Employees' Retirement System

City of Baltimore, Maryland

COMPREHENSIVE ANNUAL FINANCIAL REPORT

YEAR ENDED JUNE 30, 2016

A component unit of the City of Baltimore

ERS
EMPLOYEES' RETIREMENT SYSTEM
of the CITY OF BALTIMORE

Employees' Retirement System
City of Baltimore, Maryland

COMPREHENSIVE ANNUAL FINANCIAL REPORT
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PREPARED BY

ROSELYN SPENCER, EXECUTIVE DIRECTOR & CIO
GRACE M. IKEOCHA, ACCOUNTING MANAGER

ERS
EMPLOYEES' RETIREMENT SYSTEM
of the CITY OF BALTIMORE

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Employees' Retirement System

Mission Statement

The System is committed to protecting and prudently investing member assets and providing accurate and timely retirement benefits with quality service to members and beneficiaries.

Standards of Conduct

As Trustees and Staff, we are committed to:

Safeguard the members' assets.

Strive for continues improvement.

Maintain confidentiality as appropriate.

Effectively communicate accurate information.

Provide accountable and proactive leadership.

Conduct all business in a fair and respectful manner.

Foster an atmosphere of cooperation and teamwork.

Value members as clients and advocate on their behalf.

Comply with the System's plan provisions, policies and guidelines.

Work efficiently, simplify procedures, and minimize bureaucratic hurdles.

Form alliances and partnerships to benefit the membership and the System.

We expect all who interact with us to adhere to these standards of conduct.

Approved by the Board of Trustees February 12, 2002

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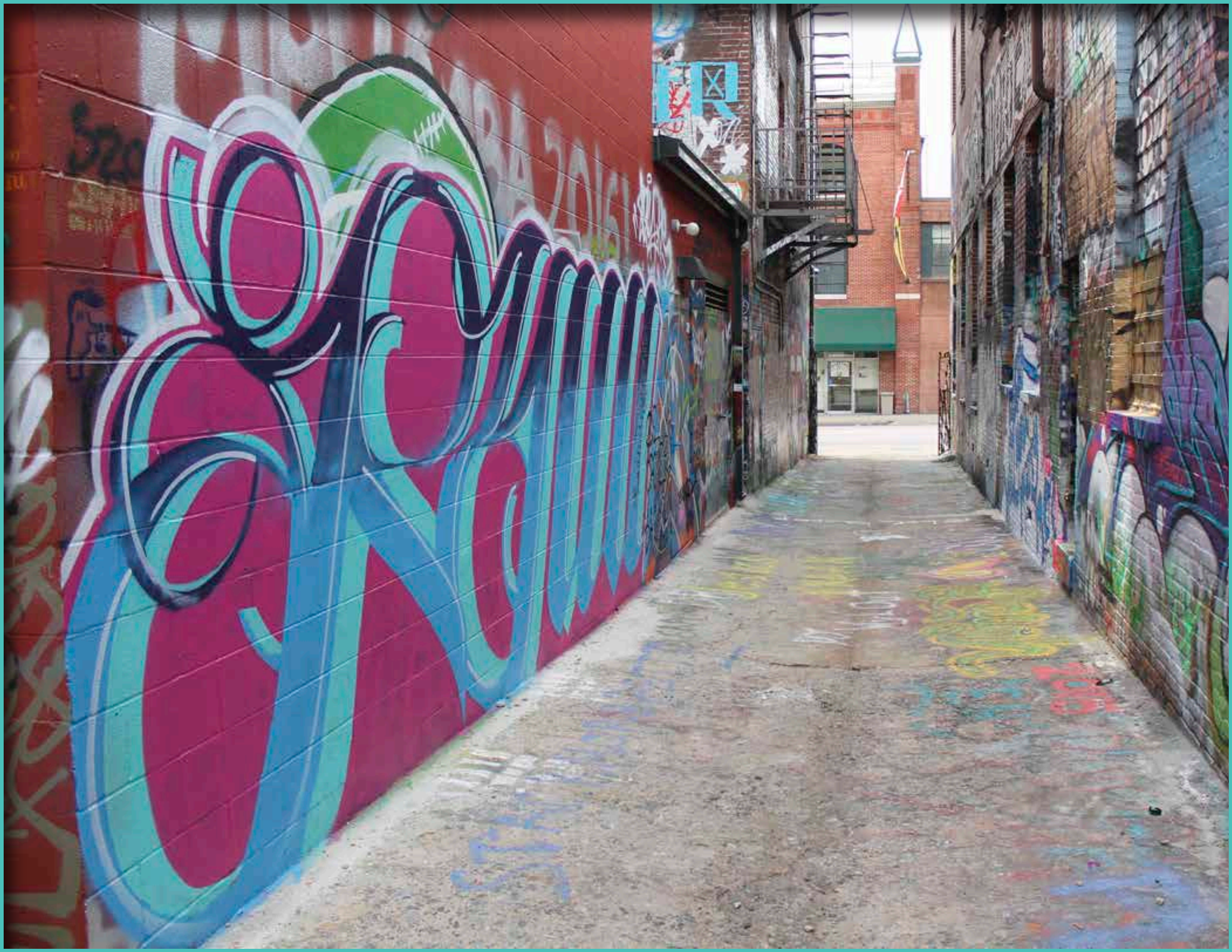

Introductory Section

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Employees' Retirement System

City of Baltimore, Maryland

For its Comprehensive Annual Financial Report for the Fiscal Year Ended

June 30, 2015

Jeffrey R. Emer

Executive Director/CEO

CITY OF BALTIMORE

CATHERINE E. PUGH, Mayor

EMPLOYEES' RETIREMENT SYSTEM and
ELECTED OFFICIALS' RETIREMENT SYSTEM

ROSELYN H. SPENCER, Executive Director
7 E. Redwood Street
12th and 13th Floors
Baltimore, Maryland 21202

January 18, 2017

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

It is my pleasure to present the Comprehensive Annual Financial Report (CAFR) of the Employees' Retirement System of the City of Baltimore, Maryland (ERS, System, and Plan) a component unit of the City of Baltimore, Maryland (City) for the fiscal year ended June 30, 2016. The System's administration is responsible for the accuracy of the data and the completeness of the presentation, including all disclosures. We believe 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 the System's operations.

For financial reporting purposes, the System utilizes accounting principles generally accepted in the United States, which requires that management provide a narrative introduction, overview and analysis of the financial statements of the System in the form of a Management Discussion and Analysis (MD&A). The System applies all applicable pronouncements of the Government Accounting Standard Board (GASB). This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it. The MD&A can be found immediately following the Independent Auditor's Report in the Financial Section, on page 18.

Profile of the Plan

The ERS is a defined benefit contributory plan established January 1, 1926 by legislation, for eligible members who are employed in the general administrative service of the City and for certain non-teacher employees of the Baltimore City Public School System. All System-related administrative and benefit provisions are established by City Ordinance, as contained in Article 22 of the Baltimore City Code, and are amended only by the Mayor and City Council. A summary of Plan provisions is presented on pages 70 through 78. The number of active, retired and deferred members, as well as beneficiaries of the Plan can be found in the Notes to Basic Financial Statements on page 25.

Major Initiatives

There were two major undertakings during the fiscal year; an asset liability study and legislative mandates. Both endeavors resulted in changes that directly affect the Plan.

Asset Liability Study: An asset liability modeling study was completed taking into consideration actuarial and capital market assumptions. The study covered projections of liabilities, contributions, benefit payments, expenses and a holistic view of asset allocation dynamics. As a result, the Board approved the following asset allocation for investment of the Plan's assets: 22% to fixed income, 27% to US equity, 20% to non-US equity, 5% to hedge funds, 13% to real estate and 13% to private equity.

Legislative Mandate: Ordinance 16-488 was signed into law by the Mayor on June 21, 2016. The Bill modified the definitions of "regular interest" for valuation purposes and "actuarial equivalent". It changed the assumed interest rate for the Plan investments from the current 7.75% (for assets covering active members), and 6.55% (for assets covering the liabilities of retired members) to 7.50% (pre-retirement) and 6.30% (post-retirement) for fiscal years ending 6/30/16 and 6/30/17. In fiscal year ending on 6/30/18 and thereafter, the assumed interest rate will be 7.00% (pre-retirement) and 6.50% (post-retirement). The Ordinance also: made changes to the actuary mortality tables to reflect present trends; clarified the definition of covered employees; changed the frequency of actuarial experience studies; provided for distribution of accumulated contributions; modified the administration of death benefits for eligibility surviving spouses and minor children; and eliminated outdated provisions of the existing Article 22.

Elements of pension reform continued to provide cost savings to the City. “Class C” members of the Plan contributed a third year of mandatory phased-in employee contributions at a rate of 3.0%. Contribution rate for “Class C” members is now 4.0% of pay for fiscal year 2017, and will continue for another year at 1.0% to cap at 5.0% in 2018.

Financial and Economic Summary

In a year where global populism was gaining momentum, geopolitical issues and the unpredictable intentions of monetary authorities, made it difficult to capture the tenor of financial markets. United Kingdom’s (UK) unexpected Brexit referendum, to exit the European Union, led to major sell offs in late June, wiping out some of the portfolio gains in the final days of the fiscal year. Brexit effect to the financial markets was immediate, and with no quick solution on implementation, is creating a prolonged period of uncertainty. Central Banks in Europe and Japan continue to implement monetary stimulus and negative interest rates policies through large scale bond purchasing programs. Here in the US, the Federal Reserve decided against a mid-year rate hike based on improved US economic data especially in the unemployment rate and the Fed’s willingness to allow inflation to raise slighter than its current 2.0%.

Yet, as the U.S. economic expansion continues, expectations are lowered for global economic growth and are expected to remain so for a long time. Equity continues to gain, as fixed income remained unattractive due to low yields and the forthcoming chance of rising interest. As a result, the markets saw a flight to safety and risk aversion in anticipation of some adjustment and the probability of an interest rate hike.

ERS investments ended the June 30, 2016 fiscal year with strong performance of 3.2%, outperforming the policy benchmark of 1.8% and ranking ERS in the 6th percentile among its peers. Although the strong relative performance, total plan net assets declined by $15.0 million or 1.0%, to $1,517 billion when compared to the 2015 fiscal year. A broad diversification of the Plan’s assets facilitated some portfolio risk mitigation while contributing to performance returns. Positive contributors to performance came from investments in fixed income, private equity and real estate. Detractors were investments to hedge funds and non-US investments that saw most of their earlier gains wiped away due to fallouts from Brexit and other macro events.

Investment Summary

The Board of Trustees (Board) is responsible for investment of the System’s assets in accordance with the approved asset allocation. Other duties of the Board include: establishing reasonable investment objectives and policy guidelines, selecting investment managers and evaluating performance results to assure adherence to guidelines, and achievement of the System’s objectives. The Board has a fiduciary duty to exercise its investment authority prudently and solely in the interest of the System’s participants and beneficiaries.

The System’s investment objective is to earn or exceed the actuarial assumption rate of 7.50%, or to outperform its policy benchmark. Although, the System outperformed its policy benchmark for the fiscal year, it fell short of the actuary assumed rate of return. The shortfall is an illustration of the difficulties in achieving the high assumed rate of return in a low interest rate, low return environment. We are still confident that ERS’ diverse investment strategy which is designed to maximize returns for the long-term is on the right track for achieving its objective. Current investment performance for the three and five year periods is still attractive, with annualized returns at 7.70% and 7.60%, respectively. The investment consultant provides the Board with monthly and annual evaluation reports. A summary of their annual analysis and the target asset allocation is found on pages 46 to 52 in the Investment Section of this report. Please refer to the MD&A for more investment and financial analysis.

Actuarial and Funding Results

An actuarial valuation report is prepared annually by the Board's Actuary to determine appropriate assumptions and funding requirements. As of June 30, 2016 the System's market value of assets declined from $1,532 million to $1,517 million or a 1% decrease over the 2015 value of assets. The assets were insufficient to offset the Total Pension Liability (TPL) of $2,328 million as of June 30, 2016 resulting in a Net Pension Liability (NPL) of $810 million as provided on page 36. This represents an increase of $90 million in NPL from 2015. Investment loses and assumption changes contributed to this increase. The NPL is the difference between the Total Pension Liabilities (TPL) less the Plan Fiduciary Net Position (FNP). All data related to GASB 67 is provided in the required supplemental section and in the financial notes.

For funding purposes, the discount assumption rate of 7.75% was lowered to 7.50% for active members and from 6.55% to 6.50% for retired members resulting in an increase of $21 million in actuarial liability. The actuarial value of assets, which is a smoothed asset value used for funding purposes was $1,657 million as of June 30, 2016. When compared to the actuarial liability of $2,328 million, there was an unfunded actuarial liability of $670 million. The System's funded ratio, which is the ratio of actuarial assets to actuarial liability, decreased from 71.7% last year to 71.2% this year.

Normal cost, which is the cost for purchasing pension years of service, also increased from 7.32% to 7.48%. The fixed 20-year amortization period of 100% funding to end in fiscal year 2032, is now in the fifth year, with 15 years of amortization periods remaining.

The required employer contribution is determined actuarially, based on the annual cost of accrual of benefits and amortization of the unfunded actuarial liability offset by employee contributions. The recommended net lump sum City contribution increased by $3.1 million (or 3.6%), from $84,474,449 for fiscal year 2017, to $87,541,882 for fiscal year 2018. Overall, this represents an increase in cost as a percentage of pay from 20.70% to 21.91%.

Accounting Systems and Internal Control

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

The System's administration assumes full responsibility for establishing and maintaining adequate internal controls and for the financial information contained in this report. Proper internal accounting and control exists to provide reasonable, but not absolute, assurance regarding the security of assets and the fair presentation of the financial statements and supporting schedules. Documented procedures, use of control cycles of work duties and other internal control policies are available for major job functions and operating processes. They are implemented thoughtfully and consistently. Management also understands that in executing reasonable assurance of an internal control framework, the cost of control should not exceed the anticipated benefits, and that the reasonable cost benefit framework requires management to make some estimates and/ or justifications.

Other Information

Independent Auditor: The Baltimore City Code requires that the City's Board of Estimates select an independent auditor for the Retirement System, and that the auditor report findings annually to the Board of Estimates and to the Board of Trustees. The Board of Estimates elected to have CliftonLarsonAllen render an opinion as to the fairness of the System's financial statements. The auditor's report is contained in the Financial Section of this report.

Professional Services: The Board appoints consultants and investment managers, subject to approval by the City's Board of Estimates. These professionals are chosen based on their ability to provide services that are essential to the effective and efficient operation of the System. Trustees are also required to monitor and terminate investment managers as necessary for underperformance, or for other material reasons as determined by the Board. All of the professionals that provide services to the Board are listed on pages 13 and 56 through 57 in the Introductory and Investment Sections of this report.

Awards and Acknowledgements

The Government Finance Officers Association of the United States and Canada (GFOA) awarded ERS a Certificate of Achievement for Excellence in Financial Reporting by for its Comprehensive Annual Financial Report for the fiscal year ended June 30, 2015. This was the 33^{nd} consecutive year (fiscal years 1983-2015) that the ERS has received this prestigious award. A Certificate of Achievement is valid for a period of one year only. We believe that our current annual financial report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

The annual report was prepared by the System's staff, with contributions from our investment consultant Marquette Associates, Inc., and actuary, Cheiron, Inc. It is intended to provide complete and reliable information as a basis for making management decisions, and as a means of determining compliance with legal provisions. Copies of this report are provided to the Elected City Officials, City Agency Heads and other interested parties. Copies are also filed with the Baltimore City Office of Legislative Reference. Other interested parties may obtain the report through the ERS website located at www.bcers.org.

In closing, I would like to take this opportunity to thank the Board, staff and advisors for their considerable contributions in overseeing the successful management of the ERS over the past year.

Respectfully submitted,

Roselyn H. Spencer

Roselyn H. Spencer
Executive Director & Chief Investment Officer

CITY OF BALTIMORE
CATHERINE E. PUGH, Mayor

EMPLOYEES' RETIREMENT SYSTEM and
ELECTED OFFICIALS' RETIREMENT SYSTEM
ROSELYN H. SPENCER, Executive Director
7 E. Redwood Street
12th and 13th Floors
Baltimore, Maryland 21202

December 31, 2016

To: All Members, Retirees and Beneficiaries of the
City of Baltimore Employees' Retirement System (ERS)

The fiscal year ending June 30, 2016 was another challenging investment period, with continued volatility in equity and fixed income markets leading many investors to suffer losses or, at best, small gains. Among the contributing factors were the sharp downturn in the energy sector, the economic slowdown in China and other developing countries, the decision by British voters to leave the European Union, and anticipation of a Federal Reserve interest rate increase.

Despite these challenges, I am happy and proud to report that the 2.8% investment return for the Baltimore City Employees' Retirement System placed it in the top 92% of similarly-sized U.S. public pension plans.

ERS assets are allocated among many different types of investments. During this fiscal year, the Board of Trustees adopted the recommendation of Marquette Associates, the ERS's investment consultant, to make changes to the allocation of ERS investments. These changes are expected to increase investment return while minimizing risk.

In June, the Baltimore City Council passed, and the Mayor signed into law, legislation making certain changes to the ERS. Those changes include a reduction in the assumed rate of investment return that the ERS's actuary uses to calculate the required contribution by the City of Baltimore and the Baltimore City Public School System. This provision will help ensure that ERS remains well-funded.

As provided in the ERS law, all eligible ERS retirees and beneficiaries will receive annual post-retirement increases in January 2017. The increase is 1.5% for members and beneficiaries under age 65 and 2.0% for members and beneficiaries age 65 and older.

In December 2015, I was fortunate enough to be elected Chair of the Board of Trustees. Having served in that capacity for almost one year, I have experienced first-hand the utmost dedication that my fellow Trustees demonstrate in carrying out their Board duties. I would also like to thank Executive Director Roselyn Spencer for her inspired leadership and the ERS staff for its exceptional service on behalf of our members and beneficiaries.

Sincerely,

Deborah F. Moore-Carter

Deborah F. Moore-Carter
Chair, Board of Trustees

BOARD OF TRUSTEES

Both appointed and elected trustees serve four-year terms. Appointed trustees continue to serve until replaced by the Mayor, or until the expiration of two consecutive full terms. There are no limitations on the number of terms an elected trustee may serve.

