Comprehensive Annual Financial Report

Fiscal Years Ended June 30, 2017 and 2016

New York State Teachers' Retirement System

Providing Retirement Security
For New York Educators

NY STRS NY

New York State Teachers' Retirement System

Providing Retirement Security
For New York Educators

Mission: To provide our members with a secure pension.

Vision: To be the model for pension fund excellence and exceptional customer service.

Values: Integrity, Excellence, Respect, Resourcefulness, Diversity, Diligence, Balance

Comprehensive Annual Financial Report
Fiscal Years Ended June 30, 2017 and 2016

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

New York State Teachers' Retirement System

For its Comprehensive Annual Financial Report for the Fiscal Year Ended

June 30, 2016

Executive Director/CEO

Government Finance Officers Association

Award for Outstanding Achievement in Popular Annual Financial Reporting

Presented to

New York State Teachers' Retirement System

For its Annual Financial Report for the Fiscal Year Ended

June 30, 2016

Executive Director/CEO

PPCC

Public Pension Coordinating Council

Public Pension Standards Award
For Funding and Administration
2016

Presented to

New York State Teachers' 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)

Alan H. Winkle

Alan H. Winkle
Program Administrator

Introduction

INTRODUCTION

Page

Board of Trustees

Organizational Structure

Retirement Board

David P. Keefe, President

Executive Director & Chief Investment Officer

Thomas K. Lee

Legal

- Contract Review
- Legislation
- Litigation
- Domestic Relations Orders

Internal Audit

- Assurance Services
- Consulting Services

Risk Management

- Enterprise and Investment Risk Management Assessment

Actuary

- Actuarial Valuations
- Fiscal Notes

Fixed Income*

- Long/Short-Term Fixed Income Securities

Human Resources

- Contract Negotiations
- Labor Relations
- Personnel Classification and Recruitment
- Staff Training

Member Relations

- Customer Service
- Info. & Communication Center
- Member & Employer Services
- Member Benefits
- Public Information

Operations

- Corporate Governance
- Facility Services
- Finance
- Information Services
- Investment Analytics
- Investment Operations

Private Equity*

- Private Equity Investments

Public Equity*

- Domestic & International Equity Management

Real Estate*

- Commercial Property Investments
- Opportunistic Fund Investments
- Commercial Lending
- Publicly Traded Securities

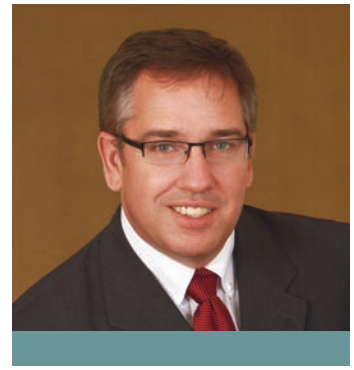
**A listing of external investment professionals used by NYSTRS can be found starting on page 102; a schedule of fees paid to them can be found on page 101.*

Executive Staff

Thomas K. Lee
Executive Director &
Chief Investment Officer

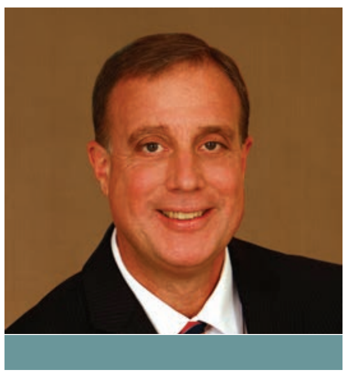
Beth M. Bonacquist
Director of
Human Resources

Sheila O. Gardella
Director of
Member Relations



David C. Gillan
Managing Director of
Real Estate

Frederick W. Herrmann
Managing Director of
Public Equities

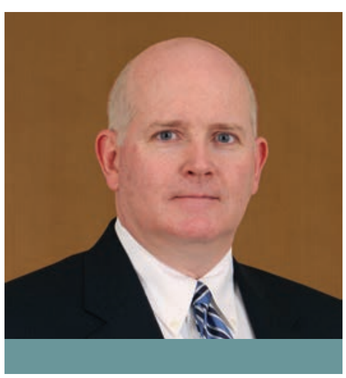


Joseph J. Indelicato Jr.
General Counsel

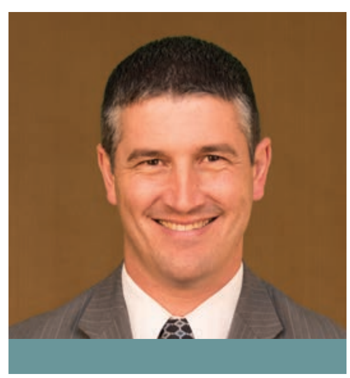
Noreen Jones
Director of
Risk Management

Kenneth R. Kasper
Director of
Internal Audit

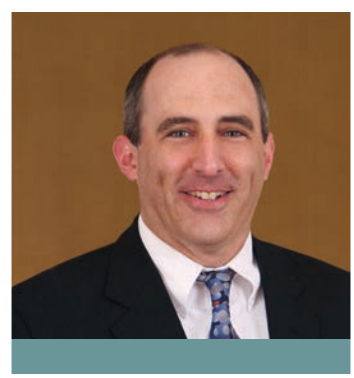
Kevin J. Schaefer
Managing Director of
Operations



Michael A. Wolfe Jr.
Managing Director of
Fixed Income



Gerald J. Yahoudy II
Managing Director of
Private Equity



Richard A. Young
Actuary

Letter of Transmittal

New York State Teachers' Retirement System
10 Corporate Woods Drive
Albany, NY 12211-2395
(800) 348-7298 or (518) 447-2900
NYSTRS.org

Thomas K. Lee, Executive Director & CIO

October 26, 2017

Trustees of the Retirement System Board:

On behalf of System staff, I present you with the Comprehensive Annual Financial Report (CAFR) of the New York State Teachers' Retirement System (NYSTRS or the System) for the fiscal years ended June 30, 2017 and 2016. This report complies with all requirements governing the preparation and contents of annual reports.

History and Overview

Created in 1921 by an act of the state Legislature, NYSTRS administers the fund from which most New York State public school teachers and administrators receive retirement and ancillary benefits. Retirement benefits are provided in accordance with New York State law and may not under the New York Constitution be diminished or impaired. A summary of NYSTRS benefits is provided on pages 15-19 of this report.

The System is governed by a 10-member Board of Trustees, which sets policy and oversees operations consistent with its fiduciary obligations under applicable law. A staff of approximately 380 is responsible for the day-to-day administration. NYSTRS serves 822 employers — including public school districts, BOCES, institutions of higher education and charter schools that elect to participate. NYSTRS has 428,579 active and retired members, including beneficiaries *(see chart below)*.

Membership Figures — as of June 30, 2017

Active Members:	264,761
Retired Members:	157,703
Beneficiaries:	6,115
Total Membership:	428,579

See page 119 for additional membership information.

The retirement fund is one of the 10 largest public funds in the U.S. based on portfolio size. NYSTRS is also consistently among the top-performing and best-funded public pension plans. Consistent receipt of required employee and employer contributions; a disciplined, risk-controlled investment policy; and, partnerships with top-performing fund managers are major contributing factors to this stability. As a long-term investor with liabilities often not payable for three decades or more, Board and staff take a prudent approach to asset management.

Awards

Recognition from various industry organizations further demonstrates the System's commitment to excellence. Honors received within the most recently completed fiscal year include:

Certificate of Achievement for Excellence in Financial Reporting, awarded by the Government Finance Officers Association (GFOA) of the United States and Canada. Given in recognition of the System's 2016 Comprehensive Annual Financial Report (CAFR), the award certifies the report was prepared in conformity with the highest standards in government accounting and financial reporting.

Letter of Transmittal *(continued)*

Award for Outstanding Achievement in Popular Annual Financial Reporting, also awarded by GFOA. The System's 2016 Popular Annual Financial Report was recognized for its high quality and for successfully presenting data from the 2016 CAFR in a manner easily understandable to the general public.

Distinguished Budget Presentation Award for the fiscal year July 1, 2016 through June 30, 2017, also awarded by GFOA. To be eligible for this recognition, the budget document must meet established criteria as a policy document, operations guide, financial plan and communications device.

Public Pension Principles Achievement Award, presented by the Public Pension Coordinating Council. The criterion to qualify for this award includes compliance with specific principles in the areas of benefits, actuarial valuation, financial reporting, investment and disclosure.

Legislation

Chapter 292 of the Laws of 2017 made parallel amendments to Education Law Section 522 and reflects the changes to Retirement and Social Security Law Section 43 made by Chapter 438 of the Laws of 2016. Chapter 438 eliminated the requirement for members to provide notice of their intent to transfer and the requirement that the member accumulate three years of service in order to receive service and salary in both retirement systems.

Noteworthy Actions

Trading Flexibility
NYSTRS is onboarding an execution management system to provide traders with added functionality in pre-trade analysis, trade execution and post-trade analysis.

Facility Improvements
The System continues to work towards LEED (Leadership in Energy and Environmental Design) certification. LEED is a rating system devised by the United States Green Building Council (USGBC) to evaluate the environmental performance of a building and encourage market transformation towards sustainable design.

Technology Improvements
NYSTRS introduced a two-tier login process to enhance security for online employer portal users. The System also upgraded its internal phone network to a Voice over Internet Protocol (VOIP) system.

Significant Litigation

No litigation significantly impacting the System or its members occurred during the fiscal year.

Financial Information

Members of the NYSTRS Board, who serve without pay, have a fiduciary responsibility to safeguard the fund used to pay guaranteed retirement and ancillary benefits to the System's members and beneficiaries. The System's long-term pension obligations for this population are well funded. Strict governmental requirements for transparency and public accountability as established by the Governmental Accounting Standards Board (GASB), as well as state and federal laws, are rigorously followed. Consistently favorable audits of System finances from a variety of independent sources affirm this.

The design, implementation and administration of appropriate internal controls protecting the security of assets are the responsibility of System management. The internal control framework has been designed to provide reasonable rather than absolute assurance that the financial statements will be free from material misstatement. 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 require estimates and judgments by management. To ensure the validity of these controls, a system of both external and internal checks and balances exists. Financial information and internal controls are subject to audit by the New York State Department of Financial Services and the Retirement System's Internal Audit Department. In addition, KPMG LLP, an

Letter of Transmittal *(continued)*

independent certified public accountant, whose unmodified opinion appears on page 23 of this report, audits the financial statements. An audit of our actuarial methods, assumptions and valuations was completed in 2015 by Gabriel Roeder Smith & Company, which concluded the actuarial valuation of the System fairly represented the actuarial position and funding requirements of the System. These oversight mechanisms provide scrupulous and transparent adherence to applicable regulations.

Major System expenses result from retirement benefit payments, death benefits and refunds of contributions to certain eligible members and beneficiaries. The increase in retirement benefit payments from 2016 to 2017 is attributable to a net increase of 2,670 retirees and beneficiaries (details are found on page 33 in the *Notes to Financial Statements-Plan Description*). Also see the *Benefits and Return of Contributions by Type* chart on pages 134-135 for more information.

For an overview of NYSTRS' financial activities for the fiscal year ended June 30, 2017, see *Management's Discussion and Analysis* beginning on page 25. This section provides explanations and further details of the information provided in the financial statements, its notes and required supplementary information.

Responsibility for both the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rests with the management of the System. To the best of our knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of operations of the System.

Funding

Funds used to pay promised benefits come from employer contributions, member contributions and investment income. Assets are professionally managed and invested on a long-term basis using sound investment policies. See *Statements of Changes in Fiduciary Net Position* on page 32 for more information.

The employer contribution rate (ECR) — expressed as a uniform percentage of member payroll — is set annually at the level necessary to properly fund benefits. The rate is established in accordance with an actuarial valuation of System assets and liabilities. The most recently adopted ECR of 9.80% will apply to 2017-18 school year salaries. The payments associated with this rate will be collected in the fall of 2018. These contributions have been collected without fail throughout the System's history, keeping NYSTRS among the most secure plans in the country.

The System's year-end net assets totaled $115.5 billion. During the same period, benefits paid to retirees and beneficiaries were approximately $6.9 billion.

The plan's funded ratio as of June 30, 2016, the date of the most-recent annual actuarial valuation and calculated using the Actuarial Value of Assets, was 97.9%. Details of our funding progress may be obtained by turning to page 113.

Investments

The System's assets are invested in the most prudent manner possible in order to achieve optimum long-term total returns with an appropriate level of risk. The System is committed to a disciplined, risk-controlled investment approach that focuses on thoughtful and prudent diversification of assets across a broad spectrum of capital market segments. The allocation of assets within the portfolio, as well as the fund's overall structure, are continuously reviewed and adjusted as appropriate to achieve these goals.

The System's total portfolio returned 12.51% net of fees for the fiscal year ended June 30, 2017. Our 30-year rate of return is 8.79%, net of fees.

Refer to pages 75-106 for further information on NYSTRS' investments. A listing of our equity and fixed income holdings can be viewed on our website at NYSTRS.org.

Letter of Transmittal *(continued)*

Acknowledgements

This Comprehensive Annual Financial Report is prepared by NYSTRS' staff and reviewed by external auditors prior to publication. The intent of the publication is to provide complete and reliable information for making management decisions, determining compliance with legal provisions and determining responsible stewardship of System assets.

The full report is available on the System's website at NYSTRS.org. Printed copies are available upon request. A Popular Annual Financial Report that presents information from this report in a format more easily understandable to those without a background in public finance will be available in January 2018.

As the data in this report shows, the vast majority of educators earn their NYSTRS benefit by spending not merely years but decades in the classroom, teaching generations of New Yorkers from Montauk to Massena, Chautauqua to Champlain. They make a difference in every corner of the state by investing their lives in these communities, and NYSTRS in turn provides members with a secure pension they cannot outlive. With 80% of payments going to New York residents, NYSTRS pensions provide an important stimulus for local economies.

Our commitment to our active members, retirees, beneficiaries and stakeholders remains as steadfast as it was when the System was founded 96 years ago.

Respectfully submitted,

Thomas K. Lee
Executive Director & Chief Investment Officer

President's Message

David P. Keefe

"Since 1921, through all the ups and downs of the financial markets, NYSTRS has remained a well-funded plan."

Dear NYSTRS Members, Administrators and Teachers:

As a retired teacher with nearly four decades of service in a New York public school district, I know firsthand the peace of mind that a NYSTRS pension provides. I can count on receiving a monthly benefit payment for as long as I live. The more than 160,000 recipients of a NYSTRS benefit also enjoy that same assurance.

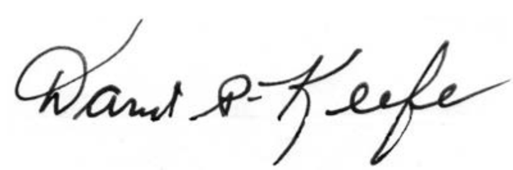
The guarantee of a secure pension relies on a well-funded and sustainable pension plan. Pension funding is a shared responsibility. Employee contributions, employer contributions and investment returns result in NYSTRS being one of the best-funded pension plans in the nation.

Since 1921, through all the ups and downs of the financial markets, NYSTRS has remained a well-funded plan. As of the most recent valuation, the trust administered by NYSTRS is 98% funded, using both the actuarial and market value of assets. Nationally, the average funding level for public retirement systems is 76%.

This means we have the necessary funds to pay both current and future benefits to the nearly half million public school teachers in New York, over 50% of whom historically work 30 years or more before collecting their pension. As noted above, I am among this group of teaching veterans.

Since 2005, I have had the privilege of serving on the NYSTRS Board as the retired teacher trustee. I now also serve as Board president, a humbling honor for which I am grateful.

My fellow Board members and the team at NYSTRS are the most devoted, attentive and principled group of public servants you will find. Together we work diligently to provide our members with a secure pension. That is our mission and we intend to live up to that lofty standard each and every day.



David P. Keefe
President

Summary of Benefits

Types of Benefits

NYSTRS provides service, vested and disability retirement benefits, as well as death benefits.

Membership Tiers

System members are organized using a tier structure based on date of membership. There are six tiers, each with different benefit structures and eligibility rules.

Tier 1:	Membership prior to 7/1/73
Tier 2:	Membership 7/1/73 — 7/26/76
Tier 3:	Membership 7/27/76 — 8/31/83
Tier 4:	Membership 9/1/83 — 12/31/09
Tier 5:	Membership 1/1/10 — 3/31/12
Tier 6:	Membership on or after 4/1/12

Eligibility for Service Retirement

Under Tiers 1-4, members may retire and receive a service retirement benefit at age 55 if credited with five years of New York State service. Retirement for Tier 1 members is also possible with fewer years of service under certain circumstances. Tier 5 and 6 members may retire at age 55 with 10 years of state service credit.

Tier 3 members are also entitled to the benefits under Tier 4. Because of the improvements in Tier 4, most Tier 3 members retire under the provisions of Tier 4. When the benefits under one tier are obviously better, an eligible member will automatically receive the better benefits.

Service Retirement Benefit

A Tier 1 member is eligible to retire at age 55 under the Career Plan without a reduction in benefits if credited with at least 20 years of state service. The pension for 20 years of New York State service rendered after July 1, 1959, is 40% of final average salary. With few exceptions, the maximum pension under the Career Plan is 79% of final average salary. This includes the two years of service added under the Benefit Enhancement legislation.

A Tier 2 member may retire at age 55 without a reduction in benefits if credited with at least 30 years of service. The pension for 30 years of service is 60% of final average salary. The maximum pension payable under Tier 2 is also 79% of final average salary, including two years of service added under the Benefit Enhancement legislation.

A Tier 4 member, and a Tier 3 member retiring under Tier 4, may retire at age 55 without a reduction in benefits if credited with at least 30 years of service. The pension for 30 years of service is 60% of final average salary. Each year beyond 30 years increases the pension 1½% of final average salary.

A Tier 5 member may retire at age 57 without a reduction in benefits if credited with at least 30 years of service. A Tier 6 member may retire at age 63 without a reduction in benefits.

Benefit Enhancement (Article 19)

New York State law enacted in 2000 provides up to two additional years of service credit at retirement for Tier 1 and 2 members who meet the eligibility requirements. It also allows Tier 3 and 4 members to cease making 3% required contributions when they have been a member for 10 years or have 10 years of total service credit, whichever occurs first. Tier 5 and 6 members are not entitled to any Benefit Enhancement.

Summary of Benefits *(continued)*

Pension Formulas

A retirement benefit is determined by the following formula:

Pension Factor x Age Factor (if applicable) x Final Average Salary = Maximum Annual Pension.

The pension factor under each tier for a service retirement is calculated using the percentages as shown in the chart below.

PENSION FORMULAS FOR SERVICE RETIREMENT

Tier 1

- 2% x years of NYS service since July 1, 1959, including any applicable benefit enhancement credit.
- 1.8% x years of NYS service before July 1, 1959.
- 1% x years of out-of-state service prior to NYSTRS membership (10-year maximum).*
- 5% reduction in pension for each full year of NYS service under 20 years (prorated for partial years with a maximum reduction of 50%).

Tier 2

- Computed under the Tier 1 formula, including applicable benefit enhancement credit and/or the 5% reduction for each year of NYS service under 20 years. (Note: Tier 2 members cannot claim out-of-state service unless it was credited under a previous Tier 1 membership.)
- A prorated reduction of up to 27% when retirement occurs before age 62 with less than 30 years of NYS service.
- No reductions if the member is age 62 with at least 20 years of service, or at age 55 with 30 years or more.

Tier 3**

- 1.67% x years of NYS service if credited with less than 20 years, or 2% x years of NYS service if credited with 20 to 30 years.
- 60% maximum for 30 years or more.
- A prorated reduction of up to 30% when retirement occurs before age 62 with less than 30 years of NYS service.
- No reductions if the member is age 62, or if credit totals 30 years or more.
- At age 62 (or at retirement, if older), benefit reduced by 50% of primary Social Security benefit accrued while in NYS public employment.

Tier 4

- 1.67% x years of NYS service if credited with less than 20 years, or 2% x years of NYS service if credited with 20 to 30 years.
- 60% for 30 years plus 1.5% for each year of NYS service beyond 30 years.
- A prorated reduction of up to 27% when retirement occurs before age 62 with less than 30 years of NYS service.
- No reductions if the member is age 62, or if credit totals 30 years or more.

Tier 5

- 1.67% x years of NYS service if credited with less than 25 years, or 2% x years of NYS service if credited with 25 to 30 years.
- 60% for 30 years plus 1.5% for each year of NYS service beyond 30 years.
- A prorated reduction of up to 38% when retirement occurs before age 62 with less than 30 years of NYS service.
- No reduction if the member is age 62, or if credit totals 30 years or more and the member is at least age 55.

Tier 6

- 1.67% x years of NYS service if credited with less than 20 years, or 1.75% x years of NYS service if credited with 20 years.
- 35% for 20 years plus 2% per year beyond 20 years of service.
- A prorated reduction of up to 52% when retirement occurs before age 63 regardless of your total service.

**Any portion of this credit that brings the total service credit beyond 35 years is excluded from the pension calculation. Benefit Enhancement credit is not used to establish the 35-year threshold.*
***Tier 3 members are entitled to receive either the benefits under Tier 3 or 4, whichever are greater.*

Summary of Benefits *(continued)*

Final Average Salary

Final average salary is generally defined as the average of the member's three highest consecutive school years of regular salary, excluding termination pay, retirement bonuses, pay for unused sick leave or accumulated vacation, and increases in salary which exceed certain limitations. Tier 6 members are restricted to a five-year final average salary using regular salary.

Members who joined the System prior to June 17, 1971 are entitled to a five-year final average salary without the limitations of the three-year final average salary if the five-year final average salary is greater.

Vested Retirement

NYSTRS members who cease employment with five or more years of credited service are eligible for a vested retirement. Ten years are required for Tier 5 and 6 members. The vested benefit is payable at age 55 and is calculated using the same factors as a service retirement benefit. However, if vested members choose to withdraw their member contributions or transfer membership to another NYS public retirement system, they will not be eligible for a NYSTRS benefit. Tier 3-6 members with 10 or more years of service can only withdraw under the specific provisions of Chapter 553 of the Laws of 2011.

Disability Retirement

Generally, members credited with at least 10 years of New York State service (five years for Tier 3 members) who become disabled as defined by applicable statute are entitled to a disability retirement benefit from the System. In most cases, the minimum disability benefit is one-third of final average salary. For Tier 3-6 members who become disabled as the result of an accident sustained in the performance of their teaching duties, the five-year or 10-year eligibility requirement is waived.

The members of the Medical Board are:

STEVEN D. KRONICK, M.D.

Psychiatrist
Pine Bush Mental Health, LLP

Psychiatric Consultant
Albany County Community
Mental Health Center

Clinical Assistant Professor of Psychiatry
Albany Medical College

Diplomate of the National
Board of Medical Examiners

Member of the American Board
of Psychiatry and Neurology

Member of the American
Psychiatric Association

RICHARD T. MacDOWELL, M.D.

Attending Surgeon at
Albany Medical College

Member of the American
College of Surgeons

Member of the American
Board of Surgery

LAURA E. PICA, M.D.

Diplomate of the National
Board of Medical Examiners

Diplomate of the American
Board of Internal Medicine

Member of the
American College of Physicians

Member of the American
Society of Internal Medicine

St. Peter's Health Partners
Medical Association - Primary Care
Physician - Internal Medicine

Summary of Benefits *(continued)*

Member Contributions

Tier 3 and 4 members are mandated to contribute 3% of their salary to the Retirement System until they have been a member for 10 years or have 10 years of service credit, whichever occurs first. Tier 5 members are required to contribute 3.5% of their salary throughout their active membership. Tier 6 members are required to contribute at a variable rate based on earnings throughout their active membership. These contributions are not included in the member's gross income for federal income tax purposes until they are distributed or made available to the member, generally at retirement as part of a retirement benefit or upon withdrawal from the System. The member's gross salary is used in all benefit calculations.

Tier 1 and 2 members are not required to contribute to the System. Tier 1 and 2 members who have made contributions to the Annuity Savings Fund (ASF) can withdraw them with interest upon retirement, or receive an annuity throughout retirement in addition to the employer-funded pension described earlier. The annuity is based on total member contributions, life expectancy, date of membership and choice of benefit.

Transfer and Prior Service

Under certain circumstances, members are eligible to transfer membership to or from another New York State public retirement system, or request reinstatement of a former membership in a NYS public retirement system. Credit for NYS public employment prior to joining NYSTRS and active duty military service are also creditable in certain situations.

Ordinary Death Benefits

An employer-funded death benefit is paid if a member dies in service and certain eligibility requirements are met. In addition, if a member dies before retirement, any contributions made by the member to the System, plus interest, are paid to the designated beneficiary.

Tier 1 Death Benefit

The amount of the employer-provided death benefit under Tier 1 is the greater of:

a. One-twelfth (1⁄12) of the member's last 12 months of earnings (exclusive of any form of termination pay) for each year of credited New York State service to a maximum of three times such earnings with 36 or more years of New York State service,

OR

b. The Death Gamble provision. Under the Death Gamble, if a member dies in active service while eligible for retirement without a benefit reduction, the beneficiary is entitled to the pension reserve which would have been used to pay the retirement benefit computed under Section 510 of the Education Law.

Tiers 2-6 Death Benefit

If a Tier 2, 3 or 4 member who joined prior to January 1, 2001, dies before retirement and a death benefit is payable, NYSTRS will pay to the beneficiary a death benefit calculated under Paragraph 2, unless the member selected Paragraph 1 and that calculation is higher. Tier 4 members joining on or after January 1, 2001, and all Tier 5 and 6 members, are covered only by Paragraph 2.

Paragraph 1 — One-twelfth (1⁄12) of the member's last 12 months of regular earnings for each year of credited New York State service to a maximum of three times such earnings with 36 or more years of New York State service, or the Death Gamble benefit.

Paragraph 2 — One year's salary after a year of member service, increasing each year to a maximum of three years' salary after three or more years of member service. This benefit declines after age 60 at the rate of 4% per year, but never falls below 60% of the original death benefit otherwise payable.

Summary of Benefits *(continued)*

Tier 2-6 members who teach until retirement will also have a survivor's death benefit if death occurs after retirement. This is separate from any choice of a Maximum retirement benefit or an option.

1st Year	50% of benefit at retirement
2nd Year	25% of benefit at retirement
3rd & Ensuing Years	10% of benefit at age 60, if any, or at retirement if earlier

Accidental Death Benefit

An accidental death benefit is payable in the form of a pension to the beneficiaries of Tier 3-6 members who die as the result of an accident sustained in the performance of their teaching duties.

Vested Member Death Benefit

A vested member death benefit is payable to the designated beneficiary or the estate of any member who has 10 or more years of credited service and does not meet the in-service eligibility requirement for an ordinary death benefit.

The amount of the benefit is half the amount of the ordinary death benefit which would have been paid if the member's death had occurred on the last day of creditable service.

Retirement Options

At the time of retirement, a member may elect the Maximum retirement benefit with no protection for a beneficiary, or one of many actuarially equivalent options (i.e., lump sum, survivor, guarantee or alternative) providing protection for a beneficiary or beneficiaries.

Cost-of-Living Adjustment (COLA)

All eligible current and future retired members will receive an automatic COLA based on 50% of the Consumer Price Index increase from one March to the next. It will be a minimum of 1% and a maximum of 3% of the first $18,000 of the retiree's Maximum retirement benefit and is effective each September. Most service retirees must be age 62 and retired five years to be eligible.

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Financial

FINANCIAL

Page

Basic Financial Statements

Required Supplementary Information

Other Supplemental Schedules

Independent Auditors' Report

KPMG LLP
515 Broadway
Albany, NY 12207-2974

The Retirement Board
New York State Teachers' Retirement System:

We have audited the accompanying financial statements of the New York State Teachers' Retirement System (the System), as of and for the years ended June 30, 2017 and 2016, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with 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 audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

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

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the New York State Teachers' Retirement System as of June 30, 2017 and 2016, and the changes in its fiduciary net position for the years then ended, in accordance with U.S. generally accepted accounting principles.

Independent Auditors' Report *(continued)*

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the management's discussion and analysis and the schedules and related notes included under Required Supplementary Information 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 audits were conducted for the purpose of forming an opinion on the basic financial statements of the System. The accompanying Schedules of Administrative Expenses and Schedule of Investment Expenses as listed in the accompanying table of contents, and the Introduction, Investments, Actuarial, and Statistical sections of this report are presented for purposes of additional analysis and are not a required part of the basic financial statements.

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

The Introduction, Investments, Actuarial, and Statistical sections of this report have not been subjected to the auditing procedures applied in the audits of the basic financial statements and, accordingly, we express no opinion on them.

KPMG LLP

Albany, New York
October 26, 2017

Management's Discussion and Analysis
June 30, 2017 and 2016
(Unaudited)

The following discussion and analysis of the financial performance of the New York State Teachers' Retirement System (NYSTRS or the System) provides an overview of its activities for the years ended June 30, 2017, 2016, and 2015. Its purpose is to provide explanations and insights into the information presented in the financial statements, notes to the financial statements, and required supplementary information.

Financial Highlights

- The System's investments experienced appreciation of $10.7 billion in 2017 and $258 million and $3.3 billion in 2016 and 2015, respectively.
- The net position of the System represents funds available to pay current and future benefits. Net position was $115.5 billion at June 30, 2017, and $107.5 billion and $109.7 billion at June 30, 2016 and 2015, respectively.
- The 2017 net position increased from 2016 by $7.96 billion, or 7.4%, and the 2016 net position decreased from 2015 by $2.2 billion, or 2.0%.
- Contributions from employers were $1.9 billion in 2017, $2.0 billion in 2016, and $2.6 billion in 2015, consistent with the change in the employer contribution rate.
- The size of the System's active membership has declined over the past three years. However, the number of retired members and beneficiaries receiving benefits has increased, leading to an increase in the retirement benefits paid, rising from $6.5 billion in 2015 to $6.7 billion in 2016 and $6.9 billion in 2017.
- The System's funded ratio, a comparison of the actuarial value of assets to the accrued pension benefit liability, was 97.9% as of the June 30, 2016 valuation. Valuations in 2015 and 2014 resulted in the System's funded ratio of 94.2% and 92.9%, respectively.

Overview of Financial Statements

The following discussion and analysis is intended to assist the reader in better understanding the purpose and meaning of each of the key components of NYSTRS' basic financial statements, which comprise the following:

1. The Statements of Fiduciary Net Position present NYSTRS' assets and deferred outflows of resources and liabilities and deferred inflows of resources by major categories and may serve over time as a useful indicator of the System's financial position. The difference between assets and deferred outflows of resources and liabilities and deferred inflows of resources represents the net position restricted for pensions. The statements also compare assets and deferred outflows of resources and liabilities and deferred inflows of resources by class to the previous year, which offers the reader the opportunity to note changes in each class from year to year.
2. The Statements of Changes in Fiduciary Net Position provide information on the change in the System's net position during the current year. The majority of additions are normally derived from net investment income; primarily in the form of changes in the fair value of assets from the prior year. Deductions include retirement benefit payments, beneficiary payments, return of contributions, and administrative expenses. For comparison purposes, information pertaining to the previous year's Statement of Changes in Fiduciary Net Position is also provided.
3. The Notes to the Basic Financial Statements are an essential part of the basic financial statements. They provide important background and detailed information about NYSTRS, the plan and the basic financial statements themselves.
4. The Required Supplementary Information (RSI) consists of information pertaining to NYSTRS' actuarial methods and assumptions and provides data on changes in the school districts' net pension liability, the school districts' net pension liability, the school districts' contributions, and NYSTRS' investment returns as well as data on the System's proportionate share of the net pension liability of the New York State and Local Employees' Retirement System (ERS), contributions to ERS and other postemployment benefits. Other supplemental information is also presented and includes the schedules of administrative expenses and investment expenses.

Management's Discussion and Analysis *(continued)*
June 30, 2017 and 2016
(Unaudited)

Financial Analysis

Tables 1 and 2 summarize and compare the System's financial results for the years 2017, 2016, and 2015. It is important to note that the change from year to year in a particular investment category is attributable not only to the change in fair value but also to purchases and sales or maturities of that investment.

Table 1 - Summary of Fiduciary Net Position
(dollars in thousands)

	June 30			Amount increase (decrease)	Percentage change of total
	2017	2016	2015	2016 to 2017	2016 to 2017
Investments at fair value:					
Short-term	$ 4,563,961	$ 2,311,958	$ 2,553,630	$2,252,003	2.09%
Domestic fixed income securities	18,473,419	18,051,038	17,897,983	422,381	0.39
Global fixed income securities	2,543,227	1,968,043	1,565,394	575,184	0.54
Domestic equities	44,078,132	42,717,181	43,193,027	1,360,951	1.27
International equities	22,094,858	18,093,214	19,995,307	4,001,644	3.72
Mortgages	3,337,830	3,786,206	3,776,802	(448,376)	(0.42)
Real estate	8,134,301	8,379,100	8,231,139	(244,799)	(0.23)
Alternative investments	10,008,555	9,671,168	9,528,078	337,387	0.31
Total investments	113,234,283	104,977,908	106,741,360	8,256,375	7.67
Net other assets, liabilities, and deferrals	2,234,077	2,528,234	2,977,557	(294,157)	(0.27)
Net position restricted for pensions	**$115,468,360**	**$107,506,142**	**$109,718,917**	**$7,962,218**	**7.40%**

Table 2 - Summary of Changes in Fiduciary Net Position
(dollars in thousands)

	Years ended June 30			Amount increase (decrease)	Percentage change of total
	2017	2016	2015	2016 to 2017	2016 to 2017
Net appreciation in fair value of investments	$10,743,830	$ 258,356	$3,294,147	$10,485,474	473.86%
Other investment income	2,208,062	2,133,998	2,106,118	74,064	3.35
Contributions	1,994,974	2,175,163	2,756,306	(180,189)	(8.14)
Retirement benefits	(6,903,361)	(6,701,637)	(6,513,931)	(201,724)	(9.12)
Other deductions	(81,287)	(78,655)	(74,157)	(2,632)	(0.12)
Net increase (decrease) on net position	**$ 7,962,218**	**$(2,212,775)**	**$1,568,483**	**$10,174,993**	**459.83%**

Management's Discussion and Analysis *(continued)*
June 30, 2017 and 2016
(Unaudited)

Fiscal Year 2017

In 2017, as a result of asset allocation rebalancing, the internally managed domestic fixed income portfolio balance increased due to the allocation of additional capital to the fixed income asset class. However, due to sizable appreciation in the System's equity-related asset classes, the overall allocation to domestic fixed income declined on a year over year basis. The June 30, 2017 balance was approximately 15.4% of invested System assets, lower than the 15.8% allocation at the end of the prior fiscal year and still within the allowable range of 12.0% to 20.0%. During the year, bond purchases of approximately $4.45 billion exceeded the sum of bond maturities, sales, tenders, calls, and agency mortgage principal prepayments by approximately $1.28 billion.

