# 426,000 MEMBERS

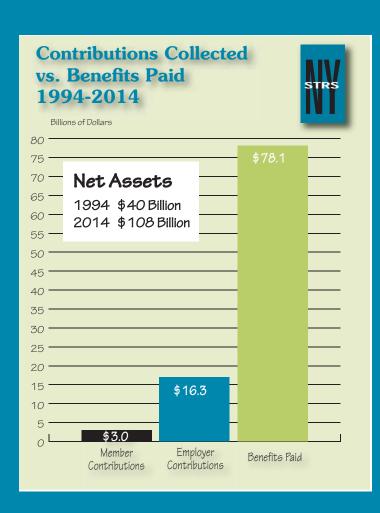


# ONE MISSION

COMPREHENSIVE ANNUAL FINANCIAL REPORT



Fiscal Year Ending June 30, 2014











# New York State Teachers' Retirement System

# COMPREHENSIVE ANNUAL FINANCIAL REPORT

Fiscal Year Ending June 30, 2014

# >Our Mission:

To provide our members with a secure pension

# >Our Vision:

To be <u>the</u> model for pension fund excellence and exceptional customer service

# >Our Values:

Integrity, Excellence, Respect, Resourcefulness, Diversity, Diligence and Balance

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# >Achievements

### **GFOA Award**



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, 2013

## **PPCC** Award



**Public Pension Coordinating Council** 

**Public Pension Standards Award** For Funding and Administration 2013

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 Program Administrator

# >Introduction





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# **Board of Trustees**



R. Michael Kraus President **EAST AURORA** Insurance Executive Elected by Board of Regents First Elected 1992







Paul J. Farfaglia **JORDAN-ELBRIDGE** Teacher Member Elected by Delegates First Elected 2009

Michael J. Masse **FAYETTEVILLE Bank Executive** Elected by Board of Regents First Elected 2009





Dr. Phyllis S. Harrington **OCEANSIDE** Administrator Appointed by Commissioner of Education First Appointed 2010

Dr. L. Oliver Robinson **CLIFTON PARK Administrator** Appointed by Commissioner of Education First Appointed 2010





Daniel J. Hogarty Jr. **TROY Bank Executive** Elected by Board of Regents First Elected 2005

Nicholas Smirensky **DELMAR** State Comptroller's Representative First Appointed 2007





Karen E. Magee **HARRISON** Teacher Member Elected by Delegates First Elected 2011

Timothy M. Southerton **SAYVILLF** Teacher Member Elected by Delegates First Elected 2011



# >Introduction

# Organizational Structure

# R. Michael Kraus, President Legal Internal Audit Assurance Services Contract Review Consulting Services • Legislation • Litigation • Domestic Relations Orders Thomas K. Lee. Enterprise Risk Management • 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

- Equity Acquisition
- Mortgage Origination & Servicing
- Property Management

# **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



John W. Virtanen

Managing Director
of Private Equity



Michael A. Wolfe Jr.

Managing Director
of Fixed Income



Richard A. Young
Actuary



## Letter of Transmittal



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

Thomas K. Lee, Executive Director & CIO

# RETIREMENT BOARD

R. Michael Kraus East Aurora President David P. Keefe Hempstead Vice President Paul J. Farfaglia Jordan-Elbridge Phyllis S. Harrington Oceanside Daniel J. Hogarty Jr. Trov Karen E. Magee Harrison Michael J. Masse Fayetteville Clifton Park Delmar Timothy M. Southerton Savville

L. Oliver Robinson Nicholas Smirensky

October 28, 2014

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 year ended June 30, 2014. 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 16-20 of this report.



"The System's total portfolio returned 18.2% net of fees for the fiscal year ended June 30, 2014. It was the fourth double-digit return posted since the 2009 global financial crisis and exceeded the actuarially assumed rate of return of 8.0% by more than 1,000 basis points."

> Thomas K. Lee Executive Director & Chief Investment Officer

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 400 is responsible for the day-to-day administration. NYSTRS serves 824 employers – including public school districts, BOCES, institutions of higher education and charter schools that elect to participate. NYSTRS has approximately 426,000 active and retired members, including beneficiaries (see accompanying chart).

# Membership Figures — as of June 30, 2014

Total Membership:425,970Active Members:270,039Retired Members:150,268Beneficiaries:5,663

See page 103 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 funds, particularly among teacher retirement systems. Consistent receipt of required employee and employer contributions; a disciplined, risk-controlled investment policy; and, relationships with top-performing fund managers are major contributing factors to this stability. As a long-term investor with liabilities often not payable for decades, 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 fiscal year covered by this report 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 2013 Comprehensive Annual Financial Report, the award certifies the report was prepared in conformity with the highest standards in government accounting and financial reporting.

**Distinguished Budget Presentation Award** for the fiscal year July 1, 2013 through June 30, 2014, 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 520 of the Laws of 2013

Chapter 520 clarifies the maximum salary which may be used to calculate the paragraph 2 ordinary death benefit for members of a public retirement system with a date of membership on or after July 1, 1973. This chapter made a technical correction to Retirement and Social Security Law sections 448(c), 508(c) and 606 (c) to re-establish a uniform maximum salary for the purposes of this death benefit calculation. The maximum salary currently allowable is \$166,294.



### **Noteworthy Actions**

#### Risk Management

A formal Risk Management Department was established. The new department provides a coordinated framework for identifying, mitigating and reporting risks that could impede NYSTRS from meeting its strategic objectives. The director of risk management is a member of the System's executive staff team.

#### Web Applications

Both members and employers benefitted from the addition of new external web applications. Members now have the ability to establish direct deposit of loan proceeds, correspond with staff through secure messaging and project benefit payments with and without the inclusion of verified prior service in the calculation. Among other upgrades, employers can add new members into NYSTRS' electronic reporting system.

#### Disaster Recovery

Improvements to the System's disaster recovery process included establishing fully active data centers in both our primary and disaster recovery locations. Having two active data centers increases the availability of programs and applications during periods of maintenance and unplanned outages.

#### **Stable Contribution Option**

Chapter 57 of the Laws of 2013 provided certain NYSTRS participating employers the opportunity to elect a seven-year stable contribution option (SCO) for employer contributions made to the System to fund member benefits. Employers had until June 30, 2014 to opt into the SCO, with only 10 employers (about 1% of all participating employers) choosing to participate. SCO employers are responsible for paying at a later date the accumulated difference, with interest, between the actuarially required contribution and the SCO for each year of participation.

#### Significant Litigation

#### Empire Center for New York State Policy v. New York State Teachers' Retirement System

The Empire Center, a non-profit corporation, challenged the System's denial of its request, pursuant to the Freedom of Information Law (or New York State Public Officers Law), for the names of retirees currently receiving a retirement benefit from the System. The System based its denial on a 2011 decision of the Appellate Division, First Department, which held that a New York public retirement system is not required to disclose the names or addresses of retirees.

The Supreme Court dismissed the petition, and the Appellate Division, Third Department affirmed. Petitioner then filed a motion for leave to appeal to the Court of Appeals.

The New York State Court of Appeals in May reversed the lower court rulings. As a result, NYSTRS returned to its prior policy of disclosing this data.

#### **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 approximately 426,000 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 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 2010 by Buck Consultants, who 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 2013 to 2014 is attributable to a net increase of 3,109 retirees and beneficiaries (details are found on page 32 in the *Notes to Financial Statements-Plan Description*). Also see the *Benefits and Return of Contributions by Type* chart on pages 118-119 for more information.

For an overview of NYSTRS' financial activities for the fiscal year ended June 30, 2014, 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 31 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 17.53% will apply to 2014-15 member salaries and will be paid by employers in fall 2015. The rates are set well in advance so school districts can budget for this expense.

The System's year-end net assets totaled \$108.2 billion. During the same period, benefits paid to retirees and beneficiaries were approximately \$6.3 billion.

The plan's funded ratio as of June 30, 2013, the date of the most-recent annual actuarial valuation and calculated in accordance with GASB Statement No. 50, was 87.5%. Details of our funding progress may be obtained by turning to page 97.



#### **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 18.2% net of fees for the fiscal year ended June 30, 2014. It was the fourth double-digit return posted since the 2009 global financial crisis and exceeded the actuarially assumed rate of return of 8.0% by more than 1,000 basis points.

Refer to pages 61-90 for further information on NYSTRS' investments. A listing of our equity and fixed income holdings can be viewed on our website at NYSTRS.org.

# **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. A summary of the report is printed each year in the newsletters NYSTRS distributes to both its active and retired members. Printed copies are available upon request.

The success of our System is directly attributable to the Board and staff team. We proudly operate in an environment of transparency, adhere to strong ethical values, and never lose sight of our fiduciary responsibilities.

Based on the character shown by NYSTRS team members, I'm confident our values-based foundation will always remain strong. Our stakeholders should expect nothing less.

Respectfully submitted,

Thomas K. Lee

Executive Director & Chief Investment Officer

# President's Message



Dear NYSTRS Members, Administrators and Teachers:

The Merriam-Webster Dictionary defines certainty as "the quality or state of being certain, especially on the basis of evidence." The same dictionary defines uncertainty as "something that is doubtful or unknown."

A guaranteed monthly income for life should be a certainty for all working Americans. This is the critical difference between retirement income generated from defined benefit and defined contribution plans. Defined benefit plans provide guaranteed income for life, while retirement savings in a defined contribution plan could literally run out.

Professionally managed, well-funded defined benefit plans have proven to be the most efficient and cost-effective way of providing steady, secure income for retirees. NYSTRS is one of the best-funded public defined benefit plans in the U.S. Our Board and staff manage a diversified, risk-controlled portfolio over the long term. Retired members of our system have received their benefits in full and without fail throughout our 93-year history.

We also take great pride in the cost effectiveness of our plan. Over the past five years, the cost to manage the plan has averaged 25 cents per \$100 managed — well below the 60 cents or more it costs to manage the same \$100 in private plans. Maybe most importantly to employers who help fund our plan, investment returns accounted for almost 87% of NYSTRS income over the last 20 years.

We have been able to stay true to our investment principles due to the regular, uninterrupted funding received from employers and employees in the form of required contributions. When combined with investment returns, these contributions allow us to build the strong growth portfolio that supplies funds for member pensions both now and in the future.

Credit for our System's success also belongs to a dedicated Board of Trustees whose members understand their fiduciary responsibilities and to an outstanding staff of professionals led by Tom Lee. The NYSTRS team is incredibly knowledgeable, hard-working and caring, and it shows not only on the balance sheet but in the incomparable commitment to customer service on display each and every day.

The strong financial and values-based foundation in place at NYSTRS ensures our members will not outlive their retirement savings. On the contrary, a NYSTRS retiree is guaranteed an income for life.



"Retired members of our system have received their benefits in full and without fail throughout our 93-year history."

R. Michael Kraus Board President

R. Michael Grans



# 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 4:
 Membership 9/1/83 — 12/31/09

 Tier 2:
 Membership 7/1/73 — 7/26/76
 Tier 5:
 Membership 1/1/10 — 3/31/12

 Tier 3:
 Membership 7/27/76 — 8/31/83
 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 1 members may retire at any age with 35 years of service. The creditable service under Benefit Enhancement legislation, described below, greatly increases the number of members eligible under this provision.

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.

#### **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% plus 1.5% for each year of NYS service beyond 30 years.
- $\cdot$  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% 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 service.
- · No reduction if the member is age 62, or if credit totals 30 years or more of service and the member is at least age 57.

#### 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% 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 <u>not</u> 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.



## **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. 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:

#### 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, National Board of Medical Examiners

Diplomate, 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

#### MELVIN J. STEINHART, M.D.

Chief of Psychiatric Consultation-Liaison Service

> Professor Emeritus of Clinical Psychiatry

Professor Emeritus of Clinical Medicine at Albany Medical College

#### **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 another NYS public retirement system. Credit for NYS public employment prior to joining NYSTRS and active duty military service is 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 ( $\frac{1}{12}$ ) 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.

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 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.

# >Financial



# >Financial

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# Independent Auditors' Report



**KPMG** 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), which comprise the statements of fiduciary net position as of June 30, 2014 and 2013, and the related statements of changes in fiduciary net position for the years then ended, and the related notes to the financial statements, which collectively comprise the System's basic financial statements.

## Management's Responsibility for the Financial Statements

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

# Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our 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, 2014 and 2013, and the changes in its fiduciary net position for the years then ended, in accordance with U.S. generally accepted accounting principles.

# >Financial



## **Emphasis of Matter**

As discussed in Note 2(g) to the financial statements, in 2014, the System adopted Governmental Accounting Standards Board (GASB) Statement No. 67, Financial Reporting for Pension Plans — an Amendment of GASB Statement No. 25. Our opinion is not modified with respect to this matter.

#### **Other Matters**

#### Required Supplementary Information

U.S. generally accepted accounting principles require that the management's discussion and analysis and the schedules 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 GASB 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 Supplemental Schedules

Our audits were conducted for the purpose of forming an opinion on the basic financial statements of the System. The accompanying Other Supplemental Schedules and the Introduction, Investments, Actuarial and Statistical sections of this report, as listed in the accompanying table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements. The Other Supplemental Schedules 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, this information is 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.

Albany, New York October 28, 2014



# Management's Discussion and Analysis

June 30, 2014 and 2013

(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, 2014, 2013, and 2012. 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 \$14.6 billion in 2014, and \$9.6 billion and \$660 million in 2013 and 2012, respectively.
- The net position of the System represents funds available to pay current and future benefits. Net position was \$108.2 billion at June 30, 2014, and \$95.4 billion and \$88.1 billion at June 30, 2013 and 2012, respectively.
- The 2014 net position increased from 2013 by \$12.8 billion, or 13.4%, and 2013 net position increased from 2012 by \$7.3 billion, or 8.3%.
- Contributions from employers were \$2.4 billion in 2014, \$1.7 billion in 2013, and \$1.6 billion in 2012, 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 \$5.9 billion in 2012 to \$6.1 billion in 2013 and \$6.3 billion in 2014.
- The System's funded ratio, a comparison of the actuarial value of assets to the accrued pension benefit liability, was 87.5% as of the June 30, 2013 valuation. Valuations in 2012 and 2011 resulted in the System's funded ratio of 89.8% and 96.7%, respectively.

#### **Overview of the 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' financial statements, which comprise the following:

- 1. The Statements of Fiduciary Net Position present NYSTRS' assets and liabilities by major categories and may serve over time as a useful indicator of the System's financial position. The difference between assets and liabilities represents the net position restricted for pensions. The statements also compare assets and liabilities by class to the previous year, which offers the reader the opportunity to note changes in each class of asset and liability 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 derived from net investment income; primarily in the form of changes in the market value of assets from last year. Deductions include retirement benefit payments, beneficiary payments, return of contributions, and administrative expenses. For comparison purpose, information pertaining to the previous year's Statement of Changes in Fiduciary Net Position is also provided.
- 3. The Notes to the Financial Statements are an essential part of the financial statements. They provide important background and detailed information about NYSTRS, the plan and the financial statements themselves.
- 4. The Required Supplementary Information consists of information pertaining to NYSTRS' actuarial methods and assumptions and provides data on changes in the school districts' net pension liability, school districts' net pension liability, the school districts' contributions, and NYSTRS' investment returns as well as data on the System's 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, 2014 and 2013 (Unaudited)

### **Financial Analysis**

Tables 1 and 2 summarize and compare the System's financial results for the years 2014, 2013, and 2012. 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 market 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
	2014	2013	2012	2013 to 2014	2013 to 2014
Investments at fair value:					
Short-term	\$ 2,151,360	\$ 2,468,675	\$ 2,884,700	\$ (317,315)	(0.33)%
Domestic fixed income securities	16,247,824	13,459,697	12,477,400	2,788,127	2.92
Global fixed income securities	1,030,747	368,357	_	662,390	0.69
Domestic equities	43,694,509	39,875,468	38,166,792	3,819,041	4.00
International equities	21,581,642	17,489,829	13,079,681	4,091,813	4.29
Mortgages	3,467,991	3,627,691	4,207,077	(159,700)	(0.17)
Real estate	7,579,193	7,180,814	6,666,178	398,379	0.42
Alternative investments	9,641,818	8,825,549	8,537,699	816,269	0.86
Total investments	105,395,084	93,296,080	86,019,527	12,099,004	12.68
Net other assets/liabilities	2,759,999	2,070,941	2,036,737	689,058	0.72
Net position restricted for pensions	\$108,155,083	\$95,367,021	\$88,056,264	\$12,788,062	13.40%

# Table 2 - Summary of Changes in Fiduciary Net Position

(dollars in thousands)

	Yed	ars ended June	30	Amount increase (decrease)	Percentage change of total
	2014	2013	2012	2013 to 2014	2013 to 2014
Net appreciation in fair value of investments	\$14,601,733	\$9,635,631	\$ 659,957	\$ 4,966,102	67.93%
Other investment income	2,062,970	2,000,849	1,715,305	62,121	0.85
Contributions	2,522,513	1,868,333	1,771,262	654,180	8.95
Retirement benefits	(6,324,546)	(6,118,849)	(5,907,795)	(205,697)	(2.81)
Other deductions	(74,608)	(75,207)	(72,189)	599	_
Net increase (decrease)	\$12,788,062	\$7,310,757	\$(1,833,460)	\$5,477,305	74.92%

## Management's Discussion and Analysis (continued) June 30, 2014 and 2013

(Unaudited)

#### Fiscal Year 2014

In 2014, as a result of asset allocation rebalancing, the internally managed domestic fixed income portfolio balance increased due to investments into the fixed income asset class. The June 30, 2014 balance was approximately 14.2% of invested System assets, within the allowable range of 13% to 22%. During the year, bond purchases of approximately \$4.7 billion exceeded the sum of bond maturities, sales, tenders, calls, and agency mortgage principal prepayments, by approximately \$2.6 billion.

Interest rates increased slightly in the intermediate part of the curve and declined slightly in the long end, but there was little year-over-year movement in front-end and 10-year rates. The interest rate curve remained steep and this, combined with the lower interest rate sensitivity of the bond portfolio, helped to minimize capital depreciation. Although there was an increase in the face value of bonds held, the continued maturity of higher coupon bonds, and reinvestment into lower coupon securities, drove the weighted average coupon of the domestic fixed income portfolio lower and decreased interest income during 2014.

Exposure to global bonds increased during the 2014 fiscal year, with a total of \$625 million invested into two separately managed accounts. The balance was approximately 1.0% of invested System assets at June 30, 2014, within the allowable range of 0% to 3%.

In domestic equities, net appreciation of \$8.3 billion for the fiscal year was driven by strong equity market returns, which included sales of approximately \$4.6 billion, contributing to an increase in net position for domestic equities of approximately \$3.8 billion. The domestic equities portfolio returned 25.03% for 2014 compared to 21.41% for 2013 resulting in a \$1.8 billion increase in net appreciation year over year. The balance was approximately 39.3% of invested System assets at June 30, 2014, remaining within the allowable range of 32% to 42%.

Similarly, international equities' net appreciation of \$3.5 billion was driven by strong international equity market returns. The System also provided additional funding of two international equity managers during the period, contributing to the change in net position for international equities of approximately \$4.0 billion. The international equities portfolio returned 22.01% for 2014 compared to 14.62% for 2013 resulting in a \$1.8 billion increase in net appreciation. The balance was approximately 20.1% of invested System assets at June 30, 2014, remaining within the allowable range of 14% to 22%.

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 \$763 million for the equity real estate portfolio and \$67 million for the debt real estate portfolio. The balance of equity real estate was approximately 10.5% of invested System assets at June 30, 2014, remaining in the allowable range of 6% to 14%. The debt real estate investments were approximately 4.9% of invested System assets at June 30, 2014, falling slightly under the allowable range of 5% to 11%, due to historically low yields available in the market. The balance was brought back into the allowable range when the System closed a \$425 million mortgage loan on July 2, 2014. Commercial real estate values, as measured by the National Council of Real Estate Investment Fiduciaries (NCREIF), continued to grow at a moderate pace of 1.3% to 2.3% per quarter for a total increase of 7.3% for the year.

The 2014 increase in private equity market values during the past year was the result of unrealized gains in the portfolio of \$1.7 billion, after \$1.1 billion in capital contributions to new and existing private equity funds and \$2.0 billion in distributions from existing private equity investments. The balance was approximately 8.0% of invested System assets at June 30, 2014, within the allowable range of 4% to 12%. Sixteen new private equity commitments were made during the year.

Within the securities lending market, unconventional monetary policy initiatives across central banks continued during the 2014 fiscal year. Rates remained suppressed despite improving unemployment figures, inflation readings moving towards the Federal Reserve's 2% target and improving financial markets on the domestic front. Attractive reinvestment opportunities remained scarce as money markets continued to be flooded with cash and issuers looked to term out funding needs to take advantage of low rates as well as work towards meeting various regulatory targets. Gross earnings fell from the prior fiscal year as front end yields continue to be at historic lows, leading the agent lenders to reduce loan balances as the risk-return trade-off has become less attractive. For this reason, as well as the realized loss on the sale of two cash collateral investments, net earnings were lower than the prior fiscal year. Lastly, the unrealized loss on cash collateral investments continued to decline, due to the previously mentioned sale of cash collateral investments plus appreciation of assets and receipt of principal payments at par.



