



# Board of Education Retirement System of the City of New York

*A Fiduciary Fund of the City of New York*

AT BERS WE HELP OUR MEMBERS

REACH THEIR RETIREMENT GOALS

## **Comprehensive Annual Financial Report**

of the Qualified Pension Plan and the  
Tax Deferred Annuity Program

For the Years Ended June 30, 2016 and June 30, 2015





# **Board of Education Retirement System of the City of New York**

*A Fiduciary Fund of the City of New York*

## **Comprehensive Annual Financial Report** of the Qualified Pension Plan and the Tax Deferred Annuity Program

For the Fiscal Years Ended  
June 30, 2016 and June 30, 2015

*Prepared by*

*Sanford R. Rich, Executive Director*

*Patrick (Rick) Hederman, Director of Fiscal Operations*

**State of New York**

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INTRODUCTORY



## INTRODUCTORY

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**SANFORD R. RICH**  
EXECUTIVE DIRECTOR  
**DANIEL D. MILLER**  
DEPUTY EXECUTIVE DIRECTOR

**BOARD OF EDUCATION RETIREMENT SYSTEM  
OF THE CITY OF NEW YORK**  
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BROOKLYN, NEW YORK 11201- 4965

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December 15th, 2016

Board of Trustees  
Board of Education Retirement System  
City of New York  
65 Court Street, 16th Floor  
Brooklyn, NY 11201

Ladies and Gentlemen:

I am pleased to present the Comprehensive Annual Financial Report (CAFR) of the New York City Board of Education Retirement System (BERS) for the fiscal years ended June 30, 2016 and June 30, 2015. BERS administers the BERS Qualified Pension Plan (the "QPP") and the BERS Tax Deferred Annuity Program (the "TDA Program"). In 2014, as a result of an analysis performed by the City's management, a decision was made to present the financial statements of the New York City Board of Education Retirement System on a combined basis for presentation purposes.

The QPP is a cost sharing, multiple employer Public Employee Retirement System (PERS) that was created on August 31<sup>st</sup>, 1921. The QPP provides pension benefits to non-pedagogical employees of the Department of Education and certain other specific schools and certain employees of the New York City School Construction Authority. The QPP combines features of a defined benefit pension plan with those of a defined contribution plan and functions in accordance with existing State statutes and City laws.

The TDA Program became operational on February 1<sup>st</sup>, 1970 and is administered pursuant to the Internal Revenue Code Section 403(b) and existing State statutes and City laws. Certain members of the QPP have the option to participate in the TDA Program, which provides a means of deferring income tax payments on their voluntary tax-deferred contributions until the period after retirement or upon withdrawal of contributions. Contributions to the TDA Program are made by the members only. The TDA Program is maintained as a separate plan.

The responsibility for the accuracy of the data, and the completeness and fairness of the presentation, including all disclosures, rests with BERS. All disclosures necessary to enable the reader to gain an understanding of the System's financial activities have been included. Analysis of the changes that affected BERS fiduciary net position is presented in the Management's Discussion and Analysis section of this report.



## MAJOR LEGAL INITIATIVES - JULY 1, 2015 THROUGH JUNE 30, 2016

### Chapter 510 of 2015 (S5692/A7834) – Plan Year for Tier 6 Members

This act amends the Retirement and Social Security law in relation to the definition of wages earned from multiple employers and of plan year for the New York City Retirement Systems. For members of a New York City or State Retirement System, after April 1, 2012, the definition of wages will not include, in cases where employees receive wages from three or more employers in a twelve month period, the wages paid by the third and each additional employer. For Tier 6 members of NYCERS, TRS, and BERS, the calendar year (January 1 to December 31) shall be used for the purpose of calculating member contributions.

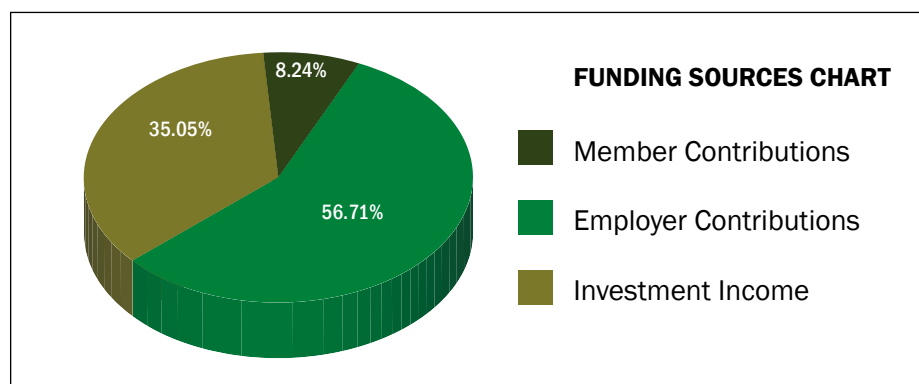
### Chapter 41 of 2016 (S7160/A9531) – Military Service Credit

This act expands the rights of members of New York State and City public retirement systems, including BERS, to purchase credit for military service performed before they joined their retirement system.

## FUNDING

The financial objective of the QPP is to fund members' retirement benefits during their active service. The Employer contributes amounts that, together with member contributions and investment income, would ultimately be sufficient to accumulate assets to pay benefits when due. The Office of the Actuary establishes employer contribution rates which, expressed as a percentage of annualized covered payroll, remain approximately level from year to year. An adequate funding level provides assurance and security for payment of future benefits. In fiscal year 2016, BERS sought to maintain a level of funding within the established guidelines of the Government Accounting Standards Board (GASB). The chart below summarizes the contribution funding sources for fiscal year 2016 for the QPP.

Funding Sources		
Funds	Percentage	Contribution (In thousands)
Member Contributions	8.24%	\$38,581
Employer Contributions	56.71%	\$265,532
Investment Income	35.05%	\$164,144
<b>Total</b>	<b>100.00%</b>	<b>\$468,257</b>





Contributions to the TDA program are made on a voluntarily basis by certain members of the QPP. TDA Members who elect to participate in a fixed return fund investment program accounts are credited with the statutory annual rate of interest, currently 7% for members represented by the United Federation of Teachers and 8.25% for all other members. Members can also elect to participate in a variable return fund program.

## INVESTMENTS

### Investment Summary

The System's assets are invested in two investment programs. These are the fixed return fund, which is managed by BERS, and the variable return fund consisting primarily of equity securities, which is managed by the Teachers' Retirement System (TRS).

BERS investments within the fixed return fund (the "Fund") increased in value for the fiscal year ending June 2016 with a return of 0.17% compared to 0.75% for the Board of Education Policy Benchmark, against which it is measured. Performance for the fiscal year ranked in the third quartile of a peer group of public funds. The value of the fixed investments at the end of FY2016, excluding collateral security lendings reached \$4.5 billion compared to \$4.4 billion in FY2015. Over the 10-year time period the Fund remains ahead of the benchmark, with a 6.31% average annual return versus 6.10% for the benchmark. During the fiscal year, the allocation to US and non US stocks were a drag on performance.

As of June 2016, the variable investments excluding variable collateral security lendings, held at TRS decreased to \$452.27 million from \$465.77 million in FY2015, or a -2.90% decline. During FY2016, the variable return fund performance was -0.50% versus 4.82% during FY2015.

### Investment Description<sup>1</sup>

Asset allocation is expected to be a major contributor to the BERS' fund total return. The Trustees establish a target asset mix after considering the long-term growth prospects of a diversified portfolio of investments and the expected costs of the plan participants' benefits. During FY2016, a revised investment policy was approved that increased the allocation to Private Equity, Real Estate and Infrastructure while reducing US equities and developed market non US equities. These are long term commitments expected to improve the risk and return profile of the Fund. We expect that they will be phased in over several fiscal years as attractive investment opportunities are approved. The Fund's new target asset mix going forward will be 72% Equity (including the Private and Public equities, Real Estate and Infrastructure) and 28% Fixed Income. Over the long-term investment future, we expect our revised equity allocation to outperform fixed income by a significant margin.

For the fiscal year ending June 2016, the total Fixed Income return of 4.5% outperformed the U.S. and non-US. public equity returns. Total Equity returns were -1.6% in FY2016 and were particularly responsible for the Fund's underperformance versus expectations. The Fund is primarily invested in index funds for the U.S. equity allocation, which helped relative performance. The active US and non US equity managers did not add the expected levels of

<sup>1</sup> Michael Wright, Segal Rogerscasey, Report on Investment Activity page 2

outperformance during FY2016. As part of our ongoing monitoring, we review the manager contributions and the structure of the Fund in order to achieve the expected levels of returns. The Fund's current level of diversification into alternative assets did help performance in FY2016 as the Private Equity, Real Estate and Infrastructure investments performed well for the Fund. However, the current allocation to those sectors is not large enough to offset the underperformance elsewhere in the portfolio.

The expectation is that global growth will be inconsistent across market sectors and certain geographic areas. We will be implementing the approved diversifications and rebalancing the fund to mitigate the volatility from these dislocations and improve the consistency of outcomes for the fund. Market conditions and fund performance will be closely monitored to accomplish the goal of providing the benefits as promised to participants.

### **Investment Policy**

BERS' investment policy statement, ratified by the Board of Trustees in January 2009 and amended in October 2011, January 2013, February 2015 and in June 2016 addresses investment objectives, investment philosophy and strategy, monitoring and evaluating performance, risk management, security lending protocol and rebalancing investment mix. The investment policy is available upon request.

### **Investment Valuation**

Investments are reported at fair value. Securities purchased pursuant to agreements to resell are carried at the contract price, exclusive of interest, at which the securities will be resold. Fair value is defined as the quoted market value on the last trading day of the period, except for the International Investment Funds (the "IIF") and Alternative Investment Funds (the "ALTINVF"). The IIF are private funds of publicly traded securities which are managed by various investment managers on behalf of BERS. Fair value is determined by BERS management based on information provided by the various investment managers. The investment managers determine fair value using the last available quoted price for each security owned adjusted by any contributions to or withdrawals from the Fund during the period. The ALTINVF are investments for which exchange quotations are not readily available and are valued at estimated fair value as determined in good faith by the General Partner (GP). These investments are initially valued at cost with subsequent adjustments that reflect third party transactions, financial operating results and other factors deemed relevant by the GP. Fair value is determined by plan management based on information provided by the various GP's after review by an independent consultant and the custodian bank for the Fund.

No investment in any one security represents 5% or more of BERS net position held in trust for benefits.

### **ECONOMIC AND MARKET COMMENT<sup>2</sup>**

BERS fiscal year was marked by slow growth and low interest rates. The Federal Reserve did not raise interest rates in FY2016 despite expectations at the beginning of the year. The Federal Funds Rate remained between 0.25% and 0.50%. The European Central Bank held its target refinancing rate at 0%, its marginal lending rate

2 Michael Wright, Segal Rogerscasey, Report on Investment Activity page 3





at 0.25% and its deposit rate at -0.40%. The Bank of Japan maintained its quantitative and qualitative easing policy of purchasing Japanese government bonds with the goal of increasing the monetary base and to lower their rates.

Real U.S. GDP grew at an annualized rate of 1.2% through June 30, 2016. Positive contributors to GDP included personal consumption expenditures (PCE) and exports. Inflation remained below the Federal Reserve's 2% objective due to decreased energy prices and lower-priced non-energy imports. The headline seasonally adjusted Consumer Price Index (CPI)\* was up 0.84% in Q2, and increased 1.05% on a year over year basis. Seasonally adjusted Core CPI, which excludes food and energy prices, rose 0.58% in Q2, bringing the year over year core CPI increase to 2.23%. On an unadjusted 12-month basis ending June 2016, the energy component fell the most at -9.4%. Commodities less food and energy commodities were also slightly negative. Food and services less energy services were both positive.

At its June meeting, in addition to an announcement on low inflation, the Federal Open Market Committee (FOMC) stated the following:

- a) Economic activity has been expanding at an accelerated pace;
- b) The labor market has slowed with diminishing employment gains;
- c) Household spending has increased; and
- d) To maintain an accommodative policy, the Fed will continue reinvesting principal payments from holdings of agency debt and agency-mortgage-backed securities, and will keep rolling over maturing Treasury securities at auction.

In addition to various uncertainties about the US elections, Brexit and Europe fiscal concerns, the economic environment was not favorable for strong portfolio performance. The US and non US stock markets were not as strong as in prior years. The US stock market, as measured by the Russell 3000 stock index, returned 2.14%, well below the strong returns in the prior two fiscal years. International equity performance continued in the negative territory for FY2016, as the MSCI EAFE posted a loss of -9.7%. This is not surprising given their more direct vulnerability to fiscal concerns in Europe and the potential for economic instability in Asia. Fixed income returns were positive as interest rates have generally declined with the Barclays Aggregate Index, which represents a proxy of investment-grade bonds, returning 6.0% for the fiscal year.

## **OTHER INFORMATION**

### **Internal Control**

The Executive Director is responsible for establishing and maintaining an internal control structure designed to provide reasonable assurance that the assets of the System are safeguarded and to ensure that adequate accounting data are compiled to allow for the preparation of financial statements in conformity with generally accepted accounting principles. The system's internal control practices are designed to provide reasonable assurance that these objectives are met.

The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived and that the valuation of costs and benefits requires estimates and judgments by management.

### **Accounting and Reporting**

This CAFR has been prepared in conformity with principles of governmental accounting and reporting, promulgated by the Governmental Accounting Standards Board (GASB), and according to guidelines adopted and published by the Government Finance Officers Association of the United States and Canada (GFOA).

The QPP, as well as the TDA Program, use the accrual basis of accounting where the measurement focus is on a flow of economic resources. Revenues are recognized in the accounting period in which they are earned and expenses are recognized in the period incurred. Contributions from members are recognized when respective employers make payroll deductions from the QPP members and the TDA Program participants. Employer contributions to the QPP are recognized when due, and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of governing the QPP and the TDA Program.

In fiscal year 2015, BERS adopted Governmental Accounting Standards Board (“GASB”) Statement No. 72, *Fair Value Measurement and Application*. GASB 72 requires the System to use valuation techniques which are appropriate under the circumstances and are either a market approach, a cost approach or an income approach. There was no material impact on the System’s financial statements as a result of the implementation of GASB 72.

### **Independent Audit**

The five major retirement systems of the City of New York are required to undergo an annual audit by a firm of certified public accountants, in accordance with generally accepted auditing standards. Marks Paneth LLP, whose opinion is presented in the Financial Section of this report, conducted the audit of the financial statements of BERS for the fiscal year ended June 30, 2016. The five New York City retirement systems also undergo a five year audit conducted by the New York State Department of Financial Services. During fiscal year 2015, BERS went through an audit covering fiscal year 2009 thru fiscal year 2014.

### **Professional Services**

Segal Rogerscasey is a consultant retained by the Retirement Board to perform professional services that are essential to the effective and efficient operations of the BERS.

BERS is going through the process of installing Enterprise Resource Planning software, known as the Comprehensive Pension Management System (CPMS). It is a multiyear project and the services of Vitech Systems Group Incorporated, GTJZ Consulting, and KPMG LLP have been retained to guide BERS.

The Chief Actuary provides actuarial services for the five major pension systems maintained by the City. The Chief Actuary’s actuarial report and certification are included in this annual report. The New York City Comptroller and

the Teachers' Retirement System retain investment managers to assist in the execution of investment policy in accordance with statutory authority, Retirement Board decisions and standard governing fiduciary practices.

### **Awards**

The GFOA awarded a Certificate of Achievement for Excellence in Financial Reporting to the BERS for its CAFR for the fiscal year ended June 30, 2015. The Certificate of Achievement is a prestigious national award, recognizing conformance with the highest standards for preparation of a state and local government finance reports.

In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report, whose contents conform to program standards. The CAFR must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. BERS has received a Certificate of Achievement over the last twenty nine consecutive years. We believe our current report continues to conform to the Certificate of Achievement program requirements and it will be submitted to the GFOA.

### **Acknowledgments**

The dedicated service of the managers and staff of BERS made the preparation of this CAFR, on a timely basis, possible. In addition, our appreciation is extended to those members of the staffs of the Bureaus of Accountancy and Asset Management of the New York City Comptroller's Office and the Office of the Actuary who worked closely with the BERS personnel in the compilation of this report. We hope that the members of the Retirement Board, officials of the Board of Education of the City of New York, our members and the citizens of the City will find this report informative and helpful.

Respectfully submitted,



Sanford R. Rich  
Executive Director





# New York City Board of Education Retirement System

For the Fiscal Year Ended June 30, 2016

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## **BOARD OF TRUSTEES**

HON. FRED BAPTISTE  
HON. ISAAC CARMIGNANI  
HON. GENEAL CHACON  
HON. T. ELZORA CLEVELAND  
HON. JOSEPH D'AMICO  
HON. DEBORAH DILLINGHAM  
HON. CARMEN FARIÑA  
HON. VANESSA LEUNG  
HON. GARY LINNEN  
HON. KAMILLAH PAYNE-HANKS  
HON. LORI PODVESKER  
HON. MILAGROS RODRIGUEZ  
HON. BENJAMIN SHULDINER  
HON. STEPHANIE SOTO  
HON. LAURA ZINGMOND  
HON. MIGUELINA ZORRILLA-ARISTY

CO-CHAIRS  
HON. JOSEPH D'AMICO  
HON. RAYMOND ORLANDO

### **Prepared By:**

Sanford R. Rich, Executive Director  
Patrick (Rick) Hederman, Director of Fiscal Operations

### **Actuary:**

Sherry S. Chan  
Chief Actuary

### **Custodian of the Funds:**

Scott M. Stringer,  
Comptroller of the City of New York

### **Headquarters Address:**

Board of Education Retirement System  
City of New York  
65 Court Street, 16th Floor  
Brooklyn, New York 11201

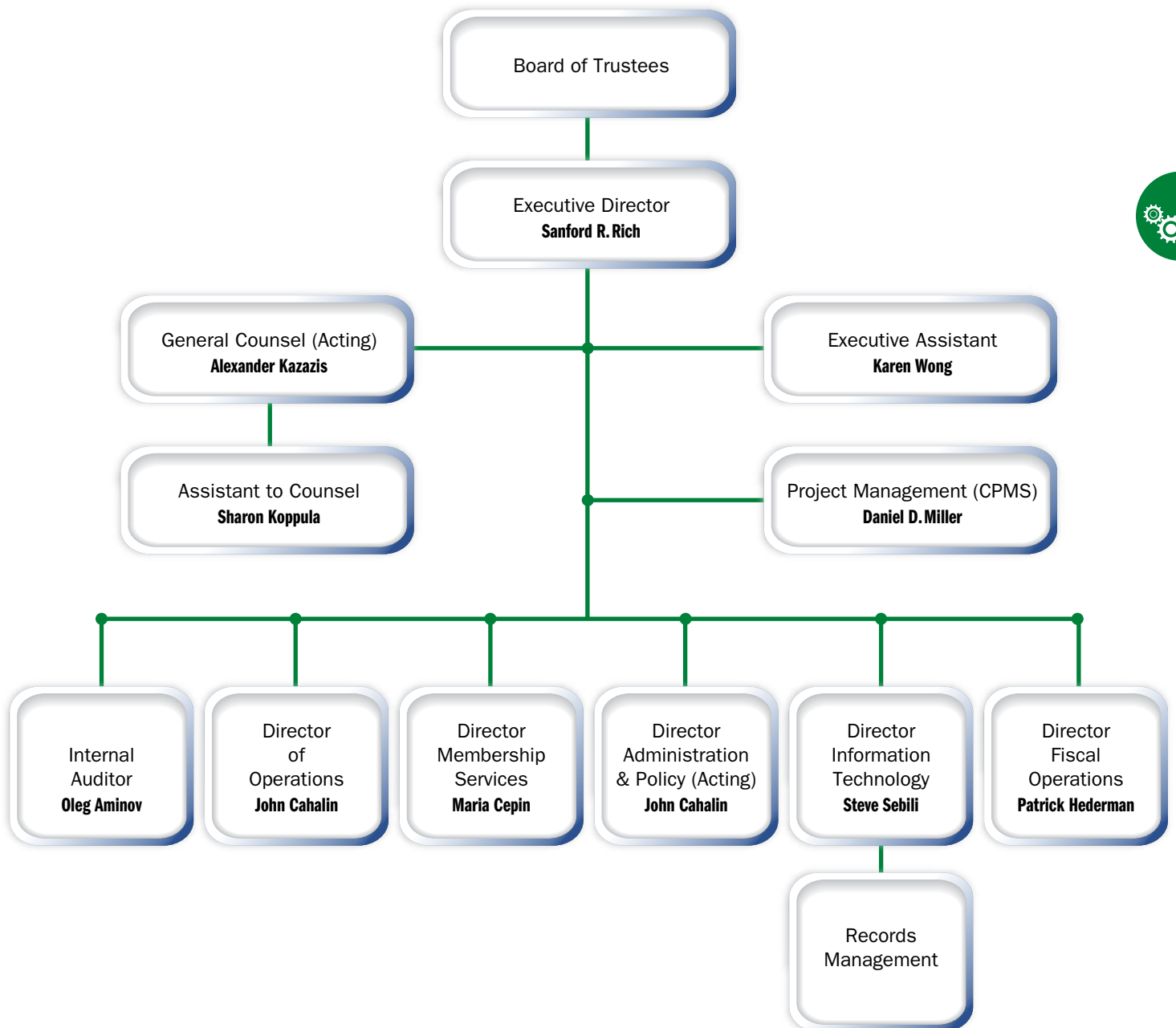




# New York City Board of Education Retirement System

For the Fiscal Year Ended June 30, 2016

## ORGANIZATION CHART





# New York City Board of Education Retirement System

For the Fiscal Year Ended June 30, 2016

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## CONSULTING AND PROFESSIONAL SERVICES

### Actuary

Office of the Actuary  
75 Park Place, 9<sup>th</sup> Floor  
New York, NY 10013-6301

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### Auditors

Marks Paneth, LLP  
685 Third Avenue  
New York, NY 10017

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### CPMS Consultants

Gary Tunnicliffe & Jack Ziegler, LLC  
321 Union Street, #4A  
Brooklyn, NY 11231

KPMG LLP  
345 Park Avenue  
New York, NY 10154

Vitech Systems Group, Inc.  
401 Park Avenue South, 12<sup>th</sup> Floor  
New York, NY 10016

Winmill Software  
P.O. Box 4595  
New York, NY 10163

---

### Custodians of Funds

Office of the Comptroller  
1 Centre Street  
New York, NY 10007

Teachers Retirement System  
55 Water Street  
New York, NY 10041

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### Investment Consultant

Buck Consultants, LLC  
485 Lexington Avenue  
New York, NY 10017

Segal Rogerscasey  
333 West 34th Street  
New York, NY 10001

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Government Finance Officers Association

**Certificate of  
Achievement  
for Excellence  
in Financial  
Reporting**

Presented to

**New York City Board of Education  
Retirement System Qualified Pension Plan  
New York**

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**June 30, 2015**

Executive Director/CEO





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## FINANCIAL

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New York  
New Jersey  
Pennsylvania  
Washington, DC

**M A R K S P A N E T H**  
ACCOUNTANTS & ADVISORS

## INDEPENDENT AUDITORS' REPORT

To the Board of Trustees of the  
New York City Board of Education Retirement System:

### ***Report on the Combining Financial Statements***

We have audited the accompanying combining statements of fiduciary net position of the New York City Board of Education Retirement System Qualified Pension Plan ("QPP") and the New York City Board of Education Retirement System Tax-Deferred Annuity ("TDA") Program, which collectively comprise the New York City Board of Education Retirement System, (the "Systems"), a fiduciary fund of The City of New York, as of June 30, 2016, and the related combining statements of changes in fiduciary net position for the year then ended, and the related notes to the combining financial statements, which collectively comprise the Systems' basic combining financial statements as listed in the table of contents.

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

Management is responsible for the preparation and fair presentation of these combining 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 the combining financial statements that are free from material misstatement, whether due to fraud or error.

### ***Auditors' Responsibility***

Our responsibility is to express opinions on these combining financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the combining financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the combining financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the combining financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Systems' preparation and fair presentation of the combining 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 Systems' 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 combining financial statements.

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

### ***Opinions***

In our opinion, the combining financial statements referred to above present fairly, in all material respects, the combining fiduciary net position of the Systems as of June 30, 2016, and the changes in combining fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.



### **Prior Period Combining Financial Statements**

The combining financial statements of the System as of June 30, 2015, were audited by other auditors whose report dated October 29, 2015, expressed unmodified opinions on those combining financial statements. As discussed in Note 9 to the combining financial statements, the System has adjusted its 2015 combining financial statements to retrospectively apply the change in accounting for the allocation of investments between the QPP and TDA.

As part of our audit of the 2015 combining financial statements, we also audited the adjustments to the 2015 combining financial statements to retrospectively apply the change in accounting as described in Note 9. In our opinion, such adjustments are appropriate and have been properly applied. We were not engaged to audit, review, or apply any procedures to the System's 2015 combining financial statements other than with respect to the adjustments and, accordingly, we do not express an opinion or any other form of assurance on the 2015 combining financial statements as a whole.

### **Other Matters**

#### *Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, Schedule 1, Schedule 2, and Schedule 3, as listed in the table of contents, be presented to supplement the basic combining financial statements. Such information, although not a part of the basic combining financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of the financial reporting for placing the basic combining financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic combining financial statements, and other knowledge we obtained during our audit of the basic combining 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 Supplementary Information*

Our audit was conducted for the purpose of forming an opinion on the basic combining financial statements. The Introductory Section, Additional Supplementary Information, Investment Section, Actuarial Section, and Statistical Section, as listed in the foregoing table of contents, are present for the purpose of additional analysis and are not a required part of the basic combining financial statements.

The Additional Supplementary Information Schedule 4, Schedule 5 and Schedule 6, as listed in the table of contents, is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic combining financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic combining financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic combining financial statements or to the basic combining financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion the Additional Supplementary Information is fairly stated, in all material respects, in relation to the 2016 basic combining financial statements taken as a whole.

The Introductory Section, Investment Section, Actuarial Section, and Statistical Section have not been subjected to the auditing procedures applied in the audit of the basic combining financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

*MARKS PANETH LLP*

October 31, 2016  
(except for the Other Supplementary Information,  
as to which the date is December 22, 2016)

**MARKS PANETH**  
ACCOUNTANTS & ADVISORS





This narrative discussion and analysis of the New York City Board of Education Retirement Systems (“BERS” or the “System”) financial performance provides an overview of the System’s combining financial activities for the Fiscal Years ended June 30, 2016 and 2015. It is meant to assist the reader in understanding the System’s combining financial statements by providing an overall review of the combining financial activities during the years, the effects of significant changes, and a comparison of the prior years’ activities and results. This discussion and analysis is intended to be read in conjunction with the System’s combining financial statements. The System administers the BERS Qualified Pension Plan (the “QPP”) and the BERS Tax-Deferred Annuity Program (the “TDA Program”).

## **OVERVIEW OF BASIC COMBINING FINANCIAL STATEMENTS**

The following discussion and analysis is intended to serve as an introduction to the System’s basic combining of financial statements. The basic combining financial statements, which are prepared in accordance with Governmental Accounting Standards Board (“GASB”) pronouncements and include the financial statements of the QPP and the TDA Program, are as follows:

- **The Combining Statements of Fiduciary Net Position** — presents the financial position of the System at fiscal year-end. It provides information about: the nature and amounts of resources with present service capacity that the System presently controls (assets); consumption of net assets by the System that is applicable to a future reporting period (deferred outflow of resources); present obligations to sacrifice resources that the System has little or no discretion to avoid (liabilities); and acquisition of net assets by the System that is applicable to a future reporting period (deferred inflow of resources) with the difference between assets/deferred outflow of resources and liabilities/deferred inflow of resources being reported as net position. Investments are shown at fair value. All other assets and liabilities are determined on an accrual basis.
- **The Combining Statements of Changes in Fiduciary Net Position** — presents the results of activities during the fiscal year. All changes affecting the assets/deferred outflow and liabilities/deferred inflow of the System are reflected on an accrual basis when the activity occurred, regardless of the timing of the related cash flows. In that regard, changes in the fair values of investments are included in the year’s activity as net appreciation (depreciation) in fair value of investments.
- **The Notes to Combining Financial Statements** — provide additional information that is essential to a full understanding of the data provided in the combining financial statements. The notes present information about the System’s accounting policies, significant account balances and activities, material risks, obligations, contingencies, and subsequent events, if any.
- **Required Supplementary Information** — as required by GASB includes the management discussion and analysis and information presented after the notes to the combining financial statements.



## Management's Discussion and Analysis (Unaudited) For the Years Ended June 30, 2016 and 2015 (Cont'd)

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### FINANCIAL HIGHLIGHTS

During Fiscal Year 2016, the System adopted certain changes to the accounting practices to enhance the utility of the financial statements. These changes were adopted as a result of a comprehensive analysis of the TDA Program of the System based on a reallocation of investments between the QPP and the TDA Program. As a result of these changes, Fiscal Year 2015 financial statements were restated. The impact of the changes prior to Fiscal Year 2015 has been reported as a prior period adjustment to the beginning net assets of Fiscal Year 2015.

### QPP Fiduciary Net Position

During Fiscal Year 2016, QPP's net position held in trust for benefits stood at \$3.42 billion, a decrease of 1.09% from Fiscal Year 2015. The decrease in the net position during Fiscal Year 2016 was primarily due to lower member contributions and investment returns, combined with the increases in the interests due to members of the fixed program of TDA Program of the System, benefit payments and administrative expenses. Member contributions and investment returns decreased by 2.48% and 7.35% respectively. Interest due to the members of the fixed program of the TDA Program increased by 11.38%. Benefit payments and administrative expenses increased by 7.83% and 17.00% respectively.

Opening net assets for Fiscal Year 2015 have been restated to reflect the impact of prior year changes as discussed above and disclosed in the notes to the financial statements. During Fiscal Year 2015, the QPP's net position held in trust for benefits increased to \$3.45 billion, a net increase of \$174.74 million or 5.33% from Fiscal Year 2014. The increase in net position during Fiscal Year 2015 was due to increases in member contributions, employer contributions and the fair value of investments. The member contributions, employer contributions and fair value of investments including the collateral security lending, increased by 6.37%, 20.28%, and 0.87%, respectively. The QPP's fair value of investments including collateral security lending was \$4.78 billion, a net increase of \$41.38 million.



**Management's Discussion and Analysis (Unaudited)**  
**For the Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

**QPP Fiduciary Net Position**  
**as of June 30, 2016, 2015, and 2014**  
**(In thousands)**

	2016	2015 (Restated) <sup>1</sup>	2014
Assets:			
Cash	\$ 327	\$ 16,143	\$ 8,903
Receivables	166,060	95,756	223,667
Investments, at fair value	4,526,973	4,479,080	4,327,245
Collateral from securities lending	477,623	302,135	412,592
Other	<u>124,031</u>	<u>106,254</u>	<u>14,150</u>
Total assets	<u>5,295,014</u>	<u>4,999,368</u>	<u>4,986,557</u>
Liabilities:			
Accounts payable	6,907	6,199	14,783
Other Liability	-	-	-
Payable for investments purchased	103,213	86,747	273,978
Accrued benefits payable	7,357	5,461	6,816
TDA Program's interest in the fixed return fund	1,283,481	1,144,817	999,123
Payables for securities lending	<u>477,623</u>	<u>302,135</u>	<u>412,592</u>
Total liabilities	<u>1,878,581</u>	<u>1,545,359</u>	<u>1,707,292</u>
Net position held in trust for benefits	<u>\$ 3,416,433</u>	<u>\$ 3,454,009</u>	<u>\$ 3,279,265</u>

<sup>1</sup>Restated from prior year

Total receivables increased from \$95.75 million in Fiscal Year 2015 to \$166.06 million at the close of Fiscal Year 2016. The increase in the receivables is primarily caused by the increase in the receivables for investment which went up by \$68.22 million. Also included in these receivables are QPP member's outstanding loans for Fiscal Year 2016 and Fiscal Year 2015 which were at \$46.75 million and \$44.68 million respectively. Other assets increased to \$124.03 million in Fiscal Year 2016, from \$106.25 million in Fiscal Year 2015, a 16.73% increase. Included in the other assets is a liability from the TDA program towards the QPP, which stood at \$96.15 million and at \$83.90 million for Fiscal Years 2016 and 2015 respectively. The liabilities represents the adjustments made to the TDA Program as the result of the accounting changes adopted within the comprehensive analysis of the TDA Program of the System. The QPP's receivables and payables for investments are primarily generated through the timing differences between the trade and settlement dates for investment securities purchased or sold.

"TDA Program's interest in the fixed return fund" represents a liability to the TDA program. The liability of \$1.28 billion is an obligation of the City of New York through the QPP. The liability includes the TDA member's account balances invested in the fixed return fund and the TDA Program's fixed and variable annuitants.



**Management's Discussion and Analysis (Unaudited)**  
**For the Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

**Changes in QPP Fiduciary Net Position**

During Fiscal Year 2016, the QPP member contributions slightly decreased to \$38.58 million, a decrease of 2.48% from Fiscal Year 2015 contribution of \$39.56 million.

In Fiscal Year 2015, the member contributions increased to \$39.56 million, a 6.37% increase from the 2014 contribution amount of \$37.19 million.

**Changes in QPP Fiduciary Net Position**  
**Years Ended June 30, 2016, 2015, and 2014**  
**(In thousands)**

	<b>2016</b>	<b>2015 (Restated)<sup>1</sup></b>	<b>2014</b>
Additions:			
Member contributions	\$ 38,581	\$ 39,564	\$ 37,193
Employer contributions	265,532	258,099	214,590
Net investment income	160,828	174,503	874,539
Net securities lending income	3,316	2,663	914
TDA Program's interest income in the fixed return fund	(94,789)	(85,104)	(206,615)
Other — payments to other retirement systems & other revenues/expenses	<u>(157,499)</u>	<u>(52,021)</u>	<u>(70,916)</u>
Total additions	<u>215,969</u>	<u>337,704</u>	<u>849,705</u>
Deductions:			
Benefit payments and withdrawals	240,727	223,244	214,315
Administrative expenses	<u>12,818</u>	<u>10,956</u>	<u>9,776</u>
Total deductions	<u>253,545</u>	<u>234,200</u>	<u>224,091</u>
Net increase (decrease) in net position	<u>(37,576)</u>	<u>103,504</u>	<u>625,614</u>
Net position held in trust for benefits:			
Beginning of year (as previously reported)	-	3,279,265	2,653,651
Prior year adjustments	-	71,240	-
Beginning of year balance restated	<u>3,454,009</u>	<u>3,350,505</u>	<u>2,653,651</u>
End of year	<u>\$ 3,416,433</u>	<u>\$ 3,454,009</u>	<u>\$ 3,279,265</u>

<sup>1</sup> Restated from prior year

Employer contributions received for the QPP for the Fiscal Years 2016 and 2015 were at \$265.53 million and \$258.10 million, an increase of 2.88%. The employer contribution for Fiscal Year 2015 increased by 20.28% from Fiscal Year 2014. The Fiscal Year 2016 increase is primarily due to a change in the post-retirement mortality rates, an increase in the amortization payment of the 2010 initial unfunded liability and a net actuarial loss. The increase in the employer contributions are primarily due to the net result of actuarial gains and losses. Employer contributions are made on a statutory basis based on the One-Year Lag methodology.



**Management's Discussion and Analysis (Unaudited)**  
**For the Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

The investment income which includes the security lending income, decreased by 7.35% in FY 2016. Interest to the TDA Program's fixed return fund represents a guarantee of 8.25% interest and 7% for UFT members. During Fiscal Year 2016, the interest to the TDA Program's fixed return fund stood at \$94.79 million.

The benefit payments and withdrawals slightly increased by 7.83% in Fiscal Year 2016, from \$223.24 million to \$240.73 million. During Fiscal Year 2015, plan benefits and withdrawals increased by 4.17%, from \$214.32 million to \$223.24 million. The increase in Fiscal Years 2016 and 2015 was primarily due to an increase in the pension benefits to retirees, which went up 6.12% and 4.68% respectively.

Administrative expenses account showed an increase of 17.00% and 12.07% in Fiscal Years 2016 and 2015. The increase was primarily due to higher personnel expenses which increased by 28.75% and 12.46% respectively.

**TDA Program Fiduciary Net Position**

During Fiscal Year 2016, the TDA Program's net position held in trust for benefits increased to \$1.63 billion, a net increase of \$118.72 million or 7.85% from Fiscal Year 2015. The increase in Fiscal Year 2016 was primarily due to an increase in member contributions, which increased by 3.43%.

**TDA Program Fiduciary Net Position**  
**June 30, 2016, 2015, and 2014**  
**(In thousands)**

	<b>2016</b>	<b>2015 (Restated)<sup>1</sup></b>	<b>2014</b>
<b>Assets:</b>			
Cash	\$ 205	\$ 122	\$ 2,902
Receivables	40,455	41,264	39,102
TDA Program's interest income in the fixed return fund	1,283,481	1,144,817	999,123
Investments, at fair value	409,776	419,530	403,176
Collateral from securities lending	15,642	29,607	16,940
Other	-	-	3,619
	<u>1,749,559</u>	<u>1,635,340</u>	<u>1,464,862</u>
<b>Liabilities:</b>			
Accounts payable	-	-	42
Other liability	96,156	83,901	-
Payable for investments purchased	902	4,428	3,668
Accrued benefits payable	6,783	6,045	6,750
Securities lending transactions	15,642	29,607	16,940
	<u>119,483</u>	<u>123,981</u>	<u>27,400</u>
Net position held in trust for benefits	<u>\$ 1,630,076</u>	<u>\$ 1,511,359</u>	<u>\$ 1,437,462</u>

<sup>1</sup>Restated from prior year



## Management's Discussion and Analysis (Unaudited) For the Years Ended June 30, 2016 and 2015 (Cont'd)

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During Fiscal Year 2015, the TDA Program's net position held in trust for benefits increased to \$1.51 billion, a net increase of \$73.89 million or 5.14% from Fiscal Year 2014. The increase in Fiscal Year 2015 was due to an increase in member contributions and the fair value of investment, which increased by 17.44% and 6.91% respectively.

At the end of Fiscal Year 2016, the TDA Program's fair value of variable investment including collateral security lending stood at \$425.42 million, a decrease of 5.28% from Fiscal Year 2015. Receivables from the QPP towards the TDA Program increased by 12.11% in Fiscal Year 2016; from \$1.14 billion for Fiscal Year 2015 to \$1.28 billion in Fiscal Year 2016.

Total receivables went from \$41.26 million in Fiscal Year 2015 to \$40.46 million at the end of Fiscal Year 2016. The TDA Program's member loans outstanding which are included in these receivables, went from \$36.51 million at the close of Fiscal Year 2015 to \$38.92 million at the close of Fiscal Year 2016, a 6.61% increase.

The TDA Program's receivables and payables are primarily generated through the timing differences between the trade and settlement dates for investment securities purchased or sold within the variable return fund.

Other liability represents a liability from the TDA Program towards the QPP, which stood at \$96.15 million and at \$83.90 million for fiscal years 2016 and 2015 respectively. It represents the adjustments made to the TDA Program as the result of the accounting changes adopted within the comprehensive analysis of the TDA Program of the System.

### Changes in TDA Program Fiduciary Net Position

During Fiscal Year 2016, member contributions to the TDA Program increased to \$77.46 million, a 3.43% increase from the \$74.89 million contributed in Fiscal Year 2015. Member contributions to the TDA Program increased to \$74.89 million during Fiscal Year 2015, a 17.44% increase from the \$63.77 million contributed in Fiscal Year 2014.



**Management's Discussion and Analysis (Unaudited)**  
**For the Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

**Changes in TDA Program Fiduciary Net Position**  
**Years Ended June 30, 2016, 2015, and 2014**  
**(In thousands)**

	<b>2016</b>	<b>2015 (Restated)<sup>1</sup></b>	<b>2014</b>
Additions:			
Member contributions	\$ 77,459	\$ 74,890	\$ 63,767
Net investment income	855	22,769	82,136
Net securities lending income	194	181	87
TDA Program's interest income in the fixed return fund	94,789	85,104	206,615
Other – payments to other retirement systems & other revenues/expenses	<u>(3,541)</u>	<u>4,448</u>	<u>(110,273)</u>
Total	<u>169,756</u>	<u>187,392</u>	<u>242,332</u>
Deductions:			
Benefit payments and withdrawals	50,189	39,222	40,410
Administrative expenses	<u>850</u>	<u>3,033</u>	<u>2,530</u>
Total deductions	<u>51,039</u>	<u>42,255</u>	<u>42,940</u>
Net increase in net position	118,717	145,137	199,392
Net position held in trust for benefits:			
Beginning of year (as previously reported)	-	1,437,462	1,238,070
Prior year adjustments	<u>-</u>	<u>(71,240)</u>	<u>-</u>
Beginning of year balance restated	<u>1,511,359</u>	<u>1,366,222</u>	<u>1,238,070</u>
End of year	<u>\$ 1,630,076</u>	<u>\$ 1,511,359</u>	<u>\$ 1,437,462</u>

<sup>1</sup>Restated from prior year

The benefit payments and withdrawals experienced a \$10.97 million or (27.96%) increase from June 30, 2015 to June 30, 2016. The change was primarily due to an increase in death benefits from \$ 4.13 million in Fiscal Year 2015 to \$13.29 million in Fiscal Year 2016.