LEGAL COUNSEL, GENERAL COUNSEL, ACTUARY, AND INDEPENDENT AUDITOR

LEGAL COUNSEL

City of Baltimore
Law Department
George Nilson, Esq.

GENERAL COUNSEL

City of Baltimore
Employees' Retirement System
Ian Berger

ACTUARY

Cheiron, Inc.
Kenneth Kent, F.S.A.
McLean, Virginia

INDEPENDENT AUDITOR

CliftonLarsonAllen, LLP
Thomas Rey, CPA

See pages 56 to 57 in the Investment Section for a list of investment professionals.

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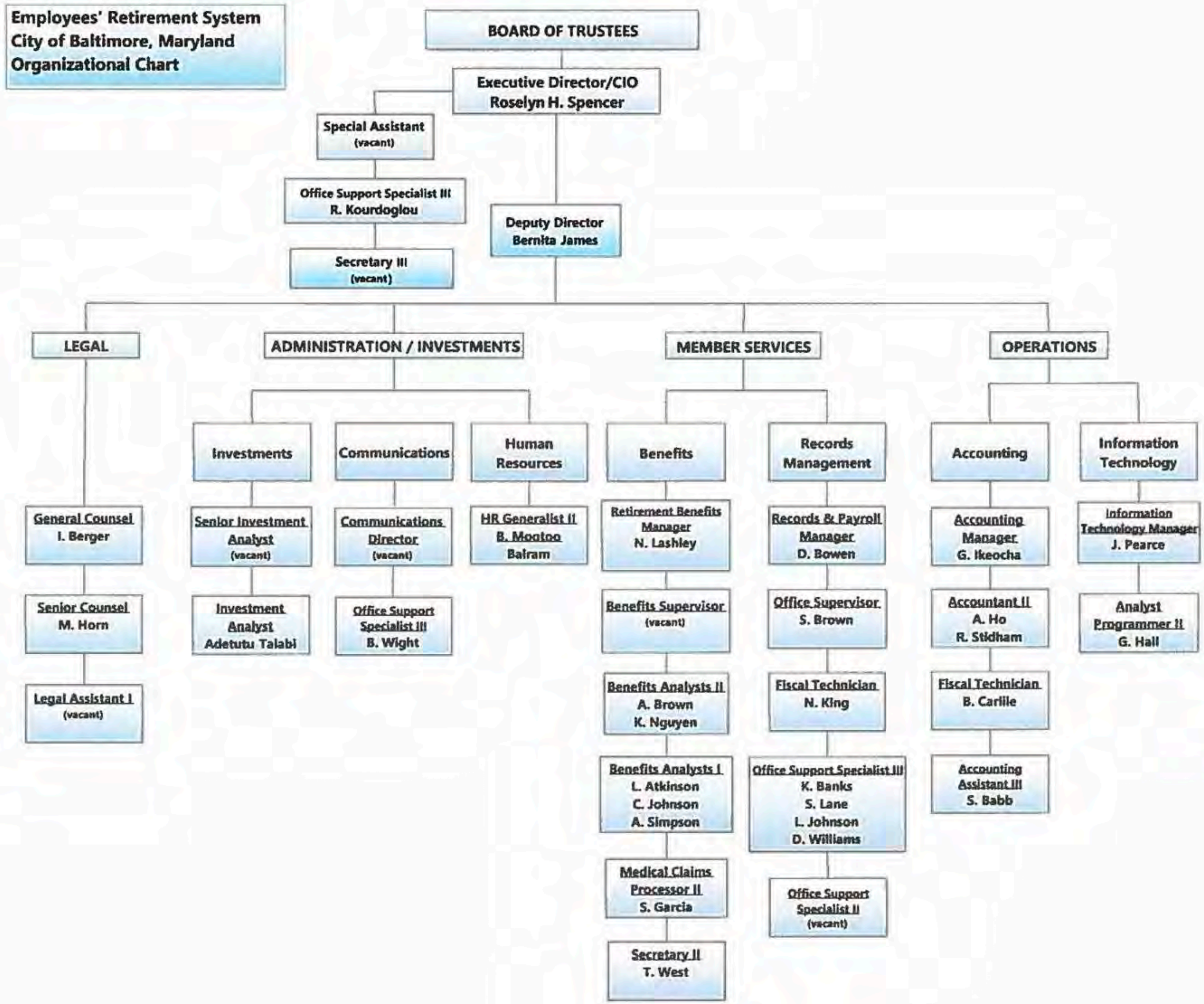

Employees' Retirement System
City of Baltimore, Maryland
Organizational Chart
BOARD OF TRUSTEES
Executive Director/CIO
Roselyn H. Spencer
Special Assistant
(vacant)
Office Support Specialist III
R. Kourdoglou
Secretary III
(vacant)
Deputy Director
Bernita James
LEGAL
ADMINISTRATION / INVESTMENTS
MEMBER SERVICES
OPERATIONS
General Counsel
I. Berger
Senior Counsel
M. Horn
Legal Assistant I
(vacant)
Investments
Senior Investment Analyst
(vacant)
Investment Analyst
Adetutu Talabi
Communications
Communications Director
(vacant)
Office Support Specialist III
B. Wight
Human Resources
HR Generalist II
B. Mootoo Balram
Benefits
Retirement Benefits Manager
N. Lashley
Benefits Supervisor
(vacant)
Benefits Analysts II
A. Brown
K. Nguyen
Benefits Analysts I
L. Atkinson
C. Johnson
A. Simpson
Medical Claims Processor II
S. Garcia
Secretary II
T. West
Records Management
Records & Payroll Manager
D. Bowen
Office Supervisor
S. Brown
Fiscal Technician
N. King
Office Support Specialist III
K. Banks
S. Lane
L. Johnson
D. Williams
Office Support Specialist II
(vacant)
Accounting
Accounting Manager
G. Ikeocha
Accountant II
A. Ho
R. Stidham
Fiscal Technician
B. Carlile
Accounting Assistant III
S. Babb
Information Technology
Information Technology Manager
J. Pearce
Analyst Programmer II
G. Hall

Financial Section

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 Employees' Retirement System
Baltimore, Maryland

Report on the Financial Statements

We have audited the accompanying financial statements of the Employees' Retirement System of the City of Baltimore (the System), which comprise the statement of fiduciary net position as of June 30, 2016, 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, 2016, 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 $341 million (22% 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.

A member of Nexia International

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, employer contributions and investment returns 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 them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated January 18, 2017 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

CliftonLarsonAllen LLP

CliftonLarsonAllen LLP

Baltimore, Maryland
January 18, 2017

We are pleased to provide this analytical overview of the financial activities of the Employees' Retirement System (ERS) for the fiscal years ended June 30, 2016 and 2015. ERS is the administrator of a cost-sharing multiple employer defined benefit local government retirement plan (the Plan). Readers are encouraged to consider the information presented here in conjunction with additional information furnished in the Transmittal Letter, which begins on page 7 of this report.

Financial Highlights

- The net position restricted for pensions at the close of the fiscal year 2016 is $1.517 billion. The net position is available to meet the Plan's ongoing obligations to plan participants and their beneficiaries.

- The Plan's total net position restricted for pensions decreased by $15.0 million, compared to last year's increase of $32.7 million. The decrease was due to benefit payments exceeding contributions and net investment income.

- The time weighted rate of return for the fiscal year ended June 30, 2016 was 3.2% compared to the fiscal year ended June 30, 2015 return of 4.6%. The 1.4% decrease in 2016 is attributed the underperformance of international equities, commingled fixed income fund and hedge fund.

- The Plan's funding objective is to meet long-term benefit obligations through contributions and investment income. As of June 30, 2016, the plan's net position as a percentage of the total pension liability was 65.2%. In general, this indicates that the Plan has approximately $0.65 of assets to cover every dollar of benefits due.

- Revenues (Additions to Fiduciary Net Position) for the year were $127.7 million. Revenues include employer contributions of $77.1 million, plan member contributions of $10.4 million, net investment income of $39.9 million, and net securities lending income of $0.4 million.

- Expenses (Deductions from Fiduciary Net Position) increased by $4.7 million to $142.7 million from the prior year expenses of $138.0 million. The expenses are primarily comprised of retirement allowances.

Overview of Financial Statements

The following discussion and analysis are intended to serve as an introduction to the Plan's financial statements and the Financial Section of this report.

The **Statement of Fiduciary Net Position** presents the Plan's assets and liabilities, as well as, the net position restricted for pensions at June 30, 2016. The assets comprise receivables, mainly from investment activity, investments at fair market value and securities lending collateral.

The **Statement of Changes in Fiduciary Net Position**, presents information showing how the Plan's net position changed during the year. Plan member contributions are recognized in the period in which the contributions are due. Employer contributions are recognized when a formal commitment has been made by the City to provide the contributions. All investment gains and losses are shown at trade date. Both realized and unrealized gains and losses are shown on investments. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.

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 statements and the notes are in conformity with the 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 and the Statement of Changes in Fiduciary Net Position can be found on pages 23 and 24 of this report.

The **Required Supplementary Information** that follows immediately after the notes to the basic financial statements include the Schedules of Changes in Net Pension Liability and Related Ratios, Employer Contributions, Investment Returns and Notes to Required Supplementary Information. See the Required Supplementary Information beginning on page 35 of this report.

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

Financial Analysis

Net position may serve over time as a useful indicator of the Plan's financial position. At June 30, 2016, assets exceeded liabilities by $1.517 billion. The net position is available to meet the Plan's ongoing obligation to Plan participants and their beneficiaries. As of June 30, 2016, total net position decreased by 1.0% over the prior year. The decrease of the net investment income which dropped from $67.0 million to $40.0 million was primarily due to the performances of international equities and alternative investment such as hedge funds in the Plan's portfolio. Management believes that the Plan remains in a strong financial position to meet its obligations to the members, retirees, and their beneficiaries.

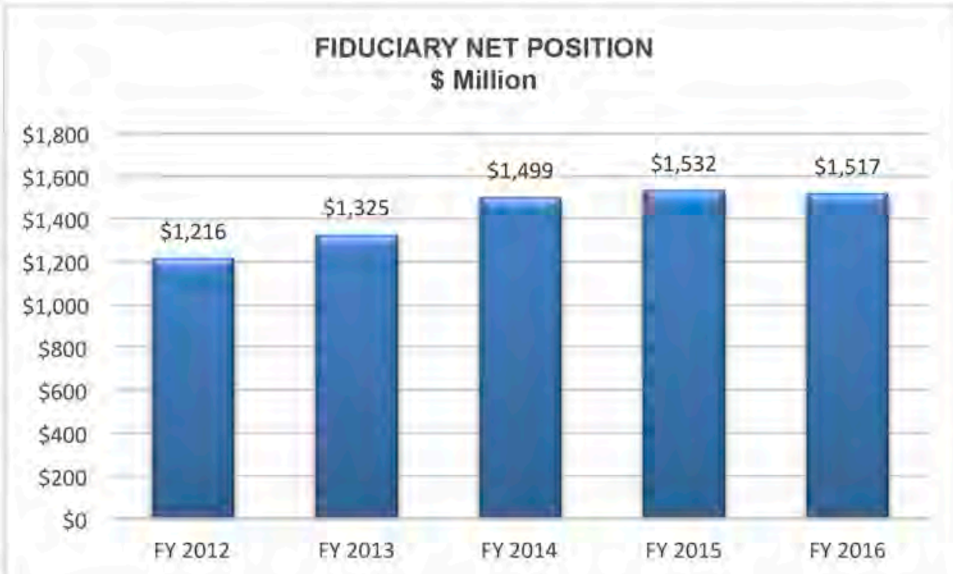
Fiduciary Net Position	Fiscal Year 2016	Fiscal Year 2015	Increase / (Decrease)	Percentage Change
Investments	$ 1,529,231,600	$ 1,531,009,786	$ (1,778,186)	-0.1%
Other assets	136,079,109	123,522,308	12,556,801	10.2%
Total assets	1,665,310,709	1,654,532,094	10,778,615	0.7%
Total liabilities	148,378,327	122,597,828	25,780,499	21.0%
Total net position	$ 1,516,932,382	$ 1,531,934,266	$ (15,001,884)	-1.0%

Investment Assets

ERS is a long-term investor and manages the Plan's assets with long-term objectives in mind. A primary element of the Plan's investment philosophy is to employ a diversification of assets as the best possible way to achieve its goals. After conducting an asset-liability study with the Plan's investment consultant, the Board of Trustees established an asset allocation plan taking into account the risk associated with each asset class as well as the financial objectives of the Plan. Investments are stated at fair value rather than at cost and include the recognition of unrealized gains and losses in the current period.

The rate of return on investments for the year ended June 30, 2016 was 3.2%, a 1.4% decrease compared to the fiscal year 2015 rate of return of 4.6%. The annualized rate of return for the last three, five and ten year periods ended June 30, 2016 were 7.7%, 7.6% and 6.0%, respectively. The Plan's long-term actuarial investment return assumption is 7.50%. The positive rate of return is attributable outperformance of the benchmarks in the private equity and real estate sectors of the Plan's portfolio.

The Investment Section beginning on page 45 gives detailed information on the Plan's investment policies. See page 52 of this report for charts showing the asset allocation targets established by the Board of Trustees and the actual asset allocation of System assets at June 30, 2016.



Liabilities

The liabilities are payables incurred by the transaction activity of the investment assets, securities lending, the retirement benefit expenses, and administrative expenses of the Plan.

Changes in Fiduciary Net Position	Fiscal Year 2016	Fiscal Year 2015	Increase / (Decrease)
Additions			
Employer contribution	$ 77,100,573	$ 97,170,796	$ (20,070,223)
Plan member's contributions	10,350,709	6,728,131	3,622,578
Net investment income	39,903,958	66,609,808	(26,705,850)
Net securities lending income	356,084	208,232	147,852
Total additions	127,711,324	170,716,967	(43,005,643)
Deductions			
Retirement allowances	138,184,417	133,129,502	5,054,915
Death benefits	652,743	943,540	(290,797)
Lump sum cash payments	124,748	125,608	(860)
Refund of members' contribution	235,808	72,008	163,800
Administrative expenses	3,515,492	3,748,434	(232,942)
Total deductions	142,713,208	138,019,092	4,694,116
Net increases (decreases)	$ (15,001,884)	$ 32,697,875	$ (47,699,759)

Contributions and Investment Income

Employer contributions decreased by 20.7% over last year's contributions. The employer's contributions are actuarially based and are calculated two fiscal years in advance. Plan member contribution's increased by $3.6 million due to 1% increase in member's mandatory contributions. The decrease in net investment income by $26.7 million was primarily due to underperformance in hedge funds and international equities. Alternative investments such as real estates and private equity outperformed their benchmark for the fiscal year. Net investment income includes investment expenses as a deduction. Investment expenses and securities lending fees were $9.3 million for fiscal year 2016, 1.4% less than fiscal year 2015 due to decrease commingled fixed funds and international equity.

Retirement Benefits and Administrative Expenses

The Plan was created to provide lifetime service retirement benefits, survivor benefits and disability benefits to eligible members and their beneficiaries. The cost of such programs includes recurring benefit payments, lump sum death benefits, payments to terminated members, and the administrative expenses of the Plan. The primary source of expense during fiscal year 2016 was for the payment of continuing retirement benefits totaling $138.2 million, compared to $133.1 million for fiscal year 2015. Retirement allowances increased $5.1 million due to an increase in the number of benefit recipients and the annual cost of living adjustment of 1.5% for participants under age 65 and 2.0% for participants age 65 and over.

Requests for Information

This financial report is designed to provide a general overview of the Plan's finances and to account for the money it receives to the Board of Trustees, the Mayor and City Council, the Plan's membership and the City's taxpayers. Questions concerning any of the information provided in this report or requests for additional financial information can be addressed to: The Executive Director, Employees' Retirement System, 7 E. Redwood Street, 12th Floor, Baltimore, Maryland 21202.

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Employees' Retirement System
City of Baltimore, Maryland

STATEMENT OF FIDUCIARY NET POSITION
For the Year Ended June 30, 2016

Assets		
Cash and cash equivalents		$ 51,338,308
Receivables:		
Investments sold	$ 50,968,077	
Foreign currency contracts	30,321,469	
Accrued income	2,454,642	
Other receivables	340,579	
Total receivables		84,084,767
Investments		
Domestic equities	463,488,512	
International equities	201,838,061	
Domestic fixed income	219,346,014	
Commingled fixed income	179,749,128	
Real estate	166,804,625	
Private equity	100,906,622	
Global equities	93,911,197	
Hedge funds	73,449,173	
Total investments		1,499,493,332
Securities lending collateral		29,738,268
Capital assets	2,427,926	
Accumulated depreciation of capital assets	(1,771,892)	
Net capital assets		656,034
Total assets		1,665,310,709
Liabilities		
Investments purchased	84,275,007	
Foreign currency contracts	30,321,469	
Obligations under securities lending	29,738,268	
Other accounts payable	2,561,124	
Investment management fees payable	1,095,485	
Administrative expenses payable	386,974	
Total liabilities		148,378,327
Net position restricted for pension benefits		$ 1,516,932,382

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

Employees' Retirement System
City of Baltimore, Maryland

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

For the Year Ended June 30, 2016

Additions		
Contributions		
Employers	$ 77,100,573	
Plan members	10,350,709	
Total contributions		$ 87,451,282
Investment income		
Net appreciation in value of investments	437,788	
Interest and dividend income	48,604,366	
Less: Investment expenses	(9,138,196)	
Net investment income		39,903,958
Securities lending income	496,519	
Less: Securities lending fees	(140,435)	
Net securities lending income		356,084
Total additions		127,711,324
Deductions		
Retirement allowances	138,184,417	
Death benefits	652,743	
Lump sum cash payments	124,748	
Refund of members contributions	235,808	
Adminstrative expenses	3,515,492	
Total deductions		142,713,208
Net increase/(decrease) in fiduciary net position		(15,001,884)
Net position restricted for pensions/benefits		
Beginning of year – July 1, 2015		1,531,934,266
End of year – June 30, 2016		$ 1,516,932,382

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

1. Plan Description:

The Employees' Retirement System of the City of Baltimore (ERS) is the administrator of a cost-sharing multiple employer defined benefit local government retirement plan (the Plan). Established January 1, 1926, the Plan covers City employees and the Baltimore City Public School System employees with the exception of those required to join the Maryland State Retirement System, or the two other Baltimore City retirement systems, the Fire and Police Employees' Retirement System and the Elected Officials' Retirement System. Based on criteria established by the Governmental Accounting Standards Board, the ERS 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, 2016, the ERS membership consisted of:

Active Plan Members	8,274
Retirees and Beneficiaries - currently receiving benefits	9,007
Terminated Plan Members - entitled to but not yet receiving benefits	1,018
Total Membership	18,299

The Plan provides service retirement benefits as well as death and disability benefits in accordance with the Plan Provisions, Article 22 of the Baltimore City Code. Only the Mayor and City Council may amend the Plan Provisions. The reduction of benefits is precluded by the City Code.