# Management's Discussion and Analysis (continued) June 30, 2014 and 2013 (Unaudited)

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 2014 from 2013 is primarily the result of activity within the System's international equity assets under management and real estate commingled and equity funds.

The change in employer contributions was a function of an increase in the employer contribution rate from 11.84% in 2013 to 16.25% in 2014.

#### Fiscal Year 2013

In 2013, as a result of asset allocation rebalancing, the internally managed domestic fixed income portfolio balance increased due to investments into the fixed income asset class. The June 30, 2013 balance was approximately 13.2% of invested System assets, within the allowable range of 13% to 23%. During the year, bond purchases of approximately \$3.8 billion exceeded the sum of bond maturities, sales, tenders, calls, and agency mortgage principal prepayments, by approximately \$1.2 billion.

Interest rates moved higher during the year and above their historic lows, but the interest rate curve remained steep and this, combined with the lower interest rate sensitivity of the bond portfolio, helped to minimize capital depreciation. Although there was an increase in the face value of bonds held, the maturity of higher coupon bonds, and continued reinvestment into lower coupon securities, drove the weighted average coupon of the domestic fixed income portfolio lower and decreased interest income during 2013.

Exposure to global bonds was established during the 2013 fiscal year, with a total of \$375 million funded into a separately managed account. The balance was approximately 0.4% of invested System assets at June 30, 2013, within the allowable range of 0% to 3%.

In domestic equities, net appreciation of \$6.5 billion for the period was driven by strong equity market performance, partially offset by net sales of approximately \$5 billion, as a response to rebalancing towards the System's 37% target allocation, which falls within the allowable range of 32% to 42%. The impact of the sales was partially offset by positive investment returns resulting in an overall increase in market value of \$1.7 billion, and net appreciation of \$6.5 billion. The domestic equities portfolio returned 21.4% for 2013 compared to 4.5% for 2012 resulting in a \$5.5 billion increase in net appreciation.

Approximately \$2.4 billion was contributed to the international equities portfolio as part of rebalancing towards the System's 18% target allocation, which falls within the allowable range of 14% to 22%. Positive investment returns for 2013 resulted in net appreciation of \$1.7 billion. The international equities portfolio returned 14.6% for 2013 compared to (13.6)% for 2012 resulting in a \$3.4 billion increase in net appreciation.

Real estate value, as measured by the National Council of Real Estate Investments Fiduciaries (NCREIF), continued to recover at a moderate pace of 0.9% to 1.5% per quarter for a total increase of 4.8% for the year.

The 2013 increase in private equity market values during the past year was the result of unrealized gains in the portfolio of \$884 million, after \$1.1 billion in capital contributions to new and existing private equity funds and \$1.7 billion in distributions from existing private equity investments. The private equity program has a target allocation of 7%, which falls within the allowable range of 4% to 12%. Thirteen new private equity commitments were made during the year.

Within the securities lending market, unconventional monetary policy initiatives across central banks continued and in some instances increased in magnitude during the 2013 fiscal year. While the financial markets stabilized, rates remained suppressed. With the actions from the Federal Reserve's quantitative easing, funding rates hovered close to zero percent. Attractive reinvestment opportunities remained scarce as the money markets were flooded with cash and issuers looked to term out their funding needs. Despite the gross earnings decline from the prior fiscal year on lower loan balances and tighter reinvestment yields, net earnings increased. This was due to the rise in demand spread as general collateral loans were reduced and the addition of an International Equity lending program, which was transitioned from a commingled structure to a separately managed program. The unrealized loss on a small number of securities dropped by approximately 38% year over year as principal payments were received at par even though the securities indicative market prices are at distressed levels.

# Management's Discussion and Analysis (continued) June 30, 2014 and 2013 (Unaudited)

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 2013 from 2012 is primarily the result of activity within the System's international equity assets under management.

The change in employer contributions was a function of an increase in the employer contribution rate from 11.11% in 2012 to 11.84% in 2013.

# Net Appreciation (Depreciation)

For the year ended June 30, 2014, NYSTRS reported net investment income of \$16.7 billion compared to \$11.6 billion in 2013 and \$2.4 billion in 2012. 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 2014 2013 2012					i (c	Amount ncrease decrease) 13 to 2014	
Short-term	\$	(66)	\$	(59)	\$	(469)	\$	(7)
Domestic fixed income securities		21,152	(;	361,933)		218,627		383,085
Global fixed income securities		17,941		(11,207)		_		29,148
Domestic equities	8,3	344,471	6,	517,776		980,504		1,826,695
International equities	3,4	187,949	1,	728,839	(	1,712,051)		1,759,110
Mortgages		32,325		(79,676)		48,675		112,001
Real estate	8	803,186		722,510		656,430		80,676
Alternative investments	1,8	394,775	1,	119,381		468,241		775,394
Totals	\$14,6	01,733	\$9,0	535,631	\$	659,957	\$4	4,966,102

#### **Economic Factors**

The economic factor that is of primary significance to NYSTRS is the investment rate of return earned in the capital markets. Legislative and demographic changes can also have a significant impact on the 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 full and on time, 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's return on investments was strong, due in large measure to the performance of both domestic and international equities. 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. The substantial loss on investments during the 2008-09 fiscal year was the primary reason for the continued increase in the employer contribution rate, from 11.84% on 2012-13 member salaries to 16.25% on 2013-14 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 to communit@nystrs.org



# Statements of Fiduciary Net Position June 30, 2014 and 2013

(dollars in thousands)

Assets:	2014	2013
Investments — at fair value (note 4):		
Short-term	\$ 2,151,360	\$ 2,468,675
Domestic fixed income securities	16,247,824	13,459,697
Global fixed income securities	1,030,747	368,357
Domestic equities	43,694,509	39,875,468
International equities	21,581,642	17,489,829
Mortgages	3,467,991	3,627,691
Real estate	7,579,193	7,180,814
Alternative investments	9,641,818	8,825,549
Total investments	105,395,084	93,296,080
Receivables:		
Employer	2,364,883	1,698,248
Employer incentives	20,151	31,663
Member	98,489	105,854
Investment income	130,604	131,805
Investment sales	6,461	49,457
Total receivables	2,620,588	2,017,027
Other assets:		
Securities lending collateral — invested (note 5)	2,793,937	3,431,447
Member loans	218,957	203,361
Capital assets, net of depreciation	29,037	28,521
Miscellaneous assets	29,189	48,422
Total other assets	3,071,120	3,711,751
Total assets	111,086,792	99,024,858
Liabilities:		
Securities lending collateral — due to borrowers (note 5)	2,795,141	3,446,168
Investment purchases payable	9,983	90,313
Mortgage escrows and deposits — net of investments	8,801	10,064
Other liabilities (notes 5 and 8)	117,784	111,292
Total liabilities	2,931,709	3,657,837
Net position restricted for pensions (note 3)	\$108,155,083	\$95,367,021

See accompanying notes to financial statements.

# Statements of Changes in Fiduciary Net Position Years Ended June 30, 2014 and 2013

(dollars in thousands)

Additions:	2014	2013
Investment income:		
Net appreciation in fair value of investments	\$ 14,601,733	\$ 9,635,631
Interest income	650,905	650,539
Dividend income	1,287,878	1,198,994
Real estate — net operating income	308,474	302,520
Securities lending — gross earnings	670	8,703
Other — net	22,483	35,416
	16,872,143	11,831,803
Less:		
Investment expenses	229,376	212,639
Securities lending:		
Broker rebates	(10,123)	(10,002)
Management fees	1,704	1,910
Appreciation of collateral	(13,517)	(9,224)
Net investment income	16,664,703	11,636,480
Contributions:		
Employer	2,400,386	1,734,908
Member	120,762	128,903
Transfers	1,365	4,522
Total contributions	2,522,513	1,868,333
Net additions	19,187,216	13,504,813
Deductions:		
Retirement benefit payments — periodic	6,273,994	6,062,304
Beneficiary payments	50,552	56,545
Return of contributions	18,992	20,869
Administrative expenses	55,616	54,338
Total deductions	6,399,154	6,194,056
Net increase in net position	12,788,062	7,310,757
Net position restricted for pensions:		
Beginning of year	95,367,021	88,056,264
End of year	\$108,155,083	\$95,367,021

See accompanying notes to financial statements.



# **Notes to Financial Statements**

June 30, 2014 and 2013

(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:

	2014	2013
Public school districts	680	682
B.O.C.E.S.	37	37
S.U.N.Y.	31	31
Community colleges	30	30
Charter schools	26	25
Special act districts	11	13
Other	9	9_
Total	824	827

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

	2014	2013
Retired members and beneficiaries currently receiving benefits	155,931	152,822
Members:		
Active members	262,322	266,100
Terminated members entitled to but not yet receiving benefits	7,717	7,228
Subtotal	270,039	273,328
Total	425,970	426,150

# Notes to Financial Statements (continued)

June 30, 2014 and 2013

(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.

#### 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 Retirement and Social Security Law.

#### 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 Retirement and Social Security Law.

#### 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 Retirement and Social Security Law.

#### Tier 6

Members who joined on or after April 1, 2012 are covered by the provisions of Article 15 of the Retirement and Social Security Law.

#### (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.

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 ages 62 or retirement at ages 57 through 61 with 30 years of service. They receive a reduced benefit for retirement at ages 55-56 regardless of service credit, or 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.

#### (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 noted for service retirements above.

#### (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 Retirement and Social Security Law. The Tier 3 benefit is integrated with Social Security.



#### Notes to Financial Statements (continued)

June 30, 2014 and 2013

(dollars in thousands)

#### (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 Tiers 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 contribution rate applied to 2013-14 and 2012-13 member salaries is 16.25% and 11.84%, respectively.

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 are 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 for which the contribution will be made in the fall of 2014 and deferring payment of the difference between the ADC and the contribution determined applying the SCO rate. Ten school districts opted into the SCO program resulting in a balance of \$17,233 of deferred contributions on 2013-14 member salaries. Interest on deferred contribution amounts will be 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%. Payments on 2014 deferred contributions and accumulated interest will be made over a five year period beginning in the fall of 2019.

#### (i) Member Contributions

Tier 3 and Tier 4 members who have less than 10 years of service or membership are required by law to contribute 3% of salary to the System. Tier 5 members are required by law to contribute 3.5% of salary throughout their active membership. 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 Retirement and Social Security Law, 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 Retirement and Social Security Law. 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) Article 19 Benefit Enhancement

Article 19 of the Retirement and Social Security Law allows eligible Tiers 1 and 2 members to 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. Effective October 2000, Tier 3 and 4 members are no longer required to make 3% contributions after obtaining the earlier of 10 or more years of service credit or 10 or more years of membership.

June 30, 2014 and 2013

(dollars in thousands)

#### (k) 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 the annual benefit. The applicable percentage payable beginning September 2014 is 1.0%, remaining unchanged from the 1.0% paid beginning September 2013.

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 Retirement and Social Security Law 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) Method Used to Value Investments

Plan investments are reported at fair value. Fair value is the amount at which an investment could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. Refer to Note 4(c) for more detail regarding the System's policy on accounting for investments.

#### (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 Internal Revenue Code.

#### (e) Reclassifications

Amounts in the prior year's financial statements have been reclassified to conform to the presentation in the current year's financial statements.



June 30, 2014 and 2013

(dollars in thousands)

#### (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) Adoption of Accounting Pronouncements

The System adopted Governmental Accounting Standards Board (GASB) Statement No. 67, Financial Reporting for Pension Plans — an amendment of GASB Statement No. 25 (GASB Statement No. 67). GASB Statement No. 67 applies to pension plans that administer pension benefits for governments through a trust or equivalent arrangement that meets certain specified criteria. GASB Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach to measuring the net pension liability of employers for benefits provided through the pension plan, about which information is required to be presented. Adoption of GASB Statement No. 67 did not impact the fiduciary net position of the System, however certain changes to note disclosures and required supplementary information have been incorporated to comply with the new standard.

#### (b) Accounting Pronouncements Issued but Not Yet Effective

In June 2012, the GASB approved Statement of Governmental Accounting Standards No. 68, Accounting and Financial Reporting for Pensions — an amendment of GASB Statement No. 27 (GASB Statement No. 68).

GASB Statement No. 68 addresses accounting and financial reporting for pensions that are provided to the employees of state and local governmental employers. The System will be affected by this statement as a governmental entity whose employees are provided with defined benefit pensions through the New York State and Local Retirement System (NYSLRS), a cost-sharing, multiple-employer defined benefit pension plan. The provisions of GASB Statement No. 68 will require the System to include its proportionate share of the New York State and Local Retirement System's net pension liability on the basic financial statements. In addition, the System will also be required to include more extensive note disclosures and required supplementary information relating to its proportionate share of net pension liability.

GASB Statement No. 68, which primarily relates to reporting by governments that provide pensions to their employees, is effective for fiscal years beginning after June 15, 2014. The System is evaluating the impact of the new GASB standard.

GASB Statement No. 71, Pension Transition for Contributions Made Subsequent to the Measurement Date — an amendment of GASB Statement No. 68 (GASB Statement No. 71) was approved in November 2013. GASB Statement No. 71 amends paragraph 137 of GASB Statement No. 68 to require that, at transition, a government recognize a beginning deferred outflow of resources for its pension contributions, if any, made subsequent to the measurement date of the beginning net pension liability. The System is evaluating the impact of this new standard.

# (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 Tiers 1 and 2 members covered by the provisions of Article 11 of the Education Law and Article 11 of the Retirement and Social Security Law are accumulated.

June 30, 2014 and 2013

(dollars in thousands)

#### (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 Retirement and Social Security Law are paid as a life annuity.

#### (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 Tiers 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 Retirement and Social Security Law, 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, 2014 and 2013 were \$13,771 and \$13,523, respectively. For reporting purposes below, 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 Retirement and Social Security Law contributed 3% of salary to the System's CO-ESC Member Contribution Fund. Effective October 2000, contributions were eliminated for Tiers 3 and 4 members with 10 or more years of service or membership. Effective January 1, 2010, Tier 5 members are required to contribute 3.5% of salary throughout their active membership. Effective April 1, 2012, Tier 6 members are required to contribute between 3% and 6% of salary throughout their active membership in accordance with a schedule based upon salary earned. Contributions to this fund were \$112,844 and \$126,367 for the years ended June 30, 2014 and 2013, respectively. For reporting purposes below, 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. Investment expenses are offset directly by investment income.

#### (h) Summary of Fund Balances

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

	2014			2013
Administrative Fund	\$	58,398	\$	55,581
Annuity Savings Fund		2,430		5,105
Annuity Reserve Fund		139,817		149,564
Pension Accumulation Fund	5	50,881,776	38	3,549,887
Pension Reserve Fund	5	57,072,662	_56	5,606,884
Total	\$10	08,155,083	\$95	5,367,021



June 30, 2014 and 2013

(dollars in thousands)

#### (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 Retirement and Social Security Law (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, 2014 and 2013, as adopted by the Retirement Board is as follows:

	20	2014		13
Asset Class	Target	Range	Target	Range
Domestic equities	37%	32-42%	37%	32-42%
International equities	18%	14-22%	18%	14-22%
Real estate	10%	6-14%	10%	6-14%
Alternative investments	7%	4-12%	7%	4-12%
Total equities	72%		72%	
Domestic fixed income securities	17%	13-22%	18%	13-23%
Global fixed income securities	2%	0-3%	2%	0-3%
Mortgages	8%	5-11%	8%	5-11%
Short-term	1%	0-4%	0%	0-5%
Total fixed income	28%	_	28%	
Total	100%	=	100%	

#### (c) Method Used to Value Investments

Plan investments are reported at fair value. Fair value is the amount at which an investment could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. Quoted market prices, when available, have been used to value investments. The market values for securities that have no quoted market price represent estimated fair value. International equities are valued based upon quoted foreign market prices and translated into U.S. dollars at the exchange rate in effect at June 30. In general, corporate debt securities have been valued at quoted market prices or, if not available, values are based on yields currently available on comparable securities of issuers with similar credit ratings. Mortgages have been valued on the basis of their future principal and interest payments discounted at prevailing interest rates for similar instruments. The fair value of real estate investment securities is based on appraisals

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(dollars in thousands)

plus fiscal year-to-date capital expenditures. Publicly traded alternative investments are valued based on quoted market prices. In the absence of readily determinable public market values, alternative investments are valued using current estimates of fair value obtained from the general partner or investment manager. Such valuations generally reflect discounts for liquidity and consider variables such as financial performance of investments, discounted cash flow analysis, recent sales prices of comparable investments, and other pertinent information.

#### (d) Rate of Return

For the years ended June 30, 2014 and 2013, the annual money-weighted rate of return on System investments, net of pension plan investment expense, was 18.16 % and 13.73%, 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, 2014 and 2013 are as follows:

	2014		2013		
Quality rating	Fair value	Percentage of portfolio	Fair value	Percentage of portfolio	
Aaa	\$ 4,787,087	27.81%	\$ 3,715,419	26.97%	
Aa	1,472,128	8.55	1,000,818	7.26	
A	2,702,723	15.69	2,459,158	17.85	
Ваа	1,785,513	10.37	1,454,837	10.56	
Other	67,905	0.39	66,188	0.48	
Total credit risk debt securities	10,815,356	62.81	8,696,420	63.12	
U.S. government fixed income securities*	6,405,950	37.19	5,079,544	36.88	
Total fixed income securities**	\$17,221,306	100.00%	\$13,775,964	100.00%	

<sup>\*</sup> 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.

#### (b) Custodial Credit Risk

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

<sup>\*\*</sup> Domestic and global fixed income securities on the Statements of Fiduciary Net Position at June 30, 2014 and 2013 include \$57,265 and \$52,090, respectively, in cash and commingled commercial mortgage backed securities.



June 30, 2014 and 2013

(dollars in thousands)

The head of the Division of the Treasury in the 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. Although the System's bank accounts were fully collateralized during the year, at June 30, 2014 and 2013, the System's bank balance was \$(8,477) and \$(6,210), respectively, representing a managed overdraft.

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

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.

#### (c) Concentration of 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, 2014 and 2013, 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 permissible investments and are excluded from this regulation.

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

June 30, 2014 and 2013

(dollars in thousands)

- 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.
- 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 Retirement and Social Security Law, 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 Retirement and Social Security Law. The
  System's investment in a limited partnership is valued based on the underlying value of the companies in which the
  partnership has invested.



June 30, 2014 and 2013

(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, 2014 and 2013 as follows:

	2014		2013		
Investment type	Fair value	Duration (in years)	Fair value	Duration (in years)	
Short-term	\$ 2,151,360	0.055	\$ 2,468,675	0.066	
Domestic fixed income*	16,210,609	3.700	13,426,106	3.619	
Global fixed income	1,030,747	5.431	368,357	5.810	
Total fair value	\$19,392,716		\$16,263,138		
Portfolio modified duration		3.387		3.130	

<sup>\*</sup> Domestic fixed income on the Statements of Fiduciary Net Position at June 30, 2014 and 2013 include \$37,215 and \$33,591, 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 of a bond, or a portfolio of bonds, the greater its price volatility will be in response to a change in interest rates and vice versa. Duration is the measure of a bond price's sensitivity to a 100-basis point change in interest rates. A duration of 8 would mean that, given a 100-basis point change up/down in rates, a bond's price would move up/down by 8%.

June 30, 2014 and 2013

(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, 2014 and 2013 as follows (holdings valued in U.S. dollars):

	2	014	2013		
	International Equities	Alternatives, Cash, and Global Fixed Income	International Equities	Alternatives, Cash, and Global Fixed Income	
Currency:					
Euro	\$ 4,613,754	\$1,776,008	\$ 3,353,907	\$1,295,780	
Japanese Yen	3,077,865	94,883	2,785,659	73,121	
British Pound Sterling	3,344,942	203,701	2,763,876	110	
Canadian Dollar	1,568,650	43,903	1,211,222	816	
Swiss Franc	1,326,332	4,088	1,115,776	_	
Australian Dollar	1,139,721	21,700	941,573	147	
Hong Kong Dollar	868,647	_	786,551	_	
Korean Won	724,935	11,694	556,896	37	
Taiwan Dollar	499,427	_	352,483	_	
Swedish Krona	467,393	10,521	404,851	_	
Other	3,204,493	39,470	2,679,666	37	
Totals	\$20,836,159	\$2,205,968	\$16,952,460	\$1,370,048	

#### (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 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 securities lending collateral is reported as an asset and collateral due to borrowers is reported as a liability on the Statement of Fiduciary Net Position. At June 30, 2014 and 2013, the amount the System owed borrowers exceeded the fair value of the cash collateral invested by approximately \$1.2 million and \$14.7 million, respectively. For each year end, the System had no credit risk exposure to borrowers because the amounts the System owes the borrowers (the collateral) exceeds the amounts the borrowers owe the System (the loaned securities).