The benefit payments and withdrawals experienced a \$1.19 million (2.94%) decrease from June 30, 2014 to June 30, 2015; the decrease in Fiscal Year 2015 was mostly due to a decrease in death benefits of 55.28% to \$4.13 million.



**Management's Discussion and Analysis (Unaudited)  
For the Years Ended June 30, 2016 and 2015  
(Cont'd)**

**Investment Summary**

Investments held by BERS' QPP and TDA Program (for both the fixed return fund and the variable return fund), including collateral from securities lending transactions from both programs, are listed according to their investment classification in the following table:

**Investment Summary  
as of June 30, 2016, 2015, and 2014  
(In thousands)**

<b>Fair Value</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Short Term Investments	\$ 113,900	\$ 215,612	\$ 157,989
Debt Securities	890,152	861,891	791,282
U.S. Equity Securities	726,951	784,214	907,430
Alternative Investments	506,922	385,819	280,168
Collective Trust Funds	2,698,824	2,651,074	2,593,552
Promissory Notes	-	-	-
Security Lending Transactions	493,265	331,742	429,532
<b>Total</b>	<b>\$ 5,430,014</b>	<b>\$ 5,230,352</b>	<b>\$ 5,159,953</b>

Because the QPP's liabilities are of a long-term nature, the assets of the QPP and the TDA Program are invested with a long-term investment horizon. Assets are invested in a diversified portfolio of capital market securities. Investments in these assets are expected to produce higher returns, but are also subject to greater volatility and may produce negative returns. The System's investments increased by 3.82% in FY 2016, increased by 1.36% in Fiscal Year 2015 and increased by 18.29% in Fiscal Year 2014. In 2016 and 2015 greater volatility in the market slowed down the return on investment. In 2014, a strong market performance was the reason behind these increases.

**CONTACT INFORMATION**

This financial report is designed to provide a general overview of The New York City Board of Education Retirement System's finances. Questions concerning any data provided in this report or requests for additional information should be directed to the Chief Accountant, New York City Board of Education Retirement System, 65 Court Street, 16<sup>th</sup> Floor, and Brooklyn, New York 11201





**Combining Statements Of Fiduciary Net Position**  
**June 30, 2016**  
**(In thousands)**

	QPP	TDA Program	Eliminations	Total
<b>ASSETS:</b>				
Cash	\$ 327	\$ 205	\$ -	\$ 532
Receivables:				
Investment securities sold	119,062	908	-	119,970
Accrued interest and dividends	247	626	-	873
Member loans	46,748	38,921	-	85,669
Other	3	-	-	3
Total receivables	<u>166,060</u>	<u>40,455</u>	<u>-</u>	<u>206,515</u>
Investments — at fair value				
Fixed return funds:				
Short term investments:				
Commercial paper	71,888	-	-	71,888
Short-term investment fund	35,933	-	-	35,933
Discount notes	-	-	-	-
Debt securities	879,762	-	-	879,762
Equity securities	291,144	-	-	291,144
Alternative Investments	506,922	-	-	506,922
Collective Trust Funds				
International equity	924,911	-	-	942,911
Domestic Equity	1,401,665	-	-	1,401,665
Mortgage debt security	28,956	-	-	28,956
Treasury Inflation protected securities	218,608	-	-	218,608
Fixed Income	106,684	-	-	106,684
Collateral from securities lending	476,001	-	-	476,001
Variable return funds:				
Short term investments	571	5,508	-	6,079
Debt securities	976	9,414	-	10,390
Equities	40,953	394,854	-	435,807
Collateral from securities lending	1,622	15,642	-	17,264
Total investments	<u>5,004,596</u>	<u>425,418</u>	<u>-</u>	<u>5,430,014</u>
TDA Program's interest in the fixed return fund	-	1,283,481	(1,283,481)	-
Other assets	124,031	-	(96,156)	27,875
Total assets	<u>5,295,014</u>	<u>1,749,559</u>	<u>(1,379,637)</u>	<u>5,664,936</u>
<b>LIABILITIES:</b>				
Accounts payable	6,907	-	-	6,907
Other liability	-	96,156	(96,156)	-
Payable for investment securities purchased	103,213	902	-	104,115
Accrued benefits payable	7,357	6,783	-	14,140
TDA Program's interest in the fixed return fund	1,283,481	-	(1,283,481)	-
Securities lending	477,623	15,642	-	493,265
Total liabilities	<u>1,878,581</u>	<u>119,483</u>	<u>(1,379,637)</u>	<u>618,427</u>
<b>NET POSITION HELD IN TRUST FOR BENEFITS:</b>				
Benefits to be provided by QPP	3,416,433	-	-	3,416,433
Benefits to be provided by TDA Program	-	1,630,076	-	1,630,076
<b>TOTAL NET POSITION HELD IN TRUST FOR BENEFITS:</b>	<u>\$ 3,416,433</u>	<u>\$ 1,630,076</u>	<u>\$ -</u>	<u>\$ 5,046,509</u>

The accompanying notes are an integral part of these financial statements.



**Combining Statements Of Fiduciary Net Position**  
**June 30, 2015 (As Restated)**  
(In thousands)

	QPP	TDA Program	Eliminations	Total
<b>ASSETS:</b>				
Cash	\$ 16,143	\$ 122	\$ -	\$ 16,265
Receivables:				
Investment securities sold	50,839	4,165	-	55,004
Accrued interest and dividends	239	590	-	829
Member loans	44,675	36,509	-	81,184
Other	3	-	-	3
Total receivables	<u>95,756</u>	<u>41,264</u>	<u>-</u>	<u>137,020</u>
Investments – at fair value				
Fixed return funds:				
Short term investments:				
Commercial paper	148,449	-	-	148,449
Short-term investment fund	35,597	-	-	35,597
Discount notes	25,996	-	-	25,996
Debt securities	851,577	-	-	851,577
Equity securities	334,325	-	-	334,325
Alternative Investments	385,819	-	-	385,819
Collective Trust Funds				
International equity	969,838	-	-	969,838
Domestic Equity	1,432,065	-	-	1,432,065
Mortgage debt security	23,862	-	-	23,862
Treasury Inflation protected securities	139,367	-	-	139,367
Fixed Income	85,942	-	-	85,942
Collateral from securities lending	298,872	-	-	298,872
Variable return funds:				
Short term investments	553	5,017	-	5,570
Debt securities	1,024	9,290	-	10,314
Equities	44,666	405,223	-	449,889
Collateral from securities lending	3,263	29,607	-	32,870
Total investments	<u>4,781,215</u>	<u>449,137</u>	<u>-</u>	<u>5,230,352</u>
TDA Program's interest in the fixed return fund	-	1,144,817	(1,144,817)	-
Other assets	106,254	-	(83,901)	22,353
Total assets	<u>4,999,368</u>	<u>1,635,340</u>	<u>(1,228,718)</u>	<u>5,405,990</u>
<b>LIABILITIES:</b>				
Accounts payable	6,199	-	-	6,199
Payable for investment securities purchased	86,747	4,428	-	91,175
Accrued benefits payable	5,461	6,045	-	11,506
TDA Program's interest in the fixed return fund	1,144,817	-	(1,144,817)	-
Other liability	-	83,901	(83,901)	-
Securities lending	302,135	29,607	-	331,742
Total liabilities	<u>1,545,359</u>	<u>123,981</u>	<u>(1,228,718)</u>	<u>440,622</u>
<b>NET POSITION HELD IN TRUST FOR BENEFITS:</b>				
Benefits to be provided by QPP	3,454,009	-	-	3,454,009
Benefits to be provided by TDA Program	-	1,511,359	-	1,511,359
TOTAL NET POSITION HELD IN TRUST FOR BENEFITS:	<u>\$ 3,454,009</u>	<u>\$ 1,511,359</u>	<u>\$ -</u>	<u>\$ 4,965,368</u>

The accompanying notes are an integral part of these financial statements.



**Combining Statement Of Changes In Fiduciary Net Position**  
**Year Ended June 30, 2016**  
(In thousands)

	QPP	TDA Program	Total
<b>ADDITIONS:</b>			
Contributions			
Member contributions	\$ 38,581	\$ 77,459	\$ 116,040
Employer contributions	265,532	-	265,532
Total contributions	<u>304,113</u>	<u>77,459</u>	<u>381,572</u>
Investment income			
Interest income	44,782	3,340	48,122
Dividend income	51,328	5,988	57,316
Net appreciation in fair value of investments	<u>79,014</u>	<u>(7,771)</u>	<u>71,243</u>
Total investment income	175,124	1,557	176,681
Less – investment expenses	<u>(14,296)</u>	<u>(702)</u>	<u>(14,998)</u>
Net investment income before securities lending transactions	<u>160,828</u>	<u>855</u>	<u>161,683</u>
Securities lending transactions			
Securities lending income	3,547	216	3,763
Securities lending fees	<u>(231)</u>	<u>(22)</u>	<u>(253)</u>
Net securities lending income	<u>3,316</u>	<u>194</u>	<u>3,510</u>
Net investment income	<u>164,144</u>	<u>1,049</u>	<u>165,193</u>
Other – payments to other retirement systems & other revenues/expenses	(157,499)	(3,541)	(161,040)
TDA Program's interest in the fixed return fund	<u>(94,789)</u>	<u>94,789</u>	<u>-</u>
Total additions	<u>215,969</u>	<u>169,756</u>	<u>385,725</u>
<b>DEDUCTIONS:</b>			
Benefit payments and withdrawals	240,727	50,189	290,916
Administrative expenses	<u>12,818</u>	<u>850</u>	<u>13,668</u>
Total deductions	<u>253,545</u>	<u>51,039</u>	<u>304,584</u>
<b>NET INCREASE IN NET POSITION</b>	<b>(37,576)</b>	<b>118,717</b>	<b>81,141</b>
<b>NET POSITION HELD IN TRUST FOR BENEFITS:</b>			
Beginning of year	<u>3,454,009</u>	<u>1,511,359</u>	<u>4,965,368</u>
End of year	<u>\$ 3,416,433</u>	<u>\$ 1,630,076</u>	<u>\$ 5,046,509</u>

The accompanying notes are an integral part of these financial statements.



**Year Ended June 30, 2015 (As Restated)**  
**(In thousands)**

	QPP	TDA Program	Total
<b>ADDITIONS:</b>			
Contributions			
Member contributions	\$ 39,564	\$ 74,890	\$ 114,454
Employer contributions	258,099	-	258,099
Total contributions	<u>297,663</u>	<u>74,890</u>	<u>372,553</u>
Investment income			
Interest income	36,898	3,111	40,009
Dividend income	46,207	5,607	51,814
Net appreciation in fair value of investments	<u>101,496</u>	<u>14,804</u>	<u>116,300</u>
Total investment income	184,601	23,522	208,123
Less – investment expenses	<u>(10,098)</u>	<u>(753)</u>	<u>(10,851)</u>
Net investment income before securities lending transactions	<u>174,503</u>	<u>22,769</u>	<u>197,272</u>
Securities lending transactions			
Securities lending income	2,849	201	3,050
Securities lending fees	<u>(186)</u>	<u>(20)</u>	<u>(206)</u>
Net securities lending income	<u>2,663</u>	<u>181</u>	<u>2,844</u>
Net investment income	<u>177,166</u>	<u>22,950</u>	<u>200,116</u>
Other – payments to other retirement systems & other revenues/expenses	(52,021)	4,448	(47,573)
TDA Program's interest in the fixed return fund	<u>(85,104)</u>	<u>85,104</u>	<u>-</u>
Total additions	<u>337,704</u>	<u>187,392</u>	<u>525,096</u>
<b>DEDUCTIONS:</b>			
Benefit payments and withdrawals	223,244	39,222	262,466
Administrative expenses	<u>10,956</u>	<u>3,033</u>	<u>13,989</u>
Total deductions	<u>234,200</u>	<u>42,255</u>	<u>276,455</u>
<b>NET INCREASE IN NET POSITION</b>	<b>103,504</b>	<b>145,137</b>	<b>248,641</b>
<b>NET POSITION HELD IN TRUST FOR BENEFITS:</b>			
Beginning of year ( as previously reported)	3,279,265	1,437,462	4,716,727
Prior year adjustments	<u>71,240</u>	<u>(71,240)</u>	<u>-</u>
Beginning of year balance restated	<u>3,350,505</u>	<u>1,366,222</u>	<u>4,716,727</u>
End of year	<u>\$ 3,454,009</u>	<u>\$ 1,511,359</u>	<u>\$ 4,965,368</u>

The accompanying notes are an integral part of these financial statements.



**1. SYSTEM DESCRIPTION**

The City of New York (the “City”) maintains a number of pension systems providing benefits for employees of its various agencies (as defined within New York State (“State”) statutes and City laws). The City’s five major actuarially-funded pension systems are the New York City Board of Education Retirement System (“BERS” or the “System”), the New York City Employees’ Retirement System (“NYCERS”), the Teachers’ Retirement System of the City of New York (“TRS”), the New York City Police Pension Fund (“POLICE”), and the New York Fire department pension Fund (“FIRE”). Each pension system is a separate Public Employee Retirement System (“PERS”) with a separate oversight body and is financially independent of the other

BERS administers the BERS Qualified Pension Plan (the “QPP”) and the BERS Tax-Deferred Annuity Program (the “TDA Program”). BERS is the fiduciary for the QPP and the TDA Program, which are included under BERS in the Pension and Other Employee Benefit Trust Funds section of the City’s Comprehensive Annual Financial Report (“CAFR”).

The QPP is a cost-sharing, multiple-employer PERS. The QPP provides pension benefits for non-pedagogical employees of the Department of Education and certain other specific schools and certain employees of the New York City School Construction Authority (collectively, the “Employer”). Substantially, all Department of Education non-pedagogical permanent employees, other than members of TRS, become members of the QPP on the first day of permanent employment. Employees classified as noncompetitive, exempt or provisional by Civil Service are eligible to enroll in the QPP voluntarily. Membership date is governed by the date of filing.

The QPP functions in accordance with existing State statutes and City laws, which establish and amend the benefit terms and the employer and member contribution requirements. It combines features of a defined benefit pension plan with those of a defined contribution pension plan but is considered a defined benefit pension plan for financial reporting purposes. Contributions are made by the employer and the members.

At June 30, 2014 and June 30, 2013, the dates of the QPP’s most recent completed actuarial valuations, the QPP membership consisted of:

	<b>2014</b>	<b>2013</b>
Retirees and beneficiaries receiving benefits	15,995	15,455
Terminated vested members not yet receiving benefits	195	182
Other inactives*	4,005	4,127
Active members receiving salary	<u>25,182</u>	<u>25,848</u>
 Total	 <u>45,377</u>	 <u>45,612</u>

\* Represents members who are no longer on payroll but not otherwise classified.



**Notes to Combining Financial Statements**  
**Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

BERS is a fiduciary component unit of the City, and is reported and is included in the City's Comprehensive Annual Financial Report as a Pension and Other Employee Benefit Trust fund.

The TDA Program was created and is administered pursuant to the Internal Revenue Code Section 403(b) and existing State statutes and City laws. Certain members of the QPP have the option to participate in the TDA Program, which provides a means of deferring income tax payments on their voluntary tax-deferred contributions until the period after retirement or upon withdrawal of contributions. Contributions to the TDA Program are made by the members only. The TDA Program is maintained as a separate plan.

At June 30, 2014 and June 30, 2013, the TDA Program participants consisted of:

	<b>2014</b>	<b>2013</b>
Contributing members	14,938	14,400
Retired members with TDA balances	5,369	4,197
% of QPP members contributing to TDA	27%	27%

**Summary of Benefits**

**QPP Benefits**

The State Constitution provides that pension rights of public employees are contractual and shall not be diminished or impaired. In 1973, 1976, 1983, and 2012, significant amendments made to the State Retirement and Social Security Law ("RSSL") modified certain benefits for employees joining the QPP on or after the effective date of such amendments. As such, benefits under the QPP fall into various categories based on the year when an employee joined the QPP. A brief overview follows:

- Members who joined prior to July 1, 1973 ("Tier 1") are entitled to service retirement benefits of 55% of "final salary" (as defined within State statutes and City laws) after 25 years of qualifying service and attainment of age 55, a portion of which is provided from member contributions. Additional benefits equal to a specified percentage per year of service of "final salary" are payable for years in excess of the 25 year minimum. These additional benefits are increased, where applicable, by an annuity attributable to accumulated member contributions in excess of the minimum required balance and by any benefits attributable to the Increased-Take-Home Pay ("ITHP") contributions accumulated after the 25th year of member qualifying service. ITHP represents amounts contributed by the City in lieu of members' own contributions. These amounts reduce the contributions that members would have to make to the QPP during their service and thereby increase their take-home pay. Members have the choice of waiving their ITHP reduction, which would reduce their take-home pay, but provide them with increased benefits upon retirement. Tier 1 members contribute on the basis of a normal rate of contribution which is assigned by the QPP at membership, and which is dependent upon age and actuarial tables in effect at the time of membership.



- In addition, these same members could elect a service retirement benefit with no minimum service requirement which provides an annual benefit for each year of service equal to a specified percentage (as described within State statutes and City laws) of “final salary”, payable upon attainment of age 55. This benefit is increased, where applicable, by an annuity attributable to the member contributions and ITHP contributions.
- For all members who enrolled in the QPP prior to July 27, 1976, ITHP contributions made on their behalf as well as their own contributions are invested, at their election, in either the fixed return fund or the variable return fund, or 50% of such contributions in each. These investment elections can be changed every two years. The QPP guaranteed a 7.5% return on member contributions or ITHP contributions to the fixed return fund until June 30, 1982, increased the guaranteed return to 8% as of July 1, 1982, and to 8.25% as of July 1, 1988, for members who enrolled in the QPP prior to July 27, 1976 (5% on member contributions for members enrolled on or after July 27, 1976). The variable return fund includes only member contributions and ITHP contributions made on their behalf as described above and is expressed in terms of units, which are valued monthly, based on investment experience.
- Certain members of Tier 1 and Tier 2 have the right to make voluntary member contributions (“Voluntary Contributions”) in excess of their required member contributions (“Required Contributions”). The investment of the Voluntary Contributions and the Required Contributions is directed by each member. A member may invest: (1) in the QPP’s fixed return fund, which is credited with interest at the Statutory Interest Rate (currently 8.25% (7.0% for UFT members)), and/or (2) in the QPP’s variable return fund. At the time of retirement or refund of contributions, a member’s aggregate balance of actual Required Contributions and Voluntary Contributions, including the actual accumulated earnings thereon, less the outstanding balance of any member loans (“Net Actual Contributions”), may exceed (“Excess of Contributions”) or fall short of (“Deficiency of Contributions”) the member’s Expected Balance. The Expected Balance is the sum of the Required Contributions which a member should have made during his or her credited service, plus the earnings that would have accumulated thereon at the Statutory Interest rate. The amount of the member’s retirement annuity or the refund of contributions that he or she is entitled to is increased by any Excess of Contributions or reduced by any Deficiency of Contributions. The total value of members’ Excess of Contributions, net of all Deficiencies of Contributions, is \$ 8.98 million and \$9.27 million, for the years ended June 30, 2016 and 2015, respectively. Actuarial estimates of the impacts of Excesses and Deficiencies are incorporated into calculation of the QPP’s net pension liability (see Note 5).
- Members who joined after July 1, 1973 and before July 27, 1976 (“Tier 2”) have provisions similar to Tier 1, except that the eligibility requirements for retirement and the salary base for benefits are different and there was a limitation on their maximum benefit. This maximum benefit limitation was subsequently eliminated under Chapter 574 of the Laws of 2000 for all Tier 2 members who retired after December 8, 2000. Tier 2 members contribute on the basis of a normal rate of contribution which is assigned by the QPP at membership, and which is dependent upon age and actuarial tables in effect at the time of membership.



**Notes to Combining Financial Statements**  
**Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

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- Members who joined the QPP on or after July 27, 1976 and prior to September 1, 1983 (“Tier 3”) were originally entitled to a retirement benefit upon the completion of ten years of service at age 62. The formula for this benefit was 1.67% of “Final Average Salary” (“FAS”) per year of credited service for members with less than 20 years of service, or 2% of FAS per year of service for members with 20 to 30 years of service. Tier 3 benefits were reduced by one half of the primary Social Security benefit attributable to service with the employer, and provided an annual cost-of-living escalator in pension benefits of not more than 3%. Tier 3 required member contributions of 3% of salary for a period not to exceed 30 years. After September 1, 1983, all Tier 3 members were mandated into the Tier 4 plan. However, these members retain their Tier 3 rights. Effective October 1, 2000, Tier 4 members with Tier 3 rights, like other Tier 4 members, are not required to make contributions once the tenth anniversary of their membership date has passed, or upon completion of 10 years of credited service, whichever is earlier, and are eligible for a pension upon the completion of five years of credited service at age 62.
- Members who joined the QPP on or after September 1, 1983 and prior to April 1, 2012 (“Tier 4”) are eligible for a pension upon the completion of five years of credited service at age 62. The annual benefit is 1.67% of FAS per year of service for members with less than 20 years of service, or 2% of FAS per year of service for members with 20 to 30 years of service, plus an addition of 1.5% of FAS per year of service for service in excess of 30 years of service. Tier 4 members were originally required to make contributions of 3% of salary until termination of service. As of October 1, 2000, these members are not required to make contributions after the tenth anniversary of their membership date or upon completion of ten years of credited service, whichever is earlier (Chapter 126 of Laws of 2000). Certain members retiring prior to the age of 62 experience an age-reduction factor in their retirement allowance.
- Effective June 28, 1995, active Tier 2 and Tier 4 members, excluding those who hold a position represented by the recognized teacher organization for collective bargaining purposes (currently, the United Federation of Teachers or “UFT”), were eligible to enroll in an early retirement program permitting them to retire at age 55 with 25 years of credited service (“55/25”), with no age reduction factor to their retirement allowance, or at age 50 with 25 years of credited service in a physically taxing position (Chapter 96 of the Laws of 1995). Additionally, Tier 4 members in non-UFT positions who joined BERS on or after June 28, 1995 and before April 1, 2012 were mandated into an early retirement program permitting them to retire at age 57 with 5 years of credited service (“57/5”), with no age reduction factor to their retirement allowance, or at age 50 with 25 years of credited service in a physically taxing position. Participants in the 55/25 and 57/5 early retirement programs are required to remit additional contributions of 1.85%, or 3.83% for physically taxing positions.
- Effective February 27, 2008, active Tier 4 members who hold a position represented by the recognized teacher organization for collective bargaining purposes (currently, UFT) were eligible to enroll in an early retirement program permitting them to retire at age 55 with 25 years of credited service (“55/25 UFT”), with no age reduction factor to their retirement allowance (Chapter 19 of





the Laws of 2008). Those choosing the age 55 retirement option are required to make additional contributions of 1.85% of salary from February 28, 2008 until June 29, 2008, or until they have accumulated 25 years of credited service, whichever is later. UFT members in covered titles who joined after February 27, 2008 but before December 10, 2009, were automatically enrolled in a 55 retirement age minimum and 27 credited years of service retirement program (“55/27 UFT”). These members are required to make additional plan contributions of 1.85% of salary until they have accumulated 27 years of credited service.

- UFT members in covered titles who joined the QPP after December 10, 2009 and prior to April 1, 2012 are covered by 55/27 UFT, but are required to make contributions of 4.85% of salary until they have 27 years of credited service, and contributions of 1.85% of salary thereafter (Chapter 504 of the Laws of 2009). Additionally, QPP benefits for this population vest in 10 years, rather than 5 years, as for other Tier 4 members.
- Members who join the QPP on or after April 1, 2012 are subject to the provisions of Chapter 18 of the Laws of 2012 (“Chapter 18/12”), also known as “Tier 6”. BERS members in Tier 6 are eligible for a pension upon the completion of ten years of credited service at age 63. The annual benefit is 1.67% of FAS for the first 20 years of credited service, plus an addition of 2% of FAS per year of service for service in excess of 20 years of service. Additionally, the FAS period is 5 years, rather than 3, and a cap is imposed on the maximum permissible FAS. Tier 6 members are required to make Basic Member Contributions (“BMC”) until they separate from service or until they retire. The BMC rate is dependent on annual wages earned during a plan year and ranges from 3% for salaries less than \$45,000 to 6% for salaries greater than \$100,000. Tier 6 members become vested after ten years of service.
- Under all service retirement categories, annuities attributable to member contributions are reduced on an actuarial basis for any loans with unpaid balances outstanding at the date of retirement.
- Subject to certain conditions, members become fully vested as to QPP benefits upon the completion of five years of credited service, or ten years of credited service for Tier 4 55/27 UFT members who joined after December 10, 2009 and for Tier 6 members.
- The QPP provides death benefits and retirement benefits on the occurrence of accidental or ordinary disability.
- During the spring 2000 session, the State Legislature approved and the State Governor (“Governor”) signed laws that provide automatic Cost-of-Living Adjustments (“COLA”) for certain retirees and beneficiaries (Chapter 125 of the Laws of 2000). It also provides additional service credits for certain Tier 1 and Tier 2 members and reduced member contributions for certain Tier 3 and Tier 4 members (Chapter 126 of the Laws of 2000).



### **TDA Program Benefits**

Contributions to the TDA Program are made by the participants only, and are voluntary. In order to contribute to the TDA Program, certain active members of the QPP are required to submit a salary reduction agreement and TDA enrollment request. A participant may elect to exclude an amount of his or her compensation from current taxable income (within the maximum allowed by the Internal Revenue Service) by contributing it to the TDA Program. The basic contribution limit, as of 2016, is \$18,000 certain participants are permitted to make additional contributions, based on age or years of service. The additional contribution limit for 2016 is \$6,000. Additionally, participants can elect to invest their contributions in either the fixed return fund or the variable return fund.

Benefits provided under the TDA Program are derived from participants' accumulated contributions and earnings on those contributions. No contributions are provided by the employer.

A participant may withdraw all or part of the balance of his or her account at the time of retirement, termination of employment, or under certain hardship conditions. Beginning January 1, 1989, the tax laws restricted withdrawals of TDA contributions and accumulated earnings thereon for reasons other than retirement or termination.

Contributions made after December 31, 1988, and investment earnings credited after that date, may only be withdrawn by active participants upon attainment of age 59½ or for reasons of hardship (as defined by Internal Revenue Service regulations). Hardship withdrawals are limited to contributions only.

Contributions made on or before December 31, 1989, and earnings credited on or before that date, may be withdrawn by active participants even before age 59½. A member who has received a withdrawal may not contribute to the TDA Program for the remainder of the current year.

If a member dies in active service, or after retirement while his or her TDA account is in deferral, the full value of his or her account at the date of death is paid to the member's beneficiary(ies) or estate.

When a member resigns before attaining vested rights under the QPP, he or she may withdraw the value of his or her TDA Program account, or leave the funds in the account for a period of up to five years after the date of resignation. If a member resigns after attaining vested rights under the QPP, he or she may leave his or her funds in the TDA Program account, accruing earnings until reaching the age at which minimum distributions are required by IRS regulations. Once a member withdraws from the QPP, participation in the TDA Program will cease, and the member will receive a refund of the value of his or her account in the TDA Program.



When a TDA Program participant applies to retire from the QPP and has a positive TDA Program account balance, the participant has three options:

- a. The participant may withdraw the total balance, either by receiving it as a taxable distribution or by rolling it over into an Individual Retirement Account (IRA);
- b. The participant may defer distribution of the account; or
- c. The participant may elect to receive the balance of the account as a life annuity. The available benefit options depend on the member's Tier.

## 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND SYSTEM ASSET MATTERS

**Basis of Accounting** — The QPP as well as the TDA Program use the accrual basis of accounting where the measurement focus is on a flow of economic resources. Revenues are recognized in the accounting period in which they are earned and expenses are recognized in the period incurred. Contributions from members are recognized when respective employers make payroll deductions from the QPP's members and the TDA Program participants. Employer contributions to the QPP are recognized when due, and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of governing the QPP and the TDA Program.

**Investment Valuation** — Investments are reported at fair value. Securities purchased pursuant to agreements to resell are carried at the contract price, exclusive of interest, at which the securities will be resold. Fair value is defined as the quoted market value on the last trading day of the period, except for the Short-Term Investment fund ("STIF") (a money market fund), International Investment funds ("IIF") and Alternative Investment funds ("ALTINVF"). The IIF are private funds of publicly traded securities which are managed by various investment managers on behalf of BERS. Fair value is determined by BERS management based on information provided by the various investment managers. The investment managers determine fair value using the last available quoted price for each security owned adjusted by any contributions to or withdrawals from the fund during the period. The ALTINVF are investments for which exchange quotations are not readily available and are valued at estimated fair value as determined in good faith by the General Partner ("GP"). These investments are initially valued at cost with subsequent adjustments that reflect third party transactions, financial operating results and other factors deemed relevant by the GP. Fair value is determined by BERS management based on information provided by the various GP's after review by an independent consultant and the custodian bank for the fund.

Purchases and sales of securities are reflected on the trade date. Dividend income is recorded on the ex-dividend date. Interest income is recorded as earned on an accrual basis.

No investment in any one security represents 5% or more of QPP's net position held in trust for benefits.



**Notes to Combining Financial Statements**  
**Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

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**Investment Programs** — The System's assets are invested in two investment programs. These are the fixed return fund, which is managed by BERS, and the variable return fund consisting primarily of equity securities, which is managed by TRS.

Under the fixed return program, members' TDA Program accounts are credited with the statutory rate of interest, currently 7% for UFT members and 8.25% for all other members. TDA Program members and certain Tier 1 and 2 QPP members may transfer their balances between the fixed return fund and the variable investment fund on a quarterly basis.

The QPP's assets within the variable return fund are co-invested with those assets of the TDA Program that are earmarked for the variable return fund. These financial statements reflect the QPP investment activity in the fixed return fund; as well as the variable return fund.

**Income Taxes** — Income earned by the QPP and the TDA Program is not subject to federal income tax until it is normally distributed. Other taxes apply in case of premature distributions.

**Accounts Payable**—Accounts payable is principally comprised of amounts owed by BERS for overdrawn bank balances. BERS's practice is to fully invest cash balances in most bank accounts on a daily basis. Overdrawn balances result primarily from outstanding benefit checks that are presented to the banks for payment on a daily basis and these balances are routinely settled each day.

**TDA Program's interest income in the fixed return fund** — The statutory interest credited on the TDA Program member account balances invested in the fixed return fund is reported as the "TDA program's interest income in the fixed return fund".

**Securities Lending Transactions** — State statutes and Board policies permit the System to lend its investments to broker-dealers and other entities for collateral, for the same securities in the future with a simultaneous agreement to return the collateral in the form of cash, treasury and U.S. Government securities. The System's agent lends the following types of securities: short term securities, common stocks, long-term corporate bonds, U.S. Government and U.S. Government agency bonds, asset-backed securities, and international equities and bonds held in collective investment funds. In return, the System receives collateral in the form of cash, U.S. Treasury and U.S. Government agency securities at 100% to 105% of the principal plus accrued interest for reinvestment. At June 30, 2016 and 2015, management believes that the System had no credit risk exposure to borrowers because the amounts the System owed the borrowers equaled or exceeded the amounts the borrowers owed the System. The contracts with the System's Custodian require the Securities Lending Agent to Indemnify the System. In the situation when a borrower goes into default, the Agent will liquidate the collateral to purchase replacement securities. Any shortfall before the replacement securities cost and the collateral value is covered by the Agent. All Securities loans can be terminated on demand within a period specified in each agreement by either the System or the borrowers. Cash collateral is invested by the securities lending agent using approved Lender's Investment guidelines. The weighted average maturity is 46.37 days.



The securities lending program in which the System participates only allows pledging or selling securities in the case of borrower default.

GASB Statement No. 28, *Accounting and Financial Reporting for Securities Lending Transactions*, requires that securities loaned as assets and related liabilities be reported in the statements of plan net position. Cash received as collateral on securities lending transactions and investments made with that cash are reported as assets. Securities received as collateral are also reported as assets if the government entity has the ability to pledge or sell them without a borrower default. Accordingly, the System recorded the investments purchased with the cash collateral as collateral from securities lending with a corresponding liability for securities lending. Securities on loan are carried at fair value, the values reported by the QPP as of June 30, 2016 and 2015 are \$463.29 million and \$302.14 million, respectively. As of net position date, the maturities of the investments made with cash collateral on average exceed the maturities of the securities loans by approximately 30 days.

**New Accounting Standards Adopted** — in Fiscal Year 2015, BERS adopted Government Accounting Standards Board (“GASB”) Statement No. 72, *Fair Value Measurement and Application*. GASB 72 requires the System to use valuation techniques which are appropriate under the circumstances and are either a market approach, a cost approach or income approach. GASB 72 establishes a hierarchy of inputs used to measure fair value consisting of three levels. Level 1 inputs are quoted prices in active markets for identical assets or liabilities. Level 2 inputs are inputs, other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs, and typically reflect management’s estimates of assumptions that market participants would use in pricing the asset or liability. GASB 72 also contains note disclosure requirements regarding the hierarchy of valuation inputs and valuation techniques that was used for the fair value measurements. There was no material impact on the System’s financial statements as a result of the implementation of GASB 72.

### 3. INVESTMENTS AND DEPOSITS

The Comptroller of the City of New York (the “Comptroller”) acts as an investment advisor to BERS. In addition, BERS employs an independent investment consultant as an investment advisor. BERS utilizes several investment managers to manage the long-term debt and equity portfolios. The managers are regularly reviewed, with regard to both their investment performance and their adherence to investment guidelines.

The BERS investment policy statement was ratified by the Board of Trustees in January 2009 and amended in October 2011 January 2013, February 2015 and June 2016. It addresses investment objectives, investment philosophy and strategy, monitoring and evaluating performance, risk management, security lending protocol, and rebalancing investment mix. Assets may be invested in fixed income, equity and other vehicles as permitted by New York State RSSL § 176-178(a) and Banking Law § 235, the New York City Administrative Code, and the Legal Investments for New York Savings Banks list as published by the New York State Banking Department. However, investments up to 25% of total System assets may be made in instruments not expressly permitted by the RSSL.



**Notes to Combining Financial Statements**  
**Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

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The System does not possess an investment risk policy statement, nor does it actively manage its assets to specified risk targets. Rather, investment risk management is an inherent function of the System's asset allocation process. QPP and TDA Program assets are diversified over a broad range of asset classes and encompass multiple investment strategies aimed at limiting concentration risk.

State Street Bank and Trust Company is the primary custodian for the fixed return fund. The variable return fund assets are held in custody at Chase Bank.

Cash deposits are insured by the Federal Deposit Insurance Corporation for up to \$250,000 per member of the System and are, therefore, fully insured.

**Concentration of Credit Risk** — The System does not have any investments in any one entity that represent 5% or more of the System's net position held in trust for benefits.

The legal requirements for the System's investments are as follows:

- A. Fixed income, equity and other investments may be made as permitted by New York State RSSL §§ 176-178(a) and Banking Law § 235, the New York City Administrative Code, and the Legal Investments for New York Savings Banks list as published by The New York State Banking Department, subject to Note 3(b).
- b. Investments up to 25% of total pension fund assets may be made in instruments not expressly permitted by the State RSSL.

The information reflected in the credit ratings and in the Years to Maturity is derived from the Custodian's Risk and Performance Analytics Reporting System. Such information is prepared as a result of the Custodian's Risk Management Analysis.



**Notes to Combining Financial Statements**  
**Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

**Credit Risk** – Portfolios other than U.S. Government and related portfolios have credit rating limitations. Investment grade portfolios are limited to mostly ratings of BBB and above except that they are also permitted a 10% maximum exposure to BB & B rated securities. While non-investment grade managers are primarily invested in BB & B rated securities, they can also invest up to 7% of their portfolio in securities rated CCC. Non rated securities, excluding short-term securities, are considered to be non-investment grade. The quality ratings of investments of the fixed return fund, by percentage of the rated portfolio, as described by nationally recognized statistical rating organizations, at June 30, 2016 and 2015 are as follows:

Investment Type* June 30, 2016	S&P Quality Ratings						CCC & Below	Not Rated	Total
	AAA	AA	A	BBB	BB	B			
U.S. Government	- %	- %	- %	- %	- %	- %	- %	- %	- %
Corporate bonds	2.23	3.27	13.13	24.35	14.67	15.67	6.52	4.58	84.42
Short term:									
Commercial paper	-	-	-	-	-	-	-	11.47	11.47
Pooled fund	-	-	-	-	-	-	-	4.11	4.11
Discount notes and T-bills	-	-	-	-	-	-	-	-	-
Portfolio	<u>2.23%</u>	<u>3.27%</u>	<u>13.13%</u>	<u>24.35%</u>	<u>14.67%</u>	<u>15.67%</u>	<u>6.52%</u>	<u>20.16%</u>	<u>100.00%</u>

Investment Type* June 30, 2015	S&P Quality Ratings						CCC & Below	Not Rated	Total
	AAA	AA	A	BBB	BB	B			
U.S. Government	- %	- %	- %	- %	- %	- %	- %	- %	- %
Corporate bonds	1.82	2.23	11.64	20.17	11.76	14.41	4.61	3.53	70.17
Short term:									
Commercial paper	-	-	-	-	-	-	-	22.03	22.03
Pooled fund	-	-	-	-	-	-	-	3.94	3.94
Discount notes and T-bills	-	-	-	-	-	-	-	3.86	3.86
Portfolio	<u>1.82%</u>	<u>2.23%</u>	<u>11.64%</u>	<u>20.17%</u>	<u>11.76%</u>	<u>14.41%</u>	<u>4.61%</u>	<u>33.36%</u>	<u>100.00%</u>

\* U.S. Treasury bonds, notes and treasury-inflation protected securities are obligations of the U.S. government or explicitly guaranteed by the U.S. government and therefore not considered to have credit risk and are not included above.



**Notes to Combining Financial Statements**  
**Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

The quality ratings of investments of the variable return fund, by percentage of the rated portfolio, as described by nationally recognized statistical rating organizations, at June 30, 2016 and 2015, are as follows:

Investment Type*	S&P Quality Ratings								Total
	AAA	AA	A	BBB	BB	B	CCC & Below	Not Rated	
<b>Variable Funds</b>									
<b>June 30, 2016</b>									
Government	- %	- %	- %	- %	- %	- %	- %	- %	- %
Corporate bonds	2.35	1.37	6.82	12.40	5.94	2.81	-	19.43	51.12
Yankee bonds	-	-	-	-	-	-	-	0.06	0.06
Municipal bonds	-	0.24	-	-	-	-	-	-	0.24
U.S. Agencies	-	1.37	-	-	-	-	-	-	1.37
Short-term:									
Money Market Funds	-	-	-	-	-	-	-	47.21	47.21
Percent of rated Portfolio	<u>2.35%</u>	<u>2.98%</u>	<u>6.82%</u>	<u>12.40%</u>	<u>5.94%</u>	<u>2.81%</u>	<u>0.00%</u>	<u>66.70%</u>	<u>100.00%</u>

Investment Type*	S&P Quality Ratings								Total
	AAA	AA	A	BBB	BB	B	CCC & Below	Not Rated	
<b>Variable Funds</b>									
<b>June 30, 2015</b>									
Government	- %	- %	- %	- %	- %	- %	- %	- %	- %
Corporate bonds	1.83	1.95	10.93	12.57	5.69	2.66	0.32	15.67	51.62
Yankee bonds	-	0.45	-	0.06	-	-	-	-	0.51
Municipal bonds	-	0.03	0.20	-	-	-	-	-	0.23
U.S. Agencies	-	0.50	-	-	-	-	-	-	0.50
Short-term:									
Money Market Funds	-	-	-	-	-	-	-	47.14	47.14
Percent of rated Portfolio	<u>1.83%</u>	<u>2.93%</u>	<u>11.13%</u>	<u>12.63%</u>	<u>5.69%</u>	<u>2.66%</u>	<u>0.32%</u>	<u>62.81%</u>	<u>100.00%</u>

\* U.S. Treasury bonds, notes and treasury-inflation protected securities are obligations of the U.S. government or explicitly guaranteed by the U.S. government and therefore not considered to have credit risk and are not included above.

