



The background of the top half of the cover features two images. The top image shows a woman smiling and interacting with three children in a classroom setting. The bottom image shows a woman smiling and interacting with a young child at a table with educational toys.

New York State Teachers' Retirement System



Over a century of providing retirement security

Annual Comprehensive Financial Report

Fiscal Years Ended
June 30, 2022 and 2021

*Over a century
of providing
retirement security*

Our Strategic Objectives

Governance Structure: Promote a governance model to appropriately manage System finances and risk, and maintain a positive reputation.

Shared Accountability: Foster an environment of shared accountability, awareness, commitment and integrity.

Customer Service: Maintain a high level of customer service and confidence.

Safeguard System Funds: Safeguard System funds and invest them in a prudent and diversified manner in order to achieve optimum long-term returns with an appropriate level of risk.

Quality Workforce: Ensure a quality workforce.

Committed to the Highest Ethical Standards of Conduct

NYSTRS strives to model strong ethical values within the pension industry. Our Board and staff take their fiduciary responsibilities seriously and are committed to operating in an environment of transparency.

System staff adhere to the following guiding principles of ethics and conduct.

Ensure compliance with all applicable laws, ethical and professional standards, and NYSTRS' policies and procedures.

Protect the interest of stakeholders, including members, employers and the public.

Act with integrity at all times to prevent a violation of public trust.

Guard the privacy of stakeholder information.

Adhere to NYSTRS' Internal Asset Management Code of Professional Conduct in managing NYSTRS funds.

Acknowledgments

The following departments have assisted with the preparation of this report:

Actuary ♦ Education & Outreach ♦ Finance ♦ Fixed Income ♦ Internal Audit ♦ Investment Operations ♦ Member Relations ♦ Private Equity ♦ Public Equities ♦ Real Estate

New York State Teachers' Retirement System

10 Corporate Woods Drive
Albany, NY 12211-2395
(800) 348-7298 ♦ NYSTRS.org



New York State Teachers' Retirement System

ANNUAL COMPREHENSIVE FINANCIAL REPORT

Fiscal Years Ended June 30, 2022 and 2021

Mission:

To provide our members with a secure pension.

Vision:

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

Values:

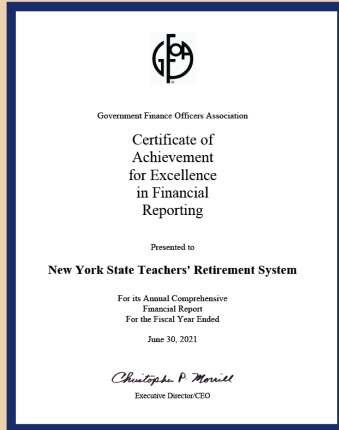
Integrity, Excellence
Respect, Resourcefulness
Diversity, Diligence
and Balance

TABLE OF CONTENTS

INTRODUCTION	Investments (cont.)	Actuarial (cont.)
7 Board of Trustees	97 Breakdown of Real Estate Equity Portfolio	125 History of Member Payroll and the Employer Contribution Rate
8 Organizational Structure	Geographical Distribution of the Real Estate Equity Portfolio	Schedule of Retired Members and Beneficiaries Added to and Removed from the Benefit Payroll
9 Executive Staff	98 Private Equity Net Asset Value by Investment Type	126 Independent Actuarial Review
10 Letter of Transmittal	Private Equity Net Asset Value by Geography	
15 President's Message	99 Domestic Fixed Income and High-Yield Bonds Distribution	
16 Summary of Benefits	Domestic Fixed Income and High-Yield Bonds Quality Distribution	
	100 Domestic Fixed Income Average Maturity	
	Global Bonds Sector Distribution	
	101 Global Bonds Quality Distribution	
	Ten Largest Fixed Income Holdings	
	102 Real Estate Debt by Property Type Breakdown of Real Estate Debt Portfolio	
	103 Geographical Distribution of the Real Estate Debt Portfolio	
	Private Debt Net Asset Value by Investment Type	
	104 Private Debt Net Asset Value by Geography	
	Cash Equivalents Sector Distribution	
	105 Annual Performance History	
	106 Investment Performance Results	
	107 Manager Investment Performance Results	
	109 Corporate Governance Securities Lending Program	
	110 Schedule of Investment Fees and Expenses	
	111 Investment Advisory Committee Real Estate Advisory Committee	
	112 Investment Consultants Master Custodian Securities Lending External Investment Managers & Advisors	
		129 Number of Active Members, Retired Members and Beneficiaries of Deceased
		130 Distribution of Active Members by Age and Years of Service
		131 Distribution of Active Members by Age
		131 Distribution of Active Members by Service
		132 Active Members and Annuitants 1922-2022
		133 Number of Active Members by Tier
		134 Retirement Statistics
		136 Retirement Benefit Options and Percent of Election Retired Members' Characteristics by Year of Retirement
		137 Distribution of Benefits Paid by County
		138 Distribution of Retired Members and Beneficiaries by Tier History of the Number of New Retirees
		139 Retired Members and Beneficiaries with Monthly Benefits by Decade of Retirement Distribution of the Annual Benefit of all Retired Members
		140 History of the Monthly COLA
		141 Distribution of Monthly COLA Increase Commencing September 2022 Distribution of Cumulative Monthly COLA Commencing September 2022
		Financial Trends Information
		142 Changes in Fiduciary Net Position
		143 Breakdown of Income Sources
		144 Benefits and Return of Contributions by Type
		Operating Information
		146 Average Benefit Payments
		148 Retired Members and Beneficiaries by Type of Benefit
		150 Principal Participating Employers
FINANCIAL	ACTUARIAL	STATISTICAL
21 Independent Auditors' Report	119 Actuarial Certification Letter	Demographic & Economic Information
24 Management's Discussion and Analysis	121 Summary of Plan Provisions and Actuarial Methods and Assumptions	129 Number of Active Members, Retired Members and Beneficiaries of Deceased
Basic Financial Statements	122 Actuarial Present Value of Future Benefits	130 Distribution of Active Members by Age and Years of Service
28 Statements of Fiduciary Net Position		131 Distribution of Active Members by Age
29 Statements of Changes in Fiduciary Net Position		131 Distribution of Active Members by Service
30 Notes to Financial Statements		132 Active Members and Annuitants 1922-2022
Required Supplementary Information		133 Number of Active Members by Tier
62 Schedule of Changes in the School Districts' Net Pension Liability (Asset)		134 Retirement Statistics
64 Schedule of the School Districts' Net Pension Liability (Asset)		136 Retirement Benefit Options and Percent of Election Retired Members' Characteristics by Year of Retirement
Schedule of the School Districts' Contributions		137 Distribution of Benefits Paid by County
66 Schedule of Investment Returns		138 Distribution of Retired Members and Beneficiaries by Tier History of the Number of New Retirees
68 Schedule of NYSTRS' Proportionate Share of the Net Pension Liability		139 Retired Members and Beneficiaries with Monthly Benefits by Decade of Retirement Distribution of the Annual Benefit of all Retired Members
70 Schedule of NYSTRS' Contributions		140 History of the Monthly COLA
72 Schedule of Changes in the System's Net OPEB Liability and Related Ratios		141 Distribution of Monthly COLA Increase Commencing September 2022 Distribution of Cumulative Monthly COLA Commencing September 2022
74 Schedule of System and Other Contributing Entity Contributions		
76 Notes to Required Supplementary Information		
Other Supplemental Schedules		
79 Schedules of Administrative Expenses		
80 Schedules of Investment Expenses		
81 Schedule of Consulting Fees		
INVESTMENTS	ACTUARIAL	STATISTICAL
85 Report on Investment Activity	119 Actuarial Certification Letter	Demographic & Economic Information
91 Asset Allocation Changes in Net Asset Value	121 Summary of Plan Provisions and Actuarial Methods and Assumptions	129 Number of Active Members, Retired Members and Beneficiaries of Deceased
92 Diversification of Investments	122 Actuarial Present Value of Future Benefits	130 Distribution of Active Members by Age and Years of Service
93 Domestic Equity Distribution Domestic Equity Externally Managed Style Distribution		131 Distribution of Active Members by Age
94 International Equity Style Distribution Global Equity Style Distribution		131 Distribution of Active Members by Service
95 Public Equity Holdings by Industry Distribution Ten Largest Public Equity Holdings		132 Active Members and Annuitants 1922-2022
96 Public Equity Country Exposure Distribution Real Estate Equity by Property Type		133 Number of Active Members by Tier
	Funding Progress	134 Retirement Statistics
	123 Funding Progress Analysis of Funding Progress Percent Funded	136 Retirement Benefit Options and Percent of Election Retired Members' Characteristics by Year of Retirement
	124 Solvency Test Analysis of Financial Experience	137 Distribution of Benefits Paid by County
		138 Distribution of Retired Members and Beneficiaries by Tier History of the Number of New Retirees
		139 Retired Members and Beneficiaries with Monthly Benefits by Decade of Retirement Distribution of the Annual Benefit of all Retired Members
		140 History of the Monthly COLA
		141 Distribution of Monthly COLA Increase Commencing September 2022 Distribution of Cumulative Monthly COLA Commencing September 2022
		Financial Trends Information
		142 Changes in Fiduciary Net Position
		143 Breakdown of Income Sources
		144 Benefits and Return of Contributions by Type
		Operating Information
		146 Average Benefit Payments
		148 Retired Members and Beneficiaries by Type of Benefit
		150 Principal Participating Employers

