

New York State and Local Retirement System
A pension trust fund of the State of New York

2016

Comprehensive Annual Financial Report

For Fiscal Year Ended March 31, 2016

Office of the New York State Comptroller
Thomas P. DiNapoli



New York State and Local Retirement System

2016 Comprehensive Annual Financial Report

For Fiscal Year Ended March 31, 2016

New York State and Local Retirement System

Employees' Retirement System
Police and Fire Retirement System

A pension trust fund of the State of New York

Prepared by the staff of the



Table of Contents

Introduction

Professional Awards	7
Letter of Transmittal	9
Administrative Organization.....	15
Advisory Committees	15
New York State and Local Retirement System Organization Chart	20
Overview of the New York State and Local Retirement System	21
By the Numbers	28
Members and Retirees.....	28
Retirees in New York State.....	29
Annual Benefit Payments Within New York State	30
Annual Benefit Payments Within the United States.....	31
Annual Benefit Payments Outside the United States.....	31

Financial

Independent Auditors' Report	35
Management's Discussion and Analysis (Unaudited)	37
Basic Financial Statements	42
Combining Basic Statement of Fiduciary Net Position	42
Combining Basic Statement of Changes in Fiduciary Net Position	43
Notes to Financial Statements	44
Required Supplementary Information (Unaudited)	68
Schedule of Changes in the Employers' Net Pension Liability and Related Ratios (Unaudited).....	68
Schedule of Employer Contributions (Unaudited).....	70
Schedule of Investment Returns (Unaudited).....	71
Notes to Required Supplementary Information (Unaudited).....	71
Additional Supplementary Information	72
Schedule of Administrative Expenses.....	72
Schedule of Investment Expenses	73
Schedule of Consulting Fees.....	74
Independent Auditors' Report on Internal Control.....	75

Investment

Overview of Investments.....	79
Investment Results	90
Investment Summary	91
Asset Allocation — March 31, 2016	92

Table of Contents

continued

Global Equity Performance.....	93
Domestic Equity Portfolio — Ten Largest Holdings	96
Fixed Income Portfolio and Comparison	97
Fixed Income Performance.....	98
Fixed Income Portfolio — Ten Largest Holdings	99
Real Estate Portfolio	100
Alternative Investments Summary	101
Domestic Equity Management Fees.....	102
Domestic Equity Commissions	103
International Equity Management Fees	105
International Equity Commissions.....	106
Global Fixed Income Management Fees	109
Domestic Bond Transactions	110
Real Estate Management Fees (Expensed).....	112
Real Estate Management Fees (Capitalized).....	113
Private Equity Management Fees (Expensed)	114
Private Equity Management Fees (Capitalized).....	115
Absolute Return Strategy Management and Incentive Fees	116
Opportunistic Funds Management and Incentive Fees (Expensed)	118
Opportunistic Funds Management and Incentive Fees (Capitalized)	119
Real Assets Management Fees (Expensed)	120
Consultant and Advisor Fees	121

Actuarial

Statement of the Actuary	125
Actuarial Cost Method and Valuation	127
Elements of the Actuarial Valuation	129
Actuarial Valuation Balance Sheets.....	133
Local Government Employers’ Final Contribution Rates for Select Plans.....	135
Contribution Rate Trend for Local Governments	137
Employer Contributions	140
Historical Trends (Rates as a Percentage of Salary, 1974 – 2017)	142
Changes in Contributions.....	143
Assets and Accrued Liabilities.....	144
Solvency Test	145
Schedule of Active Member Data.....	146
Schedule of Retired Members and Beneficiaries	147

Table of Contents

continued

Statistical

Schedule of Additions to Fiduciary Net Position.....	151
Schedule of Investment Income	152
Schedule of Deductions from Fiduciary Net Position	153
Schedule of Total Changes in Fiduciary Net Position	154
Service Retirees — ERS	156
Service Retirees — PFRS.....	158
Disability Retirees — ERS.....	160
Disability Retirees — PFRS.....	162
New Option Selections	164
Option Selection — Total Payments	165
Average Pension Benefits Paid During Year Shown.....	166
Average Benefit Pay Types	167
New Benefits — Service Retirements by Age and Service	169
New Benefits — Accidental and Ordinary Death	170
Combined System Participants.....	171
Membership by Age and Years of Service.....	172
Membership by Tier	173
Membership by Status.....	174
Number of Employers	174
Membership by Employer Type.....	175
Average Salary by Employer Type.....	176
Members and Salaries by Plan — ERS.....	177
Members and Salaries by Plan — PFRS.....	178
Retirees and Beneficiaries by Age	180
Retirees and Beneficiaries — ERS.....	181
Retirees and Beneficiaries — PFRS	182
Local Government Salaries and Billings — ERS	183
Local Government Salaries and Billings — PFRS.....	185
Contributions Recorded, 2007 – 2016.....	187
20-Year Summary	188
Notes to 20-Year Summary.....	190

Introduction

Contents

Professional Awards	7
Letter of Transmittal	9
Administrative Organization.....	15
Advisory Committees	15
New York State and Local Retirement System Organization Chart	20
Overview of the New York State and Local Retirement System	21
By the Numbers	28
Members and Retirees.....	28
Retirees in New York State.....	29
Annual Benefit Payments Within New York State	30
Annual Benefit Payments Within the United States	31
Annual Benefit Payments Outside the United States	31



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Financial Report
for the Fiscal Year Ended

March 31, 2015

Executive Director/CEO



Public Pension Coordinating Council

***Public Pension Standards Award
For Funding and Administration
2015***

Presented to

New York State and Local Retirement System

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

Presented by the Public Pension Coordinating Council, a confederation of

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

A handwritten signature in cursive script that reads "Alan H. Winkle".

Alan H. Winkle
Program Administrator

Letter of Transmittal

Office of the New York State Comptroller
Thomas P. DiNapoli



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518-474-7736

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Web: www.osc.state.ny.us/retire

September 30, 2016



To the Governor, the State Legislature
and the People of New York State:

I am pleased to present the Comprehensive Annual Financial Report (CAFR) for the New York State and Local Retirement System (the System or NYSLRS) for the fiscal year ended March 31, 2016. Responsibility for the accuracy of the data, and the completeness and fairness of the report, including all disclosures, rests with the System. All disclosures required and necessary to enable the public and the financial community to gain an understanding of the System's financial activities have been included.

We believe the enclosed financial statements and data are fairly presented in all material respects and are reported in a manner designed to present the financial position and results of the System's operations accurately. This report is intended to provide complete and reliable information as a basis for making management decisions, adhering to and complying with legal requirements, and ensuring responsible stewardship of the System's assets.

The financial section of this CAFR was prepared to conform with Generally Accepted Accounting Principles (GAAP) for governmental units, as set forth by the Governmental Accounting Standards Board (GASB), as well as the reporting requirements prescribed by the Government Finance Officers Association of the United States and Canada (GFOA). GAAP defines uniform minimum standards of, and guidelines for, financial accounting and reporting. These principles establish the framework within which financial transactions are recorded and reported, resulting in financial statements that provide comparability between government entities, consistency between accounting periods, and reliability for both internal and external users of financial statements.

The System's transactions are reported on the accrual basis of accounting. Sufficient internal accounting controls exist to provide reasonable assurance regarding the safekeeping of assets and the fair presentation of the financial statements and supporting schedules.

The financial section features a Management's Discussion and Analysis (MD&A). GASB requires that the System provide a narrative introduction, overview and analysis to accompany the basic financial statements in the form of an MD&A. This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it. The MD&A can be found in the financial section immediately following the report of the independent auditors.

The System was awarded a Certificate of Achievement for Excellence in Financial Reporting from GFOA for its CAFR for the fiscal year ended March 31, 2015. The Certificate of Achievement is a prestigious national award recognizing excellence in the preparation of state and local government financial reports. GFOA awards these certificates to those governments whose comprehensive annual financial reports meet or exceed the Association's strict criteria. To be awarded a Certificate of Achievement, a governmental unit must publish an easily readable and efficiently organized comprehensive annual financial report that conforms to program standards and that satisfies both generally accepted accounting principles and applicable legal requirements.

The System has received this respected award for each of the past 12 years. We believe that our current report continues to meet the Certificate of Achievement program requirements and are submitting it to the GFOA for consideration again this year.

The System comprises the New York State and Local Employees' Retirement System (ERS) and the New York State and Local Police and Fire Retirement System (PFRS). The assets of ERS and PFRS are held in the New York State Common Retirement Fund (Fund) and managed by the Division of Pension Investment and Cash Management in the Office of the State Comptroller.

With more than one million participants, the System is one of the largest public retirement systems in the nation.

The System offers retirement benefits for members who reach specific ages or have completed a specified number of years of service, depending on the system and plan in which they are enrolled, as well as disability and death benefits. At the end of fiscal year 2015-16, there were a total of 1,088,342 members, retirees and beneficiaries, and 3,040 participating employers.

This letter highlights some of the System's operations for the 2015-16 fiscal year, in order to enable readers to obtain a reasonable understanding of the System's financial affairs, as well as its internal controls, for this period.

Funding

The Fund's assets come from three main sources: employee (or member) contributions, employer contributions and investment income. The System is committed to meeting its long-term benefit obligations prudently and fairly. Member contributions are fixed by law. Annual employer contributions are actuarially determined. Employer contributions are the greater of a minimum contribution of 4.5 percent of member payroll, or the actuarially determined contributions.

The System announced last September that, for the third consecutive year, the employer contribution rates for ERS and PFRS would decline in 2016-17. The average employer contribution rates for the 2016-17 fiscal year, which began on April 1, 2016, are 15.5 percent of payroll in ERS and 24.3 percent in PFRS. These rates reflect reductions of about 2.7 percent and 0.4 percent, respectively, which offers some relief to our participating employers and taxpayers.

GASB no longer requires the computation of the traditional funded ratio. The ratio of fiduciary plan position to total pension liability is a required GASB financial disclosure. For the fiscal year ended March 31, 2016, the ratios are 90.7 for ERS and 90.2 for PFRS. The traditional funded ratios for ERS and PFRS can be found in this CAFR's actuarial section.

Because we scrupulously adhere to our funding policy of collecting what we bill the employers, and we follow sound actuarial principles in the determination of our bills, we continue to be among the best-funded public pension plans in the nation.

A detailed discussion of the System's funding is provided in the actuarial section of this report.

Investments

In order to ensure the Fund remains adequately funded despite continued market volatility, I lowered our assumed rate of return on investments in September 2015, from 7.5 percent to 7.0 percent. This is the second time since becoming State Comptroller in 2007 that I have lowered the assumed rate of return.

According to the National Association of State Retirement Administrators (NASRA), the average assumed rate of return for public pension funds is 7.62 percent. By taking a conservative approach, we have made a prudent decision that better positions us for today's challenging investment climate.

Low-carbon, sustainable investments are key to our future. During fiscal year 2016, we increased the Fund's commitment to sustainable investments to \$5 billion. The cornerstone of this commitment was the creation of a \$2 billion index that will exclude or reduce investments in companies that are large contributors to carbon emissions and increase the Fund's investments in companies that are lower emitters.

As a long-term investor, we must develop strategies that manage risk. Climate change, due largely to excessive carbon emissions, is one of the biggest risks facing investors. By shifting our capital to companies with lower emissions, the Fund manages risk while encouraging innovation and assisting in the transition to a low carbon economy.

Our investment policies are designed to obtain optimal risk-adjusted returns. They are designed to ensure that investments are made for the exclusive benefit of the participants and beneficiaries of the System, on whose behalf the assets of the Fund are invested, and that Fund investments are made consistent with the "prudent person" and "exclusive benefit" fiduciary standards of investments. Additionally, we have adopted policies and practices to ensure that the Fund is managed with high levels of ethical conduct and transparency.

We are responsible for implementing an asset allocation with an appropriate balance of risk and return. Our long-term target allocation for the investment portfolio is 22 percent in fixed income assets (bonds, mortgages and Treasury Inflation-Protected Securities or "TIPS") and 78 percent in equity, including domestic and international public equities as well as real estate, real assets, absolute return strategies, opportunistic funds and private equity investments. At the end of the 2015-16 fiscal year, the fair value of invested assets of the Fund was \$178.6 billion and the Fund posted positive investment performance with a time-weighted rate of return of 0.19 percent.

Since I became Comptroller nine years ago, the Fund has invested approximately \$9 billion with minority and women-owned business enterprises. Ours is among the few state pension funds in the country that has a comprehensive emerging managers program designed to expand the diversity of the Fund's portfolio and enable the Fund to access fresh ideas and new talent. Ensuring equal opportunity in the investment arena helps the Fund continue to earn strong returns. With more than \$500 million in new commitments to the emerging managers program in the 2015-16 fiscal year, our total commitment to this program now exceeds \$5.6 billion.

Accounting Practices

My staff is responsible for identifying control objectives for the protection of assets and the proper recording of all transactions in order to permit the preparation of financial statements in accordance with GAAP. The objective of internal controls is to provide reasonable, rather than absolute, assurance that the financial statements are free of material misstatements. We have designed, implemented and maintained adequate internal controls to provide reasonable assurance that our control objectives are achieved.

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. The internal control system includes the organization plan, the appropriate segregation of duties and responsibilities, the implementation of sound practices in the performance of duties, and the employment of personnel whose capabilities are commensurate with their responsibilities.

Financial information and internal controls are subject to examination by the New York State Department of Financial Services. Additionally, KPMG LLP, an independent, certified public accountant, audits the System's financial statements. KPMG's opinion appears on page 35 of this report. Lastly, pursuant to the New York State Government Accountability, Audit and Internal Control Act, the System is subject to an audit of its internal controls every three years.

We believe the internal controls in effect during the fiscal year ended March 31, 2016 adequately safeguard the System's assets and provide reasonable assurance regarding the proper recording of financial transactions.

Programs and Initiatives

One of my top priorities since taking office has been to protect the public's money. I have fought against the abuse of public funds, whether it involves rigging bids for public contracts or stealing pension benefits.

In 2011, Operation Integrity, a joint partnership with the New York State Attorney General's office, was launched to uncover unethical behavior in government. To date, our collaboration has resulted in 100 arrests and the recovery of \$20 million in taxpayer funds. I am committed to fighting public corruption, and will continue to root out fraud involving taxpayer money.

Our work with the Attorney General's Office is not limited to fighting public corruption. We continue to root out pension fraud and recoup money stolen from NYSLRS and our retirees. Some of our efforts during the past year resulted in the conviction of an Atlanta, Georgia man for stealing over \$204,000 in state pension benefits issued to his deceased mother and a Florida resident for stealing nearly \$275,000 deposited into

his deceased mother's bank account. Perhaps the most egregious example of pension fraud is the Queens man, sentenced in November 2015, who left his deceased father's body in a morgue so he could illegally collect both his father's pension and Social Security payments.

These arrests and convictions are warnings to all those who might steal from the Fund — pension fraud will not be tolerated. When we identify fraud, we will work with law enforcement to hold the perpetrators accountable.

During the fiscal year ended 2016, we continued our efforts to replace the information technology systems the Retirement System has used for three decades. This technology upgrade will allow us to administer our work in a more modern and efficient way. Over the next few years, we will introduce tools that allow our members, retirees and employers to conduct business with the Retirement System with greater convenience and efficiency.

More information about the technology systems replacement project, as well as other key programs and initiatives, can be found in the Overview of the New York State and Local Retirement System on page 21 and the Overview of Investments on page 79.

Acknowledgements

I wish to thank the members of the Advisory Council for the Retirement System, the Investment Advisory Committee, the Real Estate Advisory Committee, the Actuarial Advisory Committee and the Audit Advisory Committee for their dedicated service and commitment to the System's members and retirees. We are deeply indebted to them for their continued support and counsel.

I would also like to thank the staff in our Division of Retirement Services and our Division of Pension Investment and Cash Management, who are responsible for preparing this report. Their professionalism, dedication and long hours of assistance are greatly appreciated.

I am confident you will find this report to be a complete and reliable accounting of the System.

Sincerely,



Thomas P. DiNapoli
State Comptroller

Administrative Organization

Advisory Committees

Advisory Council for the Retirement System

The Advisory Council for the Retirement System, appointed by the Comptroller pursuant to regulations of the Comptroller (2 NYCRR Part 320), advises and makes recommendations to the Comptroller on the formulation of policies in relation to the administration and management of the Common Retirement Fund and the Retirement System. At the annual meetings of the Council, the Comptroller and senior staff also exchange information and insights with the Council to help stakeholders understand the status and challenges of the Common Retirement Fund and the Retirement System.

Honorable Peter J. Abbate, Jr.

Chairman
Assembly Governmental Employees Committee
New York State Assembly

Stephen J. Acquario

Executive Director
New York State Association of Counties

Peter A. Baynes

Executive Director
New York State Conference of Mayors

Heather Briccetti

President & CEO
Business Council of New York State, Inc.

Mario Cilento

President
New York State AFL-CIO

Gerry Geist

Executive Director
Association of Towns of the State of New York

Honorable Martin J. Golden

Chair
Senate Civil Service and Pensions Committee
New York State Senate

Don Kelly

Director of Research
Civil Service Employees Association

Timothy G. Kremer

Executive Director
New York State School Boards Association

Jim Lyman

Executive Director
Council 82, AFSCME

Bing Markee

Legislative Director
New York State Association of PBAs

Michael McManus

President
Professional Fire Fighters Association

John J. McPadden

President
Retired Public Employees Association, Inc.

Andrew Pallotta

Executive Vice President
New York State United Teachers

Michael Powers

President
New York State Correctional Officers
& Police Benevolent Association

Raymond Santander

Assistant Director
AFSCME District Council 37

Wayne Spence

President
New York State Public Employees Federation

Richard Wells

President
Police Conference of New York, Inc.

Barbara Zaron

President
New York State Organization of
Management Confidential Employees

Investment Advisory Committee

The Investment Advisory Committee is appointed by the Comptroller pursuant to Section 423 of the Retirement and Social Security Law. The Investment Advisory Committee advises the Comptroller on general investment issues. The Investment Advisory Committee reviews the investment policy statement and any amendments and it reviews and provides a recommendation to the Comptroller on the proposed asset allocation plan developed by the Chief Investment Officer after the completion of an asset liability study. The Investment Advisory Committee also periodically reviews the strategic plan of each Common Retirement Fund asset class, and monitors the Common Retirement Fund's risk profile, investment activity and performance on a periodic basis.

William G. Clark

Chief Investment Officer
Federal Reserve Employee Benefits System

Timothy C. Collins

CEO & Senior Managing Director
Ripplewood Holdings, LLC

Hugh Johnson

Chairman & Chief Investment Officer
Hugh Johnson Advisors, LLC

Catherine A. Lynch, CFA

Former Chief Executive Officer & Chief Investment Officer
National Railroad Retirement Investment Trust

Valerie Mosley

Chair & CEO
Valmo Ventures

Douglas Phillips

Senior Vice President
Institutional Resources
University of Rochester

Real Estate Advisory Committee

The Real Estate Advisory Committee is appointed by the Comptroller, with the consent of the Investment Advisory Committee, pursuant to Section 423 of the Retirement and Social Security Law. The Real Estate Advisory Committee reviews proposed mortgage and real estate investments. In the event the Real Estate Advisory Committee disapproves of a proposed mortgage or real estate investment, the investment will not be presented to the Comptroller and cannot be made by the Common Retirement Fund.

Alice M. Connell

Principal
AM Connell Associates, LLC

Louis M. Dubin

Managing Partner
Redbrick LMD

G. Gail Edwards

Chief Financial Officer
The Minto Group

Jo Ann Hanson

President
Avanti Real Estate Corporation

Glenn M. Johnson

Chief Investment Officer
Northland Investment Corporation

David H. Peirez, Esq.

Senior Partner
Reisman Peirez Reisman & Capobianco, LLP

Barry S. Seidel

Managing Partner
Seidel + Partners

Peter Tilles

Developer

Actuarial Advisory Committee

The Actuarial Advisory Committee, appointed by the Comptroller pursuant to regulation (11 NYCRR 136-2), reviews and advises the Comptroller on the actuarial soundness and financial condition of the Retirement System and the Common Retirement Fund, and annually reviews the proposed actuarial assumptions and employer contributions.

Armand de Palo

(Retired)

Michael Heller

(Retired)

Teri E. Landin

(Retired)

Stanley Talbi

Executive Vice President

Metropolitan Life Insurance

Mark T. Koehne

Senior Vice President & Actuary

Mutual of America Life Insurance Company

Audit Advisory Committee

The Audit Advisory Committee, appointed by the Comptroller pursuant to regulation (11 NYCRR 136-2), reviews and reports to the Comptroller on the annual internal and external audit process related to the Retirement System and the Common Retirement Fund, and on the Comprehensive Annual Financial Report.

Eugene Farley

(Retired)

Alan Lubin

(Retired)

Paul Moore

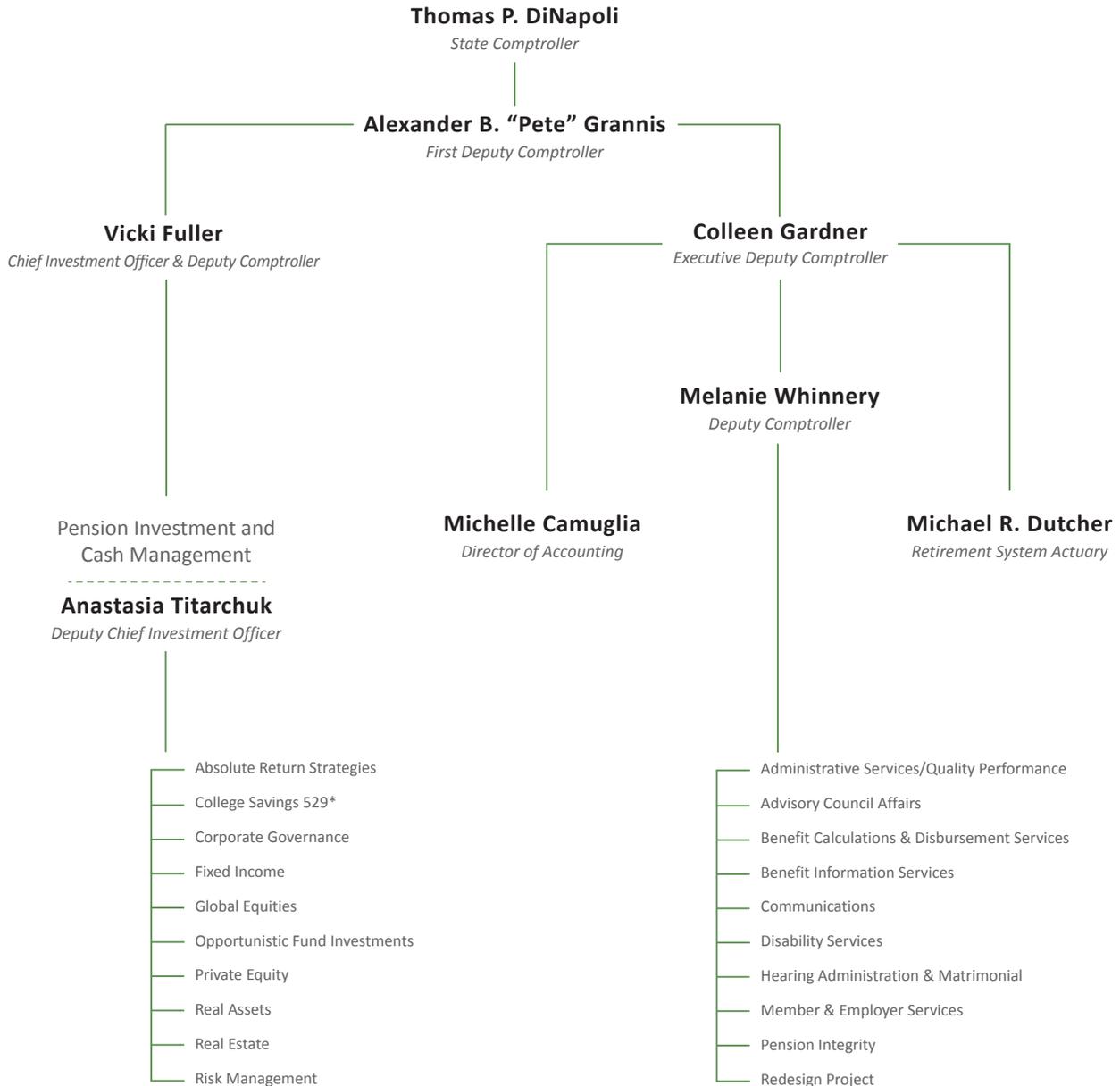
Retired Public Employees Association, Inc.

Ruben Cardona

Partner

WithumSmith + Brown, PC

New York State and Local Retirement System Organization Chart



* College Savings 529 is an independent program within OSC.

Notes:

Information regarding investment managers and consultants can be found in the Investment Section on pages 102, 105, 109 and 112 – 121. Information regarding consultants other than investment advisors can be found on page 74 in the Financial Section.

Overview of the New York State and Local Retirement System

Report from Executive Deputy Comptroller Colleen Gardner

For 95 years, NYSLRS has been delivering on the promise of retirement security for our members, retirees and employers. In October 2015, Comptroller DiNapoli gave me the opportunity to lead this effort. I am proud to join Deputy Comptroller Melanie Whinnery and the team at NYSLRS who are dedicated to strengthening the Retirement System for generations to come.

Our goal at NYSLRS is to provide exceptional services. I am pleased to outline some of the noteworthy work we have accomplished this past year.

Retirement Online and our Redesigned Computer System

We have been engaged in a significant project to replace our information technology systems and streamline our core services. A major goal of this project is to enhance operational efficiencies and effectiveness throughout the organization. The new system is being designed to provide our staff and customers — members, retirees, beneficiaries, and employers — with easy, secure access to the information they need when they need it. As NYSLRS moves away from paper-driven processes and leverages technology, we are improving quality, timeliness, and the customer experience.

In 2017, we will introduce an expanded Retirement Online, with additional self-service options for our members, retirees, employers and business partners. Over time, Retirement Online will provide our customers the ability to update information, get personalized retirement benefit information, and request services from NYSLRS.

We are committed to providing our customers a safe and secure Retirement Online experience. That's why this self-service application will incorporate robust security features to protect the personal information of our customers.

Customized Benefit Projections

Our benefit calculator was updated to create individualized benefit projections for Tier 2, 3 and 4 ERS members as well as Tier 2 PFRS members. Our Information Representatives can now customize benefit projections during consultation interviews by including sick leave credits and vacation lump sum payments. Staff also can calculate the impact of loan balances on member retirement benefits. This updated tool helps members plan better for their retirement.

Faster Pension Payments for New Retirees

We're enabling more retiring members to receive their first pension payment via direct deposit so they can have health insurance and other payments automatically deducted rather than paying for them separately by check. These members receive partial pension payments while their retirement benefit calculations are being finalized. Once NYSLRS receives the members' accruals and final salary information from their employer, their benefit is finalized and they receive a retroactive payment for any money owed. Our staff is initiating pension payments via direct deposit immediately for approximately 30 percent of cases.

Online GASB 68 Information for Employers

A strong partnership with our employers is crucial to the successful operation of NYSLRS. Over the past few years, we have made a variety of online tools available to our participating employers in an effort to make their retirement-related recordkeeping and reporting easier to manage.

Last July, we launched another online application — one that provides the information employers need to comply with the new Statement No. 68, Accounting and Financial Reporting for Pensions, issued by the Governmental Accounting Standards Board (GASB). GASB Statement No. 68 requires our employers to report expanded information concerning pensions in their financial statements, as well as their proportionate share of what is referred to as the Net Pension Liability. We have tried to make the GASB information application as helpful as possible by calculating each employer's annual proportionate share of the Net Pension Liability, pension expense, deferred inflows/outflows, and by providing other related disclosures based on current actuarial and financial information.

Service Credit for Elected and Appointed Officials

Regulation 315.4 of the New York Codes, Rules and Regulations has prescribed the process for reporting the number of days elected and appointed officials work since 1975. The regulation was amended in August 2015 to streamline the process and provide guidance to our employers and elected and appointed officials on maintaining records of activities and standard work day resolutions. Helping employers and elected and appointed officials comply with this regulation improves the accuracy of the information upon which future benefits are calculated.

Overview of the New York State and Local Retirement System continued

Report from Executive Deputy Comptroller Colleen Gardner

Customer Contact and Communication

The Benefit Information Services Bureau is often our first line of contact with customers.

Over the course of the last fiscal year, our customer service representatives:

- Answered more than 341,000 calls and responded to more than 28,700 emails from customers;
- Conducted one-on-one consultations at our 15 consultation sites throughout New York for 38,700 customers; and
- Delivered presentations to over 39,900 members.

Our self-service telephone feature, the Interactive Voice Response (IVR) system, provides account-specific information to our members, retirees, beneficiaries and employers 24 hours a day, seven days a week. Over the last fiscal year, 910,000 members, retirees, beneficiaries and employers used our IVR. During the past year, NYSLRS embarked on a project to update and replace the current IVR system so that it is even more responsive to our customers' needs.

While we answered more calls than ever before last year, we know that many callers had difficulty getting through. NYSLRS has taken steps to increase staffing levels at the call center, improve IVR flow, and provide other ways for customers to reach us, such as secure email. NYSLRS continues to make customer satisfaction a top priority.

NYSLRS has embraced social media. Facebook, Twitter and our electronic newsletter, E-News, are helping us provide timely and relevant information to an expanding number of customers, allowing us to engage with our members, retirees and stakeholders cost-effectively.

Finding new ways to give members the information they need to understand their membership details and make good decisions about the benefits available to them helps to serve one of NYSLRS' most important goals: to help members and retirees plan for a financially secure retirement.

Overview of the New York State and Local Retirement System continued

Report from Executive Deputy Comptroller Colleen Gardner

NYSLRS Loan Program

As long as our members meet eligibility requirements, they can borrow against their contributions and take a loan from NYSLRS. Over the course of the 2015-16 fiscal year, we issued over 60,000 new loans as well as over 15,000 refinanced loans to members.

At the end of the fiscal year ending 2016, there were over 128,000 members with outstanding loans. That's nearly 20 percent of our membership. In addition, nearly 17 percent of Employees' Retirement System members who retired in 2015 did so with an average outstanding loan balance of \$12,753.

While this is an important service for our members, unpaid loans may negatively impact their retirement security. Those who have outstanding loans with us may face significant tax consequences if they default on them. We inform members of the importance of paying back loans before retiring, because an outstanding loan balance at retirement permanently reduces a member's retirement benefit.

Reducing Backlogs

NYSLRS developed a backlog of member and retiree cases over a number of years and for a number of reasons. NYSLRS recognizes the need for urgent action and is using technology and business process reengineering to transform our service delivery.

SUNY Police Transfer Legislation

When a new law was enacted on December 18, 2015 permitting State University of New York (SUNY) police officers to transfer from the Employees' Retirement System (ERS) into the Police and Fire Retirement System (PFRS) and be covered by a 25-year plan, NYSLRS stepped into action. NYSLRS staff, along with SUNY and the officers' union, reached out to SUNY police officers via email, phone, mail and webinar to help them make an informed decision by the December 31, 2015 deadline. By the deadline, 426 out of a possible 578 SUNY police officers filed applications to transfer from ERS into PFRS.

Overview of the New York State and Local Retirement System continued

Report from Executive Deputy Comptroller Colleen Gardner

Rooting Out Pension Fraud

We are using additional tools to identify member deaths as soon as possible. This approach has helped us uncover instances where a caregiver or family member unlawfully accessed pension money of a deceased retiree or beneficiary by not reporting their death to NYSLRS. A new death auditing software service informs us of the deaths of retirees, beneficiaries and alternate payees weekly. Staff are also aided by an obituary notification service for deaths that have not yet been reported to the Social Security Administration.

NYSLRS seeks to recoup improper post-death payments and reviews member account details and records to determine if improper payments should be pursued criminally or civilly. Cases where fraud is suspected are referred to our Pension Integrity Bureau and the OSC Division of Investigations to pursue criminally.

NYSLRS is also uncovering cases of pension fraud relating to exceeding the limits on post-retirement public employment. Chapter 206 of the Laws of 2011, which Comptroller DiNapoli sponsored, enables NYSLRS to compare our retiree records with wage information reported by public employers. Over the last year, our reviews of post-retirement employment uncovered more than \$705,450 in benefit overpayments subject to recovery.

Our commitment to rooting out pension fraud sends a clear message: those who steal from NYSLRS will be caught and held accountable.

Overview of the New York State and Local Retirement System continued

Report from Executive Deputy Comptroller Colleen Gardner

New Laws Enacted in the Past Year that Impact NYSLRS:

Special Accidental Death Benefits Increased

Chapter 23 of the Laws of 2015 increases special accidental death benefits paid to widows, widowers or children of police officers and firefighters killed in the line of duty.

September 11 Worker Protection Task Force Extended

Chapter 45 of the Laws of 2015 extends the expiration of the September 11 Worker Protection Task Force, which was enacted as part of the World Trade Center disability law, to June 10, 2020.

Calculation of Employers' NYSLRS Contributions Changed

Chapter 94 of the Laws of 2015 concerns the calculation of employers' contributions to the New York State and Local Employees' Retirement System (ERS) and the New York State and Local Police and Fire Retirement System (PFRS). It requires NYSLRS to use employees' annual compensation at the end of a fiscal year to determine employer contributions due for the succeeding fiscal year, thereby eliminating the need for reconciliation.

Filing Requirements Amended

Chapter 378 of the Laws of 2015 amends the filing requirements for service retirement applications, disability retirement applications and option election forms by setting the date of filing as the date of postmark if these documents were mailed by United States Postal Service First-Class Mail and the member dies before the document is received by the State Comptroller.

Mandatory Retirement Age Increased for Town of Southampton Police

Chapter 476 of the Laws of 2015 increases the mandatory retirement age from 55 to 60 for members of the Southampton Town Police Department.

MTA, LIRR and Metro North Police Can Transfer to PFRS

Chapter 533 of the Laws of 2015 allows any police officer who was employed by the Metropolitan Transportation Authority (MTA), the Long Island Railroad (LIRR) or the Metro-North Commuter Railroad, and who is a member of the MTA police retirement program, to transfer his or her membership to PFRS.

Overview of the New York State and Local Retirement System continued

Report from Executive Deputy Comptroller Colleen Gardner

Creditable Service for 20-Year and 25-Year Plan Extended to Deputy Sheriffs

Chapter 542 of the Laws of 2015 allows a county to elect to provide that creditable service for the 20-year or 25-year retirement plan for sheriffs shall also include all service performed by a deputy sheriff who is a police officer pursuant to subdivision 34 of Section 1.20 of the Criminal Procedure Law.

SUNY Police Officers Allowed to Transfer to PFRS

Chapter 561 of the Laws of 2015 permits State University of New York (SUNY) police officers to transfer into the PFRS and be covered by a 25-year retirement plan.

The past year — like the 94 years before — was a year of change at NYSLRS. What has not changed is NYSLRS' commitment to serving those who serve New York. I look forward to reporting on our continued success in 2017.

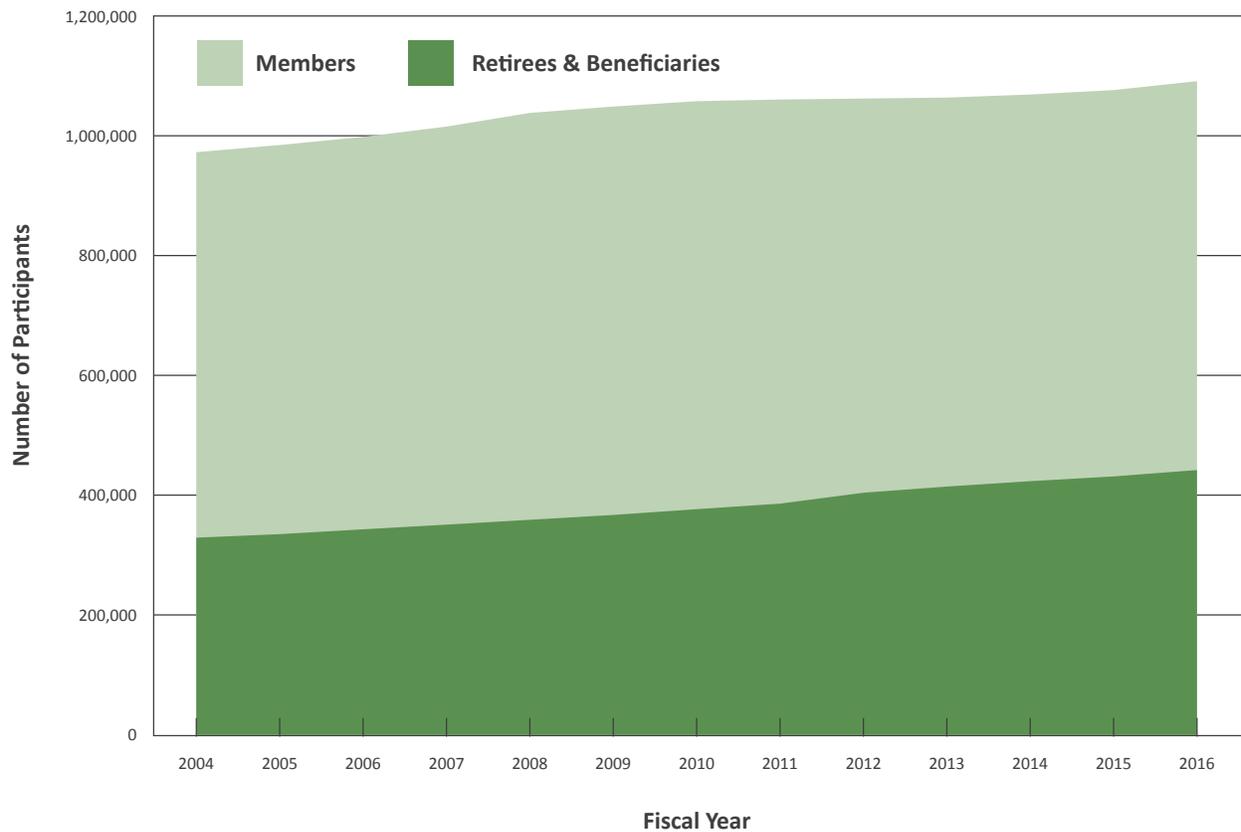
By the Numbers

Members and Retirees

There are 1,088,342 participants in the System, including 647,399 members and 440,943 retirees and beneficiaries. The number of retirees is increasing more quickly than members. For example, in 1996, retirees represented 32 percent of the System's participants. By Fiscal Year (FY) 2016, that number had increased to approximately 41 percent.

The value of the pension plan's net position at the end of the fiscal year was \$183.64 billion.

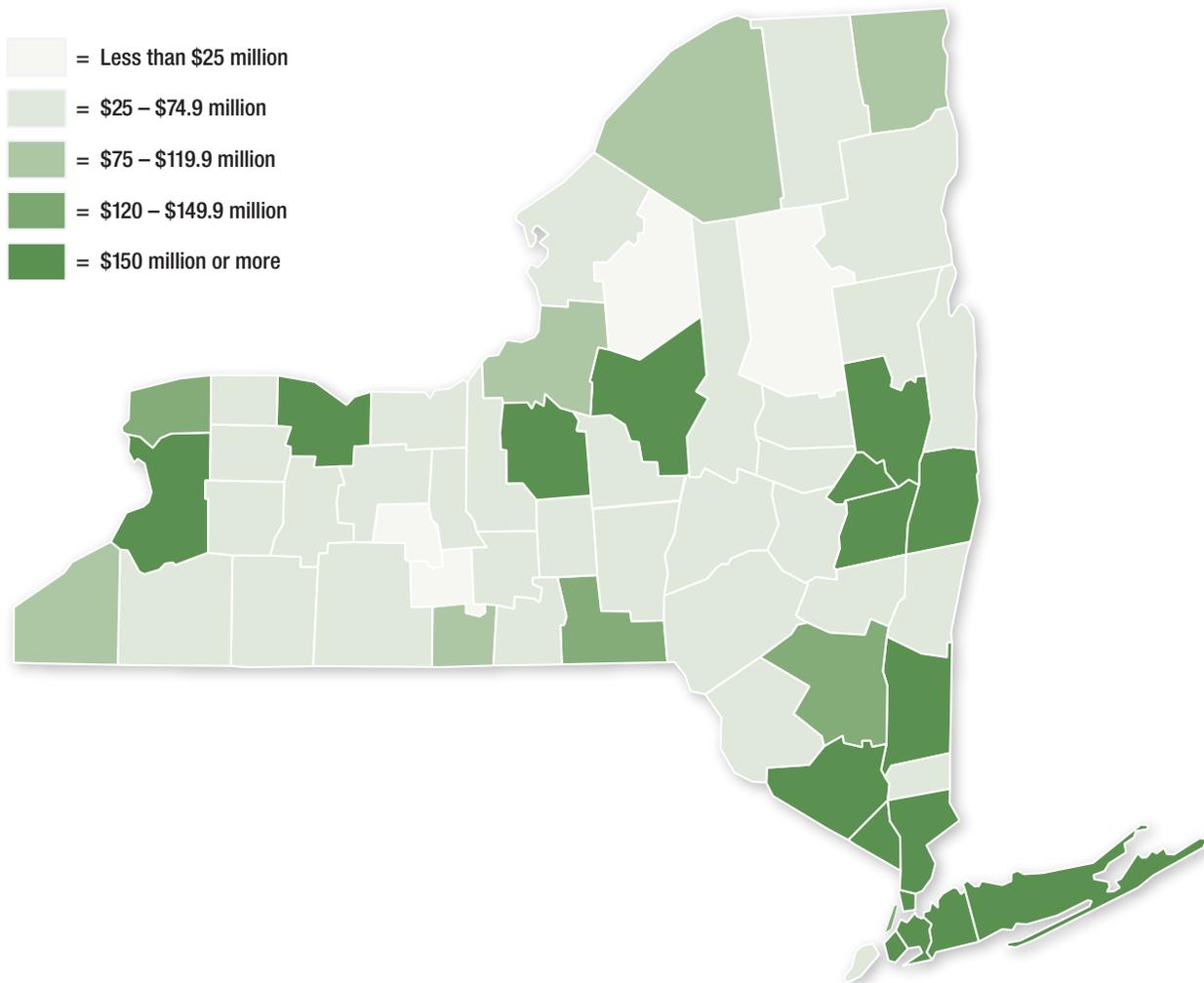
Total benefits paid continue to rise, reflecting improvements in final average salaries over the past decades, cost-of-living adjustment (COLA) payments and increased longevity. This year's benefit payments totaled more than \$10.9 billion.



Retirees in New York State

Of the 440,943 retirees and beneficiaries in the System, 345,643 (78 percent) remain New York State residents. As such, benefit payments surpassing \$8.6 billion this year alone reach the State’s communities and businesses, and impact the State’s economy.

Benefit Payments by County



Annual Benefit Payments Within New York State*

As of March 31, 2016.

County	Recipients	Annual Payments	County	Recipients	Annual Payments
Albany	17,983	\$ 533,566,861	NY Military	9	\$ 89,500
Allegany	1,611	28,896,903	Oneida	9,518	213,485,585
Bronx	3,530	90,869,951	Onondaga	13,012	280,112,044
Broome	7,424	141,868,552	Ontario	3,248	64,595,334
Cattaraugus	3,313	63,840,641	Orange	8,656	220,124,404
Cayuga	2,995	64,546,231	Orleans	1,514	29,469,882
Chautauqua	4,557	86,934,316	Oswego	4,016	75,778,628
Chemung	3,528	79,125,320	Otsego	2,116	37,191,888
Chenango	2,003	35,112,099	Putnam	2,256	66,925,873
Clinton	4,092	97,625,761	Queens	6,023	173,950,597
Columbia	2,897	69,195,464	Rensselaer	8,507	236,606,780
Cortland	1,670	31,455,330	Richmond	2,436	74,088,047
Delaware	1,790	33,969,107	Rockland	6,605	189,425,882
Dutchess	9,233	247,483,088	Saratoga	9,888	270,198,936
Erie	29,029	701,506,954	Schenectady	7,941	216,168,941
Essex	1,887	37,712,182	Schoharie	1,467	32,202,590
Franklin	2,838	62,281,620	Schuyler	796	15,801,477
Fulton	2,064	39,375,716	Seneca	1,432	28,257,490
Genesee	2,155	44,496,473	St. Lawrence	4,970	106,461,283
Greene	2,344	55,507,466	Steuben	3,156	61,810,430
Hamilton	422	8,132,486	Suffolk	33,290	1,007,991,808
Herkimer	2,309	41,919,955	Sullivan	2,781	64,415,423
Jefferson	3,221	66,987,764	Tioga	1,496	26,096,995
Kings	5,600	157,594,854	Tompkins	2,705	53,896,274
Lewis	1,110	18,125,096	Ulster	5,646	126,567,380
Livingston	2,814	61,137,565	Warren	2,784	60,012,545
Madison	2,380	46,457,669	Washington	2,592	55,677,014
Monroe	15,929	337,095,975	Wayne	3,186	59,747,507
Montgomery	2,270	48,636,928	Westchester	15,271	452,137,570
Nassau	22,322	709,900,310	Wyoming	1,974	42,303,732
New York	4,365	135,682,593	Yates	777	14,151,974
Niagara	5,890	126,684,156	Total	345,643	\$ 8,659,469,198

*The objective of this chart is to show the relative amounts paid to annuitants in the various locations within New York State. The numbers do not match the figures in the basic financial statements because the financial statement figures represent the sum of all benefit payments (including death benefits) made during the fiscal year, in accordance with Generally Accepted Accounting Principles (GAAP). The above numbers represent the sum of the annual benefits payable to all annuitants actively collecting as of the end of the fiscal year. The latter numbers are easier to organize by county than the former.

Annual Benefit Payments Within the United States*

As of March 31, 2016.

State	Recipients	Annual Payments
Alabama	795	\$ 13,281,487
Alaska	64	1,253,089
Arizona	2,742	55,013,652
Arkansas	158	2,152,256
California	2,282	38,337,616
Colorado	799	14,620,149
Connecticut	2,198	49,691,901
Delaware	693	16,877,142
Florida	35,889	788,156,163
Georgia	3,603	69,431,264
Guam	2	12,913
Hawaii	117	2,377,532
Idaho	84	1,637,719
Illinois	360	5,841,209
Indiana	277	4,330,898
Iowa	75	1,006,959
Kansas	112	1,513,032
Kentucky	337	5,139,723
Louisiana	178	2,810,975
Maine	578	11,341,438
Maryland	1,415	25,525,785
Massachusetts	1,539	29,789,878
Michigan	358	5,181,226
Minnesota	148	1,868,195
Mississippi	208	3,618,340
Missouri	249	3,422,106
Montana	117	2,095,505

State	Recipients	Annual Payments
Nebraska	57	\$ 671,201
Nevada	1,408	32,586,341
New Hampshire	610	13,681,998
New Jersey	7,306	246,711,981
New Mexico	440	8,058,736
New York	345,643	8,659,469,198
North Carolina	8,488	173,214,108
North Dakota	21	237,511
Ohio	735	11,279,601
Oklahoma	161	2,121,578
Oregon	280	4,583,458
Pennsylvania	4,415	93,937,641
Puerto Rico	488	7,101,521
Rhode Island	252	4,958,212
South Carolina	5,339	118,162,768
South Dakota	75	1,434,408
Tennessee	1,646	35,022,196
Texas	2,067	38,183,089
Utah	147	2,414,629
Vermont	588	11,424,995
Virginia	3,643	70,064,733
Washington	498	8,706,791
Washington, D.C.	113	2,362,678
West Virginia	210	3,611,624
Wisconsin	164	2,547,163
Wyoming	67	1,357,733
Total	440,238	\$ 10,710,234,034

Annual Benefit Payments Outside the United States*

As of March 31, 2016.

Total Recipients	Total Annual Payments
705	\$ 10,837,321

*The objective of this chart is to show the relative amounts paid to annuitants within the United States and outside the United States. The numbers do not match the figures in the basic financial statements because the financial statement figures represent the sum of all benefit payments (including death benefits) made during the fiscal year, in accordance with Generally Accepted Accounting Principles (GAAP). The above numbers represent the sum of the annual benefits payable to all annuitants actively collecting as of the end of the fiscal year. The latter numbers are easier to organize by country and state than the former.

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Financial

Contents

Independent Auditors’ Report 35

Management’s Discussion and Analysis (Unaudited) 37

Basic Financial Statements 42

 Combining Basic Statement of Fiduciary Net Position 42

 Combining Basic Statement of Changes in Fiduciary Net Position 43

 Notes to Financial Statements 44

Required Supplementary Information (Unaudited) 68

 Schedule of Changes in the Employers’ Net Pension Liability and Related Ratios (Unaudited) 68

 Schedule of Employer Contributions (Unaudited) 70

 Schedule of Investment Returns (Unaudited) 71

 Notes to Required Supplementary Information (Unaudited) 71

Additional Supplementary Information 72

 Schedule of Administrative Expenses 72

 Schedule of Investment Expenses 73

 Schedule of Consulting Fees 74

Independent Auditors’ Report on Internal Control 75

Independent Auditors' Report



KPMG LLP
515 Broadway
Albany, NY 12207-2974

Independent Auditors' Report

The Trustee
New York State and Local Retirement System:

Report on the Financial Statements

We have audited the accompanying combining statement of fiduciary net position of the New York State and Local Retirement System (the System) as of March 31, 2016, the related combining statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

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

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

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

Opinion

In our opinion, the financial statements referred to above present fairly in all material respects, the fiduciary net position of the System as of March 31, 2016, and the changes in fiduciary net position for the year then ended, in accordance with U.S. generally accepted accounting principles.

