets:

Capital Assets consisting of furniture and equipment, computer equipment and leasehold improvements are recorded at cost. Depreciation on computer equipment is calculated on a straight-line basis over a five year useful life; depreciation on leasehold improvements and office furniture is calculated on a straight-line basis over fifteen years, the life of the building lease.

Depreciable Capital Assets	July 1, 2017 Balance	Capital Acquisitions	Dispositions	June 30, 2018 Balance
Computer equipment	$ 991,820	$ 128,266		$1,120,086
Office furniture / equipment	420,385			420,385
Leasehold improvements	1,592,763			1,592,763
Totals	$3,004,968	$ 128,266		$3,133,234

Accumulated Depreciation	July 1, 2017 Balance	Increases	Decreases	June 30, 2018 Balance
Computer equipment	(710,941)	(149,116)		(860,057)
Office furniture / equipment	(312,794)	(28,026)		(340,820)
Leasehold improvements	(1,090,053)	(106,544)		(1,196,597)
Totals	(2,113,788)	(283,686)		(2,397,474)
Capital Assets, net	$ 891,180	$ (155,420)		$ 735,760

8. Net Pension Liability:

The following schedules show the Net Pension Liability as of June 30, 2018, and the sensitivity of the NPL to the discount rate. The discount rate used to measure the total pension liability was 7.25 percent. The projection of cash flows used to determine the discount rate assumed that member and employer contributions will be made at rates equal to those based on the June 30, 2018, Actuarial Valuation Report. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service cost of future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, F&P's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members as of July 1, 2018. Therefore, the long-term expected rate of return on F&P investments was applied to all periods of projected benefit payments to determine the total pension liability as of June 30, 2018.

Net Pension Liability

Total Pension Liability	$ 3,884,617,239
Plan Fiduciary Net Position	2,691,302,016
Net Pension Liability	$ 1,193,315,223
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	69.3%

	1% Decrease 6.25%	Discount Rate 7.25%	1% Increase 8.25%
Total Pension Liability	$ 4,340,954,265	$ 3,884,617,239	$ 3,505,581,553
Plan Fiduciary Net Position	2,691,302,016	2,691,302,016	2,691,302,016
Net Pension Liability	$ 1,649,652,249	$ 1,193,315,223	$ 814,279,537
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	62.0%	69.3%	76.8%

Valuation Date	6/30/2018

The total pension liability was determined by an actuarial valuation as of June 30, 2018, using the following actuarial assumptions, applied to all periods included in the measurement:

Actuarial Cost Method	Entry Age Normal
Discount rate	7.25%
Price inflation	2.75%
Salary increases	3.00% plus merit component based on employee classification and years of service
Mortality	Actives, Retirees, Beneficiaries: 114% and 130% of the RP-2014 Blue Collar Mortality Table for males and females respectively projected using the RPEC_2014 model, with an ultimate rate of 0.85% for ages 20-95, an ultimate rate of 0.00% for ages 95-120, convergence to the ultimate rate in year 2017, and using the committee selected weighting assumption. Disabled Members: RP-2014 Disabled Retiree Mortality blended 50%/50% with the healthy annuitant's table projected using the healthy annuitant's RPEC_2014 model.

The last experience study covered the period July 1, 2015 through June 30, 2018. An actuarial experience study is generally conducted every five years, however, the F&P conducts an experience study every three years.

9. Derivatives:

Derivatives are generally defined as an investment contract or security with a value that depends on, or is derived from, the value of an underlying asset, reference rate or financial index. The F&P has classified the following instruments as forward foreign contracts:

Forward Currency Contracts

Certain F&P investment managers enter into forward currency contracts to manage exposure to fluctuations in foreign currency exchange rates on portfolio holdings. Those managers also enter into forward exchange contracts to settle future obligations. A forward exchange contract is a commitment to purchase (payable) or sell (receivable) a foreign currency at a future date at a negotiated forward rate. Risk associated with such contracts includes movement in the value of a foreign currency relative to the U.S. dollar. Unrealized gain or loss on forward currency contracts is the difference between the contract and the closing fair value of such contract and is included in the statement of changes in fiduciary net position as net appreciation/depreciation in fair value of investments. The table below summarizes the market value of foreign currency contracts as of June 30, 2018.

Currency	Forward Foreign Contracts Cost Receivable	Forward Foreign Contracts Cost Payable	Forward Foreign Contracts Fair Value Receivable	Forward Foreign Contracts Fair Value Payable
British Pound Sterling	$ 313,568	$ 313,568	$ 313,865	$ 313,568
Canadian Dollar	279,002	279,002	278,546	279,002
Euro Currency Unit	598,540	598,540	598,540	600,057
Euro Currency Unit	107,405	107,405	108,235	107,405
Japanese Yen	260,138	260,138	260,138	259,865
Swedish Krona	113,468	113,468	113,468	113,957
Mexican Peso	59,284	59,284	59,284	59,319
Totals	$ 1,731,405	$ 1,731,405	$ 1,732,076	$ 1,733,173

10. Litigation:

The City enacted changes to the plan, through Ordinance 10-306, effective June 30, 2010: 1) replacing the “variable benefit” increases based on investment performance with tiered post-retirement COLAs based on the attained age of the retiree or beneficiary, 2) increasing the months used for the average final compensation calculation, 3) lengthening the eligibility requirements for normal service retirement and DROP 2 participation, and 4) increasing member contribution rates. In 2010, the fire and police unions and several plan participants and beneficiaries filed suit in U.S. District Court, claiming that the City wrongfully impaired the pension contract with the plan membership and violated the “Contract Clause” and the “Takings Clause” of the U.S. Constitution when it enacted the changes.

On September 20, 2012, after holding a three-phase trial, the court ultimately decided that: 1) the City impaired its contract with plan members by its replacement of the variable benefit with a tiered post-retirement COLA, 2) the impairment was substantial, and 3) although it was reasonable and necessary for the City to eliminate the “variable benefit” in order to sustain the plan, the tiered, post-retirement fixed COLAs granting older retirees higher COLAs than younger retirees rendered the change unconstitutional under the federal constitution.

The City and the unions both appealed the decision. On December 28, 2012, the judge issued an order staying the effects of his ruling pending appeals to the Fourth Circuit U.S. Court of Appeals. On August 6, 2014, the U.S. Court of Appeals overturned the District Court’s 2012. The Court of Appeals concluded that the provision in the Ordinance did not impair the federal constitutional rights of

F&P members because they could have contested the Ordinance under State law. The Fourth Circuit remanded the case to the District Court to reconsider the “Takings Clause” issue. Upon remand, the Plaintiffs sought to add state law claims to their federal suit and the City objected. After a July 22, 2016 hearing, the District Court ruled that the unions had to bring their state law claims in a Maryland State court. The District Court stayed the remaining federal “Takings Clause” claim and closed the case.

On August 19, 2016, the police and fire unions and several individuals filed a class action complaint in the Circuit Court for Baltimore City alleging that passage of the Ordinance by the City wrongfully breached the pension contract with the plan membership under F&P’s contract clause and the common law of the State of Maryland. The Plaintiffs requested judgment against the City awarding Plaintiffs monetary damages, equitable relief, specific performance – including restoring pre-Ordinance F&P provisions - attorney’s fees, costs, and judgment interest.

On January 2, 2018, the Circuit Court ruled that: (1) the contract clause of the plan prohibited the City from eliminating the variable benefit with regard to F&P members who were either retired or retirement-eligible as of June 30, 2010 and, by enacting the Ordinance, the City unlawfully diminished the rights of retired and retirement-eligible F&P members to the variable benefit and thus breached its contract with them; and (2) the City was entitled to make reasonable modifications affecting active members of the F&P plan as long as each change to benefits represented a diminution of contractual rights balanced by other new benefits or justified by countervailing equities for the public’s welfare.

A trial to determine the legality of the Ordinance 10-306 benefit modifications affecting active members was held in Circuit Court on October 29th.

It is likely that both the City and the unions will appeal any final decision rendered by the Circuit Court to the Court of Special Appeals of Maryland and, ultimately, to the Maryland Court of Appeals.

Barring a final decision from the Court of Appeals rendering Ordinance 10-306 invalid, F&P will continue to administer the F&P plan in accordance with Ordinance 10-306.

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REQUIRED SUPPLEMENTARY INFORMATION AND SUPPORTING SCHEDULES

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
SCHEDULE OF INVESTMENT RETURNS
For the Year Ended June 30

Schedule of Changes in Net Pension Liability and Related Ratios

	2018	2017	2016	2015	2014
Total Pension Liability:					
Interest (includes interest on service cost)	$ 275,197,368	$ 269,479,447	$ 261,805,511	$ 257,871,163	$ 250,480,374
Service cost	70,244,396	70,986,959	71,220,766	66,665,615	66,034,831
Changes of assumptions	86,384,050			35,744,707	
Differences between expected and actual experience	(20,544,752)	(17,476,659)	11,431,589	28,263,161	1,405,813
Benefit payments, including refunds of member contributions	(246,970,565)	(245,080,080)	(238,842,513)	(224,934,312)	(221,439,237)
Net change in total pension liability	**164,310,497**	**77,909,667**	**105,615,353**	**163,610,334**	**96,481,781**
Total pension liability - beginning	**3,720,306,742**	**3,642,397,075**	**3,536,781,722**	**3,373,171,388**	**3,276,689,607**
Total pension liability - ending	**$ 3,884,617,239**	**$ 3,720,306,742**	**$ 3,642,397,075**	**$ 3,536,781,722**	**$ 3,373,171,388**
Plan fiduciary net position					
Net investment income	$ 211,667,943	$ 274,387,604	$ 3,002,726	$ 53,902,299	$ 314,449,271
Contributions - employer	137,738,323	129,688,977	121,115,085	119,020,291	113,843,250
Contributions - members	31,285,881	29,901,791	30,549,801	30,341,796	28,265,556
Benefit payments, including refunds of member contributions	(246,970,565)	(245,080,080)	(238,842,513)	(224,934,310)	(221,439,237)
Administrative expense	(4,984,228)	(4,328,135)	(4,407,296)	(4,297,773)	(3,907,539)
Net change in total pension liability	**128,737,354**	**184,570,157**	**(88,582,197)**	**(25,967,697)**	**231,211,301**
Plan fiduciary net position - beginning	**2,562,564,662**	**2,377,994,505**	**2,466,576,702**	**2,492,544,399**	**2,261,333,098**
Plan fiduciary net position - ending	**$ 2,691,302,016**	**$ 2,562,564,662**	**$ 2,377,994,505**	**$ 2,466,576,702**	**$ 2,492,544,399**
Net pension liability - ending	**$ 1,193,315,223**	**$ 1,157,742,080**	**$ 1,264,402,570**	**$ 1,070,205,020**	**$ 880,626,989**

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS (continued)
SCHEDULE OF INVESTMENT RETURNS (continued)
For the Year Ended June 30

Plan fiduciary net position as a percentage of the total pension liability	**69.28%**	**68.88%**	**65.29%**	**69.74%**	**73.89%**
Covered payroll	**$ 323,350,763**	**$ 296,356,741**	**$ 300,855,075**	**$ 298,354,900**	**$ 284,210,233**
Net pension liability as a percentage of covered payroll	**369.05%**	**390.66%**	**420.27%**	**358.70%**	**309.85%**

Schedule of Investment Returns

	2018	**2017**	**2016**	**2015**	**2014**
Annual money-weighted rate of return, net of investment expense	7.99%	11.29%	-0.10%	2.00%	13.60%

These schedules are presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, the Fire and Police Employees' Retirement System will present information for those years for which information is available.

Starting FYE 2018, the covered payroll is reported as beginning on the valuation date. In prior years, it was reported as ending on the valuation date.

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
Required Supplementary Information

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year Ended June 30	City Contribution Per Actuarial Valuation	Contributions Required From State of Maryland	Additional City Contributions	Total Contributions Required	Total Contributions Made	Covered Payroll	Contribution Rate of Covered Payroll
2009	$68,928,188	$585,048		$69,513,236	$69,513,236	$281,423,808	24.70
2010	81,879,056	818,687	11,400,000	82,697,743	94,097,743	276,576,626	34.02
2011	89,799,377	841,660	16,898,836	90,641,037	107,539,873	275,647,861	39.01
2012	98,895,949	790,190	7,802,264	99,686,139	107,488,403	284,601,473	37.77
2013	101,291,889	786,970	5,700,000	102,078,859	107,778,859	277,524,356	38.84
2014	113,003,944	839,306		113,843,250	113,843,250	284,210,233	40.06
2015	118,190,306	829,985		119,020,291	119,020,291	298,354,900	39.89
2016	120,275,610	839,475		121,115,085	121,115,085	300,855,075	40.26
2017	128,806,072	882,905		129,688,977	129,688,977	296,356,741	43.76
2018	136,832,361	905,962		137,738,323	137,738,323	323,350,763	42.60

Notes:

Covered payroll is defined as the pensionable wages on which contributions are based.

Starting in FYE 2018, the covered payroll is reported as beginning on the valuation date. In prior years, it was reported as ending on the valuation date.

See notes to required supplementary information.

1. Ordinance 10-306, signed by the Mayor on June 22, 2010, provided amendments and clarifications to the plan that affect current and future members and retirees. The Ordinance, which was clarified by Ordinance 10-357 and signed by the Mayor on August 10, 2010: (1) modified the plan's variable post-retirement increase benefit provisions by changing to a guaranteed, fixed increase: 1% for eligible retirees and beneficiaries aged 55 to 64 who have been receiving periodic benefit payments for 2 or more years as of June 30, 2011, beginning in January 2012; and 2% for eligible retirees and beneficiaries aged 65 and older and for 100% line-of-duty disability retirees and their beneficiaries who have been receiving periodic benefit payments for 2 or more years as of June 30, 2010, beginning in January 2011; and no increases for retirees less than 55 years of age; (2) changed the age and service requirements for a normal service retirement benefit for all non-grandfathered members (members who, as of June 30, 2010, did not meet the eligibility requirements for a service retirement benefit or had fewer than 15 years of service) to the earlier of 25 years of service or age 55, with at least 15 years of service as an F&P member; (3) established a new early service retirement benefit for non-grandfathered members by allowing members who are not eligible for the new normal service retirement to retire at or after their former retirement eligibility date and receive a reduced early retirement benefit; (4) changed the definition of "average final compensation" for non-grandfathered members to mean a member's salary over 36 consecutive months during which pay was highest; (5) increased DROP 2 eligibility to 25 years of service as a contributing F&P member for non-grandfathered members with less than 15 years of service as of June 30, 2010; (6) increased the percentage of compensation contributable by all members to 7% effective July 1, 2010; 8% effective July 1, 2011; 9% effective July 1, 2012; and 10% effective July 1, 2013; (7) reduced interest paid by the plan on withdrawal of accumulated contributions and lump-sum death benefits from 5.5% to 3.0% for all members; (8) reduced interest paid by the plan on DROP 2 accounts from 5.5% to 3.0% for members with less than 15 years of service; (9) established a new minimum annual benefit of $16,000 payable to spousal beneficiaries of sworn members who, before August 1, 1996, retired or died in service with 20 or more years of service; (10) allowed pre-employment military service to be used to satisfy eligibility for a normal service, DROP, or DROP 2 retirement for all members; (11) lowered the plan's long-term investment earnings assumption from 8.25% to 8.0%; and (12) expanded the plan's Board of Trustees to add the City's Director of Finance and a third Mayoral appointee and established new professional qualifications for the Mayoral appointees.

   Due to the aforementioned plan changes, the June 30, 2009 actuarial valuation report was revised. The actuarial accrued liability was reduced by $88.8 million and the fiscal year 2011 employer contribution due July 1, 2010 was reduced from $101.8 million to $90.6 million

2. The June 30, 2010, unfunded actuarial liability increased $134.1 million from a revised $374.9 million at June 30, 2009, due to the above noted changes in plan provisions, to $509.0 million mainly due to the recognition of prior year investment losses.

3. Ordinance 11-444, signed by the Mayor on May 19, 2011, established a new minimum annual benefit of $16,000 payable to spousal beneficiaries of sworn members who, before August 1, 1996, retired on account of a Line-of-Duty Disability with less than 20 years of service. The unfunded actuarial liability increased $49.6 million to $558.6 million at June 30, 2011; the increase included $5.6 million due to the minimum benefit improvement which commenced in January 2012.

4. The actuarially determined contribution rates in the schedule of employer contributions are calculated as of June 30, 2018. The following actuarial methods and assumptions were used to determine contribution rates reported in the schedule:

Valuation date	6/30/2016
Timing	Actuarially determined contribution rates are calculated based on the actuarial valuation two years prior.

Key methods and assumptions used to determine contribution rates:

Actuarial cost method	Entry Age Normal Cost Method
Asset valuation method	5-year smoothed market
Amortization method	Closed 25-year level dollar amortization of unfunded liability as of July 1, 2014
Discount rate	7.50%
Price inflation	3.00%
Salary increases	3.00% plus merit component based on employee classification and years of service
Mortality	114% and 130% of the RP-2014 Blue Collar Mortality Table for males and females, respectively, projected using the RPEC_2014 model, with an ultimate rate of 0.85% for ages 20-95, an ultimate rate of 0.00% for ages 95-120, convergence to the ultimate rate in year 2017, and using the committee selected weighting assumption for healthy lives. RP-2014 Disabled Retiree Mortality blended 50%/50% with the healthy annuitant's table projected using the version of the RPEC_2014 model for healthy members.