The yield curve flattened during the fiscal year as the increase in rates at the long end of the curve was less than that at the front of the curve. The magnitude of the interest rate moves was reflected in the middle of the curve. For instance, at the 5-year point on the curve, yields increased by approximately 89 basis points year over year. Contrast that with the 30-year point on the curve, where yields only increased by 55 basis points. The increase in interest rates produced asset capital depreciation that, although partially offset with the addition of interest income, resulted in a small negative return for the fiscal year.

The weighted average coupon of the domestic fixed income portfolio was relatively unchanged during the fiscal year, decreasing by less than 2 basis points as the maturity of lower coupon bonds that had shorter original tenors were offset by the maturities of older high coupon bonds. The face amount of bonds held increased year over year resulting in a higher average portfolio balance during 2017. However, due to the lower weighted average coupon, the portfolio experienced a slight decrease in interest income from the prior fiscal year.

Exposure to global bonds continued to increase during the 2017 fiscal year due to the engagement and funding of external manager Goldman Sachs Asset Management, along with reinvestment of coupon in all three global bond portfolios. These factors resulted in a fiscal year-end total of $2.54 billion invested in the separately managed accounts. The global bond balance was approximately 2.2% of invested System assets at June 30, 2017, within the allowable range of 0.0% to 3.0%.

In domestic equities, net appreciation of $6.1 billion for the fiscal year was the result of strong market performance leading to a return of 18.3%. Domestic REIT performance was muted, returning 0.8% for the fiscal year. The strong domestic equities returns were offset by withdrawals of approximately $(5.7) billion as a result of rebalancing. Gains realized from domestic REITs, along with reinvested dividend income of approximately $82.1 million, contributed to an overall increase in net position for the domestic REIT portfolios of $20.7 million. The combined year-over-year change in net position at June 30, 2017 was an increase of $1.4 billion. The balance was approximately 37.2% of invested System assets at June 30, 2017, remaining within the allowable range of 31.0% to 39.0%.

International equities' net appreciation of $3.4 billion was also the result of strong market performance in both international equities and international REITs within the international equities portfolio, leading to returns of 20.9% in international equities and 5.9% in international REITs. While mostly driven by strong equity market performance, funding of new and existing managers totaling $268.4 million contributed to an overall increase for international equities of $4.0 billion. The balance was approximately 19.2% of invested System assets at June 30, 2017, remaining within the allowable range of 14.0% to 22.0%.

Real estate investments consist of a globally diversified portfolio of public and private commercial real estate assets. Net new investments, coupled with positive investment returns, resulted in net appreciation of $361 million for the equity real estate portfolio and depreciation of $135 million for the debt real estate portfolio. The balance of equity real estate was approximately 10.1% of invested System assets at June 30, 2017, remaining in the allowable range of 6.0% to 16.0%. The debt real estate investments were approximately 4.5% of invested System assets at June 30, 2017, remaining in the allowable range of 4.0% to 12.0%. The debt real estate investments remain on the low end of the allowable range due to historically low yields available in the market. Commercial real estate values, as measured by the National Council of Real Estate Investment Fiduciaries (NCREIF), grew slightly each quarter during the year. Total unlevered appreciation for the fiscal year was 2.2%, down from 5.6% in the prior year.

Management's Discussion and Analysis *(continued)*
June 30, 2017 and 2016
(Unaudited)

Net appreciation in the private equity portfolio continued to remain positive as distributions from existing investments increased from the prior year. The System made $1.2 billion in capital contributions to new and existing private equity funds and took $2.2 billion in distributions from existing private equity investments. The balance was approximately 7.4% of invested System assets at June 30, 2017, within the allowable range of 3.0% to 13.0%. Nineteen new private equity commitments were made during the year.

Within the securities lending market, while the Federal Reserve has maintained the size of its balance sheet by reinvesting principal payments from agency debt and agency mortgage backed securities and rolling over Treasury maturities at auction, the target range for Federal Funds was raised three times during the System's fiscal year. The improving employment picture and subdued inflation readings as measured by the Personal Consumption Expenditures Core Price Index were factors in the rate adjustments.

With the impending money market fund reform date of October 14, 2016 approaching, levels and spreads on short-term financial debt continued to rise during the first quarter of the 2017 fiscal year as issuers were forced to find alternative sources of funding and a large number of natural buyers exited the space. Following the implementation date, levels continued to trend higher as the market priced in a 25 basis point rate hike in December — the first of three during the fiscal year. The Federal Funds target range would end the fiscal year at 1.00-1.25%, 75 basis points higher than the range of 0.25-0.50% at the beginning of the fiscal year.

Declining loan balances were a trend throughout the year as equity borrowers lacked conviction for shorts in prolonged risk-on periods. This was coupled with their preference to shift pledged collateral from cash to securities for regulatory capital purposes. Net earnings from securities lending declined year-over-year, led by the lower level of loan balances combined with an increase in broker rebates which outpaced the rise in gross revenues.

Investment expenses are primarily comprised of investment management fees that are based on the market value of assets managed, and in some cases the returns achieved. The investment expense increase in 2017 from 2016 is primarily the result of activity within the System's alternative investments.

The change in employer contributions was a function of a decrease in the employer contribution rate from 13.26% in 2016 to 11.72% in 2017.

Fiscal Year 2016

At the end of the 2016 fiscal year, the internally managed domestic fixed income portfolio market value was relatively unchanged when compared to 2015, as portfolio appreciation plus investments into the fixed income asset class were offset by maturities, sales and principal payments. The June 30, 2016 balance was approximately 15.8% of invested System assets, slightly higher than the 15.5% allocation at the end of the prior fiscal year and still within the allowable range of 13.0% to 22.0%. During the year, bond purchases of approximately $2.2 billion were exceeded by the sum of bond maturities, sales, tenders, calls, and agency mortgage principal prepayments, by approximately $280 million.

The yield curve bull flattened during the fiscal year; as the decline in rates at the long end of the curve was greater than that at the front of the curve, with the magnitude of the interest rate moves increasing as the maturity point on the curve increased. For instance at the 2-year point on the curve, yields declined by approximately 6 basis points year over year whereas the 30-year point on the curve declined by 84 basis points. The lower interest rates produced asset capital appreciation and when adding the interest income of the portfolio, resulted in a positive return for the fiscal year. The weighted average coupon of the domestic fixed income portfolio was relatively unchanged during the fiscal year increasing by only a handful of basis points as the maturity of older high coupon bonds were offset by maturities of lower coupon bonds that had shorter original tenors. The face amount of bonds held decreased year over year, however, the average portfolio balance during the 2016 fiscal year was higher than 2015, generating a small increase in interest income.

Management's Discussion and Analysis *(continued)*
June 30, 2017 and 2016
(Unaudited)

Exposure to global bonds continued to increase during the 2016 fiscal year due to price appreciation of portfolio assets, reinvestment of coupon and additional investments into the asset class in the early part of the fiscal year, resulting in a fiscal year-end total of $1.97 billion invested in the two separately managed accounts. The global bond balance was approximately 1.9% of invested System assets at June 30, 2016, within the allowable range of 0.0% to 3.0%.

In domestic equities, net appreciation of $558.3 million for the fiscal year was the result of positive market returns in both equities and domestic REITs within the equities portfolio, of 3.0% and 19.4%, respectively. The positive returns in domestic equities were offset by sales of approximately $900.0 million and dividends of $780.0 million swept from the portfolio, contributing to a decrease in net position since the prior year for domestic equities of $550.8 million. In domestic REITs, market gains along with reinvested dividend income of approximately $85.1 million, offset by a withdrawal of $250.0 million, contributed to an overall increase in net position for the domestic REIT portfolios of $75.0 million. The combined year-over-year change in net position at June 30, 2016 was a decrease of $475.8 million. The balance was approximately 38.8% of invested System assets at June 30, 2016, remaining within the allowable range of 32.0% to 42.0%.

International equities' net depreciation of $2.2 billion was the result of poor market returns in 2016. Returns for international equities and international REITs were (9.6)% and (0.4)%, respectively. Returns in 2015 were (5.3)% for international equities and (2.2)% for international REITs, resulting in a continued decrease in combined market values since 2014. The balance was approximately 16.8% of invested System assets at June 30, 2016, remaining within the allowable range of 14.0% to 22.0%.

Real estate investments consist of a globally diversified portfolio of public and private commercial real estate assets. Net new investments, coupled with positive investment returns, resulted in net appreciation of $307 million for the equity real estate portfolio and $538 million for the debt real estate portfolio. The balance of equity real estate was approximately 11.1% of invested System assets at June 30, 2016, remaining in the allowable range of 6.0% to 14.0%. The debt real estate investments were approximately 5.8% of invested System assets at June 30, 2016, remaining in the allowable range of 5.0% to 11.0%. The debt real estate investments remain on the low end of the allowable range due to historically low yields available in the market. Commercial real estate values, as measured by the National Council of Real Estate Investment Fiduciaries (NCREIF), were positive during the year, but slowed from 1.9% in the first quarter of the fiscal year to 0.8% in the fourth quarter. Total unlevered appreciation for the fiscal year was 5.6%, down from 7.5% in the prior year.

In 2016, net appreciation in the private equity portfolio continued to remain positive as distributions from existing investments increased from the prior year. The System made $1.2 billion in capital contributions to new and existing private equity funds and took $2.1 billion in distributions from existing private equity investments. The balance was approximately 7.6% of invested System assets at June 30, 2016, within the allowable range of 4.0% to 12.0%. Nineteen new private equity commitments were made during the year.

Within the securities lending market, unconventional monetary policy initiatives implemented by global central banks continued during the 2016 fiscal year. Generally, rates remained suppressed in the U.S. despite one increase in the Fed Funds target in December 2015, as further improvement in unemployment data was balanced by inflation readings that had not reached the Federal Reserve's unofficial 2.0% target. Reinvestment opportunities during the fiscal year were limited in the beginning as money markets remained flooded with cash and issuers termed out funding needs to take advantage of low rates and work towards achieving their regulatory financial targets. However, with the Fed rate hike in the middle of the fiscal year, plus pressure due to looming money market reform, as the end of the fiscal year approached, interest rates began to rise. This rise in interest rates helped to increase gross earnings from the prior fiscal year due to greater collateral reinvestment returns. Nevertheless, slightly lower demand for domestic equity securities and a smaller realized gain on cash collateral investments against the gain realized in 2015 caused marginally lower net earnings year over year. Lastly, the unrealized gain on cash collateral investments declined, due to the lower quoted price on a legacy asset and principal payments on securities with discount dollar prices continuing to pay off at par.

Investment expenses are primarily comprised of investment management fees that are based on the market value of assets managed and in some cases the returns achieved. The investment expense increase in 2016 from 2015 is primarily the result of activity within the System's alternative investments.

Management's Discussion and Analysis *(continued)*
June 30, 2017 and 2016
(Unaudited)

The change in employer contributions was a function of a decrease in the employer contribution rate from 17.53% in 2015 to 13.26% in 2016.

Net Appreciation (Depreciation)

For the year ended June 30, 2017, NYSTRS reported net investment income of $12.9 billion compared to $2.4 billion in 2016 and $5.4 billion in 2015. The most significant change was in appreciation (depreciation) on investments as follows:

Table 3 - Net Appreciation (Depreciation) on Investments
(dollars in thousands)

	Years ended June 30			Amount increase (decrease)
	2017	2016	2015	2016 to 2017
Short-term	$ 26,395	$ 6,186	$ 1,931	$ 20,209
Domestic fixed income securities	(475,254)	294,280	(126,395)	(769,534)
Global fixed income securities	(43,706)	81,172	(3,422)	(124,878)
Domestic equities	6,078,746	558,265	2,263,543	5,520,481
International equities	3,432,294	(2,180,990)	(1,308,567)	5,613,284
Mortgages	(135,434)	112,055	(45,092)	(247,489)
Real estate	360,522	505,720	1,148,192	(145,198)
Alternative investments	1,499,449	881,668	1,363,957	617,781
Other	818	—	—	818
Totals	**$10,743,830**	**$ 258,356**	**$ 3,294,147**	**$10,484,656**

Economic Factors

The economic factor that is of primary significance to NYSTRS is the investment rate of return earned in the capital markets. Legislative, demographic, and actuarial assumption changes can also have a significant impact on the net pension liability and funded status of the plan. All of these factors are incorporated into the annual actuarial valuation, which determines the rate at which participating employers must contribute in order to appropriately fund member benefits. In terms of demographics, the System will likely continue to experience a shift toward a greater proportion of retirees relative to active members. This year, the System experienced significant appreciation in investments. Investment returns are smoothed (averaged) by NYSTRS over a five year period for purposes of computing the actuarial value of assets used to determine the employer contribution rate. Stronger investment returns over the past few years have led to a decrease in the employer contribution rate, from 13.26% on 2015-16 member salaries to 11.72% on 2016-17 member salaries.

Requests for Information

This financial report is designed to provide active members, retirees, employers and anyone else who is interested with a general overview of the financial activities of NYSTRS. Questions about this report or requests for additional financial information should be addressed to the Public Information Office, New York State Teachers' Retirement System, 10 Corporate Woods Drive, Albany, NY 12211 or by email at communit@nystrs.org.

Statements of Fiduciary Net Position

June 30, 2017 and 2016

(dollars in thousands)

Assets:	2017	2016
Investments — at fair value (note 4, 5 and 6):		
Short-term	**$ 4,563,961**	$ 2,311,958
Domestic fixed income securities	**18,473,419**	18,051,038
Global fixed income securities	**2,543,227**	1,968,043
Domestic equities	**44,078,132**	42,717,181
International equities	**22,094,858**	18,093,214
Mortgages	**3,337,830**	3,786,206
Real estate (note 5)	**8,134,301**	8,379,100
Alternative investments	**10,008,555**	9,671,168
Total investments	**113,234,283**	104,977,908
Receivables:		
Employer	**1,851,733**	2,050,140
Member contributions	**99,838**	98,190
Investment income	**226,377**	218,720
Investment sales	**302,932**	131,617
Total receivables	**2,480,880**	2,498,667
Other assets:		
Securities lending collateral — invested (note 5)	**1,498,660**	1,892,369
Member loans	**246,809**	239,645
Capital assets, net of depreciation	**26,317**	26,158
Miscellaneous assets	**20,713**	51,929
Total other assets	**1,792,499**	2,210,101
Total assets	**117,507,662**	109,686,676
Deferred outflows of resources:		
Changes in net pension liability (note 10)	**6,318**	15,834
Liabilities:		
Securities lending collateral — due to borrowers (note 5)	**1,495,909**	1,890,030
Investment purchases payable	**413,005**	171,300
Mortgage escrows and deposits — net of investments	**12**	278
Other liabilities (notes 5, 9 and 10)	**135,110**	132,675
Total liabilities	**2,044,036**	2,194,283
Deferred inflows of resources:		
Changes in net pension liability (note 10)	**1,584**	2,085
Net position restricted for pensions (note 3)	**$115,468,360**	$107,506,142

See accompanying notes to financial statements.

Statements of Changes in Fiduciary Net Position
June 30, 2017 and 2016
(dollars in thousands)

Additions:	2017	2016
Investment income:		
Net appreciation in fair value of investments	**$ 10,743,830**	$ 258,356
Interest income	**697,454**	711,296
Dividend income	**1,268,224**	1,274,584
Real estate — net operating income	**462,481**	362,798
Securities lending — gross earnings	**14,916**	10,814
Other — net	**14,661**	9,317
	13,201,566	2,627,165
Less:		
Investment expenses	**248,706**	239,412
Securities lending:		
Broker rebates	**(234)**	(7,486)
Management fees	**1,614**	1,838
Depreciation (appreciation) of collateral	**(412)**	1,047
Net investment income	**12,951,892**	2,392,354
Contributions:		
Employer (note 1)	**1,857,359**	2,046,562
Member contributions	**129,770**	124,587
Transfers	**7,845**	4,014
Total contributions	**1,994,974**	2,175,163
Net additions	**14,946,866**	4,567,517
Deductions:		
Retirement benefit payments — periodic	**6,838,093**	6,644,785
Beneficiary payments	**65,268**	56,852
Return of contributions	**19,676**	18,229
Administrative expenses	**61,611**	60,426
Total deductions	**6,984,648**	6,780,292
Net increase (decrease) in net position	**7,962,218**	(2,212,775)
Net position restricted for pensions:		
Beginning of year	**107,506,142**	109,718,917
End of year	**$115,468,360**	$107,506,142

See accompanying notes to financial statements.

Notes to Financial Statements
June 30, 2017 and 2016
(dollars in thousands)

(1) Plan Description

The New York State Teachers' Retirement System (NYSTRS or the System) was created and exists, pursuant to Article 11 of the New York State Education Law. The System is the administrator of a cost sharing, multiple-employer public employee retirement system (PERS), administered by a 10-member Board to provide pension benefits for teachers employed by participating employers in the State of New York, excluding New York City. The System's Board is composed of:

- Three teacher members elected from the active membership.
- One retired member elected by a mail vote of all retired members.
- Two school administrators appointed by the Commissioner of Education.
- Two present or former school board members, experienced in the fields of finance and investment, elected by the Board of Regents. At least one of these individuals must have experience as an executive of an insurance company.
- One present or former bank executive elected by the Board of Regents.
- The State Comptroller or his/her designee.

As of June 30, the number of participating employers was:

	2017	2016
Public school districts	680	680
B.O.C.E.S.	37	37
S.U.N.Y.	31	31
Community colleges	30	30
Charter schools	25	24
Special act districts	10	10
Other	9	9
Total	822	821

As of June 30, the System's membership consisted of:

	2017	2016
Retired members and beneficiaries currently receiving benefits	163,818	161,148
Members:		
Active members	256,171	257,792
Terminated members entitled to but not yet receiving benefits	8,590	8,558
Subtotal	264,761	266,350
Total	428,579	427,498

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

(a) Benefits

The benefits provided to members of the System are established by New York State law and may be amended only by the Legislature with the Governor's approval. Benefit provisions vary depending on date of membership and are subdivided into the following six classes:

Tier 1

Members who last joined prior to July 1, 1973 are covered by the provisions of Article 11 of the Education Law.

Tier 2

Members who last joined on or after July 1, 1973 and prior to July 27, 1976 are covered by the provisions of Article 11 of the Education Law and Article 11 of the Retirement and Social Security Law (RSSL).

Tier 3

Members who last joined on or after July 27, 1976 and prior to September 1, 1983 are covered by the provisions of Article 14 and Article 15 of the RSSL.

Tier 4

Members who last joined on or after September 1, 1983 and prior to January 1, 2010 are covered by the provisions of Article 15 of the RSSL.

Tier 5

Members who joined on or after January 1, 2010 and prior to April 1, 2012 are covered by the provisions of Article 15 of the RSSL.

Tier 6

Members who joined on or after April 1, 2012 are covered by the provisions of Article 15 of the RSSL.

(b) Service Retirements

Tier 1 members are eligible, beginning at age 55, for a service retirement allowance of approximately 2% per year of credited service times final average salary.

Under Article 19 of the RSSL, eligible Tier 1 and 2 members can receive additional service credit of one-twelfth of a year for each year of retirement credit as of the date of retirement or death up to a maximum of two additional years.

Tiers 2 through 5 are eligible for the same but with the following limitations: (1) Tiers 2 through 4 members receive an unreduced benefit for retirement at age 62 or retirement at ages 55 through 61 with 30 years of service or a reduced benefit for retirement at ages 55 through 61 with less than 30 years of service; (2) Tier 5 members receive an unreduced benefit for retirement at age 62 or retirement at ages 57 through 61 with 30 years of service. They receive a reduced benefit for retirement at ages 55 and 56 regardless of service credit, or ages 57 through 61 with less than 30 years of service.

Tier 6 members are eligible for a service retirement allowance of 1.75% per year of credited service for the first 20 years of service plus 2% per year for years of service in excess of 20 years times final average salary. Tier 6 members receive an unreduced benefit for retirement at age 63. They receive a reduced benefit at ages 55-62 regardless of service credit.

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

(c) Vested Benefits

Retirement benefits vest after 5 years of credited service except for Tiers 5 and 6 where 10 years of credited service are required. Benefits are payable at age 55 or greater with the limitations previously noted for service retirements.

(d) Disability Retirement

Members are eligible for disability retirement benefits after 10 years of credited New York State service except for Tier 3 where disability retirement is permissible after 5 years of credited New York State service pursuant to the provisions of Article 14 of the RSSL. The Tier 3 benefit is integrated with Social Security.

(e) Death Benefits

Death benefits are paid to the beneficiary of active members who die in service. The benefit is based on final salary and the number of years of credited service.

(f) Prior Service

After 2 years of membership, members of all tiers may claim and receive credit for prior New York State public or teaching service. Only Tier 1 and 2 members may, under certain conditions, claim out-of-state service.

(g) Tier Reinstatement

In accordance with Chapter 640 of the Laws of 1998, any active member who had a prior membership may elect to be reinstated to their original date and Tier of membership.

(h) Employer Contributions

Pursuant to Article 11 of the New York State Education Law, employers are required to contribute at an actuarially determined rate adopted annually by the Retirement Board. The actuarially determined employer contribution rate applied to 2016-17 and 2015-16 member salaries is 11.72% and 13.26%, respectively. A reconciliation of total required employer contributions presented in the Schedule of the School Districts' Contributions and additions from employer contributions per the System's Statements of Changes in Fiduciary Net Position for fiscal years 2017 and 2016 is as follows:

	June 30	
	2017	2016
Total required employer contributions	$1,857,234	$2,046,152
Miscellaneous billing adjustments	125	410
Additions from employer contributions	$1,857,359	$2,046,562

In April 2013, the System's Retirement Board adopted a Stable Contribution Option (SCO) provided for under Chapter 57 of the Laws of 2013. Under the law, BOCES and public school districts participating in NYSTRS were offered the choice of either paying the actuarially determined contribution (ADC) or electing to participate in the SCO program, thereby paying a stable contribution rate for up to seven years beginning with the rate applied to the 2013-14 salaries and concluding with the rate applied to the 2019-20 salaries; deferring payment of the difference between the ADC and the contribution determined applying the SCO rate. Interest on deferred contribution amounts were based on the monthly average yield on 10-year U.S. Treasury securities for the twelve month period that precedes August 1 of the applicable deferred year, plus 1%. As of June 30, 2017 all districts that participated in the SCO have opted out and have either paid their outstanding deferral in full, or have opted to repay the System over 5 years. The SCO receivable balances at June 30, 2017 and 2016 were $33,786 and $33,636, respectively.

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

(i) Member Contributions

Tier 3 and Tier 4 members are required by law to contribute 3% of salary to the System. Effective October 2000, contributions were eliminated for Tier 3 and 4 members with 10 or more years of service or membership. Effective January 1, 2010, Tier 5 members are required by law to contribute 3.5% of salary throughout their active membership. Effective April 1, 2012, Tier 6 members are required by law to contribute between 3% and 6% of salary throughout their active membership in accordance with a schedule based upon salary earned. Pursuant to Article 14 and Article 15 of the RSSL, those member contributions are used to help fund the benefits provided by the System. However, if a member dies or leaves covered employment with less than 5 years of credited service for Tiers 3 and 4, or 10 years of credited service for Tiers 5 and 6, the member contributions with interest calculated at 5% per annum are refunded to the employee or designated beneficiary. Eligible Tier 1 and Tier 2 members may make member contributions under certain conditions pursuant to the provisions of Article 11 of the Education Law and Article 11 of the RSSL. Upon termination of membership, such accumulated member contributions are refunded. At retirement, such accumulated member contributions can be withdrawn or are paid as a life annuity.

(j) Permanent Cost-of-Living Adjustment (COLA)

Section 532-a of the Education Law provides a permanent cost-of-living benefit to both current and future retired members. This benefit will be paid commencing September of each year to retired members who have attained age 62 and have been retired for 5 years or attained age 55 and have been retired for 10 years. Disability retirees must have been retired for 5 years, regardless of age, to be eligible. The annual COLA percentage is equal to 50% of the increase in the consumer price index, not to exceed 3% nor be lower than 1%. It is applied to the first eighteen thousand dollars of annual benefit. The applicable percentage payable beginning September 2017 is 1.2% compared to 1.0% paid beginning September 2016.

Members who retired prior to July 1, 1970 are eligible for a minimum benefit of seventeen thousand five hundred dollars for 35 years of credited full-time New York State service. Certain members who retire pursuant to the provisions of Article 14 of the RSSL are eligible for automatic cost-of-living supplementation based on the increase in the consumer price index with a maximum per annum increase of 3%.

(2) Summary of Significant Accounting Policies

(a) Basis of Accounting

The System's financial statements are prepared using the accrual basis of accounting. Plan member contributions are recognized in the period in which the contributions are due. Employer contributions are recognized when due and the employer has a legal requirement to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan. Investment purchases and sales are recorded on a trade-date basis.

(b) Investments

Plan investments are reported at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Refer to note 6 for more detail regarding the methods used to measure the fair value of investments.

Notes to Financial Statements *(continued)*

June 30, 2017 and 2016

(dollars in thousands)

(c) Capital Assets

Capital assets of twenty-five thousand dollars or more are recorded at historical cost and capitalized over their useful life. Depreciation has been provided over the estimated useful lives using the straight-line method. The estimated useful lives are as follows:

	Years
Building	50
Building improvements	Various
Roads and shrubbery	15
Office furniture and equipment	5 - 7
Computer equipment and software	3 - 5
Automobiles	5

(d) Federal Tax Status

The System is exempt from federal income taxes under Section 501(a) of the IRC.

(e) Reclassifications

Where necessary, amounts in the prior year's financial statements have been reclassified to conform to the presentation in the current year's financial statements.

(f) Use of Estimates

Management of the System has made a number of estimates and assumptions relating to the reporting of assets and liabilities and in the disclosure of contingencies to prepare these financial statements in conformity with U.S. generally accepted accounting principles. The System's most significant estimates relate to assumptions made about future events as part of the annual actuarial valuation process, and the valuation of alternative investments. Due to the inherent nature of these estimates, actual results could differ from those estimates.

(g) Accounting Pronouncements Applicable to the System, Issued but Not Yet Effective

GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* (GASB 75): The statement addresses accounting and financial reporting for other postemployment benefits (OPEB) that are provided to the employees of state and local governmental employers. GASB 75 establishes standards for recognizing and measuring liabilities, deferred outflows of resources, deferred inflows of resources, and expenses related to OPEB in the basic financial statements, in addition to requiring more extensive note disclosures and required supplementary information. GASB 75 will be effective for fiscal years beginning after June 15, 2017. The System is evaluating the impact of this new statement.

GASB Statement No. 85, *Omnibus 2017* (GASB 85): GASB 85 addresses practice issues that have been identified during implementation and application of certain GASB Statements. This statement addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits. GASB 85 will be effective for fiscal years beginning after June 15, 2017. The System is evaluating the impact of this statement.

GASB Statement No. 84, *Fiduciary Activities* (GASB 84): GASB 84 provides guidance on the identification of fiduciary activities for accounting and financial reporting purposes, including clarification of fiduciary activities and how these activities should be reported. GASB 84 will be effective for fiscal years beginning after December 15, 2018. The System is evaluating the impact of this statement.

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

(3) Funds

The following funds were established pursuant to the laws of the State of New York. All of the funds, with the exception of the Administrative Fund, are available for the payment of benefits to members or beneficiaries.

(a) Annuity Savings Fund

The fund in which contributions of Tier 1 and 2 members covered by the provisions of Article 11 of the Education Law and Article 11 of the RSSL are accumulated. For reporting purposes, this fund is combined with the Annuity Reserve Fund.

(b) Annuity Reserve Fund

The fund from which the accumulated contributions of members covered by the provisions of Article 11 of the Education Law and Article 11 of the RSSL are paid as a life annuity. For reporting purposes, this fund is combined with the Annuity Savings Fund.

(c) Pension Accumulation Fund

The fund in which all reserves for the payment of all benefits are accumulated with the exception of the annuity provided by the accumulated contributions of Tier 1 and 2 members, supplemental retirement allowances, and group term life insurance.

(d) Pension Reserve Fund

The fund that pays pensions with the reserves transferred from the Pension Accumulation Fund.

(e) Group Life Insurance Fund

Pursuant to Article 4-B of the RSSL, the Retirement Board established a Group Life Insurance Fund. The Group Life Insurance Fund provides a group term death benefit not to exceed fifty thousand dollars, payable upon the death of eligible members. Group term death benefits paid for the years ended June 30, 2017 and 2016 were $17,553, and $15,785, respectively. For reporting purposes, this fund is combined with the Pension Accumulation Fund.

(f) CO-ESC Member Contributions Fund

Members covered by the provisions of Article 14 and Article 15 of the RSSL contributed a range of 3% to 6% of salary depending on their tier to the System's CO-ESC Member Contributions Fund. Contributions to this fund were $108,324 and $105,160 for the years ended June 30, 2017 and 2016, respectively. For reporting purposes, this fund is combined with the Pension Accumulation Fund.

(g) Administrative Fund

All operating expenses of the System are paid through this fund. The fund receives an allocation from employer contributions, which are designated by law to cover all noninvestment-related operating expenses.

Notes to Financial Statements *(continued)*

June 30, 2017 and 2016

(dollars in thousands)

(h) Summary of Fund Balances

Net position restricted for pensions at June 30, 2017 and 2016, consist of the following:

	2017	2016
Administrative Fund	$ 62,354	$ 60,157
Annuity Savings and Reserve Funds	108,902	119,987
Pension Accumulation Fund	50,214,413	43,192,314
Pension Reserve Fund	65,082,691	64,133,684
Total	$115,468,360	$107,506,142

(4) Pension Plan Investments

(a) Investment Policy

The System has been authorized by the New York State Legislature pursuant to the Banking Law, Section 235, the Education Law, Article 11, Section 508, the RSSL, Article 4-A, Sections 176 and 177, to invest in stocks, bonds, mortgages, real estate, and other investments. A specific investment within these broad asset classes may be subject to particular restrictions or limitations contained in the applicable statutory provision. The "Leeway Clause" of Section 177 provides that, subject to guidelines adopted by the Retirement Board, up to 25% of assets may be invested in types of assets not otherwise specifically authorized, provided the Retirement Board is satisfied such investments were made with the care, skill, prudence, and diligence of a prudent person acting in a like capacity and familiar with such matters. Pursuant to regulations promulgated by the New York State Department of Financial Services, investments must be made in a manner consistent with those of a reasonably prudent person exercising care, skill, and caution. In addition to applicable legal constraints, the Retirement Board has adopted policies governing the investments made by the System.

(b) Asset Allocation

The System's asset allocation policy as of June 30, 2017 and 2016, as adopted by the Retirement Board is as follows:

	2017		2016	
Asset Class	Target	Range	Target	Range
Domestic equities	35%	31-39%	37%	32-42%
International equities	18	14-22	18	14-22
Real estate	11	6-16	10	6-14
Private equities	8	3-13	7	4-12
Total equities	72		72	
Domestic fixed income securities	16	12-20	17	13-22
Global fixed income securities	2	0-3	2	0-3
High-yield fixed income securities	1	0-3	—	—
Mortgages	8	4-12	8	5-11
Short-term	1	0-4	1	0-4
Total fixed income	28		28	
Total	100%		100%	

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

(c) Rate of Return

For the years ended June 30, 2017 and 2016, the annual money-weighted rate of return on System investments, net of pension plan investment expense, was 13.05% and 2.28%, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

(5) Deposit and Investment Risk Disclosure

(a) Credit Risk

The quality ratings of investments in fixed income securities as described by nationally recognized statistical rating organizations at June 30, 2017 and 2016 are as follows:

	2017		2016	
Quality rating	Fair value	Percentage of portfolio	Fair value	Percentage of portfolio
Aaa	$ 9,606,706	37.85 %	$ 6,650,667	29.89 %
Aa	1,505,760	5.93	1,744,075	7.84
A	3,873,682	15.26	3,888,149	17.48
Baa	2,539,728	10.01	2,454,141	11.03
Other	156,767	0.62	143,156	0.64
Total credit risk debt securities	17,682,643	69.67	14,880,188	66.88
U.S. government fixed income securities*	7,695,974	30.33	7,367,249	33.12
Total fixed income securities**	$25,378,617	100.00%	$22,247,437	100.00%

* *Obligations of the U.S. government or obligations explicitly guaranteed by the U.S. government are not considered to have credit risk and do not have purchase limitations.*

** *Short-term, domestic fixed income securities and global fixed income securities on the Statements of Fiduciary Net Position at June 30, 2017 and 2016 include $201,990 and $83,602, respectively, in cash and commingled commercial mortgage backed securities.*

(b) Custodial Credit Risk

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

The head of the Division of the Treasury in the New York State Department of Taxation and Finance (the Treasurer) is the statutory custodian of the funds of the System, and, in this capacity, has arranged to have bank accounts collateralized. Collateral is held in the name of the Treasurer as custodian for the System, by a bank that does not act as an agent for the System. The System's bank accounts were fully collateralized during the year. At June 30, 2016, the System's bank balance was $46. At June 30, 2017 the balance was ($8,355), representing a managed overdraft. Consistent with the System's investment policy, all of the System's securities are held by the System's custodial bank in the System's name.

Notes to Financial Statements *(continued)*

June 30, 2017 and 2016

(dollars in thousands)

(c) Concentration of Investment and Credit Risk

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

As of June 30, 2017 and 2016, the System did not hold investments in any one issuer that would represent 5% or more of fiduciary net position. Obligations issued or explicitly guaranteed by the U.S. government and pooled investments are not considered subject to concentration of credit risk.