KPMG LLP is a Delaware limited liability partnership,
the U.S. member firm of KPMG International Cooperative
("KPMG International"), a Swiss entity.

**Other Matters***Required Supplementary Information*

U.S. generally accepted accounting principles require that the management's discussion and analysis and required supplementary information as listed in the accompanying table of contents be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the System's basic financial statements. The accompanying other supplementary information as listed in the accompanying table of contents is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the other supplementary information is fairly stated in all material respects in relation to the basic financial statements as a whole. The introduction, investment, actuarial, and statistical sections of the report have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we express no opinion on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated July 20, 2016 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

KPMG LLP

July 20, 2016

Management's Discussion and Analysis (Unaudited)

March 31, 2016

The following overview of the financial activity of the New York State and Local Retirement System (the System) for the fiscal year ended March 31, 2016 is intended to provide the reader with an analysis of the System's overall financial position. The System is comprised of the New York State and Local Employees' Retirement System (ERS) and the New York State and Local Police and Fire Retirement System (PFRS). This management's discussion and analysis should be read in conjunction with the basic financial statements of the System, which follow.

Financial Highlights

The fiduciary net position of the System held in trust to pay pension benefits was \$183.64 billion as of March 31, 2016. This amount reflects a decrease of \$5.77 billion from the prior fiscal year. This change is primarily the result of the net depreciation of the fair value of the investment portfolio. Investment (depreciation) appreciation for the fiscal years ended March 31, 2016 and 2015 is \$(3.93) billion and \$9.28 billion, respectively.

- The System's investments reported a positive money-weighted rate of return, net of investment expense, of 0.03 percent for the fiscal year ended March 31, 2016 and a positive money-weighted rate of return, net of investment expense, of 6.98 percent for the fiscal year ended March 31, 2015.
- Retirement and death benefits paid during fiscal year 2016 to 440,943 annuitants totaled \$10.91 billion, as compared to \$10.44 billion paid to 430,308 annuitants for fiscal year 2015. The increase is primarily due to the number of new retirees.
- Contributions from employers decreased from \$5.80 billion for the fiscal year ended March 31, 2015 to \$5.14 billion for the fiscal year ended March 31, 2016. The decrease in contributions is attributable to lower billing rates.
- The Net Pension Liability (NPL) for ERS was \$16.10 billion for the measurement period ended March 31, 2016 as compared to \$3.38 billion for the measurement period ended March 31, 2015. The fiduciary net position, restricted for pension benefits as of March 31, 2016, was \$156.25 billion, which represents 90.7 percent of the calculated total pension liability for ERS. The NPL is allocated to participating employers and reported pursuant to Governmental Accounting Standards Board (GASB) Statements 67 and 68.
- The NPL for the PFRS was \$2.96 billion for the measurement period ended March 31, 2016 as compared to \$275.26 million for the measurement period ended March 31, 2015. The fiduciary net position restricted for pension benefits as of March 31, 2016, was \$27.39 billion, which represents 90.2 percent of the calculated total pension liability for the PFRS. The NPL is allocated to participating employers and reported pursuant to GASB Statements 67 and 68.

Overview of the Financial Statements

The financial statements consist of the combining basic statement of fiduciary net position, the combining basic statement of changes in fiduciary net position, and the notes to the basic financial statements. The required supplementary information that appears after the notes to the basic financial statements is not a required part of the basic financial statements, but is supplementary information required by the GASB. The other supplementary information following the required supplementary information is not required, but management has chosen to include such information to increase transparency.

The combining basic statement of fiduciary net position reflects the resources available to pay members, retirees and beneficiaries at the close of the System's fiscal year. This statement also provides information about the fair value and composition of the System's net position.

The combining basic statement of changes in fiduciary net position presents the changes to the System's net position for the fiscal year, including net investment (loss) income, net appreciation or depreciation in fair value of the investment portfolio, and contributions from members and employers. Benefits and administrative expenses paid by the System are included under the deductions section of the statement.

The notes to the financial statements are an integral part of the basic financial statements and provide additional information about the plans, policies and performance of the System. The financial statement notes include Description of Plans, Summary of Significant Accounting Policies, System Reserves, Investments, Deposit and Investment Risk Disclosure, Derivatives, Securities Lending Program, Net Pension Liability of Participating Employers, Federal Income Tax Status, Commitments, and Contingencies.

The required supplementary schedules include: Schedule of Changes in the Employers' Net Pension Liability and Related Ratios, Schedule of Employer Contributions, and Schedule of Investment Returns.

The other supplementary information includes schedules of administrative expenses, investment expenses, and consulting fees.

Analysis of the Overall Financial Position of the System

The purpose of the System's investments is to provide for long-term growth, while also ensuring a reliable cash flow that meets the funding requirements of the near-term pension obligation. To achieve these goals, the investments are allocated to a variety of asset types and strategies in order to meet the current funding needs as well as future growth requirements of the pension liability. Equity-related investments are included for their long-term return and growth characteristics. While a majority of fixed income and debt-related investments are generally included in the allocation for their ability to control investment risk and provide for a reliable cash flow that meets the funding requirements of the pension payments, a portion is strategically invested in more actively traded markets. It is important to note that the change from year to year is due not only to changes in fair values, but also to purchases, sales, and redemptions. Tables 1, 2, and 3 summarize and compare financial data for the current and prior years.

Table 1

Summary schedule of fiduciary net position as of March 31, 2016, as compared to March 31, 2015:

	(Dollars in Thousands)			Percentage Change
	2016	2015	Dollar Change	
Assets:				
Investments	\$ 178,639,701	\$ 184,502,044	\$ (5,862,343)	(3.2)%
Securities lending collateral — invested	11,732,966	6,195,790	5,537,176	89.4
Receivables and other assets	<u>6,484,158</u>	<u>7,184,596</u>	<u>(700,438)</u>	<u>(9.7)</u>
Total assets	196,856,825	197,882,430	(1,025,605)	(0.5)
Liabilities:				
Securities lending obligations	11,741,243	6,206,381	5,534,862	89.2
Payables and other liabilities	<u>1,475,377</u>	<u>2,263,633</u>	<u>(788,256)</u>	<u>(34.8)</u>
Total liabilities	13,216,620	8,470,014	4,746,606	56.0
Net position, restricted for pension benefits	\$ 183,640,205	\$ 189,412,416	\$ (5,772,211)	(3.0)%

The fiduciary net position of the System totaled \$183.64 billion as of March 31, 2016, a decrease of \$5.77 billion from the prior fiscal year, primarily attributable to the net depreciation of invested assets.

Table 2

Schedule of invested assets as of March 31, 2016, as compared to March 31, 2015:

	(Dollars in Thousands)			Percentage Change
	2016	2015	Dollar Change	
Domestic equity	\$ 61,544,070	\$ 67,219,661	\$ (5,675,591)	(8.4)%
Global fixed income	44,661,200	47,652,210	(2,991,010)	(6.3)
International equity	29,211,336	27,073,871	2,137,465	7.9
Private equity	13,961,373	14,247,374	(286,001)	(2.0)
Real estate	12,639,723	12,123,440	516,283	4.3
Absolute return strategy investments	8,029,411	8,388,806	(359,395)	(4.3)
Short-term investments	5,578,801	5,252,486	326,315	6.2
Opportunistic funds	1,719,316	1,292,161	427,155	33.1
Mortgage loans	796,403	852,955	(56,552)	(6.6)
Real assets	498,068	399,080	98,988	24.8
Total investments	\$ 178,639,701	\$ 184,502,044	\$ (5,862,343)	(3.2)%

The largest percentage increases to the invested assets were in the opportunistic funds and real assets portfolios, which represent 1.0 percent and 0.3 percent of the total portfolio, respectively. The Fund continued to add capital to both the opportunistic funds and real assets portfolios to fulfill the targeted asset allocation. The largest percentage decrease to the invested assets was in domestic equity, which represents 34.5 percent of the total portfolio. The Fund also added capital to new corporate issues and funded an external manager to maintain a diversified global fixed income mandate. This strategy of diversification enabled the Fund to capitalize on the dynamic opportunity set across global markets.

Table 3

Summary schedule of changes in fiduciary net position for the year ended March 31, 2016, as compared to the year ended March 31, 2015:

	(Dollars in Thousands)			Percentage Change
	2016	2015	Dollar Change	
Additions:				
Net investment (loss) income	\$ (384,834)	\$ 12,444,891	\$ (12,829,725)	(103.1)%
Total contributions	5,779,715	6,313,041	(533,326)	(8.4)
Total additions	5,394,881	18,757,932	(13,363,051)	(71.2)
Deductions:				
Total benefits paid	(11,060,472)	(10,513,714)	(546,758)	5.2
Administrative expenses	(106,620)	(107,151)	531	(0.5)
Total deductions	(11,167,092)	(10,620,865)	(546,227)	5.1
Net (decrease) increase	(5,772,211)	8,137,067	(13,909,278)	(170.9)
Net position, restricted for pension benefits — beginning of year	189,412,416	181,275,349	8,137,067	4.5
Net position, restricted for pension benefits — end of year	\$ 183,640,205	\$ 189,412,416	\$ (5,772,211)	(3.0)%

The change in net investment (loss) income is primarily attributable to the net depreciation in fair value of investments from 2015 to 2016. This is reflected in the change in the money-weighted rate of return, net of investment expense, from 6.98 percent in 2015 to 0.03 percent in 2016. The decrease in total contributions is attributable to the change in employer billing rates.

Economic Factors and Rates of Return

The Fund announced positive investment performance for the fiscal year ended March 31, 2016, with a time-weighted rate of return of 0.19 percent, a modest increase which reflected the volatility in the world equity markets. The Fund's private equity and real estate portfolios experienced strong positive performance which benefited the total Fund. The U.S. equity market's performance was flat for the year while the international markets, particularly the emerging markets, experienced negative performance. Market volatility and concerns about increasing inflation and political uncertainty across the globe continued through this year. This was the seventh consecutive year of positive performance for the Fund following the fiscal crisis of 2008.

Requests for Information

This financial report is designed to provide a general overview of the System's finances for all interested parties. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the New York State and Local Retirement System, 110 State Street, Albany, New York 12244-0001. The report can also be accessed on the Comptroller's website at www.osc.state.ny.us/retire/about_us/financial_statements_index.php.

Basic Financial Statements

Combining Basic Statement of Fiduciary Net Position

March 31, 2016

	(Dollars in Thousands)		
	Employees' Retirement System	Police and Fire Retirement System	Total
Assets:			
Investments (notes 2(b), 4 and 5):			
Domestic equity	\$ 52,272,728	\$ 9,271,342	\$ 61,544,070
Global fixed income	37,933,188	6,728,012	44,661,200
International equity	24,810,777	4,400,559	29,211,336
Private equity	11,858,154	2,103,219	13,961,373
Real estate	10,735,605	1,904,118	12,639,723
Absolute return strategy investments	6,819,816	1,209,595	8,029,411
Short-term investments	4,738,379	840,422	5,578,801
Opportunistic funds	1,460,309	259,007	1,719,316
Mortgage loans	676,428	119,975	796,403
Real assets	423,036	75,032	498,068
Total investments	151,728,420	26,911,281	178,639,701
Securities lending collateral — invested (note 7)	9,965,447	1,767,519	11,732,966
Forward foreign exchange contracts (note 6)	101,970	18,086	120,056
Receivables:			
Employers' contributions	3,749,357	471,217	4,220,574
Members' contributions	8	—	8
Member loans	1,067,191	2,725	1,069,916
Investment income	341,935	60,647	402,582
Investment sales	240,234	42,609	282,843
Other	88,288	110,398	198,686
Total receivables	5,487,013	687,596	6,174,609
Capital assets, at cost, net of accumulated depreciation	160,947	28,546	189,493
Total assets	167,443,797	29,413,028	196,856,825
Liabilities:			
Securities lending obligations (note 7)	9,972,478	1,768,765	11,741,243
Forward foreign exchange contracts (note 6)	100,243	17,780	118,023
Accounts payable — investments	758,449	134,522	892,971
Benefits payable	204,081	81,068	285,149
Other liabilities	155,281	23,953	179,234
Total liabilities	11,190,532	2,026,088	13,216,620
Net position, restricted for pension benefits	\$ 156,253,265	\$ 27,386,940	\$ 183,640,205

See accompanying notes to financial statements.

Basic Financial Statements

continued

Combining Basic Statement of Changes in Fiduciary Net Position

Year Ended March 31, 2016

	(Dollars in Thousands)		
	Employees' Retirement System	Police and Fire Retirement System	Total
Additions:			
Income (loss) from investing activities:			
Net depreciation in fair value of investments	\$ (3,344,512)	\$ (590,341)	\$ (3,934,853)
Interest income	1,229,554	217,015	1,446,569
Dividend income	1,354,026	238,984	1,593,010
Other income	874,361	154,324	1,028,685
Less investment expenses	(480,957)	(84,888)	(565,845)
Total loss from investing activities	(367,528)	(64,906)	(432,434)
Income from securities lending activities:			
Securities lending income	31,191	5,505	36,696
Securities lending rebates	13,754	2,428	16,182
Less securities lending management fees	(4,486)	(792)	(5,278)
Total income from securities lending activities	40,459	7,141	47,600
Total net investment loss	(327,069)	(57,765)	(384,834)
Contributions:			
Employers	4,347,619	792,585	5,140,204
Members	289,333	17,298	306,631
Interest on accounts receivable	128,648	15,711	144,359
Other	69,684	118,837	188,521
Total contributions	4,835,284	944,431	5,779,715
Total additions	4,508,215	886,666	5,394,881
Deductions:			
Benefits paid:			
Retirement benefits	(9,045,042)	(1,675,252)	(10,720,294)
Death benefits	(179,861)	(8,329)	(188,190)
Other, net	(150,294)	(1,694)	(151,988)
Total benefits paid	(9,375,197)	(1,685,275)	(11,060,472)
Administrative expenses	(93,012)	(13,608)	(106,620)
Total deductions	(9,468,209)	(1,698,883)	(11,167,092)
Net decrease	(4,959,994)	(812,217)	(5,772,211)
Net position, restricted for pension benefits — beginning of year	161,213,259	28,199,157	189,412,416
Net position, restricted for pension benefits — end of year	\$ 156,253,265	\$ 27,386,940	\$ 183,640,205

See accompanying notes to financial statements.

Notes to Financial Statements

March 31, 2016

1. Description of Plans

The Office of the New York State Comptroller administers the following plans: the New York State and Local Employees' Retirement System (ERS) and the New York State and Local Police and Fire Retirement System (PFRS), which are collectively referred to as the New York State and Local Retirement System (the System). The net position of the System is held in the New York State Common Retirement Fund (the Fund), which was established to hold all assets and record changes in fiduciary net position allocated to the System.

The Comptroller of the State of New York serves as the trustee of the Fund and is the administrative head of the System. The Comptroller is an elected official determined in a direct statewide election and serves a four-year term. Thomas P. DiNapoli has served as Comptroller since February 7, 2007. In November 2014, he was elected for a new term commencing January 1, 2015. System benefits are established under the provisions of the New York State Retirement and Social Security Law (RSSL). Once a public employer elects to participate in the System, the election is irrevocable. The New York State Constitution provides that pension membership is a contractual relationship and plan benefits cannot be diminished or impaired. Benefits can be changed for future members only by enactment of a State statute. Generally, members of the System are employees of the State and its municipalities, other than New York City.

ERS and PFRS are cost-sharing, multiple-employer, defined benefit pension plans. The System is included in the State's financial report as a pension trust fund. The Public Employees' Group Life Insurance Plan (GLIP) provides death benefits in the form of life insurance. In these statements, GLIP amounts are apportioned to and included in ERS and PFRS.

As of March 31, 2016, the number of participating employers for ERS and PFRS consisted of the following:

	ERS	PFRS
State	1	1
Counties	57	4
Cities	61	61
Towns	913	207
Villages	487	375
Other	793	38
School districts	698	–
Total	3,010	686

As of March 31, 2016, the System membership for ERS and PFRS consisted of the following:

	ERS	PFRS
Retirees and beneficiaries currently receiving benefits	407,112	33,831
Active members	494,411	31,720
Inactive members*	117,883	3,385
Total members and benefit recipients	1,019,406	68,936
* Includes vested members not currently receiving benefits and nonvested members.		

Notes to Financial Statements

(a) Membership Tiers

Pension legislation enacted in 1973, 1976, 1983, 2009 and 2012 established distinct classes of membership. For convenience, the System uses a tier concept to distinguish these groups, generally:

ERS

- Tier 1** Those persons who last became members before July 1, 1973.
- Tier 2** Those persons who last became members on or after July 1, 1973, but before July 27, 1976.
- Tier 3** Generally, those persons who are State correction officers who last became members on or after July 27, 1976, but before January 1, 2010, and all others who last became members on or after July 27, 1976, but before September 1, 1983.
- Tier 4** Generally, except for correction officers, those persons who last became members on or after September 1, 1983, but before January 1, 2010.
- Tier 5** Those persons who last became members on or after January 1, 2010, but before April 1, 2012.
- Tier 6** Those persons who first became members on or after April 1, 2012.

PFRS

- Tier 1** Those persons who last became members before July 31, 1973.
- Tier 2** Those persons who last became members on or after July 31, 1973, but before July 1, 2009.
- Tier 3** Those persons who last became members on or after July 1, 2009, but before January 9, 2010.
- Tier 4** N/A
- Tier 5** Those persons who last became members on or after January 9, 2010, but before April 1, 2012, or who were previously PFRS Tier 3 members who elected to become Tier 5.
- Tier 6** Those persons who first became members on or after April 1, 2012.

(b) Vesting

Members who joined the System prior to January 1, 2010 need five years of service to be 100 percent vested. Members who joined on or after January 1, 2010 (ERS) or January 9, 2010 (PFRS) require ten years of service credit to be 100 percent vested.

Notes to Financial Statements

(c) Employer Contributions

Participating employers are required under the RSSL to contribute to the System at an actuarially determined rate adopted annually by the Comptroller. The average contribution rate for ERS for the fiscal year ended March 31, 2016 was approximately 18.2 percent of payroll. The average contribution rate for PFRS for the fiscal year ended March 31, 2016 was approximately 24.7 percent of payroll. Delinquent annual bills for employer contributions accrue interest at the actuarial interest rate applicable during the year. For the fiscal year ended March 31, 2016, the applicable interest rate was 7.5 percent.

(d) Member Contributions

Generally, Tier 3, 4, and 5 members must contribute 3 percent of their salary to the System. As a result of Article 19 of the RSSL, eligible Tier 3 and 4 employees, with a membership date on or after July 27, 1976, who have ten or more years of membership or credited service with the System, are not required to contribute. Members cannot be required to begin making contributions or to make increased contributions beyond what was required when membership began. For Tier 6 members, the contribution rate varies from 3 percent to 6 percent depending on salary. Generally, Tier 5 and 6 members are required to contribute for all years of service.

(e) Benefits

Tiers 1 and 2

Eligibility: Tier 1 members, with the exception of those retiring under special retirement plans, must be at least age 55 to be eligible to collect a retirement benefit. There is no minimum service requirement for Tier 1 members. Tier 2 members, with the exception of those retiring under special retirement plans, must have five years of service and be at least age 55 to be eligible to collect a retirement benefit. The age at which full benefits may be collected for Tier 1 is 55, and the full benefit age for Tier 2 is 62.

Benefit Calculation: Generally, the benefit is 1.67 percent of final average salary for each year of service if the member retires with less than 20 years. If the member retires with 20 or more years of service, the benefit is 2 percent of final average salary for each year of service. Tier 2 members with five or more years of service can retire as early as age 55 with reduced benefits. Tier 2 members age 55 or older with 30 or more years of service can retire with no reduction in benefits. As a result of Article 19 of the RSSL, Tier 1 and Tier 2 members who worked continuously from April 1, 1999 through October 1, 2000 received an additional month of service credit for each year of credited service they have at retirement, up to a maximum of 24 additional months.

Final average salary is the average of the wages earned in the three highest consecutive years of employment. For Tier 1 members who joined on or after June 17, 1971, each year's compensation used in the final average salary calculation is limited to no more than 20% greater than the previous year. For Tier 2 members, each year of final average salary is limited to no more than 20% greater than the average of the previous two years.

Notes to Financial Statements

Tiers 3, 4, and 5

Eligibility: Tier 3 and 4 members, with the exception of those retiring under special retirement plans, must have five years of service and be at least age 55 to be eligible to collect a retirement benefit. Tier 5 members, with the exception of those retiring under special retirement plans, must have ten years of service and be at least age 55 to be eligible to collect a retirement benefit. The full benefit age for Tiers 3, 4 and 5 is 62.

Benefit Calculation: Generally, the benefit is 1.67 percent of final average salary for each year of service if the member retires with less than 20 years. If a member retires with between 20 and 30 years of service, the benefit is 2 percent of final average salary for each year of service. If a member retires with more than 30 years of service, an additional benefit of 1.5 percent of final average salary is applied for each year of service over 30 years. Tier 3 and 4 members with five or more years of service and Tier 5 members with ten or more years of service can retire as early as age 55 with reduced benefits. Tier 3 and 4 members age 55 or older with 30 or more years of service can retire with no reduction in benefits.

Final average salary is the average of the wages earned in the three highest consecutive years of employment. For Tier 3, 4 and 5 members, each year's compensation used in the final average salary calculation is limited to no more than 10 percent greater than the average of the previous two years.

Tier 6

Eligibility: Tier 6 members, with the exception of those retiring under special retirement plans, must have ten years of service and be at least age 55 to be eligible to collect a retirement benefit. The full benefit age for Tier 6 is 63 for ERS members and 62 for PFRS members.

Benefit Calculation: Generally, the benefit is 1.67 percent of final average salary for each year of service if the member retires with less than 20 years. If a member retires with 20 years of service, the benefit is 1.75 percent of final average salary for each year of service. If a member retires with more than 20 years of service, an additional benefit of 2 percent of final average salary is applied for each year of service over 20 years. Tier 6 members with ten or more years of service can retire as early as age 55 with reduced benefits.

Final average salary is the average of the wages earned in the five highest consecutive years of employment. For Tier 6 members, each year's compensation used in the final average salary calculation is limited to no more than 10 percent greater than the average of the previous four years.

Notes to Financial Statements

Special Plans

The 25-Year Plans allow a retirement after 25 years of service with a benefit of one-half of final average salary, and the 20-Year Plans allow a retirement after 20 years of service with a benefit of one-half of final average salary. These plans are available to certain PFRS members, sheriffs, and correction officers.

Ordinary Disability Benefits

Generally, ordinary disability benefits, usually one-third of salary, are provided to eligible members after ten years of service; in some cases, they are provided after five years of service.

Accidental Disability Benefits

For all eligible Tier 1 and Tier 2 ERS and PFRS members, the accidental disability benefit is a pension of 75% of final average salary, with an offset for any Workers' Compensation benefits received. The benefit for eligible Tier 3, 4, 5 and 6 members is the ordinary disability benefit with the years-of-service eligibility requirement dropped.

Ordinary Death Benefits

Death benefits are payable upon the death, before retirement, of a member who meets eligibility requirements as set forth by law. The first \$50,000 of an ordinary death benefit is paid in the form of group term life insurance. The benefit is generally three times the member's annual salary. For most members, there is also a reduced post-retirement ordinary death benefit available.

Post-Retirement Benefit Increases

A cost-of-living adjustment is provided annually to: (i) all pensioners who have attained age 62 and have been retired for five years; (ii) all pensioners who have attained age 55 and have been retired for ten years; (iii) all disability pensioners, regardless of age, who have been retired for five years; (iv) ERS recipients of an accidental death benefit, regardless of age, who have been receiving such benefit for five years; and (v) the spouse of a deceased retiree receiving a lifetime benefit under an option elected by the retiree at retirement. An eligible spouse is entitled to one-half the cost-of-living adjustment amount that would have been paid to the retiree when the retiree would have met the eligibility criteria. This cost-of-living adjustment is a percentage of the annual retirement benefit of the eligible member as computed on a base benefit amount not to exceed \$18,000 of the annual retirement benefit. The cost-of-living percentage shall be 50 percent of the annual Consumer Price Index as published by the U.S. Bureau of Labor, but cannot be less than 1 percent or exceed 3 percent.

2. Summary of Significant Accounting Policies

(a) Basis of Accounting

The System maintains records and accounts, and prepares financial statements using the accrual basis of accounting. Employer contributions are recognized when legally due, pursuant to statutory requirements, in accordance with the terms of each plan. Member contributions are based on earned member salaries and are recognized when due. Benefits, expenses, and refunds are recognized when due and payable.

(b) Investments

Investments are recorded on a trade-date basis and reported at fair value. Fair value is defined as the amount that can reasonably be expected to be received for an investment in a current sale between a willing buyer and a willing seller. Due to the nature of investments, it is reasonable that changes in the value of investments will occur in the near future, and such changes could materially affect the amounts reported. The amounts reported as investments on the financial statements are allocated between ERS and PFRS based on each system's monthly average equity in the Fund. See note 4(c) for detailed information on the System's policy on investment valuation.

(c) Member Loan Programs

Members are entitled to participate in a loan program that allows them to borrow up to 75 percent of their member contributions. Repayment of outstanding amounts is generally made through payroll deductions within five years. The interest rate charged for member loans is fixed at 1 percent below the actuarial interest rate at the time the loan is granted. The rate for loans issued during the fiscal year ended March 31, 2016 was 6 percent.

(d) Capital Assets

Capital assets are capitalized at cost and depreciated on a straight-line basis over the related assets' estimated useful lives.

During the fiscal year ended March 31, 2011, the System began capitalizing outlays associated with its data imaging, filing, and storage system. This project was completed in the fiscal year ended March 31, 2016. The outlays for the project totaled \$36.64 million.

During the fiscal year ended March 31, 2014, the System began capitalizing outlays associated with its pension administration system redesign. As of March 31, 2016, capitalized outlays for the project total \$133.0 million. This project is currently ongoing and is expected to be completed in the fiscal year ending March 31, 2019, at which time depreciation of the capitalized costs will begin.

Notes to Financial Statements

(e) Contributions Receivable

Employers' contributions receivable are presented net of withdrawals, refunds, advance employer payments, and credits due employers. Receivable amounts from participating employers include \$32.91 million for amortization of retirement incentives, new plan adoptions, and retroactive membership. The Retirement and Social Security Law includes several provisions related to the amortization of employer contribution amounts. These include:

- Chapter 260 of the Laws of 2004 authorized local employers to amortize over ten years, at 5 percent interest, the portion of their annual bill for the fiscal year ended 2007 that exceeded 10.5 percent of payroll. The amortized amount receivable from participating employers as of March 31, 2016 is \$2.65 million.
- Chapter 57 of the Laws of 2010 authorized the State and local employers to amortize a portion of their annual pension costs during periods when actuarial contribution rates exceed thresholds established by the statute. Amortized amounts will be paid in equal annual installments over a ten-year period including a rate of interest set by the Comptroller annually. Employers may prepay these amounts at any time without penalty. The first payment will be due in the fiscal year following the decision to amortize. Chapter 57 further provides that when contribution rates fall below legally specified levels and all outstanding amortizations have been paid, employers that elected to amortize will be required to pay additional moneys into reserve funds, specific to each employer, which will be used to offset their contributions in the future. These reserve funds will be invested separately from pension assets.

For the annual bill for the fiscal year ended 2011, the statutory amortization threshold was 9.5 percent of payroll for ERS and 17.5 percent for PFRS. The Comptroller set an interest rate of 5 percent. The amortized amount receivable from the State as of March 31, 2016 is \$136.37 million and from local participating employers is \$23.07 million.

For the annual bill for the fiscal year ended 2012, the statutory amortization threshold was 10.5 percent of payroll for ERS and 18.5 percent for PFRS. The Comptroller set an interest rate of 3.75 percent. The amortized amount receivable from the State as of March 31, 2016 is \$354.88 million and from local participating employers is \$131.07 million.

For the annual bill for the fiscal year ended 2013, the statutory amortization threshold was 11.5 percent of payroll for ERS and 19.5 percent for PFRS. The Comptroller set an interest rate of 3 percent. The amortized amount receivable from the State as of March 31, 2016 is \$562.94 million and from local participating employers is \$264.31 million.

For the annual bill for the fiscal year ended 2014, the statutory amortization threshold was 12.5 percent of payroll for ERS and 20.5 percent for PFRS. The Comptroller set an interest rate of 3.67 percent. The amortized amount receivable from the State as of March 31, 2016 is \$777.93 million and from local participating employers is \$177.69 million.

Notes to Financial Statements

For the annual bill for the fiscal year ended 2015, the statutory amortization threshold was 13.5 percent of payroll for ERS and 21.5 percent for PFRS. The Comptroller set an interest rate of 3.15 percent. The amortized amount receivable from the State as of March 31, 2016 is \$653.07 million and from local participating employers is \$134 million.

For the annual bill for the fiscal year ended 2016, the statutory amortization threshold is 14.5 percent of payroll for ERS and 22.5 percent for PFRS. The Comptroller has set an interest rate of 3.21 percent. The amortized amount receivable from the State as of March 31, 2016 is \$357.05 million and from local participating employers is \$67.05 million.

- The fiscal year 2014 Enacted Budget included an alternate contribution program (the Alternate Contribution Stabilization Program) that provided certain participating employers with a one-time election to amortize slightly more of their required contributions than would be available for amortization under the 2010 legislation. In addition, the maximum payment period was increased from ten years to twelve years. The election was available to: counties, cities, towns, villages, BOCES, school districts and the four public health care centers operated in the counties of Nassau, Westchester and Erie. The State was not eligible to participate in the Alternate Contribution Stabilization Program.

For the annual bill for the fiscal year ended 2014, the alternative amortization threshold was 12 percent of payroll for ERS and 20 percent for PFRS. The Comptroller set an interest rate of 3.76 percent. The amortized amount receivable as of March 31, 2016 from participating employers is \$215.65 million.

For the annual bill for the fiscal year ended 2015, the alternative amortization threshold was 12 percent of payroll for ERS and 20 percent for PFRS. The Comptroller set an interest rate of 3.5 percent. The amortized amount receivable as of March 31, 2016 from participating employers is \$182.75 million.

For the annual bill for the fiscal year ended 2016, the alternative amortization threshold is 12.5 percent of payroll for ERS and 20.5 percent for PFRS. The Comptroller has set an interest rate of 3.31 percent. The amortized amount receivable as of March 31, 2016 from participating employers is \$134.08 million.

Notes to Financial Statements

(f) Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingencies. These estimates are subject to a certain amount of uncertainty in the near-term, which could result in changes in the values reported for those assets in the combined statement of fiduciary net position. Estimates also affect the reported amounts of income/additions and expenses/deductions during the reporting period. Actual results could differ from these estimates.

(g) Recent Accounting Pronouncements

Governmental Accounting Standards Board (GASB) Statement No. 72, *Fair Value Measurement and Application*, provides guidance for determining a fair value measurement for financial reporting purposes. This Statement also provides guidance for applying fair value to certain investments and disclosures related to all fair value measurements. The System will implement this standard beginning with the financial statements as of and for the fiscal year ended March 31, 2017.

Notes to Financial Statements

3. System Reserves

The legally required reserves, as covered by provisions of the RSSL, are maintained by the System, are fully funded as of March 31, 2016, and are described below:

- *Annuity Savings Funds* — Funds in which contributions of Tier 1 and Tier 2 members are accumulated.
- *Annuity Reserve Funds* — Funds from which member contribution annuities are paid.
- *Pension Accumulation Funds* — Funds in which employer contributions and income from the investments of the System are accumulated.
- *Pension Reserve Funds* — Funds from which pensions are paid.
- *Designated Annuitant Funds* — Funds from which beneficiary annuities are paid.
- *Loan Insurance Funds* — Funds that provide loan insurance coverage for members with existing no-default loan balances at time of death.
- *Group Life Insurance Plan Reserve* — Reserves that provide group term death benefits not to exceed \$50,000, payable upon the death of eligible members.
- *Coescalation (COESC) Contribution Funds* — Funds in which member contributions are accumulated. These funds are transferred to the Pension Accumulation Fund at retirement.

As of March 31, 2016, the System reserves for ERS and PFRS consisted of the following:

	(Dollars in Thousands)	
	ERS	PFRS
Annuity savings	\$ 4,270	\$ 46,067
Annuity reserve	82,638	9,992
Pension accumulation	60,804,402	11,147,961
Pension reserve	86,559,360	16,123,782
Designated annuitant	54,410	21,171
Loan insurance	2,750	104
Group Life Insurance Plan reserve	110,545	3,998
COESC contributions	8,634,890	33,865
Total	\$ 156,253,265	\$ 27,386,940

A law pertaining to State University of New York (SUNY) police officers was enacted on December 18, 2015. Chapter 561 of the Retirement and Social Security Law (RSSL) allowed sworn SUNY police officers who were members of the New York State and Local Employees' Retirement System (ERS) to transfer to the Police and Fire Retirement System (PFRS). Officers who transferred are covered by a special 25-year plan. The transfer requests must have been filed with the System on or before December 31, 2015. SUNY Police Officers hired on or after December 18, 2015 are automatically registered to PFRS and are covered by the special 25-year plan. During the fiscal year ended March 31, 2016, pension assets in the amount of \$63.7 million were transferred from ERS to PFRS to reflect the SUNY police transfers.

4. Investments

(a) Investment Policy

The State Comptroller, currently Comptroller Thomas P. DiNapoli, is Trustee of the Fund. He is directly accountable for the investment of Fund assets and for the oversight and management of the Fund. Comptroller DiNapoli is responsible for implementing an asset allocation with an appropriate balance of risk and return. The Trustee has put in place investment policies and practices designed to ensure that investments are made for the exclusive benefit of the participants and beneficiaries of the System, on whose behalf the assets of the Fund are invested, and that Fund investments are made with the care that a prudent person serving in a like capacity and familiar with such matters would use in the conduct of an enterprise of like character and with like aims — the “prudent person” and “exclusive benefit” fiduciary standards of investment. Additionally, the Trustee has adopted policies and practices to ensure that the Fund is managed with high levels of ethical conduct and transparency.

The Comptroller seeks the input of a wide range of internal and external advisors to determine the allocation of assets and the appropriate investment choices for the Fund. Approximately sixty employees work in the Office of the State Comptroller’s Division of Pension Investment and Cash Management (PICM). The Comptroller appoints a Chief Investment Officer to oversee PICM operations, manage staff, and supervise investments on a day-to-day basis. The Fund also relies on advice from a network of outside advisors, consultants, and legal counsel, as well as the members of independent external advisory committees appointed by the Comptroller. Outside advisors and internal investment staff are part of the chain of approval that must recommend all investment decisions before they reach the Comptroller for final approval.

The asset allocation is not intended to be an absolute limit on the type of investments that can be made by the Comptroller or considered by staff. The Comptroller is expressly permitted to invest the assets of the Fund pursuant to various provisions of State law, including, among others, sections 13, 176, 177, 178, and 313 of the RSSL, which also contains limitations on the amount and quality of investments the Fund may hold in certain asset categories. Investments purchased pursuant to these provisions are so-called “legal list” investments. In addition to the foregoing, section 177(9) of the RSSL contains a provision that currently provides that up to 25 percent of the Fund’s assets may be placed in investments not specifically authorized by any other provision of law. In making investments under this provision, the Comptroller is subject to the prudent person and exclusive benefit provisions in the statute. Subject to such standards, investments made under this provision must also, to the extent reasonably possible, benefit the overall economic health of the State. Investments purchased pursuant to section 177(9) of the RSSL are so-called “basket clause” investments.

The external advisory committees appointed by the Comptroller meet periodically throughout the year and provide independent, expert assistance in guiding the Fund. These committees include: the Advisory Council for the Retirement System; the Investment Advisory Committee; the Real Estate Advisory Committee; the Actuarial Advisory Committee; and the Audit Advisory Committee.

Notes to Financial Statements

(b) Asset Allocation

The following was the adopted asset allocation policy as of March 31, 2016:

Asset Class	Target Allocation
Domestic equity	38.0%
International equity	13.0
Private equity	10.0
Real estate	8.0
Absolute return strategies	3.0
Opportunistic portfolio	3.0
Real assets	3.0
Bonds and mortgages	18.0
Cash	2.0
Inflation-indexed bonds	2.0
	100.0%

(c) Methods Used to Value Investments

Equity securities traded on a national or international exchange are reported at current quoted fair values.

Bonds and other fixed assets are primarily reported at fair values obtained from independent pricing services.

Mortgages are valued on the basis of future principal and interest payments and are discounted at prevailing interest rates for similar instruments.

Direct investments in real estate are valued based on independent appraisals made every three years or according to the fund agreement.

Real estate partnerships are reported at values provided by general partners. These values are based on discounted cash flows, comparative sales, capitalization rates applied to net operating income, or if none of the preceding fit a property's attributes and strategy, at cost.

For various alternative investments (private equity, absolute return strategies, opportunistic funds, and real assets) where no readily ascertainable fair value exists, management in consultation with its investment advisors will value these investments in good faith based upon reported net asset values, cash-flow analysis, purchases and sales of similar investments, new financings, economic conditions, other practices used within the industry, or other information provided by the underlying investment advisors. Because of the inherent uncertainty in privately held securities, the fair value may differ from the values that would have been used if a ready market for such securities existed, and the difference can be material.

Notes to Financial Statements

The Fund trades in foreign exchange contracts in the normal course of its investing activities in order to manage exposure to market risks. Such contracts, which are generally for a period of less than one year, are used to purchase and sell foreign currency at a guaranteed future price. These contracts are recorded at fair value using foreign currency exchange rates.

(d) Rates of Return

In accordance with U.S. generally accepted accounting principles, the money-weighted rate of return on plan investments, net of investment expenses, was 0.03 percent for the year ended March 31, 2016. For internal purposes, the System evaluates investment performance using the time-weighted rate of return, gross of certain investment fees, which was 0.19 percent for the year ended March 31, 2016.

5. Deposit and Investment Risk Disclosure

(a) Custodial Credit Risk for Investments

Investment securities are exposed to custodial credit risk if the securities are not registered in the name of the Fund, or are held either by the counterparty or the counterparty's trust department or agent, but not in the name of the Fund.

Equity and fixed income investments owned directly by the Fund, which trade in the United States (U.S.) markets, are generally held by the Fund's custodian, in separate accounts, in the name of the Comptroller of the State of New York in Trust for the Fund. These securities are typically held in electronic form through the Federal Book Entry System and by the Depository Trust Company (DTC) and its subsidiaries acting as an agent of the Fund's custodian bank. Securities held directly by the Fund that trade in markets outside the U.S. are held by a subsidiary of the Fund's custodian bank in the local market, a bank performing custodial services in the local market acting as an agent for the Fund's custodian bank, and in some foreign markets, the securities are held in electronic form by a DTC subsidiary or an organization similar to DTC. Fixed income investments that are not held by the Fund's custodian are held by third party administrators in the name of the Comptroller of the State of New York in Trust for the Fund.

Equity investments held indirectly by the Fund via limited partnerships, commingled investment funds, joint ventures, and other similar vehicles are held in custody by an organization contracted by the general partner and/or the investment management firm responsible for the management of each investment organization.

Title to real estate invested in by the Fund is held either by a real estate holding company or a real estate investment fund. Ownership of mortgage assets is documented by the Fund's holding of original mortgage and note documents by the Office of the State Comptroller's PICM.

Basic Financial statements

continued

Notes to Financial Statements

(b) Custodial Credit Risk for Deposits

Deposits are exposed to custodial credit risk if the deposits are not covered by depository insurance or the deposits are uncollateralized, collateralized with securities held by the pledging financial institution, or collateralized with securities held by the pledging institution's trust department or agent, but not in the name of the Fund.

In accordance with existing policies and procedures, the PICM in the Office of the State Comptroller monitors deposit balances for the purpose of determining collateralization levels. Collateral sufficient to cover all uninsured deposits is held at the State's custodial bank.

(c) Interest Rate Risk

The System is subject to interest rate risk, which is the risk that changes in market interest rates will adversely affect the fair value of the Fund's fixed income securities. Pursuant to the Fund's investment policies and procedures and to address changing economic factors and their impact on various sectors of the economy, the Division's staff meets regularly to discuss the investment strategy for the fixed income portfolio. Several factors are taken into account when formulating this strategy, including sector weightings and the current duration of the portfolio.

The price volatility of the Fund's fixed income holdings is measured by duration. Effective duration is a measure of the price sensitivity of a bond to interest rate movements. Effective duration follows the concept that interest rates and bond prices move in opposite directions.

As of March 31, 2016, the duration of the fixed income portfolio is as follows (Dollars in Thousands):

Bond Category	Fair Value (Dollars in Thousands)	Percentage of Bond Portfolio	Effective Duration (In Years)
Core Portfolio:			
Treasury	\$ 5,599,754	12.5%	8.66
Federal agency	2,033,357	4.6	5.23
Corporate	14,378,582	32.2	6.39
Asset-backed	2,382,686	5.3	1.78
Commercial mortgage-backed	1,716,539	3.8	2.87
Mortgage-backed	4,974,643	11.1	3.54
Collateralized loan obligations	2,947,060	6.6	0.02
Municipal bonds	382,373	0.9	10.55
Core Portfolio	34,414,994	77.0	5.27
Treasury Inflation-Protected Securities (TIPS)	6,658,845	14.9	5.52
Externally managed funds:			
BlackRock Fixed Income	1,997,256	4.5	2.95
Neuberger Berman Fixed Income	1,022,589	2.3	2.39
Semper Capital Management	247,158	0.6	1.32
Smith Graham	320,358	0.7	3.50
Total	\$ 44,661,200	100.0%	

Notes to Financial Statements

(d) Credit Risk of Debt Securities

Fixed income obligations purchased pursuant to section 177(1-a) of the RSSL must be investment grade at the time of their acquisition. A bond is considered investment grade if its credit rating is Baa or higher by Moody's or BBB- or higher by Standard & Poor's. Fixed income obligations purchased pursuant to section 177(9) of the RSSL, the "basket clause," are subject to a standard of prudence. As of March 31, 2016, credit ratings, obtained from several industry rating services, for the fixed income portfolio are as follows (Dollars in Thousands):

Quality Rating	Fair Value	Percentage of Fair Value
AAA	\$ 24,233,307	54.25%
AA	4,237,770	9.49
A	5,820,883	13.03
BAA	5,703,566	12.77
BBB	802,548	1.80
BA	542,116	1.21
BB	61,920	0.14
B	132,829	0.30
CAA	80,494	0.18
CA	2,479	0.01
C	3,196	0.01
Not rated	20,247	0.05
Externally managed funds:*		
Black Rock Fixed Income Range AAA to C & Not Rated	1,997,256	4.47
Neuberger Berman Fixed Income Range AAA to CAA & Not Rated	1,022,589	2.29
Total	\$ 44,661,200	100.00%

* These externally managed funds are part of the "basket clause" investments described in note 4(a). Approximately 75 percent of the holdings in each of these funds are rated as non investment grade or not rated. The remaining holdings in these funds are rated investment grade or above.

Notes to Financial Statements

(e) Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of the Fund's investment in a single issuer.

As of March 31, 2016, the System did not hold any investments in any one issuer that totaled 5 percent or more of the pension plan's fiduciary net position. Investments issued or explicitly guaranteed by the U.S. government and pooled investments are excluded.

Issuer limits for investments held by the Fund are established by law and by policy guidelines adopted by the PICM.

Short-term fixed income investments not purchased pursuant to section 177(9) of the RSSL are generally limited to the following investment types maturing in one year or less:

- Obligations for which the full faith and credit of the U.S. is pledged to provide payment of interest and principal.
- Obligations issued by any Federal Home Loan Bank or obligations fully guaranteed as to principal and interest by the Federal National Mortgage Association or Federal Home Loan Mortgage Corporation.
- Commercial paper that has received the highest rating from two nationally recognized rating services. A maximum of \$1 billion of the short-term portfolio may be invested in any one commercial paper issuer.
- Simultaneous purchase and sale of U.S. Treasury obligations may be executed with Primary Government Dealers. A maximum of \$200 million may be invested with any one Primary Government Dealer.
- Corporate and asset-backed securities (ABS) that are rated investment grade by two nationally recognized rating services. ABS must have a weighted average life of one year or less.

Short-term fixed income investments purchased pursuant to section 177(9) of the RSSL are subject to the specific prudent person investor and exclusive benefit provisions of this statute. Subject to such standards, investments made under section 177(9) must, to the extent reasonably possible, benefit the overall economic health of the State.

Notes to Financial Statements

Fixed income investments not purchased pursuant to section 177(9) of the RSSL are generally limited to the following investment types with maturities longer than one year:

- Obligations for which the full faith and credit of the U.S. is pledged to provide payment of principal and interest.
- Obligations payable in U.S. dollars issued by any department, agency, or political subdivision of the U.S. government or issued by any corporation, company, or other issuer of any kind or description created or existing under the laws of the U.S., any state of the U.S., the District of Columbia, or the Commonwealth of Puerto Rico, and obligations payable in U.S. funds of Canada or any province or city of Canada, provided each obligation at the time of investment shall be rated investment grade by two nationally recognized rating services (or by one nationally recognized rating service in the event only one such service rates such obligation). The aggregate investment by the Fund in the obligations of any one issuer shall not exceed 2 percent of the assets of the Fund or 5 percent of the direct liabilities of the issuer.
- Interest-bearing obligations payable in U.S. funds, which at the time of investment are rated in one of the three highest rating grades by each rating service approved by the New York State Department of Financial Services that has rated such obligations. The aggregate amount invested in the obligations of any single issuer may not exceed 1 percent of the assets of the Fund.
- Bonds issued or guaranteed by the State of Israel and approved by the United States Comptroller of the Currency, payable in U.S. dollars, not to exceed 5 percent of the assets of the Fund.
- Obligations issued or guaranteed by the International Bank for Reconstruction and Development (not to exceed 5 percent of the assets of the Fund), the Inter-American Development Bank, the Asian Development Bank, or the African Development Bank.

Fixed income investments purchased pursuant to section 177(9) of the RSSL are subject to the specific prudent person investor and exclusive benefit provisions of this statute. Subject to such standards, investments made under section 177(9) must, to the extent reasonably possible, benefit the overall economic health of the State.

(f) Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The Fund has exposure through direct investments in international equities, international equity commingled funds, international fixed income investments, international real estate investments, international absolute return strategies, international private equity investments, international opportunistic funds, and international real asset funds. The Fund's asset allocation and investment policies allow for active and passive investments in international securities. The Fund permits the managers of direct investments in international equities to use forward currency contracts to manage their exposure to foreign currencies relative to the U.S. dollar. Where the Fund participates in commingled funds, limited partnerships, or other investment arrangements, the decision whether or not to use forward currency contracts to manage their foreign currency exposure is left up to the individual investment managers. To address the impact of changes in exchange rates, only forward foreign exchange contracts of one year or less are allowed when used to lessen portfolio volatility or hedge the portfolio's currency exposure.