GFOA Triple Crown Award

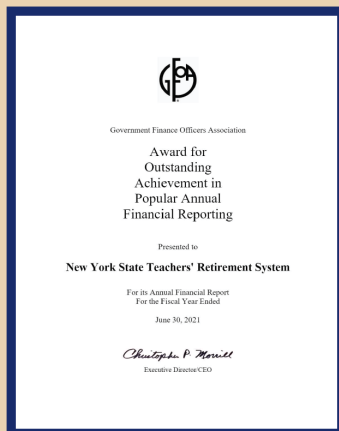
GFOA's Triple Crown recognizes governments that have received GFOA's Certificate of Achievement for Excellence in Financial Reporting, the Distinguished Budget Presentation, and the Popular Annual Financial Reporting Award.



GFOA Certificate of Achievement for Excellence in Financial Reporting



GFOA Distinguished Budget Presentation Award



GFOA Popular Annual Financial Reporting Award



Public Pension Coordinating Council

***Public Pension Standards Award
For Funding and Administration
2021***

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)

A handwritten signature in black ink that reads "Alan H. Winkle". The signature is written in a cursive style.

Alan H. Winkle
Program Administrator



INTRODUCTION

*Over a century of providing
retirement security*

INTRODUCTION

Page

7	Board of Trustees
8	Organizational Structure
9	Executive Staff
10	Letter of Transmittal
15	President's Message
16	Summary of Benefits

BOARD OF TRUSTEES — as of June 30, 2022



David P. Keefe
President
Hempstead
 Retired Teacher Member
 Elected by NYSTRS Retirees
 First Elected 2004



Dr. L. Oliver Robinson
Vice President
Clifton Park
 School Administrator
 Appointed by
 Commissioner of Education
 First Appointed 2010



Juliet C. Benaquisto
Schenectady
 Teacher Member
 Elected by NYSTRS Delegates
 First Elected 2021



Jennifer J. Longtin
Ballston Lake
 School Boards Association Member
 Elected by Board of Regents
 First Elected 2019



Elizabeth A. Chetney
Baldwinsville
 Teacher Member
 Elected by NYSTRS Delegates
 First Elected 2019



Ruth Mahoney
Albany
 Bank Executive
 Elected by Board of Regents
 First Elected 2021



Dr. Phyllis S. Harrington
Oceanside
 School Administrator
 Appointed by
 Commissioner of Education
 First Appointed 2010



Christopher Morin
Scarsdale
 School Boards Association Member
 Elected by Board of Regents
 First Elected 2019