Issuer limits for investments held by the System are established for each investment area by the RSSL Article 4-A, Sections 176-179.

Short-term fixed income investments are generally limited to the following investment types maturing in one year or less:

- Obligations issued by any Federal Home Loan Bank or obligations fully guaranteed as to principal and interest by Fannie Mae or Freddie Mac.
- Commercial paper that has the highest rating by two nationally recognized rating services.

Fixed income securities are generally limited to the following investment types with maturities longer than one year:

- 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., District of Columbia or Commonwealth of Puerto Rico, and obligations of Canada or any province or city of Canada provided each obligation shall be rated investment grade by two nationally recognized rating services. The aggregate investment by the System in the obligations of any one issuer shall not exceed 2% of the assets of the System or 5% of the direct liabilities of the issuer.
- Notwithstanding the 5% limitation stated above, the System may invest not more than 2.5% of its assets in the obligations of any one railroad or industrial corporation, or any one corporation engaged directly and primarily in the production, transportation, distribution, or sale of electricity or gas or the operations of telephone and telegraph systems or waterworks or in some combination thereof.
- In no event may more than 30% of the System's assets be invested in bonds of electric and gas corporations. Equipment trust certificates, subject to the provisions of the law, are not to exceed 5% of the assets of the System.
- Obligations issued or guaranteed by the Inter-American Development Bank, Asian Development Bank, the African Development Bank, or the Youth Facilities Project Guarantee Fund and participations therein.
- Obligations of the Dominion of Canada, of any province of the Dominion of Canada, and of any city of the Dominion of Canada, payable in U.S. funds, provided that the aggregate unpaid principal amount of all such obligations at any time held by the System shall not exceed 5% of the System's assets.
- Bonds of the Savings and Loan Bank of the State of New York, Federal Land Bank, Federal Intermediate Credit Banks, and Banks for Cooperatives.
- Bonds of Freddie Mac, Federal Home Loan Banks, Tennessee Valley Authority, Fannie Mae, and the United States Postal Service.
- Obligations issued or guaranteed by the International Bank for Reconstruction and Development, provided the aggregate unpaid principal amount of such obligations at any time held by the System shall not exceed 5% of the System's assets.

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

- Bonds and notes of any bank, trust company, savings bank, or savings and loan association organized under the laws of New York State having a net worth of at least $10 million, which meet all applicable statutes, provided the aggregate unpaid principal amount of bonds and notes secured by conventional mortgages shall not exceed 5% of the assets of the System.
- Mortgage pass-through certificates, provided the certificates evidence ownership of undivided interests in pools or mortgage loans secured by first mortgages on real property located in New York State improved by one-to-four family residential dwellings, which meet all applicable statutes. The aggregate unpaid principal on conventional mortgages securing mortgage pass-through certificates cannot exceed 10% of the assets of the System nor can the total unpaid principal on any single pool of conventional mortgages securing mortgage pass-through certificates exceed 1% of the assets of the System.
- Collateralized Mortgage Obligations, which meet the requirements of applicable statutes.
- Private placements, where the purchase of unrated obligations is authorized by the Banking Law or the RSSL, governing fixed income obligations; if not so provided, private placements as well as other domestic fixed income securities not otherwise provided for may be purchased under the Leeway Clause.

The System may invest in domestic equity securities and interest-bearing obligations payable in U.S. funds, which are convertible into equity securities of any corporation created or existing under the laws of the U.S., any state of the U.S. District of Columbia, and the Commonwealth of Puerto Rico or any investment company, as defined by, and which is registered under, an act of Congress of the United States, entitled to the Investment Company Act of 1940, as amended, subject to certain limitations.

The System's international equity investments may not exceed 10% of the System's assets including emerging market equity securities. To the extent the 10% limitation is exceeded, the System's international equity securities may be invested in Leeway investments (which amount shall not exceed 25% of System assets).

The maximum amount invested within the System's equities, including domestic and international, may not exceed, in any one year, 15% of System assets or 70% of the total System assets in aggregate. The System may not own more than 5% of the total issued and outstanding equity securities of any one corporation.

The System's real estate investments will be diversified across geographic regions to allow for competitive portfolio performance in the event of a temporary weakness in any one region and to allow for differing urban and suburban market trends within any region. The System may invest in certain conventional mortgages constituting a first lien upon real property located in the U.S. pursuant to statute subject to certain provisions.

Alternative investments are made pursuant to the Leeway Clause of the RSSL.

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

(d) Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of the investment. The System is exposed to interest rate risk at June 30, 2017 and 2016 as follows:

	2017		2016	
Investment type	Fair value	Duration (in years)	Fair value	Duration (in years)
Mortgages	$ 3,337,830	4.718	$ 3,786,206	5.000
Short-term	$ 4,563,961	0.066	$ 2,311,958	0.071
Domestic fixed income*	18,430,012	4.052	18,010,802	3.656
Global fixed income	2,543,227	7.130	1,968,043	6.743
Total fair value	$25,537,200		$22,290,803	
Short-term and fixed income portfolio modified duration		3.650		3.550

**Domestic fixed income on the Statements of Fiduciary Net Position at June 30, 2017 and 2016 include $43,407 and $40,236, respectively, in commingled commercial mortgaged backed securities.*

Duration is a measure of a debt investment's exposure to fair value changes arising from changing interest rates. The greater the duration, the greater its price volatility will be in response to a change in interest rates and vice versa.

Notes to Financial Statements *(continued)*

June 30, 2017 and 2016

(dollars in thousands)

(e) 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 System has exposure through international holdings in commingled investment trust funds and separate accounts, international real estate investment trusts (REITs), global bonds, and alternatives. The "Alternatives" represent private equity and real estate investments denominated in foreign currency. With respect to global bond investments, the majority of currency risk inherent in non-U.S. dollar denominated bonds owned by the System in a separate account is hedged away by the managers through currency forwards. The System has an exposure to foreign currency fluctuation at June 30, 2017 and 2016 as follows (holdings valued in U.S. dollars):

	2017		2016	
	International Equities	Alternatives, Cash, and Global Fixed Income	International Equities	Alternatives, Cash, and Global Fixed Income
Currency:				
Euro	$ 4,848,820	$1,781,942	$ 3,653,922	$1,505,110
Japanese Yen	3,642,216	278,420	3,001,893	241,692
British Pound Sterling	2,768,045	296,648	2,513,297	294,338
Canadian Dollar	1,358,950	75,665	1,208,464	54,680
Swiss Franc	1,212,597	7,907	1,095,236	6,873
Hong Kong Dollar	1,081,729	3	833,857	—
Australian Dollar	1,031,991	92,257	875,729	55,292
South Korean Won	782,728	18,716	592,033	17,513
China Renminbi	653,490	—	472,718	—
New Taiwan Dollar	602,889	15	221,485	—
Swedish Krona	457,195	9,375	377,554	8,311
Indian Rupee	388,446	(30)	282,035	—
South African Rand	333,836	14,684	297,347	11,252
Danish Krone	300,440	13,080	275,325	12,194
Brazilian Real	304,040	5	281,305	—
Other	1,411,967	92,049	1,477,310	69,458
Totals	$21,179,379	$2,680,736	$17,459,510	$2,276,713

(f) Securities Lending Transactions

The Retirement and Social Security Law authorizes the System to enter into securities lending transactions. Agreements to lend a security must be with a broker dealer or with New York State or nationally chartered banks and must not exceed a period of one year. The market value of securities loaned may not exceed 20% of the market value of the System's invested assets. Domestic and international bonds, domestic and international equities, and global REIT securities are eligible to be loaned. Initial collateral of at least 102% of the market value of loaned securities is received from the borrower for domestic securities and 105% for international securities. Securities on loan are marked to market daily and collateral for the loan is required not to fall below 100%. The fair value of reinvested cash collateral is reported as an asset and cash collateral received from borrowers is reported as a liability on the System's Statements of Fiduciary Net Position. The fair value of the cash collateral invested exceeded the

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

amount the System owed borrowers by approximately $2.8 million as of June 30, 2017 and $2.3 million as of June 30, 2016. For each year-end, the System had no credit risk exposure to borrowers because the System's liability to the borrowers (the collateral) exceeds the amounts of the borrower's liability to the System (the loaned securities).

As of June 30, 2017 and 2016, JP Morgan Securities Lending (JP Morgan) acted as agent for the domestic equity and fixed income securities lending programs and State Street Bank and Trust Co. (State Street) acted as agent for the international equity, global bonds and global REIT securities lending program. Under the terms of the contract with the lending agents, the System is fully indemnified against failure of the borrowers to return the loaned securities (to the extent the collateral is inadequate to replace the loaned securities) or failure to pay the System for income distributions by the securities' issuers while the securities are on loan. There were no significant violations of legal or contractual provisions, no borrower or lending agent defaults, and no material recoveries of prior period losses during the year. The majority of securities on loan can be recalled by the System on demand or returned by the borrower at any time. Cash collateral is invested by the System's lending agents in short term investment funds managed by the agent lenders. There is no direct match of the maturities of the collateral investments with the maturities of the securities loans. Investments are restricted to issuers with a short term credit rating issued by Standard & Poor's and Moody's Investors Service, not lower than A-1/P-1 or long term ratings not lower than A/A2, respectively, or the equivalent thereof. Non-cash collateral received is limited to high quality U.S. treasuries, agency securities and agency mortgage backed securities which cannot be pledged or sold by the System unless the borrower defaults. At June 30, 2017 the average effective duration of the funds managed by JP Morgan was 22 days and of those managed by State Street was 3 days compared to 18 days and 2 days, respectively, at June 30, 2016. Securities loans and related collateral investments are monitored on a daily basis to ensure compliance with collateral requirements, limitations, and collateral investment guidelines.

Securities Lending Program	2017	2016
Fair value of securities on loan — cash collateral	$1,457,165	$1,850,640
Fair value of securities on loan — noncash collateral	205,551	893,225
Total fair value of securities on loan	$1,662,716	$2,743,865
Fair value of liabilities to borrowers — cash collateral	$1,495,909	$1,890,030
Fair value of liabilities to borrowers — noncash collateral	210,480	914,363
Total collateral due to borrowers	$1,706,389	$2,804,393
Fair value of cash collateral invested by System	$1,498,660	$1,892,369
Fair value of noncash collateral held by System	210,480	914,363
Total collateral invested and held by the System	$1,709,140	$2,806,732

(g) Direct-Owned Real Estate Entities

The System has established a number of separate legal entities as investment vehicles to acquire and hold the underlying assets and liabilities associated with certain real estate properties. The System is the sole investor in these entities (hereinafter referred to as "direct-owned real estate entities") and appoints the entities' corporate officers who exercise operating discretion within parameters that are approved and monitored by NYSTRS.

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

The aggregate amount of the System's net equity at fair value in these direct-owned real estate entities is included within Real Estate Investments on the Statements of Fiduciary Net Position and is composed of the following:

Aggregate Assets and Liabilities of Direct Owned Real Estate at Fair Value	June 30 2017	2016
Assets	$2,139,592	$2,044,079
Liabilities	639,398	646,668
Net Equity	$1,500,194	$1,397,411

Within the liabilities amount above is the outstanding principal balance of non-recourse debt used by certain direct-owned real estate entities to lower the cash outlay in acquiring real estate assets and to enhance the performance of the real estate portfolio. In the event of a default on this non-recourse debt, only the specific real estate asset(s) that were pledged as collateral for the debt can be used to satisfy the debt. The general assets of the System are not pledged as collateral for this non-recourse debt. The principal balance of this non-recourse debt outstanding at June 30, 2017 matures as follows:

Schedule of mortgage debt maturities:

	Principal
2017	$ 60,800
2018	28,536
2019	22,700
2020	85,750
2021	334,965
2022-2023	88,755
Total	$621,506

(6) Fair Value Measurement

NYSTRS' investments measured and reported at fair value are classified according to the following hierarchy in which the levels are based on the nature of inputs used to measure the fair value of the investment:

Level 1 – Investments' fair values based on prices quoted in active markets for identical assets.

Level 2 – Investments' fair values based on observable inputs for the assets either directly or indirectly, other than those considered Level 1 inputs, which may include quoted prices for identical assets in markets that are not considered to be active, and quoted prices of similar assets in active or inactive markets.

Level 3 – Investments' fair values based upon unobservable inputs.

The categorization of investments within the hierarchy above is based solely upon the objectivity of the inputs used in the measurement of fair value of the investments and does not reflect the level of risk associated with the investments.

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

Investments classified in Level 1 of the fair value hierarchy are valued from predetermined external pricing vendors or primary dealers who source quoted prices in active markets which are readily attainable exit values of these securities. Investments classified in Level 2 are subject to alternative pricing sources, including a combination of price sources, descriptive data and pricing models based on attributes such as spread data, sector, quality, duration, and prepayment characteristics. Investments classified as Level 3 are valued using best available sources such as property appraisals, discounted cash flow models and public market comparables of similar assets where applicable. The values are supplied by advisors or general partners who hold those or similar assets in investments vehicles they oversee. These pricing sources may or may not be indicative of realizable exit value attainable for the assets.

NYSTRS' investments and securities lending collateral reinvested have the following fair value measurements or net asset values (NAV) as of June 30, 2017 and 2016, respectively:

		Fair Value Measurements Using		
Investments by Fair Value Level	**6/30/2017**	**Quoted Prices in Active Markets for Identical Assets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**
Fixed income securities:				
Short-term instruments	$ 6,060,602	$ —	$ 6,057,967	$ 2,635
Domestic fixed income securities	17,338,490	198,900	17,139,406	184
Domestic commercial mortgage backed securities	1,091,320	—	1,085,389	5,931
Global fixed income securities	2,485,546	(9,531)	2,495,077	—
Total fixed income securities	$26,975,958	$ 189,369	$26,777,839	$ 8,750
Equity securities:				
Domestic equities	$44,078,345	$43,971,611	$ 106,734	$ —
International equities	21,149,427	20,853,965	295,285	177
Total equity securities	$65,227,772	$64,825,576	$ 402,019	$ 177
Mortgages:	$ 3,337,830	$ —	$ —	$3,337,830
Real estate:				
Direct equity real estate investments	$ 2,981,494	$ —	$ —	$2,981,494
Real estate alternative investments	387,581	—	—	387,581
Total real estate	$ 3,369,075	$ —	$ —	$3,369,075
Total investments by fair value level	$98,910,635	$65,014,945	$27,179,858	$6,715,832

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

Investments Measured at the Net Asset Value (NAV)	June 30, 2017	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Commingled domestic fixed income fund (1)	$ 43,407	$ —	Daily	30 days
Commingled global fixed income fund (2)	40,464	—	Semi-monthly	15 days
Commingled international equity funds (3)	836,992	—	Daily or monthly	5–30 days
Privately held real estate investment trusts (4)	1,805,875	127,667	NA	NA
Real estate commingled funds (5):				
Closed ended funds	2,285,824	1,092,063	NA	NA
Open ended funds	1,061,107	—	Quarterly	30–120 days
Alternative investments (6)	9,620,974	7,028,313	NA	NA
Total investments measured at the NAV	$ 15,694,643	$8,248,043		
Investment related cash, receivables and payables not included in above	127,665			
Total investments and securities lending collateral reinvested	$114,732,943			

Investments by Fair Value Level	6/30/2016	Fair Value Measurements Using: Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Fixed income securities:				
Short-term instruments	$ 4,202,611	$ —	$ 4,198,431	$ 4,180
Domestic fixed income securities	16,505,293	50,023	16,455,046	224
Domestic commercial mortgage backed securities	1,505,303	16,246	1,485,442	3,615
Global fixed income securities	1,919,806	166,145	1,753,661	—
Total fixed income securities	$24,133,013	$ 232,414	$23,892,580	$ 8,019
Equity securities:				
Domestic equities	42,721,375	42,616,820	104,555	—
International equities	17,348,460	17,167,213	181,186	61
Total equity securities	$60,069,835	$59,784,033	$ 285,741	$ 61
Mortgages:	$ 3,786,206	$ —	$ —	$3,786,206
Real estate:				
Direct equity real estate investments	$ 3,437,710	$ —	$ —	$3,437,710
Real estate alternative investments	362,540	—	—	362,540
Total real estate	$ 3,800,250	$ —	$ —	$3,800,250
Total investments by fair value level	$91,789,304	$60,016,447	$24,178,321	$7,594,536

Notes to Financial Statements *(continued)*

June 30, 2017 and 2016

(dollars in thousands)

Investments Measured at the Net Asset Value (NAV)	June 30, 2016	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Commingled domestic fixed income fund (1)	$ 40,236	$ —	Daily	30 days
Commingled global fixed income funds (2)	27,519	—	Semi-monthly	15 days
Commingled international equity funds (3)	662,425	—	Daily or monthly	5–30 days
Privately held real estate investment trusts (4)	1,642,310	207,667	NA	NA
Real estate commingled funds (5):				
Closed ended funds	2,230,343	1,365,296	NA	NA
Open ended funds	1,068,737	—	Quarterly	30–120 days
Alternative investments (6)	9,304,144	5,903,538	NA	NA
Total investments measured at the NAV	$ 14,975,714	$7,476,501		
Investment related cash, receivables and payables not included in above	105,259			
Total investments and securities lending collateral reinvested	$106,870,277			

(1) Commingled domestic fixed income fund consists of one commingled investment vehicle which primarily invests in publicly traded domestic commercial mortgage backed securities. The investment is valued at the net asset value of units held at the end of the period based upon the fair value of the underlying investments. Subsequent to June 30, 2017, this investment was liquidated.

(2) Commingled global fixed income fund consists of one commingled investment vehicle which invests primarily in publicly traded global fixed income securities. The investment is valued at the net asset value of units held at the end of the period based upon the fair value of the underlying investments.

(3) Commingled international equity funds consist of three commingled investment vehicles which invest primarily in publicly traded global equity securities. The funds are valued at the net asset value of units held at the end of the period based upon the fair value of the underlying investments.

(4) Privately held real estate investment trusts consist of two trusts which primarily invest in U.S. commercial real estate. The fair values of the investments in this group have been determined using the net asset value of units held at the end of the period based upon the property appraisals of the underlying assets. The trusts are perpetual in nature, making periodic operating distributions to shareholders. Capital calls and redemptions are determined by a unanimous vote of the trust board members.

(5) Real estate commingled funds include equity real estate funds that invest primarily in U.S. commercial real estate. The investment structures are either open end funds or closed end funds. In these structures, NYSTRS commits funds along with other investors to create a pool of capital that the fund manager then invests according to an agreed upon strategy such as core, value add or opportunistic. The fair values of the investments in this group have been determined using the NAV per share (or its equivalent) of the plan's ownership interest in partners' capital. Open end funds may be redeemed on a quarterly basis with notice. Closed end funds are not redeemable, however distributions will be received as the underlying investments of the funds are liquidated, which on average can occur over the span of eight to ten years after final closing.

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

(6) Alternative investments include private equity, debt funds, and real estate equity funds through limited partnership structures. Private equity (84% at 6/30/17, 86% at 6/30/16) consists of buyout, growth, venture capital, fund of funds, secondary, co-investment, mezzanine, distressed/turnaround, special situation and real estate funds. The debt funds (7% at 6/30/17, 8% at 6/30/16) consist of funds investing primarily in mezzanine debt. The real estate equity funds (9% at 6/30/17, 6% at 6/30/16) consist of global commercial real estate funds. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the plan's ownership interest in partners' capital. These funds are not eligible for redemption. Distribution is received as underlying investments within the funds are liquidated, which on average can occur over the span of 5 to 10 years.

(7) Net Pension Liability (Asset) of NYSTRS Participating School Districts

The components of the net pension liability (asset) of the NYSTRS participating school districts at June 30, 2017 and 2016 were as follows:

	2017	2016
Total pension liability	$114,708,261	$108,577,184
Plan fiduciary net position	115,468,360	107,506,142
School districts' net pension liability (asset)	$ (760,099)	$ 1,071,042
Plan fiduciary net position as a percentage of total pension liability	100.66%	99.01%

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

(a) Actuarial Methods and Assumptions

The total pension liability at June 30, 2017 was determined using an actuarial valuation as of June 30, 2016, with update procedures used to roll forward the total pension liability to June 30, 2017. Total pension liability at June 30, 2016 was determined by an actuarial valuation as of June 30, 2015, with update procedures used to roll forward the total pension liability to June 30, 2016. These actuarial valuations applied the following actuarial methods and assumptions:

Actuarial cost method	Entry age normal	
Inflation	2.5%	
Projected salary increases	Rates of increase differ based on service They have been calculated based upon recent NYSTRS member experience.	
	Service	**Rate**
	5	4.72%
	15	3.46
	25	2.37
	35	1.90
Projected COLAs	1.5% compounded annually	
Investment rate of return	7.25% for the June 30, 2017 measurement of total pension liability. 7.50% for the June 30, 2016 measurement of total pension liability. The rates are compounded annually, net of pension plan investment expense, including inflation.	
Mortality	Annuitant mortality rates are based on plan member experience, with adjustments for mortality improvements based on Society of Actuaries Scale MP2014, applied on a generational basis. Active member mortality rates are based on plan member experience.	
Experience Period	The actuarial assumptions were based on the results of an actuarial experience study for the period July 1, 2009 to June 30, 2014.	

The long-term expected rate of return on pension plan investments was determined in accordance with Actuarial Standard of Practice (ASOP) No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*. ASOP No. 27 provides guidance on the selection of an appropriate assumed investment rate of return. Consideration was given to expected future real rates of return (expected returns, net of pension plan investment expense and inflation) for each major asset class as well as historical investment data and plan performance.

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

Best estimates of arithmetic real rates of return for each major asset class included in the System's target asset allocation as of the measurement date of June 30, 2017 and June 30, 2016 (see the discussion of the pension plan's investment policy) are summarized in the following table:

Asset Class	Long-Term Expected Real Rate of Return* 2017	2016
Domestic equities	5.9%	6.0%
International equities	7.4	7.7
Real estate	4.3	5.1
Alternative investments	9.0	9.3
Domestic fixed income securities	1.6	1.3
Global fixed income securities	1.3	0.9
Mortgages	2.8	2.8
High-yield fixed income securities	3.9	N/A
Short-term	0.6	0.2

**Real rate of return are net of the long-term inflation assumption of 2.2% for 2017 and 2.1% for 2016.*

(b) Discount Rate

The discount rate used to measure the total pension liability as of June 30, 2017 was 7.25%. The discount rate used to measure the total pension liability as of June 30, 2016 was 7.50%. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current member contribution rates and that contributions from school districts will be made at statutorily required rates, actuarially determined. Based on those 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 (Asset) to Changes in the Discount Rate

The following presents the net pension liability (asset) of the NYSTRS participating school districts calculated using the discount rate of 7.25% for June 30, 2017 and 7.50% for June 30, 2016, as well as what the school districts' net pension liability (asset) would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the current rate:

System's Net Pension Liability (Asset)	1% Decrease	Current Discount Rate	1% Increase
June 30, 2017	(6.25%)	(7.25%)	(8.25%)
	$13,094,259	$ (760,099)	$(12,362,437)
	1% Decrease	**Current Discount Rate**	**1% Increase**
June 30, 2016	(6.50%)	(7.50%)	(8.50%)
	$13,974,176	$ 1,071,042	$ (9,751,431)

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

(8) Commitments and Contingencies

The System, in the normal course of business, enters into commitments with off-balance-sheet risk. The System adheres to the same credit policies, financial and administrative controls, and risk limiting and monitoring procedures for commitments as for on-balance-sheet investments.

The commitments for loans on real estate or purchases of real estate are subject to satisfactory appraisals prior to closing. Once investments are made, the System's exposure to potential loss is determined by the value of the underlying collateral.

The future financial commitments outstanding at June 30, 2017 and 2016, respectively, were: real estate and real estate alternative investments of $2.03 billion and $2.27 billion; mortgages and real estate debt funds of $1.36 billion and $490.10 million; and private equity investments of $5.03 billion and $4.99 billion.

(9) Other Liabilities

Other liabilities include amounts due to the System's bank for disbursements issued on previous business days, which are funded when presented for payment. At June 30, 2017 and 2016, total other liabilities were $135,110 and $132,675, respectively. The June 30, 2017 balance includes a managed overdraft of $8,355.

(10) System Employees' Pension Plan

(a) Plan Description

As an employer, the System participates in the ERS, a cost sharing, multiple-employer defined benefit pension plan which falls under the New York State and Local Retirement System (NYSLRS) and is administered by the Comptroller of the State of New York. ERS provides retirement, disability, withdrawal, and death benefits to plan members and beneficiaries as authorized by the RSSL of the State of New York. Benefits are guaranteed by the State Constitution and cannot be diminished or impaired. Benefits can be reduced for future members only by an act of the State Legislature. The NYSLRS issues a publicly available financial report that contains financial statements and required supplementary information for ERS. The report may be obtained on the Comptroller's website at www.osc.state.ny.us/pension.

(b) Benefits

The classes of employees covered under the ERS range from Tiers 1 – 6. In order to be eligible for retirement, all members must be at least age 55 and have a minimum of 5 years of service for Tiers 2 – 4, and 10 years of service for Tiers 5 and 6. There is no minimum service requirement for Tier 1 members. Generally, all members are eligible for early retirement at age 55 with a benefit calculation of 1.67% of final average salary. Benefit calculations for Tier 1 and 2 members with greater than 20 years of service credit, or Tier 3 – 5 members between 20 and 30 years of service credit, is 2.0% of final average salary. Tier 3 – 5 members are eligible for an additional 1.50% of final average salary applied to each year of service over 30 years. Generally, Tier 6 member retirement benefits are 1.75% of final average salary with 20 years of service, with an additional 2.0% of final average salary for each year of service over 20 years.

For Tiers 1 – 5, final average salary is the average of the wages earned in the three highest consecutive years of employment. Tier 6 final average salary is the average of the wages earned in the five highest consecutive years of employment.

Other benefits provided under the ERS include: ordinary disability, accidental disability, and post-retirement benefit increases.

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

(c) Funding Policy

Funding of ERS is accomplished through member and employer contributions and investment earnings, according to the New York State RSSL.

Plan members who joined the System before July 27, 1976 (Tiers 1 and 2) are not required to make contributions. Those joining on or after July 27, 1976 and before January 1, 2010 (Tiers 3 and 4) who have less than 10 years of service or membership are required to contribute 3% of salary. Those joining on or after January 1, 2010, and before April 1, 2012 (Tier 5), are required to contribute 3% throughout active service. Persons joining on or after April 1, 2012 (Tier 6), are required to contribute between 3% and 6% throughout active service. Employers are required to contribute at an actuarially determined rate. An average employer contribution rate for the tiers of 15.5% and 18.2% was applicable to the annual covered payroll for the years ended March 31, 2017 and March 31, 2016, respectively. The contributions paid to ERS during the System's years ended June 30, 2017 and 2016 were $4,318, and $5,289, respectively, and were 100% of the contributions required.

(d) Pension Liabilities, Pension Expense, Deferred Outflows of Resources, and Deferred Inflows of Resources Related to Pensions

At June 30, 2017 and 2016, the System reported a liability of $10.3 million and $17.6 million, respectively, for its proportionate share of the ERS net pension liability measured as of March 31, 2017 and 2016, respectively. NYSTRS' proportion of the ERS net pension liability was based on the projection of the long term share of contributions to ERS relative to the projected contributions of all participating employers, actuarially determined. At March 31, 2017, the System's proportion was 0.1098533% and was 0.1095719% at March 31, 2016.

For the years ended June 30, 2017 and 2016, the System recognized pension expense of $6.1 million and $6.4 million, respectively.

The following presents a summary of deferred outflows of resources and deferred inflows of resources at June 30, 2017 and 2016:

	2017	2016
Deferred outflows of resources:		
Difference between expected and actual experience	$ 259	$ 89
Changes of assumptions	3,526	4,690
Net differences between projected and actual investment earnings on pension plan investments	2,062	10,433
Changes in proportion and differences between employer contributions and proportionate share of contributions	471	622
	$6,318	$15,834
Deferred inflows of resources:		
Difference between expected and actual experience	$1,567	$2,085
Changes in proportion and differences between employer contributions and proportionate share of contributions	17	—
	$1,584	$2,085

Notes to Financial Statements *(continued)*

June 30, 2017 and 2016

(dollars in thousands)

Amounts reported as deferred outflows of resources and deferred inflows of resources at June 30, 2017 related to pensions will be recognized in pension expense as follows:

Year ended June 30:	
2018	$2,111
2019	2,111
2020	1,900
2021	(1,388)

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the ERS and additions to/deductions from the ERS's fiduciary net position have been determined on the same basis as they are reported for the ERS by the NYSLRS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

(e) Actuarial Assumptions

The total pension liability for the March 31, 2017 measurement date was determined by using an actuarial valuation as of April 1, 2016, with update procedures used to roll forward the total pension liability to March 31, 2017. The total pension liability for the March 31, 2016 measurement date 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. These actuarial valuations applied the following actuarial assumptions:

Inflation	2.5%
Salary Scale	3.8%, indexed by service
Investment rate of return, including inflation	7.0% compounded annually, net of investment expenses
Cost-of-living adjustments	1.3% annually
Decrements	Developed from the Plan's 2015 experience study of the period April 1, 2010 through March 31, 2015
Mortality improvement	Society of Actuaries Scale MP-2014

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

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. The target allocation and best estimates of arithmetic real rates of return for each major asset class for the measurement period March 31, 2017 and 2016 are summarized in the following table:

	2017		2016	
Asset Class	Target allocation	Long-term expected real rate of return	Target allocation	Long-term expected real rate of return
Domestic equity	36%	4.55%	38%	4.80%
International equity	14	6.35	13	6.05
Private equity	10	7.75	10	8.50
Real estate	10	5.80	8	5.75
Absolute return strategies	2	4.00	3	4.25
Opportunistic portfolio	3	5.89	3	6.10
Real assets	3	5.54	3	6.15
Bonds and mortgages	17	1.31	18	1.50
Cash	1	(0.25)	2	(0.25)
Inflation-indexed bonds	4	1.50	2	1.50
	100%		100%	

Discount Rate

The discount rate used to calculate the total pension liability was 7.0% for years ending March 31, 2017 and 2016. 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 determined. Based upon those assumptions, the ERS'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.

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

Sensitivity of the System's Proportionate Share of the ERS Net Pension Liability

The following presents the System's proportionate share of the ERS net pension liability calculated using the discount rate of 7.0% for the years ending June 30, 2017 and 2016, as well as what the System's proportionate share of the ERS net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate:

	System's Net Pension Liability (Asset)		
	1% Decrease (6.0%)	Current Discount Rate (7.0%)	1% Increase (8.0%)
June 30, 2017	$32,967	$10,322	$ (8,824)
June 30, 2016	$39,657	$17,587	$ (1,062)

(11) System Employees' Other Postemployment Benefits

(a) Plan Description

The System adopted GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits other than Pensions* (GASB 45), for the fiscal year beginning July 1, 2007. The adoption necessitated the recognition of an actuarially determined annual required contribution (ARC) as an expense in the Statement of Changes in Fiduciary Net Position.

Pursuant to contractual agreement and policy, the System provides postemployment healthcare benefits to eligible System employees who retire from the System. The System is a voluntary participating employer in the New York State Health Insurance Program (NYSHIP), administered by the State of New York. Article XI of the New York State Civil Service Law assigns the authority to NYSHIP to establish and amend the benefit provisions of the plan and to establish maximum obligations of the plan members to contribute to the plan. The System's Board is authorized to establish the contribution rates of System employees and retirees below those set by Civil Service Law, and they are set as part of the collective bargaining process.

In order to be eligible, employees must have worked for at least 10 years for the System, retire directly from System employment, and commence receipt of their pension from the ERS. Dependents may also be covered.

System retirees are required to contribute toward the cost of their coverage. Employees who retire on or after July 1, 1985 contribute an amount equal to 12% of the premium paid by the System up to the premium of the Empire Plan option. If more expensive coverage is elected, the retiree pays 12% of the Empire Plan option and 100% of the difference between the two.

Employees who retire on or after April 1, 1991, are eligible to have accumulated unused sick leave converted into a credit to offset their contribution requirement.

As of June 30, 2017, 622 participants including 364 current employees, and 258 retired and/or spouses of retired employees participated in the healthcare plan. As of June 30, 2016, 612 participants including 362 current employees, and 250 retired and/or spouses of retired employees participated in the healthcare plan.

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

(b) Funding

The System's Board established the New York State Teachers' Retirement System Retired Employee Health Benefits Trust (the Trust) in 2008. The Trust was created for the sole purpose of accepting irrevocable contributions from the System in order to provide postemployment health insurance benefits to current and future eligible retirees of the System in accordance with the terms of the healthcare plan. The Trust issues stand alone financial statements, which can be obtained by contacting the System.

The employer contribution, or funding, of the System's other postemployment benefit (OPEB) obligation is at the discretion of management and the Board. The System's current policy is to prefund benefits by contributing an amount that is, at a minimum, equal to the ARC, an amount actuarially determined in accordance with the parameters of GASB Statement No. 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed 30 years.

The System's contributions and net OPEB obligation (NOO) for the past three fiscal years are as follows:

Actuarial Valuation Date	Fiscal Year Ending	Annual Required Contribution (a)	Interest On Existing NOO (b)	ARC Adjustment (c)	Annual OPEB Cost (a)+(b)+(c) (d)	Actual Contribution Amount (e)	Net Increase in NOO (d)-(e) (f)	NOO as of Fiscal Year End (g)
July 1, 2014	June 30, 2015	$4,542	$ (59)	$ 43	$4,526	$5,500	$(974)	$(1,707)
July 1, 2015	June 30, 2016	4,782	(137)	100	4,746	5,500	(754)	(2,461)
July 1, 2016	June 30, 2017	5,454	(172)	130	5,412	5,500	(88)	(2,549)

The funded status of the System's OPEB as of the most recent actuarial valuation date is as follows:

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) – Entry Age Normal (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
July 1, 2016	$29,565	$90,982	$61,417	32.5%	$29,087	211%

(c) Actuarial Methods and Assumptions

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Actuarially determined amounts are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented as required supplementary information following the Notes to Financial Statements, presents multiyear trend information that shows whether the actuarial value of plan assets is increasing or decreasing over time relative to the AAL for benefits. The provisions of GASB Statement No. 45 require an actuarial valuation be performed at least biennially. Currently, the Trust has an actuarial valuation performed annually.