June 30, 2014 and 2013

(dollars in thousands)

As of June 30, 2014 and 2013, 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 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. At June 30, 2014 and 2013, the average effective duration of the funds managed by JP Morgan was 22 days and of those managed by State Street was 2 days compared to 25 days and 5 days, respectively. 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	2014	2013
Fair value of securities on loan - cash collateral	\$1,749,502	\$2,620,230
Fair value of securities on loan - non-cash collateral	982,767	737,478
Total fair value of securities on loan	\$2,732,269	\$3,357,708
Fair value of cash collateral invested by System	\$1,791,001	\$2,679,578
Fair value of non-cash collateral held by System	1,002,936	751,869
Total collateral invested and held by the System	\$2,793,937	\$3,431,447
Fair value of liabilities to borrowers - cash collateral	\$1,792,205	\$2,694,299
Fair value of liabilities to borrowers - non-cash collateral	1,002,936	751,869
Total collateral due to borrowers	\$2,795,141	\$3,446,168

# (6) Net Pension Liability (Asset) of Participating School Districts

The components of the net pension liability (asset) of the participating school districts at June 30, 2014 and 2013 were as follows:

	2014	2013
Total pension liability	\$ 97,015,706	\$94,708,767
Plan fiduciary net position	108,155,083	95,367,021
School districts' net pension liability (asset)	\$ (11,139,377)	\$ (658,254)
Plan fiduciary net position as a percentage of total pension liability	111.48%	100.70%

June 30, 2014 and 2013

(dollars in thousands)

#### (a) Actuarial Assumptions

The total pension liability at June 30, 2014 was determined using an actuarial valuation as of June 30, 2013, with update procedures used to roll forward the total pension liability to June 30, 2014. Total pension liability at June 30, 2013 was determined by an actuarial valuation as of June 30, 2012, with update procedures used to roll forward the total pension liability to June 30, 2013. These actuarial valuations used the following actuarial assumptions:

Inflation 3.0%

Projected salary increases Rates of increase differ based on age and gender.

They have been calculated based upon recent NYSTRS member experience.

<u>Age</u>	<u>Female</u>	<u>Male</u>
25	10.35%	10.91%
35	6.26	6.27
45	5.39	5.04
55	4.42	4.01

Projected COLAs 1.625% compounded annually

Investment rate of return 8.0% compounded annually, net of pension plan investment expense, including inflation.

Annuitant mortality rates are based on plan member experience, with adjustments for mortality improvements based on Society of Actuaries Scale AA.

The actuarial assumptions used in the June 30, 2013 and 2012 valuations were based on the results of an actuarial experience study for the period July 1, 2005 to June 30, 2010.

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.



June 30, 2014 and 2013

(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 valuation date of June 30, 2013 and June 30, 2012 (see the discussion of the pension plan's investment policy) are summarized in the following table:

Long-Term Expected Real Rate of Return*					
Asset Class	2013	2012			
Domestic equities	7.3%	7.0%			
International equities	8.5%	9.1%			
Real estate	5.0%	4.9%			
Alternative investments	11.0%	10.2%			
Domestic fixed income securities	1.5%	2.0%			
Global fixed income securities	1.4%	1.7%			
Mortgages	3.4%	4.0%			
Short-term	0.8%	1.2%			

<sup>\*</sup> Real rates of return are net of the long-term inflation assumption of 2.3% for 2013 and 2012.

#### (b) Discount Rate

The discount rate used to measure the total pension liability was 8.0 percent. 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 school districts calculated using the discount rate of 8.0 percent, 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 (7.0 percent) or 1-percentage-point higher (9.0 percent) than the current rate:

School district's net pension liability (asset)					
	1% Decrease (7.0%)	Current Discount Rate (8.0%)	1% Increase (9.0%)		
June 30, 2014	\$ (240,292)	\$ (11,139,377)	\$(20,426,910)		
June 30, 2013	\$10,046,417	\$ (658,254)	\$ (9,772,304)		

June 30, 2014 and 2013

(dollars in thousands)

# (7) 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, 2014 and 2013 respectively, were: real estate and real estate alternative investments of \$1.95 billion and \$1.44 billion; mortgages and real estate debt funds of \$722.5 million and \$320.5 million; and private equity investments of \$4.37 billion and \$4.18 billion.

# (8) 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. Of the total other liabilities of \$117,784 and \$111,292 at June 30, 2014 and 2013, respectively, \$8,477 and \$6,210, respectively, were managed overdrafts.

# (9) System Employees' Pension Plan

#### (a) Plan Description

As an employer, the System participates in the New York State and Local Retirement System (NYSLRS), a cost sharing, multi-employer defined benefit pension plan administered by the Comptroller of the State of New York. NYSLRS provides retirement, disability, withdrawal, and death benefits to plan members and beneficiaries as authorized by the Retirement and Social Security Law 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. The report may be obtained by writing to the New York State and Local Retirement System, 110 State Street, Albany, NY 12244.

#### (b) Funding Policy

Funding of NYSLRS is accomplished through member and employer contributions and investment earnings, according to the New York State Retirement and Social Security Law.

Plan members who joined the System before July 27, 1976 are not required to make contributions. Those joining on or after July 27, 1976 and before January 1, 2010 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, are required to contribute 3% throughout active service. Persons joining on or after April 1, 2012, are required to contribute between 3% and 6% throughout active service. Employers are required to contribute at an actuarially determined rate. Various enactments of pension legislation has established distinct classes of membership referred to as Tiers 1, 2, 3, 4, 5, and 6. An average employer contribution rate for these tiers of 20.82% and 18.70% was applicable to the annual covered payroll for the years ended March 31, 2014 and March 31, 2013, respectively. The required contributions paid to NYSLRS during the System's years ended June 30, 2014 and 2013 were \$5,250 and \$4,807, respectively, and were 100% of the contributions required.



June 30, 2014 and 2013

(dollars in thousands)

# (10) System Employees' Other Post-Employment Benefits

#### (a) Plan Description

The System adopted GASB Statement No. 45, Accounting and Financial Reporting by Employers for Post-employment Benefits other than Pensions (GASB Statement No. 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 as an agent multiple-employer defined benefit plan. 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 NYSLRS. Dependents may also be covered.

System retirees are required to contribute toward the cost of their coverage. Under the current agreement, employees who retire on or after July 1, 1985 contribute an amount equal to 10% 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 10% 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, 2014, 579 participants including 347 current employees, and 232 retired and/or spouses of retired employees participated in the healthcare plan. As of June 30, 2013, 559 participants including 337 current employees, and 222 retired and/or spouses of retired employees participated in the healthcare plan. NYSHIP does not issue a stand-alone financial report and NYSHIP's agent activities are included within the financial statements of the State of New York.

#### (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 post-employment 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 post-employment 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 contribution to the Trust for the years ended June 30, 2014 and 2013, were \$5,500 and \$5,240, respectively, and were equal to 115% and 100% of the System's ARC.

June 30, 2014 and 2013

(dollars in thousands)

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, 2013	\$16,779	\$74,479	\$57,700	22.5%	\$26,500	218%

#### (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 to be performed at least biennially. Currently, the Trust has an actuarial valuation performed annually.

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:

Valuation date
Actuarial cost method
Amortization method
Amortization period
Asset valuation method
Actuarial assumptions:
Investment rate of return\*
Healthcare cost trend rate

July 1, 2013
Entry age normal
Level percentage of payroll, open
30 years
Market value

8.0% compounded annually 9% initial, 5% ultimate

# (11) 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 two 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.

<sup>\*</sup>Includes an inflation assumption of 3.0%



# Required Supplementary Information

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

Last Two Fiscal Years (dollars in thousands)

	2014	2013
Total pension liability		
Service cost	\$ 1,397,547	\$ 1,406,084
Interest	7,434,764	7,252,357
Changes of benefit terms	-	-
Differences between expected and actual experience	(181,834)	(128,194)
Changes of assumptions	-	-
Benefit payments, including refunds of member contributions	(6,343,538)	(6,139,718)
Net change in total pension liability	2,306,939	2,390,529
Total pension liability - beginning	94,708,767	92,318,238
Total pension liability - ending (a)	\$ 97,015,706	\$94,708,767
Plan fiduciary net position		
Contributions - employer	\$ 2,400,386	\$1,734,908
Contributions - member	120,762	128,903
Net investment income	16,664,703	11,636,480
Benefit payments, including refunds of member contributions	(6,343,538)	(6,139,718)
Administrative expenses	(55,616)	(54,338)
Other	1,365	4,522
Net change in plan fiduciary net position	12,788,062	7,310,757
Plan fiduciary net position - beginning	95,367,021	88,056,264
Plan fiduciary net position - ending (b)	\$108,155,083	\$95,367,021
School districts' net pension liability (asset) - ending (a) - (b)	\$(11,139,377)	\$ (658,254)

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

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

# Schedule of the School Districts' Net Pension Liability (Asset) (Unaudited) Last Two Fiscal Years

(dollars in thousands)

	2014	2013
Total pension liability	\$ 97,015,706	\$94,708,767
Plan fiduciary net position	108,155,083	95,367,021
School districts' net pension liability (asset)	\$(11,139,377)	\$ (658,254)
Plan fiduciary net position as a percentage of the total pension liability	111.48%	100.70%
Covered - employee payroll	\$ 14,771,301	\$14,647,830
School districts' net pension liability (asset) as a percentage of covered - employee payroll	(75.41)%	(4.49)%

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



# Schedule of the School Districts' Contributions (Unaudited)

Last 10 Fiscal Years

(dollars in thousands)

	2014	2013	2012	2011
Actuarially determined contribution	\$2,400,336	\$ 1,734,303	\$ 1,626,589	\$ 1,269,976
Contributions in relation to the actuarially determined contribution	2,383,103	1,734,303	1,626,589	1,269,976
Contribution deficiency	\$ 17,233	\$ -	\$ -	\$ -
Covered-employee payroll	\$14,771,301	\$14,647,830	\$14,640,764	\$14,732,895
Contributions as a percentage of covered-employee payroll	16.25%	11.84%	11.11%	8.62%

# Schedule of the School Districts' Contributions (Unaudited)

Last 10 Fiscal Years

(dollars in thousands)

2010	2009	2008	2007	2006	2005
\$ 915,632	\$ 1,096,155	\$1,195,148	\$1,125,138	\$ 997,687	\$ 684,817
915,632	1,096,155	1,195,148	1,125,138	997,687	684,817
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$14,792,116	\$14,366,387	\$13,690,128	\$13,083,004	\$12,518,030	\$12,163,708
6.19%	7.63%	8.73%	8.60%	7.97%	5.63%



# Schedule of Investment Returns (Unaudited) Last Two Fiscal Years

	2014	2013
Annual money-weighted rate of return, net of investment expense	18.16%	13.73%

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

# Notes to Required Supplementary Information (Unaudited) 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 2006 were adopted by the Retirement Board on October 25, 2000. Revised assumptions were adopted by the Retirement Board on October 26, 2006 and first used in the 2006 actuarial valuation. The actuarial assumptions were revised again in 2011. These assumptions were adopted by the Retirement Board on October 27, 2011 and first used in the 2011 actuarial valuation. The Retirement System's asset valuation method was changed effective with the 2007 actuarial valuation. 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. Prior to the 2011 actuarial valuation, COLAs were projected to increase at a rate of 1.75% 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.

Actuarial cost method	Aggregate (level percent of payroll)*
Actuariai cost method	Aggregate flevel bercellt of bayroll

Amortization method

Remaining amortization period

Asset valuation method

Inflation

Projected salary increases

n/a\*

n/a\*

Five-year phased in deferred recognition of each year's actual gain or loss, above (or below) an assumed inflationary gain of 3.0%.1

3.0%

Rates of increase differ based on age and gender.1

They have been calculated based upon recent NYSTRS member experience.

<u>Age</u>	<u>Female</u>	<u>Male</u>
25	10.35%	10.91%
35	6.26	6.27
45	5.39	5.04
55	4.42	4.01

Projected COLAs 1.625% compounded annually<sup>1</sup>

Investment rate of return 8.0% compounded annually, net of pension plan investment expense, including inflation.

<sup>\*</sup>The System is funded in accordance with the Aggregate Cost Method, which does not identify nor 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 15 years.

<sup>&</sup>lt;sup>1</sup>See Notes to Required Supplementary Information above. See accompanying independent auditors' report.



# Other Post-Employment Benefits Schedule of Funding Progress (Unaudited) June 30, 2014

(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, 2011	\$ 9,067	\$73,127	\$64,060	12.4%	\$24,631	260%
July 1, 2012	12,020	81,838	69,818	14.7	25,993	269
July 1, 2013	16,779	74,479	57,700	22.5	26,500	218

In accordance with GASB Statement No. 45, Paragraph 26, the schedule of funding progress contains the required elements of information as of the most-recent actuarial valuation date. The Trust is required to have an actuarial valuation performed at least biennially. The most-recent actuarial valuation was completed as of July 1, 2013.

# Other Supplemental Schedules

# **Schedules of Administrative Expenses**

Years ended June 30, 2014 and 2013

(dollars in thousands)

	2014	2013
Salaries and benefits:		
Salaries Civil service Employees retirement Health and dental insurance Overtime salaries Social security	\$ 27,055 33 5,295 10,097 60 1,929	\$26,749 61 4,856 9,747 35 1,921
Total salaries and benefits	44,469	43,369
Building occupancy expenses:		
Building, grounds and equipment Depreciation — building and improvements Depreciation — equipment Office supplies and expenses Utilities and municipal assessments	1,233 1,417 204 167 1,001	1,464 1,272 172 166 714
Total building occupancy expenses	4,002	3,788
Computer expenses:		
Amortization/depreciation — computer micro Computer hardware and software Computer maintenance and supplies	1,666 2,201 72	1,825 2,317 80
Total computer expenses	3,939	4,222
Personnel and meeting expenses:		
Board — meetings, travel and education Delegates meeting Preretirement seminars Professional development Travel and automobile expense Other personnel expenses	134 52 144 523 229 40	120 53 131 521 167 42
Total personnel and meeting expenses	1,122	1,034
Professional and governmental services:		
Auditors — financial Auditors — insurance department Disability medical examinations Postage and cartage Professional fees and services Publications Statutory custodian charges	142 67 131 859 426 322 117	128 67 136 918 215 344 117
Total professional and governmental services	2,064	1,925
Total	\$55,616	\$54,338



# Other Supplemental Schedules (continued)

# Schedule of Investment Expenses Year ended June 30, 2014

(dollars in thousands)

Investment category	Assets serviced or under management	Expenses
Domestic fixed income securities	\$1,265,970	\$ 2,517
Global fixed income securities	1,030,747	1,650
Domestic equities	5,213,179	18,380
International equities	21,508,655	23,406
Mortgages	1,467,938	110
Real estate	7,574,193	61,192
Alternative investments	9,641,818	114,387
General	_	7,734
Totals	\$47,702,500	\$229,376

# >Investments



# >Investments

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# Report on Investment Activity for Year Ended June 30, 2014

# **Overall Objectives and Performance**

NYSTRS is one of the best-funded public pension plans in the nation. Total net assets were valued at \$108.2 billion as of June 30, 2014, an increase of \$12.8 billion from the previous year.

With the Federal Reserve (Fed) signaling a slowdown in its bond buying program, the market volatility that marked the end of the 2012-13 fiscal year eased during 2013-14. By the midpoint of the fiscal year, the System benefitted from consistently positive U.S. economic results that coincided with the orderly reduction in Fed bond purchases. Strong economic data and lower market volatility led to 10-year interest rates ranging from 2.50% to 3.00%.

NYSTRS' disciplined approach to investing its risk-controlled portfolio continues to pay dividends for System members. The System's total fund return for the fiscal year ended June 30, 2014 was 18.2% net of fees, the fourth double-digit return in five years. NYSTRS' long-term expected rate of return is 8.0% per annum.

The fund is also managed at a very low cost compared to the value of assets. Approximately 61% of assets are managed internally by System staff. Investment management expenses and fees for the externally managed or serviced portfolio equate to an annual cost of about 47 basis points, while the internally managed portfolio operates at an annual cost of approximately 5 basis points. Combined, the investment portfolio operates at an average annual cost of 25 basis points.

Our 10-year annualized net rate of return now stands at 7.7% and our 25-year return at 9.2%.

Following is an overview of how each System asset class performed during the past fiscal year.

# **Public Equities**

Developed equity markets delivered exceptional returns for a second straight fiscal year. In the U.S., markets reached new all-time highs with investors increasingly confident in the macro-economic outlook. Investor appetite for riskier assets was generally undiminished even with the Fed's announcement it would scale back its quantitative easing program. A modest pullback occurred in the System's third fiscal quarter due to weaker than expected manufacturing data, but confidence was restored in the final quarter as the economy again showed signs of strengthening. Overall, the S&P 1500 index returned 24.7% for the fiscal year, driven by the technology, healthcare, energy and materials sectors. Economically sensitive small-cap stocks led the overall market with investors favoring growth over stable dividend payers.

International developed markets also performed strongly during the fiscal year led by Europe's 30.0% return, with the formerly challenged economies of Spain, Italy and Ireland continuing to recover. Despite emerging from recession, the European economy showed renewed signs of weakness, prompting the European Central Bank (ECB) to cut interest rates in the second fiscal quarter. European equity markets reacted positively to the ECB's actions, which mirrored the U.S. quantitative easing program. In contrast to Europe, the Japanese market was relatively weak, reflecting uncertainty with proposed reforms intended to boost domestic consumption. For the period, energy, utility and telecom stocks were the main beneficiaries in international developed markets.

Relative to the world's developed economies, emerging markets underperformed during the fiscal year. Still, the MSCI Emerging Markets Index returned 14.3% despite rising geo-political tensions in various regions, most notably involving Russia and Ukraine. Russian stocks fell over 10.0% in the third quarter before recovering when tensions eased. Elsewhere, concerns regarding China's economic growth, together with the prospect of higher interest rates in the U.S., provided additional headwinds for emerging markets. India and South Korea were among those regions to register strong performance. Overall, the system's benchmark for international equities, the MSCI All Country World ex-U.S. Index, returned 21.7% for the fiscal year.

# >Investments

# Report on Investment Activity (continued)

NYSTRS' public equity portfolio is globally diversified with exposure to both domestic and international markets determined by the System's asset allocation policy. Benefitting from rising equity markets during the fiscal year, staff raised over \$4.0 billion from internally managed domestic equities while also providing additional funding to two international managers.

All internally managed public equity portfolios performed as expected relative to their benchmarks, while external domestic managers delivered returns in excess of their respective benchmarks after fees. The System's international managers also performed consistent with expectations, although individual manager returns were mixed. Overall, the System's domestic equity portfolio generated a return of 25.0% for the fiscal year. The international equity portfolio returned 22.0%. Combined, NYSTRS' public equity program returned 24.0% for the fiscal year.

#### **Fixed Income**

Central bank monetary policies worldwide kept interest rates low throughout the fiscal year resulting in markets brimming with liquidity. In the U.S., the Fed continued both its nearly six-year run of a 0.00% - 0.25% federal funds rate and its quantitative easing programs. Under these programs, U.S. treasuries, agencies and mortgage backed securities were purchased in an effort to achieve full employment and ensure price stability. Central banks in other developed nations, including the Bank of Japan and the European Central Bank, mimicked U.S. quantitative easing efforts and accommodative monetary policies in order to stimulate their economies.

U.S. monetary policy continued to be a tailwind for the nation's economy. Consumers benefitted through lower financing rates and reduced debt service costs. Certain asset classes also benefitted as investors searched for yield, pushing up the valuations of riskier assets such as equities and lower credit quality/higher interest rate risk bonds. This created a wealth effect from asset appreciation.

Fed policy also had a favorable impact on key economic metrics such as the unemployment rate, manufacturing indices, and business and consumer confidence levels — each of which influenced the fixed income markets. However, though the unemployment rate declined to 6.1%, its lowest level since September 2008, additional labor market data was mixed. For instance the underemployment rate of 12.1% was still significantly higher than pre-recession lows. Also, the labor force participation rate hit its lowest level since 1978. Both indices provide evidence that some labor market troubles still exist.

Economic and business activity measured by the Institute for Supply Management indices were expansionary, with each month's data showing growth. Overall, despite weather conditions that stifled growth and caused economic contraction during winter months, the U.S. economy expanded during the fiscal year. With the Fed signaling an end to the quantitative easing program and possible rate increases, it remains to be seen how the economy will respond.

While the extensive period of low interest rates has been a challenge when managing fixed income, our focus remains on achieving the portfolio's primary objectives of generating cash flow to help meet the System's over \$6.0 billion annual retirement benefit obligation and preserving capital. The System's internally and externally managed portfolios are well diversified to mitigate risk. Additionally, active portfolio management helps control risk while generating cash flow in excess of what could be earned in money market investments. At the same time, the ability to respond to market opportunities as they arise is preserved.

At fiscal year-end, over 68.0% of the internally managed domestic fixed income portfolio consisted of Aaa securities, the highest credit quality rating granted. Approximately 43.0% was invested in Aaa rated U.S. Treasuries and a combined 26.0% invested in Aaa rated 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 yield greater than what could be gained by investing solely in Aaa securities.

The well-diversified externally managed global bond portfolios had a sizeable 35.0% 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 bonds that provide additional yield. Overall 97.0% of the combined portfolios were invested in investment grade bonds.

Domestic and global bond market performance during the fiscal year, as measured by the Barclays U.S. Aggregate Float Adjusted Bond Index and Barclays Global Aggregate Float Adjusted Index in U.S. dollars hedged to the U.S. dollar, returned 4.3% and 5.3%, respectively. Reaping the best returns in both markets required investors to be exposed to high levels of both credit and interest rate risk. Domestic bonds with maturities greater than 10 years returned over 10.0% during the fiscal year, while the lowest credit quality but still investment grade bonds returned over 9.0%. Global bonds with maturities greater than 10 years and a higher level of interest rate risk returned close to 10.0% as well, while the lowest credit quality global bonds returned over 11.0%. The benefit of having a geographically diverse portfolio was apparent, as the European portion of the global benchmark returned over 7.0%, far outpacing Asia and the U.S.