**Custodial Credit Risk** – Deposits are exposed to custodial credit risk if they are uninsured and uncollateralized. Custodial credit risk is the risk that, in the event of a failure of the counterparty, the System will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the System, and are held by either the counterparty or the counterparty’s trust department or agent but not in the System’s name.

Consistent with the System’s investment policy, the investments are held by the System’s custodian and registered in the System’s name.

All of the System’s deposits are insured and are collateralized by securities held by a financial institution separate from the System’s depository financial institution.

All of the System’s securities are held by the System’s custodial bank in the System’s name.





**Notes to Combining Financial Statements**  
**Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

**Interest Rate Risk** – Interest rate risk is the risk that the fair value of investments could be adversely affected by the change in interest rates. Duration limits are used to control the portfolios exposure to interest rate changes. In the investment grade core Fixed Income portfolios duration is limited to a range of one year shorter than the benchmark duration to 0.75 years longer than the duration of the benchmark indices. Duration range is a measure of the overall portfolio, while statements of the stated maturity reflect the specific maturities of the individual securities held. The System has no formal risk policy. The lengths of investment maturities for fixed return fund (in years), as shown by the percent of the rated portfolio, at June 30, 2016 and 2015 are as follows:

Years to Maturity Investment Type June 30, 2016	Investment Maturities				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
U.S. Government	35.90 %	0.09 %	2.11 %	6.62 %	27.08 %
Corporate bonds	54.11	1.60	15.70	20.93	15.88
Short term:					
Commercial paper	7.36	7.36	-	-	-
Pooled fund	2.63	2.63	-	-	-
Discount notes and T-bills	-	-	-	-	-
Percent of rated portfolio	<u>100.00 %</u>	<u>11.68 %</u>	<u>17.81%</u>	<u>27.55 %</u>	<u>42.96 %</u>

Years to Maturity Investment Type June 30, 2015	Investment Maturities				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
U.S. Government	35.99 %	1.21 %	4.44 %	5.25 %	25.09 %
Corporate bonds	44.91	1.62	11.25	18.72	13.32
Short term:					
Commercial paper	14.10	14.10	-	-	-
Pooled fund	2.52	2.52	-	-	-
Discount notes and T-bills	2.48	2.48	-	-	-
Percent of rated portfolio	<u>100.00 %</u>	<u>21.93 %</u>	<u>15.69%</u>	<u>23.97 %</u>	<u>38.41 %</u>



**Notes to Combining Financial Statements**  
**Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

The lengths of investment maturities (in years) of the variable return fund, as shown by the percent of the rated portfolio, at June 30, 2016 and 2015 are as follows:

<b>Years to Maturity Investment Type June 30, 2016</b>	<b>Investment Maturities</b>				
	<b>Fair Value</b>	<b>Less Than One Year</b>	<b>One to Five Years</b>	<b>Six to Ten Years</b>	<b>More Than Ten Years</b>
U.S. Government	24.27 %	0.14 %	23.53 %	0.60 %	- %
Corporate bonds	38.71	2.23	26.60	5.14	4.74
Yankee Bonds	0.05	-	0.05	-	-
Municipal Bonds	0.18	0.16	0.02	-	-
U.S. Agencies	1.04	-	1.04	-	-
Short term: Money Market	35.75	35.75	-	-	-
Percent of rated portfolio	<u>100.00 %</u>	<u>38.28 %</u>	<u>51.24%</u>	<u>5.74 %</u>	<u>4.74 %</u>

<b>Years to Maturity Investment Type June 30, 2015</b>	<b>Investment Maturities</b>				
	<b>Fair Value</b>	<b>Less Than One Year</b>	<b>One to Five Years</b>	<b>Six to Ten Years</b>	<b>More Than Ten Years</b>
U.S. Government	20.22 %	0.22%	19.93 %	0.07 %	- %
Corporate bonds	41.12	2.49	25.56	7.07	6.00
Yankee Bonds	0.41	-	0.26	0.15	-
Municipal Bonds	0.18	-	0.18	-	-
U.S. Agencies	0.51	0.13	0.38	-	-
Short term: Money Market	37.56	37.56	-	-	-
Percent of rated portfolio	<u>100.00 %</u>	<u>40.40 %</u>	<u>46.31%</u>	<u>7.29 %</u>	<u>6.00 %</u>



**Foreign Currency Risk** — Foreign currency risk is the risk that changes in the exchange rates will adversely impact the fair value of an investment. Currency risk is present in underlying portfolios that invest in foreign stock and/or bonds. The currency markets have proven to be good diversifiers in a total portfolio context; therefore, the System has numerous managers that invest globally. In general, currency exposure is viewed as a benefit for its diversification reasons and not as an inherent risk within the portfolio. The System has no formal risk policy.

In addition, the System has investments in foreign stocks and/or bonds denominated in foreign currencies. The System's foreign currency exposures as of June 30, 2016 and 2015 in the fixed return fund are as follows (amounts in thousands of U.S. dollars):

<b>Trade Currency</b>	<b>2016</b>	<b>2015</b>
Australian Dollar	\$ 13,121	\$ 16,352
Brazilian Real	23,754	25,734
British Pnd Sterling	112,906	119,481
Canadian Dollar	16,420	14,451
Colombian Peso	275	-
Danish Krone	19,128	14,668
Egyptian Pound	438	646
Euro Currency	165,129	181,382
Hong Kong Dollar	85,205	92,496
Hungarian Forint	94	803
Indian Rupee	32,811	30,616
Indonesian Rupiah	8,079	5,742
Israeli Shekel	596	573
Japanese Yen	123,143	119,093
Malaysian Ringgit	7,958	6,683
Mexican Nuevo Peso	7,085	10,081
Moroccan Dirham	1	1
New Taiwan Dollar	21,844	31,208
New Zealand Dollar	1,868	1,673
Norwegian Krone	11,699	12,341
Pakistan Rupee	7	6
Philippines Peso	1,848	1,557
Polish Zloty	5,483	6,354
Renminbi Yuan	553	(2)
Qatari Rial	2,416	2,858
Singapore Dollar	18,414	16,994
South African Rand	19,462	21,136
South Korean Won	50,175	40,982
Swedish Krona	29,410	31,624
Swiss Franc	49,253	51,270
Thai Baht	14,555	12,165
Turkish Lira	9,535	8,022
UAE Dirham	927	50
Total	<u><u>\$ 853,592</u></u>	<u><u>\$ 877,040</u></u>



**Notes to Combining Financial Statements**  
**Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

The foreign currency exposures of the variable return funds as of June 30, 2016 and 2015 are as follows (amounts in thousands of U.S. dollars):

<b>Trade Currency</b>	<b>2016</b>	<b>2015</b>
Australian Dollar	\$ 946	\$ 1,031
Brazilian Real	973	-
British Pnd Sterling	4,859	7,399
Canadian Dollar	1,039	1,191
Chilean Peso	1	-
Danish Krone	178	245
Egyptian Pound	6	-
Euro Currency	8,081	10,573
Hong Kong Dollar	959	1,412
Hungarian Forint	-	23
Indian Rupee	2,415	-
Israeli Shekel	164	241
Japanese Yen	4,767	6,625
Malaysian Ringgit	496	-
Mexican Nuevo Peso	427	-
New Zealand Dollar	15	-
Norwegian Krone	255	494
Phillipines Peso	76	-
Polish Zloty	158	-
Singapore Dollar	776	923
South African Rand	1,227	260
South Korean Won	3,683	-
Swedish Krona	360	643
Swiss Franc	2,803	3,583
Taiwan Dollar	2,351	-
Thai Baht	305	-
Turkish Lira	456	-
Uae Dirham	120	-
Total	<u>\$ 37,896</u>	<u>\$ 34,643</u>



**Notes to Combining Financial Statements**  
**Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

**Securities Lending Transactions:**

**Credit Risk** – The quality ratings of investments held as collateral for Securities Lending are as follows:

**Investment Type and Fair Value - Fixed Return Fund**

**Securities Lending Transactions**

**(In thousands)**

**June 30, 2016**

	S&P Quality Ratings									
	AAA	AA	A	BBB	BB	B	CCC & Below	Short Term	Not Rated	Total
U.S. Government	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Corporate bonds	-	-	-	-	-	-	-	-	-	-
Yankee bonds	-	-	-	-	-	-	-	-	-	-
Short term:										
Commercial paper	-	-	-	-	-	-	-	-	-	-
Mutual funds	-	-	-	-	-	-	-	-	-	-
Money market	35,129	-	-	-	-	-	-	-	-	35,129
Bank notes	-	-	-	-	-	-	-	-	2,181	2,181
U.S. Agency	-	-	-	-	-	-	-	-	-	-
Reverse repurchase agreements	-	-	-	-	-	-	-	-	391,721	391,721
Repurchase agreements	-	-	-	-	-	-	-	-	-	-
Certificates of deposit	-	-	-	-	-	-	-	-	-	-
Certificates of deposit – floaters	-	-	-	-	-	-	-	-	-	-
Time deposit	-	-	-	-	-	-	-	-	-	-
Cash	-	-	-	-	-	-	-	-	46,408	46,408
Other	-	-	-	-	-	-	-	-	561	561
<b>Total</b>	<b>\$ 35,129</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 440,871</b>	<b>\$ 476,000</b>
Percent of securities lending portfolio	7.38 %	- %	- %	- %	- %	- %	- %	- %	92.62 %	100.00 %

**Investment Type and Fair Value - Fixed Return Fund**

**Securities Lending Transactions**

**(In thousands)**

**June 30, 2015**

	S&P Quality Ratings									
	AAA	AA	A	BBB	BB	B	CCC & Below	Short Term	Not Rated	Total
U.S. Government	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Corporate bonds	-	-	-	-	-	-	-	-	-	-
Yankee bonds	-	-	-	-	-	-	-	-	-	-
Short term:										
Commercial paper	-	-	-	-	-	-	-	-	-	-
Mutual funds	-	-	-	-	-	-	-	-	-	-
Money market	37,068	-	-	-	-	-	-	-	-	37,068
Bank notes	-	-	-	-	-	-	-	-	24,465	24,465
U.S. Agency	-	-	-	-	-	-	-	-	-	-
Reverse repurchase agreements	-	-	-	-	-	-	-	-	208,353	208,353
Repurchase agreements	-	-	-	-	-	-	-	-	-	-
Certificates of deposit	-	-	-	-	-	-	-	-	-	-
Certificates of deposit – floaters	-	-	-	-	-	-	-	-	-	-
Time deposit	-	-	-	-	-	-	-	-	-	-
Cash	-	-	-	-	-	-	-	-	28,986	28,986
Other	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>\$ 37,068</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 261,804</b>	<b>\$ 298,872</b>
Percent of securities lending portfolio	12.40 %	- %	- %	- %	- %	- %	- %	- %	87.60 %	100.00 %





**Notes to Combining Financial Statements**  
**Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

**Interest Rate Risk** – The lengths of investment maturities (in years) of the collateral for Securities Lending are as follows:

<b>Years to Maturity</b> <b>Fixed Return Fund</b> <b>(In thousands)</b> <b>June 30, 2016</b>	<b>Investment Maturities</b>				
	<b>Fair Value</b>	<b>Less Than One Year</b>	<b>One to Five Years</b>	<b>Six to Ten Years</b>	<b>More Than Ten Years</b>
U.S. Government	\$ -	\$ -	\$ -	\$ -	\$ -
Corporate bonds	-	-	-	-	-
Yankee bonds	-	-	-	-	-
Short term:					
Commercial paper	-	-	-	-	-
Mutual fund	-	-	-	-	-
Money market	35,129	35,129	-	-	-
Bank notes	2,181	2,181	-	-	-
U.S. Treasury	-	-	-	-	-
U.S. Agency	-	-	-	-	-
Reverse repurchase agreements	391,721	391,721	-	-	-
Repurchase agreements	-	-	-	-	-
Certificates of deposit	-	-	-	-	-
Certificates of deposit – floaters	-	-	-	-	-
Time deposit	-	-	-	-	-
Cash	46,408	46,408	-	-	-
Adjustment to custodial reports	-	-	-	-	-
Other	562	562	-	-	-
<b>Total</b>	<b>\$ 476,001</b>	<b>\$ 476,001</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
Percent of securities lending portfolio	100.00 %	100.00 %	- %	- %	- %

<b>Years to Maturity</b> <b>Fixed Return Fund</b> <b>(In thousands)</b> <b>June 30, 2015</b>	<b>Investment Maturities</b>				
	<b>Fair Value</b>	<b>Less Than One Year</b>	<b>One to Five Years</b>	<b>Six to Ten Years</b>	<b>More Than Ten Years</b>
U.S. Government	\$ -	\$ -	\$ -	\$ -	\$ -
Corporate bonds	-	-	-	-	-
Yankee bonds	-	-	-	-	-
Short term:					
Commercial paper	-	-	-	-	-
Mutual fund	-	-	-	-	-
Money market	37,068	37,068	-	-	-
Bank notes	24,465	24,465	-	-	-
U.S. Treasury	-	-	-	-	-
U.S. Agency	-	-	-	-	-
Reverse repurchase agreements	208,353	208,353	-	-	-
Repurchase agreements	-	-	-	-	-
Certificates of deposit	-	-	-	-	-
Certificates of deposit – floaters	-	-	-	-	-
Time deposit	-	-	-	-	-
Cash	28,986	28,986	-	-	-
Adjustment to custodial reports	-	-	-	-	-
Other	-	-	-	-	-
<b>Total</b>	<b>\$ 298,872</b>	<b>\$ 298,872</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
Percent of securities lending portfolio	100.00 %	100.00 %	- %	- %	- %



**Notes to Combined Financial Statements**  
**Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

**Years to Maturity**  
**QPP & TDA Program -**  
**Variable Return Fund**

(In thousands)	Investment Maturities				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
<b>June 30, 2016</b>					
U.S. Government	\$ 4,844	\$ 1,266	\$ 1,573	\$ 1,101	\$ 904
Corporate bonds	-	-	-	-	-
Yankee bonds	-	-	-	-	-
Short term:					
Commercial paper	-	-	-	-	-
Mutual fund	-	-	-	-	-
Money market	-	-	-	-	-
Bank notes	-	-	-	-	-
U.S. Treasury	-	-	-	-	-
U.S. Agency	-	-	-	-	-
Reverse repurchase agreements	-	-	-	-	-
Repurchase agreements	12,418	12,418	-	-	-
Certificates of deposit	-	-	-	-	-
Certificates of deposit – floaters	-	-	-	-	-
Time deposit	-	-	-	-	-
Cash	-	-	-	-	-
Adjustment to custodial reports	-	-	-	-	-
Other	2	2	-	-	-
<b>Total</b>	<u>\$ 17,264</u>	<u>\$ 13,686</u>	<u>\$ 1,573</u>	<u>\$ 1,101</u>	<u>\$ 904</u>
Percent of securities lending portfolio	<u>100.00 %</u>	<u>79.27 %</u>	<u>9.11 %</u>	<u>6.38 %</u>	<u>5.24 %</u>

**Years to Maturity**  
**QPP & TDA Program -**  
**Variable Return Fund**

(In thousands)	Investment Maturities				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
<b>June 30, 2015</b>					
U.S. Government	\$ 15,106	\$ -	\$ 6,341	\$ 5,211	\$ 3,554
Corporate bonds	-	-	-	-	-
Yankee bonds	-	-	-	-	-
Short term:					
Commercial paper	-	-	-	-	-
Mutual fund	-	-	-	-	-
Money market	-	-	-	-	-
Bank notes	-	-	-	-	-
U.S. Treasury	1,316	1,316	-	-	-
U.S. Agency	-	-	-	-	-
Reverse repurchase agreements	-	-	-	-	-
Repurchase agreements	16,490	16,490	-	-	-
Certificates of deposit	-	-	-	-	-
Certificates of deposit – floaters	-	-	-	-	-
Time deposit	-	-	-	-	-
Cash	-	-	-	-	-
Adjustment to custodial reports	-	-	-	-	-
Other	(42)	(42)	-	-	-
<b>Total</b>	<u>\$ 32,870</u>	<u>\$ 17,764</u>	<u>\$ 6,341</u>	<u>\$ 5,211</u>	<u>\$ 3,554</u>
Percent of securities lending portfolio	<u>100.00 %</u>	<u>54.04 %</u>	<u>19.29 %</u>	<u>15.86 %</u>	<u>10.81 %</u>

For the years ended June 30, 2016 and 2015, the annual money-weighted rate of return on the System's fixed return fund investments, net of investment expense on the System's fixed return fund,





**Notes to Combining Financial Statements**  
**Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

was 0.20% and 3.15%. The money-weighted rate of return expresses investment performance, net of investment expense adjusted for the changing amounts actually invested.

In Fiscal Year 2015, the System adopted GASB Statement No. 72 (“GASB 72”), *Fair Value Measurement and Application*. GASB 72 was issued to address accounting and financial reporting issues related to fair value measurements.

The System categorizes its fair value measurements within the fair value hierarchy established by Generally Accepted Accounting Principles (“GAAP”). The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. The System has the following recurring fair value measurements as of June 30, 2016 and June 30, 2015:

<b>Fixed Return Funds</b> <b>GASB 72 Disclosure</b> <b>(In thousands)</b>	<b>2016</b>			
	<b>Level One</b>	<b>Level Two</b>	<b>Level Three</b>	<b>Total</b>
INVESTMENTS—At fair value				
Short-term investments:				
Commercial paper	\$ -	\$ 71,888	\$ -	\$ 71,888
Short-term investment fund	-	35,933	-	35,933
Discount notes	-	-	-	-
Debt securities	-	873,890	5,872	879,762
Equity securities	291,144	-	-	291,144
Alternative investments	-	-	506,922	506,922
Collective trust funds:				
International equity	926,562	16,349	-	942,911
Fixed income	1,682	8,047	96,955	106,684
Domestic equity	1,401,395	270	-	1,401,665
Mortgage debt security	-	6,213	22,743	28,956
Treasury inflation protected securities	-	218,608	-	218,608
Collateral from securities lending	-	476,001	-	476,001
Total investments	<u>\$ 2,620,783</u>	<u>\$ 1,707,199</u>	<u>\$ 632,492</u>	<u>\$ 4,960,474</u>

<b>Fixed Return Funds</b> <b>GASB 72 Disclosure</b> <b>(In thousands)</b>	<b>2015</b>			
	<b>Level One</b>	<b>Level Two</b>	<b>Level Three</b>	<b>Total</b>
INVESTMENTS—At fair value				
Short-term investments:				
Commercial paper	\$ -	\$ 148,449	\$ -	\$ 148,449
Short-term investment fund	-	35,597	-	35,597
Discount notes	-	25,996	-	25,996
Debt securities	-	847,566	4,011	851,577
Equity securities	334,078	247	-	334,325
Alternative investments	-	-	385,819	385,819
Collective trust funds:				
International equity	969,838	-	-	969,838
Fixed income	-	-	85,942	85,942
Domestic equity	1,432,065	-	-	1,432,065
Mortgage debt security	-	23,862	-	23,862
Treasury inflation protected securities	-	139,367	-	139,367
Collateral from securities lending	-	298,872	-	298,872
Total investments	<u>\$ 2,735,981</u>	<u>\$ 1,519,956</u>	<u>\$ 475,772</u>	<u>\$ 4,731,709</u>



**Equity and Fixed Income Securities** – Equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets issued by pricing vendors for these securities. Debt and equity securities classified in Level 2 of the fair value hierarchy are valued using prices determined by the use of matrix pricing techniques maintained by the various pricing vendors for these securities. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Debt and equity securities classified in Level 3 are securities whose stated market price is unobservable by the market place, many of these securities are priced by the issuers or industry groups for these securities. Fair value is defined as the quoted market value on the last trading day of the period. These prices are obtained from various pricing sources by our custodian bank. Debt and equity securities held in Collective Trust Funds are held in those funds on behalf of the pension system and there is no restriction on the use and or liquidation of those assets for the exclusive benefit of the funds participants.

**Alternative Investments** – Alternative investments include private equity, real estate, opportunistic fixed income, and infrastructure investments. These are investments for which exchange quotations are not readily available and are valued at estimated fair value, as determined in good faith by the General Partner (“GP”). These investments are initially valued at cost with subsequent adjustments that reflect third party transactions, financial operating results and other factors deemed relevant by the GP. The assets in our alternative investment program are classified as Level 3 assets. A more detailed explanation of the Level 3 valuation methodologies follows:

Investments in non-public equity securities are valued by the GP using one or more valuation methodologies outlined in Accounting Standard Codification (“ASC”) 820, depending upon the availability of data required by each methodology. In some cases, the GP may use multiple approaches to estimate a valuation range. For the immediate time period following a transaction, the determination of fair value for equity securities, in which no liquid trading market exists, can generally be approximated based on the transaction price (absent any significant developments). Thereafter, or in the interim, if significant developments relating to such portfolio company or industry occur which may suggest a material change in value, the GP should value each investment by applying generally accepted valuation methods including: (1) the market approach (such as market transaction and comparable public company multiples, which are based on a measurement of the company's historical and projected financial performance with typical metrics including enterprise value/latest 12 months EBITDA or projected fiscal year EBITDA) or (2) the income or discounted cash flow approach.

In the market approach, valuation multiples that are relevant to the industry and company in the investments held should be considered and relied upon. Valuation multiples should be assessed and may be adjusted on a go-forward basis based on the business risk associated with the subject company in which the investment is held. In addition, the implied entry multiples should be considered as benchmarks in valuing unlisted equity. In circumstances where no financial performance metrics are available, the GP should rely on other non-financial related metrics applicable to relevant progress from the original investment date to the valuation date. In the income or discounted cash flow approach, forecasted cash flows that may be generated by the subject company are discounted to



present value at an appropriate discount rate. These methodologies can be utilized to determine an enterprise value (“Enterprise Valuation Methodologies”) from which net debt is subtracted to estimate equity value.

The determination of fair value using these methodologies should take into consideration a range of factors, including but not limited to, the price at which the investment was acquired, the nature of the investment, local market conditions, trading values on public exchanges for comparable securities, current and projected operating performance and financing transactions subsequent to the acquisition of the investment. Because of the subjective nature of estimated fair value of the private investments, such value may differ significantly from the values that would have been used had a ready market existed for these investments. These financial instruments have been classified as Level 3 in the fair value hierarchy.

**Variable-Return Funds**  
**GASB 72 Disclosure**  
**As of June 30, 2016**  
**(In thousands)**

	Level 1	Level 2	Level 3	Total
Variable return funds:				
Short-term investments	\$ -	\$ 6,079	\$ -	\$ 6,079
Debt securities	-	10,390	-	10,390
Equities	391,311	44,475	21	435,807
Collateral from securities lending	-	17,264	-	17,264
	<u>\$ 391,311</u>	<u>\$ 78,208</u>	<u>\$ 21</u>	<u>\$ 469,540</u>

**Variable-Return Funds**  
**GASB 72 Disclosure**  
**As of June 30, 2016**  
**(In thousands)**

	Level 1	Level 2	Level 3	Total
Variable return funds:				
Short-term investments	\$ -	\$ 5,570	\$ -	\$ 5,570
Debt securities	-	10,314	-	10,314
Equities	388,390	61,499	-	449,889
Collateral from securities lending	-	32,870	-	32,870
	<u>\$ 388,390</u>	<u>\$ 110,253</u>	<u>\$ -</u>	<u>\$ 498,643</u>

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

Equity Debt securities classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the securities’ relationship to benchmark quoted prices.

Equity securities classified in Level 3 of the fair value hierarchy are valued using discounted cash flow techniques.

**4. CONTRIBUTIONS AND ACTUARIAL ASSUMPTIONS**

The financial objective of the QPP is to fund members’ retirement benefits during their active service and to establish employer contribution rates which, expressed as a percentage of annualized covered payroll, will remain approximately level from year to year. The Employer contributes amounts that, together with Member Contributions and investment income, would ultimately be sufficient to accumulate assets to pay benefits when due.



Contributions to the TDA program are made on a voluntarily basis by certain members of the QPP.

**Member Contributions**

- Members who joined the QPP prior to July 1, 1973 (“Tier 1”) contribute on the basis of a normal rate of contribution which is assigned by the QPP at membership, and which is dependent upon age and actuarial tables in effect at the time of membership. Tier 1 members can also make Increased Take Home Pay (“ITHP”) contributions, for which they can receive an additional annuity after retirement
- Members who joined after July 1, 1973 and before July 27, 1976 (“Tier 2”) also contribute on the basis of a normal rate of contribution which is assigned by the QPP at membership, and which is dependent upon age and actuarial tables in effect at the time of membership. Note that the actuarial tables are different in Tier 2. Tier 2 members can also make ITHP contributions, for which they can receive an additional annuity after retirement.
- Members who joined after July 27, 1976 and before April 1, 2012 (“Tier 4”) contribute 3% of salary until the earlier of the 10th anniversary of their membership date, or upon the completion of 10 years of credited service. Certain Tier 4 members are enrolled in special early retirement plans and must therefore also make Additional Member Contributions (“AMC”), depending on the specific plan.
- Members who joined on or after April 1, 2012 (“Tier 6”) are required to make Basic Member Contributions (“BMC”) until they separate from service or until they retire. The BMC rate is dependent on annual wages earned during a plan year and ranges from 3% for salaries less than \$45,000 to 6% for salaries greater than \$100,000. Certain Tier 6 members are enrolled in special early retirement plans and must therefore also make Additional Member Contributions (“AMC”), depending on the specific plan.

**Employer Contributions** — Statutorily-required contributions (“Statutory Contributions”) to the QPP, determined by the System’s Chief Actuary of the Office of the Actuary (the “Actuary”) in accordance with State statutes and City laws, are generally funded by the employer within the appropriate fiscal year.



**5. QPP NET PENSION LIABILITY**

The components of the net pension liability of the Employers at June 30, 2014 and 2013 were as follows:

	(in thousands)	
	2016	2015
Total pension liability	\$ 4,800,698	\$ 4,460,233
Fiduciary net position *	<u>3,416,433</u>	<u>3,454,009</u>
Employers' net pension liability	<u>\$ 1,384,265</u>	<u>\$ 1,006,224</u>
Fiduciary net position as a percentage of the total pension liability	<u>71.20%</u>	<u>77.40%</u>

\* Such amounts represent the preliminary System's fiduciary net position and may differ from the final System's fiduciary net position.

**Actuarial Methods and Assumptions**

The total pension liability as of June 30, 2016 and 2015 were determined by actuarial valuations as of June 30, 2014 and June 30, 2013, respectively, that were rolled forward to develop the total pension liability to the respective fiscal year end. The following actuarial assumptions were applied to all periods included in the measurement:

Projected Salary Increases*	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per annum.
Investment Rate of Return*	7.0% per annum, net of investment expenses.
COLAs*	1.5% per annum for Auto COLA 2.5% per annum for escalation.

\* Developed assuming a long-term Consumer Price Inflation assumption of 2.5% per annum.

Mortality tables for Service and Disability pensioners were developed from an experience study of the QPP. The mortality tables for beneficiaries were also developed from an experience review. Pursuant to Section 96 of the New York City Charter, studies of the actuarial assumptions used to value liabilities of the five actuarially-funded New York City Retirement Systems ("NYCRS") are conducted every two years.

In October 2015 the independent actuarial auditor, Gabriel, Roeder, Smith & Company (GRS), issued a report on their NYC Charter-mandated actuarial experience studies for the four-year and ten-year periods ended June 30, 2013 (the GRS Report).



**Notes to Combined Financial Statements**  
**Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

Based, in part, on the GRS Report, on published studies of mortality improvement, and on input from the City's outside consultants and auditors, the Actuary proposed, and the Boards of Trustees of the BERS adopted, new post-retirement mortality tables for use in determining employer contributions beginning in Fiscal Year 2016. The new tables of post-retirement mortality are based primarily on the experience of the BERS (the Base Tables) and the application of Mortality Improvement Scale MP-2015, published by the Society of Actuaries in October 2015 (the Valuation Tables). Scale MP-2015 replaced Mortality Improvement Scale AA.

In addition, beginning in Fiscal Year 2016, the Actuary revised the Actuarial Asset Valuation Method to constrain the Actuarial Asset Value to be within a 20% corridor of the Market Value of Assets.

The two previously completed studies were published by The Hay Group ("Hay") dated December 2011 and by The Segal Company ("Segal"), dated November 2006. Hay analyzed experience for Fiscal Years 2006 through 2009 and made recommendations with respect to the actuarial assumptions and methods based on their analysis. Segal analyzed experience for Fiscal Years 2002 through 2005 and made recommendations with respect to the actuarial assumptions and methods based on their analysis.

**Expected Rate of Return on Investments**

The long-term expected rate of return on QPP investments was determined using a building-block method in which best-estimate ranges of expected real rates of return (i.e., expected returns, net of QPP investment expenses 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 real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

<b>Asset Class</b>	<b>Target Asset Allocation</b>	<b>Long-Term Expected Real Rate of Return</b>
U.S. public markets equities	35.00%	6.60%
International public market equities	17.00	7.00%
Emerging public market equities	5.00	7.90%
Private market equities	6.00	9.90%
Fixed Income (Core, TIPS, Opportunistic)	30.00	2.70%
Alternatives (Real Assets, Hedge Funds)	7.00	4.00%
Total	<u>100.00%</u>	



**Discount Rate**—The discount rate used to measure the total pension liability was 7%. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the rates applicable to the current Tier for each member and that Employer contributions will be made at rates as determined by the Actuary. Based on those assumptions, the QPP’s fiduciary net position was projected to be available to make all projected future benefit payments of current active and non-active QPP members. Therefore, the long-term expected rate of return on QPP investments was applied to all periods of projected benefit payments to determine the total pension liability.

The following presents the net pension liability of the Employers, calculated using the discount rate of 7.0%, as well as what the Employers’ net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.0 percent) or 1-percentage-point higher (8.0 percent) than the current rate:

	(in thousands)		
	1% Decrease (-6.0%)	Current Discount Rate (7.0%)	1% Increase (-8.0%)
Employers’ net pension liability June 30, 2016	\$1,948,548	\$1,384,265	\$911,336

## 6. MEMBER LOANS

Members of the QPP are permitted to borrow up to 75% of their employee contribution account balances, including accumulated interest, subject to the limitations of Section 72 of the Internal Revenue Code. The balance of QPP member loans receivable at June 30, 2016 and 2015 is \$46.75 million and \$44.68 million, respectively. When a member withdraws from the QPP with an outstanding QPP loan balance, this outstanding QPP loan balance will be deducted from the refund of the member’s contribution balance. When a member retires with an outstanding QPP loan balance, the member’s retirement benefit will be reduced by the actuarial value of the amount of the outstanding QPP loan balance, unless this balance is paid off.

Members of the TDA Program are permitted to borrow up to 75% of their TDA Program account balances, including accumulated interest, subject to the limitations of Section 72 of the Internal Revenue Code. The balance of TDA Program member loans receivable at June 30, 2016 and 2015 is \$38.92 million and \$36.51 million, respectively.

## 7. RELATED PARTIES

The Comptroller has been appointed by law as custodian for the assets of the QPP and the TDA Program. QPP fixed return fund securities are held by certain banks under custodial agreements with the Comptroller. The Comptroller also provides cash receipt and cash disbursement services to the System. Actuarial services are provided to the System by the New York City Office of the Actuary. The City’s Corporation Counsel provides legal services to the System. Other administrative services are also provided by the City. Costs of \$1.03 million and \$1.45 million were incurred on behalf of the



**Notes to Combined Financial Statements**  
**Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

System by other City agencies, primarily the Comptroller's Office for 2016 and 2015, respectively. The fixed return fund assets of the QPP are co-invested with those of the TDA Program. The variable return fund assets of the QPP are co-invested with those of the TDA Program and TRS (see Note 2). TRS holds the assets of the variable return fund.

**8. ADMINISTRATIVE EXPENSES**

In Fiscal Years 2016 and 2015, as per Chapter 307 of the New York State Laws of 2002, The Plan provided BERS with Corpus funding for administrative expenses in the amount of \$13.67 million and \$13.99 million, respectively.

**9. CONTINGENT LIABILITIES AND OTHER MATTERS**

**Contingent Liabilities** – The System has claims pending against it and has been named as a defendant in lawsuits and also has certain other contingent liabilities. Management of the System, on the advice of legal counsel, believes that such proceedings and contingencies will not have a material effect on the net position of the System or changes in the net position of the System. Under the existing State statutes and City laws that govern the functioning of the System, increases in the obligations of the System to members and beneficiaries ordinarily result in increases in the obligations of the New York City Board of Education to the System.

**Other Matters**

**Restatement of Fiscal Year 2015 combining financial statements** – The combining financial statements of the System as of June 30, 2015, have been adjusted to retrospectively apply the change in accounting for the allocation of investments between the QPP and TDA as follows:

Combining statement of Fiduciary Net Position: (In thousands)	2015 As Issued			
	QPP	TDA Program	Eliminations	Total
Cash	\$ 17,933	\$ 122	\$ -	\$ 18,055
Other assets	18,074	4,279	-	22,353
TDA Program's interest in the fixed return fund	-	1,152,729	(1,152,729)	-
TDA Program's interest in the fixed return fund	1,152,729	-	(1,152,729)	-
Other liability	-	-	-	-
Accounts payable	6,110	1,879	-	7,989
Net position	3,359,796	1,605,572	-	4,965,368

Combining statement of Fiduciary Net Position: (In thousands)	2015 As Restated			
	QPP	TDA Program	Eliminations	Total
Cash	\$ 16,143	\$ 122	\$ -	\$ 16,265
Other assets	106,254	-	(83,901)	22,353
TDA Program's interest in the fixed return fund	-	1,144,817	(1,144,817)	-
TDA Program's interest in the fixed return fund	1,144,817	-	(1,144,817)	-
Other liability	-	83,901	(83,901)	-
Accounts payable	6,199	-	-	6,199
Net position	3,454,009	1,511,359	-	4,965,368





**Notes to Combined Financial Statements**  
**Years Ended June 30, 2016 and 2015**  
**(Cont'd)**

<b>Combining statement of Changes in Fiduciary Net Position: (In thousands)</b>	<b>2015 As Issued</b>		
	<b>QPP</b>	<b>TDA Program</b>	<b>Total</b>
Other —payments to other retirement systems and other revenues/expenses	\$ (115,144)	67,571	(47,573)
TDA Program's interest in the fixed return fund	-	44,954	-
Net position, beginning of the year	3,279,265	1,437,462	4,716,727

<b>Combining statement of Changes in Fiduciary Net Position: (In thousands)</b>	<b>2015 As Restated</b>		
	<b>QPP</b>	<b>TDA Program</b>	<b>Total</b>
Other —payments to other retirement systems and other revenues/expenses	\$ (52,021)	4,448	(47,573)
TDA Program's interest in the fixed return fund	-	85,104	-
Net position, beginning of the year	3,350,505	1,366,222	4,716,727

**Actuarial Audit** — Pursuant to Section 96 of the New York City Charter, studies of the actuarial assumptions used to value liabilities of the five actuarially-funded New York City Retirement Systems (“NYCRS”) are conducted every two years.

Refer to Note 5 for the results of the most recent actuarial audits for the QPP.

**Revised Actuarial Assumptions and Methods** — In accordance with the ACNY and with appropriate practice, the Boards of Trustees of the five actuarially-funded NYCRS are to periodically review and adopt actuarial assumptions as proposed by the Actuary for use in the determination of Employer Contributions.

Based, in part, upon a review of the Segal and Hay studies, the Actuary issued a February 10, 2012 Report entitled “Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and After July 1, 2011 for the New York City Board of Education Retirement System” (“February 2012 Report”).

The Board of Trustees of BERS adopted those changes to actuarial assumptions that require Board approval. The State Legislature and the Governor enacted Chapter 3/13 to provide for those changes to the actuarial assumptions and methods that require legislation, including the AIR assumption of 7.0% per annum, net of investment expenses.

In October 2015 the independent actuarial auditor, Gabriel, Roeder, Smith & Company (GRS), issued a report on their NYC Charter-mandated actuarial experience studies for the four-year and ten-year periods ended June 30, 2013 (the GRS Report).

Based, in part, on the GRS Report, on published studies of mortality improvement, and on input from the City’s outside consultants and auditors, the Actuary proposed, and the Boards of Trustees of the BERS adopted, new post-retirement mortality tables for use in determining employer contributions



## Notes to Combined Financial Statements Years Ended June 30, 2016 and 2015 (Cont'd)

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beginning in Fiscal Year 2016. The new tables of post-retirement mortality are based primarily on the experience of the BERS (the Base Tables) and the application of Mortality Improvement Scale MP-2015, published by the Society of Actuaries in October 2015 (the Valuation Tables). Scale MP-2015 replaced Mortality Improvement Scale AA.

In addition, beginning in Fiscal Year 2016, the Actuary revised the Actuarial Asset Valuation Method to constrain the Actuarial Asset Value to be within a 20% corridor of the Market Value of Assets.

**New York State Legislation (only significant laws included)** — Chapter 18 of the Laws of 2012 amended portions of the Retirement and Social Security Law and Administrative Code of the City of New York that affect the contributions and benefits of members who join a New York State public retirement system (including BERS) on or after April 1, 2012. These changes are sometimes referred to as Tier 6.

Chapter 3 of the Laws of 2013 (“Chapter 3/13”) implemented changes in the actuarial procedures for determining Employer Contributions beginning Fiscal Year 2012. In particular, Chapter 3/13 continued the OYLM, employed the Entry Age Actuarial Cost Method (“EAACM”), established an Actuarial Interest Rate (“AIR”) assumption of 7.0% per annum, net of investment expenses, continued it and other interest rates until June 20, 2016, and defined the amortization of Unfunded Actuarial Accrued Liabilities (“UAAL”).

Chapter 489 of the Laws of 2013 (“Chapter 489/13”) extended the WTC Disability Laws to vested members.



**Required Supplementary Information (Unaudited)**  
**Qualified Pension Plan**  
**Schedule 1**

**SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS<sup>1</sup>**

(In thousands)

	<b>2016</b>	<b>2015 (Restated)<sup>2</sup></b>	<b>2014</b>
Total pension liability:			
Service cost	\$ 153,107	\$ 147,898	\$ 142,687
Interest	320,315	299,592	288,162
Changes of benefit terms	-	-	-
Differences between expected and actual experience	(75,907)	50,148	-
Changes of assumptions	183,677	-	-
Benefit payments and withdrawals	<u>(240,727)</u>	<u>(223,244)</u>	<u>(214,315)</u>
Net change in total pension liability	340,465	274,394	216,534
Total pension liability – beginning	<u>4,460,233</u>	<u>4,185,839</u>	<u>3,969,305</u>
Total pension liability – ending (a)	<u>4,800,698</u>	<u>4,460,233</u>	<u>4,185,839</u>
Plan fiduciary net position:			
Employer contributions	265,532	258,099	214,590
Member contributions	38,581	39,564	37,193
Net investment income	164,144	177,166	875,453
Payment of interest on TDA program fixed return funds	(240,727)	(85,104)	(206,615)
Benefit payments and withdrawals	(12,818)	(223,244)	(214,315)
Administrative expenses	(94,789)	(10,956)	(9,776)
Other	<u>(157,499)</u>	<u>(52,021)</u>	<u>(70,916)</u>
Net change in plan fiduciary net position	(37,576)	103,504	625,614
Plan fiduciary net position – beginning	<u>3,454,009</u>	<u>3,350,505</u>	<u>2,653,652</u>
Plan fiduciary net position – ending (b)	<u>3,416,433</u>	<u>3,454,009</u>	<u>3,279,266</u>
Employer's net pension liability – ending (a)-(b)	<u>\$ 1,384,265</u>	<u>\$ 1,006,224</u>	<u>\$ 906,574</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>71.20%</u>	<u>77.40%</u>	<u>78.34%</u>
Covered-employee payroll <sup>3</sup>	<u>\$ 1,008,056</u>	<u>\$ 1,016,822</u>	<u>\$ 989,168</u>
City's net pension liability as a percentage of covered-employee payroll	<u>137.30%</u>	<u>99.00%</u>	<u>91.65%</u>

1. Post-Publication Adjustments to Assets at June 30, 2014 and Restated Assets at June 30, 2015.

2. Projected Employee Payroll at Time 1.0 under One-Year Lag Methodology.

3. In accordance with GASB No. 67, paragraph 50, such information was not readily available for periods prior to 2013.





**Required Supplementary Information (Unaudited)**  
**Qualified Pension Plan (Cont'd)**  
**Schedule 2**

**SCHEDULE OF EMPLOYERS' CONTRIBUTIONS**  
**(In thousands)**

	<b>2016</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>	<b>2008</b>	<b>2007</b>
Actuarially determined contribution	\$ 265,532	\$ 258,099	\$ 214,590	\$ 196,246	\$ 213,651	\$ 180,191	\$ 147,349	\$ 134,225	\$ 143,100	\$ 129,820
Contributions in relation to the actuarially determined contribution	<u>265,532</u>	<u>258,099</u>	<u>214,590</u>	<u>196,246</u>	<u>213,651</u>	<u>180,191</u>	<u>147,349</u>	<u>134,225</u>	<u>143,100</u>	<u>129,820</u>
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered-employee payroll	<u>\$1,008,056</u>	<u>\$1,016,822</u>	<u>\$ 989,168</u>	<u>\$ 886,186</u>	<u>\$ 879,476</u>	<u>\$ 880,656</u>	<u>\$ 826,782</u>	<u>\$ 755,516</u>	<u>\$ 729,098</u>	<u>\$ 696,422</u>
Contributions as a percentage of covered-employee payroll	<u>26.34%</u>	<u>25.38%</u>	<u>21.69%</u>	<u>22.15%</u>	<u>24.29%</u>	<u>20.46%</u>	<u>17.82%</u>	<u>17.77%</u>	<u>19.63%</u>	<u>18.64%</u>

## Required Supplementary Information (Unaudited) Qualified Pension Plan (Cont'd) Schedule 2 (Cont'd)

### NOTES TO SCHEDULE OF EMPLOYERS' CONTRIBUTIONS

**Note:** Any factors that significantly affect trends in the amounts reported (e.g. changes in benefit terms, changes in size or composition of member population, or use of different assumptions) also should be disclosed with this schedule.