A complete description of the methods and assumptions used to determine contribution rates for the year ending June 30, 2018 can be found in the June 30, 2016 actuarial valuation report.

5. Ordinance 15-381, signed by the Mayor on June 15, 2015, authorized all retirement allowances shall be paid monthly rather than bi-weekly, effective January 1, 2016. Service retirements for all members and beneficiaries take effect on the 1st day of the calendar month and shall be paid on the 15th day of that calendar month. Death and survivorship benefits take effect on the 1st day of the calendar month following the month in which the member dies and shall be paid on the 15th day of that calendar month. For the calendar month in which the death of a retired member or beneficiary occurs, the F&P shall owe and pay the entire monthly allowance due to a retired member or beneficiary.

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
SCHEDULE OF ADMINISTRATIVE EXPENSES
For the Year Ended June 30, 2018

Salaries and Wages:		
Permanent full-time salaries	$2,005,572	
Overtime	11,989	
Total Salaries and Wages		$2,017,561
Other Personnel Costs:		
Medical insurance and health care	292,378	
Retirement	327,262	
Social security	145,128	
Other employee benefits	22,198	
Total Other Personnel Costs		786,966
Contractual Services:		
Technology systems support	785,756	
Lease payments	260,150	
Actuarial services	181,689	
Retirement payroll processing	175,078	
Legal Fees	79,864	
Printing	63,025	
Other professional services	56,504	
Staff training	51,220	
Postage	42,237	
Financial audit fees	41,000	
Board meeting expense	25,481	
Trustee education	21,473	
Equipment rental	17,096	
Dues and publications	10,236	
Telephone systems	9,417	
Equipment maintenance	7,633	
Total Contractual Services		1,827,859
Depreciation expense		283,686
Office supplies		28,482
Office furniture		5,851
Computer equipment		33,823
Total Administrative Expenses		$4,984,228

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
SCHEDULE OF INVESTMENT EXPENSES
SCHEDULE OF PAYMENTS TO CONSULTANTS
For the Year Ended June 30, 2018

Schedule of Investment Expenses

Investment Expenses	Fees
Investment management fees	$14,179,874
Investment consultant fees	916,024
Securities lending fees	161,851
Custodial fees	161,046
Total Investment Expenses	**$15,418,795**

Schedule of Payments to Consultants

Firm	Fees	Nature of Service
Magothy Technology	$470,861	Technology systems support
TeleCommunication Systems	193,151	Technology systems support
Cheiron	181,689	Actuarial services
Venable, LLP	78,542	Legal fees
CliftonLarsonAllen	41,000	Financial audit
Kasowitz, Benson, Torres, & Friedman, LLP	1,322	Legal fees
Total Paid to Consultants	**$966,565**	

Notes:

(1) Several of the alternative investment managers provide account valuations on a net of fee basis. Manager fees are netted against investment income and because they are not separable for specific investment income, amounts are recorded and reported net of fees.

(2) A schedule of fees and commissions is also illustrated in the Investment Section on page 63.

INVESTMENT SECTION

September 24, 2018

To the Board of Trustees of the
Fire & Police Employees' Retirement System of the City of Baltimore

Introduction

Summit Strategies Group ("Summit") prepares this report for the Baltimore City Fire & Police Employees' Retirement System (the "System") based on the information supplied by the System's custodian, BNY Mellon Asset Servicing ("BNY Mellon"). BNY Mellon holds assets in safe-keeping for the System, regularly values the assets for the System, and provides Summit with beginning and ending fair values, cash flows, securities transactions and positions for the System as well as each manager monthly. Third-party custodians or administrators for pooled investment vehicles such as mutual funds, collective investment trusts, hedge funds and other commingled funds provide BNY Mellon and the System with fair values. Private partnerships provide the System and Summit capital account statements and audited financial statements for those investments. BNY Mellon audits the information contained in its monthly accounting reports. Summit uses BNY Mellon's monthly reports to independently calculate performance returns for the System and the System's Board of Trustees (the "Trustees").

Distinction of Responsibilities

The Trustees are responsible for the investment and administration of the System's assets. This includes establishing the strategic asset allocation that, over time, is the primary determinant of the investment return on assets. A thorough understanding of both the System's assets and liabilities is essential for determining an appropriate asset allocation. The key drivers of this analysis are the projections of the System's liabilities and of expected future returns and risk for each asset class, as well as correlation between asset classes. The liability projections include all critical metrics of the System's pension plan including: membership, benefits structure, contributions, liquidity needs, projected asset growth and funding requirements. In March 2016, Summit conducted and presented an asset-liability study to the System's Trustees at which time the Trustees adopted a strategic target asset allocation. Subsequent to an asset-liability study, Summit annually reviews the target asset allocation, expected asset class returns, and relative valuation with the Trustees and modifies the target asset mix if necessary. The following page shows the target asset allocation, as modified by the Trustees, as of fiscal year-end ("FYE") 2018.

Investment Policy and Structure

The target asset allocation adopted by the Trustees is included in the System's Statement of Investment Objectives and Policies. The System employs various investment managers to implement the asset allocation within the guidelines and limitations contained in the Statement of Investment Objectives and Policies, Asset Class Guidelines and Manager Instructions (together, the "Investment Policy"). The System's Investment Policy is designed to provide broad diversification among asset classes and investment strategies in order to maximize return at a prudent level of risk as determined by the Trustees, and to minimize the risk of large losses to the System. Within each asset class, the Trustees employ several investment managers to further diversify the investment approach and to minimize style biases. In addition, asset allocation ranges, target allocations, and a process of periodic rebalancing are used to maintain compliance with the Investment Policy and to increase the likelihood the System will achieve its long-term risk and return objectives. The System's assets are invested using both active and passive investment managers to obtain the desired asset allocation mix in a cost effective and efficient manner. Each investment manager is delegated full investment discretion for its respective portfolio including the discretion to purchase, hold, and sell individual securities or other investment positions and control industry, economic sector, and geographic exposure subject to the Investment Policy.

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The following table outlines the System's long-term target asset allocation as of FYE 2018:

Asset Class	Allocation Target
US Equity	22.5%
International Equity	24.5%
Fixed Income	13.0%
Private Equity	10.0%
Hedge Funds	10.0%
Real Estate	10.0%
Energy/Natural Resources	10.0%
Cash Equivalents	<1.0%
Total	**100.0%**

Investment Objectives

The System's Investment Policy contains the following objectives (in order):

1. To preserve the inflation-adjusted fair value of the System;
2. To ensure adequate liquidity is available to meet benefit payments as they fall due;
3. To meet the actuarial rate of return assumptions over time while maintaining an appropriate risk level; and
4. To exceed the investment return objective without unduly jeopardizing objectives 1-3.

The FYE 2018 investment policy return objective is based on a hypothetical portfolio that includes the following allocations: 22.50% Russell 3000 Index, 24.50% MSCI All Country World Ex-US Index; 13% Bloomberg Barclays US Universal Index; 10% Private Equity Composite; 10% HFRI Fund of Funds Composite Index; 10% NCREIF Property Index; 5% Natural Resources/Private Energy Composite; 5% S&P MLP Total Return Index; and <1% FTSE 3 Month T-Bill. In addition, the System's investment performance is evaluated relative to the Public Plan Universe of the BNY Mellon US Trust Universe, which represents the performance of 525 public pension plans with an aggregate fair value of $1.7 trillion as of June 30, 2018. Finally, each investment manager is compared to its relevant market index and style peer universe.

Market Review

For the fiscal year beginning July 1, 2017 and ending June 30, 2018, global equity markets produced strong returns, but it was a tale of two periods. Global equity markets reached record highs to end 2017, driven by the concurrence of rising earnings growth, high consumer and business confidence, and ongoing central bank accommodation. In the fourth quarter of 2017, the Tax Cuts and Jobs Act (TCJA) overhauled the US tax code, lowering the corporate tax rate from 35% to 21% and lowering overall individual tax rates. The MSCI ACWI IMI (benchmark for global equities) grew 5.7% in that quarter. Volatility returned in force over the first half of 2018, after the historically low market volatility environment of 2017. Geopolitical headlines, trade war tensions, inflation fears and interest rate hikes all detracted from global equity market performance. Global equity markets declined (as measured by MSCI ACWI IMI) -0.9% in Q1 of 2018, something not seen since Q3, 2015. Global equity markets recovered in the second quarter, posting gains in April and May, before slipping slightly in June to end the quarter with a return of 0.7%. Positive earnings reports from the first quarter were a tailwind for equity markets. Uncertainty, however, around US-China trade talks and rising interest rates continued to drag. Stock prices did not rally as much as has been historically observed following positive earnings surprises, resulting in only modest gains. In aggregate, the MSCI ACWI IMI grew 11.4% for the trailing year ending June 30, 2018.

The yield on the 10-year Treasury continued its climb over the fiscal year, to end June 30, 2018 at 2.9%, up from 2.3% at the same time the previous year. Strong US economic data, rising inflation expectations, further Federal Reserve rate hikes, and the tax reform passed in Q4 2017 drove yields higher and resulted in lower fixed income returns. The Bloomberg Barclays U.S. Aggregate Index (representing U.S. investment grade bonds) ended the fiscal year down -0.4%.

In the first quarter of 2018, the Federal Energy Regulatory Commission (FERC) ruled that MLPs would no longer be allowed to recover an income tax allowance in their cost of service contracts on interstate pipelines regulated by FERC. Though the ruling did not impact the vast majority of MLP and energy infrastructure assets, the ruling contributed to already mounting negative sentiment for the asset class, given its struggles over the trailing year. MLPs sold off and returned -6.4% in March, to end the quarter down -10.7%. In April and May, however, positive earnings reports and improving sentiment across the energy complex, plus an in-effect reversal of the original FERC ruling, resulted in the best two-month period for the S&P MLP Index since April 2016. For the quarter ending June 30, 2018, the S&P MLP Index returned 13.2%, bringing the return over the trailing 1-year period to -1.8%.

A hypothetical portfolio of 60% MSCI ACWI IMI and 40% Bloomberg Barclays US Aggregate would have returned 6.5% for the trailing one-year ending June 30, 2018. The System's portfolio was able to benefit from its diversification outside traditional stocks and bonds of the 60/40 portfolio. The System's allocation to real estate proved to be a benefit, as the NCREIF Property Index grew 7.2% over the year. The System's hedge fund allocation was additive, with the HFRI Fund of Funds Composite Index returning 5.1%. Finally, the System has investments in private partnerships in the areas of private equity, energy and natural resources, which provide diversification and excess return potential relative to traditional publicly-traded equities. These returns are cash-flow based, with the largest amount of returns typically coming in at the end of their stated investment period. For the fiscal year, however, these investments produced strong double-digit returns on a time-weighted return basis.

Looking forward from June 30, 2018, gains generated by risk assets are likely to moderate compared to the very strong returns observed since 2009. Following 2017, which saw historically low equity market volatility, market fluctuations are likely to increase as the global economy and financial markets continue into late cycle. Geopolitical and trade headlines remain on the radar as potential market-shifters. Despite heightened uncertainty and generally high valuations across broad asset classes, pockets of relative value continue to present attractive opportunities in various sectors and economies globally.

Investment Performance

Summit calculates and reports all returns in accordance with Global Investment Performance Standards ("GIPS"). As an investment consultant, Summit is prohibited from stating that investment performance is shown "in compliance with" or "in accordance with" GIPS, as GIPS compliance is reserved solely for use by investment management firms. Summit, however, strives to uphold and maintain the guiding principles underlying GIPS standards, both ethically and in its performance calculation methodology. Accordingly, all performance returns are calculated using a time-weighted methodology known as the Modified Dietz method. This algorithm attempts to eliminate the effects of cash flows and geometrically links period returns.

The total return for the fiscal year ending June 30, 2018, on all assets was 8.5%, which outperformed its Policy index benchmark of 7.8% and ranked in the 54th percentile of the Public Plan Universe of the BNY Mellon US Trust Universe. The System's Investment Policy calls for measuring performance over rolling 3- to 5-year periods. Prior to FYE 2016 for Investment performance measurement purposes, total System assets were separated into "actively managed" accounts and "other" assets. The "actively managed" portion of the System's total assets referred to the assets diversified according to the Investment Policy. The "other" assets consisted of the cash reserve held for payment of benefits and administrative expenses, Contingency Reserve assets, and Variable Benefit assets held in an immunized portfolio dedicated solely to paying post-retirement benefit increases. This distinction has since been eliminated, but still affects trailing 3-5 year returns. Accordingly, the System's diversified assets have compounded at annual rates of return of 6.9% and 7.5% for the last 3 and 5 years, outperforming benchmark returns of 6.3% and 7.4%, and ranking in the 66th and 73rd percentiles for those periods, respectively. Over the longer time period of the trailing 7 years (post-Financial Crisis) the System's diversified portfolio returned 7.4%, outperforming the benchmark return of 7.2% and ranking in the 64th percentile. Over the trailing 10 years (pre-Financial Crisis), the System's diversified portfolio returned 6.4%, outperforming the benchmark return of 6.2%, and ranked in the 78th percentile of the peer universe. The System's assets produced positive absolute returns and outperformed the policy benchmark return over the trailing 1, 3, 5, 7 and 10 year periods. Peer rankings are reflective of the System's investment objectives and risk-adverse positioning.

Contributive and detractive factors for FY 2018 were:

- Strong absolute returns in domestic equities, international equities, private equity, real estate, and natural resources/private energy contributed to performance;
- Strong relative performance in large cap domestic equities, international equities, real estate, and MLPs contributed to performance;
- Above-target weight to domestic equities, and a below-target weight to MLPs contributed to performance; and
- Poor relative performance in small/mid cap domestic equities, fixed income, and hedge funds, as well as an underweight in private equity and overweight in fixed income detracted from performance.

The fair value of all assets increased from $2.57 billion on June 30, 2017 ending at $2.69 billion on June 30, 2018, net of all cash flows. Time weighted returns for the asset class composites and total fund are shown below.

			Fiscal Year Rate of Return	
	Fair Value ($ in millions)*	**Percent of Total***	**System***	**Benchmark***
US Equity	$698.2	25.9%	16.3%	14.8%
International Equity	$652.9	24.3%	8.7%	7.3%
Fixed Income	$455.8	16.9%	-0.6%	-0.3%
Private Equity	$186.9	6.9%	17.9%	N/A
Hedge Funds	$195.9	7.3%	4.6%	5.1%
Real Estate	$263.6	9.8%	12.3%	7.2%
Energy MLPs	$141.8	5.3%	-0.2%	-1.8%
Natural Resources	$77.8	2.9%	7.6%	N/A
Cash	$19.3	0.7%	3.3%	N/A
Total Assets	$2,692.3	100.0%	8.5%	7.8%

* *Rounded*

It has been an honor to serve the Fire and Police participants and retirees of the System over the last 16 years and a pleasure to work with the System's Board of Trustees and staff. I wish all much continued success in the future.

Respectfully submitted,

Daniel J. Holmes
Principal, Consulting

Investment Objectives

The primary investment objectives of the Board of Trustees (Board) of the Fire and Police Employees' Retirement System (F&P, System) are set forth below. It is recognized that maximizing any one objective may compromise the achievement of other objectives. For example, maximizing liquidity may reduce investment return; seeking maximum investment return may subject capital preservation to higher risk. Accordingly, the investment objectives are given in descending order of priority:

1. To preserve the capital value of the System assets adjusted for inflation;
2. To ensure adequate System liquidity to meet benefit liabilities as they fall due;
3. To meet the actuarial interest rate assumption; and
4. Without unduly jeopardizing the above objectives, to exceed the investment return objective by the astute management of funds.

General Investment Policy

The Board must comply with investment restrictions imposed by the laws of the City of Baltimore and any other State or Federal laws dealing with investment of public retirement plan assets. System investment managers are expected to familiarize themselves with these laws.

Investment policy for the System relates to the portfolio of all assets that comprise the total holdings of the System. The Board recognizes that the objective of a sound and prudent policy is to produce investment results that will preserve the assets of the System, as well as to maximize earnings of the F&P consistent with its long-term needs. These long-term needs have been ascertained through various studies performed on behalf of the Board by its actuary and its investment advisor. Investment policy and the long-term average allocation of plan assets to which they refer are deemed to be consistent with the projected pattern of cash flows to the F&P and its projected benefit payments. Should the projected finances of the System change significantly, the applicable Federal or State statutes be amended, or changes in the System's asset valuation methods be adopted, these policies and average asset allocations will be reviewed and modified by the action of the Board, if appropriate.