Basic Financial statements

continued

Notes to Financial Statements

Foreign investments included in the combining basic statement of fiduciary net position as of March 31, 2016 are as follows (Dollars in Thousands):

	Fixed Income	Equity	Cash	Real Estate	Private Equity, Opportunistic, Absolute Return Strategy and Real Asset Funds	Total
Angolan Kwanza	\$ 3,175	\$ –	\$ –	\$ –	\$ 210	\$ 3,385
Argentine Peso	39,860	–	–	508	8,872	49,240
Armenian Dram	2,286	–	–	–	–	2,286
Australian Dollar	351,963	355,061	2,507	53,625	76,293	839,449
Azerbaijani New Manat	6,539	–	–	–	–	6,539
Bahamian Dollar	–	–	–	846	(7,139)	(6,293)
Bermudian Dollar	1,796	–	–	–	61,605	63,401
Bolivian Boliviano	699	–	–	–	–	699
Brazilian Real	73,698	140,897	773	39,726	123,970	379,064
British Pound Sterling	581,932	1,940,760	3,867	384,482	1,282,748	4,193,789
Bulgarian Lev	–	–	–	30	7,496	7,526
Burmese Kyat	–	–	–	–	10,301	10,301
Canadian Dollar	800,781	198,117	92	1,317	395,569	1,395,876
Cayman Islands Dollar	107,697	–	–	–	2,555,503	2,663,200
Central African CFA Franc	1,620	–	–	39	105,838	107,497
Chilean Peso	76,809	5,633	–	–	(750)	81,692
Chinese Yuan Renminbi	470,940	–	–	342,993	1,381,890	2,195,823
Columbian Peso	21,401	4,275	–	78	460	26,214
Costa Rican Colon	1,526	–	–	52	5	1,583
Croatian Kuna	13,479	–	–	20	3,382	16,881
Czech Koruna	256	–	121	1,915	12,310	14,602
Danish Krone	4,846	264,228	176	55,191	142,788	467,229
Dominican Peso	24,508	–	–	32	109	24,649
Egyptian Pound	3,170	3,876	34	271	4,575	11,926
Ethiopian Birr	591	–	–	128	70	789
Euro	742,699	2,344,871	71,411	981,616	1,189,445	5,330,042
Ghanaian Cedi	4,558	–	–	–	23,866	28,424
Guatemalan Quetzal	2,106	–	–	–	(70)	2,036
Hong Kong Dollar	181,188	636,273	165	133,896	45,190	996,712
Hungarian Forint	24,222	9,914	98	28	10,351	44,613
Icelandic Krona	–	–	–	16	15,675	15,691
Indian Rupee	52,673	124,545	2,841	42,114	283,395	505,568
Indonesian Rupiah	61,702	43,719	159	33	26,199	131,812
Iraqi Dinar	2,923	–	–	–	146	3,069
Israeli Shekel	166,156	15,102	707	486	108,291	290,742
Jamaican Dollar	4,669	–	–	129	–	4,798
Japanese Yen	236,122	1,551,227	2,187	100,492	239,875	2,129,903
Kazakhstani Tenge	13,971	–	–	–	462	14,433
Kenyan Shilling	2,951	–	–	29	7,998	10,978

Basic Financial statements

continued

Notes to Financial Statements

	Fixed Income	Equity	Cash	Real Estate	Private Equity, Opportunistic, Absolute Return Strategy and Real Asset Funds	Total
Malaysian Ringgit	3,435	62,871	803	106	23,395	90,610
Maldivian Rufiyaa	–	–	–	2,430	2,552	4,982
Mauritian Rupee	–	–	–	341	51,650	51,991
Mexican Peso	307,454	56,437	255	15,467	51,782	431,395
Mongolian Togrog	12,895	–	–	–	49	12,944
Moroccan Dirham	21,572	–	–	493	(246)	21,819
New Taiwan Dollar	1,681	238,471	7,822	2,269	1,273	251,516
New Zealand Dollar	34,425	3,593	–	50	2,021	40,089
Nigerian Naira	1,610	20	1	90	7,144	8,865
Norwegian Krone	122,179	38,625	271	487	79,588	241,150
Pakistan Rupee	4,908	–	–	–	–	4,908
Panamanian Balboa	14,024	–	–	29	392	14,445
Paraguayan Guarani	2,417	–	–	–	–	2,417
Peruvian Nuevo Sol	13,461	–	1	46	7,923	21,431
Philippine Peso	13,680	14,603	7	–	7,297	35,587
Polish Zloty	–	26,438	191	4,175	29,925	60,729
Qatari Rial	–	3,113	–	60	–	3,173
Romanian Leu	4,169	–	–	368	4,373	8,910
Russian Ruble	27,728	–	–	3,193	56,544	87,465
Serbian Dinar	6,081	–	–	–	–	6,081
Singapore Dollar	4,456	160,338	39	1,807	40,962	207,602
South African Rand	50,004	163,508	641	492	30,978	245,623
South Korean Won	342,424	501,549	552	2,941	103,981	951,447
Sri Lankan Rupee	20,794	–	–	20	262	21,076
Swedish Krona	–	351,810	422	181,722	2,549	536,503
Swiss Franc	46,562	781,752	392	1,115	235,901	1,065,722
Thai Baht	–	56,558	–	6,783	(235)	63,106
Tunisian Dinar	1,420	–	–	–	–	1,420
Turkish Lira New	123,078	39,705	57	4,468	54,446	221,754
Ukrainian Hryvnia	12,745	–	–	1,598	2,279	16,622
United Arab Emirates Dirham	24,869	12,986	14	11,300	1,824	50,993
Uruguayan Peso	7,286	–	–	35	–	7,321
Venezuelan Bolivar	22,764	–	–	2,327	10,603	35,694
Vietnamese Dong	4,365	–	–	9	4,317	8,691
West African CFA Franc	14,239	–	–	–	–	14,239
Zambian Kwacha	1,520	–	–	–	367	1,887
Other	4,824	–	–	712	(364)	5,172
Total subject to foreign currency risk	5,358,581	10,150,875	96,606	2,385,025	8,930,460	26,921,547
Commingled international equity in U.S. Dollars	–	14,947,581	–	–	–	14,947,581
Foreign investments in U.S. Dollars	–	4,112,880	–	4,415	4,850,759	8,968,054
Total foreign investments	\$ 5,358,581	\$ 29,211,336	\$ 96,606	\$ 2,389,440	\$ 13,781,219	\$ 50,837,182

Notes to Financial Statements

6. Derivatives

A derivative is generally defined as an investment contract or security with a value that depends on, or is derived from, the value of an underlying asset, reference rate, or financial index. The System has classified the following as derivatives:

Forward Currency Contracts

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

The table below summarizes the fair value of foreign currency contracts as of March 31, 2016 (Dollars in Thousands):

Currency	Forward Currency Contracts	Spot Currency Contracts	Totals
Australian Dollar	\$ 8,688	\$ (228)	\$ 8,460
Brazilian Real	–	(181)	(181)
British Pound Sterling	(12,736)	(5,146)	(17,882)
Canadian Dollar	12,139	(28)	12,111
Colombian Peso	–	164	164
Danish Krone	–	(1,002)	(1,002)
Euro	(23,259)	5,209	(18,050)
Hong Kong Dollar	9,341	(4,843)	4,498
Hungarian Forint	–	805	805
Indian Rupee	(2)	(99)	(101)
Indonesia Rupiah	–	757	757
Japanese Yen	22,532	(3,060)	19,472
Malaysian Ringgit	–	(511)	(511)
Mexican Peso	454	–	454
New Taiwan Dollar	–	(4,709)	(4,709)
Norwegian Krone	–	(138)	(138)
Polish Zloty	–	(2,764)	(2,764)
Qatar Rial	(139)	–	(139)
Singapore Dollar	223	–	223
South African Rand	5,575	–	5,575
South Korean Won	–	(2,651)	(2,651)
Swedish Krona	–	(915)	(915)
Swiss Franc	(6,394)	–	(6,394)
Thai Baht	–	(592)	(592)
Turkish Lira New	–	(736)	(736)
U.S. Dollar	(13,033)	20,626	7,593
United Arab Emirates Dirham	(1,356)	–	(1,356)
Total	\$ 2,033	\$ (42)	\$ 1,991

Notes to Financial Statements

7. Securities Lending Program

Section 177-d of the RSSL authorizes the Fund to enter into security loan agreements with broker/dealers and state or national banks. The Fund has designated its master custodian bank (the custodian) to manage a securities lending program. This program is subject to a written contract between the Fund and the custodian who acts as securities lending agent for the Fund. The custodian is authorized to lend securities within the borrower limits and guidelines established by the Fund. Types of collateral received from borrowers for securities loaned are cash, government securities, and obligations of federal agencies. The custodian is authorized to invest the cash collateral in short-term investments that are legal for the Fund. These include domestic corporate and bank notes, U.S. Treasury obligations, obligations of federal agencies, repurchase agreements, and specific asset-backed securities. All rights of ownership to securities pledged as collateral remain with the borrower except in the event of default. As of March 31, 2016, there were no violations of legal or contractual provisions. The Fund did not experience any losses resulting from the default of a borrower or lending agent during the year ended March 31, 2016.

The Fund lends fixed income, domestic equity, and international equity securities to approved broker/dealers. Collateral for securities loaned equals 102 percent of fair value for domestic securities and 105% for international securities. Credit risk associated with the investment of cash collateral pledged by borrowers is mitigated by the maturity restrictions, percentage limitations, and rating requirements for individual asset classes included in the Fund's reinvestment guidelines. The custodian acknowledges responsibility to reimburse the Fund for losses that might arise from managing the program in a manner inconsistent with the contract. The Fund manages its market risk by recording investments at fair value daily and maintaining the value of the collateral held by the Fund in excess of the value of the securities loaned. As of March 31, 2016, the fair value of securities on loan was \$13.66 billion. The associated collateral was \$13.99 billion, of which \$11.76 billion was cash collateral and \$2.23 billion was securities. The cash collateral has been reinvested in other instruments, which had a fair value of \$11.73 billion as of March 31, 2016. The securities lending obligations were \$11.74 billion. The unrealized loss in invested cash collateral on March 31, 2016 was \$8.28 million, which is reported in the combining basic statement of changes in fiduciary net position as part of "Net depreciation in fair value of investments."

All open security loans can be terminated on demand by either the Fund or the borrower. To provide sufficient liquidity, the policy of the Fund is to maintain a minimum of 10% collateral in overnight investments. While the Fund's Securities Lending Investment Guidelines allow investments of up to a maximum of three years for U.S. Treasury and federal agency obligations and one year for all other investments, the average term of open security loans at March 31, 2016 was 35 days. All loans were open loans. There were no direct matching loans.

On March 4, 2013, a securities lending collateral deficiency was realized in the amount of \$127.14 million and agreed to be repaid to the lending agent through future earnings commencing with revenues earned effective April 1, 2013 and continuing in the future until the deficiency is reimbursed in full. The securities lending collateral deficiency is due to a loss in the reinvestment of cash collateral. Investment guidelines have been strengthened to mitigate future losses. At March 31, 2016, the balance of the securities lending collateral deficiency was \$20.33 million.

The collateral pool is valued at fair value obtained from independent pricing services.

Notes to Financial Statements

8. Net Pension Liability of Participating Employers

The components of the net pension liability of the employers participating in the system as of March 31, 2016, were as follows:

	(Dollars in Thousands)		
	Employees' Retirement System	Police and Fire Retirement System	Total
Employers' total pension liability	\$ 172,303,544	\$ 30,347,727	\$ 202,651,271
Fiduciary net position	156,253,265	27,386,940	183,640,205
Employers' net pension liability	16,050,279	2,960,787	19,011,066
Ratio of fiduciary net position to the employers' total pension liability	90.7%	90.2%	90.6%

(a) Actuarial Assumptions

The total pension liability at March 31, 2016 was determined by using an actuarial valuation as of April 1, 2015, with update procedures used to roll forward the total pension liability to March 31, 2016. The actuarial valuation used the following actuarial assumptions:

	ERS	PFRS
Inflation	2.5%	2.5%
Salary increases	3.8	4.5
Investment rate of return (net of investment expense, including inflation)	7.0	7.0
Cost of living adjustments	1.3	1.3

Annuitant mortality rates are based on April 1, 2010 – March 31, 2015 System experience with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2014.

The actuarial assumptions used in the April 1, 2015 valuation are based on the results of an actuarial experience study for the period April 1, 2010 – March 31, 2015.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected return, net of 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 future real rates of return by the target asset allocation percentage and by adding expected inflation.

Basic Financial statements

continued

Notes to Financial Statements

Best estimates of arithmetic real rates of return for each major asset class included in the target asset allocation as of March 31, 2016 (see Investment policy — note 4(a)) are summarized below:

Asset Class	Long-Term Expected Real Rate of Return
Domestic equity	7.30%
International equity	8.55
Private equity	11.00
Real estate	8.25
Absolute return strategies	6.75
Opportunistic portfolio	8.60
Real assets	8.65
Bonds and mortgages	4.00
Cash	2.25
Inflation-indexed bonds	4.00

(b) Discount Rate

The discount rate used to calculate the total pension liability was 7.0 percent. The projection of cash flows used to determine the discount rate assumes that contributions from plan members will be made at the current contribution rates and that contributions from employers will be made at statutorily required rates, actuarially. Based upon the assumptions, the System's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

(c) Sensitivity of the Net Pension Liability to the Discount Rate Assumption

The following presents the current-period net pension liability of the employers calculated using the current-period discount rate assumption of 7.0 percent, as well as what the net pension liability (asset) would be if it were calculated using a discount rate that is one percentage-point lower (6.0 percent) or one percentage point-higher (8.0 percent) than the current assumption (Dollars in Thousands):

	One Percent Decrease (6.0%)	Current Assumption (7.0%)	One Percent Increase (8.0%)
ERS net pension liability (asset)	\$ 36,192,213	\$ 16,050,279	\$ (968,795)
PFRS net pension liability (asset)	\$ 6,613,230	\$ 2,960,787	\$ (100,751)

Notes to Financial Statements

9. Federal Income Tax Status

ERS and PFRS are qualified defined benefit retirement plans under section 401(a) of the Internal Revenue Code and are exempt from federal income taxes. ERS and PFRS last received favorable determination letters from the Internal Revenue Service dated August 28, 2014 stating that ERS and PFRS are in compliance with the applicable requirements of the Internal Revenue Code. Therefore, no provision for income taxes has been included in the System's financial statements.

10. Commitments

As of March 31, 2016, the System had contractual commitments totaling \$11.45 billion to fund future private equity investments, \$5.19 billion to fund future real estate investments, \$1.67 billion for opportunistic funds, \$40 million to fund absolute return strategies and \$720 million to fund future real asset investments. Future commitments will be funded over the commitment period through transaction income including distributions, redemptions, and maturities.

11. Contingencies

The System is a defendant in litigation proceedings involving individual benefit payments, participant eligibility, and other issues arising from its normal activities. Management of the System believes there will be no material adverse effect on the basic financial statements as a result of the outcome of these matters.

Required Supplementary Information (Unaudited)

Schedule of Changes in the Employers' Net Pension Liability and Related Ratios (Unaudited)

(Dollars in Thousands)

	2016 Employees' Retirement System	2015 Employees' Retirement System
Total pension liability:		
Service cost	\$ 2,916,374	\$ 2,989,807
Interest	11,198,823	11,581,437
Difference between expected and actual experience	(2,378,116)	135,177
Changes in assumptions	5,350,157	—
Benefit payments	(9,224,904)	(8,829,751)
Other, net	(150,294)	(77,388)
Net change in total pension liability	7,712,040	5,799,282
Total pension liability — beginning	164,591,504	158,792,222
Total pension liability — ending (a)	172,303,544	164,591,504
Fiduciary net position:		
Contributions — employer	4,347,619	4,893,110
Contributions — member	289,332	272,004
Net investment income (loss)	(327,068)	10,582,102
Benefit payments	(9,224,904)	(8,829,751)
Refunds of contributions	(150,294)	(77,388)
Administrative expense	(93,012)	(93,357)
Other additions	198,333	193,176
Net change in fiduciary net position	(4,959,994)	6,939,896
Fiduciary net position — beginning	161,213,259	154,273,363
Fiduciary net position — ending (b)	156,253,265	161,213,259
Net pension liability — ending (a) – (b)	\$ 16,050,279	\$ 3,378,245
Ratio of fiduciary net position to total pension liability	90.7%	97.9%
Covered-employee payroll	\$ 24,364,056	\$ 24,480,045
Net pension liability as a percentage of covered-employee payroll	65.9%	13.8%

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

See accompanying independent auditors' report and notes to required supplementary information.

Required Supplementary Information (Unaudited)

continued

Schedule of Changes in the Employers' Net Pension Liability and Related Ratios (Unaudited)

(Dollars in Thousands)

	2016 Police and Fire Retirement System	2015 Police and Fire Retirement System
Total pension liability:		
Service cost	\$ 628,863	\$ 625,648
Interest	1,935,222	1,997,215
Difference between expected and actual experience	(537,163)	39,833
Changes in assumptions	1,531,662	–
Benefit payments	(1,683,580)	(1,606,417)
Other, net	(1,694)	(158)
Net change in total pension liability	1,873,310	1,056,121
Total pension liability — beginning	28,474,417	27,418,296
Total pension liability — ending (a)	30,347,727	28,474,417
Fiduciary net position:		
Contributions — employer	792,585	904,339
Contributions — member	17,297	12,789
Net investment income (loss)	(57,765)	1,862,789
Benefit payments	(1,683,580)	(1,606,417)
Refunds of contributions	(1,694)	(158)
Administrative expense	(13,608)	(13,794)
Other additions	134,548	37,623
Net change in fiduciary net position	(812,217)	1,197,171
Fiduciary net position — beginning	28,199,157	27,001,986
Fiduciary net position — ending (b)	27,386,940	28,199,157
Net pension liability — ending (a) – (b)	\$ 2,960,787	\$ 275,260
Ratio of fiduciary net position to total pension liability	90.2%	99.0%
Covered-employee payroll	\$ 3,232,589	\$ 3,257,100
Net pension liability as a percentage of covered-employee payroll	91.6%	8.5%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available. See accompanying independent auditors' report and notes to required supplementary information.

Required Supplementary Information (Unaudited)

continued

Schedule of Employer Contributions (Unaudited)

(Dollars in Millions)

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
ERS										
Actuarially determined contribution (1)	\$ 4,348	\$ 4,893	5,138	4,524	3,879	3,623	1,879	1,963	2,135	2,216
Contributions in relation to the actuarial determined contribution (2)	4,348	4,893	5,138	4,524	3,879	3,623	1,879	1,963	2,135	2,216
Contribution deficiency (excess)	\$ -	-	-	-	-	-	-	-	-	-
Covered-employee payroll (3)	\$ 24,364	\$ 24,480	24,361	24,405	24,291	24,389	24,972	24,099	22,779	22,018
Contributions as a percentage of covered-employee payroll	17.85%	19.99%	21.09%	18.54%	15.97%	14.86%	7.52%	8.15%	9.37%	10.06%
PFRS										
Actuarially determined contribution (1)	\$ 793	\$ 904	926	812	706	542	465	493	513	502
Contributions in relation to the actuarial determined contribution (2)	793	904	926	812	706	542	465	493	513	502
Contribution deficiency (excess)	\$ -	-	-	-	-	-	-	-	-	-
Covered-employee payroll (3)	\$ 3,232	\$ 3,257	3,233	3,163	3,191	3,146	3,113	2,970	2,926	2,825
Contributions as a percentage of covered-employee payroll	24.54%	27.76%	28.64%	25.67%	22.12%	17.23%	14.94%	16.60%	17.53%	17.77%
(1) The actuarially determined contribution includes normal costs, the GLIP amounts, adjustments made to record the reconciliation of projected salary to actual salary and miscellaneous accounting adjustments.										
(2) The contributions in relation to the actuarially determined contribution reflects actual payments and installment payment plans.										
(3) Covered-employee payroll represents pensionable payroll.										

See accompanying independent auditors' report and notes to required supplementary information.

Schedule of Investment Returns (Unaudited)

	2016	2015
Annual money-weighted rate of return, net of investment expenses	0.03%	6.98%

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

See accompanying independent auditors' report.

Notes to Required Supplementary Information (Unaudited)

Year Ended March 31, 2016

Changes in benefit terms.

There were no significant legislative changes in benefits for the April 1, 2014 actuarial valuation.

Changes of assumptions.

There was a change in assumption for the pensioner mortality improvement in the April 1, 2014 actuarial valuation from the Society of Actuaries' Scale AA to Scale MP-2014.

Methods and assumptions used in calculations of actuarially determined contributions.

The April 1, 2014 actuarial valuation determines the employer rates for contributions payable in fiscal year 2016.

The following actuarial methods and assumptions were used:

Actuarial cost method	The System is funded using the Aggregate Cost Method. All unfunded actuarial liabilities are evenly amortized (as a percentage of projected pay) over the remaining worker lifetimes of the valuation cohort.
Asset valuation period	5 year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return.
Inflation	2.7%
Salary scale	4.9% in ERS, 6.0% in PFRS, indexed by service
Investment Rate of Return	7.5% compounded annually, net of investment expenses, including inflation.
Cost of living adjustments	1.4% annually

See accompanying independent auditors' report.

Additional Supplementary Information

Schedule of Administrative Expenses

Year Ended March 31, 2016

(Dollars in Thousands)

	2016
Personal services:	
Salaries	\$ 54,665
Overtime salaries	2,435
Fringe benefits	<u>28,075</u>
Total personal services	85,175
Building occupancy expenses:	
Building, lease, and condominium fees	3,424
Utilities and municipal assessments	108
Office supplies and services	287
Telephone	<u>680</u>
Total building occupancy expenses	4,499
Computer expenses:	
IT shared services*	<u>10,635</u>
Total computer expenses	10,635
Personal and operating expenses:	
Training	90
Travel and auto expenses — includes pre-retirement seminars	1,160
Postage — includes member and retiree communication	1,576
Printing — includes member and retiree communication	261
Subscriptions/memberships	<u>128</u>
Total personal and operating expenses	3,215
Professional expenses:	
Audit services	1,064
Medical/clinical services	1,470
Miscellaneous consulting services	<u>562</u>
Total professional expenses	3,096
Total	\$ 106,620

* The System is implementing a shared service, information technology (IT) model within the Office of the State Comptroller, wherein all IT costs, including personal services, will be incorporated into the IT shared services and reflected as nonpersonal service expenditures.

See accompanying independent auditors' report.

Schedule of Investment Expenses

Year Ended March 31, 2016

(Dollars in Thousands)

	2016
Investment expenses:	
Investment management and incentive fees:	
Absolute return strategy funds	\$ 150,183
Private equity	138,799
International equity	81,617
Real estate	55,328
Domestic equity	46,754
Opportunistic funds	28,812
Real assets	14,189
Fixed income	12,717
Total investment management and incentive fees	528,399
Investment-related expenses:	
General consulting	8,582
Miscellaneous expenses	7,661
Data processing expenses/licenses	5,364
Private equity consulting and monitoring	3,527
Mortgage loan servicing fees	2,914
Real estate consulting and monitoring	2,597
Legal fees	2,330
Absolute return strategy consulting and monitoring	1,999
Administrative expenses	1,255
Real assets consulting and monitoring	587
Audit and audit-related fees*	413
Custodial fees	122
Domestic equity consulting and monitoring	69
Global equity consulting	26
Total investment-related expenses	37,446
Total investment expenses	\$ 565,845
* "Audit and audit-related fees" include expenses incurred for the system's fiduciary review.	

See accompanying independent auditors' report.

Schedule of Consulting Fees

Year Ended March 31, 2016

Fees in excess of \$25,000 paid to outside professionals other than investment advisors.

	Amount	Nature
Seward & Kissel, LLP	\$ 688,315	Legal Services
Morgan, Lewis & Bockius, LLP	494,408	Legal Services
Foster, Pepper & Shefelman, PLLC	398,311	Legal Services
KPMG LLP	239,183	Audit Services
Funston Advisory Services	173,600	Audit Services
Orrick Herrington & Sutcliffe, LLP	165,847	Legal Services
D & D Medical Associates, PC	160,336	Medical Services
FCME Management, Inc.	151,336	Medical Services
Nixon Peabody, LLP	141,863	Legal Services
Jeffrey M. Meyer MD, PLLC	93,132	Medical Services
Regional Orthopaedics, PLLC	91,525	Medical Services
Mayer, Brown, LLP	80,635	Legal Services
K&L Gates, LLP	80,110	Legal Services
Seyfarth Shaw, LLP	70,000	Legal Services
First Choice Evaluations	66,162	Medical Services
Jackson Walker, LLP	57,744	Legal Services
Michael Lynch	42,340	Medical Services
Groom Law Group	38,379	Legal/ Tax Consultant
John S. Mazella MD, PC	37,150	Medical Services
ProHEALTH Care Associates	36,801	Medical Services
Simaren Corporation	35,033	Security Services
Louis Benton, MD	31,000	Medical Services
Riverside Orthopaedic & Sports Medicine Assoc.	30,525	Medical Services
Specialty Consultants	28,333	Recruitment Services
Pine Bush Mental Health, LLP	27,700	Medical Services
Edward A Toriello MD, FACS.	26,775	Medical Services
Certified Medical Consultants, Inc.	25,740	Medical Services
CEM Benchmarking, Inc.	25,000	Industry Measurement Survey

See accompanying independent auditors' report.

Independent Auditors' Report on Internal Control



KPMG LLP
515 Broadway
Albany, NY 12207-2974

Independent Auditors' Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

The Trustee
New York State and Local Retirement System:

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of the New York State and Local Retirement System (the System), which comprise the combining statement of fiduciary net position as of March 31, 2016, and the related combining statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated July 20, 2016.

Internal Control over Financial Reporting

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

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

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

Compliance and Other Matters

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

KPMG LLP is a Delaware limited liability partnership, the U.S. member firm of KPMG International Cooperative ("KPMG International"), a Swiss entity.

Independent Auditors' Report on Internal Control

continued



Purpose of this Report

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

KPMG LLP

July 20, 2016

Investment

Contents

Overview of Investments	79
Investment Results	90
Investment Summary	91
Asset Allocation — March 31, 2016	92
Global Equity Performance	93
Domestic Equity Portfolio — Ten Largest Holdings	96
Fixed Income Portfolio and Comparison	97
Fixed Income Performance	98
Fixed Income Portfolio — Ten Largest Holdings	99
Real Estate Portfolio	100
Alternative Investments Summary	101
Domestic Equity Management Fees	102
Domestic Equity Commissions	103
International Equity Management Fees	105
International Equity Commissions	106
Global Fixed Income Management Fees	109
Domestic Bond Transactions	110
Real Estate Management Fees (Expensed)	112
Real Estate Management Fees (Capitalized)	113
Private Equity Management Fees (Expensed)	114
Private Equity Management Fees (Capitalized)	115
Absolute Return Strategy Management and Incentive Fees	116
Opportunistic Funds Management and Incentive Fees (Expensed)	118
Opportunistic Funds Management and Incentive Fees (Capitalized)	119
Real Assets Management Fees (Expensed)	120
Consultant and Advisor Fees	121

Overview of Investments

Overall Objectives and Performance

The Division of Pension Investment and Cash Management is responsible for the management of the assets of the New York State Common Retirement Fund (Fund). The Fund's primary objectives are to provide the means to pay benefits to the System's participants and to minimize employer contributions through an investment program designed to protect and enhance the long-term value of the assets. The Fund's asset allocation policy was constructed to meet these objectives by achieving a maximum level of return consistent with policies on liquidity, diversification and investment risk. Investments in equities, although historically volatile, provide superior long-term performance and growth characteristics, while fixed income investments provide more predictable cash flow to meet the System's funding requirements and pension obligations.

The Fund investment performance for the fiscal year ended March 31, 2016 was 0.19 percent on a gross basis, reflecting the challenging return environment for the world equity markets. The Fund's alternative investment portfolio experienced strong performance, benefited by the private equity and real estate portfolios. The fiscal year was marked by increased volatility across markets as concerns about growth slowdown and political uncertainty across the globe weighed on returns. Investors remain concerned with the limitations and effectiveness of monetary policy across the developed world, the low price of oil, a slowdown in China, and high debt levels in the majority of largest economies. Despite these challenges, the Fund preserved its capital after seven years of strong positive performance following the fiscal crisis of 2008.

The Fund's performance reflected the challenging global equity markets. The equity portfolio returned (2.9) percent, the real estate portfolio returned a positive 13.1 percent, the private equity portfolio returned a positive 9.1 percent and the absolute return strategies portfolio returned (4.8) percent. The core fixed income portfolio returned a positive 1.8 percent and Treasury Inflation-Protected Securities (TIPS) returned a positive 2.3 percent.

The sound investment framework provided by the Fund's asset allocation and diversification policies enabled it to preserve capital as the economy continued to recover. With its long-term investment approach, the Fund remains positioned to continue to provide sufficient cash flow to fund pension payments.

The investment performance information provided in this section of the Comprehensive Annual Financial Report was calculated by the Fund's custodian, J.P. Morgan, using a daily time-weighted rate of return based on the fair value of assets.

Pension Risk Management

Established in 2011, the Pension Risk Management (PRM) program provides a framework for the protection and continued growth of plan assets to earn the best risk-adjusted returns to maintain and improve the funding status of the plan. The Fund's risk management philosophy drives the goal of diversifying our investments to manage risk, which we believe is multidimensional. We diversify among asset classes, sectors, geographies, time horizons, and other factors. The PRM program is intended to cover risks at the total fund level as well as at the asset class level, to reflect the differing risk and return profiles. In 2015, the PRM staff continued to build out its suite of investment risk tools and capabilities. The PRM team coordinates periodic risk discussions with the executive team and investment staff, reviews total plan and asset class risk reports, performs simulations of portfolio performance under various stress test scenarios, and partners with investment officers for independent risk reviews of new manager commitments.

Global Equities

The role of the global equities portfolio is to provide the largest source of nominal returns in the Fund's portfolio over the long term through diversified, global equity market exposure. For the fiscal year ended March 31, 2016, the Fund's global equity portfolio posted a (2.86) percent return versus a (4.34) percent return for the MSCI All Country World Index. In December 2015, the Federal Reserve raised rates for the first time since 2006. This development, combined with expectations of additional rate hikes, the drop in oil prices, and the continued slowdown in China, weighed on equity market performance.

The Fund's U.S. equity portfolio declined for the fiscal year, returning (0.54). At fiscal year end, the allocation to U.S. equities was 34.9 percent, the largest allocation in the Fund. The Fund's non-U.S. equity portfolio suffered an 8.54 percent decline for the fiscal year, but still managed to outperform the MSCI ACWI ex U.S. benchmark return of (9.19) percent. Active managers with purely global mandates outperformed the MSCI ACWI, returning (3.61) percent relative to the benchmark return of (4.34). The aforementioned slowdown in China, and the specter of higher rates in the U.S., as well as turmoil in global commodity markets, all combined to punish emerging market returns. The Fund's investments in emerging markets dropped 12.41 percent, compared to a benchmark return of (12.03), as macro events dragged down returns.

The global equity program strives to enhance the overall equity allocation and continues to rely on internally managed passive investment vehicles in the more efficient segments of the equity markets. This allows the Fund to maintain exposure to broad market returns, but at very low costs. Staff continue to pursue active manager mandates in less efficient markets where active managers have a better opportunity to outperform their benchmarks.

The Fund continued to use minority- and women-owned brokerage service providers when trading internally managed assets. For the fiscal year, these brokers accounted for approximately 37 percent of the total commissions.

Fixed Income

The fixed income portfolio is designed to provide a consistent flow of income to help address the cash flow needs of the Fund and to provide downside protection against the volatility of the Fund's equity like strategies while achieving efficiency in the risk/return profile for Fixed Income. The Fund accomplishes these goals by investing internally in long-term and short-term assets, while external managers focus on increasing returns and diversification through non-core fixed income investments. The short-term fixed income portfolio offers liquidity to meet monthly pension fund liabilities as well as providing funding needs for the other asset classes within the Fund.

The Fund uses the Barclays Aggregate Index as a benchmark for its core fixed income portfolio and seeks to add value through sector weights and security selection. The long-term core fixed income portfolio consists primarily of U.S. Treasury securities, government-sponsored agency debentures, corporate bonds, commercial mortgage-backed securities, mortgages, asset-backed securities, collateralized loan obligations, and municipal bonds. The non-core, externally managed, fixed income allocation consists primarily of higher yielding, credit-focused investments. The Fund also has a large allocation to Treasury Inflation-Protected Securities (TIPS). The Fund's short-term fixed income portfolio may be invested in high quality commercial paper, U.S. Treasury bills, bank certificates of deposit, agency discount notes, and short corporate and asset-backed securities.

The Fund's core long-term fixed income portfolio (excluding TIPS) returned 1.6 percent for the year versus 2.0 percent for the Barclays Aggregate Bond Index. The underperformance was a result of the portfolio's underweight to interest rate risk and an overweight to credit risk versus the benchmark. The interest rate position was brought in line with the benchmark in the second part of the year, as the probability of the Federal Reserve significantly raising rates diminished. The core portfolio continues to have an overweight to high quality credit. It does not invest in non-investment grade credit and maintains an average credit quality of A+/Aa3.

Within the core portfolio, U.S. Treasury securities were the best performing asset as investors sought safety from the volatility of the equity markets. Collateralized loan obligations were the worst performing asset, due to the higher complexity of instruments and smaller investor base.

The Fund's TIPS portfolio, which assists in hedging U.S. inflation risk, returned 2.3 percent, compared to the Salomon Smith Barney TIPS Index of 1.5 percent. Short-term cash investments returned 0.4 percent for the fiscal year. External non-core fixed income returned (0.1) percent.

The Fund has 42 approved broker-dealer firms to execute trades in the long-term and short-term fixed-income portfolios. Fourteen percent of these trading partners are women- and minority-owned firms. Women- and minority-owned firms continue to play a central role in the Fund's long-term and short-term fixed income strategy, executing 5 percent of all long-term trades and 5 percent of all short-term broker-initiated trades.

The Fund participates in a securities lending program by lending a portion of its fixed income and equity securities to qualified counterparties providing incremental income to the Fund. The securities lending program earned the Fund \$48 million in revenue for the fiscal year.

Real Estate

The Real Estate group invests in diversified real estate properties across core, core-plus/value-add, and opportunistic strategies in order to achieve its mandate to provide a steady stream of cash flows through core investments and to capture excess returns through core-plus/value-add and opportunistic investments.

It invests through four primary investment structures: wholly owned assets, joint ventures, co-investments, and funds (closed-end, open-end, and fund-of-funds). For wholly owned assets, the Fund works with an external advisor or third party provider to manage the property. For all other structures, the Fund invests alongside a general partner and focuses on investing with partners whose interests are aligned with the Fund's via shared risk and reward.

As of March 31, 2016, equity real estate represented 6.9 percent of the total Fund and produced a total return of 13.14 percent for the fiscal year. This marked the fifth full year of recovery for the Fund's real estate portfolio. Looking forward, the Fund will continue to invest new capital and to take advantage of the current market opportunities in core, value-add and opportunistic strategies.

Core strategies include well located, well leased, and well maintained properties whose primary purpose in the portfolio is to provide a reliable source of current income, along with value appreciation commensurate with the surrounding market. These assets are often in irreplaceable locations and are of very high quality. Currently, a significant percentage of the real estate portfolio assets are located in markets that have demonstrated tenant demand for high "institutional quality" assets in prime locations in gateway cities. Value-added investments include undermanaged real estate that will be repositioned and re-leased as the economy recovers. Opportunistic investments include strategies such as development or substantial renovation that carry the increased risk of construction.

In addition, the Fund will continue to target green investments. Real estate assets are by their nature long-term investments, and sustainable, energy-efficient properties offer attractive, long-term investment opportunities. Many of the Fund's assets are LEED-certified. LEED (Leadership in Energy and Environmental Design) is a set of objective standards by which owners and managers can measure the efficiency of assets. The Fund's staff understands that certain tenants prefer to lease assets in LEED-certified buildings, further justifying the focus on this objective.

In terms of risk management, the real estate portfolio risk is mitigated by diversification by property type, geography, investment strategy and selection of best-in-class joint venture partners and managers, as well as consultants and advisors. In order to achieve long-term appreciation and sustainable investments returns, the Fund will continue to effectively manage the current portfolio investments and maximize its existing relationships with investment managers. In addition, the Fund partners with small and minority managers in the real estate arena to capitalize on their talent and expertise.

Affordable Housing Permanent Loan Program

In 1991, The Common Retirement Fund developed a program to support the rehabilitation and development of affordable housing in New York State. Under the program, the Fund's designated manager, the Community Preservation Corporation (CPC), originates affordable long-term housing mortgages across New York State. CPC provides the construction financing and, when construction is completed, sells the permanent loans to the Fund. All mortgages are 100 percent insured by the State of New York Mortgage Agency (SONYMA).

Through this program with CPC, the Fund has been able to provide moderate-income and low-income families across the State with the opportunity to rent affordable housing. By purchasing permanent mortgages, the Fund provides for the production of affordable new multifamily housing and the revitalization of deteriorated or obsolete housing units.

Since the inception of this program, 18,006 units representing \$723.9 million have been completed, and 2,481 are in the pipeline. In the 2015-2016 fiscal year, the Fund invested in affordable housing throughout the State, including Dutchess, Erie, Nassau, Onondaga, Orange, Saratoga and Westchester counties. The Fund remains dedicated to working with CPC and SONYMA to provide New York State residents with opportunities for affordable housing, as long as the investment structures and potential returns fulfill the fiduciary mandate of the overall pension fund to the beneficiaries and retirees.

Helping NY/Equity Real Estate Investments

Beyond the CPC program discussed above, the Fund invests in New York State commercial real estate properties through a mix of investment structures such as joint ventures, commingled funds and club fund investments, as well as wholly owned properties. The Fund owns, in whole or in part, shopping centers, office buildings, residential properties and hotels. Through these investment vehicles, the Fund has been able to acquire, develop, re-lease and reposition properties that are in need of upgrading with the goal of increasing property values. New York properties, particularly those that are in central business districts, have rebounded in value from the recent economic downturn as investors seek to buy stabilized, in-fill assets in gateway cities such as New York.

Alternative Investments

Private Equity

The Fund's private equity portfolio is designed to generate long-term returns that exceed those of public equities. As of March 31, 2016, the private equity program generated a one-year total return of 9.1 percent.

The Fund seeks to participate in private equity investments primarily through partnerships consisting of pooled funds managed by specialized investment managers for the purpose of investing in private companies. The Fund seeks to partner with the very best private equity investors, including emerging and diverse managers, across various investment strategies. Private equity investments are generally held for long-term appreciation and are less liquid than publicly-traded securities.

The Fund will commit capital to private equity at a disciplined pace to ensure the diversification of the portfolio over time. In addition, the Fund seeks to commit capital across various geographies, including international managers who have the expertise to source attractive investment opportunities in global markets, and more locally, to managers that focus their investments in New York State. The Fund also seeks to commit capital to industry sectors that show high potential for economic growth and capital appreciation, and that will further enhance the diversification of the portfolio.

Because private equity investments involve long-term contractual commitments to a manager, the Fund will seek to invest with managers who have demonstrated the ability to consistently deliver superior returns. The Fund can better achieve such superior returns through active portfolio management, which requires frequent and direct interaction with investment managers to monitor performance and ensure proper alignment of interests between manager and investor.

The private equity program will seek to exploit those long-term commitments and alignment of interests by making additional co-investments alongside select managers on improved economic terms. During the past year, the Fund made 11 co-investments totaling over \$190 million in invested capital in carefully chosen portfolio companies alongside Fund managers. The Fund has established co-investment programs focused on opportunities sourced from its core private equity portfolio, emerging manager program, and in-State investments.

Absolute Return Strategies

The investment goals for the absolute return strategies program are to provide diversified superior risk-adjusted returns with low correlation to other asset classes. The absolute return strategies portfolio invests with hedge fund managers on a global basis across multiple security types and asset classes. The portfolio values long-term partnerships with investment managers who have shown an ability to consistently deliver top-quartile returns and who partner with the Fund to better align investor and fund manager interests.

The portfolio, as of March 31, 2016, consists of roughly 26 core investments across strategies including hedged equity, credit, global macro, managed futures, distressed debt and emerging markets. The portfolio seeks diversification through a multi-manager and multi-strategy approach, typically investing in vehicles which generate uncorrelated returns and those which can lower the overall risk and volatility of the Fund's portfolio.

As of March 31, 2016, the absolute return strategies portfolio generated a return of (4.78) percent for the fiscal year, as compared to the HFRX Global Hedge Fund Index return of (8.19) percent.

Opportunistic

The opportunistic portfolio invests across a broad range of investment strategies that do not fit neatly into the definition of traditional asset classes, or share characteristics of multiple asset classes. The portfolio includes investments across the capital structures of both public and private companies, property, and real assets that are distinguished from the mandates of the other asset classes by their history, investment structures, terms, duration, risk/return profiles or other relevant characteristics. Additionally, the portfolio seeks to take advantage of short- to medium-term market dislocations. The portfolio's objectives are to provide diversification to the overall Fund portfolio, preserve investment capital, increase total portfolio return with low correlation to other asset classes, and/or reduce the risk of the overall Fund portfolio.

The investment objectives are accomplished by investing in strategic opportunities that have resulted from market dislocations, regulatory reforms, capital shortages, structural changes, and stress or distress among asset owners. These opportunities may exhibit lower risk and higher current income than the Fund's investments in more traditional asset classes and provide a source of capital to investment ideas that do not fit neatly into existing asset categories, or that span multiple categories.

The opportunistic portfolio affords the Fund the opportunity to capture returns in advance of heavy institutional asset flows (early mover advantage), or acquire a preferential position in situations that are capacity constrained. The portfolio also allows the Fund to invest more flexibly across asset classes, geographies and capital structures.

The structures of these investments will vary greatly depending on the opportunity, and may range from broad strategic partnerships, where the Fund staff is able to leverage the resources of an institution to invest across a wide number of asset classes or strategies, to a more targeted approach that may include investments through various vehicles. As of March 31, 2016, the portfolio has generated a one-year total return of 4.0 percent.

Real Assets

The Real Assets portfolio is the Fund's newest alternative asset allocation, having first launched in 2014. To date, the Real Assets portfolio has made investments in a diverse basket of assets including commodities, farmland, inflation-linked bonds, infrastructure and renewables. The Real Assets portfolio's objectives are to add alpha to the Fund's overall portfolio return and offer inflation participation opportunities while maintaining a low correlation to traditional asset classes over time. The performance of the asset class is primarily driven by broad, macroeconomic factors including commodity prices and resource demand, demographics and inflation. The portfolio also seeks to benefit from investment themes that will play out over multiple economic cycles, including the development of renewable infrastructure and the growth of the middle class in emerging and frontier economies.

Real asset investments offer exposure to varied return sources, including capital appreciation and cash flow from income. The diversified approach reduces realized volatility and allows the portfolio to benefit from long-term growth investment themes. The portfolio is still in its early stages and has deployed less than 10 percent of the targeted allocation. As of March 31, 2016, the Real Assets portfolio allocation was 0.3 percent of the total Fund and produced a total return of (16.64) percent. These results were attributed to continued weakness in the energy markets and a low inflation environment. Also, the timing of cash flows have, as expected, produced a negative drag due to the early stage of certain investments. We expect performance to improve as managers begin making investments based on the Fund's commitments. Consistent with the Real Assets portfolio's prudent and conservative approach, considerations will be made to engage co-investment real asset opportunities. Co-investments will enable the Fund to obtain attractive exposures at lower fees. Staff is also in the process of developing a custom benchmark to provide robust portfolio monitoring.

Environmental, Social and Governance (ESG) Investment Program

The Fund established the Green Strategic Investment Program in 2009, committing to invest \$500 million in environmentally focused investment strategies across all asset classes. As of December 2015, that commitment had expanded to \$5 billion. Companies that have developed and adhere to sustainable business practices strengthen their competitive position in the market, which enhances the potential for increased returns for the Fund.

This year the Fund, in concert with one of its strategic partners, Goldman Sachs Asset Management, developed a new alternative large cap domestic equity index, the FTSE Russell 1000 GSAM Risk Aware Low Emissions Index. In January 2016, the Fund launched this new index with an initial investment of \$2 billion. This innovative strategy allows the Fund to reduce its exposure to green-house-gas emissions by over 70 percent while maintaining a 25 basis point tracking error to the underlying index. Relying on the Carbon Disclosure Project's data and focusing on emissions reduction per level of tracking error, the investment avoids or reduces exposure to companies that are most heavily reliant on fossil fuels.

In public equity, the Fund maintains its ongoing commitment to sustainable investments in the FTSE Environmental Technology 50 Index, focusing on sustainability and climate change. The Fund also continues to invest in leading sustainable active managers. Generation, a leading provider of sustainable investment solutions, continues to grow, ending the fiscal year with \$960 million under management. The Fund ended the year with a \$285 million investment in the Rockefeller Global Sustainability & Impact Strategy. The Rockefeller Strategy incorporates six sustainability criteria: governance, products and marketing, workplace, environmental stewardship, community, and human rights. Rockefeller fuses its sustainability criteria with traditional fundamental bottom-up research to create a core global equity portfolio.

The Fund continues to hold World Bank green bonds, which support projects in the World Bank's member countries that meet specific criteria for low carbon development. Purchasing these bonds provided a rare opportunity for the Fund to support climate change solutions within its fixed income portfolio at competitive prices.

Overview of Investments

continued

New York Business Development Corporation

The Fund seeks to diversify its investments and achieve a risk-adjusted rate of return through a commitment to the New York Business Development Corporation (NYBDC). NYBDC underwrites loans to small businesses in New York State, often with guarantees from the Small Business Administration, for working capital, equipment, the acquisition of real property, capital improvements and the refinancing of existing loans. NYBDC has successfully completed loans to a wide range of business enterprises, including retailers, restaurants, small manufacturers and a variety of other service businesses across the State. By focusing exclusively on small business lending, NYBDC can frequently offer more favorable terms than other lenders. NYBDC has a goal of making at least 25 percent of its loans to women- or minority-owned businesses. NYBDC also has an active Veteran's Loan Program where New York business owners who serve in the Guard or Reserve, or are honorably-discharged former active duty members can access small business loans.

The Fund has been an investor in NYBDC since 1987 with commitments totaling \$400 million. In 2010, the Fund approved a fourth \$100 million commitment to support NYBDC's small business loan program. Since this program began in 1987, NYBDC has made 1,108 loans totaling \$377 million to businesses that employ over 22,700 New Yorkers. During the fiscal year ended March 31, 2016, NYBDC made 35 loans totaling \$19.1 million.

Financing for Businesses in New York State

In 2000, the Fund initiated the New York State Private Equity Investment Program. The In-State Program is designed to generate a market rate of return consistent with the risk of private equity while increasing the diversification of the Fund's investment portfolio and expanding the availability of capital for New York State businesses. By making sound strategic investments in new and expanding New York companies, and making equity capital available to small businesses often overlooked by investment professionals in this asset class, the program is also proving to be an important contributor to the State's economy. The In-State Program provides a model for how the pension fund can identify profitable investment opportunities and generate market rate returns, while supporting business development and job growth in New York State.

On March 31, 2016, the Fund's private equity portfolio included investments in over 275 New York businesses with a fair value of \$1.4 billion. This figure reflects only the Fund's share of these investments; the total value of New York companies held by the Fund's partnerships was more than \$21 billion as of September 30, 2015 (the most recent data available). Included in the Fund's New York State portfolio are: Flat World Knowledge in Ossining, PACS Industries in Bethpage, Multisorb in Buffalo, Auburn Armature Inc. in Auburn, Movable Ink in New York City, Vnomics in Rochester and CognitiveTPG in Ithaca.

As of March 31, 2016, the Fund had over \$700 million of remaining commitments to nineteen different private equity managers. Commitments in this program totaled \$1.6 billion. These commitments are devoted exclusively to New York State investment opportunities. The nineteen managers in the program are:

- *Ascend Ventures*, a technology venture fund located in New York City;
- *Ascent Biomedical Ventures NY*, a New York City-based venture capital fund focusing on life sciences;
- *CSFB New York Co-investment Fund*, a fund that makes investments alongside other private equity funds investing in New York State;
- *Contour Venture Partners*, an early-stage venture fund based in New York City;
- *DeltaPoint Capital*, a growth equity fund located in Rochester;
- *DFJ Gotham*, a New York City-based fund focused on early-stage venture capital investments;
- *Easton Hunt Capital Partners*, a New York City-based fund that pursues a broad strategy of investing in companies in a wide range of industries and stages of development;
- *FA Technology Ventures*, a venture capital fund located in Albany and focusing on information and energy technology;
- *Founders Equity*, a New York City-based fund that makes growth equity investments;
- *Graycliff Partners*, a New York City-based fund that targets buyout and growth equity investments;
- *Tribeca Venture Partners (fka Greenhill SAVP New York)*, a New York City-based early-stage applied technology venture firm focused on investing in business information and technology-enabled services companies;
- *Primary Venture Partners (fka High Peaks Ventures)*, an early-stage venture capital fund based in New York City and Albany;
- *Hudson River Co-investment Fund*, a special situations fund managed by Hamilton Lane Advisors that makes investments alongside other private equity managers in New York;
- *Milestone Venture Partners*, a New York City-based fund that focuses on companies providing technology-enhanced business services;
- *Paladin Homeland Security Fund (NY)*, a Washington, D.C.-based fund that opened a New York office to invest in companies that address a broad range of government and commercial security needs;
- *SoftBank Capital NY*, a New York City and Buffalo-based fund that invests in digital media and technologies that leverage broadband;
- *Summer Street Capital Partners*, a growth equity investment fund located in Buffalo;
- *Trillium Lakefront Partners NY*, a Rochester-based fund that focuses on investing in technology companies in upstate New York; and
- *Wheatley Partners*, a technology venture fund with a focus on information and medical technology located in New York City and Long Island.

Corporate Governance

Comptroller DiNapoli's role as a fiduciary keeps him engaged in discussions and negotiations with management and boards of directors of companies in the Fund's portfolio regarding corporate governance and accountability. During the fiscal year ended March 31, 2016, the corporate governance staff monitored the Fund's portfolio companies for compliance with industry best practices to assure that: (i) the Fund's investments were not subject to undue risks; and (ii) the Fund's portfolio companies were being managed in a sustainable fashion to help ensure long-term value. Further, the Fund actively sought reforms that aimed to enhance corporate risk oversight and management, transparency and accountability. Staff also voted proxies in-house for the Fund's shares at over 2,000 U.S. and international corporations.