The above actuarially determined contributions were developed using a One-Year Lag Methodology, under which the actuarial valuation determines the employer contribution for the second following fiscal year (e.g. Fiscal Year 2016 contributions were determined using an actuarial valuation as of June 30, 2014). The methods and assumptions used to determine the actuarially determined contributions are as follows:

Valuation Dates	June 30, 2014	June 30, 2013	June 30, 2012	June 30, 2011	June 30, 2010	June 30, 2009 - June 30, 2005
Actuarial cost method	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Frozen Initial Liability <sup>1</sup>
Amortization method for Unfunded Actuarial Accrued Liabilities:						
Initial Unfunded Post-2010 Unfunded	Increasing Level Dollar	Increasing Dollar Level Dollar	Increasing Dollar Level Dollar	Increasing Dollar Level Dollar	Increasing Dollar Level Dollar	NA <sup>2</sup> NA <sup>2</sup>
Remaining amortization period:						
Initial Unfunded	18 years (closed)	19 years (closed)	20 years (closed)	21 years (closed)	22 years (closed)	NA <sup>2</sup>
2010 ERI	2 years (closed)	3 years (closed)	4 years (closed)	5 years (closed)		
2011 Actuarial gain/loss	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA <sup>2</sup>
2012 Actuarial gain/loss	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA	NA <sup>2</sup>
2013 Actuarial gain/loss	14 years (closed)	15 years (closed)	NA	NA	NA	NA <sup>2</sup>
2014 Actuarial gain/loss	15 years (closed)	NA	NA	NA	NA	NA
Actuarial Asset Valuation (AAV) Method	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance. <sup>5</sup>	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 1999.
Actuarial assumptions:						
Assumed rate of return <sup>3</sup>	7.0% per annum, net of investment expenses <sup>3</sup>	7.0% per annum, net of investment expenses <sup>3</sup>	7.0% per annum, net of investment expenses	7.0% per annum, net of investment expenses	7.0% per annum, net of investment expenses	8.0% per annum, net of investment expenses
Post-retirement mortality	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2006
Active service: withdrawal, death, disability, service retirement	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2006 <sup>4</sup>
Salary increases <sup>3</sup>	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year. <sup>3</sup>	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year. <sup>3</sup>	In general, merit and promotion increases plus assumed general increases of 3.0% per year.	In general, merit and promotion increases plus assumed general increases of 3.0% per year.	In general, merit and promotion increases plus assumed general increases of 3.0% per year.	In general, merit and promotion increases plus assumed general increases of 3.0% per year.
Cost-of-Living Adjustments <sup>3</sup>	1.5% per annum for Auto COLA. 2.5% per annum for Elcalation.	1.5% per annum for Auto COLA. 2.5% per annum for Elcalation.	1.5% per annum for Auto COLA. 2.5% per annum for Elcalation.	1.5% per annum for Auto COLA. 2.5% per annum for Elcalation.	1.5% per annum for Auto COLA. 2.5% per annum for Elcalation.	1.3% per annum

1. Under this actuarial cost method, the Initial Liability was reestablished as of June 30, 1999, by the Entry Age Actuarial Cost Method but with the unfunded actuarial accrued liability (UAAL) not less than \$0. The financial results using this Frozen Initial Liability Actuarial Cost Method are the same as those that would be produced using the Aggregate Actuarial Cost Method.

2. In conjunction with Chapter 85 of the Laws of 2000, there is an amortization method. However, the June 30, 1999 UAAL for the QPP equaled \$0 and no amortization period was required.

3. Developed using a long-term Consumer Price Inflation assumption of 2.5% per year.

4. In the June 30, 2009 actuarial valuation, the tables adopted by the Board of Trustees during Fiscal Year 2006 were supplemented by additional assumptions adopted by the Board of Trustees during Fiscal Year 2011 for valuing benefits payable to Tier 3 active members.

5. As of June 30, 2014 (Lag) valuation, the AAV is constrained to be no more than 20% of Market Value.

**Required Supplementary Information (Unaudited)**  
**Qualified Pension Plan (Cont'd)**  
**Schedule 3**

---

**SCHEDULE OF INVESTMENT RETURNS**

The following table displays annual money-weighted rate of return, net of investment expense, for each of the past three fiscal years:

<b>Fiscal Year Ended</b>	<b>Weighted Rate of Return</b>
June 30, 2016	0.20%
June 30, 2015	3.15%
June 30, 2014	19.51%

**Note:** In accordance with GASB No. 67, paragraph 50, such information was not readily available for periods prior to 2013.



**SCHEDULE OF INVESTMENT EXPENSES**

FUND MANAGER	CATEGORY	AMOUNT (IN \$)
<b>1 Fixed Investment Expenses:</b>		
Apollo Investment Fd VIII	Alternative Inv Equity	206,541.42
Ardian - ASF VII	Alternative Inv Equity	13,942.00
Ardian Capital	Alternative Inv Equity	73,816.00
Bridgepoint Advisors LTD	Alternative Inv Equity	101,925.10
Carlyle Ptnrs VI	Alternative Inv Equity	361,502.13
Centerbridge	Alternative Inv Equity	38,655.00
Crestview Ptnrs II	Alternative Inv Equity	112,004.00
CVC Capital	Alternative Inv Equity	357,247.15
Equity VII	Alternative Inv Equity	255,221.82
Landmark	Alternative Inv Equity	6.95
Mesirow Partners Fund III	Alternative Inv Equity	2.15
Mesirow Partners Fund IV	Alternative Inv Equity	47,563.18
Mesirow Partners Fund V	Alternative Inv Equity	251,423.73
Mill City Capital II	Alternative Inv Equity	18,318.76
New Main Stream Capital II	Alternative Inv Equity	25,355.86
New York Fairview	Alternative Inv Equity	268,191.58
Patriot Partners II	Alternative Inv Equity	92,615.02
Platinum Eq Cap Ptnrs III	Alternative Inv Equity	170,220.39
Raine Group LLC	Alternative Inv Equity	160,440.00
Siris Capital	Alternative Inv Equity	40,610.00
Stellex Partners	Alternative Inv Equity	89,200.00
Valor Equity Partners	Alternative Inv Equity	184,154.00
Vista Equity Partners Fund V, L.P.	Alternative Inv Equity	550,900.00
Vista Equity Partners Fund VI, L.P.	Alternative Inv Equity	20,198.00
Warburg Pincus XI	Alternative Inv Equity	108,332.92
Warburg Pincus XII	Alternative Inv Equity	238,256.98
WCAS XII	Alternative Inv Equity	34,874.00
Webster Capital III	Alternative Inv Equity	22,062.00
		<b>\$ 3,843,580.14</b>
Prudential Privest	Alternative Inv FI	<b>\$ (4,448.13)</b>
Blackstone	Alternative Inv Real Estate	454,386.00
Blackstone Real Estate	Alternative Inv Real Estate	169,757.00
Brookfield Asset Management	Alternative Inv Real Estate	25,759.87
Brookfield Infr Fd II	Alternative Inv Real Estate	107,635.31
Brookfield Stra Re Ptnrs	Alternative Inv Real Estate	99,804.00
Caryle Realty Partners	Alternative Inv Real Estate	338,994.00
Emmes Asset Mgmt Co	Alternative Inv Real Estate	112,912.00
First Reserve Energy	Alternative Inv Real Estate	154,608.00
Franklin Templeton Fd	Alternative Inv Real Estate	223,021.13
Global Infrastructure Mgmt LLC	Alternative Inv Real Estate	93,843.00
Hudson Separate Account	Alternative Inv Real Estate	32,961.93
Industry Funds Management Pty	Alternative Inv Real Estate	841.61
Jamestown Premier Funds	Alternative Inv Real Estate	210.03
KKR Global Infra	Alternative Inv Real Estate	221,811.00
Lasalle US Property Fd	Alternative Inv Real Estate	267,493.27
RFM NYCRS Sandy LLC	Alternative Inv Real Estate	227,342.75
Tristan European Property Inv	Alternative Inv Real Estate	37.32
UBS Trumbull Property Fd	Alternative Inv Real Estate	452,245.93
		<b>\$ 2,983,664.15</b>



**Additional Supplementary Information**  
**Fiscal Year Ended June 30, 2016**  
**(In thousands) (Cont'd)**

**SCHEDULE OF INVESTMENT EXPENSES (CONT'D)**

<b>FUND MANAGER</b>	<b>CATEGORY</b>	<b>AMOUNT (IN \$)</b>
Affinity Invt Advisors	Equity	86,719.78
Clarkston SMID	Equity	86,122.04
Herndon Capital/PIM ATLANTA LIFE	Equity	36,031.83
Nicholas Asset Mgmt	Equity	14,614.39
Redwood Investments	Equity	89,217.15
Blackrock	Equity	2,377.00
Bowling Portfolio Mgmt	Equity	37,335.32
Channing SVC	Equity	126,703.21
Daruma	Equity	4.02
Emon Transition	Equity	2.26
FIS - Eudaimonia	Equity	36,275.27
Hahn Capital Management LLC	Equity	28,359.73
High Pointe	Equity	29,834.52
Huber Capital Management	Equity	28,123.01
Martin Invt Mgmt	Equity	89,734.01
Nicholas Inv Par	Equity	69,062.33
Nichols SCG	Equity	77,063.94
Piermont SCV	Equity	128,151.29
PIM Lombardia Capital Partners	Equity	21,415.59
Rice Hall SCG	Equity	70,638.58
Seizart Capital Partners	Equity	35,429.08
Wellington Mgmt MCC	Equity	734,677.41
Zevenbergen	Equity	5.16
		<b>\$ 1,827,896.92</b>
Blackrock	Fixed Income	112,858.52
Loomis Sayles	Fixed Income	360,088.34
Prudential Credit	Fixed Income	123,787.70
Security Lending	Fixed Income	346,747.87
Shenkman	Fixed Income	374,584.53
State Street	Fixed Income	55,584.98
Taplin Canada	Fixed Income	88,110.84
		<b>\$ 1,461,762.78</b>
Acadian EAFE Small Cap MTA	Intl Equity	1,455,429.07
Ballie Group Trust	Intl Equity	655,872.57
Cony Grp Acadian	Intl Equity	305,353.23
prucegrove	Intl Equity	782,300.33
		<b>\$ 3,198,955.20</b>
Blackrock R 1000 Growth	Mutual Fund Equity	25,285.02
Blackrock R 1000 Value	Mutual Fund Equity	27,983.71
Blackrock R 2000 Growth	Mutual Fund Equity	1,133.34
Blackrock R 2000 Value	Mutual Fund Equity	967.03
		<b>\$ 55,369.10</b>
Babson BL MTA	Mutual Fund Fixed Income	<b>\$ 105,865.65</b>
ETI II - ACS	Mutual Fund Mortgage	12,057.67
ETI CCD PPAR	Mutual Fund Mortgage	0.63
AFL-CIO Housing Inv Trust	Mutual Fund Mortgage	62,914.73
		<b>\$ 74,973.03</b>
PIMCO TIPS MTA	TIPS	20.09
State Street TIPS MTA	TIPS	4,767.13
		<b>\$ 4,787.22</b>
	<b>Sub total</b>	<b>\$ 13,552,406.06</b>





**SCHEDULE OF INVESTMENT EXPENSES (CONT'D)**

<b>2</b>	<b><u>Legal Fees</u></b>		
	Blackstone Real Estate Partners VII	1,375.00	
	Bryan Cave	961.54	
	Cox, Castle & Nicholson	5,242.57	
	Daruma Asset Mgt Inc.	46,323.30	
	Day Pitney	5,517.11	
	Foster Pepper	12,560.58	
	Morgan Lewis & Bockius	4,869.07	
	Nixon Peabody	1,438.14	
	Pillsbury Winthrop Shaw Pittman	989.50	
	Reinhart Boerner Van Deuren	4,343.41	
	Seward & Kissel	56.76	
	<b>Sub total</b>	<b>\$ 83,676.98</b>	
<b>3</b>	<b><u>Consultant Fees</u></b>		
	Buck Consultants LLC	85,000.00	
	Segal Rogerscasey	94,999.98	
	Courtland Partners	10,249.61	
	Hamilton Lane	175,000.00	
	Prudential	165,340.00	
	Stepstone - Infrastructure	10,000.00	
	Townsend Group	27,868.67	
	Institutional Shareholder Services	602.59	
	Abel/Noser Corp	1,638.90	
	Global Trading Analytics	329.70	
	<b>Sub total</b>	<b>\$ 571,029.45</b>	
<b>4</b>	<b><u>Variable Investment Expenses</u></b>		
	Qualified Pension Plan	89,013.88	
	Tax - Deferred Annuity	702,328.74	
	<b>Sub total</b>	<b>791,342.62</b>	
	<b>Investment Expenses FY 16</b>	<b><u><u>\$14,998,455.11</u></u></b>	

**Additional Supplementary Information**  
**Fiscal Year Ended June 30, 2016**  
(In thousands) (Cont'd)

**SCHEDULE OF DIRECT PAYMENTS TO CONSULTANTS**

<b>INDIVIDUAL OR FIRM NAME</b>	<b>NATURE OF SERVICES</b>	<b>AMOUNT</b>
<b>Buck Consultants, LLC</b> 485 Lexington Avenue New York, NY 10017	Investment Consultation	\$ 85,000.00
<b>Prudential Insurance Co.</b> 200 Wood Ave South Iselin, NJ 08830	Investment Consultation	165,340.00
<b>Segal Rogerscasey</b> 333 West 34th Street New York, NY 10001	Investment Consultation	94,999.98
<b>Gary Tunncliffe &amp; Jack Ziegler, LLC</b> 321 Union Street, #4A Brooklyn, NY 11231	CPMS Consultants*	596,160.00
<b>Vitech Systems Group, Inc.</b> 401 Park Avenue South, 12th Floor New York, NY 10016	CPMS Consultants	4,119,250.00
<b>Winmill Software</b> P.O. Box 4595 New York, NY 10163	CPMS Consultants	228,750.00
<b>Total Consulting Fees for FY 2016</b>		<b><u>\$ 5,289,499.98</u></b>

\* CPMS - Comprehensive Pension Management System



**SCHEDULE OF ADMINISTRATIVE EXPENSES**

(In thousands)

	<b>EXPENSE TYPE</b>	<b>AMOUNT</b>
<b>1</b>	<b><u>Administrative Expenses (QPP):</u></b>	
	Salaries paid to Plan Personnel	\$ 8,249,240
	Consumable Supplies and Materials	95,192
	Furniture and Equipment	326,570
	General Services	120,289
	Contractual services	<u>4,027,193</u>
	Sub-Total	<b>\$ 12,818,483</b>
<b>2</b>	<b><u>Administrative Expenses (TDA):</u></b>	
	Contractual services	<u>850,108</u>
	Sub-Total	<b>\$ 850,108</b>
<b>3</b>	<b><u>Miscellaneous Expenses:</u></b>	
	Related Parties Administrative Expenses	Sub-Total \$ 1,032,975
	(Adm expenses made by the Comptroller on our behalf. Charged on investment)	
	<b>Total Administrative Expenses for FY 2016</b>	<b><u><u>\$ 14,701,566</u></u></b>





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## INVESTMENT

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333 West 34th Street New York, NY 10001-2402  
T 212.251.5061 www.segalrc.com

October 25, 2016

New York City Board of Education Retirement System (BERS)  
65 Court Street  
Brooklyn, NY 11201

Re: Report on Investment Activity

Dear Members of the New York City Board of Education Retirement System:

**Fund Summary**

The Board of Education Retirement System Total Fund returned +0.17%, net of fees, for the Fiscal Year (FY) ending June 2016, compared to +0.75% for the Board of Education Policy Benchmark<sup>1</sup>, against which it is measured. Performance for the FY ranked in the third quartile of a peer group of public funds. The Fund increased in value and ended the fiscal year at \$4.50 billion (compared to \$4.40 billion last year). Over the 10-year time period, the Fund remains ahead of benchmark, with a +6.31% average annual return versus +6.10% for the benchmark. Longer term, this 10-year performance ranks in the top quartile of a peer group.

**Economic and Market Comment**

Slow growth and low interest rates continued through this fiscal year. These conditions are not favorable for strong portfolio performance. In addition, uncertainty around the U.S. election and the vote in the UK to exit from the European Union were cited as reasons why the U.S. and non U.S. stock markets were not as strong as in prior years. On the economic front, the dramatic decline in energy prices, while a positive for consumers was a major headwind impacting both energy company capital spending and the economies of many emerging market countries.

<sup>1</sup> The Board of Education Policy Benchmark is a custom index representing the weighted average return of the benchmarks for each major investment program in the Plan. The Policy Benchmark as of 6/30 consisted of: 42.26% Russell 3000, 17% MSCI EAFE, 5% MSCI Emerging Markets, 2.91% Russell 3000 + 300bps, 2.83% NFI ODCE Net + 100bps, 17% NYC Core + 5 fixed income, 5% Barclays Capital US TIPS, 5.5% Citigroup BB&B Index, and 2.5% Credit Suisse Leveraged Loan Index.

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Real U.S. GDP grew at an annualized rate of 1.2% thru June 30, 2016. Positive contributors to GDP included personal consumption expenditures (PCE) and exports. At its June meeting, the Federal Open Market Committee (FOMC) stated the following:

- Economic activity has been expanding at an accelerated pace;
- The labor market has slowed with diminishing employment gains;
- Household spending has increased;
- Inflation remained below the Federal Reserve (Fed)'s 2% objective due to decreased energy prices and lower-priced non-energy imports, but is expected to rise to 2% over the medium term;
- The Federal Funds Rate will remain between 0.25% and 0.50%; and,
- To maintain an accommodative policy, the Fed will continue reinvesting principal payments from holdings of agency debt and agency-mortgage-backed securities, and will keep rolling over maturing Treasury securities at auction.

Despite expectations at the beginning of the year, the Fed has not raised interest rates to date in 2016. In June 2016, the European Central Bank held its target refinancing rate at 0%, its marginal lending rate at 0.25% and its deposit rate at -0.40%. The Bank of Japan (BoJ) maintained its quantitative and qualitative easing policy of purchasing Japanese government bonds (JGBs), with the goal of increasing the monetary base and to lower their rates.

The headline seasonally adjusted Consumer Price Index (CPI)\* was up +0.84% in Q2, and increased +1.05% on a YoY basis. Seasonally adjusted Core CPI, which excludes food and energy prices, rose 0.575% in Q2, bringing the YoY core CPI increase to 2.23%. On an unadjusted 12-month basis ending June 2016, the energy component fell the most at -9.4%. Commodities less food and energy commodities were also slightly negative. Food and services less energy services were both positive.

The U.S. stock market, as measured by the Russell 3000 stock index, returned +2.14%, well below the strong returns in the prior two fiscal years. International equity performance continued in the negative territory for the FY, as the MSCI EAFE posted a loss of -9.7%. This is not surprising given their more direct vulnerability to fiscal concerns in Europe and the potential for economic instability in Asia. Fixed income returns were positive as interest rates have generally declined with the Barclays Aggregate Index, which represents a proxy of investment-grade bonds, returning +6.0% for the fiscal year.



**Fund Description**

Asset allocation is expected to be a major contributor to the Board of Education Retirement System's Fund total return. The Trustees establish a target asset mix after considering the long-term growth prospects of a diversified portfolio of investments and the expected costs of the plan participants' benefits. During the FY, a revised investment policy was approved that increased the allocation to Private Equity, Real Estate and Infrastructure while reducing U.S. equities and developed market non US equities. These are long term commitments expected to improve the risk and return profile of the fund. We expect that they will be phased in over several fiscal years as attractive investment opportunities are approved. The fund's new target asset mix going forward will be 72% Equity (including the Private and Public equities, Real Estate and Infrastructure) and 28% Fixed Income. Over the long-term investment future, we expect our revised equity allocation will outperform fixed income by a significant margin.

For the FY ending June 2016, the total Fixed Income return of 4.5% outperformed the U.S. and non-U.S. public equity returns. Total Equity returns were -1.6% in FY 2016 and were particularly responsible for the Fund's underperformance versus expectations. The fund is primarily invested in index funds for the U.S. equity allocation, which helped relative performance. The active US and non US equity managers did not add the expected levels of outperformance during the FY. As part of our ongoing monitoring we review the manager contributions and the structure of the fund in order to achieve the expected levels of returns. The Fund's current level of diversification into alternative assets did help performance in FY 2016 as the Private Equity, Real Estate and Infrastructure investments did well for the Fund. However, the current allocation to those sectors is not large enough to offset the underperformance elsewhere in the portfolio.

The expectation is that global growth will be inconsistent across market sectors and certain geographic areas. We will be implementing the approved diversifications and rebalancing the fund to mitigate the volatility from these dislocations and improve the consistency of outcomes for the fund. Market conditions and fund performance will be closely monitored to accomplish the goal of providing the benefits as promised to participants.

Sincerely,



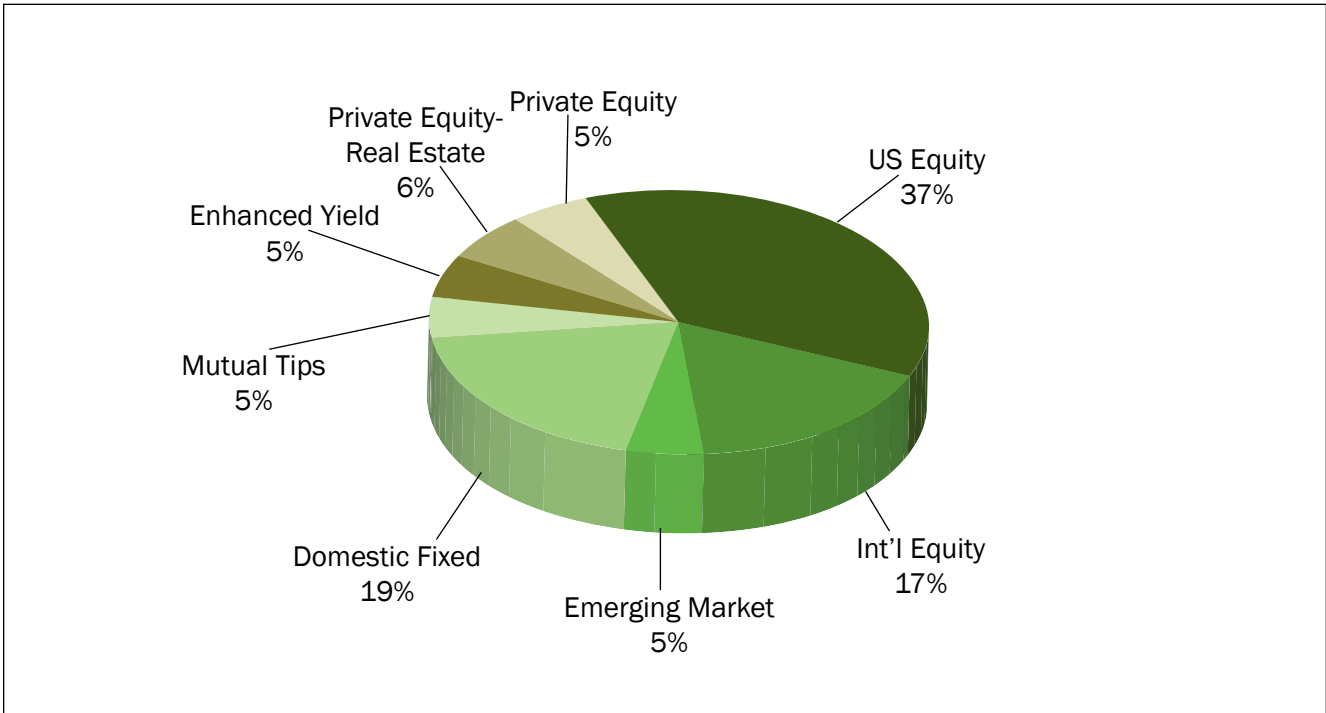
Michael C. Wright

20071755v1/14358.001





**Qualified Pension Plan and Tax Deferred Annuity Program (Fixed)  
Asset Allocation (Fixed)  
Fiscal Year Ended June 30, 2016**



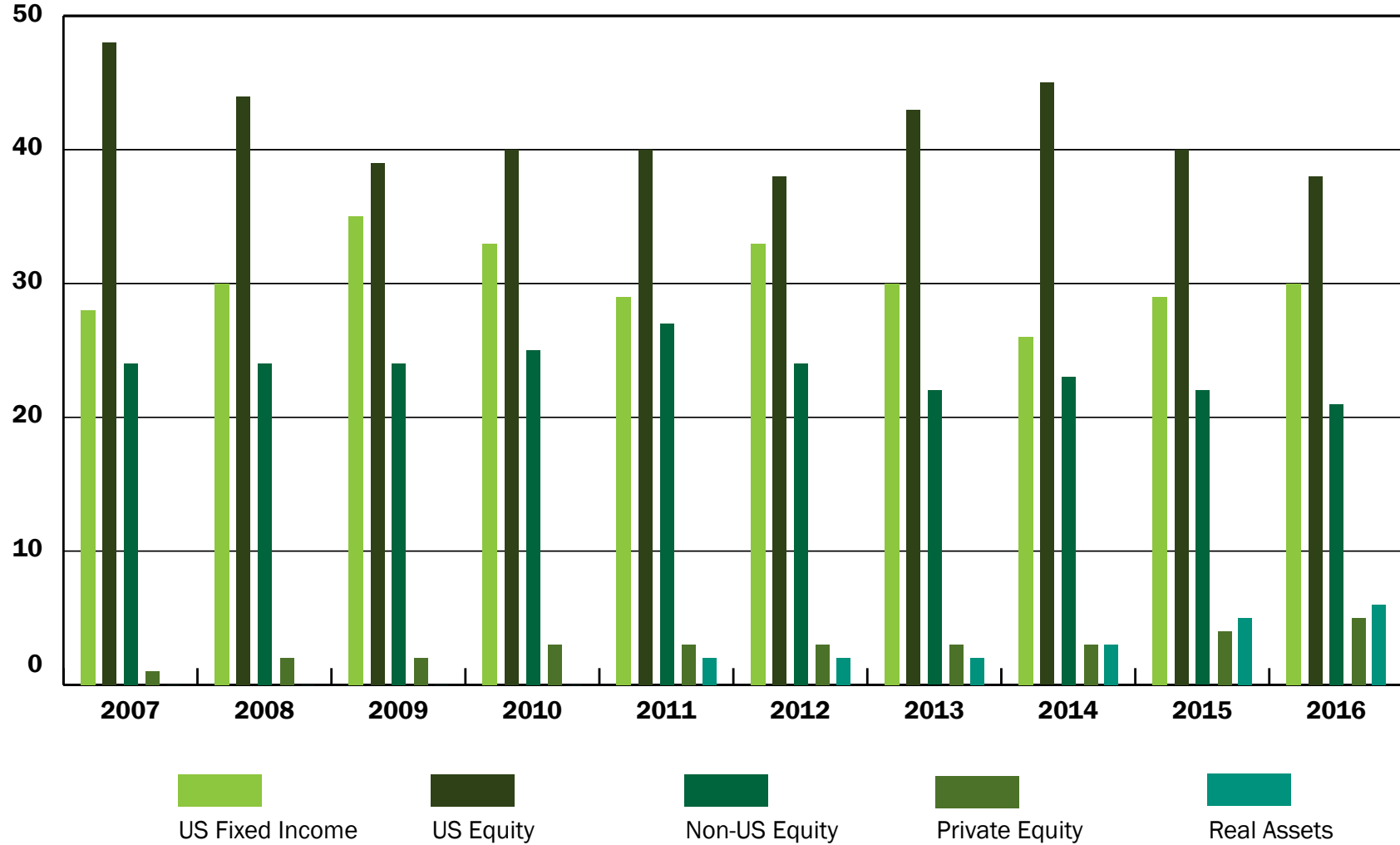
Years	US Equity	Int'l Equity	Emerging Market	Domestic Fixed	Mutual TIPS	Enhanced Yield	Private Equity-Real Estate	Private Equity
6/30/2007	47.90	19.30	4.50	20.40	2.80	4.40	0.00	0.70
6/30/2008	36.49	19.57	16.38	20.62	2.69	2.95	0.00	1.30
6/30/2009	34.28	20.48	11.00	26.06	2.73	3.94	0.00	1.51
6/30/2010	36.22	21.67	8.46	25.27	2.72	3.66	0.00	2.00
6/30/2011	39.97	21.51	5.37	22.63	2.62	3.43	1.66	2.81
6/30/2012	37.79	19.03	4.48	24.81	2.46	6.00	2.15	3.28
6/30/2013	42.90	17.59	4.56	20.01	3.91	5.60	2.39	3.04
6/30/2014	44.72	18.27	4.67	16.69	3.38	6.19	2.83	3.25
6/30/2015	40.15	17.06	4.94	20.67	3.16	5.48	4.47	4.07
6/30/2016	37.00	17.00	5.00	19.50	5.00	5.50	6.03	4.97





**Assets Allocation (Fixed)**  
**Fiscal Years Ended June 30, 2007 - June 30, 2016**

% of  
**Portfolio**



**Investment Summary (Fixed and Variable)**  
**Fiscal Year Ended June 30, 2016**  
(In thousands)

<u>Type of Investments</u>	<u>Fair Value</u>	<u>Percentage</u>
<b>Short Term Investments</b>	\$ 113,900	2.10%
<b>Debt Securities</b>	890,152	16.39
<b>Promissory Notes</b>	-	-
<b>Equity Securities</b>	726,951	13.39
<b>Alternative Investments</b>	506,922	9.34
<b>Collective Trust Funds</b>		
International Equity	942,911	17.36
Domestic Equity	1,401,665	25.81
Mortgage Debt Security	28,956	0.53
Treasury Inflation-Protected Securities	218,608	4.03
Fixed Income	106,684	1.96
<b>Total Collective Trust Funds</b>	<b>2,698,824</b>	<b>49.70</b>
<b>Collateral From Securities Lending</b>	<u>493,265</u>	<u>9.08</u>
<b>Total Investments</b>	<u><u>\$ 5,430,014</u></u>	<u><u>100.00%</u></u>





**Schedule of Investment Returns (Fixed)**  
**Annualized Investments Results (Unaudited)**  
**Fiscal Year Ended June 30, 2016**

Assets \$K	Assets %		3 Mos Apr-16 Jun-16 %	6 Mos Jan-16 Jun-16 %	1 Yr Jul-15 Jun-16 %	3 Yrs Jul-13 Jun-16 %	5 Yrs Jul-11 Jun-16 %	10 Yrs Jul-06 Jun-16 %
<b>2,199,731</b>	<b>44.35</b>	<b>U.S. Equities</b>	<b>2.53</b>	<b>3.31</b>	<b>1.37</b>	<b>11.27</b>	<b>11.23</b>	<b>7.35</b>
		Russell 3000 Index	2.63	3.62	2.14	12.56	11.60	7.40
<b>942,911</b>	<b>19.01</b>	<b>Total International Equities</b>	<b>-0.14</b>	<b>-0.34</b>	<b>-11.25</b>	<b>-3.03</b>	<b>1.22</b>	<b>3.79</b>
716,811	14.45	<b>Int'l. Equities-Developed Markets</b>						
		MSCI EAFE	-2.79	-6.65	-15.43	-5.39	0.05	0.21
226,100	4.56	<b>Int'l. Equities-Emerging Markets</b>						
		MSCI Emerging Markets Free	0.66	6.41	-12.05	-2.19	-3.78	3.54
<b>3,142,642</b>	<b>63.35</b>	<b>Total Equities - Public &amp; Private</b>						
<b>1,234,010</b>	<b>24.88</b>	<b>U.S. Fixed Income</b>	<b>3.05</b>	<b>6.30</b>	<b>4.60</b>	<b>6.69</b>	<b>4.86</b>	<b>6.23</b>
<b>476,001</b>	<b>9.60</b>	<b>Securities lending</b>	-	-	-	-	-	-
<b>107,821</b>	<b>2.17</b>	<b>Short-term Investments</b>	<b>0.13</b>	<b>0.33</b>	<b>0.47</b>	<b>0.28</b>	<b>0.42</b>	<b>1.67</b>
<b>4,960,474</b>	<b>100.00</b>	<b>Total Portfolio</b>	<b>2.11</b>	<b>3.44</b>	<b>0.41</b>	<b>6.64</b>	<b>6.99</b>	<b>6.31</b>

Yield data were obtained from the NYCBERS Performance Overview as of June 30, 2016

These returns are calculated using a time weighted rate of return based on the market value of the portfolio, for time periods greater than one year the returns are annualized.