The Board recognizes that its investment portfolio must be diversified over several different asset classifications in order to reduce risk. The following asset allocation has been established as an overall objective for the total holdings of the System:

	Percentage of Total Fund at Fair Value
Asset Category	Target
Domestic Equity	22.5%
International Equity	24.5%
Private Equity	10.0%
Energy MLP	5.0%
Private Energy	5.0%
Fixed Income	13.0%
Real Estate	10.0%
Hedge Funds	10.0%

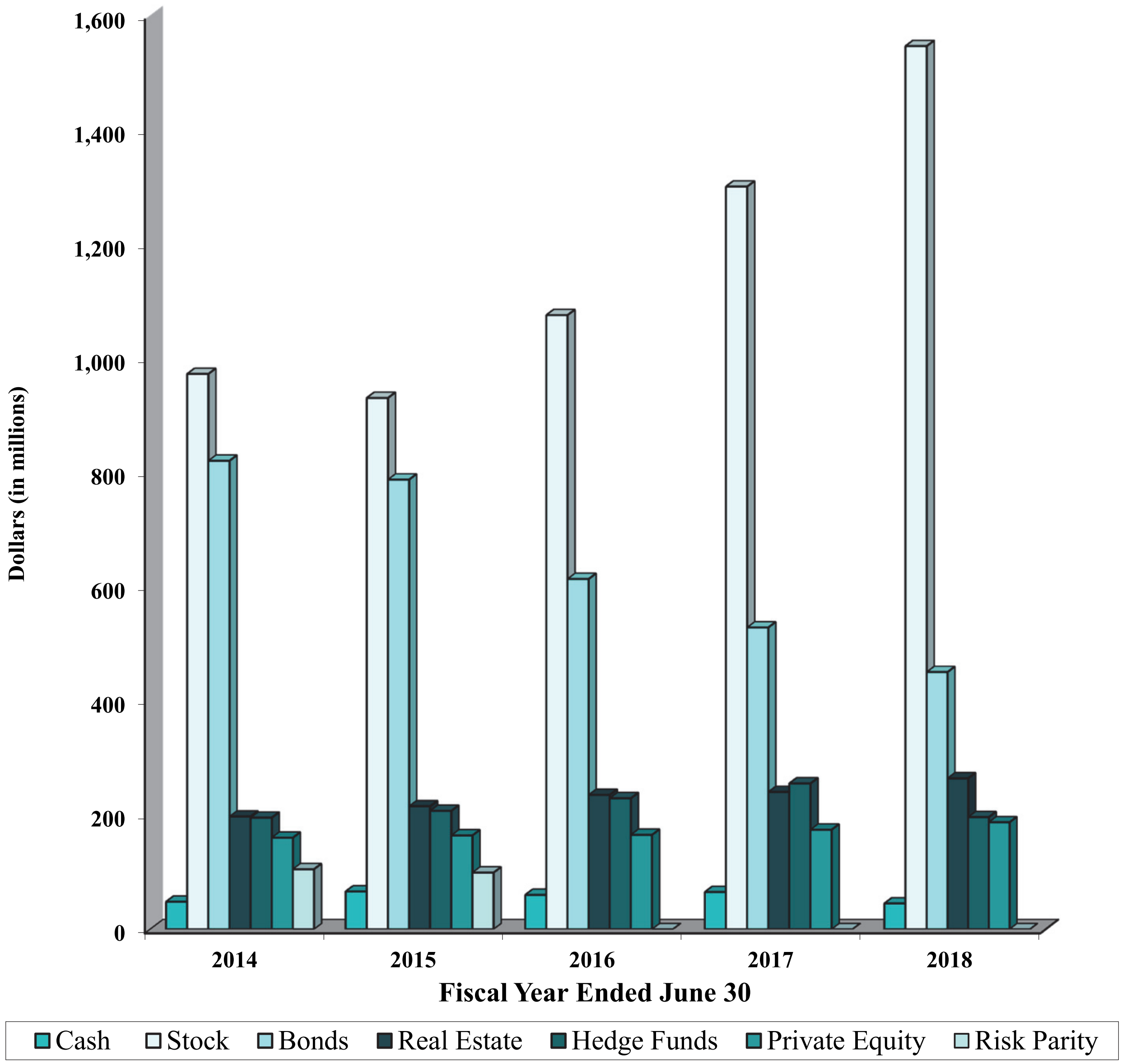
Within each major asset classification, investments are further diversified. Excessive concentration in any particular security, company or industry is to be avoided. Investment guidelines have been supplied to each of the System's investment managers. Subject to these objectives and guidelines, and the System laws, the investment managers have full discretion in investment decisions. Managers are advised to notify the Board in writing if these objectives cannot be met or if the guidelines constrict performance. The investment managers are encouraged to suggest changes to the guidelines at any time.

Proxy Voting

Pursuant to a U.S. Department of Labor directive, the Board has a long standing policy that, when solicitations of proxies with respect to securities are received by an investment manager, the decisions as to whether and how to vote such proxies are delegated to that investment manager.

The Board also recognizes, however, that the investment manager's decisions must be made in accordance with applicable legal standards and that the Board has an obligation to ensure that those standards are being observed. Therefore, the Board requests that annually (June 30) each management firm furnish the System with a written statement of their policy and practices with respect to the voting of securities held in their employee benefit plan asset portfolios, together with their written assurance that such policies and practices are being followed. These statements and assurances will be included, and will be given appropriate weight, in the Board's continuing evaluation of each manager's overall investment performance.

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
TOTAL PORTFOLIO COMPOSITION
FAIR VALUE OF INVESTMENTS



	2014		2015		2016		2017		2018	
Cash	$ 48	2%	$ 66	2%	$ 60	2%	$ 65	2%	$ 45	2%
Stock	972	38	930	38	1,075	45	1,300	45	1,546	57
Bonds	820	35	787	35	613	26	528	26	450	17
Real Estate	197	7	215	7	235	10	240	10	264	10
Hedge Funds	195	8	207	8	229	10	255	10	196	7
Private Equity	160	6	164	6	165	7	174	7	187	7
Risk Parity	105	4	99	4						
Total	$ 2,497	100%	$ 2,468	100%	$ 2,377	100%	$ 2,562	100%	$ 2,688	100%

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
INVESTMENT RESULTS - TIME WEIGHTED RATE OF RETURN

		Annualized		
Total Returns	**FY 2018**	**3 Years**	**5 Years**	**10 Years**
TOTAL PORTFOLIO	8.5%	6.9%	7.5%	6.6%
Composite Benchmark	7.8	6.3	7.4	6.2
DOMESTIC EQUITIES	16.3	11.9	13.2	10.9
S&P 500 Index	14.4	11.9	13.4	10.2
Russell 1000	14.5	11.6	13.4	10.2
Russell 2000	17.6	11.0	12.5	10.6
Russell 3000	14.8	11.6	13.3	10.2
INTERNATIONAL EQUITIES	8.7	4.9	6.0	5.2
MSCI AC World ex USA (Net)	7.3	5.1	6.0	2.5
DOMESTIC FIXED INCOME	(0.6)	2.3	1.9	5.0
Barclays Capital US Government/Credit	(0.6)	1.8	2.3	3.8
Barclays Capital Aggregate	(0.4)	(0.4)	2.3	3.7
PRIVATE EQUITY	17.9	14.4	15.0	10.3
S&P 500 Index Plus 200 bps	16.4	13.9	15.4	12.2
HEDGE FUND	4.6	5.3	6.0	3.1
HFRI FOF Composite Index	5.1	1.9	3.5	1.4
REAL ESTATE	12.3	10.5	11.9	4.1
NCREIF Property Index	7.2	8.3	9.8	6.2
ENERGY MLP	(0.2)	(4.5)	1.2	N/A
S&P MLP Index	(1.8)	(6.3)	(3.0)	7.2

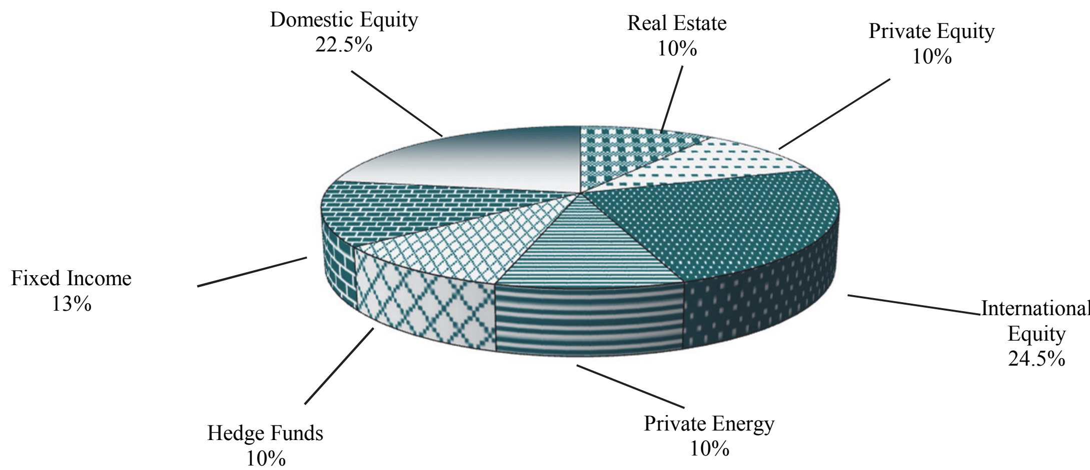
Notes:

The Composite Benchmark exhibits the overall rate of return for a sample unmanaged portfolio. At fiscal year end 2018, the Composite Benchmark is comprised of 22.50% Russell 3000 Index, 24.50% MSCI All Country World Ex-US Index; 13% Bloomberg Barclays US Universal Index; 10% Private Equity Composite; 10% HFRI Fund of Funds Composite Index; 10% NCREIF Property Index; 5% Natural Resources/Private Energy Composite; 5% S&P MLP Total Return Index; and <1% FTSE 3 Month T-Bill.

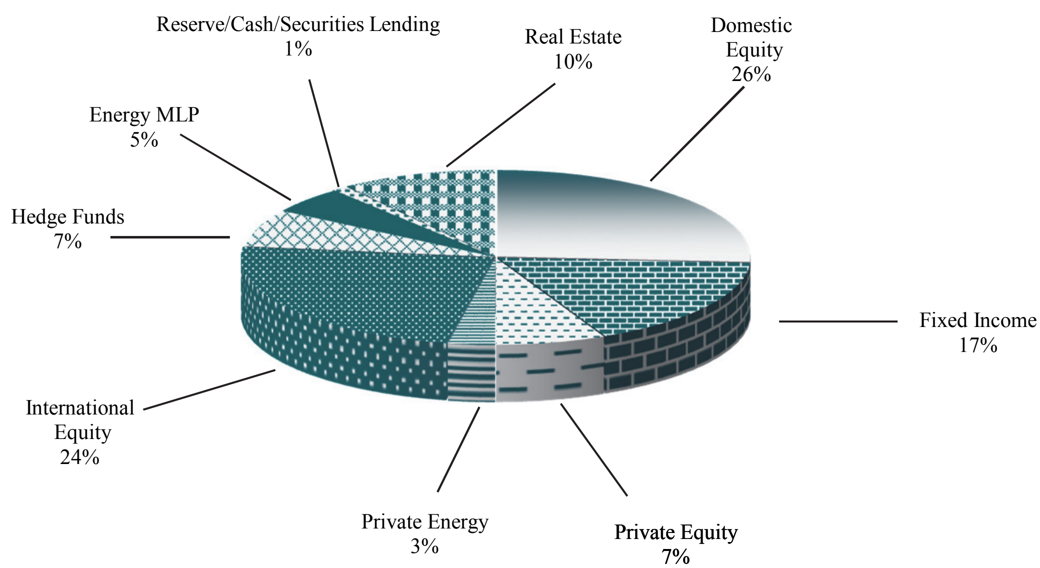
The composite returns above were calculated by the System's investment consultant, who used a time weighted rate of return based on market value.

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
ASSET ALLOCATION - ACTIVELY MANAGED ACCOUNTS
For the Period Ended June 30, 2018

TARGET ASSET ALLOCATION



ACTUAL ASSET ALLOCATION



Fire and Police Employees' Retirement System
City of Baltimore, Maryland
TOP TEN DOMESTIC AND INTERNATIONAL STOCK HOLDINGS BY FAIR VALUE
TOP TEN BOND HOLDINGS BY FAIR VALUE
June 30, 2018

Top Ten Domestic Stock Holdings

	Shares	Stock	Fair Value
1)	104,200	Target Corp	7,931,704.00
2)	176,000	Cisco Systems Inc	7,573,280.00
3)	66,900	Allstate Corp/The	6,105,963.00
4)	167,551	Pfizer Inc	6,078,750.28
5)	93,800	Cvs Health Corp	6,036,030.00
6)	114,600	Verizon Communications Inc	5,765,526.00
7)	59,100	Walmart Inc	5,061,915.00
8)	80,400	Walgreens Boots Alliance Inc	4,825,206.00
9)	36,800	Chevron Corp	4,652,624.00
10)	55,100	Exxon Mobil Corp	4,558,423.00

Top Ten International Stock Holdings

	Shares	Stock	Fair Value
1)	38,300	Linde Ag	9,140,188.53
2)	49,357	Volkswagen Ag	8,195,678.57
3)	147,898	British American Tobacco Plc	7,478,547.41
4)	978,250	Bp Plc	7,468,944.37
5)	183,284	Royal Dutch Shell Plc	6,566,146.32
6)	152,900	Takeda Pharmaceutical Co Ltd	6,457,511.23
7)	233,500	Kddi Corp	6,389,550.23
8)	66,555	Basf Se	6,364,922.23
9)	370,776	Unicredit Spa	6,188,731.53
10)	80,873	Novartis Ag	6,131,345.42

Top Ten Bond Holdings

	Par	Bonds	Fair Value
1)	3,750,000	Resolution Fdg Corp Strip	3,682,762.50
2)	912,050	Gnma Gtd Remic P/T 18-H02 Fj	910,235.27
3)	800,000	World Financial Network Cr A A	802,120.00
4)	790,000	U S Treasury Note	782,226.40
5)	665,000	Citibank Credit Card Iss A2 A2	665,598.50
6)	638,048	Gnma Gtd Remic P/T 14-H14 Fa	641,040.11
7)	625,000	Federal Home Ln Bk Cons Bd	615,700.00
8)	595,000	U S Treasury Note	591,400.25
9)	550,000	Federal Home Ln Bk Cons Bd	540,479.50
10)	486,424	Freddie Mac Structured Dna1 M2	495,524.53

A complete list of portfolio holdings is available upon request.

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
INVESTMENT SUMMARY
June 30, 2018

	Fair Value	Percent of Total Investments
Stock:		
U.S. Common Stock		
Financial	$ 111,448,110	4.22%
Technology	60,076,032	2.27
Health care	45,679,622	1.73
Consumer durables	43,795,046	1.66
Consumer services	36,562,980	1.38
Energy	31,753,096	1.20
Consumer nondurables	19,212,079	0.73
Basic industries	10,668,359	0.40
Transportation	6,451,993	0.24
Total U.S. Common Stock	365,647,317	13.83
Other		
International Stock	640,038,626	24.21
Equity index funds	322,423,866	12.20
Total Other	962,462,492	36.41
Total Stock	**1,328,109,809**	**50.24**
Bonds:		
U.S. Securities and Agencies		
Treasury notes and bonds	67,690,743	2.56
U.S. Agencies	55,784,232	2.11
Total U.S. Securities and Agencies	123,474,975	4.67
Corporate		
Financial	129,741,440	4.91
Transportation	10,240,090	0.39
Utilities	8,922,712	0.34
Industrial	3,539,514	0.13
Total Corporate	152,443,756	5.77
Emerging markets debt fund	127,933,130	4.84
MBS trust fund	22,659,180	0.86
Barclay Aggregate Index	18,504,876	0.70
Senior floating rate fund	5,412,307	0.21
Total Bonds	**450,428,224**	**17.05**
Other Investments:		
Real estate funds	263,578,427	9.97
Energy master limited partnerships	218,435,893	8.26
Hedge funds	195,933,446	7.41
Private equity funds	186,913,181	7.07
Total Other Investments	**864,860,947**	**32.71**
Total Investments	**$2,643,398,980**	**100.00%**

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
SUMMARY SCHEDULE OF FEES AND COMMISSIONS
For the Year Ended June 30, 2018

	Assets Under Management	Fees
Investment Managers' Fees		
Domestic equity	$917,794,816	$4,122,558
International equity	652,904,199	1,756,930
Fixed income	512,366,009	1,188,215
Real estate	263,578,427	1,813,751
Direct hedge funds	195,933,446	212,241
Private equity	186,913,181	5,086,181
Securities lending		161,851
Total Investment Managers' Fees		**$14,341,727**
Other Investment Service Fees:		
Investment consultant fees		$916,023
Custodian bank fees		161,046
Total Other Investment Service Fees		**$1,077,069**

Brokerage Fees

Broker's fees on investment transactions for the year ended June 30, 2018 amounted to $329,419. Brokerage firms receiving more than $4,300 in fees are listed below.