As of June 30, 2014, 14.3% of System investments were in the internally managed domestic fixed income portfolio. For the one- and three-year periods ended June 30, 2014, the System's long-term bond portfolio's annual return was 3.0% and 2.9%, respectively, versus the 4.3% and 3.7% for the benchmark. The underperformance is attributable to assuming less interest rate risk and a lower level of credit risk than the benchmark.

With respect to the externally managed global bond portfolios, as of June 30, 2014, 1.0% of System assets were invested in global bonds significantly hedged to U.S. dollars and benchmarked against the Barclays Global Aggregate Float Adjusted Index. Net of fees, global bonds returned 4.7%, compared to 5.3% for the benchmark. Duration management and yield-curve positioning were the primary factors for underperforming the benchmark. The System's long-term expectation is these managers will add investment diversification and help generate greater risk-adjusted fixed income returns.

# Short-Term (Cash Equivalents)

The System's short-term fixed income portfolio consists of high-quality securities which can easily be converted into cash to provide for the monthly payment of pension benefits, make investments in other asset classes and support 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 90 days or less.

As of June 30, 2014, the portfolio's weighted average duration was 20 days. For the 12 months ended June 30, 2014, the short-term portfolio returned 0.12%, versus the iMoneyNet Fund Report Averages/All Taxable Index benchmark which returned 0.01%.

Throughout the 2014 fiscal year, the benchmark federal funds rate remained anchored at 0.00% – 0.25%. Despite improving economic and financial market conditions, the Fed continued its quantitative easing program in an effort to move employment and price stability toward levels more consistent with their dual mandate. As the employment picture began to improve at a faster than expected pace, the Fed began scaling back its monthly purchases of U.S. Treasuries and agency mortgage backed securities. As of June 30, 2014, the Fed was purchasing a combined \$35 billion of U.S. Treasuries and agency mortgage backed securities monthly, down from \$85 billion monthly. Contingent on the U.S. economy's continued improvement, tapering is widely expected to be completed soon.

# >Investments

# Report on Investment Activity (continued)

The prevailing theme of historically low money market rates continued during the fiscal year. Both imposed and pending regulations affected both supply and demand of money market instruments. Dealers aimed to reduce the size of their balance sheets, while issuers looked to term out their liabilities by issuing longer-dated bonds. Meanwhile, investors continued to seek short-dated, high-quality fixed income securities. With the abundant amount of cash in the financial system, highlighted by a Fed balance sheet exceeding \$4 trillion, the supply/demand imbalance helped foster an environment of near zero money market rates. In an effort to put a floor under these rates, the Fed began testing its Overnight Fixed-Rate Reverse Repurchase Agreement with approved counterparties. Under this program, the Fed attempts to set a risk-free rate floor on overnight rates by pledging U.S. Treasury collateral to counterparties and agreeing to repurchase it the next day at an agreed upon price plus interest.

The Fed is expected to continue monitoring incoming economic and financial market data, and adjust its monetary policy stance as warranted, in an attempt to meet its price stability and normal rate of unemployment (approximately 5.0% - 6.0%) mandates.

#### Real Estate

Commercial real estate capital markets posted another strong year as global investors, buoyed by accommodative monetary policies in the U.S. and abroad, continued to focus on hard assets in major markets at historically low yields.

In the U.S., NYSTRS' portfolio continues to emphasize coastal gateway markets that attract multinational tenants and investors. Our primary locations in New York, Boston, San Francisco, Los Angeles and Washington, D.C. are home to world-class education and healthcare centers that are densely populated with diverse employment bases. Natural land limitations in these markets and local development constraints generally limit the amount of competing product that could put downward pressure on rents and property values.

Commercial investors have keyed in on U.S. employment growth, with demand for space and corresponding rent increases expected to drive overall returns going forward due to primary market capitalization rates that have met or eclipsed 2007 peak levels. Although unemployment numbers continue to drop, record-low labor participation rates and historically high underemployment rates continue to be a drag on commercial space fundamentals. Employment growth has generally been driven by part-time and lower-paying retail jobs, which do not create demand for office space or provide discretionary capital for consumer spending at our shopping centers — which in turn translates into a lack of demand for warehouse inventories. Apartment fundamentals have been the bright spot, as demand from echo boomers outpace supply.

Even with the anticipated end of the Fed's quantitative easing program, possible moves in the Fed Funds rate, along the specter of \$1.4 trillion in commercial mortgage maturing over the next 40 months, have left all-in commercial lending rates at historically low levels.

The primary drivers of demand for commercial mortgage product comes from U.S. banks with newly repaired balance sheets that will continue to tap reserves for core mortgage investments treated beneficially under the new Basel III regulations; life insurance companies that continue to have a large appetite for trophy assets designed to match long-term policyholder liabilities; and, a securitized market that has rebounded substantially from market lows and that is expected to issue over \$100 billion in securities in calendar year 2014.

Within the property classes, multifamily continues to generate strong numbers even as rents peak in the primary markets. Developers, looking to take advantage of escalated rents in the major markets and potential rent growth in secondary and tertiary markets, are expected to deliver 520,000 units nationally over the next two years. This would represent approximately 1.8% of existing stock — well above the long-term growth trend.

Overall, U.S. office rents continue to struggle as hiring of office workers lags retail job creation. Additionally, owners of office space are focusing on building efficiency by shrinking work stations and increasing use of digital file storage. However, limited development pipelines have kept vacancies and rent levels in check. Coastal markets anchored by major healthcare, technology and energy centers continue to produce jobs, increasing demand for office space and driving rents higher.

Top-tier retail centers account for the majority of rent growth in this sector, although "B assets" in secondary markets are expected to follow suit. Overall, consumer spending remains muted, as wage levels have grown slightly by some measures and are considered negative by others. The hard asset development pipeline continues to be extraordinarily low as retailers and developers look for ways to address customer demand in the presence of double-digit growth from internet retailers.

NYSTRS has a globally diversified portfolio of public and private commercial real estate assets valued at \$16.2 billion. The portfolio is generally broken down into equity and debt components.

The System's \$11.1 billion equity portfolio consists primarily of core high-quality, cash-flowing properties, including apartment projects, regional shopping malls, open-air shopping centers, warehouses and office buildings primarily in central business districts. For the year ended June 30, 2014 the core equity portfolio returned 14.4%. In all, the program has returned 10.6% over the last 10 years on an annualized basis.

In addition to the core portfolio, the System invests in global opportunistic strategies where non-stabilized assets are purchased at a discount and repositioned for sale as core cash-flowing assets. For the year ended June 30, 2014, the System's global value added/opportunistic portfolio returned 15.9%, compared to 9.1% over the last 10 years on an annualized basis.

NYSTRS' global real estate securities portfolio makes up 23.9% of the overall equity program. The portfolio consists of publicly traded Real Estate Investment Trusts (REITs) and Real Estate Operating Companies (REOCs) that manage top-tier commercial properties throughout the world which provide the System with daily liquidity and ongoing cash flow through dividends. The portfolio consists of \$2.2 billion and \$425 million in domestic and international assets, respectively. For the year ended June 30, 2014, the domestic portfolio returned 13.9% and the international portfolio returned 12.9%. Over the last 10 years domestic holdings returned 10.0% while the international portfolio, which began in December 2006, has been flat at 0.2% since inception. The loss is primarily the result of performance during the global financial crisis and the European economic malaise.

NYSTRS' \$5.1 billion real estate debt portfolio consists primarily of domestic commercial mortgages where the System provides fixed-rate loans on high-quality, well-located, cash-flowing assets. At June 30, 2014 the System's mortgage portfolio returned 6.5% with a 10-year average annual return of 6.5%. The portfolio currently has a weighted average coupon of 5.1% and duration of 4.3 years.

The System's commercial mortgage backed securities (CMBS) program consists primarily of investment-grade income securities collateralized by commercial properties that provide a current yield in a publicly traded/liquid environment. At June 30, 2014, the System's CMBS portfolio had a yield to maturity of 2.6% and duration of 3.9 years. The CMBS portfolio returned 6.5% for the year and has a 10-year average annual return of 4.9%.

NYSTRS' real estate debt funds consist of higher yielding strategies including short-term mortgages on transitional properties and subordinate positions on commercial assets. For the year ended June 30, 2014, the System's real estate debt fund portfolio returned 16.0%. For the 10-year period, the portfolio lost 2.6%, primarily due to losses experienced during the global financial crisis.



# **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 7.0% with an allocation range of 4.0% to 12.0%. The partnership structures generally cover periods of 10 years or more, with the goal to achieve higher long-term returns than available through marketable securities. Our expectation is for the program to outperform public equities by 500 basis points (S&P 500 plus 5.0%)

The Retirement System's private equity investments are in buyout, venture capital, fund of funds, secondary funds, co-investment, mezzanine, distressed debt, special situation and real estate funds. For asset allocation purposes, the approximately \$855 million of private equity associated with real estate and timberland are categorized in this report as real estate equity.

The Retirement System has a mature and cash-flow positive private equity program diversified by investment strategy and geographic focus. Investments primarily consist of commitments to closed-end commingled funds managed by experienced sponsors. The particular business strategies pursued are determined by research and experience, with a focus on high-potential opportunities.

Increased exposure to Asia and Latin America is expected over the next five to 10 years.

The largest segment of the portfolio involves leveraged buyouts focused primarily on purchasing controlling interests in private companies, with the intent of increasing earnings by improving operations and the value of a company.

The portfolio also includes venture capital. Commitments are sought with best-in-class entrepreneurs generally focused on technology. Typically these companies are less mature and need capital to help develop, launch or expand their businesses.

By fiscal year-end, the System had active commitments of \$16.7 billion with 79 fund sponsors. The private equity portfolio was valued at \$8.4 billion, representing 7.9% of the System's total assets. Unfunded commitments totaled \$4.4 billion.

Over the last 10 years, the private equity program has returned 14.4%, outperforming the benchmark of 12.8%.

# **Other Programs**

#### Securities Lending

The System's securities lending program generates incremental income by lending in-demand domestic and international equity, as well as fixed income securities.

The System uses multiple agent lenders to manage the securities lending programs. Each lending program is proactively monitored by System staff to ensure compliance with the System's contractual and risk guidelines.

The System earns a spread (the difference between income earned on reinvestment of cash collateral and the amount rebated to the borrower of the security) on loans collateralized by cash that consists of 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 determined by 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.

In the System's 2014 fiscal year, the Fed's quantitative easing program reduced U.S. Treasury bill issuance, and the Reserve's fixed-rate overnight reverse repo facility continued to keep general collateral rates for U.S. Treasuries low. In January 2014, the Federal Reserve Bank began to taper the amount of the monthly asset purchase program. Expectations are for the program to end soon. Financial regulations such as Basel III, which requires banks to hold greater amounts of capital, have garnered a lot of attention as it is uncertain how proposed requirements will affect borrowers, lenders, and agent lenders.

The System continued to generate the majority of program income from borrower demand. Continued historically low yields provided limited opportunities to reinvest cash collateral, contributing to the lending agent's maintenance of a low level of loan balances, as the risk-return trade-off of higher balances at tighter spreads was not compelling.

The System earned \$14.5 million from securities lending, before a realized loss of \$5.4 million due to sale of impaired collateral investments, for the fiscal year ended June 30, 2014, as compared to \$16.8 million during the fiscal year ended June 30, 2013.

As of June 30, 2014, the securities lending portfolio was collateralized at approximately 102.3%, with 3.8% of the System's securities available to lend on loan. This was down from 5.5% on loan at June 30, 2013, due to reduced borrower demand as well as a lack of attractive cash collateral reinvestment opportunities.

The unrealized loss on investments in the System's cash collateral reinvestment portfolio continued its decline. At \$1.2 million as of June 30, 2014, it is down from \$14.7 million as of June 30, 2013, a reduction of \$13.5 million or approximately 91.8%. The unrealized loss decreased year-over-year due to the continued receipt of principal payments at par, an increase in the securities' indicative market prices from the previous year and the sale of two cash collateral investments.

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

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# >Investments

# **Diversification of Investments**

June 30, 2014 and 2013

(dollars in thousands)

Investment type	2014	Percent	2013	Percent	Increase (Decrease)
Short-term: Government related* Corporate	\$ 85,666 2,065,694 2,151,360	2.04%	\$ 139,992 2,328,683 2,468,675	2.65%	\$ (54,326) (262,989) (317,315)
Domestic fixed income securities: United States Treasury Federal agency, notes & debentures Federal agency mortgage backed Commercial mortgage backed Corporate	6,405,951 1,394,534 2,453,491 1,265,970 4,727,878	15.42	5,079,545 1,156,066 1,934,453 1,108,177 4,181,456	14.43	1,326,406 238,468 519,038 157,793 546,422 2,788,127
Global fixed income securities:	1,030,747		368,357		662,390
	1,030,747	0.98	368,357	0.39	662,390
Domestic equities: Basic materials Capital goods Consumer cyclicals Consumer staples Energy Financial Technology Transportation Utilities Diversified and miscellaneous	5,124,199 4,939,909 4,755,574 3,219,211 3,599,927 9,328,370 7,840,302 1,301,625 3,458,471 126,921 43,694,509	41.46	4,614,726 4,692,001 4,695,445 3,264,566 3,117,533 8,867,536 6,222,037 1,111,768 3,253,501 36,355 39,875,468	42.74	509,473 247,908 60,129 (45,355) 482,394 460,834 1,618,265 189,857 204,970 90,566
International equities: Commingled investments Direct investments REITs	9,286,996 11,869,947 424,699 21,581,642	20.48	7,475,676 9,640,325 373,828 17,489,829	18.74	1,811,320 2,229,622 50,871 4,091,813
Mortgages: Conventional Federal Housing Administration	3,466,138 1,853 3,467,991	3.29	3,625,709 1,982 3,627,691	3.89	(159,571) (129) (159,700)
Real estate: Direct equity real estate investments Commingled real estate investments Other real estate owned	4,280,539 3,293,654 5,000 7,579,193	7.19	4,001,988 3,173,826 5,000 7,180,814	7.70	278,551 119,828 — 398,379
Alternative investments: Private equity Real estate equity funds Real estate debt funds Timberland	8,383,165 567,433 403,242 287,978		7,707,255 546,188 301,093 271,013		675,910 21,245 102,149 16,965
Total investments	9,641,818	9.14	8,825,549	9.46	816,269
Total investments	\$105,395,084	100.00%	\$93,296,080	100.00%	\$12,099,004

<sup>\*</sup>U.S. Treasury, agency, supranational, and sovereign debt issues.

# Asset Allocation — as of June 30, 2014

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	37%	32-42%	39.3%
International Equity	18%	14-22%	20.1%
Real Estate	10%	6-14%	10.5%
Private Equity	7%	4-12%	8.0%
Total Equities	72%		77.9%
Domestic Fixed Income	17%	13-22%	14.2%
Global Bonds	2%	0-3%	1.0%
Mortgages	8%	5-11%	4.9%
Cash Equivalents	1%_	0-4%	2.0%
Total Fixed Income	28%		22.1%

# **Annual Performance History**



Fiscal Year Ended June 30

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# Investment Performance Results — as of June 30, 2014

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 Growth Tilt2 Fund	25.3%	16.6%	19.4%	- %	
NYSTRS Index2 Fund	24.7	16.5	19.2	-	
NYSTRS Value Tilt2 Fund	24.8	16.8	19.4	-	
Benchmark: S&P 1500*	24.7	16.5	19.2	-	
NYSTRS S&P 100 Fund	22.8	16.5	17.7	-	
Benchmark: S&P 100	22.9	16.5	17.7	-	
NYSTRS S&P 500 Fund	24.5	16.7	18.8	-	
Benchmark: S&P 500	24.6	16.6	18.8	-	
NYSTRS S&P 600 Fund	25.5	16.8	21.9	-	
Benchmark: S&P 600	25.5	16.8	22.0	-	
Total Enhanced All Cap Management	25.5	15.2	-	-	
Benchmark: Russell 3000	25.2	16.5	-	-	
Total Active All Cap Management	25.7	14.7	-	-	
Benchmark: S&P All Cap (Equal Weighted)	25.2	16.3	-	-	
Total Enhanced Large Cap Management	24.9	16.7	18.5	-	
Benchmark: S&P 500	24.6	16.6	18.8	-	
Total Active Mid Cap Management	35.0	21.2	24.7	13.7	
Benchmark: Russell Midcap*	26.9	16.1	21.1	8.8	
Total Domestic Equities	25.0	16.6	19.3	8.5	
Benchmark: Blended S&P/Russell*	24.7	16.5	19.2	8.4	
nternational Equities					
NYSTRS Canadian Index	27.1	-	-	-	
Benchmark: MSCI Canada	26.3	-	-	-	
Total External Passive Management	22.1	6.4	10.8	6.4	
Total Active Management	21.2	8.4	13.1	7.4	
Total International Equities	22.0	6.5	11.0	6.5	
Benchmark: Blended MSCI ACWI (ex-US)/EAFE*	21.7	6.1	10.5	6.3	
eal Estate	14.6	13.2	13.6	9.9	
Benchmark: Blended NCREIF/REIT*	12.2	11.1	11.0	7.0	
rivate Equity	22.3	12.9	15.3	14.4	
Benchmark: S&P 500 plus 5%	29.6	21.6	23.8	12.8	
Oomestic Fixed Income	3.0	2.9	4.1	4.7	
Benchmark: Barclays Capital Aggregate Float Adj*‡	4.3	3.7	4.9	5.0	
Blobal Bonds	4.7	-		-	
Benchmark: Barclays Global Agg. Hedged (Flt. Adj.)‡	5.3	4.6	-	-	
Nortgages	7.1	6.4	8.5	5.9	
hort-Term	0.1	0.1	0.2	1.8	
Benchmark: IMoneyNet™Money Fund Avg/All Taxable	0.0	0.0	0.0	1.5	
otal Fund	18.2%	11.4%	13.8%	7.7%	

<sup>\*</sup>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, 2014

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	Rates of Return <sup>1</sup> from Inception		
	Managed (\$ millions)	Fund	Benchmark	Inception Date
Domestic Equities				
Enhanced All Cap Management				
Progress	\$ 827.7	16.6%	17.7%	Nov-10
Active All Cap Management				
Leading Edge	414.4	15.4	16.9	Dec-10
Enhanced Large Cap Management				
T. Rowe Price	613.5	19.5	19.3	Jan-09
Active Mid Cap Management				
Iridian	1,134.1	11.8	5.4	Apr-99
nternational Equities				
Passive Management				
BlackRock ACWI	8,643.0	16.6	16.3	Dec-11
State Street ACWI	8,685.3	17.8	17.6	Jul-12
Active Management				
Aberdeen	578.6	8.4	6.4	Dec-10
AQR	603.4	16.0	13.8	Feb-12
Baillie Gifford	593.8	14.7	13.6	Sep-11
DFA	162.6	3.8	2.5	Feb-13
FIS	112.4	12.9	13.2	May-13
LSV	616.9	8.6	6.2	Jul-11
Marathon	481.5	18.2	16.0	Jan-12
William Blair	606.7	10.2	7.1	Oct-10
Blobal Bonds				
Loomis Sayles	513.4	2.2	2.7	Nov-12
Wellington	517.4	4.9	5.6	Aug-13
lortgages				
BlackRock: CMBS	484.4	5.9	6.0	Apr-01
Prima: CMBS	330.3	5.9	5.1	Nov-03
Torchlight: CMBS	414.0	5.4	6.0	Apr-01
Torchlight: Torchlight Value Fund	37.2	4.1	-1.7	Sep-05
eal Estate				·
Direct Investments				
Clarion Partners	803.7	8.9	5.9	Jun-90
Invesco Realty Advisors (Industrial)	181.6	8.7	7.9	Nov-94
Invesco Realty Advisors (Multi-family)	76.5	11.1	7.0	Dec-98
JPMorgan Asset Management	2,808.2	10.8	6.1	Oct-90
Kennedy Associates	82.3	8.9	7.9	Apr-95
Sentinel Real Estate	\$ 328.2	10.8%	8.0%	Mar-96

<sup>&</sup>lt;sup>1</sup>Returns for periods over 1 year are annualized.