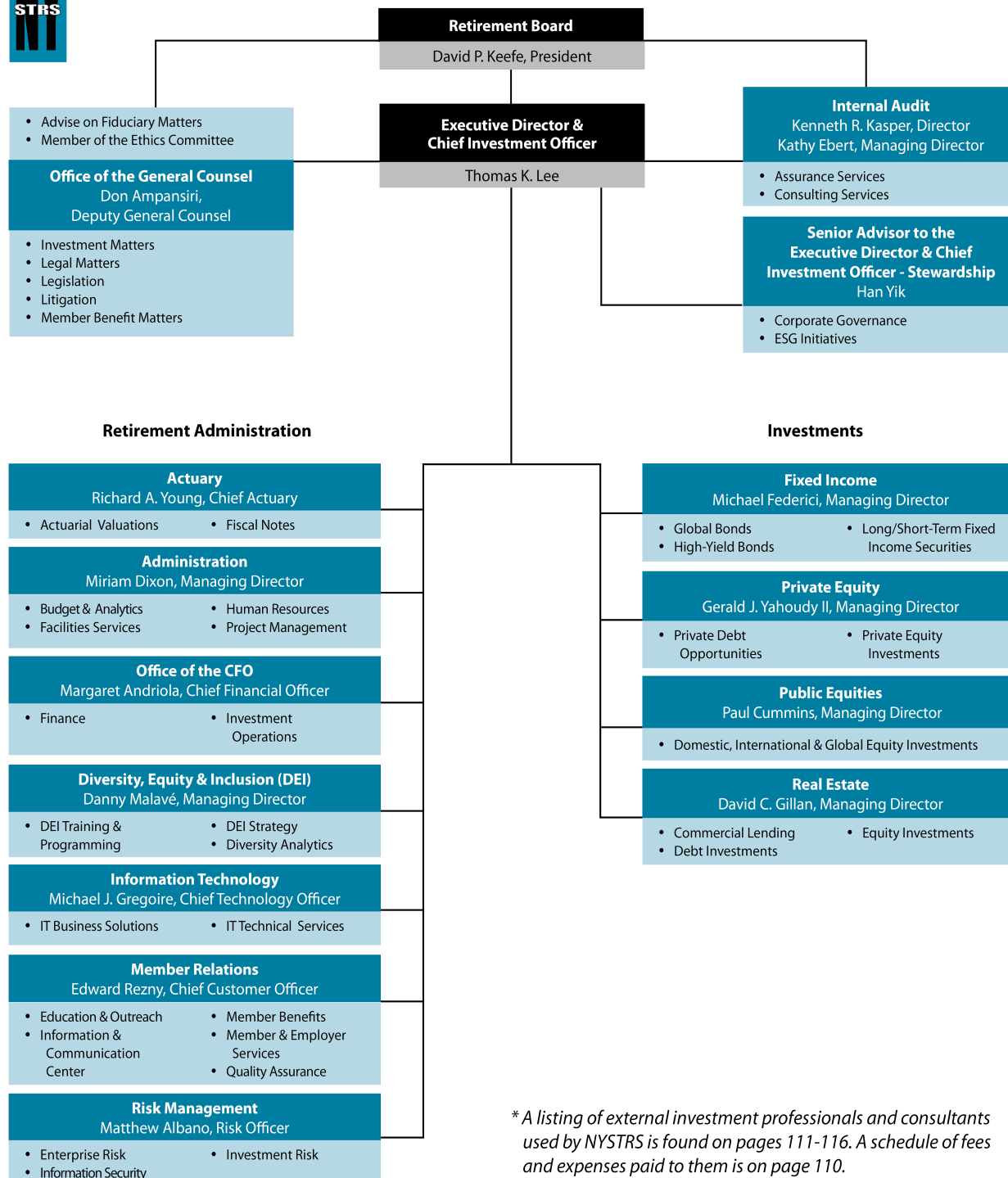


Eric J. Iberger
Bayport-Blue Point
 Teacher Member
 Elected by NYSTRS Delegates
 First Elected 2021



Nicholas Smirensky
Delmar
 State Comptroller Appointee
 First Appointed 2007

ORGANIZATIONAL STRUCTURE — as of June 30, 2022



EXECUTIVE STAFF — as of June 30, 2022



Thomas K. Lee

Executive Director & Chief Investment Officer (CIO)



Matthew Albano
Risk Officer



Don Ampansiri
Deputy General Counsel



Margaret Andriola
Chief Financial Officer



Paul Cummins
Managing Director of Public Equities



Miriam Dixon
Managing Director of Administration



Kathy Ebert
Managing Director of Internal Audit



Michael Federici
Managing Director of Fixed Income



David C. Gillan
Managing Director of Real Estate



Michael J. Gregoire
Chief Technology Officer



Kenneth R. Kasper
Director of Internal Audit



Danny Malavé
Managing Director of Diversity, Equity & Inclusion



Edward Rezny
Chief Customer Officer



Gerald J. Yahoudy II
Managing Director of Private Equity



Han Yik
Senior Advisor to the Executive Director & CIO - Stewardship



Richard A. Young
Chief Actuary

LETTER OF TRANSMITTAL



New York State Teachers' Retirement System

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

Thomas K. Lee, Executive Director & CIO

RETIREMENT BOARD

David P. Keefe <i>President</i>	Hempstead
L. Oliver Robinson <i>Vice President</i>	Clifton Park
Juliet C. Benaquisto	Schenectady
Elizabeth A. Chetney	Baldwinsville
Phyllis S. Harrington	Oceanside
Eric J. Iberger	Bayport-Blue Point
Jennifer J. Longtin	Ballston Lake
Ruth Mahoney	Albany
Christopher Morin	Scarsdale
Nicholas Smirensky	Delmar

November 21, 2022

Trustees of the Retirement System Board:

On behalf of System staff, I present you with the Annual Comprehensive Financial Report of the New York State Teachers' Retirement System (NYSTRS or the System) for the fiscal years ended June 30, 2022 and 2021. 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 16-17 of this report.

The System is governed by a 10-member Board of Trustees, which sets policy and oversees operations consistent with its fiduciary obligations under applicable law. A staff of approximately 380 is responsible for the day-to-day administration. NYSTRS serves 822 employers – including public school districts, BOCES, institutions of higher education and charter schools that elect to participate. NYSTRS has 442,044 active and retired members, including beneficiaries (*see chart below*).

Membership Figures — as of June 30, 2022

Active Members:	263,475
Retired Members:	171,616
Beneficiaries:	6,953
Total Membership:	442,044

See page 129 for additional membership information.

LETTER OF TRANSMITTAL *(continued)*

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

Awards

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

Certificate of Achievement for Excellence in Financial Reporting, awarded by the Government Finance Officers Association (GFOA) of the United States and Canada. Given in recognition of the System's 2021 Annual Comprehensive Financial Report, the award certifies the report was prepared in conformity with the highest standards in government accounting and financial reporting.

Award for Outstanding Achievement in Popular Annual Financial Reporting, also awarded by GFOA. The System's 2021 Popular Annual Financial Report was recognized for its high quality and for successfully presenting data from the 2021 Annual Comprehensive Financial Report in a manner easily understandable to the general public.

Distinguished Budget Presentation Award for the fiscal year July 1, 2021 through June 30, 2022, 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 criteria to qualify for this award include compliance with specific principles in the areas of benefits, actuarial valuation, financial reporting, investment and disclosure.

In addition, the System was recognized by GFOA this past year as a ***Triple Crown*** award winner for receiving all three of the GFOA's major awards, listed above, in one year. NYSTRS was one of only four public pension plans honored for fiscal year 2019 reporting, the most recent year covered.

Legislation

Chapter 329 of the Laws of 2021 allows NYSTRS to accept alternate methods of postal mail for the submittal of forms, applications and/or payments.

Chapter 370 of the Laws of 2021 limits the maximum amount Tier 6 members joining NYSTRS on or after July 1, 2022 may borrow to 50% of the member's total contribution balance or \$50,000, whichever is less, and makes technical corrections to the law related thereto.

Chapter 376 of the Laws of 2021 removes the age 60 qualifier and provides NYSTRS retirees to be eligible for the post-retirement death benefit in the third and subsequent years following retirement at the rate of 10% of the benefit in force at the time of retirement. The law applies to deaths on or after August 2, 2021.

Chapter 424 of the Laws of 2021 extends coverage for certain public employees who worked during the World Trade Center rescue, recovery, or cleanup and became members of a state retirement system at a later date.

Chapter 541 of the Laws of 2021 extends the minimum retirement benefit to members of NYSTRS who retired prior to July 1, 1980 and increases said allowance to \$550 per year of service up to a 35-year maximum of \$19,250.

Chapter 56 (Part HH) of the Laws of 2022 allows a NYSTRS retiree to be employed and earn compensation in a position at a school district or Board of Cooperative Educational Services (BOCES) without suspension or diminution of their retirement allowance. This provision expires June 30, 2023.

Chapter 56 (Part SS) of the Laws of 2022 permits the employee contribution rate for Tier 6 members to be determined using a member's annual base wages for contributions to be made during the fiscal years ending June 30, 2023 and June 30, 2024.

LETTER OF TRANSMITTAL *(continued)*

Compensation earned for extracurricular programs or any other pensionable earnings paid in addition to the annual base wages will not be included in the employee contribution rate determination.

Chapter 56 (Part TT) of the Laws of 2022 reduces the 10-year vesting requirement for Tier 5 and Tier 6 members to five-year vesting for purposes of eligibility for a service retirement benefit or a deferred-vested retirement benefit.

Noteworthy Actions

Continued Operational Flexibility During the Pandemic

Our workforce remained flexible as we adapted policy as needed to match fluctuating COVID conditions in our region. Our Information Technology division was able to adapt to the needs of a remote workforce and is currently supporting a fully hybrid work environment. We are testing a Flexible Work Pilot program for the 2022-2023 fiscal year where employees are granted a bank of telecommuting time which varies based on job duties. We have been able to maintain our high standards of customer service to members, and the System has continued to provide benefits without interruption.