Brokerage Firms	Fees Paid	Shares/ Units	Average Commission per Share	Brokerage Firms	Fees Paid	Shares/ Units	Average Commission per Share
Instinet Corp	$97,729	3,997,558	$0.02470	Daiwa Securities, Inc.	$9,812	476,179	$0.02061
Merrill Lynch	55,927	9,767,202	0.00573	Barclays Capital	9,185	345,244	0.02660
Morgan Stanley & Co.	43,030	5,242,411	0.00821	Deutsche Bank Securities	8,717	245,755	0.03547
Hilltop Securities, Inc.	39,822	1,255,551	0.03172	Credit Lyonnais Securities	6,786	492,329	0.01378
UBS Securities, LLC	35,010	3,495,067	0.01002	National Financial	6,033	190,200	0.03172
Citigroup Global Markets, LTD	25,431	2,556,195	0.00995	Societe Generale	5,812	730,552	0.00796
J P Morgan Securities, Inc.	22,419	1,768,362	0.01268	Macquarie Bank Limited	5,806	701,454	0.00828
Jefferies & Company, Inc.	22,265	1,931,313	0.01153	S G	5,764	176,008	0.03275
Goldman Sachs & Co.	19,241	1,256,774	0.01531	RBC Capital Markets, LLC	5,731	492,570	0.01163
Credit Suisse, LLC	18,760	1,895,096	0.00990	Mizuho Securities	5,508	325,100	0.01694
Cowen & Co.	18,611	600,703	0.03098	Northern Tr Securities	4,881	162,700	0.03000
Pershing Securities, LTD	14,377	458,482	0.03136	HSBC Bank PLC	4,837	456,520	0.01060
Stifel Nicolaus	13,913	447,083	0.03112	Exane	4,753	145,748	0.03261
Sanford C Bernstein & Co.	13,520	1,181,195	0.01145	Wells Fargo Securities, LLC	4,517	332,474	0.01359
Friedman Billings & Ramsey	10,659	350,432	0.03042	Liquidnet, Inc.	4,341	279,294	0.01554

Brokerage Commissions

Because of the highly visible nature of the Fire and Police Employees' Retirement System, it is important that the investment managers have best execution as their primary objective. While the managers are permitted to direct a portion of brokerage commissions for research, it is expected that each manager will receive commission discounts which are commensurate with current discount practice. Investment managers are expected to give preference whenever possible to brokerage firms with offices located in the Baltimore Metropolitan Area. However, the managers are expected to negotiate commission rates, and local brokerage firms should be given preference only when commission rates and transaction services are competitive with those available from other firms.

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
INVESTMENT PROFESSIONALS

DOMESTIC EQUITY MANAGERS

Large Cap

The Edgar Lomax Company
Randall Eley
Springfield, VA

Mellon Capital Management
Brian Hock
Boston, MA

Rhumbline Advisors
Julie Lind
Boston, MA

Brown Advisory
Ken Stuzin
Baltimore, MD

Small and Mid Cap

Pinnacle Associates, Ltd.
Peter Marron
New York, NY

Rothschild Asset Management Inc
Tina Jones
New York, NY

INTERNATIONAL EQUITY MANAGERS

William Blair & Co.
Doug Kryscio
Chicago, IL

Causeway Capital Management, LLC
Sarah Ketterer
Los Angeles, CA

LMCG Investments, LLC
Gordon Johnson
Boston, MA

REAL ASSETS

Harvest Fund Advisors, LLC
Eric Conklin
Wayne, PA

Tortoise Capital Advisors, LLC
Zach Hamel
Leawood, KS

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
INVESTMENT PROFESSIONALS

DIRECT HEDGE FUND

Caspian Capital
Adam S. Cohen
New York, NY

Cantab Capital Partners
Dr. Ewan Kirk
Cambridge, UK

MKP Capital Management
Patrick McMahon
New York, NY

Voya Alternative Asset Management
Peter Guan
Atlanta, GA

Waterfall Asset Management
Jack Ross
New York, NY

FIXED INCOME MANAGERS

Loomis Sayles & Company, L.P.
Clifton Rowe
Boston, MA

Mellon Capital Management
Brian Hock
Boston, MA

Western Asset Management Company
Veronica Amici
Pasadena, CA

Pugh Capital Management
Mary Pugh
Seattle, WA

C. S. McKee
Brian Allen
Pittsburgh, PA

PRIVATE ENERGY

Aether Investment Partners
David Rhoades
Denver, CO

Park Street Capital
Kristine Dailey
Boston, MA

Aberdeen Flag Energy & Resource Partners III
Jim Gasperoni
Boston, MA

EnCap Investments
Douglas Swanson
Houston, TX

REAL ESTATE MANAGERS

Principal Global Investors
John Berg
De Moines, IA

ARES Management
Julie Solomon
New York, NY

INVESTMENT PROFESSIONALS

LaSalle Investment Management, Inc.
James Hutchinson
Chicago, IL

Clarion
Jeb Belford
New York, NY

DLJ Real Estate
Andy Rifkin
New York, NY

Equus Capital Partners
Arthur Pasquarella
Philadelphia, PA

Alex Brown Realty
John M. Prugh
Baltimore, MD

Angelo Gordon Real Estate
Adam Schwartz
New York, NY

ARES Management
John Ruane
London, England

Meridian Realty Partners
Gary Block
Bethesda, MD

PRIVATE EQUITY

Pantheon
Yokasta Segura-Baez
New York, NY

BlackRock
Leo Chenette
Princeton, New Jersey

Capital Dynamics
Cynthia Duda
New York, NY

LGT Capital Partners
Sasha Gruber
New York, NY

Castlelake
Evan Carruthers
Minneapolis, MN

DC Capital Partners
Thomas J. Campbell
Alexandria, VA

Adams Street Partners
Scott C. Hazen
Chicago, IL

Aberdeen Squadron Asia Pacific
Jim Gasperoni
Boston, MA

Siguler Guff
Ralph Jaeger
New York, NY

Greenspring Global Partners
Hunter Somerville
Owings Mills, MD

Centana Management
Eric Byunn
New York, NY

Drum Capital Management, LLC
Scott Vollmer
Stamford, CT

RLJ Partners
Jesse M. Burwell
Bethesda, MD

INVESTMENT PROFESSIONALS

GLOBAL CUSTODIAN

BNY Mellon Asset Servicing
Sarah Baulch
Pittsburgh, PA

SECURITIES LENDING

BNY Mellon Asset Servicing
Mike McDermott
Pittsburgh, PA

INVESTMENT CONSULTANT

The Summit Strategies Group
Daniel Holmes
St. Louis, MO

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ACTUARIAL SECTION





Via Electronic Mail

October 19, 2018

Board of Trustees
Fire and Police Employees' Retirement System
of the City of Baltimore
7 East Redwood Street, 18th Floor
Baltimore, Maryland 21202-3470

Re: 2018 CAFR

Honorable Members of the Board of Trustees:

Cheiron has performed an actuarial valuation of the Fire and Police Employees' Retirement System (BCFPERS) as of June 30, 2018. This valuation is used to determine the City's contribution to be made in Fiscal Year 2020 for BCFPERS. The contribution actually made during Fiscal Year 2018 was developed in the 2016 actuarial valuation.

The funding method used in this annual valuation is the entry age normal funding method. Under this funding method, a normal cost rate is determined as a level percentage of pay for each active member, net of employee contributions. The normal cost rate times payroll at the valuation equals the total normal cost for each member. The employer's contribution is then increased or decreased from this normal cost amount to amortize the unfunded actuarial liability, the difference between the actuarial value of assets and the actuarial accrued liability, as a level dollar amount over a closed 25-year period that began June 30, 2014.

The actuarial value of assets for the System was set equal to the market value of assets as of June 30, 2014. Beginning with the plan year ending June 30, 2015, the actuarial value of assets is the current market value of assets, adjusted by a five-year smoothing of gains and losses on a market value basis. However, if the actuarial value of assets is less than 80% or more than 120% of the market value, an adjustment is made to the actuarial value to bring the value within this corridor.

The results presented in this Comprehensive Annual Financial Report reflect the assumptions from the June 30, 2018 actuarial valuation. Article 22 of the Baltimore City Code specifies a number of these assumptions and requires a review of all of the assumptions by the actuary at least once every three years. The most recent such review examined experience from 2011 to 2017 and resulted in assumption changes that were first reflected in the June 30, 2018 actuarial valuation.

The Board adopted recommended changes, including:

- Recommended demographic assumption changes, including updates to the termination rates, retirement rates, disability rates, DROP/DROP2 exit rates, percent married, children and benefit loads
- Decrease in rate of investment return assumption from 7.50% to 7.25%, and
- Decrease in inflation assumption from 3.00% to 2.75%.

The impact of these changes is reflected in the June 30, 2018 valuation and resulting Fiscal Year (FY) 2020 contributions. In addition, the assumptions and methods used for funding purposes meet the parameters set forth by Governmental Accounting Standards Board Statement Nos. 67 and 68.

Membership data used for the actuarial valuation was supplied by the System. An informal examination of the obvious characteristics of this data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23 was performed. Asset information was provided on an unaudited basis.

All supporting schedules in the Actuarial Section and the Schedule of Funding Progress in the Financial Section have been prepared by the System and reviewed by Cheiron.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices that are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board, including the use of assumptions and methods for funding purposes that comply with the Actuarial Standards of Practice. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This report was prepared solely for the Fire and Police Employees' Retirement System of the City of Baltimore for the purposes described herein, except that the System auditor may rely on this report solely for the purpose of completing an audit related to the matters herein. This report is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

Sincerely,
Cheiron

Fiona E. Liston

Fiona E. Liston, FSA, MAAA
Principal Consulting Actuary

Elizabeth Wiley, FSA, MAAA
Consulting Actuary

Brett Warren

Brett Warren, FSA, MAAA
Associate Actuary

Attachments

1. **Funding Method:**

   Liabilities and contributions shown in this report are computed using the entry age normal method of funding. Under this funding method, a normal cost rate is determined as a level percentage of pay for each active member. The normal cost rate times payroll equals the total normal cost for each member. The normal cost plus member contributions will pay for projected benefits at retirement for each active System member.

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

   The portion of the actuarial liability in excess of System assets, the UAL, is amortized to develop an additional cost or savings that is added to each year's employer normal cost. Under this cost method, actuarial gains and losses are directly reflected in the size of the unfunded actuarial liability. The amortization method is described as item 3 below.

2. **Asset Valuation Method:**

   Effective June 30, 2014, the actuarial value of assets was set to equal the market value of assets. The deferral of investment gains and losses only applies after June 30, 2014.

   The actuarial value has been calculated by taking the market value of assets less 80% of the investment gain (loss) during the preceding year, less 60% of the investment gain (loss) during the second preceding year, less 40% of the investment gain (loss) during the third preceding year, and less 20% of the investment gain (loss) in the fourth preceding year.

   The investment gain (loss) is calculated by taking the difference between the expected value of assets based on an investment return assumption and the actual value of assets. If the actuarial value of assets is less than 80% or more than 120% of the market value, an adjustment is made to the actuarial value to bring the value within this corridor.

3. **Amortization Method:**

   The current unfunded actuarial liability is amortized as a level dollar figure over a closed 25-year period beginning on July 1, 2014.

4. **Changes Since Last Valuation:**

   None.

Actuarial Assumptions

1. **Rate of Investment Return:**

   7.25% compounded annually.

2. **Rates of Salary Increase:**

   Salary increases are split into a static inflation assumption of 2.75% and a merit scale based on department and service, shown below.

Police	
Service	**Merit Scale**
0-1	0.25%
2	1.50%
3	18.25%
4	6.25%
5	5.50%
6	1.00%
7	4.00%
8 – 14	1.00%
15	3.75%
16 – 20	1.00%
21+	0.75%

Fire	
Service	**Merit Scale**
0	0.25%
1	4.00%
2 – 3	15.00%
4	2.00%
5	3.00%
6 – 13	0.75%
14 – 15	2.50%
16 – 20	0.50%
21+	0.50%

3. **System Expenses:**

   All expenses are paid from the fund. Administrative expenses are added to the contribution in the amount of 1.5% of covered payroll.

4. Pre-Retirement Mortality and Disability:

Age	Non-Line-of-Duty Disability[1]	Line-of-Duty Disability[1]	Non-Line-of-Duty Death[2,3]		Line-of-Duty Death[2,3]	
			Male	Female	Male	Female
20	0.0001	0.0004	0.000534	0.000206	0.000133	0.000051
25	0.0006	0.0026	0.000637	0.000219	0.000159	0.000055
30	0.0013	0.0050	0.000595	0.000277	0.000149	0.000069
35	0.0015	0.0060	0.000688	0.000364	0.000172	0.000091
40	0.0015	0.0061	0.000825	0.000503	0.000206	0.000126
45	0.0016	0.0064	0.001280	0.000835	0.000320	0.000209
50	0.0014	0.0056	0.002216	0.001401	0.000554	0.000350
55	0.0008	0.0032	0.003665	0.002127	0.000916	0.000532
60	0.0008	0.0032	0.006163	0.003103	0.001541	0.000776
64	0.0008	0.0032	0.009698	0.004308	0.002425	0.001077

[1] Assumes 80%/20% of total rates split between Line of Duty Disability and Non Line of Duty Disability, respectively.

[2] Assumes 20%/80% of total rates split between Line of Duty Death and Non Line of Duty Death, respectively.

[3] 114% and 130% of the RP-2014 Blue Collar Mortality Table for males and females respectively projected using the RPEC_2014 model, with an ultimate rate of 0.85% for ages 20-95, an ultimate rate of 0.00% for ages 95-120, convergence to the ultimate rate in year 2017, and using the committee selected weighing assumption.

5. Post-Retirement Mortality:

Retirees and Beneficiaries: 114% and 130% of the RP-2014 Blue Collar Mortality Table for males and females respectively projected using the RPEC_2014 model, with an ultimate rate of 0.85% for ages 20-95, an ultimate rate of 0.00% for ages 95-120, convergence to the ultimate rate in year 2017, and using the committee selected weighting assumption.

Disabled members: RP-2014 Disabled Retiree Mortality blended 50%/50% with the healthy annuitant's table projected using the healthy annuitant's RPEC_2014 model.

Age	Retirees and Beneficiaries		Disabled Members	
	Male	Female	Male	Female
55	0.006839	0.005233	0.015104	0.009856
60	0.009640	0.007456	0.018122	0.012227
65	0.014381	0.011343	0.023033	0.016101
70	0.022443	0.018156	0.031395	0.023179
75	0.035918	0.029862	0.045102	0.035454
80	0.059119	0.049613	0.067868	0.055325
85	0.098987	0.084514	0.106145	0.087467
90	0.166907	0.145425	0.169956	0.139038

6. **Withdrawal:**

Years of Service[1]	Police	Fire
0	6.0%	14.0%
1	9.0%	5.0%
2	11.0%	4.0%
3	8.0%	2.5%
4	6.0%	2.5%
5	4.5%	2.5%
6	3.5%	2.0%
7	3.0%	2.0%
8	2.5%	2.0%
9	2.0%	2.0%
10	1.7%	2.0%
11	1.4%	1.2%
12	1.1%	1.2%
13	0.8%	1.2%
14 – 19	0.4%	1.2%
20+	0.0%	0.0%

[1]Withdrawal decrements are reduced to zero when member is eligible to retire.

7. **Service Retirement:**

The valuation uses retirement rates that vary according to member plan (police or firefighter) and whether a member is eligible for DROP, grandfathered DROP2, or non-grandfathered DROP2.

Members with 20 or more years of service on or before December 31, 2009 are eligible for DROP.

Members who had less than 20 years of service on December 31, 2009, but had either 15 or more years of service on June 30, 2010 or were age 50 or older as of June 30, 2010, can elect to participate in grandfathered DROP2 when they have 20 or more years of service.

Members who were not age 50 or older as of June 30, 2010, and also had less than 15 years of service on June 30, 2010, can participate in non-grandfathered DROP2 when they have 25 or more years of service.

Non-grandfathered members, who are not eligible for DROP or grandfathered DROP2, can take early retirement, with a reduced benefit. Prior to reaching normal retirement eligibility, these non-grandfathered members are assumed to take early retirement according to the following table:

Non-grandfathered Early Retirement Rate for Police and Firemen

Age	Service <10	10	11	12	13	14	15	16	17	18	19	20	21-24	25+
<45												5.00%	5.00%	
45												5.00%	5.00%	
46	Members Not Yet Eligible for Early Retirement											5.00%	5.00%	
47												5.00%	5.00%	
48												5.00%	5.00%	
49												5.00%	5.00%	
50	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	
51	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	
52	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	
53	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	
54	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	
55	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%								
56	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%								
57	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%								
58	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%								
59	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%								
60	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	Members Eligible for Unreduced Benefits							
61	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%								
62	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%								
63	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%								
64	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%								
65	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%								

Once members reach eligibility for normal retirement, they are expected to follow one of two paths: they either enter the DROP/DROP2 program and follow the appropriate post-DROP or post-DROP2 retirement assumptions for their group, or they never enter the DROP/DROP2 program and follow the appropriate non-DROP or non-DROP2 retirement assumptions for their group. Active members who are beyond their applicable DROP or DROP2 program eligibility as of the valuation date are assumed to have already made this decision and so are valuing only with the applicable DROP/DROP2 or non-DROP/non-DROP2 retirement assumptions. Those who are not yet normal retirement eligible are valued under both options and the resulting liabilities are blended according to the following probabilities table:

	Police and Fire
DROP Members	
DROP	80%
Non-DROP	20%
Grandfathered DROP2 Members	
Grandfathered DROP2	80%
Grandfathered Non-DROP2	20%
Non-Grandfathered DROP2 Members	
Non-Grandfathered DROP2	80%
Non-Grandfathered Non-DROP2	20%

Non-DROP/Grandfathered Non-DROP2 Retirement Probabilities

Members who do not join DROP or grandfathered DROP2 are assumed to have retirement rates that vary by service until age 50. After age 50, the rates are assumed to vary solely by age.