# Manager Investment Performance Results — as of June 30, 2014 (continued)

			Rates of Return <sup>1</sup> from Inception	
	Managed (\$ millions)	Fund	Benchmark	Inception Date
Direct Investments - Timber				
Forest Investments: Adirondack Timber I	\$288.0	4.1%	5.7%	Dec-98
Domestic Public Securities				
Adelante Capital Management	443.5	11.0	10.4	Aug-98
Cohen & Steers: Equity Income	288.9	10.3	9.6	Jul-98
Cohen & Steers: REIT Preferred	272.2	9.7	7.8	Sep-07
Cohen & Steers: Total Return	720.8	12.5	11.2	Jun-95
Deutsche Asset & Wealth Management	498.0	11.8	10.4	Aug-98
International Public Securities				
Deutsche Asset & Wealth Management	143.5	0.3	1.7	Dec-06
Ell Capital Management	147.2	0.6	1.5	Dec-06
LaSalle Investment Management	\$134.0	-0.5%	1.7%	Dec-06
	Assets Managed (\$ millions)	Inception Rate of Return <sup>1</sup>	Equity Multiple	Inceptior Date
Commingled Funds				
Abacus: Multi-Family Partners II	\$ 22.0	36.9%	1.3	Apr-13
Angelo, Gordon & Co.: AG Realty Fund V	0.3	25.4	1.6	Dec-01
Angelo, Gordon & Co.: AG Realty Fund VI	2.1	2.8	1.1	Sep-05
Angelo, Gordon & Co.: AG Realty Fund VII	24.6	13.8	1.5	Dec-07
Angelo, Gordon & Co.: AG Realty Fund VIII	38.3	12.1	1.2	Sep-11
Apollo: CPI Capital Partners North America	3.0	-7.1	0.7	Dec-06
Artemis: Real Estate Fund I	35.9	21.9	1.2	Jul-11
BlackRock: Granite Property Fund	73.8	5.1	2.1	Dec-97
Blackstone RE Partners: Asia	47.5	11.7	1.1	Dec-13
Blackstone RE Partners: Europe IV	49.1	2.3	1.0	Apr-14
Blackstone RE Partners: Fund V TE.2	54.2	10.1	1.6	Jul-06
Blackstone RE Partners: Fund VITE.2	150.7	13.4	1.8	Mar-07
Blackstone RE Partners: Fund VII	67.1	27.4	1.4	Dec-11
Brookfield Properties: DTLA Holdings	193.0	11.6	1.2	Oct-13
Brookfield Properties: Office Partners	420.5	9.9	1.7	Oct-06
Cabot Properties: Industrial Value Fund II	44.6	0.1	1.0	Nov-05
Cabot Properties: Industrial Value Fund III	0.9	21.9	1.5	Dec-08
Cabot: Industrial Value Fund IV	4.2	-32.4	0.7	Mar-14
CBRE: China Opportunity Fund	0.2	11.3	1.5	Dec-06
CBRE: Strategic Partners Europe Fund III	24.4	-13.6	0.5	Apr-07
CBRE: Strategic Partners IV	10.5	-24.9	0.1	Dec-05
CBRE: Strategic Partners U.K. Fund III	8.6	-20.6	0.3	May-07
CBRE: Strategic Partners U.S. Opport. 5	37.3	0.8	1.0	Dec-07
Obite, difficial of an incia of appoint of	07.0	0.0	1.0	DCC-07

<sup>&</sup>lt;sup>1</sup>Returns for periods over 1 year are annualized.

# Manager Investment Performance Results — as of June 30, 2014 (continued)

	Assets Managed (\$ millions)	Inception Rate of Return <sup>1</sup>	Equity Multiple	Inception Date
Commingled Funds (continued)				
Cerberus: Institutional Real Estate Partners	\$ 3.0	10.1%	1.3	May-04
Cerberus: Institutional Real Estate Partners - Series Two	38.6	18.7	1.5	May-08
Cerberus: Institutional Real Estate Partners III	24.5	12.4	1.1	Dec-12
Clarion Partners: Development Ventures II	1.1	-9.0	0.7	Jun-05
Clarion Partners: Development Ventures III	35.5	-1.3	1.0	Apr-09
Cornerstone: Apartment Fund I	0.0	19.9	2.1	Nov-00
Cornerstone: Apartment Venture I	0.3	65.2	2.5	Jul-03
Cornerstone: Apartment Venture III	7.4	4.4	1.2	Apr-07
Cornerstone: Patriot Fund	65.8	11.6	1.5	Oct-10
DLJ: Real Estate Capital Partners III	47.8	-0.6	1.0	Jun-05
DLJ: Real Estate Capital Partners IV	58.2	1.4	1.0	Feb-08
Essex Property Trust: Apartment Value Fund II	1.8	10.6	1.9	Nov-04
Exeter Property Group: Industrial Value Fund	40.4	7.6	1.4	Nov-07
Exeter Property Group: Industrial Value Fund II	80.1	18.8	1.3	Dec-11
FCP: Realty Fund II	28.3	14.4	1.2	Feb-12
GAW Capital: Gateway Real Estate Fund IV	31.4	7.5	1.0	Jun-13
Hines Interests: Emerging Markets	2.0	19.8	1.9	Oct-99
Hines Interests: U.S. Office Value Added	3.4	17.4	1.5	Jan-05
Hines Interests: U.S. Office Value Added II	18.4	-12.2	0.5	Aug-07
JPMorgan: Excelsior II	57.6	-3.7	0.8	Dec-05
Landmark Partners: Real Estate Trust IV	0.8	19.7	1.6	Mar-02
LaSalle: Asia Opportunity Fund III	15.1	-0.3	1.0	Mar-08
Lone Star: Fund III	4.3	31.9	2.1	Oct-00
Lone Star: Fund IV	17.7	30.8	2.3	Dec-01
Lone Star: Fund V	44.1	-1.4	0.9	Jan-05
Lone Star: Fund VI	17.7	13.9	1.7	Jul-08
Lone Star: Fund VII	28.7	53.7	1.8	Jun-11
Lone Star: Real Estate Fund II	45.2	22.1	1.3	Jun-11
Lone Star: Real Estate Fund III (U.S.)	8.5	-12.5	1.0	May-14
MGPA: Asia Fund II	33.7	0.2	1.0	Apr-05
MGPA: Asia Fund III	45.9	4.8	1.3	May-07
MGPA: Europe Fund III	51.3	2.2	1.1	Jun-07
MGPA: Europe Parallel Fund II	1.9	-10.0	0.6	Apr-05
MGPA: Lend Lease Global Properties	0.8	13.4	2.0	May-99
O'Connor: North American Property Partners	35.7	-5.0	0.7	Sep-04
O'Connor: North American Property Partners II	21.0	-7.7	0.8	Oct-07
O'Connor: Peabody Global Real Estate	\$ 0.7	14.3%	1.5	Jul-99

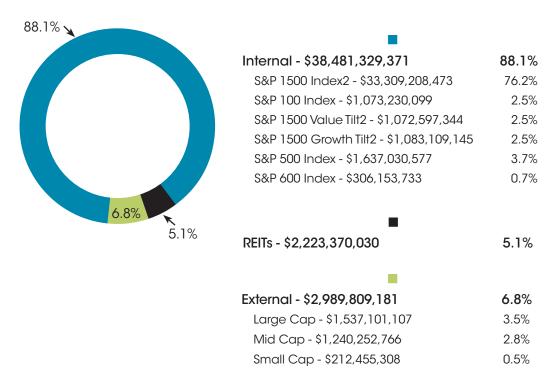
 $<sup>^{1}</sup>Returns$  for periods over 1 year are annualized.

## Manager Investment Performance Results — as of June 30, 2014 (continued)

	Assets Managed (\$ millions)	Inception Rate of Return <sup>1</sup>	Equity Multiple	Inception Date
Commingled Funds (continued)				
Penwood RE: Calif. Select Industrial Partners	\$ 19.8	-12.0%	0.7	Dec-05
Penwood RE: Select Industrial Partners II	16.8	18.0	1.4	Aug-07
Penwood RE: Select Industrial Partners III	6.9	25.7	1.2	Jun-12
Perella Weinberg: Real Estate Fund I	35.3	13.7	1.4	Jan-08
Perella Weinberg: Real Estate Fund II	11.9	-46.6	0.9	Sep-13
Prudential Latin America: PLA Residential Fund III	40.6	-4.3	0.8	Mar-08
Prudential: PRISA	262.5	6.1	4.2	Sep-85
Prudential: PRISA II	212.3	7.2	2.2	Sep-89
Prudential: PRISA III	87.7	6.1	1.4	Jun-03
Rockpoint: Finance Fund I	1.3	-9.7	0.6	Mar-07
Rockpoint: Heritage Fields	40.8	-3.1	0.8	Jul-05
Rockpoint: Real Estate Fund I	13.0	11.9	1.2	Sep-04
Rockpoint: Real Estate Fund II	41.6	-5.0	0.8	Sep-05
Rockpoint: Real Estate Fund III	20.0	15.2	1.4	Dec-07
Rockpoint: Real Estate Fund IV	16.7	36.0	1.3	Dec-12
Rockwood: Fund IV	0.1	24.3	1.8	Sep-00
Rockwood: Fund V	2.4	12.6	1.4	Jul-03
Rockwood: Fund VI	40.6	3.3	1.2	Jun-05
Rockwood: Fund VII	36.6	-7.6	0.6	Oct-06
Rockwood: Fund VIII	37.5	20.2	1.5	Mar-09
Starwood: Distressed Opportunity Fund IX	41.5	36.9	1.3	Mar-13
Starwood: Opportunity Fund IV	0.9	16.9	2.2	Jan-97
Starwood: Opportunity Fund VII-A	39.1	-2.6	0.8	Jan-06
UBS Realty: Trumbull Prop. Fund	310.7	6.9	4.8	Sep-85
USAA Real Estate: U.S. Industrial REIT II	33.7	5.3	1.2	Jan-07
Walton Street: Real Estate Fund VI	74.1	10.7	1.4	Apr-09
Westbrook: Real Estate Fund IV	0.4	20.1	1.6	May-01
Westbrook: Real Estate Fund V	2.6	43.6	1.7	Feb-05
Westbrook: Real Estate Fund VI	38.0	0.2	1.0	May-06
Westbrook: Real Estate Fund VII	43.6	2.3	1.1	Dec-07
Westbrook: Real Estate Fund VIII	37.0	14.0	1.3	Jun-10
Westbrook: Real Estate Fund IX	\$ 15.8	12.0%	1.1	Jun-13

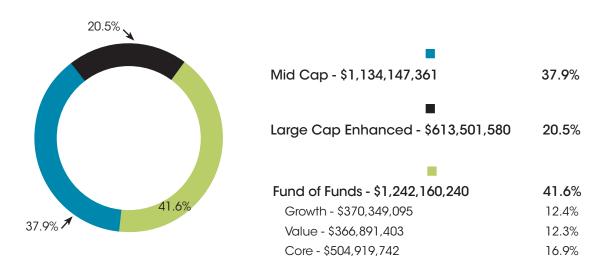
<sup>&</sup>lt;sup>1</sup>Returns for periods over 1 year are annualized.

# **Domestic Equity Distribution** — as of June 30, 2014 \$43,694,508,582

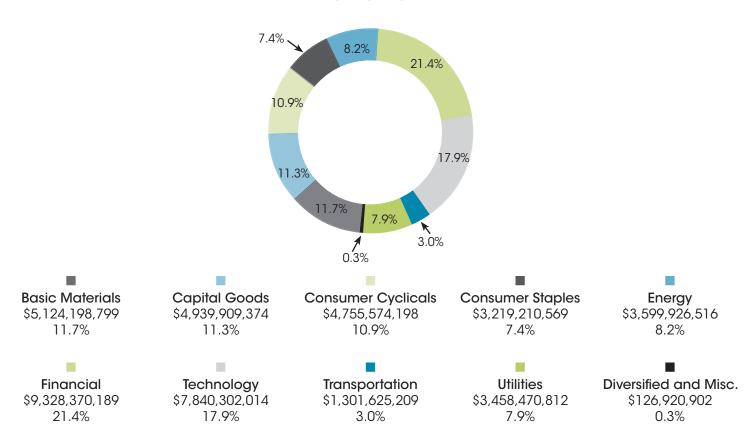


# Domestic Equity Externally Managed Style Distribution

— as of June 30, 2014 \$2,989,809,181



# **Domestic Equity Holdings by Industry Distribution** — as of June 30, 2014 \$43,694,508,582

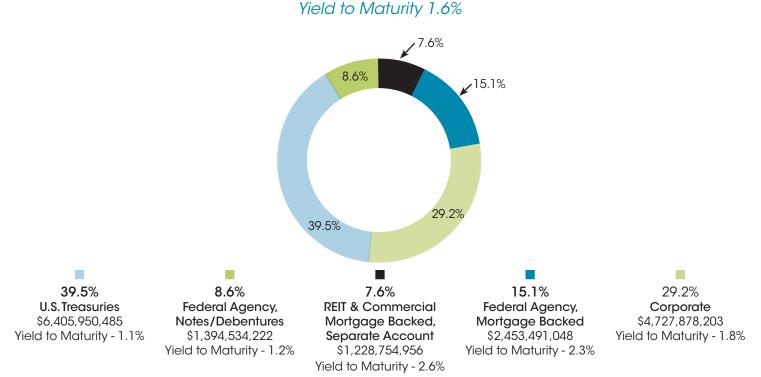


## Ten Largest Domestic Equity Holdings — as of June 30, 2014

Rank	Company	Cost	Market Value	Percent of Equities
1	Apple	\$ 99,476,673	\$1,170,244,085	2.7%
2	Exxon	140,470,140	887,845,170	2.0%
3	Google	270,827,181	684,207,082	1.6%
4	Microsoft	267,306,438	655,468,831	1.5%
5	Johnson & Johnson	120,804,881	606,822,678	1.4%
6	General Electric	173,989,980	530,740,595	1.2%
7	Wells Fargo	201,449,278	522,441,880	1.2%
8	Chevron	85,838,090	511,181,711	1.2%
9	Berkshire Hathaway	278,185,560	459,251,309	1.1%
10	JPMorgan Chase	150,971,792	452,623,654	1.0%
Total		\$1,789,320,013	\$6,480,826,995	14.9%

A complete list of the System's holdings is available on our website (see "Investments" under the heading "About NYSTRS") or through the Public Information Office.

# **Domestic Fixed Income Sector Distribution** — as of June 30, 2014 \$16,210,608,914



# Ten Largest Domestic Fixed Income Holdings — as of June 30, 2014

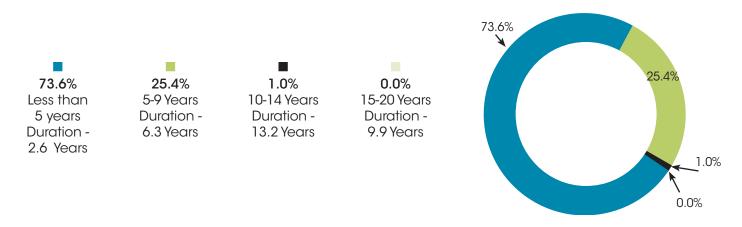
Rank	Issue	Market Value	Percent of Domestic Fixed Income Market Value
1	AID-Israel 5.50% Due 4/26/2024	\$122,006,400	0.7%
2	U.S.Treasury Note 3.625% Due 2/15/2020	109,992,188	0.7%
3	U.S.Treasury Note 2.75% Due 11/15/2023	76,869,141	0.5%
4	U.S.Treasury Note 2.50% Due 3/31/2015	76,350,600	0.5%
5	U.S.Treasury Note 2.625% Due 12/31/2014	75,946,275	0.5%
6	U.S.Treasury Note 0.625% Due 5/31/2017	75,097,940	0.5%
7	U.S.Treasury Note 0.875% Due 6/15/2017	75,029,325	0.5%
8	U.S.Treasury Note 0.75% Due 3/15/2017	75,000,000	0.4%
9	U.S.Treasury Note 0.375% Due 5/31/2016	74,932,650	0.4%
10	U.S.Treasury Note 1.75% Due 5/15/2022	72,193,350	0.4%
Total		\$833,417,869	5.1%

A complete list of the System's holdings is available on our website (see "Investments" under the heading "About NYSTRS") or through the Public Information Office.

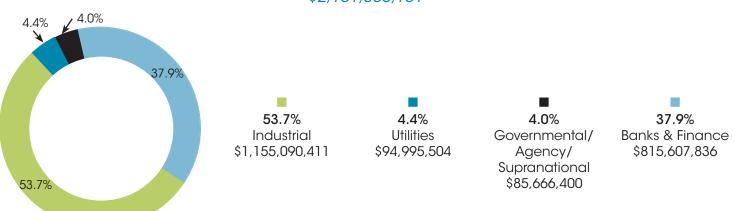
## Domestic Fixed Income Quality Distribution — as of June 30, 2014



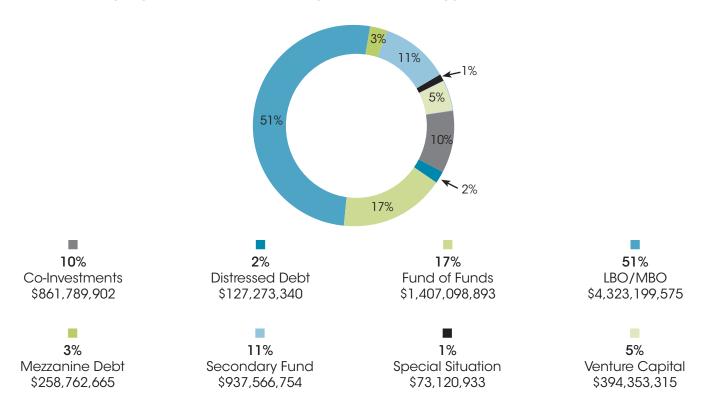
# Domestic Fixed Income Average Maturity — as of June 30, 2014 Internally Managed Effective Duration 3.7 Years



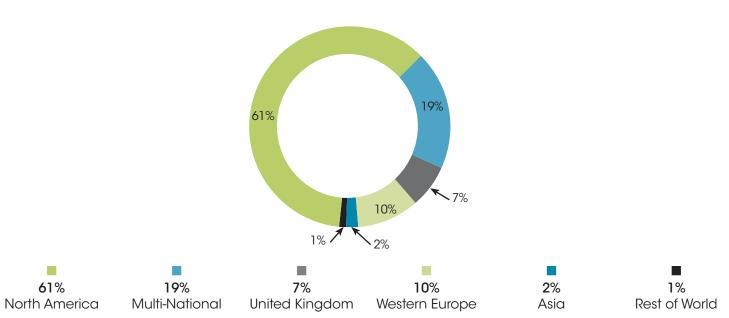
# **Short-Term Sector Distribution** — as of June 30, 2014 \$2,151,360,151



# Private Equity Net Asset Value by Investment Type — as of June 30, 2014

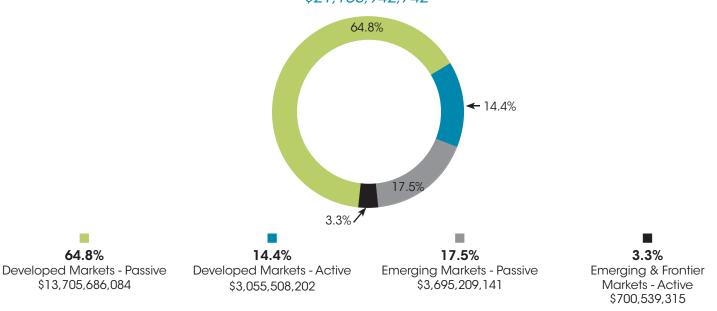


# Private Equity Net Asset Value by Geography\* — as of June 30, 2014

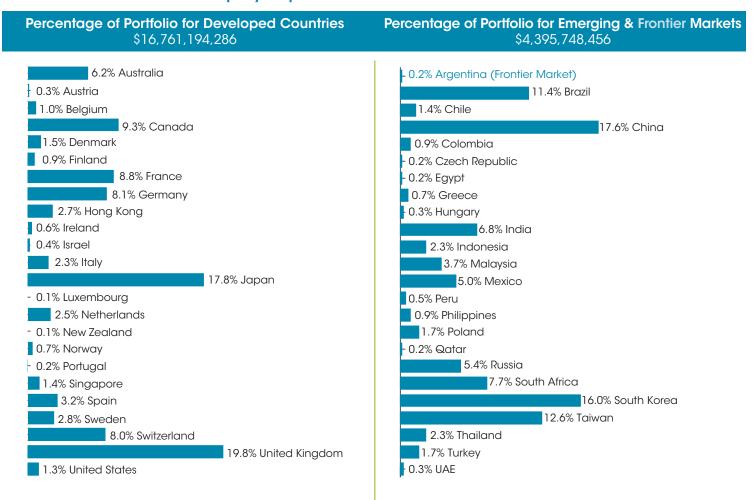


<sup>\*</sup>Excluding Fund of Funds and Secondary Funds.