Diversity, Equity & Inclusion in the Workplace

NYSTRS continues to expand its efforts toward development of a more diverse and inclusive organization with the appointment of an executive level managing director of Diversity, Equity and Inclusion (DEI). We have also enhanced our diversity recruitment strategy by implementing search panel DEI training, expanding recruitment outreach, and establishing inclusive interviewing and onboarding practices.

Our commitment to DEI extends to our external partners as well. Managers and consultants must provide diversity and inclusion information about their firms or general partners as part of the System's due diligence review process. NYSTRS also holds an annual Minority- and Women-Owned Business Enterprises (MWBE) investments and professional services conference to provide emerging businesses and managers the opportunity to partner with us. In 2022, this event was held virtually.

System Governance

The Retirement Board undertook a thoughtful and deliberative process to analyze climate risks and opportunities related to NYSTRS' investment portfolio. In December 2021, the Board unanimously adopted an initial climate change action plan as an important first step to mitigate such risks to the portfolio. The plan — which called for the System to cease further investment in 20 oil and gas holdings and thermal coal reserves holdings worth an estimated \$1 billion and to divest \$66 million worth of other thermal coal holdings — is consistent with the Board's fiduciary duties to provide retirement security to the System's more than 442,000 members.

In June 2022, NYSTRS announced the appointment of Han Yik to the newly created position senior advisor for stewardship. Mr. Yik advises on regulatory, public policy, global initiatives and corporate governance. In addition, he is building and leading NYSTRS' initiatives on investor stewardship and sustainability.

NYSTRS also welcomed Juliet C. Benaquisto, a teacher in the Schenectady City School District, to the Board as one of our three active teacher Board members. Ms. Benaquisto was elected by NYSTRS delegates at the Oct. 29, 2021 Annual Delegates Meeting to fill the remainder of the term vacated by Sheila Sullivan Buck, who resigned from the Board to accept a position with New York State United Teachers.

Significant Litigation

There was no significant litigation that affected the Retirement System during the fiscal year.

Financial Information

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

LETTER OF TRANSMITTAL *(continued)*

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 requires 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, Plante Moran, PC, an independent certified public accountant, whose unmodified opinion appears on page 21 of this report, audits the financial statements. 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 2021 to 2022 is attributable to a net increase of 2,779 retirees and beneficiaries (details are found on page 30 in the *Notes to Financial Statements-Plan Description*). Also see the *Benefits and Return of Contributions by Type* chart on pages 144-145 for more information.

For an overview of NYSTRS' financial activities for the fiscal year ended June 30, 2022, see *Management's Discussion and Analysis* beginning on page 24. 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 29 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 10.29% will apply to 2022-2023 school year salaries. The payments associated with this rate will be collected in the fall of 2023. These contributions have been collected without fail throughout the System's history, keeping NYSTRS among the most secure plans in the country.

The System's year-end net assets totaled \$132.0 billion. During the same period, benefits paid to retirees and beneficiaries were approximately \$8.0 billion.

The plan's funded ratio as of June 30, 2021, the date of the most-recent annual actuarial valuation and calculated using the Actuarial Value of Assets, was 99.3%. Details of our funding progress may be obtained by turning to page 123.

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.

Market volatility led to a total portfolio return of negative 7.1%, net of fees, for the fiscal year ended June 30, 2022. Given market and economic conditions of the last fiscal year, this was not an unexpected result, and the percentage decline was similar to most major market indices, such as the S&P 500 which returned negative 10.62% for the fiscal year. Our 30-year rate of return is 8.5%, net of fees.

LETTER OF TRANSMITTAL *(continued)*

Refer to pages 83-116 for further information on NYSTRS' investments. A listing of our equity and fixed income holdings can be viewed on our website at NYSTRS.org.

Acknowledgments

The content of this Annual Comprehensive Financial Report is the responsibility of System management and is prepared by NYSTRS staff. The System's external auditor audits financial statements within prior to publication. The intent of the publication is to provide complete and reliable information for making management decisions, determining compliance with legal provisions and determining responsible stewardship of System assets.

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

As this annual report demonstrates, the NYSTRS Board and staff are committed to fulfilling our mission of providing our members with a secure pension. Our retirement plan was solidly built to endure the up and down cycles of the economy. Required member and employer contributions are consistently collected in full and without fail. Those contributions are then prudently invested in a diversified and risk-controlled portfolio with a focus on long-term returns.

On behalf of all of us at NYSTRS, I am proud to say that our members can rest assured that their pension benefits are safe and will cover them for life. We remain dedicated to being the model for pension fund excellence and exceptional customer service.

Respectfully submitted,



Thomas K. Lee
Executive Director & Chief Investment Officer

PRESIDENT'S MESSAGE



David P. Keefe

Dear NYSTRS Members, Administrators and Trustees,

The Greek philosopher Heraclitus has been quoted as saying "change is the only constant in life." Certainly we have all seen plenty of change over the past several years — from the pandemic to global conflicts, to supply shortages and rising prices. Fortunately, there is one "constant" that New York state's public educators can count on: our defined benefit pension plan.

Despite the recent volatility in our economy, public school teachers can rest assured that our pension plan is secure and will provide them with guaranteed retirement security for life. When NYSTRS was founded in 1921, it was built to endure the up-and-down cycles of the economy. No matter what is happening in the world, our members can have peace of mind knowing our pension plan remains strong and stable.

Our Retirement System has long been one of the best-funded public pension plans in the country and it is well-positioned to provide retirement security to our more than 442,000 active and retired members and beneficiaries now and in the future. As of June 30, 2022, the System's net assets are \$132 billion, and our 30-year rate of investment return, net of fees, is 8.5%. Our five- and 10-year rates of investment return, net of fees, are 7.7% and 8.9%, respectively.

The Retirement System's success is due to its solid foundation. The plan is designed for long-term stability with a sound, shared funding structure in which contributions are provided by both participating employers and members. We also follow a prudent, disciplined, and risk-controlled investment approach with a well-diversified portfolio. Over the past 30 years, 85% of NYSTRS' income has come from investment earnings, while 13% came from employer contributions and 2% came from member contributions. During the same time period, NYSTRS paid out \$138.4 billion in benefits.

NYSTRS's investment strategy is focused not on the next fiscal quarter, but on the long haul to cover the pensions of both current retired teachers and those planning to retire decades from now. Assets are invested across a broad spectrum of capital market segments, and management costs are kept as low as possible with most investments managed internally by NYSTRS' highly qualified investment staff.

In addition, this past fiscal year the Retirement Board adopted a climate action plan to begin mitigating climate change risks related to the System's investment portfolio. The plan was developed with a methodical and deliberative process consistent with our fiduciary duty to provide retirement security to our members.

As your Board president and a retired teacher myself, I am grateful to be part of such an exemplary team at NYSTRS. Our Board and the NYSTRS staff take their fiduciary responsibility very seriously and are dedicated to serving the state's public educators.

A handwritten signature in black ink that reads "David P. Keefe".

David P. Keefe
President

SUMMARY OF BENEFITS

Types of Benefits

NYSTRS provides pension benefits for service, vested and disability retirement, as well as death benefits. Following is a general summary of benefits. Members are advised to refer to the *Active Members' Handbook* at NYSTRS.org for complete information on benefit calculation.

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

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 Article 19 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 Article 19 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 1.5% 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. The pension for 30 years of service is 60% of final average salary. Each year beyond 30 years increases the pension 1.5% of final average salary.