Ages Less Than 50	
Years of Service	Probability of Retirement
20	40%
21+	20%

Ages 50 and Higher	
Age	Probability of Retirement
50	10.00%
51	8.00%
52	8.00%
53	5.00%
54	4.00%
55	4.00%
56	4.00%
57	3.00%
58	6.00%
59	12.00%
60	18.00%
61	18.00%
62	25.00%
63	25.00%
64	35.00%
65	100.00%

Non-Grandfathered Non-DROP2 Retirement Probabilities

Assumptions vary between the rate applicable in the first year of eligibility for unreduced retirement and those for subsequent years for those who do not join non-grandfathered DROP2.

	Police and Fire	
Age	First Eligible	Subsequent
Less than 65	50.0%	30.0%
65 and up	100.0%	100.0%

DROP and Grandfathered/Non-Grandfathered DROP2 Retirement Probabilities

Years After Electing DROP	DROP and DROP2 Exit Rates	
	Police	Fire
1	12.00%	3.00%
2	12.00%	6.00%
3	15.00%	6.00%
4	10.00%	6.00%
5	10.00%	6.00%
6	25.00%	6.00%
7	20.00%	12.00%
8	20.00%	20.00%
9	15.00%	10.00%
10	15.00%	10.00%
11	15.00%	10.00%
12	15.00%	15.00%
13	15.00%	15.00%
14	15.00%	15.00%
15+	20.00%	20.00%

NOTE: In all cases once the member reaches age 65, there is 100% probability of leaving DROP to commence benefit receipt.

8. Line-of-Duty Disability:

Benefit Types: 1% of line-of-duty disability retirements are assumed to receive a pension equal to 100% of compensation at the time of retirement. The rest are assumed to receive a pension equal to 66 2/3% of Average Final Compensation.

Form of Payment: All future withdrawal benefits are assumed to be paid in the form of a lump sum refund of member contributions.

All future retirement benefits are assumed to be paid in the form of a 50% Joint and Survivor Annuity. In addition, members participating in DROP are assumed to receive their DROP account balance in the form of a lump sum upon retirement.

Future non-line-of-duty disability retirement benefits for current active members with fewer than five years of service (i.e., eligible only for the refund of member contributions) are assumed to be paid in the form of a lump sum. All other disability retirement benefits are assumed to be paid in the form of a 50% Joint and Survivor Annuity. In addition, members participating in DROP are assumed to receive their DROP account in the form of a lump sum upon disability retirement.

Future death benefits for current active members who have not reached service retirement eligibility are assumed to be paid in the form of a lump sum. Certain line of duty death benefits for refund of member contributions are assumed to be paid in the form of a lump sum. All other death benefits are assumed to be paid in the form of a single life annuity equal to the member's accrued benefit. Beneficiaries of members participating in DROP are assumed to additionally receive the member's DROP account in the form of a lump sum.

9. **Cost-of-Living Adjustment Assumption:**

   Assumed to follow System provisions – 0%, 1%, or 2% depending on age and type of retirement

10. **Percent Married:** Males 80%, Females 85%

11. **Spouse Age:** A husband is assumed to be four years older than his wife.

12. **Remarriage Rates:** None

13. **Children:**

    All benefits with Joint & Survivor Forms of Payments for retirees had their survivor benefits increased by 0.3% to account for children's benefits.

14. **Benefit Loads:**

    Benefits to certain types of future beneficiaries receiving Line-of-Duty death benefits were increased by 5.0% to allow for contingent beneficiaries.

    Benefits to certain types of future members receiving Line-of-Duty disability benefits were increased by 1.5% to allow for possible conversion to Line-of-Duty death benefits.

    Benefits payable in the form of a Joint and Survivor 100% Pop Up or Joint and Survivor 50% Pop Up were valued, respectively, as 100% Joint and Survivor with a 2.70% load and 50% Joint and Survivor with a 1.50% load to account for the additional value of the Pop Up form of benefit in the absence of data on the amount to which the benefit would increase.

    All future retirement benefits were increased by 1% to account for possible child beneficiaries.

15. **Funding Policy:**

    The City's funding policy is to contribute the amount equal to the net normal cost, a provision for anticipated administrative expenses, plus the accrued liability contribution or less the amortization of the excess assets, as the case may be. However, the aggregate payment by the City must be sufficient, when combined with the amount in the Fund, to provide the pensions and other benefits payable out of the Fund during the then-current year.

16. **Changes Since Last Valuation:**

    None.

17. **Rationale for Assumptions:**

    The actuarial assumptions were chosen by the Board of Trustees, upon the recommendation of the actuaries, based on an experience study conducted on the System's experience from the 2011-2014 valuations. The results of this study were presented in September 2015 and went into effect starting with the June 30, 2015 valuation.

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Valuation Date June 30	Number	Annual Payroll	Annual Average Pay	% Increase In Average Pay
2009	4,690	$281,423,808	$60,005	2.7%
2010	4,584	276,576,626	60,335	0.6
2011	4,575	275,647,861	60,251	(0.1)
2012	4,624	284,601,473	61,549	2.2
2013	4,439	277,524,356	62,520	1.6
2014	4,317	284,210,233	65,835	5.3
2015	4,248	298,354,900	70,234	6.7
2016	4,094	300,855,075	73,487	4.6
2017	4,012	296,356,741	73,868	0.5
2018	4,049	305,372,850	75,419	2.1

Annual payroll is considered pensionable payroll.

Fire and Police Employees' Retirement Sytem
City of Baltimore, Maryland
SCHEDULE OF RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS

	Added to Rolls		Removed from Rolls		Rolls - End of Year			
Year Ended June 30	No.	Annual Allowances*	No.	Annual Allowances	No.	Annual Allowances	% Increase in Annual Allowances	Average Annual Allowances
2009	232	7,709,875	184	4,049,841	5,929	174,430,768	2.1	29,420
2010	280	12,045,607	197	4,307,535	6,012	182,168,840	4.4	30,301
2011	267	11,885,471	179	4,215,749	6,100	189,838,563	4.2	31,121
2012	234	9,614,994	198	4,747,538	6,136	194,706,019	2.6	31,732
2013	291	10,232,591	221	3,318,082	6,206	201,620,528	3.6	32,488
2014	258	9,180,339	196	3,095,964	6,268	207,704,903	3.0	33,137
2015	236	8,840,349	236	3,780,142	6,268	212,765,110	2.4	33,945
2016	234	9,612,277	211	3,046,582	6,291	219,330,805	3.1	34,864
2017	264	10,870,255	236	4,279,497	6,319	225,921,564	3.0	35,753
2018	220	8,784,970	243	4,794,782	6,296	229,911,753	1.8	36,517

* Includes post-retirement adjustments.
The annual allowances were adjusted to incorporate the $16,000 minimum benefit for certain beneficiaries under Ordinances 10-306 and 11-444.

SOLVENCY TEST

The Retirement System's funding objective is to meet long-term benefit promises through contributions which spread the cost over the employees' service base. If the contributions to the System are soundly executed, the System will pay all promised benefits when due - the ultimate test of financial soundness.

A short-term solvency test is one means of examining a system's progress under its funding program. In a short-term solvency test, the plan's present assets are compared with: 1) Active member contributions on deposit; 2) The liabilities for future benefits to present retired lives; and 3) The liabilities for service already rendered by active members. In a system which has been following the discipline of allocating cost on a consistent basis to valuation years, the liabilities for active member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active members (liability 3) will be partially covered by the remainder of present assets. Generally, the funded portion of liability 3 will increase over time. Liability 3 being fully funded is rare.

The schedule below illustrates the System's history of liability 3.

	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Assets		
Valuation Date June 30	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Members (Employer Financed Portion)	Valuation Assets	(1)	(2)	(3)
2009	$237,159,576	$1,971,574,127	$842,153,582	$2,587,235,012	100%	100%	44.9%
2010	246,799,329	1,977,520,610	809,403,584	2,524,753,505	100	100	37.1
2011	247,518,595	2,057,539,881	799,746,838	2,546,236,459	100	100	30.2
2012	261,776,304	2,134,597,319	792,288,436	2,475,874,446	100	100	10.0
2013	270,077,058	2,208,521,089	788,974,354	2,502,405,754	100	100	3.0
2014	283,377,044	2,266,741,330	810,330,710	2,492,544,399	100	97.5	0.0
2015	300,379,071	2,372,231,709	864,170,942	2,575,515,725	100	95.9	0.0
2016	314,005,394	2,440,488,840	887,902,841	2,602,544,409	100	93.8	0.0
2017	325,140,922	2,510,032,318	885,133,502	2,644,643,773	100	92.4	0.0
2018	341,791,801	2,567,142,559	975,682,879	2,712,246,895	100	92.3	0.0

Gains and Losses in Accrued Liabilities During Fiscal Year
Resulting from Differences Between Assumed Experience and Actual Experience

Type of Activity	Gain or (Loss) for Fiscal Year 2017	Gain or (Loss) for Fiscal Year 2018
Age and Service Retirements If members retire at older ages or with lower final average pay than assumed, there is a gain. If younger ages or higher pays, a loss.	$ 3,200,000	$ 2,190,000
Disability Retirements If disability claims are less than assumed, there is a gain. If more claims, a loss.	3,480,000	2,700,000
Death-in-Service Benefits If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(550,000)	(350,000)
Withdrawal From Employment If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	520,000	3,640,000
Pay Increases If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	12,320,000	12,010,000
Investment Income If there is greater investment income than assumed, there is a gain. If less, a loss.	(64,770,000)	(49,870,000)
Death After Retirement If retirees live longer than assumed, there is a loss. If not as long, a gain.	3,410,000	1,850,000
New Entrants New entrants create a loss because they were not assumed in the previous evaluation.	(790,000)	(1,000,000)
Excess Contributions Gain created due to contributions that are not designated to reduce the BIF and ERF.	-	-
Continuing Inactives Gains and losses from continuing inactives from causes other than death.	250,000	(100,000)
Other Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, valuation methods, etc.	(4,170,000)	(960,000)
Loss During Year From Financial Experience	$ (47,100,000)	$ (29,890,000)

1. **EFFECTIVE DATE:**

   The System was established July 1, 1962, and has been amended periodically.

2. **ELIGIBILITY:**

   Any uniformed officer of the Police or Fire Departments shall become a member as a condition of employment.

3. **MEMBER CONTRIBUTIONS:**

   Prior to July 1, 2010, members contributed at the rate of 6% of regular compensation. Effective July 1, 2010, the rate increased to 7% of regular compensation; effective July 1, 2011, the rate increased to 8% of regular compensation; effective July 1, 2012, the rate is 9% of regular compensation; and, effective July 1, 2013, the rate will be 10% of regular compensation.

   Contributions are treated as made by the employer and are made to the System pre-tax according to Section 414(h)(2) of the Internal Revenue Code.

   Members of the Baltimore City Employees' Retirement System who transferred to this System after July 1, 1967, and did not make up the contributions which would have been made from July 1, 1962, are to have their retirement allowance reduced by the actuarial equivalent of the deficient contributions with interest.

4. **AVERAGE FINAL COMPENSATION:**

   Average Final Compensation (AFC) shall mean the average annual compensation based on eighteen consecutive months of service during which the member's compensation was highest.

   Effective July 1, 2010, for members hired on or after July 1, 2010, and for members who, as of June 30, 2010, did not meet the eligibility requirements for a service retirement benefit and had fewer than 15 years of service, AFC means the average annual compensation based on 36 consecutive months of service during which the member’s compensation was highest.

5. **MILITARY SERVICE CREDIT:**

   (A) **Military Service Prior to Employment:** A maximum of three years service credit is granted provided the member has acquired:

   (1) 10 years of service and attained the age of 50; or

   (2) 20 years of service, regardless of age; or

   (3) 15 years of service, regardless of age for a member removed from his/her position.

   Effective July 1, 2010, eligible military service credit prior to employment also can be used to satisfy the eligibility requirements for a normal service retirement benefit, early service, DROP, or DROP 2. To qualify to receive F&P service credit, a member may not be eligible to receive retirement benefits for the military service from any other retirement system except for a Reserve Component Retirement benefit for Reserve service and National Guard members nor be eligible for a regular military pension.

   (B) **Military Service Within Employment:** Upon retirement or death, any member who had a break in employment due to military duty, shall receive service credit for the period of absence as provided by the Uniformed Services Employment and Reemployment Rights Act, provided the member leaves his/her accumulated contributions and interest on deposit with the F&P, does not take any other employment, and returns to F&P covered employment within 1 year following the military service.

6. **SERVICE RETIREMENT BENEFIT:**

(A) **Normal Retirement Eligibility Requirements:**

(1) Effective June 30, 2010, members who entered the System on or before June 30, 2003, and who had acquired 15 or more years of service as of June 30, 2010, or who met the following age or service requirements as of June 30, 2010, may retire based on the following eligibility requirements:

(a) age 50, regardless of years of service credit; or

(b) regardless of age, 20 years of service credit.

(2) Effective June 30, 2010, members who entered the System on or after July 1, 2003, and who had acquired 15 or more years of service as of June 30, 2010, or who met the following age and service requirements as of June 30, 2010, may retire based on the following eligibility requirements:

:

(a) age 50, with at least 10 years of service as a contributing member of this System; or

(b) regardless of age, 20 years of service with at least 10 years as a contributing member of this System.

(3) Effective July 1, 2010, members who, as of June 30, 2010, did not meet the applicable eligibility requirements in (1) or (2) above and had fewer than 15 years of service, are eligible for a normal retirement benefit upon the earlier of:

(a) age 55, with at least 15 years of service as a contributing member of this System; or

(b) regardless of age, 25 years of service with at least 15 years as a contributing member of this System.

(B) **Normal Retirement Benefit Amount:** The sum of:

(1) an annuity of the actuarial equivalent of the member's accumulated contributions and interest; and

(2) a pension, which together with the annuity, shall be equal to 2.5% of the member’s average final compensation for each of the first 20 years of service; plus

(3) 2.0% of the member’s average final compensation for each year of service in excess of 20 years.

(C) **Early Retirement Eligibility Requirements:**

Effective July 1, 2010, members who, as of June 30, 2010, did not meet the applicable eligibility requirements (A)(1) or (2) above and had fewer than 15 years of service, are eligible for an early retirement benefit upon attaining the applicable eligibility requirements in (A)(1) or (2) above.

(D) **Early Retirement Benefit Amount:**

(1) The amount determined under (B) above, reduced by:

(2) The applicable percentage shown below for each month (or fraction of a month) by which the member’s benefit commencement date proceeds the date the member would have first met eligibility requirements for a normal retirement benefit under (A)(3) above had the member continued in employment with the City:

(a) 6.5/12% per month for the first 60 months or fraction of a month immediately preceding the member's normal service retirement date;

(b) 4.5/12% per month for the next 60 months or fraction of a month;

(c) ¼% per month for the next 60 months or fraction of a month; and

(d) 1/6% per month for any additional month or fraction of a month.

7. **NON-LINE-OF-DUTY DISABILITY RETIREMENT BENEFIT:**

(A) **Non-Line-of-Duty Disability Eligibility Requirements:** Five years of membership service and determined by a hearing examiner to be mentally or physically incapacitated for the further performance of duty and that such incapacity is likely to be permanent.

(B) **Non-Line-of-Duty Disability Benefit Amount:** The sum of:

(1) an annuity of the actuarial equivalent of the member's accumulated contributions and interest; and

(2) a pension, which together with the annuity, shall be equal to 2.5% of the member's average final compensation for each year of service up to 20 years; plus

(3) 2.0% of the member's average final compensation for each year of service in excess of 20 years.

(4) the total of this benefit shall not be less than 25% of the member's average final compensation.

(C) **Offset to Retirement Allowance:** This allowance is offset by workers' compensation, if the member entered the System after July 1, 1970.

8. **LINE-OF-DUTY DISABILITY RETIREMENT BENEFIT:**

(A) **Line-of-Duty Disability Eligibility Requirements:** Immediate eligibility upon membership in the System and determined by a hearing examiner to be incapacitated for the further performance of duty, and the incapacity resulted from an injury occurring while in the actual performance of such duty without willful negligence on the part of the member.

Should such disability further result in extensive brain damage causing total incapacity or in the loss of or the use of both hands or both arms or both feet or both legs or both eyes or any two thereof, an additional pension will be payable.