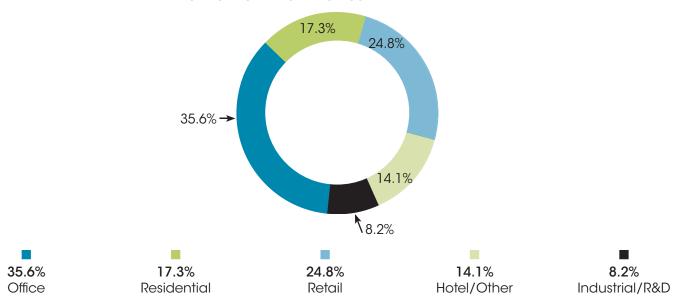
# International Equity Style Distribution — as of June 30, 2014 \$21,156,942,742



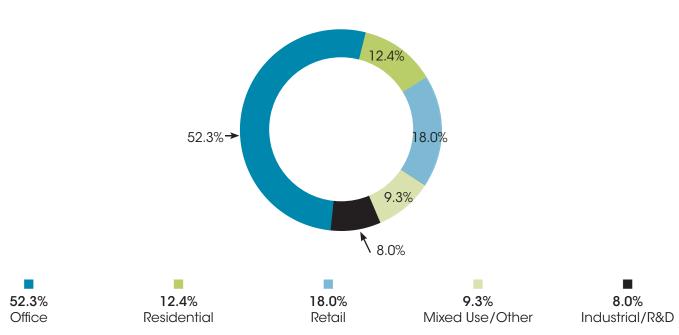
## International Equity Exposure Distribution — as of June 30, 2014



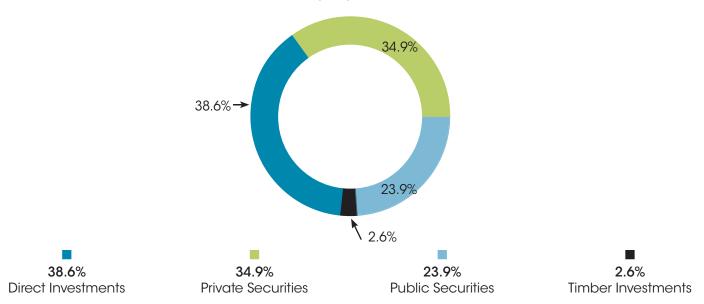
# Real Estate Equity by Property Type — as of June 30, 2014



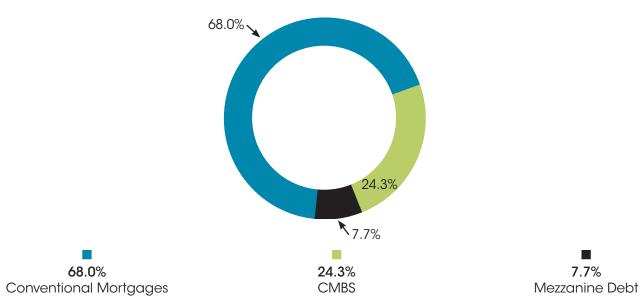
# Real Estate Mortgages by Property Type — as of June 30, 2014



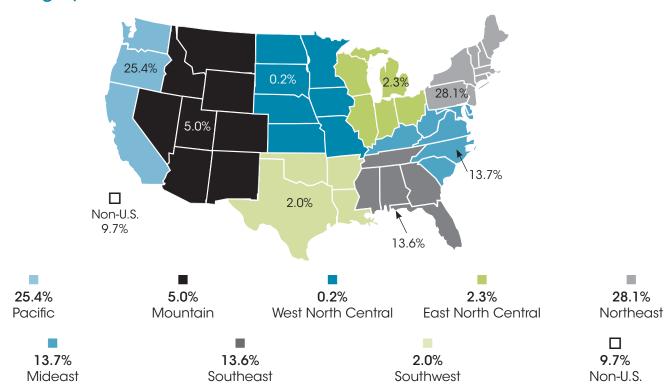
# Breakdown of Real Estate Equity Portfolio — as of June 30, 2014



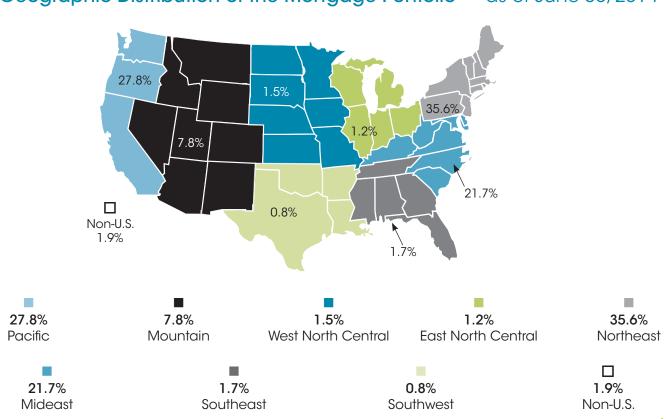
# Breakdown of Mortgage Portfolio — as of June 30, 2014



# Geographic Distribution of the Real Estate Portfolio — as of June 30, 2014



## Geographic Distribution of the Mortgage Portfolio — as of June 30, 2014





## **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 2013 calendar year, a total of 18,787 proposals were voted on, representing 1,979 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.

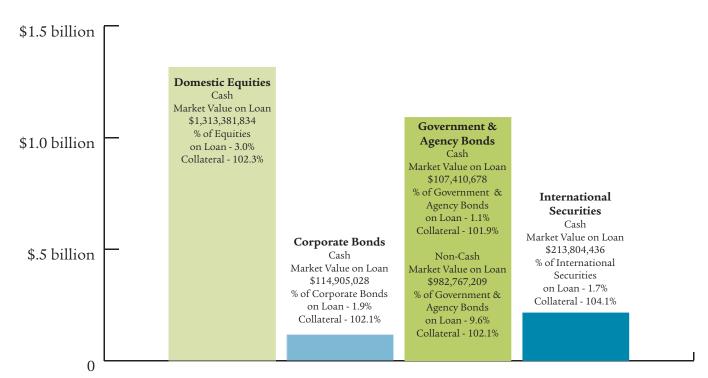
Management Proposals (18,216)			
Position	Number of Proposals	Percentage of Position	
For	16,073	88.2%	
Against	2,110	11.6%	
Abstain	33	0.2%	

Shareholder Proposals (571)			
Position	Number of Proposals	Percentage of Position	
For	211	36.9%	
Against	359	62.9%	
Abstain	1	0.2%	

# Securities Lending Program — as of June 30, 2014

Market Value on Loan

Cash: \$1,749,501,976 - Non-Cash: \$982,767,209 - Total: \$2,732,269,185



# Schedule of Investment Fees and Expenses Year ended June 30, 2014

(dollars in thousands)

	(donaro n
Fund Manager	Investment Management Expenses
Fund Manager  Domestic Fixed Income Securities:	2013-2014
	\$ 885
BlackRock Financial Management	\$ 626
Prima Capital Advisors Torchlight Investors	
Total Domestic Fixed Income:	1,006 \$ 2,517
Global Fixed Income Securities:	\$ 2,517
	\$ 889
Loomis, Sayles & Company Wallington Management Company	\$ 889 761
Wellington Management Company	
Total Global Fixed Income:	\$ 1,650
Domestic Equities:	
Adelante Capital Management	\$ 1,174
Cohen & Steers	2,791
Iridian Asset Management	5,248
Leading Edge Investment Advisors	2,374
Progress	3,685
RREEF America	1,460
T. Rowe Price	1,648
Total Domestic Equities:	\$18,380
International Equities:	
Aberdeen Asset Management	\$ 2,752
AQR Capital Management	2,592
Baillie Gifford	2,195
BlackRock ACWI Index	2,401
BlackRock EAFE Index	6
Dimensional Fund Advisors	733
Ell Capital Management	882
FIS Group	682
LaSalle Investment Management	680
LSV Asset Management	2,888
Marathon Asset Management	2,468
RREEF America	845
State Street Global Advisors	2,153
William Blair & Co.	2,129
Total International Equities:	\$23,406
Mortgages:	
Deutsche Bank	\$ 1
FHA Mortgages	1
GEMSA	47
NY Life	61
Total Mortgages:	\$ 110
	(continued)

To do de l'account de la company de la compa	
Fund Manager	Investment Management Expenses 2013-2014
Real Estate:	
Clarion	\$ 2,851
Invesco	1,155
JPMorgan	7,943
Kennedy	404
Sentinel	2,117
Real Estate Separate Accounts/Commingled	46,722
Total Real Estate:	\$ 61,192
Alternative Investments:	
Private Equity	\$ 95,124
Real Estate	19,263
Total Alternative Investments:	\$114,387
General Expenses:	
Advisory Committee - Investment	\$ 57
Advisory Committee - Real Estate	44
Callan Associates	526
Foster Pepper	6
Hamilton Lane	224
Hewitt EnnisKnupp	501
International Equity - Advisory Fees	317
International Equity - Market Fees	12
Investment Information Services	2,964
JPMorgan Chase	83
K&L Gates	101
Morgan, Lewis & Bockius	142
Nixon Peabody	59
Real Estate Origination Costs	173
Real Estate Professional Fees	140
Real Estate Service Costs	22
Seward & Kissel	61
State Street Corporation	1,414
StepStone Group	742
Stockbridge Risk Management	13
TorreyCove	133
Total General Expenses:	\$ 7,734
Total Investment Fees and Expenses:	\$229,376

(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

#### Geoffrey Gerber, Ph.D.

President & Founder

TWIN Capital Management, Inc. McMurry, Pennsylvania

#### 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

#### Robert G. Wade Jr.

Director (Retired)

Chancellor LGT Asset Management New York, New York

#### Carol A. Zipkin

Executive Vice President (Retired)

Alliance Capital Management L.P. New York, New York

## **External Investment Managers**

#### **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** 

Loomis Sayles & Company Wellington Management Company LLP

#### **International Equities:**

Active

Aberdeen Asset Management, Inc.
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** (continued)

#### Private Equity - Limited Partnerships:

Abbott Select Buyouts Fund II Abry Advanced Securities Fund II ABRY Advanced Securities Fund III

ABRY Mezzanine Partners
ABRY Partners Fund V
ABRY Partners Fund VI
ABRY Partners Fund VII
ABRY Senior Equity Fund II
ABRY Senior Equity Fund IVI
ABRY Senior Equity Fund IV

AG Capital Recovery Partners VII, L.P.

Aisling Capital II, LP Aisling Capital III, LP Alchemy Plan (Empire)

Apex V

Apex V Secondary

Apex VI

Apollo Real Estate Fund IV

Ares Corporate Opportunities Fund II, L.P. Ares Corporate Opportunities Fund III, L.P. Ares Corporate Opportunities Fund IV, L.P. Avenue Special Situations Fund V, L.P. Blackstone Capital Partners Fund IV Blackstone Capital Partners Fund V

Caltius Partners IV CapStreet IV, LP

Carlyle Asia Partners IV, L.P. Carlyle European Partners III, L.P.

Carlyle Partners IV, L.P. Carlyle Partners V, L.P.

Carlyle/Riverstone Global Energy & Power Fund III

Charterhouse Capital Partners VII Charterhouse Capital Partners VIII Charterhouse Capital Partners IX

Chisholm Partners III Chisholm Partners IV

Cinven III Cinven IV Cinven V

Clayton Dubilier & Rice VI Clearlake Capital Partners III, L.P. Close Brothers Private Equity Fund VII Co-Investment Partners (NY), L.P. Co-Investment Partners (NY) II, L.P. Co-Investment Partners (NY) III, L.P. Co-Investment Partners Europe, L.P.

Cortec Group Fund V, L.P. CVC Capital Partners VI, L.P.

CVC Capital Partners Asia Pacific IV, L.P.

CVC European Equity Partners V, L.P. DLJ Merchant Banking Partners III

Doughty Hanson & Co. V
Energy Capital Partners II, LP
Energy Capital Partners III, LP
Fairview Ventures Fund II
Fairview Ventures Fund III
FirstMark Capital II, L.P.
FirstMark Capital III, L.P.
GCM Grosvenor Cleantech Fund

GCM Grosvenor Seasoned Primaries Fund, L.P. GCM Grosvenor Seasoned Primaries Fund II, L.P. GCM Grosvenor Seasoned Primaries Fund III, L.P.

General Catalyst Group VII, L.P. Green Equity Investors V

GTCR Fund VIII GTCR Fund IX GTCR Fund X GTCR Fund XI

HarbourVest International PEP IV HarbourVest International PEP V

HarbourVest International PEP VI - Asia Pacific Fund

HarbourVest/NYSTRS Co-Investment Fund HarbourVest/NYSTRS Co-Investment Fund II HarbourVest Partners VII-Mezzanine Fund HarbourVest Partners VII-Venture Fund HarbourVest VI - Partnership Fund

Hellman & Friedman V Hellman & Friedman VI Hellman & Friedman VII Highland Capital Partners IX, L.P. HIPEP Select Asia Fund, L.P.

Horsley Bridge VII

Hutton Collins Capital Partners II LP Hutton Collins Capital Partners III LP

ICG Europe Fund V Industri Kapital 2007 Fund Inflexion 2010 Buyout Fund

Institutional Venture Partners XIV, L.P.

IK Fund VII, L.P.
J.C. Flowers II L.P.
JLL Partners Fund V, L.P.
JLL Partners Fund VI, L.P.
JPMorgan Venture Capital II
JPMorgan Venture Capital III
Kelso Investment Associates VIII
Kelso Investment Associates VIII

KKR Asia Fund II, L.P. KRG Capital Fund III

### **External Investment Managers** (continued)

#### Private Equity - Limited Partnerships: (continued)

Lexington Capital Partners VI

Lexington Capital Partners VII

Lexington Emerging Partners, L.P.

Lexington Middle Market Investors

Lexington Middle Market Investors II

Lightspeed Venture Partners IX, L.P.

Lightspeed Venture Partners X, L.P.

Lightspeed Venture Partners Select, L.P.

Lyceum Capital Fund III, L.P.

Madison Dearborn Capital Partners IV

Madison Dearborn Capital Partners V

Madison Dearborn Capital Partners VI

Metalmark Capital Partners, L.P.

Nautic V

Nautic VI

Nautic VII

Oaktree European Principal Fund III, L.P.

Olympus Growth Fund IV

Olympus Growth Fund V

Olympus Growth Fund VI

P123 Ltd

Patria - Brazilian Private Equity Fund V, L.P.

Peninsula Fund V, L.P.

Permira IV

Phoenix Equity Partners 2010 Fund

Pine Brook Capital Partners, L.P.

Pine Brook Capital Partners II, L.P.

Rhone Partners IV, L.P.

Riverstone/Carlyle Global Energy and Power Fund IV

Silver Lake Partners II

Silver Lake Partners III

Silver Lake Partners IV, L.P.

Spark Capital Partners IV, L.P.

Strategic Partners II

Strategic Partners III

Strategic Partners III - Venture

Strategic Partners IV, L.P.

Strategic Partners IV - VC, L.P.

Strategic Partners V, L.P.

StepStone Pioneer Capital Buyout Fund I, L.P.

StepStone Pioneer Capital Europe I, L.P.

StepStone Pioneer Capital Europe II, L.P.

StepStone Pioneer Capital Fund II, L.P.

StepStone Pioneer Capital Fund III, L.P.

Sterling Group Partners III, L.P.

Sun Capital Partners V, L.P.

Technology Crossover Ventures IV

Technology Crossover Ventures V

Technology Crossover Ventures VI

Technology Crossover Ventures VII

The First Capital Access Fund, L.P.

The Resolute Fund II, L.P.

The Resolute Fund III, L.P.

Thoma Bravo Fund X

Thoma Bravo Fund XI, L.P.

Thoma Bravo Special Opportunities Fund I, L.P.

Thomas H. Lee V

Thomas H. Lee VI

TPG Partners III

TPG Partners IV

TPG Partners V

TPG Partners VI

TSG4 (TSG Consumer Partners)

TSG5

TSG6, L.P.

Valhalla Partners II, L.P.

VantagePoint NY Venture Partners

VantagePoint Venture Partners 2006

VantagePoint Venture Partners IV

VCFA Private Equity Partners IV

Vista Equity Partners Fund IV

Warburg Pincus Private Equity VIII

Waud Capital Partners III, L.P.

WCAS Capital Partners IV

Welsh, Carson, Anderson & Stowe IX

Welsh, Carson, Anderson & Stowe X

Welsh, Carson, Anderson & Stowe XI

Wynnchurch Capital Partners III, L.P.

## **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

Global Director of Facilities Management

CBRE Inc. Chicago, Illinois

#### Thomas P. Mahoney

Managing Director (Retired)

CIGNA Investments Hartford, Connecticut

### **Master Custodian**

#### **Custodian:**

State Street Bank & Trust Co.

#### **Investment Consultants**

#### Callan Associates

San Francisco, California

#### Elkins/McSherry, LLC

New York, New York

### Hewitt EnnisKnupp, Inc., an Aon Company

Chicago, Illinois

## StepStone Group LLC

La Jolla, California (7/1/13 to 4/30/14)

#### **TorreyCove Capital Partners**

San Diego, California (5/1/2014 to 6/30/14)

#### **Real Estate Advisors**

#### **Equity:**

Bentall Kennedy Clarion Partners Forest Investment Associates Invesco Realty Advisors JPMorgan Asset Management Sentinel Real Estate Corporation

#### Debt:

BlackRock Financial Management, Inc.
Blackstone Real Estate Advisors
Brookfield Real Estate Financial Partners LLC
Capri Capital Advisors, LLC
Carbon Capital Inc.
C-III Capital Partners LLC
Cornerstone Real Estate Advisers LLC
Latitude Management Real Estate Investors, Inc.
Madison Realty Capital
PCCP, LLC
Pramerica Real Estate Investors
Prima Capital Advisors, LLC
Talmage
Torchlight Investors

#### **REITs:**

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

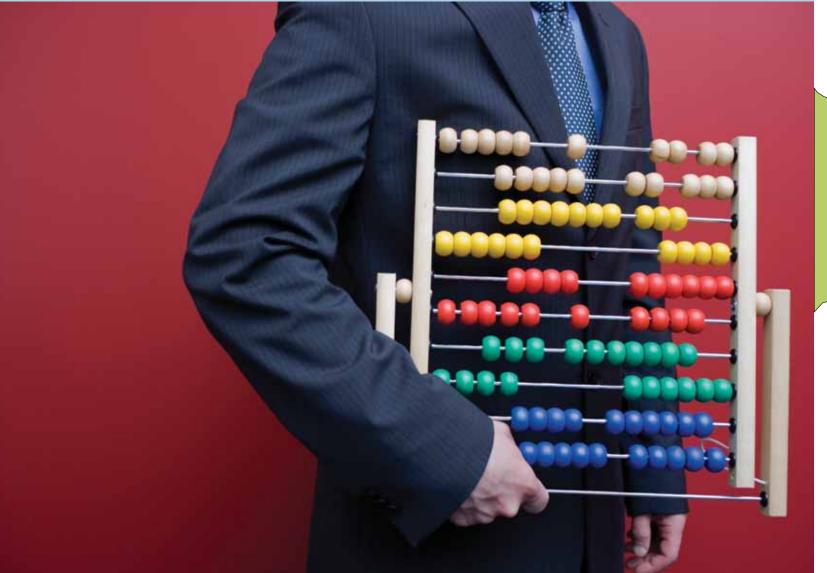
#### Commingled:

Abacus Capital Group, LLC Angelo, Gordon & Co. Apollo Global Real Estate Artemis Real Estate Partners BlackRock, Inc. Blackstone Real Estate Advisors Brookfield Office Properties Inc. Cabot Properties, Inc. **CBRE** Global Investors Cerberus Capital Management, L.P. Clarion Partners Cornerstone Real Estate Advisers LLC DLJ Real Estate Capital Partners, Inc. Essex Property Trust, Inc. **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 O'Connor Capital Partners Penwood Real Estate Investment Management, LLC Perella Weinberg Partners Prudential Real Estate Investors Rockpoint Group, LLC Rockwood Capital Corporation Starwood Capital Group LLC **UBS Realty Investors LLC** 

Walton Street Capital

**USAA** Real Estate Company

# >Actuarial



# >Actuarial

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#### **Actuarial Certification Letter**



#### New York State Teachers' Retirement System

10 Corporate Woods Drive Albany, New York 12211-2395 (800) 348-7298 or (518) 447-2900 NYSTRS.org

Thomas K. Lee, Executive Director & CIO

Office of the Actuary (518) 447-2692

October 14, 2014

Retirement Board New York State Teachers' Retirement System 10 Corporate Woods Drive Albany, NY 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 the actuarially determined employer contribution rate. This rate is determined by an actuarial valuation made as of each June 30th.

The most recently completed actuarial valuation was made as of June 30, 2013. 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.

(continued)



"The capital markets produced very strong returns during the fiscal year ending June 30, 2014, and the System achieved an annual net rate of return of 18.2% for the fiscal year, as well as hitting an all-time high market value of assets of approximately \$108 billion."

Rue 1 a y

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



#### **Actuarial Certification Letter** (continued)

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 2011 and first effective with the June 30, 2011 actuarial valuation. 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, 2013 was 13.7%. The System's five-year annualized rate of return increased to 5.2%. The June 30, 2013 actuarial valuation produced a required employer contribution rate of 17.53% of payroll, representing an increase of approximately 8% over the prior year's rate of 16.25%. This is the highest employer contribution rate the System has had in the last 28 years.

Looking ahead, however, the picture is brighter. The capital markets produced very strong returns during the fiscal year ending June 30, 2014, and the System achieved an annual net rate of return of 18.2% for the fiscal year, as well as hitting an all-time high market value of assets of approximately \$108 billion. This strong return, combined with the very poor '08-'09 fiscal year return coming off of the five-year average, has led to a substantial increase in the System's five-year rate of return from 5.2% to 13.8%. Additionally the System's 10-year rate of return has increased to 7.7%, and the 25-year rate of return to 9.2%. Due primarily to the favorable investment returns of the last several years, the next employer contribution rate will represent a decrease from the current 17.53% rate, and likely a noticeable one.

The plan's funded ratio as of June 30, 2013, calculated using the Actuarial Value of Assets (AVA) was 87.5% and calculated using the Market Value of Assets (MVA) was 100.8%. Although the AVA-based funded ratio has fallen below 100% in recent years, the System remains well funded, especially in comparison to the majority of its peers. Additionally this funded ratio will likely rise above 90% with the next actuarial valuation. 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.