The ERS Plan is divided into three Classes: A, C, and D for amendments of membership and benefit changes of the Plan Provisions.

Class "A" has 15 members. The "A" contributory class consists of all members hired prior to July 1, 1979 who did not elect to transfer to Class C, the non-contributory class. Membership was mandatory on the member's second anniversary of employment. However, the member could voluntarily enroll within the first two years of employment.

The Class "C" Plan is composed of 7,899 members and consists of all employees hired on or after July 1, 1979 who automatically become members on the first anniversary of employment, and all members hired prior to July 1, 1979 who elected to transfer from the Class "A" contributory class.

Effective July 1, 2013, Ordinance 13-144 was enacted by the Mayor and City Council introducing contributions for active ERS non-contributory members and eliminating the post retirement variable benefit increase. The Ordinance provides that effective July 1, 2013 members will contribute 1% of pay, to continue each year at 1% increments provided that 2% compensation is received for each year of contribution until employee contributions reach 5% of compensation.

The ERS defined benefit class "C" Plan was closed to new members on June 30, 2014 to establish the City of Baltimore's Retirement Savings Plan (RSP). The RSP consist of a 401a contributory non-hybrid and a hybrid contributory defined benefit "D" Plan. The waiting period of entry for the contributory non-hybrid plan is 180 days. The hybrid contributory defined benefit Plan waiting period is one year. Employees hired as of July 1, 2014, have 150 days of employment to select between the two Plans. Employees who do not select a Plan after 150 days of employment will automatically default into the hybrid contributory defined benefit "D" plan. The mandatory contribution to each of the Plan's is 5%. Members have an option in the both Plans to contribute to the City of Baltimore's 457 Deferred Compensation Plan and will receive a 50% match on the first two percent of their contributions.

The Class "D" Plan is composed of 360 members and consists of all employees hired on or after July 1, 2014.

2. Summary of Significant Accounting Policies:

Basis of Presentation:
For accounting and financial reporting purposes, the Plan conforms with 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 Plan, a component unit of the City of Baltimore. There are no component units of the Plan 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. Plan member contributions are recognized in the period in which the contributions are due. Employer contributions are recognized when due. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.

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, hedge, and risk parity funds where no readily ascertainable fair value exists, management, in consultation with the general partner and investment advisors, has determined these investments be measured at net asset value per share. The values for these investments are determined by the Plan's proportionate share of the partnership’s most recent available financial information. Foreign exchange contracts are marked-to-fair value daily based on published fair value 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 value of investments. Initial margin requirements for such financial instruments are provided by investment securities pledged as collateral or by cash.

Net investment income consists of realized and unrealized appreciation (depreciation) in the 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. Interest income is recognized when earned. Dividend income is recorded on the ex-dividend date.

Tax Status:
The System is a tax-exempt governmental plan qualified under Section 401 and exempt under Section 501(a) of the Internal Revenue Code. IRS qualification letters have been received.

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.

Adoption of New Accounting Standard:

GASB 72, Fair Value Measurement and Application, 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:

Article 22 of the Baltimore City Code grants the authority to establish and amend the contributions of the active plan members to the Mayor and City Council of Baltimore.

The contributions required by the Plan provisions for each membership class are as follows:

Membership classes	Percentage of compensation
A	4.0%
C	1.0 - 5.0%*

*Class C contributions increased from 2.0% to 3.0% for the fiscal year beginning July 1, 2015 through June 30, 2016.

The employer contributions are determined through an actuarial valuation. The valuation method is stipulated in the Plan provisions.

All contributions are transferred to BNY Mellon, the ERS custodian for safekeeping and investment.

4. Post retirement increases:

Post-retirement benefit increases are granted each year to eligible retirees and beneficiaries in pay status for more than 18 months. The minimum guaranteed benefit increase is 1.50% for participants in pay status under age 65 and 2.00% for participants in pay status age 65 and over, effective June 22, 2010. Eligible retired members and beneficiaries with a pension entry date on or before June 30, 2015 will receive the minimum guaranteed benefit increase and is payable on January 1, 2017.

5. Cash and Investments:

The Plan's cash deposits are covered up to statutory limits by the federal depository insurance at all times.

The Board of Trustees (the Board) 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 Plan's investments through an external investment advisor who acts as a fiduciary for the Plan and through external investment managers. The Board invests the assets of the Plan 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. Investments of the Plan are held under custodial agreement with BNY Mellon Financial Corporation.

ERS Plan investments as of June 30, 2016, are listed below:

Investment type	
Debt securities:	
U.S. Govt Agencies	$ 92,404,799
U.S. Treasury Notes and Bonds	17,218,607
Commingled fixed income fund	179,749,128
Corporate Bonds	109,722,608
Total Debt Securities	399,095,142
Equities:	
Domestic equities	463,488,512
International equities	201,838,061
Global equities	93,911,197
Private equity	100,906,622
Real estate	166,804,625
Hedge funds	73,449,173
Total equities	1,100,398,190
Total investments	$ 1,499,493,332

The long-term expected rate of return on pension plan investments was determined using a building block method in which best-estimate ranges of expected future real rates (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rate of return for each major asset class included in the pension plan's target asset allocation as of June 30, 2016, are summarized in the following table:

Asset Class	Asset Allocation	Long-Term Expected Real Rate of Return
Domestic equity	27 %	5.5 %
Domestic fixed income	22 %	0.8 %
International and global equities	20 %	5.3 %
Real estate	13 %	5.9 %
Hedge funds	5 %	2.1 %
Private equity	13 %	9.4 %

Rate of Return

For the year ended June 30, 2016, the annual money-weighted rate of return of the Plan was 2.7%. The money-weighted rate of return expresses the Plan's investment performance, net of investment expense, adjusted for the changing amounts actually invested. The inflation rate as of June 30, 2016, was 2.65%.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates of debt investments will adversely affect the fair value of investments. The Plan has selected the duration method to disclose the debt securities exposure to changes in interest rates for all debt securities. The duration years for the commingle fixed income funds are not available. The Plan fixed income interest rate policy limits the average duration of the portfolio within one to two years of the Barclay's Capital Bond index benchmark.

Investment Type	Fair Value	Duration (in years)
Debt securities:		
U.S. Government Agency Bonds	$ 92,404,799	4.36
U.S. Treasury Notes and Bonds	17,218,607	10.41
Corporate Bonds	109,722,608	5.37
*Commingled fixed income	179,749,128	
Total Debt Securities	$ 399,095,142	

** Commingled fixed income fund duration is not available.*

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. ERS-rated debt investments as of June 30, 2016, were rated by Standard & Poor's (S&P) and for securities with no S&P rating, the Moody's quality ratings were used.

Investments at Fair Value / Credit Risk by Quality Rating

Investment Type	AAA - A	BBB – B	CCC - C	DDD-D	Not Rated	Total
Debt securities:						
U.S. Treasury Agency Bonds	$ 59,655,677	$ 2,669,249	$ 484,147	$ 286,950	$ 29,308,776	$ 92,404,799
U.S. Treasury Notes	17,218,607					17,218,607
Commingle fixed income fund					179,749,128	179,749,128
Corporate Bonds	50,360,220	$50,260	$ 5,048,987	999,935	3,053,055	109,722,608
Total Debt Securities	$ 127,234,504	$ 52,929,660	$ 5,533,134	$ 1,286,885	$ 212,110,959	$ 399,095,142

Foreign Currency Exposure Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. At June 30, 2016, the Employees' Retirement System did not hold any hedging foreign investment positions. ERS does not have a formal policy to limit foreign currency risk.

ERS foreign currency risk at June 30, 2016 is presented in the following table:

Currency	Total
Euro Currency Unit	$ 42,402,778
British Pound Sterling	27,846,635
Japanese Yen	26,779,279
Singapore Dollar	12,148,504
Australian Dollar	14,639,117
Hong Kong Dollar	9,288,146
Swiss Franc	9,397,567
Canadian Dollar	8,840,126
New Zealand Dollar	9,848,485
Danish Kroner	4,287,237
Swedish Krona	8,621,172
S African Comm Rand	3,460,400
South Korean Won	593,286
Norwegian Krone	1,899,552
Phillippines Peso	1,960,371
Mexican Peso	2,814,195
Indonesian Rupiah	795,606
Malaysian Ringgit	163,424
Brazil Real	417,148
Polish Zloty	295,254
Turkish Lira	205,299
Total Foreign Currency Securities	186,703,581
U.S.Dollars Held by International Investment managers	130,697,069
Total foreign currency Exposure	$ 317,400,650

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. As of June 30, 2016, the ERS 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.

Fair Value Measurements

The Plan 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 measurements) and the lowest priority to unobservable inputs (Level 3 measurements).

Level 1	Unadjusted quoted prices for identical instruments in active markets.
Level 2	Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.
Level 3	Valuations derived from valuation techniques in which significant inputs are unobservable.

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

In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The Plan's assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset. The table on page 32 shows the fair value leveling on the investments for the Plan.

Equity securities classified in Level 1 are valued using prices quoted in active markets for those securities. Debt securities classified in Level 1, Level 2 and Level 3 are valued using either a bid evaluation, mid evaluation, last trade or official close. Bid evaluations are an estimated price at which a dealer would pay for a security. Mid evaluations are when a bid and ask evaluation are both present. Last trade is the most recent trade price of a security at market close time. Official close is the closing price as defined by the exchange.

The Employee's Retirement System invested assets measured at fair value at June 30, 2016 are presented below:

Investments by fair value level	Base Amount	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	$ 109,772,608	$ 1,671,385	$ 107,379,601	$ 721,622
U.S. Treasury Notes and Bonds	17,218,607	17,218,607	-	-
US Govt Agency Bonds	92,404,799	-	92,404,799	-
Total debt securities at fair value level	$ 219,396,014	$ 18,889,992	$ 199,784,400	$ 721,622
Equity securities				
Domestic equities	$ 294,522,492	$ 294,522,492	$ -	$ -
International equities	157,884,640	157,884,640	-	-
Global equities	93,911,197	93,911,197	-	-
Total equity securities at fair value level	$ 546,318,329	$ 546,318,329	$ -	$ -
Total investments by fair value level	$ 765,714,343			
Investments measured at the net asset value (NAV)				
Commingled fixed income	$ 179,749,128			
Domestic equities	168,966,020			
International equities	43,953,421			
Real estate	166,804,625			
Private equity	100,906,622			
Hedge funds	73,449,173			
Total investments measured at the NAV	$ 733,828,989			
Total investments	$ 1,499,543,332			
Investment derivative instruments				
Foreign currency contract receivable	$ 30,298,271	$ -	$ 30,298,271	$ -
Foreign currency contract payable	(30,660,054)	-	(30,660,054)	-
Total investment derivative instruments	$ (361,783)	$ -	$ (361,783)	$ -

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

Investment Measured at the Net Asset Value (NAV)		Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Comingled fixed income	$179,749,128	$ -	Daily, weekly & monthly	N/A, 0 - 30 days
Domestic equities	168,966,020	-	Daily, weekly & monthly	N/A, 0 - 30 days
International equities	43,953,421		Daily, weekly & monthly	N/A, 0 - 30 days
Real estate funds	166,804,625	700,297	Not eligible, quarterly	90-100 days
Private equity	100,906,622	40,504,867	Not eligible	N/A, 0 - 30 days
Hedge funds	73,449,173	-	Daily, quarterly, annual, semi-annual	90-100 days
Total investments measured at the NAV	$733,828,989	$ 41,205,164		

(1) Commingled fixed income Fund is in high quality corporate bond securities with long durations in line with the profile of invested funds. A fundamentals-based, quantitative credit modeling process is used to screen out riskier securities securities and determine credit quality.

(2) Domestic Equity investments include is funds that are actively managed. The Funds invest in stocks of small, mid and large capilizations. The Funds seek to outperform the S&P 500 index while maintaining a similar level of market risk over the long term.

(3) International equity investments include is also in actively managed funds. About half of the investments are is in securities where rigorous dividend discount analysis is used to identify value in terms of long term flow of income. The other half of the investments are in funds which employs strategy that seeks to outperform the MSCI World index (half-hedged) while maintaining a similar level of market risk over the long term.

(4) The System's real estate investments consist of 2 core real estate funds and 2 real estate partnerships. The real estate partnerships consist of non-core, value added and opportunistic strategies. For the most part, the real estate investments are illiquid and redemptions are restricted, however the core funds of $150 million are liquid and the redemption frequency is quarterly, and a 90-100 days notice period.

(5) The system's Hedge Fund investments include 2 multi strategy fund managers. The investment strategies consist of equity long/short, event driven composites, relative value composites and global macro, CTA, equity and market neutral. These investments are eligible for redemption with a 90-100 days notice period.

(6) The System's private equity investments consist of 12 funds, invested in Diversified, Venture Capital, Distressed Debt, Buyouts, International and Special Situations strategies. These investments are considered illiquid as redemptions are restricted over the life of the investment.

6. Securities Lending:

The Plan has a Securities Lending Authorization Agreement with BNY Mellon Bank (the Custodian). 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. Investment managers may loan securities held in custody of commingled accounts if authorized in the manager's contract with the ERS.

Collateral received in exchange for securities loaned is collected in an escrow account for the Plan's benefit for the duration of the loan. At no time, will the Plan 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 are marked daily. As of June 30, 2016, the maturities of the investments made with the cash collateral are not matched to the maturities of securities loans. The Plan does not have the right to sell or pledge securities received as collateral without borrower default.

At June 30, 2016, the Plan had no credit risk exposure to borrowers because the amounts the Plan owes borrowers exceeded the amounts the borrowers owed the Plan. The fair value of securities on loan at June 30, 2016 was $65,242,322 and the fair value of the collateral received for those securities on loan was $66,219,346. The Plan did not impose any restrictions during the fiscal year on the amount of loans the Custodian made on its behalf.

The terms of the Securities Lending Authorization Agreement require that the Custodian indemnify the Plan 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 reasonable determination of the creditworthiness of any borrower. There were no such failures by any borrowers during the fiscal year. Moreover, there were no losses during the fiscal year resulting from default of the borrower or the Custodian.

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 pool and is measured at amortized cost, which best represents fair value. The short-term investment pool guidelines specify that a minimum of 20% 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 following table presents the fair values of the underlying loaned securities, and the fair value of collateral pledged at June 30, 2016.

Securities Lent	Fair Value Loaned Securities	Collateral Fair Value	Percentage Collateralized
Lent for cash collateral:			
Equity	$24,801,787	$25,284,465	102%
Corporate & Fixed Income	4,343,601	4,453,803	103
Lent for noncash collateral:			
U.S. Treasury Notes & Bonds	2,642,369	2,722,825	103
Equity	32,588,864	32,873,743	101
Corporate	865,701	884,510	102
Total securities lent	$65,242,322	$66,219,346	102%

7. Derivatives Instruments:

A derivative is a unique and often complex financial arrangement entered with another party, typically a private-sector financial firm. The value or cash flows of a derivative are determined by how the fair value prices of the hedged item change. The System has classified the following as hedging investment instruments.

The System enters into forward currency contracts to manage exposure to fluctuations in foreign currency exchange rates on portfolio holdings. The System also enters into forward exchange contracts to settle future obligations. A forward exchange contract is a commitment to purchase or sell a foreign currency at a future date at a negotiated forward rate. A contract is classified as forward contract when the settlement date is more than two days after the contract date. Risk associated with such contracts includes movement in the value of a foreign currency relative to the U.S. dollar. The contracts are valued at forward exchange rates and include net appreciation/depreciation in the statement of plan position. Realized gain or loss on forward currency contracts is the difference between the original contract and the closing value of such contract and is included in the statement of changes in fiduciary net position.

The table below summarizes the fair value of foreign currency contracts as of June 30, 2016:

Currency	Receivables at Cost	Receivables at Fair value	Payables at Cost	Payables at Fair value	Net Unrealized Gain/(Loss)
Australian Dollar	$ 6,619,076	$ 6,619,076	$ (6,619,076)	$ (6,693,122)	$ (74,046)
Canadian Dollar	2,228,195	2,228,195	(2,228,195)	(2,205,685)	22,510
Euro Currency	144,488	144,488	(144,488)	(144,628)	(140)
Japanese Yen	57,329	57,329	(57,329)	(57,430)	(101)
Mexican New Peso	2,043,049	2,053,824	(2,043,049)	(2,017,621)	36,203
New Zealand Dollar	7,838,645	7,838,645	(7,838,645)	(8,193,221)	(354,576)
Norwegian Krone	1,493,752	1,493,752	(1,493,752)	(1,463,601)	30,151
Polish Zloth	58,145	58,145	(58,145)	(58,156)	(11)
Pound Sterling	496,673	496,673	(496,673)	(467,594)	29,079
Singapore Dollar	4,229,320	4,229,320	(4,229,320)	(4,302,643)	(73,323)
Swedish Krona	1,468,168	1,468,168	(1,468,168)	(1,411,724)	56,444
U.S. Dollar	3,644,629	3,610,656	(3,644,629)	(3,644,629)	(33,973)
Total Currency	$ 30,321,469	$ 30,298,271	$ (30,321,469)	$ (30,660,054)	$ (361,783)

8. Net Pension Liability:

The following schedules are the Net Pension Liability (NPL) as of June 30, 2016, and the sensitivity of the of NPL to the discount rate.

Net Pension Liability

The components of the net pension liability of the Plan at June 30, 2016 were as follows:

Total pension liability	$2,327,562,823
Less: Plan fiduciary net position	1,516,932,382
Net Pension Liability	$ 810,630,441
Plan fiduciary net position as a percentage of the total pension liability	65.17%

The discount rates used to measure the total pension liability was 7.50% and 6.50%, for active and retired members, respectively. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made the contribution rate and that Employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

The sensitivity of the pension liability schedule presents the net pension liability of the Plan calculated using the discount rate 7.50 percent as well as what the Plan's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.50 percent) or 1-percentage-point higher (8.50 percent) than the current rate.