A Tier 6 member may retire at age 63 without a reduction in benefits. The pension for 20 years of service is 35% of final average salary. Each year beyond 20 years increases the pension 2% of final average salary.

Vested Retirement Benefit

NYSTRS members in Tiers 1-6 who cease employment with five or more years of credited service are eligible for a vested retirement. (Prior to April 9, 2022, Tier 5 and 6 members needed to attain 10 years of state service credit to be vested.) The vested benefit is payable in most cases at age 55 and is calculated using the same factors as a service retirement benefit. Vested Tier 6 members with an inactive membership must be at least 63 to retire.

Death Benefits

NYSTRS offers several types of death benefits: In-Service (which includes post-retirement coverage for Tiers 2-6); Accidental; Vested; and Accelerated. Eligibility depends on an individual's membership status and, in certain cases, the cause or timing of death.

SUMMARY OF BENEFITS *(continued)*

Disability Retirement Benefit

Generally, members credited with at least 10 years of New York State service who become disabled, as defined by applicable statute and approved by the Medical Board, 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 10-year eligibility requirement is waived.

The members of the Medical Board are:

STEVEN D. KRONICK, M.D.

Board Certified Psychiatrist; Additional
Qualifications in Geriatric Psychiatry

Psychiatrist
Pine Bush Mental Health, LLP

Psychiatric Consultant
Albany County Community
Mental Health Center

Clinical Assistant Professor of Psychiatry
Albany Medical College

Diplomate of the National
Board of Medical Examiners

Member of the American Board
of Psychiatry and Neurology

Member of the American
Psychiatric Association

RICHARD T. MACDOWELL, M.D.

Attending Surgeon and Professor (Retired)
at Albany Medical College

Fellow of the American
College of Surgeons

Member of the American
Board of Surgery

Board Certified in Internal Medicine General

LAURA E. PICA, M.D.

Board Certified in
Internal Medicine General

Diplomate of the American
Board of Internal Medicine

Albany County Community
Mental Health Center

Clinical Assistant Professor of Psychiatry
Albany Medical College

Diplomate of the National
Board of Medical Examiners

Member of the American Board
of Psychiatry and Neurology

Member of the American
Psychiatric Association

Member Contributions

Tier 3 and 4 members were mandated to contribute 3% of their salary to the Retirement System until they had been members for 10 years or had 10 years of service credit, whichever occurred 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.

Transfer and Prior Service

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

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.

This page intentionally left blank.



FINANCIAL

*Over a century of providing
retirement security*

FINANCIAL

Page

- 21 Independent Auditors' Report
- 24 Management's Discussion and Analysis

Basic Financial Statements

- 28 Statements of Fiduciary Net Position
- 29 Statements of Changes in Fiduciary Net Position
- 30 Notes to Financial Statements

Required Supplementary Information

- 62 Schedule of Changes in the School Districts' Net Pension Liability (Asset)
- 64 Schedule of the School Districts' Net Pension Liability (Asset)
Schedule of the School Districts' Contributions
- 66 Schedule of Investment Returns
- 68 Schedule of NYSTRS' Proportionate Share of the Net Pension Liability
- 70 Schedule of NYSTRS' Contributions (Unaudited)
- 72 Schedule of Changes in the System's Net OPEB Liability and Related Ratios (Unaudited)
- 74 Schedule of System and Other Contributing Entity Contributions (Unaudited)
- 76 Notes to Required Supplementary Information

Other Supplemental Schedules

- 79 Schedules of Administrative Expenses
- 80 Schedules of Investment Expenses
- 81 Schedule of Consulting Fees

**Plante Moran, PC**

P.O. Box 307
3000 Town Center, Suite 100
Southfield, MI 48075
Tel: 248.352.2500
Fax: 248.352.0018
plantemoran.com

To the Retirement Board
New York State Teachers' Retirement System

Opinion

We have audited the accompanying financial statements of New York State Teachers' Retirement System (the "System") as of and for the year ended June 30, 2022 and the related notes to the financial statements, which collectively comprise the System's basic financial statements, as listed in the table of contents.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of New York State Teachers' Retirement System as of June 30, 2022 and the changes in its financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the System and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Report on Prior Year Financial Statements

The basic financial statements of New York State Teachers' Retirement System as of and for the year ended June 30, 2021 were audited by other auditors, who expressed an unmodified opinion on those basic financial statements on October 28, 2021.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America and for 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.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for 12 months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and, therefore, is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 System's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and other required supplementary schedules, as identified in the table of contents, be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which 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 an assurance.

Supplemental Schedules

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise New York State Teachers' Retirement System's basic financial statements. The other supplemental schedules, as identified in the table of contents, are presented for the purpose of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the other supplemental schedules are fairly stated in all material respects in relation to the basic financial statements as a whole.

Other Information

Management is responsible for the other information included in the Annual Comprehensive Financial Report. The other information comprises the introduction, investments, actuarial, and statistical sections, as identified in the table of contents, but does not include the basic financial statements and our auditor's report thereon. Our opinion on the basic financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements or whether the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Plante Moran, PC

October 27, 2022, except for the other supplemental schedules, as identified in the table of contents, and introduction, investments, actuarial, and statistical sections, as identified in the table of contents of our report, as to which the date is November 21, 2022



MANAGEMENT'S DISCUSSION AND ANALYSIS

June 30, 2022 and 2021

(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, 2022 and 2021. 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 net position of the System represents funds available to pay current and future benefits. Net position was \$132.0 billion as of the fiscal year ended 2022, and \$148.1 billion and \$120.5 billion as of the fiscal years ended 2021 and 2020, respectively. The change for the fiscal year ended 2022 was negative \$16.1 billion, or negative 10.9%, and the change for the fiscal year ended 2021 was positive \$27.6 billion, or 23.0%.
- The System's investments experienced depreciation of \$12.4 billion in 2022 and appreciation of \$31.5 billion and \$1.6 billion in 2021 and 2020, respectively.
- Contributions from employers were \$1.7 billion in 2022, \$1.6 billion in 2021, and \$1.5 billion in 2020, consistent with the change in the employer contribution rate.
- While the number of active members has declined only slightly in the past five years, the number of retired members and beneficiaries receiving benefits has been steadily increasing, leading to an increase in the retirement benefits paid. Retirement benefits paid in 2022, 2021, and 2020 were \$8.0 billion, \$7.7 billion, and \$7.5 billion, respectively.
- The System's funded ratio, a comparison of the actuarial value of assets to the accrued pension benefit liability, was 99.3% as of the 2021 valuation. Valuations in 2020 and 2019 resulted in the System's funded ratio of 98.9% and 99.6%, respectively.

Overview of Financial Statements

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

MANAGEMENT'S DISCUSSION AND ANALYSIS (continued)

June 30, 2022 and 2021

(Unaudited)

Other supplemental information is also presented and includes the schedules of administrative expenses, investment expenses, and consulting fees.

Financial Analysis

Tables 1 and 2 summarize and compare the System's financial results for the years 2022 and 2021. Investments comprise the overwhelming majority of assets of the System. Investment performance, contributions and benefit payments are the primary drivers of changes in net fiduciary position.