As noted in the Financial Section of this report, the System has implemented Governmental Accounting Standards Board (GASB) Statement No. 67. As measured in accordance with this new accounting standard the System's Net Pension Liability as of June 30, 2014 is in fact a net asset in the amount of \$11.1 billion.

Chapter 57 of the Laws of 2013 allowed the NYSTRS Board to provide eligible school districts with a seven-year Stable Contribution Option (SCO), essentially allowing a temporary deferral of a portion of required contributions. In that only ten employers elected to participate in the SCO, the impact of the program on total required contributions will be minimal.

All actuarial calculations have been prepared in accordance with the Statements of the Governmental Accounting Standards Board, where applicable, and generally accepted actuarial principles, procedures, and standards of practice as prescribed by the Actuarial Standards Board. All schedules in the Actuarial and Statistical sections and the actuarial material in the Required Supplementary Information and the Notes to the Financial Statements in the Financial section were prepared under my direction. 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, 2013

#### 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 actual gain or loss, above (or below)

an assumed inflationary gain of 3.0%.

#### **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 (5/90)

8.0% compounded annually. The valuation rate of interest and the salary scale each contain a 3.0% assumed annual rate of inflation.

Rates of Salary Increase (10/11)			
<u>Age</u>	<u>Male</u>	<u>Female</u>	
25	10.91%	10.35%	
35	6.27	6.26	
45	5.04	5.39	
55	4.01	4.42	

#### Demographic

Rates of Mortality (10/11)						
Male <u>Age</u>	Active <u>Members</u>	Male <u>Age</u>	Retired Members & Beneficiaries	Male <u>Age</u>	Disabled <u>Members</u>	
30	0.02%	20	0.03%	30	2.10%	
40	0.04	40	0.10	40	6.61	
50	0.07	60	0.41	60	4.03	
60	0.17	80	4.17	80	7.51	
Female <u>Age</u>		Female <u>Age</u>		Female <u>Age</u>		
30	0.01%	20	0.02%	30	3.72%	
40	0.03	40	0.06	40	5.14	
50	0.05	60	0.33	60	3.41	
60	0.10	80	2.86	80	6.06	

Rates of Withdrawal (10/11) Ten-Year Ultimate Rates				
Male Age				
35	0.74%			
40	0.81			
45	0.93			
50	0.77			
<u>Female Age</u>				
35	2.27%			
40	1.45			
45	0.96			
50	0.87			

	Ra	tes of Service Retirem	nent (10/11 Tiers 1-5) (10/12 Tier 6)		
Male <u>Age</u>	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	<u>Tier 6</u>
55	31.18%	3.46%	1.73%	1.73%	1.73%
60	22.55	4.72	2.36	20.12	2.36
65	17.43	-	-	-	18.70
70	13.43	-	-	-	21.14
Female <u>Age</u>					
55	31.18%	4.22%	2.11%	2.11%	2.11%
60	19.06	4.85	2.42	17.31	2.42
65	20.06	-	-	-	16.37
70	16.91	-	-	-	22.20

Rates of Disability Retirement (10/11)						
Male Age						
35	0.00%					
40	0.01					
45	0.04					
50	0.11					
<u>Female Age</u>						
35	0.01%					
40	0.02					
45	0.05					
50	0.12					



# Actuarial Present Value of Future Benefits - as of June 30, 2013 and June 30, 2012 (in thousands)

Each year an actuarial valuation determines the actuarial present value of future benefits, which is the current value of retirement and ancillary benefit payments that the Retirement System can expect to pay in the future to current retirees and members. The results of the two most recent actuarial valuations are displayed in the following table.

	2013	2012
Present Value of Benefits Presently Being Paid:		
Service Retirement Benefits	\$ 51,807,853	\$ 50,434,852
Disability Retirement Benefits	286,285	279,173
Death Benefits	2,375	2,697
Survivor Benefits	733,317	686,872
Cost-of-Living Allowance	4,665,647	4,634,175
Total Present Value of Benefits Presently Being Paid	57,495,477	56,037,769
Present Value of Benefits Payable in the Future to Present Active Members	S:	
Service Retirement Benefits	49,065,090	48,417,710
Disability Retirement Benefits	223,852	220,231
Termination Benefits	1,806,612	1,797,499
Death and Survivor Benefits	442,672	438,738
Cost-of-Living Allowance	1,024,222	1,021,289
Total Active Member Liabilities	52,562,450	51,895,466
Present Value of Benefits Payable in the Future to Present Inactive (Vestec	i) Members:	
Retirement Benefits	246,725	228,637
Death Benefits	331	291
Cost-of-Living Allowance	5,150	4,823
Total Vested Liabilities	252,206	233,751
Unclaimed Funds	11,057	9,740
Total Actuarial Present Value of Future Benefits	\$110,321,190	\$108,176,726

Note: Totals may not sum due to rounding.

# **Funding Progress**

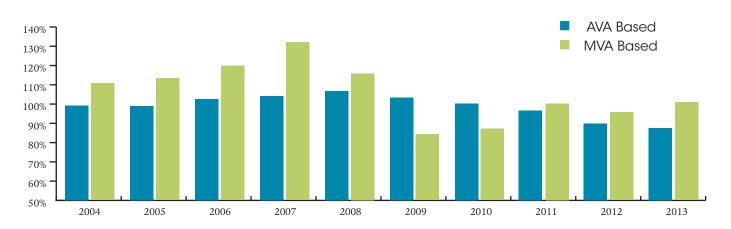
The portion of the actuarial present value of future benefits that is attributed to service rendered as of the valuation date is known as the actuarial accrued liability. In order to effectively assess the funding progress of a retirement system, it is necessary to compare the ratio of plan assets to 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	Market Value of	Actuarial Value	Actuarial Accrued	Percent Fund	ed based on
Year Ended	Assets (MVA)	of Assets (AVA)	Liability <sup>1</sup>	MVA	AVA
2004	\$ 80,276.2	\$72,044.4	\$72,604.9	110.6%	99.2%
2005	84,908.5	74,074.3	74,961.1	113.3	98.8
2006	91,492.2	78,335.8	76,353.0	119.8	102.6
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

### Percent Funded



<sup>&</sup>lt;sup>1</sup> 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)

	Aggre	gate Accrued Liabili	ities* for:				
Fiscal Year Ended	Active Current Service Rendered Member Retired Members by Active Members Accumulated and (Employer-Financed Contributions Beneficiaries Portion)		Actuarial Value of Assets	Accruec	ntage of Aggro I Liabilities Covarial Value of A	vered by	
	(A)	(B)	(C)	(D)	(A)	(B)	(C)
2008	\$3,850.3	\$47,515.4	\$31,411.8	\$88,254.7	100.0%	100.0%	117.4%
2009	3,665.9	49,091.3	33,304.8	88,805.5	100.0%	100.0%	108.2%
2010	4,016.4	50,546.3	33,756.1	88,544.4	100.0%	100.0%	100.7%
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%

<sup>\*</sup>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, 2013
Salary/Service:	-0.49%
Net Investment Loss:	+1.75
New Entrants:	-0.11
Withdrawal:	-0.06
Mortality:	+0.04
Retirement:	0.00
Pension Payments:	+0.17
Cost-of-Living Adjustment:	-0.02
Total Change in Employer Contribution Rate	+1.28%

# 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)
2005	260,356	\$12,163.7	3.4%	\$61,543	5.63%
2006	264,410	12,518.0	2.9	62,549	7.97
2007	270,045	13,083.0	4.5	64,651	8.60
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	N/A	16.25

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

	Number of Retired Members and Beneficiaries					efit of Retired d Beneficiaries	Total Number		Percentage Increase	
Fiscal Year Ended	Added During the Year	Removed During the Year	Added During the Year	Removed During the Year	of Retired Members and Beneficiaries	Total Annual Benefit	in Total Annual Benefit	Average Annual Benefit		
2005	7,536	3,457	\$347,943,836	\$ 72,645,187	125,325	\$4,236,863,962	6.95%	\$33,807		
2006	7,682	3,420	347,529,000	74,043,173	129,587	4,510,349,789	6.45	34,806		
2007	7,291	3,522	346,344,571	77,056,365	133,356	4,779,637,995	5.97	35,841		
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		

<sup>\*</sup>Computed on the Maximum annual benefit including supplementation and COLA.



### **Independent Actuarial Review**



KPMG LLP 345 Park Avenue New York, NY 10154 Telephone 212 758 9700 Fax 212 758 9819 Internet www.us.kpmg.com

October 28, 2014

Retirement Board New York State Teachers' Retirement System:

The New York State Teachers' Retirement System (the System), as part of the independent financial statement audit, has requested that KPMG LLP assess the actuarial assumptions, methods and procedures used by the System's Actuary to calculate the employer contributions for the plan. My assessment consisted of the following procedures.

- A review of the actuarial assumptions, methods and procedures stated in the system's Actuarial Valuation Report as of June 30, 2012 and the resultant employer contribution rate of 16.25% applied to the payroll for the fiscal year ending June 30, 2014.
- A review of the methodology used to estimate the payroll as of June 30, 2014, from which the employer and employee contribution receivable as of June 30, 2014 are derived.
- A review of the System's Experience Studies as of June 30, 2012, and the opinions of the Actuary presented thereon, to ascertain whether the actuarial assumptions are reasonable and appropriate.

In performing my review I compared the methods and procedures utilized by the System's Actuary with Actuarial Standard of Practice No. 4 (Measuring Pension Obligations) as adopted by the American Academy of Actuaries.

In my opinion, the methods, procedures and actuarial assumptions used by the System have been developed with appropriate oversight and judgment by the System's Actuary and comply with generally accepted actuarial principles and practices as set forth in Actuarial Standards of Practice No. 4. In addition, it is my opinion that the total pension liability was determined in accordance with my understanding of Statement No. 67 of the Governmental Accounting Standards Board.

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.

Very truly yours,

KPMG LLP

Robert L. Mishler, ASA, MAAA, EA Senior Manager

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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 103-114 are intended to assist users in understanding the environment within which NYSTRS operates and to provide information that facilitates comparisons of financial statement information over time and among similar entities. The demographic and economic information schedules presented are:

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#### **Financial Trends Information**

The schedules on pages 116-119 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:

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	<del>age</del>
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### **Operating Information**

The schedules on pages 121-125 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:

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# Demographic & Economic Information

### **Active Members:**

	Male	Female	Total
June 30, 2013	65,110	208,218	273,328
Changes During Year:			
Added	2,106	6,963	9,069
Withdrawn	1,473	4,173	5,646
Retired	1,420	5,127	6,547
Died	58	107	165
June 30, 2014	64,265	205,774	270,039

## Members Retired for:

	Service*			Disability				Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
June 30, 2013	50,279	94,925	145,204	513	1,574	2,087	50,792	96,499	147,291	
Changes During Year:										
Retired	1,401	5,031	6,432	19	96	115	1,420	5,127	6,547	
Died	1,326	1,955	3,281	35	78	113	1,361	2,033	3,394	
Lump Sum	29	143	172	0	0	0	29	143	172	
Restored to Active Membership	0	0	0	2	2	4	2	2	4	
June 30, 2014	50,325	97,858	148,183	495	1,590	2,085 **	50,820	99,448	150,268	

### **Beneficiaries of Deceased:**

	Service Annuitants				,	Active Members			Total			
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
June 30, 2013	1,118	3,984	5,102	91	169	260	29	140	169	1,238	4,293	5,531
Changes During Year:												
Added	119	324	443	6	7	13	0	0	0	125	331	456
Died	78	220	298	2	6	8	1	17	18	81	243	324
June 30, 2014	1,159	4,088	5,247	95	170	265	28	123	151	1,282	4,381	5,663

# Summary:

	Male	Female	Total
Active Members	64,265	205,774	270,039
Retired Members	50,820	99,448	150,268
Beneficiaries	1,282	4,381	5,663
Total	116,367	309,603	425,970

<sup>\*</sup>Also includes vested retirees.

<sup>\*\*</sup>Includes 34 males and 52 females retired for disability who receive a service benefit.



# Distribution of Active Members by Age and Years of Service\* — as of June 30, 2013

			Year	s of Credited Servic	ce	
Age		0-5	6-10	11-15	16-20	21-25
20-24	Number of Members	6,253	1	0	0	0
	Average Salary	\$35,137	\$17,325	\$0	\$0	\$0
25-29	Number of Members	26,765	2,594	0	0	0
	Average Salary	\$47,124	\$59,272	\$0	\$0	\$0
30-34	Number of Members	17,856	17,363	3,128	2	0
	Average Salary	\$51,794	\$64,952	\$75,129	\$58,185	\$0
35-39	Number of Members	9,100	10,876	16,976	1,478	1
	Average Salary	\$52,023	\$68,574	<i>\$79,888</i>	\$89,238	\$119,799
40-44	Number of Members	7,699	7,706	12,427	11,175	1,003
	Average Salary	\$49,275	\$64,835	\$81,152	\$90,281	\$91,398
45-49	Number of Members	6,989	6,183	7,072	7,177	7,208
	Average Salary	\$43,865	\$58,304	\$75,244	\$89,997	\$94,411
50-54	Number of Members	5,708	5,453	6,425	4,683	5,008
	Average Salary	\$40,726	\$53,492	\$67,493	\$82,078	\$93,336
55-59	Number of Members	3,887	3,220	4,853	4,404	3,954
	Average Salary	\$45,122	\$54,028	\$66,054	\$78,127	\$88,390
60-64	Number of Members	2,155	1,587	2,390	2,908	3,085
	Average Salary	\$50,171	\$54,046	\$66,316	\$78,240	\$88,273
65-69	Number of Members	826	420	513	592	592
	Average Salary	\$53,950	\$60,332	\$62,836	<i>\$76,999</i>	\$86,988
70+	Number of Members	407	118	132	119	107
	Average Salary	\$41,872	\$51,187	\$50,924	\$65,247	\$71,982
Total	Number of Members	87,645	55,521	53,916	32,538	20,958
	Average Salary	\$47,740	\$62,959	\$76,038	\$86,059	\$91,663

<sup>\*</sup>Average salary data is for the 183,528 members who earned a full year of service.

The average salary for all active members, full-time and part-time, is \$65,887.

# Distribution of Active Members by Age — as of June 30, 2013

#### 

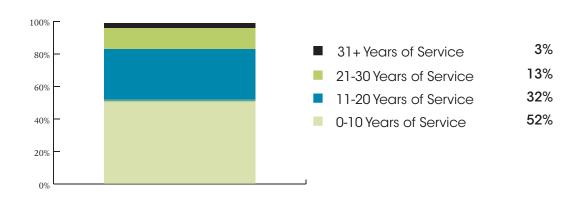
# Averages — as of June 30, 2013

Gender	Age	Years of Service
Female	43	11
Male	43	11

# Distribution of Active Members by Age and Years of Service\* (continued) — as of June 30, 2013

		Years of Credi	ted Service			
26-30	31-35	36-40	41-45	46-50	51+	Total
0	0	0	0	0	0	6,254
\$0	\$0	\$0	\$0	\$0	\$0	\$35,117
0	0	0	0	0	0	29,359
\$0	\$0	\$0	\$0	\$0	\$0	\$49,721
0	0	0	0	0	0	38,349
\$0	\$0	\$0	\$0	\$0	\$0	\$63,616
0	0	0	0	0	0	38,431
\$0	\$0	\$0	\$0	\$0	\$0	\$75,080
0	0	0	0	0	0	40,010
\$0	\$0	\$0	\$0	\$0	\$0	\$80,452
1,067	2	0	0	0	0	35,698
\$96,152	\$162,236	\$0	\$0	\$0	\$0	\$80,957
6,510	751	1	0	0	0	34,539
\$98,836	\$99,486	\$118,618	\$0	\$0	\$0	\$80,639
4,485	3,184	333	0	0	0	28,320
\$99,440	\$104,659	\$111,034	\$0	\$0	\$0	\$83,191
2,750	1,229	897	105	1	0	17,107
\$97,791	\$107,907	\$115,934	\$122,714	\$127,696	\$0	\$86,036
535	264	128	178	14	0	4,062
\$90,936	\$109,214	\$119,483	\$125,182	\$126,862	\$0	\$85,553
106	60	47	37	43	23	1,199
\$84,112	\$86,332	\$109,259	\$97,672	\$123,182	\$114,789	\$77,331
15,453	5,490	1,406	320	58	23	273,328
\$98,271	\$104,724	\$114,874	\$121,260	\$124,165	\$114,789	\$76,348

# Distribution of Active Members by Service — as of June 30, 2013

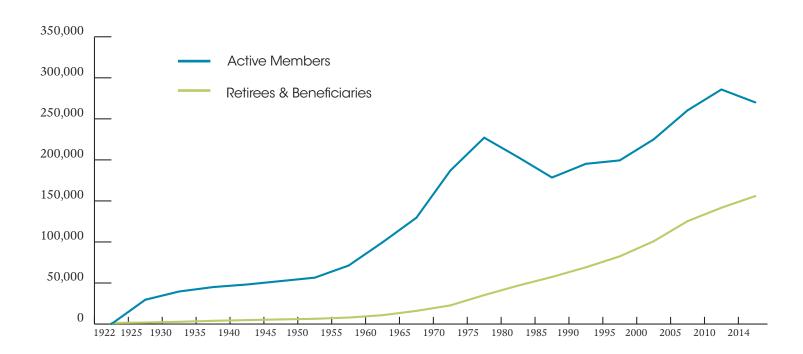




### **Active Members and Annuitants 1922-2014**

As of June 30	Active Members	Retirees & Beneficiaries	As of June 30	Active Members	Retirees & Beneficiaries
1922	-	1,296	1970	186,914	22,700
1925	29,057	1,815	1975	227,038	35,252
1930	39,663	2,732	1980	203,330	46,812
1935	45,031	3,919	1985	178,516	57,366
1940	48,193	4,771	1990	195,194	69,127
1945	52,359	5,637	1995	199,398	82,459
1950	56,504	6,374	2000	224,986	100,839
1955	71,273	7,897	2005	260,356	125,325
1960	99,555	10,796	2010	285,774	141,716
1965	129,543	16,043	2014	270,039	155,931

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
1995	64,093	17,012	25,206	93,087	_	-	199,398
1996	58,850	16,596	24,546	100,926	_	_	200,918
1997	53,502	16,186	23,861	110,167	_	-	203,716
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



#### Members Retired in 2013-2014 for:

	Service*	Disability
Number Retired	6,433	114
Age at Retirement:		
Average	61 yrs., 0 mos.	51 yrs., 0 mos.
Median	61 yrs., 2 mos.	51 yrs., 4 mos.
Years of Service:		
Average	25 yrs., 4 mos.	18 yrs., 3 mos.
Median	27 yrs., 0 mos.	17 yrs., 1 mo.
**Benefit:		
Average	\$44,978	\$26,705
Median	\$45,231	\$23,691
Final Average Salary (FAS):		
Average	\$84,545	\$75,903
Median	\$83,776	\$69,879
***Benefit as % of FAS:		
Average	47.68%	34.49%
Median	52.00%	33.33%

#### Members Retired in 2013-2014 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	1,583	4,067	783
Age at Retirement:			
Average	61 yrs., 3 mos.	60 yrs., 8 mos.	62 yrs., 6 mos.
Median	61 yrs., 6 mos.	60 yrs., 11 mos.	61 yrs., 9 mos.
Years of Service:			
Average	12 yrs., 1 mo.	28 yrs., 0 mos.	39 yrs., 1 mo.
Median	12 yrs., 1 mo.	29 yrs., 0 mos.	38 yrs., 2 mos.
* *Benefit:			
Average	\$9,634	\$50,724	\$86,588
Median	\$7,134	\$50,487	\$83,276
Final Average Salary (FAS):			
Average	\$49,796	\$92,181	\$115,138
Median	\$43,858	\$89,396	\$112,789
***Benefit as % of FAS:			
Average	17.88%	54.03%	74.97%
Median	17.41%	56.67%	76.22%

<sup>\*</sup>Also includes vested retirees.

<sup>\*\*</sup>The Maximum, even though the member may have chosen an option.

<sup>\*\*\*</sup>The average and median of individual benefits as percentages of final average salary.