Notes to Financial Statements *(continued)*
June 30, 2017 and 2016
(dollars in thousands)

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the pattern of sharing of benefit costs between the employer and plan members to that point. Actuarial calculations reflect a long term perspective and employ methods and assumptions that are designed to reduce short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations. Additional information as of the latest actuarial valuation is as follows:

	2016	2015
Valuation Date*	July 1, 2016	July 1, 2015
Actuarial cost method	Entry age normal	Entry age normal
Amortization method	Level percentage of payroll, open	Level percentage of payroll, open
Amortization period	30 years	30 years
Asset valuation method	Market Value	Market Value
Actuarial assumptions:		
Investment rate of return**	7.0% compounded annually	8.0% compounded annually
Healthcare cost trend rate:		9.0% initial, 5.0% ultimate
Medicare	9.0% initial, 5.0% ultimate	
Pre-Medicare	7.8% initial, 5.0% ultimate	

* *The results of a July 1, 2014 valuation using participant data and health care premium information as of July 2014 was projected forward using standard actuarial techniques to obtain the July 1, 2015 valuation results.*

The results of a July 1, 2015 valuation using participant data and health care premium information as of July, 2015 was projected forward using standard actuarial techniques to obtain the July 1, 2016 valuation results.

** *Included an inflation assumption of 3.0% for the July 1, 2015 valuation and 2.5% for the July 1, 2016 valuation.*

(12) Risk Management

The System is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; job related illnesses or injuries to employees; and natural disasters for which the System carries commercial insurance. There were no settlements in the past three years that exceeded coverage. Management of the System believes there would be no material adverse effect on the financial statements as a result of the outcome of these matters if they existed.

Required Supplementary Information

Schedule of Changes in the School Districts' Net Pension Liability (Asset) (Unaudited)

(Last Five Fiscal Years)
(dollars in thousands)

	2017	2016	2015	2014	2013
Total pension liability					
Service cost	$ 1,292,143	$ 1,181,609	$ 1,396,824	$ 1,397,547	$ 1,406,084
Interest	7,988,167	7,809,566	7,611,757	7,434,764	7,252,357
Changes of benefit terms	—	—	—	—	—
Differences between expected and actual experience	727,895	(111,652)	(161,043)	(181,834)	(128,194)
Changes of assumptions	3,045,909	7,085,423	—	—	—
Benefit payments, including refunds of member contributions	(6,923,037)	(6,719,866)	(6,531,140)	(6,343,538)	(6,139,718)
Net change in total pension liability	6,131,077	9,245,080	2,316,398	2,306,939	2,390,529
Total pension liability — beginning	108,577,184	99,332,104	97,015,706	94,708,767	92,318,238
Total pension liability — ending (a)	$114,708,261	$108,577,184	$ 99,332,104	$ 97,015,706	$94,708,767
Plan fiduciary net position					
Contributions — employer	$ 1,857,359	$ 2,046,562	$ 2,633,682	$ 2,400,386	$ 1,734,908
Contributions — member	129,770	124,587	119,411	120,762	128,903
Net investment income	12,951,892	2,392,354	5,400,265	16,664,703	11,636,480
Benefit payments, including refunds of member contributions	(6,923,037)	(6,719,866)	(6,531,140)	(6,343,538)	(6,139,718)
Administrative expenses	(61,611)	(60,426)	(56,948)	(55,616)	(54,338)
Other	7,845	4,014	3,213	1,365	4,522
Net change in plan fiduciary net position	7,962,218	(2,212,775)	1,568,483	12,788,062	7,310,757
Plan fiduciary net position — beginning	107,506,142	109,718,917	108,155,083	95,367,021	88,056,264
Cumulative effect of change in accounting principle	—	—	(4,649)	—	—
Beginning balance, as restated	107,506,142	109,718,917	108,150,434	95,367,021	88,056,264
Plan fiduciary net position — ending (b)	$115,468,360	$107,506,142	$109,718,917	$108,155,083	$ 95,367,021
School districts' net pension liability (asset) — ending (a) — (b)	$ (760,099)	$ 1,071,042	$ (10,386,813)	$(11,139,377)	$ (658,254)

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

See accompanying independent auditors' report.

Required Supplementary Information *(continued)*

Schedule of the School Districts' Net Pension Liability (Asset) (Unaudited)

(Last Five Fiscal Years)
(dollars in thousands)

	2017	2016	2015	2014	2013
Total pension liability	$114,708,261	$108,577,184	$ 99,332,104	$ 97,015,706	$94,708,767
Plan fiduciary net position	115,468,360	107,506,142	$109,718,917	108,155,083	95,367,021
School districts' net pension liability (asset)	$ (760,099)	$ 1,071,042	$ (10,386,813)	$ (11,139,377)	$ (658,254)
Plan fiduciary net position as a percentage of the total pension liability	100.66%	99.01%	110.46%	111.48%	100.70%
Covered payroll	$ 15,846,705	$ 15,431,009	$ 15,021,357	$ 14,771,301	$14,647,830
School districts' net pension liability (asset) as a percentage of covered payroll	(4.80)%	6.94%	(69.15)%	(75.41)%	(4.49)%

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

See accompanying independent auditors' report.

Required Supplementary Information *(continued)*

Schedule of the School Districts' Contributions (Unaudited)
(Last 10 Fiscal Years)
(dollars in thousands)

	2017	2016	2015	2014
Actuarially determined contribution	$ 1,857,234	$ 2,046,152	$ 2,633,244	$ 2,400,378
Contributions in relation to the actuarially determined contribution	1,857,234	2,046,152	2,608,266	2,383,145
Contribution deficiency	$ —	$ —	$ 24,978	$ 17,233
Covered payroll	$15,846,705	$15,431,009	$15,021,357	$14,771,301
Contributions as a percentage of covered payroll	11.72%	13.26%	17.36%	16.13%

See accompanying independent auditors' report.

Required Supplementary Information *(continued)*

Schedule of the School Districts' Contributions (Unaudited) *(continued)*

(Last 10 Fiscal Years)
(dollars in thousands)

2013	2012	2011	2010	2009	2008
$ 1,734,303	$ 1,626,589	$ 1,269,976	$ 915,632	$ 1,096,155	$ 1,195,148
1,734,303	1,626,589	1,269,976	915,632	1,096,155	1,195,148
$ —	$ —	$ —	$ —	$ —	$ —
$14,647,830	$14,640,764	$14,732,895	$14,792,116	$14,366,387	$13,690,128
11.84%	11.11%	8.62%	6.19%	7.63%	8.73%

See accompanying independent auditors' report.

Required Supplementary Information *(continued)*

Notes to Required Supplementary Information
(Last 10 Fiscal Years)

Changes of benefit terms. Chapter 504 of the Laws of 2009 created a new tier of membership (Tier 5) for members with a date of membership on or after January 1, 2010. The Tier 5 benefit structure represents a reduction in benefits from those of prior tiers and an increase in the required employee contribution rate. The Tier 5 benefit changes were first included in the 2010 actuarial valuation. Chapter 18 of the Laws of 2012 created a new tier of membership (Tier 6) for members who join on or after April 1, 2012. The Tier 6 benefit formula is slightly less generous than that of Tier 5, and the required employee contribution rate was increased further. The Tier 6 benefit changes were first included in the 2012 actuarial valuation.

Changes of assumptions. Actuarial assumptions are revised periodically to more closely reflect actual, as well as anticipated future experience. The actuarial assumptions used in the actuarial valuations prior to 2011 were adopted by the Retirement Board on October 26, 2006. Revised assumptions were adopted by the Retirement Board on October 27, 2011 and first used in the 2011 actuarial valuation. The actuarial assumptions were revised again in 2015. These assumptions were adopted by the Retirement Board on October 29, 2015 and first used in the 2015 actuarial valuation.

The System's valuation rate of interest for purposes of the ADC is 7.50% effective with the 2015 actuarial valuation. Prior to the 2015 actuarial valuation, the System's valuation rate of interest assumption was 8.0%.

Prior to the 2007 actuarial valuation, the asset valuation method used was a five-year market smoothing for equities, real estate, and alternative investments, based upon book values. The asset valuation method was changed effective with the 2007 actuarial valuation to use a five-year phased in deferred recognition, at a rate of 20% per year, of each year's realized and unrealized appreciation in excess of (or less than) an assumed inflationary gain of 3.0%. The asset valuation method was changed again effective with the 2015 actuarial valuation to recognize each year's net investment income/loss in excess of (or less than) 7.5% at a rate of 20% per year, until fully recognized after five years.

Prior to the 2011 actuarial valuation, COLAs were projected to increase at a rate of 1.75% annually. Effective with the 2011 actuarial valuation, COLAs were projected to increase at a rate of 1.625% annually. Effective with the 2015 actuarial valuation, COLAs are projected to increase at a rate of 1.50% annually.

Method and assumptions used in calculations of school districts' actuarially determined contributions. The actuarially determined contribution rates in the schedule of school districts' contributions are calculated as of June 30, two years prior to the end of the fiscal year in which contributions are reported. Unless otherwise noted above, the following actuarial methods and assumptions were used to determine contribution rates reported in the Schedule of the School Districts' Contributions.

See accompanying independent auditors' report.

Required Supplementary Information *(continued)*

Notes to Required Supplementary Information *(continued)*
(Last 10 Fiscal Years)

Actuarial cost method	Aggregate (level percent of payroll)*
Amortization method	n/a*
Remaining amortization period	n/a*
Asset valuation method	Five-year phased in deferred recognition of each year's net investment income/loss in excess of (or less than) 7.5% at a rate of 20% per year, until fully recognized after five years. For fiscal years ending prior to June 30, 2015, realized and unrealized appreciation in excess of (or less than) the assumed inflationary rate of 3.0% is subject to the five-year phase in.
Inflation	2.5%
Projected salary increases	Rates of increase differ based on service. They have been calculated based upon recent NYSTRS member experience.

Service	Rate
5	4.72%
15	3.46
25	2.37
35	1.90

Projected COLAs	1.5% compounded annually
Investment rate of return	7.5% compounded annually, net of pension plan investment expense.

**The System is funded in accordance with the Aggregate Cost Method, which does not identify or separately amortize unfunded actuarial liabilities. Costs are determined by amortizing the unfunded present value of benefits over the average future working lifetime of active plan members, which currently for NYSTRS is approximately 13 years.*

See accompanying independent auditors' report.

Required Supplementary Information *(continued)*

Schedule of Investment Returns (Unaudited)
(Last Five Fiscal Years)

	2017	2016	2015	2014	2013
Annual money-weighted rate of return, net of investment expense	13.05%	2.28%	5.18%	18.16%	13.73%

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

See accompanying independent auditors' report.

Required Supplementary Information *(continued)*

Schedule of NYSTRS' Proportionate Share of the Net Pension Liability (Unaudited)

New York State and Local Employees' Retirement System (ERS)

(Last Four Fiscal Years)
(dollars in thousands)

	2017	2016	2015	2014
System's proportion of the net pension liability	0.1098533%	0.1095719%	0.1028788%	0.1028788%
System's proportionate share of the net pension liability	$10,322	$17,587	$ 3,475	$ 4,649
System's covered payroll	$28,994	$28,251	$28,067	$26,188
System's proportionate share of the net pension liability as a percentage of covered payroll	35.6%	62.3%	12.4%	17.8%
ERS fiduciary net position as a percentage of the total pension liability	94.7%	90.7%	97.9%	97.2%

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

See accompanying independent auditors' report.

Required Supplementary Information *(continued)*

Schedule of NYSTRS' Contributions (Unaudited)

New York State and Local Employees' Retirement System (ERS)

(Last 10 Fiscal Years)
(dollars in thousands)

	2017	2016	2015	2014
Actuarially determined contribution	$4,318	$5,289	$ 5,131	$ 5,250
Contributions in relation to the actuarially determined contribution	4,318	5,289	5,131	5,250
Contribution deficiency	$ —	$ —	$ —	$ —
Covered payroll	$29,346	$29,273	$28,693	$26,333
Contributions as a percentage of covered payroll	14.71%	18.07%	17.88%	19.94%

See accompanying independent auditors' report.

Required Supplementary Information *(continued)*

Schedule of NYSTRS' Contributions (Unaudited) *(continued)*

New York State and Local Employees' Retirement System (ERS)

(Last 10 Fiscal Years)

(dollars in thousands)

2013	2012	2011	2010	2009	2008
$ 4,807	$ 3,740	$ 2,903	$ 1,802	$ 1,918	$ 2,125
4,807	3,740	2,903	1,802	1,918	2,125
$ -	$ -	$ -	$ —	$ —	$ —
$26,259	$25,830	$24,931	$24,916	$24,155	$23,000
18.31%	14.48%	11.64%	7.23%	7.94%	9.24%

See accompanying independent auditors' report.

Required Supplementary Information *(continued)*

Other Post-Employment Benefit Schedule of Funding Progress (Unaudited)

June 30, 2017

(dollars in thousands)

Actuarial valuation date	Actuarial value of assets (a)	Actuarial accrued liability (AAL) – entry age normal (b)	Unfunded AAL (UAAL) (b-a)	Funded ratio (a/b)	Covered payroll (c)	UAAL as a percentage of covered payroll ((b-a)/c)
July 1, 2014	$23,100	$77,131	$54,031	29.9%	$25,556	211%
July 1, 2015	26,675	82,136	55,461	32.5	26,507	209
July 1, 2016	29,565	90,982	61,417	32.5	29,087	211

See accompanying independent auditors' report.

Other Supplemental Schedules

Schedules of Administrative Expenses
Years ended June 30, 2017 and 2016
(dollars in thousands)

	2017	2016
Salaries and benefits:		
Salaries	$30,472	$29,299
Civil service	22	49
Employees retirement	4,318	5,128
Health and dental insurance	10,909	10,681
Overtime salaries	51	30
Social security	2,147	2,070
Total salaries and benefits	47,919	47,257
Building occupancy expenses:		
Building, grounds and equipment	1,573	1,685
Depreciation — building and improvements	1,531	1,495
Depreciation — equipment	362	310
Office supplies and expenses	146	189
Utilities and municipal assessments	899	826
Total building occupancy expenses	4,511	4,505
Computer expenses:		
Amortization/depreciation — computer micro	1,021	1,338
Computer hardware and software	2,718	2,657
Computer maintenance and supplies	79	48
Total computer expenses	3,818	4,043
Personnel and meeting expenses:		
Board — meetings, travel and education	86	85
Delegates meeting	46	52
Preretirement seminars	162	143
Professional development	716	715
Travel and automobile expense	151	166
Other personnel expenses	59	51
Total personnel and meeting expenses	1,220	1,212
Professional and governmental services:		
Auditors — financial	374	327
Auditors — insurance department	132	67
Disability medical examinations	106	96
Postage and cartage	893	810
Professional fees and services	460	565
Publications	303	269
Statutory custodian charges	122	120
Total professional and governmental services	2,390	2,254
Total administrative fund expenses	59,858	59,271
Reconciliation of contribution expense to pension expense	1,753	1,154
Total Administrative Expenses	**$61,611**	**$60,426**

See accompanying independent auditors' report.

Other Supplemental Schedules *(continued)*

Schedules of Investment Expenses
Year ended June 30, 2017
(dollars in thousands)

Investment Category	Assets Serviced or Under Management	Expenses
Domestic fixed income securities	$ 1,138,760	$ 2,537
Global fixed income securities	2,461,346	4,510
Domestic equities	4,916,884	18,842
International equities	22,078,590	24,585
Mortgages	855,650	59
Real estate	8,129,301	65,244
Alternative investments	10,008,555	124,784
General	—	8,145
Totals	$49,589,086	$248,706

See accompanying independent auditors' report.

Investments

INVESTMENTS

Page

Report on Investment Activity for Fiscal Year Ending June 30, 2017

Overall Objectives and Performance

NYSTRS is a long-term investor, with many liabilities not coming due for 25 years or more. This allows us to utilize a disciplined investment approach with a strong emphasis on risk control. With a net position of $115.5 billion and a funded ratio of 97.9% based on an actuarial value of assets, NYSTRS remains one of the best-funded public pension plans in the nation.

Our total fund return, net of fees, for the fiscal year ended June 30, 2017 was 12.5%, outpacing the System's 7.5% assumed rate of return. It marked the eighth consecutive year NYSTRS posted a positive return, with returns in five of those years exceeding the System's assumed rate. Our 30-year and 25-year annualized net rates of return were 8.8% and 8.7%, respectively.

With more than half of our assets administered internally by System staff, we are able to manage investments at a very low cost compared to the value of assets — approximately 25 basis points.

Basis of Presentation

Following is an overview of how each System asset class performed during the past fiscal year. Performance calculations are prepared using time-weighted rates of return and are net of fees unless otherwise indicated. Returns for periods longer than one year are annualized.

Public Equities

Fiscal year 2017 saw exceptionally strong returns across global equity markets. U.S. equity indexes reached new all-time highs despite trading at increasingly expensive earnings multiples compared to recent history. Domestic equities, as measured by the S&P 1500 index, rose 18.1% on improved corporate earnings from a strengthening economy that followed a surprise general election result, raising expectations for tax and regulatory reforms. The market was led by the technology and financial sectors, while defensive sectors such as telecom, consumer staples and utilities lagged. Energy stocks were also notable detractors, with the sector posting negative returns for the period on renewed oil price weakness. In general investors sought riskier assets, as well as assets expected to benefit from higher interest rates.

International markets also rallied sharply on improved economic outlooks. Developed markets, as measured by the MSCI EAFE index, rose 20.3%, led by a Japanese economy producing its longest run of continuous growth in over a decade. A recovery for European equities despite political fallout from the United Kingdom's decision to leave the European Union also was a key factor. Emerging markets generated the strongest overall performance rising 23.7%, led by an Asia region that benefited from a weaker dollar (further increasing returns for U.S.-based investors) and as fears of significantly slower growth in China eased. Overall international markets advanced by 20.5% during the period, as measured by the MSCI ACWI Ex-U.S. index, outpacing domestic equities for the first time in several years.

The System's globally diversified public equity portfolio experienced significant gains from these rising markets. During the year, staff opportunistically sold $4.9 billion in securities from the domestic equity portfolio through rebalancing activity in line with the System's strategic asset allocation targets. Additionally, a further $800 million in dividend income was swept from the portfolio. Despite these outflows, used to pay benefits and fund investments in other asset classes, the domestic equity portfolio grew by $1.4 billion, with assets valued at $42.2 billion as of June 30, 2017. The domestic equity portfolio generated a return of 18.3%, beating the System's S&P 1500 policy benchmark by 0.2%. Excess returns were generated by the System's internally managed strategies, as well as positive contributions from external active managers.

Report on Investment Activity for Fiscal Year Ending June 30, 2017 *(continued)*

The international equity portfolio improved by $4.0 billion over the period, with assets valued at $21.7 billion as of the end of the fiscal year. During the year, staff funded a new external active manager approved by the Board at its October 2016 meeting and provided additional funding for another manager, for a combined total of $255 million. The international equity portfolio generated a return of 20.9%, outperforming its policy benchmark, the MSCI ACWI Ex-U.S. index, by 0.4% after fees. This was accomplished by a combination of efficient portfolio management in the System's passive strategies and strong performance by several active managers.

Overall, the NYSTRS public equity portfolio returned 19.1% for the fiscal year. Over the past five years, the System's public equity investments have generated an average return of 12.4% per year.

Fixed Income

The Federal Open Market Committee (FOMC) continued its gradual tightening of monetary policy during the System's 2017 fiscal year, raising rates three times and arriving at a target federal funds rate of 1.00 – 1.25% as of June 30, 2017. Compared to the median estimates for the target range as released in the FOMC's Summary of Economic Projections, the Committee has been slow to tighten monetary policy, presumably because inflation readings and expectations have not been as robust as expected despite an improving employment picture. The FOMC believes the current disinflationary forces are transitory in nature and that inflation, as measured by the U.S. Personal Consumption Expenditure Core Price Index, will eventually migrate towards its implicit 2.0% target.

In its June 14, 2017, economic summary the FOMC also addressed the outlook for normalization of the Federal Reserve's balance sheet. Contingent on the economy moving as expected, the Federal Reserve is expected to gradually decrease the reinvestment of principal payments from treasury, agency and agency mortgage-backed securities at a predefined pace. The FOMC included wording in its economic summary that would adjust the balance sheet normalization plans if economic conditions deviate from expectations. Looking ahead, the terms of Chair Janet Yellen and Vice Chair Stanley Fischer expire in February and June 2018, respectively. It is unclear if they will be nominated for another term and, if so, if either will accept the nomination.

Generally accommodative Federal Reserve policy continued to favorably influence key economic metrics such as the unemployment rate, manufacturing indices and consumer confidence levels — each of which impacted fixed income markets. The U.S. unemployment rate declined to 4.4% by the end of NYSTRS' 2017 fiscal year. The underemployment rate continued to drop and the labor force participation rate improved, but neither returned to pre-crisis levels. Economic and business activity measured by the Institute for Supply Management (ISM) indices revealed continued expansion in manufacturing and non-manufacturing sectors during the fiscal year. Sentiment indicators such as the University of Michigan's Survey of Consumers and the National Federation of Independent Businesses (NFIB) Small Business Optimism Index remained upbeat.

Globally, monetary policy continued on an accommodative path, relying on bond purchases and near historic low (and in some instances negative) interest rates. In Japan inflation remains too subdued to reverse quantitative easing, while the European Central Bank could begin tapering its quantitative easing program by the end of calendar year 2017 if the economic outlook improves and the need for broad-based bond purchases declines. Overall, the global economy was characterized by sluggish growth and low inflation, resulting in subdued yields. Conversely, U.S. Treasury rates increased moderately and remained attractive to investors due to the yield advantage they offered.

While the protracted period of low interest rates remains a challenge for fixed income portfolios, NYSTRS' focus remains on generating cash flow to help meet its $6.9 billion annual retirement benefit obligation and preserving capital. Both are accomplished within the context of receiving proportionate return for risk taken. To mitigate risk, the System's internally and externally managed fixed income portfolios are well diversified by sector, issuer and

Report on Investment Activity for Fiscal Year Ending June 30, 2017 *(continued)*

interest rate exposure. Additionally, the System's external portfolio managers actively monitor and manage risk while striving to generate cash flow in excess of what could be earned in risk-free fixed income investments while seeking to respond to market opportunities as they arise.

At fiscal year-end, roughly 67.0% of the internally managed domestic fixed income portfolio consisted of Aaa securities, the highest credit quality rating granted. Approximately 43.0% was invested in U.S. Treasury securities with the remaining 24.0% invested in high-quality U.S. agencies, agency mortgage-backed securities and supranational debt. A portion of the portfolio was invested in corporate bonds with a weighted average credit rating of mid-A. These positions, many of which are issued by multinational industry leaders, provide the System with yields greater than what could be gained by investing solely in U.S. Treasury securities of similar duration.

The externally managed global bond portfolios had a sizeable 28.0% allocation to the highest rated Aaa securities. These managers rely on their deep credit research resources to identify and invest in lower credit quality investment grade and, to a lesser extent, non-investment grade bonds that provide additional yield. Roughly 96.0% of the combined portfolios were invested in investment grade bonds, with a small position in cash.

The best returns in the investment grade domestic fixed income market were achieved by investors who took less U.S. Treasury interest rate risk and greater credit risk. Domestic bonds with maturities of one to three years returned 0.4% during the fiscal year, while bonds with maturities 10 years and greater returned -1.2%, driven by -7.2% returns in long maturity U.S. Treasury securities. However, corporate bonds with maturities 10 years and greater returned 3.6%. Lower credit quality bonds outperformed as Baa bonds returned 3.5% compared to Aaa bonds which returned -1.4% during the fiscal year.

In the global bond space, the best returns were achieved by those securities hedged to the U.S. dollar and by investors who took on lower levels of interest rate risk but higher levels of credit risk. The unhedged Barclays Global Aggregate Float Adjusted Index returned -1.6%, underperforming the -0.4% return experienced by the hedged version of the benchmark. Hedged global bonds with maturities greater than 10 years vastly underperformed with a return of -3.2%, while Baa rated bonds outperformed with a 2.5% return during the fiscal year. A geographically diverse portfolio can exhibit an array of market results, as the hedged European and Asian portions of the global benchmark returned 0.1% and -2.0%, respectively.

As of June 30, 2017, 15.4% of System investments represented the internally managed domestic fixed income portfolio. For the one- and three-year periods ended June 30, 2017, the System's long-term bond portfolio's annual return was -0.2% and 2.0%, respectively, versus the -0.3% and 2.5% respective benchmarks. The one year outperformance is attributable to assuming less interest rate or duration risk for U.S. Treasurys as compared to the benchmark.

With respect to the externally managed global bond portfolios, as of June 30, 2017, 2.2% of System assets were invested in global bonds significantly hedged to U.S. dollars. Net of fees, for the one- and three-year periods ended June 30, 2017 global bonds returned 0.4% and 3.3%, respectively, compared to -0.4% and 3.3% for the respective benchmarks. Security selection and sector positioning were the primary factors for outperforming the benchmark over the past fiscal year. Long-term, NYSTRS expects these managers will continue to add investment diversification and help generate greater risk-adjusted fixed income returns.

Report on Investment Activity for Fiscal Year Ending June 30, 2017 *(continued)*

Short-Term (Cash Equivalents)

The System's short-term fixed income portfolio consists of high-quality securities which can easily be converted into cash for the purposes of making monthly payment of pension benefits, facilitating with asset allocation or supporting the operating commitments of the System. Securities held in this portfolio generally mature in 12 months or less. Securities that have maturities greater than 13 months at the time of purchase have a floating-rate coupon that resets every three months or less.

The System's short-term portfolio has an asset allocation target of 1.0%. As of June 30, 2017, the portfolio represented 4.0% of total invested System assets, within the allowable range of 0.0 – 4.0%. As of June 30, 2017, the portfolio's weighted average maturity and weighted average life were 24 and 26 days, respectively. For the 12 months ended June 30, 2017, the short-term portfolio returned 0.7%, versus the iMoneyNet Money Fund Averages/All-Taxable Index benchmark, which returned 0.3%.

The onset of the 2017 fiscal year saw pressures arise due to the October 14, 2016 reform date for money market mutual funds as mandated by the Securities and Exchange Commission (SEC). The reform, which in part required Prime funds to implement a floating net asset value (NAV) and redemption gates should stresses arise in a fund, caused a roughly $1.0 trillion exodus out of Prime funds and into Government funds. With Prime funds being large buyers of non-government short-term financial debt, levels and spreads on those issuers widened out dramatically as they looked for alternative investors to fill the void. Once the implementation date passed, levels and credit spreads tightened as Prime funds began to slowly redeploy liquidity. Meanwhile other types of investors (e.g., Securities Lending Cash Reinvestment portfolios, Non 2a-7 Short Term Bond Funds, etc.) continued to add exposure with the technical widening in levels and spreads. The spread between one and three month LIBOR hit a fiscal year high of 36.9 basis points in November 2016 and closed the fiscal year at 7.5 basis points.

The Federal Reserve Bank of New York continues its Overnight Reverse Repurchase Operations facility. The total awarded amount available at each daily operation remains capped at the size of the System Open Market Account (roughly $2.0 trillion) with a $30.0 billion individual counterparty limit.

Real Estate

Commercial real estate markets continued to benefit from accommodative monetary policies throughout the world. Sovereign wealth funds and other large institutional investors, seeking to satisfy their appetite for hard assets, continued to focus on properties in global gateway cities with reliable income streams and stable currencies. Over the past three years, the demand for these core assets have driven pricing, yields and overall returns to historic levels.

By fiscal year-end, however, asset pricing for most U.S. property types appeared to have plateaued as investors paused to absorb elevated pricing levels amidst recent Federal Reserve rate increases and the Fed's intention to unwind its $4.5 trillion quantitative easing portfolio. Globally, capital controls in China, weaker oil prices, geopolitical threats in Northern Asia and questions surrounding the consequences of the Brexit referendum contributed to a slowdown in transaction levels.

Over the past three years, NYSTRS has been a net seller of commercial assets, taking advantage of elevated pricing levels. Asset appreciation for the remaining holdings has kept the portfolio at target levels. Redeployed capital has focused on quality, well-located assets acquired at a discount to "perfected" core pricing with value derived through repositioning, renovation, and improved levels and quality of leasing. NYSTRS' primary focus will continue to be in and around densely populated metropolitan areas, which include hubs of world-class education, transportation and health care centers.

Report on Investment Activity for Fiscal Year Ending June 30, 2017 *(continued)*

Overall, our most important risk mitigation continues to be our disciplined underwriting. This means not chasing bids and/or pricing to unrealistic levels and continuing to cull non-strategic assets from the portfolio in a seller's market.

On the operating side, property market fundamentals remain healthy but rent growth has begun to slow in most property sectors. An exception has been warehouse space, which has benefitted from the shift away from traditional brick-and-mortar retail and toward online retailers. The latter requires large warehouses located at intermodal sites across the country and last-mile distribution centers that continue to compress consumer's order-to-delivery timeframe.

Demand for multifamily product has been consistently strong coming out of the global financial crisis. However, rents appear to have reached peak levels in many markets due to lagging wage growth, expanded residential supply levels and an uptick in single-family home purchases and rentals by millennials.

On the lending side, Basel III and Dodd-Frank regulations continue to constrain commercial banks from financing non-conventional loans due to increased reserve requirements. This has provided non-bank lenders, including NYSTRS, opportunities to fill this void. Over the past several years, NYSTRS has invested $1.1 billion in bridge and senior mezzanine loans and has an additional $1.4 billion available to commit in this space. The strategy has provided the System with floating rate yields in excess of 5.0% and an all-in return of 10.9% over the past five years.

The System has a globally diversified portfolio of public and private commercial real estate equity assets, which, including both invested and committed capital, was valued at $20.0 billion at fiscal year-end. The portfolio is generally broken down into equity and debt components.

NYSTRS' $13.5 billion global commercial equity portfolio consists of core high-quality assets primarily located in major U.S. coastal markets and global metro areas throughout Europe and Asia. For the fiscal year ended June 30, 2017, NYSTRS' commercial real estate equity portfolio returned, on a net basis, 6.6%. Since inception the portfolio has returned 8.5%. The portfolio has outperformed its benchmark by 80 basis points (bps) over the past year and 190 bps, or 1.90%, on an annualized basis since the program's 1985 inception.

The System's focus on global gateway markets in the U.S. and throughout the world has driven the performance of the portfolio as there has been consistent demand from multinational tenants for space in these markets. Also driving performance is increased demand from institutional and sovereign wealth investors seeking stable yield opportunities, pushing valuations to record levels.

NYSTRS' $6.5 billion commercial debt portfolio consists primarily of conventional fixed-rate, first-mortgage loans on core high-quality assets. Current market yields for this product are in the mid-to-high 3.0% yield range for 10- to 12-year yields.

To supplement these yields, NYSTRS has focused on floating-rate, bridge (a.k.a., transitional) and senior mezzanine loans capped at 75.0% of appraised value. As noted above, yields to date have been in excess of 5.0% with the portfolio returning 8.9% over the last fiscal year.

Finally, the System has a $1.1 billion commercial mortgage backed securities (CMBS) program comprised of investment-grade securities currently providing the System with a yield of 3.7%.

Report on Investment Activity for Fiscal Year Ending June 30, 2017 *(continued)*

For the fiscal year ended June 30, 2017, NYSTRS' overall commercial real estate debt portfolio returned, on a net basis, 2.3%. Since inception the portfolio has returned 8.5%. The portfolio outperformed its benchmark by 40 bps over the past year and underperformed the benchmark by 30 bps since inception.

The low nominal return (+2.3%) for the debt portfolio over the past year was a function of significant increases in U.S. Treasury and LIBOR yields over the past year (driven by the previously referenced Fed tightening program) which have dropped valuations on existing fixed-rate loans with relatively lower coupon yields.

Private Equity

NYSTRS made its first private equity investment in 1984 and formally committed to the asset class in 1999, establishing a target of 1.0% of investments. Today, the target allocation is 8.0% with an allocation range of 3.0% to 13.0%. Partnership structures generally cover periods of 10 years or more, with the goal to achieve higher long-term returns than available through marketable securities. The program seeks to outperform public equities by 500 basis points (S&P 500 plus 5.0%) over the long term.

Private equity activity continues to be characterized by an abundance of capital. The demand for private equity exposure has continued to steadily increase, with interest from new entrants and an increased appetite from well-established limited partners fueling record fundraising levels across strategies and geographies. Continued robustness in the capital markets and increased competition for assets (from both sponsors and well-capitalized strategic buyers) continue to drive entry and leverage multiples higher. Given the current market environment, the System is focused on investing with disciplined top-performing managers that have demonstrated an ability to prudently invest across varying macro-economic backdrops and cycles. Importantly, alignment of interest remains a paramount consideration.

The Retirement System's private equity portfolio is comprised of buyout, growth, venture capital, fund of funds, secondary, co-investment, mezzanine, distressed/turnaround, special situation and real estate funds.

The Retirement System has a mature, cash-flow positive private equity program diversified by both investment strategy and geographic focus. The program continues to focus on recommitting to its top-performing partnerships, while strategically adding new relationships that provide increased exposure to particular strategies and geographies. Specifically, NYSTRS continues to de-emphasize large and mega buyout exposure, while increasing small and medium buyout exposure in both North America and Europe. Additionally, the System will continue to marginally increase exposure to sector-focused opportunities and mid-size distressed/turnaround managers. The program also seeks to supplement its venture portfolio through selective commitments to growth strategies. Increased exposure to Asia and Latin America is expected over the next five to 10 years through selective commitments with top-performing, country-specific and pan-regional managers.

By fiscal year-end, the System had active commitments of $19.5 billion with 92 fund sponsors. The private equity portfolio was valued at $8.4 billion, representing 7.4% of the System's total assets. Unfunded commitments totaled $5.0 billion. Over the last 10 years, the private equity program has returned 9.1%, versus the stated benchmark of 12.2%. Over the last 20 years, the private equity program has returned 12.3%, outperforming the benchmark of 12.2%.