The following shareholder engagements were initiated during the 2015-2016 fiscal year:

- **Board Accountability:** The Comptroller continued to file proposals requesting that boards adopt best practices that make them more accountable to shareholders. The Fund filed five proposals promoting diversity in board selection, one of which was withdrawn after an agreement was reached with the company. An additional proposal was filed calling for enhanced shareholder rights in the board of director's election process.
- **Environmental Management:** Thirteen resolutions were also filed with companies on the issue of climate change management, five of which were withdrawn following agreements with the companies. An additional two proposals filed by the Fund sought to have companies enhance their sustainability reporting. The Fund filed one resolution with an oil and gas company asking the company to commit to placing an independent director with environmental expertise on its board.
- **Global Labor Standards/Workers' Rights:** The Fund continued its participation in an international engagement on workers' rights coordinated by the United Nations' Principles for Responsible Investment (PRI) campaign. As part of this initiative, the Fund submitted and subsequently withdrew with agreement two resolutions to portfolio companies designed to promote improved labor and environmental standards in their foreign and domestic operations, and those of their significant suppliers.
- **Political Spending Disclosure:** Resolutions were filed at 15 portfolio companies asking for annual disclosure of political contributions made with corporate funds. Resolutions at six companies were withdrawn when the companies agreed to make the requested disclosures. As a result of the Fund's success in 2013, Qualcomm agreed to settle a lawsuit brought by the Fund in the Delaware Court of Chancery, which sought to compel it to disclose how shareholder funds were being spent for political purposes. The Fund also reached agreement with Oracle Corporation last year to make similar disclosures.
- **Sexual Orientation:** The Fund negotiated agreements with two portfolio corporations to amend their board of directors nominating committee charters to include sexual orientation and gender identity in their description of diversity.

Investment Results

Based on fair values as of March 31, 2016.

	Annualized Rate of Return			
	1 Year	3 Years	5 Years	10 Years
Total Fund	0.19%	6.66%	7.25%	5.69%
Global Equity	(2.86)	8.04	8.03	5.38
MSCI All Country World Index Free	(4.34)	5.54	5.22	4.08
Private Equity	9.12	11.85	11.11	10.77
Cambridge U.S. Private Equity Index	5.26	12.37	12.53	11.33
Real Estate	13.14	14.02	14.14	6.09
National Council of Real Estate Investment Fiduciaries (NCREIF)	13.35	12.04	12.18	7.76
Absolute Return Strategy	(4.78)	3.46	3.69	3.23
HFRX Global Hedge Fund Index	(8.19)	(1.09)	(1.59)	(0.52)
Opportunistic Alternatives	4.00	6.24	5.53	–
Treasury Inflation-Indexed Securities	2.26	(0.31)	4.44	5.35
Barclays Capital U.S. TIPS Index	1.51	(0.71)	3.02	4.62
Core Fixed Income	1.81	2.13	3.27	4.96
Barclays Capital Aggregate Bond Index	1.96	2.50	3.78	4.90
Short-Term Investments	0.88	0.55	0.46	1.54

These figures are for investment management purposes and may not agree with audited statements.

Investment return calculations were prepared using a time-weighted rate of return. Private Equity and Real Estate are reported on a three-month lag and Absolute Return Strategy on a one-month lag (adjusted by cash flows).

Investment Summary

The following table summarizes the fair values for March 31, 2016 and 2015 (Dollars In Thousands):

Asset Type	Fair Value March 31, 2016	Percentage of Total Fair Value*	Fair Value March 31, 2015	Percentage of Total Fair Value*
Domestic Equity	\$ 61,544,070	34.5%	\$ 67,219,661	36.4%
Global Fixed Income	44,661,200	25.0	47,652,210	25.8
International Equity	29,211,336	16.4	27,073,871	14.7
Private Equity	13,961,373	7.8	14,247,374	7.7
Real Estate	12,639,723	7.1	12,123,440	6.6
Absolute Return Strategy	8,029,411	4.5	8,388,806	4.5
Short-Term Investments	5,578,801	3.1	5,252,486	2.9
Opportunistic Funds	1,719,316	1.0	1,292,161	0.7
Mortgage Loans	796,403	0.4	852,955	0.5
Real Assets	498,068	0.3	399,080	0.2
Total Investments	\$ 178,639,701	100.0%	\$ 184,502,044	100.0%

* This table reflects percentages derived from financial statement figures and may differ slightly from the asset allocation figures because certain investments have been reclassified.

Asset Allocation — March 31, 2016*

The Fund diversifies its assets among various classes including domestic and international equity, fixed income, inflation-indexed securities, real estate, private equity and absolute return strategies.

Asset liability studies, conducted periodically with help from an investment consultant, identify the optimal mix of assets to meet the growth requirements of pension obligations while controlling risk as measured by return volatility. In the fiscal year ended March 31, 2015, the Fund completed an asset liability analysis and adopted a new Long-Term Policy Allocation, as reflected in the schedule below. As implementation of the new Long-Term Policy Allocation is expected to take several years, the Fund established an Interim Policy Allocation for the transition period.

The Fund has formal rebalancing guidelines, which ensure a disciplined process for meeting asset allocation goals, as well as allocation ranges for individual asset classes, which minimize unnecessary turnover.

Asset Type	Allocation as of March 31, 2016	Current Interim Policy	Long-Term Policy Allocation
Equity			
Domestic Equity	37.6%	38.0%	38.0%
International Equity	15.1	16.0	13.0
Alternatives			
Private Equity	7.8%	8.0%	10.0%
Real Estate	6.7	6.0	8.0
Absolute Return	3.5	3.0	3.0
Opportunistic Portfolio	1.0	1.0	3.0
Real Asset	0.3	1.0	3.0
Bonds & Mortgages	21.9%	20.0%	18.0%
Cash	2.5%	2.0%	2.0%
Inflation-Indexed Bonds	3.6%	5.0%	2.0%

*A detailed listing of the New York State and Local Retirement System's assets as of March 31, 2016, is on our website at www.osc.state.ny.us.

Global Equity Performance

As of March 31, 2016.

	Total Assets (Dollars in Millions)	Annualized Rate of Return				Inception Date	Since Inception Performance	Benchmark Performance*
		1 Year	3 Years	5 Years	10 Years			
Total Global Equity	\$ 93,729.8	(2.86)%	8.04%	8.03%	5.38%			
MSCI All Country World Index Free		(4.34)%	5.54%	5.22%	4.08%			
Total Large Cap Composite	\$ 41,372.4	1.57%	11.72%	11.48%	6.81%	2/1/83	11.04%	11.01%
CRF Large Cap Index Fund	34,603.6	1.71	11.74	11.50	7.02	8/1/78	11.47	11.44
CRF High Efficiency Defensive Index Fund	2,584.0	–	–	–	–	1/1/16	4.21	4.12
CRF Low Emission Index Fund	1,989.6	–	–	–	–	1/1/16	0.97	1.05
Aronson+Johnson+Ortiz	1,187.2	(5.79)	9.66	10.89	6.33	12/1/04	7.31	6.51
Eagle Capital	506.0	(2.20)	–	–	–	9/1/14	1.83	3.94
Piedmont Investment Advisors	502.1	(1.14)	11.46	10.32	–	3/1/10	11.55	13.15
Russell Top 200 (S&P 500 To 1/1/16)		1.16%	11.59%	11.44%	6.94%			
Total Mid Cap Composite	\$ 14,678.0	(4.48)%	8.43%	8.92%	7.21%	7/1/91	11.49%	12.11%
CRF Midcap Index Fund	12,724.3	(4.11)	9.41	9.42	7.84	11/1/91	11.73	11.74
Progress Investment	950.0	(8.25)	7.09	8.00	6.46	9/1/94	10.99	10.71
Apex Capital	337.6	(9.84)	8.89	9.45	–	3/1/08	10.32	8.84
First Pacific	275.8	(12.33)	(2.86)	–	–	11/1/12	(0.40)	12.33
Iridian Asset	390.4	(4.80)	–	–	–	1/8/15	(0.68)	0.97
Russell Midcap (S&P 400 Mid Cap To 1/1/16)		(5.03)%	8.91%	9.20%	7.62%			
Total Small Cap Composite	\$ 4,992.3	(7.63)%	7.80%	8.33%	6.47%	7/1/91	10.00%	9.59%
CRF Small Cap Index Fund	1,637.3	(8.52)	8.20	8.89	6.41	10/1/05	7.40	7.21
Brown Capital	880.8	(0.10)	12.62	12.57	12.85	9/1/94	14.42	8.63
EARNEST Partners	790.3	(5.27)	9.90	9.69	6.08	6/1/01	9.71	7.80
Systematic Financial	393.2	(9.04)	5.31	6.12	5.10	9/1/02	8.65	8.90
Leading Edge	360.1	(9.68)	–	–	–	4/1/15	(9.68)	(9.76)
Artisan Partners	317.8	(6.95)	–	–	–	8/28/13	3.82	4.47
Lombardia Capital Partners	295.7	(9.06)	5.31	6.88	–	5/1/08	8.65	6.35
PENN Capital	267.5	(18.83)	–	–	–	9/1/13	(3.74)	2.62
Ariel Microcap	49.5	(27.43)	–	–	–	11/1/13	(14.75)	0.33
Russell 2000 Index		(9.76)%	6.84%	7.20%	5.26%			
Total Long-Only Alpha Composite	\$ 1,076.3	(3.84)%	11.31%	–	–	9/1/11	14.90%	3.38%
Valueact Capital Partners II, LP	516.6	(12.01)	10.06	–	–	9/1/11	14.03	3.38
Triam Partners Strategic Fund II, LP	228.0	5.84	11.00	–	–	1/1/13	12.25	3.90
Triam Partners Strategic Investment Fund-N, LP	214.3	9.19	–	–	–	2/1/15	7.83	(1.44)
Triam Partners Strategic Fund I, LP	117.4	(3.29)	9.20	–	–	10/1/11	13.90	4.88
HFRI Equity Hedge Index		(4.55)%	2.57%	1.74%	2.73%			

* Benchmarks for all accounts will vary according to mandate.

Global Equity Performance

continued

As of March 31, 2016.

	Total Assets (Dollars in Millions)	Annualized Rate of Return			Inception Date	Since Inception Performance	Benchmark Performance*
		1 Year	3 Years	5 Years			
Total Progress Composite	\$ 950.0	(8.25)%	7.09%	8.00%	9/01/94	10.99%	10.71%
Affinity Investment	141.1	(10.23)	–	–	9/23/14	(2.20)	2.60
AH Lisanti	52.2	(9.86)	–	–	7/01/14	(0.13)	0.02
Channing Capital	165.6	(3.52)	11.67	11.77	7/01/05	8.22	8.10
Decatur Capital Management	79.2	(9.30)	–	–	8/01/13	4.43	8.77
Denali Advisors	140.3	(1.38)	12.43	12.35	3/01/08	10.14	8.80
Hahn Capital Management	120.8	(4.50)	–	–	8/01/13	5.11	8.60
Monarch Partners	138.3	(10.23)	–	–	8/01/13	4.61	5.24
Poplar Forest	36.4	(13.49)	–	–	9/23/14	(8.68)	2.60
Stoneridge	76.1	(19.78)	–	–	7/01/14	(8.32)	0.02
Progress Composite Benchmark		(4.79)%	9.70%	9.85%			
Total FIS Composite	\$ 952.0	(5.88)%	–	–	10/01/13	3.42%	3.66%
Athena Global Investors	49.7	(11.44)	–	–	10/01/13	0.98	7.83
BRC Investment	161.3	(9.76)	–	–	10/01/13	7.15	8.28
Decatur Capital Management	129.5	(1.58)	–	–	10/01/13	11.97	12.05
Lombardia Capital Mangement	48.9	(3.03)	–	–	10/01/13	(1.93)	(1.33)
Global Alpha Capital Management	60.3	7.99	–	–	10/01/13	10.66	3.76
Chautauqua Capital Management	62.2	0.97	–	–	10/01/13	2.39	(2.17)
Ativo Capital Management	27.8	(16.36)	–	–	10/01/13	(1.36)	(4.30)
Somerset Capital Management	21.3	(8.04)	–	–	10/01/13	(0.03)	(4.30)
Martin Investment	37.6	(4.99)	–	–	12/01/14	(1.32)	(5.39)
FIS Frontier Market	12.7	(5.20)	–	–	10/01/13	(3.29)	(1.43)
FIS Global Tactical Account	190.9	(5.09)	–	–	10/01/13	4.81	–
Osmosis Investment Management	61.3	–	–	–	11/01/15	(2.89)	(5.80)
Redwood Investments	88.5	(3.87)	–	–	04/01/15	(3.87)	0.50
MSCI All Country World Index Free		(4.34)%	5.54%	5.22%			
Total Leading Edge	\$ 360.1	(9.68)%	–	–	4/1/2015	(9.68)%	(9.76)%
Granite Investment Partners	49.4	(10.67)	–	–	4/1/2015	(10.67)	(9.76)
Matarin Capital Management	53.2	(5.19)	–	–	4/1/2015	(5.19)	(9.76)
Palisades Investment Partners	27.8	(6.90)	–	–	4/1/2015	(6.90)	(9.76)
Nicholas Investment Partners	24.7	(18.41)	–	–	4/1/2015	(18.41)	(11.84)
Nichols Asset Management	17.1	(14.63)	–	–	4/1/2015	(14.63)	(11.84)
Redwood Investments Scg	26.8	(5.41)	–	–	4/1/2015	(5.41)	(11.84)
Rice Hall James	27.6	(7.27)	–	–	4/1/2015	(7.27)	(11.84)
Stoneridge Investment Partners	23.2	(20.89)	–	–	4/1/2015	(20.89)	(11.84)
Channing Capital Management	54.4	(9.07)	–	–	4/1/2015	(9.07)	(7.72)
Phocas Financial Corporation	55.8	(6.59)	–	–	4/1/2015	(6.59)	(7.72)
Russell 2000 Index		(9.76)%	6.84%	7.20%			

* Benchmarks for all accounts will vary according to mandate.

Global Equity Performance

continued

As of March 31, 2016.

	Total Assets (Dollars in Millions)	Annualized Rate of Return				Inception Date	Since Inception Performance	Benchmark Performance*
		1 Year	3 Years	5 Years	10 Years			
Brandes Investment	\$ 1,041.1	(6.53)%	6.72%	6.01%	2.58%	11/01/99	6.25%	4.04%
Generation Investment	960.5	6.01	13.20	11.22	–	4/08/09	16.98	12.56
Templeton Investment	1,847.8	(7.84)	5.81	7.00	–	3/01/11	6.84	5.69
T. Rowe Price	866.5	(1.04)	11.50	8.38	–	3/01/11	8.42	5.69
FIS Group	952.0	(5.88)	–	–	–	10/01/13	3.42	3.66
FTSE Environmental Technology 50	108.9	(3.57)	9.43	0.77	–	11/01/09	2.18	1.85
Goldman Sachs	1,949.6	(2.40)	–	–	–	7/14/14	(1.08)	(1.15)
Rockefeller	285.6	(3.77)	–	–	–	2/23/15	(4.13)	(4.74)
MSCI All Country World Index Free		(4.34)%	5.54%	5.22%	4.08%			
Acadian Asset Management	\$ 1,425.5	3.84%	3.18%	2.70%	2.47%	11/01/04	6.12%	4.91%
Baillie Gifford	1,894.8	(2.80)	4.42	5.54	5.13	2/01/99	5.43	3.39
Blackrock ACWI ex US	8,849.7	(9.01)	0.55	0.56	2.21	11/01/04	5.17	4.91
Wellington Management	744.8	–	–	–	–	3/01/16	5.70	8.13
MSCI All Country World Free ex U.S.		(9.19)%	0.32%	0.31%	1.94%			
Capital Guardian	\$ 1,270.8	(7.54)%	2.85%	3.16%	2.44%	9/01/89	7.00%	4.24%
Mondrian Investment	1,397.4	(6.82)	4.54	3.78	3.19	1/01/98	6.55	4.25
Baring International A/P	831.2	(9.68)	2.62	2.83	2.69	4/01/02	6.42	5.33
Blackrock MSCI Europe	3,663.6	–	–	–	–	8/27/15	(3.17)	(3.21)
MSCI EAFE Index		(8.27)%	2.23%	2.29%	1.80%			
Morgan Stanley Emerging Markets	\$ 865.3	(8.06)%	(2.97)%	(1.29)%	3.50%	10/01/93	6.89%	5.43%
Morgan Stanley Frontier Markets	140.2	–	–	–	–	11/01/15	(6.19)	(5.62)
Genesis Investment Management	584.9	(9.12)	(2.90)	–	–	3/01/12	(0.85)	(3.67)
Quantitative Management Associates	917.5	(12.57)	(3.89)	–	–	2/01/12	(0.82)	(2.24)
Rock Creek Emerging Markets Fund	389.0	(22.63)	–	–	–	10/01/13	(9.60)	–
MSCI Emerging Markets Index		(12.03)%	(4.50)%	(4.13)%	3.02%			
Cevian Capital II, LP	\$ 424.8	(13.35)%	4.18%	–	–	9/01/11	9.94%	3.38%
HFRI Equity Hedge Index		(4.55)%	2.57%	1.74%	2.73%			

* Benchmarks for all accounts will vary according to mandate.

Domestic Equity Portfolio — Ten Largest Holdings

As of March 31, 2016.

Company	Shares	Fair Value	Percentage of Domestic Equity
Apple, Inc.	15,295,394	\$ 1,667,044,992	2.7%
Microsoft Corp.	22,579,231	1,247,050,928	2.0
Exxon Mobil Corp.	11,054,469	924,043,064	1.5
Johnson & Johnson	7,880,602	852,681,136	1.4
General Electric Company	23,906,400	765,522,028	1.2
Berkshire Hathaway, Inc. - Class B	5,185,015	735,649,928	1.2
Facebook, Inc. - Class A	5,681,256	648,231,310	1.0
AT & T, Inc.	16,197,626	634,461,010	1.0
Alphabet, Inc. Class C	819,134	610,213,873	1.0
J.P. Morgan Chase & Company	10,267,475	608,039,870	1.0

Fixed Income Portfolio and Comparison

As of March 31, 2016.

Sector	Fair Value (Dollars in Millions)	Fair Value Percentage	Effective Duration	Current Yield
Treasuries	\$ 5,599.8	16.3%	8.66	3.44%
Agencies	2,033.4	5.9	5.23	1.56
Corporate Bonds	14,378.6	41.8	6.39	3.70
Asset-Backed	2,382.7	6.9	1.78	2.23
Commercial Mortgage-Backed	1,716.5	5.0	2.87	4.43
Mortgage-Backed	4,974.6	14.5	3.54	3.86
Collateralized Loan Obligations	2,947.1	8.6	0.02	2.41
Municipal Bonds	382.4	1.1	10.55	4.65
Totals	\$ 34,415.0	100.0%	5.27	3.41%
TIPS	\$ 6,658.8		5.52	1.89%
Blackrock	\$ 1,997.3		2.95	5.27%
Neuberger Berman	\$ 1,022.6		2.39	4.34%
Semper Capital	\$ 247.2		1.32	2.34%
Smith Graham	\$ 320.4		3.5	2.69%

Fixed Income Performance

As of March 31, 2016.

	Annual Rate of Return		
	1 Year	3 Years	5 Years
Common Retirement Fund — Core	1.63%	2.21%	3.97%
Treasuries	3.65	2.24	5.06
Agencies	2.00	1.59	3.26
Corporate Bonds	1.63	2.81	4.36
Asset-Backed	1.23	N/A	N/A
Commerical Mortgage-Backed	1.89	2.48	4.58
Mortgage-Backed	2.41	2.84	3.44
Collateralized Loan Obligations	(1.60)	N/A	N/A
Barclays Capital Aggregate Bond Index	1.96	2.50	3.78
Common Retirement Fund — TIPS	2.26	(0.31)	4.44
Salomon Smith Barney — TIPS Index	1.51	(0.71)	3.02

Fixed Income Portfolio — Ten Largest Holdings*

As of March 31, 2016.

Issue	Fair Value (Dollars in Millions)	Percentage of Fixed Income
Treasury Inflation-Indexed Securities Due 4/15/29	\$ 1,293.1	2.85%
Treasury Bonds Due 8/15/45	1,116.4	2.46
Treasury Inflation-Indexed Securities Due 1/15/25	881.7	1.94
Treasury Inflation-Indexed Securities Due 4/15/28	689.4	1.52
Treasury Inflation-Indexed Securities Due 1/15/19	687.6	1.52
Treasury Inflation-Indexed Securities Due 7/15/18	668.1	1.47
Treasury Inflation-Indexed Securities Due 7/15/19	626.0	1.38
Treasury Inflation-Indexed Securities Due 2/15/46	522.4	1.15
Treasury Bonds Due 12/15/18	431.4	0.95
Treasury Inflation-Indexed Securities Due 1/15/26	407.0	0.90
Total	\$ 7,323.1	16.15%

*A detailed listing of the New York State and Local Retirement System's assets as of March 31, 2016, is on our website at www.osc.state.ny.us.

Real Estate Portfolio

As of March 31, 2016.

	Equity Amount*	Percentage	Mortgage Amount*	Percentage
Property Diversification				
Industrial/R&D	\$ 994,086,548	7.9%	\$ –	0.0%
Land for Development	–	0.0	–	0.0
Lodging	667,524,886	5.3	–	0.0
Office	3,776,811,919	29.9	54,625,529	6.9
Other	2,071,699,171	16.3	–	0.0
Residential	2,187,271,406	17.3	402,388,904	50.5
Retail	2,946,909,193	23.3	339,388,478	42.6
Total	\$ 12,644,303,122	100.0%	\$ 796,402,911	100.0%
Regional Diversification				
Northeast	\$ 2,606,900,811	20.6%	\$ 796,402,911	100.0%
Mideast	1,013,224,629	8.0	–	0.0
Southeast	1,014,923,150	8.0	–	0.0
Southwest	1,410,437,746	11.2	–	0.0
Midwest	1,181,036,566	9.3	–	0.0
Mountain	359,415,434	2.8	–	0.0
Pacific	2,779,061,405	22.0	–	0.0
Other	2,279,303,381	18.1	–	0.0
Total	\$ 12,644,303,122	100.0%	\$ 796,402,911	100.0%

* Note: Based on NYSCRF full real estate portfolio fair value.
These figures may not agree with the audited statements due to timing and classification differences made for investment management purposes.

Opportunistic Real Estate

Number of Active Partnerships	Capital Committed (Dollars in Millions)	Capital Contributed (Dollars in Millions)	Current Fair Value (Dollars in Millions)	Cumulative Distributions (Dollars in Millions)	Total Value / Exposure (Dollars in Millions)
74	\$13,394.9	\$ 10,279.7	\$ 4,427.1	\$ 7,831.2	\$ 12,258.3

These figures may not agree with the audited statements due to timing and classification differences made for investment management purposes.

Alternative Investments Summary

As of March 31, 2016.

	Number of Partnerships	Capital Committed	Capital Contributed	Net Asset Value	Cumulative Distributions	Total Value
Private Equity Funds						
Buyout	142	\$ 24,401,901,685	\$ 20,899,811,465	\$ 7,787,978,719	\$ 23,646,515,781	\$ 31,434,494,500
Distressed/Turnaround	20	2,091,687,520	1,852,496,167	861,581,018	1,569,913,236	2,431,494,254
Growth	43	5,807,123,516	3,576,688,172	2,414,582,657	2,888,644,789	5,303,227,446
Venture	46	3,428,298,060	3,297,973,858	1,547,957,381	2,779,769,908	4,327,727,289
Special Situations	42	5,319,779,719	4,264,504,866	1,281,427,408	4,408,220,664	5,689,648,072
Other	N/A	N/A	67,846,278	67,846,278	N/A	67,846,278
Total*	293	\$ 41,048,790,500	\$ 33,959,320,806	\$ 13,961,373,461	\$ 35,293,064,378	\$ 49,254,437,839
Absolute Return Strategy Funds						
Equity Long-Bias	5	N/A	N/A	\$ 1,501,047,588	N/A	\$ 1,501,047,588
Equity Long/Short	7	N/A	N/A	1,232,462,278	N/A	1,232,462,278
Event Driven	20	N/A	N/A	1,632,530,215	N/A	1,632,530,215
Fund of Funds	4	N/A	N/A	629,732,191	N/A	629,732,191
Quantitative	1	N/A	N/A	136,073,454	N/A	136,073,454
Relative Value	3	N/A	N/A	829,430,028	N/A	829,430,028
Structured Credit	2	N/A	N/A	388,808,854	N/A	388,808,854
Tactical Trading	8	N/A	N/A	1,679,326,275	N/A	1,679,326,275
Total	50			\$ 8,029,410,884		\$ 8,029,410,884
Opportunistic Funds						
	16	\$ 3,530,000,000	\$ 1,675,039,907	\$ 1,719,316,586	\$ 385,155,236	\$ 2,104,471,822
Real Assets	5	\$ 1,300,000,000	\$ 580,009,705	\$ 498,067,520	\$ 306,227	\$ 498,373,747
* The total figures include the Fund's private equity investments and other investments through the New York Business Development Corporation (NYBDC).						

Domestic Equity Management Fees

For the Fiscal Year Ended March 31, 2016.

	Management Fees	Incentive Fees	Total
Apex Capital Management, Inc.	\$ 1,786,711	\$ –	\$ 1,786,711
Ariel Investments, LLC	473,617	–	473,617
Aronson + Johnson + Ortiz, LP	1,218,044	908,854	2,126,898
Artisan Partners, LP	3,388,280	–	3,388,280
BlackRock Institutional Trust Company, NA	99,170	–	99,170
Brown Capital Management, Inc.	6,674,600	–	6,674,600
Eagle Capital Management, LLC	3,860,620	–	3,860,620
Earnest Partners, LLC	2,860,457	–	2,860,457
First Pacific Advisors, LLC	1,970,614	–	1,970,614
FIS Group, Inc.	4,212,289	–	4,212,289
Iridian Asset Management, LLC	2,187,774	–	2,187,774
Leading Edge Investment Advisors, LP	2,831,074	–	2,831,074
Lombardia Capital Partners, LLC	1,358,816	–	1,358,816
PENN Capital Management Company, Inc.	1,570,314	–	1,570,314
Piedmont Investment Advisors, LLC	1,060,872	–	1,060,872
Progress Investment Management Company	7,063,783	–	7,063,783
SASCO Capital, Inc.	876,002	–	876,002
Systematic Financial Management, LP	2,352,196	–	2,352,196
Total	\$ 45,845,232	\$ 908,854	\$ 46,754,086

Domestic Equity Commissions

For the Fiscal Year Ended March 31, 2016.

Broker	Shares	Commission \$ U.S.
Abel Noser Corp.	1,519,120	\$ 55,878
Academy Securities, Inc.	179,418	3,453
American Portfolios Financial Services, Inc.	29,895	1,495
Ancora Securities, Inc.	179,380	8,481
Auerbach Grayson & Company, Inc.	33,625	336
Avondale Partners, LLC	124,272	4,985
B Riley & Company, LLC	709,643	23,194
Baird Robert W. & Company, Inc.	3,438,882	129,086
Barclays Capital, Inc.	13,906,722	384,258
Barrington Research Associates, Inc.	6,105	183
Baypoint Trading, LLC	3,616,445	139,670
Bear Stearns & Company	12,400	434
Benchmark Capital Holdings, LLC	117,236	4,109
Blair, William & Company	1,992,335	73,441
Blaylock & Company, Inc.	479,273	9,585
Bloomberg Tradebook, LLC	6,554,266	133,447
BMO Capital Markets	957,609	31,823
BNP Paribas Prime Brokerage Acting Agent	27,049	1,129
BNY Brokerage	12,258,778	400,156
BOE Securities, Inc.	6,005	300
Boenning & Scattergood, Inc.	30,258	1,513
Brean Capital, LLC	513,937	6,374
Broadcort Capital Corp.	52,820	1,210
Buckingham Research Group, Inc.	612,674	21,846
C L King & Associates, Inc.	3,745,694	76,901
Cabrera Capital Markets, Inc.	5,449,368	110,255
Cantor Fitzgerald & Company	13,389,030	355,363
Capital Institutional Services, Inc.	4,891,683	219,537
Celadon Financial Group, LLC	157,300	1,337
Cheevers & Company	3,311,482	84,446
Citation Group	10,134,911	355,109
Citigroup Global Markets, Inc.	5,859,713	130,045
Collins Stewart, LLC	532,995	21,088
Compass Point Research & Trading, LLC	346,997	13,899
Concept Capital Markets, LLC	67,151	2,015
Conifer Securities, LLC	2,865,927	75,110
Cornerstone Macro, LLC	568,305	18,916

Broker	Shares	Commission \$ U.S.
Cowen & Company, LLC	1,091,712	\$ 39,319
Craig-Hallum Capital Group, LLC	770,547	24,846
Credit Research & Trading Capital Group, LLC	616,298	21,414
Credit Suisse Securities, Ltd.	6,584,966	163,737
CSI U.S. Institutional Desk	63,594	3,180
Cuttone & Company, Inc.	182,296	3,646
Davidson, D.A. & Company, Inc.	26,217	787
Deutsche Bank Securities, Inc.	10,581,616	151,296
Donaldson, Lufkin & Jenrette	508,969	22,838
Dougherty & Company, LLC	301,635	9,756
Drexel Hamilton, LLC	1,465,415	48,759
FBN Securities, Inc.	3,195	128
Fidelity Capital Markets	1,539,675	21,966
FIG Partners, LLC	56,942	1,139
First Analysis Securities Corp.	10,086	303
First Southwest Company	2,635,253	117,753
Fox River Execution Technology, LLC	622,100	3,111
Frank Russell Securities, Inc.	4,772,412	47,724
Friedman Billings & Ramsey	912,581	28,878
Gabelli & Company	41,929	1,713
Goldman Sachs & Company	12,235,874	217,320
Gordon, Haskett & Company	226,790	7,938
Great Pacific Securities, Inc.	4,756,700	86,432
Guggenheim Securities, LLC	37,521	1,501
Guzman & Company	10,990,581	200,991
Hibernia Southcoast Capital, Inc.	8,257	330
Imperial Capital, LLC	14,118	424
Instinet	21,175,611	368,482
Investment Technology Group	69,530,790	785,909
ISI Group, Inc.	4,503,051	80,518
Island Trader Securities, Inc.	1,475,861	32,233
Ivy Securities	2,691,862	122,562
Janney Montgomery Scott, Inc.	61,144	2,446
Jefferies & Company, Inc.	6,854,445	164,532
JMP Securities	1,479,507	54,646
JNK Securities, Inc.	3,008,678	40,223
Johnson Rice & Company, LLC	572,155	22,847

Domestic Equity Commissions

continued

Broker	Shares	Commission \$ U.S.
Jones Trading Institutional Services, LLC	13,274,552	\$ 436,256
J.P. Morgan Securities, Inc.	7,821,369	168,711
Keefe Bruyette & Wood, Inc.	1,484,585	59,129
KeyBanc Capital Markets, Inc.	2,207,617	82,468
Knight Equity Markets, LP	5,440,827	102,858
Leerink Swann & Company	223,943	8,444
Liquidnet, Inc.	30,708,822	431,010
Livingston Monroe Capital Group, Inc.	1,078,800	9,170
Longbow Securities, LLC	248,333	8,104
Loop Capital Markets, LLC	25,876,211	459,552
Luminex Trading and Analytics, LLC	19,074	51
Lynch Jones & Ryan, Inc.	40,106	802
M. Ramsey King Securities, Inc.	211,676	6,311
Macquarie Securities (USA), Inc.	499,537	17,213
Maxim Group	58,869	2,535
Merrill Lynch Pierce Fenner & Smith, Inc.	177,728,543	1,852,563
Mischler Financial Group, Inc.	218,674	5,104
Mizuho Securities USA, Inc.	949	36
MKM Partners, LLC	272,506	11,811
Monness, Crespi, Hardt & Company, Inc.	265,890	13,294
Morgan Stanley & Company, Inc.	10,949,019	288,877
Muriel Siebert	611,220	12,224
National Financial Services Corp.	241,435	4,413
Needham & Company	2,008,081	71,281
Noble International Investments	80,037	3,095
North South Capital, LLC	98,010	3,579
Northland Securities, Inc.	39,562	1,527
Oppenheimer & Company, Inc.	527,746	19,855
Pacific Crest Securities	8,000	320
Penserra Securities, Inc.	11,027,118	99,020
Pershing, LLC	31,955,485	319,412
Pickering Energy Partners, Inc.	71,610	2,506
Piper Jaffray	750,167	28,697
Raymond James & Associates, Inc.	2,707,544	107,265
RBC Capital Markets	5,647,533	226,887
Rosenblatt Securities, LLC	884,479	13,876
Roth Capital Partners, Inc.	207,978	6,626

Broker	Shares	Commission \$ U.S.
Russell Implementation Services, Inc.	107,706	\$ 1,077
Samuel A. Ramirez & Company, Inc.	323,420	6,468
Sandler O'Neill & Partners, LP	373,625	11,682
Sanford C. Bernstein & Company, LLC	5,509,542	135,402
Scotia Capital, Inc.	337,063	12,035
Scott & Stringfellow, Inc.	204,734	9,301
Seaport Group Securities, LLC	569,806	12,432
Security Capital Brokerage, Inc.	1,402,626	62,084
SG Americas Securities, LLC	7,059,806	70,436
SIDCO/ITG, Inc.	50,932	1,403
Sidoti & Company, LLC	1,503,291	58,150
Simmons & Company International	40,800	1,428
Southwest Securities, Inc.	1,695,968	74,562
State Street Global Markets, LLC	4,118,722	63,988
Stephens, Inc.	1,137,702	51,779
Sterne Agee & Leach, Inc.	2,475,907	91,022
Stifel Nicolaus & Company, Inc.	5,259,884	159,796
Strategas Securities, LLC	396,834	13,573
Stuart Frankel & Company, Inc.	20,040	802
Sturdivant and Company, Inc.	6,148,063	123,890
SunTrust Capital Markets, Inc.	1,381,796	54,241
The Advisory Board Company	5,196	156
The Vertical Trading Group, LLC	23,664	825
Themis Trading, LLC	1,373,994	17,175
Topeka Capital Markets, Inc.	4,840,598	128,179
UBS Securities, LLC	2,132,756	56,460
USCA Securities, LLC	48,590	1,701
Valdes & Moreno	350,924	16,430
Vandham Securities Corp.	10,484	315
Verint Systems, Inc.	44,458	2,194
Wedbush Morgan Securities, Inc.	1,339,034	47,606
Weeden & Company	4,409,296	83,947
Wells Fargo Securities, LLC	2,059,989	66,690
Western International Securities, Inc.	6,640	166
Williams Capital Group, LP	12,507,005	277,289
Wunderlich Securities, Inc.	519,289	21,970
Yamner & Company, Inc.	339,736	3,397
Total	676,714,913	\$ 12,426,967

International Equity Management Fees

For the Fiscal Year Ended March 31, 2016.

	Management Fees	Incentive Fees	Total
Acadian Asset Management, LLC	\$ 4,776,886	\$ –	\$ 4,776,886
Baillie Gifford Overseas, Ltd.	5,103,053	–	5,103,053
Baring Asset Management	2,408,309	–	2,408,309
BlackRock Institutional Trust Company, NA	4,230,124	–	4,230,124
Boston Company, LLC	645,906	–	645,906
Brandes Investment Partners, LP	3,985,255	–	3,985,255
Capital Guardian Trust Company	4,496,486	–	4,496,486
Consilium Frontier Equity Fund, LP	132,589	–	132,589
Generation Investment Management, LLP	7,583,751	6,023,109	13,606,860
Genesis Investment Management, LLP	4,225,273	–	4,225,273
Goldman Sachs Asset Management	12,598,702	–	12,598,702
Mondrian Investment Partners, Inc.	4,282,355	–	4,282,355
Morgan Stanley Emerging Markets Fund, Inc.	6,973,856	–	6,973,856
Morgan Stanley Investment Management, Inc.	687,965	–	687,965
Quantitative Management Associates, LLC	2,582,745	–	2,582,745
Rockefeller & Company Asset Management	1,899,748	–	1,899,748
T. Rowe Price Associates, Inc.	3,753,739	–	3,753,739
Templeton Investment Counsel, LLC	4,754,623	–	4,754,623
Wellington Management Company, LLP	472,616	–	472,616
Total	\$ 75,593,983	\$ 6,023,109	\$ 81,617,092

International Equity Commissions

For the Fiscal Year Ended March 31, 2016.

Broker	Shares	Commission \$ U.S.
ABG Securities	495,147	\$ 9,419
Allen & Company, Inc.	379,839	10,640
Aqua Securities, LP	1,000	20
Arqaam Securities, LLC	37,369	2,598
Atlantic Capital	8,441	582
Auerbach Grayson & Company, Inc.	22,561	6,492
Avondale Partners, LLC	1,600	64
B. Riley & Company, LLC	136,860	5,474
Baader Bank AG	70,524	4,405
Baird Robert W. & Company, Inc.	391,182	15,792
Banca IMI Securities Corp.	119,485	1,871
Banco Bilbao Viscaya	1,289,043	1,404
Banco Bradesco S.A.	63,689	634
Banco Icatu	2,400	49
Banco Itau	438,233	3,737
Banco Pactual S.A.	566,900	4,578
Banco Portugues de Investimento	45,732	1,193
Banco Santander	204,996	763
Bank am Bellevue	117,660	10,159
Bank of New York Mellon Corp.	235,870	681
Barclays Capital Securities, Ltd.	529,542	12,326
Barclays Capital, Inc.	12,746,071	162,320
Barclays Global Investors	844,540	6,944
Bay Crest Partners, LLC	289,786	2,898
BBVA Securities, Inc.	471,567	458
Beacon Capital	114,600	3,707
Bear Stearns Securities Corp.	23,088	693
Benchmark Company, LLC	185,381	5,708
Berenberg Bank	373,650	18,584
BGC Brokers, LP	231,982	571
Blair, William & Company	1,285,544	52,999
Bloomberg Tradebook, LLC	719,824	658,670
BMO Capital Markets	395,010	10,145
BNP Paribas Securities Corp.	5,200,021	42,520
BNP Securities	68,400	2,736
BNY Brokerage	58,062,058	193,427
BOE Securities, Inc.	71,700	2,151
Boenning & Scattergood, Inc.	24,451	734

Broker	Shares	Commission \$ U.S.
Brean Murray, Foster Securities, Inc.	72,100	\$ 2,884
Brean Murray, Carret & Company, LLC	37,950	1,518
Brockhouse & Cooper, Inc.	5,150,121	34,619
BTIG, LLC	5,039,892	35,798
B-Trade Services, LLC	8,800	66
C.L. King & Associates, Inc.	17,400	694
Cabrera Capital Markets, Inc.	759,768	3,680
Canaccord Adams, Inc.	12,498	477
Canaccord Capital Corp.	8,762	438
Cantor Fitzgerald & Company	9,860,006	54,139
Capital Institutional Services, Inc.	173,490	6,307
Carnegie Fondkommission	373,703	11,715
Cheevers & Company	6,700	134
China International Corp.	694,000	4,230
CIBC World Markets Corp.	46,931	940
CIMB Securities	7,000,757	9,673
Citibank	9,645	1,169
CITIC Securities Brokerage (HK), Ltd.	9,325,000	1,424
Citigroup Global Markets, Inc.	526,338,244	1,189,512
Clear View Trading	220,969	7,403
Commerzbank Capital Markets Corp.	9,700	843
Compass Point Research & Trading, LLC	70,000	2,800
Cowen & Company, LLC	210,229	6,560
Credit Agricole Indosuez Cheuvreux	152,786	5,514
Credit Lyonnais Securities, Inc.	32,254,978	349,703
Credit Research & Trading Capital Group, LLC	150,354	6,014
Credit Suisse Securities, Ltd.	70,874,994	873,853
CSFB, UK, Ltd	1,751,600	5,958
CV Brokerage, Inc.	77,000	1,540
Daewoo Securities	161,652	6,166
Daiwa Securities America, Inc.	6,708,059	66,999
Danske Securities	396,826	24,505
DBS Securities	184,000	73
DeMatteo Monness, LLC	4,032	202
Deutsche Bank Securities, Inc.	61,422,588	398,867
Deutsche Securities Asia, Ltd.	293,480	3,552
DNB ASA	946,400	8,825
Dougherty & Company, LLC	183,769	7,011

International Equity Commissions

continued

Broker	Shares	Commission \$ U.S.
Dowling & Partners	4,200	\$ 126
Dundee Securities Corp.	78,800	1,149
Edelweiss Securities	73,166	2,206
ENS North America, Inc.	308,300	1,570
Enskilda	22,930	1,300
Equita SIM S.p.A.	155,089	669
Evercore Group, LLC	16,985	170
Evli Bank Plc	18,124	102
Exane, Paris	11,223,829	57,025
FBN Securities, Inc.	39,524	790
Financial Brokerage Group (FBG)	31,556	118
Findentiis Equities S.V.	498,880	7,092
Fox River Execution Technology, LLC	2,490,606	10,322
Fraser Mackenzie	1,033,165	163
Friedman Billings & Ramsey	14,400	576
Genuity Capital Markets	2,296	115
Global Hunter Securities, LLC	198,670	7,441
Goldman Sachs & Company	4,000	160
Goldman Sachs International, Ltd.	72,571,273	494,026
Goodbody Stockbrokers	82,835	4,227
Handelsbanken	520,902	12,597
Helvea S.A.	80,852	3,361
Hibernia Southcoast Capital, Inc.	238,340	9,242
Hong Kong Shanghai Bank	7,197,980	30,767
Howard Weil, Inc.	634,422	25,377
HSBC Bank Plc London	421,995	3,161
HSBC Brokerage (USA), Inc.	89,826,207	309,406
HSBC Securities (Asia), Inc.	94,171	274
HSBC Securities, Inc.	589,700	2,692
ICAP Corporates, LLC	477,292	4,984
ICAP Group	146,200	973
ICICI Brokerage Services Mumbai	748,552	5,147
IDFC Securities, Ltd.	105,980	1,734
India Infoline, Ltd.	1,870,432	10,344
ING Barings, LLC	2,639	154
Instinet	121,524,951	310,740
Investec Henderson Crosthwaite Securities	2,058,126	28,718
Investec Securities, Ltd. Johannesburg	49,477	318

Broker	Shares	Commission \$ U.S.
Investment Technology Group	39,689,839	\$ 216,960
ISI Group, Inc.	1,809,416	39,286
Island Trader Securities, Inc.	109,690	4,153
IXIS Corporate & Investment Bank	113,582	4,447
J & E Davy	2,024	79
J. Vontobel & Company	1,060	73
Janney Montgomery Scott, Inc.	50,152	1,545
Jefferies & Company, Inc.	14,503,823	166,605
JM Financial Institutional Securities, Ltd.	35,824	738
JMP Securities	13,563	503
Johnson Rice & Company, LLC	264,554	9,942
Jones & Associates, Inc.	40,500	1,620
Jonestrading Institutional Services, LLC	252,480	5,095
JP Morgan Securities (Asia Pacific), Ltd	3,550,000	2,852
JP Morgan Securities (Far East), Ltd.	4,240	287
JP Morgan Securities, Inc.	286,636,798	499,155
JP Morgan Securities, Ltd.	353,762	1,018
KBC Financial Products	65,495	895
Keefe Bruyette & Wood, Inc.	1,082,649	25,462
Kempen & Company	35,857	461
Kepler Equities	1,147,722	32,564
KeyBanc Capital Markets, Inc.	467,682	17,414
KGI Securities Company, Ltd.	45,000	172
Kim Eng Securities	81,600	593
Knight Direct, LLC	407,119	1,738
Knight Equity Markets, LP	475,870	2,689
Korea Investment & Securities Company	300,447	20,677
Kotak Securities, Ltd.	132,011	11,406
Leerink Swann & Company	64,447	2,578
Liberum Capital, Ltd.	332,908	2,160
Liquidnet, Inc.	21,137,788	1,223,607
Longbow Securities, LLC	153,280	6,131
Loop Capital Markets, LLC	2,449,337	16,041
Luminex Trading & Analytics, LLC	196,813	492
M. Ramsey King Securities, Inc.	10,100	309
M. M. Warburg & Company	5,546	109
Macquarie Equities, Ltd.	44,211,907	224,651
Macquarie Securities (USA), Inc.	85,103	2,536

International Equity Commissions

continued

Broker	Shares	Commission \$ U.S.
MainFirst Bank AG	241,862	\$ 15,161
Maxim Group	21,909	825
Mediobanca S.p.A	1,067,897	6,426
Merrill Lynch Pierce Fenner & Smith, Inc.	142,486,467	713,292
Miller Tabak & Company, LLC	33,497	670
Mischler Financial Group, Inc.	105,000	525
Mitsubishi Finance International	346,300	13,046
Mizuho Securities	4,170,707	53,072
Montrose Securities International	4,100	82
Morgan Stanley & Company, Inc.	370,835,140	760,672
Motilal Oswal Securities, Ltd.	553,145	2,784
National Financial Services Corp.	301,696	3,394
Natixis Bleichroeder, Inc.	57,918	3,071
Needham & Company	85,041	3,445
NMAS1 Equities S.A.	389,033	4,990
Nomura Securities International, Inc.	864,481	12,688
Nordea Bank AB	405,553	14,305
Numis Securities, Ltd.	1,865,793	6,314
Oddo Securities	139,127	6,016
Panmure Gordon	59,433	1,208
Parel Paris	74,990	724
Penserra Securities, Inc.	5,210,081	39,447
Pershing Division of DLJ	394,190	1,732
Pershing, LLC	3,803,305	55,714
Piper Jaffray	936,496	25,452
Pulse Trading, LLC	4,700	47
Rabo Securities	7,804	390
Raymond James & Associates, Inc.	1,056,974	36,734
RBC Capital Markets	3,681,868	45,959
Redburn Partners, LLP	7,470,982	83,170
Robert Fleming & Company	641,044	32,052
Royal Bank of Canada Dominion Securities	5,481,922	32,399
RS Platou	254,461	6,140
Salisbury BKT Securities Corporation	942,745	687
Samsung Securities	129,754	35,804
Sandler O'Neill & Partners, LP	877,900	26,337
Sanford C. Bernstein & Company, LLC	61,689,170	314,089

Broker	Shares	Commission \$ U.S.
Santander Investment Securities, Inc.	495,707	\$ 809
Schroders Salomon Smith Barney	27,000	33
Scotia Capital, Inc.	782,602	12,975
Scott & Stringfellow, Inc.	438,574	17,334
SEB Copenhagen	158,213	2,040
SG Americas Securities, LLC	308,493,976	304,431
SG Cowen Securities Corp.	133,990	2,550
Simmons & Company International	561,220	22,545
SMBC Nikko Securities	1,588,100	24,422
Societe Generale Securities Corp.	7,245,429	49,806
Standard Chartered Bank	5,853	59
State Street Global Markets, LLC	258,494	3,336
Stephens, Inc.	473,826	19,119
Sterne Agee & Leach, Inc.	104,280	4,171
Stifel Nicolaus & Company, Inc.	983,417	34,784
Strategas Securities, LLC	66,070	1,914
Sturdivant & Company, Inc.	28,500	570
Susquehanna Partners	101,990	1,785
Terra Menkul Degerler A.S.	14,766	36
Themis Trading, LLC	640,797	6,828
Toronto Dominion Bank	81,400	2,310
Tudor, Pickering, Holt & Company	190,320	7,586
UBS Securities, LLC	415,694,791	799,618
Union Bank of Switzerland (UBS)	14,200	142
Union Gaming Advisors, LLC	15,500	620
Wedbush Securities, Inc.	46,550	1,152
Weeden & Company	8,675,349	37,654
Wells Fargo & Company	1,174,920	36,248
Wells Fargo Investments, LLC	100,992	4,040
Williams Capital Group, LP	233,881	9,162
Winslow, Evans & Crocker, Inc.	399,200	7,984
Wolfe Trahan Securities	5,700	228
Woori Investment & Securities Company, Ltd.	2,339	345
Wunderlich Securities	95,300	3,812
XP Investimentos	76,956	464
Yuanta Core Pacific Securities	1,696,750	2,642
Zannex Securities	92,384	606
Total	2,930,943,584	\$ 12,073,353

Global Fixed Income Management Fees

For the Fiscal Year Ended March 31, 2016.

	Management Fees	Incentive Fees	Total
BlackRock Institutional Trust Company, NA	\$ 6,964,549	\$ 4,385,613	\$ 11,350,162
Neuberger Berman Fixed Income, LLC	1,248,437	804,048	2,052,485
Semper Capital Management , LP	143,283		143,283
Smith Graham & Company Investment Advisors, LP	643,086		643,086
Total	\$ 8,999,355	\$ 5,189,661	\$ 14,189,016

Domestic Bond Transactions

For the Fiscal Year Ended March 31, 2016.

Summarized by Broker or (Direct Issuer).