Sensitivity of the pension liability to changes in the discount rate.

	1% Decrease	Current Discount Rate	1% Increase
Discount Rate - Active Participants	6.50%	7.50%	8.50%
Discount Rate - Retired Participants	5.50%	6.50%	7.50%
Plan's net pension liability	$1,065,386,176	$ 810,630,441	$ 594,463,888
Plan fiduciary net position as a percentage of the total pension liability	58.7%	65.2%	71.8%

The amortization method and the actuarial assumptions presented below are determined as part of the actuarial valuation dated June 30, 2016. The information presented below is in the required supplementary schedules of this report starting on page 37.

Actuarial funding method:	Entry Age Normal Method.	
Actuarial assumptions:	Effective June 30, 2012	
Investment rate of return:	Pre-retirement	7.50%
	Post-retirement	6.50%
Projected salary increases:	Inflation rate approximately 2.65%.	
Cost-of-living adjustments:	1.5% for participants in pay status under age 65 and 2.0% for participants in pay status age 65 and over.	

Pre-Retirement Mortality:

1. Non-line-of-Duty - RP 2000 Healthy Mortality with projections using 50% of the AA scale projected 15 years with a three-year set forward for both males and females (effective 6/30/15).

2. Line-of-Duty - 0.005% at all ages (effective 6/30/1999).

Post-Retirement Mortality:

1. Retirees and Beneficiaries - RP 2000 Health Mortality with projections using 50% of the AA scale project 15 years with a two-year set forward for both males and females. Given the requirement for experience studies performance every five years, these projections are sufficient until the next measurement period.

2. Disabled members - RP 2000 Disabled mortality with generational projections using 50% of the AA scale projected 15 years with a four-year set forward for both males and females.

The last actuarial experience study covered the period 7/1/2010 through 6/30/2014. Generally, an experience study is conducted every four years, unless requested by the ERS Board of Trustees.

9. Capital Assets:

The capital assets purchased as of the fiscal year ending June 30, 2016 consist of leasehold improvements, office equipment and office furniture. All capital assets are recorded at cost less accumulated depreciation.

Capital Assets	Accumulated Cost	Accumulated Depreciation	Capital Assets
Leasehold Improvements	$ 1,641,076	$ (1,056,127)	$ 584,949
Office Furniture	400,864	(350,258)	50,506
Office Equipment	385,986	(365,507)	20,479
Total Capital Assets	$ 2,247,926	$ (1,771,892)	$ 656,034

10. Subsequent Events:

The Plan evaluated subsequent events through December 30, 2016 the date the financial statements were available to be issued. Events or transactions occurring after June 30, 2016, but prior to December 30, 2016 that provided additional evidence about conditions that existed at June 30, 2016, have been recognized in the financial statements for the year ended June 30, 2016. Events or transactions that provided evidence about conditions that did not exist at June 30, 2016, but arose before the financial statements were available to be issued have not been recognized in the financial statements for the year ended June 30, 2016.

Required Supplementary Information and Supporting Schedules

Employees' Retirement System
City of Baltimore, Maryland

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Year Ended June 30, 2016

	2016	2015	2014
Total Pension Liability			
Service cost (MOY)	$ 25,507,759	$ 26,107,551	$ 26,483,854
Interest (includes interest on service cost)	155,822,464	152,621,503	148,861,690
Changes of benefit terms	-	-	(1,001,048)
Difference between expected and actual experience	11,578,209	2,052,377	13,956,452
Changes of assumptions	20,850,001	-3,828,646	0
Benefit payments, including refund of members contributions	(139,197,716)	(134,270,657)	(129,973,970)
Net change in pension liability	74,560,717	42,682,128	58,326,978
Total pension liability - beginning	**2,253,002,106**	**2,210,319,978**	**2,151,993,000**
Total pension liability - ending	**$ 2,327,562,823**	**$ 2,253,002,106**	**$ 2,210,319,978**
Plan fiduciary net position			
Contributions - employer	$ 77,100,573	$ 97,170,796	$ 94,917,886
Contributions - members	10,350,709	6,728,131	3,623,467
Net investment income	40,260,042	66,818,040	209,647,169
Benefit payments, including refund of member contributions	(139,197,716)	(134,270,658)	(129,973,970)
Administrative expense	(3,515,492)	(3,748,434)	(3,711,975)
Net change in plan fiduciary net position	$ (15,001,884)	$ 32,697,875	$ 174,502,577
Plan fiduciary net position - beginning	**1,531,934,266**	**1,499,236,391**	**1,324,733,814**
Plan fiduciary net position - ending	**1,516,932,382**	**1,531,934,266**	**1,499,236,391**
Net pension liability - ending	**$ 810,630,441**	**$ 721,067,840**	**$ 711,083,587**
Plan fiduciary net postion as a percentage of the total pension liability	65.17%	68.00%	67.83%
Covered employee payroll	$ 399,465,753	$ 408,095,216	$ 401,291,783
Net pension liability as a percentage of covered employee payroll	202.93%	176.69%	177.20%

Note: This schedules is intended to present information for 10 years. However until a full 10-year trend is compiled, the System will present information for those years for which information is available.

Employees' Retirement System
City of Baltimore, Maryland

SCHEDULE OF EMPLOYER CONTRIBUTIONS
Last Ten Fiscal Years

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Actuarial determined contribution	$ 75,862,000	$ 90,489,000	$ 91,286,000	$ 88,300,214	$ 77,995,003	$ 62,374,396	$ 48,748,397	$ 43,673,027	$ 43,918,411	$ 36,841,351	$ 31,003,063
Contributions in relations to actuarially determined contribution	77,100,573	97,170,796	94,917,886	88,300,214	77,995,003	62,374,396	48,748,397	43,673,027	43,918,411	36,841,351	31,003,063
Contribution deficiency (excess)	$ (1,238,573)	$ (6,681,796)	$ (3,631,886)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Covered employee payroll	$ 399,465,753	$ 408,095,216	$ 401,291,783	$ 392,868,271	$ 390,557,576	$ 392,941,135	$ 401,328,980	$ 398,009,463	$ 367,517,243	$ 346,391,734	$ 331,888,366
Contributions as a percentage of employee payroll	19.30%	23.81%	23.65%	22.48%	19.97%	15.87%	12.15%	10.97%	11.95%	10.64%	9.34%

The notes below summarize the key methods and assumptions used to determine the actuarial determined contribution for fiscal year 2016.

Notes to Schedule

Valuation Date	July 1, 2014
Timing	Actuarial determined contribution rates are calculated based on the actuarial valuation two years prior to the beginning of the plan year

Key Methods and Assumptions Used to Determine Contribution Rates:

Actuarial cost method	Entry Age Normal
Asset valuation method	Market Value
Amortization method	Level percent of pay closed period with 17 years remaining as of July 1, 2014
Discount rate	7.75% until retirement, 6.55% after retirement
Investment return	7.75% which is net of all expenses. While this is the same rate used for funding purposes which includes administrative expenses, for consistency in measurement we have used the same rate for the expected future asset return
Social Security Wage Base	3.00%
Inflation	2.75%
Salary increases	Age base salary scale
Mortality	Sex distinct 1994 Uninsured Pensioners Generational Mortality with adjustments and improvements using Scale AA

A complete description of the method and assumtions used to determine contribution rates for the fiscal year ending June 30, 2016 can be found in July 1, 2014 actuarial valuation report

Employees' Retirement System
City of Baltimore, Maryland

SCHEDULE OF INVESTMENT RETURNS

Last Ten Fiscal Years

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Annual money-weighted rate of return, net of investment expense	2.7%	4.6%	15.2%	12.8%	-1.7%	19.9%	-11.3%	-18.1%	-5.1%	18.3%

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

1. Effective July 1, 2006, amendments were made to the Plan provisions. These amendments included combining the assets of the Plan and increasing the cost of living adjustment. The investments in the paid up benefit and the contingency reserve funds were passively invested and not used in the actuary's valuation of the Plan's assets. The new Plan provision no longer separates the paid up benefit fund and the contingency reserve fund. The combining of assets allows the Plan to have all assets actively invested. The cost of living adjustment was changed to a guaranteed adjustment of 1.5% with an additional variable increase based on excess investment returns.

   All of the assumption and Plan provision changes resulted in a .056%, or $245,384, decrease in annual City cost for the fiscal year as well as an increase of the unfunded liability from $119.4 million to $151.5 million. The changes to the Plan provision paid an additional ad hoc cost of living adjustment of $13.1 million or a one-time increase of 1.45% to all retirees and beneficiaries with a retirement date on or before June 30, 2006, which was paid during fiscal year ending June 30, 2007. Changes were effective as of June 30, 2007.

2. The total recommended contributions increased by 13.08% from $43,673,028 for fiscal year 2009 to $48,748,396 for fiscal year 2010 as a reflection of the prior year's experience and increased unfunded actuarial liability as of June 30, 2008. This represents a projected increase in cost as a percent of pay from 12.61% to 13.26%.

   The valuation for fiscal year 2009 reflects a significant increase in the number of active participants for the Baltimore City Public School System that will be covered under the Plan. The membership increased from 1,548 in 2008 to 1,787 in 2009.

3. The total recommended contribution increased by 28% from $48,748,397 for fiscal year 2010 to $62,374,396 for fiscal year 2011 as a reflection of the prior years' experience and increased unfunded actuarial liability as of June 30, 2009. This represents a projected increase in cost as a percent of pay from 13.26% to 15.67%.

4. The total recommended contribution increased by 25.0% from $62,374,396 for fiscal year 2011 to $77,995,003 for fiscal year 2012 as a reflection of the prior years' experience and increased unfunded actuarial liability as of June 30, 2011. This represents a projected increase in a cost as a percent of pay from 15.67% to 19.43%.

5. The total recommended contribution increased by 13.2% from $77,995,003 for fiscal year 2012 to $88,300,214 for fiscal year 2013 as a reflection of the prior years' experience and increased unfunded actuarial liability as of June 30, 2011. The experience study changes increased the recommended contributions by $10,305,211. This represents a projected increase in cost as a percent of pay from 19.43% to 22.47%.

   The newly adopted funding policy of the Board provides for the unfunded actuarial liability to be amortized over a fixed period of 20 years targeting 100% funding by the fiscal year ending 2031.

6. The total recommended contribution increased by 7.5% from $88,300,214 for fiscal year 2013 to $94,917,886 for fiscal year 2014 as a reflection of the prior years' experience and increased unfunded actuarial liability as of June 30, 2012.

   The actuarial funding method was changed from the Projected Unit Cost Method to the Entry Age Normal Method to make funding measures consistent with anticipated accounting measures required under new accounting standards issued by the Governmental Accounting Standard Board (GASB). This change resulted in an increase of the unfunded actuarial liability of $100.2 million.

7. The total recommended contribution increased by 2.4% from $94,917,886 for fiscal year 2014 to $97,170,796 for fiscal year 2015 as a reflection of the prior years' experience and increased unfunded actuarial liability as of June 30, 2013. Fiscal year 2013 contributions were paid in two installments. Interest receivable on the installments will be calculated with the actuarial results.

   Ordinance 13-144 was enacted by the Mayor and City Council introducing contributions for active ERS members and eliminating the post retirement variable benefit increase. The Ordinance provides that effective July 1, 2013 members will contribute 1% of pay, to continue each year at 1% increments provided that 2% compensation is received for each year of contribution until employee contributions reach 5% of compensation.

8. Plan C member contributions were contingent upon increases in pay which were yet to be negotiated at the time the July 1, 2013 valuation was completed and when the City made the contribution for fiscal year 2014, the City contribution was not offset for Plan C member contributions. To account for member contributions and credits to the City funding requirement, the fiscal year 2015 contribution of $97,170,796 previously calculated as of July 1, 2013 valuation was adjusted to account for expected Plan C member contributions of 2% of pay resulting in a net City contribution of 90,489,236. The City contribution is further reduced for payments made in excess of required contribution after adjusting for member contributions actually received. This results in a net recommended City contribution of $86,857,159 for FYE 2015.

9. The actuarial value of assets is offset by the normal cost reserve from plan change, due to the continued recognition of prior year's investment losses; the rate of return is below expectation with an asset rate of return for the year of 6.10%, which is compared to the expected investment return of 7.75% for the prior year. As of June 30, 2016, previous investment losses are partially being recognized and further offset by investment gains, which are being deferred for recognition in the future.

Employees' Retirement System
City of Baltimore, Maryland

SCHEDULE OF ADMINISTRATIVE EXPENSES

Year Ended June 30, 2016

Salaries and wages:			
Permanent full-time salaries	$ 1,824,367		
Overtime	216		
Total salaries and wages			$ 1,824,583
Other personnel costs:			
Social security	154,666		
Medical insurance and health care	279,550		
Other	16,394		
Total other personnel costs			450,610
Contractual services:			
Lease purchase agreements		261,167	
Computer network services		272,209	
Actuarial services		111,245	
Retirement payroll processing		146,895	
Professional services		54,924	
Data processing services		63,476	
Audit Fees		37,940	
Printing		16,299	
Trustee Education		29,315	
Postage		23,856	
Telephone systems		14,862	
Lease of business machines		13,757	
Advertising		3,054	
Dues and publications		7,655	
Equipment maintenance		12,970	
Staff training		8,167	
Miscellaneous		10,727	
Legal fees		662	
Total contractual services			1,089,180
Material and supplies:			
Office Supplies			10,555
Depreciation expense			140,564
Total administrative expenses			$ 3,515,492

SCHEDULE OF INVESTMENT EXPENSES
SCHEDULE OF PAYMENTS TO CONSULTANTS
Year Ended June 30, 2016

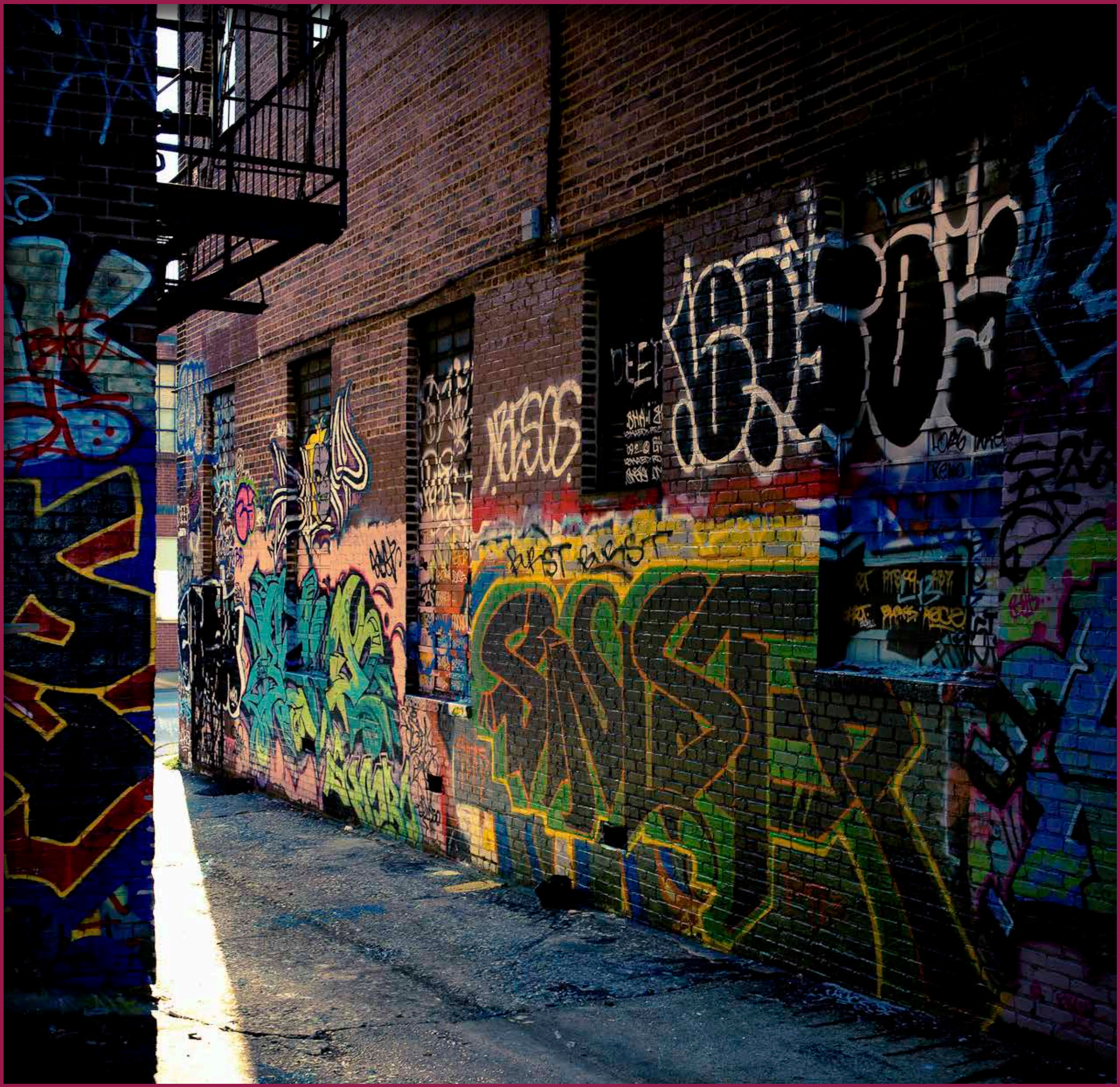
Schedule of Investment Expenses

Investment expenses:	Fees
Investment management fees	$ 8,829,758
Investment consultant fees	251,075
Custodial fees	57,363
Subtotal	9,138,196
Securities lending fees	140,435
Total investment expenses	**$ 9,278,631**

Schedule of Payments to Consultants

Firm	Fees	Nature of Service
Cheiron, Inc.	$ 121,426	Actuarial Services
Sona Network	101,704	Computer Network Services
Pension Technology, Inc.	62,858	Benefits Adminstration System
CliftonLarsonAllen, LLP	37,940	Financial Audit
BellaArt	31,719	Web and Graphic Communications
Total of payments to consultants	**$ 355,647**	

Note: A schedule of fees and commissions is also illustrated in the Investment Section on page 55.