Report on Investment Activity for Fiscal Year Ending June 30, 2017 *(continued)*

Other Programs

Securities Lending

The System's securities lending program generates incremental income by lending in-demand domestic and international equity and fixed income securities. The System uses multiple agent lenders to manage the securities lending program. Each lending program is proactively monitored by NYSTRS staff to ensure it is managed in compliance with the System's contractual, statutory and risk guidelines.

The System earns a spread (the difference in income earned on reinvestment of cash collateral less the amount rebated to the borrower of the security) on loans collateralized by cash from demand and reinvestment components. The reinvestment portion of the spread is generated by investing the cash collateral received for securities loaned into high-quality, short-term fixed income securities. The demand piece of the spread is a function of borrower interest. The System also enters into non-cash loans collateralized by U.S. government and agency securities, whereby the System earns income via a fee paid by the borrower.

Loan balances trended downward throughout the year as equity borrowers lacked conviction for shorts due to prolonged risk-on periods coupled with their preference to shift pledged collateral from cash to securities for regulatory capital relief purposes. Net earnings from securities lending declined year over year led by the lower level of loan balances as the increase in broker rebates outpaced the rise in gross earnings.

As of June 30, 2017, 2.2% of the System's assets available to lend were on loan, collateralized at 102.2%. The utilization percentage was down from 3.8% at June 30, 2016. Borrower demand continued to generate the majority of securities lending income, which totaled $13.5 million for the fiscal year, compared to $16.5 million for the fiscal year ended June 30, 2016. The prior fiscal year's unrealized gain on investments in the System's cash collateral reinvestment portfolio improved during the 2017 fiscal year, settling at $2.8 million (including unpaid income) as of June 30, 2017.

For information describing the securities lending process, please see the *Notes to Financial Statements* under the heading "Securities Lending Transactions."

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Diversification of Investments
June 30, 2017 and June 30, 2016
(dollars in thousands)

Investment type	2017	Percent	2016	Percent	Increase (Decrease)
Short-term:					
Government related*	$ 903,243		$ 229,375		$ 673,868
Corporate	3,661,327		2,082,663		1,578,664
	4,564,570	4.03%	2,312,038	2.20%	2,252,532
Domestic fixed income securities:					
United States Treasury	7,572,679		7,232,770		339,909
Federal agency, notes & debentures	1,116,557		1,242,135		(125,578)
Federal agency mortgage backed	2,982,670		1,998,238		984,432
Commercial mortgage backed	1,138,760		1,549,427		(410,667)
Corporate	5,758,958		6,123,065		(364,107)
	18,569,624	16.38	18,145,635	17.26	423,989
Global fixed income securities:	2,461,346		1,947,256		514,090
	2,461,346	2.17	1,947,256	1.85	514,090
Domestic equities:					
Consumer Discretionary	5,280,551		5,136,093		144,458
Consumer Staples	3,560,386		3,980,047		(419,661)
Energy	2,347,911		2,801,991		(454,080)
Financials	6,130,563		8,514,295		(2,383,732)
Health Care	5,916,798		5,766,888		149,910
Industrials	4,612,626		4,408,453		204,173
Information Technology	9,219,051		7,964,741		1,254,310
Materials	1,545,799		1,542,659		3,140
Real Estate	3,267,028		--		3,267,028
Telecommunication Services	810,808		1,062,588		(251,780)
Utilities	1,323,335		1,487,201		(163,866)
Miscellaneous	103,668		107,828		(4,160)
	44,118,524	38.92	42,772,784	40.68	1,345,740
International equities:					
Commingled investments	9,349,555		7,735,615		1,613,940
Direct investments	12,348,610		9,975,190		2,373,420
REITs	445,234		418,311		26,923
	22,143,399	19.54	18,129,116	17.24	4,014,283
Mortgages:					
Conventional	3,337,830		3,784,963		(447,133)
Federal Housing Administration	--		1,242		(1,242)
	3,337,830	2.95	3,786,205	3.60	(448,375)
Real estate:					
Direct equity real estate investments	4,782,370		5,075,021		(292,651)
Commingled real estate investments	3,346,931		3,299,079		47,852
Other real estate owned	5,000		5,000		--
	8,134,301	7.18	8,379,100	7.97	(244,799)
Alternative investments:					
Private equity	8,408,856		8,020,833		388,023
Real estate equity funds	621,790		607,359		14,431
Real estate debt funds	665,846		718,313		(52,467)
Timberland	312,062		324,663		(12,601)
	10,008,554	8.83	9,671,168	9.20	337,386
Total investments	**$113,338,148**	**100.00%**	**$105,143,302**	**100.00%**	**$8,194,846**

**U.S. Treasury, agency, supranational, and sovereign debt issues.*

The above schedule is presented at net asset value, which differs from the financial statement presentation.

Changes in Net Asset Value

The fair value of investments are presented below in the aggregate by asset allocation classification, which differs from the financial statement presentation.

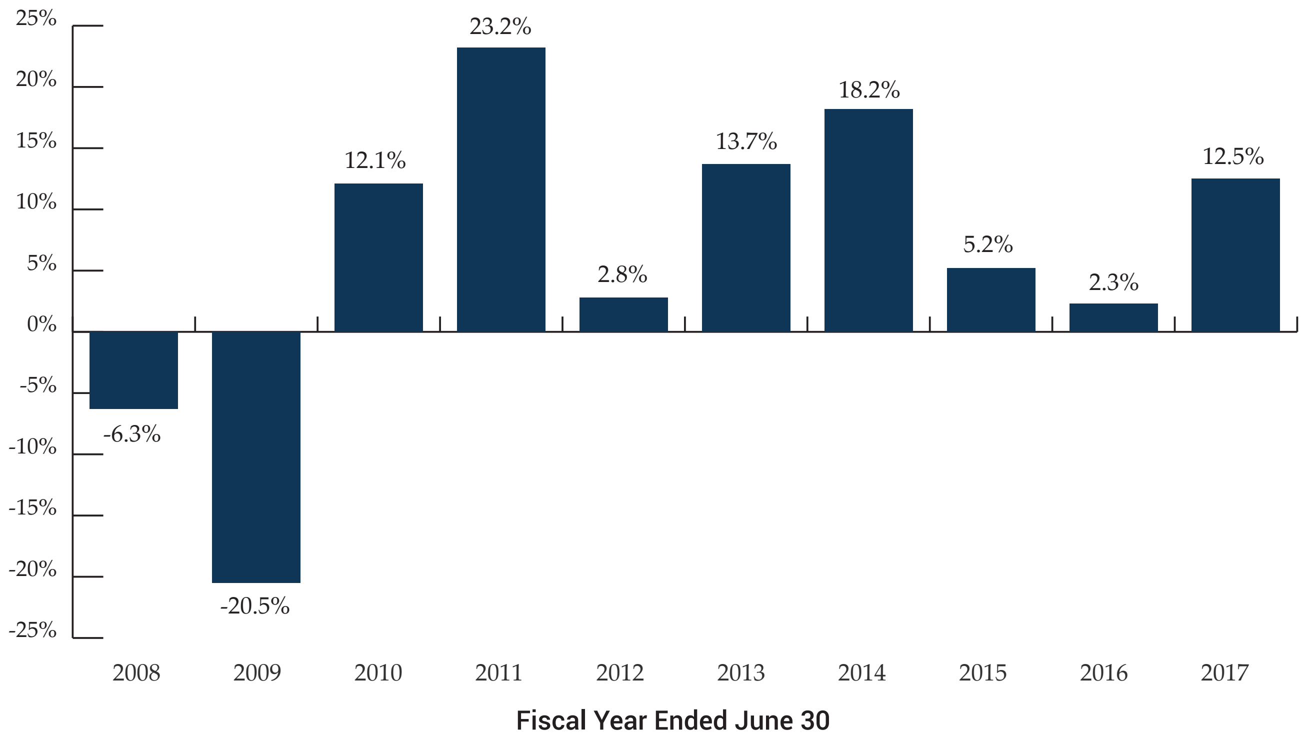
Asset Class	Net Asset Value 6/30/2016	Net Income	Net Appreciation (Depreciation)	Net Cash Inflows (Outflows)	Net Asset Value 6/30/2017
Equities					
Domestic Equities	$ 40,841,088,287	$ 861,306,545	$ 6,141,115,984	($5,677,354,805)	$ 42,166,156,011
International Equities	17,710,805,650	311,064,464	3,420,250,335	256,044,207	21,698,164,656
Real Estate Equity	11,661,127,481	456,944,084	396,471,811	(1,048,787,840)	11,465,755,536
Private Equity	8,020,833,349	(99,168,564)	1,410,865,647	(923,673,937)	8,408,856,495
Debt					
Domestic Fixed Income	16,596,207,569	416,514,027	(446,534,612)	864,676,962	17,430,863,946
High Yield Bonds	--	--	--	--	--
Global Bonds	1,947,256,040	57,919,762	(43,829,832)	500,000,000	2,461,345,970
Real Estate Debt	6,053,945,187	268,823,188	(160,891,305)	(1,019,441,456)	5,142,435,614
Cash Equivalents	2,312,038,452	2,950,540	26,382,550	2,223,197,793	4,564,569,335
Total	**$105,143,302,015**	**$2,276,354,046**	**$10,743,830,578**	**($4,825,339,076)**	**$113,338,147,563**

Asset Allocation — as of June 30, 2017

The most significant contributor to a fund's long-term investment performance is the allocation decision among the various asset classes, including equities, fixed income and real estate. The allocation process helps control risk and sets the guidelines to diversify the System's portfolio. The asset allocation policy adopted by the Board allows ranges around an optimal target allocation. The Retirement Board, with the assistance of an external consultant, reviews the asset allocation policy on an annual basis to analyze recent and historical investment experience. Since this is a long-term plan, adjustments to the allocation are usually made on an annual basis when necessary. The current targets, ranges and actual allocations are detailed below:

	Target	Range	Actual
Domestic Equity	35%	31-39%	37.2%
International Equity	18%	14-22%	19.2%
Real Estate Equity	11%	6-16%	10.1%
Private Equity	8%	3-13%	7.4%
Total Equities	*72%*		*73.9%*
Domestic Fixed Income	16%	12-20%	15.4%
High Yield Bonds	1%	0-3%	0.0%
Global Bonds	2%	0-3%	2.2%
Real Estate Debt	8%	4-12%	4.5%
Cash Equivalents	1%	0-4%	4.0%
Total Debt	*28%*		*26.1%*

Annual Performance History



Investment Performance Results — as of June 30, 2017

The System is a long-term investor and therefore can withstand some short-term volatility. The liabilities are generally long-term in nature and may not become payable for 30 or more years in the future. The time-weighted performance (net of fees) and associated benchmark returns are shown in the following table.

	Annualized Rates of Return			
	1-YR	3-YR	5-YR	10-YR
Domestic Equities				
NYSTRS AllCap Disc. Equity Fund	18.2%	- %	- %	- %
NYSTRS Growth Tilt2 Fund	18.6	9.3	14.7	-
NYSTRS Index2 Fund	18.2	9.6	14.7	-
NYSTRS Value Tilt2 Fund	18.7	9.6	15.0	-
Benchmark: S&P 1500*	18.1	9.5	14.7	-
NYSTRS S&P 100 Fund	17.7	9.7	13.9	-
Benchmark: S&P 100	17.7	9.7	13.9	-
NYSTRS S&P 500 Fund	17.8	9.6	14.6	-
Benchmark: S&P 500	17.9	9.6	14.6	-
NYSTRS S&P 600 Fund	22.7	9.4	15.5	-
Benchmark: S&P 600	22.5%	9.3%	15.5%	-

**In a dynamic market, strategies and objectives evolve over time. Consequently, these benchmarks are blended due to historical investment strategy decisions.*

Investment Performance Results — as of June 30, 2017 *(continued)*

	Annualized Rates of Return			
	1-YR	3-YR	5-YR	10-YR
Domestic Equities *(continued)*				
Total Enhanced All Cap Management	19.1%	6.3%	12.7%	- %
Benchmark: Russell 3000	18.5	9.1	14.6	-
Total Active All Cap Management	16.3	5.2	12.3	-
Benchmark: S&P All Cap (Equal Weighted)	19.7	9.2	15.1	-
Total Enhanced Large Cap Management	19.8	10.3	15.1	-
Benchmark: S&P 500	17.9	9.6	14.6	-
Total Active Mid Cap Management	20.7	5.3	16.6	9.6
Benchmark: Russell Midcap*	16.5	7.7	14.7	7.6
Total Domestic Equities	18.3	9.3	14.7	7.4
Benchmark: Blended S&P/Russell*	18.1	9.5	14.7	7.4
International Equities				
NYSTRS Canadian Index	12.5	-3.3	3.8	-
Benchmark: MSCI Canada	11.7	-3.9	3.0	-
Total External Passive Management	20.8	1.1	7.6	0.3
Total Active Management	21.5	2.3	8.7	2.1
Total International Equities	20.9	1.3	7.8	0.8
Benchmark: Blended MSCI ACWI (ex-US)/EAFE*	20.5	0.8	7.3	0.4
Real Estate Equity	6.6	10.9	12.1	5.9
Benchmark: Blended NCREIF/REIT*	5.8	9.9	10.5	4.6
Private Equity	17.4	13.7	15.1	9.1
Benchmark: S&P 500 plus 5%	22.9	14.6	19.6	12.2
Domestic Fixed Income	-0.2	2.0	1.8	4.1
Benchmark: Barclays Capital Aggregate Float Adj*‡	-0.3	2.5	2.2	4.5
Global Bonds	0.4	3.3	-	-
Benchmark: Barclays Global Agg. Hedged (Flt. Adj.)‡	-0.3	3.3	3.4	-
Real Estate Debt	2.3	4.5	5.1	5.2
Benchmark: Blended GLCMPI/Barclays‡	1.9	3.9	4.3	5.5
Short-Term	0.7	0.4	0.3	0.7
Benchmark: iMoneyNet MONEY FUND AVERAGE™ /Taxable (All)	0.3	0.1	0.1	0.5
Total Fund	**12.5%**	**6.6%**	**10.2%**	**5.6%**

**In a dynamic market, strategies and objectives evolve over time. Consequently, these benchmarks are blended due to historical investment strategy decisions.*
‡See footnote on the Investments divider page.

Manager Investment Performance Results — as of June 30, 2017

The assets under management (at market), time-weighted performance results (at market) and appropriate benchmark or equity multiple for each manager/advisor are summarized in the following table.

	Assets Managed ($ millions)	Rates of Return[1] from Inception Fund	Rates of Return[1] from Inception Benchmark	Inception Date
Domestic Equities				
Enhanced All Cap Management				
Progress	$ 814.6	11.8%	13.7%	Nov-10
Active All Cap Management				
Leading Edge	440.5	10.6	13.3	Dec-10
Enhanced Large Cap Management				
T. Rowe Price	651.0	16.1	15.8	Jan-09
Active Mid Cap Management				
Iridian	1,058.4	10.7	5.8	Apr-99
International Equities				
Passive Management				
BlackRock ACWI	8,644.3	7.9	7.6	Dec-11
State Street ACWI	8,647.5	7.3	7.0	Jul-12
Active Management				
Aberdeen	568.4	3.9	3.8	Dec-10
AQR	659.9	8.2	6.3	Feb-12
Baillie Gifford	705.0	9.8	6.8	Sep-11
DFA	170.7	2.3	1.5	Feb-13
FIS	250.5	4.8	4.0	May-13
LSV	666.6	5.2	3.4	Jul-11
Marathon	534.6	9.5	7.5	Jan-12
William Blair	655.5	6.6	4.3	Oct-10
Global Bonds				
Goldman Sachs Asset Mgt.	501.0	-0.8	-1.0	Aug-16
Loomis Sayles	983.5	3.0	3.1	Nov-12
Wellington	976.8	3.7	4.0	Aug-13
Real Estate Debt				
BlackRock: CMBS	532.5	5.3	5.4	Apr-01
Prima: CMBS	562.7	5.6	4.8	Nov-03
Torchlight: CMBS	0.1	4.9	5.4	Apr-01
Torchlight: Torchlight Value Fund	43.4	4.4	-0.4	Sep-05
Real Estate Equity				
Direct Investments				
Bentall Kennedy	109.5	9.8	8.2	Apr-95
Clarion Partners	366.1	9.3	6.4	Jun-90
Invesco Realty Advisors (Industrial)	218.1	9.0	8.2	Nov-94
Invesco Realty Advisors (Multi-family)	106.2	11.6	7.6	Dec-98
JPMorgan Asset Management	3,532.0	11.0	6.6	Oct-90
Sentinel Real Estate	$ 450.6	11.6%	8.3%	Mar-96

[1]*Returns for periods over 1 year are annualized.*

Manager Investment Performance Results — as of June 30, 2017 *(continued)*

	Assets Managed ($ millions)	Rates of Return[1] from Inception: Fund	Rates of Return[1] from Inception: Benchmark	Inception Date
Direct Investments - Timber				
Forest Investments: Adirondack Timber I	$312.1	4.2%	5.7%	Dec-98
Domestic Public Securities				
Adelante Capital Management	342.5	10.5	10.0	Aug-98
Cohen & Steers: Equity Income	393.9	10.4	9.4	Jul-98
Cohen & Steers: REIT Preferred	194.6	9.2	7.8	Sep-07
Cohen & Steers: Total Return	629.2	12.0	10.8	Jun-95
Deutsche Asset & Wealth Management	392.2	11.2	10.0	Aug-98
International Public Securities				
Deutsche Asset & Wealth Management	309.2	0.7	1.6	Dec-06
LaSalle Investment Management	$136.0	-0.4%	1.6%	Dec-06

	Assets Managed ($ millions)	Inception Rate of Return[1]	Equity Multiple	Inception Date
Commingled Funds				
Abacus: Multi-Family Partners II	$ 3.2	27.9%	1.6	Apr-13
Abacus: Multi-Family Partners III	44.0	24.7	1.2	Jun-15
Angelo, Gordon & Co.: AG Core Plus Realty Fund IV	20.9	6.9	1.1	Jun-15
Angelo, Gordon & Co.: AG Realty Fund VI	0.6	2.7	1.1	Sep-05
Angelo, Gordon & Co.: AG Realty Fund VII	4.7	13.1	1.5	Dec-07
Angelo, Gordon & Co.: AG Realty Fund VIII	30.3	15.9	1.6	Sep-11
Angelo, Gordon & Co.: AG Realty Fund IX	32.9	12.1	1.1	Nov-15
Apollo: CPI Capital Partners North America	0.2	-7.7	0.7	Dec-06
Artemis: Real Estate Fund I	15.8	24.6	1.5	Jul-11
Artemis: Real Estate Fund II	28.3	10.4	1.1	May-14
BlackRock: Asia Fund II	1.9	-2.2	0.9	Apr-05
BlackRock: Asia Fund III	15.8	3.2	1.2	May-07
BlackRock: Europe Fund III	1.9	3.4	1.2	Jun-07
BlackRock: Europe Parallel Fund II	0.4	-11.4	0.5	Apr-05
Blackstone RE Partners: Asia	114.7	16.6	1.3	Dec-13
Blackstone RE Partners: Europe IV	182.2	14.6	1.3	Apr-14
Blackstone RE Partners: Fund V TE.2	17.1	10.8	1.9	Jul-06
Blackstone RE Partners: Fund VI TE.2	20.6	12.9	2.0	Mar-07
Blackstone RE Partners: Fund VII	66.1	18.3	1.5	Dec-11
Blackstone RE Partners: Fund VIII	94.7	18.6	1.2	Aug-15
Brockton Capital: Fund III	19.9	17.9	1.2	Feb-16
Brookfield Properties: DC Office Partners	68.1	4.5	1.1	Jun-15
Brookfield Properties: DTLA Holdings	266.9	14.9	1.6	Oct-13
Brookfield Properties: Office Partners	$216.2	7.6%	1.8	Oct-06

[1]*Returns for periods over 1 year are annualized.*

Manager Investment Performance Results — as of June 30, 2017 *(continued)*

	Assets Managed ($ millions)	Inception Rate of Return[1]	Equity Multiple	Inception Date
Commingled Funds *(continued)*				
Cabot Properties: Industrial Value Fund II	$ 3.2	3.1%	1.3	Nov-05
Cabot Properties: Industrial Value Fund IV	107.7	14.1	1.2	Mar-14
Cabot Properties: Industrial Core Fund	92.5	10.0	1.1	Jul-16
CBRE: Strategic Partners Europe Fund III	1.0	-17.4	0.3	Apr-07
CBRE: Strategic Partners U.K. Fund III	0.4	-23.6	0.2	May-07
CBRE: Strategic Partners U.S. Opport. 5	19.9	5.3	1.4	Dec-07
CBRE: Strategic Partners U.S. Value 6	5.4	12.3	1.4	Dec-11
CBRE: Strategic Partners U.S. Value 7	46.9	13.1	1.3	Sep-14
Cerberus: Institutional Real Estate Partners	0.3	9.7	1.2	May-04
Cerberus: Institutional Real Estate Partners - Series Two	3.4	17.5	1.5	May-08
Cerberus: Institutional Real Estate Partners III	39.5	12.3	1.3	Dec-12
Clarion Partners: Development Ventures III	9.7	14.7	1.8	Apr-09
Cornerstone: Apartment Venture III	0.0	4.3	1.2	Apr-07
DLJ: Real Estate Capital Partners III	30.0	-1.5	0.9	Jun-05
DLJ: Real Estate Capital Partners IV	65.2	3.3	1.2	Feb-08
Exeter Property Group: Industrial Value Fund	11.7	11.3	1.9	Nov-07
Exeter Property Group: Industrial Value Fund II	12.5	29.7	2.0	Dec-11
Exeter Property Group: Industrial Value Fund III	113.7	18.1	1.3	Sep-14
FCP: Realty Fund II	19.3	22.5	1.6	Feb-12
FCP: Realty Fund III	48.0	19.0	1.3	May-15
GAW Capital: Gateway Real Estate Fund IV	70.2	11.6	1.3	Jun-13
GCM Grosvenor: NYSTRS RE Investment Partners	74.1	5.8	1.1	Jul-14
GCM Grosvenor: NYSTRS RE Investment Partners 2016	22.1	18.4	1.1	Jun-16
Hines Interests: Emerging Markets	1.1	19.8	1.9	Oct-99
Hines Interests: U.S. Office Value Added II	1.3	-4.8	0.7	Aug-07
JPMorgan: Excelsior II	22.6	-2.6	0.8	Dec-05
Landmark Partners: Real Estate Trust IV	0.3	19.6	1.6	Mar-02
LaSalle: Asia Opportunity Fund III	1.8	0.8	1.0	Mar-08
Lone Star: Fund III	0.3	31.9	2.1	Oct-00
Lone Star: Fund IV	5.4	30.8	2.4	Dec-01
Lone Star: Fund V	20.5	-1.4	0.9	Jan-05
Lone Star: Fund VI	10.8	11.7	1.6	Jul-08
Lone Star: Fund VII	4.8	47.1	1.8	Jun-11
Lone Star: Fund IX	53.8	16.1	1.2	Mar-15
Lone Star: Real Estate Fund II	11.8	25.9	1.5	Jun-11
Lone Star: Real Estate Fund III	22.3	19.1	1.4	May-14
Northwood Investors: Real Estate Partners Series VI	29.6	-1.0	1.0	Jan-16
O'Connor: North American Property Partners	17.5	-2.8	0.8	Sep-04
O'Connor: North American Property Partners II	12.2	-2.1	0.9	Oct-07
Penwood RE: Calif. Select Industrial Partners	6.4	-5.5	0.8	Dec-05
Penwood RE: Select Industrial Partners II	0.4	24.9	2.0	Aug-07
Penwood RE: Select Industrial Partners III	28.6	27.8	1.4	Jun-12
Penwood RE: Select Industrial Partners IV	$34.4	6.0%	1.1	Jun-15

[1]*Returns for periods over 1 year are annualized.*

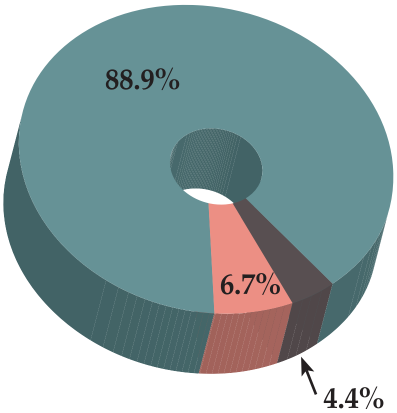
Manager Investment Performance Results — as of June 30, 2017 *(continued)*

	Assets Managed ($ millions)	Inception Rate of Return[1]	Equity Multiple	Inception Date
Commingled Funds *(continued)*				
PGIM Real Estate: PLA Residential Fund III	$10.0	-7.0%	0.6	Mar-08
PGIM Real Estate: PRISA	316.2	6.6	4.9	Sep-85
PGIM Real Estate: PRISA II	267.0	7.7	2.7	Sep-89
PGIM Real Estate: PRISA III	114.8	8.6	1.9	Jun-03
PW Real Assets: Perella Weinberg Real Estate Fund I	1.1	13.0	1.5	Jan-08
PW Real Assets: Perella Weinberg Real Estate Fund II	36.6	8.5	1.2	Sep-13
PW Real Assets: Perella Weinberg Real Estate Fund III	15.0	-9.2	0.9	Oct-16
Rockpoint: Core Plus RE Fund	50.7	12.2	1.2	Mar-15
Rockpoint: Finance Fund I	1.0	-7.9	0.6	Mar-07
Rockpoint: Heritage Fields	54.2	0.6	1.1	Jul-05
Rockpoint: Real Estate Fund I	0.0	11.9	1.2	Sep-04
Rockpoint: Real Estate Fund II	8.0	-2.6	0.9	Sep-05
Rockpoint: Real Estate Fund III	10.6	14.1	1.4	Dec-07
Rockpoint: Real Estate Fund IV	27.7	19.6	1.3	Dec-12
Rockpoint: Real Estate Fund V	17.0	9.4	1.1	Jan-16
Rockwood: Fund V	0.2	12.3	1.4	Jul-03
Rockwood: Fund VI	1.2	1.6	1.1	Jun-05
Rockwood: Fund VII	29.6	-3.7	0.7	Oct-06
Rockwood: Fund VIII	3.4	19.5	1.7	Mar-09
Starwood: Distressed Opportunity Fund IX	33.8	23.2	1.6	Mar-13
Starwood: Opportunity Fund IV	0.1	16.9	2.2	Jan-97
Starwood: Opportunity Fund VII-A	15.4	-2.4	0.8	Jan-06
Starwood: Opportunity Fund X Global	71.3	23.8	1.3	Oct-15
UBS Realty: Trumbull Prop. Fund	363.2	7.0	5.5	Sep-85
Walton Street: Real Estate Fund VI	33.8	8.0	1.4	Apr-09
Westbrook: Real Estate Fund V	11.0	43.7	1.8	Feb-05
Westbrook: Real Estate Fund VI	19.6	0.5	1.0	May-06
Westbrook: Real Estate Fund VII	26.9	3.1	1.2	Dec-07
Westbrook: Real Estate Fund VIII	10.1	12.0	1.3	Jun-10
Westbrook: Real Estate Fund IX	35.2	11.9	1.2	Jun-13
Westbrook: Real Estate Fund X	$16.2	6.9%	1.0	Jul-16

[1]*Returns for periods over 1 year are annualized.*

Domestic Equity Distribution — as of June 30, 2017

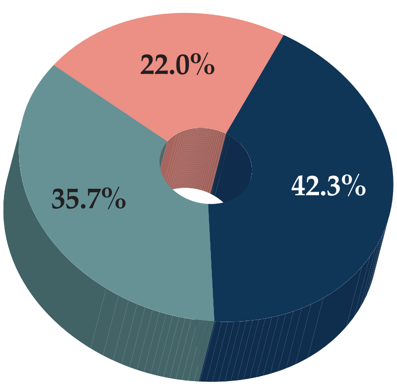
$44,118,523,915



Internal - $39,201,640,383	**88.9%**
S&P 1500 Index2 - $33,517,679,798	76.1%
S&P 100 Index - $1,301,281,164	2.9%
S&P 1500 Value Tilt2 - $1,112,457,009	2.5%
S&P 1500 Growth Tilt2 - $1,118,595,594	2.5%
S&P 500 Index - $1,288,536,840	2.9%
S&P 600 Index - $306,641,225	0.7%
All Cap Disciplined Equity - $556,448,753	1.3%
REITs - $1,952,367,904	**4.4%**
External - $2,964,515,628	**6.7%**
Large Cap - $1,564,118,467	3.5%
Mid Cap - $1,177,035,043	2.7%
Small Cap - $223,362,118	0.5%

Domestic Equity Externally Managed Style Distribution — as of June 30, 2017

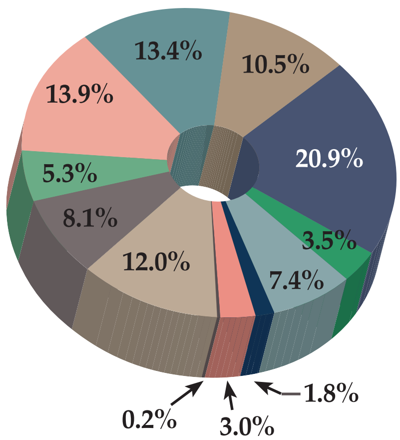
$2,964,515,628



Mid Cap - $1,058,392,531	**35.7%**
Large Cap Enhanced - $651,016,117	**22.0%**
Fund of Funds - $1,255,106,980	**42.3%**
Growth - $328,925,640	11.1%
Value - $278,622,952	9.4%
Core - $647,558,388	21.8%

Domestic Equity Holdings by Industry Distribution — as of June 30, 2017

$44,118,523,915



Consumer Discretionary - $5,280,551,462	**12.0%**
Consumer Staples - $3,560,386,040	**8.1%**
Energy - $2,347,911,186	**5.3%**
Financials - $6,130,562,725	**13.9%**
Health Care - $5,916,797,614	**13.4%**
Industrials - $4,612,625,816	**10.5%**
Information Technology - $9,219,051,132	**20.9%**
Materials - $1,545,799,327	**3.5%**
Real Estate - $3,267,027,590	**7.4%**
Telecommunication Services - $810,808,494	**1.8%**
Utilities - $1,323,335,301	**3.0%**
Miscellaneous - $103,667,228	**0.2%**

Ten Largest Equity Holdings — as of June 30, 2017

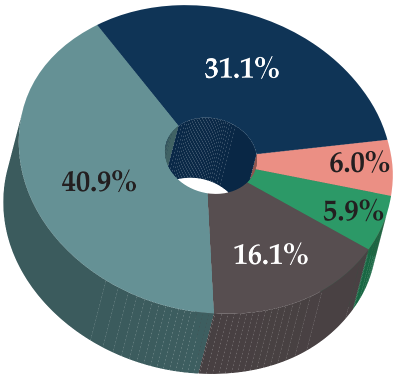
Rank	Company	Cost	Market Value	Percent of Equities
1	Apple Inc.	$ 87,173,191	$1,365,469,894	2.44%
2	Alphabet Inc.	271,981,466	985,588,598	1.76
3	Microsoft Corp.	279,448,348	962,714,016	1.72
4	Amazon.com Inc.	68,028,519	693,458,744	1.24
5	Johnson & Johnson	109,895,792	647,020,336	1.16
6	Facebook Inc.	276,005,607	645,692,392	1.15
7	Exxon Mobil Corp.	135,530,396	608,837,647	1.09
8	JP Morgan Chase & Co.	133,847,247	592,635,406	1.06
9	Berkshire Hathaway Inc.	263,431,149	563,157,452	1.01
10	Wells Fargo + Co.	167,924,273	444,654,057	0.79
Total		**$1,793,265,988**	**$7,509,228,542**	**13.42%**

A complete list of the System's equity holdings is available on our website (see About Us > Investments) or through the Public Information Office.

Domestic Fixed Income Sector Distribution* — as of June 30, 2017

$18,526,216,769

Yield to Maturity 2.2%



U.S. Treasurys - $7,572,679,269 Yield to Maturity - 1.6%	**40.9%**
Corporate - $5,758,958,027 Yield to Maturity - 2.4%	**31.1%**
Federal Agency, Notes/Debentures - $1,116,557,140 Yield to Maturity - 1.9%	**6.0%**
REIT & Commercial Mortgage Backed, Separate Account - $1,095,351,823 Yield to Maturity - 3.7%	**5.9%**
Federal Agency, Mortgage Backed & Asset Backed - $2,982,670,510 Yield to Maturity - 2.8%	**16.1%**

**Excluding CMBS Commingled Fund.*

Ten Largest Fixed Income Holdings* — as of June 30, 2017

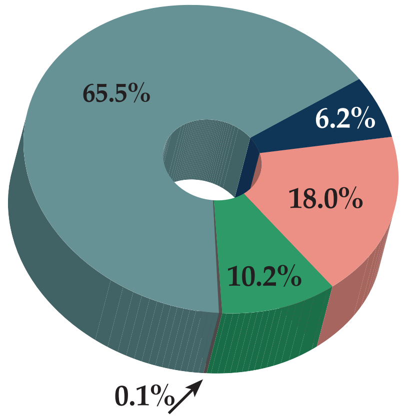
Rank	Issue	Market Value	Percent of Fixed Income Market Value
1	U.S. Treasury Note 1.25% Due 4/30/2019	$124,692,375	0.6%
2	AID-Israel 5.50% Due 4/26/2024	119,378,700	0.6%
3	U.S. Treasury Note 3.625% Due 2/15/2020	105,441,400	0.5%
4	U.S. Treasury Note 1.25% Due 6/30/2019	99,726,600	0.5%
5	U.S. Treasury Note 2.75% Due 11/15/2023	78,070,350	0.4%
6	U.S. Treasury Note 0.625% Due 8/31/2017	74,953,125	0.4%
7	U.S. Treasury Note 1.25% Due 3/31/2019	74,838,900	0.4%
8	U.S. Treasury Note 1.75% Due 5/15/2022	74,589,825	0.3%
9	U.S. Treasury Note 0.75% Due 9/30/2018	74,469,750	0.3%
10	U.S. Treasury Note 2.00% Due 6/30/2024	74,337,900	0.3%
Total		**$900,498,925**	**4.3%**

**Excluding short-term portfolio holdings.*

A complete list of the System's fixed income holdings (excluding short-term) is available on our website (see About Us > Investments) or through the Public Information Office.