TABLE 1 - SUMMARY OF FIDUCIARY NET POSITION

(dollars in thousands)

	June 30			Amount increase (decrease) 2021 to 2022	Percentage change of total 2021 to 2022
	2022	2021	2020		
Investments at fair value	\$ 129,860,183	\$ 146,219,128	\$ 118,603,921	\$ (16,358,945)	(11.0)%
Receivables	2,311,013	2,302,028	2,070,049	8,985	0.0
Securities lending collateral — invested	709,827	481,018	486,845	228,809	0.2
Member Loans	232,473	236,944	256,935	(4,471)	0.0
Other Assets	31,956	41,308	60,140	(9,352)	0.0
Total Assets	133,145,452	149,280,426	121,477,890	(16,134,974)	(10.9)
Total Deferred Outflows of Resources	28,756	32,671	25,261	(3,915)	0.0
Securities lending collateral — due to borrowers	707,887	479,186	484,150	228,701	0.2
Investment Purchases Payable	278,472	450,377	314,679	(171,905)	(0.1)
Other Liabilities	176,269	198,526	217,360	(22,257)	0.0
Total Liabilities	1,162,628	1,128,089	1,016,189	34,539	0.0
Total Deferred Inflows of Resources	46,998	36,551	7,457	10,447	0.0
Net position restricted for pensions	\$131,964,582	\$148,148,457	\$120,479,505	\$ (16,183,875)	(10.9)%

The decrease in the investment value as of June 30, 2022 attributable to depreciation of the investment portfolio due to particularly weak market performance. The portfolio earned a time-weighted rate of return of negative 7.15%, compared to an assumed rate of return of 6.95%.

The increase in the investment value as of June 30, 2021 is attributable to appreciation of the investment portfolio due to particularly strong market performance, net of benefit payments. The portfolio earned a time-weighted rate of return of 28.98%, compared to an assumed rate of return of 7.1%. The increase in receivables through June 30, 2021 is due to two factors: 1) amounts due from employers increased \$109 million due to the increase in the employer contribution rate from 8.86% to 9.53%, and 2) timing of investment sales caused an increase in the amount receivable from \$226 million to \$320 million.

MANAGEMENT'S DISCUSSION AND ANALYSIS (continued)

June 30, 2022 and 2021

(Unaudited)

TABLE 2 - SUMMARY OF CHANGES IN FIDUCIARY NET POSITION

(dollars in thousands)

	Years ended June 30			Amount increase (decrease) 2021 to 2022	Percentage change of total 2021 to 2022
	2022	2021	2020		
Net (depreciation) appreciation in fair value of investments	\$ (12,446,619)	\$ 31,499,853	\$ 1,643,319	\$ (43,946,472)	(29.7)%
Other investment income	2,367,805	2,168,155	2,280,314	199,650	0.1
Contributions- Employer and Member	1,934,793	1,788,336	1,653,677	146,457	0.1
Total (Deductions) Additions	(8,144,021)	35,456,344	5,577,310	(43,600,365)	(29.4)
Retirement benefits	(7,961,870)	(7,717,521)	(7,484,462)	(244,349)	(0.2)
Other deductions	(77,984)	(69,871)	(90,824)	(8,113)	0.0
Total Deductions	(8,039,854)	(7,787,392)	(7,575,286)	(252,462)	(0.2)
Net (decrease) increase in net position	(16,183,875)	27,668,952	(1,997,976)	(43,852,827)	(29.6)
Net position, beginning of year	148,148,457	120,479,505	122,477,481	27,668,952	18.7
Net position, end of year	\$131,964,582	\$148,148,457	\$120,479,505	\$(16,183,875)	(10.9)%

Net Investment Income

For the year ended June 30, 2022, NYSTRS reported net investment loss of \$10.1 billion compared to net investment income of \$33.7 billion in 2021 and \$3.9 billion in 2020. The loss in 2022 was due to diminished market returns, primarily in the equity segments. The net appreciation (depreciation) by asset class and year is shown in the table below:

TABLE 3 - NET APPRECIATION (DEPRECIATION) ON INVESTMENTS *

(dollars in thousands)

	Years ended June 30			Amount increase (decrease) 2021 to 2022
	2022	2021	2020	
Domestic equity	\$ (5,876,449)	\$ 15,646,731	\$ 1,751,965	\$ (21,523,180)
International equity	(5,203,533)	6,762,617	(1,016,484)	(11,966,150)
Global equity	(947,017)	1,527,191	46,357	(2,474,208)
Real estate equity	1,780,335	1,947,403	(21,446)	(167,068)
Private equity	917,693	5,679,894	534,144	(4,762,201)
Domestic fixed income	(2,128,080)	(452,552)	870,989	(1,675,528)
High-yield bonds	(178,770)	55,978	(8,969)	(234,748)
Global bonds	(391,260)	(22,191)	135,675	(369,069)
Real estate debt	(534,179)	130,075	(698,772)	(664,254)
Private debt	117,213	221,004	(6,908)	(103,791)
Cash equivalents	3,942	2,492	56,538	1,450
Other	(6,514)	1,211	230	(7,725)
Totals	\$ (12,446,619)	\$ 31,499,853	\$ 1,643,319	\$ (43,946,472)

*net of purchases, sales and maturities

MANAGEMENT'S DISCUSSION AND ANALYSIS *(continued)*

June 30, 2022 and 2021

(Unaudited)

Economic Factors

The economic factor that is of primary significance to NYSTRS is the investment rate of return earned in the capital markets. Legislative, demographic, and actuarial assumption changes can also have a significant impact on the net pension liability and funded status of the plan. All of these factors are incorporated into the annual actuarial valuation, which determines the rate at which participating employers must contribute in order to appropriately fund member benefits. In terms of demographics, the System will likely continue to experience a shift toward a greater proportion of retirees relative to active members. This year the System experienced a depreciation on investments due to particularly weak market performance. 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. Industry forecasts of a decrease in expected future investment returns contributed to an increase in the employer contribution rate, from 9.53% on 2020-21 member salaries to 9.80% on 2021-22 member salaries.

Requests for Information

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

STATEMENTS OF FIDUCIARY NET POSITION

June 30, 2022 and 2021

(dollars in thousands)

Assets:	2022	2021
Investments — at fair value (notes 4, 5 and 6):		
Domestic equity	\$ 41,961,629	\$ 50,050,654
International equity	19,509,375	24,795,559
Global equity	4,218,623	5,097,105
Real estate equity	16,491,592	14,844,615
Private equity	14,073,681	14,783,219
Domestic fixed income	18,271,844	18,815,502
High-yield bonds	958,586	941,987
Global bonds	2,950,256	3,305,959
Real estate debt	7,730,876	7,460,772
Private debt	1,424,443	1,163,794
Cash equivalents	2,269,278	4,959,962
Total investments	129,860,183	146,219,128
Receivables:		
Employer	1,695,040	1,581,828
Member contributions	167,254	135,357
Investment income	291,344	264,854
Investment sales	157,375	319,989
Total receivables	2,311,013	2,302,028
Other assets:		
Securities lending collateral — invested (note 5)	709,827	481,018
Member loans	232,473	236,944
Capital assets, net of depreciation	20,722	22,962
Miscellaneous assets	11,234	18,346
Total other assets	974,256	759,270
Total assets	133,145,452	149,280,426
Deferred outflows of resources:		
Changes in net OPEB liability (note 10)	10,703	10,904
Changes in net pension liability (note 9)	18,053	21,767
Total deferred outflows of resources	28,756	32,671
Liabilities:		
Securities lending collateral — due to borrowers (note 5)	707,887	479,186
Investment purchases payable	278,472	450,377
Mortgage escrows and deposits — net of investments	12,895	6,755
Net OPEB liability (note 10)	34,792	47,187
Other liabilities (notes 5 and 9)	128,582	144,584
Total liabilities	1,162,628	1,128,089
Deferred inflows of resources:		
Changes in net OPEB liability (note 10)	13,230	4,276
Changes in net pension liability (note 9)	33,768	32,275
Total deferred inflows of resources	46,998	36,551
Net position restricted for pensions (note 3)	\$ 131,964,582	\$ 148,148,457

See accompanying notes to financial statements.