Investment Section

MarquetteAssociates

INVESTMENT CONSULTANT'S REPORT

Introduction

This report, prepared for the City of Baltimore Employees' Retirement System (ERS) by Marquette Associates, Inc. is based on information supplied by the System's custodian, Mellon Bank, N.A (Mellon). Mellon provides Marquette Associates, Inc. with beginning and ending market values, cash flows, transactions, and positions for the ERS as well as each manager, where applicable. Mellon audits the information contained in its accounting reports monthly. The rates of return are calculated using a time-weighted rate of return methodology based upon market values. The returns are reported on both net of fees and gross of fees to provide comparisons with the appropriate benchmarks. Investment information is reported to the greatest degree possible in conformance with the presentation standards of Global Performance Investment Standards (GIPS) formerly known as AIMR.

Distinction of Responsibilities

In recognition of the importance of prudent investment of System assets to both the City and the System's members, the Board, as primary fiduciary of the System, shall periodically review the asset management and actuarial characteristics of the System to ensure that investments are managed in a manner that is consistent with the retirement objectives of the System's members. These responsibilities are detailed in the Investment Guidelines.

The primary investment objectives of the System are to preserve the capital value of the System assets adjusted for inflation, to ensure adequate liquidity to meet benefit liabilities as they fall due, to meet the actuarial interest rate assumptions, and without unduly jeopardizing the above objectives, to exceed the investment return objective by the astute management of System assets.

The investment managers appointed to execute the policy will invest ERS assets in accordance with the policy guidelines and with their judgment concerning relative investment values. In particular, the investment managers are accorded full discretion to: (1) select individual securities, (2) make periodic strategic adjustments to the mix of the common stock and fixed income securities, where applicable and (3) diversify their portfolios.

Investment Asset Allocation Structure

The goal of the asset allocation structure is to provide a favorable rate of return coupled with a prudent level of risk. The System conducted a full Asset Allocation Review earlier this year to achieve long term return objectives while reducing risk. As a result, the System will implement strategies to diversify the fixed income, equity, real estate and private equity programs over the course of the year. The following table outlines the ERS's current investment policy targets:

Investment Objective

The investment return is evaluated against a policy benchmark consisting of 36% Russell 3000, 14% MSCI ACWI ex US, 26% Barclays Capital Agg, 9% CPI+6%, 5% T-bills plus 5%, and 10% Cambridge All Private Equity. In addition, the ERS's performance is evaluated relative to the Investorforce Public Fund Universe, a universe representing the performance of 260 Public Funds. Marquette utilizes the InvestorForce Performance Reporting network, an advanced and comprehensive analysis and performance management platform, comprised of 48 different investment consulting firms located throughout the United States.

Market Overview

Fixed income markets outpaced equities for the year ended June 30, 2016 in a year where defensive investments and risk aversion dominated the markets. With the unexpected decision of the United Kingdom to leave the European Union at the end of June and concerns over global growth, the stock market retracted earlier gains and investors flocked to the safety of Treasury bonds. The best performing areas of both the bond and stock market exhibited the least risk such as government bonds and low volatility equity stocks. The U.S. Equity market, as proxied by the Russell 3000 Index posted a gain of 2.1% for the year while developed international markets posted a loss of -9.8%. International markets suffered losses due to concerns about the United Kingdom's spillover effects into already struggling European economies. As yields on longer dated bonds significantly decreased over the year, fixed income markets posted a solid gain of 6.0% as proxied by the Barclays Capital Aggregate Bond Index. The best performing asset class for the year again was core real estate with a gain of 10.6% spurred by continued investor interest and consistent income.

Investment Performance

For the fiscal year ending June 30, 2016, the System posted a 3.2% return which outpaced the policy benchmark of 1.8% and ranked highly, in the 6th percentile of the peer group universe. The alternative asset classes such as private equity and private real estate solidly outpaced their respective benchmarks over the past year. The private equity program posted the best relative returns as direct fund investments added significant value. The real estate portfolio also posted strong gains versus its benchmark. The international equity portfolio was able to mitigate losses due to its exposure to international small-cap and emerging markets small-cap equity. A greater exposure to small-cap stocks detracted from the domestic equity portfolio.

The market value of the ERS assets declined from the prior year to finish at $1.518.3 billion. The Total Fund market value for this report included both capital appreciation and cash flow activity. At the end of fiscal year 2016, the System's assets were allocated as follows:

			Fiscal Year Rate of Return	
	Fair Value (in millions)	Percent of Total	ERS	Benchmark
U.S. Equity	$513.9	33.8%	1.9%	2.1%
International Equity	$258.9	17.0%	-3.7%	-9.8%
U.S. Fixed Income	$397.3	26.2%	5.5%	6.0%
Real Estate	$166.8	11.0%	12.7%	10.6%
Private Equity	$100.9	6.6%	9.7%	0.6%
Hedge Funds	$73.4	4.8%	-4.9%	-5.4%
Cash Equivalents	$7.1	0.5%		
Total Fund	$1,518.3	100.0%	3.2%	1.8%

Nichole Roman-Bhatty
Managing Partner
Marquette Associates, Inc.

Investment Objectives

The primary investment objectives of the Employees' Retirement System (the Plan) 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 following investment objectives are given in descending order of priority:

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

General Investment Policy

The Employees' Retirement System 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. The Plan's investment managers are expected to familiarize themselves with these laws.

Investment policy for the Plan relates to the portfolio of all assets that comprise the total holdings of the Plan. The Board of Trustees (Board) recognizes that the objective of a sound and prudent policy is to produce investment results that will preserve the assets of the Plan, as well as, to maximize earnings of the Plan 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 Plan and its projected benefit payments. Should the projected finances of the Plan change significantly, the applicable Federal or State statutes be amended, or changes in the Plan'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.

In general, the Board recognizes that large pools of assets must be diversified over several different security classifications in order to reduce risk. The following asset allocation has been established as an overall objective for the total holdings of the Plan:

Asset Category	Target
Domestic equity	36%
Fixed income	26%
International equity	14%
Private Equity	10%
Real Estate	9%
Hedge Funds	5%

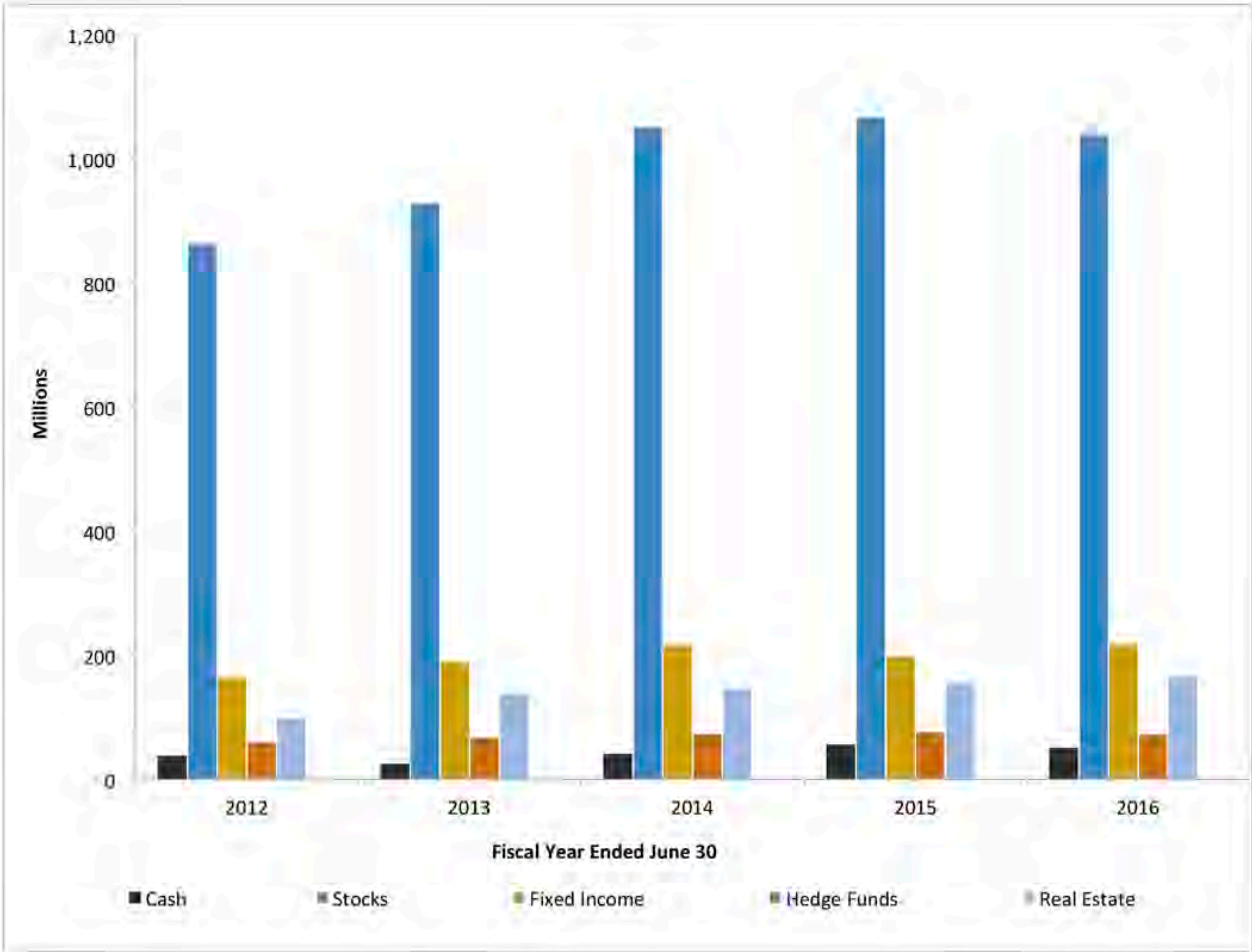
Within each major security classification, investments should be diversified and excessive concentration in any particular security, company or industry is to be avoided. Detailed guidelines in this regard have been supplied to each of the Plan's investment managers. Additionally, each is expected to be familiar with the investment provisions in Article 22 of the Baltimore City Code. Subject to these objectives and guidelines, and the Plan laws referenced herein, the investment managers shall 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, and are encouraged to suggest changes in these guidelines at any time.

Proxy Voting

Pursuant to a U.S. Department of Labor directive, the Board of Trustees 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 Plan 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.

PORTFOLIO COMPOSITION
FAIR VALUE OF INVESTMENTS



(amounts expressed in millions)

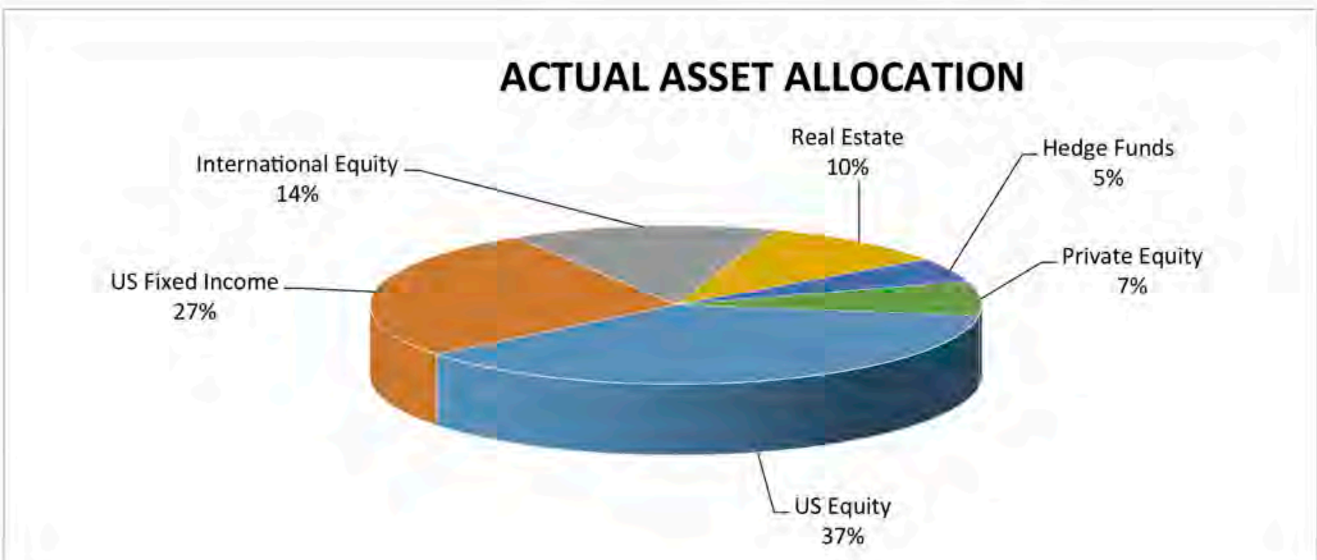
	2012		2013		2014		2015		2016	
Cash	$ 38	2%	$ 25	2%	$ 41	3%	$ 56	3%	$ 51	3%
Stocks	864	70	929	69	1,052	69	1,067	69	1,040	67
Fixed Income	166	14	190	14	217	14	200	14	219	14
Hedge Funds	61	5	68	5	74	5	77	5	73	5
Real Estate	99	8	140	10	146	9	156	10	167	11
Total	$ 1,228	100%	$ 1,352	100%	$ 1,530	100%	$ 1,556	100%	$ 1,550	100%

INVESTMENT RESULTS
Time Weighted Rate of Return, Current Value Basis

		Annualized		
	FY 2016	**3 Years**	**5 Years**	**10 Years**
TOTAL PORTFOLIO	3.2 %	7.7 %	7.6 %	6.0 %
Median Public Pension Fund	2.1	7.1	7.4	6.3
DOMESTIC EQUITIES	1.9	10.9	11.6	7.4
Russell 3000	2.1	11.1	11.6	7.4
INTERNATIONAL EQUITIES	(3.7)	3.2	1.6	2.6
MSCI ACWI ex-US	(9.8)	1.6	0.6	2.3
FIXED INCOME	5.5	4.0	4.0	5.2
Barclays Aggregate	6.0	4.1	3.8	5.1
REAL ESTATE	12.1	14.0	12.3	5.6
NPI	8.4	10.9	11.1	7.2
PRIVATE EQUITY COMPOSITE	9.7	14.7	11.9	11.5
Venture Economics Private Equity	3.0	6.6	10.1	8.8
HEDGE FUNDS	(4.9)	3.0	3.6	2.8
HFRI Fund of Funds	(5.4)	1.9	1.6	1.6

Note: The calculations above were prepared by the Employees' Retirement System's investment advisor, Marquette Associates, Inc. using a time weighted rate of return, based on market rate of return. The performance shown for the Total Portfolio does not include "Other Assets" dedicated to the payment of post-retirement benefit increases. The Median Public Pension Fund exhibits the overall rate of return for the average Public Pension Plan as measured by the Investorforce Public Universe.

ASSET ALLOCATION — ACTIVELY MANAGED ACCOUNTS
Year Ended June 30, 2016



Note: For asset allocation purposes, only actively managed accounts are included. Assets in the mutual funds are allocated between domestic equity and domestic fixed income based on the percentage held by the investment managers at June 30, 2016. Assets in the cash reserve are also excluded from this illustration. These assets are for the purpose of providing cash for the payment of benefit and administrative expenses.

TOP EQUITY AND FIXED INCOME HOLDINGS BY FAIR VALUE
Year Ended June 30, 2016

		Shares	Fair Value
TOP TEN DOMESTIC EQUITY HOLDINGS			
1	AT&T INC	89,700	$ 6,549,894
2	EXXON MOBIL CORP	63,650	5,966,551
3	UNITEDHEALTH GROUP INC	158,000	5,744,880
4	GENERAL ELECTRIC CO	101,800	5,684,512
5	SBA COMMUNICATIONS CORP	70,300	4,917,485
6	PFIZER INC	83,100	4,787,391
7	ALLIANCE DATA SYSTEMS CORP	133,158	4,688,493
8	VERIZON COMMUNICATIONS INC	33,100	4,673,720
9	JOHNSON & JOHNSON	39,400	4,252,836
10	WAL-MART STORES INC	37,900	3,973,057
	Total		$ 51,238,819
TOP TEN INTERNATIONAL EQUITY HOLDINGS			
1	DASSAULT SYSTEMS	43,590	$ 3,362,534
2	CRODA INTERNATIONAL PLC	12,070	3,176,047
3	AIA GROUP LTD	54,600	2,842,031
4	CHR HANSEN HOLDING A/S	37,400	2,837,002
5	NESTLE SA ADR	158,100	2,824,810
6	ROTORK PLC	42,238	2,761,919
7	CAPITALAND MALL TRUST	4,740	2,729,640
8	WPP PLC	226,356	2,720,734
9	NIFCO INC/ JAPAN	452,000	2,700,481
10	SPIRAX-SARCO ENGINEERING PLC	92,984	2,642,791
	Total		$ 28,597,990
TOP TEN DOMESTIC FIXED INCOME HOLDINGS			
1	US TREASURY NOTE 3.500% 08/01/2046 DD 08/01/16	10,000,000	$ 10,539,100
2	US TREASURY NOTE 4.000% 08/01/2046 DD 08/01/16	8,000,000	8,569,760
3	US TREASURY NOTE 1.375% 09/30/2020 DD 09/30/15	6,000,000	6,108,960
4	US TREASURY NOTE 3.000% 08/01/2046 DD 08/01/16	5,800,000	6,008,220
5	US TREASURY NOTE 3.000% 07/01/2046 DD 07/01/16	3,000,000	3,113,310
6	US TREASURY NOTE 1.375% 02/15/2044 DD 02/15/14	2,052,900	2,373,152
7	US TREASURY NOTE VAR RT 11/16/2045 DD 05/01/03	2,038,879	2,191,612
8	US TREASURY NOTE 4.206% 07/25/2040 DD 07/15/15	1,957,505	2,065,168
9	US TREASURY NOTE 1.625% 05/15/2026 DD 05/15/16	1,900,000	1,923,237
10	US TREASURY NOTE 3.825% 11/25/2039 DD 12/15/14	1,624,867	1,772,632
	Total		$ 44,665,151

A complete list of portfolio holdings is available on request.