Long-Term Broker	Par \$ U.S.
Amherst Pierpont	\$ 1,877,892,115
Auriga USA, LLC	845,976
Bank of America Merrill Lynch	1,255,786,942
Barclay Investment	134,250,000
Barclays Capital, Inc.	1,083,730,000
Bay Crest Partners, LLC	9,117,912
BNP Paribas Securities Corp.	167,000,000
Brean Capital, LLC	9,076,157
Brownstone Investment Group, LLC	2,114,384
Cabrera Capital Markets, Inc.	29,920,000
Cantor Fitzgerald & Company	110,113,369
Capital Institutional Services, Inc.	75,840,000
CapRok Capital LLC	19,844,865
CastleOak Securities, LP	687,404,964
Citigroup Global Markets, Inc.	2,974,180,994
Credit Suisse Securities, Ltd.	1,462,493,572
Cuttone & Company, Inc.	10,000,000
D.A. Davidson & Company, Inc.	1,385,405
Daiwa Securities America, Inc.	6,850,000
Deutsche Bank Securities, Inc.	1,364,269,780
Development Corp. for Israel	25,000,000
Fifth Third Securities	555,931
First Tennessee Securities Corp.	2,378,231,000
Goldman Sachs & Company	1,764,315,154
Great Pacific Securities, Inc.	558,202,759
Guggenheim Securities, LLC	448,499,287
Hilltop Securities Inc.	2,000,000
HSBC Securities, Inc.	309,691,000
ICBI Financial Services (Barclays)	14,000,000
Imperial Capital, LLC	10,263,213
INTL FCStone, Inc.	1,485,170
J.P. Morgan Securities, Inc.	2,083,005,054
Jefferies & Company, Inc.	582,015,000
JVB Financial Group	2,619,652
KeyBanc Capital Markets, Inc.	3,409,832
KGS-Alpha Capital Markets, LP	414,303

Long-Term Broker	Par \$ U.S.
Loop Capital Markets, LLC	\$ 139,167,486
MarketAxess	1,430,000
Mesirow Financial, Inc.	13,586,030
Mitsubishi UFJ Securities (USA), Inc.	208,625,000
Morgan Stanley & Company, Inc.	1,347,544,190
Muriel Siebert & Company, Inc.	6,250,000
Nomura Securities International, Inc.	12,180,091
R.W. Pressprich & Company, Inc.	5,000,000
Raymond James & Associates, Inc.	2,710,809
RBC Capital Markets	1,282,774,000
Sandler O'Neill & Partners, LP	2,488,007
Seaport Securities Corp.	1,229,381
SMBC Nikko Securities	50,000,000
Societe Generale Securities Corp.	152,000,000
Sterne Agee & Leach, Inc.	179,243,000
Stifel Nicolaus & Company, Inc.	751,660,346
SunTrust Capital Markets	133,507,000
Toronto Dominion Bank	917,000,000
U.S. Bancorp Investments, Inc.	168,969,000
UBS Securities, LLC	2,745,151,000
Wells Fargo & Company	1,696,963,011
Williams Capital Group, LP	78,430,000
Total	\$ 29,361,732,141

Domestic Bond Transactions

continued

For the Fiscal Year Ended March 31, 2016.
Summarized by Broker or (Direct Issuer).

Short-Term Broker	Par \$ U.S.
Amherst Pierpont	\$ 100,000,000
Bank of America Merrill Lynch	11,204,271,000
Bank of New York Mellon	381,776,000
Barclays Capital, Inc.	1,826,629,000
BNP Paribas Securities	8,337,950,000
CastleOak Securities, LP	134,361,000
Citigroup Global Markets, Inc.	12,943,978,000
Credit Suisse Securities, Ltd.	5,539,659,000
Deutsche Bank Securities, Inc.	152,268,000
Exxon Asset Management Company	379,802,000
First Tennessee Securities Corp.	472,331,000
General Electric Capital Corp.	417,925,000
Goldman Sachs & Company	1,536,264,000
Great Pacific Securities, Inc.	1,364,876,000
Guggenheim Securities, LLC	35,619,288,000
J.P. Morgan Securities, Inc.	10,444,439,000
Jefferies & Company, Inc.	65,468,000
Loop Capital Markets, LLC	50,000,000
Mitsubishi UFJ Securities (USA), Inc.	2,221,036,000
Morgan Stanley & Company, Inc.	709,264,000
Prudential Financial, Inc.	178,000,000
RBC Capital Markets	28,393,714,000
Societe Generale Securities Corp.	34,000,000
Toronto Dominion Bank	527,907,000
Toyota Motor Credit Corp.	707,000,000
U.S. Bancorp Investments, Inc.	125,000,000
UBS Securities, LLC	4,313,301,000
Wells Fargo & Company	316,300,000
Williams Capital Group, LP	5,359,214,000
Total	\$ 133,856,021,000

Real Estate Management Fees (Expensed)

For the Fiscal Year Ended March 31, 2016.

	Management Fees	Incentive Fees	Total
Ares Management	\$ 1,330,678	\$ –	\$ 1,330,678
Artemis Real Estate Partners, LLC	7,062,886	–	7,062,886
Blackstone Real Estate Advisors	8,222,361	–	8,222,361
Carlyle Group	1,592,161	–	1,592,161
CIF-H GP, LLC (Cayuga Lake Fund, LP)	2,125,011	–	2,125,011
CIF-V GP, LLC (Seneca Lake Fund, LP)	90,060	–	90,060
CIM Group, LP	5,328,804	–	5,328,804
Clarion Partners	6,344,856	–	6,344,856
Cypress Grove International Management, LLC	114,933	–	114,933
Cypress Grove International Management, LLC (CGI Co-Investment Fund)	54,332	–	54,332
Franklin Templeton Institutional, LLC (Lake Montauk)	1,981,959	–	1,981,959
Genesis Workforce Housing Fund II, LLC	80,077	–	80,077
Heitman Capital Management, LLC	10,196,897	–	10,196,897
J.P. Morgan Investment Management, Inc.	2,260,723	–	2,260,723
Lake Hempstead Fund, LP	294,266	–	294,266
Lake Success Fund, LP	165,828	–	165,828
LaSalle Investment Management, Inc.	1,828,810	–	1,828,810
Metropolitan Workforce Housing Fund, LLC	519,849	–	519,849
Morgan Stanley Group	715,308	–	715,308
NIAM VI GP Inc.	1,421,619	–	1,421,619
Redwood Grove International Management, LLC	938,272	–	938,272
Redwood Grove International Management B, LLC (RGI Co-Investment Fund)	233,964	–	233,964
Rockpoint Real Estate Funds	1,059,620	–	1,059,620
Westbrook Realty Management	1,364,679	–	1,364,679
Total	\$ 55,327,953	\$ –	\$ 55,327,953

Real Estate Management Fees (Capitalized)

For the Fiscal Year Ended March 31, 2016.

	Management Fees	Incentive Fees	Total
ACA Advisors (Aetos)	\$ 365,206	\$ –	\$ 365,206
Ares Management	984,650	–	984,650
BCP Strategic Partners (Beacon)	2,064,490	–	2,064,490
Blackstone Real Estate Advisors	717,579	–	717,579
CBRE Global Investors Luxembourg S.à.r.l.	319,787	–	319,787
City Investment Fund Associates, LLC	174,422	–	174,422
Clarion Partners	1,352,369	–	1,352,369
Colony Advisors, LLC	2,202,700	–	2,202,700
Genesis Workforce Housing Fund II, LLC	92,363	–	92,363
Heitman Capital Management, LLC	1,500,000	–	1,500,000
J.P. Morgan Investment Management, Inc.	345,564	–	345,564
Kimex	94,444	–	94,444
LaSalle Investment Management, Inc.	238,848	–	238,848
LSP (Lone Star)	236,160	–	236,160
MetLife Investment Advisors, LLC	682,535	–	682,535
Noble Investment Management, LLC	429,002	–	429,002
Praedium	100,580	–	100,580
Stockbridge Real Estate Funds	4,229,825	–	4,229,825
Warburg Pincus, LLC	194,422	–	194,422
Total	\$ 16,324,946	\$ –	\$ 16,324,946

Private Equity Management Fees (Expensed)

For the Fiscal Year Ended March 31, 2016.

57 Stars, LLC	\$ 289,224	Hellman & Friedman Investors, Inc.	\$ 3,271,946
ACA Manager (Mauritius) Limited	1,858,357	Hony Capital	1,520,449
Access Capital Advisors, LLC	1,032,168	Hudson Capital GP, LLC	1,966,500
ACON Investments, LLC	1,423,881	InterMedia Advisors, LLC	733,396
Affinity Equity Partners	2,595,395	Irving Place Capital Advisors	280,874
Aisling Capital, LLC	369,336	J.P. Morgan Partners, LLC	3,273,713
Apollo Management, LP	8,127,450	JMI Equity	506,509
Ares Management, LP	2,736,706	Kelso & Company	1,462,862
Ascent Biomedical Ventures	220,020	KKR & Company, LP	3,844,882
Asia Alternatives Management, LLC	2,904,536	KSL Capital Partners, LLC	2,742,156
Banc of America Capital Investors, LP	444,259	Leonard Green & Partners, LP	1,326,112
Blackstone Group, LP	2,608,683	Levine Leichtman Capital Partners, Inc.	320,012
Brait Capital Partners, Ltd.	392,829	Lindsay Goldberg & Company, LLC	854,588
Brookfield Asset Management, Inc.	2,385,840	Lion Capital, LLP	166,541
Carlyle Group	1,792,360	Madison Dearborn Partners, Inc.	77,293
CCMP Capital Associates III, LP	2,168,556	Milestone Managers, LLC	68,344
Centerbridge Partners, LP	2,572,420	Muller & Monroe Asset Management, LLC	932,253
Cinven Capital Management, Ltd.	2,650,928	NB Alternatives Advisors, LLC	2,921,690
Clearlake Capital Group, LP	761,535	New Mountain Capital, LLC	461,968
Clessidra SGR S.p.A	24,630	Nordic Capital VIII, Ltd.	1,258,226
Contour Venture Partners	397,925	NY Legacy VC Management LLC	561,245
CVC Capital Partners	5,311,986	Paladin Capital Group	370,366
DeltaPoint Capital Management, LLC	335,929	Palladium Equity Partners	582,968
Draper Fisher Jurvetson	389,555	Patria Investimentos	1,028,407
EQT Partners	2,200,972	Performance Equity Management, LLC	1,353,447
Ethos Private Equity	202,097	Pine Brook Road Partners, LLC	2,287,463
Fairview Capital Partners, Inc.	144,645	Platinum Equity Advisors, LLC	4,561,357
Falcon Investment Advisors, LLC	314,075	Primary Venture Partners	1,104,144
Farol Asset Management, LP	1,328,356	Providence Equity Partners, LLC	2,126,101
Founders NY GP LLC	559,338	Quadrangle Group	207,547
FountainVest Partners (Asia), Ltd.	1,500,000	RRJ Capital	1,512,763
Francisco Partners Management, LP	656,953	Searchlight Capital Partners	4,962,828
Freeman, Spogli & Company	1,919,102	Snow Phipps Group, LLC	1,850,000
GCM Grosvenor Capital Management, LP	869,270	SoftBank Capital	359,000
GenNx360 Capital Partners	2,059,739	Summer Street Capital Partners, LLC	869,635
Gilde, LP	360,581	TA Associates	2,195,156
Goldman, Sachs & Company	17,918	TFSI Management	504,198
Graycliff Partners LP	656,250	TLP Management, LLC	53,937
GSO Capital Solutions Associates II, LLC	445,234	TPG Capital, LP	6,184,996
Hamilton Lane Advisors, LLC	3,004,323	Tribeca Venture Partners	323,100
HarbourVest Partners, LLC	1,950,000	Vista Equity Partners	10,283,813
Helios Investment Partners	1,000,000	Warburg Pincus, LLC	4,542,966
		Total	\$ 138,799,102

Private Equity Management Fees (Capitalized)

For the Fiscal Year Ended March 31, 2016.

Ascent Biomedical Ventures	\$ 250,884
Avenue Capital Group	1,064,646
Blum Capital	69,204
Bridgepoint Capital, Ltd.	3,032,310
Cerberus Capital Management, LP	140,497
Clearwater Capital Partners	1,790,501
Fairview Capital	24,771
First Albany Companies, Inc.	182,325
Goldman, Sachs & Co.	12,264
Hamilton Lane	634,422
HarbourVest Partners, LLC	1,083,767
Horsley Bridge Partners, LLC	32,280
Institutional Venture Partners	1,123,512
NCH Capital, Inc.	601,138
Oaktree Capital Management, LP	2,439,955
RRJ Capital	3,500,761
SAIF Partners	2,365,911
Softbank Capital Partners	568,900
TA Associates	153,251
The Cypress Group LLC	104,308
Tribeca Venture Partners	159,675
VCFA Group	599,243
Warburg Pincus, LLC	1,210,233
Total	\$ 21,144,758

Absolute Return Strategy Management and Incentive Fees

For the Fiscal Year Ended March 31, 2016.

	Management Fees	Incentive Fees	Total
Angelo, Gordon & Company, LP	\$ 1,797,885	\$ –	\$ 1,797,885
Apollo Value Advisors, LP	–	(30)	(30)
Apollo Value Management, LP	219	–	219
BlueCrest Capital Management, LP	2,376,985	2,579,188	4,956,172
Brevan Howard Offshore Management, Ltd.	4,966,952	–	4,966,952
Bridgewater Associates, LP	1,275,203	–	1,275,203
Brigade Capital GP, LLC	–	(1,689,099)	(1,689,099)
Brigade Capital Management, LLC	2,785,492	–	2,785,492
Brookside Capital, LLC	1,876,985	2,632	1,879,617
Cevian Capital (Malta)	6,723,515	–	6,723,515
Cevian Capital II GP, Ltd.	–	–	–
D.E. Shaw & Company, LP	13,052,811	15,696,223	28,749,034
Discovery Capital Management, LLC	4,429,730	–	4,429,730
Drawbridge Special Opportunities Advisors, LLC	1,104,415	–	1,104,415
Drawbridge Special Opportunities GP, LLC	–	740,246	740,246
Elm Ridge Capital Management, LLC	1,606,750	–	1,606,750
Galton Capital Group, LLC	–	23,033	23,033
GoldenTree Asset Management, LP	7,325	–	7,325
Graticule Asia Macro Advisors, LLC	4,477,355	–	4,477,355
Graticule Asia Macro GP	–	(2,449,968)	(2,449,968)
HBK Capital, LP	–	–	–
HBK Investment, LP	3,983,816	–	3,983,816
Highfields Associates, LLC	–	1,550,680	1,550,680
Highfields Capital Management, LP	3,629,487	–	3,629,487
Highland Capital Management, LP	207	–	207
Horizon Asset Cayman Limited	–	1,864,499	1,864,499
Horizon Asset, LLP	2,469,058	–	2,469,058
King Street Capital Management, LP	3,334,647	100,206	3,434,853
Knighthood Capital Management, LLC	3,224,053	–	3,224,053
Landsdowne Partners, Ltd. Partnership	4,061,187	10,193,965	14,255,152
Marathon Asset Management, LP	7,279	–	7,279
Mariner Investment Group, LLC	4,493,692	–	4,493,692
Marshall Wace (GPI), Ltd.	–	3,664,611	3,664,611
Marshall Wace, LLP	4,681,250	–	4,681,250
Mezzacappa Investors II, LLC	40,413	–	40,413
OxFORD Asset Management, LLP	2,848,414	697,081	3,545,495
OZ Advisors, LP	–	–	–

Absolute Return Strategy Management and Incentive Fees

continued

	Management Fees	Incentive Fees	Total
OZ Management II, LP	\$ 6,362,364	\$ –	\$ 6,362,364
Paulson & Co., Inc.	1,874,899	–	1,874,899
Pharo Global Advisors, Ltd.	2,894,860	165,640	3,060,501
Pine River Domestic Management, LP	4,974,289	(1,746,497)	3,227,792
Schultze Asset Management, LLC	109,593	–	109,593
Schultze Management Group, LLC	–	1,417	1,417
SR Financial, LLC	7,872	–	7,872
The Rock Creek Group, LP	3,886,070	–	3,886,070
Tilden Park Associates I, LLC	–	818,263	818,263
Tilden Park Management I, LLC	3,618,989	–	3,618,989
Trian Fund Management, LP	6,540,199	–	6,540,199
Trian Partners Strategic Investment Fund GP, LP	–	2,452,210	2,452,210
Trian Partners Strategic Investment Fund II GP, LP	–	89,361	89,361
ValueAct Capital Management, LP	5,905,160	–	5,905,160
Viking Global Investors, LP	–	–	–
Viking Global Performance, LLC	–	–	–
Total	\$ 115,429,418	\$ 34,753,661	\$ 150,183,079

Opportunistic Funds Management and Incentive Fees (Expensed)

For the Fiscal Year Ended March 31, 2016.

	Management Fees	Incentive Fees	Total
ADV Partners	\$ 2,575,549	\$ –	\$ 2,575,549
Blackstone Group	2,936,952	345,073	3,282,025
Clearlake Capital Group	200,919	–	200,919
Finisterre Capital, LLP	2,246,140	1,506,962	3,753,102
Invesco Institutional (N.A.), Inc.	377,724	1,602,400	1,980,124
Landmark Partners	419,863	–	419,863
Pacific Alternative Asset Management Company, LLC	3,029,195	–	3,029,195
Pine Street Alternative Asset Management, LP	3,115,536	5,002,757	8,118,293
Stellex Capital Management	2,382,802	–	2,382,802
TPG Capital	2,285,879	784,082	3,069,961
Total	\$ 19,570,559	\$ 9,241,274	\$ 28,811,833

Opportunistic Funds Management and Incentive Fees (Capitalized)

For the Fiscal Year Ended March 31, 2016.

Manager	Management Fees
Landmark Partners	\$ 3,118,998
Pacific Alternative Asset Management Company, LLC	41,717
TPG Capital	1,556,942
Total	\$ 4,717,657

Real Assets Management Fees (Expensed)

For the Fiscal Year Ended March 31, 2016.

KKR and Company LP	\$ 1,659,881
Morgan Stanley Infrastructure, Inc.	3,383,900
Patria Investimentos	2,062,500
TIAA-CREF Alternatives Advisors, LLC	3,600,000
Wellington Management Company, LLP	2,010,769
Total	\$ 12,717,050

Consultant and Advisor Fees

For the Fiscal Year Ended March 31, 2016.

Albourne America, LLC	\$ 1,053,333
Bard Consulting, LLC	1,562,500
Ernest & Young US LLP	375,000
FX Transparency, LLC	26,250
Hamilton Lane Advisors, LLC	1,875,000
J.P. Morgan Asset Management, Inc.	69,945
J.P. Morgan Investment Management, Inc.	1,380,151
LP Capital Advisors, LLC	235,633
McKinsey & Company, Inc.	7,275,500
McLagan Management Consultants	71,750
Mercer Investment Consulting, Inc.	40,000
Pension Consulting Alliance, Inc.	416,394
RV Kuhns & Associates, Inc.	820,000
Stockbridge Risk Management, Inc.	12,452
The Bank of New York Mellon	1,531,937
The Townsend Group	572,446
Wilshire Associates, Inc.	68,842
Total	\$ 17,387,132

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Actuarial

Contents

Statement of the Actuary	125
Actuarial Cost Method and Valuation	127
Elements of the Actuarial Valuation	129
Actuarial Valuation Balance Sheets.....	133
Local Government Employers' Final Contribution Rates for Select Plans.....	135
Contribution Rate Trend for Local Governments	137
Employer Contributions	140
Historical Trends (Rates as a Percentage of Salary, 1974 – 2017)	142
Changes in Contributions.....	143
Assets and Accrued Liabilities.....	144
Solvency Test	145
Schedule of Active Member Data.....	146
Schedule of Retired Members and Beneficiaries	147

Statement of the Actuary

September 30, 2016

As the Actuary for the Employees' Retirement System (ERS) and the Police and Fire Retirement System (PFRS), it is my duty to ensure that the New York State and Local Retirement System (the System) properly funds the benefits of members, retirees and beneficiaries. A discussion of the plan provisions can be found at the beginning of the Notes to Financial Statements.

The System's funding policy is established by New York State Retirement and Social Security Law. The System has a funding objective of employer contributions that, over time, are a level percentage of payroll and accumulating assets over an employee's working lifetime sufficient to pay benefits as they become due.

The Actuarial Bureau annually generates actuarial valuations which determine the annual contributions required of employers. The most recent valuation was for valuation date April 1, 2015 and determined the employer contribution rates for February 1, 2017. A valuation relies on valuation date data for active members, retirees and beneficiaries. Data for active members includes date of birth, salary, credited service, tier and plan. For retired members and beneficiaries, data includes date of birth, monthly benefits and benefit option. In preparation for the valuation, we extensively validate the System's data by running reasonableness tests and accounting for every individual on a year-to-year basis. We also review the information contained in the Financial Statements.

For active members, the valuation projects expected benefits at retirement, death, disablement and withdrawal based on estimated pay and service, as well as the member's plan benefit formula. For retirees, the valuation determines the present value of payments expected to be made for the retiree's and beneficiary's lifetimes.

Proper funding requires that liabilities and employer contribution rates be determined on the basis of reasonable actuarial assumptions and methods. The types of assumptions that must be made include both demographic (rates of employee mortality, disability, turnover and retirement) and economic (interest rates, inflation and salary growth). Therefore, valuations include assumptions about these uncertainties.

The Actuary performs annual experience studies, ascertaining how closely the System's experience is conforming to the assumptions. If significant differences occur that the Actuary believes may indicate permanent shifts, the Actuary may recommend assumption changes.

The System retains an external auditor to independently review its financial records every year. Furthermore, an Actuarial Advisory Committee meets annually to review the actuarial assumptions and the results of the actuarial valuation. The System also engages the services of an outside actuarial consultant to perform a review every five years; similarly, every five years, the System is audited by the New York State Department of Financial Services. Lastly, the Comptroller of the State of New York, in his role as trustee of the System, established an Office of Internal Audit to help fulfill his fiduciary objectives.

Statement of the Actuary

continued

The April 1, 2014 valuation for determining the February 1, 2016 employer contribution rates found in this report was performed under my direction and supervision, using the assumptions adopted by the Comptroller, a summary of which is included later in this section.

I am responsible for all of the valuation results and other actuarial calculations contained in this report. In the Notes to Financial Statements, I prepared the Net Pension Liability of Participating Employers, and while I prepared the employer contribution rates that determined the 2016 employer billing, I did not prepare the Schedule of Employer Contributions. I prepared all of the schedules in the Actuarial Section with the exception of the New York Public Employees' Group Life Insurance Plan.

In addition to the funding valuation report for ERS and PFRS, separate reports are issued to provide financial reporting for NYSLRS in accordance with Governmental Accounting Standard Board (GASB) Statement No. 67. Reports containing the actuarial results of the financial reporting valuations are based upon the measurement date of March 31, 2016.

On the basis of the foregoing, I hereby certify that, to the best of my knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial practices which are consistent with the principles prescribed by the Actuarial Standards Board as well as the Code of Professional Conduct and Qualification Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries, of which I am a member.



Michael Dutcher, E.A., A.S.A., M.A.A.A.

Actuary

New York State and Local Employees' Retirement System

New York State and Local Police and Fire Retirement System

Actuarial Cost Method and Valuation

Actuarial Cost Method

An actuarial cost method is a procedure for allocating the costs of a retirement system to particular time periods. It does not determine how much a system will ultimately cost; rather, it determines the portion of the estimated total cost that is to be allocated to a particular year.

For 70 years, by virtue of applying the definition of normal cost found in New York State Retirement and Social Security Law, the actuarial funding method used by the System was the aggregate method (AGG). Chapter 210 of the Laws of 1990 changed the funding method to a modified projected unit credit (PUC) method beginning in the fiscal year ending March 31, 1991 (referred to as fiscal year 1991). This law was challenged and the challenge was upheld by the New York State Supreme Court. On appeal, both the appellate division and the New York State Court of Appeals unanimously agreed with the New York State Supreme Court. These decisions allowed the Comptroller to return to the aggregate funding method, beginning with the 1995 fiscal year. To ease the transition in the Employees' Retirement System (ERS), and to help prevent budget crises among participating employers, the Comptroller devised a plan to phase-in non-GLIP (New York State Public Employees' Group Life Insurance Plan) rates beginning in the 1995 fiscal year, when the rates were zero. The rates increased by 1.5 percent per year until 1999, when the transition would cease. However, due to excellent investment gains and favorable experience, almost all ERS employer bills were below the transition rates in 1997, and in 1998, all were below the transition rates, so the transition ceased in 1998.

The aggregate method is ultimately an amortization policy. All valuation gains and losses are amortized evenly over the remaining working lifetimes of the active membership. The fact that the method does not allow arbitrary amortization periods, or increasing payments, is useful in a public setting, as budgetary pressures can inspire a temptation to fund benefits over time frames that extend beyond the working lifetimes of the benefit recipients, and/or with back-loaded payments, which is not prudent and compromises intergenerational equity.

The "drawback" of the aggregate cost method is that it defines the accrued liability to be the actuarial value of assets. Thus, the unfunded accrued liability is always zero, and the system's funded ratio is always 100 percent. This "drawback" is overcome by using the entry age normal cost method for purposes of financial disclosures. In this report, the reader should assume that any funding data provided is under the aggregate cost method, unless otherwise noted as under the entry age normal method. The actuarial assumptions used are the same under either method.

Actuarial Valuation

At the beginning of the fiscal year, the Actuary, by law, determines the System's actuarial assets and liabilities. The actuarial valuation is important since it determines the rates of employer contributions. Chapter 49 of the Laws of 2003 mandates that the actuarial valuation undertaken on the first day of a fiscal year be used to determine contribution rates for the next succeeding fiscal year, to be applied to salaries as of the end of that fiscal year. Chapter 94 of the Laws of 2015 changed the billable salary to compensation earned during the previous fiscal year.

Each valuation differs markedly from the March 31 point-in-time snapshot of the System provided by the Financial Statements. The two measurements serve different purposes and use different techniques.

Two examples help make this clear:

- The actuarial assets for valuation purposes include the current value of all the future contributions employers and employees will make on behalf of current members. The Financial Statement balance sheet asset figure includes contributions previously received and invested.
- The actuarial assets smooth out the investment performance by using a multiyear smoothing procedure. Techniques like this are widely practiced and professionally recommended to protect employers from volatile contribution rates. The Financial Statements, on the other hand, simply present fair values of assets on the last day of the fiscal year.

Aggregate Actuarial Funding Method

Actuarial liabilities are the valuation date values (called the actuarial present values) of the benefits the Retirement System expects to pay to current members, retirees and beneficiaries. The actuarial present value of benefits is calculated by projecting the amount of future service retirement, death and disability benefits (based on past and future service, salary, and plan) to be paid, and then discounting for assumed investment earnings, employee turnover and other contingencies.

The actuarial present value of the contributions that employers must make to the System to fund the projected benefit payment is equal to the actuarial liabilities, minus the sum of the actuarial value of present assets and the present value of employee contributions.

Under the aggregate funding method, the actuarial present value of the contributions that employers must make to the System is funded as a level percentage of salary over the projected future working lifetimes of current members.

Elements of the Actuarial Valuation

Actuarial Assumptions

The actuarial assumptions for employer contribution rates for the fiscal year ending 2016 were adopted effective April 1, 2010. These assumptions and their predecessors are shown below. All assumptions presume ongoing systems.

Fiscal Year Ended 3/31	Salary Scale*			Interest Rate	Multiple-Decrement Tables Based on Systems' Experience
1987 – 88	Inflation Productivity & Merit	5.00% <u>2.30%</u> 7.30%		8.00%	4/1/81– 3/31/86 experience
1989 – 92	Inflation Productivity & Merit	5.00% <u>2.00%</u> 7.00%		8.75%	4/1/81– 3/31/86 experience
1993 – 96	Inflation Productivity & Merit	5.00% <u>2.00%</u> 7.00%		8.75%	4/1/86 – 3/31/91 experience
		ERS	PFRS		
1997 – 98	Inflation Productivity & Merit	4.75% <u>1.25%</u> 6.00%	4.75% <u>1.75%</u> 6.50%	8.50%	4/1/90 – 3/31/95 experience
1999 – 2000	Inflation Productivity & Merit	3.50% <u>2.50%</u> 6.00%	3.50% <u>3.00%</u> 6.50%	8.50%	4/1/90 – 3/31/95 experience
2001	Inflation Productivity & Merit	3.00% <u>2.50%</u> 5.50%	3.00% <u>3.00%</u> 6.00%	8.00%	4/1/90 – 3/31/95 experience
2002 – 04	Inflation Productivity & Merit	3.00% <u>2.90%</u> 5.90%	3.00% <u>3.90%</u> 6.90%	8.00%	4/1/95 – 3/31/00 experience
2005	Inflation Productivity & Merit	3.00% <u>2.40%</u> 5.40%	3.00% <u>3.90%</u> 6.90%	8.00%	4/1/95 – 3/31/00 experience
2006	Inflation Productivity & Merit	3.00% <u>2.40%</u> 5.40%	3.00% <u>3.90%</u> 6.90%	8.00%	4/1/95 – 3/31/00 experience with subsequent adjustments
2007 – 11	Inflation Productivity & Merit	3.00% <u>2.40%</u> 5.40%	3.00% <u>3.70%</u> 6.70%	8.00%	4/1/00 – 3/31/05 experience with subsequent adjustments
2012 – 16	Inflation Productivity & Merit	2.70% <u>2.20%</u> 4.90%	2.70% <u>3.30%</u> 6.00%	7.50%	4/1/05 – 3/31/10 experience with subsequent adjustments

* This is an approximate value. Salary scales vary by age and plan and are based on each System's experience.

Selected Actuarial Assumptions Used in the April 1, 2014 Valuation

These illustrations show the number of people expected to decrement during the year, i.e.: decease, retire, become disabled, withdraw, etc. Demographic assumptions below show counts per 10,000 members. Assumptions are computed by the Actuary and adopted by the Comptroller. They are based on recent member experience.

Service Retirement — ERS

Age	Service (in years)		
	< 20	20 – 29.99	≥ 30
Tier 1			
55	1,566	2,977	5,586
60	982	1,600	1,930
65	2,050	2,553	2,321
Tiers 2–4			
55	592	821	4,185
60	489	781	1,994
65	1,576	2,579	2,775
Tiers 5–6			
55	477	662	821
60	393	630	781
65	1,576	2,579	2,775

Service Retirement — PFRS

Service	20-year (All Tiers)	20-year with additional 60ths (All Tiers)
20	2,165	847
25	1,188	541
30	945	1,681

Service Retirees — Mortality

Age	Male Clerk	Female Clerk	PFRS
55	61	32	38
60	59	55	49
70	136	123	126
80	352	301	445

Disability Retirees — Mortality

Age	Male	Female	PFRS
30	10	10	6
40	16	15	7
60	212	233	63
80	761	532	510

Elements of the Actuarial Valuation

continued

Disability Retirement — Ordinary and Accidental

Age	ERS Ordinary	ERS Accidental	PFRS Ordinary*	PFRS Accidental
35	7	0	13	18
40	15	1	25	38
45	23	1	31	47
50	38	1	47	43

* includes performance of duty.

Ordinary Death

Age	ERS	PFRS
35	7	4
40	9	4
45	11	6
50	16	9

Withdrawal — ERS (Ten-year ultimate rates)

Age	ERS
35	222
40	183
45	162
50	125

Withdrawal — PFRS

Service	PFRS
5	121
10	55
15	43

Salary Scale — Annual Percentage Increase

Service	ERS	PFRS
5	5.92	7.41
10	4.86	4.85
15	4.40	4.41
20	4.06	4.42
25	3.81	4.22

Actuarial Value of Assets

The actuarial asset values are determined by applying the assumed return on investments (7.5 percent for the April 1, 2014 valuation) to the financial statement plan net position with adjustments for cash flow (contributions and deductions). This smoothing method expects and immediately recognizes the assumed return on assets while phasing in unexpected gains and losses over a five-year period. The method treats realized and unrealized gains in the same manner. The Group Life Insurance Plan assets appreciate at the same rate as our short-term investment pool.

In the April 1, 2014 valuation of the System and Insurance Plan for fiscal year 2016, the difference between market and actuarial values of smoothed investments was:

	Investments (Dollars in Millions)	
Actuarial Value	\$	167,214
Market Value		<u>176,835</u>
Difference	\$	(9,621)

Administrative Expenses

The cost of administering the System is borne by the State and local employers on a current disbursement basis.

Group Life Insurance Plan (GLIP)

GLIP provides for up to \$50,000 of member and certain post-retirement death benefits to be paid as life insurance. All benefits provided are on a one-year term insurance basis. Participating employers are billed each year based on the aggregate of anticipated claims for the plan year. Premiums are set so that the reserve will, at its lowest amount during any year, be approximately equal to payables. Payables is an estimate of the amount of claims currently being processed, plus claims incurred but not yet reported.

Deficiency Costs

An employer may also have a deficiency contribution. When a new employer joins the System, any past service liability is paid for by separate annual payments over a period of up to 25 years. These payments are not affected by the funding method.

Rate and Contribution Comparability

Unless stated otherwise, rates and contributions assume a payment date of February 1 before the fiscal year end to provide for comparability of State and local government rates and costs.

Actuarial Valuation Balance Sheets

Actuarial assets and liabilities are used to determine employer contributions for the fiscal year ending March 31. Values are in millions of dollars, as calculated in the April 1, 2013 valuation for fiscal year end 2015 billing and the April 1, 2014 valuation for fiscal year end 2016 billing.

	FYE 2015 Billing*	FYE 2016 Billing
	(Dollars in Millions)	
ERS		
Actuarial Assets		
Actuarial Value of Present Assets:		
Held for Current Retirees & Beneficiaries	\$ 78,743	\$ 85,528
Held for Members	44,997	51,995
Members' Contributions	<u>8,328</u>	<u>8,462</u>
Total	\$ 132,067	\$ 145,985
Actuarial Present Value of Prospective Contributions:		
From Employers	\$ 39,457	\$ 35,217
From Members	<u>1,657</u>	<u>2,005</u>
Total	\$ 41,114	\$ 37,222
Total Actuarial Assets	\$ 173,181	\$ 183,207
Actuarial Liabilities		
Actuarial Present Value of Benefits for Current Retirees & Beneficiaries:		
Service Retirement Benefits	\$ 74,775	\$ 81,299
Disability Retirement Benefits	3,858	4,116
Death Benefits	<u>110</u>	<u>112</u>
Total	\$ 78,743	\$ 85,527
Actuarial Present Value of Benefits for Members:		
Service Retirement Benefits	\$ 91,085	\$ 94,303
Disability Retirement Benefits	1,798	1,791
Death Benefits	1,186	1,182
Other	<u>369</u>	<u>403</u>
Total	\$ 94,438	\$ 97,679
Total Actuarial Liabilities	\$ 173,181	\$ 183,206
* Numbers may not add up due to rounding.		

Actuarial Valuation Balance Sheets

continued

	FYE 2015 Billing*	FYE 2016 Billing
	(Dollars in Millions)	
PFRS		
Actuarial Assets		
Actuarial Value of Present Assets:		
Held for Current Retirees & Beneficiaries	\$ 14,948	\$ 15,958
Held for Members	8,159	9,506
Members' Contributions	5	10
Total	\$ 23,112	\$ 25,474
Actuarial Present Value of Prospective Contributions:		
From Employers	\$ 8,106	\$ 7,517
From Members	120	229
Total	\$ 8,226	\$ 7,746
Total Actuarial Assets	\$ 31,338	\$ 33,220
Actuarial Liabilities		
Actuarial Present Value of Benefits for Current Retirees & Beneficiaries:		
Service Retirement Benefits	\$ 12,008	\$ 12,863
Disability Retirement Benefits	2,789	2,933
Death Benefits	151	162
Total	\$ 14,948	\$ 15,958
Actuarial Present Value of Benefits for Members:		
Service Retirement Benefits	\$ 14,576	\$ 15,357
Disability Retirement Benefits	1,525	1,595
Death Benefits	285	302
Other	4	8
Total	\$ 16,390	\$ 17,262
Total Actuarial Liabilities	\$ 31,338	\$ 33,220
* Numbers may not add up due to rounding.		

New York Public Employees' Group Life Insurance Plan

Actuarial Assets	2015	2016
	(Dollars in Millions)	
Assets		
Investments	\$ 128	\$ 151
Premiums Receivable	—	—
Total Assets	\$ 128	\$ 151
Liabilities		
Managed Overdraft (cash)	5	5
Claims Being Processed	28	32
Claims Unreported	16	16
Reserve for Mortality Fluctuations	79	98
Total Liabilities	\$ 128	\$ 151

Local Government Employers' Final Contribution Rates for Select Plans

The following contribution rates are for the fiscal year ending March 31, 2016, and assume a February 1, 2016 payment date.

All rates exclude any contribution rates due to amortization payments, prior years' adjustments, deficiency costs, retirement incentive programs and certain benefits electable by local governments, such as credit for unused sick leave or one-year final average salary. All rates include Group Life Insurance.

	Plan ID	Percentage of Payroll				
		Tier 1	Tier 2	Tiers 3 & 4	Tier 5	Tier 6
ERS						
Age-based plans						
Basic, Age 55, Age 60 Contributory	71-a	12.3	11.5	n/a	n/a	n/a
Article 14	A14	n/a	n/a	18.6	n/a	n/a
Article 15	A15	n/a	n/a	18.6	15.3	10.4
Guaranteed Benefits	75-e	22.6	20.5	n/a	n/a	n/a
Career	75-g	24.0	21.9	n/a	n/a	n/a
New Career	75-h/75-i	25.0	22.9	n/a	n/a	n/a
25-year plans						
Sheriffs and Deputies	89-a	27.0	25.3	n/a	n/a	n/a
Article 14B Sheriffs — 25-year	551	25.2	24.8	22.4	20.2	14.2
Article 14B Sheriffs — 25-year + 1/60th	551-e	26.7	26.5	24.0	21.4	15.4
full service for 1/60th	551-ee	27.7	27.5	24.9	22.2	16.0
County Law Enforcement	89-e, etc.	27.3	27.0	20.0	17.7	12.0
20-year plans						
Sheriffs and Deputies	89-b	30.9	25.4	n/a	n/a	n/a
additional 1/60th	89-b(m)	31.1	26.7	n/a	n/a	n/a
Article 14B Sheriffs — 20-year	552	31.1	30.9	28.2	25.4	19.1
Article 14B Sheriffs — 20-year + 1/60th	553	31.1	30.9	28.5	26.1	20.1
full service for 1/60th	553b	32.3	32.1	29.7	27.1	20.9
Detective Investigators	89-d	30.3	30.0	n/a	n/a	n/a
additional 1/60th	89-d(m)	30.4	30.1	n/a	n/a	n/a

Local Government Employers' Final Contribution Rates for Select Plans

continued

	Plan ID	Percentage of Payroll				
		Tier 1	Tier 2	Tier 3	Tier 5*	Tier 6*
PFRS						
Age-based plans						
Basic, Age 55, Age 60 Contributory	371-a	12.5	11.0	11.0	7.2	2.3
Guaranteed Benefits	375-e	19.4	16.1	16.1	12.1	6.4
Career	375-g	21.2	17.6	17.6	13.5	7.6
New Career	375-i	21.9	18.1	18.1	14.0	7.9
Improved Career	375-j	21.9	18.1	18.1	14.0	7.9
25-year plans						
Contributory	384	n/a	n/a	n/a	16.6	11.2
additional 1/60th	384(f)	n/a	n/a	n/a	17.9	12.4
Non-Contributory	384	21.2	21.0	21.0	20.1	17.9
additional 1/60th	384(f)	22.7	22.5	22.5	21.5	19.2
20-year plans						
Contributory	384-d	n/a	n/a	n/a	20.1	14.3
additional 1/60th	384-e	n/a	n/a	n/a	20.4	14.5
Non-contributory	384-d	25.4	24.7	24.4	23.6	21.0
additional 1/60th	384-e	25.8	25.1	24.4	23.9	21.3
* Age-based plans in Tier 5 and Tier 6 are contributory.						

Contribution Rate Trend for Local Governments

Rates are based on a February 1 payment date. Each rate is applied to the salary of members covered by that particular plan. Rates were calculated under the aggregate method. All rates include Group Life Insurance and administrative rates.

Actual costs borne by employers are shown in the Statistical Section.

Plan Name (Section)	Percentage of Payroll									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
ERS										
Guaranteed Benefits (75-e)										
Tier 1	12.0	10.9	9.7	8.4	13.8	19.4	22.9	25.8	24.8	22.6
Tier 2	10.9	9.9	8.8	7.6	12.5	17.5	20.7	23.3	22.5	20.5
Career (75-g)										
Tier 1	12.7	11.5	10.3	8.9	14.6	20.4	24.1	27.3	26.3	24.0
Tier 2	11.6	10.5	9.4	8.1	13.3	18.6	22.0	24.9	24.0	21.9
New Career (75-i)										
Tier 1	13.2	12.0	10.7	9.2	15.2	21.3	25.2	28.5	27.4	25.0
Tier 2	12.1	11.0	9.8	8.5	13.9	19.5	23.0	26.0	25.1	22.9
Article 14/15 — Tier 3	9.7	8.8	7.9	6.9	11.2	15.6	18.4	20.8	20.1	18.6
Article 15 — Tier 4	9.7	8.8	7.9	6.9	11.2	15.6	18.4	20.8	20.1	18.6
Article 15 — Tier 5	—	—	—	—	—	12.6	14.9	16.7	16.4	15.3
Article 15 — Tier 6	—	—	—	—	—	—	9.9	11.3	10.8	10.4

Contribution Rate Trend for Local Governments

continued

Plan Name (Section)	Percentage of Payroll									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
PFRS										
Guaranteed Benefits (375-e)										
Tier 1	12.2	11.9	11.2	10.8	13.2	16.1	19.6	22.1	21.4	19.4
Tiers 2 & 3	10.1	9.7	9.5	9.2	11.1	13.0	16.2	18.1	17.8	16.1
Tier 5*	—	—	—	—	—	9.3	11.8	13.0	12.7	12.1
Tier 6*	—	—	—	—	—	—	7.0	7.3	7.2	6.4
Career (375-g)										
Tier 1	13.4	13.0	12.3	11.8	14.4	17.6	21.3	24.1	23.4	21.2
Tiers 2 & 3	11.1	10.7	10.4	10.0	12.1	14.2	17.6	19.7	19.4	17.6
Tier 5*	—	—	—	—	—	10.4	13.1	14.5	14.2	13.5
Tier 6*	—	—	—	—	—	—	8.2	8.6	8.5	7.6
New Career (375-i)										
Tier 1	13.8	13.5	12.7	12.2	14.9	18.1	22.1	24.9	24.2	21.9
Tiers 2 & 3	11.3	10.9	10.7	10.3	12.5	14.6	18.1	20.3	19.9	18.1
Tier 5*	—	—	—	—	—	10.8	13.6	15.1	14.7	14.0
Tier 6*	—	—	—	—	—	—	8.5	8.9	8.7	7.9
25-Year (384) — Contributory										
Tiers 1, 2 & 3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Tier 5	—	—	—	—	—	13.7	16.5	18.4	18.1	16.6
Tier 6	—	—	—	—	—	—	11.4	12.3	12.0	11.2
25-Year + 1/60ths (384(f)) — Contributory										
Tiers 1, 2 & 3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Tier 5	—	—	—	—	—	15.0	18.0	20.2	19.7	17.9
Tier 6	—	—	—	—	—	—	12.8	13.8	13.3	12.4
25-Year (384) — Non-Contributory										
Tier 1	13.5	13.3	12.5	11.9	14.7	17.7	21.2	24.0	23.2	21.2
Tiers 2 & 3	13.4	13.2	12.5	11.9	14.7	17.6	21.2	23.9	23.1	21.0
Tier 5	—	—	—	—	—	16.9	20.4	22.9	22.1	20.1
Tier 6	—	—	—	—	—	—	18.4	20.4	19.6	17.9
25-Year + 1/60ths (384(f)) — Non-Contributory										
Tier 1	14.0	13.8	12.9	12.4	15.2	19.2	23.1	26.1	25.1	22.7
Tiers 2 & 3	13.6	13.3	12.7	12.2	15.0	19.0	22.9	25.9	24.8	22.5
Tier 5	—	—	—	—	—	18.3	21.9	24.7	23.7	21.5
Tier 6	—	—	—	—	—	—	19.9	22.0	21.1	19.2

* Age-based plans in Tier 5 and Tier 6 are contributory.

Contribution Rate Trend for Local Governments

continued

Plan Name (Section)	Percentage of Payroll									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
20-Year (384-d) — Contributory										
Tiers 1, 2 & 3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Tier 5	—	—	—	—	—	16.7	20.1	22.7	22.0	20.1
Tier 6	—	—	—	—	—	—	14.6	16.0	15.4	14.3
20-Year + 1/60ths (384-e) — Contributory										
Tiers 1, 2 & 3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Tier 5	—	—	—	—	—	17.0	20.5	23.0	22.3	20.4
Tier 6	—	—	—	—	—	—	14.9	16.3	15.6	14.5
20-Year (384-d) — Non-Contributory										
Tier 1	15.7	15.5	14.9	14.2	17.4	21.5	25.7	29.2	28.0	25.4
Tier 2	15.0	14.7	14.5	13.8	16.8	20.9	25.1	28.4	27.3	24.7
Tier 3	—	—	—	—	—	20.4	24.2	27.5	26.1	24.4
Tier 5	—	—	—	—	—	20.0	24.1	27.1	26.1	23.6
Tier 6	—	—	—	—	—	—	21.6	24.1	23.1	21.0
20-Year + 1/60ths (384-e) — Non-Contributory										
Tier 1										
1990-1998 elections (avg.)	26.9	26.7	20.5	19.9	23.1	21.8	26.1	29.6	28.4	25.8
all other years	16.1	15.9	15.1	14.5	17.7	21.8	26.1	29.6	28.4	25.8
Tier 2										
1990-1998 elections (avg.)	17.7	17.1	15.9	15.3	18.4	21.2	25.4	28.8	27.6	25.1
all other years	16.0	15.7	15.0	14.4	17.5	21.2	25.4	28.8	27.6	25.1
Tier 3	—	—	—	—	—	20.4	24.2	27.5	26.1	24.4
Tier 5	—	—	—	—	—	20.3	24.4	27.5	26.3	23.9
Tier 6	—	—	—	—	—	—	22.0	24.4	23.3	21.3

Employer Contributions

Contributions reported here may differ from those appearing elsewhere in the Actuarial Section because these tables deal only with the contributions attributable to the single year shown. Actual contributions may include adjustments due to previous years, such as amortization payments or credits and reconciliation of other years' bills. In 2005, 2006 and 2007, employers could amortize a portion of their contributions. Employers who opted into either of the Contribution Stabilization Programs (Chapter 57 of the Laws of 2010 and Chapter 57 of the Laws of 2013) are allowed to amortize a portion of their contribution. The following amounts show their total obligation. The average rates below are for normal, administrative and Group Life Insurance contributions.

Comparison of Employer Contributions*

For fiscal years ending 2015 and 2016. (Dollars in Millions)

	2016 Contribution			2015 Contribution		
	Salary	Contribution	Average Rate	Salary	Contribution	Average Rate
ERS						
Tier 1	\$ 215	\$ 54	25.2%	\$ 228	\$ 63	27.7%
Tier 2	250	58	23.2	265	67	25.4
Tiers 3 & 4	20,779	3,990	19.2	20,627	4,291	20.8
Tier 5	1,431	227	15.9	1,408	240	17.0
Tier 6	2,969	324	10.9	1,952	222	11.4
Total	\$ 25,644	\$ 4,653	18.1%	\$ 24,480	\$ 4,884	19.9%
PFRS						
Tier 1	\$ 9	\$ 3	29.4%	\$ 10	\$ 3	31.9%
Tier 2	3,097	792	25.6	2,953	832	28.2
Tier 3	13	3	23.1	12	3	25.1
Tier 5	127	27	21.1	110	25	23.2
Tier 6	280	41	14.7	172	27	15.9
Total	\$ 3,527	\$ 866	24.5%	\$ 3,257	\$ 891	27.4%

Deficiency contributions for Fiscal Year 2016 (as of February 1, 2016) totaled \$1,553,873.

Incentive contributions for Fiscal Year 2016 (as of February 1, 2016) totaled \$63,379,617.

*Numbers may not add up due to rounding.