#### All Retirees as of June 30, 2014 Retired for:

	Service*	Disability
Number Retired	148,269	1,999
Age at Retirement:		
Average	58 yrs., 6 mos.	49 yrs., 6 mos.
Median	57 yrs., 4 mos.	50 yrs., 4 mos.
Years of Service:		
Average	28 yrs., 3 mos.	18 yrs., 6 mos.
Median	30 yrs., 5 mos.	18 yrs., 0 mos.
**Benefit:		
Average	\$40,140	\$19,208
Median	\$39,963	\$17,592
Final Average Salary (FAS):		
Average	\$67,589	\$52,478
Median	\$66,828	\$50,954
***Benefit as % of FAS:		
Average	54.89%	35.83%
Median	60.67%	33.33%

#### All Retirees as of June 30, 2014 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	24,850	87,939	35,480
Age at Retirement:			
Average	58 yrs., 9 mos.	58 yrs., 3 mos.	58 yrs., 10 mos.
Median	57 yrs., 1 mo.	57 yrs., 0 mos.	58 yrs., 3 mos.
Years of Service:			
Average	13 yrs., 8 mos.	28 yrs., 7 mos.	37 yrs., 4 mos.
Median	14 yrs., 0 mos.	30 yrs., 0 mos.	36 yrs., 8 mos.
**Benefit:			
Average	\$7,960	\$39,661	\$63,866
Median	\$5,961	\$38,754	\$60,102
Final Average Salary (FAS):			
Average	\$37,242	\$68,836	\$85,751
Median	\$30,594	\$66,999	\$81,389
***Benefit as % of FAS:			
Average	21.01%	56.66%	74.23%
Median	19.70%	59.78%	73.56%

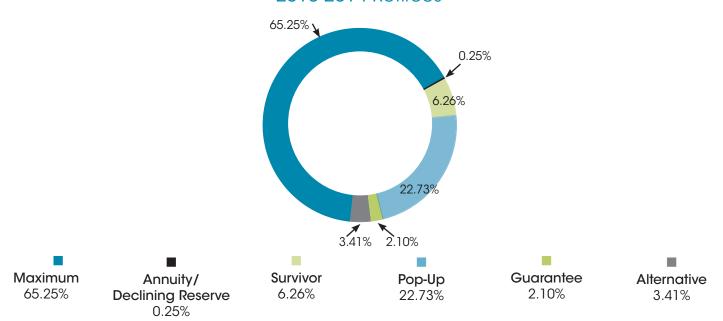
<sup>\*</sup>Also includes vested retirees.

<sup>\*\*</sup>The Maximum, even though the member may have chosen an option.

<sup>\*\*\*</sup>The average and median of individual benefits as percentages of final average salary.



# Retirement Benefit Options and Percent of Election 2010-2014 Retirees

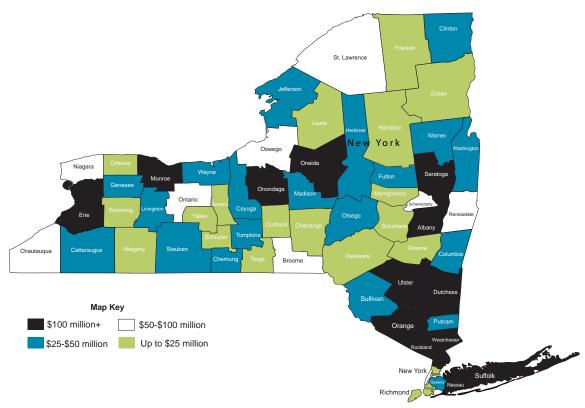


# Retired Members' Characteristics\* By Year of Retirement

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
2005	7,182	57-10	28-6	\$72,126	\$45,394
2006	7,281	58-4	28-2	71,840	43,914
2007	6,900	58-7	28-1	74,185	44,204
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

<sup>\*</sup>Averages are for service and vested retirees.

## Distribution of Benefits Paid by County\*— as of June 30, 2014



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	2,886	\$110,390,096	Jefferson	1,231	\$43,358,612	St. Lawrence	1,588	\$53,544,732
Allegany	616	\$19,819,056	Kings	213	\$8,633,076	Saratoga	3,099	\$123,305,020
Bronx	241	\$11,796,523	Lewis	326	\$10,943,152	Schenectady	1,654	\$61,981,511
Broome	2,225	\$79,034,220	Livingston	873	\$32,255,978	Schoharie	382	\$13,562,149
Cattaraugus	899	\$32,940,705	Madison	902	\$32,512,434	Schuyler	251	\$7,948,149
Cayuga	965	\$34,012,752	Monroe	8,032	\$311,298,567	Seneca	410	\$14,145,464
Chautauqua	1,840	\$68,743,248	Montgomery	543	\$19,312,145	Steuben	1,294	\$44,257,562
Chemung	1,050	\$36,031,931	Nassau	8,920	\$467,313,244	Suffolk	16,116	\$895,760,847
Chenango	648	\$20,858,637	New York	1,222	\$53,490,963	Sullivan	777	\$32,302,906
Clinton	1,151	\$40,997,287	Niagara	2,202	\$90,319,628	Tioga	534	\$18,947,195
Columbia	731	\$27,951,678	Oneida	2,974	\$106,526,836	Tompkins	936	\$29,101,795
Cortland	662	\$22,982,764	Onondaga	6,095	\$218,385,816	Ulster	2,426	\$101,329,896
Delaware	579	\$18,884,376	Ontario	1,709	\$63,032,391	Warren	1,301	\$48,815,870
Dutchess	2,945	\$127,547,709	Orange	2,968	\$132,782,015	Washington	732	\$25,540,731
Erie	10,148	\$422,626,864	Orleans	438	\$17,606,210	Wayne	1,188	\$42,837,264
Essex	587	\$18,799,585	Oswego	1,516	\$53,149,860	Westchester	6,204	\$318,673,534
Franklin	636	\$21,736,175	Otsego	1,049	\$33,975,603	Wyoming	475	\$17,194,270
Fulton	780	\$28,710,057	Putnam	888	\$45,148,962	Yates	418	\$14,411,636
Genesee	737	\$28,196,586	Queens	846	\$41,116,537			
Greene	462	\$16,564,502	Rensselaer	1,516	\$57,161,262	Out of State	37,459	\$1,226,636,722
Hamilton	141	\$5,030,584	Richmond	45	\$1,926,027			
Herkimer	1,011	\$33,572,289	Rockland	2,239	\$107,177,138	Grand Total	155,931	\$6,264,951,333

 $<sup>\</sup>hbox{$^*$Computed on the optional annual benefit including supplementation and COLA.}$ 



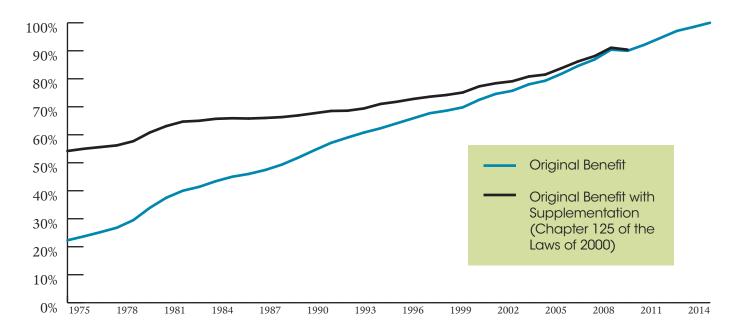
# Distribution of Retired Members and Beneficiaries by Tier — as of June 30, 2014

	Tiox 1	Tion 0	Tion 2	Tion 4	Total
	Tier 1	Tier 2	Tier 3	Tier 4	Total
Members Retired for:					
Service*	98,735	16,198	14,474 (242)**	18,776	148,183
Disability	795	194	269 (33)**	827	2,085
Beneficiaries of Deceased:					
Service Annuitants	4,694	221	174 (3)**	158	5,247
Disability Annuitants	176	23	26 (5)**	40	265
Active Members	148	2	1 (0)**	0	151
Total	104,548	16,638	14,944 (283)**	19,801	155,931

<sup>\*</sup>Also includes vested retirees.

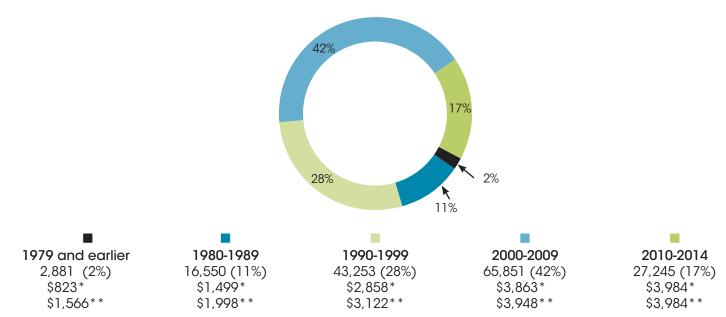
## Retired Members — Remaining Purchasing Power Through 2014

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 2014 in accordance with Chapter 125 of the Laws of 2000.



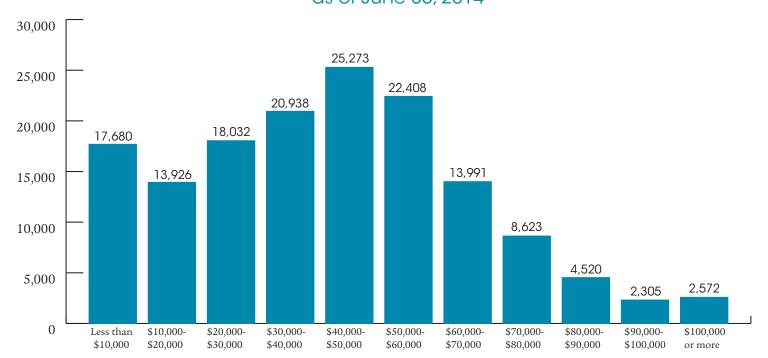
<sup>\*\*</sup>Those receiving an Article 14 (Tier 3) benefit. The remainder are receiving an Article 15 (Tier 4) benefit. Tier 3 members receive the better of the two benefits.

#### Retired Members and Beneficiaries with Monthly Benefits By Decade of Retirement — as of June 30, 2014



<sup>\*</sup>Average monthly benefit (based on the Maximum benefit).

## Distribution of the Annual Benefit\* of All Retired Members — as of June 30, 2014



<sup>\*</sup>Maximum annual retirement benefit including supplementation and COLA.

<sup>\*\*</sup>Average total monthly benefit including supplementation and COLA (based on the Maximum benefit).



## Distribution of Monthly COLA Increase Commencing September 2014

Monthly COLA Increase	Number of Retired Members and Beneficiaries
\$15.00	98,155
\$12.50 - \$14.99	3,288
\$10.00 - \$12.49	3,100
\$7.50 - \$9.99	7,393
\$5.00 - \$7.49	4,056
\$2.50 - \$4.99	5,802
\$0.01 - \$2.49	3,087
\$0 (currently ineligible)	31,050
Total	155,931

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

## Distribution of Cumulative Monthly COLA Commencing September 2014

•	
Cumulative Monthly COLA	Number of Retired Members and Beneficiaries
\$282.00	30,779
\$235.00 - \$281.99	11,060
\$188.00 - \$234.99	12,422
\$141.00 - \$187.99	16,754
\$94.00 - \$140.99	17,139
\$47.00 - \$93.99	23,068
\$0.01- \$46.99	13,659
\$0 (currently ineligible)	31,050
Total	155,931

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#### Financial Trends Information

### Changes in Fiduciary Net Position

Last Ten Fiscal Years

(dollars in thousands)

Additions:	2005	2006	2007	2008
Net investment income (loss)	\$7,951,926	\$ 9,893,833	\$16,863,349	\$(5,531,807)
Employer contributions	695,735	997,032	1,104,010	1,188,140
Member contributions	158,354	161,738	168,462	177,959
Transfers	17,155	15,807	7,260	2,349
Total additions (reductions) to fiduciary net position	8,823,170	11,068,410	18,143,081	(4,163,359)
Deductions: (See Benefits and Return of Contribution	ns by Type on p	pages 118-119)		
Benefit payments	4,138,122	4,426,416	4,661,665	4,908,446
Return of contributions	12,466	15,600	16,819	22,792
Administrative expenses	40,309	42,668	43,893	49,016
Total deductions from fiduciary net position	4,190,897	4,484,684	4,722,377	4,980,254
Change in fiduciary net position	\$4,632,273	\$ 6,583,726	\$13,420,704	\$(9,143,613)

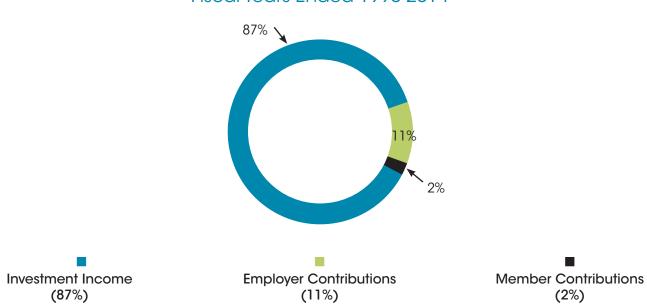
#### Changes in Fiduciary Net Position (continued)

Last Ten Fiscal Years (dollars in thousands)

2009	2010	2011	2012	2013	2014
\$ (19,363,140)	\$8,702,215	\$17,250,415	\$ 2,375,262	\$11,636,480	\$16,664,703
1,096,117	925,506	1,389,415	1,628,491	1,734,908	2,400,386
181,723	139,369	154,327	138,583	128,903	120,762
5,665	6,037	2,144	4,188	4,522	1,365
(18,079,635)	9,773,127	18,796,301	4,146,524	13,504,813	19,187,216
5,151,463	5,333,788	5,681,007	5,907,795	6,118,849	6,324,546
17,080	17,071	20,348	19,732	20,869	18,992
49,401	49,088	50,159	52,457	54,338	55,616
5,217,944	5,399,947	5,751,514	5,979,984	6,194,056	6,399,154
\$(23,297,579)	\$4,373,180	\$13,044,787	\$(1,833,460)	\$ 7,310,757	\$12,788,062

### **Breakdown of Income Sources**

Fiscal Years Ended 1995-2014





#### Benefits and Return of Contributions by Type

Last Ten Fiscal Years

(dollars in thousands)

Type of Benefit	2005	2006	2007	2008
Age and service benefits:				
Retirees	\$4,054,051	\$4,335,475	\$4,579,829	\$4,817,594
Survivors	31,787	37,232	26,964	30,500
Death in service benefits	21,039	17,321	17,033	21,382
Disability benefits:				
Ordinary	31,015	36,079	37,544	38,671
Accidental	230	309	295	299
Total benefits	\$4,138,122	\$4,426,416	\$4,661,665	\$4,908,446
Type of Return of Contributions				
Death	\$ 1,742	\$ 1,394	\$ 1,609	\$ 1,735
Separation from service	10,724	14,206	15,210	21,057
Total return of contributions	\$ 12,466	\$ 15,600	\$ 16,819	\$ 22,792

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

2009	2010	2011	2012	2013	2014
\$5,045,738	\$5,237,032	\$5,593,968	\$5,811,739	\$6,023,506	\$6,233,619
27,674	38,516	28,237	29,153	32,879	28,918
38,119	20,244	22,852	29,266	23,666	21,634
39,565	37,628	35,667	37,350	38,507	39,871
367	368	283	287	291	504
\$5,151,463	\$5,333,788	\$5,681,007	\$5,907,795	\$6,118,849	\$6,324,546
\$ 1,905	\$ 2,287	\$ 2,240	\$ 2,393	\$ 2,434	\$ 2,325
15,175	14,784	18,108	17,339	18,435	16,667
\$ 17,080	\$ 17,071	\$ 20,348	\$ 19,732	\$ 20,869	\$ 18,992

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## **Operating Information**

## Average Benefit Payments — July 1, 2004 - June 30, 2014

			Yea	rs of Credi	ted Servic	e		
Retirement Effective Dates	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35+
Period 7/1/2004 to 6/30/2005								
Average monthly benefit	\$235	\$296	\$482	\$1,153	\$2,432	\$3,477	\$4,646	\$5,793
Average final average salary	\$37,120	\$25,825	\$30,400	\$47,128	\$65,314	\$74,902	\$81,145	\$91,010
Number of retired members	33	270	626	513	746	790	2,574	1,630
Period 7/1/2005 to 6/30/2006								
Average monthly benefit	\$131	\$227	\$503	\$1,245	\$2,414	\$3,359	\$4,569	\$5,657
Average final average salary	\$21,859	\$27,506	\$34,427	\$50,742	\$64,892	\$74,120	\$81,845	\$90,272
Number of retired members	60	451	547	486	756	865	2,377	1,739
Period 7/1/2006 to 6/30/2007								
Average monthly benefit	\$118	\$257	\$558	\$1,264	\$2,222	\$3,336	\$4,629	\$5,831
Average final average salary	\$24,409	\$28,422	\$37,416	\$52,612	\$65,663	\$76,566	\$84,377	\$94,039
Number of retired members	65	415	537	491	722	831	2,152	1,687
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

# >Statistical

#### Retired Members and Beneficiaries by Type of Benefit — as of June 30, 2014

Amount of	Number of Retired	Type of Retirement					
Monthly Benefit	Members	1	2	3	4	5	6
\$1 - \$500	13,474	8,242	4,626	162	300	28	116
\$501 - \$1,000	12,447	7,518	3,840	434	559	81	15
\$1,001 - \$1,500	11,339	7,854	2,202	459	749	67	8
\$1,501 - \$2,000	11,057	8,106	1,891	386	634	36	4
\$2,001 - \$2,500	11,403	9,006	1,572	298	499	25	3
\$2,501 - \$3,000	11,785	9,831	1,271	163	505	11	4
\$3,001 - \$3,500	13,273	11,810	921	92	441	8	1
\$3,501 - \$4,000	14,883	13,784	634	44	418	3	0
\$4,001 - \$4,500	14,491	13,690	419	27	350	5	0
\$4,501 - \$5,000	11,612	11,068	276	9	259	0	0
over \$5,000	30,167	29,271	351	11	533	1	0
Total	155,931	130,180	18,003	2,085	5,247	265	151

#### 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

Tier 6: retirement at age less than 63.

<sup>\*</sup>Tiers 2-5: retirement at age less than 62 and service less than 30 years.

#### Retired Members and Beneficiaries by Type of Benefit — as of June 30, 2014 (continued)

Option Selected							
1	2	3	4	5	6		
10,124	742	995	656	690	267		
8,592	918	1,518	609	627	183		
7,673	911	1,595	521	496	143		
7,720	902	1,553	428	318	136		
8,087	887	1,669	375	245	140		
8,197	995	1,893	331	210	159		
9,194	1,091	2,287	353	133	215		
10,139	1,135	2,875	354	141	239		
9,646	1,093	3,040	318	114	280		
7,521	977	2,561	227	76	250		
18,219	2,791	7,437	567	155	998		
105,112	12,442	27,423	4,739	3,205	3,010		

#### 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

		2014	
Participating Employer	Covered Employees	Rank	Percentage of Total System**
Buffalo Public Schools	4,737	1	1.75%
Rochester City School District	3,929	2	1.45%
Syracuse City School District	2,648	3	0.98%
Yonkers Public Schools	2,048	4	0.76%
Brentwood Union Free Schools	1,694	5	0.63%
Greece Central Schools	1,435	6	0.53%
Sachem Central Schools	1,384	7	0.51%
Newburgh City School District	1,291	8	0.48%
Clarkstown Central Schools	1,222	9	0.45%
Wappingers Central Schools	1,221	10	0.45%
All Other*	248,430		92.00%
Total	270,039		100.00%

#### \*In 2014, "All Other" consisted of:

Туре	Number	Covered Employees
Public School Districts	670	226,837
BOCES	37	13,842
SUNY	31	2,373
Community Colleges	30	3,040
Charter Schools	26	1,261
Special Act Districts	11	699
Other	9	378
Total "All Other"	814	248,430
Top 10 Participating Employers	10	21,609
Total	824	270,039

<sup>\*\*</sup>Percentages may not sum to 100% due to rounding.

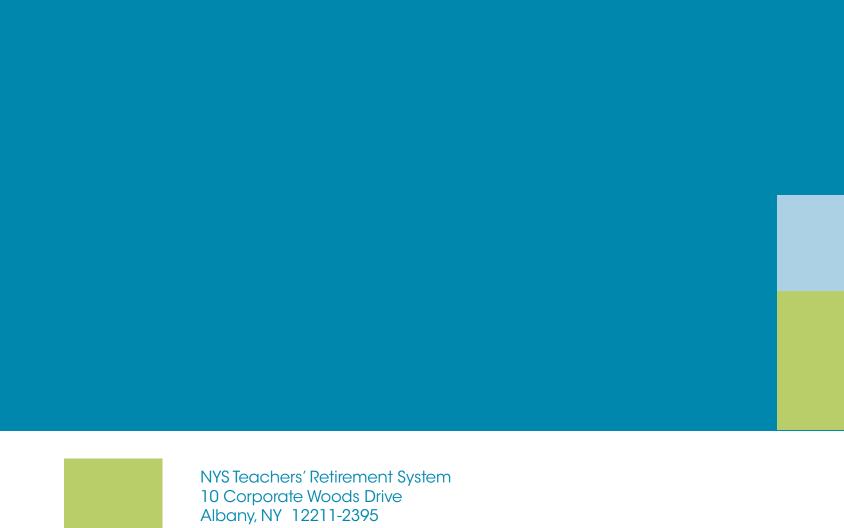
## Principal Participating Employers (continued) Current Year and Nine Years Ago

		2005	
Participating Employer	Covered Employees	Rank	Percentage of Total System**
Buffalo Public Schools	4,980	1	1.91%
Rochester City School District	4,461	2	1.71%
Syracuse City School District	3,584	3	1.38%
Yonkers Public Schools	2,451	4	0.94%
Eastern Suffolk 1 BOCES	2,120	5	0.81%
Brentwood Union Free Schools	2,069	6	0.79%
Sachem Central Schools	1,845	7	0.71%
Greece Central Schools	1,739	8	0.67%
Clarkstown Central Schools	1,440	9	0.55%
Newburgh City School District	1,433	10	0.55%
All Other	234,234		89.97%
Total	260,356		100.00%

<sup>\*\*</sup>Percentages may not sum to 100% due to rounding.

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