Employees' Retirement System
City of Baltimore, Maryland

INVESTMENT SUMMARY
Year Ended June 30, 2016

	Fair Value	Percentage of Fair Value
Domestic Equity:		
Financial Services	$ 88,216,164	
Technology	60,453,041	
Health Care	38,122,755	
Consumer Services	35,073,230	
Energy	34,278,563	
Business Services	25,506,978	
Utilities	17,940,955	
Consumer Non-Durables	16,028,401	
Transportation	13,430,722	
Media	8,911,806	
Basic Industries	8,418,004	
Chemicals	5,819,389	
Capital Goods	5,575,724	
Consumer Durables	4,567,866	
Wholesale Distribution	3,947,939	
Total domestic equity	366,291,535	
Other		
Commingled funds	163,254,873	
International equity	201,838,061	
Global Non - U.S. equity	27,853,301	
Private equity	100,906,622	
Total other	493,852,857	
Total equity	**860,144,393**	**57.36%**
Fixed Income:		
U.S. securities and agencies		
U.S. agencies	62,680,915	
Treasury notes and bonds	25,848,950	
Total U.S. securities and agencies	88,529,865	
Corporate:		
Financial	80,724,435	
Non-U.S. fixed income	34,927,912	
Health Care	4,539,320	
Industrial	2,165,007	
Utilities	2,246,113	
Transportation	574,283	
Technology	3,466,628	
Consumer Non-Durables	1,136,792	
Energy	1,035,657	
Total corporate	130,816,148	
Commingle fixed income fund	179,749,128	
Total fixed income	**399,095,141**	**26.62%**
Other investments:		
Real estate	166,804,625	
Hedge Funds	73,449,173	
Total other investments	**240,253,798**	**16.02%**
Total investments	**$ 1,499,493,332**	**100.00%**

Employees' Retirement System
City of Baltimore, Maryland

SUMMARY SCHEDULE OF FEES AND COMMISSIONS

Year Ended June 30, 2016

	Assets Under Management	Fees
Investment managers' fees		
Domestic equity	$ 463,488,512	$ 1,554,403
International equity	201,838,061	1,305,133
Fixed income	219,346,014	754,892
Commingled fixed income	179,749,128	47,197
Real estate	166,804,625	940,481
Global equities	93,911,197	617,455
Hedge funds	73,449,173	729,403
Venture Capital	51,888,368	1,236,744
Private equity	100,906,622	1,644,049
Securities Lending	29,738,268	140,435
Total investment managers' fees		**$ 8,970,192**
Other investment service fees:		
Custodial fees		$ 57,363
Investment consultant fees		251,075
Total other investment service fees		**$ 308,438**

Brokerage Fees

Broker's fees on investment transactions for the year ended June 30, 2016 amounted to $265,790. A list of the brokers receiving more than $3,200 in fees are listed below.

Brokerage Firms	Fees Paid	Brokerage Firms	Fees Paid
BNY Convergex, New York	$ 39,295	Topeka Capital Markets Inc. New York	$ 5,368
Percival Finl Partners Ltd. Lake Success	36,119	Baird, Robert W & Co Inc. Milwaukee	4,936
Pershing LLC, Jersey City	14,413	Merrill Lynch Intl London Equities	4,850
Jefferies & Co. Inc. New York	13,085	Morgan Stanley & Co Inc NY	4,644
BNY Capital Markets Inc. Roseland	13,014	Cowen and Company LLC, New York	4,558
Deutsche Bk Secs Inc, NY (NWSCUS33)	12,879	Keefe Bruyette and Woods, Jersey City	4,380
Stifel Nicolaus	11,568	Barclays Capital Le, Jersey City	4,150
Credit Suisse, New York (CSUS)	10,226	JP Morgan Securities Inc, Brooklyn	4,062
RBC Capital Markets LLC, New York	10,133	JP Morgan Securities Inc, London	4,001
Goldman Sachs & Co, NY	8,483	Loop Capital Markets, Jersey City	3,793
BNY Convergex Execution Sol, New York	8,186	Williams Capital Group LP, Jersey City	3,785
Merrill Lynch Pierce Fenner Smith Inc NY	8,154	Piper Jaffray & Co, Minneapolis	3,592
National Finl Svcs Corp, New York	6,388	Instinet Europe Limited, London	3,578
Stephens Inc. Little Rock	5,818	Sanford C Bernstein & Co Inc., London	3,302
Keybanc Capital Markets, Inc, New Jersy	5,744	Raymond James & Assoc Inc, St Petersburg	3,286

Brokerage Commissions

Because of the highly visible nature of the Employees' Retirement System, it is important that the investment managers have as a primary objective in investment transactions to obtain the best execution in all cases. While the investment managers are permitted to direct a portion of 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 first 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.

INVESTMENT PROFESSIONALS

EQUITY MANAGERS

The Edgar Lomax Company
Randall Eley
Springfield, Virginia

Rothschild Asset Mgmt. Inc.
Mary Jane Cullinan
New York, New York

TimesSquare Capital Mgt.LLC
Joseph B. DeVera, Sr.
New York, New York

EQUITY FUND OF FUNDS

Group Advisor

FIS Funds Management, Inc.
Tina Byles Williams
Philadelphia, Pennsylvania

Decatur Capital
Nanette Hill
Decatur, Georgia

Martin Investments
Patrick Martin
Evanston, Illinois

Denali Advisors
Robert Snigaroff
San Diego, California

Ativo Capital Management
Michael Brooks
Chicago, Illinois

Lombardia Capital
Keven Sapanli
Pasadena, California

WCM Investment Management
Nelvon E. Farias
Laguna Beach, California

Algert Global
Michael Wolpert
San Francisco, California

INTERNATIONAL EQUITY MANAGERS

Harding Loevner, LP
Alec Wash, CFA
Bridgewater, New Jersey

Lazard Asset Management. LLC
Eric B. McKee
New York, New York

Mondrian Investment Partners
Laura Conlon
Philadelphia, Pennsylvania

HEDGE FUND MANAGERS

Corbin Capital Partners, LP
Craig Bergstrom, CFA
New York, New York

Grosvenor Capital Management, LLC
Sean J. Conroy
Chicago, Illinois

INVESTMENT PROFESSIONALS

FIXED INCOME MANAGERS

Semper Capital Mgt. (UCM Partners)
Thomas Mandel
New York, New York

PIMCO
Edward Devlin
New York, New York

Manulife Asset Mgt.
Nancy C. Irving
Boston, Massachusetts

REAL ESTATE MANAGERS

American Realty Advisors
Stanley Iezman
Glendale, California

Ares Capital Mgt. (AREA)
Steven M. Wolf
New York, New York

Thor Urban
Joseph J. Sitt
New York, New York

Hancock Timber Resources Group
John T. Perda
Boston, Massachusetts

Cornerstone Real Estate Advisers
Terri A. Herubin
Hartford, Connecticut

PRIVATE EQUITY & VENTURE CAPITAL MANAGERS

Abbott Capital, Inc.
Charles H. vanHorne
New York, New York

Adams Street Partners, LLC
Eric R. Mansell
Chicago, Illinois

Fairview Capital, LP
Laurence C. Morse
West Hartford, Connecticut

RCP Advisors, LLP
William F. Souder
Chicago, Illinois

Summit Partners
James M. Freeland
Boston, Massachusetts

Warburg Pincus
James W. Wilson, CFA
New York, New York

SECURITIES LENDING

BNY Mellon Global Securities Lending
Renee Rawls
Pittsburgh, Pennsylvania

PASSIVE MANAGEMENT

Mellon Capital Management Corp.
Brian Hock
Pittsburgh, Pennsylvania

GLOBAL CUSTODIAN

BNY Mellon Asset Servicing
Sarah Baulch
Pittsburgh, Pennsylvania

INVESTMENT ADVISOR

Marquette Associates, Inc.
Nichole Roman-Bhatty
Chicago, Illinois

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Actuarial Section

January 28, 2017

Board of Trustees
Employees' Retirement System
7 East Redwood Street, 12th Floor
Baltimore, Maryland 21202-3470

Re: 2016 CAFR - Revised

Honorable Members of the Board of Trustees:

Cheiron Inc. performs an actuarial valuation of the System at the end of each fiscal year. The most recent valuation, as of June 30, 2016, determined the employer's contribution for the plan year beginning July 1, 2017. The contribution is determined for the following year and therefore, it is our understanding the contribution plus interest is historically made during the 2017 Fiscal Year.

The Employees' 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.

The funding method used in the annual valuation is the Entry Age Normal Cost method. This method computes level contributions as a percentage of pay over the entire working lifetime of the plan participant. The employer's contribution is increased or decreased to amortize the difference between the actuarial value of assets and the actuarial accrued liability as a level dollar amount over 20 years as of July 1, 2011, targeting 100% funding by the fiscal year ending 2032.

The valuation is based on actuarial assumptions recommended by the Actuary and approved by the Board of Trustees. The assumptions and methods used for funding purposes meet the parameters set forth in the disclosures presented in the financial section by Governmental Accounting Standards Board (GASB) Statement No. 67. Some actuarial assumptions are incorporated into Article 22 of the Baltimore City Code. The City Code requires a periodic review of the assumptions by the Actuary. The most recent review examined experience from 2010 to 2014 and resulted in changes that were incorporated in the June 30, 2015 valuation. The current assumptions are a reasonable estimate of the anticipated experience of the System.

The valuation is based on a closed group of membership; no new hires are assumed. The actuarial value of assets for this disclosure is equal to the market value adjusted for investment performance above or below the assumed rate of return. Such gains or losses are aggregated and recognized at the rate of 20% each year. Membership data used for the actuarial valuation is supplied by the Retirement System. The data is examined by the actuary for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23. Asset information is provided on an unaudited basis.

The assumptions and methods used in determining the assets, liabilities, and the annual required contributions of the employer as defined by the Governmental Accounting Standards Board meet the parameters set by GASB Statement No. 67, *Financial Reporting for Pension Plans.* All supporting schedules in the Actuarial Section and the Schedule of Employer Contributions and the Schedule of Funding Progress in the Financial Section have been prepared by the System and reviewed by Cheiron. The undersigned meet the qualification standards of the American Academy of Actuaries to render the actuarial opinion contained in this letter and the actuarial report.

These results were prepared solely for the Employees' Retirement System of the City of Baltimore for the purposes described herein, except that the plan auditor may rely on these results solely for the purpose of completing an audit related to the matters herein. Other users of these results are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

To the best of our knowledge, the exhibits that make up the actuarial section of this report and its contents when taken in context with our full valuation report as of July 1, 2015, have been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the 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.

Sincerely,
Cheiron

Kenneth A. Kent, FSA, EA. FCA, MAAA	Anu Patel, FSA, EA, MAAA
Principal Consulting Actuary	Principal Consulting Actuary

Attachments

ACTUARIAL FUNDING METHODS AND ACTUARIAL ASSUMPTIONS

Actuarial Funding Method

Method of Funding: (Effective 7/1/1989, Revised 7/1/2012)	Liabilities and contributions shown in this report are computed using the Entry Age Normal method of funding. The Plan's normal cost is computed as the level percentage of pay required to fund the retirement benefits between each member's date of hire and assumed retirement. The actuarial accrued liability is the difference between the present value of future benefits and the present value of future normal cost. The current Unfunded Actuarial Liability, which is the difference between the actuarial liability and the actuarial value of assets, is amortized as a level dollar amount over 20 years. The 20-year period decreases each year from 2011 until 2031, at which time the unfunded liability will be fully paid each year.
Asset Valuation: (Effective 6/30/1982, Revised 6/30/2011)	The actuarial value of assets is equal to the market value, adjusted for investment surpluses and deficits over a five-year period. The actuarial value of assets is the market value less cumulative unallocated earnings. Any contribution receivable for the upcoming fiscal year (as determined in the prior year's valuation) is added to the result. The actuarial value of assets will not be greater than 120% nor less than 80% of the market value of assets as of the valuation date.
Post Retirement Benefit Increases: (Effective 6/30/2011)	Annual post-retirement benefit increases are 1.5% for retirees under age 65 and 2.0% for retirees over age 65.

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Actuarial Assumptions

Interest: (Effective 6/30/2016)	7.50% compounded annually until retirement except employee accumulations; 6.50% compounded annually after retirement.
Expenses: (Effective 6/30/2015)	Administrative expenses are expected to be equal to the prior years' actual expenses rounded up to the next hundred thousand dollars and added as part of the annual normal cost for the year.
	Investment expenses are assumed to be paid out of investment earnings.
Investment Return:	A liability weighted return on assets is expected on the basis that a 7.50% return is achieved on the portion of assets attributable to active and terminated vested participants, and a 6.50% return is assumed for retiree based assets. The weighted expected return this year is 6.94%. The liability weighted return on assets for next year's valuation will be based on the rates listed in the interest rate section above.

ACTUARIAL FUNDING METHODS AND ACTUARIAL ASSUMPTIONS

Salary Scale:
(Effective 6/30/2015)

Salary increases are assumed to vary with age. Sample rates are as follows:

Age	Annual Rate of Salary Increase
20	0.0630
25	0.0580
30	0.0530
35	0.0470
40	0.0410
45	0.0370
50	0.0350
55	0.0350
60	0.0350
65	0.0350
69	0.0350

The interest rate and salary assumptions are based on an inflation rate of approximately 2.65% (Effective 6/30/2015).

Social Security:
(Effective 6/30/2011)

3.00% per year compounded annually.

Additional Assumptions:

Inflation: (Effective 6/30/2015)	2.65%
Cost of Living Adjustment: (Effective 7/1/2010)	1.50% for current retirees under age 65 and 2.0% for current retirees over age 65
Percent Married: (Effective 7/1/2011)	Males 90%, Females 80%
Spouse Age:	A husband is assumed to be 4 years older than his wife.
Remarriage rates:	None

ACTUARIAL FUNDING METHODS AND ACTUARIAL ASSUMPTIONS

Active decrements and service retirement rates are the same as presented in the June 30, 2015 actuarial valuation report. (Effective 6/30/2015) Sample rates follow:

Rates of Retirement

AGE	< 30 yos	30 yos	30 + yos
45 -49	0.00	0.10	0.00
50-54	0.00	0.10	0.05
55	0.03	0.10	0.05
56-57	0.04	0.10	0.05
58	0.05	0.10	0.05
59	0.05	0.10	0.10
60	0.05	0.10	0.10
61	0.07	0.20	0.15
62	0.15	0.20	0.25
63	0.11	0.20	0.20
64	0.14	0.20	0.17
65	0.20	0.30	0.25
66	0.20	0.20	0.25
67	0.17	0.20	0.20
68	0.15	0.20	0.20
69	0.20	0.20	0.20
70	1.00	1.00	1.00

Withdrawals

Service	Rate
0	0.1450
1	0.1350
2	0.1150
3	0.0900
4	0.0800
5	0.0800
6	0.0700
7	0.0600
8	0.0400
9	0.0400
10	0.0400
11	0.0400
12	0.0400
13	0.0300
14	0.0300
15	0.0300

Mortality and Disablity Rates

AGE	Non-Line-of-Duty Disability	Line-of Duty Disability (Classes A&B)	Line-of Duty Disability (Class C)	Non-Line-of-Duty Death * Male	Non-Line-of-Duty Death * Female	Line-of Duty Death*
25	0.00050	0.00004	0.00008	0.00037	0.00021	0.00005
30	0.00059	0.00004	0.00008	0.00061	0.00037	0.00005
35	0.00073	0.00005	0.00010	0.00093	0.00055	0.00005
40	0.00190	0.00006	0.00013	0.00122	0.00084	0.00005
45	0.00332	0.00009	0.00018	0.00169	0.00127	0.00005
50	0.00394	0.00012	0.00023	0.00255	0.00194	0.00005
55	0.00567	0.00013	0.00025	0.00457	0.00369	0.00005
60	0.00715	0.00034	0.00068	0.00888	0.00737	0.00005
65	0.00130	0.00038	0.00076	0.01608	0.01295	0.00005
69	0.00078	0.00039	0.00078	0.02455	0.01990	0.00005

* *Rates for individuals who are the age shown as of June 30, 2015*

Mortality Rates for Retired and Disabled Members and Beneficiaries

1. Retirees and Beneficiaries – RP 2000 Healthy Mortality with generational projections using 50% of the AA scale projected 15 years with a two year set forward for both males and females.

2. Disabled Members – RP 2000 Disabled Mortality with generational projections using 50% of the AA scale projected 15 years with a four year set forward for both males and females.

	Retirees and Beneficiaries *		Disabled Members	
AGE	Male	Female	Male	Female
55	0.00407	0.00328	0.03524	0.01956
60	0.00776	0.00641	0.04282	0.02562
65	0.01447	0.01172	0.05365	0.03403
70	0.02437	0.01990	0.06924	0.04709
75	0.04222	0.03212	0.09305	0.06384
80	0.07466	0.05341	0.12515	0.08899

** Rates for individuals who are the age shown as of June 30, 2015*

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SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Valuation Date	Number	Annual Payroll	Annual Average	% Increase/ (Decrease) in Average Pay
6/30/2005	9,412	$320,985,907	34,104	2.7%
6/30/2006	9,193	331,888,366	36,102	5.9
6/30/2007	9,035	346,391,734	38,339	6.2
6/30/2008	9,280	367,517,242	39,603	3.3
6/30/2009	9,719	398,009,475	40,952	3.4
6/30/2010	9,680	401,328,980	41,460	1.2
6/30/2011	9,393	392,941,135	41,833	0.9
6/30/2012	9,107	390,557,576	42,885	2.5
6/30/2013	9,004	392,868,271	43,633	1.7
6/30/2014	8,904	401,291,783	45,069	3.3
6/30/2015	8,673	408,095,216	47,054	4.4
6/30/2016	8,274	399,465,753	48,280	7.1

SCHEDULE OF RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS

	Added to Rolls		Removed from Rolls		Rolls - End of Year		% Increase in	Average
		Annual		Annual		Annual	Annual	Annual
Year Ended	No.	Allowances*	No.	Allowances*	No.	Allowances*	Allowances	Allowances
6/30/2005	507	$5,115,926	371	$3,154,496	8,623	$89,826,401	2.2%	$10,417
6/30/2006	473	5,572,251	408	3,239,121	8,688	92,159,531	2.6	10,608
6/30/2007	436	11,159,559	428	3,725,576	8,696	99,593,514	8.1	11,453
6/30/2008	382	7,846,827	440	3,953,061	8,638	103,487,280	3.9	11,980
6/30/2009	478	6,819,538	498	4,385,748	8,618	105,921,070	2.4	12,291
6/30/2010	473	8,065,853	454	4,252,838	8,637	109,734,085	3.6	12,705
6/30/2011	493	9,685,011	437	4,966,673	8,693	114,452,423	4.3	13,166
6/30/2012	497	10,860,356	451	4,339,871	8,739	120,972,909	5.7	13,843
6/30/2013	501	10,216,250	432	5,192,731	8,808	125,996,428	4.2	14,305
6/30/2014	421	10,499,144	336	5,588,634	8,893	130,906,938	3.9	14,720
6/30/2015	393	10,089,809	388	6,224,773	8,898	134,771,974	3.0	15,146
6/30/2016	450	14,965,060	368	5,525,068	9,007	140,346,930	7.2	15,582

* Includes post-retirement adjustments.