(B) **Line-of-Duty Disability Benefit Amount:**

(1) The sum of:

(a) an annuity of the actuarial equivalent of the member's accumulated contributions and interest; plus

(b) a pension equal to 66.667% of the member's average final compensation.

(2) If the member's disability results in extensive brain damage causing total incapacity or in the loss of or the use of both hands or both arms or both feet or both legs or both eyes or any two thereof, an additional pension is paid so that the retirement allowance is equal to 100% of the member's current annual

compensation at the time of retirement. The member will also receive a lump-sum refund of the member's accumulated contributions and interest.

(C) **Offset to Retirement Allowance:** This allowance is offset by workers' compensation, if the member entered the System after July 1, 1970.

9. **TERMINATION OF EMPLOYMENT:**

(A) **Eligibility Requirements:** If removed from a position without fault upon acquiring 15 years of service, the member is eligible for an immediate benefit; otherwise a refund of accumulated contributions and interest if not eligible for any other benefits.

(B) **Benefit Amount:** The sum of:

(1) an annuity of the actuarial equivalent of the member's accumulated contributions and interest; plus

(2) a pension, which together with the annuity, shall be equal to 2.5% of the member's average final compensation for each of the first 20 years of service; plus

(3) 2.0% of the member's average final compensation for each year of service in excess of 20 years.

10. **MAXIMUM ALLOWANCE AND OPTIONAL METHODS OF RECEIVING BENEFIT PAYMENTS:**

(A)	**Maximum Allowance:**	Upon retiree's death, 50% of the retiree's maximum allowance is paid to the spouse provided they had been married for at least one year prior to retirement or five years beginning before or after retirement. A spouse remains eligible for the maximum benefit unless she or he remarries or until death. If there is no eligible spouse, the allowance will be paid to any minor and unmarried children until the last child marries, dies, or attains age 18 or age 22 if a full-time student. All other options will result in a lesser amount paid.
(B)	**Reserve Guarantee Option:**	Upon retiree's death, a cash refund to retiree's designated beneficiary based on present value of allowance at retirement less payments made.
(C)	**100% Joint and Survivor Option:**	Upon retiree's death, 100% of retiree's allowance to continue to designated beneficiary until death.
(D)	**50% Joint and Survivor Option:**	Upon retiree's death, 50% of retiree's allowance to continue to designated beneficiary until death.
(E)	**100% Pop-up Joint and Survivor Option:**	Upon retiree's death, 100% of retiree's allowance to continue to designated beneficiary until death. If the beneficiary predeceases member, the member's benefit "pops-up" to the maximum allowance.
(F)	5**0% Pop-up Joint and Survivor Option:**	Upon retiree's death, 50% of retiree's allowance to continue to designated beneficiary until death. If the beneficiary predeceases member, the member's benefit "pops-up" to the maximum allowance.

(G) **Specific Benefit Option:** Upon retiree's death and subject to the approval of the Board of Trustees, the member's designated beneficiary will receive:

(1) a specific lump sum amount; or

(2) a specific periodic allowance.

These options are available for service, termination, non-line-of-duty disability, and line-of-duty disability retirement. The option and/or beneficiary may be changed within thirty days after retirement.

11. **NON-LINE-OF-DUTY DEATH BENEFIT:**

(A) **Non-Line-of-Duty Death Benefit Eligibility Requirements:** Member who dies while actively employed but whose death does not qualify as a line-of-duty death.

(B) **Non-Line-of-Duty Death Benefit Amount:**

(1) Lump-sum benefit: The member's accumulated contributions and interest and if the member has one or more years of service, 50% of the greater of the member's current annual compensation or average final compensation shall be payable to the member's designated beneficiary or as specified by the plan provisions.

(2) 25% plus benefit: In lieu of (1) above, if the member had at least two years of continuous service, an annual sum equal to 25% of the member's current annual compensation, plus 1.5% of the member's current annual compensation for each year of service in excess of two years. This benefit is not to exceed 50% of the member's current annual compensation. This benefit shall be payable to:

(a) the member's spouse until the spouse remarries or dies; or

(b) the member's minor and unmarried children equally until the last child marries, dies, or attains age 18 or age 22 if a full-time student.

(3) 100% survivorship benefit: If the member was eligible for a service retirement and the member's designated beneficiary is his/her spouse to whom she/he was married for at least one year prior to the date of death, or surviving parent, such beneficiary may elect to receive in lieu of (1) and (2) above, an allowance equal to the amount that would have been paid under the 100% Joint and Survivor Option.

(C) **Offset to Retirement Allowance:** This allowance is offset by workers' compensation, if the member entered the System after July 1, 1970.

12. **LINE-OF-DUTY DEATH BENEFIT:**

(A) **Line-of-Duty Death Benefit Eligibility Requirements**:

(1) Immediate eligibility upon membership in the System and determined by a hearing examiner that the member's death arose out of and in the course of the actual performance of duty, without willful negligence on the part of the member; or

(2) A member had been granted a line-of-duty disability and dies within five years as a result of the last injury that resulted in a line-of-duty disability retirement.

(B) **Line-of-Duty Death Benefit Amount:** This benefit will consist of:

(1) A refund of the member's accumulated contributions and interest to the member’s designated beneficiary or as specified by the plan provisions, and

(2) A pension of 100% of member’s current annual compensation to be paid to:

(a) the member’s surviving spouse to continue for life; or

(b) if no surviving spouse or the spouse dies, then equally to the member's minor and unmarried children equally until the last child marries, dies, or attains age 18 or age 22 if a full-time student; or

(c) if no surviving spouse or eligible minor child or children, then to the member's surviving dependent parents to continue for life.

(C) **Offset to Retirement Allowance:** This allowance is offset by workers’ compensation, if the member entered the System after July 1, 1970.

13. **DEFERRED RETIREMENT OPTION PLAN (DROP):**

The Deferred Retirement Option Plan became effective July 1, 1996.

(A) **Eligibility: a member who did not meet the following eligibility requirements as of December 31, 2009, is not eligible for DROP participation and is not entitled to DROP benefits effective January 1, 2010. Such member may be eligible for participation in the Deferred Retirement Option Plan 2 (DROP 2) that became effective January 1, 2010.**

(1) For members who entered the System on or before June 30, 2003, a member must acquire 20 or more years of service, regardless of age on or before December 31, 2009. Eligible military service credit prior to employment also can be used to satisfy the eligibility requirements.

(2) For members who entered the System on or after July 1, 2003, a member must acquire 20 or more years of service with at least 10 years of service as a contributing member of this System, regardless of age, on or before December 31, 2009. Eligible military service credit prior to employment also can be used to satisfy the eligibility requirements.

(3) An application must be filed not less than 30 days nor more than 90 days prior to the date the DROP participation will begin.

(4) A member who terminates employment immediately becomes ineligible to participate or to continue to participate in the DROP.

(B) **Term of DROP:**

The maximum period of time that a member can participate in the DROP is a single term of three consecutive years beginning on the member's DROP start date.

(C) **No Service Credit While in DROP:**

A DROP participant remains a member of the F&P but is not credited with F&P service.

Except for Intermediate DROP Retirement Benefits, compensation during the member's DROP participation period shall be disregarded in calculating the member's AFC.

(D) **Discontinuation of DROP Participation:**

(1) If a member terminates service anytime during or at the end of the three year DROP period, participation in the DROP ends automatically.

(2) A member may elect to end participation in the DROP on either the first or second anniversary of the DROP participation start date. The election must be made by filing an application with the System not less than 30 days nor more than 90 days prior to the first or second anniversary of the member's DROP start date.

(3) A member who continues employment after terminating participation in the DROP shall resume earning service credit in the F&P.

(4) Once a member terminates participation in the DROP, the member cannot again participate in the DROP at a later date.

(5) If a member retires at the end of the DROP participation period, begins receiving DROP retirement benefits, and is then reemployed in a position covered by the F&P or any Baltimore City sponsored retirement system, all DROP retirement benefit payments will be suspended until the member's later retirement.

(E) **DROP Account:** The member's DROP account shall consist of:

(1) For each full year of a member's DROP participation, an amount equal to the maximum annual service retirement allowance the member would have received had the member retired from service and began receiving the maximum retirement allowance;

(2) For each partial year of a member's DROP participation, an amount equal to a member's pro-rated maximum annual service retirement allowance;

(3) A separate sub-account consisting of the member's regular mandatory contributions made during the member’s DROP participation period; and

(4) Interest compounded annually at 8.25% until the member terminates from service.

(F) **DROP Retirement Benefit:**

(1) BASIC DROP:

A member who terminates service during or at the conclusion of the DROP participation period will receive:

(a) the service retirement benefit the member would have received if the member had retired on the date the DROP participation began; and

(b) the balance in the member's DROP account.

(2) INTERMEDIATE DROP:

A member who continues working following the conclusion of the DROP participation period and terminates service within 18 months following the DROP participation period will receive:

(a) all benefits under the Basic DROP Benefit; plus

(b) 2.0% of the member's AFC, calculated as of the member's date of termination from employment covered by this System, for each year of service credit, prorated for partial years, earned by employment following the DROP participation period (taking into account the member's annual compensation while in DROP), not to exceed 18 months; plus

(c) a recovery rate of 1.5% of the member's AFC, calculated as of the member's date of termination from employment covered by this System, for each year of service credit, prorated for partial years, earned by employment following the DROP participation period (taking into account the member's annual compensation while in DROP), not to exceed 18 months, but limited to a "recovery" of 2.0% if the member discontinued participation in DROP after 1 year or limited to a "recovery" of less than 2.25% if the member discontinued participation in DROP after 2 years; plus

(d) 2.0% of the member's AFC, calculated as of the member's termination date from employment covered by this System, for each year of service not already included in the calculation of the member's retirement benefit under (a) and (b).

(3) FULL DROP:

A member who continues working following the conclusion of the DROP participation period and terminates service 18 or more months following the DROP participation period will receive:

(a) an annuity of the actuarial equivalent of the member's accumulated contributions and interest; plus

(b) a pension, which together with the annuity, shall be equal to 2.5% of the member's AFC, calculated as of the member's date of termination from employment covered by this System for each of the first 20 years of service; plus

(c) 2.0% of the member's AFC, calculated as of the member's date of termination from employment covered by this System for each year of service in excess of 20 years; plus

(d) a recovery rate of 1.5% of the member's AFC, calculated as of the member's date of termination from employment covered by this System, for each year of service credit, prorated for partial years, earned by employment following the DROP participation period, not to exceed 4 years, but limited to a "recovery" of 2.0% if the member discontinued participation in DROP at 1 year or limited to a "recovery" of 4.0% if the member discontinued participation in DROP at 2 years; plus

(e) the balance in the member's DROP account.

(G) **Non-Line-of-Duty Disability:**

(1) any member who retires on account of a non-line-of-duty disability during or at the end of the DROP participation period will receive the Basic DROP Retirement Benefit.

(2) any member who retires on account of a non-line-of-duty disability within 18 months following the DROP participation period will receive the Intermediate DROP Retirement Benefit.

(3) any member who retires on account of a non-line-of-duty disability 18 or more months following the DROP participation period will receive the Full DROP Retirement Benefit.

(H) **Line-of-Duty Disability**:

Any member who retires on account of a line-of-duty disability during or following the DROP participation period will receive the line-of-duty disability retirement benefit consisting of: an annuity of the member's accumulated contributions and interest, plus 66.667% of current AFC. This benefit will be paid instead of any DROP retirement benefits and the member will not receive the balance in the DROP account.

(I) **Non-Line-of-Duty Death:**

Due to the non-line-of-duty death of a member who dies during or following the DROP participation period, the beneficiary will receive the non-line-of-duty death benefit according to the DROP provisions. The member's DROP account is payable according to the form of the non-line-of-duty death benefit as follows:

(1) Lump-sum benefit: The beneficiary of a deceased DROP participant will receive the balance of the deceased member's DROP account in a lump sum payment.

(2) 25% plus benefit: The beneficiary can elect to receive the balance of the deceased member's DROP account in a lump sum payment or in periodic payments.

(3) 100% survivorship benefit: The beneficiary can elect to receive the balance of the deceased member's DROP account in a lump sum payment or in periodic payments.

(J) **Line-of-Duty Death:**

The line-of-duty death benefit payable due to the death of a member who dies during or following the DROP participation period will equal either of the following as elected by the member's beneficiary:

(1) the non-line-of-duty death benefit including DROP benefits as described above; or

(2) the line-of-duty death benefit payable as though the member had never participated in the DROP.

(K) **Benefits for Reemployed DROP Participants:**

(1) if a member receiving DROP retirement benefits is reemployed in a position covered by the F&P, the member's DROP retirement benefits shall be suspended. When the member later retires again on a service or non-line-of-duty disability retirement, the member will resume receiving the DROP benefits which had been suspended at the time of reemployment, plus, the member will receive 2.0% (prorated for partial years) of the member's current AFC for each year of service credit earned during the reemployment period.

(2) if a member receiving DROP retirement benefits is reemployed in a position covered by the F&P, and then dies during the reemployment period, beneficiary eligibility for either non-line-of-duty death benefits or line-of-duty death benefits will be determined according to the DROP provisions.

(3) if a member receiving DROP retirement benefits is reemployed in a position covered by another Baltimore City sponsored retirement system, the member's DROP retirement benefits shall be suspended. When the member later retires again, the member will resume receiving the DROP retirement benefits which had been suspended at the time of reemployment,

(L) **DROP Post-Retirement Benefit Increases:**

(1) A member who retires during or at the end of the DROP participation period will have that DROP participation period credited toward the eligibility requirement for post-retirement benefit increases.

(2) A member who continues working following the DROP participation period will not have that DROP

participation period credited toward the eligibility requirement for post-retirement benefit increases.

(3) Post-retirement benefit increases for former DROP participants are applied prospectively.

(M) **Form of Payment of Benefits from DROP Account:**

A member (or a beneficiary after the death of the member in service) can choose to receive the total balance of the DROP account as:

(1) One lump sum which can be:

(a) rolled over to an IRA or similar account; or
(b) taken in pocket; or

(2) Periodic payments in the same form as the retirement benefit.

14. **DEFERRED RETIREMENT OPTION PLAN 2 (DROP 2):**

DROP 2 became effective January 1, 2010. A member who is a DROP participant or who is entitled to DROP benefits is not entitled to DROP 2 participation or DROP 2 benefits. DROP 2 provisions differ for fire department and police department personnel.

(A) **Eligibility:**

(1) For members who entered the System on or before June 30, 2003, a member must acquire 20 or more years of service regardless of age.

(2) For members who entered the System on or after July 1, 2003, and on or before December 31, 2009, a member must acquire 20 or more years of service with at least 10 years of service as a contributing member of this System, regardless of age.

(3) For members who entered the System on or after January 1, 2010, a member must acquire 20 or more consecutive years of service credit through City employment and as a contributing member of the System, regardless of age.

(4) Effective July 1, 2010, members who had 15 or more years of service as of June 30, 2010, must acquire 20 or more years of service, and members who had less than 15 years of service as of June 30, 2010, must acquire 25 or more years of service as a contributing member of this System.

(5) For members who entered the System on or after July 1, 2010, a member must acquire 25 or more years of service credit as a contributing member of the System, regardless of age.

(6) An application must be filed not less than 30 days nor more than 90 days prior to the date the DROP 2 participation will begin.

(7) A member who terminates employment immediately becomes ineligible to participate or to continue to participate in the DROP 2.

(B) **Term of DROP 2:**

The maximum period of time that a member can participate in the DROP 2 is a single term of three consecutive years beginning on the member's DROP 2 start date.

A member must remain in DROP 2 for a minimum of 1 year to be eligible for DROP 2 benefits.

(C) **No Service Credit While in DROP 2:**

A DROP 2 participant remains a member of the F&P but is not credited with F&P service.

Except for Mid DROP 2 retirement benefits, compensation during the member's DROP 2 participation period shall be disregarded in calculating the member's AFC.

(D) **Discontinuation of DROP 2 Participation:**

(1) If a member terminates service anytime during or at the end of the three year DROP 2 period, participation in the DROP 2 ends automatically.

(2) A member may elect to end participation in the DROP 2 on either the first or second anniversary of the DROP 2 participation start date. The election must be made by filing an application with the System not less than 30 days nor more than 90 days prior to the first or second anniversary of the member's DROP 2 start date.

(3) A member who continues employment after terminating participation in the DROP 2 shall resume earning service credit in the F&P.

(4) Once a member terminates participation in the DROP 2, the member cannot again participate in the DROP 2 at a later date.

(5) If a member retires at the end of the DROP 2 participation period, begins receiving DROP 2 retirement benefits, and is then reemployed in a position covered by the F&P or any Baltimore City sponsored retirement system, all DROP 2 retirement benefit payments will be suspended until the member's later retirement.