**List of 50 Largest Equity Holdings (Fixed)  
Fiscal Year Ended June 30, 2016**

NAME OF EQUITY HOLDINGS	COST	FAIR VALUE
1 GENPACT LTD COMMON STOCK USD.01	\$ 2,089,763	\$ 3,418,262
2 MARKEL CORP COMMON STOCK	1,674,672	3,176,569
3 ADVANCE AUTO PARTS INC COMMON STOCK USD.0001	1,262,863	3,137,562
4 VANTIV INC CL A COMMON STOCK USD.00001	1,188,071	2,951,294
5 EQUIFAX INC COMMON STOCK USD1.25	1,034,156	2,891,825
6 LENNOX INTERNATIONAL INC COMMON STOCK USD.01	827,310	2,842,446
7 M & T BANK CORP COMMON STOCK USD.5	2,130,518	2,806,426
8 WASTE CONNECTIONS INC COMMON STOCK	2,518,410	2,770,250
9 IDEX CORP COMMON STOCK USD.01	1,519,724	2,481,308
10 GLOBAL PAYMENTS INC COMMON STOCK	1,981,959	2,465,322
11 NVR INC COMMON STOCK USD.01	929,890	2,451,528
12 METTLER TOLEDO INTERNATIONAL COMMON STOCK USD.01	1,967,231	2,395,700
13 UGI CORP COMMON STOCK	1,052,229	2,367,978
14 DENTSPLY SIRONA INC COMMON STOCK USD.01	1,554,389	2,344,678
15 AKAMAI TECHNOLOGIES INC COMMON STOCK USD.01	2,026,042	2,208,340
16 TRANSUNION COMMON STOCK USD.01	1,673,323	2,181,960
17 VERISIGN INC COMMON STOCK USD.001	1,085,350	2,060,515
18 TRIMBLE INC COMMON STOCK	2,196,595	2,033,134
19 NATIONAL INSTRUMENTS CORP COMMON STOCK USD.01	1,999,411	2,010,502
20 CARMAX INC COMMON STOCK USD.5	1,369,056	1,938,940
21 FACTSET RESEARCH SYSTEMS INC COMMON STOCK USD.01	1,154,745	1,918,638
22 ROBERT HALF INTL INC COMMON STOCK USD.001	1,360,764	1,903,917
23 WATERS CORP COMMON STOCK USD.01	1,180,700	1,885,976
24 FIRST REPUBLIC BANK/CA COMMON STOCK USD.01	866,111	1,850,536
25 GUIDEWIRE SOFTWARE INC COMMON STOCK USD.0001	1,595,756	1,833,284
26 HUNT (JB) TRANSPRT SVCS INC COMMON STOCK USD.01	1,536,801	1,824,486
27 AMPHENOL CORP CL A COMMON STOCK USD.001	1,028,567	1,816,788
28 ALLEGHENY CORP COMMON STOCK USD1.0	1,050,700	1,811,416
29 PATTERSON COS INC COMMON STOCK USD.01	1,380,424	1,766,423
30 WEX INC COMMON STOCK USD.01	1,496,175	1,756,996
31 HARLEY DAVIDSON INC COMMON STOCK USD.01	1,336,123	1,733,631
32 TRIPADVISOR INC COMMON STOCK USD.001	1,523,168	1,677,651
33 ALKERMES PLC COMMON STOCK USD.01	1,124,092	1,674,775
34 GENESEE & WYOMING INC CL A COMMON STOCK USD.01	2,465,004	1,652,840
35 BALL CORP COMMON STOCK	1,575,093	1,606,573
36 UNIVERSAL HEALTH SERVICES B COMMON STOCK USD.01	921,192	1,566,422
37 CDW CORP/DE COMMON STOCK USD.01	1,339,229	1,554,062
38 QEP RESOURCES INC COMMON STOCK USD.01	1,538,370	1,547,985
39 ENERGEN CORP COMMON STOCK USD.01	1,963,837	1,543,732
40 MSCI INC COMMON STOCK USD.01	920,263	1,537,079
41 ALLISON TRANSMISSION HOLDING COMMON STOCK USD.01	1,158,695	1,505,365
42 WHITE MOUNTAINS INSURANCE GP COMMON STOCK USD1.0	1,051,934	1,495,392
43 NORTHERN TRUST CORP COMMON STOCK USD1.667	1,472,854	1,408,886
44 MSC INDUSTRIAL DIRECT CO A COMMON STOCK USD.001	1,322,386	1,360,820
45 NEWFIELD EXPLORATION CO COMMON STOCK USD.01	1,061,473	1,355,663
46 HARMAN INTERNATIONAL COMMON STOCK USD.01	2,120,773	1,328,095
47 SEI INVESTMENTS COMPANY COMMON STOCK USD.01	560,082	1,276,551
48 AMERCO COMMON STOCK USD.25	899,487	1,256,615
49 PATTERSON UTI ENERGY INC COMMON STOCK USD.01	1,119,492	1,235,281
50 FASTENAL CO COMMON STOCK USD.01	1,059,684	1,231,290

NOTE: Full listing of holdings can be obtained at  
NYC Board of Education Retirement System  
65 Court Street, Room 1603, Brooklyn, NY 11201



## List of 50 Largest Bond Holdings (Fixed) Fiscal Year Ended June 30, 2016

<b>NAME OF BOND HOLDINGS</b>	<b>PAR VALUE</b>	<b>FAIR VALUE</b>
1 GNMA II TBA 30 YR 3.5 JUMBOS	\$ 26,903,656	\$ 26,989,761
2 FNMA TBA 30 YR 4 SINGLE FAMILY MORTGAGE	23,857,804	23,888,206
3 GNMA II TBA 30 YR 4 JUMBOS	22,575,488	22,606,021
4 GNMA II TBA 30 YR 3 JUMBOS	13,208,833	13,312,197
5 FNMA POOL AO2974 FN 05/42 FIXED 3.5	10,321,905	10,377,622
6 FNMA POOL AS7245 FN 05/46 FIXED 3.5	10,259,833	10,296,642
7 FNMA POOL 890720 FN 07/44 FIXED VAR	9,907,792	9,949,787
8 FED HM LN PC POOL G08693 FG 03/46 FIXED 3.5	9,457,219	9,543,131
9 GNMA POOL 736570 GN 03/40 FIXED 4.5	7,147,122	7,288,559
10 US TREASURY N/B 08/23 2.5	6,478,002	7,182,412
11 FNMA TBA 30 YR 4 SINGLE FAMILY MORTGAGE	7,137,785	7,156,668
12 US TREASURY N/B 05/44 3.375	5,962,461	7,098,970
13 FNMA POOL AT2720 FN 05/43 FIXED 3	6,912,523	7,056,731
14 FNMA POOL AL7521 FN 06/39 FIXED VAR	6,785,882	6,805,267
15 FNMA TBA 30 YR 3 SINGLE FAMILY MORTGAGE	6,701,017	6,713,334
16 US TREASURY N/B 08/40 3.875	4,185,928	5,906,174
17 US TREASURY N/B 08/22 1.625	5,554,788	5,705,715
18 FNMA POOL AR9195 FN 03/43 FIXED 3	5,530,524	5,645,901
19 FNMA TBA 30 YR 4.5 SINGLE FAMILY MORTGAGE	5,495,786	5,492,730
20 FNMA POOL AS6880 FN 03/46 FIXED 3.5	5,280,573	5,301,956
21 US TREASURY N/B 05/25 2.125	4,624,752	4,901,186
22 US TREASURY N/B 02/43 3.125	3,813,636	4,821,251
23 FED HM LN PC POOL Q38643 FG 02/46 FIXED 3.5	4,715,852	4,762,318
24 FHLMC TBA 30 YR 4 GOLD SINGLE FAMILY	4,695,625	4,705,272
25 FNMA POOL AX2516 FN 10/29 FIXED 3.5	4,652,962	4,673,657
26 US TREASURY N/B 08/24 2.375	4,061,387	4,311,022
27 FANNIE MAE NOTES 09/24 2.625	3,819,804	4,147,595
28 US TREASURY N/B 10/22 1.875	3,693,393	3,855,061
29 FNMA POOL AS1091 FN 11/43 FIXED 4	3,611,825	3,667,455
30 FNMA POOL AL5611 FN 08/44 FIXED VAR	3,290,896	3,351,717
31 US TREASURY N/B 02/26 1.625	3,172,078	3,236,000
32 FHLMC TBA 30 YR 4 GOLD SINGLE FAMILY	3,186,280	3,194,875
33 US TREASURY N/B 02/22 2	3,056,020	3,173,683
34 FNMA POOL BC4873 FN 03/46 FIXED 3.5	3,067,363	3,100,973
35 US TREASURY N/B 12/21 2.125	2,928,903	3,020,455
36 US TREASURY N/B 02/23 1.5	2,922,258	2,967,500
37 GNMA II POOL 004113 G2 04/38 FIXED 5	2,815,898	2,919,637
38 FNMA POOL 725423 FN 05/34 FIXED VAR	2,909,997	2,903,401
39 US TREASURY N/B 05/41 4.375	2,384,074	2,855,780
40 ALCATEL LUCENT USA INC SR UNSECURED 03/29 6.45	1,908,284	2,757,413
41 GNMA I TBA 30 YR 4.5 SINGLE FAMILY MORTGAGE	2,736,313	2,751,150
42 US TREASURY N/B 11/43 3.75	2,162,016	2,731,117
43 FNMA POOL AP9726 FN 10/42 FIXED 3	2,669,048	2,728,355
44 FNMA TBA 30 YR 5 SINGLE FAMILY MORTGAGE	2,666,438	2,666,544
45 FED HM LN PC POOL G60250 FG 10/45 FIXED 3.5	2,610,195	2,659,919
46 US TREASURY N/B 02/40 4.625	1,933,862	2,646,072
47 STRIP PRINC 11/21 0.00000	1,466,088	2,639,280
48 FREDDIE MAC NOTES 05/20 1.375	2,585,180	2,639,208
49 GNMA POOL 782386 GN 08/38 FIXED 5	2,556,144	2,597,223
50 FNMA POOL AS2462 FN 05/29 FIXED 3	2,559,160	2,570,014

NOTE: Full listing of holdings can be obtained at  
NYC Board of Education Retirement System  
65 Court Street, Room 1603, Brooklyn, NY 11201



**List of 50 Largest International Equity Holdings (Fixed)  
Fiscal Year Ended June 30, 2016**

<b>NAME OF INT'L EQUITY HOLDINGS</b>	<b>COST</b>	<b>FAIR VALUE</b>
1 INDUSTRIA DE DISENO TEXTIL	\$ 11,013,319	\$ 17,498,200
2 SOFTBANK GROUP CORP	15,141,039	15,008,118
3 AIA GROUP LTD	9,895,923	13,906,574
4 M3 INC	7,307,441	13,678,080
5 SAMSUNG ELECTRONICS CO LTD	10,971,469	13,607,417
6 ARM HOLDINGS PLC	8,120,359	11,109,586
7 L'OREAL	7,153,103	10,149,116
8 ROLLS ROYCE HOLDINGS PLC	12,417,671	9,831,690
9 ATLAS COPCO AB A SHS	7,839,298	9,717,394
10 TENCENT HOLDINGS LTD	1,905,437	9,534,155
11 TOTAL SA	9,407,225	9,485,529
12 ROYAL DUTCH SHELL PLC B SHS	10,362,542	9,281,380
13 NOVARTIS AG REG	6,917,922	9,160,798
14 NESTLE SA REG	6,508,841	8,663,291
15 RAKUTEN INC	6,203,665	8,613,365
16 ZALANDO SE	9,158,027	7,707,294
17 UNITED OVERSEAS BANK LTD	8,766,248	7,505,244
18 ASML HOLDING NV	6,159,983	7,462,723
19 PRUDENTIAL PLC	5,256,658	7,254,736
20 CRH PLC	5,226,745	7,248,653
21 CHINA MOBILE LTD	6,346,202	7,139,852
22 JARDINE MATHESON HLDGS LTD	7,183,712	6,791,872
23 CHINA CONSTRUCTION BANK H	7,952,070	6,698,432
24 SVENSKA HANDELSBANKEN A SHS	5,984,681	6,497,083
25 KINNEVIK AB B	10,168,115	6,420,906
26 NOVO NORDISK A/S B	2,575,707	6,359,655
27 HSBC HOLDINGS PLC	10,804,070	6,330,124
28 FIAT CHRYSLER AUTOMOBILES NV	4,502,715	6,250,726
29 HONDA MOTOR CO LTD	8,406,568	6,230,272
30 CHINA MOBILE LTD	6,467,527	6,196,406
31 SWATCH GROUP AG/THE BR	7,977,693	5,928,226
32 SMC CORP	3,884,761	5,695,976
33 BOSKALIS WESTMINSTER	6,331,026	5,576,054
34 BANCO SANTANDER SA	11,100,533	5,483,948
35 TESCO PLC	10,865,670	5,468,432
36 DENSO CORP	5,776,468	5,290,844
37 KERING	4,946,502	5,002,862
38 BAYERISCHE MOTOREN WERKE AG	5,108,279	4,980,335
39 HON HAI PRECISION INDUSTRY	4,428,492	4,889,498
40 ANGLO AMERICAN PLC	8,377,899	4,816,790
41 LAFARGEHOLCIM LTD REG	7,224,934	4,782,164
42 GENMAB A/S	2,932,006	4,747,140
43 HONGKONG LAND HOLDINGS LTD	5,066,365	4,695,220
44 SHIN ETSU CHEMICAL CO LTD	4,645,589	4,678,249
45 CIE FINANCIERE RICHEMONT REG	4,326,461	4,641,337
46 TRAVIS PERKINS PLC	5,113,169	4,592,232
47 TENAGA NASIONAL BHD	3,124,242	4,554,520
48 SBM OFFSHORE NV	6,003,029	4,513,360
49 CARNIVAL PLC	3,508,185	4,431,473
50 BANK OF NOVA SCOTIA	4,729,678	4,342,253

NOTE: Full listing of holdings can be obtained at  
NYC Board of Education Retirement System  
65 Court Street, Room 1603, Brooklyn, NY 11201



**List of 50 Largest EAFE Investment Holdings (Fixed)  
Fiscal Year Ended June 30, 2016**

<b>NAME OF EAFE INVESTMENT HOLDINGS</b>	<b>COST</b>	<b>FAIR VALUE</b>
1 INDUSTRIA DE DISENO TEXTIL	\$ 11,013,319	\$ 17,498,200
2 SOFTBANK GROUP CORP	15,141,039	15,008,118
3 AIA GROUP LTD	9,895,923	13,906,574
4 M3 INC	7,307,441	13,678,080
5 ARM HOLDINGS PLC	8,120,359	11,109,586
6 L'OREAL	7,153,103	10,149,116
7 ROLLS ROYCE HOLDINGS PLC	12,417,671	9,831,690
8 ATLAS COPCO AB A SHS	7,839,298	9,717,394
9 TENCENT HOLDINGS LTD	1,905,437	9,534,155
10 TOTAL SA	9,407,225	9,485,529
11 ROYAL DUTCH SHELL PLC B SHS	10,362,542	9,281,380
12 NOVARTIS AG REG	6,917,922	9,160,798
13 NESTLE SA REG	6,508,841	8,663,291
14 RAKUTEN INC	6,203,665	8,613,365
15 ZALANDO SE	9,158,027	7,707,294
16 UNITED OVERSEAS BANK LTD	8,766,248	7,505,244
17 ASML HOLDING NV	6,159,983	7,462,723
18 PRUDENTIAL PLC	5,256,658	7,254,736
19 CRH PLC	5,226,745	7,248,653
20 CHINA MOBILE LTD	6,346,202	7,139,852
21 JARDINE MATHESON HLDGS LTD	7,183,712	6,791,872
22 CHINA CONSTRUCTION BANK H	7,952,070	6,698,432
23 SVENSKA HANDELSBANKEN A SHS	5,984,681	6,497,083
24 KINNEVIK ABB	10,168,115	6,420,906
25 NOVO NORDISK A/S B	2,575,707	6,359,655
26 HSBC HOLDINGS PLC	10,804,070	6,330,124
27 FIAT CHRYSLER AUTOMOBILES NV	4,502,715	6,250,726
28 HONDA MOTOR CO LTD	8,406,568	6,230,272
29 CHINA MOBILE LTD	6,467,527	6,196,406
30 SWATCH GROUP AG/THE BR	7,977,693	5,928,226
31 SMC CORP	3,884,761	5,695,976
32 BOSKALIS WESTMINSTER	6,331,026	5,576,054
33 BANCO SANTANDER SA	11,100,533	5,483,948
34 TESCO PLC	10,865,670	5,468,432
35 DENSO CORP	5,776,468	5,290,844
36 KERING	4,946,502	5,002,862
37 BAYERISCHE MOTOREN WERKE AG	5,108,279	4,980,335
38 ANGLO AMERICAN PLC	8,377,899	4,816,790
39 LAFARGEHOLCIM LTD REG	7,224,934	4,782,164
40 GENMAB A/S	2,932,006	4,747,140
41 HONGKONG LAND HOLDINGS LTD	5,066,365	4,695,220
42 SHIN ETSU CHEMICAL CO LTD	4,645,589	4,678,249
43 CIE FINANCIERE RICHEMONT REG	4,326,461	4,641,337
44 TRAVIS PERKINS PLC	5,113,169	4,592,232
45 SBM OFFSHORE NV	6,003,029	4,513,360
46 CARNIVAL PLC	3,508,185	4,431,473
47 FERRARI NV	2,375,252	4,337,076
48 LLOYDS BANKING GROUP PLC	6,677,330	4,267,019
49 NOKIAN RENKAAT OYJ	3,959,925	4,233,656
50 BASF SE	5,069,675	4,115,127

NOTE: Full listing of holdings can be obtained at  
NYC Board of Education Retirement System  
65 Court Street, Room 1603, Brooklyn, NY 11201





**List of 50 Largest Emerging Market Investment Holdings (Fixed)  
Fiscal Year Ended June 30, 2016**

NAME OF EMERGING MARKET HOLDINGS	COST	FAIR VALUE
1 SAMSUNG ELECTRONICS CO LTD	\$ 10,971,469	\$ 13,607,417
2 HON HAI PRECISION INDUSTRY	4,428,492	4,889,498
3 TENAGA NASIONAL BHD	3,124,242	4,554,520
4 KOREA ELECTRIC POWER CORP	3,204,555	4,206,076
5 TIGER BRANDS LTD	4,183,714	3,971,051
6 GAIL INDIA LTD	4,181,146	3,948,914
7 TELEKOMUNIKASI INDONESIA PER	3,174,844	3,846,964
8 PTT PCL/FOREIGN	4,320,157	3,835,107
9 STATE BANK OF INDIA	3,450,603	3,684,686
10 SASOL LTD	5,006,040	3,544,785
11 FIRSTRAND LTD	3,391,567	3,323,072
12 TATA MOTORS LTD	2,823,158	3,256,663
13 SK HYNIX INC	4,497,574	3,172,378
14 BHARAT PETROLEUM CORP LTD	2,355,362	3,097,713
15 CELLTRION INC	1,184,481	2,868,421
16 FUBON FINANCIAL HOLDING CO	2,198,884	2,761,516
17 PEGATRON CORP	2,218,130	2,727,656
18 GRUMA S.A.B. B	838,965	2,721,247
19 POLSKI KONCERN NAFTOWY ORLEN	2,039,781	2,451,025
20 BRF SA	4,131,341	2,430,635
21 KIA MOTORS CORP	2,711,065	2,391,747
22 CJ CORP	1,125,124	2,362,749
23 HINDUSTAN PETROLEUM CORP	1,741,952	2,355,691
24 HINDALCO INDUSTRIES LTD	2,367,918	2,227,780
25 HCL TECHNOLOGIES LTD	1,515,352	2,226,551
26 LG ELECTRONICS INC	2,684,860	2,167,599
27 JBS SA	2,449,129	2,143,139
28 MRF LTD	1,130,288	2,129,606
29 NAVER CORP	1,105,351	2,061,674
30 BANK NEGARA INDONESIA PERSER	2,322,434	2,052,727
31 BM FBOVESPA SA	1,275,325	2,041,118
32 SASOL LTD	3,267,482	2,011,167
33 PTT GLOBAL CHEMICAL PCL FOR	2,469,315	1,934,273
34 INDIAN OIL CORP LTD	1,831,547	1,928,774
35 KOC HOLDING AS	1,906,552	1,911,652
36 LG DISPLAY CO LTD	2,168,836	1,883,674
37 BRASKEM SA PREF A	2,322,725	1,753,117
38 RAIA DROGASIL SA	1,075,536	1,724,313
39 INNOLUX CORP	2,694,777	1,722,991
40 GRUPO AEROPORT DEL PACIFIC B	944,225	1,600,257
41 BANCO DO BRASIL S.A.	3,522,211	1,587,793
42 TURKIYE IS BANKASI C	2,726,999	1,560,289
43 TIPCO ASPHALT PCL FOREIGN	1,212,434	1,519,531
44 STANDARD BANK GROUP LTD	1,987,786	1,497,534
45 LOTTE CHEMICAL CORP	1,398,235	1,463,932
46 SK TELECOM	1,347,022	1,439,931
47 SK INNOVATION CO LTD	1,326,714	1,437,157
48 BARWA REAL ESTATE CO	2,091,794	1,412,405
49 THANACHART CAPITAL FOREIGN	1,425,954	1,327,812
50 FIBRIA CELULOSE SA	2,268,404	1,320,764

NOTE: Full listing of holdings can be obtained at  
NYC Board of Education Retirement System  
65 Court Street, Room 1603, Brooklyn, NY 11201



**List of Largest Tips Holdings (Fixed)**  
**Fiscal Year Ended June 30, 2016**

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<b>NAME OF LARGEST TIPS HOLDINGS</b>	<b>PAR VALUE</b>	<b>FAIR VALUE</b>
1 TIPS STATE STREET	\$ 213,313,964	\$ 218,588,417
2 TIPS PIMCO	3,979,234	19,812



NOTE: Full listing of holdings can be obtained at  
NYC Board of Education Retirement System  
65 Court Street, Room 1603, Brooklyn, NY 11201

**List of 50 Largest Economically Targeted Investment Holdings (Fixed)  
Fiscal Year Ended June 30, 2016**

NAME OF ECONOMICALLY TARGETED INVESTMENT HOLDINGS	PAR VALUE	FAIR VALUE
1 AFL CIO HOUSING INV TRUST \$	15,462,258	\$ 16,013,243
2 BOA BANK OF AMERICA PPAR 1%	525,603	649,303
3 JPM CHASE- PPAR 1%	383,063	408,585
4 JPM CHASE- PPAR 1%	302,067	337,996
5 CCD CITIBANK NA PPAR 1%	264,918	297,256
6 BOA BANK OF AMERICA PPAR 1%	278,144	295,054
7 FNMA POOL AW0982	278,460	289,499
8 FNMA POOL AU1707	260,065	274,438
9 BOA BANK OF AMERICA PPAR 1%	258,681	271,679
10 LIIF LOW INCOME INVESTMENT FU 1%	234,833	261,771
11 FNMA POOL AU7004	241,473	248,764
12 FNMA POOL AV0680	213,168	221,492
13 GOVERNMENT NATIONAL MORTGAGE	211,719	212,594
14 FNMA POOL 466026	207,808	210,360
15 FNMA POOL AU6719	192,956	200,463
16 FNMA POOL AW3604	190,247	194,881
17 COMMUNITY PRESERVATION CORP.	173,434	184,132
18 JPM CHASE- PPAR 1%	167,357	182,908
19 FNMA POOL AV7745	171,021	178,786
20 FNMA POOL AB7800	168,840	169,362
21 FNMA POOL AW6468	161,940	167,289
22 GOVERNMENT NATIONAL MORTGAGE	162,620	162,256
23 LIIF LOW INCOME INVESTMENT FU 1%	137,500	147,084
24 JPM CHASE- PPAR 1%	128,500	145,524
25 CCD CITIBANK NA PPAR 1%	115,664	142,900
26 LIIF LOW INCOME INVESTMENT FU 1%	110,313	141,160
27 CCD CITIBANK NA PPAR 1%	115,958	140,906
28 CCD CITIBANK NA PPAR 1%	113,704	140,478
29 BOA BANK OF AMERICA PPAR 1%	126,224	138,944
30 FNMA POOL AV7090	134,162	137,575
31 CCD CITIBANK NA PPAR 1%	112,092	136,209
32 JPM CHASE- PPAR 1%	119,245	128,260
33 FNMA POOL AV3535	115,929	119,833
34 FHLMC MULTIFAMILY STRUCTURED P	117,589	119,187
35 FNMA POOL AW5048	112,804	115,817
36 GNMA POOL AF9426	110,808	113,302
37 JPM CHASE- PPAR 1%	98,912	111,811
38 BOA BANK OF AMERICA PPAR 1%	87,196	110,341
39 LIIF LOW INCOME INVESTMENT FU 1%	88,819	109,536
40 LIIF LOW INCOME INVESTMENT FU 1%	84,724	107,161
41 FNMA POOL 469393	105,332	105,768
42 FNMA POOL AU8082	98,002	103,867
43 FNMA POOL AV1504	99,095	102,518
44 JPM CHASE- PPAR 1%	84,794	100,819
45 FNMA POOL AB7476	99,546	98,519
46 FNMA POOL AI3490	91,857	98,467
47 FNMA POOL AO3388	92,779	93,739
48 COMMUNITY PRESERVATION CORP.	84,848	91,823
49 FNMA POOL AK6714	88,956	91,115
50 LIIF LOW INCOME INVESTMENT FU 1%	85,385	90,189

NOTE: Full listing of holdings can be obtained at  
NYC Board of Education Retirement System  
65 Court Street, Room 1603, Brooklyn, NY 11201



**Largest 50 Domestic Equity Holdings “Variable A” Program  
Fiscal Year Ended June 30, 2016**

<b>NAME OF DOMESTIC EQUITY HOLDINGS “VARIABLE A” PROGRAM</b>	<b>COST</b>	<b>FAIR VALUE</b>
1 GMO- U.S. EQUITY ALLOCATION FUND IV	\$ 8,235,250	\$ 7,525,981
2 GMO INTERNATIONAL EQUITY FUND OPEN-END FUND	7,787,418	6,812,531
3 GMO- ASSET ALLOCATION BOND FUND III	7,785,226	6,721,836
4 FPA CRESCENT FUND OPEN-END FUND	5,919,435	6,088,227
5 APPLE INC	1,574,782	6,026,166
6 MICROSOFT CORP	3,578,565	5,463,604
7 EXXON MOBIL CORP	3,364,394	4,243,036
8 JOHNSON & JOHNSON	2,430,931	4,108,462
9 COMCAST CORP	2,531,442	3,961,766
10 FACEBOOK INC	1,717,660	3,658,749
11 GENERAL ELECTRIC CO	3,564,220	3,446,335
12 BERKSHIRE HATHAWAY INC	2,147,227	3,320,472
13 AT&T INC	2,373,580	3,306,779
14 UNITEDHEALTH GROUP INC	1,531,214	3,222,757
15 PFIZER INC	2,290,209	3,114,501
16 ALPHABET INC	1,635,120	3,091,357
17 PROCTER & GAMBLE CO	2,453,622	3,083,648
18 AMAZON.COM INC	579,317	3,043,403
19 ALLERGAN PLC	2,504,048	3,005,775
20 VERIZON COMMUNICATIONS INC	2,081,320	2,919,324
21 JPMORGAN CHASE & CO	2,196,557	2,809,789
22 AMGEN INC	1,897,365	2,730,331
23 GMO CURRENCY HEDGED INTERNATIONAL BOND FUND	2,626,795	2,687,589
24 WELLS FARGO & CO	2,855,536	2,668,298
25 ALPHABET INC	1,247,756	2,534,685
26 BIOGEN INC	2,629,047	2,420,137
27 PHILIP MORRIS INTERNATIONAL INC	1,358,436	2,285,908
28 MERCK & CO INC	1,647,339	2,252,554
29 PEPSICO INC	1,401,753	2,163,039
30 CHEVRON CORP	1,537,869	2,125,492
31 WALT DISNEY CO	941,536	2,065,896
32 ALTRIA GROUP INC	842,327	1,981,256
33 COCA-COLA CO	1,157,021	1,957,210
34 MEDTRONIC PLC	1,074,092	1,939,761
35 CITIGROUP INC	4,307,285	1,915,960
36 INTEL CORP	1,311,972	1,910,982
37 CISCO SYSTEMS INC	1,716,662	1,878,516
38 VISA INC	736,349	1,864,848
39 HOME DEPOT INC	677,049	1,846,065
40 BANK OF AMERICA CORP	4,429,829	1,767,686
41 ORACLE CORP	995,107	1,676,524
42 BRISTOL-MYERS SQUIBB CO	826,046	1,662,598
43 INTERNATIONAL BUSINESS MACHINES CORP	1,188,401	1,628,099
44 THERMO FISHER SCIENTIFIC INC	958,637	1,579,685
45 CELGENE CORP	931,666	1,564,653
46 GMO - QUALITY FUND-V	1,451,910	1,454,423
47 WAL-MART STORES INC	1,019,978	1,423,404
48 QUALCOMM INC	1,328,678	1,396,319
49 GILEAD SCIENCES INC	510,603	1,367,752
50 BROADCOM LTD	806,719	1,357,798

NOTE: Full listing of holdings can be obtained at  
NYC Board of Education Retirement System  
65 Court Street, Room 1603, Brooklyn, NY 11201



**Schedule of Payments of Commissions to Brokers  
Fiscal Year Ended June 30, 2016**

<b>INDIVIDUAL OR BROKERAGE FIRM</b>	<b># OF SHARES</b>	<b>COMMISSION PAID</b>	<b>COMMISSION PER SHARE (in \$)</b>
ABLE NOSER	3,002	81	0.027
ACADEMY SECURITIES INC	34,592	692	0.020
AGORA CORDE TITUL E VAL MOB	186,384	1,545	0.008
ALLEN & COMPANY LLC	3,339	134	0.040
AMERICAN PORTFOLIOS FINANIAL	370	19	0.050
ASCENDIANT CAPITAL MARKETS, LLC	1,586	48	0.030
AVONDALE PARTNERS LLC	6,263	213	0.034
B.RILEY & CO., LLC	13,616	344	0.025
BANCO SANTANDER CENTRAL HISPANO	3,644	204	0.056
BANK J.VONTOBEL UND CO. AG	7,554	2,610	0.346
BARCLAYS BANK PLC	3,007	26	0.009
BARCLAYS CAPITAL	232,013	689	0.003
BARCLAYS CAPITAL INC	296	9	0.030
BARCLAYS CAPITAL INC./LE	2,398,573	8,938	0.004
BARCLAYS CAPITAL LE	47,107	890	0.019
BARRINGTON RESEARCH ASSOCIATES	1,591	48	0.030
BB&T SECURITIES, LLC	14,862	470	0.032
BERENBERG	5,339	160	0.030
BLOOMBERG TRADEBOOK LLC	62,376	1,661	0.027
BMO CAPITAL MARKETS	8,336	175	0.021
BNP PARIBAS PRIME BROKERAGE, INC.	3,393	102	0.030
BNP PARIBAS SECURITIES SERVICE	1,962,907	2,456	0.001
BNP PARIBAS SECURITIES SERVICES	4,516	425	0.094
BNP PARIBAS SECURITIES SERVICES SA	57,462	1,620	0.028
BNY CONVERGEX EXECUTION SOLUTIONS LLC	2,456,286	12,097	0.005
BNY CONVERGEX LJR	354	7	0.020
BREAN CAPITAL LLC	15,616	559	0.036
BROADCORT CAPITAL CORP	605	12	0.020
BTIG, LLC	61,356	2,114	0.034
BUCKINGHAM RESEARCH GROUP INC	4,163	167	0.040
BURKE ANDQUICK PARTNERS LLC	183	6	0.035
CABRERA CAPITAL MARKETS	129,869	1,896	0.015
CACEIS BANK DEUTSCHLAND GMBH	5,963	1,862	0.312
CANACCORD GENUITY INC.	44,190	1,358	0.031
CANADIAN IMPERIAL BANK OF COMMERCE	51,681	1,040	0.020
CANTOR FITZGERALD & CO / CASTLEOAK SEC	32,881	658	0.020
CANTOR FITZGERALD & CO.	26,885	628	0.023
CANTOR FITZGERALD/CANTOR CLEARING SERV	333,357	1,000	0.003
CAPITAL INSTITUTIONAL SVCS INC EQUITIES	27,361	1,366	0.050
CHEEVERS & CO. INC.	392,574	6,676	0.017
CHINA FORTUNE SECURITIES.,LTD	217,896	665	0.003
CHINA INTERNATIONAL CAPITAL CORPORA	23,230	27	0.001
CIBC WORLD MKTS INC	8,517	264	0.031
CIMB SECURITIES (HK) LTD.	18,245	39	0.002
CITATION GROUP	30,344	1,515	0.050
CITIBANK N.A.	23,625	915	0.039
CITIBANK OF COLOMBIA	36,546	242	0.007
CITIGROUP GLOBAL MARKETS INC	1,995,984	7,253	0.004
CITIGROUP GLOBAL MARKETS INC.	5,992,820	2,155	0.000
CITIGROUP GLOBAL MARKETS INDIA	95,748	323	0.003
CITIGROUP GLOBAL MARKETS LIMITED	1,793,527	6,658	0.004
CLSA AUSTRALIA PTY LTD	369,264	1,876	0.005



**Schedule of Payments of Commissions to Brokers**  
**Fiscal Year Ended June 30, 2016**  
**(Cont'd)**

<b>INDIVIDUAL OR BROKERAGE FIRM</b>	<b># OF SHARES</b>	<b>COMMISSION PAID</b>	<b>COMMISSION PER SHARE (in \$)</b>
CLSA SINGAPORE PTE LTD.	3,587,069	6,658	0.002
COMPASS POINT RESEARCH & TRADING, LLC	12,706	504	0.040
CONVERGEX EXECUTION SOLUTIONS LLC	41,615	1,248	0.030
CONVERGEX LLC	6,342	221	0.035
COWEN AND COMPANY, LLC	70,755	2,359	0.033
CRAIG - HALLUM	66,815	1,959	0.029
CREDIT LYONNAIS SECURITIES (USA) INC	23,519	1,062	0.045
CREDIT LYONNAIS SECURITIES INDIA	1,857,083	17,690	0.010
CREDIT LYONNAIS SECURITIES(ASIA)	15,332,858	9,200	0.001
CREDIT RESEARCH & TRADING LLC	13,035	465	0.036
CREDIT SUISSE SECS INDIA PRIVATE LTD	13,090	354	0.027
CREDIT SUISSE SECURITIES (EUROPE) LTD	868,905	5,022	0.006
CREDIT SUISSE SECURITIES (USA) LLC	7,645,212	13,047	0.002
CSI US INSTITUTIONAL DESK	8,162	286	0.035
CUTTONE & CO.	900	32	0.035
DAIWA SBCM EUROPE	16,124	250	0.016
DAIWA SECURITIES (HK) LTD.	181,862	65	0.000
DAIWA SECURITIES AMERICA INC	130,127	1,693	0.013
DANSKE BANK A.S.	308,752	1,051	0.003
DAVIDSON D.A. & COMPANY INC.	9,057	247	0.027
DAVY STOCKBROKERS	23,931	932	0.039
DBS VICKERS SECURITIES (SINGAPORE)	21,372	352	0.016
DEUTSCHE BANK AG LONDON	793,386	2,871	0.004
DEUTSCHE BANK SECURITIES INC	12,448,835	17,576	0.001
DEUTSCHE SECURITIES ASIA LIMITED	481,965	520	0.001
DOUGHERTY & COMPANY LLC	23,083	752	0.033
DOUGHERTY COMPANY	10,065	299	0.030
DREXEL HAMILTON LLC	37,790	1,007	0.027
DSP MERRILL LYNCH LTD	442,176	1,021	0.002
FBN SECURITIES INC	632	25	0.040
FBR CAPITAL MARKETS & CO.	7,640	254	0.033
FEDERATED MANAGED GROWTH & INCOME 17 A7	275,006	2,062	0.007
FIDELITY CAPITAL MARKETS	2,451	49	0.020
FIDELITY CLEARING CANADA ULC	76,867	1,537	0.020
FIRST ANALYSIS SECURITIES CORP	1,638	49	0.030
GABELLI & COMPANY	4,263	171	0.040
GOLDMAN SACHS & CO	8,177,179	18,022	0.002
GOLDMAN SACHS & CO INTL.	106	8	0.076
GOLDMAN SACHS INTERNATIONAL	192,156	1,733	0.009
GUGGENHEIM CAPITAL MARKETS LLC	14,975	524	0.035
GUZMAN AND COMPANY	5,232	105	0.020
HEIGHT SECURITIES, LLC	9,743	341	0.035
HONGKONG AND SHAGHAI BANKING CORPO	1,234,818	615	0.000
HSBC BANK BRASIL SA BANCO MULTIPLO	22,692	6	0.000
HSBC BANK PLC	588,756	3,229	0.005
HSBC SECURITIES	1,657,334	1,640	0.001
HSBC SECURITIES (USA) INC.	1,871,600	1,893	0.001
HSBC SECURITIES INDIA HOLDINGS	32,497	672	0.021
ICAP DO BRASIL DTVM LTDA	530,228	2,515	0.005
ICBC FINCL SVCS, EQUITY CLEARANCE	956	6	0.006
ICICI BROKERAGE SERVICES	215,937	432	0.002
IMPERIAL CAPITAL LLC	3,043	91	0.030

**Schedule of Payments of Commissions to Brokers**  
**Fiscal Year Ended June 30, 2016**  
**(Cont'd)**

<b>INDIVIDUAL OR BROKERAGE FIRM</b>	<b># OF SHARES</b>	<b>COMMISSION PAID</b>	<b>COMMISSION PER SHARE (in \$)</b>
INDUSTRIAL AND COMMERCIAL BANK	4,389	128	0.029
INSTINET	516,712	6,232	0.012
INSTINET AUSTRALIA CLEARING SRVC PTY LTD	327,634	741	0.002
INSTINET LLC	212,797	449	0.002
INSTINET PACIFIC LIMITED	9,633,480	7,505	0.001
INSTINET SINGAPORE SERVICES PT	1,877,618	1,851	0.001
INSTINET U.K. LTD	9,683,014	19,783	0.002
INVESTEC BANK PLC	9,022,781	1,774	0.000
INVESTMENT TECHNOLOGY GROUP INC.	731,810	7,193	0.010
INVESTMENT TECHNOLOGY GROUP LTD	892,766	7,158	0.008
ISI GROUP INC	67,763	1,362	0.020
ITG CANADA	11,648	72	0.006
ITG INC	11,753	126	0.011
ITG INC.	28,593	811	0.028
ITG SECURITIES (HK) LTD	291,921	432	0.001
J P MORGAN SECURITIES INC	20,657	446	0.022
J.P. MORGAN CLEARING CORP.	777,046	4,302	0.006
J.P. MORGAN SECURITIES (TAIWAN) LTD	2,270,344	934	0.000
J.P. MORGAN SECURITIES INC.	186,741	3,954	0.021
J.P.MORGAN SECURITIES(FAR EAST)LTD SEOUL	22,506	845	0.038
JANNEY MONTGOMERY, SCOTT INC	9,017	312	0.035
JEFFERIES & COMPANY INC	278,306	5,306	0.019
JEFFERIES INTERNATIONAL LTD	169,781	315	0.002
JMP SECURITIES	16,306	423	0.026
JNK SECURITIES INC	8,586	279	0.032
JOH BERENBERG GOSSLER AND CO	70,085	1,592	0.023
JOHNSON RICE & COMPANY LLC	18,557	522	0.028
JOHNSON RICE & CO	9,080	268	0.029
JONESTRADING INSTITUTIONAL SERVICES LLC	121,661	2,635	0.022
JP MORGAN SECURITIES PLC	1,093,361	4,578	0.004
JP MORGAN SECURITIES SINGAPORE	53,945	46	0.001
JPMORGAN CHASE BANK NA LONDON	16,559	79	0.005
JPMORGAN SECURITIES(ASIA PACIFIC)LTD	1,325,703	140	0.000
KB SECURITIES N V	69,628	1,231	0.018
KCG AMERICAS LLC	53,043	163	0.003
KEEFE BRUYETTE & WOODS INC	68,977	2,139	0.031
KEPLER EQUITIES PARIS	11,837	754	0.064
KEYBANC CAPITAL MARKETS INC	68,579	2,343	0.034
KING, CL,& ASSOCIATES, INC	333,915	6,880	0.021
KINGSWAY FINANCIAL SVCS GROUP LTD	254,611	541	0.002
KNIGHT EQUITY MARKETS L.P.	100,867	2,076	0.021
LADENBURG THALMAN & CO	5,510	144	0.026
LEERINK PARTNERS LLC	30,396	1,026	0.034
LIQUIDNET INC	790,794	9,456	0.012
LONGBOW SECURITIES LLC	2,655	84	0.032
LOOP CAPITAL MARKETS	1,520,406	10,942	0.007
LUMINEX TRADING AND ANALYTICS LLC	3,811	10	0.003
M RAMSEY KING SECURITIES INC	11,675	302	0.026
MACQUARIE BANK LIMITED	7,453,577	3,764	0.001
MACQUARIE CAPITAL (USA) INC	10,926	228	0.021
MACQUARIE SECURITIES (USA) INC	60,810	1,731	0.028
MACQUARIE SECURITIES LTD SEOUL	77,298	3,304	0.043



**Schedule of Payments of Commissions to Brokers**  
**Fiscal Year Ended June 30, 2016**  
**(Cont'd)**

<b>INDIVIDUAL OR BROKERAGE FIRM</b>	<b># OF SHARES</b>	<b>COMMISSION PAID</b>	<b>COMMISSION PER SHARE (in \$)</b>
MAINFIRST BANK DE	62,487	1,688	0.027
MAXIM GROUP	10,943	286	0.026
MERRILL LYNCH AND CO INC	1,733,108	2,716	0.002
MERRILL LYNCH INTERNATIONAL	13,232,871	8,319	0.001
MERRILL LYNCH PIERCE FENNER & SMITH INC	2,411,122	19,050	0.008
MERRILL LYNCH PIERCE FENNER AND S	285,953	464	0.002
MERRILL LYNCH PROFESSIONAL CLEARING CORP	2,641	104	0.039
MISCHLER FINANCIAL GROUP, INC-EQUITIES	49,043	731	0.015
MIZUHO SECURITIES USA INC.	9,219	324	0.035
MKM PARTNERS LLC	37,504	1,389	0.037
MORGAN STANLEY AND CO INTERNATIONAL	22,736	1,708	0.075
MORGAN STANLEY AND CO INTL TAIPEI METRO	3,957,062	2,808	0.001
MORGAN STANLEY AND CO. INTERNATIONAL	2,176,174	2,584	0.001
MORGAN STANLEY ASIA LTD	343,996	1,090	0.003
MORGAN STANLEY CO INCORPORATED	3,221,512	12,500	0.004
MORGAN STANLEY INDIA COMPANY PVT LTD	15,277	119	0.008
NATIONAL FINANCIAL SERVICES CORP.	11,303	286	0.025
NATIXIS SECURITIES	72,714	1,979	0.027
NEEDHAM & COMPANY	17,544	530	0.030
NEEDHAM AND COMPANY LLC	54,280	1,689	0.031
NOBLE INTERNATIONAL INVESTMENTS INC.	3,682	106	0.029
NOMURA FINANCIAL ADVISORY & SEC INDIA	682,927	7,178	0.011
NOMURA FINANCIAL AND INVESTMENT	50,997	486	0.010
NOMURA SECURITIES CO LTD	377,588	204	0.001
NORTH SOUTH CAPITAL LLC	42,094	1,512	0.036
NORTHLAND SECURITIES INC.	7,958	300	0.038
NUMIS SECURITIES LIMITED	3,400	146	0.043
OPPENHEIMER & CO. INC.	19,660	614	0.031
PAREL	20,230	621	0.031
PAVILION GLOBAL MARKETS LTD	1,107,728	3,999	0.004
PENSERRA SECURITIES	1,272,799	11,624	0.009
PENSERRA SECURITIES LLC	161,014	642	0.004
PERSHING LLC	2,714,529	7,726	0.003
PERSHING SECURITIES LIMITED	821,745	2,552	0.003
PICKERING ENERGY PARTNERS, INC	12,533	439	0.035
PIPER JAFFRAY	60,530	1,940	0.032
RAYMOND JAMES AND ASSOCIATES INC	112,806	3,622	0.032
RBC CAPITAL MARKETS	75,941	1,866	0.025
RBC DOMINION SECURITIES INC.	31,029	979	0.032
REDBURN PARTNERS LLP	1,172,510	5,199	0.004
ROBERT W.BAIRD CO.INCORPORATE	149,377	5,045	0.034
ROSENBLATT SECURITIES LLC	6,063	167	0.028
ROTH CAPITAL PARTNERS LLC	5,181	155	0.030
ROYAL BANK OF CANADA EUROPE LTD	526,131	2,242	0.004
SAMSUNG SECURITIES CO LTD	2,743	197	0.072
SAMUEL A RAMIREZ & COMPANY INC	189,182	1,419	0.007
SANDLER ONEILL & PART LP	8,051	244	0.030
SANDLER ONEILL AND PARTNERS L.P.	4,663	147	0.031
SANFORD C. BERNSTEIN AND CO. LLC	774,582	418	0.001
SANFORD C. BERNSTEIN LTD	457,169	4,836	0.011
SANFORD CBERNSTEIN CO LLC	121,342	2,206	0.018
SANTANDER CENTRAL HISPANO BOLSA	566,029	1,823	0.003



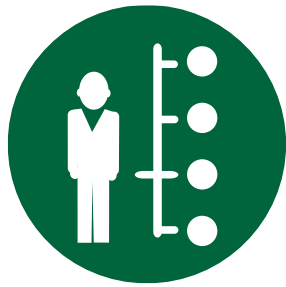
**Schedule of Payments of Commissions to Brokers**  
**Fiscal Year Ended June 30, 2016**  
**(Cont'd)**

<b>INDIVIDUAL OR BROKERAGE FIRM</b>	<b># OF SHARES</b>	<b>COMMISSION PAID</b>	<b>COMMISSION PER SHARE (in \$)</b>
SCOTIA CAPITAL (USA) INC	22,854	800	0.035
SEAPORT GROUP SECURITIES, LLC	17,722	581	0.033
SG AMERICAS SECURITIES LLC	810,762	3,199	0.004
SG SECURITIES HK	17,956,933	4,493	0.000
SHENYIN AND WANGUO SECURITIES CO. LTD	492,892	463	0.001
SIDOTI & COMPANY LLC	56,819	1,679.15	0.030
SMBC NIKKO CAPITAL MARKETS LIMITED	20,926	739	0.035
SOCIETE GENERALE LONDON BRANCH	1,082,709	3,816	0.004
SPEAR, LEEDS AND KELLOGG	1,399	7	0.005
STATE STREET GLOBAL MARKETS, LLC	59,905	973	0.016
STEPHENS, INC.	101,968	3,432	0.034
STERNE AGEE & LEACH INC.	8,898	445	0.050
STIFEL NICOLAUS & CO INC	177,857	5,700	0.032
STRATEGAS SECURITIES LLC	31,870	797	0.025
STURDIVANT AND CO., INC.	15,290	459	0.030
SUNTRUST CAPITAL MARKETS, INC.	57,801	1,798	0.031
TD SECURITIES (USA) LLC	500	5	0.010
TELSEY ADVISORY GROUP LLC	411,195	11,478	0.028
TERA MENKUL DEGERLER A.S.	135,137	108	0.001
THE HONGKONG AND SHANGHAI BANK	43,554	992	0.023
THE VERTICAL TRADING GROUP	8,628	281	0.033
TOPEKA CAPITAL MARKETS INC	211,130	4,680	0.022
UBS AG	375,491	6,430	0.017
UBS LIMITED	3,544,838	8,889	0.003
UBS SECURITIES ASIA LTD	6,886,386	3,014	0.000
UBS SECURITIES CANADA INC	61,533	212	0.003
UBS SECURITIES LLC	188,325	2,792	0.015
VANDHAM SECURITIES CORP	484	15	0.030
WEDBUSH MORGAN SECURITIES INC	26,876	758	0.028
WEEDEN & CO.	30,226	1,075	0.036
WELLS FARGO PRIME SERVICES, LLC	496,878	3,725	0.007
WELLS FARGO SECURITIES LLC	45,343	268	0.006
WELLS FARGO SECURITIES, LLC	32,319	1,152	0.036
WILLIAM BLAIR & COMPANY L.L.C	116,870	3,900	0.033
WILLIAMS CAPITAL GROUP LP (THE)	72,919	1,896	0.026
WOORI INVESTMENT SECURITIES	24,820	911	0.037
WUNDERLICH SECURITIES INC	3,067	89	0.029
WUNDERLICH SECURITIES INC.	12,711	392	0.031
XP INVESTIMENTOS CCTVM SA	178,414	1,271	0.007





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## ACTUARIAL

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## OFFICE OF THE ACTUARY

255 GREENWICH STREET • 9<sup>TH</sup> FLOOR  
NEW YORK, NY 10007  
(212) 442-5775 • FAX: (212) 442-5777

SHERRY S. CHAN  
CHIEF ACTUARY

December 20, 2016

Board of Trustees  
New York City Board of Education  
Retirement System  
65 Court Street  
Brooklyn, NY 11201

Re: Actuarial Information for the Comprehensive Annual Financial Report (CAFR) for the  
Fiscal Year Ended June 30, 2016

Dear Members of the Board of Trustees:

The financial objective of the New York City Board of Education Retirement System - Qualified Pension Plan (BERS or the Plan) is to fund members' retirement benefits during their active service and to establish employer normal contribution rates that, expressed as a percentage of active member annualized covered payroll, would remain approximately level over the future working lifetimes of those active members and, together with member contributions and investment income, are intended to ultimately be sufficient to accumulate assets to pay benefits when due.