SOLVENCY TEST

The Employees' 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 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; 3) The liabilities for future benefits to terminated vested members; and, 4) 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), the liabilities for future benefits to present retired lives (liability 2), and the liabilities for future benefits to terminated vested members (liability 3) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active members (liability 4) will be partially covered by the remainder of present assets. Generally, the funded portion of liability 4 will increase over time.

The schedule below illustrates the System's history of liabilities 1 through 4.

	Aggregate Accrued Liabilities For					Portion of Accrued Liabilities Covered by Report Assets			
	(1)	(2)	(3)	(4)					
Valuation Date	Active Member Contributions	Retirees and Beneficiaries	Terminated Vested Members	Active Members (Employer Financed Portion)	Valuation Assets	(1)	(2)	(3)	(4)
06/30/2005	$5,585,067	$898,978,213	$27,015,479	$545,367,724	$1,403,206,754	100%	100%	100%	86.5%
06/30/2006	5,142,918	937,648,822	29,987,196	578,363,462	1,411,165,976	100	100	100	75.8
06/30/2007	4,891,816	991,713,294	33,164,687	568,912,381	1,447,196,612	100	100	100	73.4
06/30/2008	4,265,169	1,023,749,711	37,096,665	598,966,777	1,475,533,717	100	100	100	68.5
06/30/2009	3,875,023	1,039,839,384	40,657,298	640,558,977	1,424,202,643	100	100	100	53.1
06/30/2010	3,419,652	1,103,746,648	46,882,433	676,175,786	1,390,514,840	100	100	100	35.0
06/30/2011	3,013,222	1,169,599,360	43,416,490	724,418,152	1,410,211,059	100	100	100	26.8
06/30/2012	2,977,938	1,228,202,331	44,829,153	835,268,747	1,429,666,081	100	100	100	18.4
06/30/2013	2,688,948	1,270,442,197	44,651,885	834,209,969	1,465,943,503	100	100	100	17.8
06/30/2014	5,070,338	1,312,440,514	52,060,082	840,749,044	1,540,327,375	100	100	100	20.3
06/30/2015	10,682,704	1,356,302,147	48,799,252	837,218,003	1,615,537,148	100	100	100	23.9
06/30/2016	19,415,031	1,408,689,345	48,210,458	851,247,989	1,657,187,748	100	100	100	21.2

ANALYSIS OF FINANCIAL EXPERIENCE

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 Year 2015	Gain or (Loss) for Year 2016
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.	$ 4,260,000	$ (9,846,000)
Disability Retirements If disability claims are less than assumed, there is a gain. If more claims, a loss.	(2,782,000)	(5,383,000)
Death-in-Service Benefits If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(3,655,000)	(3,439,000)
Withdrawal from Employment If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	(8,104,000)	3,388,000
Pay Increases If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	1,844,000	6,147,000
Investment Income If there is greater investment income than assumed, there is a gain. If less, a loss.	(16,475,000)	(29,234,000)
Death After Retirement If retirees live longer than assumed, there is a loss. If not as long, a gain. (includes PuBF G/(L))	7,621,000	4,259,000
New Entrants New entrants create a loss because they were not assumed in the previous evaluation.	(2,954,000)	(1,623,000)
Plan Changes or Increase in Periodic Pension Plan changes or one time increase in the periodic benefit payments	0	0
Assumption, Method and Plan Changes Changes due to assumption changes and/or changes in accounting and liability.	3,829,000	(20,850,000)
Other Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, valuation methods, etc.	1,717,000	(393,000)
Gain or (Loss) During Year from Financial Experience	$ (14,699,000)	(56,974,000)

1. **EFFECTIVE DATE:**

The Employees' Retirement System was established by City Ordinance, effective January 1, 1926, and has been amended periodically.

2. **ELIGIBILITY:**

Any regular and permanent officer, agent, or employee of the City with the exception of those required to join the Maryland State or other Retirement System will become a Class C member of the Employees' Retirement System upon completion of one year of employment. The Board of Estimates may authorize prospective membership for any class of part-time employees. There are three classes of members as follows:

Class A - Members who were hired before July 1, 1979, and entered membership on or after January 1, 1954, or who were employed and elected prior to April 1, 1954, to contribute at the higher Class A rate.

Class B - Members as of January 1, 1954, who did not elect Class A membership. Any Class B member may elect to become a Class A member by bringing his accumulated contributions and interest up to what they would be if he had elected Class A membership on January 1, 1954.

Class C - Members who were hired on or after July 1, 1979 and before July 1, 2014, or any other members who may have elected to transfer during various open transfer periods to Class C membership.

Class D - Members who were hired or rehired on or after July 1, 2014, and are Retirement Savings Plan "hybrid members".

3. **MEMBER CONTRIBUTIONS:**

Class C members make the following pre-tax contributions as a percentage of earnable compensation:

July 1, 2013 -- June 30, 2014	1%
July 1, 2014 -- June 30, 2015	2%
July 1, 2015 ---June 30, 2016	3%
July 1, 2016 -- June 30, 2017	4%
July 1, 2017 -- June 30, 2018	5%

Year-to-year increases in the contribution rate are conditioned on members' receiving a raise of at least 2%.

Class A and Class B members contribute 4% of earnable compensation. Class A and Class B contributions are not required upon attaining age 60 and completing 35 years of service.

Class D members contribute 5% of earnable compensation.

4. **COMPENSATION:**

Earnable compensation is the annual salary authorized for the member, not including overtime, differential pay, environmental pay, hazardous duty pays for conversion of leave or other fringe benefits, or any like additional payment.

Average final compensation is the average of the member's annual earnable compensation on January 1 for the three successive years of service when the member's earnable compensation is the highest or, if the member is in service on January 1 for less than three successive years, then the average during total service.

Covered compensation (for Class C members only) is the average of the FICA wage base for the 35-year period ending with the calendar year which ends immediately prior to the earlier of: (1) January 1, which is one year prior to January 1 of the calendar year in which member terminates employment; or (2) January 1 of the calendar year in which the member attains age 65.

5. **MILITARY SERVICE CREDIT:**

(A) **Classes A and B**

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

(a) 10 years of service and has reached the age of 60; or
(b) 20 years of service, regardless of age.

(2) **Military Service Within Employment:** Upon retirement or death, any member who had a break in employment due to military duty, will receive service credit for the period of absence as provided by the Veterans' Reemployment Rights Act and the Uniformed Services Employment and Reemployment Rights Act of 1994.

(B) **Classes C** and D

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

(a) 10 years of service and has reached the age of 62; or

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

(2) **Military Service Within Employment:** Upon retirement or death, any member who had a break in employment due to military duty, will receive service credit for the period of absence as provided by the Veterans' Re-Employment Rights Act and the Uniformed Services Employment and Reemployment Rights Act of 1994. For members reemployed after military service, the City will pay their member contributions for the period of military service. If the member terminates City employment before becoming eligible for a retirement benefit or deferred vested benefit, the member will not receive the contributions made by the City for the period of military service.

6. **SERVICE RETIREMENT:**

(A) **Classes A and B**

(1) **Eligibility Requirements:**

(a) Age 60 with five years of service; or

(b) 30 years of membership service, regardless of age.

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

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

(b) a pension, which together with the annuity will be equal to 1.935% for Class A members and 1.785% for Class B members for each year of service, times the member's average final compensation.

(B) **Class C**

(1) **Eligibility Requirements:**

(a) Age 65 with five years of service;

(b) 30 years of service, regardless of age; or

(c) Age 55 with five years of service, payable at age 65 or reduced for payment before age 65.

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

(a) a pension of 1.60% for each year of service (not to exceed 30), times the member's average final compensation; plus

(b) .25% for each year of service not to exceed 30, times member's average final compensation in excess of covered compensation; plus

(c) 1.85% for each year of service in excess of 30, times the member's average final compensation.

If a member elects to have his maximum or optional pension commence prior to normal retirement date, age 65 with less than 30 years, the amount of his pension will be reduced 6.667% for each of the first five years (prorated for shorter periods) and 3.333% for each of the next five years (prorated for shorter periods) by which the commencement of his pension precedes his normal retirement age 65.

(C) **Class D**

(1) **Eligibility Requirements:**

(a) Age 65 with five years of service;

(b) 30 years of service, regardless of age; or

(c) Age 55 with five years of service, payable at age 65 or reduced for payment before age 65.

(2) **Benefit Amount:**

(a) 1.0% for each year of service times the member's average final compensation.

(b) For members who retire at age 62 with at least 20 years of service, 1.1% for each year of service times the member's average final compensation.

If a member elects to have his maximum or optional pension commence prior to normal retirement date, age 65 with less than 30 years, the amount of his pension will be reduced 6.667% for each of the first five years (prorated for shorter periods) and 3.333% for each of the next five years (prorated for shorter periods) by which the commencement of his pension precedes his normal retirement age 65.

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

(A) **Classes A and B**

(1) **Eligibility Requirements:** Five years of service and determined by a hearing examiner to be mentally or physically incapacitated for the performance of duty, and that the incapacity is likely to be permanent.

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

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

(b) a pension which, together with the annuity will equal 1.90% for Class A members and 1.75% for Class B members for each year of service, times the member's average final compensation.

The member will receive, as a minimum, the benefit as stated above or 25% of the member's average final compensation.

(3) **Offset to Retirement Allowance:** This benefit is offset by:

(a) workers' compensation; and

(b) earnings in excess of base amount (current earnable compensation in same job grade and step adjusted for longevity) with a $1 reduction for each $2 of the first $5,000 of excess and a $2 reduction for each $5 of additional excess earnings.

(B) **Classes C and D**

(1) **Eligibility Requirements:** Five years of service and determination by a hearing examiner to be mentally or physically incapacitated for the performance of duty, and that the incapacity is likely to be permanent.

(2) **Benefit Amount:** The non-line-of-duty disability pension will be the greater of:

(a) a pension equal to the member's accrued service retirement benefit; or

(b) 15% of the member's average final compensation.

(3) **Offset to Retirement Allowance:** This benefit is offset by workers' compensation.

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

(A) **Classes A and B**

(1) **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 accident occurring while in the actual performance of duty without willful negligence.

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

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

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

(3) **Offset to Retirement Allowance:** This benefit is offset by workers' compensation.

(B) **Classes C and D**

(1) **Eligibility Requirements:** Immediate eligibility upon membership in the System and determination by a hearing examiner to be incapacitated for the further performance of duty, and the incapacity resulted from an accident occurring while in the actual performance of duty without willful negligence.

(2) **Benefit Amount:** A pension equal to 66.667% of the member's average final compensation.

(3) **Offset to Retirement Allowance:** This benefit is offset by wokers' compensation.

9. **DISMEMBERMENT DISABILITY RETIREMENT (Classes C and D only):**

(A) **Eligibility Requirement:** Immediate eligibility upon membership in the System and determination by a hearing examiner that the loss of any two or more of hands, feet, sight of eye(s), or combination thereof, was a direct result of bodily injury from an accident that occurred while in the actual performance of duty.

(B) **Benefit Amount:** A pension equal to 100% of the member's average final compensation.

(C) **Offset to Retirement Allowance:** This benefit is offset by workers' compensation.

10. **TERMINATION OF EMPLOYMENT:**

(A) **Classes A and B**

(1) **Eligibility Requirement:**

(a) For a termination retirement allowance deferred to age 60, the completion of:

(i) 15 years of service; or

(ii) Five years of service, if removed from a position without fault or if an elected or appointed official not re-elected or re-appointed.

(b) For a termination retirement allowance payable immediately without reduction for age, the completion of 20 years of service, if removed from a position without fault or if an elected or appointed official not re-elected or re-appointed.

(c) Eligible for a refund of accumulated contributions if not eligible for any other benefits.

(2) **Benefit Amount:**

(a) Deferred Payment: Determined the same as for service retirement, but based on membership service and average final compensation at the time of termination.

(b) Immediate Payment: Determined the same as if the member had retired with a non-line-of-duty disability retirement allowance.

(B) **Class C**

(1) **Eligibility Requirement:**

(a) For a termination retirement allowance deferred to age 65, completion of:

(i) 10 years of service; or

(ii) Five years of service, if removed from a position without fault or if an appointed official not re-appointed.

(b) For a termination retirement allowance payable immediately without reduction for age, the completion of 20 years of service, if removed from a position without fault or if an appointed official not re-appointed.

(c) Eligible for a refund of accumulated contributions if not eligible for any other benefits.

(2) **Benefit Amount:**

(a) Deferred Payment: Determined the same as for service retirement, but based on membership service and average final compensation at the time of termination.

(C) **Class D**

(1) **Eligibility Requirement:**

(a) For a termination retirement allowance deferred to age 65, completion of 10 years of service.

(b) Eligible for a refund of accumulated contributions if not eligible for any other benefits.

(2) **Benefit Amount:**

Determined the same as for service retirement, but based on membership service and average final compensation at the time of termination.

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

(A) **Lump Sum:** Under $12,500 or as adjusted by the Board of Trustees.

(B) **Maximum Allowance:** Upon retiree's death, 40% of retiree's maximum allowance to unremarried spouse or dependent children until the last dies or attains age 18 (age 22 if a full time student). All other options result in a lesser amount paid.

(C) **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.

(D) **100% Joint and Survivor Option:** Upon retiree's death, 100% of retiree's allowance to continue to designated beneficiary.

(E) **50% Joint and Survivor Option:** Upon retiree's death, 50% of retiree's allowance to continue to designated beneficiary.

(F) **50% Pop-Up:** Upon retiree's death 50% of retiree's allowance to continue to designated beneficiary.
If designated beneficiary predeceases member, member receives Maximum and no survivorship benefit is paid.

(G) **100% Pop-Up:** Upon retiree's death 100% of retiree's allowance to continue to designated beneficiary. If designated beneficiary predeceases member, member receives Maximum and no survivorship benefit is paid.

(H) **Specific Benefit Option:** Upon the 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. Any option and/or beneficiary may be changed by the retired member within 30 days after retirement.

12. **NON-LINE-OF-DUTY DEATH BENEFITS:**

(A) **Classes A and B**

(1) **Lump Sum Benefit:**

(a) **Eligibility Requirements:** Member who

(i) dies while actively employed; and

(ii) whose death does not qualify as a line-of-duty death.

(b) **Benefit Amount:** The designated beneficiary is paid:

(i) the member's accumulated contributions; plus
(ii) if member has one or more years of membership service, 50% of the greater of the member's average final compensation or current annual earnable compensation.

(2) **100% Survivorship Benefit:**

(a) **Eligibility Requirements:** This benefit is paid to the member's designated beneficiary spouse to whom he/she has been married for at least five years or his/her parent(s), provided the Member:

(i) is eligible for service retirement at the time of death; or

(ii) would have become eligible for service retirement within 90 days of the date of death; or

(iii) retired on account of service, non line of duty disability, or line of duty disability and dies within 30 days of retirement; or

(iv) is entitled to a deferred allowance at age 60 and dies anytime between the effective retirement date at age 60 and no later than 30 days following the attainment of age 60.

(b) **Benefit Amount:** The eligible beneficiary may elect in lieu of the Lump Sum Benefit or the 40% Survivorship Benefit, an allowance equal to the amount that would have been paid under the Service Retirement 100% Joint and Survivor Option.

(3) **40% Survivorship Benefit:**

(a) **Eligibility Requirements:** This benefit is paid to the member's designated beneficiary spouse with whom he has been married for at least one year prior to the date of death or to the member's unmarried children if less than age 18 (or age 22 if students), provided the Member:

(i) died in active service; and

(ii) had more than 20 years of service as of the date of death.

(b) **Benefit Amount:** The eligible beneficiary spouse or children may elect in lieu of the Lump Sum Benefit or the 100% Survivorship Benefit, an allowance equal to 40% of the member's accrued service retirement benefit.

(4) **Offset to Death Benefits:** These benefits are offset by any pension benefits paid before the members' death.

(B) **Classes C and D**

(1) Lump Sum Benefit:

(a) **Eligibility Requirements:** Member who:

(i) dies while actively employed; and

(ii) has one or more years of membership service, but whose death does not qualify as a line-of-duty death.

(b) **Benefit Amount:** The designated beneficiary is paid:

(i) the member's accumulated contributions, if any; plus

(ii) one-time payment of 50% of the greater of the member's average final compensation or current annual earnable compensation.

(2) 100% Survivorship Benefit:

(a) **Eligibility Requirements:** This benefit is paid to the member's designated beneficiary spouse to whom he/she was married for at least 5 years or his parent(s), provided the member:

(i) is eligible for service retirement at the time of death; or

(ii) would have become eligible for service retirement within 90 days of the date of death; or

(iii) retired on account of service, non line of duty disability, or line of duty disability and dies within 30 days of retirement; or

(iv) is entitled to a deferred allowance at age 65 and dies anytime between the effective retirement date at age 65 and no later than 30 days following the attainment of age 65.

(b) **Benefit Amount:** The eligible beneficiary may elect in lieu of the Lump Sum Benefit or the 40% Survivorship Benefit, an allowance equal to the amount that would have been paid under the Service Retirement 100% Joint and Survivor Option.

(3) 40% Survivorship Benefit:

(a) **Eligibility Requirements:** This benefit is paid to the member's designated beneficiary spouse to whom he has been married for at least one year prior to the date of death or to the member's unmarried children if less than age 18 (or age 22 if students), provided the member:

(i) died in active service; and

(ii) had more than 20 years of service as of the date of death.

(b) **Benefit Amount:** The eligible beneficiary spouse or eligible children may elect in lieu of the Lump Sum Benefit or the 100% Survivorship Benefit, an allowance equal to 40% of the member's accrued service retirement benefit.

(4) Offset to Death Benefits: These benefits are offset by workers' compensation.