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

Fiscal Years Ended June 30, 2022 and 2021

(dollars in thousands)

Additions:	2022	2021
Investment income:		
Net (decrease) increase in fair value of investments	\$ (12,446,619)	\$ 31,499,853
Interest income	785,225	762,391
Dividend income	1,442,149	1,306,813
Real estate — net operating income	525,001	416,860
Securities lending — gross earnings	4,007	3,456
Other — net	10,969	17,060
	(9,679,268)	34,006,433
Less:		
Investment expenses	399,564	339,540
Securities lending:		
Broker rebates	(523)	(2,849)
Management fees	613	871
(Appreciation) depreciation on collateral	(108)	863
Net investment (loss) income	(10,078,814)	33,668,008
Contributions:		
Employer (note 1)	1,735,255	1,618,437
Member contributions	190,853	159,874
Transfers (to)/from other systems	8,685	10,025
Total contributions	1,934,793	1,788,336
Net (deductions) additions	(8,144,021)	35,456,344
Deductions:		
Retirement benefit payments — periodic	7,895,257	7,659,950
Beneficiary payments	66,613	57,571
Return of contributions	16,754	14,379
Administrative expenses	61,230	55,492
Total deductions	8,039,854	7,787,392
Net (decrease) increase in net position	(16,183,875)	27,668,952
Net position restricted for pensions, beginning of year	148,148,457	120,479,505
Net position restricted for pensions, end of year	\$ 131,964,582	\$ 148,148,457

See accompanying notes to financial statements.

NOTES TO FINANCIAL STATEMENTS

June 30, 2022 and 2021

(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, defined benefit 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 the Comptroller's designee.

Funding of the System is accomplished through member and employer contributions and investment earnings, according to New York State Education Law.

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

	2022	2021
Public school districts	679	679
Boards of Cooperative Educational Services (BOCES)	37	37
SUNY	31	31
Community colleges	30	30
Charter schools	27	26
Special act districts	9	9
Other	9	9
Total	822	821

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

	2022	2021
Retired members and beneficiaries currently receiving benefits	178,569	175,790
Members:		
Active members	253,258	249,355
Terminated members entitled to but not yet receiving benefits	10,217	9,803
Subtotal	263,475	259,158
Total	442,044	434,948

NOTES TO FINANCIAL STATEMENTS *(continued)*

June 30, 2022 and 2021

(dollars in thousands)

(a) Benefits

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

Tier 1

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

Tier 2

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

Tier 3

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

Tier 4

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

Tier 5

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

Tier 6

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

(b) Service Retirements

Tier 1 and 2 members are generally eligible for a service retirement benefit of 2.0% per year of credited service times final average salary (FAS). A 5% reduction generally applies for each full year of state service under 20 years (prorated for partial years with a maximum reduction of 50%). Tier 1 and 2 members may retire as early as age 55 with five or more years of state service credit. Retirement may also occur for Tier 1 members at age 55 with less than five years of service if two years are credited since July 1, 1967, after the current membership date, and since the member turned age 53.

Generally, the maximum pension payable to Tier 1 and 2 members (with two years of credit under the Article 19 Benefit Enhancement law) is 79% of FAS. An age factor applies to Tier 2 members who retire before age 62 with less than 30 years of service. There is no age factor for Tier 1 members.

Tier 3 and 4 members are generally eligible for a service retirement benefit of 1.67% per year of credited service times FAS for less than 20 years of service, 2.0% per year for 20 to 30 years of service, and 60% of FAS plus 1.5% per year for service beyond 30 years. Tier 3 and 4 members may retire as early as age 55 with five years of state service credit. An age factor applies for Tier 3 and 4 members who retire before age 62 with less than 30 years of service.

Tier 5 members are generally eligible for a service retirement benefit of 1.67% per year of credited service times FAS for less than 25 years of service, 2.0% per year for 25 to 30 years of service, and 60% of FAS plus 1.5% per year for service beyond 30 years. Tier 5 members may retire as early as age 55 with five years of state service credit. An age factor applies to Tier 5 members who retire before age 57 or retire between age 57 and 62 with less than 30 years of service.

Tier 6 members are generally eligible for a service retirement benefit of 1.67% per year of credited service times FAS for less than 20 years of service, 1.75% per year for 20 years of service, and 35% of FAS plus 2% per year for service beyond 20 years. Tier 6 members may retire as early as age 55 with five years of state service credit. An age factor applies for Tier 6 members who retire before age 63. In addition, vested Tier 6 members with an inactive membership must be at least 63 to retire.

NOTES TO FINANCIAL STATEMENTS *(continued)*

June 30, 2022 and 2021

(dollars in thousands)

(c) Vested Benefits

Retirement benefits for Tiers 1-6 are now vested after five years of credited service. Prior to April 9, 2022, Tier 5 and 6 members needed to attain 10 years of state service credit to be vested. 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 five years of credited New York State service pursuant to the provisions of Article 14 of the RSSL. The Tier 3 benefit is integrated with Social Security.

(e) Death Benefits

Death benefits are paid to the beneficiary of active members who die in service and certain retirees. For active members, the benefit is based on final salary, age and the number of years of credited service. For retired members, it is also based on the number of years in retirement.

(f) Prior and Military Service

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

(g) Tier Reinstatement

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

(h) Employer Contributions

Pursuant to Article 11 of the New York State Education Law, employers are required to contribute at an actuarially determined rate adopted annually by the Retirement Board. The actuarially determined employer contribution rate applied to 2021-22 and 2020-21 member salaries is 9.80% and 9.53%, respectively. A reconciliation of total required employer contributions presented in the Schedule of the School Districts' Contributions and additions from employer contributions per the System's Statements of Changes in Fiduciary Net Position for fiscal years 2022 and 2021 is as follows:

	June 30	
	2022	2021
Total required employer contributions	\$ 1,736,097	\$ 1,617,547
Miscellaneous billing adjustments	(842)	890
Additions from employer contributions	<u>\$ 1,735,255</u>	<u>\$ 1,618,437</u>

In April 2013, the System's Retirement Board adopted a Stable Contribution Option (SCO) provided for under Chapter 57 of the Laws of 2013. Under the law, BOCES and public school districts participating in NYSTRS were offered the choice of either paying the actuarially determined contribution (ADC) or electing to participate in the SCO program, thereby paying a stable contribution rate for up to seven years beginning with the rate applied to the 2013-14 salaries and concluding with the rate applied to the 2021-22 salaries; deferring payment of the difference between the ADC and the contribution determined applying the SCO rate. Interest on deferred contribution amounts were based on the monthly average yield on 10-year U.S. Treasury securities for the 12-month period that precedes August 1 of the applicable deferred year, plus 1.0%. As of June 30, 2017, all districts that participated in the SCO have opted out and have either paid their outstanding deferral

NOTES TO FINANCIAL STATEMENTS *(continued)*

June 30, 2022 and 2021

(dollars in thousands)

in full or have opted to repay the System over five years. The SCO receivable balances at June 30, 2022 and 2021 were \$0 and \$2,722, respectively.