(E) **DROP 2 Account:** The member's DROP 2 account shall consist of:

(1) For each full year of a member's DROP 2 participation, an amount equal to the maximum annual service retirement allowance the member would have received had the member retired from service and began receiving the maximum retirement allowance;

(2) For each month of a member's DROP 2 participation, an amount equal to one-twelfth of a member's maximum annual service retirement allowance;

(3) For each day not included in (1) or (2), an amount equal to 1/365 of the member's maximum annual service retirement allowance;

(4) Documentation requirements must be met prior to the member's DROP 2 start date for inclusion of pre-employment military service credit in the DROP 2 benefit calculation.

(5) A separate sub-account consisting of the member's regular mandatory contributions made during the member's DROP 2 participation period; and

(6) Interest compounded annually at 5.50% until the member terminates from service. Effective July 1, 2010, for members who had fewer than 15 years of service as of June 30, 2010, interest is compounded annually at 3.0%

until the member terminates from service.

(F) **DROP 2 Retirement Benefit - FIRE DEPARTMENT MEMBERS:**

(1) EARLY DROP 2:

A member must complete a minimum of 1 year of DROP 2 participation to be eligible for Early DROP 2 benefits. A member who terminates service during year 2 or year 3 or at the conclusion of the DROP 2 participation period will receive:

(a) the following percentages of the member's AFC calculated as of the day before the member's DROP 2 start date:

(i) 2.5% for each of the first 20 years of service, plus
(ii) 2.0% for each full year of service in excess of 20 years, prorated for partial years, prior to the member's DROP 2 start date; no service credit is earned during the member's DROP 2 participation period; plus

(b) the balance in the member's DROP 2 account.

(2) MID DROP 2:

A member who continues working, resumes earning service credit for employment covered by this System following the conclusion of the member's DROP 2 participation period, and terminates service anytime within 5 years following the member's DROP 2 participation period will receive:

(a) the following percentages of the member's AFC calculated as of the day before the member's DROP 2 start date:

(i) 2.5% for each of the first 20 years of service, plus
(ii) 2.0% for each full year of service in excess of 20 years, prorated for partial years, prior to the member's DROP 2 start date, plus
(iii) 2.0% for each full year of service, prorated for partial years, purchased during or following the member's DROP 2 participation period, if any; no service credit is earned during the member's DROP 2 participation period; plus

(b) the following percentages of the member's AFC calculated as of the member's termination date from employment covered by this System:

(i) 2.0% for each full year of service, prorated for partial years, for up to 5 years of employment as a contributing member of this System following the member's DROP 2 participation period; no service credit is earned during the member's DROP 2 participation period, plus
(ii) A recovery rate of 1.5% for each of the first four years of employment covered by this System immediately following the member's DROP 2 participation period, subject to the following limitations:

1. if the member discontinued DROP 2 participation at 1 year, the recovery rate is limited to 2.0%.

2. if the member discontinued DROP 2 participation at 2 years, the recovery rate is limited to 4.0%.

plus,

(c) the balance in the member's DROP 2 account.

(3) COMPLETE DROP 2:

A member who continues working, resumes earning service credit for employment covered by this System following the conclusion of the member's DROP 2 participation period, and terminates service 5 or more years following the DROP 2 participation period will receive:

(a) the following percentages of the member's AFC calculated as of the member's termination date from employment covered by this System:

(i) 2.5% for each of the first 20 years of service, plus
(ii) 2.0% for each full year of service, prorated for partial years, for service in excess of 20 years, excluding employment covered by this System during the member's DROP 2 participation period, plus
(iii) A recovery rate of 1.5% for each of the first four years of employment covered by this System immediately following the member's DROP 2 participation period, subject to the following limitations:

1. if the member discontinued DROP 2 participation at 1 year, the recovery rate is limited to 2.0%.

2. if the member discontinued DROP 2 participation at 2 years, the recovery rate is limited to 4.0%.

plus,

(b) the balance in the member's DROP 2 account.

(G) **DROP 2 Retirement Benefit – POLICE DEPARTMENT MEMBERS:**

(1) EARLY DROP 2:

A member must complete a minimum of 1 year of DROP 2 participation to be eligible for Early DROP 2 benefits. A member who terminates service during year 2 or year 3 or at the conclusion of the DROP 2 participation period will receive:

(a) the following percentages of the member's AFC as of the day before the member's DROP 2 start date:

(i) 2.5% for each of the first 20 years of service, plus
(ii) 2.0% for each full year of service in excess of 20 years, prorated for partial years, prior to the member's DROP 2 start date; no service credit is earned during the member's DROP 2 participation period; plus

(b) the balance in the member's DROP 2 account.

(2) MID DROP 2:

A member who continues working, resumes earning service credit for employment covered by this System following the conclusion of the member's DROP 2 participation period, and terminates service anytime within 3½ years following the DROP 2 participation period will receive:

(a) the following percentages of the member's AFC as of the day before the member's DROP 2 start date:

(i) 2.5% for each of the first 20 years of service, plus
(ii) 2.0% for each full year of service in excess of 20 years, prorated for partial years, prior to the member's DROP 2 start date, plus
(iii) 2.0% for each full year of service, prorated for partial years, purchased during or following the member's DROP 2 participation period, if any; no service credit is earned during the member's DROP 2 participation period; plus

(b) the following percentage of the member's AFC calculated as of the member's termination date from employment covered by this System:

2.0% for each full year of service, prorated for partial years, for up to 3½ years of employment as a contributing member of this System following the member's DROP 2 participation period; no service credit is earned during the member's DROP 2 participation period; and

(c) the balance in the member's DROP 2 account.

(3) COMPLETE DROP 2:

A member who continues working, resumes earning service credit for employment covered by this System following the conclusion of the member's DROP 2 participation period, and terminates service 3½ or more years following the DROP 2 participation period will receive:

(a) the following percentages of the member's AFC calculated as of the member's termination date from employment covered by this System:

(i) 2.5% for each of the first 20 years of service, plus
(ii) 2.0% for each full year of service, prorated for partial years, for service in excess of 20 years excluding employment covered by this System during the member's DROP 2 participation period; plus

(b) the balance in the member's DROP 2 account.

(H) **Non-Line-of-Duty Disability:**

(1) the member must complete a minimum of 1 year of the DROP 2 participation period to be eligible for any DROP 2 benefits.

(2) any member who retires prior to the first anniversary of the member's DROP 2 start date is not entitled to any benefits under DROP 2. The benefit will be calculated as though the member had never participated in DROP 2.

(3) any member who retires on account of a non-line-of-duty disability during or at the end of the DROP 2 participation period will receive the Early DROP 2 retirement benefit.

(4) any Fire department member who retires within 5 years following the end of the DROP 2 participation period or any Police department member who retires within 3½ years following the end of the DROP 2 participation period on account of a non-line-of-duty disability will receive the Mid DROP 2 Retirement Benefit.

(5) any Fire department member who retires with 5 or more years following the end of the DROP 2 participation period or any Police department member who retires with 3½ or more years following the end of the DROP 2 participation period on account of a non-line-of-duty disability will receive the Complete DROP 2 Retirement Benefit.

(I) **Line-of-Duty Disability:**

Any member who retires on account of a line-of-duty disability during or following the DROP 2 participation period will receive the line-of-duty disability retirement benefit consisting of: an annuity of the member's accumulated contributions and interest, plus 66.667% of current AFC. This benefit will be paid instead of any DROP 2 retirement benefits and the member will not receive the balance in the DROP 2 account.

(J) **Non-Line-of-Duty Death:**

Due to the non-line-of-duty death of a member who dies after completing a minimum of one year of DROP 2 participation or following the DROP 2 participation period, the beneficiary will receive the non-line-of-duty death benefit according to the DROP 2 provisions. The member’s DROP 2 account is payable according to the form of the non-line-of-duty death benefit as follows:

(1) Lump-sum benefit: The beneficiary of a deceased DROP 2 participant will receive the balance of the deceased member’s DROP 2 account in a lump sum payment.

(2) 25% plus benefit: The beneficiary can elect to receive the balance of the deceased member’s DROP 2 account in a lump sum or in periodic payments.

(3) 100% survivorship benefit: The beneficiary can elect to receive the balance of the deceased member’s DROP 2 account in a lump sum payment or in periodic payments.

If the member dies within the first year of the DROP 2 participation period, the benefit will be calculated as though the member had never participated in DROP 2.

(K) **Line-of-Duty Death:**

The line-of-duty death benefit payable due to the death of a member who dies after completing a minimum of one year of DROP 2 participation or following the DROP 2 participation period will equal either of the following as elected by the member's beneficiary:

(1) the non-line-of-duty death benefit including DROP 2 benefits as described above; or

(2) the line-of-duty death benefit payable as though the member had never participated in the DROP 2.

If the member dies within the first year of the DROP 2 participation period, the benefit will be calculated as though the member had never participated in DROP 2.

(L) **Benefits for Reemployed DROP 2 Participants:**

(1) if a member receiving DROP 2 retirement benefits is reemployed in a position covered by the F&P, the member’s DROP 2 retirement benefits shall be suspended. When the member later retires again on a service or non-line-of-duty disability retirement, the member will resume receiving the DROP 2 benefits which had been suspended at the time of reemployment, plus, the member will receive 2.0% (prorated for partial years) of the member's current AFC for each year of service credit earned during the reemployment period.

(2) if a member receiving DROP 2 retirement benefits is reemployed in a position covered by the F&P, and then dies during the reemployment period, beneficiary eligibility for either non-line-of-duty death benefits or line-of-duty death benefits will be determined according to the DROP 2 provisions.

(3) if a member receiving DROP 2 retirement benefits is reemployed in a position covered by another Baltimore City sponsored retirement system, the member's DROP 2 retirement benefits shall be suspended. When the member later retires again, the member will resume receiving the DROP 2 retirement benefits which had been suspended at the time of reemployment,

(M) **Pre-employment Military Service Credit for DROP 2 Participants:**

A member may receive up to 3 years of membership service credit for military service prior to employment with the City of Baltimore if the requirements are met according to the plan provisions. Credit for pre-employment military service may be used in the calculation of the member's maximum service retirement benefit credited to the member's DROP 2 account.

The member must apply and provide the F&P proper and complete documentation of pre-employment military service prior to the member's DROP 2 participation start date in order for the pre-employment military service to be used in the calculation of the members DROP 2 benefit credited to the DROP 2 account.

If the member fails to properly apply and provide the F&P with complete documentation of pre-employment military service prior to the member's DROP 2 participation start date, the pre-employment military service credit will not be included in the calculation of the member's maximum service retirement benefit that is credited to the member's DROP 2 account.

(N) **Form of Payment of Benefits from DROP 2 Account:**

A member (or an eligible beneficiary after the death of the member in service) can choose to receive the total balance of the DROP 2 account as:

(1) One lump sum which can be:

(a) rolled over to an IRA or similar account; or
(b) taken in pocket; or

(2) Periodic payments in the same form as the retirement benefit.

15. **POST-RETIREMENT BENEFIT INCREASES:**

Effective June 30, 2010, post-retirement benefit increases are fixed rather than based on investment performance. Retirees and beneficiaries who have been receiving periodic benefit payments for two or more years as of the June 30 determination date may be eligible for such an increase. An exception exists for DROP participants who retire during or at the end of their DROP participation period. Basic DROP retirees will have their DROP participation period credited toward the eligibility requirements for post-retirement benefit increases. The increase is payable commencing in the January following the June 30 determination date.

The amount and eligibility of the post-retirement benefit increase is as follows:

(1) Eligible retirees (or their beneficiaries) who have not attained age 55 as of the June 30 determination date will not receive an increase payable the following January.

(2) Eligible retirees (or their beneficiaries) who have attained age 55 but have not attained age 65 and have been retired for two or more years as of the June 30 determination date will receive a 1.0% increase payable the following January. This increase was first payable in January 2012.

(3) Eligible retirees (or their beneficiaries) who have attained age 65 and have been retired for two or more years as of June 30 determination date will receive a 2.0% increase payable the following January. This increase was first payable in January 2011.

(4) Eligible retirees (or their beneficiaries) who are receiving a 100% line-of-duty disability regardless of age and have been retired for two or more years as of the June 30 determination date will receive a 2.0% increase payable the following January. This increase was first payable in January 2011.

16. **MINIMUM BENEFIT FOR CERTAIN SPOUSAL BENEFICIARIES**

Effective July 1, 2010, a minimum annual benefit of $16,000 is provided to the spousal beneficiary of a sworn member who, before August 1, 1996, retired or died in service with 20 or more years of service.

Effective January 1, 2012, a minimum annual benefit of $16,000 is provided to the spousal beneficiary of a sworn member who, prior to August 1, 1996, retired on account of line-of-duty disability with less than 20 years of service.

17. **BENEFIT PAYMENTS**

Effective January 1, 2016:

A. **Monthly Payments:** All retirement allowances or other benefits paid by this System shall be paid monthly rather than bi-weekly.

B. **Retirement Allowances:** Service retirements for all members and beneficiaries of this System take effect on the 1st day of a calendar month and shall be paid on the 15th day of that calendar month.

C. **Death and Survivorship Benefits:**

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(1) Death and survivorship benefits for beneficiaries take effect on the 1st day of the calendar month following the month in which the member dies and shall be paid on the 15th day of that calendar month.

(2) For the calendar month in which the death of a retired member or beneficiary occurs, this System shall owe and pay the entire monthly allowance due to a retired member or beneficiary.

STATISTICAL SECTION

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
STATISTICAL SECTION NARRATIVE

The Statistical Section of this Comprehensive Annual Financial Report presents information to add historical perspective, context, and detail to the financial statements, notes to financial statements, and required supplementary information presented in the preceding sections. To provide historical perspective and a sense of trends, most exhibits in this Section are presented in multiple-year formats. The information is categorized into two topical groups: Financial Trends and Demographic and Economic Information.

Financial Trends

These schedules contain trend information to help the reader understand how the F&P's financial performance has changed over time.

Statement of Changes in Fiduciary Net Position - Fiscal Years 2009 - 2018
Revenues by Source - Fiscal Years 2009 - 2018
Expenses by Type - Fiscal Years 2009 - 2018
Benefit Expenses by Type - Fiscal Years 2009 - 2018
Average Monthly Service Retirement Benefit Payments - Fiscal Years 2009 - 2018

Demographic and Economic Information

These schedules offer demographic indicators to help the reader understand trends in F&P membership.

Active Members by Years of Service - Fiscal Years 2009 – 2018
Active Members and Active DROP / DROP 2 Members by Years of Service and Department
Active DROP / DROP 2 Members by Fiscal Year of DROP / DROP 2 Entry and Department – Fiscal Years 1997 – 2018
Retirees and Beneficiaries by Attained Age and Type of Retirement
DROP / DROP 2 Retirees and DROP / DROP 2 Beneficiaries by Attained Age and Type of Retirement

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
CHANGES IN FIDUCIARY NET POSITION

	2009	2010	2011	2012	2013
Additions					
Net investment income	$ (357,730,702)	$ 252,146,101	$ 366,713,890	$ 80,339,513	$ 200,073,582
Employer contributions	69,513,236	94,097,743	107,539,873	107,488,403	107,778,859
Member contributions	17,661,252	17,254,515	19,586,155	22,866,939	25,381,635
Net securities lending income	1,801,369	500,376	452,113	594,933	463,706
Total Additions	(268,754,845)	363,998,735	494,292,031	211,289,788	333,697,782
Deductions					
Retirement allowances	173,547,075	176,660,415	186,002,569	193,082,852	198,640,360
Lump sum DROP payments	10,379,493	18,078,701	17,039,089	10,816,700	13,625,797
Administrative expenses	3,334,851	3,311,686	4,241,753	3,672,958	3,568,855
Refunds of member contributions	1,114,334	1,372,214	1,490,557	1,309,010	2,393,838
Death benefits	251,544	154,775	254,630	385,167	163,838
Total Deductions	188,627,297	199,577,791	209,028,598	209,266,687	218,392,688
Net Increase (Decrease)	$ (457,382,142)	$ 164,420,944	$ 285,263,433	$ 2,023,101	$ 115,305,094

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
CHANGES IN FIDUCIARY NET POSITION (Concluded)

	2014	2015	2016	2017	2018
Additions					
Net investment income	$ 313,953,904	$ 53,442,809	$ 2,533,389	$ 273,800,787	$ 211,182,141
Employer contributions	113,843,250	119,020,291	121,115,085	129,688,977	137,738,323
Member contributions	28,265,556	30,341,796	30,549,801	29,901,791	31,285,881
Net securities lending income	495,366	459,490	469,337	586,818	485,802
Total Additions	456,558,076	203,264,386	154,667,612	433,978,373	380,692,147
Deductions					
Retirement allowances	205,591,968	210,318,274	217,821,498	223,772,460	228,774,485
Lump sum DROP payments	12,373,388	11,477,573	17,062,244	17,790,724	14,429,983
Administrative expenses	3,907,539	4,297,773	4,407,296	4,328,135	4,984,228
Refunds of member contributions	3,129,650	2,796,110	3,094,838	3,069,464	3,542,713
Death benefits	344,230	342,353	863,933	447,433	223,384
Total Deductions	225,346,775	229,232,083	243,249,809	249,408,216	251,954,793
Net Increase (Decrease)	$ 231,211,301	$ (25,967,697)	$ (88,582,197)	$ 184,570,157	$ 128,737,354

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
REVENUES BY SOURCE

Fiscal Year	Net Investment Income	Employer Contributions		Member Contributions	Total
		Amount	% of Covered Payroll		
2009	$ (355,929,333)	$ 69,513,236	24.7%	$17,661,252	$ (268,754,845)
2010	252,646,477	94,097,743	34.0	17,254,515	363,998,735
2011	367,166,003	107,539,873	39.0	19,586,155	494,292,031
2012	80,934,446	107,488,403	37.8	22,866,939	211,289,788
2013	200,537,288	107,778,859	38.8	25,381,635	333,697,782
2014	314,449,270	113,843,250	40.1	28,265,556	456,558,076
2015	53,902,299	119,020,291	39.9	30,341,796	203,264,386
2016	3,002,726	121,115,085	40.3	30,549,801	154,667,612
2017	274,387,605	129,688,977	43.8	29,901,791	433,978,373
2018	211,667,943	137,738,323	42.6	31,285,881	380,692,147

Notes: Employer contributions were made in accordance with actuarially determined contribution requirements.