Employer Contributions

continued

Final Employer Contributions by Employer Type*

Attributable to fiscal year 2016 costs only. (Dollars in Millions)

Employer	Normal	Administrative	GLIP	Total
ERS				
State	\$ 1,893	\$ 43	\$ 47	\$ 1,983
Counties	788	18	18	825
Cities	119	3	4	125
Towns	267	6	8	282
Villages	83	2	2	87
Miscellaneous	697	17	21	735
Schools	585	14	17	617
Total	\$ 4,433	\$ 103	\$ 118	\$ 4,653
PFRS				
State	\$ 165	\$ 3	\$ —	\$ 168
Counties	198	3	—	201
Cities	244	4	—	248
Towns	92	2	—	93
Villages	74	1	—	75
Miscellaneous	79	1	—	80
Total	\$ 851	\$ 14	\$ —	\$ 866

Employer Contributions by Tier*

(Dollars in Millions)

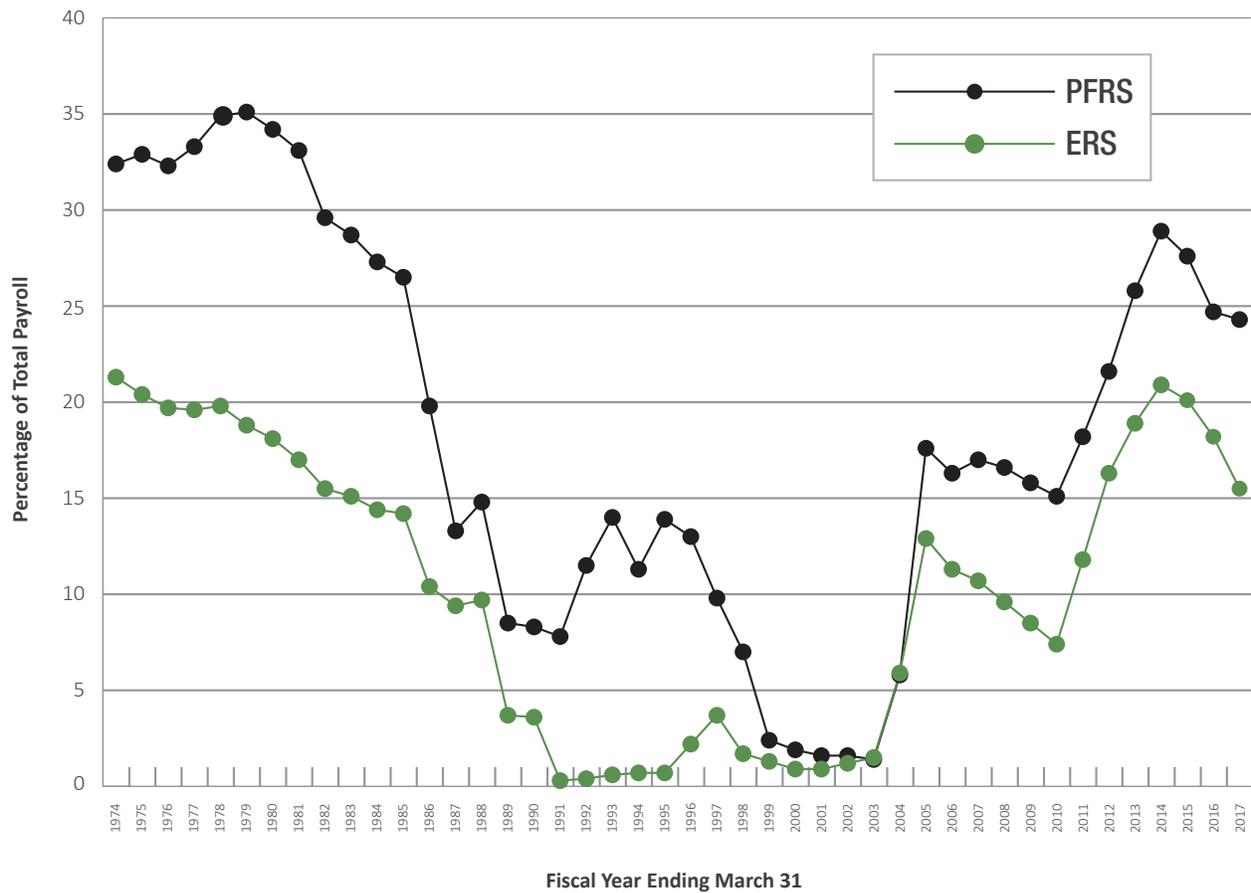
	2016 (as of February 1, 2016)		2015 (as of February 1, 2015)	
	Employer Contributions Attributable to Year	Percentage	Employer Contributions Attributable to Year	Percentage
ERS				
Tier 1	\$ 54	1.2%	\$ 63	1.3%
Tier 2	58	1.2	67	1.4
Tiers 3 & 4	3,990	85.8	4,291	87.9
Tier 5	227	4.9	240	4.9
Tier 6	324	7.0	222	4.6
Total	\$ 4,653	100.0%	\$ 4,884	100.0%
PFRS				
Tier 1	\$ 3	0.3%	\$ 3	0.4%
Tier 2	792	91.5	832	93.4
Tier 3	3	0.4	3	0.3
Tier 5	27	3.1	25	2.9
Tier 6	41	4.8	27	3.1
Total	\$ 866	100.0%	\$ 891	100.0%

*Numbers may not add up due to rounding.

Historical Trends (Rates as a Percentage of Salary, 1974 – 2017)

The State is obligated to pay its bill on March 1, one month before the end of the fiscal year. Through 2004, local employers paid their bills by December 15, three and one-half months before the end of the fiscal year. Beginning in 2005, the payment date for local employers was changed to February 1.

Trends in Employer Contributions



Changes in Contributions

The System's experience in many areas (employee salary growth or decrease, investment return, legislative enactments of benefits) is assessed and quantified yearly. Each element exerts an increasing, decreasing or neutral pressure on contributions to be charged for that year.

Analysis of Changes (By Source)

Experience during one fiscal year produces the increase or decrease in contributions for the following year.

(Dollars in Millions)

Fiscal Year Valuation Date	Fiscal Year Bill Date	Contributions for Preceding Fiscal Year Bill	Salary Growth	Return on Investments	Assumption Changes	Change in Benefits	Other Adjustments	Projected Contributions for Year Shown*
ERS								
2006	2008	2,395	112	51	n/a	n/a	(191)	2,367
2007	2009	2,316	93	(147)	n/a	n/a	(91)	2,171
2008	2010	2,018	88	(192)	n/a	n/a	(79)	1,835
2009	2011	1,854	135	1,098	(75)	n/a	130	3,142
2010	2012	3,029	89	782	417	n/a	(71)	4,246
2011	2013	3,948	15	570	202	n/a	(81)	4,654
2012	2014	4,627	119	870	(9)	n/a	(343)	5,264
2013	2015	5,243	97	521	(539)	n/a	(182)	5,140
2014	2016	5,143	(24)	(937)	633	n/a	(187)	4,628
2015	2017	4,515	35	(396)	273	n/a	(433)	3,994
PFRS								
2006	2008	430	21	6	n/a	n/a	16	473
2007	2009	476	22	(24)	n/a	n/a	12	486
2008	2010	487	26	(29)	8	n/a	(1)	491
2009	2011	474	31	152	(13)	n/a	(42)	602
2010	2012	576	10	117	22	n/a	(31)	694
2011	2013	693	18	93	(8)	n/a	53	849
2012	2014	827	25	142	(1)	n/a	(36)	957
2013	2015	936	3	79	(83)	n/a	(18)	917
2014	2016	917	23	(143)	52	n/a	(7)	842
2015	2017	809	1	(70)	161	n/a	(73)	828

* This is an estimated figure. Minor adjustments, mostly salary-related, result in the final contribution figure for the year as shown in the Contributions for Preceding Fiscal Year Bill column.

Note: Chapter 94 of the Laws of 2015 changed the definition of billing salary beginning with fiscal year 2016. The billing rates are now applied to salaries as of the end of the previous fiscal year, rather than the end of the fiscal year when the contributions are made.

The Projected Contributions for Fiscal Year Shown is now based on one year of salary projection (previously a two-year projection) and the Contributions for Preceding Fiscal Year Bill is based on known salaries from the previous fiscal year (previously a one-year projection). This explains the large decrease in contributions from the projected to the actual amount for fiscal year 2016.

Assets and Accrued Liabilities

Plan assets can be expressed as the market value or as the actuarial value of assets. The market value of assets represents the market value of investments as of the last day of the fiscal year. The actuarial value of assets smoothes the volatility in the market value by phasing in unexpected gains and losses over a period of five years. The actuarial accrued liability is the portion of the actuarial present value of future benefits that is attributed to service rendered as of the valuation date. Note that the asset values do not include the following dedicated assets: Group Life Insurance Plan, Non-Member Contributions, Administrative Overbill Account, Loan Insurance Reserve and Annuity Savings Fund.

(Dollars in Millions)

Valuation Date	Market Value of Assets (MVA)	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AL)	Ratio of Assets to AL based on	
				MVA	AVA
ERS					
4/1/07	\$ 133,135	\$ 121,116	\$ 114,525	116.2%	105.8%
4/1/08	132,474	128,916	120,183	110.2	107.3
4/1/09	94,242	126,438	125,136	75.3	101.0
4/1/10	114,058	125,482	133,574	85.4	93.9
4/1/11	127,192	126,395	140,087	90.8	90.2
4/1/12	130,349	125,688	144,107	90.5	87.2
4/1/13	139,580	132,067	149,211	93.5	88.5
4/1/14	154,119	145,985	158,638	97.2	92.0
4/1/15	161,065	156,648	167,065	96.4	93.8
PFRS					
4/1/07	\$ 23,490	\$ 21,379	\$ 20,074	117.0%	106.5%
4/1/08	23,372	22,767	21,072	110.9	108.0
4/1/09	16,695	22,423	21,597	77.3	103.8
4/1/10	20,194	22,230	22,998	87.8	96.7
4/1/11	22,357	22,205	24,169	92.5	91.9
4/1/12	22,837	22,009	25,048	91.2	87.9
4/1/13	24,436	23,112	25,815	94.7	89.5
4/1/14	26,961	25,474	27,377	98.5	93.0
4/1/15	28,154	27,330	29,336	96.0	93.2

Solvency Test

The System is funded in accordance with the aggregate method. The following solvency test is one means of checking the System's funding progress. In this test, the System's actuarial value of assets is compared to:

- (1) member contributions on deposit;
- (2) the liabilities for future benefits to persons who have retired; and
- (3) the employer-financed liabilities for service already rendered by active members.

The accrued liabilities in this chart are calculated in accordance with the entry age normal method.

Valuation Date	Accrued Liability (Dollars in Millions)				Actuarial Assets (Dollars in Millions)	Portion of Actuarial Accrued Liabilities Covered by Actuarial Assets		
	Member Contributions (1)	Retiree (2)	Active (3)	Total (1) + (2) + (3)		(1)	(2)	(3)
ERS								
4/1/07	\$ 7,112	\$ 51,231	\$ 56,182	\$ 114,525	\$ 121,116	100.0%	100.0%	111.7%
4/1/08	7,430	54,945	57,808	120,183	128,916	100.0	100.0	115.1
4/1/09	7,718	57,419	59,999	125,136	126,438	100.0	100.0	102.2
4/1/10	7,979	62,692	62,903	133,574	125,482	100.0	100.0	87.1
4/1/11	8,214	67,412	64,461	140,087	126,395	100.0	100.0	78.8
4/1/12	8,168	75,210	60,729	144,107	125,688	100.0	100.0	69.7
4/1/13	8,328	78,743	62,140	149,211	132,067	100.0	100.0	72.4
4/1/14	8,462	85,528	64,648	158,638	145,985	100.0	100.0	80.4
4/1/15	8,608	90,163	68,294	167,065	156,648	100.0	100.0	84.7
PFRS								
4/1/07	\$ 22	\$ 10,638	\$ 9,414	\$ 20,074	\$ 21,379	100.0%	100.0%	113.9%
4/1/08	22	11,156	9,894	21,072	22,767	100.0	100.0	117.1
4/1/09	26	11,588	9,983	21,597	22,423	100.0	100.0	108.3
4/1/10	27	12,891	10,080	22,998	22,230	100.0	100.0	92.4
4/1/11	29	13,383	10,757	24,169	22,205	100.0	100.0	81.7
4/1/12	2	14,060	10,986	25,048	22,009	100.0	100.0	72.3
4/1/13	5	14,948	10,862	25,815	23,112	100.0	100.0	75.1
4/1/14	10	15,958	11,409	27,377	25,474	100.0	100.0	83.3
4/1/15	20	17,072	12,244	29,336	27,330	100.0	100.0	83.6

Schedule of Active Member Data

Fiscal Year Ending March 31	Active Members	Annual Member Payroll (Dollars in Millions)	Percentage Increase in Annual Member Payroll	Average Salary
ERS				
2006	513,016	\$ 20,919	3.5%	\$ 40,776
2007	519,203	22,018	5.3	42,408
2008	528,435	22,779	3.5	43,106
2009	530,023	24,099	5.8	45,468
2010	529,466	24,972	3.6	47,164
2011	513,092	24,389	(2.3)	47,534
2012	505,575	24,291	(0.4)	48,046
2013	498,266	24,405	0.5	48,979
2014	493,209	24,361	(0.2)	49,392
2015	491,558	24,480	0.5	49,801
PFRS				
2006	32,469	\$ 2,712	7.1%	\$ 83,518
2007	32,811	2,825	4.2	86,099
2008	33,089	2,926	3.6	88,440
2009	33,052	2,970	1.5	89,854
2010	32,449	3,113	4.8	95,934
2011	31,659	3,146	1.0	99,357
2012	31,024	3,191	1.4	102,850
2013	30,780	3,163	(0.9)	102,754
2014	31,218	3,233	2.2	103,549
2015	31,372	3,257	0.8	103,822

Schedule of Retired Members and Beneficiaries

Added to and Removed from Benefit Payroll

Fiscal Year	Number of Retired Members and Beneficiaries		Annual Benefits of Retired Members and Beneficiaries		Total Number of Retired Members and Beneficiaries	Total Annual Benefit	Percentage Increase in Total Annual Benefits	Average Annual Benefit
	Added During the Year	Removed During the Year	Added During the Year	Removed During the Year				
ERS								
2006	20,121	12,815	\$ 444,562,616	\$ 142,494,586	313,837	\$ 5,299,236,827	6.04%	\$ 16,885
2007	19,780	12,504	453,890,020	144,683,098	321,113	5,608,443,749	5.83	17,466
2008	20,787	13,174	538,291,047	156,937,687	328,726	5,989,797,109	6.80	18,221
2009	21,585	14,038	565,713,502	173,445,214	336,273	6,382,065,397	6.55	18,979
2010	22,885	14,052	604,707,420	181,343,790	345,106	6,805,429,027	6.63	19,720
2011	22,733	13,899	683,435,574	186,508,676	353,940	7,302,355,926	7.30	20,632
2012	31,906	14,378	990,541,993	198,660,208	371,468	8,094,237,711	10.84	21,790
2013	23,424	13,993	627,992,358	207,014,141	380,899	8,515,215,928	5.20	22,356
2014	23,320	14,931	636,672,277	229,131,028	389,288	8,922,757,178	4.79	22,921
2015	21,832	14,339	615,594,488	225,462,412	396,781	9,312,889,254	4.37	23,471
PFRS								
2006	1,404	716	\$ 85,412,810	\$ 18,880,308	28,408	\$ 1,040,179,643	6.83%	\$ 36,616
2007	1,230	685	74,195,781	18,847,992	28,953	1,095,527,432	5.32	37,838
2008	1,157	727	73,592,416	20,604,380	29,383	1,148,515,468	4.84	39,088
2009	1,270	748	85,132,844	21,203,012	29,905	1,212,445,300	5.57	40,543
2010	1,606	814	106,721,728	25,637,123	30,697	1,293,529,905	6.69	42,139
2011	1,184	790	80,517,204	24,073,826	31,091	1,349,973,282	4.36	43,420
2012	1,403	788	97,599,791	23,890,471	31,706	1,423,682,602	5.46	44,903
2013	1,629	798	120,115,279	25,836,637	32,537	1,517,961,244	6.62	46,653
2014	1,431	851	99,767,882	27,650,778	33,117	1,590,078,348	4.75	48,014
2015	1,222	812	89,763,321	27,980,968	33,527	1,651,860,701	3.89	49,270

ERS — Annual benefits are based on option 0 benefits plus COLA.

PFRS — Annual benefits are based on option 0 benefits (prior to option selection and partial lump sum distribution) plus COLA.

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Statistical

Contents

Schedule of Additions to Fiduciary Net Position	151
Schedule of Investment Income	152
Schedule of Deductions from Fiduciary Net Position	153
Schedule of Total Changes in Fiduciary Net Position	154
Service Retirees — ERS	156
Service Retirees — PFRS	158
Disability Retirees — ERS	160
Disability Retirees — PFRS	162
New Option Selections	164
Option Selection — Total Payments	165
Average Pension Benefits Paid During Year Shown	166
Average Benefit Pay Types	167
New Benefits — Service Retirements by Age and Service	169
New Benefits — Accidental and Ordinary Death	170
Combined System Participants	171
Membership by Age and Years of Service	172
Membership by Tier	173
Membership by Status	174
Number of Employers	174
Membership by Employer Type	175
Average Salary by Employer Type	176
Members and Salaries by Plan — ERS	177
Members and Salaries by Plan — PFRS	178
Retirees and Beneficiaries by Age	180
Retirees and Beneficiaries — ERS	181
Retirees and Beneficiaries — PFRS	182
Local Government Salaries and Billings — ERS	183
Local Government Salaries and Billings — PFRS	185
Contributions Recorded, 2007 – 2016	187
20-Year Summary	188
Notes to 20-Year Summary	190

Schedule of Additions to Fiduciary Net Position

(Dollars in Thousands)

Year Ending	Member Contributions	Employer Contributions	Other Income*	Investment Income	Total
2016	\$ 306,631	\$ 5,140,204	\$ 332,880	\$ (384,834)	\$ 5,394,881
ERS	289,333	4,347,619	198,332	(327,069)	4,508,215
PFRS	17,298	792,585	134,548	(57,765)	886,666
2015	\$ 284,793	\$ 5,797,449	\$ 230,799	\$ 12,444,891	\$ 18,757,932
ERS	272,004	4,893,110	193,176	10,582,102	15,940,392
PFRS	12,789	904,339	37,623	1,862,789	2,817,540
2014	\$ 281,398	\$ 6,064,133	\$ 192,581	\$ 20,598,593	\$ 27,136,705
ERS	273,545	5,137,935	175,677	17,496,541	23,083,698
PFRS	7,853	926,198	16,904	3,102,052	4,053,007
2013	\$ 269,134	\$ 5,336,045	\$ 131,853	\$ 14,717,622	\$ 20,454,654
ERS	264,788	4,524,395	122,931	12,496,378	17,408,492
PFRS	4,346	811,650	8,922	2,221,244	3,046,162
2012	\$ 273,247	\$ 4,585,178	\$ 157,625	\$ 7,868,313	\$ 12,884,363
ERS	268,545	3,878,717	134,821	6,681,603	10,963,686
PFRS	4,702	706,461	22,804	1,186,710	1,920,677
2011	\$ 286,199	\$ 4,164,571	\$ 127,709	\$ 19,339,896	\$ 23,918,375
ERS	284,486	3,622,638	101,730	16,427,023	20,435,877
PFRS	1,713	541,933	25,979	2,912,873	3,482,498
2010	\$ 284,291	\$ 2,344,222	\$ 81,981	\$ 28,422,361	\$ 31,132,855
ERS	282,791	1,879,209	76,466	24,145,393	26,383,859
PFRS	1,500	465,013	5,515	4,276,968	4,748,996
2009	\$ 273,316	\$ 2,456,223	\$ 155,918	\$ (40,428,820)	\$ (37,543,363)
ERS	268,991	1,963,413	89,042	(34,368,280)	(32,046,834)
PFRS	4,325	492,810	66,876	(6,060,540)	(5,496,529)
2008	\$ 265,676	\$ 2,648,448	\$ 116,112	\$ 3,163,728	\$ 6,193,964
ERS	263,098	2,134,954	98,703	2,690,533	5,187,288
PFRS	2,578	513,494	17,409	473,195	1,006,676
2007	\$ 250,158	\$ 2,718,551	\$ 131,863	\$ 17,416,082	\$ 20,516,654
ERS	247,237	2,216,087	110,929	14,803,498	17,377,751
PFRS	2,921	502,464	20,934	2,612,584	3,138,903

* Includes interest earned on member loans, interest on accounts receivable and transfers from other systems.

Schedule of Investment Income

(Dollars in Thousands)

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Net Change in Fair Value of Investments	\$ (3,934,853)	\$ 9,275,335	\$ 17,432,110	\$ 11,592,363	\$ 4,958,927	\$ 16,740,555	\$ 25,631,185	\$ (43,720,432)	\$ (1,287,032)	\$ 13,538,322
Interest	1,446,569	1,447,757	1,366,175	1,394,442	1,379,423	1,426,941	1,540,095	1,722,343	1,976,372	1,816,416
Dividends	1,593,010	1,589,248	1,498,622	1,512,908	1,405,870	1,269,009	1,202,421	1,531,091	2,060,063	1,563,627
Real Estate and Mortgages	491,949	414,345	353,821	382,315	239,038	97,844	155,974	194,517	8,872	176,456
Alternative Investments	174,552	174,850	259,960	377,664	170,225	234,940	109,603	49,646	150,360	170,689
Security Lending Income	52,878	35,639	28,381	32,617	33,323	31,328	62,224	545,934	1,335,474	1,248,865
International	360,723	137,227	220,090	146,314	153,157	46,127	5,748	23,223	379,185	276,755
Other Included Prior Year Adjustment	1,461	(40,881)	17,187	(247,988)	(44,790)	(57,241)	81,669	(44,810)	47,318	8,551
Security Lending Expenses	(5,278)	(3,563)	(2,838)	(3,261)	(3,332)	(2,744)	(2,080)	(367,584)	(1,217,664)	(1,209,216)
Investment Expenses	(565,845)	(585,066)	(574,915)	(469,752)	(423,528)	(446,863)	(364,478)	(362,748)	(289,220)	(174,383)
Net Investment Income	\$ (384,834)	\$ 12,444,891	\$ 20,598,593	\$ 14,717,622	\$ 7,868,313	\$ 19,339,896	\$ 28,422,361	\$ (40,428,820)	\$ 3,163,728	\$ 17,416,082

Schedule of Deductions from Fiduciary Net Position

(Dollars in Thousands)

Year Ending	Retirement Allowances	Post-Retirement Supplements	Death Benefits	Separation from Service	Administrative Expenses	Other Expenses	Total
2016	\$ 10,113,758	\$ 606,536	\$ 188,190	\$ 34,488	\$ 106,620	\$ 117,500	\$ 11,167,092
ERS	8,536,930	508,112	179,861	33,097	93,012	117,197	9,468,209
PFRS	1,576,828	98,424	8,329	1,391	13,608	303	1,698,883
2015	\$ 9,651,227	\$ 601,850	\$ 183,091	\$ 27,628	\$ 107,151	\$ 49,918	\$ 10,620,865
ERS	8,152,183	502,916	174,652	26,067	93,357	51,321	9,000,496
PFRS	1,499,044	98,934	8,439	1,561	13,794	(1,403)	1,620,369
2014	\$ 9,098,453	\$ 596,556	\$ 203,820	\$ 29,972	\$ 105,662	\$ 48,725	\$ 10,083,188
ERS	7,702,970	497,142	185,169	28,439	92,266	51,341	8,557,327
PFRS	1,395,483	99,414	18,651	1,533	13,396	(2,616)	1,525,861
2013	\$ 8,669,843	\$ 586,209	\$ 194,170	\$ 29,265	\$ 105,720	\$ 42,049	\$ 9,627,256
ERS	7,339,678	487,100	177,113	28,294	92,134	43,221	8,167,540
PFRS	1,330,165	99,109	17,057	971	13,586	(1,172)	1,459,716
2012	\$ 8,109,356	\$ 568,466	\$ 184,960	\$ 29,789	\$ 100,649	\$ 45,260	\$ 9,038,480
ERS	6,845,843	470,310	172,340	28,866	87,232	44,949	7,649,540
PFRS	1,263,513	98,156	12,620	923	13,417	311	1,388,940
2011	\$ 7,717,007	\$ 555,255	\$ 192,265	\$ 27,745	\$ 101,333	\$ 27,951	\$ 8,621,556
ERS	6,520,651	457,931	179,301	26,653	87,760	29,328	7,301,624
PFRS	1,196,356	97,324	12,964	1,092	13,573	(1,377)	1,319,932
2010	\$ 6,931,780	\$ 548,321	\$ 183,023	\$ 25,805	\$ 100,029	\$ 29,943	\$ 7,818,901
ERS	5,807,070	451,277	170,188	23,940	86,769	29,318	6,568,562
PFRS	1,124,710	97,044	12,835	1,865	13,260	625	1,250,339
2009	\$ 6,497,135	\$ 534,487	\$ 180,491	\$ 31,680	\$ 99,229	\$ 21,706	\$ 7,364,728
ERS	5,431,840	439,000	173,580	29,577	86,727	23,775	6,184,499
PFRS	1,065,295	95,487	6,911	2,103	12,502	(2,069)	1,180,229
2008	\$ 6,142,751	\$ 511,069	\$ 181,693	\$ 29,841	\$ 90,304	\$ 17,680	\$ 6,973,338
ERS	5,135,670	418,423	169,688	27,919	78,849	17,896	5,848,445
PFRS	1,007,081	92,646	12,005	1,922	11,455	(216)	1,124,893
2007	\$ 5,722,875	\$ 495,908	\$ 164,632	\$ 29,331	\$ 79,772	\$ 18,985	\$ 6,511,503
ERS	4,777,587	405,264	153,660	27,034	69,893	18,363	5,451,801
PFRS	945,288	90,644	10,972	2,297	9,879	622	1,059,702

Schedule of Total Changes in Fiduciary Net Position

(Dollars in Thousands)

Year Ending	Member Contributions	Employer Contributions	Other Income	Investment Income	Total
2016	\$ 306,631	\$ 5,140,204	\$ 332,880	\$ (384,834)	\$ 5,394,881
ERS	289,333	4,347,619	198,332	(327,069)	4,508,215
PFRS	17,298	792,585	134,548	(57,765)	886,666
2015	\$ 284,793	\$ 5,797,449	\$ 230,799	\$ 12,444,891	\$ 18,757,932
ERS	272,004	4,893,110	193,176	10,582,102	15,940,392
PFRS	12,789	904,339	37,623	1,862,789	2,817,540
2014	\$ 281,398	\$ 6,064,133	\$ 192,581	\$ 20,598,593	\$ 27,136,705
ERS	273,545	5,137,935	175,677	17,496,541	23,083,698
PFRS	7,853	926,198	16,904	3,102,052	4,053,007
2013	\$ 269,134	\$ 5,336,045	\$ 131,853	\$ 14,717,622	\$ 20,454,654
ERS	264,788	4,524,395	122,931	12,496,378	17,408,492
PFRS	4,346	811,650	8,922	2,221,244	3,046,162
2012	\$ 273,247	\$ 4,585,178	\$ 157,625	\$ 7,868,313	\$ 12,884,363
ERS	268,545	3,878,717	134,821	6,681,603	10,963,686
PFRS	4,702	706,461	22,804	1,186,710	1,920,677
2011	\$ 286,199	\$ 4,164,571	\$ 127,709	\$ 19,339,896	\$ 23,918,375
ERS	284,486	3,622,638	101,730	16,427,023	20,435,877
PFRS	1,713	541,933	25,979	2,912,873	3,482,498
2010	\$ 284,291	\$ 2,344,222	\$ 81,981	\$ 28,422,361	\$ 31,132,855
ERS	282,791	1,879,209	76,466	24,145,393	26,383,859
PFRS	1,500	465,013	5,515	4,276,968	4,748,996
2009	\$ 273,316	\$ 2,456,223	\$ 155,918	\$ (40,428,820)	\$ (37,543,363)
ERS	268,991	1,963,413	89,042	(34,368,280)	(32,046,834)
PFRS	4,325	492,810	66,876	(6,060,540)	(5,496,529)
2008	\$ 265,676	\$ 2,648,448	\$ 116,112	\$ 3,163,728	\$ 6,193,964
ERS	263,098	2,134,954	98,703	2,690,533	5,187,288
PFRS	2,578	513,494	17,409	473,195	1,006,676
2007	\$ 250,158	\$ 2,718,551	\$ 131,863	\$ 17,416,082	\$ 20,516,654
ERS	247,237	2,216,087	110,929	14,803,498	17,377,751
PFRS	2,921	502,464	20,934	2,612,584	3,138,903

Schedule of Total Changes in Fiduciary Net Position

continued

Retirement Allowances	Post-Retirement Supplement	Death Benefits	Separation from Service	Administrative Expenses	Other Expenses	Total	Net Increase / Decrease
\$ 10,113,758	\$ 606,536	\$ 188,190	\$ 34,488	\$ 106,620	\$ 117,500	\$ 11,167,092	\$ (5,772,211)
8,536,930	508,112	179,861	33,097	93,012	117,197	9,468,209	(4,959,994)
1,576,828	98,424	8,329	1,391	13,608	303	1,698,883	(812,217)
\$ 9,651,227	\$ 601,850	\$ 183,091	\$ 27,628	\$ 107,151	\$ 49,918	\$ 10,620,865	\$ 8,137,067
8,152,183	502,916	174,652	26,067	93,357	51,321	9,000,496	6,939,896
1,499,044	98,934	8,439	1,561	13,794	(1,403)	1,620,369	1,197,171
\$ 9,098,453	\$ 596,556	\$ 203,820	\$ 29,972	\$ 105,662	\$ 48,725	\$ 10,083,188	\$ 17,053,517
7,702,970	497,142	185,169	28,439	92,266	51,341	8,557,327	14,526,371
1,395,483	99,414	18,651	1,533	13,396	(2,616)	1,525,861	2,527,146
\$ 8,669,843	\$ 586,209	\$ 194,170	\$ 29,265	\$ 105,720	\$ 42,049	\$ 9,627,256	\$ 10,827,398
7,339,678	487,100	177,113	28,294	92,134	43,221	8,167,540	9,240,952
1,330,165	99,109	17,057	971	13,586	(1,172)	1,459,716	1,586,446
\$ 8,109,356	\$ 568,466	\$ 184,960	\$ 29,789	\$ 100,649	\$ 45,260	\$ 9,038,480	\$ 3,845,883
6,845,843	470,310	172,340	28,866	87,232	44,949	7,649,540	3,314,146
1,263,513	98,156	12,620	923	13,417	311	1,388,940	531,737
\$ 7,717,007	\$ 555,255	\$ 192,265	\$ 27,745	\$ 101,333	\$ 27,951	\$ 8,621,556	\$ 15,296,819
6,520,651	457,931	179,301	26,653	87,760	29,328	7,301,624	13,134,253
1,196,356	97,324	12,964	1,092	13,573	(1,377)	1,319,932	2,162,566
\$ 6,931,780	\$ 548,321	\$ 183,023	\$ 25,805	\$ 100,029	\$ 29,943	\$ 7,818,901	\$ 23,313,954
5,807,070	451,277	170,188	23,940	86,769	29,318	6,568,562	19,815,297
1,124,710	97,044	12,835	1,865	13,260	625	1,250,339	3,498,657
\$ 6,497,135	\$ 534,487	\$ 180,491	\$ 31,680	\$ 99,229	\$ 21,706	\$ 7,364,728	\$ (44,908,091)
5,431,840	439,000	173,580	29,577	86,727	23,775	6,184,499	(38,231,333)
1,065,295	95,487	6,911	2,103	12,502	(2,069)	1,180,229	(6,676,758)
\$ 6,142,751	\$ 511,069	\$ 181,693	\$ 29,841	\$ 90,304	\$ 17,680	\$ 6,973,338	\$ (779,374)
5,135,670	418,423	169,688	27,919	78,849	17,896	5,848,445	(661,157)
1,007,081	92,646	12,005	1,922	11,455	(216)	1,124,893	(118,217)
\$ 5,722,875	\$ 495,908	\$ 164,632	\$ 29,331	\$ 79,772	\$ 18,985	\$ 6,511,503	\$ 14,005,151
4,777,587	405,264	153,660	27,034	69,893	18,363	5,451,801	11,925,950
945,288	90,644	10,972	2,297	9,879	622	1,059,702	2,079,201

Service Retirees — ERS

This table shows the number (*Number*), average final average salary (*Avg FAS*), and average annual pension benefit prior to option selection and including any cost-of-living adjustment (*Avg Pen*) of surviving Employees' Retirement System service retirees on March 31, 2016. Groupings are based on years of service and age, with a breakdown by category of employer.

Years of Service	Nearest Age														
	Under 55			55 – 64			65 – 74			75 – 84			85 & Over		
	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen
State															
Under 10	–	–	–	1,128	44,494	4,246	1,978	41,230	4,937	807	32,897	4,427	517	19,157	3,280
10 – 14	–	–	–	3,411	38,825	6,122	7,645	35,650	6,942	4,349	31,917	7,148	2,736	24,030	6,578
15 – 19	–	–	–	2,136	46,606	10,307	4,872	44,127	12,069	3,771	36,666	11,622	2,236	26,964	10,519
20 – 24	–	–	–	2,445	58,261	21,079	7,764	54,586	23,557	5,739	42,702	20,775	3,231	31,303	17,941
25 – 29	1,426	82,910	41,159	6,071	71,656	35,102	9,658	60,083	32,289	5,579	45,921	27,999	2,261	34,387	24,040
30 – 34	103	95,353	47,195	9,230	74,321	45,909	11,810	63,038	40,918	4,965	49,809	35,381	1,628	38,583	30,991
35 & Over	1	84,030	42,015	8,373	70,035	51,372	17,812	66,253	51,431	5,274	57,170	47,123	1,812	47,339	42,861
Total	1,530	83,749	41,566	32,794	65,013	35,562	61,539	56,838	32,755	30,484	44,407	25,525	14,421	32,135	19,670
Counties															
Under 10	–	–	–	972	38,736	3,732	1,824	35,750	4,166	733	30,640	4,112	334	16,457	2,967
10 – 14	–	–	–	2,247	37,281	5,920	4,802	34,235	6,643	2,961	28,300	6,356	1,778	20,969	5,706
15 – 19	–	–	–	1,365	43,062	9,621	3,278	40,738	11,099	2,430	33,504	10,640	1,664	23,968	9,332
20 – 24	246	76,731	39,870	1,858	52,411	20,170	4,803	48,743	21,187	3,113	37,794	18,464	1,656	28,426	15,904
25 – 29	469	95,678	48,588	2,216	66,961	32,930	4,200	54,006	28,983	2,464	42,411	26,672	1,023	31,774	21,760
30 – 34	19	103,281	54,740	3,580	66,055	41,377	4,268	56,738	36,872	1,638	45,529	32,197	526	35,188	27,718
35 & Over	–	–	–	2,913	65,214	48,204	5,399	64,949	50,270	1,428	54,497	44,904	449	40,871	36,625
Total	734	89,525	45,825	15,151	56,261	28,319	28,574	49,587	25,483	14,767	38,073	19,319	7,430	26,797	14,305
Cities															
Under 10	–	–	–	135	35,083	3,298	295	32,919	3,939	130	23,762	3,148	74	13,087	2,409
10 – 14	–	–	–	351	34,532	5,280	767	30,521	5,952	462	25,071	5,696	305	18,871	5,047
15 – 19	–	–	–	231	38,328	8,736	495	38,217	10,480	385	29,474	9,309	278	20,780	8,338
20 – 24	–	–	–	248	48,092	17,140	618	46,064	19,585	423	33,890	16,612	269	24,253	13,673
25 – 29	–	–	–	215	57,873	26,983	632	49,731	26,649	407	36,433	22,638	239	26,670	18,976
30 – 34	–	–	–	652	59,789	37,438	773	52,263	34,020	359	41,295	29,625	161	28,680	23,558
35 & Over	–	–	–	586	61,718	45,758	1,102	56,475	43,665	350	43,009	36,158	143	32,022	30,025
Total	–	–	–	2,418	51,791	27,127	4,682	45,829	24,408	2,516	33,808	18,345	1,469	23,551	13,843
Towns															
Under 10	–	–	–	305	31,774	3,225	750	28,836	3,447	405	25,689	3,378	130	15,680	2,478
10 – 14	–	–	–	537	37,631	6,094	1,336	33,359	6,489	989	26,171	5,808	518	20,152	5,257
15 – 19	–	–	–	408	40,542	9,231	1,043	38,874	10,637	829	31,276	9,838	453	23,701	8,819
20 – 24	–	–	–	442	51,422	18,720	1,304	47,491	20,505	993	37,790	18,242	426	29,018	15,923
25 – 29	–	–	–	391	61,333	28,856	1,075	53,329	28,613	751	41,398	24,666	314	30,824	20,397
30 – 34	–	–	–	936	68,567	42,994	1,096	56,403	36,497	595	45,136	31,681	185	32,143	24,836
35 & Over	–	–	–	1,205	75,274	56,075	1,614	65,757	51,115	477	50,448	41,064	152	37,574	32,483
Total	–	–	–	4,224	58,720	32,053	8,218	47,937	24,622	5,039	36,069	17,929	2,178	26,130	13,664

Service Retirees — ERS

continued

Years of Service	Nearest Age														
	Under 55			55 – 64			65 – 74			75 – 84			85 & Over		
	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen
Villages															
Under 10	–	–	–	88	31,472	2,940	215	30,305	3,565	111	23,838	3,186	40	14,879	2,193
10 – 14	–	–	–	186	34,614	5,275	403	32,077	6,226	299	27,308	6,058	186	18,111	4,823
15 – 19	–	–	–	108	42,356	9,568	317	41,282	11,334	233	31,128	9,845	173	20,980	8,163
20 – 24	–	–	–	134	53,321	19,097	368	50,140	21,448	290	38,108	18,537	150	22,967	12,682
25 – 29	–	–	–	119	57,038	26,275	304	55,496	29,824	242	39,284	23,868	120	27,095	18,077
30 – 34	–	–	–	276	65,911	41,259	356	53,206	34,388	193	40,563	28,917	54	31,923	24,709
35 & Over	–	–	–	291	69,881	51,747	461	63,190	49,140	163	47,615	39,258	59	37,168	34,588
Total	–	–	–	1,202	55,109	28,623	2,424	47,823	24,226	1,531	35,409	18,021	782	23,282	12,588
Miscellaneous															
Under 10	–	–	–	828	49,342	4,671	1,424	44,080	5,053	482	36,050	4,756	141	21,320	3,373
10 – 14	–	–	–	1,542	48,464	7,677	2,948	42,143	8,086	1,626	35,818	7,933	768	24,032	6,355
15 – 19	–	–	–	1,112	56,393	12,291	2,317	49,824	13,453	1,325	39,412	12,252	578	25,980	9,887
20 – 24	–	–	–	1,430	64,048	22,537	3,327	57,784	24,625	1,526	46,038	21,627	671	32,055	17,421
25 – 29	–	–	–	1,015	69,215	32,108	2,667	64,905	34,308	1,142	51,446	30,300	529	36,501	24,822
30 – 34	–	–	–	2,373	82,912	51,913	2,447	70,757	45,213	924	57,236	39,752	372	42,181	32,876
35 & Over	–	–	–	1,751	80,292	59,061	2,988	75,980	58,764	1,033	67,097	54,281	365	51,466	45,022
Total	–	–	–	10,051	67,404	31,917	18,118	58,945	28,803	8,058	47,039	23,807	3,424	32,644	18,853
Schools															
Under 10	–	–	–	1,352	24,101	2,331	2,753	21,123	2,498	1,295	17,858	2,415	701	9,710	1,737
10 – 14	–	–	–	2,089	28,616	4,596	4,945	26,256	5,087	4,207	21,477	4,765	2,547	13,949	3,838
15 – 19	–	–	–	1,596	32,809	7,530	4,204	30,470	8,307	3,280	25,823	8,184	2,266	15,461	6,222
20 – 24	–	–	–	1,920	40,138	14,990	6,316	37,890	16,372	3,908	29,193	14,282	2,353	18,159	10,121
25 – 29	–	–	–	1,314	46,282	21,886	4,537	41,917	22,572	2,968	30,510	18,563	1,505	21,034	14,414
30 – 34	–	–	–	1,498	55,561	34,758	2,702	45,887	29,643	1,614	34,841	24,366	615	25,186	19,515
35 & Over	–	–	–	1,008	62,444	46,218	1,776	51,307	39,492	882	40,128	32,802	361	31,322	28,129
Total	–	–	–	10,777	39,787	16,792	27,233	35,276	15,533	18,154	27,236	12,624	10,348	17,255	8,964

Service Retirees — PFRS

This table shows the number (*Number*), average final average salary (*Avg FAS*), and average annual pension benefit prior to option selection, including any cost-of-living adjustment (*Avg Pen*) of surviving Police and Fire Retirement System service retirees on March 31, 2016. Groupings are based on years of service and age, with a breakdown by category of employer.

Years of Service	Nearest Age														
	Under 40			40 – 49			50 – 59			60 – 69			70 & Over		
	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen
State															
Under 10	–	–	–	–	–	–	2	44,208	6,368	4	26,953	3,146	9	22,409	4,559
10 – 14	–	–	–	–	–	–	13	47,657	10,110	23	34,650	7,241	25	13,594	3,349
15 – 19	–	–	–	–	–	–	4	58,946	15,869	12	39,438	11,409	17	28,746	12,036
20 – 24	–	–	–	113	124,627	65,997	425	103,238	55,114	293	64,960	36,443	894	32,351	24,798
25 – 29	–	–	–	17	139,635	83,400	379	126,374	77,707	259	89,176	54,779	378	46,613	34,067
30 – 34	–	–	–	1	101,353	58,833	187	135,392	92,157	392	109,873	74,746	358	60,583	45,825
35 & Over	–	–	–	–	–	–	14	143,642	98,741	161	118,944	84,554	196	75,456	59,609
Total	–	–	–	131	126,397	68,201	1,024	117,231	70,017	1,144	92,420	59,524	1,877	44,779	33,812
Counties															
Under 10	–	–	–	–	–	–	3	60,073	7,885	4	34,949	4,564	1	96,529	65,343
10 – 14	–	–	–	–	–	–	6	67,656	13,306	19	38,266	8,362	12	27,519	6,092
15 – 19	–	–	–	–	–	–	1	73,636	18,900	12	45,329	13,738	7	34,885	13,589
20 – 24	–	–	–	73	151,624	78,133	302	140,555	74,165	461	83,504	47,019	1,043	50,336	33,964
25 – 29	–	–	–	8	192,304	117,672	300	171,908	106,160	306	127,332	80,075	360	76,467	51,027
30 – 34	–	–	–	–	–	–	103	189,381	128,779	642	146,663	102,467	486	101,577	74,403
35 & Over	–	–	–	–	–	–	–	–	–	379	174,274	130,486	437	128,079	99,229
Total	–	–	–	81	155,641	82,038	715	159,700	94,591	1,823	131,145	88,732	2,346	79,299	56,927
Cities															
Under 10	–	–	–	–	–	–	7	38,044	4,798	5	44,123	5,895	7	38,364	8,391
10 – 14	–	–	–	–	–	–	24	44,608	8,857	88	28,968	6,381	53	17,069	4,167
15 – 19	–	–	–	–	–	–	23	54,664	15,175	41	46,342	15,858	33	21,038	7,578
20 – 24	–	–	–	359	98,972	50,225	1,348	85,222	43,923	1,369	58,025	32,159	1,488	34,458	24,348
25 – 29	–	–	–	26	99,813	56,400	491	103,403	60,741	759	84,342	50,426	794	46,182	31,419
30 – 34	–	–	–	–	–	–	155	121,060	78,656	790	93,105	62,114	910	58,102	43,102
35 & Over	–	–	–	–	–	–	9	92,767	64,477	437	99,814	72,192	695	71,132	56,473
Total	–	–	–	385	99,029	50,642	2,057	91,319	49,781	3,489	76,037	47,050	3,980	48,271	35,221
Towns															
Under 10	–	–	–	–	–	–	9	35,672	4,246	22	28,951	3,974	32	17,805	2,862
10 – 14	–	–	–	–	–	–	6	35,046	6,309	38	33,434	6,758	44	22,397	5,558
15 – 19	–	–	–	–	–	–	7	67,300	18,389	14	43,243	14,113	25	27,761	10,438
20 – 24	–	–	–	101	110,387	55,864	493	93,873	47,838	347	68,443	36,982	338	42,134	28,206
25 – 29	–	–	–	9	114,616	59,883	125	114,094	62,959	181	87,930	50,806	106	53,178	34,284
30 – 34	–	–	–	–	–	–	36	127,136	80,823	212	105,622	70,821	145	74,009	52,982
35 & Over	–	–	–	–	–	–	3	109,457	64,844	117	124,943	88,339	124	91,841	71,353
Total	–	–	–	110	110,733	56,192	679	97,863	51,197	931	85,057	51,472	814	54,358	37,218

Service Retirees — PFRS

continued

Years of Service	Nearest Age														
	Under 40			40 – 49			50 – 59			60 – 69			70 & Over		
	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen
Villages															
Under 10	-	-	-	-	-	-	15	27,637	3,198	28	26,706	3,045	42	10,723	1,441
10 – 14	-	-	-	-	-	-	10	43,212	8,220	57	29,043	6,120	56	18,721	4,799
15 – 19	-	-	-	-	-	-	7	54,194	14,134	32	37,562	12,169	30	21,071	8,743
20 – 24	-	-	-	120	98,825	50,018	419	86,816	43,765	370	63,779	34,336	381	38,953	26,774
25 – 29	-	-	-	7	119,478	63,741	131	117,660	63,509	145	85,460	47,266	141	45,276	29,823
30 – 34	-	-	-	-	-	-	26	134,795	83,394	141	116,874	74,450	146	66,153	47,068
35 & Over	-	-	-	-	-	-	3	100,611	61,252	106	127,241	90,048	104	92,253	72,170
Total	-	-	-	127	99,964	50,774	611	92,998	47,853	879	79,138	45,989	900	47,343	32,639
Miscellaneous															
Under 10	-	-	-	-	-	-	2	64,352	7,382	4	58,522	63,892	1	101,364	8,700
10 – 14	-	-	-	-	-	-	1	49,063	10,949	8	41,473	8,811	10	18,605	4,633
15 – 19	-	-	-	-	-	-	4	121,433	35,053	5	51,066	14,944	6	53,817	20,555
20 – 24	-	-	-	20	142,133	72,628	121	133,789	69,952	312	106,245	57,781	285	45,043	32,944
25 – 29	-	-	-	1	211,198	121,763	88	151,168	92,537	208	142,015	87,706	93	80,165	51,431
30 – 34	-	-	-	-	-	-	23	149,441	100,589	171	167,356	115,129	85	108,973	77,542
35 & Over	-	-	-	-	-	-	1	223,145	163,201	41	168,057	122,068	91	109,922	85,025
Total	-	-	-	21	145,421	74,968	240	140,937	80,209	749	132,199	81,620	571	70,348	50,225

Disability Retirees — ERS

This table shows the number (*Number*), average final average salary (*Avg FAS*), and average annual pension benefit prior to option selection, including any cost-of-living adjustment (*Avg Pen*) of surviving Employees' Retirement System disability retirees on March 31, 2016. Groupings are based on years of service and age, with a breakdown by category of employer.