An actuarial valuation of the Plan is performed annually as of the second June 30 preceding each fiscal year to determine the Employer Contributions to be paid for that fiscal year (i.e., June 30, 2014 (Lag) actuarial valuation to determine Fiscal Year 2016 Employer Contributions (the Actuarial Contributions)).

Employers are required to contribute statutorily-required contributions (Statutory Contributions) and these contributions are generally funded by Employers within the appropriate fiscal year.

For Fiscal Year 2016, the Actuarial Contributions to BERS, are equal to those recommended by the Actuary of the New York City Pension Funds and Retirement Systems (the Actuary) and represent the Statutory Contributions.



During June 2012 the Governmental Accounting Standards Board (GASB) released two new accounting standards for public pension plans, Statement No. 67 (GASB67) and Statement No. 68 (GASB68), collectively “GASB67/68.”

GASB67, *Financial Reporting for Pension Plans*, amends GASB Statement No. 25 (GASB25) and is effective for financial statements for fiscal years beginning after June 15, 2013 (i.e., Fiscal Year 2014 for BERS).

GASB68, *Accounting and Financial Reporting for Pensions*, amends GASB Statement No. 27 (GASB27) and is effective for financial statements for fiscal years beginning after June 15, 2014 (i.e., Fiscal Year 2015 for the City of New York (the City)).

On October 11, 2016, the Actuary published the, “GASB 67/68 Report for the City of New York and the New York City Retirement Systems For Fiscal Year Ended June 30, 2016” (the Fiscal Year 2016 GASB67/68 Report). Appendix C of The Fiscal Year 2016 GASB67/68 Report contains information developed in accordance with GASB67 for BERS.

### **Actuarial Assumptions and Methods**

Provided in this Actuarial Section of the CAFR is a “Summary of Actuarial Assumptions and Methods in Effect for the June 30, 2014 (Lag) Actuarial Valuation.” These actuarial assumptions and methods (2012 A&M) were first employed in the June 30, 2010 (Lag) actuarial valuation that was used to determine Fiscal Year 2012 Employer Contributions to the Plan.

These 2012 A&M were developed after reviewing the results of independent actuarial studies dated December 2011 by The Hay Group (Hay) and November 2006 by The Segal Company (Segal) in accordance with Section 96 of the New York City Charter, after which the Actuary issued a February 10, 2012 Report entitled “Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and After July 1, 2011 for the New York City Board of Education Retirement System” (February 2012 Report).

The Board of Trustees of the Plan adopted those changes in actuarial assumptions that require Board approval. The State Legislature and the Governor enacted Chapter 3 of the Laws of 2013 (Chapter 3/13) to provide for those changes to the actuarial assumptions and methods that require legislation, including the Actuarial Interest Rate (AIR) assumption of 7.0% per annum, net of investment expenses.

In October 2015 the independent actuarial auditor, Gabriel, Roeder, Smith & Company (GRS), issued a report on their NYC Charter-mandated actuarial experience studies for the four-year and ten-year periods ended June 30, 2013 (the GRS Report).



Based, in part, on the GRS Report, on published studies of mortality improvement, and on input from the City's outside consultants and auditors, the Actuary proposed, and the Board of Trustees of BERS adopted, new post-retirement mortality tables for use in determining employer contributions beginning in Fiscal Year 2016. The new tables of post-retirement mortality are based primarily on the experience of BERS (the Base Tables) and the application of Mortality Improvement Scale MP-2015, published by the Society of Actuaries in October 2015 (the Valuation Tables). Scale MP-2015 replaced Mortality Improvement Scale AA.

In addition, beginning in Fiscal Year 2016, the Actuary revised the Actuarial Asset Valuation Method to constrain the Actuarial Asset Value to be within a 20% corridor of the Market Value of Assets.

The 2012 A&M reflecting the above revisions is referred to as the "2016 A&M."

These actuarial assumptions and methods (2016 A&M) used for funding purposes meet the parameters set by the Actuarial Standards of Practice (ASOPs).

### **Benefits and Census Data**

A summary of the benefits applicable to Plan members included in the June 30, 2014 (Lag) actuarial valuation is shown later in this Actuarial Section of the CAFR.

Census data is submitted by the Plan's administrative staff and by the employers' payroll facilities and is reviewed by the Office of the Actuary (OA) for consistency and reasonability.

A summary of the census data used in the June 30, 2014 (Lag) actuarial valuation is included in this CAFR. A summary of the census data used in the June 30, 2013 (Lag) actuarial valuation of the Plan is available in the June 30, 2015 CAFR.

### **Funded Status**

The Funded Status of the Plan is usually expressed by the relationship of Assets to Liabilities.

With respect to the Funded Status of the Plan, included in the Actuarial Section of the CAFR is a schedule of Funded Status based on the Entry Age Actuarial Cost Method (Table 8).

Also included in the Actuarial Section of the CAFR is a Solvency Test (i.e., Comparative Summary of Aggregate Accrued Liabilities Funded by Actuarial Value of Assets) (Table 9), as prescribed by the Government Finance Officers Association (GFOA). This Solvency Test represents an alternative approach to describing progress toward funding objectives.



### **Presentation Style and Sources of Information**

The actuarial information herein is being presented in a manner believed to be consistent with the requirements of the GFOA and, where applicable, with GASB67.

The following items in the Actuarial Section of the CAFR were prepared by the OA:

- Summary of Actuarial Assumptions and Methods in Effect for the June 30, 2014 (Lag) Actuarial Valuation.
- Active Member Valuation Data.
- Summary of Plan Membership.
- Funded Status Based on Entry Age Actuarial Cost Method.
- Comparative Summary of Aggregate Accrued Liabilities Funded by Actuarial Value of Assets - Solvency Test.
- Retirants and Beneficiaries Added to and Removed from Rolls.
- Statutory vs. Actuarial Contributions.
- Summary of Plan Provisions.

The following items in the Financial Section of the CAFR were also prepared by the OA:

- Membership Data.
- Net Pension Liability.
- Actuarial Assumptions and Methods.
- Schedule of Changes in Employers' Net Pension Liability and Related Ratios.
- Schedule of Employer Contributions.

If you have any questions about any of the information in this Actuarial Section or any of the actuarial information presented elsewhere in this CAFR, please do not hesitate to contact Mr. Michael J. Samet, Mr. Edward Hue, or me.





Board of Trustees  
New York City Board of Education  
Retirement System  
December 20, 2016  
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### **Acknowledgment of Qualification**

I, Sherry S. Chan, am the Chief Actuary for, and independent of, the New York City Pension Funds and Retirement Systems. I am a Fellow of the Society of Actuaries, a Fellow of the Conference of Consulting Actuaries and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. To the best of my knowledge, the results contained herein have been prepared in accordance with generally accepted actuarial principles and procedures and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Respectfully submitted,



Sherry S. Chan, FSA, FCA, MAAA  
Chief Actuary

SSC/eh

Att.

cc: Mr. Jean-Daniel Desmornes – New York City Board of Education Retirement System  
Mr. Edward Hue – New York City Office of the Actuary  
Mr. Sanford Rich – New York City Board of Education Retirement System  
Mr. Sam Rumley – New York City Office of the Actuary  
Mr. Michael Samet – New York City Office of the Actuary

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## Summary of Actuarial Assumptions and Methods In Effect For The June 30, 2014 (Lag) Actuarial Valuation

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- (1) Pursuant to Section 96 of the New York City Charter, studies of the actuarial assumptions used to value liabilities of the five actuarially-funded New York City Retirement Systems (NYCRS) are conducted every two years.

Also, in accordance with the Administrative Code of the City of New York (ACNY), the Boards of Trustees of the five actuarially-funded NYCRS are to periodically review and adopt actuarial assumptions as proposed by the Actuary for use in the determination of Employer Contributions.

The most recently completed study was published by Gabriel Roeder Smith & Company (GRS) dated October 2015 and analyzed experience for Fiscal Years 2010 through 2013. GRS made recommendations with respect to the actuarial assumptions and methods based on their analysis.

Based, in part, on the GRS Report, on published studies of mortality improvement, and on input from the City's outside consultants and auditors, the Actuary proposed, and the BERS Board of Trustees of the Plan adopted, new post-retirement mortality tables for use in determining employer contributions beginning in Fiscal Year 2016. The new tables of post-retirement mortality are based primarily on the experience of BERS (the Base Tables) and the application of Mortality Improvement Scale MP-2015, published by the Society of Actuaries in October 2015 (the Valuation Tables). Scale MP-2015 replaced Mortality Improvement Scale AA.

In addition, beginning in Fiscal Year 2016, the Actuary revised the Actuarial Asset Valuation Method to constrain the Actuarial Asset Value to be within a 20% corridor of the Market Value of Assets.

The previously completed studies were published by The Hay Group (Hay), dated December 2011 and by The Segal Company (Segal), dated November 2006. Hay analyzed experience for Fiscal Years 2006 through 2009 and made recommendations with respect to the actuarial assumptions and methods based on their analysis. Segal analyzed experience for Fiscal Years 2002 through 2005 and made recommendations with respect to the actuarial assumptions and methods based on their analysis.

Based, in part, upon a review of the Segal and Hay studies, the Actuary issued a February 10, 2012 Report entitled "Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and After July 1, 2011 for the New York City Board of Education Retirement System" (February 2012 Report).

The Board of Trustees of the Plan adopted those changes to actuarial assumptions that require Board approval. The State Legislature and the Governor have enacted Chapter 3 of the Laws of 2013 (Chapter 3/13) to provide for those changes to the actuarial assumptions and methods that require legislation, including the Actuarial Interest Rate (AIR) assumption of 7.0% per annum, net of investment expenses, the Entry Age Actuarial Cost Method and the amortization of Unfunded Actuarial Accrued Liabilities.



## Summary of Actuarial Assumptions and Methods In Effect For The June 30, 2014 (Lag) Actuarial Valuation (Cont'd)

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The investment rate of return assumption is 7.0% per annum, net of investment expenses (4.0% per annum for benefits payable under the Variable Annuity Program).

- (2) The mortality tables for service and disability pensioners were developed from an experience study of the Plan's pensioners. Sample probabilities are shown in Table 1A. Mortality tables for beneficiaries were developed from experience review. Sample probabilities are shown in Table 1B.
- (3) Active Service tables are used to estimate various withdrawals from Active Service. Sample probabilities are shown in Table 2A for members withdrawing from Active Service due to Death or Disability who did not elect an improved retirement program and Table 2B for members electing an improved retirement program, in Table 3 for members withdrawing for Other Than Death or Disability or Retirement, and in Table 4 for members withdrawing from Active Service after eligibility for Service Retirement.
- (4) A Salary Scale is used to estimate salaries at termination, retirement or death. Sample percentage increases are shown in Table 5. The Salary Scale includes a General Wage Increase (GWI) assumption of 3.0% per annum.
- (5) The economic assumptions (i.e., the assumed investment return rate, GWI rate and Cost-of-Living Adjustments (COLA)) were developed assuming a long-term Consumer Price Inflation (CPI) assumption of 2.5% per annum. The assumption is 1.5% per annum for Auto COLA and 2.5% per annum for escalation.
- (6) The valuation assumes a closed group of members.
- (7) Beginning with the June 30, 2010 (Lag) actuarial valuation, the Entry Age Actuarial Cost Method (EAACM) of funding is utilized by the Plan's Actuary to calculate the contribution required of the Employer.

Under this method, the Actuarial Present Value (APV) of Benefits (APVB) of each individual included in the actuarial valuation is allocated on a level basis over the earnings (or service) of the individual between entry age and assumed exit age(s). The employer portion of this APV allocated to a valuation year is the Employer Normal Cost. The portion of this APV not provided for at a valuation date by the APV of Future Employer Normal Costs or future member contributions is the Actuarial Accrued Liability (AAL).

The excess, if any, of the AAL over the Actuarial Asset Value (AAV) is the Unfunded Actuarial Accrued Liability (UAAL).

Under this method, actuarial gains (losses), as they occur, reduce (increase) the UAAL and are explicitly identified and amortized.



## Summary of Actuarial Assumptions and Methods In Effect For The June 30, 2014 (Lag) Actuarial Valuation (Cont'd)

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Increases (decreases) in obligations due to benefit changes, actuarial assumption changes and/or actuarial method changes are also explicitly identified and amortized.

Chapter 105 of the Laws of 2010 established, as of June 30, 2011, an Early Retirement Incentive (ERI) for certain BERS members. The UAAL attributable to the ERI is amortized on a level basis over a period of five years (4 payments under the One-Year Lag Methodology).

- (9) One-Year Lag Methodology (Lag or OYLM) uses a June 30, XX-2 valuation date to determine Fiscal Year XX Employer Contributions.

The June 30, 2014 (Lag) actuarial valuation uses a June 30, 2014 valuation date to determine Fiscal Year 2016 Employer Contributions.

This methodology requires technical adjustments to certain components used to determine Fiscal Year 2016 Employer Contributions as follows:

- Present Value of Future Salary (PVFS)

The PVFS at June 30, 2014 is reduced by the value of salary projected to be paid during Fiscal Year 2015.

- Salary for Determining Employer Contributions

Salary used to determine the employer normal contribution is the salary projected to be paid during Fiscal Year 2016 to members on payroll at June 30, 2014.

- UAAL Payments

For determining the UAAL payments for Fiscal Year 2016, and to be consistent with OYLM, the UAAL as of June 30, 2014 is adjusted by the discounted value of employer normal contributions paid during Fiscal Year 2015 and the discounted value of the administrative expenses reimbursed during Fiscal Years 2015 and 2016.



**Summary of Actuarial Assumptions and Methods  
In Effect For The June 30, 2014 (Lag) Actuarial Valuation  
(Cont'd)**

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- (10) The Actuary reset the AAV to the Market Value of Assets (MVA) as of June 30, 2011 (i.e., Market Value Restart).

Beginning with the June 30, 2012 (Lag) actuarial valuation, the Actuarial Asset Valuation Method (AAVM) recognizes investment returns greater or less than expected over a period of six years.

In accordance with this AAVM, actual Unexpected Investment Returns (UIR) are phased into the AAV at rates of 15%, 15%, 15%, 15%, 20% and 20% per year, respectively, (i.e., cumulative rates of 15%, 30%, 45%, 60%, 80% and 100%).

Beginning with the June 30, 2014 (Lag) actuarial valuation, the AAV is constrained to be within a 20% corridor of the Market Value.

- (11) The APVB as of June 30, 2014, used to determine Fiscal Year 2016 Employer Contributions, includes estimates of liabilities for:

- World Trade Center Disability Benefits.
- World Trade Center Death Benefits.

- (12) As discussed herein, the actuarial assumptions and methods are unchanged from those used in the June 30, 2013 (Lag) actuarial valuation except for the adoption of revised post-retirement mortality Tables and a 20% corridor constraining the Actuarial Asset Value as described in sections (1) and (10) above, respectively.



**Summary of Actuarial Assumptions and Methods  
In Effect For The June 30, 2014 (Lag) Actuarial Valuation  
(Cont'd)**

**Table 1A  
DEATHS AMONG SERVICE AND DISABILITY PENSIONERS  
Percentage of Pensioners Dying within Next Year**

Age	Service Pensioners		Disability Pensioners	
	Males	Females	Males	Females
40	0.0947%	0.0573%	1.2639%	1.3481%
45	0.2982	0.1002	1.3564	1.4734
50	0.5603	0.2093	1.6327	1.7585
55	0.8732	0.3336	2.1003	1.8410
60	1.0191	0.4917	2.4210	1.9145
65	1.2791	0.6538	2.5828	2.1211
70	1.8603	1.0620	3.0075	2.4756
75	2.5748	1.7589	3.8204	3.2337
80	4.4557	2.9656	5.1977	4.4159
85	7.3027	4.9949	7.3175	6.4750
90	11.4055	8.5739	11.4213	11.1714
95	20.5692	15.5282	20.5864	18.8480
100	31.4230	21.6851	31.4230	22.6011
105	37.5244	27.6686	37.5244	27.6686
110	100.0000	100.0000	100.0000	100.0000

Society of Actuaries Mortality Improvement Scale MP-2015 is applied to these rates.

**Table 1B  
DEATHS AMONG BENEFICAIRIES  
Percentage of Pensioners Dying within Next Year**

Years of Service	Males	Females
40	0.0947%	0.0687%
45	0.2684	0.1202
50	0.4203	0.2512
55	0.8245	0.4448
60	1.0827	0.7377
65	1.4619	1.0274
70	1.9843	1.4161
75	2.9181	2.2280
80	5.3467	3.7564
85	8.2155	6.2437
90	14.2568	10.7174
95	22.8721	18.1287
100	31.4230	21.7021
105	37.5244	27.6686
110	100.0000	100.0000

Society of Actuaries Mortality Improvement Scale MP-2015 is applied to these rates.

**Summary of Actuarial Assumptions and Methods  
In Effect For The June 30, 2014 (Lag) Actuarial Valuation  
(Cont'd)**

Table 2A

**WITHDRAWALS FROM ACTIVE SERVICE (DUE TO DEATH OR DISABILITY)  
MEMBERS WHO DO NOT ELECT AN IMPROVED RETIREMENT PROGRAM**

**Percentage of Active Members Separating within Next Year**

Age	Accidental Disability		Ordinary Disability		Death	
	Males	Females	Males	Females	Males	Females
20	0.04%	0.02%	0.20%	0.20%	0.040%	0.030%
25	0.04	0.02	0.20	0.20	0.040	0.030
30	0.04	0.02	0.20	0.20	0.060	0.040
35	0.04	0.02	0.30	0.20	0.080	0.050
40	0.04	0.02	0.40	0.25	0.100	0.060
45	0.04	0.02	0.50	0.30	0.150	0.100
50	0.04	0.02	0.60	0.50	0.200	0.150
55	0.04	0.02	0.70	0.70	0.300	0.200
60	0.04	0.02	0.70	0.70	0.400	0.250
65	0.04	0.02	0.70	0.70	0.500	0.300
70	NA	NA	NA	NA	NA	NA

Table 2B

**WITHDRAWALS FROM ACTIVE SERVICE (DUE TO DEATH OR DISABILITY)  
MEMBERS WHO ELECTED AN IMPROVED RETIREMENT PROGRAM**

**Percentage of Active Members Separating within Next Year**

Age	Accidental Disability		Ordinary Disability		Death	
	Males	Females	Males	Females	Males	Females
20	0.04%	0.02%	0.20%	0.20%	0.040%	0.030%
25	0.04	0.02	0.20	0.20	0.040	0.030
30	0.04	0.02	0.20	0.20	0.060	0.040
35	0.04	0.02	0.30	0.20	0.080	0.050
40	0.04	0.02	0.40	0.25	0.100	0.060
45	0.04	0.02	0.50	0.30	0.150	0.100
50	0.04	0.02	0.60	0.50	0.200	0.150
55	0.04	0.02	0.70	0.70	0.300	0.200
60	0.04	0.02	0.70	0.70	0.400	0.250
65	0.04	0.02	0.70	0.70	0.500	0.300
70	NA	NA	NA	NA	NA	NA



**Summary of Actuarial Assumptions and Methods  
In Effect For The June 30, 2014 (Lag) Actuarial Valuation  
(Cont'd)**

**Table 3**

**WITHDRAWALS FOR OTHER THAN DEATH OR DISABILITY OR RETIREMENT  
Percentage of Active Members Withdrawing within Next Year**

Years of Service	Probability of Withdrawal	
	Males	Females
0	6.00%	4.00%
5	4.00	3.00
10	2.50	2.00
15	1.50	1.50
20	1.00	1.00
25	1.00	1.00

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**ACTUARIAL**

**Table 4**

**WITHDRAWALS FROM ACTIVE SERVICE (AFTER ELIGIBILITY FOR SERVICE RETIREMENT)  
Percentage of Eligible Active Members Retiring Within Next Year**

Age	With <sup>(2)</sup> Reduced Benefits	With Unreduced Benefit <sup>(1)</sup>					
		Members not Electing Optional Retirement Program			Members Electing Optional Retirement Program		
		Years of Service Since First Elig.			Years of Service Since First Elig.		
		0-1	1-2	2+	0-1	1-2	2+
50	0.00%	20.00%	15.00%	10.00%	40.00%	20.00%	15.00%
55	2.00	20.00	15.00	10.00	40.00	20.00	15.00
60	4.00	20.00	15.00	10.00	40.00	20.00	15.00
65	0.00	30.00	25.00	20.00	60.00	25.00	25.00
70	NA	100.00	100.00	100.00	100.00	100.00	100.00

- (1) Separate probabilities of Service Retirement are applicable to those active members who elected an Optional Retirement Program such as Chapter 96 of the Laws of 1995 or Chapter 19 of the Laws of 2008.
- (2) Applicable to members whose benefits will be reduced upon retiring prior to the date eligible for unreduced Service Retirement.



**Summary of Actuarial Assumptions and Methods  
In Effect For The June 30, 2014 (Lag) Actuarial Valuation  
(Cont'd)**

**Table 5  
SALARY SCALE**

Years of Service	Assumed Annual Percentage Increases Within Next Year*
0	9.00%
5	5.00
10	4.50
15	4.50
20	4.25
25	4.00
30	4.00
35	4.00
40	4.00

\* Salary Scale includes a General Wage Increase assumption of 3.0% per annum.



## Active Member Valuation Data

Table 6  
ACTIVE MEMBER VALUATION DATA

Valuation Date	Number	Annual Payroll	Annual Average Salary	Percentage Increase (Decrease) in Average Salary
6/30/05 (Lag)	23,005	\$715,077,619	\$31,084	4.0%
6/30/06 (Lag)	23,095	749,962,525	32,473	4.5
6/30/07 (Lag)	21,947	777,626,307	35,432	9.1
6/30/08 (Lag)	22,729	852,105,791	37,490	5.8
6/30/09 (Lag)	23,303	910,609,483	39,077	4.2
6/30/10 (Lag) <sup>(1)</sup>	23,324	912,290,136	39,114	0.1
6/30/11 (Lag)	23,131	920,369,154	39,789	1.7
6/30/12 (Lag)	27,840	1,018,895,365	36,598	(8.0)
6/30/13 (Lag)	25,848	1,051,571,168	40,683	11.2
6/30/14 (Lag)	25,182	1,045,187,738	41,505	2.0

(1) Beginning with the June 30, 2010 (Lag) actuarial valuation, the annualized covered payroll is based on revised actuarial assumptions.

## SUMMARY OF PLAN MEMBERSHIP

As of the June 30, 2014 (Lag) and June 30, 2013 (Lag) actuarial valuations, the Plan's Membership consisted of:

Table 7

Summary of Plan Membership		
Group	2014 (Lag)	2013 (Lag)
Retirees and beneficiaries currently receiving benefits	15,995	15,455
Terminated vested members not yet receiving benefits	195	182
Other Inactives*	4,005	4,127
Active members	<u>25,182</u>	<u>25,848</u>
Total	<u>45,377</u>	<u>45,612</u>

\* Represents members who are no longer on payroll but not otherwise classified.

## Funded Status Based on Entry Age Actuarial Cost Method (Dollar Amounts in Thousands)

This Schedule is being provided by the Actuary for the Plan to improve the transparency and decision usefulness of this financial report.

Prior to the June 30, 2010 (Lag) Actuarial Valuation, the Actuarial Cost Method (ACM) used to develop the funding requirements for the Plan was the Frozen Initial Liability (FIL) ACM. Under this ACM, following establishment of any Initial Unfunded Actuarial Accrued Liabilities (UAAL), actuarial gains and losses are financed over the working lifetimes of active participants and are not identified as separate UAAL.

The funding status and funding progress information provided in this Schedule has been prepared using the Entry Age ACM where the Actuarial Present Value (APV) of any obligations of the Plan not provided by the APV of Future Contributions (Employer and Employee), as determined under the Entry Age ACM, equals the Actuarial Accrued Liability (AAL). Under the Entry Age ACM, the UAAL equals the AAL minus the Actuarial Value of Assets.

**Table 8**  
**FUNDED STATUS BASED ON ENTRY AGE ACTUARIAL COST METHOD**  
**(Dollar Amounts in Thousands)**

Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) - Entry Age (b)	Unfunded AAL (UAAL) - Entry Age (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/ c)
June 30, 2014 (Lag) <sup>1</sup>	2,632,922	4,335,746	1,702,824	60.7%	1,045,188	162.9%
June 30, 2013 (Lag) <sup>1</sup>	2,277,791	4,015,080	1,737,289	56.7	1,051,571	165.2
June 30, 2012 (Lag) <sup>1</sup>	2,371,613	3,763,130	1,391,517	63.0	1,018,895	136.6
June 30, 2011 (Lag) <sup>1</sup>	2,323,629	3,681,694	1,358,065	63.1	920,369	147.6
June 30, 2010 (Lag) <sup>1</sup>	2,056,452	3,558,251	1,501,799	57.8	912,290	164.6
June 30, 2009 (Lag)	1,963,719	2,858,115	894,396	68.7	910,609	98.2
June 30, 2008 (Lag)	2,084,116	2,721,629	637,513	76.6	852,106	74.8

Note: This schedule is based on actuarial assumptions used for determining Employer Contributions.

- 1 Reflects revised actuarial assumptions and methods based on experience review, including an AIR assumptions of 7.0% per annum, net of investment expenses.



**Comparative Summary of Actuarial Values and Percentages Covered by Actuarial Value of Assets**

**Table 9  
SOLVENCY TEST  
(Dollar Amounts in thousands)**

As of June 30	Aggregate Accrued Liabilities For			Actuarial Value of Assets (D)	Percentage of Actuarial Values Covered by Actuarial Value of Assets		
	Accumulated Member Contributions	Current Retirants and Beneficiaries	Active Members' Employer Financed Portion		(A)	(B)	(C)
	(A)	(B)	(C)				
2005 (Lag)	\$301,021	\$1,131,335	\$ 742,368	\$1,841,041	100%	100%	55%
2006 (Lag)	317,544	1,181,666	809,206	1,830,338	100	100	41
2007 (Lag)	319,153	1,233,708	839,993	1,983,714	100	100	51
2008 (Lag)	337,821	1,262,046	904,890	2,084,116	100	100	54
2009 (Lag)	359,122	1,303,453	965,681	1,963,719	100	100	31
2010 (Lag)	388,082	1,627,094	1,306,868	2,056,452	100	100	3
2011 (Lag)	409,625	1,714,099	1,319,938	2,323,629	100	100	15
2012 (Lag)	434,215	1,804,626	1,283,582	2,371,613	100	100	10
2013 (Lag)	469,312	1,918,824	1,372,542	2,277,791	100	94	0
2014 (Lag)	504,619	2,080,400	1,475,008	2,632,922	100	100	3

Also, see following "SOLVENCY TEST - NOTES."

## Comparative Summary of Actuarial Values and Percentages Covered by Actuarial Value of Assets (Cont'd)

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### SOLVENCY TEST - NOTES

The ultimate test of financial soundness in a retirement system is its ability to pay all of its promised benefits when due. The retirement system's progress in accumulating assets to pay all promised benefits can be measured by comparing the Actuarial Value of Assets of the retirement system with the Aggregate Accrued Liabilities for:

- (A) Accumulated Member Contributions;
- (B) Current Retirants and Beneficiaries; and
- (C) Active Members' Employer Financed Portion.

The Aggregate Accrued Liabilities are the APV of projected benefits produced by the projected benefit attribution approach prorated on service. The Aggregate Accrued Liabilities were calculated in accordance with Governmental Accounting Standards Board Statement No. 5 (GASB 5).

This comparative summary allocated assets as if they were priority groups, somewhat similar to (but not identical to) the priority categories of Section 4044 of the Employee Retirement Income Security Act of 1974 (ERISA).

The values in the table are dependent upon census data, benefit levels (which have changed on occasion over the past years), and the actuarial assumptions and methods employed at each valuation date. The two most recent changes in assumptions and methods occurred in the June 30, 2014 (Lag) valuation use to compute Employer Contributions for Fiscal Year 2016 and in the June 30, 2010 (Lag) valuation used to compute Employer Contributions for Fiscal Year 2012. These underlying bases can be found within the Comprehensive Annual Financial Report for each respective year.

To fully evaluate trends in financial soundness, changes in assumptions need to be evaluated. Beginning with the June 30, 2010 (Lag) actuarial valuations, the Actuarial Interest Rate assumption equals 7.0% per annum, net of investment expenses, and the General Wage Increase assumption equals 3.0% per annum. Prior to the June 30, 2010 (Lag) actuarial valuation, the Actuarial Interest Rate assumption was 8% per annum, gross of expenses.



**Retirants and Beneficiaries Added To and Removed From Rolls**

Table 10

Year Ended	Added to Rolls		Removed from Rolls		Rolls End of Year		% Increase In Annual Allowances	Average Annual Allowances
	Number	Annual Allowances <sup>(1)</sup>	Number	Annual Allowances	Number	Annual Allowances <sup>(2)</sup>		
6/30/05	779	\$ 8,763,397	431	3,995,277	11,973	\$ 133,647,065	3.7%	\$11,164
6/30/06	1,066	12,053,392	466	3,414,306	12,573	142,286,151	6.5	11,317
6/30/07	958	10,886,720	540	3,850,151	12,991	149,322,720	4.9	11,494
6/30/08	667	8,148,653	462	4,350,475	13,196	153,120,898	2.5	11,604
6/30/09	936	10,879,798	491	4,135,086	13,641	159,865,610	4.4	11,719
6/30/10	850	10,705,737	522	4,700,094	13,969	165,871,253	3.8	11,874
6/30/11	901	14,977,636	471	4,325,573	14,399	176,523,316	6.4	12,259
6/30/12	1,053	16,201,746	578	6,211,198	14,874	186,513,864	5.7	12,540
6/30/13	1,110	16,977,455	529	4,957,022	15,455	198,534,297	6.4	12,846
6/30/14	1,094	13,701,890	554	5,306,812	15,995	206,929,375	4.2	12,937

- (1) Balancing Item – Amounts shown include changes due to benefit finalization, change in benefit type (e.g., Service to Accident Disability), COLA increases and other changes.
- (2) Allowances shown in table are those used in the actuarial valuation as of the Year Ended date and are not adjusted for anticipated changes due to finalization of benefit calculation or contract settlements.

## Statutory vs. Annual Required Contributions

Fiscal Year Ended	Statutory Contribution <sup>(1)</sup>	Annual Required Contribution	Employer Rate of Contribution <sup>(2)</sup>
6/30/07	\$129,820,109	\$129,820,109	18.641%
6/30/08	143,100,327	143,100,327	19.627
6/30/09	134,224,615	134,224,615	17.766
6/30/10	147,348,563	147,348,563	17.822
6/30/11	180,191,397	180,191,397	20.461
6/30/12	213,650,880	213,650,880	24.293
6/30/13	196,245,777	196,245,777	22.145
6/30/14	214,589,565	214,589,565	21.694
6/30/15	258,099,327	258,099,327	25.383
6/30/16	265,532,032	265,532,032	26.341

- (1) Represents total employer contributions accrued for fiscal year.

Beginning Fiscal Year 2006, the Statutory Contributions were computed using a One-Year Lag Methodology in accordance with Chapter 152/06 which also eliminated the use of ten-year phase-in of Chapter 278/02 for funding the additional actuarial liabilities attributed to Chapter 125/00.

- (2) The Employer Rate of Contribution equals the Statutory Contribution as a percentage of the salaries of members who were on payroll or projected to be on payroll (under One-Year Lag Methodology) as of the preceding June 30 and adjusted, where applicable, to be consistent with collective bargaining agreements estimated to be achieved.



## Summary of Plan Provisions

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This Summary of Plan Provisions is applicable to Plan members included in the June 30, 2014 (Lag) actuarial valuation.

### A. MEMBERSHIP

Membership in the New York City Board of Education Retirement System – Qualified Pension Plan is available to all non-temporary employees in education service, regardless of part-time or full-time status, other than persons eligible to participate in the New York City Teachers' Retirement System – Qualified Pension Plan.

All such persons holding permanent civil service positions are required to become members of the New York City Board of Education Retirement System – Qualified Pension Plan.

### B. BRIEF HISTORY

The Board of Education Retirement System was established as of September 1, 1921 and originally provided for its members a fractional retirement plan (i.e., age 60-1/140th). Subsequently, additional fractional plans were made available (i.e., the age 55-1/120th and the age 55-1/100th). These plans are known as the Old Service Fraction Plans.

Amendments in 1968 to the Rules and Regulations of the Board of Education Retirement System substantially revised the benefit structure by establishing two new retirement plans effective July 1, 1968. Members who joined the System on or after the effective date were required to choose either one of the two plans, namely (1) the Career Pension Plan (Plan A), or (2) the 55-Year Increased-Service-Fraction Plan (Plan B). A member who joined the System prior to the effective date could continue under his/her existing plan, or could elect one of these new plans, providing such election was made prior to July 1, 1970. Members who elected one of these new plans are referred to as Tier I members.

Chapter 1046 of the Laws of 1973 imposed certain limitations on the benefits available to members joining the System after June 30, 1973. For members who joined the System between July 1, 1973 and June 30, 1976 (Tier II members), two plans were available: the Modified Career Pension Plan (Plan C); and the Modified 55-Year-Increased-Service-Fraction Plan (Plan D).

Chapter 890 of the Laws of 1976 established a new statewide pension plan, the Coordinated Escalator (CO-ESC) Retirement Plan, covering all employees joining on or after July 1, 1976 (Tier III members). However, the New York Court of Appeals on May 31, 1988 held, in *Civil Service Employees' Association vs. Regan*, that persons who became members between July 1, 1976 and July 26, 1976 are considered Tier II (i.e., Plans C and D) members.





Chapter 414 of the Laws of 1983 established the Coordinated Retirement Plan, effective September 1, 1983, superseding the CO-ESC plan for most employees joining the System on or after July 27, 1976 (Tier IV members). This plan set a normal retirement age of 62, and mandated a 3% contribution by the member for all years of membership. Members who joined July 27, 1976 through August 31, 1983, however, are entitled to receive a benefit from either the CO-ESC or Coordinated Plan, whichever provides a greater benefit.

Chapter 749 of the Laws of 1992 set forth pension rights, including retroactive rights, to part-time employees.

Chapter 96 of the Laws of 1995 (Chapter 96/95) established an Optional Retirement Program effective during Fiscal Year 1996. This Program increased early retirement benefits and required additional member contributions. This Program is optional for those hired prior to the effective date of the legislation and mandatory for those hired after.

Chapter 442 of the Laws of 1997 reduced from 4.35% to 2.85% the Additional Member Contributions for Tier II and Tier IV members participating in the Chapter 96/95 Optional Retirement Program.

Chapter 266 of the Laws of 1998 improved benefits for Tier IV members who had at least 20 years of service but less than 25 years of service and permitted certain Tier III retirees to elect to receive Tier IV benefits.

Chapter 388 of the Laws of 1998 provided a pre-retirement death benefit for certain vested members of the Plan.

Chapter 389 of the Laws of 1998 allowed certain members of the Plan to become vested after five years of service.

Chapter 390 of the Laws of 1998 (Chapter 390/98) provided additional benefits for cost-of-living increases for certain retirees of the Plan. An initial increase for members who retired on or before Calendar Year 1992 is effective as of September 1998 as enacted by the City Council on August 27, 1998. A subsequent increase for members who retired on or before Calendar Year 1993 is effective as of September 1999 as enacted by the City Council on August 27, 1998.

Chapter 644 of the Laws of 1998 provided that any active member with ten or more years of service and within three years of retirement may purchase up to three years of member service credit for U.S. Military Service during a period of war.

Chapter 646 of the Laws of 1999 provided active and future members the right to reinstate earlier membership by repaying prior member contributions with 5% interest.



## Summary of Plan Provisions (Cont'd)

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Chapter 659 of the Laws of 1999 reduced to five years the amount of service credit needed for Tier III/IV vested members to receive benefits at age 55.

Chapter 110 of the Laws of 2000 amended the language of the legislation that later became Chapter 126 of the Laws of 2000 which provides for benefit enhancements for certain members.

Chapter 125 of the Laws of 2000 (Chapter 125/00) provided eligible retirees with annual automatic Cost-of-Living Adjustments. It also provided for a five-year phase-in for the funding of the additional actuarial liabilities.

Chapter 126 of the Laws of 2000 provided for benefit enhancements (i.e., elimination of employee basic contributions for Tier III/IV members with more than 10 years of membership, additional service credit for Tier I/II members of up to a maximum of 24 months, and allows Tier III/IV members to retire at age 55 with reduced benefits under the same formula as used for Tier II members) for certain members of the New York City Retirement Systems.

Chapter 553 of the Laws of 2000 permitted Tier IV members to retire early with a reduced benefit beginning at age 55 provided they have at least 5 years of credited service and are not members of the 25 Year Early Retirement Program or the Age 57 Retirement Program.

Chapter 554 of the Laws of 2000 provided that Tiers II, III and IV members who joined prior to January 1, 2001 and who elected Death Benefit One will receive the greater of Death Benefit One or Death Benefit Two coverage. New members on and after January 1, 2001 will only receive coverage under Death Benefit Two.