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
EXPENSES BY TYPE

Fiscal Year	Retirement Benefits	DROP Payments	Refunds	Administrative Expenses	Total
2009	173,798,619	10,379,493	1,114,334	3,334,851	$ 188,627,297
2010	176,815,190	18,078,701	1,372,214	3,311,686	199,577,791
2011	186,257,199	17,039,089	1,490,557	4,241,753	209,028,598
2012	193,468,019	10,816,700	1,309,010	3,672,958	209,266,687
2013	198,804,198	13,625,797	2,393,838	3,568,855	218,392,688
2014	205,936,198	12,373,388	3,129,650	3,907,539	225,346,775
2015	210,660,627	11,477,573	2,796,110	4,297,773	229,232,083
2016	218,685,431	17,062,244	3,094,838	4,407,296	243,249,809
2017	224,219,893	17,790,724	3,069,464	4,328,135	249,408,216
2018	228,997,869	14,429,983	3,542,713	4,984,228	251,954,793

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
BENEFIT EXPENSES BY TYPE

Year	Age and Service Benefits		Death Benefits			Disability Benefits			
						Retirees			
Ending	Retirees	Beneficiaries	Duty	Non-Duty	Lump Sum	Duty	Non-Duty	Beneficiaries	Total
2009	$133,001,464	$10,862,644	$3,608,486	$3,242,417	$251,544	$22,751,656	$5,481,123	$4,978,778	$184,178,112
2010	143,638,241	11,219,469	3,066,579	3,215,249	154,775	23,209,880	5,262,840	5,126,858	194,893,891
2011	148,265,914	13,292,721	3,063,434	3,311,818	254,630	23,759,543	5,291,033	6,057,195	203,296,288
2012	147,421,816	13,916,530	3,010,331	3,269,163	385,167	24,626,399	5,192,927	6,462,386	204,284,719
2013	154,203,276	14,539,747	2,972,662	3,238,196	163,838	25,229,266	5,136,984	6,946,026	212,429,995
2014	158,233,244	15,372,751	2,908,705	3,229,061	344,230	25,992,206	5,061,399	7,167,990	218,309,586
2015	160,757,738	16,006,666	2,870,887	3,289,067	342,353	26,604,387	5,025,575	7,241,527	222,138,200
2016	173,404,322	16,629,410	2,893,842	3,202,861	863,933	26,937,043	4,895,300	6,920,964	235,747,675
2017	179,232,723	17,497,593	2,880,489	3,188,438	447,433	27,142,330	4,986,095	6,635,516	242,010,617
2018	182,298,749	16,130,843	2,775,501	3,201,695	223,384	27,518,518	4,822,082	6,457,080	243,427,852

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
AVERAGE MONTHLY SERVICE RETIREMENT BENEFIT PAYMENTS

Retirement Effective Dates	Years of Credited Service				
From July 1, 2008 to June 30, 2018	<15	16-20	21-25	26-30	31+
Period 7/1/08 to 6/30/09					
Average Monthly Benefit	1,575	2,640	3,486	4,634	5,425
Average-Average Final Compensation	58,129	64,944	68,713	77,044	71,716
Number of Active Retirees	1	26	50	20	20
Period 7/1/09 to 6/30/10					
Average Monthly Benefit	1,536	2,628	3,523	4,378	5,857
Average-Average Final Compensation	62,502	62,799	71,305	70,529	81,313
Number of Active Retirees	5	32	54	30	26
Period 7/1/10 to 6/30/11					
Average Monthly Benefit	1,770	2,690	3,431	4,384	5,877
Average-Average Final Compensation	68,688	65,375	71,761	71,739	81,707
Number of Active Retirees	1	35	61	26	22
Period 7/1/11 to 6/30/12					
Average Monthly Benefit	3,084	3,035	3,417	4,395	5,188
Average-Average Final Compensation	61,369	69,233	70,981	72,633	75,409
Number of Active Retirees	10	36	33	24	14
Period 7/1/12 to 6/30/13					
Average Monthly Benefit	3,011	2,922	3,540	4,762	5,222
Average-Average Final Compensation	58,539	65,438	71,489	76,472	69,186
Number of Active Retirees	19	44	74	36	16

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
AVERAGE MONTHLY SERVICE RETIREMENT BENEFIT PAYMENTS (Concluded)

	Years of Credited Service				
	<15	16-20	21-25	26-30	31+
Period 7/1/13 to 6/30/14					
Average Monthly Benefit	2,905	3,086	3,724	4,525	5,275
Average-Average Final Compensation	59,037	71,445	74,337	74,591	76,000
Number of Active Retirees	21	49	60	22	10
Period 7/1/14 to 6/30/15					
Average Monthly Benefit	3,380	3,282	3,587	5,031	6,217
Average-Average Final Compensation	63,848	73,791	75,700	78,631	81,817
Number of Active Retirees	12	43	58	17	15
Period 7/1/15 to 6/30/16					
Average Monthly Benefit	3,388	3,169	3,944	5,180	6,689
Average-Average Final Compensation	64,470	74,099	81,420	84,253	92,377
Number of Active Retirees	8	21	67	26	23
Period 7/1/16 to 6/30/17					
Average Monthly Benefit	2,954	3,038	3,919	6,127	6,675
Average-Average Final Compensation	67,871	80,564	82,694	93,907	91,322
Number of Active Retirees	23	34	45	32	28
Period 7/1/17 to 6/30/18					
Average Monthly Benefit	3,673	4,799	4,250	4,104	4,752
Average-Average Final Compensation	77,622	88,930	84,278	86,400	90,005
Number of Active Retirees	17	20	60	30	10
Period 7/1/08 to 6/30/18					
Average Monthly Benefit	3,264	3,067	3,693	4,767	5,872
Average-Average Final Compensation	72,402	70,899	75,235	79,025	81,952
Number of Active Retirees	117	340	562	263	184

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
SCHEDULE OF ACTIVE MEMBERS BY YEARS OF SERVICE

Years of Credited Service	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
0-4	1,142	1,079	1,047	987	824	787	801	640	670	802
5-9	900	873	873	982	997	934	883	854	689	573
10-14	759	726	770	770	791	765	739	742	821	832
15-19	904	872	890	853	763	686	651	688	693	709
20-24	513	572	536	504	575	668	633	650	625	569
25-29	291	264	251	313	294	275	334	313	290	356
30+	181	198	208	215	195	202	207	207	224	208
Total Members	4,690	4,584	4,575	4,624	4,439	4,317	4,248	4,094	4,012	4,049
Average Service Credit	12.45	12.71	12.64	12.73	13.09	13.42	13.62	13.98	14.06	13.99
Average Age	38.99	39.21	39.14	39.23	39.62	39.94	40.24	40.69	40.95	41.02

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
SCHEDULE OF CURRENT ACTIVE MEMBERS BY YEARS OF SERVICE AND DEPARTMENT
SCHEDULE OF CURRENT ACTIVE DROP AND DROP 2 MEMBERS BY YEARS OF SERVICE AND DEPARTMENT
For the Year Ended June 30, 2018

Schedule of Current Active Members By Years of Service and Department

Years of Credited Service	Police Department	Fire Department	School Crossing Guards	Airport Employees	Total
0-4	530	272			802
5-9	375	198			573
10-14	471	361			832
15-19	461	248			709
20-24	415	154			569
25-29	188	168			356
30+	80	125	1	2	208
Total Members	2,520	1,526	1	2	4,049

Schedule of Current Active DROP Members By Years of Service and Department

Years of Credited Service	Police Department	Fire Department	School Crossing Guards	Airport Employees	Total
25-29	5	16			21
30+	78	123	1	2	204
Total DROP Members	83	139	1	2	225

Schedule of Current Active Grandfathered DROP 2 Members By Years of Service and Department

Years of Credited Service	Police Department	Fire Department	Total
20-24	127	43	170
25-29	171	150	321
30+	1		1
Total DROP 2 Members	299	193	492

Schedule of Current Active Non-Grandfathered DROP 2 Members By Years of Service and Department

Years of Credited Service	Police Department	Fire Department	Total
25-29	3	5	8
30+			
Total DROP 2 Members	3	5	8

SCHEDULE OF CURRENT ACTIVE DROP AND DROP 2 MEMBERS BY FISCAL YEAR OF DROP / DROP 2 ENTRY AND DEPARTMENT

Year of DROP Entry	Police Department	Fire Department	School Crossing Guards	Airport Employees	Total
7/1/96 - 6/30/97	3	8			11
7/1/97 - 6/30/98	1				1
7/1/98 - 6/30/99	1	1	1		3
7/1/99 - 6/30/00	6	7			13
7/1/00 - 6/30/01	4	6			10
7/1/01 - 6/30/02	5	9			14
7/1/02 - 6/30/03	5	10			15
7/1/03 - 6/30/04	8	3			11
7/1/04 - 6/30/05	7	9			16
7/1/05 - 6/30/06	11	16		1	28
7/1/06 - 6/30/07	6	17			23
7/1/07 - 6/30/08	14	31			45
7/1/08 - 6/30/09	5	10		1	16
7/1/09 - 6/30/10	6	11			17
7/1/10 - 6/30/11		1			1
7/1/11 - 6/30/12	1				1
7/1/12 - 6/30/13					
7/1/13 - 6/30/14					
7/1/14 - 6/30/15					
7/1/15 - 6/30/16					
7/1/16 - 6/30/17					
7/1/17 - 6/30/18					
Total DROP Members	83	139	1	2	225

Year of Grandfathered DROP 2 Entry	Police Department	Fire Department	Total
7/1/09 - 6/30/10	7	15	22
7/1/10 - 6/30/11	22	76	98
7/1/11 - 6/30/12	30	12	42
7/1/12 - 6/30/13	63	18	81
7/1/13 - 6/30/14	66	37	103
7/1/14 - 6/30/15	28	8	36
7/1/15 - 6/30/16	47	25	72
7/1/16 - 6/30/17	28		28
7/1/17 - 6/30/18	8	2	10
Total DROP 2 Members	299	193	492

Year of Grandfathered DROP 2 Entry	Police Department	Fire Department	Total
7/1/17 - 6/30/18	3	5	8
Total DROP 2 Members	3	5	8

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
SCHEDULE OF RETIREES BY ATTAINED AGE AND TYPE OF RETIREMENT
For the Year Ended June 30, 2018

		TYPE OF RETIREMENT*					
Age	Number of Recipients	0	1	2	3	4	9
Under 25							
25-29							
30-34	21				3	18	
35-39	36				9	27	
40-44	96	11	5		13	67	
45-49	353	212	8	1	24	108	
50-54	569	406	6	7	35	114	1
55-59	569	453	1	3	24	87	1
60-64	637	568	3	1	16	49	
65-69	743	666			20	57	
70-74	757	665		1	25	66	
75-79	461	391			19	51	
80-84	291	235			23	33	
85-89	176	125			16	34	1
90 and up	69	52			6	11	
Totals	4,778	3,784	23	13	233	722	3
Average Annual Benefit	$41,579	$43,706	$31,232	$31,727	$20,213	$37,707	$71,026

*Type of Retirement
0 - Normal retirement for age and service
1 - Early Retirement
2 - Discontinued service
3 - Non-line-of-duty disability
4 - Line-of-duty disability
9 - Line-of-duty disability, 100% of compensation

Fire and Police Employees' Retirement System
City of Baltimore, Maryland
SCHEDULE OF BENEFICIARIES BY ATTAINED AGE AND TYPE OF RETIREMENT
For the Year Ended June 30, 2018

		TYPE OF RETIREMENT*							
Age	Number of Recipients	0	1	3	4	6	7	8	9
Under 20	12	1		1	3		4	3	
20-24	5	1		1	1		2		
25-29									
30-34	2				1			1	
35-39	2				1		1		
40-44	11	2	1				6	2	
45-49	34	20		1	2	2	3	6	
50-54	64	46		4	7	2	3	2	
55-59	96	74		4	7	4	4	3	
60-64	131	90		9	16	8	4	4	
65-69	182	121		9	19	16	8	9	
70-74	193	133		12	25	7	7	9	
75-79	226	137	1	30	37	8	7	5	1
80-84	236	137		32	48	9	5	5	
85-89	203	114		31	49	6		3	
90 and up	121	73		13	26	2	1	6	
Totals	1,518	949	2	147	242	64	55	58	1
Average Annual Benefit	$20,586	$19,766	$20,153	$14,638	$18,254	$31,088	$19,142	$48,257	$40,381

*Type of Retirement
0 - Normal retirement for age and service
1 - Early Retirement
3 - Non-line-of-duty disability
4 - Line-of-duty disability
6 - Non-line-of-duty death, member eligible for service retirement at death
7 - Non-line-of-duty death with 25% of compensation
8 - Line-of-duty death
9 - Line-of-duty disability, 100% of compensation

Fire and Police Employees' Retirement System

City of Baltimore, Maryland

SCHEDULE OF DROP RETIREES BY ATTAINED AGE AND TYPE OF RETIREMENT

SCHEDULE OF DROP BENEFICIARIES BY ATTAINED AGE AND TYPE OF RETIREMENT

For the Year Ended June 30, 2018

Schedule of DROP Retirees by Attained Age and Type of Retirement

		TYPE OF RETIREMENT*	
Age	Number of Recipients	0	4
40-44			
45-49	20	20	
50-54	206	204	2
55-59	376	364	12
60-64	464	457	7
65-69	505	492	13
70-74	386	382	4
75-79	146	145	1
80-84	33	33	
85+	6	6	
Totals	2,142	2,103	39
Average Annual Benefit	$49,164	$49,207	$46,863

Schedule of DROP Beneficiaries by Attained Age and Type of Retirement

		TYPE OF RETIREMENT*					
Age	Number of Recipients	0	1	4	6	7	8
40-44							
45-49	10	10					
50-54	29	27			2		
55-59	56	52		1	3		
60-64	71	66		1	3		1
65-69	71	56		1	11		3
70-74	49	45			2	1	1
75-79	32	31	1				
80-84	15	15					
85+	3	3					
Totals	336	305	1	3	21	1	5
Average Annual Benefit	$22,114	$20,035	$26,604	$21,993	$38,783	$27,704	$77,008

*Type of Retirement

0 - Normal retirement for age and service

1 - Early Retirement

4 - Line-of-duty disability: Member not eligible for DROP benefits

6 - Non-line-of-duty death, member eligible for service retirement at death

7 - Non-line-of-duty death with 25% of compensation

8 - Line-of-duty death: Beneficiary not eligible for DROP benefits

SCHEDULE OF DROP 2 RETIREES / BENEFICIARIES BY ATTAINED AGE AND TYPE OF RETIREMENT

For the Year Ended June 30, 2018

Schedule of DROP 2 Retirees by Attained Age and Type of Retirement

		TYPE OF RETIREMENT*			
Age	Number of Recipients	0	1	3	4
40-44	89	87	1		1
45-49	82	78		1	3
50-54	25	25			
55-59	17	17			
60-64	3	3			
65-69	1	1			
70-74					
75+					
Totals	217	211	1	1	4
Average Annual Benefit	$39,159	$39,056	$38,795	$30,469	$46,846

Schedule of DROP 2 Beneficiaries by Attained Age and Type of Retirement

		TYPE OF RETIREMENT*			
Age	Number of Recipients	0	3	6	7
40-44	2	1			1
45-49	6	3	1	2	
50-54	9	8			1
55-59	3	3			
60-64	1	1			
65-69					
70-74					
75+					
Totals	21	16	1	2	2
Average Annual Benefit	$15,612	$11,349	$14,537	$28,893	$36,975

*Type of Retirement
0 - Normal retirement for age and service
1 - Early Retirment
3 - Non-line-of-duty disability
4 - Line-of-duty disability
6 - Non-line-of-duty death, member eligible for service retirement at death
7 - Non-line-of-duty death with 25% of compensation

FIRE & POLICE

Employees' Retirement System

City of Baltimore, Maryland

Comprehensive Annual Financial Report

A Component Unit of the City of Baltimore, Maryland

Year Ended June 30, 2018

Prepared by:

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