13. **LINE-OF-DUTY DEATH BENEFITS:**

(A) **Eligibility Requirements:** A determination by a hearing examiner that the death of a member was:

(1) the direct result of bodily injury though accidental means independent of any pre-existing physical or medical conditions;

(2) occurring while in the actual performance of duty; and

(3) not caused by willful negligence on the part of the member.

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

(1) the member's accumulated contributions (if any); plus

(2) an annual pension of 100% of current earnable compensation, payable to:

(a) the spouse during widow(er)hood, provided: (1) there is no voluntary separation agreement renouncing rights of inheritance; and (2) the member has not designated his children as beneficiaries;

(b) if no eligible spouse, or if the spouse dies or remarries, the child or children, equally, until age 18 (age 22 if a full-time student);

(c) if no eligible spouse or child surviving, then to the deceased's father and/or mother equally, or to the survivor;

(d) for Classes A and B, any member who retires and dies within 30 days after the effective date of accidental disability retirement will receive the above benefits if death is the result of injuries in the line-of-duty.

If no beneficiary and if intestate without heirs, then contributions will remain part of the System, and no death benefit is paid.

(C) **Offset to Retirement Allowance:** This benefit is offset by workers' compensation, net of legal and medical fees.

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

(A) **Eligibility Requirements;**

Only retirees and their beneficiaries, who have been receiving periodic benefit payments as of the June 30th determination date, and members who have been retired for a minimum of 12 months, are eligible for the increase. The increase is payable commencing in the January after the June 30th determination date.

(B) **Amount:**

(1) **Classes A, B and C**

1.5% for participants in pay status under age 65 and 2.0% for participants in pay status age 65 and over.

(2) **Class D**

(a) In pay status under age 65:

1.5% if Class D funded status is 85% or more.

1.0% if Class D funded status is at least 70% but less than 85%.

No increase if Class D funded status is less than 70%.

(b) In pay status age 65 or older:

2.0% if Class D funded status is 85% or more.

1.0% if Class D funded status is at least 70% but less than 85%.

No increase if Class D funded status is less than 70%.

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Statistical Section

STATISCAL SECTION SUMMARY

The statistical section of the Employees' Retirement System's (System) comprehensive annual financial report presents detailed information as a context for helping the readers understand the information in the financial statements, notes disclosures, required supplementary information, and the System's overall financial health for the last ten fiscal years. The different reports contained in this section are listed below.

Financial Trends

Changes of Plan Net Position schedules detail the System's financial performance from year to year.

Revenue Capacity

The Revenue by Source schedule list the different income streams of the System.

Expenses Capacity

The Expense by Type schedules contains information about the major costs of the System.

Demographic Information

The demographic schedules consist of various membership information used by the Actuary to determine or monitor the demographic assumptions. The tables which are used to compare current assumptions with actual experience to determine recommended assumption changes include:

- The Schedule of Active Members by Years of Service, which provides active membership information including the average service credit and member's age for each fiscal year;
- The Schedule of Retirees by Attained Age and Type of Retirement, provides the number of retirees by age and the type of retirement, and
- The Schedule of Beneficiaries By attained Age and Type of Retirement that provides membership information on beneficiaries by age and type of the member's retirement.

Benefit Expenses by Type: is a report of benefit related expenses by the type of retirement and payment for each year of service.

Average Monthly Benefit Payments: is a schedule of monthly benefit payments based on years of credited service. For each year, the schedule provides the average monthly benefit payment, Average – average Final Compensation and number of retirees grouped in years of credited service.

Employees' Retirement System
City of Baltimore, Maryland

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

For the Last Ten Fiscal Years

	2007	2008	2009	2010	2011
Additions					
Contributions					
Employer	$ 36,841,351	$ 43,918,411	$ 43,673,027	$ 48,748,397	$ 62,374,396
Plan members	308,703	345,637	172,567	215,669	358,202
Total contributions	$ 37,150,054	$ 44,264,048	$ 43,845,594	$ 48,964,066	$ 62,732,598
Investment Income					
Net appreciation in fair value of investments	$ 177,595,751	$ (111,674,879)	$ (278,688,103)	$ 91,458,311	$ 195,926,226
Interest, dividends, and real estate income	47,136,147	46,115,481	28,522,723	26,028,223	20,583,936
Less: investment expenses	(5,684,475)	-6,275,603	-5,406,811	-5,641,242	-6,115,531
Net investment income	$ 219,047,423	$ (71,835,001)	$ (255,572,191)	$ 111,845,292	$ 210,394,631
Securities lending income	$ $468,902	$ 1,001,675	$ 762,206	$ 290,022	$ 283,344
Securities lending fees	(140,643)	-300,467	-228,479	-86,970	-83,849
Net securities lending income	$ $328,259	$ 701,208	$ 533,727	$ 203,052	$ 199,495
Total additions	$ 256,525,736	$ (26,869,745)	$ (211,192,870)	$ 161,012,410	$ 273,326,724
Deductions					
Retirement allowances	$ 97,104,170	$ 101,461,516	$ 104,166,249	$ 108,225,770	$ 112,642,028
Adminstrative expenses	2,615,247	2,913,458	3,138,612	3,061,461	3,189,932
Death benefits	1,294,666	1,061,050	881,569	791,170	546,942
Lump cash payments	155,325	177,877	289,626	155,564	123,425
Refund of Contributions	5,008	9,161		334	95,936
Total deductions	$ 101,174,416	$ 105,623,062	$ 108,476,056	$ 112,234,299	$ 116,598,263
Net increases / (decreases)	$ 155,351,320	$ (132,492,807)	$ (319,668,926)	$ 48,778,111	$ 156,728,461
Net assets held in trust for pension benefits					
Beginning Balance	$ 1,333,223,648	$ 1,488,574,968	$ 1,356,082,161	$ 1,036,413,235	$ 1,085,191,346
Ending Balance	$ 1,488,574,968	$ 1,356,082,161	$ 1,036,413,235	$ 1,085,191,346	$ 1,241,919,807

Employees' Retirement System
City of Baltimore, Maryland

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
For the Last Ten Fiscal Years

	2012	2013	2014	2015	2016
Additions					
Contributions					
Employer	$ 77,995,003	$ 88,300,214	$ 94,917,886	$ 97,170,796	$ 77,100,573
Plan members	359,028	223,720	3,623,467	6,728,131	10,350,709
Total contributions	$ 78,354,031	$ 88,523,934	$ 98,541,353	$ 103,898,927	$ 87,451,282
Investment Income					
Net appreciation in fair value of investments	$ 18,948,964	$ 135,498,253	$ 192,951,419	$ (14,411,263)	$ 437,788
Interest, dividends, and real estate income	6,758,532	19,359,439	24,639,052	90,342,747	48,604,366
Less: investment expenses	(6,155,302)	-6,931,175	-8,117,367	-9,321,676	-9,138,196
Net investment income	$ 19,552,194	$ 147,926,517	$ 209,473,104	$ 66,609,808	$ 39,903,958
Securities lending income	$ 205,199	$ 359,807	$ 788,486	$ 297,447	$ 496,519
Securities lending fees	(60,244)	-107,623	-614,421	-89,215	-140,435
Net securities lending income	$ 144,955	$ 252,184	$ 174,065	$ 208,232	$ 356,084
Total additions	$ 98,051,180	$ 236,702,635	$ 308,188,522	$ 170,716,967	$ 127,711,324
Deductions					
Retirement allowances	$ 118,802,304	$ 124,059,639	$ 129,205,776	$ 133,129,502	$ 138,184,417
Adminstrative expenses	3,297,684	3,554,942	3,711,975	3,748,434	3,515,492
Death benefits	1,289,869	689,223	699,991	943,540	652,743
Lump cash payments	73,596	157,082	63,979	125,608	124,748
Refund of Contributions	9,088	6,381	4,224	72,008	235,808
Total deductions	$ 123,472,541	$ 128,467,267	$ 133,685,945	$ 138,019,092	$ 142,713,208
Net increases / (decreases)	$ (25,421,361)	$ 108,235,368	$ 174,502,577	$ 32,697,875	$ (15,001,884)
Net assets held in trust for pension benefits					
Beginning Balance	$ 1,241,919,807	$ 1,216,498,446	$ 1,324,733,814	$ 1,499,236,391	$ 1,531,934,266
Ending Balance	$ 1,216,498,446	$ 1,324,733,814	$ 1,499,236,391	$ 1,531,934,266	$ 1,516,932,382

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

Fiscal Year	Net Investment Income (Loss)	Employer Contributions Amount	Employer Contributions % of Covered Payroll	Member Contributions	Total Income (Loss)
2007	$ 225,820,282	$ 36,841,351	10.6	$ 308,703	$ 262,970,336
2008	-71,133,793	43,918,411	11.5	345,637	-26,869,745
2009	-255,038,464	43,673,027	11.0	172,567	-211,192,870
2010	112,048,344	48,748,397	12.4	215,669	161,012,410
2011	210,594,126	62,374,396	15.9	358,202	273,326,724
2012	19,697,149	77,995,003	20.0	359,028	98,051,180
2013	148,178,701	88,300,214	22.5	223,720	236,702,635
2014	209,647,169	94,917,886	23.7	3,623,467	308,188,522
2015	66,818,039	97,170,796	23.8	6,728,131	170,716,966
2016	40,260,042	77,100,573	19.3	10,350,709	127,711,324

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

EXPENSES BY TYPE

Fiscal Year	Benefits	Refunds	Administrative Expenses	Total
2007	$ 98,554,161	$ 5,008	$ 2,615,247	$ 101,174,416
2008	102,700,443	9,161	2,913,458	105,623,062
2009	105,337,444		3,138,612	108,476,056
2010	109,172,504	334	3,061,461	112,234,299
2011	113,312,395	95,936	3,189,932	116,598,263
2012	120,165,769	9,088	3,297,684	123,472,541
2013	124,905,944	6,381	3,554,942	128,467,267
2014	129,969,746	4,224	3,711,975	133,685,945
2015	134,198,650	72,007	3,748,433	138,019,090
2016	138,961,908	235,808	3,515,492	142,713,208

Employees' Retirement System
City of Baltimore, Maryland

SCHEDULE OF ACTIVE MEMBERS BY YEARS OF SERVICE

Years of Credited Service	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
0-4	2,124	2,306	2,714	2,675	2,426	2,051	1,811	1,766	1,800	1,678
5-9	1,789	1,812	1,826	1,917	1,929	2,033	2,181	2,215	2,026	1,778
10-14	1,093	1,304	1,406	1,376	1,422	1,426	1,425	1,430	1,451	1,446
15-19	1,286	949	724	705	710	817	988	1,054	1,034	1,059
20-24	974	1,166	1,320	1,307	1,192	979	721	550	519	547
25-29	1036	976	929	794	707	772	892	992	968	887
30+	733	767	800	906	1,007	1,029	986	897	875	879
Total Members	9,035	9,280	9,719	9,680	9,393	9,107	9,004	8,904	8,673	8,274
Average Service Credit	13.83	13.56	13.17	13.27	13.58	13.92	13.92	13.83	13.88	14.30
Average Age	48.64	48.66	48.61	48.96	49.35	49.74	49.89	49.89	50.10	50.54

Employees' Retirement System
City of Baltimore, Maryland

SCHEDULE OF RETIREES BY ATTAINED AGE AND TYPE OF RETIREMENT
Year Ended June 30, 2016

Age	Number of Recipients	TYPE OF RETIREMENT* 0	1	2	3	4
0-29						
30-39	6				6	
40-44	16				15	1
45-49	29	1		2	26	
50-54	123	25		19	74	5
55-59	568	133	151	89	189	6
60-64	1,188	442	361	183	190	12
65-69	1,741	909	484	198	143	7
70-74	1,301	740	333	141	80	7
75-79	997	538	289	109	52	9
80-84	776	388	273	77	31	7
85 and up	846	528	216	76	18	8
Totals	7,591	3,704	2,107	894	824	62
Average Annual Benefit	$16,900	$23,019	$7,145	$21,013	$9,500	$21,888

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

SCHEDULE OF BENEFICIARIES BY ATTAINED AGE AND TYPE OF RETIREMENT

Year Ended June 30, 2016

		TYPE OF RETIREMENT*						
Age	Number of Recipients	0	1	2	3	4	5	8
0-24	13	5	1	2	3		2	
25-29	1				1			
30-34								
35-39								
40-44	1						1	
45-49	6			1	4	1		
50-54	28	7	7	2	9		3	
55-59	70	29	11	5	15	1	9	
60-64	129	50	19	6	36		18	
65-69	184	78	26	16	50	3	11	
70-74	212	93	45	22	34	1	16	1
75-79	226	108	50	18	34	3	13	
80-84	238	119	61	21	23	2	12	
85 and up	308	196	56	13	26	7	10	
Totals	1,416	685	276	106	235	18	95	1
Average Annual Benefit	$8,510	$10,390	$4,353	$10,360	$5,226	$10,505	$12,693	$10,698

*Type of Retirement

0 - Normal retirement for age and service
1 - Early retirement
2 - Discontinued service retirement
3 - Non-line-of-duty disability
4 - Line-of-duty disability
5 - Non-line-of-duty death, member eligible for service retirement at death
8 - Line-of-duty death

Employees' Retirement System
City of Baltimore, Maryland

BENEFIT EXPENSES BY TYPE

Year	Age and Service Benefits			Death Benefits			Disability Benefits			
							Retirees			
Ending	Retirees	Beneficiaries	Lump Sum	Duty	Non-Duty	Lump Sum	Duty	Non-Duty	Beneficiaries	Total
2007	81,936,778	5,611,389	155,325	691,165	961,009	893,948	1,529,265	5,755,332	1,019,950	98,554,161
2008	85,680,282	6,378,604	324,170	516,418	981,229	177,877	1,503,083	5,994,761	1,144,019	102,700,443
2009	86,813,655	6,856,655	289,626	502,613	1,100,267	881,569	1,513,339	6,214,941	1,164,778	105,337,443
2010	90,004,238	7,367,063	155,564	461,609	1,246,067	791,170	1,443,226	6,499,946	1,203,621	109,172,504
2011	94,588,958	7,080,619	123,425	418,549	1,151,890	546,942	1,420,134	6,722,021	1,259,857	113,312,395
2012	99,171,620	8,156,362	73,596	410,158	1,143,187	1,289,869	1,435,552	7,093,318	1,392,106	120,165,768
2013	103,423,042	8,739,976	157,082	388,447	1,187,725	689,223	1,438,353	7,413,884	1,468,211	124,905,943
2014	107,713,150	9,102,520	63,979	404,560	1,236,993	699,991	1,498,018	7,721,421	1,529,114	129,969,746
2015	110,984,187	9,378,946	125,608	416,846	1,274,558	943,540	1,543,510	7,955,905	1,575,550	134,198,650
2016	130,663,656	7,161,289	124,748	270,961	1,059,257	652,743	1,286,253	395,782	1,098,518	142,713,208

Employees' Retirement System
City of Baltimore, Maryland
AVERAGE MONTHLY BENEFIT PAYMENTS

Retirement Effective Dates	Years of Credited Service					
From July 1, 2006 to June 30, 2016	0-10	11-15	16-20	21-25	26-30	31+
Period 7/1/06 to 6/30/07						
Average-Average Final Compensation	$ 3,786	$ 3,121	$ 8,234	$ 18,455	$ 16,445	$ 18,055
Average Monthly Benefit	315	260	686	1,538	1,370	1,505
Total No. of Retirees	19	13	26	21	23	206
Period 7/1/07 to 6/30/08						
Average-Average Final Compensation	$ 3,842	$ 4,759	$ 13,398	$ 15,470	$ 22,442	$ 25,370
Average Monthly Benefit	320	397	1,116	1,289	1,870	2,114
Total No. of Retirees	42	34	30	40	46	78
Period 7/1/08 to 6/30/09						
Average-Average Final Compensation	$ 3,627	$ 5,343	$ 9,088	$ 12,817	$ 24,363	$ 29,391
Average Monthly Benefit	302	445	757	1,068	2,030	2,449
Total No. of Retirees	55	56	55	29	46	94
Period 7/1/09 to 6/30/10						
Average-Average Final Compensation	$ 4,995	$ 6,431	$ 11,722	$ 17,473	$ 18,619	$ 28,651
Average Monthly Benefit	416	536	977	1,456	1,552	2,388
Total No. of Retirees	52	43	37	53	50	106
Period 7/1/10 to 6/30/11						
Average-Average Final Compensation	$ 4,802	$ 6,622	$ 9,915	$ 18,686	$ 24,367	$ 31,738
Average Monthly Benefit	400	552	826	1,557	2,031	2,645
Total No. of Retirees	44	46	51	48	71	97

AVERAGE MONTHLY BENEFIT PAYMENTS

Retirement Effective Dates	Years of Credited Service					
From July 1, 2006 to June 30, 2016	0-10	11-15	16-20	21-25	26-30	31+
Period 7/1/11 to 6/30/12						
Average-Average Final Compensation	$ 4,771	$ 6,699	$ 10,872	$ 15,846	$ 26,148	$ 30,737
Average Monthly Benefit	398	558	906	1,321	2,179	2,561
Total No. of Retirees	64	57	26	49	58	112
Period 7/1/12 to 6/30/13						
Average-Average Final Compensation	$ 4,304	$ 7,038	$ 10,756	$ 13,785	$ 22,735	$ 31,499
Average Monthly Benefit	359	587	896	1,149	1,895	2,625
Total No. of Retirees	65	58	38	56	54	104
Period 7/1/13 to 6/30/14						
Average-Average Final Compensation	$ 5,097	$ 7,263	$ 11,084	$ 15,153	$ 22,669	$ 29,644
Average Monthly Benefit	425	605	924	1,263	1,889	2,470
Total No. of Retirees	67	68	33	55	53	132
Period 7/1/14 to 6/30/15						
Average-Average Final Compensation	$ 7,550	$ 7,234	$ 12,389	$ 15,223	$ 23,621	$ 28,722
Average Monthly Benefit	629	603	1,032	1,269	1,968	2,393
Total No. of Retirees	71	50	47	31	62	107
Period 7/1/15 to 6/30/16						
Average-Average Final Compensation	$ 5,670	$ 7,286	$ 10,581	$ 13,174	$ 21,873	$ 31,452
Average Monthly Benefit	472	607	882	1,098	1,823	2,621
Total No. of Retirees	79	72	56	38	71	130

Employees' Retirement System

CITY OF BALTIMORE, MARYLAND

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