Chapter 509 of the Laws of 2001 reduced from 2.85% to 1.85% the Additional Member Contribution rate for Tier II and Tier IV members participating in the Chapter 96/95 Optional Retirement Programs.

Chapter 69 of the Laws of 2002 provided an Early Retirement Incentive (ERI) program for certain members.

Chapter 278 of the Laws of 2002 (Chapter 278/02) revised the phase-in schedule of Chapter 125/00 for Fiscal Year 2003 and later by extending from five to ten years the phase-in period for the funding of the additional actuarial liabilities attributable to Chapter 125/00.

Chapter 307 of the Laws of 2002 provided Corpus Funding of administrative expenses for the Plan commencing July 1, 2002 and allows for the appointment of an Executive Director for the Plan.

Chapter 623 of the Laws of 2004 provided for an Excess Benefit Plan to be established which would provide benefits to those pensioners whose annual retirement benefits are limited because those benefits exceed the limitations set by IRC Section 415 (b). The law is retroactive to July 1, 2000.



Chapter 104 of the Laws of 2005, as amended by Chapter 93 of the Laws of 2005, created a presumptive eligibility for accidental disability in connection with the World Trade Center attack on September 11, 2001.

Chapter 105 of the Laws of 2005 states that a member killed in the U.S. Armed Forces on and after June 14, 2005 is deemed a Line-of-Duty death while on active payroll.

Chapter 133 of the Laws of 2005 continued the valuation and other interest rates for one year to June 30, 2006 from June 30, 2005.

Chapter 152 of the Laws of 2006 (Chapter 152/06) provided for the changes in actuarial assumptions and methods that require legislation, including the continuation of the AIR assumption of 8.0% per annum and continuation of the current Frozen Initial Liability (FIL) Actuarial Cost Method and the existing Unfunded Actuarial Accrued Liability (UAAL). In addition, Chapter 152/06 provided for the elimination of the use of the ten-year phase-in of Chapter 278/02 for funding the additional actuarial liabilities created by the benefits provided by Chapter 125/00.

Chapter 445 of the Laws of 2006 (Chapter 445/06) created a presumptive eligibility of accidental death benefits in conjunction with the World Trade Center attack on September 11, 2001.

Chapter 5 of the Laws of 2007 amended Chapter 445/06 to clarify the World Trade Center accidental disability benefits payable to retirees who die in the first 25 years of retirement. It also amended Chapter 445/06 to include World Trade Center deaths as presumptive accidental deaths in the Line of Duty.

Chapter 260 of the Laws of 2007 is a reopener of the Chapter 96/95 Optional Retirement Program for Tier II and Tier IV members in the Loader and Handler job titles.

Chapter 19 of the Laws of 2008 established retirement programs to permit certain Tier II and Tier IV members to elect to retire between ages 55 and 62 without reduction provided they have 25 years of service, by paying an additional contribution of 1.85% of future pay. New members after February 27, 2008 are mandated into this plan and are required to be age 55 and have 27 years of service to retire without reduction.

Chapter 489 of the Laws of 2008 expanded and redefined the eligibility provisions of the accidental disability and accidental death benefits that arise in connection with the World Trade Center attack on September 11, 2001.

Chapter 211 of the Laws of 2009 continued the valuation and other interest rates for one year to June 30, 2010 from June 30, 2009.



## Summary of Plan Provisions (Cont'd)

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Chapter 504 of the Laws of 2009 (Chapter 504/09) provides that individuals joining the Plan after December 10, 2009, who are represented by the United Federation of Teachers (UFT) and who participate in the 55/27 retirement program, will be required to make pension contributions of 4.85% of salary until they have 27 years of credited service and contributions of 1.85% of salary thereafter. These members will become vested after ten years of credited service.

Also, under Chapter 504/09, all members of the Plan represented by the UFT who participate in the Tax Deferred Annuity Program (TDA), will receive an interest rate of 7.0% per annum credited to their TDA Fixed Funds accounts beginning December 10, 2009.

Chapter 105 of the Laws of 2010 (Chapter 105/10) provided an Early Retirement Incentive (ERI) program for certain members.

Chapter 157 of the Laws of 2011 provided that members who were laid off from the School Construction Authority (SCA) on or after December 1, 2002 and who returned to work prior to January 8, 2008, can buy back their layoff time for retirement purposes.

Chapter 265 of the Laws of 2011 continued the valuation and other interest rates for one year to June 30, 2011 from June 30, 2010.

Chapter 180 of the Laws of 2011 continued the valuation and other interest rates for one year to June 30, 2012 from June 30, 2011.

Chapter 18 of the Laws of 2012 (Chapter 18/12) placed certain limitations on the Tier III and Tier IV benefits available to participants hired on and after April 1, 2012 in most New York State PERS, including BERS. These changes are sometimes referred to as Tier VI.

Chapter 3 of the Laws of 2013 (Chapter 3/13) implemented changes in the actuarial procedures for determining Employer Contributions beginning Fiscal Year 2012. In particular, Chapter 3/13 continued the OYLM, employed the Entry Age Actuarial Cost Method (EAACM), an Actuarial Interest Rate (AIR) assumption of 7.0% per annum, net of investment expenses and defined the amortization of Unfunded Actuarial Accrued Liabilities (UAAL).

Chapter 489 of the Laws of 2013 (Chapter 489/13) extended the WTC Disability Law benefits to vested members.

Following is a description of the principal benefit provisions of the System, preceded by simplified definitions of the technical terms used therein.



## C. COORDINATED RETIREMENT PLAN

ARTICLE 15 OF THE RETIREMENT AND SOCIAL SECURITY LAW (RSSL)

### I. Definitions

Final Average Salary (FAS) - The average salary earned during any three consecutive years (five years for Tier 6) which provides the highest average salary. If the salary earned during any year included in the three-year period, however, exceed that of the average of the previous two years by more than 10%, the amount in excess of 10% will be excluded from the computation of FAS.

Salary - The regular compensation earned by and paid to a member.

### II. Benefits Under The Coordinated Retirement Plan

A member whose date of membership is July 27, 1976 or later, belongs to the Coordinated Retirement Plan.

#### a. SERVICE RETIREMENT

##### 1. Normal Service Retirement

(a) Payability Date depends on Plan as follows:

- (1) Age 62 and 5 years of service;
- (2) Age 57 and 5 years of service;
- (3) Age 55 and 25 years of service;
- (4) Age 55 and 27 years of service; or
- (5) Age 63 and 10 years of service.

- (b)
- (1) Pension payable for members with fewer than 20 years of service (25 for members in Optional Retirement Plans):  $\frac{1}{60}$  times FAS times years of service.
  - (2) Pension payable for members with at least 20 years of service (Tier 6) (25 for members in Optional Retirement Plans), but fewer than 30 years of service (Tier 4):  $\frac{1}{50}$  times FAS times years of service (Tier 4) or 35% plus 2% times FAS times years of service in excess of 20 (Tier 6).
  - (3) Pension payable for members with 30 or more years of service:  $\frac{1}{50}$  times FAS for each of the first thirty years of service, plus  $\frac{3}{200}$  times FAS for each additional year (Tier 4).



## Summary of Plan Provisions (Cont'd)

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### 2. Early Service Retirement:

Commencing as early as age 55, requires completion of five years of credited service (ten years for Tier 6). Benefit is equal to the Service Retirement benefit reduced depending on the number of months prior to age 62 (age 63 for Tier 6).

### 3. Deferred Vested Benefit

A member who has five or more years of service upon termination of employment (ten years if hired after December 10, 2009) is entitled to a deferred vested benefit payable starting at age 62 (age 63 for Tier 6). The benefit formulas are the same as those set forth under Normal Service Retirement.

### b. DISABILITY RETIREMENT

#### 1. Requirements

A member is eligible for ordinary disability retirement if:

- (a) he/she has completed ten or more years of service and,
- (b) he/she is incapacitated from performance of gainful employment.

If the disability is judged to be the result of an accident in the performance of duty, the service requirement is waived.

#### 2. Benefit Payable

The benefit is the greatest of:

- (a)  $\frac{1}{3}$  of FAS,
- (b)  $\frac{1}{60}$  times FAS times years of credited service, or
- (c) the service retirement allowance but only if member has met the eligibility requirements for Service Retirement.

### c. ORDINARY DEATH BENEFIT

Upon the death of a member in active service, a benefit is payable to his/her designated beneficiary. Under legislation effective July 26, 1986, the death benefits are the same as those applicable to members who joined the System between July 1, 1973 and July 26, 1976 (described in Section D.II.e of this Summary Of Plan Provisions).



d. ACCIDENTAL DEATH BENEFIT

1. Requirements

A beneficiary is entitled to the benefit if the member died before the effective date of retirement as a natural and proximate result of an accident sustained in the performance of duty, and the accident was not caused by the member's own willful negligence.

2. Pension Payable

The beneficiary receives a pension equal to 50% of wages earned during the last year of actual service (must be applied for within two years of death) and within 60 days if member joined after August 31, 1983.

3. Other Provisions

- (a) If the eligible beneficiary becomes ineligible to continue to receive the benefit, it shall be continued to the next eligible class of beneficiaries, and if none, to each successive class.
- (b) If the benefits paid do not exceed the amount of the ordinary lump sum benefit because of the absence of eligible beneficiaries, the difference is to be paid to the last eligible beneficiary, or if none, to the member's estate.

e. DESIGNATION OF BENEFICIARY

Beneficiaries are dealt with differently for ordinary death and accidental death benefits. For the ordinary death benefit, the latest named beneficiary, duly designated on a System form filed with the System will receive the death benefit. If none is designated, the benefit is paid to the member's estate.

For the accidental death benefit, beneficiaries are prescribed in the following order:

- 1. a surviving spouse who has not renounced survivorship rights in a separation agreement until remarriage;
- 2. surviving children, until age 25;
- 3. dependent parents whose eligibility shall be determined in accordance with regulations promulgated by the Board of Trustees; and,
- 4. any other person who qualified as a dependent on the final federal income tax return of the member filed in the year immediately preceding the year of death, until such person reaches 21 years of age.



## Summary of Plan Provisions (Cont'd)

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### D. PLANS FOR MEMBERS JOINING PRIOR TO JULY 27, 1976

#### I. Definitions

ACCUMULATED DEDUCTIONS - The total contributions made by a member to his annuity savings account, with regular and special interest, or increment thereon.

FINAL SALARY - (1) For a member who joined prior to July 1, 1973, salary earnable by the member in the year ending on the date of retirement or alternatively, the average annual compensation during any three calendar years designated by the member. (2) For a member who joined after June 30, 1973, the average salary earned during any three consecutive years which provides the highest average salary. However, if the salary earned during any year included in this three year period exceeds the average of the previous two years by more than 20%, the amount in excess of 20% is excluded from the computation.

MINIMUM ACCUMULATION - The amount of normal contributions accumulated with interest to the date on which a member either completed or could have completed 25 years of career pension plan service, less the amount of the reserve for Increased-Take-Home-Pay on such date.

PAYABILITY DATE - For members who elected the career pension plan, the date on which the service retirement allowance begins, which is the latest of (1) the date on which the member retires, (2) the date on which he/she attains the age 55 (age 50 for members in physically taxing positions for at least 25 years of service), or (3) the date on which he/she could have completed 25 years of service had he/she remained in Educational City Service. For a member who last joined the System prior to July 1, 1959, the payability date is the date of retirement, regardless of age, provided such member has completed 35 years of service. For all other members, the retirement allowance begins on the date of retirement.

PHYSICALLY TAXING POSITION - Any career pension plan position which has been included as physically taxing by the List Administrator.

RESERVE-FOR-INCREASED-TAKE-HOME-PAY - A reserve of 2 percent, 2.5 percent, 4 percent or 5 percent of the member's salary, pursuant to the provisions of Section 28 of the Rules and Regulations, accumulated with regular and additional interest, or increment thereon.

#### II. Benefits

##### a. SERVICE RETIREMENT

1. Career Pension Plan - (i) A member who joined prior to July 1, 1973 who elected the career pension plan (Plan A) is eligible to retire after having completed 20 years of career pension plan qualifying service, with benefits to begin on the payability date. Regardless



of the number of years of service, however, a member who has elected the career pension plan and who is at least 55 years of age may retire with benefits payable immediately by canceling his election of the career pension plan, thereby becoming eligible for the benefits under the 55 year-increased-service-fraction plan which is described in paragraph (2) below. (ii) In order for a member who joined after June 30, 1973 (Plan C) to be eligible for retirement, he must (a) have attained age 55 and (b) have rendered five years of credited service, in addition to the aforementioned requirements.

The service retirement allowance is the sum of (a) 2.2% of final salary, multiplied by the number of years of career pension plan service not in excess of 25, reduced by an annuity which is the actuarial equivalent of the Minimum Accumulation, (b) an annuity which is the actuarial equivalent of the accumulated deductions, and (c) for all years of service other than the first 25 years of career pension plan service, (i) a pension for increased-take-home-pay made in each year and (ii) 1.2% of final salary for each such year prior to July 1, 1968 and 1.7% of final salary for each year beginning on or after that date.

2. 55-Year-Increased-Service-Fraction Plan - (i) A member who joined prior to July 1, 1973 (Plan B) and who elected the 55-year-increased-service-fraction plan may retire after having attained age 55 with benefits payable immediately upon retirement. (ii) In order for a member who joined after June 30 1973, (Plan D) to be eligible for retirement, he must have rendered five years of credited service, in addition to the aforementioned requirement.

The service retirement allowance consists of a pension for service, a pension for increased-take-home-pay and an annuity. The pension for service is equal to 1.2% of final salary multiplied by each year of service prior to July 1, 1968, plus 1.53% of final salary multiplied by each year of service after June 30, 1968; the pension for increased-take-home-pay is the actuarial equivalent of the reserve for increased-take-home-pay; and the annuity is the actuarial equivalent of the member's accumulated deductions.

Any Plan C or D member who did not join the Optional Retirement Programs and who retires prior to age 62 will have his pension for service reduced by 0.5% for each of the first 24 months that the payability date precedes age 62, and by 0.25% for each such additional month.

b. ORDINARY DISABILITY RETIREMENT

Regardless of the plan elected, a member, who has completed 10 or more years of city service immediately preceding the occurrence of disability from causes other than accident in the actual performance of duty, is entitled to an ordinary disability retirement allowance.

If upon becoming disabled, the member could have retired for service with benefits payable immediately, the ordinary disability allowance is the same as the service retirement allowance.



## Summary of Plan Provisions (Cont'd)

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For all other members, the ordinary disability allowance is computed in the same manner as though the member had been eligible for service retirement under the 55-year-increased-service-fraction plan with benefits payable immediately regardless of age and without reduction for age.

### c. ACCIDENT DISABILITY RETIREMENT

Upon the occurrence of disability caused by an accident in the actual performance of duty, a member is entitled to an accident disability retirement allowance consisting of a pension equal to three-fourths of final compensation, a pension for increased-take-home-pay which is the actuarial equivalent of the reserve for increased-take-home-pay, and an annuity purchased with the member's accumulated deductions. The pension is subject to reduction because of Worker's Compensation benefits granted on account of the accident.

### d. CHANGING RETIREMENT PLAN

1. A member in Plan A (Plan C) may change to Plan B (Plan D) at any time after his first year of coverage under Plan A (Plan C).
2. A member who elected Plan B (Plan D) can change to Plan A (Plan C) at any time.
3. A member in an Old Service Fraction Plan can change to Plan A, B, C or D.
4. A Plan A (Plan C) member who intends to leave city service who has at least 5 years but less than 20 years of service credit, and who wishes to vest his rights must elect Plan B (Plan D) by filing with the Retirement System an affidavit withdrawing from Plan A (Plan C), prior to resignation.

### e. ORDINARY DEATH BENEFIT

Upon the death of a member from causes other than an accident in the actual performance of duty, a benefit is paid to the member's estate or to such person as the member shall have nominated.

With respect to a member who joined before July 1, 1973, and total number of years of allowable service less than ten, the benefit is equal to the compensation earnable by the member in the six months immediately preceding death and, if the total number of years of allowable service is greater than ten, but less than twenty, the benefit is equal to the compensation earnable during the twelve months immediately preceding death. If the total number of years of allowable service is greater than twenty, the benefit is equal to twice the compensation earnable during the twelve months immediately preceding death.



In addition, the member's accumulated deductions and the reserve for increased-take-home-pay are paid to the member's estate or to the member's designated beneficiary. The benefit payable on account of such a member who at the time of death would have been eligible for service retirement is either the benefit described above or an amount equal to the reserve on the retirement allowance which would have been payable had the member retired on the day before death, whichever is larger.

A member who joins after June 30, 1973 must choose between the following two death benefits which cannot be changed; upon death, a benefit is paid pursuant to such election.

**Death Benefit 1:** One month's salary for each year of service up to a maximum of three years' salary. In addition, the member's accumulated deductions are payable. If the member would have been eligible to receive an unreduced retirement allowance at the time of death, the benefit is the reserve on the retirement allowance which would have been payable had the member retired on the day before his death, if greater.

**Death Benefit 2:** In addition to a refund of the member's accumulated deductions, one year's salary for each year of service up to a maximum of three years' salary. The maximum benefit declines after age 60 at the rate of 5% per year, to a minimum of 50% of the benefit in effect at age 60.

A benefit is also payable upon death after retirement, which benefit is expressed as a percent of the benefit in force immediately before retirement as follows: If death occurs in the first year after retirement, 50% of such benefit; if death occurs in the second year following retirement, 25%; upon death occurring subsequently, 10%. If retirement occurred after age 60, the minimum death benefit payable after retirement is 10% of the death benefit in force at age 60.

The Rules and Regulations adopted by the Board of Trustees in accordance with Chapter 581 of the Laws of 1970 provide that the first \$50,000 of each benefit on account of death in active service is payable from the group term life insurance plan. Only the amount in excess of \$50,000, if any, is payable by the retirement system.

f. ACCIDENTAL DEATH

The benefit is payable upon the death of a member which occurs as a result of an accident sustained in the performance of duty.

The accidental death benefit is a lump sum equal to the reserve for increased-take-home-pay and a pension equal to one-half of final average salary, payable to the surviving spouse until remarriage or death, or if there is no surviving spouse, to a child or children until the attainment of age 18 of the youngest child, or if there is no surviving spouse or child to the dependent



## Summary of Plan Provisions (Cont'd)

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parents. In addition, the member's accumulated deductions are paid to his/her estate or to the designated beneficiary. The pension is subject to reduction because of Worker's Compensation benefits granted on account of the accidental death.

### g. TERMINATION OF EMPLOYMENT

A member who either resigns or is dismissed with fault receives a benefit equal to his accumulated deductions. At resignation with at least 5 years of service the member may elect, in lieu of a return of his accumulated deductions, to receive an allowance computed in the same manner as the retirement allowance for retirement under the 55-year-increased-service-fraction plan, except that the allowance is deferred to age 55. Should a member with less than 10 years of service who elected to receive a deferred retirement allowance die before the attainment of age 55, the benefit consists of the accumulated deductions. If a member who at resignation had at least 10 years of service and elected to receive a deferred retirement allowance dies before the attainment of age 55, the benefit is one-half of the ordinary death benefit.

A member not eligible for service retirement and who is removed from service without fault or delinquency and has not less than one-half year of service in the year immediately preceding the date of termination or who is so removed from a position in the competitive or labor class, regardless of service, is entitled to the return of his accumulated deductions in a lump sum payment or to a pension whose present value is equal to the pension he would have received at his earliest payability date, based on his service to date of termination. If the member has attained age 50 and has completed at least 20 years of service, an additional pension is payable equal to one-half the difference between the pension so computed and the pension payable at his earliest age for service retirement. In addition, he receives a pension which is the actuarial equivalent of his reserve for increased-take-home-pay and an annuity of such amount as his accumulated deductions will purchase.

### h. AUTOMATIC ANNUAL COST-OF-LIVING ADJUSTMENTS (COLA)

COLA are payable to members who are either (1) at least age 62 and have been retired for at least 5 years or (2) at least age 55 and have been retired for at least 10 years. Additionally, COLA are payable to members who retired for disability after being retired for 5 or more years and beneficiaries receiving accidental death benefits who have been receiving them for at least 5 years.

Starting with benefits for September 2001, COLA are 50% of the increase in the CPI-U based on the year ending March 31, rounding to the next higher .1%, not less than 1% nor greater than 3% of the first \$18,000 of the sum of the maximum retirement allowance and prior COLA.

COLA are payable during the life of the retired member. One half of the amount is also payable after the member's death and during the life of the spouse beneficiary if such retired member

had elected one of the options under the Administrative Code which provides that benefits are to be continued for the life of such spouse after the death of the retired member, and where the death of such retired member occurred or occurs more than thirty days after the effective date of the retirement of such member.

## E. OPTIONS ON RETIREMENT OR DEATH

### No Option (Maximum Retirement Allowance)

A member upon retirement may receive the basic maximum retirement allowance payable in monthly installments throughout life with all payments ending at death.

Alternatively, a member may elect to receive an actuarial equivalent benefit in any one of the following optional forms.

With respect to plans other than the Coordinated Retirement Plan (Article 15):

#### Option 1 (Cash Refund)

With respect to members who joined prior to July 1, 1973, a cash refund allowance under which reduced payments will be made during life with a provision that in case of death before such payments have equaled the present value of the retirement allowance at date of retirement, the balance shall be paid to the designated beneficiary or estate. With respect to members who joined after June 30, 1973, this option is only available with respect to the benefits derived from employee contributions (annuity).

#### Option 2 (Joint and 100% Survivor Allowance)

#### Option 3 (Joint and 50% Survivor Allowance)

A joint and survivor allowance under which reduced payments will be made during life with a provision that at the death of the member the same payments (Option 2) or one half of such payments (Option 3) shall be continued throughout the life of such other person as the member shall have designated.

#### Option 4

Such other form of benefit which is the actuarial equivalent as may be certified by the Actuary and approved by the Board of Trustees. By resolution, the Board of Trustees has approved an option under which reduced payments will be made during life with a provision that upon his/her death, a sum specified by the member at the time of retirement shall be paid to the designated beneficiary or estate.



## Summary of Plan Provisions (Cont'd)

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### Option 4-2 and 4-3

Option 4-2 and Option 4-3 are known as the “Pop-Up” options. These are called “Pop-Ups” because they are variations of Options 2 and 3 that provide if a joint and survivor option is elected and the beneficiary predeceases the retiree, then the retirement allowance will increase (pop-up) to the level of the maximum retirement allowance.

### Ten-Year (or Five-Year) Certain and Life

Ten-year (or five-year) certain and life allowance under which reduced payments will be made during the lifetime of the member with a provision that in case of death within ten (five) years of retirement, the remaining benefit that would have been payable had the member survived for ten (five) years shall be paid to the designated beneficiary or estate for the balance of the ten (five) years.

With respect to Article 15, the options are as follows:

- a. A five-year or ten-year certain and life option, the same as described above.
- b. A joint and survivor option under which reduced payments will be made during life with a provision that at the death of the member, 100%, 75%, 50% or 25% of such payments shall be continued throughout the life of such other person as the member shall have designated.
- c. A pop-up option as described above.

### F. CONTRIBUTIONS

The benefits of the system are financed by employee and employer contributions and from investment earnings of the System.

### I. EMPLOYEE CONTRIBUTIONS

A member of Article 15 who joins BERS on or after April 1, 2012 (Tier 6) and is not a member of the Automotive or Special Officers Programs is required to contribute between 3.0% and 6.0% of salary, depending on salary level, for all years of service. Tier 6 members in the Automotive or Special Officers Programs contribute 3.0% of salary plus Additional Member Contributions (AMC).

A Tier 4 member of Article 15 (Coordinated Retirement Plan) who joined BERS on or before March 31, 2012 is mandated to contribute 3% of salary during all years of coverage. Effective October 1, 2000, these members are not required to make contributions after the 10th anniversary of their membership date or completion of ten years of credited service, whichever is earlier. For those who elected or were mandated into the Optional Retirement Plans, AMC are required.



A member who joined prior to July 27, 1976 contributes by salary deductions on the basis of a normal rate of contribution which is assigned by the System at the time he/she elects his/her plan. The normal rate, which is dependent upon the member's age and plan, as well as the tables in effect for that purpose at the time he/she became a member, is determined so as to provide approximately one-third of the benefit on account of the first 25 years of service.

In the plans which permit retirement for service at age 55, the normal contribution rate is calculated so as to provide an annuity equal to 1% of final salary for each year of service at the earliest age for service retirement. For such plans, the contribution rate for members who enter at age 55 or over is the rate applicable to a member entering at age 54.

Member contributions are accumulated with interest on individually maintained ledger accounts. Except under Article 15, upon retirement, the amount to his/her credit (i.e., accumulated deductions) is used to purchase an annuity on the basis of the tables adopted by the Board of Trustees. Upon death in service, the accumulated deductions are paid to the beneficiary.

Beginning July 1, 1960, on a year to year basis, the normal rates of contribution of members who joined before July 27, 1976 were reduced by an increased-take-home-pay rate equal to two and one-half percentage points and equal to five percentage points beginning July 1, 1961. Between July 1, 1968 and December 31, 1975, an increased-take-home-pay rate of four percentage points was effective for all members. On January 1, 1976, an increased-take-home-pay rate of two percentage points became effective for all members. Following is a table showing the effective periods and increased-take-home-pay rate.

<b><u>Period</u></b>	<b><u>Increased-Take-Home-Pay Rate</u></b>
07-01-1960 - 06-30-1961	2.5%
07-01-1961 - 06-30-1968	5%
07-01-1968 - 12-31-1975	4%
01-01-1976 and after	2% for non-Article 14 & 15 Members 0% for Article 14 & 15 Members

At present the reduction is two percentage points for members other than members in the Coordinated Retirement Plan. In general, the retirement and death benefits payable to or on account of members are supplemented by the reserve for increased-take-home-pay, accumulated from City contributions equal to the increased-take-home-pay rate times salary so that in general, the total benefit is equal to the benefit which would have been paid if the members' rates of contribution had not been reduced. However, the reserve for increased-take-home-pay is not payable upon death of a member who joins after June 30, 1973.



## Summary of Plan Provisions (Cont'd)

---

### II. Purchase Of Prior Service

A member is eligible to purchase credit for city service rendered prior to membership date by an additional contribution based on salary and periods of service being purchased.

In the case of any member in BERS prior to July 1, 1968, who has purchased service, the amount of purchased service can be used toward the twenty-five years needed for retirement eligibility under Plan A, provided such service was continuous and immediately preceded membership.

### III. Loans

- a. After three years of membership in the Retirement System, a member may borrow up to 75% of accumulated deductions.
- b. A member may take three loans during any twelve month period.
- c. Loans are repaid through payroll deduction of not less than 5% of gross salary.

Beginning 90 days after the inception of the loan, the unpaid portion is insured without limitation. Should the borrower retire before the loan is repaid, the actuarial equivalent of the amount outstanding is deducted from his/her retirement allowance.

### IV. Employer Contributions

The Entry Age Actuarial Cost Method is utilized by the Plan's Actuary to calculate the contribution from the employers.

Employer contributions are accrued by the Plan and are funded by the employers on a current basis.

#### G. VARIABLE ANNUITY PROGRAM

Beginning July 1, 1970, members were given the option to participate in a Variable Annuity Program, thereby providing a means which can reasonably be expected to protect a portion of their retirement income against the effect of increases in the cost of living. The monthly variable annuity payment is a fixed number of units, the value of which varies each month to reflect the financial experience of the investments which are almost entirely in common stocks. A member may elect to place part or all of his/her contributions and the City's contributions for increased-take-home-pay in the variable annuity program. The remaining portion of the retirement allowance which is provided by the City must be paid in fixed dollar amounts. Subject to certain prescribed limitations, a member may periodically elect either to participate in the variable annuity program or to revoke a previous election.





An individual account of the member's own contributions is maintained in the Variable Annuity Savings Fund. Another individual account based on the City's contribution for increased-take-home-pay is maintained in the Variable Pension Accumulation Fund. Deposits in these accounts are credited in terms of units, the value of which is determined at the beginning of each month and remains unchanged during that month. On July 1, 1970, the effective date of the program, a unit was assigned an arbitrary value of \$10. Each month, thereafter, the unit value changed reflecting the investment experience of the common stock fund during the preceding month.

**H. TAX-DEFERRED ANNUITY PROGRAM**

Beginning January 1, 1970, members were given the option to participate in a tax-deferred annuity program, thereby providing a means of deferring income tax payments on their tax deferred contributions until the period after retirement. Each calendar year, a member may elect to contribute to the Tax-Deferred Annuity Program any amount not in excess of the maximum permissible amount under Section 403 (b) of the Internal Revenue Code. The City makes no contributions to the Tax-Deferred Annuity Program, but if elected by members, will guarantee the benefit payments to retired members. A member has the option either to have his/her contributions accumulate at regular and special interest per annum, or to have his/her contributions invested in variable funds.

The Tax-Deferred Annuity Program is maintained as a separate account within the Board of Education Retirement System. An individual account of the member's fixed dollar contributions is maintained in the Tax-Deferred-Annuity Savings Fund if he/she elected to have his/her benefit paid in fixed dollars; otherwise, in the Tax-Deferred Variable Annuity Savings Fund.





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## STATISTICAL

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**INTRODUCTION:**

The Statistical section presents three sets of data. The first group of data is comprised of six (6) schedules and accompanying graphs that provide a comparative horizontal base of the financials over a ten year spread for the QPP and a five year spread for the TDA. The second group of data offers an analysis of the QPP benefit payments based on demographic information. The third and final group gives a comparative analysis of the QPP contributors based on their salary and their provenance.

The schedules and graphs of the first group are:

- a) Revenue by source for the QPP
- b) Expenses by type for the QPP
- c) Refunds by type for the QPP
- d) Schedule of changes in QPP net position
- e) Schedule of changes in TDA net position
- f) Benefit expenses by type for the QPP

The second group of data is comprised of the following:

- a) Age and service retirement
- b) Ordinary disability retirement
- c) Accidental disability retirement
- d) Accidental death retirement
- e) Other beneficiaries
- f) All pensioners and beneficiaries

The third group of data is comprised of the following:

- a) Summary of activities by Age and Service
- b) Average annual benefit payments
- c) Participating Employers





**Qualified Pension Plan  
Revenue by Source  
(In thousands)**

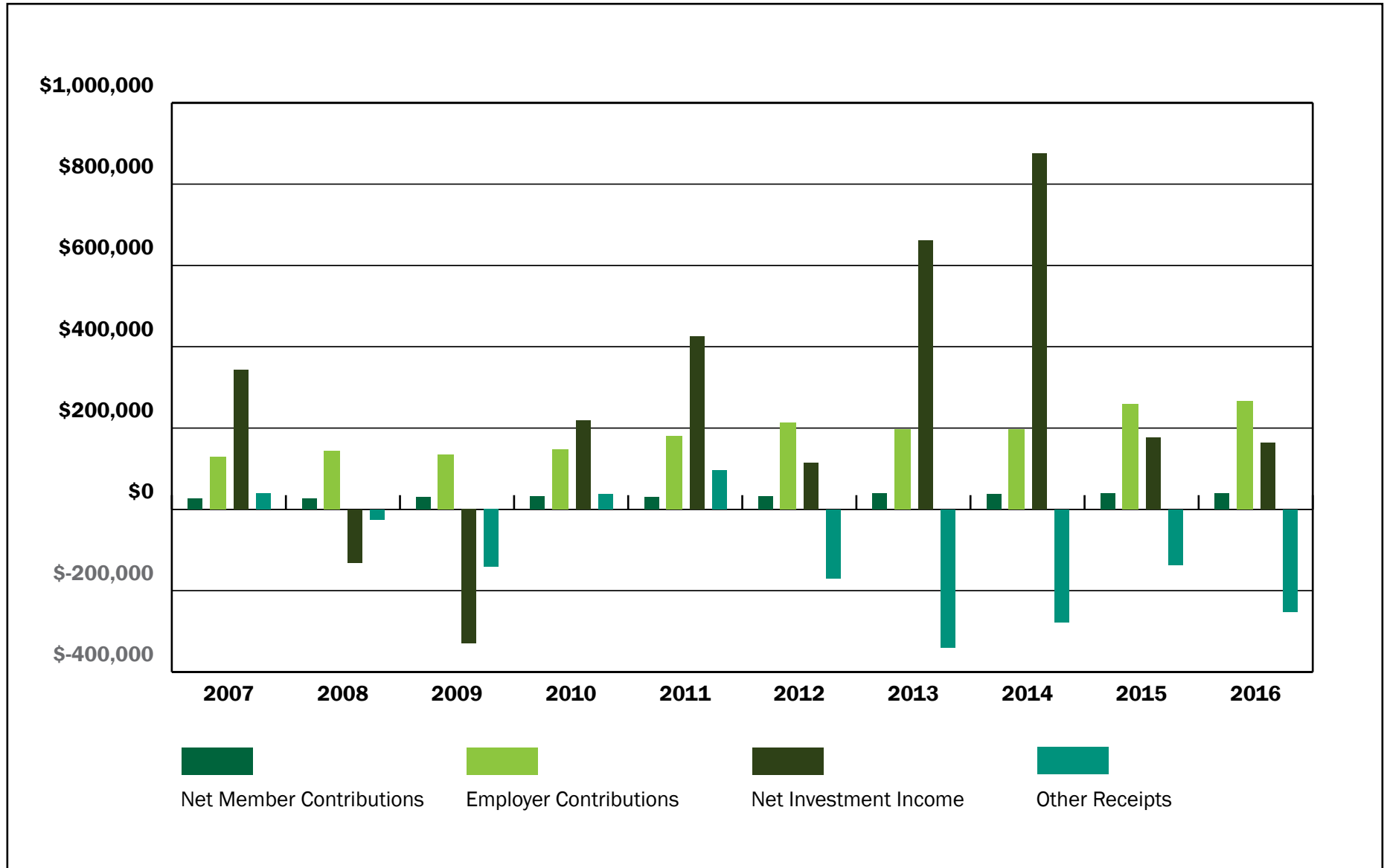
Fiscal Year Ended June 30	Net Member Contributions	Employer Contributions	Net Investment Income	Other Income	Total	Employer Contributions as % of Payroll
2007	\$26,148	\$129,820	\$342,656	\$39,148	<b>\$537,772</b>	18.2
2008	\$27,109	\$143,100	(\$130,569)	(\$24,831)	<b>\$14,809</b>	19.1
2009	\$30,971	\$134,225	(\$329,365)	(\$141,090)	<b>(\$305,259)</b>	17.3
2010	\$31,361	\$147,349	\$218,872	\$38,232	<b>\$435,814</b>	17.3
2011	\$31,008	\$180,191	\$425,690	\$95,958	<b>\$732,847</b>	19.8
2012	\$32,866	\$213,651	\$113,738	(\$170,091)	<b>\$190,164</b>	23.4
2013	\$39,056	\$196,246	\$660,827	(\$340,057)	<b>\$556,072</b>	21.3
2014	\$37,193	\$214,590	\$875,453	(\$277,531)	<b>\$849,705</b>	21.1
2015	\$ 39,564	\$258,099	\$177,166	(\$137,125)	\$337,704	24.5
2016	\$38,581	\$265,532	\$164,144	(252,288)	\$215,969	25.4

The table offers a horizontal comparison base for the revenue sources of the Plan for the past 10 years.

It particularly stresses the importance of employer contributions that have steadily increased over the years.

Net Investment Income has been restated for the fiscal years 2012 and 2013 due to the reclassification of certain data based on the GASB 67 recommendation.

**Qualified Pension Plan  
Revenue by Source**





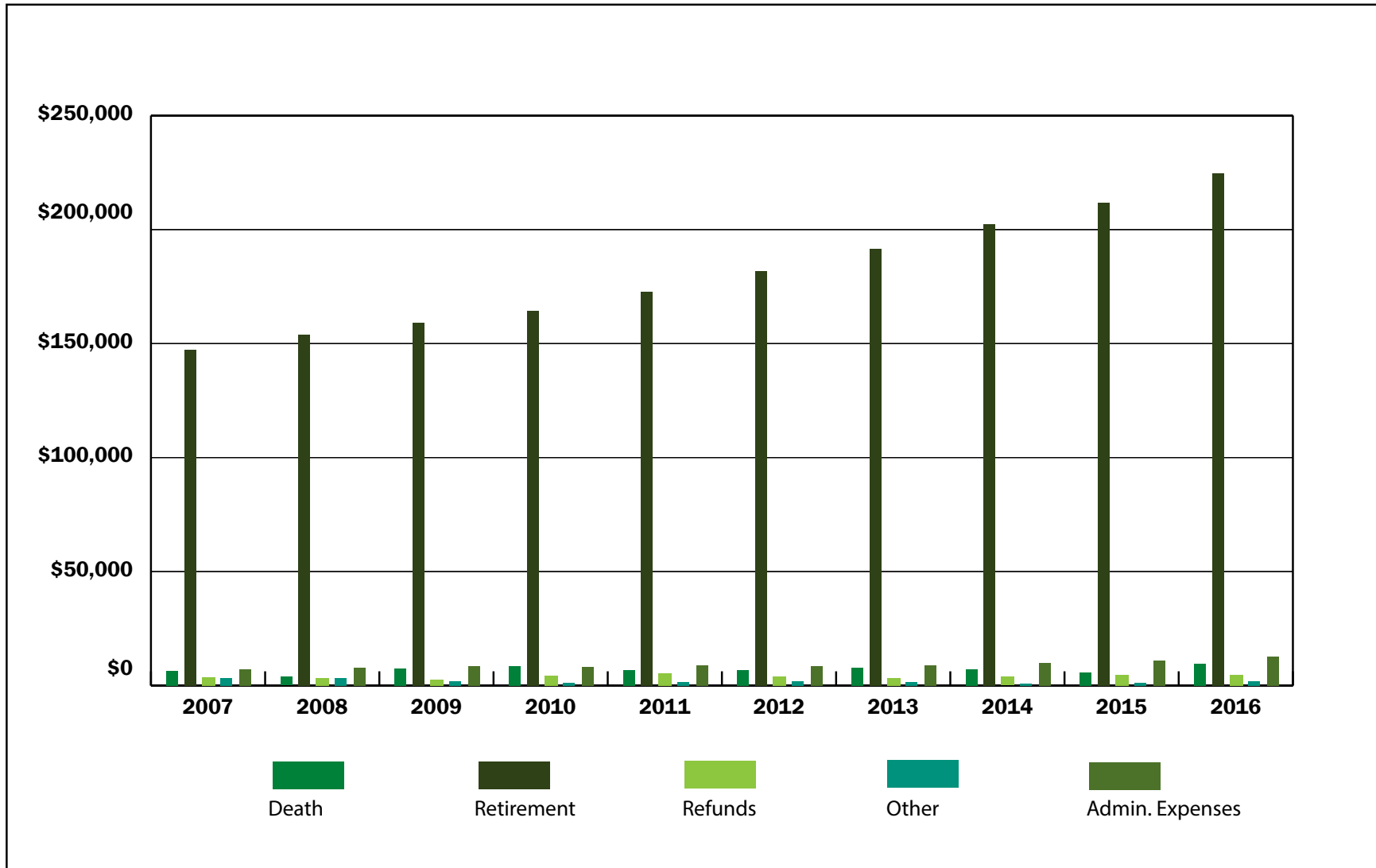
**Qualified Pension Plan  
Expenses by Type  
(In thousands)**

Fiscal Year Ended June 30	Benefit Payments				Administrative Expenses	Total
	Death	Retirement	Refunds	Other		
2007	\$6,326	\$147,399	\$3,534	\$3,191	\$7,281	<b>\$167,731</b>
2008	\$3,827	\$153,886	\$3,395	\$3,448	\$7,854	<b>\$172,410</b>
2009	\$7,544	\$159,262	\$2,768	\$2,018	\$8,413	<b>\$180,006</b>
2010	\$8,548	\$164,362	\$4,207	\$1,296	\$8,047	<b>\$186,460</b>
2011	\$6,686	\$172,680	\$5,237	\$1,662	\$8,892	<b>\$195,158</b>
2012	\$6,827	\$181,735	\$4,009	\$1,936	\$8,687	<b>\$203,194</b>
2013	\$7,858	\$191,463	\$3,360	\$1,412	\$8,927	<b>\$213,020</b>
2014	\$7,274	\$202,233	\$3,827	\$981	\$9,776	<b>\$224,091</b>
2015	\$5,765	\$211,693	\$4,614	\$1,172	\$10,956	<b>\$234,200</b>
2016	\$9,580	\$224,639	\$4,750	\$1,758	\$12,818	<b>\$253,545</b>

The table offers a horizontal comparison base for the expense groups of the Plan for the past 10 years.