Years of Service	Nearest Age														
	Under 55			55 – 64			65 – 74			75 – 84			85 & Over		
	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen									
State															
Under 10	173	35,660	19,190	333	26,654	11,465	279	21,791	11,616	140	18,820	9,732	54	15,516	7,481
10 – 14	455	46,278	19,781	1,028	37,690	14,077	942	30,930	12,806	418	23,787	11,090	155	17,573	9,711
15 – 19	403	51,515	21,896	949	43,590	17,378	989	35,539	16,653	417	27,455	14,954	123	17,782	14,002
20 – 24	283	58,688	25,633	881	48,651	21,445	782	39,908	21,299	300	28,308	19,383	59	18,143	16,771
25 – 29	141	61,898	33,962	628	55,972	29,861	387	41,000	24,294	152	31,756	22,999	28	16,179	17,710
30 – 34	30	63,275	35,936	201	52,346	30,607	169	40,720	27,075	52	33,817	27,037	6	19,263	18,011
35 & Over	–	–	–	31	51,664	31,700	44	42,277	29,338	6	41,300	34,472	–	–	–
Total	1,485	50,654	23,074	4,051	44,217	19,640	3,592	35,128	17,733	1,485	26,500	15,594	425	17,383	12,294
Counties															
Under 10	49	53,869	31,788	66	30,468	13,432	63	25,410	13,286	30	17,077	8,407	17	17,272	7,650
10 – 14	236	53,486	25,033	369	41,568	16,437	350	31,022	11,811	173	22,838	9,310	53	13,872	8,593
15 – 19	220	63,970	31,809	389	45,593	19,077	333	36,721	16,230	140	28,223	14,926	33	17,259	11,527
20 – 24	149	74,698	40,877	353	56,987	27,544	229	40,522	21,698	72	34,369	24,825	16	24,238	22,096
25 – 29	52	78,761	46,388	226	60,243	32,606	117	43,948	27,050	34	29,960	23,018	6	20,852	18,496
30 – 34	9	68,066	33,407	66	56,340	33,721	38	54,720	37,841	10	34,599	26,790	1	15,837	20,855
35 & Over	–	–	–	8	54,582	34,931	8	61,184	44,199	–	–	–	–	–	–
Total	715	63,180	32,541	1,477	49,405	22,999	1,138	36,629	17,839	459	26,696	14,794	126	16,882	11,518
Cities															
Under 10	6	39,554	13,991	19	28,306	10,583	20	21,004	10,589	8	22,138	11,953	7	17,217	11,462
10 – 14	33	46,244	15,824	72	34,635	11,428	76	30,376	11,487	38	21,420	8,226	12	15,038	12,666
15 – 19	19	40,494	13,801	91	40,604	14,387	72	33,038	12,604	29	25,450	11,952	7	13,075	9,453
20 – 24	21	54,021	19,376	59	43,048	17,815	44	33,417	16,031	22	24,148	18,593	6	19,862	17,443
25 – 29	9	55,033	24,091	40	43,355	20,789	45	35,091	20,434	13	30,815	21,784	1	8,251	19,805
30 – 34	3	87,946	42,951	14	47,901	26,521	10	36,964	23,539	3	24,715	15,409	3	14,532	14,253
35 & Over	–	–	–	3	61,614	36,382	1	40,615	26,793	–	–	–	1	22,668	26,601
Total	91	48,641	17,812	298	39,785	15,759	268	31,967	14,475	113	24,204	13,215	37	15,843	13,303
Towns															
Under 10	15	36,336	13,227	17	29,175	11,220	17	28,706	15,637	10	15,514	6,800	7	14,957	9,501
10 – 14	50	44,046	15,141	106	39,838	13,688	81	31,974	12,800	40	23,259	10,877	17	17,499	9,734
15 – 19	50	51,649	17,787	130	46,816	16,275	98	35,886	14,433	32	33,299	13,724	11	17,799	10,284
20 – 24	53	60,322	22,049	100	53,527	21,313	73	39,883	21,859	28	29,472	22,387	6	26,766	23,476
25 – 29	28	70,914	31,400	67	53,813	25,614	42	43,675	26,569	12	36,255	25,697	1	14,593	24,728
30 – 34	7	68,557	35,555	31	59,002	34,285	18	44,980	29,761	6	28,499	26,081	1	23,018	22,625
35 & Over	–	–	–	5	71,765	44,136	5	42,568	30,028	1	30,632	21,626	–	–	–
Total	203	54,150	20,401	456	48,138	19,492	334	37,015	18,307	129	28,005	15,935	43	18,516	12,403

Disability Retirees — ERS

continued

Years of Service	Nearest Age														
	Under 55			55 – 64			65 – 74			75 – 84			85 & Over		
	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen
Villages															
Under 10	3	41,145	14,869	7	32,629	11,677	7	21,721	11,741	3	14,944	11,044	–	–	–
10 – 14	21	48,395	16,436	32	39,187	13,868	27	27,187	10,812	13	23,708	11,751	5	14,859	8,358
15 – 19	11	53,547	18,343	30	47,946	16,582	28	32,968	16,246	10	22,985	11,077	–	–	–
20 – 24	9	48,255	17,811	33	54,966	21,660	19	35,381	19,911	11	24,771	18,286	4	28,002	19,528
25 – 29	10	66,957	28,565	16	58,493	27,215	16	40,965	22,606	9	28,321	21,818	1	41,924	36,930
30 – 34	–	–	–	12	62,494	35,040	8	55,275	34,551	7	30,555	25,394	1	36,751	35,881
35 & Over	–	–	–	1	58,962	36,464	–	–	–	–	–	–	–	–	–
Total	54	52,456	19,213	131	49,461	20,077	105	34,087	17,576	53	24,984	16,452	11	24,089	17,519
Miscellaneous															
Under 10	15	35,929	12,588	47	32,617	13,271	27	24,795	10,781	22	22,092	11,194	6	21,263	7,074
10 – 14	83	42,039	14,462	208	43,928	14,549	195	40,373	13,073	64	26,132	10,041	16	15,663	10,330
15 – 19	68	51,018	17,274	229	49,254	16,653	198	39,458	14,864	42	28,482	12,711	6	19,750	11,688
20 – 24	55	60,868	22,120	169	53,490	19,921	88	45,001	19,445	23	27,686	15,846	6	23,112	17,199
25 – 29	32	58,109	25,299	97	52,985	24,540	49	51,004	27,762	17	39,588	30,463	3	23,402	20,772
30 – 34	4	47,085	24,466	50	59,897	33,541	14	45,652	27,568	8	44,101	35,452	–	–	–
35 & Over	–	–	–	5	46,857	32,685	2	46,075	36,492	1	28,043	21,516	1	37,830	34,899
Total	257	50,167	18,241	805	48,892	18,697	573	41,091	16,255	177	28,505	14,747	38	19,563	12,586
Schools															
Under 10	10	20,708	7,535	39	20,886	8,127	50	19,031	7,998	41	14,714	6,421	18	14,715	8,258
10 – 14	115	36,230	12,313	352	30,518	9,779	346	26,394	8,338	162	22,081	7,559	53	11,849	5,899
15 – 19	40	45,767	15,516	277	34,811	11,716	324	32,448	11,282	91	22,433	10,138	40	13,740	8,699
20 – 24	61	47,267	17,292	171	39,372	14,660	108	32,330	14,763	54	25,563	14,085	8	23,580	17,560
25 – 29	23	57,427	25,017	103	46,346	21,128	48	34,034	17,910	22	27,320	19,049	8	23,726	20,331
30 – 34	2	52,153	27,317	34	49,094	25,794	20	47,254	28,532	1	28,335	20,885	2	15,144	16,268
35 & Over	1	50,782	29,835	2	54,629	34,269	3	51,776	32,792	1	22,658	18,884	–	–	–
Total	252	41,918	15,185	978	35,260	12,917	899	29,836	11,194	372	22,189	9,758	129	14,350	8,875

Disability Retirees — PFRS

This table shows the number (*Number*), average final average salary (*Avg FAS*), and average annual pension benefit prior to option selection, including any cost-of-living adjustment (*Avg Pen*) of surviving Police and Fire Retirement System disability retirees on March 31, 2016. Groupings are based on years of service and age, with a breakdown by category of employer.

Years of Service	Nearest Age														
	Under 40			40 – 49			50 – 59			60 – 69			70 & Over		
	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen
State															
Under 10	6	74,517	45,679	26	69,410	44,526	39	39,179	24,451	37	24,371	18,573	16	13,403	19,314
10 – 14	1	98,439	49,219	13	91,390	49,516	35	57,288	33,408	31	37,507	24,719	54	18,484	20,932
15 – 19	–	–	–	16	112,752	72,640	43	73,599	43,263	41	46,835	29,410	105	23,641	23,471
20 – 24	–	–	–	7	116,530	80,333	43	99,516	65,915	27	61,007	37,739	85	39,749	32,287
25 – 29	–	–	–	2	147,471	99,484	20	122,494	82,586	32	86,153	56,764	37	48,677	37,214
30 – 34	–	–	–	–	–	–	2	110,249	77,649	21	112,608	79,760	14	51,032	42,324
35 & Over	–	–	–	–	–	–	–	–	–	3	122,221	90,081	13	78,364	62,091
Total	7	77,934	46,184	64	92,304	58,202	182	74,986	47,388	192	57,918	38,750	324	32,740	29,089
Counties															
Under 10	2	88,181	66,935	23	87,475	55,331	20	54,963	34,091	22	38,379	34,273	27	20,586	31,553
10 – 14	7	136,242	88,406	47	109,644	76,611	58	90,674	62,155	94	42,155	35,319	71	30,418	32,061
15 – 19	1	110,849	83,137	51	126,802	88,911	80	108,342	76,249	135	57,548	46,985	148	43,660	39,794
20 – 24	–	–	–	25	145,971	99,674	114	130,171	89,973	136	78,388	60,221	191	58,260	49,063
25 – 29	–	–	–	7	147,344	100,356	46	151,763	104,302	49	109,126	79,853	68	67,113	54,359
30 – 34	–	–	–	–	–	–	4	178,618	133,963	39	130,218	93,938	18	83,810	68,078
35 & Over	–	–	–	–	–	–	–	–	–	6	159,277	120,291	20	112,887	88,309
Total	10	124,090	83,585	153	119,692	82,367	322	116,649	80,675	481	71,971	55,936	543	52,735	46,182
Cities															
Under 10	8	83,575	49,738	40	59,159	38,275	53	47,232	30,326	39	31,612	23,816	13	11,632	20,942
10 – 14	9	85,227	57,866	73	71,248	43,946	118	56,591	35,096	120	35,824	25,815	62	19,039	21,655
15 – 19	–	–	–	68	83,186	50,493	163	68,341	43,586	147	41,853	30,536	105	28,424	26,207
20 – 24	–	–	–	34	99,610	61,264	162	84,500	53,799	213	53,871	37,433	180	38,088	32,637
25 – 29	–	–	–	1	107,344	53,672	73	97,608	62,675	103	72,235	49,118	138	42,300	34,222
30 – 34	–	–	–	–	–	–	10	106,387	73,946	60	80,523	54,800	91	50,484	38,669
35 & Over	–	–	–	–	–	–	1	188,122	146,091	16	85,927	56,913	24	63,382	48,581
Total	17	84,449	54,041	216	77,399	47,728	580	73,081	46,594	698	52,729	36,886	613	37,724	32,053
Towns															
Under 10	1	111,724	83,973	19	74,404	49,311	25	50,608	31,837	17	33,836	23,501	5	14,020	19,628
10 – 14	1	96,483	72,848	28	83,319	53,437	45	65,049	39,790	44	38,739	26,353	26	25,629	24,857
15 – 19	–	–	–	31	94,568	59,195	35	77,528	50,680	38	45,696	34,425	41	32,478	30,390
20 – 24	–	–	–	10	108,925	71,481	64	99,019	66,684	65	65,610	44,966	42	44,702	38,084
25 – 29	–	–	–	1	104,852	52,426	22	107,481	64,937	31	87,587	62,054	13	60,802	48,892
30 – 34	–	–	–	–	–	–	1	167,608	125,767	15	116,021	79,977	10	77,360	54,546
35 & Over	–	–	–	–	–	–	–	–	–	1	108,517	82,648	3	134,508	103,008
Total	2	104,104	78,411	89	88,453	56,578	192	82,163	53,033	211	60,876	42,635	140	42,236	36,286

Disability Retirees — PFRS

continued

Years of Service	Nearest Age														
	Under 40			40 – 49			50 – 59			60 – 69			70 & Over		
	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen
Villages															
Under 10	3	63,855	43,027	15	69,624	44,129	25	42,714	26,200	24	27,040	22,883	9	14,010	21,429
10 – 14	3	85,294	57,182	28	77,857	51,285	42	69,209	44,512	32	38,968	29,290	29	24,350	22,836
15 – 19	1	122,725	61,362	31	92,322	57,402	53	81,733	52,598	53	53,669	39,599	39	32,955	28,733
20 – 24	–	–	–	8	100,047	59,023	53	89,523	57,933	45	67,144	46,830	37	41,662	34,879
25 – 29	–	–	–	–	–	–	10	122,679	81,212	23	86,049	55,946	16	51,671	41,206
30 – 34	–	–	–	–	–	–	–	–	–	7	132,141	86,206	8	55,864	43,763
35 & Over	–	–	–	–	–	–	–	–	–	2	82,151	41,472	5	77,167	50,332
Total	7	81,453	51,713	82	83,984	53,043	183	78,022	50,245	186	58,227	41,213	143	37,192	31,659
Miscellaneous															
Under 10	1	109,199	54,599	14	77,363	51,185	14	60,407	38,131	17	40,555	31,152	–	–	–
10 – 14	–	–	–	31	114,650	82,178	26	94,212	64,870	27	58,557	38,121	7	45,674	30,519
15 – 19	–	–	–	18	126,258	87,243	19	106,480	72,420	46	69,206	51,044	23	43,089	35,708
20 – 24	–	–	–	3	126,987	74,166	52	129,421	90,713	62	96,780	69,908	18	62,606	48,205
25 – 29	–	–	–	–	–	–	14	140,818	95,694	32	128,577	92,707	10	86,358	65,283
30 – 34	–	–	–	–	–	–	1	163,801	81,901	10	137,687	103,018	2	121,573	96,475
35 & Over	–	–	–	–	–	–	–	–	–	1	153,924	116,487	4	114,739	91,725
Total	1	109,199	54,599	66	110,467	76,621	126	112,567	77,263	195	87,690	63,356	64	62,553	48,676

New Option Selections

This table shows the number (*Number*), and annual benefit amount after option selection and any partial lump sum distribution* (*\$ Amount*) of new retirees during the given fiscal year. Groupings are based on option selected, with breakdowns by retirement system and member gender.

Options	2012		2013		2014		2015		2016	
	Number	\$ Amount	Number	\$ Amount	Number	\$ Amount	Number	\$ Amount	Number	\$ Amount
ERS Females										
Single Life Allowance**	9,847	244,526,001	7,066	145,987,536	6,795	143,422,357	6,320	142,513,916	7,683	182,550,124
Cash Refund	69	1,813,098	26	931,274	20	473,751	19	561,834	19	685,259
Joint Allowance — Full	861	14,148,043	699	9,574,166	763	11,629,185	588	8,007,103	715	12,033,549
Joint Allowance — Half	189	5,485,019	132	3,476,859	128	3,073,482	124	3,115,553	137	3,495,837
Five Year Certain	211	5,788,347	149	3,346,546	112	2,345,998	123	2,979,134	136	3,039,451
Ten Year Certain	419	9,708,694	296	5,513,983	296	5,363,546	208	4,043,326	273	5,215,831
Pop-Up — Full	1,600	36,193,577	1,194	22,353,822	1,239	25,390,149	1,097	23,550,358	1,402	29,934,874
Pop-Up — Half	1,131	36,260,986	705	19,919,224	693	20,361,320	678	20,062,741	800	24,575,129
Other (Option 4)	804	27,448,210	526	15,976,185	590	17,789,997	559	18,418,160	687	23,740,784
Total	15,131	381,371,979	10,793	227,079,599	10,636	229,849,789	9,716	223,252,128	11,852	285,270,881
ERS Males										
Single Life Allowance**	4,739	153,233,477	3,314	91,200,227	3,328	96,281,163	2,997	88,942,511	3,613	113,480,787
Cash Refund	33	1,638,041	16	777,752	9	236,241	9	311,243	4	127,476
Joint Allowance — Full	2,555	80,606,825	1,798	45,969,725	1,738	46,047,124	1,475	40,833,756	1,778	54,076,972
Joint Allowance — Half	429	19,451,402	236	8,353,592	244	9,002,641	233	8,521,708	281	11,080,053
Five Year Certain	120	3,952,047	93	2,575,856	77	2,024,955	52	1,617,199	80	2,708,720
Ten Year Certain	324	9,913,276	208	5,481,097	193	4,696,445	172	4,932,061	207	7,085,157
Pop-Up — Full	2,537	83,585,224	1,726	49,381,516	1,724	50,437,559	1,651	51,382,784	2,074	66,784,431
Pop-Up — Half	1,069	44,906,134	616	23,124,767	624	23,815,933	624	24,050,864	736	29,476,086
Other (Option 4)	1,262	57,034,571	768	30,476,297	857	34,791,727	804	33,899,200	1,010	43,559,235
Total	13,068	454,321,001	8,775	257,340,833	8,794	267,333,792	8,017	254,491,330	9,783	328,378,921
PFRS Females										
Single Life Allowance**	57	3,496,158	105	6,768,155	65	4,294,738	64	4,451,492	62	4,622,315
Cash Refund	—	—	—	—	—	—	—	—	—	—
Joint Allowance — Full	3	90,382	5	202,829	4	196,548	1	146,116	2	117,042
Joint Allowance — Half	2	168,563	3	256,284	3	150,200	3	169,021	4	344,922
Five Year Certain	2	152,893	1	93,215	1	75,517	—	—	—	—
Ten Year Certain	6	442,145	9	764,107	5	248,602	4	312,565	1	88,018
Pop-Up — Full	11	595,115	11	696,482	10	500,175	10	434,592	10	625,473
Pop-Up — Half	5	262,928	4	176,756	5	214,516	11	624,942	5	321,668
Other (Option 4)	2	210,532	4	236,218	4	388,118	2	162,922	8	629,196
Total	88	5,418,718	142	9,194,052	97	6,068,418	95	6,301,653	92	6,748,638
PFRS Males										
Single Life Allowance**	423	25,769,728	456	30,408,806	409	26,754,924	354	24,590,267	320	22,112,233
Cash Refund	1	44,596	1	78,836	2	239,734	1	87,958	—	—
Joint Allowance — Full	161	9,062,001	167	12,048,353	156	9,699,880	136	8,872,941	105	6,873,667
Joint Allowance — Half	52	4,154,005	67	5,694,946	52	4,013,396	46	3,585,725	45	3,825,860
Five Year Certain	6	372,945	11	810,791	6	338,162	3	372,785	3	202,398
Ten Year Certain	26	1,729,546	47	2,801,198	36	2,689,781	24	1,530,830	24	1,817,821
Pop-Up — Full	211	10,693,161	219	12,422,440	226	12,069,140	157	9,271,264	146	8,746,372
Pop-Up — Half	136	10,128,505	166	11,990,873	108	7,075,973	86	5,813,128	86	6,921,576
Other (Option 4)	117	8,982,280	144	11,388,742	143	11,641,329	124	9,765,795	154	12,564,460
Total	1,133	70,936,772	1,278	87,644,989	1,138	74,522,324	931	63,890,698	883	63,064,391

* In 2016, two ERS retirees selected partial lump sums which totaled \$433,514 and 122 PFRS retirees selected partial lump sums which totaled \$17,787,076.

** Includes Option 0 and ½.

Option Selection — Total Payments

This table shows the number (*Number*), and annual benefit amount after option selection and any partial lump sum distribution* (*\$ Amount*) of surviving retirees on March 31 of the given year. Groupings are based on option selected, with breakdowns by retirement system and member gender.

Options	2012		2013		2014		2015		2016	
	Number	\$ Amount								
ERS Females										
Single Life Allowance**	131,577	1,986,711,063	134,734	2,097,523,060	137,143	2,199,495,808	139,436	2,301,148,172	142,738	2,439,709,589
Cash Refund	8,758	100,233,102	8,205	97,167,869	7,611	93,452,340	7,116	90,210,442	6,590	87,017,005
Joint Allowance — Full	8,052	87,382,895	8,472	94,438,499	8,947	103,313,062	9,255	108,355,697	9,680	117,472,217
Joint Allowance — Half	2,655	44,160,312	2,694	46,678,830	2,718	48,593,182	2,722	50,311,548	2,742	52,664,945
Five Year Certain	4,142	60,318,191	4,133	62,301,500	4,041	62,599,394	3,999	64,218,334	3,948	65,278,096
Ten Year Certain	6,644	83,605,226	6,669	86,834,748	6,687	89,939,370	6,656	91,970,160	6,654	94,602,238
Pop-Up — Full	13,289	214,674,185	14,280	234,957,928	15,285	258,136,457	16,151	279,589,915	17,261	306,609,960
Pop-Up — Half	12,074	252,090,560	12,537	269,247,425	12,955	285,932,247	13,367	302,832,057	13,851	323,518,033
Other (Option 4)	4,227	111,203,138	4,692	126,307,424	5,218	142,916,829	5,702	160,017,110	6,304	182,213,350
Total	191,418	2,940,378,671	196,416	3,115,457,282	200,605	3,284,378,690	204,404	3,448,653,436	209,768	3,669,085,432
ERS Males										
Single Life Allowance**	58,582	1,389,716,674	59,788	1,449,117,701	60,859	1,511,993,719	61,693	1,564,822,972	62,964	1,639,051,171
Cash Refund	5,389	106,841,326	5,043	102,915,632	4,667	97,809,143	4,357	93,603,693	4,011	88,404,869
Joint Allowance — Full	28,084	645,917,503	28,746	673,789,024	29,291	699,932,285	29,636	721,763,534	30,276	756,073,178
Joint Allowance — Half	9,130	271,792,548	8,876	270,583,032	8,743	271,788,909	8,571	272,110,655	8,419	274,645,486
Five Year Certain	2,000	44,325,066	2,003	45,773,736	1,958	45,763,720	1,917	45,841,030	1,871	46,354,166
Ten Year Certain	4,633	96,940,848	4,643	99,670,379	4,589	100,426,526	4,552	102,446,498	4,564	106,314,614
Pop-Up — Full	21,269	541,371,444	22,536	584,081,845	23,761	625,938,791	24,925	668,777,757	26,450	725,671,552
Pop-Up — Half	12,781	414,558,462	13,052	430,283,454	13,309	445,943,369	13,537	460,462,999	13,892	481,396,053
Other (Option 4)	6,945	261,383,004	7,600	289,382,235	8,336	321,539,065	8,969	351,108,729	9,814	390,307,216
Total	148,813	3,772,846,875	152,287	3,945,597,038	155,513	4,121,135,528	158,157	4,280,937,867	162,261	4,508,218,305
PFRS Females										
Single Life Allowance**	638	30,248,414	743	37,098,117	803	41,227,459	863	45,682,000	919	50,244,911
Cash Refund	5	295,261	5	295,261	5	295,261	5	295,261	5	295,261
Joint Allowance — Full	39	1,495,342	44	1,698,300	47	1,887,708	48	2,076,810	47	2,071,752
Joint Allowance — Half	13	569,194	16	825,479	20	1,034,320	23	1,203,342	27	1,548,818
Five Year Certain	12	555,181	13	648,397	14	723,914	14	723,914	14	723,914
Ten Year Certain	72	3,631,250	80	4,307,112	85	4,551,912	89	4,905,198	90	4,995,739
Pop-Up — Full	112	5,388,537	123	6,086,218	133	6,586,394	143	7,029,555	152	7,598,667
Pop-Up — Half	66	3,228,967	70	3,410,624	74	3,594,146	85	4,223,475	90	4,566,055
Other (Option 4)	21	1,426,365	25	1,662,583	29	2,050,867	31	2,216,352	38	2,782,268
Total	978	46,838,511	1,119	56,032,092	1,210	61,951,983	1,301	68,355,906	1,382	74,827,385
PFRS Males										
Single Life Allowance**	15,157	524,509,183	15,210	547,056,375	15,209	566,215,055	15,154	582,235,830	15,042	594,625,064
Cash Refund	1,653	52,698,493	1,601	51,632,893	1,521	49,735,195	1,465	48,293,210	1,396	46,766,372
Joint Allowance — Full	2,710	115,847,369	2,825	126,043,453	2,929	134,264,050	3,021	141,254,474	3,084	146,707,445
Joint Allowance — Half	1,352	65,139,874	1,381	69,844,520	1,392	72,447,011	1,406	75,063,474	1,422	77,666,165
Five Year Certain	379	13,342,340	377	13,799,772	368	13,765,390	362	13,971,786	354	13,899,664
Ten Year Certain	1,397	49,099,834	1,409	51,045,019	1,407	52,696,182	1,396	53,234,819	1,375	53,781,392
Pop-Up — Full	2,748	118,181,382	2,940	129,993,076	3,133	141,182,490	3,260	149,724,858	3,374	157,327,923
Pop-Up — Half	2,397	134,364,179	2,517	144,819,757	2,587	150,482,065	2,634	154,828,074	2,682	160,406,683
Other (Option 4)	1,129	83,685,215	1,269	95,023,807	1,404	106,245,733	1,516	115,219,264	1,662	127,363,319
Total	28,922	1,156,867,868	29,529	1,229,258,672	29,950	1,287,033,170	30,214	1,333,825,789	30,391	1,378,544,027

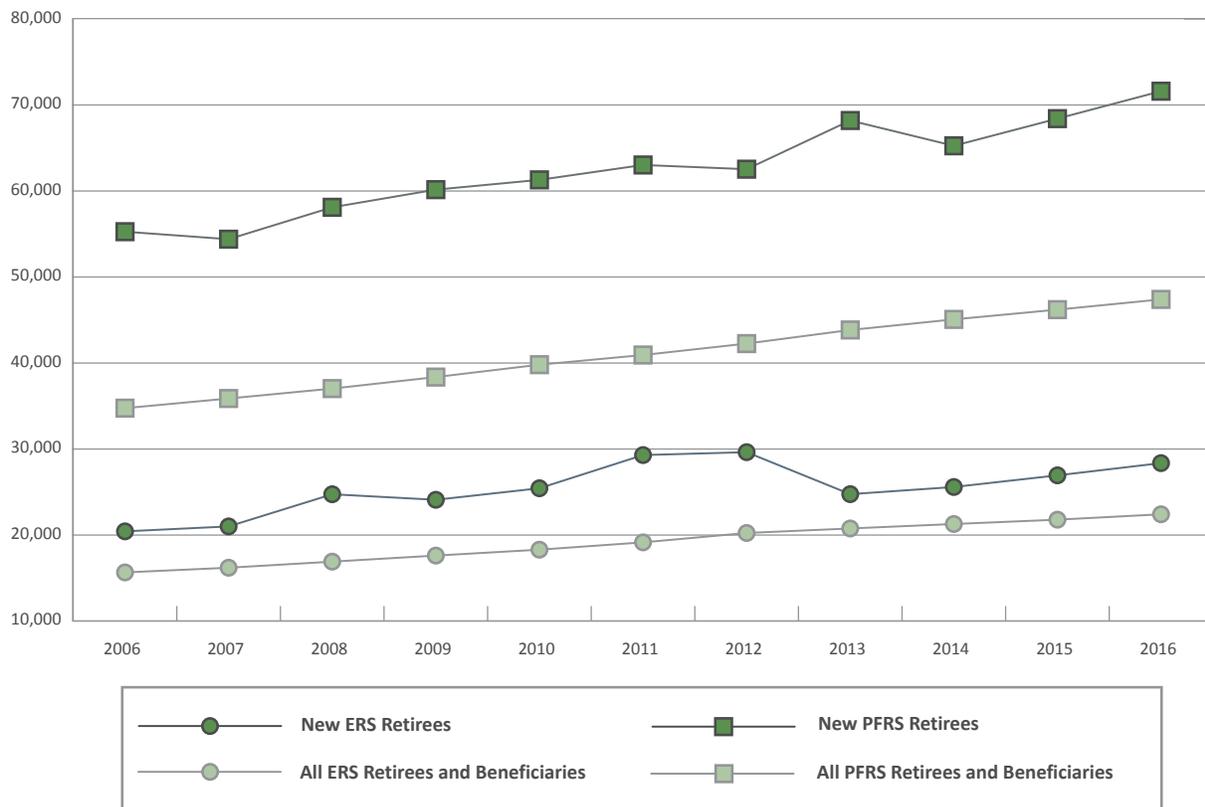
* In the two years since this program began in ERS, two retirees have selected partial lump sums which totaled \$433,514. In the eight years since the program began in PFRS, 1,023 retirees have selected partial lump sums which totaled \$110,032,728.

** Includes Option 0 and ½.

Average Pension Benefits Paid During Year Shown

This table shows the average annual benefit payments to all retirees and beneficiaries receiving benefits during the year compared with average annual benefit payments to new retirees during the year. The benefit consists of actual payments — after option selection and any partial lump sum distribution, plus any cost-of-living adjustment. A breakdown is provided by retirement system.

Year	ERS		PFRS	
	All Retirees & Beneficiaries	New Retirees	All Retirees & Beneficiaries	New Retirees
2006	\$ 15,657	\$ 20,430	\$ 34,753	\$ 55,269
2007	16,202	21,004	35,877	54,397
2008	16,909	24,744	37,030	58,106
2009	17,615	24,100	38,367	60,158
2010	18,300	25,441	39,808	61,295
2011	19,151	29,300	40,932	63,026
2012	20,241	29,636	42,259	62,535
2013	20,766	24,756	43,844	68,197
2014	21,285	25,588	45,074	65,256
2015	21,788	26,941	46,207	68,414
2016	22,415	28,364	47,397	71,603



Average Benefit Pay Types

New Benefits: ERS

These tables show the number (*Number Granted*), average monthly retirement allowance prior to option selection or any partial lump sum distribution (*Monthly Allowance*), and average final average salary (*Average FAS*) of Employees' Retirement System members retiring during the fiscal year ending March 31, 2016. Groupings are based on years of service.

New Service Retirements

Years of Service	Number Granted	Monthly Allowance	Average FAS
Under 5	18	\$ 526	\$ 26,432
5 – 9	1,477	365	39,474
10 – 14	2,967	679	44,941
15 – 19	2,325	1,055	49,358
20 – 24	3,133	1,974	58,015
25 – 29	3,816	2,932	69,368
30 – 34	4,438	3,909	75,834
35 – 39	2,287	4,507	77,684
40 & Over	617	5,354	79,724
Total	21,078	\$ 2,531	\$ 62,470

New Accidental Disability Retirements

Years of Service	Number Granted	Monthly Allowance	Average FAS
Under 5	–	\$ –	\$ –
5 – 9	2	4,381	70,098
10 – 14	–	–	–
15 – 19	–	–	–
20 – 24	–	–	–
25 – 29	–	–	–
30 – 34	–	–	–
35 – 39	–	–	–
40 & Over	–	–	–
Total	2	\$ 4,381	\$ 70,098

New Ordinary Disability Retirements

Years of Service	Number Granted	Monthly Allowance	Average FAS
Under 5	4	\$ 839	\$ 30,322
5 – 9	8	1,270	46,781
10 – 14	139	1,332	52,651
15 – 19	123	1,437	53,914
20 – 24	103	1,835	61,287
25 – 29	88	2,081	57,234
30 – 34	35	2,553	59,456
35 – 39	4	3,344	68,028
40 & Over	–	–	–
Total	504	\$ 1,687	\$ 55,849

New Performance of Duty Disability Retirements

Years of Service	Number Granted	Monthly Allowance	Average FAS
Under 5	–	\$ –	\$ –
5 – 9	4	4,405	70,713
10 – 14	15	4,702	78,275
15 – 19	13	4,461	79,085
20 – 24	8	6,217	100,343
25 – 29	9	8,127	130,696
30 – 34	2	6,422	104,631
35 – 39	–	–	–
40 & Over	–	–	–
Total	51	\$ 5,527	\$ 91,634

Average Benefit Pay Types

continued

New Benefits: PFRS

These tables show the number (*Number Granted*), average monthly retirement allowance prior to option selection or any partial lump sum distribution (*Monthly Allowance*), and average final average salary (*Average FAS*) of Police and Fire Retirement System members retiring during the fiscal year ending March 31, 2016. Groupings are based on years of service.

New Service Retirements

Years of Service	Number Granted	Monthly Allowance	Average FAS
Under 5	–	\$ –	\$ –
5 – 9	19	425	40,443
10 – 14	15	982	53,127
15 – 19	16	1,761	68,207
20 – 24	268	4,985	116,035
25 – 29	263	6,848	135,498
30 – 34	228	8,120	144,834
35 – 39	79	8,490	149,900
40 & Over	18	9,734	151,040
Total	906	\$ 6,496	\$ 129,109

New Accidental Disability Retirements

Years of Service	Number Granted	Monthly Allowance	Average FAS
Under 5	–	\$ –	\$ –
5 – 9	6	5,522	88,357
10 – 14	6	6,940	110,593
15 – 19	4	5,390	96,328
20 – 24	9	9,355	148,770
25 – 29	6	8,214	131,407
30 – 34	3	11,213	179,409
35 – 39	1	11,757	188,122
40 & Over	–	–	–
Total	35	\$ 7,863	\$ 126,650

New Ordinary Disability Retirements

Years of Service	Number Granted	Monthly Allowance	Average FAS
Under 5	–	\$ –	\$ –
5 – 9	–	–	–
10 – 14	3	2,102	77,147
15 – 19	1	3,583	129,003
20 – 24	–	–	–
25 – 29	–	–	–
30 – 34	–	–	–
35 – 39	–	–	–
40 & Over	1	4,993	85,598
Total	5	\$ 2,977	\$ 89,209

New Performance of Duty Disability Retirements

Years of Service	Number Granted	Monthly Allowance	Average FAS
Under 5	1	\$ 2,672	\$ 64,133
5 – 9	1	4,549	109,199
10 – 14	7	3,080	73,935
15 – 19	11	4,082	97,097
20 – 24	4	3,348	80,352
25 – 29	4	4,563	109,522
30 – 34	1	2,596	62,318
35 – 39	–	–	–
40 & Over	–	–	–
Total	29	\$ 3,721	\$ 88,992

New Benefits — Service Retirements by Age and Service

This table shows the number (*Number*), average annual pension benefit prior to option selection or any partial lump sum (*Allowance*), and the average allowance as a percentage of the average final average salary (%) of new service retirees during the fiscal year ending March 31, 2016. Groupings are based on years of service and age at retirement, within each retirement system.

Years of Service	Age at Retirement											
	50 – 59			60 – 64			65 – 69			70 & Over		
	Number	Allowance	%	Number	Allowance	%	Number	Allowance	%	Number	Allowance	%
ERS												
Under 5	–	\$ –	–	2	\$ 706	3	11	\$ 10,027	11	5	\$ 395	5
5 – 9	487	3,549	9	460	4,428	11	380	5,274	13	150	4,731	12
10 – 14	953	6,038	14	902	8,806	19	756	9,395	20	356	9,504	20
15 – 19	600	9,145	20	812	13,155	27	625	14,975	28	288	13,577	28
20 – 24	725	18,844	34	1,185	23,954	42	887	26,278	43	336	26,395	43
25 – 29	1,265	37,015	46	1,501	33,809	52	778	35,673	54	272	32,920	54
30 – 34	2,253	47,364	62	1,504	46,325	62	500	47,659	62	181	43,996	62
35 – 39	1,132	50,258	69	801	58,043	70	270	57,749	70	84	56,236	70
40 & Over	49	59,227	78	267	56,600	79	199	69,631	81	102	76,204	84
Total	7,464	\$ 32,149	45	7,434	\$ 31,083	46	4,406	\$ 27,898	42	1,774	\$ 26,093	40

Years of Service	Age at Retirement											
	40 – 49			50 – 54			55 – 59			60 & Over		
	Number	Allowance	%	Number	Allowance	%	Number	Allowance	%	Number	Allowance	%
PFRS												
Under 5	–	\$ –	–	–	\$ –	–	–	\$ –	–	–	\$ –	–
5 – 9	–	–	–	–	–	–	18	5,079	12	1	5,546	14
10 – 14	–	–	–	–	–	–	10	12,150	20	5	11,073	24
15 – 19	–	–	–	–	–	–	12	18,775	27	4	28,225	38
20 – 24	146	59,035	51	78	63,932	52	35	57,538	48	9	46,130	52
25 – 29	39	70,747	57	123	81,259	60	83	90,072	61	18	76,931	60
30 – 34	1	58,833	58	45	104,665	66	113	100,120	67	69	88,928	67
35 – 39	–	–	–	–	–	–	16	92,909	67	63	104,165	68
40 & Over	–	–	–	–	–	–	–	–	–	18	116,813	77
Total	186	\$ 61,489	53	246	\$ 80,046	59	287	\$ 79,192	56	187	\$ 89,705	65

New Benefits — Accidental and Ordinary Death

Accidental Death Benefits

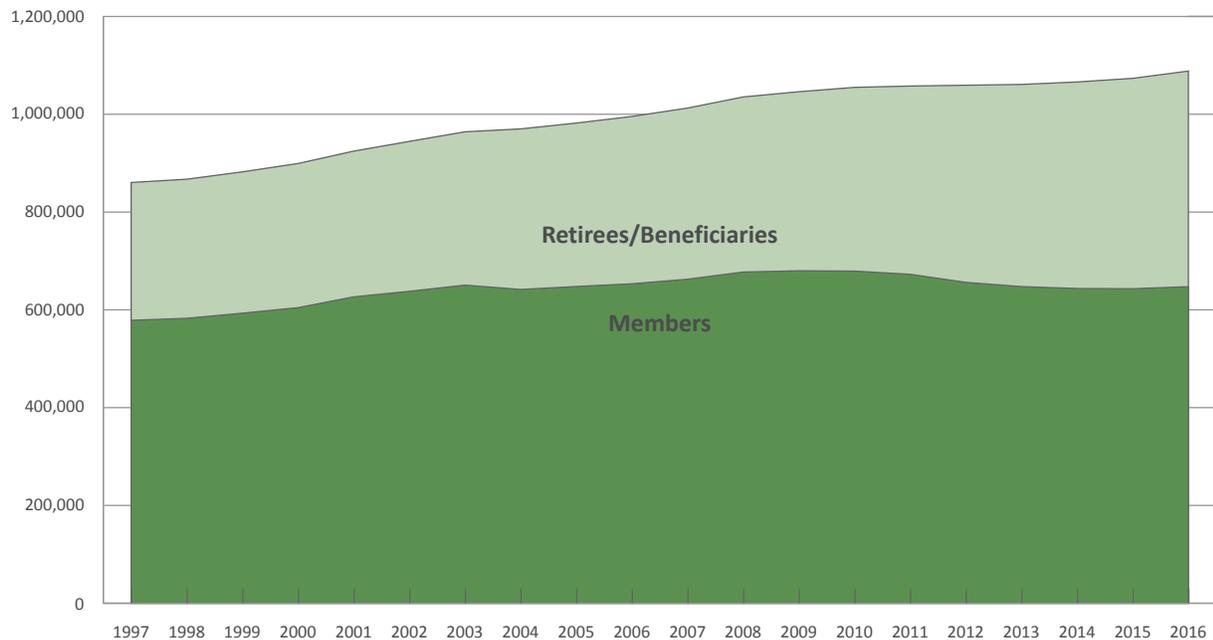
During the fiscal year ending March 31, 2016, the Employees' Retirement System approved six accidental death benefits, which averaged \$25,495. The Police and Fire Retirement System approved five accidental death benefits, which averaged \$54,221.

Ordinary Death Benefits

Years of Service	ERS			PFRS		
	Number Paid	Average Benefit	Percentage of Salary	Number Paid	Average Benefit	Percentage of Salary
Under 5	69	\$ 80,630	204.2	2	\$ 173,000	301.4
5 – 9	138	125,854	278.4	–	–	–
10 – 14	181	115,630	231.0	1	70,500	150.8
15 – 19	113	141,321	241.4	2	216,500	225.5
20 – 24	88	152,722	251.8	1	443,781	579.0
25 – 29	87	181,438	281.0	1	1,122,319	745.6
30 – 34	30	205,948	286.7	1	1,050,156	662.4
35 – 39	16	258,511	296.1	–	–	–
40 & Over	10	633,879	617.2	–	–	–
Total	732	\$ 144,409	256.4	8	\$ 433,219	398.9

Combined System Participants

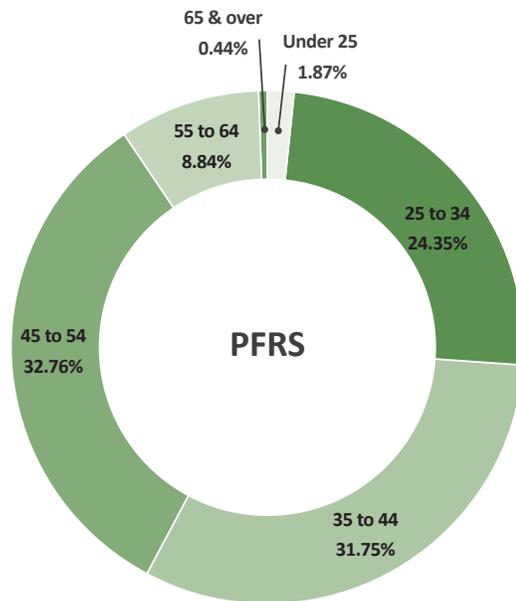
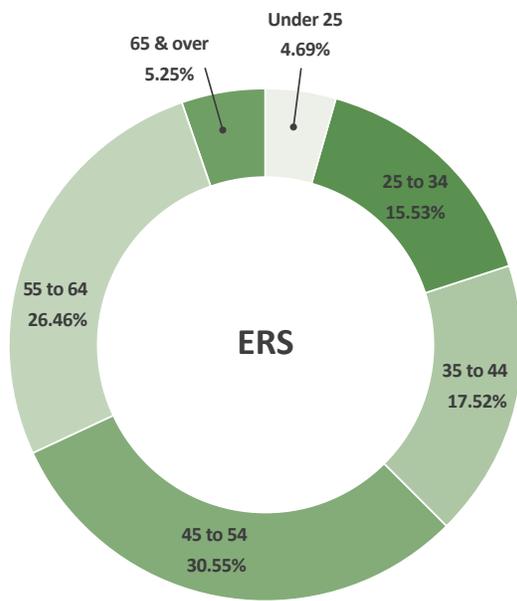
Fiscal Year	Members	Percentage Changed	Retirees/ Beneficiaries	Percentage Changed	Total Participants	Percentage Changed
1997	578,566	(2)	281,863	3	860,429	0
1998	582,689	1	284,515	1	867,204	1
1999	593,188	2	289,046	2	882,234	2
2000	604,479	2	294,835	2	899,314	2
2001	626,565	4	298,078	1	924,643	3
2002	637,896	2	306,604	3	944,500	2
2003	650,543	2	313,597	2	964,140	2
2004	641,721	(1)	328,357	5	970,078	1
2005	647,758	1	334,251	2	982,009	1
2006	653,291	1	342,245	2	995,536	1
2007	662,633	1	350,066	2	1,012,699	2
2008	677,321	2	358,109	2	1,035,430	2
2009	679,908	0	366,178	2	1,046,086	1
2010	679,217	0	375,803	3	1,055,020	1
2011	672,723	(1)	385,031	2	1,057,754	0
2012	656,224	(2)	403,174	5	1,059,398	0
2013	647,574	(1)	413,436	3	1,061,010	0
2014	643,659	(1)	422,405	2	1,066,064	0
2015	643,178	0	430,308	2	1,073,486	1
2016	647,399	1	440,943	2	1,088,342	1



Membership by Age and Years of Service

As of March 31, 2016.

Age	Years of Service											
	Total		0 – 4		5 – 9		10 – 19		20 – 29		30 & Over	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
ERS												
Under 25	28,691	4.69	28,567	4.67	124	0.02	–	–	–	–	–	–
25 – 34	95,066	15.53	67,880	11.09	21,246	3.47	5,940	0.97	–	–	–	–
35 – 44	107,288	17.52	37,616	6.14	28,445	4.65	38,472	6.28	2,755	0.45	–	–
45 – 54	187,079	30.55	37,403	6.11	36,113	5.90	63,585	10.38	41,143	6.72	8,835	1.44
55 – 64	162,020	26.46	21,398	3.49	24,861	4.06	54,532	8.91	38,902	6.35	22,327	3.65
65 & Over	32,150	5.25	4,400	0.72	4,997	0.82	10,813	1.77	7,362	1.20	4,578	0.75
Total	612,294	100.00	197,264	32.22	115,786	18.91	173,342	28.31	90,162	14.73	35,740	5.84
PFRS												
Under 25	656	1.87	653	1.86	3	0.01	–	–	–	–	–	–
25 – 34	8,549	24.35	5,153	14.68	2,558	7.29	838	2.39	–	–	–	–
35 – 44	11,145	31.75	1,458	4.15	2,050	5.84	7,025	20.01	612	1.74	–	–
45 – 54	11,500	32.76	440	1.25	720	2.05	3,421	9.75	6,143	17.50	776	2.21
55 – 64	3,102	8.84	99	0.28	169	0.48	326	0.93	932	2.65	1,576	4.49
65 & Over	153	0.44	21	0.06	18	0.05	15	0.04	8	0.02	91	0.26
Total	35,105	100.00	7,824	22.29	5,518	15.72	11,625	33.11	7,695	21.92	2,443	6.96

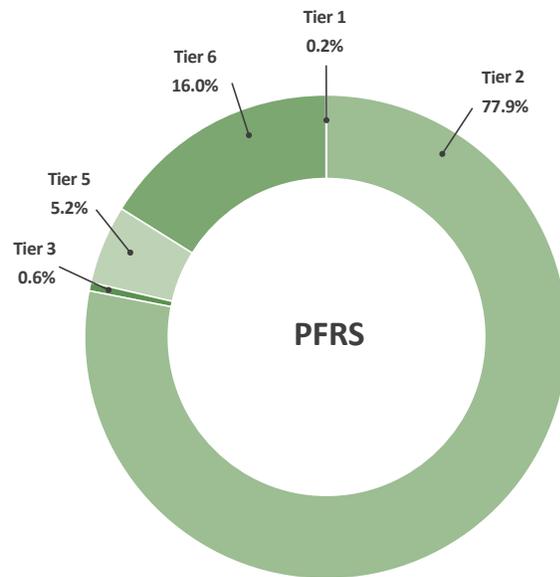
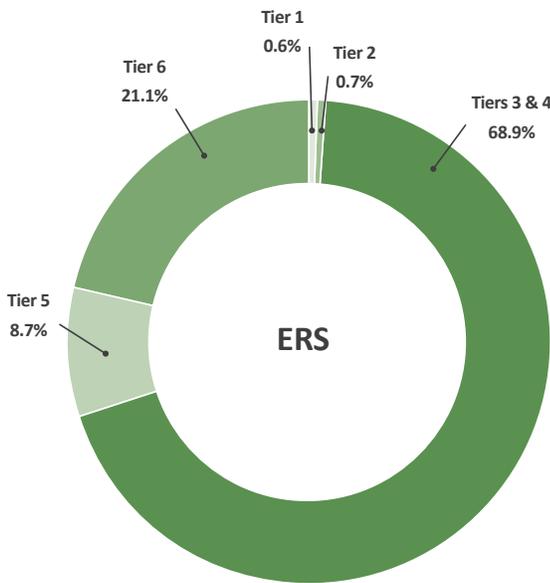


Membership by Tier

As of March 31, 2016.

	ERS		PFRS		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
Tier 1	3,809	0.6	77	0.2	3,886	0.6
Tier 2	4,420	0.7	27,364	77.9	31,784	4.9
Tiers 3 & 4*	421,583	68.9	225	0.6	421,808	65.2
Tier 5	53,123	8.7	1,823	5.2	54,946	8.5
Tier 6	129,359	21.1	5,616	16.0	134,975	20.8
Total	612,294	100.0	35,105	100.0	647,399	100.0

* There is no Tier 4 in the Police and Fire Retirement System.



Membership by Status

This table shows membership counts by status — active or inactive — as of March 31, 2016, with a breakdown by system. Active status means the member was reported on payroll at the fiscal year end. Inactive status means the member was not reported on payroll (including pending retirement and pending deaths) at the fiscal year end. The sum of these two statuses represent the total membership count for the system.

	ERS			PFRS		
	Active	Inactive	Total	Active	Inactive	Total
2007	519,203	107,720	626,923	32,811	2,899	35,710
2008	528,435	112,684	641,119	33,089	3,113	36,202
2009	530,023	113,677	643,700	33,052	3,156	36,208
2010	505,575	116,532	622,107	31,024	3,093	34,117
2011	513,092	124,829	637,921	31,659	3,143	34,802
2012	505,575	116,532	622,107	31,024	3,093	34,117
2013	498,266	115,664	613,930	30,780	2,864	33,644
2014	493,209	116,356	609,565	31,218	2,876	34,094
2015	491,558	117,079	608,637	31,372	3,169	34,541
2016	494,411	117,883	612,294	31,720	3,385	35,105

Number of Employers

As of March 31, 2016.

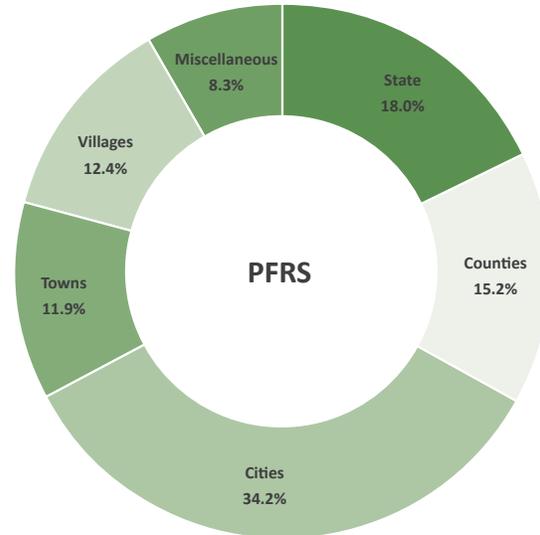
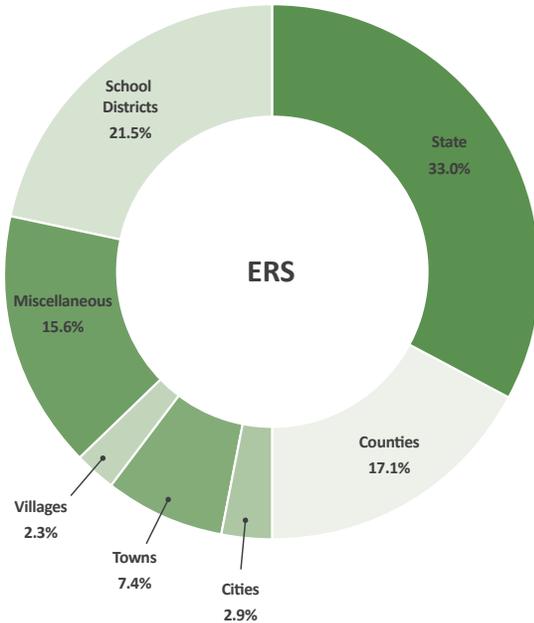
Category	ERS	PFRS
State	1	1
Counties	57	4
Cities	61	61
Towns	913	207
Villages	487	375
Miscellaneous	793	38
School Districts	698	0
Total*	3,010	686

* Please note that some ERS employers are also PFRS employers. Therefore the total of ERS employers and PFRS employers above will not equal the total number of NYSLRS participating employers.