Domestic Fixed Income Quality Distribution — as of June 30, 2017

$18,526,216,769*



Aaa**	Aa	A	Baa	Others
$12,127,284,661	$1,156,536,926	$3,339,276,385	$1,884,642,444	$18,476,353
65.5%	**6.2%**	**18.0%**	**10.2%**	**0.1%**

**Excluding CMBS portfolio cash/short-term investment fund and CMBS commingled fund.*

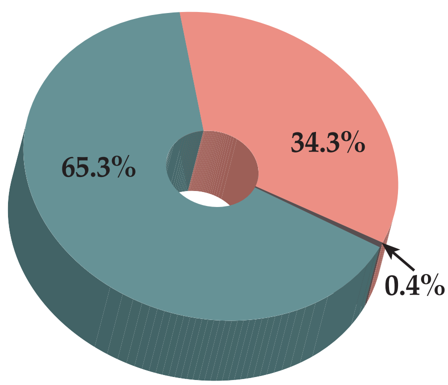
***Includes explicitly and implicitly guaranteed debt issued by the U.S. government and its agencies.*

Domestic Fixed Income Average Maturity — as of June 30, 2017

$17,430,863,946

Internally Managed

Effective Duration 3.9 Years

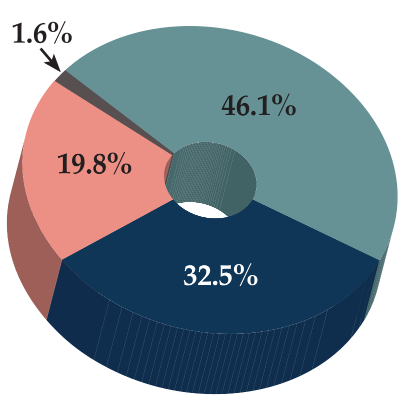


Less than 5 Years - $11,378,029,471 Duration - 2.5 Years	**65.3%**
5-10 Years - $5,977,093,758 Duration - 6.4 Years	**34.3%**
10+ Years - $75,740,717 Duration - 11.0 Years	**0.4%**

Short-Term Sector Distribution — as of June 30, 2017

$4,564,569,335

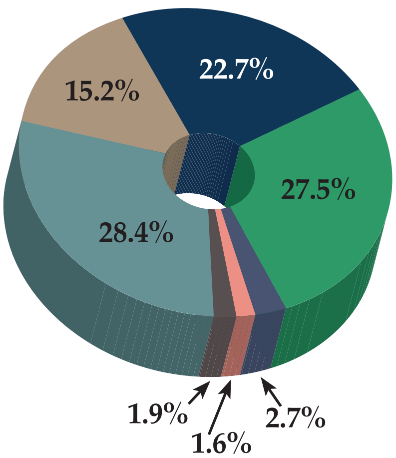
Internally Managed



Industrial - $2,103,499,269	**46.1%**
Utilities - $74,977,968	**1.6%**
Governmental/Agency/Supranational - $903,363,242	**19.8%**
Banks & Finance - $1,482,728,856	**32.5%**

Global Fixed Income Quality Distribution — as of June 30, 2017

$2,461,345,970



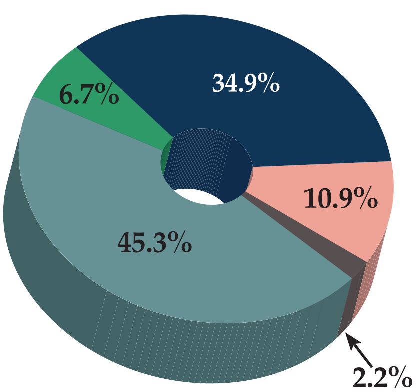
Aaa - $699,022,256	28.4%
Aa - $374,124,587	15.2%
A - $558,725,535	22.7%
Baa - $676,870,142	27.5%
Ba - $66,456,341	2.7%
B/Caa - $39,381,536*	1.6%
Not Rated - $46,765,573**	1.9%

**Caa exposure is less than 0.1%.*

***Includes cash (U.S. dollar equivalents) and State Street Government Short-Term Investment Fund.*

Global Fixed Income Sector Distribution — as of June 30, 2017

$2,461,345,970

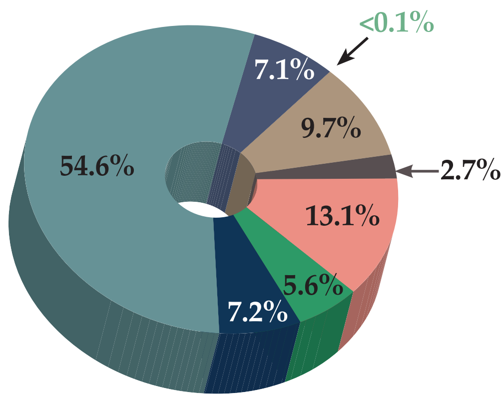


Global Treasurys - $1,115,602,992	45.3%
Government Related - $163,550,350	6.7%
Corporate - $859,768,702	34.9%
Securitized - $268,722,533	10.9%
Other - $53,701,393*	2.2%

**Includes cash (U.S. dollar equivalents) and State Street Government Short-term Investment Fund*

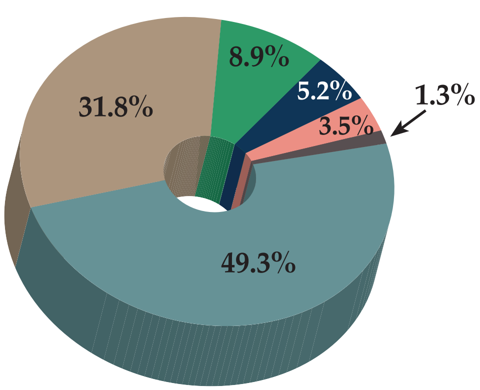
Private Equity Net Asset Value by Investment Type — as of June 30, 2017

$8,408,856,498



LBO/MBO - $4,585,508,058	**54.6%**
Venture Capital - $601,535,260	**7.1%**
Real Estate - $2,353,731	**<0.1%**
Co-Investments - $814,011,125	**9.7%**
Distressed/Turnaround - $226,468,405	**2.7%**
Fund of Funds - $1,102,491,330	**13.1%**
Credit - $467,582,315	**5.6%**
Secondary Funds - $608,906,272	**7.2%**

Private Equity Net Asset Value by Geography* — as of June 30, 2017

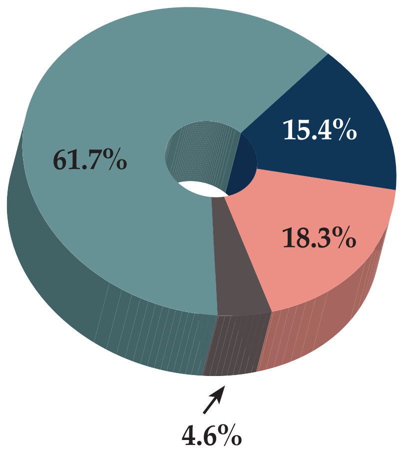


North America	**49.3%**
Multi-National	**31.8%**
Western Europe	**8.9%**
United Kingdom	**5.2%**
Asia	**3.5%**
Rest of World	**1.3%**

**Excluding fund of funds and secondary investments.*

International Equity Style Distribution — as of June 30, 2017

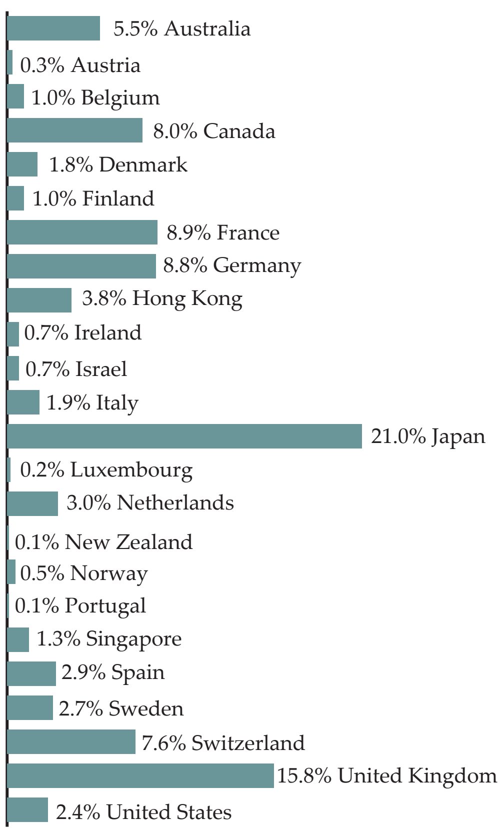
$21,698,164,658



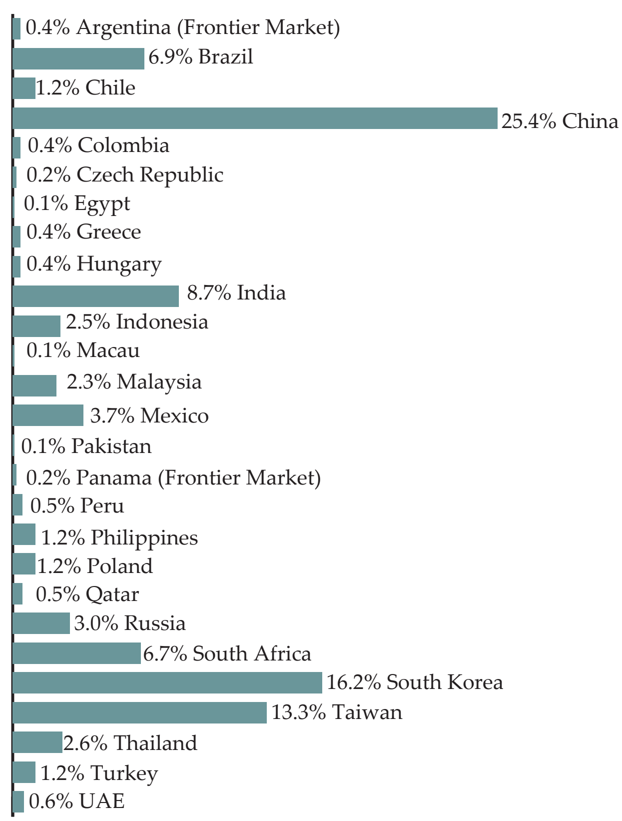
- Developed Markets - Passive - $13,377,616,313 **61.7%**
- Developed Markets - Active - $3,350,660,685 **15.4%**
- Emerging Markets - Passive - $3,978,897,972 **18.3%**
- Emerging & Frontier Markets - Active - $990,989,688 **4.6%**

International Equity Exposure Distribution — as of June 30, 2017

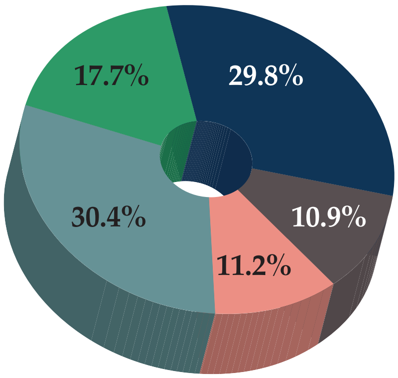
Percentage of Portfolio for Developed Countries
$16,728,276,998



Percentage of Portfolio for Emerging & Frontier Markets
$4,969,887,660

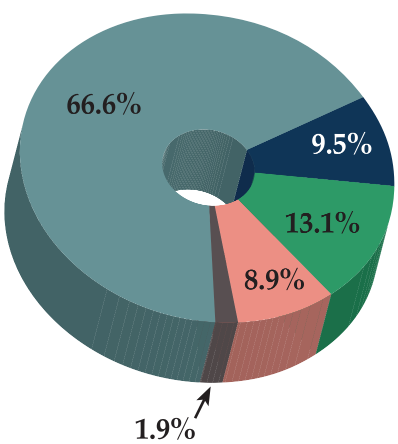


Real Estate Equity by Property Type — as of June 30, 2017



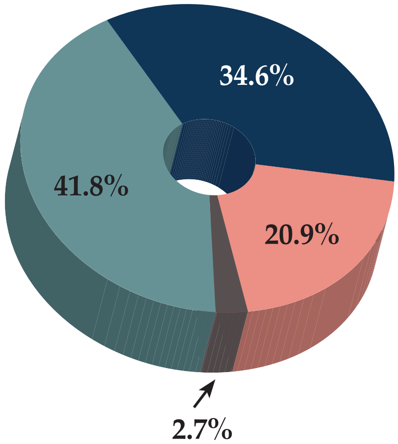
Office	29.8%
Residential	17.7%
Retail	30.4%
Hotel/Other	11.2%
Industrial/R&D	10.9%

Real Estate Debt by Property Type — as of June 30, 2017



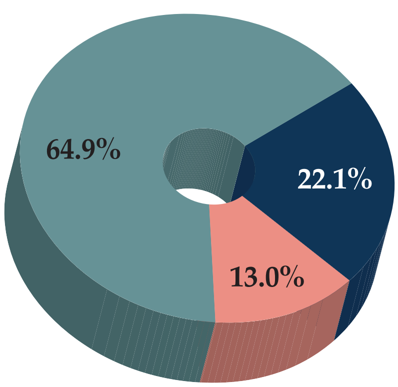
Office	66.6%
Residential	9.5%
Retail	13.1%
Mixed Use/Other	8.9%
Industrial/R&D	1.9%

Breakdown of Real Estate Equity Portfolio — as of June 30, 2017



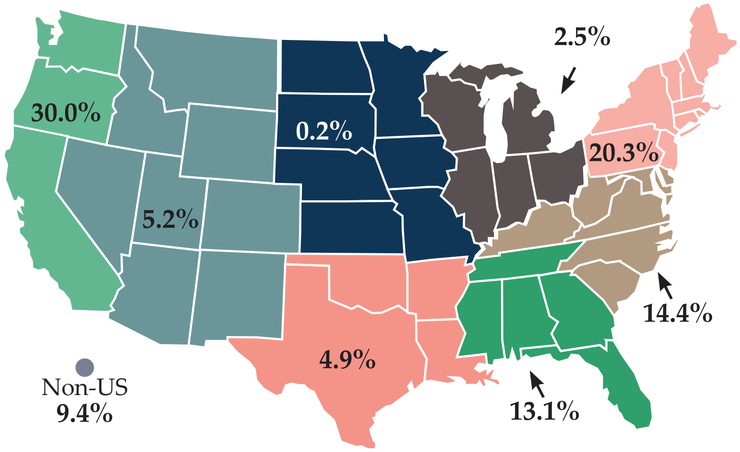
Direct Investments	41.8%
Private Securities	34.6%
Public Securities	20.9%
Timber Investments	2.7%

Breakdown of Real Estate Debt Portfolio — as of June 30, 2017



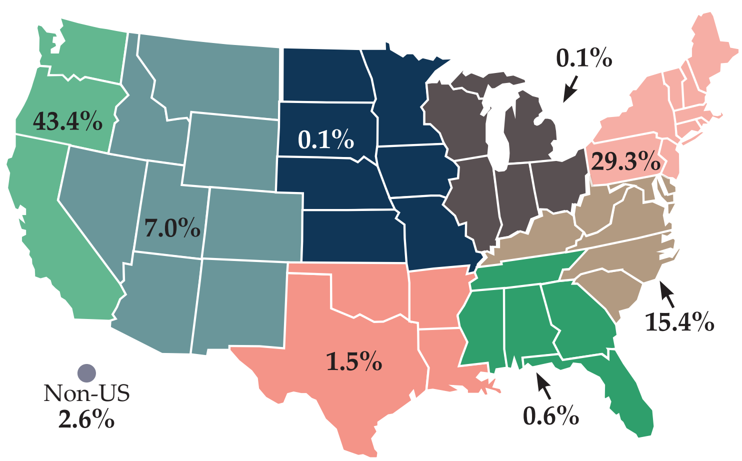
Conventional Mortgages	64.9%
CMBS	22.1%
Mezzanine Debt	13.0%

Geographic Distribution of the Real Estate Equity Portfolio — as of June 30, 2017



●	Pacific	30.0%
●	Mountain	5.2%
●	West North Central	0.2%
●	East North Central	2.5%
●	Northeast	20.3%
●	Mideast	14.4%
●	Southeast	13.1%
●	Southwest	4.9%
●	Non-U.S.	9.4%

Geographic Distribution of the Real Estate Debt Portfolio — as of June 30, 2017



●	Pacific	43.4%
●	Mountain	7.0%
●	West North Central	0.1%
●	East North Central	0.1%
●	Northeast	29.3%
●	Mideast	15.4%
●	Southeast	0.6%
●	Southwest	1.5%
●	Non-U.S.	2.6%

Corporate Governance

Shareholder responsibility is fundamental to good corporate governance, which recognizes an appropriate balance between the rights of shareholders (the owners of the corporation) and the need for management and the Board to direct the corporation's affairs with a long-term perspective. The System's shareholder voting rights must be managed with the same care as any of its other assets. Therefore, the Retirement Board has established a formal proxy voting policy reflecting three objectives: to protect the System's rights; to promote responsible corporate policies and activities; and, to enhance long-term value.

For the 2016 calendar year, a total of 21,352 proposals were voted on, representing 2,216 meetings for the companies it owns in the System's equity portfolio. Many of the proxies focused on auditors/CPA and board-related issues, and executive compensation. System policies generally support management if the position is reasonable, is not detrimental to the long-term economic prospects of the company, and does not tend to diminish the rights of shareholders.

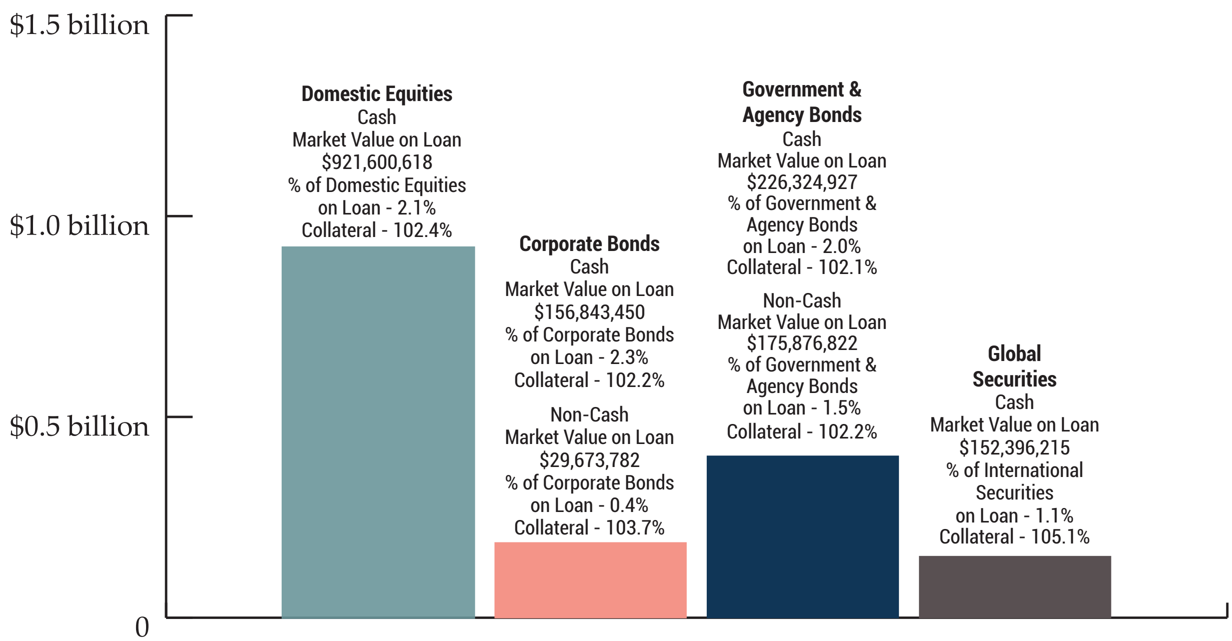
Management Proposals (20,784)		
Position	Number of Proposals	Percentage of Position
For	18,234	87.8%
Against	2,499	12.0%
Abstain	51	0.2%

Shareholder Proposals (568)		
Position	Number of Proposals	Percentage of Position
For	250	44.0%
Against	314	55.3%
Abstain	4	0.7%

Securities Lending Program — as of June 30, 2017

Market Value on Loan

Cash: $1,457,165,210 – Non-Cash: $205,550,604 – Total: $1,662,715,814



Schedule of Investment Fees and Expenses
Year ended June 30, 2017
(dollars in thousands)

Fund Manager	Investment Management Expenses 2016-2017
Domestic Fixed Income Securities:	
BlackRock Financial Management	$ 951
Prima Capital Advisors	986
Torchlight Investors	600
Total Domestic Fixed Income:	$ 2,537
Global Fixed Income Securities:	
Goldman Sachs Asset Management	$ 691
Loomis, Sayles & Company	1,758
Wellington Management Company	2,061
Total Global Fixed Income:	$4,510
Domestic Equities:	
Adelante Capital Management	$1,047
Cohen & Steers	2,880
Iridian Asset Management	5,439
Leading Edge Investment Advisors	2,763
Progress	3,878
RREEF America	1,319
T. Rowe Price	1,516
Total Domestic Equities:	$18,842
International Equities:	
Aberdeen Asset Management	$2,742
Ariel Investments	132
AQR Capital Management	2,840
Baillie Gifford	2,409
BlackRock ACWI Index	2,364
Dimensional Fund Advisors	797
FIS Group	782
LaSalle Investment Management	703
LSV Asset Management	3,025
Marathon Asset Management	2,727
RREEF America	1,660
State Street Global Advisors	2,176
William Blair & Co.	2,228
Total International Equities:	$24,585
Mortgages:	
Deutsche Bank	$ 1
FHA Mortgages	1
NY Life	51
NYS Teachers' Retirement System	6
Total Mortgages:	$ 59

Fund Manager	Investment Management Expenses 2016-2017
Real Estate:	
Clarion	$ 3,268
Invesco	1,297
JPMorgan Investment Management	8,667
Kennedy	404
Sentinel	2,409
Real Estate Separate Accounts/Commingled	49,199
Total Real Estate:	$ 65,244
Alternative Investments:	
Private Equity	$ 99,169
Real Estate	25,615
Total Alternative Investments:	$124,784
General Expenses:	
Advisory Committee - Investment	$ 59
Advisory Committee - Real Estate	68
Aon Hewitt Investment Consulting Inc.	512
BARRA	753
Bloomberg	264
Callan Associates	586
Factset Research Systems	1,177
Hirschler Fleischer	62
International Equity - Market Fees	43
Investment Information Services	1,595
JPMorgan Chase	93
K&L Gates	122
Morgan, Lewis & Bockius	195
Nixon Peabody	85
Real Estate Origination Costs	198
Real Estate Professional Fees	277
Real Estate Service Costs	32
Robinson Bradshaw	73
Seward & Kissel	110
Squire Patton Boggs	63
SS&C Technologies	254
State Street Corporation	715
TorreyCove	809
Total General Expenses:	$ 8,145
Total Investment Fees and Expenses:	**$248,706**

(continued)

Investment Advisory Committee

David L. Brigham, Chairman
Trustee
Church Pension Fund
New York, New York

Howard J. Bicker
Executive Director/CIO (Retired)
Minnesota State Board of Investment
Saint Paul, Minnesota

Daniel J. Bukowski *(appointed 10.27.16)*
Managing Partner
Net Alpha Advisors, LLC
Chicago, Illinois

Johanna Fink
Chief Operating Officer
Leducq Corporation
Boston, Massachusetts

Leonade D. Jones
Director
American Funds Group
Washington, D.C.

Robert Levine, CFA
Chief Investment Officer (Retired)
Nomura Corporate Research and
Asset Management Inc.
New York, New York

James W. O'Keefe
Managing Director (Retired)
UBS Realty Investors LLC
Hartford, Connecticut

Geoffrey Gerber, Ph.D. *(resigned 7.18.16)*
President & Founder
TWIN Capital Management, Inc.
McMurray, Pennsylvania

Robert G. Wade Jr. *(resigned 9.30.16)*
Director (Retired)
Chancellor LGT Asset Management
New York, New York

Real Estate Advisory Committee

James O'Keefe, Chairman
Managing Director (Retired)
UBS Realty Investors LLC
Hartford, Connecticut

Herman Bulls
President & Chief Executive Officer
Bulls Advisory Group LLC
McLean, Virginia

Eileen Byrne
Managing Director (Retired)
BlackRock Inc.
New York, New York

Paul J. Dolinoy
President (Retired)
Equitable Real Estate/Lend Lease
Atlanta, Georgia

Blake Eagle
Chief Executive Officer (Retired)
National Council of Real Estate Investment Fiduciaries
Chicago, Illinois

Maureen A. Ehrenberg
Executive Managing Director
Jones Lang LaSalle
Chicago, Illinois

Jill S. Hatton
Managing Director (Retired)
BlackRock Inc.
Boston, Massachusetts

Investment Consultants

Aon Hewitt Investment Consulting Inc.
Chicago, Illinois

Callan Associates
San Francisco, California

Elkins/McSherry LLC
New York, New York

TorreyCove Capital Partners
San Diego, California

Master Custodian

State Street Bank & Trust Co.
Boston, Massachusetts

External Investment Managers & Advisors

Domestic Equities:

Active All Cap
Leading Edge Investment Advisors
(Manager of Managers)

Active Mid Cap
Iridian Asset Management LLC

Enhanced All Cap
Progress Investment Management Co.
(Manager of Managers)

Enhanced Large Cap
T. Rowe Price Associates Inc.

Global Fixed Income Securities:

Active
Goldman Sachs Asset Management LP
Loomis Sayles & Company
Wellington Management Company LLP

International Equities:

Active
Aberdeen Asset Management Inc.
Ariel Investments LLC
AQR Capital Management LLC
Baillie Gifford Overseas Ltd.
Dimensional Fund Advisors
FIS Group Inc.
LSV Asset Management
Marathon Asset Management LLP (Marathon-London)
William Blair & Company

Passive
State Street Global Advisors
BlackRock Institutional Trust Co. N.A.

Securities Lending:

JPMorgan Chase Bank N.A.
State Street Bank & Trust Co.

External Investment Managers & Advisors *(continued)*

Private Equity - Limited Partnerships:

Abbott Select Buyouts Fund
Abbott Select Buyout Fund II
ABRY Advanced Securities Fund II
ABRY Advanced Securities Fund III LP
ABRY Mezzanine Partners
ABRY Partners Fund V
ABRY Partners Fund VI
ABRY Partners Fund VII
ABRY Partners Fund VIII
ABRY Senior Equity Fund II
ABRY Senior Equity Fund III
ABRY Senior Equity Fund IV
ABRY Senior Equity Fund V
AG Capital Recovery Partners VII LP
Aisling Capital II LP
Aisling Capital III LP
Alchemy Plan (Empire)
Amulet Capital Fund I LP
Apex V
Apex V Secondary
Apex VI
Apollo Real Estate Fund IV
Ares Corporate Opportunities Fund II LP
Ares Corporate Opportunities Fund III
Ares Corporate Opportunities Fund IV LP
Ares Corporate Opportunities Fund V LP
Avenue Special Situations Fund V LP
Blackstone Capital Partners IV LP
Blackstone Capital Partners V LP
Caltius Partners IV LP
CapStreet IV LP
Carlyle Asia Partners IV LP
Carlyle European Partners III LP
Carlyle Partners IV LP
Carlyle Partners V LP
Carlyle/Riverstone Global Energy & Power Fund III LP
Charterhouse Capital Partners VII
Charterhouse Capital Partners VIII
Charterhouse Capital Partners IX
Chisholm Partners III
Cinven III
Cinven IV
Cinven V
Cinven VI
Clayton Dubilier & Rice VI
Clearlake Capital Partners III LP
Clearlake Capital Partners IV LP
Clearlake Opportunities Partners LP
Close Brothers Private Equity Fund VII
Co-Investment Partners (NY) LP
Co-Investment Partners (NY) II LP
Co-Investment Partners (NY) III LP
Co-Investment Partners Europe LP
Cortec Group Fund V LP
Cortec Group Fund VI LP
Cressey & Co. V LP
CVC Capital Partners Asia Pacific IV LP
CVC Capital Partners VI LP
CVC European Equity Partners V LP
Doughty Hanson & Co. V
EIV Capital III LP
Energy Capital Partners II LP
Energy Capital Partners III LP
Fairview Ventures Fund II
Fairview Ventures Fund III
FirstMark Capital II LP
FirstMark Capital III LP
GCM Grosvenor Cleantech
GCM Grosvenor Seasoned Primaries
GCM Grosvenor Seasoned Primaries II
GCM Grosvenor Seasoned Primaries III
General Catalyst Group VII LP
Gilde Buy-Out Fund V C.V.
Green Equity Investors V
GTCR Fund VIII
GTCR Fund IX
GTCR Fund X
GTCR Fund XI LP
HarbourVest International PEP IV
HarbourVest International PEP V
HarbourVest International PEP VI - Asia Pacific Fund
HarbourVest Partners VII-Mezzanine Fund
HarbourVest Partners VII-Venture Fund
HarbourVest Partners VIII-Venture Fund
HarbourVest VI - Partnership Fund
HarbourVest/NYSTRS Co-Investment Fund
HarbourVest/NYSTRS Co-Investment Fund II LP
Hellman & Friedman Capital Partners VIII LP
Hellman & Friedman V
Hellman & Friedman VI
Hellman & Friedman VII
Highland Capital Partners IX LP
HIPEP Select Asia Fund LP
HIPEP Select Asia II LP
Horsley Bridge VII
Hutton Collins Capital Partners II LP
Hutton Collins Capital Partners III LP
ICG Europe Fund V LP
ICG Europe Fund VI LP
IK Fund VII LP
IK Fund VIII LP
Industri Kapital 2007 Fund
Inflexion 2010 Buyout Fund
Inflexion Buyout Fund IV LP
Inflexion Enterprise Fund IV LP
Inflexion Partnership Capital Fund LP

External Investment Managers & Advisors *(continued)*

Private Equity - Limited Partnerships: *(continued)*

Inflexion Supplemental Fund IV LP
Institutional Venture Partners XIV LP
Institutional Venture Partners XV LP
JC Flowers II LP
JLL Partners Fund V LP
JLL Partners Fund VI LP
Kelso Investment Associates VII
Kelso Investment Associates VIII
KKR Asian Fund II LP
KRG Capital Fund III
KRG Capital Fund IV
Lexington Capital Partners V
Lexington Capital Partners VI
Lexington Capital Partners VII
Lexington Emerging Partners LP
Lexington Middle Market Investors
Lexington Middle Market Investors II
Lightspeed Venture Partners IX LP
Lightspeed Venture Partners X LP
Lightspeed Venture Partners Select LP
Lyceum Capital Fund III LP
Madison Dearborn Capital Partners IV
Madison Dearborn Capital Partners V
Madison Dearborn Capital Partners VI
MBK Partners Fund IV LP
Metalmark Capital Partners LP
Monomoy Capital Partners III LP
Nautic Partners VIII LP
Nautic V
Nautic VI
Nautic VII
Oaktree European Principal Fund III LP
Olympus Growth Fund IV
Olympus Growth Fund V
Olympus Growth Fund VI
One Rock Capital Partners II LP
Orion Energy Credit Opportunities Fund II LP
P123 Ltd
Pacific Equity Partners Fund V LP
Patria - Brazilian Private Equity Fund V LP
PEG Pooled Venture Capital Institutional Investors II LLC
PEG Pooled Venture Capital Institutional Investors III LLC
Peninsula Fund V LP
Permira IV
Phoenix Equity Partners 2010 Fund
Phoenix Equity Partners 2016 LP
Pine Brook Capital Partners LP
Pine Brook Capital Partners II LP
Rhone Partners IV LP
Rhone Partners V LP
Riverstone/Carlyle Global Energy and Power Fund IV
Silver Lake Partners II
Silver Lake Partners III
Silver Lake Partners IV LP
Silver Lake Partners V LP
Siris Partners III LP
Spark Capital Growth Fund II LP
Spark Capital Partners IV LP
Spark Capital Partners V LP
StepStone Pioneer Capital Buyout Fund I
StepStone Pioneer Capital Europe I LP
StepStone Pioneer Capital Europe II LP
StepStone Pioneer Capital Fund II LP
StepStone Pioneer Capital Fund III LP
Sterling Group Partners III LP
Sterling Group Partners IV LP
Strategic Partners II
Strategic Partners III - Venture
Strategic Partners III LP
Strategic Partners IV LP
Strategic Partners IV - VC LP
Strategic Partners V LP
Sun Capital Partners V LP
TCV IX LP
TDR Capital IV LP
Technology Crossover Ventures IV
Technology Crossover Ventures V
Technology Crossover Ventures VI
Technology Crossover Ventures VII
Tenex Capital Partners II LP
The First Capital Access Fund LP
The Resolute Fund II LP
The Resolute Fund III LP
Thoma Bravo Discover Fund LP
Thoma Bravo Fund X
Thoma Bravo Fund XI LP
Thoma Bravo Fund XII LP
Thoma Bravo Special Opportunities Fund I LP
Thoma Bravo Special Opportunities Fund II LP
Thomas H. Lee VI
TPG Partners III
TPG Partners IV
TPG Partners V
TPG Partners VI
Trident VII LP
TSG4 (TSG Consumer Partners)
TSG5
TSG6 LP
TSG7 A LP
TSG7 B LP
Valhalla Partners II LP
Valor Equity Partners IV LP
VantagePoint NY Venture Partners
VantagePoint Venture Partners 2006
VantagePoint Venture Partners IV
VCFA Private Equity Partners IV

External Investment Managers & Advisors *(continued)*

Private Equity - Limited Partnerships: *(continued)*

Veritas Capital Buyout Fund VI LP
Vista Equity Partners Fund IV
Warburg Pincus Private Equity VIII
Waud Capital Partners III LP
Waud Capital Partners IV LP
WCAS Capital Partners IV
Welsh, Carson, Anderson, & Stowe X
Welsh, Carson, Anderson, & Stowe XI
Wynnchurch Capital Partners III LP

Real Estate Advisors

Equity:

Bentall Kennedy
Clarion Partners
Forest Investment Associates
Invesco Advisers Inc.
JPMorgan Asset Management
Sentinel Real Estate Corporation

Debt:

Barings Real Estate Advisers LLC
BlackRock Financial Management Inc.
Blackstone Real Estate Advisors
Brookfield Real Estate Financial Partners LLC
Capri Capital Advisors LLC
Grosvenor Capital Management
Latitude Management Real Estate Investors Inc.
Madison Realty Capital
PCCP LLC
PGIM Real Estate
Prima Capital Advisors LLC
TCI Real Estate Partners Limited
Torchlight Investors

REITs:

Adelante Capital Management LLC
Cohen & Steers Capital Management Inc.
Deutsche Asset & Wealth Management
LaSalle Investment Management

Commingled:

Abacus Capital Group LLC
Aermont Capital LLP
Angelo, Gordon & Co.
Apollo Global Real Estate
Artemis Real Estate Partners
Barings Real Estate Advisers LLC
BlackRock Inc.
Blackstone Real Estate Advisors
Brockton Capital LLP
Brookfield Office Properties Inc.
Cabot Properties Inc.
CBRE Global Investors
Cerberus Capital Management LP
Clarion Partners
DLJ Real Estate Capital Partners LLC
Exeter Property Group
Federal Capital Partners
Gaw Capital Partners
Grosvenor Capital Management
Hines Interests Limited Partnership
JPMorgan Asset Management
Landmark Partners Inc.
LaSalle Investment Management
Lone Star Funds
Northwood Investors LLC
O'Connor Capital Partners
Penwood Real Estate Investment Management LLC
PGIM Real Estate
Rockpoint Group LLC
Rockwood Capital Corporation
Starwood Capital Group LLC
UBS Realty Investors LLC
Walton Street Capital
Westbrook Partners

Actuarial

ACTUARIAL

Page

Actuarial Certification Letter

New York State Teachers' Retirement System
10 Corporate Woods Drive
Albany, NY 12211-2395
(800) 348-7298 or (518) 447-2900
NYSTRS.org
Thomas K. Lee, Executive Director & CIO

Office of the Actuary

October 12, 2017

Retirement Board
New York State Teachers' Retirement System
10 Corporate Woods Drive
Albany, New York 12211-2395

Dear Members of the Board:

The financial objective of the New York State Teachers' Retirement System is to properly fund the retirement and ancillary benefits of members in order to ensure sufficient assets are being accumulated in order to pay benefits as they become due. Employer contributions are made by participating employers in accordance with an actuarially determined employer contribution rate. This rate is determined by an actuarial valuation made as of each June 30th. Members contribute in accordance with a fixed rate schedule as required by statute.