**Qualified Pension Plan  
Expenses by Type  
(In thousands)**





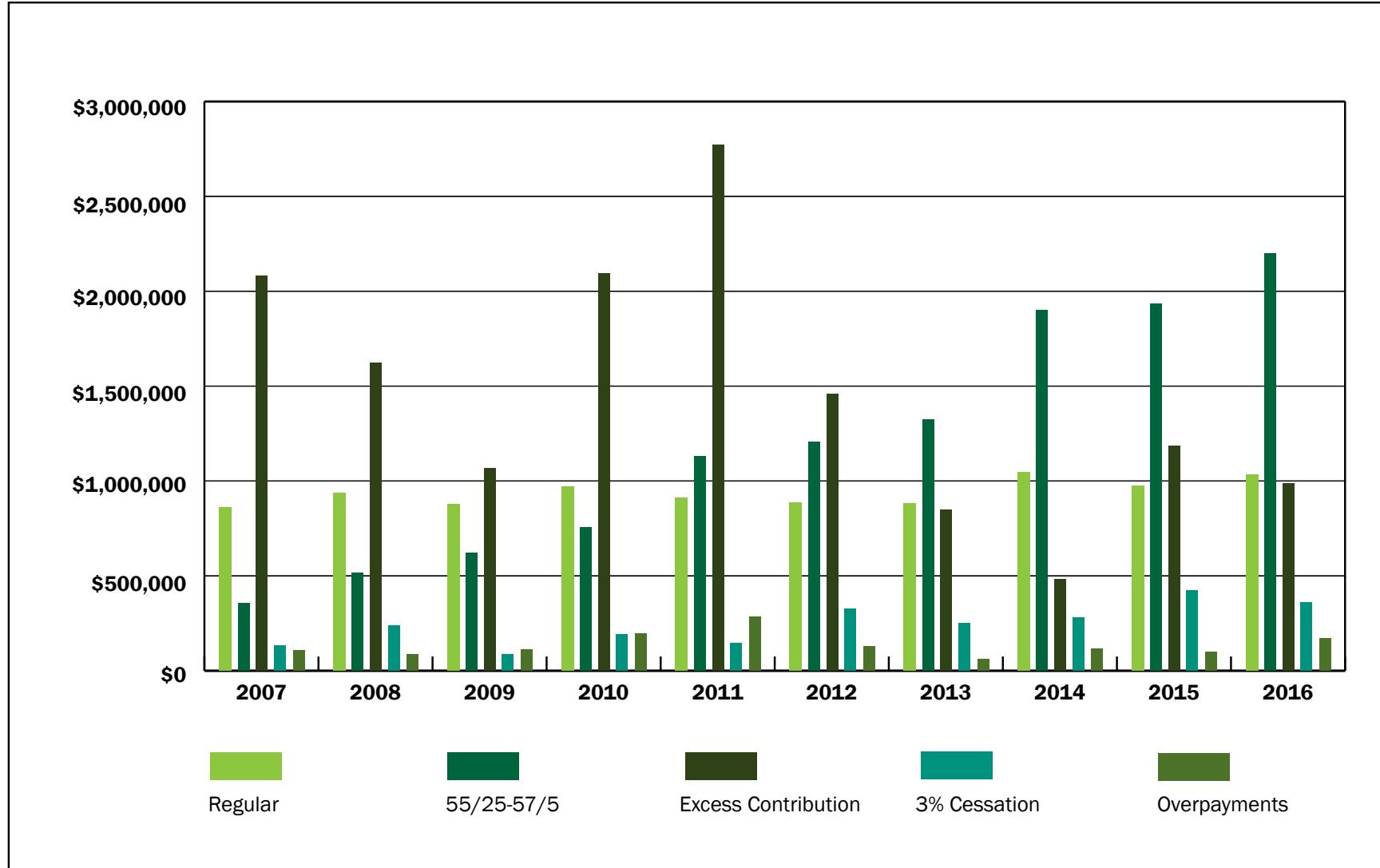
**Qualified Pension Plan  
Refunds by Type  
(In thousands)**

Fiscal Year Ended June 30	Refunds					
	Regular Resignation	Add Pension 55/25-57/5	Excess Contribution	3% Cessation	Other Overpayments	Total
2007	\$859	\$356	\$2,079	\$133	\$106	<b>\$3,534</b>
2008	\$937	\$514	\$1,622	\$236	\$85	<b>\$3,395</b>
2009	\$879	\$620	\$1,067	\$88	\$113	<b>\$2,768</b>
2010	\$971	\$754	\$2,092	\$193	\$197	<b>\$4,207</b>
2011	\$909	\$1,129	\$2,772	\$144	\$283	<b>\$5,237</b>
2012	\$888	\$1,206	\$1,456	\$328	\$130	<b>\$4,009</b>
2013	\$880	\$1,322	\$846	\$251	\$61	<b>\$3,360</b>
2014	\$1,047	\$1,899	\$484	\$281	\$116	<b>\$3,827</b>
2015	\$973	\$1,933	\$1,186	\$425	\$97	<b>\$4,614</b>
2016	\$1,033	\$2,198	\$986	\$361	\$171	<b>\$4,750</b>

The table offers a horizontal comparison base for the refund segment of the expense groups of the Plan for the past 10 years.

The refund segment is broken down by type. It shows that additional contribution based refunds are more significant than resignation from the system.

**Qualified Pension Plan  
Refunds by Type  
(In thousands)**



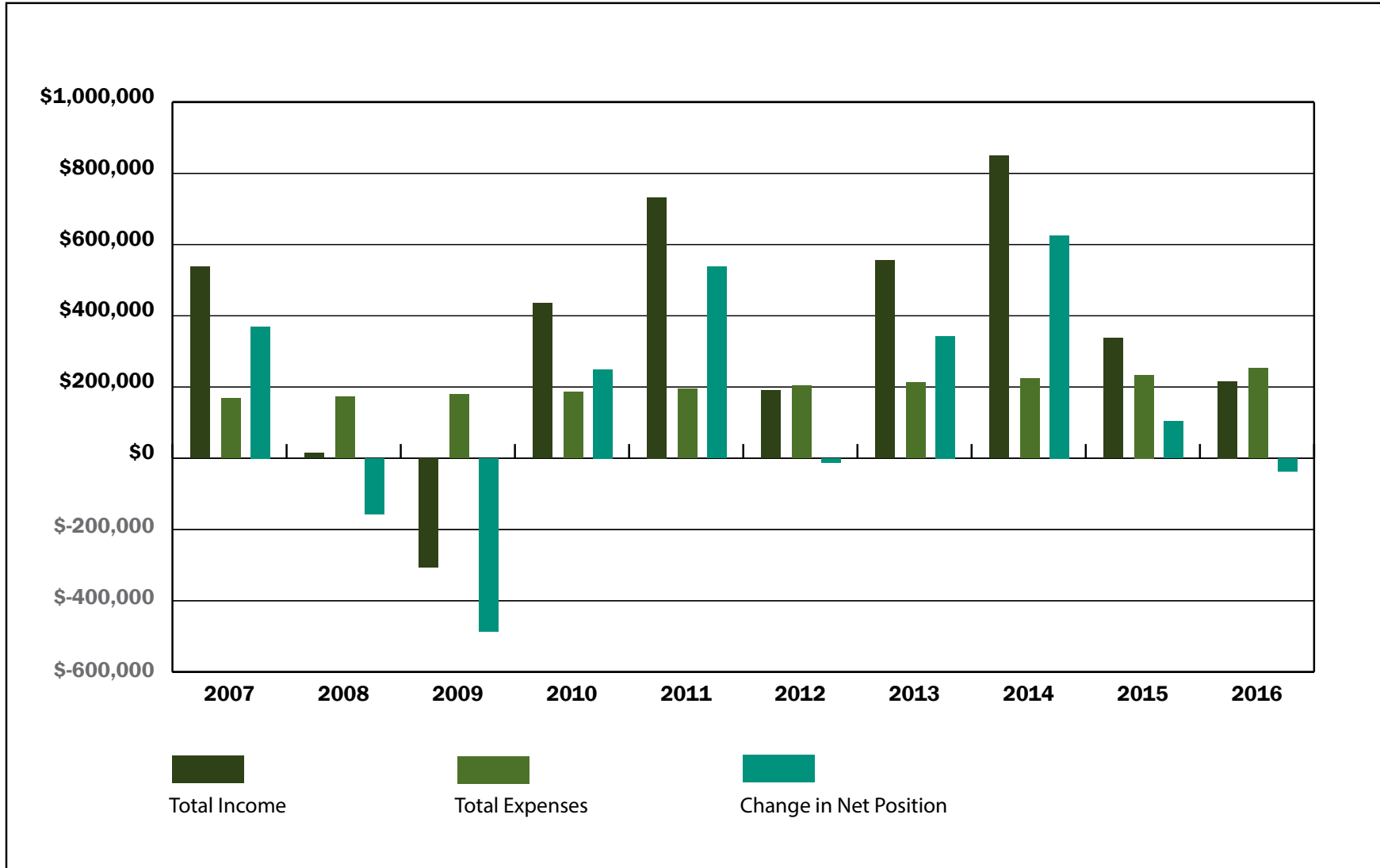


**Qualified Pension Plan  
Schedule of Changes in Net Position  
(In thousands)**

Year Ended	Member Contributions	Employer Contributions	Net Investment Income	Other Receipts	Total Income	Benefit Payments				Administrative Expenses	Total Expenses	Change in Net Position
						Death	Refund	Retirement	Other			
2007	\$26,148	\$129,820	\$342,656	\$39,148	<b>\$537,772</b>	\$6,326	\$3,534	\$147,399	\$3,191	\$7,281	<b>\$167,731</b>	\$370,041
2008	\$27,109	\$143,100	(\$130,569)	(\$24,831)	<b>\$14,809</b>	\$3,827	\$3,395	\$153,886	\$3,448	\$7,854	<b>\$172,410</b>	(\$157,601)
2009	\$30,971	\$134,225	(\$329,365)	(\$141,090)	<b>(\$305,259)</b>	\$7,544	\$2,768	\$159,262	\$2,018	\$8,413	<b>\$180,006</b>	(\$485,265)
2010	\$31,361	\$147,349	\$218,872	\$38,232	<b>\$435,814</b>	\$8,548	\$4,207	\$164,362	\$1,296	\$8,047	<b>\$186,460</b>	\$249,354
2011	\$31,008	\$180,191	\$425,690	\$95,958	<b>\$732,847</b>	\$6,686	\$5,237	\$172,680	\$1,662	\$8,892	<b>\$195,158</b>	\$537,689
2012	\$32,866	\$213,651	\$113,738	(\$170,091)	<b>\$190,164</b>	\$6,827	\$4,009	\$181,735	\$1,936	\$8,687	<b>\$203,194</b>	(\$13,030)
2013	\$39,056	\$196,246	\$660,827	(\$340,057)	<b>\$556,072</b>	\$7,858	\$3,360	\$191,463	\$1,412	\$8,927	<b>\$213,020</b>	\$343,052
2014	\$37,193	\$214,590	\$875,453	(\$277,531)	<b>\$849,705</b>	\$7,274	\$3,827	\$202,233	\$981	\$9,776	<b>\$224,091</b>	\$625,614
2015	\$39,564	\$258,099	\$177,166	(\$137,125)	<b>\$337,704</b>	\$5,765	\$4,614	\$211,693	\$1,172	\$10,956	<b>\$234,200</b>	\$103,504
2016	\$38,581	\$265,532	\$164,144	(\$252,288)	<b>\$215,969</b>	\$9,580	\$4,750	\$224,639	\$1,758	\$12,818	<b>\$253,545</b>	(37,576)

The table offers a 10 year horizontal comparison base for the operations of the BERS.

**Qualified Pension Plan  
Schedule of Changes in Net Position  
(In thousands)**



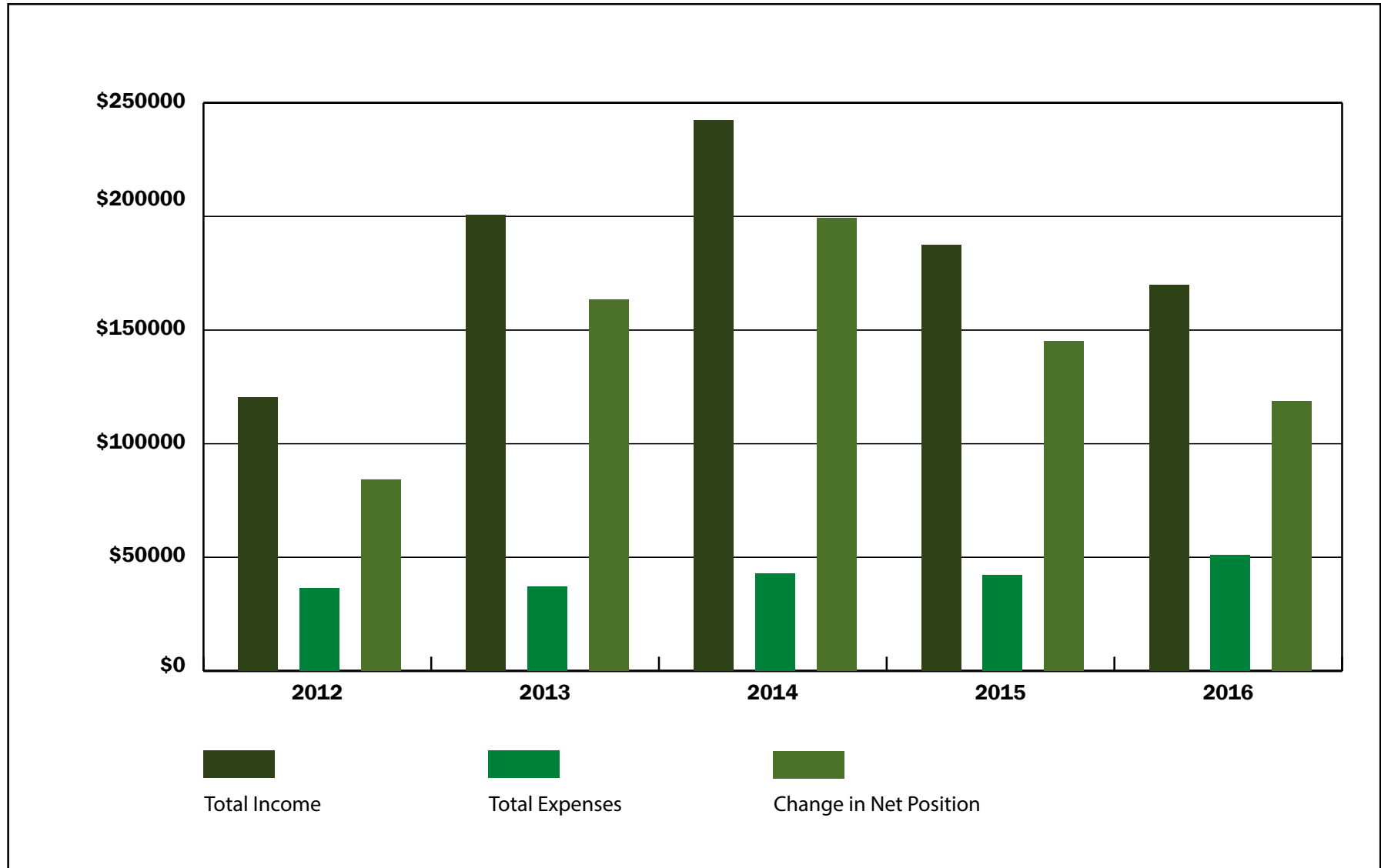


**Tax Deferred Annuity Program  
Schedule of Changes in Net Position  
(In thousands) (Cont'd)**

Year Ended	Participant Contributions	Net Investment Income	Other Receipts	Transfer of Investment Income	Total Income	Benefit Payments				Administrative Expenses	Total Expenses	Change in Net Position
						Death	Refund	Retirement	Other			
2012	\$59,024	\$6,468	\$26,593	\$28,396	<b>\$120,481</b>	\$8,272	\$25,146	\$325	\$68	\$2,445	<b>\$36,256</b>	\$84,225
2013	\$61,550	\$62,134	(\$86,810)	\$163,756	<b>\$200,630</b>	\$6,523	\$27,802	\$301	\$31	\$2,455	<b>\$37,112</b>	\$163,518
2014	\$63,767	\$82,223	(\$110,273)	\$206,615	<b>\$242,332</b>	\$9,242	\$30,755	\$354	\$59	\$2,531	<b>\$42,941</b>	\$199,391
2015	\$74,890	\$22,950	\$4,448	\$85,104	<b>\$187,392</b>	\$4,133	\$34,707	\$370	\$12	\$3,033	<b>\$42,255</b>	\$145,137
2016	\$77,459	\$1,049	(\$3,541)	\$94,789	<b>\$169,756</b>	\$13,292	\$36,467	\$351	\$80	\$850	<b>\$51,039</b>	\$118,717

The table offers a 5 year horizontal comparison base for the operations of the BERS TDA Program.

**Tax Deferred Annuity Program  
Schedule of Changes in Net Position  
(In thousands) (Cont'd)**





**Qualified Pension Plan  
Benefit Expenses by Type  
(In thousands)**

Fiscal Year Ended June 30	Age And Service Retirement Benefits	Disability Retirement Benefits		Lump Sum Payments			Total
		Duty	Non-Duty	Survivors	Death In Service	Death After Retirement	
2007	\$147,399	\$1,712	\$3,595	\$1,167	\$4,678	\$481	<b>\$159,032</b>
2008	\$148,179	\$1,841	\$3,866	\$1,226	\$2,318	\$284	<b>\$157,715</b>
2009	\$153,124	\$1,980	\$4,158	\$1,288	\$6,188	\$68	<b>\$166,806</b>
2010	\$157,760	\$2,130	\$4,472	\$1,624	\$6,887	\$37	<b>\$172,910</b>
2011	\$165,580	\$2,291	\$4,810	\$1,280	\$5,328	\$77	<b>\$179,366</b>
2012	\$174,099	\$2,464	\$5,173	\$1,782	\$5,035	\$10	<b>\$188,562</b>
2013	\$183,250	\$2,649	\$5,564	\$1,963	\$5,890	\$5	<b>\$199,321</b>
2014	\$193,400	\$2,849	\$5,984	\$2,469	\$4,768	\$37	<b>\$209,507</b>
2015	\$202,193	\$3,065	\$6,435	\$1,532	\$3,642	\$592	<b>\$217,459</b>
2016	\$214,422	\$3,296	\$6,921	\$2,453	\$7,094	\$34	<b>\$234,219</b>

The table offers a horizontal comparison base for the benefit segment of the expense groups of the Plan across the past 10 years. The benefit segment is broken down by type.



**Qualified Pension Plan  
Retired Members by Type of Benefit**

**AGE AND SERVICE RETIREMENT**

Age	Men		Women	
	Number Of Retirants	Average Annual Allowance	Number Of Retirants	Average Annual Allowance
49 & UNDER	1	\$29,037	5	\$16,583
50 - 54	13	43,635	2	44,246
55 - 59	88	28,187	282	12,938
60 - 64	338	31,344	1,284	11,763
65 - 69	545	28,819	2,440	10,542
70 - 74	532	28,353	2,337	9,779
75 - 79	456	26,932	1,782	8,486
80 - 84	347	24,269	1,479	8,151
85 - 89	235	26,015	1,165	7,745
90 & OVER	118	21,944	701	7,731
<b>TOTALS</b>	<b>2,673</b>	<b>\$27,634</b>	<b>11,477</b>	<b>\$9,508</b>



**ORDINARY DISABILITY (NON-DUTY) RETIREMENT**

Age	Men		Women	
	Number Of Retirants	Average Annual Allowance	Number Of Retirants	Average Annual Allowance
49 & UNDER	6	\$14,667	18	\$13,450
50 - 54	25	17,977	39	11,942
55 - 59	44	19,914	93	11,072
60 - 64	51	17,458	147	9,824
65 - 69	38	16,188	152	9,678
70 - 74	26	13,245	118	8,968
75 - 79	13	14,038	45	9,073
80 - 84	6	19,757	20	6,687
85 - 89	6	15,906	2	7,834
90 & OVER	3	7,261	1	12,354
<b>TOTALS</b>	<b>218</b>	<b>\$16,889</b>	<b>635</b>	<b>\$9,981</b>

NOTE: This schedule is based on 2014 data (LAG)

**Qualified Pension Plan  
Retired Members by Type of Benefit  
(Cont'd)**

**ACCIDENTAL DISABILITY (DUTY) RETIREMENT**

Age Of Retirants	Men		Women	
	Number Of Retirants	Average Annual Allowance	Number Of Retirants	Average Annual Allowance
49 & UNDER	0	\$0	3	\$9,890
50 - 54	5	16,918	9	8,396
55 - 59	8	15,154	13	10,986
60 - 64	11	14,382	21	9,853
65 - 69	8	19,722	17	7,343
70 - 74	6	20,180	13	6,609
75 - 79	8	26,023	13	7,797
80 - 84	1	26,273	8	5,978
85 - 89	6	26,594	3	8,466
90 & OVER	1	27,014	2	4,769
<b>TOTALS</b>	<b>54</b>	<b>19,702</b>	<b>102</b>	<b>\$8,332</b>

**ACCIDENTAL DEATH (DUTY) RETIREMENT**

Age Of Retirants	Men		Women	
	Number Of Retirants	Average Annual Allowance	Number Of Retirants	Average Annual Allowance
49 & UNDER	0	\$0	0	\$0
50 - 54	0	0	0	0
55 - 59	1	5,961	0	0
60 - 64	0	0	0	0
65 - 69	0	0	0	0
70 - 74	0	0	0	0
75 - 79	1	9,115	0	0
80 - 84	0	0	0	0
85 - 89	0	0	0	0
90 & OVER	0	0	0	0
<b>TOTALS</b>	<b>2</b>	<b>\$7,538</b>	<b>0</b>	<b>\$0</b>

NOTE: This schedule is based on 2014 data (LAG)



**Qualified Pension Plan  
Retired Members by Type of Benefit  
(Cont'd)**

**OTHER BENEFICIARIES**

Age Of Retirants	Men		Women	
	Number Of Retirants	Average Annual Allowance	Number Of Retirants	Average Annual Allowance
49 & UNDER	29	\$6,432	43	\$5,014
50 - 54	10	3,760	26	8,398
55 - 59	12	4,522	23	10,542
60 - 64	12	11,679	44	13,307
65 - 69	25	6,446	61	15,450
70 - 74	22	6,001	74	21,399
75 - 79	26	6,277	98	21,055
80 - 84	19	8,293	101	18,790
85 - 89	14	7,127	102	18,284
90 & OVER	8	7,047	85	14,707
<b>TOTALS</b>	<b>177</b>	<b>\$6,715</b>	<b>657</b>	<b>\$16,536</b>



**ALL PENSIONERS AND BENEFICIARIES**

Age Of Retirants	Men		Women	
	Number Of Retirants	Average Annual Allowance	Number Of Retirants	Average Annual Allowance
49 & UNDER	36	\$8,432	69	\$8,265
50 - 54	53	21,488	76	11,160
55 - 59	153	23,125	411	12,320
60 - 64	412	28,599	1,496	11,591
65 - 69	616	27,014	2,670	10,584
70 - 74	586	26,760	2,542	10,063
75 - 79	504	25,484	1,938	9,131
80 - 84	373	23,388	1,608	8,790
85 - 89	261	24,783	1,272	8,592
90 & OVER	130	20,727	789	8,481
<b>TOTALS</b>	<b>3,124</b>	<b>\$25,549</b>	<b>12,871</b>	<b>\$9,876</b>

NOTE: This schedule is based on 2014 data (LAG)

**Qualified Pension Plan**  
**Summary of Actives by Age and Service**  
**Male**

**DATA USED IN THE JUNE 30, 2014 (LAG) ACTUARIAL VALUATION**  
**FOR DETERMINING FISCAL YEAR 2016 EMPLOYER CONTRIBUTIONS**

Age \ Svc	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Up	All Years
<b>Number:</b>										
UNDER 20	1	0	0	0	0	0	0	0	0	1
20 TO 24	103	0	0	0	0	0	0	0	0	103
25 TO 29	288	32	0	0	0	0	0	0	0	320
30 TO 34	369	136	25	0	0	0	0	0	0	530
35 TO 39	320	204	100	21	1	0	0	0	0	646
40 TO 44	289	245	154	60	16	1	0	0	0	765
45 TO 49	268	221	179	134	55	21	1	0	0	879
50 TO 54	272	205	167	158	138	85	14	2	0	1,041
55 TO 59	194	167	144	130	121	119	44	12	0	931
60 TO 64	117	115	86	86	73	79	44	20	5	625
65 TO 69	47	58	53	28	21	19	15	9	6	256
70 & UP	21	34	27	24	11	22	3	4	2	148
<b>TOTAL</b>	<b>2,289</b>	<b>1,417</b>	<b>935</b>	<b>641</b>	<b>436</b>	<b>346</b>	<b>121</b>	<b>47</b>	<b>13</b>	<b>6,245</b>

<b>Salaries (In thousands):</b>										
UNDER 20	44	0	0	0	0	0	0	0	0	44
20 TO 24	2,885	0	0	0	0	0	0	0	0	2,885
25 TO 29	10,700	1,316	0	0	0	0	0	0	0	12,016
30 TO 34	16,564	7,523	1,106	0	0	0	0	0	0	25,192
35 TO 39	15,819	12,769	6,045	1,308	55	0	0	0	0	35,996
40 TO 44	13,985	16,687	10,833	3,887	867	26	0	0	0	46,285
45 TO 49	12,447	15,094	12,494	9,971	3,943	1,431	75	0	0	55,455
50 TO 54	12,021	12,195	10,660	11,781	10,516	6,932	1,087	155	0	65,347
55 TO 59	8,104	9,963	8,994	9,227	9,392	10,211	4,334	1,011	0	61,236
60 TO 64	4,957	6,423	4,984	5,611	6,057	6,817	4,168	1,737	420	41,174
65 TO 69	1,635	2,769	2,497	1,951	1,556	1,585	1,346	956	638	14,933
70 & UP	725	1,447	979	1,421	637	1,574	269	208	172	7,431
<b>TOTAL *</b>	<b>99,886</b>	<b>86,185</b>	<b>58,591</b>	<b>45,156</b>	<b>33,024</b>	<b>28,576</b>	<b>11,280</b>	<b>4,066</b>	<b>1,230</b>	<b>367,994</b>

<b>Average Salaries: **</b>										
UNDER 20	43,880	0	0	0	0	0	0	0	0	43,880
20 TO 24	28,011	0	0	0	0	0	0	0	0	28,011
25 TO 29	37,153	41,117	0	0	0	0	0	0	0	37,550
30 TO 34	44,888	55,314	44,233	0	0	0	0	0	0	47,532
35 TO 39	49,433	62,595	60,446	62,279	55,460	0	0	0	0	55,721
40 TO 44	48,392	68,110	70,347	64,787	54,169	25,700	0	0	0	60,504
45 TO 49	46,444	68,298	69,797	74,407	71,695	68,156	75,440	0	0	63,089
50 TO 54	44,195	59,486	63,834	74,566	76,204	81,547	77,633	77,400	0	62,773
55 TO 59	41,774	59,658	62,458	70,976	77,621	85,808	98,506	84,212	0	65,774
60 TO 64	42,371	55,854	57,951	65,245	82,974	86,288	94,719	86,861	83,958	65,878
65 TO 69	34,781	47,733	47,109	69,671	74,104	83,432	89,749	106,220	106,367	58,330
70 & UP	34,530	42,561	36,241	59,188	57,896	71,548	89,810	51,945	85,945	50,211
<b>TOTAL</b>	<b>43,637</b>	<b>60,822</b>	<b>62,664</b>	<b>70,447</b>	<b>75,743</b>	<b>82,589</b>	<b>93,222</b>	<b>86,517</b>	<b>94,606</b>	<b>58,926</b>

Note: Age is last birthday. Service is completed years.

\* Total may not add up due to rounding.

\*\* Average based on actual unrounded salary.



**Qualified Pension Plan  
Summary of Actives by Age and Service  
Female**

**DATA USED IN THE JUNE 30, 2014 (LAG) ACTUARIAL VALUATION  
FOR DETERMINING FISCAL YEAR 2016 EMPLOYER CONTRIBUTIONS**

Age \ Svc	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Up	All Years
<b>Number:</b>										
UNDER 20	3	0	0	0	0	0	0	0	0	3
20 TO 24	120	0	0	0	0	0	0	0	0	120
25 TO 29	550	31	1	0	0	0	0	0	0	582
30 TO 34	700	262	48	1	0	0	0	0	0	1,011
35 TO 39	721	410	222	29	2	0	0	0	0	1,384
40 TO 44	839	501	350	116	27	1	0	0	0	1,834
45 TO 49	998	744	513	280	98	33	4	0	0	2,670
50 TO 54	995	893	836	488	186	79	37	1	0	3,515
55 TO 59	748	804	962	714	288	159	79	10	4	3,768
60 TO 64	363	472	640	533	309	155	48	23	14	2,557
65 TO 69	123	152	243	208	156	111	22	11	7	1,033
70 & UP	62	60	75	92	84	70	12	3	2	460
<b>TOTAL</b>	<b>6,222</b>	<b>4,329</b>	<b>3,890</b>	<b>2,461</b>	<b>1,150</b>	<b>608</b>	<b>202</b>	<b>48</b>	<b>27</b>	<b>18,937</b>

<b>Salaries (In thousands):</b>										
UNDER 20	85	0	0	0	0	0	0	0	0	85
20 TO 24	3,148	0	0	0	0	0	0	0	0	3,148
25 TO 29	22,880	1,249	80	0	0	0	0	0	0	24,209
30 TO 34	33,168	14,342	2,102	43	0	0	0	0	0	49,654
35 TO 39	29,382	21,758	11,633	1,340	103	0	0	0	0	64,215
40 TO 44	29,984	20,182	16,241	6,114	1,734	82	0	0	0	74,336
45 TO 49	30,638	25,311	18,396	11,281	5,212	1,984	388	0	0	93,210
50 TO 54	27,980	28,847	27,506	16,547	7,897	4,472	2,503	93	0	115,845
55 TO 59	22,091	25,675	30,007	23,268	10,634	7,735	5,250	755	228	125,644
60 TO 64	10,711	15,123	19,431	15,736	11,275	6,263	2,742	1,405	882	83,568
65 TO 69	3,382	4,558	6,966	5,804	4,701	3,622	1,090	600	509	31,233
70 & UP	1,370	1,603	1,828	2,433	2,158	1,957	489	115	97	12,049
<b>TOTAL *</b>	<b>214,817</b>	<b>158,648</b>	<b>134,188</b>	<b>82,565</b>	<b>43,715</b>	<b>26,115</b>	<b>12,462</b>	<b>2,968</b>	<b>1,716</b>	<b>677,194</b>

<b>Average Salaries: **</b>										
UNDER 20	28,173	0	0	0	0	0	0	0	0	28,173
20 TO 24	26,230	0	0	0	0	0	0	0	0	26,230
25 TO 29	41,600	40,303	79,520	0	0	0	0	0	0	41,596
30 TO 34	47,382	54,741	43,782	42,910	0	0	0	0	0	49,114
35 TO 39	40,752	53,067	52,400	46,206	51,270	0	0	0	0	46,398
40 TO 44	35,738	40,284	46,402	52,705	64,229	81,700	0	0	0	40,532
45 TO 49	30,700	34,020	35,859	40,289	53,183	60,115	97,105	0	0	34,910
50 TO 54	28,120	32,304	32,902	33,908	42,459	56,606	67,652	92,880	0	32,957
55 TO 59	29,533	31,934	31,193	32,589	36,924	48,645	66,452	75,482	57,088	33,345
60 TO 64	29,507	32,041	30,360	29,523	36,488	40,408	57,129	61,087	62,989	32,682
65 TO 69	27,492	29,987	28,666	27,904	30,136	32,634	49,545	54,583	72,717	30,235
70 & UP	22,100	26,709	24,367	26,440	25,693	27,959	40,749	38,297	48,275	26,192
<b>TOTAL</b>	<b>34,525</b>	<b>36,648</b>	<b>34,496</b>	<b>33,550</b>	<b>38,013</b>	<b>42,952</b>	<b>61,695</b>	<b>61,833</b>	<b>63,547</b>	<b>35,760</b>

Note: Age is last birthday. Service is completed years.

\* Total may not add up due to rounding.

\*\* Average based on actual unrounded salary.



**Qualified Pension Plan  
Summary of Actives by Age and Service  
Male and Female**

**DATA USED IN THE JUNE 30, 2014 (LAG) ACTUARIAL VALUATION  
FOR DETERMINING FISCAL YEAR 2016 EMPLOYER CONTRIBUTIONS**

Age \ Svc	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Up	All Years
<b>Number:</b>										
UNDER 20	4	0	0	0	0	0	0	0	0	4
20 TO 24	223	0	0	0	0	0	0	0	0	223
25 TO 29	838	63	1	0	0	0	0	0	0	902
30 TO 34	1,069	398	73	1	0	0	0	0	0	1,541
35 TO 39	1,041	614	322	50	3	0	0	0	0	2,030
40 TO 44	1,128	746	504	176	43	2	0	0	0	2,599
45 TO 49	1,266	965	692	414	153	54	5	0	0	3,549
50 TO 54	1,267	1,098	1,003	646	324	164	51	3	0	4,556
55 TO 59	942	971	1,106	844	409	278	123	22	4	4,699
60 TO 64	480	587	726	619	382	234	92	43	19	3,182
65 TO 69	170	210	296	236	177	130	37	20	13	1,289
70 & UP	83	94	102	116	95	92	15	7	4	608
<b>TOTAL</b>	<b>8,511</b>	<b>5,746</b>	<b>4,825</b>	<b>3,102</b>	<b>1,586</b>	<b>954</b>	<b>323</b>	<b>95</b>	<b>40</b>	<b>25,182</b>

<b>Salaries (In thousands):</b>										
UNDER 20	128	0	0	0	0	0	0	0	0	128
20 TO 24	6,033	0	0	0	0	0	0	0	0	6,033
25 TO 29	33,580	2,565	80	0	0	0	0	0	0	36,225
30 TO 34	49,731	21,865	3,207	43	0	0	0	0	0	74,847
35 TO 39	45,201	34,527	17,677	2,648	158	0	0	0	0	100,211
40 TO 44	43,969	36,869	27,074	10,001	2,601	107	0	0	0	120,622
45 TO 49	43,085	40,404	30,890	21,252	9,155	3,415	464	0	0	148,665
50 TO 54	40,001	41,042	38,166	28,328	18,413	11,403	3,590	248	0	181,192
55 TO 59	30,195	35,638	39,001	32,495	20,026	17,946	9,584	1,765	228	186,879
60 TO 64	15,668	21,547	24,414	21,347	17,332	13,080	6,910	3,142	1,302	124,742
65 TO 69	5,016	7,327	9,463	7,755	6,257	5,208	2,436	1,556	1,147	46,165
70 & UP	2,095	3,050	2,806	3,853	2,795	3,531	758	323	268	19,480
<b>TOTAL *</b>	<b>314,703</b>	<b>244,833</b>	<b>192,779</b>	<b>127,722</b>	<b>76,738</b>	<b>54,690</b>	<b>23,742</b>	<b>7,034</b>	<b>2,946</b>	<b>1,045,188</b>

<b>Average Salaries: **</b>										
UNDER 20	32,100	0	0	0	0	0	0	0	0	32,100
20 TO 24	27,052	0	0	0	0	0	0	0	0	27,052
25 TO 29	40,072	40,717	79,520	0	0	0	0	0	0	40,161
30 TO 34	46,521	54,937	43,936	42,910	0	0	0	0	0	48,570
35 TO 39	43,420	56,233	54,899	52,956	52,667	0	0	0	0	49,365
40 TO 44	38,980	49,422	53,718	56,824	60,486	53,700	0	0	0	46,411
45 TO 49	34,033	41,870	44,638	51,332	59,837	63,242	92,772	0	0	41,889
50 TO 54	31,571	37,379	38,052	43,852	56,832	69,533	70,392	82,560	0	39,770
55 TO 59	32,054	36,702	35,263	38,501	48,964	64,553	77,918	80,244	57,088	39,770
60 TO 64	32,642	36,706	33,629	34,486	45,371	55,897	75,107	73,075	68,507	39,202
65 TO 69	29,507	34,888	31,968	32,859	35,353	40,058	65,844	77,820	88,248	35,815
70 & UP	25,245	32,442	27,510	33,216	29,422	38,382	50,561	46,096	67,110	32,039
<b>TOTAL</b>	<b>36,976</b>	<b>42,609</b>	<b>39,954</b>	<b>41,174</b>	<b>48,385</b>	<b>57,327</b>	<b>73,505</b>	<b>74,045</b>	<b>73,641</b>	<b>41,505</b>

Note: Age is last birthday. Service is completed years.

\* Total may not add up due to rounding.

\*\* Average based on actual unrounded salary.



**Qualified Pension Plan  
Annual Average Benefit Payments Amount**

Fiscal Year Ended June 30	Service Retirement Benefits			Ordinary (Non-Duty) Disability Benefits			Accidental (Duty) Disability Benefits			Survivor Benefits		
	Number	Average Annual Allowance	Average Monthly Allowance	Number	Average Annual Allowance	Average Monthly Allowance	Number	Average Annual Allowance	Average Monthly Allowance	Number	Average Annual Allowance	Average Monthly Allowance
2004 (Lag)	10,450	\$11,018	\$918	454	\$9,881	\$823	118	\$12,295	\$1,025	603	\$12,942	\$1,079
2005 (Lag)	10,723	\$11,106	\$926	495	\$9,802	\$817	125	\$12,555	\$1,046	628	\$12,956	\$1,080
2006 (Lag)	11,246	\$11,260	\$938	543	\$9,967	\$831	127	\$12,501	\$1,042	657	\$13,168	\$1,097
2007 (Lag)	11,618	\$11,440	\$953	565	\$10,031	\$836	141	\$12,354	\$1,030	667	\$13,497	\$1,125
2008 (Lag)	11,820	\$11,556	\$963	575	\$10,278	\$857	133	\$12,614	\$1,051	668	\$13,382	\$1,115
2009 (Lag)	12,176	\$11,665	\$972	627	\$10,547	\$879	118	\$13,036	\$1,086	720	\$13,448	\$1,121
2010 (Lag)	12,435	\$11,844	\$987	671	\$10,655	\$888	133	\$12,700	\$1,058	730	\$13,356	\$1,113
2011 (Lag)	12,841	\$12,244	\$1,020	698	\$10,975	\$915	138	\$12,559	\$1,047	722	\$13,724	\$1,144
2012 (Lag)	13,218	\$12,520	\$1,043	731	\$11,393	\$949	148	\$12,490	\$1,041	777	\$13,969	\$1,164
2013 (Lag)	13,662	\$12,811	\$1,068	795	\$11,620	\$968	153	\$12,809	\$1,067	845	\$14,579	\$1,215
2014 (Lag)	14,150	\$12,932	\$1,078	853	\$11,680	\$973	156	\$12,268	\$1,022	836	\$14,435	\$1,203





**Schedule of Participating Employers  
As Of June 30, 2014 (Lag)**

Employer	As of June 30, 2014 (Lag)		As of June 30, 2005	
	Number of Employees <sup>(1)</sup>	Annual Payroll <sup>(1)</sup>	Number of Employees <sup>(1)</sup>	Annual Payroll <sup>(1)</sup>
NYC Department of Education <sup>(2)</sup>	24,608	\$ 990,464,595	22,627	\$ 685,062,766
NYC Schools Construction Authority	557	\$ 54,110,222	364	\$ 29,538,936
Charter Schools				
Beginning with Children	3	\$ 101,372	7	\$ 180,909
Renaissance	14	\$ 511,549	7	\$ 295,008
<b>Total</b>	<b>25,182</b>	<b>\$ 1,045,187,738</b>	<b>23,005</b>	<b>\$ 715,077,619</b>

- (1) The number of employees and their corresponding salaries (Annual Payroll) include only current active members receiving salary as of June 30th.
- (2) A limited (de minimis) number of these employees have been reported as employed by employers other than those listed in the table. For actuarial valuation purposes these employees are included with the NYC Department of Education pending confirmation of status.







**Board of Education Retirement System**  
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