Membership by Employer Type*

As of March 31, 2016.

	ERS		PFRS		Total	
	Total	Active	Total	Active	Total	Active
State	202,153	169,979	6,309	5,870	208,462	175,849
Counties	104,756	82,738	5,348	5,049	110,104	87,787
Cities	18,048	14,303	12,018	10,940	30,066	25,243
Towns	45,450	35,582	4,182	3,681	49,632	39,263
Villages	14,256	10,951	4,340	3,497	18,596	14,448
Miscellaneous	95,759	73,939	2,908	2,683	98,667	76,622
School Districts	131,872	106,919	-	-	131,872	106,919
Total	612,294	494,411	35,105	31,720	647,399	526,131



* A detailed listing of employers as of March 31, 2016 is available on our website at www.osc.state.ny.us/retire/employers/index.php.

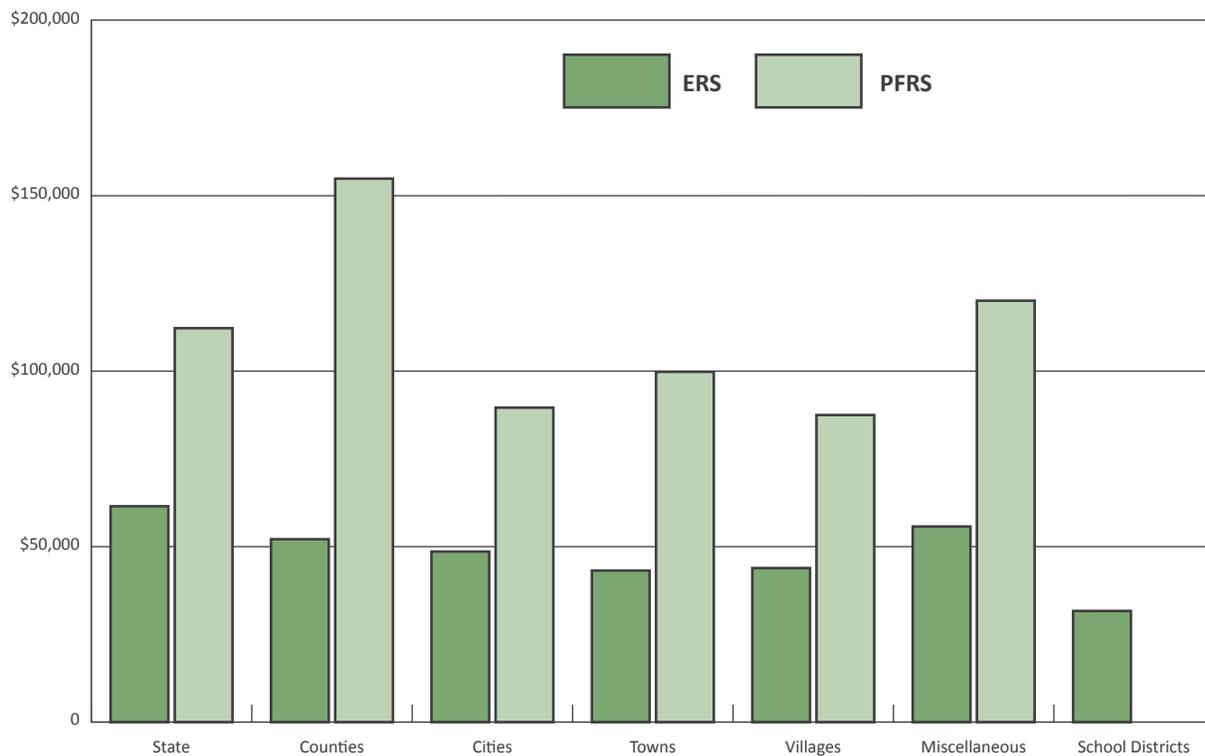
*Numbers may not add up due to rounding.

Average Salary by Employer Type

Fiscal year ending March 31, 2016.

	Average Salary	Total Members*	Total Salaries
ERS			
State	\$ 61,502	169,979	\$ 10,454,007,107
Counties	52,110	82,738	4,311,438,938
Cities	48,597	14,303	695,082,808
Towns	43,182	35,582	1,536,488,416
Villages	43,899	10,951	480,733,574
Miscellaneous	55,733	73,939	4,120,812,030
School Districts	31,677	106,919	3,386,849,412
Total	\$ 50,536	494,411	\$ 24,985,412,285
PFRS			
State	\$ 112,226	5,870	\$ 658,769,355
Counties	154,843	5,049	781,804,478
Cities	89,595	10,940	980,170,170
Towns	99,811	3,681	367,405,060
Villages	87,491	3,497	305,954,884
Miscellaneous	120,068	2,683	322,142,269
Total	\$ 107,700	31,720	\$ 3,416,246,216

* Active members receiving salary.



Members and Salaries by Plan — ERS

As of March 31, 2016.

	Tier 1	Tier 1 Total Salaries	Tier 2	Tier 2 Total Salaries
Age 55/60 Contributory	6	\$ 321,649	3	\$ 166,025
Age 55 75-c	23	740,685	32	1,177,455
Age 55 75-e	5	266,181	12	262,166
Age 55 75-g	43	1,920,562	50	2,336,107
Age 55 75-h	1,118	91,915,080	1,301	101,720,316
Age 55 75-i	1,575	86,197,733	1,895	106,212,808
Regular Correction Officers/SHTA % Disability	2	231,630	–	–
Correction Officers 89	13	1,302,605	27	2,772,154
Sheriffs 89-a	1	125,182	–	–
Sheriffs 89-b	–	–	–	–
Sheriffs 89-b(m)	–	–	–	–
Investigators 89-d	–	–	–	–
Investigators 89-d(m)	2	320,248	–	–
Sheriffs — 551	–	–	2	184,443
Sheriffs — 551e	–	–	–	–
Sheriffs — 552	1	72,781	–	–
Sheriffs — 553	1	111,672	3	310,249
Legislators 80-a	2	192,000	–	–
Unified Court Peace Officers	–	–	20	2,106,242
25-Year Correction Officers/Sheriffs/Office of Mental Health	11	991,691	18	1,669,325
25-Year 1/60 Peace Officers, Amb Med Techs, Paramedics	1	116,983	2	239,139
Total	2,804	\$ 184,826,683	3,365	\$ 219,156,429

	Tier 3 & 4	Tier 3 & 4 Total Salaries	Tier 5	Tier 5 Total Salaries	Tier 6	Tier 6 Total Salaries*
Article 14 & 15	310,485	\$ 17,628,656,081	33,375	\$ 1,293,856,440	104,986	\$ 2,628,875,118
Regular Correction Officers/SHTA % Disability	415	38,902,214	19	1,130,786	61	3,461,748
Article 14 Correction Officers	14,917	1,289,672,758	898	58,553,229	4,835	222,800,982
Sheriffs — 551	281	23,773,607	9	538,000	60	2,705,148
Sheriffs — 551e	49	3,123,718	7	334,227	14	570,452
Sheriffs — 552	411	32,259,029	32	1,878,117	70	3,214,393
Sheriffs — 553	1,406	128,940,769	132	9,002,589	197	9,254,824
Unified Court Peace Officers	5,550	460,350,342	227	13,953,259	241	10,948,887
25-Year Correction Officers/Sheriffs/Office of Mental Health	6,718	565,758,452	669	45,412,381	1,944	77,150,290
25-Year 1/60 Peace Officers, Paramedics	11	742,105	–	–	1	10,719
20-Year 1/60 Investigators	18	3,118,877	1	99,909	–	–
Westchester County Criminal Investigators	24	3,282,978	1	130,672	–	–
25-Year 1/60 % Accidental Disability Amb Med Techs	126	13,433,354	6	515,107	4	144,009
25-Year % Accidental Disability Fire Marshalls	38	4,523,022	4	350,583	–	–
Total	340,449	\$ 20,196,537,306	35,380	\$ 1,425,755,297	112,413	\$ 2,959,136,571

* Reportable Tier 6 salaries are capped at the Governor's salary, which was \$179,000 for fiscal year 2016.

There may be plans with no member count and salary greater than zero. Members who work for multiple employers may have salary under multiple plans but will only be counted once, under their primary plan.

Members and Salaries by Plan — PFRS

As of March 31, 2016.

	Tier 1	Tier 1 Total Salaries	Tier 2	Tier 2 Total Salaries	Tier 3	Tier 3 Total Salaries
Age 55/60 Basic	–	\$ –	33	\$ 426,187	1	\$ 39,178
Age 55 375-c	–	–	120	2,666,934	1	6,775
Age 55 375-e	–	–	31	693,900	–	–
Age 55 375-g	–	–	38	936,437	1	9,329
Age 55 375-h	–	–	1	125,176	–	–
Age 55 375-i	6	664,718	149	8,851,622	5	111,279
Age 55 375-j	1	179,321	4	355,390	–	–
State Police 381-b	–	–	3,906	521,367,107	2	213,529
Regional Park Police 383-a	–	–	182	16,334,732	2	72,575
EnCon Police 383-b	–	–	243	23,871,508	1	72,197
Forest Ranger 383-c	–	–	108	10,786,799	1	89,711
SUNY Police 384-d	–	–	278	742,920	2	2,972
25-Year 384	–	–	44	2,014,182	17	1,546,604
25-Year 384(f)	2	259,701	89	9,856,236	67	5,148,216
20-Year 384-d	9	1,220,514	7,168	735,300,388	53	3,471,247
20-Year 1/60 384-e	25	4,591,656	12,164	1,655,196,461	28	2,346,639
Total	43	\$ 6,915,912	24,576	\$ 2,989,525,982	181	\$ 13,130,251

There may be plans with no member count and salary greater than zero. Members who work for multiple employers may have salary under multiple plans but will only be counted once, under their primary plan.

Members and Salaries by Plan — PFRS

continued

Tier 5 Contributory	Tier 5 Total Contributory Salaries	Tier 5 Non- Contributory	Tier 5 Total Non-Contributory Salaries	Tier 6 Contributory	Tier 6 Total Contributory Salaries*	Tier 6 Non- Contributory	Tier 6 Total Non-Contributory Salaries*
5	\$ 33,315	–	\$ –	16	\$ 139,997	–	\$ –
17	164,985	–	–	44	686,235	–	–
7	178,923	–	–	17	233,472	–	–
4	32,766	–	–	10	158,981	–	–
–	–	–	–	–	–	–	–
11	619,883	–	–	43	1,772,842	–	–
–	–	–	–	–	–	–	–
67	6,792,637	–	–	812	70,830,450	–	–
5	316,711	–	–	80	4,603,340	–	–
3	225,097	–	–	47	1,551,854	–	–
2	165,980	–	–	15	450,451	–	–
58	61,894	–	–	70	125,010	–	–
12	592,017	1	50,767	43	1,587,414	–	–
6	604,496	7	712,696	8	565,477	4	270,357
583	41,400,735	132	9,443,296	1,780	77,294,404	13	946,685
613	57,561,391	91	8,079,139	2,259	114,997,982	35	3,422,392
1,393	\$ 108,750,831	231	\$ 18,285,898	5,244	\$ 274,997,910	52	\$4,639,433

* Reportable Tier 6 salaries are capped at the Governor's salary, which was \$179,000 for fiscal year 2016.

Retirees and Beneficiaries by Age

As of March 31, 2016.

Age	ERS			PFRS		
	Retirees & Beneficiaries	Retirees	Beneficiaries	Retirees & Beneficiaries	Retirees	Beneficiaries
0 – 25	182	–	182	14	–	14
26 – 30	212	1	211	6	–	6
31 – 35	321	11	310	19	11	8
36 – 40	433	66	367	69	51	18
41 – 45	784	266	518	336	312	24
46 – 50	2,148	1,381	767	1,728	1,672	56
51 – 55	6,539	5,351	1,188	3,527	3,437	90
56 – 60	35,233	33,212	2,021	3,852	3,713	139
61 – 65	69,134	66,047	3,087	5,316	5,106	210
66 – 70	92,074	87,654	4,420	6,627	6,294	333
71 – 75	69,557	64,739	4,818	5,103	4,772	331
76 – 80	50,112	45,176	4,936	3,410	3,135	275
81 – 85	37,818	33,085	4,733	2,038	1,799	239
86 – 90	25,994	21,752	4,242	1,275	1,090	185
91 – 95	12,766	10,345	2,421	425	325	100
96 – 100	3,345	2,613	732	77	50	27
101+	460	330	130	9	6	3
Total	407,112	372,029	35,083	33,831	31,773	2,058

Retirees and Beneficiaries — ERS

This table shows the number (*Number*), the average annual modified pension benefit prior to option selection and without any cost-of-living adjustment (*Average Option 0 Benefit w/o COLA*), the average cost-of-living adjustment (*Average COLA*) of surviving Employees' Retirement System retirees and beneficiaries* as of March 31, 2016. Groupings are based on fiscal year of member retirement. The modified pension benefit has been reduced for any partial lump sum distribution.

Year of Retirement	Number	Average Option 0 Benefit w/o COLA*	Average COLA	Total
1955	1	\$ 2,107	\$ 6,574	\$ 8,681
1956	2	1,145	4,791	5,936
1957	–	–	–	–
1958	1	2,142	12,864	15,006
1959	1	3,518	9,796	13,314
1960	2	4,397	11,604	16,001
1961	–	–	–	–
1962	2	3,195	7,495	10,690
1963	3	2,379	9,033	11,412
1964	2	4,520	7,977	12,497
1965	2	7,302	18,816	26,118
1966	11	3,691	7,428	11,119
1967	5	2,377	6,856	9,233
1968	8	2,715	5,276	7,991
1969	14	2,066	3,999	6,065
1970	40	3,043	4,493	7,536
1971	46	4,463	5,969	10,432
1972	83	4,440	5,136	9,576
1973	138	5,145	5,736	10,880
1974	186	5,340	5,950	11,290
1975	258	5,225	5,448	10,673
1976	429	5,276	5,140	10,416
1977	623	5,142	4,957	10,099
1978	710	5,699	4,964	10,663
1979	910	5,742	4,823	10,565
1980	1,190	5,670	4,101	9,772
1981	1,472	5,717	3,436	9,153
1982	1,811	6,388	3,442	9,830
1983	1,884	6,688	3,290	9,978
1984	2,988	8,810	3,899	12,709
1985	2,752	8,537	3,562	12,099
1986	3,491	9,167	3,511	12,678

Year of Retirement	Number	Average Option 0 Benefit w/o COLA*	Average COLA	Total
1987	3,829	\$ 10,005	\$ 3,630	\$ 13,635
1988	3,953	10,923	3,596	14,519
1989	4,536	11,585	3,484	15,070
1990	5,218	13,188	3,387	16,575
1991	8,349	17,103	3,619	20,722
1992	7,940	14,349	3,084	17,432
1993	6,472	14,983	2,884	17,867
1994	5,927	14,989	2,667	17,656
1995	7,350	15,853	2,631	18,484
1996	13,003	20,668	2,825	23,493
1997	11,815	19,167	2,474	21,642
1998	9,025	16,973	2,034	19,007
1999	9,956	16,690	1,873	18,563
2000	11,895	17,970	1,762	19,732
2001	12,773	21,563	1,757	23,320
2002	10,665	19,504	1,531	21,034
2003	23,186	28,207	1,526	29,733
2004	11,653	19,555	1,119	20,674
2005	14,181	21,654	992	22,646
2006	15,641	22,480	845	23,325
2007	16,326	24,815	715	25,529
2008	16,845	26,548	576	27,124
2009	15,640	26,605	415	27,020
2010	17,909	28,202	267	28,469
2011	27,644	34,517	152	34,669
2012	17,771	27,309	–	27,309
2013	17,872	26,981	–	26,981
2014	19,404	27,858	–	27,858
2015	20,298	29,215	–	29,215
2016	13,708	\$ 31,100	\$ –	\$ 31,100

* 7,263 of the 35,083 beneficiaries are not eligible for COLA and are not included in the above counts.

Retirees and Beneficiaries — PFRS

This table shows the number (*Number*), the average annual modified pension benefit prior to option selection and without any cost-of-living adjustment (*Average Option 0 Benefit w/o COLA*), the average cost-of-living adjustment (*Average COLA*) of surviving Police and Fire Retirement System retirees and beneficiaries* as of March 31, 2016. Groupings are based on fiscal year of member retirement. The modified pension benefit has been reduced for any partial lump sum distribution.

Year of Retirement	Number	Average Option 0 w/o COLA*	Average COLA	Total
1942	1	\$ 2,029	\$ 21,825	\$ 23,854
1943	–	–	–	–
1944	–	–	–	–
1945	–	–	–	–
1946	–	–	–	–
1947	–	–	–	–
1948	–	–	–	–
1949	–	–	–	–
1950	–	–	–	–
1951	–	–	–	–
1952	–	–	–	–
1953	–	–	–	–
1954	1	2,357	14,901	17,258
1955	2	2,482	7,723	10,205
1956	1	3,614	21,609	25,223
1957	–	–	–	–
1958	–	–	–	–
1959	–	–	–	–
1960	1	3,478	19,340	22,818
1961	1	2,435	6,848	9,283
1962	–	–	–	–
1963	3	3,462	13,758	17,220
1964	1	4,864	18,020	22,884
1965	2	5,365	18,048	23,412
1966	2	4,280	13,565	17,844
1967	7	5,505	13,183	18,688
1968	6	5,309	13,232	18,541
1969	11	5,039	11,227	16,266
1970	17	6,166	12,764	18,930
1971	19	7,149	12,787	19,936
1972	86	7,333	13,194	20,527
1973	77	7,627	13,111	20,738
1974	109	8,016	13,325	21,341
1975	82	8,465	12,048	20,513
1976	108	9,837	12,432	22,269
1977	197	10,597	12,275	22,872
1978	196	10,739	11,715	22,454
1979	267	11,394	11,097	22,491
1980	280	\$ 12,247	\$ 10,056	\$ 22,302
1981	256	13,217	8,815	22,032
1982	344	14,855	8,271	23,126
1983	385	15,799	7,922	23,721
1984	376	17,758	7,881	25,638
1985	448	19,179	7,380	26,558
1986	656	20,781	7,232	28,014
1987	691	22,901	7,154	30,055
1988	812	24,647	6,761	31,408
1989	846	24,993	6,345	31,338
1990	872	27,689	5,784	33,473
1991	975	30,673	5,267	35,940
1992	1,076	35,087	4,703	39,790
1993	1,006	33,888	4,349	38,237
1994	894	32,983	3,952	36,935
1995	788	37,639	3,540	41,180
1996	785	36,590	3,260	39,851
1997	768	40,672	2,946	43,618
1998	735	39,391	2,539	41,930
1999	762	40,604	2,392	42,996
2000	895	47,012	2,068	49,080
2001	1,098	52,736	1,960	54,695
2002	951	53,072	1,697	54,769
2003	1,270	60,650	1,477	62,127
2004	1,200	57,999	1,275	59,275
2005	1,095	58,376	984	59,361
2006	1,107	59,316	751	60,067
2007	1,106	60,393	562	60,955
2008	1,130	62,819	396	63,215
2009	1,072	66,025	309	66,333
2010	1,108	68,174	207	68,381
2011	1,258	68,537	103	68,639
2012	1,218	70,050	–	70,050
2013	1,227	68,827	–	68,827
2014	1,222	72,051	–	72,051
2015	1,304	74,636	–	74,636
2016	231	\$ 77,813	\$ –	\$ 77,813

* 387 of the 2,058 beneficiaries are not eligible for COLA and are not included in the above counts.

Local Government Salaries and Billings — ERS

The contribution amounts shown below are due February 1st preceding the fiscal year end (FYE).

FYE	Salaries	Contributions	Normal	Deficiency	GLIP	Administrative
Counties						
2007	\$ 4,082,673,936	\$ 447,024,967	\$ 417,028,835	\$ –	\$ 17,682,805	\$ 12,313,327
2008	4,216,431,872	422,160,637	394,084,911	–	11,157,933	16,917,793
2009	4,377,722,306	386,066,989	357,016,093	–	11,534,099	17,516,797
2010	4,440,975,009	348,633,573	319,242,145	–	15,718,947	13,672,481
2011	4,400,173,486	559,214,523	525,419,127	–	15,589,216	18,206,180
2012	4,443,930,817	776,404,451	748,265,831	–	14,983,770	13,154,850
2013	4,373,201,590	869,913,388	836,809,946	–	15,242,472	17,860,970
2014	4,336,303,275	961,029,407	932,736,131	–	15,028,728	13,264,548
2015	4,268,067,445	916,967,766	884,569,811	–	14,822,845	17,575,110
2016	4,268,067,445	764,800,462	729,885,087	–	17,843,119	17,072,256
Cities						
2007	625,077,477	65,850,318	60,796,905	–	3,158,385	1,895,028
2008	648,030,721	61,051,722	56,528,107	–	1,938,692	2,584,923
2009	669,808,943	54,817,726	50,114,905	–	2,015,498	2,687,323
2010	672,358,993	49,473,203	44,600,856	–	2,784,205	2,088,142
2011	660,882,586	78,687,818	73,186,068	–	2,750,875	2,750,875
2012	663,784,626	107,570,937	102,977,843	–	2,624,624	1,968,470
2013	657,761,044	124,229,355	118,894,947	–	2,667,204	2,667,204
2014	673,091,884	137,981,259	133,304,614	–	2,672,375	2,004,270
2015	679,974,366	134,647,196	129,157,994	–	2,744,601	2,744,601
2016	679,974,366	118,631,364	112,511,612	–	3,399,861	2,719,891
Towns						
2007	1,356,019,116	140,466,376	128,916,495	696,150	6,782,132	4,071,599
2008	1,417,734,849	131,248,138	120,766,233	677,721	4,200,582	5,603,602
2009	1,465,224,022	120,574,358	109,598,831	695,659	4,404,475	5,875,393
2010	1,483,730,590	108,762,029	97,393,459	717,958	6,084,843	4,565,769
2011	1,483,142,934	174,236,832	161,410,776	687,246	6,068,074	6,070,736
2012	1,499,756,171	243,005,724	232,009,841	701,186	5,881,293	4,413,404
2013	1,523,144,059	282,487,748	269,746,224	730,975	6,003,677	6,006,872
2014	1,514,279,860	320,436,350	308,991,586	729,377	6,121,687	4,593,700
2015	1,541,087,303	304,935,776	292,018,266	704,881	6,104,792	6,107,837
2016	1,541,087,303	277,193,215	262,917,719	409,489	7,701,640	6,164,367
Villages						
2007	411,425,147	42,088,503	38,567,121	240,460	2,050,581	1,230,341
2008	427,838,001	39,705,557	36,476,385	243,599	1,279,527	1,706,046
2009	444,961,775	36,293,410	32,947,899	231,780	1,334,454	1,779,277
2010	452,674,761	32,980,639	29,491,939	243,794	1,854,239	1,390,667
2011	453,586,842	53,044,335	49,083,776	251,569	1,854,495	1,854,495
2012	456,923,176	75,242,014	71,732,124	359,252	1,800,376	1,350,262
2013	464,343,459	84,603,712	80,734,045	210,055	1,829,806	1,829,806
2014	468,173,558	96,707,532	93,193,118	224,737	1,879,811	1,409,866
2015	475,868,379	93,000,032	88,986,865	214,831	1,899,168	1,899,168
2016	475,868,379	84,779,246	80,364,318	134,970	2,377,750	1,902,208

Local Government Salaries and Billings — ERS

continued

FYE	Salaries	Contributions	Normal	Deficiency	GLIP	Administrative
Miscellaneous						
2007	\$ 3,452,844,188	\$ 351,765,032	\$ 323,252,763	\$ 1,090,110	\$ 17,138,851	\$ 10,283,308
2008	3,612,130,156	333,088,130	307,009,697	1,016,328	10,741,056	14,321,049
2009	3,877,365,154	307,150,742	279,817,198	1,031,567	11,272,265	15,029,712
2010	4,053,679,047	288,402,076	258,729,069	1,396,742	16,157,869	12,118,396
2011	4,009,081,340	476,258,246	441,882,050	1,123,038	16,626,579	16,626,579
2012	4,074,206,349	705,637,232	676,397,501	1,117,975	16,069,562	12,052,194
2013	3,971,661,743	749,635,292	716,057,300	835,444	16,371,274	16,371,274
2014	3,968,529,764	826,997,637	797,752,084	791,616	16,258,823	12,195,114
2015	4,016,329,736	786,826,716	753,471,524	785,464	16,284,864	16,284,864
2016	4,016,329,736	692,441,164	656,011,033	285,120	20,080,556	16,064,455
School Districts						
2007	2,892,495,432	295,496,975	272,049,180	87,908	14,599,932	8,759,955
2008	3,028,665,963	276,852,420	255,641,659	94,016	9,050,047	12,066,698
2009	3,179,510,771	258,982,162	236,727,573	107,511	9,491,589	12,655,489
2010	3,277,959,694	237,870,801	214,479,105	111,442	13,303,002	9,977,252
2011	3,299,608,584	387,560,100	360,157,255	414,165	13,494,340	13,494,340
2012	3,363,257,728	530,456,512	507,067,857	433,238	13,117,370	9,838,047
2013	3,295,559,464	623,154,200	595,786,408	426,060	13,470,866	13,470,866
2014	3,295,866,762	685,241,928	661,805,954	135,753	13,314,400	9,985,821
2015	3,337,348,846	654,771,133	627,945,059	139,518	13,343,278	13,343,278
2016	3,337,348,846	593,311,380	563,142,438	134,423	16,685,833	13,348,686

For the FYEs 2006-2015, the contribution amounts include the normal cost of benefits including supplemental pensions and, in some cases, the Retirement Incentive Program, Deficiency Contributions, the Group Life Insurance Plan (GLIP), and the administrative cost of the System for the fiscal year.

For the FYE 2016, the contribution amounts include the normal cost of benefits including supplemental pensions, Deficiency Contributions, GLIP, the administrative cost of the System for the fiscal year, and accounting adjustments. Accounting adjustments include prior year adjustments, prepayment discounts, and reconciliation of actual versus estimated salary amounts.

Legislation enacted in July of 2015 (Chapter 94, Laws of 2015), requires the System to use prior year actual salaries rather than current year estimated salaries in the calculation of required contributions. This change eliminates the need for reconciliation of actual versus estimated salaries, the result of which is reflected in the FYE 2016 salaries.

Local Government Salaries and Billings — PFRS

The contribution amounts shown below are due February 1st preceding the fiscal year end (FYE).

FYE	Salaries	Contributions	Normal	Deficiency	GLIP	Administrative
Counties						
2007	\$ 686,235,014	\$ 121,577,173	\$ 118,828,521	\$ -	\$ -	\$ 2,748,652
2008	705,089,650	120,646,667	117,816,582	-	707,521	2,122,564
2009	705,233,176	117,939,533	115,751,728	-	-	2,187,805
2010	691,324,895	113,345,262	109,684,666	-	-	3,660,596
2011	774,589,528	128,266,705	124,105,246	-	693,576	3,467,883
2012	741,170,663	165,977,875	162,848,546	-	-	3,129,329
2013	750,476,797	186,487,909	182,070,522	-	736,230	3,681,157
2014	742,952,940	215,606,426	212,605,235	-	-	3,001,191
2015	748,062,218	204,532,593	200,811,227	-	744,273	2,977,093
2016	748,062,218	183,660,699	180,668,452	-	-	2,992,247
Cities						
2007	803,949,506	142,751,818	139,481,125	-	-	3,270,693
2008	862,509,071	142,311,942	138,966,064	-	836,467	2,509,411
2009	878,117,139	151,071,141	148,374,256	-	-	2,696,885
2010	898,507,065	146,455,535	141,869,364	-	-	4,586,171
2011	896,261,192	171,091,657	165,609,925	-	913,625	4,568,107
2012	919,665,789	202,376,328	198,704,804	-	-	3,671,524
2013	904,451,691	242,732,696	237,147,463	-	930,870	4,654,363
2014	940,121,957	270,589,638	266,868,512	-	-	3,721,126
2015	935,625,377	266,374,021	261,525,612	-	969,687	3,878,722
2016	935,625,377	220,521,730	216,779,231	-	-	3,742,499
Towns						
2007	293,260,663	50,495,562	49,326,214	-	-	1,169,348
2008	307,058,431	51,073,666	49,853,332	-	305,084	915,250
2009	321,618,843	53,509,018	52,550,766	-	-	958,252
2010	324,877,420	52,903,830	51,226,025	-	-	1,677,805
2011	333,981,112	60,280,009	58,310,352	-	328,283	1,641,374
2012	345,481,241	74,297,961	72,943,723	-	-	1,354,238
2013	344,465,630	90,102,480	88,024,012	-	346,422	1,732,046
2014	351,821,273	101,830,050	100,430,452	-	-	1,399,598
2015	361,105,021	99,600,409	97,809,899	-	358,100	1,432,410
2016	361,105,021	103,194,597	101,750,184	-	-	1,444,413
Villages						
2007	251,789,449	40,309,964	39,301,296	-	-	1,008,668
2008	260,713,425	40,875,275	39,828,283	-	261,751	785,241
2009	271,083,935	41,155,426	40,339,680	-	-	815,746
2010	279,110,145	41,046,994	39,630,908	-	-	1,416,086
2011	284,144,385	49,801,862	48,105,170	-	282,784	1,413,908
2012	288,899,267	61,448,733	60,286,366	-	-	1,162,367
2013	289,479,125	72,871,202	71,130,551	-	290,108	1,450,543
2014	296,688,354	83,549,031	82,367,874	-	-	1,181,157
2015	298,766,157	81,460,417	79,943,884	-	303,296	1,213,237
2016	298,766,157	69,981,037	68,788,007	-	-	1,193,030

Local Government Salaries and Billings — PFRS

continued

FYE	Salaries	Contributions	Normal	Deficiency	GLIP	Administrative
Miscellaneous						
2007	\$ 245,010,928	\$ 42,931,506	\$ 41,968,985	\$ –	\$ –	\$ 962,521
2008	266,355,184	44,355,212	43,330,386	–	256,207	768,619
2009	278,364,071	44,753,630	43,917,335	–	–	836,295
2010	276,719,595	44,766,923	43,309,191	–	–	1,457,732
2011	277,823,751	51,630,642	49,951,567	–	279,846	1,399,229
2012	305,193,545	60,344,419	59,216,144	–	–	1,128,275
2013	303,608,075	77,558,504	75,734,743	–	303,957	1,519,804
2014	324,198,568	88,966,389	87,744,530	–	–	1,221,859
2015	322,131,168	89,840,321	88,189,827	–	330,099	1,320,395
2016	322,131,168	73,328,115	72,039,593	–	–	1,288,522

For the FYEs 2006-2015, the contribution amounts include the normal cost of benefits including supplemental pensions, the Group Life Insurance Plan (GLIP), and the administrative cost of the System for the fiscal year.

For the FYE 2016, the contribution amounts include the normal cost of benefits including supplemental pensions, GLIP, the administrative cost of the System for the fiscal year, and accounting adjustments. Accounting adjustments include prior year adjustments, prepayment discounts, and reconciliation of actual versus estimated salary amounts.

Legislation enacted in July of 2015 (Chapter 94, Laws of 2015), requires the System to use prior year actual salaries rather than current year estimated salaries in the calculation of required contributions. This change eliminates the need for reconciliation of actual versus estimated salaries, the result of which is reflected in the FYE 2016 salaries.

Contributions Recorded, 2007 – 2016

(Dollars in Millions)

Contributions recorded are the amounts presented in the System’s financial statements and include employer costs plus or minus any adjustments in amounts receivable and changes resulting from legislation.

Year Ended 3/31	Employer Contributions*	Member Contributions
2007		
Total	\$ 2,718.5	\$ 250.2
State	988.2	
Local	1,730.3	
2008		
Total	\$ 2,648.5	\$ 265.7
State	1,007.8	
Local	1,640.7	
2009		
Total	\$ 2,456.2	\$ 273.3
State	889.2	
Local	1,567.0	
2010		
Total	\$ 2,344.2	\$ 284.3
State	897.5	
Local	1,446.7	
2011		
Total	\$ 4,164.6	\$ 286.2
State	1,759.0	
Local	2,405.6	
* Includes employer premiums to Group Term Life Insurance Plan.		

Year Ended 3/31	Employer Contributions*	Member Contributions
2012		
Total	\$ 4,585.2	\$ 273.2
State	1,785.6	
Local	2,799.6	
2013		
Total	\$ 5,336.0	\$ 269.1
State	1,950.1	
Local	3,385.9	
2014		
Total	\$ 6,064.1	\$ 281.4
State	2,372.7	
Local	3,691.4	
2015		
Total	\$ 5,797.4	\$ 284.8
State	2,263.0	
Local	3,534.4	
2016		
Total	\$ 5,140.2	\$ 306.6
State	1,958.4	
Local	3,181.8	
* Includes employer premiums to Group Term Life Insurance Plan.		

20-Year Summary*

	2016	2015	2014	2013	2012	2011	2010	2009	2008
Total Participants	1,088,342	1,073,486	1,066,064	1,061,010	1,059,398	1,057,754	1,055,210	1,046,086	1,035,430
Number of Members	647,399	643,178	643,659	647,574	656,224	672,723	679,217	679,908	677,321
ERS (a)	612,294	608,637	609,565	613,930	622,107	637,921	643,875	643,700	641,119
State	202,153	201,194	201,192	202,570	203,274	213,089	216,582	219,741	220,216
Counties	104,756	105,582	106,688	108,302	111,051	114,111	115,722	116,515	117,084
Cities	18,048	18,079	18,182	18,176	18,420	18,667	18,897	18,893	18,992
Towns	45,450	44,826	44,676	44,407	44,644	44,416	44,361	43,403	43,203
Villages	14,256	14,129	14,073	14,040	14,051	14,165	14,150	14,000	13,891
Miscellaneous	95,759	94,341	94,396	95,199	97,225	98,115	97,960	97,272	95,601
School Districts	131,872	130,486	130,358	131,236	133,442	135,358	136,203	133,876	132,132
PFRS (a)	35,105	34,541	34,094	33,644	34,117	34,802	35,342	36,208	36,202
State	6,309	6,009	5,792	5,630	5,548	5,779	5,973	6,222	6,223
Counties	5,348	5,179	5,003	5,076	5,372	5,499	5,560	5,841	5,898
Cities	12,018	11,856	11,812	11,868	11,974	12,137	12,289	12,433	12,414
Towns	4,182	4,196	4,162	4,153	4,178	4,205	4,249	4,340	4,364
Villages	4,340	4,343	4,330	4,370	4,433	4,512	4,547	4,592	4,621
Miscellaneous	2,908	2,958	2,995	2,547	2,612	2,670	2,724	2,780	2,682
Members by Tier (b)									
ERS Tier 1	3,809	4,520	5,249	6,230	7,551	10,718	13,395	16,829	20,513
ERS Tier 2	4,420	5,375	6,297	7,538	9,222	12,911	15,651	18,097	20,315
ERS Tiers 3 through 6	604,065	598,742	598,019	600,162	605,334	614,292	614,829	608,774	600,291
PFRS Tier 1	77	92	123	172	230	304	393	576	745
PFRS Tier 2	27,364	28,179	29,188	30,295	31,830	33,091	34,261	35,632	35,457
PFRS Tiers 3, 5 & 6	7,664	6,270	4,783	3,177	2,057	1,407	688	0	0
Retirees & Beneficiaries	440,943	430,308	422,405	413,436	403,174	385,031	375,803	366,178	358,109
ERS	407,112	396,781	389,288	380,899	371,468	353,940	345,106	336,273	328,726
PFRS	33,831	33,527	33,117	32,537	31,706	31,091	30,697	29,905	29,383
Employers	3,040	3,032	3,027	3,029	3,040	3,039	3,035	3,026	3,021
ERS	3,010	3,006	3,002	3,004	3,016	3,016	3,011	3,001	2,995
PFRS	686	682	681	681	682	681	681	683	683
Benefit Payments (c)	\$ 10,908.5	\$ 10,436.2	\$ 9,898.8	\$ 9,450.2	\$ 8,862.8	\$ 8,464.6	\$ 7,663.1	\$ 7,212.1	\$ 6,835.6
Retirement Allowances	10,113.8	9,651.2	9,098.4	8,669.8	8,109.3	7,717.0	6,931.8	6,497.1	6,142.8
Death Benefits (Lump Sum)	188.2	183.1	203.8	194.2	185.0	192.3	183.0	180.5	181.7
COLA Payments	606.5	601.9	596.6	586.2	568.5	555.3	548.3	534.5	511.1
# of Service Retirements	21,984	18,039	19,702	19,962	28,259	19,092	19,193	17,979	17,261
# of Death Benefits Paid	751	900	810	844	879	984	955	935	1,014
# of Disability Retirements	626	720	963	1,026	1,161	844	1,421	1,020	950
Employer Contributions	\$ 5,140.2	\$ 5,797.4	\$ 6,064.1	\$ 5,336.1	\$ 4,585.2	\$ 4,164.5	\$ 2,344.2	\$ 2,456.2	\$ 2,648.4
ERS	4,232.4	4,802.2	5,045.6	4,435.6	3,790.6	3,525.8	1,785.5	1,898.7	2,073.5
PFRS	792.6	901.0	926.3	808.5	706.4	538.8	465.0	492.8	510.6
Group Life Insurance Plan	115.2	94.2	92.2	92.0	88.2	99.9	93.7	64.7	64.3
Rate (as a % of Salary) (d)									
ERS	18.2%	20.1%	20.9%	18.9%	16.3%	11.9%	7.4%	8.5%	9.6%
PFRS	24.7%	27.6%	28.9%	25.8%	21.6%	18.2%	15.1%	15.8%	16.6%
Employee Contributions	\$ 306.6	\$ 284.8	\$ 281.4	\$ 269.1	\$ 273.2	\$ 286.2	\$ 284.3	\$ 273.3	\$ 265.7
ERS	289.3	272.0	273.5	264.8	268.5	284.5	282.8	269.0	263.1
PFRS	17.3	12.8	7.9	4.3	4.7	1.7	1.5	4.3	2.6
Investments (e)	\$ 178,639.7	\$ 184,502.0	\$ 176,835.1	\$ 160,660.8	\$ 150,658.9	\$ 147,237.0	\$ 132,500.2	\$ 108,960.7	\$ 153,877.7
Equities	90,755.4	94,293.5	93,191.7	83,049.5	79,059.2	79,945.0	72,674.0	47,871.0	83,153.7
Global Fixed Income	44,661.2	47,652.2	41,410.6	38,559.5	33,440.5	31,037.9	33,726.1	36,541.6	36,571.4
Commercial Mortgages	796.4	852.9	853.9	812.7	803.0	851.3	845.7	710.2	772.4
Short-Term Investments	5,578.8	5,252.5	6,592.8	6,461.3	7,397.7	8,360.2	3,086.1	3,826.7	6,443.1
Private Equity	13,961.4	14,247.4	14,369.8	14,072.6	14,925.9	14,620.4	12,584.0	10,563.7	12,699.4
Equity Real Estate	12,639.7	12,123.4	12,529.3	11,195.4	9,339.5	7,631.0	5,551.1	7,066.5	8,909.4
Absolute Return Strategy	8,029.4	8,388.8	7,406.1	6,124.7	5,165.7	4,215.5	3,553.3	2,381.0	5,328.3
Opportunistic Funds	1,719.3	1,292.2	480.9	385.1	527.4	575.7	479.9	0.0	0.0
Other	498.1	399.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rate of Return (f)	0.2%	7.2%	13.0%	10.4%	6.0%	14.6%	25.9%	(26.4)%	2.6%
Core Fixed Income	1.8%	5.5%	(0.5)%	4.7%	9.0%	8.0%	7.4%	2.4%	8.6%
Equity Investments	(0.4)%	8.3%	19.1%	12.5%	4.9%	17.1%	41.3%	(30.8)%	0.9%
Administrative Cost	\$ 106.6	\$ 107.2	\$ 105.7	\$ 105.7	\$ 100.6	\$ 101.3	\$ 100.0	\$ 99.2	\$ 90.3
Financial Statement Assets	\$ 183,640.2	\$ 189,412.4	\$ 181,275.3	\$ 164,221.8	\$ 153,394.4	\$ 149,548.6	\$ 134,251.7	\$ 110,937.8	\$ 155,845.9

20-Year Summary*

continued

2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997
1,012,699	995,536	982,009	970,078	964,140	944,500	924,643	899,314	882,234	867,204	860,429
662,633	653,291	647,758	641,721	650,543	637,896	626,565	604,479	593,188	582,689	578,566
626,923	617,989	612,410	606,155	614,555	602,428	590,959	569,369	558,236	547,805	543,663
215,296	211,041	208,899	207,641	216,005	216,507	222,343	216,347	216,380	214,628	216,084
115,944	115,472	118,006	117,514	119,319	118,318	119,638	115,576	113,856	112,792	115,904
18,843	18,891	18,979	18,933	19,637	19,671	19,551	19,148	18,966	18,907	18,909
41,989	41,393	40,561	39,841	39,395	38,063	37,121	35,882	35,056	34,764	33,949
13,597	13,388	13,106	12,878	12,823	12,360	11,969	11,509	11,279	11,087	10,942
92,736	90,879	86,791	85,732	85,708	81,752	69,968	67,212	64,218	62,176	58,128
128,518	126,925	126,068	123,616	121,668	115,757	110,369	103,695	98,481	93,451	89,747
35,710	35,302	35,348	35,566	35,988	35,468	35,606	35,110	34,952	34,884	34,903
6,219	5,955	6,038	5,898	5,802	5,679	5,534	5,279	5,232	5,195	5,230
5,873	5,850	5,833	5,814	5,901	6,029	6,176	6,267	6,338	6,332	6,277
12,206	12,147	12,113	12,374	12,541	12,612	12,781	12,660	12,552	12,579	12,538
4,295	4,261	4,217	4,231	4,233	4,191	4,180	4,163	4,149	4,139	4,095
4,591	4,641	4,653	4,732	4,867	4,795	4,805	4,727	4,699	4,683	4,743
2,526	2,448	2,494	2,517	2,644	2,162	2,130	2,014	1,982	1,956	2,020
25,053	29,492	34,980	39,622	50,032	56,541	60,736	57,657	64,173	69,942	75,166
22,458	24,263	25,938	27,398	30,122	31,981	32,914	32,641	34,296	36,061	37,739
579,412	564,234	551,492	539,135	534,401	513,906	497,309	479,071	459,767	441,802	430,758
924	1,143	1,503	2,076	2,597	3,260	3,927	4,469	4,997	5,537	6,087
34,786	34,159	33,845	33,490	33,391	32,208	31,679	30,641	29,955	29,347	28,816
0	0	0	0	0	0	0	0	0	0	0
350,066	342,245	334,251	328,357	313,597	306,604	298,078	294,835	289,046	284,515	281,863
321,113	313,837	306,531	301,528	287,341	280,997	273,147	270,333	264,899	260,751	258,413
28,953	28,408	27,720	26,829	26,256	25,607	24,931	24,502	24,147	23,764	23,450
3,010	3,001	2,993	2,985	2,968	2,922	2,897	2,860	2,843	2,809	2,786
2,983	2,974	2,967	2,959	2,943	2,917	2,890	2,853	2,836	2,813	2,782
683	685	684	684	681	679	678	678	679	678	676
\$ 6,383.4	\$ 6,028.9	\$ 5,674.7	\$ 5,347.5	\$ 4,984.6	\$ 4,488.3	\$ 4,181.0	\$ 3,720.2	\$ 3,482.0	\$ 3,305.0	\$ 3,122.0
5,722.9	5,388.6	5,041.0	4,722.1	4,373.3	3,872.0	3,619.9	3,415.1	3,217.1	3,071.6	2,885.3
164.6	161.2	161.9	157.3	148.4	151.8	152.9	142.8	123.0	125.7	118.5
495.9	479.1	471.8	468.1	462.9	464.5	336.1	162.3	141.9	107.7	118.2
16,390	16,827	14,533	23,655	16,078	17,499	11,640	14,470	12,675	11,932	15,324
832	932	1,041	1,025	1,019	1,068	1,005	1,026	956	974	965
1,227	1,267	1,463	1,103	1,064	1,038	1,079	1,189	1,356	938	1,016
\$ 2,718.6	\$ 2,782.2	\$ 2,964.8	\$ 1,286.5	\$ 651.9	\$ 263.8	\$ 214.8	\$ 164.5	\$ 291.7	\$ 462.6	\$ 903.5
2,116.0	2,271.4	2,434.5	1,052.3	525.5	179.1	131.0	83.0	193.2	280.1	668.8
502.5	433.4	455.3	158.4	66.3	47.3	49.0	62.0	50.1	125.1	177.9
100.1	77.3	75.0	75.8	60.1	37.4	34.8	19.5	48.4	57.4	56.8
10.7%	11.3%	12.9%	5.9%	1.5%	1.2%	0.9%	0.9%	1.3%	1.7%	3.7%
17.0%	16.3%	17.6%	5.8%	1.4%	1.6%	1.6%	1.9%	2.4%	7.0%	9.8%
\$ 250.2	\$ 241.2	\$ 227.3	\$ 221.9	\$ 219.2	\$ 210.2	\$ 319.1	\$ 422.7	\$ 399.8	\$ 369.4	\$ 348.2
247.2	237.7	224.5	217.4	214.1	206.0	317.4	422.0	398.7	368.8	347.7
2.9	3.5	2.8	4.5	5.1	4.2	1.7	0.7	1.1	0.6	0.5
\$ 154,575.5	\$ 140,453.3	\$ 126,083.5	\$ 119,245.0	\$ 95,598.3	\$ 111,168.5	\$ 112,432.9	\$ 127,138.9	\$ 111,008.7	\$ 104,921.8	\$ 82,333.8
90,119.7	88,550.9	80,917.2	74,876.5	51,357.0	66,375.5	63,661.7	82,733.6	66,397.8	63,348.7	45,827.4
33,536.2	28,889.0	29,310.8	29,691.2	32,019.7	31,839.2	35,305.7	31,764.3	34,307.9	32,451.7	27,373.5
889.7	1,162.7	1,281.9	1,530.0	1,723.6	1,628.7	1,835.8	1,318.6	1,509.5	1,635.0	1,506.3
8,551.1	6,619.3	2,602.5	1,879.1	771.2	1,429.0	992.0	2,238.3	2,541.8	1,927.0	3,011.2
10,044.8	8,284.8	6,832.4	6,738.8	5,564.8	5,579.5	5,941.6	5,385.9	3,159.8	2,671.7	2,122.9
6,752.7	5,430.7	4,634.0	4,529.4	4,162.0	4,316.6	4,696.0	3,698.1	3,091.8	2,887.7	2,492.5
4,681.3	1,516.0	504.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.6%	14.6%	8.5%	28.8%	(10.2)%	2.8%	(8.7)%	17.8%	8.8%	30.4%	10.9%
6.0%	1.7%	3.0%	8.9%	16.8%	4.3%	14.1%	1.3%	6.6%	15.6%	4.3%
15.0%	19.1%	10.6%	42.8%	(24.3)%	2.9%	(20.3)%	25.3%	10.1%	47.2%	15.0%
\$ 79.8	\$ 78.5	\$ 65.3	\$ 69.6	\$ 67.5	\$ 66.6	\$ 57.8	\$ 50.7	\$ 52.6	\$ 49.1	\$ 47.6
\$ 156,625.2	\$ 142,620.1	\$ 128,037.7	\$ 120,799.0	\$ 97,372.7	\$ 112,724.9	\$ 114,043.5	\$ 128,889.4	\$ 112,723.1	\$ 106,319.2	\$ 83,947.5

Notes to 20-Year Summary

* Combined ERS and PFRS unless noted; dollars in millions; data as of March 31 fiscal year end.

- (a) Includes active members and inactive members identified with their last employer.
- (b) Tier 3 through 6 membership statistics are combined. Tier 6 was enacted on April 1, 2012.
- (c) Total does not include Employee Contributions Refunded or Other Benefits found in the Financial Statements.
- (d) Beginning in the 2006 fiscal year, all rates assume a February 1 payment date prior to the close of the fiscal year. Previous years assume rates based on a December 15 payment date. Contributions include normal, administrative, retirement incentive and deficiency costs.
- (e) Investments for 1995 and later years are shown at (and rate of return is calculated on) fair value as required by GASB 25, which the System adopted that year.
- (f) Generally, the Rate of Return is calculated on a time-weighted, gross of fees, basis.

Office of the New York State Comptroller
Thomas P. DiNapoli