The most recently completed actuarial valuation was made as of June 30, 2016. This valuation relies on member data provided by the participating employers to the Retirement System. The administrative and actuarial staffs review this data for reasonability as well as reconcile it against prior data. In addition, the valuation relies on financial data provided by the Retirement System's Finance Department. The Retirement System's independent auditors provide reasonable assurances of the data provided by the Finance Department as part of the annual audit. I have reviewed the member data and believe it to be reasonable and appropriate for purposes of this valuation.

Actuarial assumptions, as adopted by the Retirement Board, are reviewed each year against experience on both an annual and quinquennial basis and changes are recommended when warranted. The current actuarial assumptions were adopted by the Retirement Board in October 2015 and first effective with the June 30, 2015 actuarial valuation. These assumptions included a decrease in the System's assumed rate of return from 8.00% to 7.50%. The actuarial funding method is the Aggregate Cost Method and is specified in statute. In this method, actuarial gains and losses are not separately amortized, but are spread over the average future working lifetime of active members and included in the annual normal rate calculation. A summary of the actuarial methods and assumptions used in the actuarial valuation is included later in this section. More detail on the valuation and actuarial methods and assumptions is available in the System's Actuarial Valuation Report.

The System's market value rate of return on assets for the fiscal year ending June 30, 2016 was 2.3%. The System's five-year annualized rate of return decreased to 8.3%. The June 30, 2016 actuarial valuation produced a required employer contribution rate of 9.80% of payroll, representing a decrease of approximately 16% over the prior year's rate of 11.72%. This was the third consecutive decrease in the employer contribution rate following five years of increases. Investment gains from prior years recognized in the actuarial value of assets resulted in the decrease in the employer contribution rate.

Looking ahead to next year, the capital markets produced strong returns during the fiscal year ending June 30, 2017, and the System achieved a net rate of return of 12.5% for the fiscal year. This is the first year out of the last three with a return that is above the assumed rate of return. The System's five-year annualized rate of return stands at 10.2%. The actuarial value of assets smoothing process recognizes gains and losses gradually over a five year period thereby moderating their impact on the employer contribution rate.

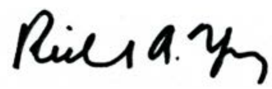
Actuarial Certification Letter (continued)

As of this date, the System is contemplating a lowering of its assumed rate of return to 7.25% for the actuarial valuation as of June 30, 2017. A decrease in the assumed rate of return has the effect of increasing the required employer contribution rate.

The plan's funded ratio as of June 30, 2016, calculated using the Actuarial Value of Assets (AVA) was 97.9% and calculated using the Market Value of Assets (MVA) was 98.4%. The primary reason for this healthy funded ratio is that the System has collected the actuarially-required contribution annually from employers. The significance of this cannot be overstated. Various exhibits in this section provide further information on the actuarial assets, liabilities, and the funding level.

All actuarial calculations have been prepared in accordance with generally accepted actuarial principles, procedures, and standards of practice as prescribed by the Actuarial Standards Board, and Statements of the Governmental Accounting Standards Board, where applicable. All schedules in the Actuarial and Statistical sections except "*Changes in Fiduciary Net Position*" and "*Benefits and Return of Contributions by Type*" were prepared under my direction, as was the actuarial material in the Required Supplementary Information and the Notes to the Financial Statements in the Financial section. I meet the qualification standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,



Richard A. Young, A.S.A., E.A., M.A.A.A., F.C.A.
Actuary

cc: T. Lee

Summary of Actuarial Methods and Assumptions — as of June 30, 2016

Methods

Actuarial funding method:	Aggregate Cost Method (gains and losses are smoothed over the average future working lifetime of active members). All benefits are included in the actuarial valuation. See *Summary of Benefits* in the Introduction.
Actuarial asset valuation method:	Five-year phased in deferred recognition of each year's net investment income/loss, in excess of (or less than) an assumed gain of 7.5%.

Assumptions

Assumptions are computed by the Actuary and adopted by the Retirement Board. They are based upon recent NYSTRS member experience. Selected sample rates are shown below. Adoption dates shown in parentheses. Detailed assumption information may be found in NYSTRS' annual Actuarial Valuation Report.

Economic

Valuation Rate of Interest (10/2015)
7.5% compounded annually. The valuation rate of interest contains a 2.5% assumed annual rate of inflation.

Rates of Salary Increase (10/2015) Including Cost-of-Living, Merit and Productivity	
Years of Service	
5	4.72%
15	3.46
25	2.37
35	1.90

Projected COLA Rate (10/2015)
1.5% annually

Demographic

Base Rates of Mortality (10/2015)

Male Age	Active Members	Male Age	Retired Members & Beneficiaries	Male Age	Disabled Members
30	0.03%	20	0.03%	30	18.00%
40	0.05	40	0.05	40	13.29
50	0.08	60	0.39	60	4.26
60	0.20	80	4.04	80	7.56
Female Age		Female Age		Female Age	
30	0.01%	20	0.01%	30	10.65%
40	0.02	40	0.04	40	8.19
50	0.06	60	0.29	60	3.13
60	0.10	80	2.82	80	7.40

Rates of Withdrawal (10/2015) Ten-Year Ultimate Rates

Male Age	
35	0.85%
40	0.75
45	0.87
50	0.92
Female Age	
35	1.88%
40	1.15
45	1.01
50	0.94

Rates of Service Retirement (10/2015)

Male Age	Tier 1 & Tiers 2-4 age 62 or with 30 years of service & Tier 5 age 62	Tiers 2-4 less than age 62 & less than 30 years of service	Tier 5 less than age 62 & less than 30 years of service	Tier 5 less than age 62 & with 30 years of service	Tier 6
55	30.67%	3.20%	1.60%	1.60%	1.60%
60	31.10	6.36	3.18	25.94	3.18
65	20.97	-	-	-	25.24
70	16.36	-	-	-	27.03
Female Age					
55	31.40%	3.46%	1.73%	1.73%	1.73%
60	27.94	7.04	3.52	26.10	3.52
65	23.83	-	-	-	26.95
70	22.93	-	-	-	25.72

Rates of Disability Retirement (10/2015)

Male Age	
35	0.01%
40	0.02
45	0.05
50	0.09
Female Age	
35	0.01%
40	0.02
45	0.05
50	0.10

Actuarial Present Value of Future Benefits — as of June 30, 2016 and June 30, 2015
(in thousands)

Each year an actuarial valuation determines the actuarial present value of future benefits (PVB), which is the present value of retirement and ancillary benefit payments, excluding group life insurance benefits, that the Retirement System can expect to pay in the future to current retirees and members. The PVB is based upon both service and salary projected to retirement. The results of the two most recent actuarial valuations are displayed in the following table.

	2016	2015
Present Value of Benefits Currently Being Paid:		
Service Retirement Benefits	$ 59,300,507	$ 58,061,673
Disability Retirement Benefits	331,309	322,369
Death Benefits	1,866	1,869
Survivor Benefits	932,669	883,930
Cost-of-Living Allowance	5,013,195	4,990,575
Total Present Value of Benefits Currently Being Paid	65,579,546	64,260,416
Present Value of Benefits Payable in the Future to Current Active Members:		
Service Retirement Benefits	50,051,245	48,422,365
Disability Retirement Benefits	209,350	202,511
Termination Benefits	2,001,472	1,955,951
Death and Survivor Benefits	362,916	349,156
Cost-of-Living Allowance	1,276,730	1,255,059
Total Active Member Liabilities	53,901,713	52,185,042
Present Value of Benefits Payable in the Future to Current Inactive (Vested) Members:		
Retirement Benefits	338,520	315,058
Death Benefits	311	300
Cost-of-Living Allowance	28,275	26,660
Total Vested Liabilities	367,106	342,018
Unclaimed Funds	15,082	13,098
Total Actuarial Present Value of Future Benefits	**$119,863,447**	**$116,800,574**

Note: Totals may not sum due to rounding.

Funding Progress

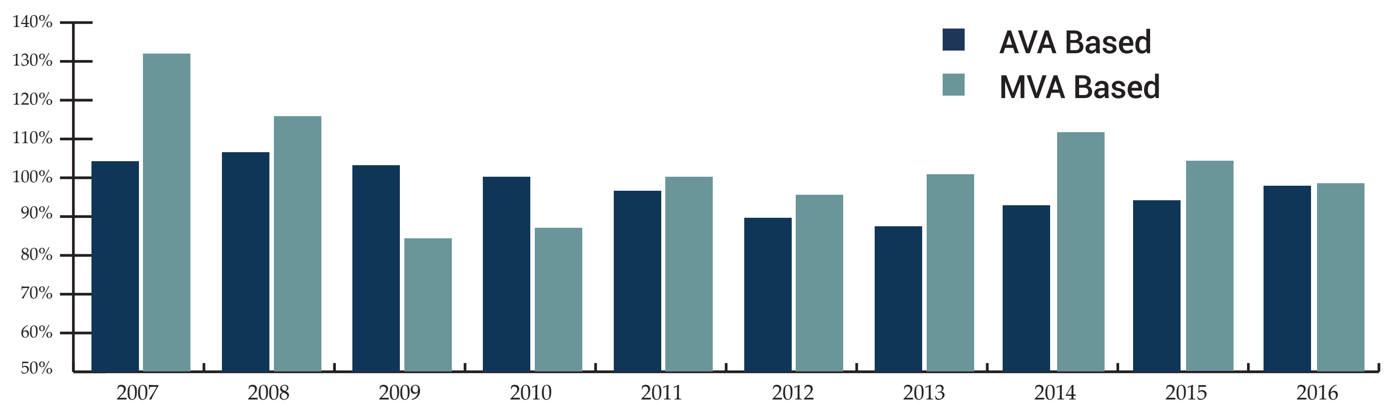
The portion of the actuarial present value of future benefits that is attributed to service rendered as of the valuation date is known as the actuarial accrued liability. In order to effectively assess the funding progress of a retirement system, it is necessary to compare the ratio of plan assets to the actuarial accrued liability over a period of time. Plan assets can be expressed as the market value of assets or as the actuarial value of assets. The market value of assets represents the market value of investments as of a particular date. The actuarial value of assets smoothes the volatility inherent in the market value of assets by phasing in unexpected gains and losses over a period of five years, and represents more of an average value.

The Retirement System's funding method has allowed the accumulation of assets appropriate for the funding of its liabilities in a systematic and reasonable manner.

Analysis of Funding Progress
(in millions)

Fiscal Year Ended	Market Value of Assets (MVA)	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability[1]	Percent Funded Based On	
				MVA	AVA
2007	$104,912.9	$82,858.9	$79,537.2	131.9%	104.2%
2008	95,769.3	88,254.7	82,777.5	115.7	106.6
2009	72,471.8	88,805.5	86,062.0	84.2	103.2
2010	76,844.9	88,544.4	88,318.8	87.0	100.3
2011	89,889.7	86,892.2	89,824.9	100.1	96.7
2012	88,056.3	82,871.4	92,250.9	95.5	89.8
2013	95,367.0	82,742.5	94,583.8	100.8	87.5
2014	108,155.1	90,007.1	96,904.5	111.6	92.9
2015	109,718.9	99,301.8	105,401.8	104.1	94.2
2016	107,506.1	107,039.2	109,305.1	98.4	97.9

Percent Funded



[1] *Effective June 30, 2006, the Actuarial Accrued Liability is calculated under the Entry Age Normal Cost Method as was required by Governmental Accounting Standards Board (GASB) Statement No. 50 prior to its replacement by GASB Statement No. 67. The Retirement System is funded in accordance with the Aggregate Cost Method. GASB Statement No. 50 required that the Entry Age Normal Cost Method be used to calculate the accrued liability for purposes of presenting the funded percentage.*

Solvency Test
(in millions)

Fiscal Year Ended	Aggregate Accrued Liabilities* for: Active Member Accumulated Contributions	Current Retired Members and Beneficiaries	Service Rendered by Active Members (Employer-Financed Portion)	Actuarial Value of Assets	Percentage of Aggregate Accrued Liabilities Covered by Actuarial Value of Assets		
	(A)	(B)	(C)	(D)	(A)	(B)	(C)
2011	$4,111.2	$54,635.2	$31,078.5	$86,892.2	100.0%	100.0%	90.6%
2012	4,256.4	56,197.6	31,796.9	82,871.4	100.0%	100.0%	70.5%
2013	4,366.3	57,681.9	32,535.6	82,742.5	100.0%	100.0%	63.6%
2014	4,457.8	59,190.2	33,256.5	90,007.1	100.0%	100.0%	79.3%
2015	4,555.1	64,504.9	36,341.8	99,301.8	100.0%	100.0%	83.2%
2016	4,657.8	65,858.4	38,788.9	107,039.2	100.0%	100.0%	94.2%

**NYSTRS is funded in accordance with the Aggregate Cost Method. The accrued liabilities in this chart are calculated in accordance with the Entry Age Normal Cost Method for purposes of disclosing the funded ratio.*

Analysis of Financial Experience

The table below shows, for each potentially significant experience source, the effect on the employer contribution rate due to the difference between actual experience and that predicted by the actuarial assumptions.

Experience Source	Change in the Employer Contribution Rate During Fiscal Year Ended June 30, 2016
Salary/Service:	+0.05%
Net Investment Gain:	-1.61
New Entrants:	-0.09
Withdrawal:	-0.05
Mortality:	+0.03
Retirement:	-0.15
Pension Payments:	-0.01
Cost-of-Living Adjustment:	-0.08
Excess Benefit Plan Rate:	-0.01
Total Change in Employer Contribution Rate	**-1.92%**

History of Member Payroll and the Employer Contribution Rate

Fiscal Year Ended	Active Members	Annual Member Payroll (in millions)	Percent Increase In Annual Member Payroll	Average Full-Time Member Salary	Employer Contribution Rate (Percent of Payroll)
2008	274,901	$13,690.1	4.6%	$66,488	8.73%
2009	280,338	14,366.4	4.9	68,737	7.63
2010	285,774	14,792.1	3.0	71,225	6.19
2011	280,435	14,732.9	-0.4	72,947	8.62
2012	277,273	14,640.8	-0.6	74,922	11.11
2013	273,328	14,647.8	0.0	76,348	11.84
2014	270,039	14,771.3	0.8	77,585	16.25
2015	267,715	15,021.4	1.7	78,695	17.53
2016	266,350	15,431.0	2.7	79,813	13.26
2017	264,761	15,846.7	2.7	N/A	11.72

Schedule of Retired Members and Beneficiaries Added to and Removed from the Benefit Payroll*

	Number of Retired Members and Beneficiaries		Annual Benefit of Retired Members and Beneficiaries					
Fiscal Year Ended	Added During the Year	Removed During the Year	Added During the Year	Removed During the Year	Total Number of Retired Members and Beneficiaries	Total Annual Benefit	Percentage Increase in Total Annual Benefit	Average Annual Benefit
2008	6,711	3,361	$330,202,139	$ 76,893,575	136,706	$5,032,946,559	5.30%	$36,816
2009	6,047	3,456	308,528,053	85,339,178	139,297	5,256,135,434	4.43	37,733
2010	5,879	3,460	287,886,459	88,868,015	141,716	5,455,153,878	3.79	38,494
2011	8,873	3,746	469,318,353	97,889,187	146,843	5,826,583,044	6.81	39,679
2012	6,463	3,494	319,324,379	96,522,713	149,812	6,049,384,710	3.82	40,380
2013	6,776	3,766	327,889,400	104,595,554	152,822	6,272,678,556	3.69	41,046
2014	7,003	3,894	332,495,800	110,681,561	155,931	6,494,492,795	3.54	41,650
2015	6,679	4,152	314,972,220	123,973,317	158,458	6,685,491,698	2.94	42,191
2016	6,719	4,029	318,693,576	122,540,821	161,148	6,881,644,453	2.93	42,704
2017	6,880	4,210	332,625,259	131,259,139	163,818	7,083,010,573	2.93	43,237

**Computed on the Maximum annual benefit including supplementation and COLA.*

Independent Actuarial Review

KPMG LLP
515 Broadway
Albany, NY 12207-2974

Retirement Board
New York State Teachers' Retirement System

As part of our audit of the financial statements of the New York State Teachers' Retirement System (the System) as of and for the year ended June 30, 2017, we performed procedures over the actuarial assumptions, methods and procedures used by the System's Actuary to calculate the employer contributions for the System to determine the reasonableness of the employer contributions reported in the System's June 30, 2017 basic financial statements. As part of those procedures, an actuary from our firm reviewed the following for reasonableness as compared to Actuarial Standard of Practice (ASOP) No. 4, *Measuring Pension Obligations*, as adopted by the Actuarial Standards Board.

- The actuarial assumptions, methods and procedures described in the System's Actuarial Valuation Report as of June 30, 2015, used to derive the resultant employer contribution rate of 11.72% applied to employer payroll for the fiscal year ended June 30, 2017.
- The methodology used to estimate the payroll as of June 30, 2017, from which the employer contributions for the fiscal year ended June 30, 2017 and the related employer contribution receivable as of June 30, 2017 are derived.
- The System's Experience Studies as of June 30, 2015, and the opinions of the System's Actuary presented thereon.

Based on the results of the above procedures, we determined that the methods, procedures and actuarial assumptions used to develop the employer contributions reported in the System's 2017 basic financial statements appeared reasonable in the context of ASOP No. 4.

This report is intended solely for the use of the New York State Teachers' Retirement System and should not be used for any other purpose.

KPMG LLP

October 26, 2017

Statistical

STATISTICAL

The objective of the statistical section is to provide financial statement users with historical perspective, context and detail to assist in using the information in the financial statements, notes to financial statements, and required supplementary information to better understand and assess the economic condition of NYSTRS.

Demographic & Economic Information

The schedules on pages 119-131 are intended to assist users in understanding the environment within which NYSTRS operates and to provide information that facilitates comparison of financial statement information over time and among similar entities. The demographic and economic information schedules presented are:

Page

Financial Trends Information

The schedules on pages 132-136 are intended to assist users in understanding and assessing how the financial position of NYSTRS has changed over time. The financial trend schedules presented are:

Page

Operating Information

The schedules on pages 137-142 are intended to provide contextual information about the operations and resources of NYSTRS to assist readers in using financial statement information. The operating information schedules are:

Page

Demographic & Economic Information

Active Members:

	Male	Female	Total
June 30, 2016	63,297	203,053	**266,350**
Changes During Year:			
Added	2,435	9,088	**11,523**
Withdrawn	1,715	4,828	**6,543**
Retired	1,347	5,049	**6,396**
Died	61	112	**173**
June 30, 2017	62,609	202,152	**264,761**

Members Retired for:

	Service*			Disability			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
June 30, 2016	49,999	103,037	153,036	470	1,657	2,127	**50,469**	**104,694**	**155,163**
Changes During Year:									
Retired	1,329	4,970	6,299	18	79	97	**1,347**	**5,049**	**6,396**
Died	1,494	2,049	3,543	28	86	114	**1,522**	**2,135**	**3,657**
Lump Sum	46	149	195	0	0	0	**46**	**149**	**195**
Restored to Active Membership	0	0	0	1	3	4	**1**	**3**	**4**
June 30, 2017	49,788	105,809	155,597	459	1,647	2,106**	**50,247**	**107,456**	**157,703**

Beneficiaries of Deceased:

	Service Annuitants			Disability Annuitants			Active Members			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
June 30, 2016	1,257	4,324	5,581	103	169	272	27	105	132	**1,387**	**4,598**	**5,985**
Changes During Year:												
Added	122	354	476	4	4	8	0	0	0	**126**	**358**	**484**
Died	89	242	331	5	9	14	2	7	9	**96**	**258**	**354**
June 30, 2017	1,290	4,436	5,726	102	164	266	25	98	123	**1,417**	**4,698**	**6,115**

Summary:

	Male	Female	Total
Active Members	62,609	202,152	**264,761**
Retired Members	50,247	107,456	**157,703**
Beneficiaries	1,417	4,698	**6,115**
Total	114,273	314,306	**428,579**

**Also includes vested retirees.*

***Includes 19 males and 47 females retired for disability who receive a service benefit.*

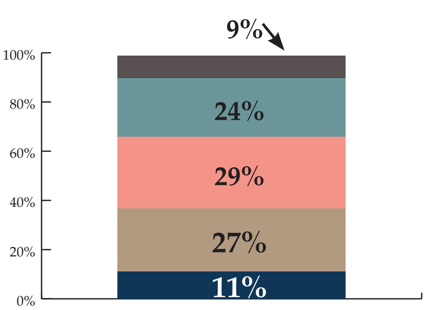
Distribution of Active Members by Age and Years of Service* — as of June 30, 2016

		Years of Credited Service				
Age		**0-5**	**6-10**	**11-15**	**16-20**	**21-25**
20-24	**Number of Members**	**4,879**	**0**	**0**	**0**	**0**
	Average Salary	*$38,402*	*$0*	*$0*	*$0*	*$0*
25-29	**Number of Members**	**22,860**	**1,505**	**0**	**0**	**0**
	Average Salary	*$49,189*	*$60,479*	*$0*	*$0*	*$0*
30-34	**Number of Members**	**18,842**	**13,649**	**2,251**	**0**	**0**
	Average Salary	*$52,865*	*$65,041*	*$76,702*	*$0*	*$0*
35-39	**Number of Members**	**9,639**	**9,257**	**16,884**	**2,603**	**1**
	Average Salary	*$52,905*	*$67,277*	*$81,418*	*$90,442*	*$110,314*
40-44	**Number of Members**	**6,697**	**5,924**	**10,153**	**14,307**	**1,027**
	Average Salary	*$48,704*	*$64,796*	*$83,814*	*$94,098*	*$99,174*
45-49	**Number of Members**	**6,555**	**5,768**	**6,794**	**10,941**	**9,102**
	Average Salary	*$45,201*	*$59,358*	*$78,652*	*$93,375*	*$100,357*
50-54	**Number of Members**	**5,134**	**4,624**	**5,601**	**5,796**	**5,551**
	Average Salary	*$42,302*	*$52,966*	*$70,710*	*$85,790*	*$99,134*
55-59	**Number of Members**	**3,558**	**3,033**	**4,370**	**4,912**	**3,610**
	Average Salary	*$43,765*	*$50,394*	*$65,330*	*$78,203*	*$90,764*
60-64	**Number of Members**	**2,068**	**1,408**	**2,289**	**3,340**	**2,868**
	Average Salary	*$51,888*	*$53,597*	*$65,600*	*$80,145*	*$88,427*
65-69	**Number of Members**	**875**	**508**	**610**	**903**	**779**
	Average Salary	*$52,688*	*$55,809*	*$62,709*	*$77,964*	*$86,287*
70+	**Number of Members**	**473**	**122**	**137**	**144**	**126**
	Average Salary	*$42,926*	*$44,453*	*$58,239*	*$69,728*	*$86,587*
Total	**Number of Members**	**81,580**	**45,798**	**49,089**	**42,946**	**23,064**
	Average Salary	*$49,222*	*$62,803*	*$77,988*	*$89,365*	*$96,511*

**Average salary data is for the 185,495 members who earned a full year of service.*

The average salary for all active members, full-time and part-time, is $70,795.

Distribution of Active Members by Age — as of June 30, 2016



- 60+ Years of Age **9%**
- 50-59 Years of Age **24%**
- 40-49 Years of Age **29%**
- 30-39 Years of Age **27%**
- 20-29 Years of Age **11%**

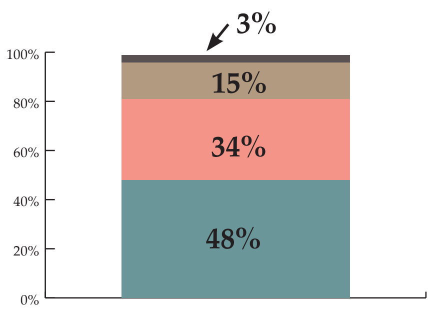
Averages — as of June 30, 2016

Gender	Age	Years of Service
Female	44	12
Male	43	12

Distribution of Active Members by Age and Years of Service* — as of June 30, 2016 *(continued)*

Years of Credited Service						
26-30	31-35	36-40	41-45	46-50	51+	Total
0	0	0	0	0	0	4,879
$0	*$0*	*$0*	*$0*	*$0*	*$0*	*$38,402*
0	0	0	0	0	0	24,365
$0	*$0*	*$0*	*$0*	*$0*	*$0*	*$50,643*
0	0	0	0	0	0	34,742
$0	*$0*	*$0*	*$0*	*$0*	*$0*	*$62,857*
0	0	0	0	0	0	38,384
$0	*$0*	*$0*	*$0*	*$0*	*$0*	*$76,112*
1	0	0	0	0	0	38,109
$130,718	*$0*	*$0*	*$0*	*$0*	*$0*	*$84,995*
986	0	0	0	0	0	40,146
$101,259	*$0*	*$0*	*$0*	*$0*	*$0*	*$87,223*
7,145	1,073	0	0	0	0	34,924
$103,416	*$104,639*	*$0*	*$0*	*$0*	*$0*	*$86,941*
4,689	3,210	292	1	0	0	27,675
$102,126	*$108,432*	*$112,349*	*$157,065*	*$0*	*$0*	*$85,190*
2,573	1,244	832	69	1	0	16,692
$100,179	*$110,431*	*$116,148*	*$134,348*	*$187,637*	*$0*	*$87,171*
690	328	196	163	25	0	5,077
$94,615	*$108,031*	*$117,656*	*$130,562*	*$131,248*	*$0*	*$86,838*
111	97	38	37	51	21	1,357
$79,625	*$92,027*	*$111,940*	*$112,367*	*$127,939*	*$120,501*	*$83,510*
16,195	5,952	1,358	270	77	21	266,350
$101,878	*$107,891*	*$115,437*	*$129,134*	*$129,789*	*$120,501*	*$79,813*

Distribution of Active Members by Service — as of June 30, 2016

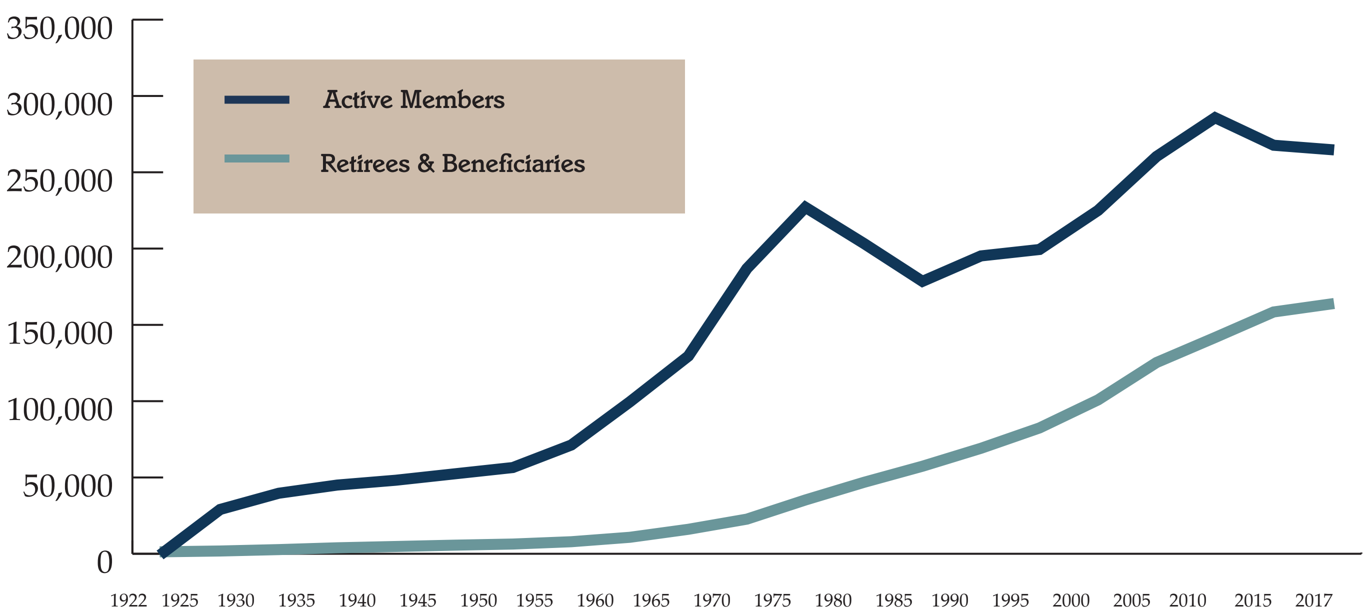


31+ Years of Service	3%
21-30 Years of Service	15%
11-20 Years of Service	34%
0-10 Years of Service	48%

Active Members and Annuitants 1922-2017

As of June 30	Active Members	Retirees & Beneficiaries
1922	-	1,296
1925	29,057	1,815
1930	39,663	2,732
1935	45,031	3,919
1940	48,193	4,771
1945	52,359	5,637
1950	56,504	6,374
1955	71,273	7,897
1960	99,555	10,796
1965	129,543	16,043
1970	186,914	22,700
1975	227,038	35,252
1980	203,330	46,812
1985	178,516	57,366
1990	195,194	69,127
1995	199,398	82,459
2000	224,986	100,839
2005	260,356	125,325
2010	285,774	141,716
2015	267,715	158,458
2017	264,761	163,818

See related graph below.



Number of Active Members by Tier

As of June 30	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Tier 6	Total
1998	49,266	15,860	23,302	120,652	--	--	209,080
1999	50,859	15,776	20,726	128,906	--	--	216,267
2000	47,234	15,700	20,159	141,893	--	--	224,986
2001	41,169	15,472	19,914	157,795	--	--	234,350
2002	35,601	15,121	19,674	172,438	--	--	242,834
2003	28,327	14,463	19,083	185,374	--	--	247,247
2004	22,986	13,947	18,835	198,747	--	--	254,515
2005	17,901	13,210	18,535	210,710	--	--	260,356
2006	13,621	12,084	18,173	220,532	--	--	264,410
2007	10,838	10,178	17,743	231,286	--	--	270,045
2008	8,630	8,171	17,007	241,093	--	--	274,901
2009	6,943	6,752	16,111	250,532	--	--	280,338
2010	5,582	5,706	14,942	255,966	3,578	--	285,774
2011	3,814	4,137	12,690	247,530	12,264	--	280,435
2012	2,756	3,253	11,180	239,199	19,969	916	277,273
2013	1,968	2,447	9,450	231,258	19,452	8,753	273,328
2014	1,439	1,810	7,753	222,545	19,124	17,368	270,039
2015	1,116	1,348	6,222	214,020	18,878	26,131	267,715
2016	832	974	4,920	204,912	18,540	36,172	266,350
2017	607	720	3,881	195,226	17,722	46,605	264,761

Members Retired in 2016-2017 for:

	Service*	Disability
Number Retired	**6,299**	**97**
Age at Retirement:		
Average	61 yrs., 3 mos.	50 yrs., 10 mos.
Median	61 yrs., 6 mos.	52 yrs., 2 mos.
Years of Service:		
Average	25 yrs., 0 mos.	19 yrs., 1 mo.
Median	27 yrs., 2 mos.	18 yrs., 2 mos.
**Benefit:		
Average	$45,049	$29,520
Median	$46,622	$26,521
Final Average Salary (FAS):		
Average	$85,242	$80,450
Median	$84,902	$74,854
***Benefit as % of FAS:		
Average	47.25%	35.74%
Median	53.33%	33.33%

Members Retired in 2016-2017 for Service* With:

	Less Than 20 Yrs. N.Y.	Between 20 Yrs. N.Y. and 35 Yrs. Total	35 Yrs. Total or More
Number Retired	**1,551**	**4,143**	**605**
Age at Retirement:			
Average	62 yrs., 2 mos.	60 yrs., 8 mos.	63 yrs., 0 mos.
Median	62 yrs., 0 mos.	61 yrs., 0 mos.	62 yrs., 3 mos.
Years of Service:			
Average	11 yrs., 6 mos.	28 yrs., 0 mos.	38 yrs., 5 mos.
Median	12 yrs., 0 mos.	30 yrs., 0 mos.	37 yrs., 3 mos.
**Benefit:			
Average	$9,338	$52,704	$84,180
Median	$6,417	$52,005	$81,366
Final Average Salary (FAS):			
Average	$47,658	$94,935	$115,213
Median	$39,755	$91,643	$112,661
***Benefit as % of FAS:			
Average	17.78%	54.54%	72.91%
Median	17.50%	59.56%	71.50%

**Also includes vested retirees.*

***The Maximum, even though the member may have chosen an option.*

****The average and median of individual benefits as percentages of final average salary.*

All Retirees as of June 30, 2017 Retired for:

	Service*	Disability
Number Retired	**155,663**	**2,040**
Age at Retirement:		
Average	58 yrs., 9 mos.	49 yrs., 6 mos.
Median	57 yrs., 8 mos.	50 yrs., 4 mos.
Years of Service:		
Average	28 yrs., 1 mo.	18 yrs., 4 mos.
Median	30 yrs., 3 mos.	17 yrs., 6 mos.
**Benefit:		
Average	$41,703	$20,343
Median	$41,819	$18,566
Final Average Salary (FAS):		
Average	$71,173	$55,911
Median	$69,909	$53,992
***Benefit as % of FAS:		
Average	54.29%	35.64%
Median	60.33%	33.33%

All Retirees as of June 30, 2017 Retired for Service* With:

	Less Than 20 Years N.Y.	Between 20 Yrs. N.Y. and 35 Yrs. Total	35 Yrs. Total or More
Number Retired	**26,729**	**93,581**	**35,353**
Age at Retirement:			
Average	59 yrs., 1 mo.	58 yrs., 7 mos.	58 yrs., 11 mos.
Median	57 yrs., 7 mos.	57 yrs., 4 mos.	58 yrs., 4 mos.
Years of Service:			
Average	13 yrs., 5 mos.	28 yrs., 7 mos.	37 yrs., 5 mos.
Median	13 yrs., 7 mos.	30 yrs., 0 mos.	36 yrs., 8 mos.
**Benefit:			
Average	$8,416	$42,150	$65,686
Median	$6,258	$41,166	$61,493
Final Average Salary (FAS):			
Average	$40,159	$73,574	$88,262
Median	$33,772	$71,018	$83,250
***Benefit as % of FAS:			
Average	20.46%	56.44%	74.18%
Median	19.44%	59.98%	73.50%

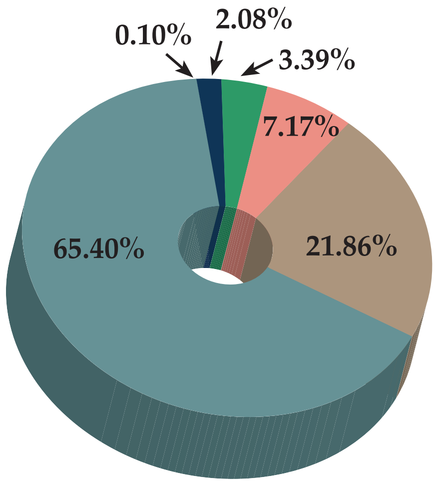
**Also includes vested retirees.*

***The Maximum, even though the member may have chosen an option.*

****The average and median of individual benefits as percentages of final average salary.*

Retirement Benefit Options and Percent of Election

2013-2017 Retirees



●	Annuity/Declining Reserve	**0.10%**
●	Guarantee	**2.08%**
●	Alternative	**3.39%**
●	Survivor	**7.17%**
●	Pop-Up	**21.86%**
●	Maximum	**65.40%**

Percentages may not sum to 100% due to rounding.

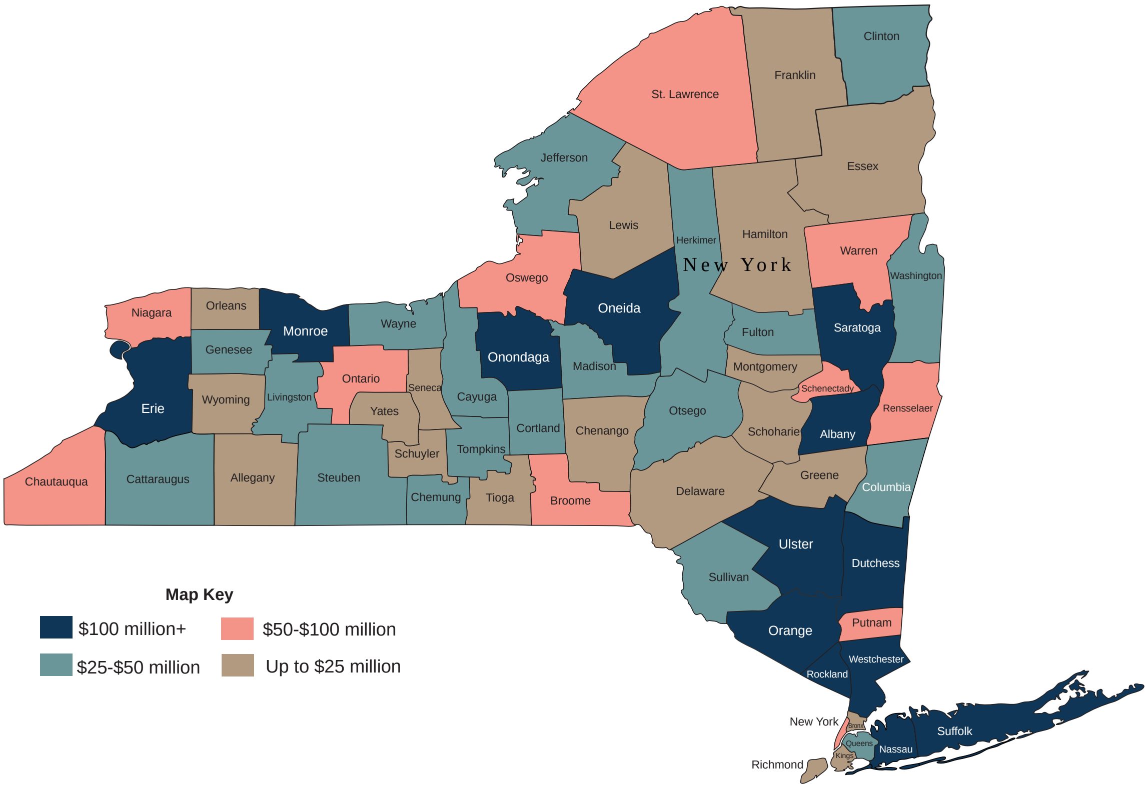
Retired Members' Characteristics*

By Year of Retirement

Retired in Fiscal Year Ended	Number of Retired Members	Average Age at Retirement (yrs.- mos.)	Average Service at Retirement (yrs.- mos.)	Average Final Average Salary	Average Maximum Annual Benefit
2008	6,330	58-11	27-8	$77,066	$45,779
2009	5,644	59-6	27-7	78,050	46,061
2010	5,501	60-0	27-5	79,615	46,489
2011	8,423	60-3	28-7	85,010	51,200
2012	6,033	60-9	26-3	82,461	45,759
2013	6,330	60-10	25-6	81,987	44,768
2014	6,547	61-0	25-4	84,545	44,978
2015	6,161	60-11	25-4	84,362	44,487
2016	6,245	61-2	25-0	84,308	44,215
2017	6,396	61-3	25-0	85,242	45,049

Averages are for service and vested retirees.

Distribution of Benefits Paid by County* — as of June 30, 2017



County	Retired Members and Beneficiaries	Annual Benefit Paid	County	Retired Members and Beneficiaries	Annual Benefit Paid	County	Retired Members and Beneficiaries	Annual Benefit Paid
Albany	3,024	$119,323,256	Jefferson	1,298	$48,027,760	St. Lawrence	1,656	$56,944,120
Allegany	648	$21,873,004	Kings	216	$9,479,550	Saratoga	3,377	$138,127,357
Bronx	265	$12,740,461	Lewis	339	$11,823,060	Schenectady	1,702	$65,233,679
Broome	2,303	$84,388,301	Livingston	927	$35,086,201	Schoharie	405	$14,526,368
Cattaraugus	921	$35,300,050	Madison	955	$35,400,819	Schuyler	251	$8,261,937
Cayuga	1,008	$36,542,837	Monroe	8,621	$340,516,756	Seneca	419	$15,076,244
Chautauqua	1,867	$73,146,235	Montgomery	535	$20,322,486	Steuben	1,385	$48,376,863
Chemung	1,072	$37,742,044	Nassau	9,248	$508,150,525	Suffolk	16,808	$965,417,582
Chenango	667	$22,311,427	New York	1,288	$59,350,388	Sullivan	817	$35,493,773
Clinton	1,211	$44,455,668	Niagara	2,253	$95,736,945	Tioga	538	$19,644,797
Columbia	737	$28,719,154	Oneida	3,110	$115,199,548	Tompkins	996	$32,104,246
Cortland	700	$25,225,589	Onondaga	6,605	$240,374,587	Ulster	2,614	$111,969,259
Delaware	615	$20,642,007	Ontario	1,848	$70,601,364	Warren	1,356	$53,244,789
Dutchess	3,154	$141,004,317	Orange	3,149	$145,840,798	Washington	751	$27,204,387
Erie	10,589	$447,310,193	Orleans	442	$18,207,319	Wayne	1,235	$45,827,429
Essex	613	$20,143,603	Oswego	1,632	$58,210,783	Westchester	6,512	$347,348,417
Franklin	684	$23,538,607	Otsego	1,066	$35,214,951	Wyoming	466	$17,278,434
Fulton	794	$30,111,017	Putnam	942	$50,427,245	Yates	410	$14,495,844
Genesee	762	$29,766,303	Queens	827	$42,633,852			
Greene	501	$18,473,215	Rensselaer	1,600	$61,195,349	Out of State	39,518	$1,374,858,955
Hamilton	142	$5,283,720	Richmond	49	$2,099,281			
Herkimer	1,031	$35,179,251	Rockland	2,344	$113,959,544	**Grand Total**	**163,818**	**$6,822,513,850**

Computed on the optional annual benefit including supplementation and COLA.

Distribution of Retired Members and Beneficiaries by Tier — as of June 30, 2017

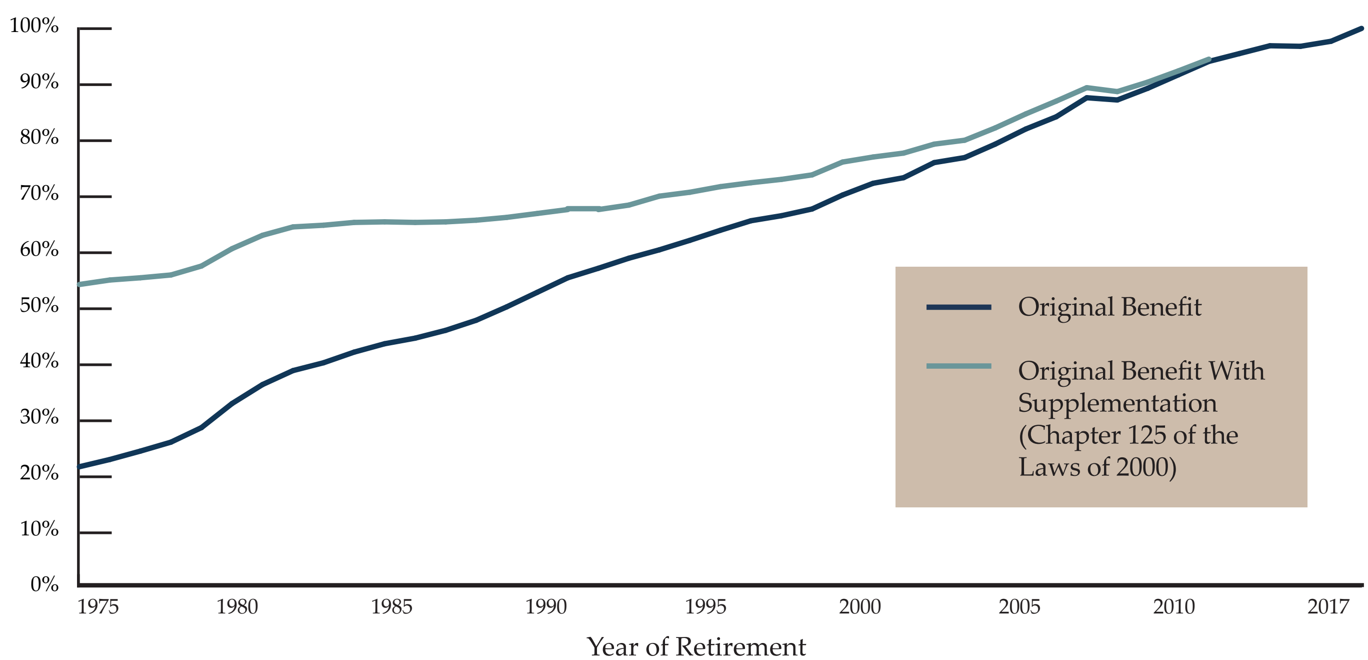
	Tier 1	Tier 2	Tier 3		Tier 4	Tier 5	Tier 6	Total
Members Retired for:								
Service*	90,545	16,854	18,066	(223)**	30,113	17	2	155,597
Disability	664	180	255	(32)**	1,007	0	0	2,106
Beneficiaries of Deceased:								
Service Annuitants	4,896	301	237	(5)**	292	0	0	5,726
Disability Annuitants	164	23	27	(5)**	52	0	0	266
Active Members	121	1	1	(0)**	0	0	0	123
Total	**96,390**	**17,359**	**18,586**	**(265)****	**31,464**	**17**	**2**	**163,818**

**Also includes vested retirees.*

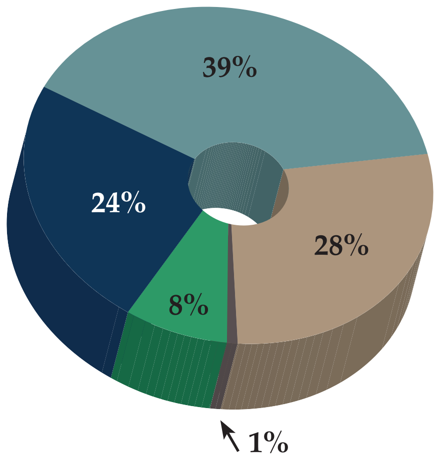
***Those receiving an Article 14 (Tier 3) benefit. The remainder are receiving an Article 15 (Tier 4) benefit. Tier 3 members receive the better of the two benefits.*

Retired Members — Remaining Purchasing Power Through 2017

Inflation annually erodes the purchasing power of our retired members' benefits. The chart below illustrates the percentage of purchasing power remaining of the original benefit, and the original benefit plus supplementation including the cost-of-living adjustment, payable beginning September 2017 in accordance with Chapter 125 of the Laws of 2000.



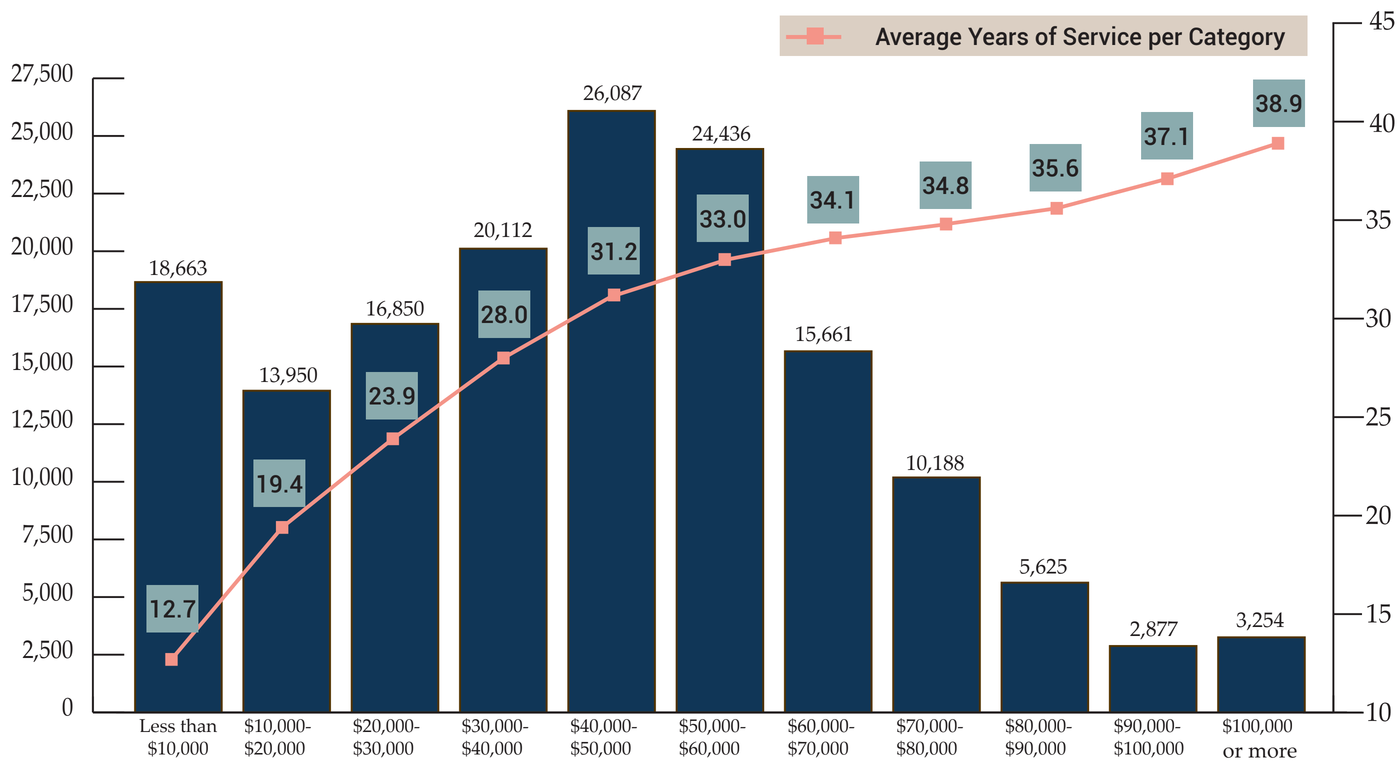
Retired Members and Beneficiaries* With Monthly Benefits by Decade of Retirement — as of June 30, 2017



- **1979 and earlier: 1,562** — 1% — $830** — $1,542***
- **1980-1989: 12,550** — 8% — $1,511** — $2,035***
- **1990-1999: 39,969** — 24% — $2,871** — $3,171***
- **2000-2009: 64,543** — 39% — $3,873** — $3,998***
- **2010-2017: 45,071** — 28% — $3,929** — $3,938***

Excludes 123 beneficiaries of deceased active members.
*** Average monthly benefit (based on the Maximum benefit).*
****Average total monthly benefit including supplementation and COLA (based on the Maximum benefit).*

Distribution of the Annual Benefit* of All Retired Members — as of June 30, 2017



Maximum annual retirement benefit including supplementation and COLA.

Distribution of Monthly COLA Increase Commencing September 2017

Monthly COLA Increase	Number of Retired Members and Beneficiaries
$18.00	107,030
$15.00 - $17.99	3,196
$12.00 - $14.99	3,143
$9.00 - $11.99	8,101
$6.00 - $8.99	4,380
$3.00 - $5.99	6,251
$0.01 - $2.99	3,012
$0 (currently ineligible)	28,705
Total	**163,818**

Commencing September	Year Ended March 31 CPI Percentage Change	Applicable COLA Percentage	Maximum Annual Base Benefit Amount	Maximum Monthly COLA Increase	Cumulative Maximum Monthly COLA	Average Monthly COLA Increase	Cumulative Average Monthly COLA
2001	2.92%	1.5%	$18,000	$22.50	$22.50	$18.80	$18.80
2002	1.48%	1.0%	$18,000	$15.00	$37.50	$12.64	$31.44
2003	3.02%	1.6%	$18,000	$24.00	$61.50	$20.32	$51.76
2004	1.74%	1.0%	$18,000	$15.00	$76.50	$12.85	$64.61
2005	3.15%	1.6%	$18,000	$24.00	$100.50	$20.68	$85.29
2006	3.36%	1.7%	$18,000	$25.50	$126.00	$22.09	$107.38
2007	2.78%	1.4%	$18,000	$21.00	$147.00	$18.29	$125.67
2008	3.98%	2.0%	$18,000	$30.00	$177.00	$26.24	$151.91
2009	-0.38%	1.0%	$18,000	$15.00	$192.00	$13.17	$165.08
2010	2.31%	1.2%	$18,000	$18.00	$210.00	$15.86	$180.94
2011	2.68%	1.4%	$18,000	$21.00	$231.00	$18.55	$199.49
2012	2.65%	1.4%	$18,000	$21.00	$252.00	$18.59	$218.08
2013	1.47%	1.0%	$18,000	$15.00	$267.00	$13.30	$231.38
2014	1.51%	1.0%	$18,000	$15.00	$282.00	$13.32	$244.70
2015	-0.07%	1.0%	$18,000	$15.00	$297.00	$13.36	$258.06
2016	0.85%	1.0%	$18,000	$15.00	$312.00	$13.36	$271.42
2017	2.38%	1.2%	$18,000	$18.00	$330.00	$16.03	$287.45

Distribution of Cumulative Monthly COLA Commencing September 2017

Cumulative Monthly COLA	Number of Retired Members and Beneficiaries
$330.00	25,560
$275.00 - $329.99	9,903
$220.00 - $274.99	17,100
$165.00 - $219.99	17,263
$110.00 - $164.99	21,894
$55.00 - $109.99	23,205
$0.01 - $54.99	20,188
$0 (currently ineligible)	28,705
Total	**163,818**

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Financial Trends Information

Changes in Fiduciary Net Position
Last Ten Fiscal Years
(dollars in thousands)

Additions:	2008	2009	2010	2011
Net investment income (loss)	$(5,531,807)	$(19,363,140)	$8,702,215	$17,250,415
Employer contributions	1,188,140	1,096,117	925,506	1,389,415
Member contributions	177,959	181,723	139,369	154,327
Transfers	2,349	5,665	6,037	2,144
Total additions	(4,163,359)	(18,079,635)	9,773,127	18,796,301
Deductions: (See Benefits and Return of Contributions by Type on Pages 134-135)				
Benefit payments	4,908,446	5,151,463	5,333,788	5,681,007
Return of contributions	22,792	17,080	17,071	20,348
Administrative expenses	49,016	49,401	49,088	50,159
Total deductions	4,980,254	5,217,944	5,399,947	5,751,514
Change in fiduciary net position restricted for pensions	$(9,143,613)	$(23,297,579)	$4,373,180	$13,044,787

Changes in Fiduciary Net Position *(continued)*

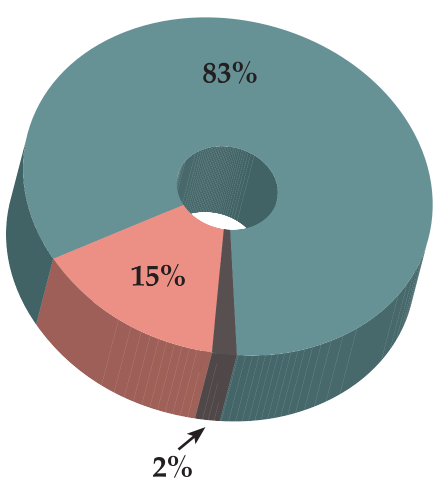
Last Ten Fiscal Years

(dollars in thousands)

2012	2013	2014	2015	2016	2017
$ 2,375,262	$11,636,480	$16,664,703	$5,400,265	$ 2,392,354	$12,951,892
1,628,491	1,734,908	2,400,386	2,633,682	2,046,562	1,857,359
138,583	128,903	120,762	119,411	124,587	129,770
4,188	4,522	1,365	3,213	4,014	7,845
4,146,524	13,504,813	19,187,216	8,156,571	4,567,517	14,946,866
5,907,795	6,118,849	6,324,546	6,513,931	6,701,637	6,903,361
19,732	20,869	18,992	17,209	18,229	19,676
52,457	54,338	55,616	56,948	60,426	61,611
5,979,984	6,194,056	6,399,154	6,588,088	6,780,292	6,984,648
$(1,833,460)	$ 7,310,757	$12,788,062	$1,568,483	$(2,212,775)	$ 7,962,218

Breakdown of Income Sources

Fiscal Years Ended 1998-2017



- Investment Income 83%
- Employer Contributions 15%
- Member Contributions 2%

Benefits and Return of Contributions by Type
Last Ten Fiscal Years
(dollars in thousands)

Type of Benefit	2008	2009	2010	2011
Age and service benefits:				
Retirees	$4,817,594	$5,045,738	$5,237,032	$5,593,968
Survivors	30,500	27,674	38,516	28,237
Death in service benefits	21,382	38,119	20,244	22,852
Disability benefits:				
Ordinary	38,671	39,565	37,628	35,667
Accidental	299	367	368	283
Total benefits	$4,908,446	$5,151,463	$5,333,788	$5,681,007
Type of Return of Contributions				
Death	$ 1,735	$ 1,905	$ 2,287	$ 2,240
Separation from service	21,057	15,175	14,784	18,108
Total return of contributions	$ 22,792	$ 17,080	$ 17,071	$ 20,348

Benefits and Return of Contributions by Type *(continued)*

Last Ten Fiscal Years

(dollars in thousands)

	2012	2013	2014	2015	2016	2017
	$5,811,739	$6,023,506	$6,233,619	$6,419,576	$6,601,664	$6,794,278
	29,153	32,879	28,918	31,888	34,051	41,662
	29,266	23,666	21,634	20,730	22,801	23,606
	37,350	38,507	39,871	41,251	42,591	43,469
	287	291	504	486	530	346
	$5,907,795	$6,118,849	$6,324,546	$6,513,931	$6,701,637	$6,903,361
	$ 2,393	$ 2,434	$ 2,325	$ 2,350	$ 3,011	$ 3,061
	17,339	18,435	16,667	14,859	15,218	16,615
	$ 19,732	$ 20,869	$ 18,992	$ 17,209	$ 18,229	$ 19,676

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Operating Information

Average Benefit Payments — July 1, 2007 – June 30, 2017

	Years of Credited Service							
Retirement Effective Dates	**0-5**	**5-10**	**10-15**	**15-20**	**20-25**	**25-30**	**30-35**	**35+**
Period 7/1/2007 to 6/30/2008								
Average monthly benefit	$136	$264	$559	$1,326	$2,358	$3,587	$4,767	$6,064
Average final average salary	$25,781	$30,873	$38,528	$55,668	$69,848	$81,072	$87,087	$97,266
Number of retired members	67	397	529	422	721	761	1,753	1,680
Period 7/1/2008 to 6/30/2009								
Average monthly benefit	$153	$255	$654	$1,343	$2,427	$3,632	$4,780	$6,169
Average final average salary	$25,513	$29,713	$42,093	$56,606	$71,239	$81,388	$88,817	$98,228
Number of retired members	38	369	455	359	739	717	1,505	1,462
Period 7/1/2009 to 6/30/2010								
Average monthly benefit	$146	$298	$736	$1,419	$2,405	$3,839	$4,779	$6,361
Average final average salary	$29,089	$32,606	$46,779	$58,769	$69,544	$85,340	$90,489	$100,436
Number of retired members	46	377	438	360	770	752	1,351	1,407
Period 7/1/2010 to 6/30/2011								
Average monthly benefit	$166	$301	$710	$1,386	$2,571	$3,924	$5,017	$6,877
Average final average salary	$38,073	$33,593	$44,505	$58,067	$72,641	$86,710	$94,654	$106,004
Number of retired members	38	403	507	431	1,128	1,705	2,103	2,108
Period 7/1/2011 to 6/30/2012								
Average monthly benefit	$196	$371	$818	$1,402	$2,748	$3,807	$5,142	$6,992
Average final average salary	$43,570	$39,131	$50,185	$59,356	$77,772	$85,469	$96,934	$108,825
Number of retired members	44	431	571	444	1,079	840	1,604	1,020
Period 7/1/2012 to 6/30/2013								
Average monthly benefit	$201	$326	$782	$1,513	$2,721	$3,910	$5,285	$7,061
Average final average salary	$33,171	$34,780	$47,730	$62,797	$76,501	$89,200	$100,095	$110,455
Number of retired members	48	501	705	452	1,061	954	1,709	900
Period 7/1/2013 to 6/30/2014								
Average monthly benefit	$221	$367	$837	$1,571	$2,836	$4,140	$5,275	$7,305
Average final average salary	$41,966	$38,623	$51,493	$65,104	$80,215	$93,124	$100,079	$115,852
Number of retired members	47	484	649	562	1,133	1,161	1,778	733
Period 7/1/2014 to 6/30/2015								
Average monthly benefit	$255	$306	$842	$1,543	$2,879	$4,163	$5,277	$6,887
Average final average salary	$35,508	$33,815	$51,353	$64,139	$82,057	$92,745	$100,927	$110,667
Number of retired members	37	400	615	521	1,081	1,255	1,660	592
Period 7/1/2015 to 6/30/2016								
Average monthly benefit	$188	$321	$873	$1,532	$2,873	$4,280	$5,353	$6,907
Average final average salary	$35,355	$34,747	$51,987	$63,932	$81,515	$94,402	$102,221	$112,592
Number of retired members	32	491	589	582	1,079	1,223	1,676	573
Period 7/1/2016 to 6/30/2017								
Average monthly benefit	$120	$329	$868	$1,645	$2,871	$4,282	$5,452	$7,076
Average final average salary	$23,555	$35,957	$52,383	$66,494	$81,188	$94,415	$104,070	$115,549
Number of retired members	117	457	569	565	1,079	1,185	1,864	560

Retired Members and Beneficiaries by Type of Benefit — as of June 30, 2017

Amount of Monthly Benefit	Number of Retired Members	Type of Retirement 1	2	3	4	5	6
$1 - $500	13,729	7,863	5,302	130	313	28	93
$501 - $1,000	12,302	6,764	4,565	409	480	72	12
$1,001 - $1,500	10,943	7,208	2,595	455	613	64	8
$1,501 - $2,000	10,633	7,433	2,172	398	586	42	2
$2,001 - $2,500	11,297	8,503	1,909	311	545	26	3
$2,501 - $3,000	11,813	9,444	1,574	189	588	14	4
$3,001 - $3,500	13,547	11,733	1,169	99	536	9	1
$3,501 - $4,000	15,724	14,323	838	57	503	3	0
$4,001 - $4,500	15,792	14,708	585	33	459	7	0
$4,501 - $5,000	12,774	12,041	368	11	354	0	0
over $5,000	35,264	33,979	521	14	749	1	0
Total	**163,818**	**133,999**	**21,598**	**2,106**	**5,726**	**266**	**123**

Type of retirement:

1 - Normal retirement for age and service

2 - Early retirement*

3 - Disability retirement

4 - Beneficiary payment, normal or early retirement

5 - Beneficiary payment, disability retirement

6 - Beneficiary payment, death in service

**Tiers 2-5: retirement at age less than 62 and service less than 30 years.*
Tier 6: retirement at age less than 63.

Retired Members and Beneficiaries by Type of Benefit — as of June 30, 2017 *(continued)*

Option Selected					
1	2	3	4	5	6
10,444	759	1,033	656	513	324
8,767	834	1,521	562	382	236
7,619	822	1,533	463	348	158
7,455	843	1,573	373	240	149
7,950	891	1,760	365	182	149
8,147	997	2,010	307	192	160
9,299	1,129	2,428	345	119	227
10,572	1,215	3,191	362	128	256
10,390	1,219	3,444	333	100	306
8,137	1,086	2,951	245	72	283
21,069	3,262	9,008	632	146	1,147
109,849	**13,057**	**30,452**	**4,643**	**2,422**	**3,395**

Option selected:

1 - Unmodified; Single life annuity (Maximum)

2 - Joint and survivor

3 - Joint and survivor with pop-up

4 - Guarantee period

5 - Declining reserve / Annuity reserve

6 - Alternative

Principal Participating Employers
Current Year and Nine Years Ago

	2017		
Participating Employer	Covered Employees	Rank	Percentage of Total System**
Buffalo Public Schools	4,708	1	1.78%
Rochester City School District	4,025	2	1.52%
Syracuse City School District	2,813	3	1.06%
Yonkers Public Schools	2,194	4	0.83%
Brentwood Union Free Schools	1,800	5	0.68%
Greece Central Schools	1,406	6	0.53%
Newburgh City School District	1,311	7	0.50%
Sachem Central Schools	1,288	8	0.49%
Albany City School District	1,226	9	0.46%
Eastern Suffolk 1 BOCES	1,203	10	0.45%
All Other*	242,787		91.70%
Total	**264,761**		**100.00%**

*In 2017, "All Other" consisted of:

Type	Number	Covered Employees
Public School Districts	671	221,976
BOCES	36	13,089
SUNY	31	2,299
Community Colleges	30	3,049
Charter Schools	25	1,398
Special Act Districts	10	631
Other	9	345
Total "All Other"	812	242,787
Top 10 Participating Employers	10	21,974
Total	**822**	**264,761**

***Percentages may not sum to 100% due to rounding.*

Principal Participating Employers *(continued)*

Current Year and Nine Years Ago

	2008		
Participating Employer	Covered Employees	Rank	Percentage of Total System**
Rochester City School District	4,803	1	1.75%
Buffalo Public Schools	4,588	2	1.67%
Syracuse City School District	3,447	3	1.25%
Yonkers Public Schools	2,449	4	0.89%
Brentwood Union Free Schools	1,979	5	0.72%
Greece Central Schools	1,678	6	0.61%
Sachem Central Schools	1,659	7	0.60%
Eastern Suffolk 1 BOCES	1,618	8	0.59%
Newburgh City School District	1,618	8	0.59%
East Ramapo Central Schools	1,489	10	0.54%
All Other	249,573		90.79%
Total	**274,901**		**100.00%**

***Percentages may not sum to 100% due to rounding.*

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Acknowledgements:

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- Actuary
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