(i) Member Contributions

Tier 3 and Tier 4 members were required by law to contribute 3% of salary to the System. Effective October 2000, contributions were eliminated for Tier 3 and 4 members with 10 or more years of service or membership. Effective January 1, 2010, Tier 5 members are required by law to contribute 3.5% of salary throughout their active membership. Effective April 1, 2012, Tier 6 members are required by law to contribute between 3.0% and 6.0% of salary throughout their active membership in accordance with a schedule based upon salary earned. Pursuant to Article 14 and Article 15 of the RSSL, those member contributions are used to help fund the benefits provided by the System. However, if a member dies or leaves covered employment with less than five years of credited service for Tiers 3 - 6, the member contributions with interest calculated at 5.0% per annum are refunded to the employee or designated beneficiary. Eligible Tier 1 and Tier 2 members may make member contributions under certain conditions pursuant to the provisions of Article 11 of the Education Law and Article 11 of the RSSL. Upon termination of membership, such accumulated member contributions are refunded. At retirement, such accumulated member contributions can be withdrawn or are paid as a life annuity.

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

Section 532-a of the Education Law provides a permanent cost-of-living benefit to both current and future retired members. This benefit will be paid commencing September of each year to retired members who have attained age 62 and have been retired for five years or attained age 55 and have been retired for 10 years. Disability retirees must have been retired for five years, regardless of age, to be eligible. The annual COLA percentage is equal to 50.0% of the increase in the Consumer Price Index (CPI), not to exceed 3.0% nor be lower than 1.0%. It is applied to the first \$18,000 dollars of the maximum annual benefit. The applicable percentage payable beginning September 2022 and 2021 is 3.0% and 1.4%, respectively.

Members who retired prior to July 1, 1970 are eligible for a minimum benefit of \$17,500 dollars for 35 years of credited full-time New York State service. Certain members who retire pursuant to the provisions of Article 14 of the RSSL are eligible for automatic cost-of-living supplementation based on the increase in the CPI with a maximum per annum increase of 3.0%.

(2) Summary of Significant Accounting Policies*(a) Basis of Accounting*

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

(b) Investments

Plan investments are reported at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Where plan investments do not have a readily determinable fair market value, fair value of the plan investments has been established using the net asset value per share (or its equivalent) of the investment to establish fair value where applicable. Refer to note 6 for more detail regarding the methods used to measure the fair value of investments.

NOTES TO FINANCIAL STATEMENTS *(continued)*

June 30, 2022 and 2021

(dollars in thousands)

(c) System Employees' Pension Plan and Other Postemployment Benefits

The System offers a defined benefit pension plan to its employees. The System records a net pension liability for the difference between the total pension liability calculated by the actuary and the pension plan's fiduciary net position. For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions and pension expense, information about the fiduciary net position of the Employees Retirement System (ERS) and additions to/deductions from ERS's fiduciary net position have been determined on the same basis as they are reported for ERS by the New York State and Local Retirement System (NYSLRS).

The System offers a defined benefit other postemployment benefits (OPEB) plan to its employees. The System records a net OPEB liability for the difference between the total OPEB liability calculated by the actuary and the OPEB plan's fiduciary net position. For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB and OPEB expense, information about the fiduciary net position of the New York State Teachers' Retirement System Retired Employee Health Benefits Trust (the Trust) and additions to/deductions from the Trust's fiduciary net position have been determined on the same basis as they are reported for by the Trust.

For these purposes, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms, and investments are reported at fair value for both plans.

In addition to assets, the statement of fiduciary net position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element represents a consumption of net position that applies to a future period and will not be recognized as an outflow of resources (expense/expenditure) until then.

In addition to liabilities, the statement of fiduciary net position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element represents an acquisition of net position that applies to a future period and will not be recognized as an inflow of resources (revenue) until that time.

The System reports deferred outflows of resources and deferred inflows of resources related to their employee's participation in separate pension and OPEB plans.

(d) Capital Assets

Capital assets with a useful life greater than one year and of one hundred 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	39
Building improvements	15
Roads and shrubbery	10
Office furniture and equipment	7
Computer equipment and software	3 - 5
Automobiles	5

(e) Federal Tax Status

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

(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

NOTES TO FINANCIAL STATEMENTS *(continued)*

June 30, 2022 and 2021

(dollars in thousands)

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 investments. Due to the inherent nature of these estimates, actual results could differ from those estimates.

(g) Reclassification

Certain amounts in the 2021 basic financial statements have been reclassified to conform to 2022 presentation.

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

Governmental Accounting Standards Board (GASB) Statement No. 96 Subscription Based Information Technology Arrangements provides guidance on the accounting and financial reporting for subscription-based information technology arrangements (SBITAs) for government end users (governments). The requirements of this Statement are effective for fiscal years beginning after June 15, 2022, and all reporting periods thereafter. The System is evaluating the impact of this statement.

(3) Funds

The following funds were established pursuant to the laws of the State of New York.

(a) Annuity Savings Fund

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

(b) Annuity Reserve Fund

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

(c) Pension Accumulation Fund

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

(d) Pension Reserve Fund

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

(e) Group Life Insurance Fund

Pursuant to Article 4-B of the RSSL, the Retirement Board established a Group Life Insurance Fund. The Group Life Insurance Fund provides a group term death benefit not to exceed fifty thousand dollars, payable upon the death of eligible members. Group term death benefits paid for the years ended June 30, 2022 and 2021 were \$25,209 and \$19,836, respectively. For reporting purposes below, this fund is combined with the Pension Accumulation Fund.

NOTES TO FINANCIAL STATEMENTS *(continued)*

June 30, 2022 and 2021

(dollars in thousands)

(f) CO-ESC Member Contributions Fund

Members covered by the provisions of Article 14 and Article 15 of the RSSL contributed a range of 3% to 6% of salary depending on their tier to the System’s CO-ESC Member Contribution Fund. Contributions to this fund were \$144,019 and \$126,946 for the years ended June 30, 2022 and 2021, 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 non-investment-related operating expenses.

(h) Summary of Fund Balances

Net position restricted for pensions at June 30, 2022 and 2021 consist of the following:

	2022	2021
Administrative fund	\$ 62,053	\$ 62,807
Annuity savings and reserve funds	63,454	72,002
Pension accumulation, group life insurance and CO-ESC funds	58,826,877	76,692,887
Pension reserve fund	73,012,198	71,320,761
Total	<u>\$ 131,964,582</u>	<u>\$ 148,148,457</u>

(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; and the RSSL, Article 4-A, Sections 176 and 177, to invest in stocks, bonds, mortgages, real estate, and other investments. A specific investment within these broad asset classes may be subject to particular restrictions or limitations contained in the applicable statutory provision. The Leeway Clause of Section 177 provides that, subject to guidelines adopted by the Retirement Board, up to 25.0% 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.

NOTES TO FINANCIAL STATEMENTS (continued)

June 30, 2022 and 2021

(dollars in thousands)

(b) Asset Allocation

The System's asset allocation policy as of June 30, 2022 and 2021, as adopted by the Retirement Board is as follows:

Asset Class	Target June 30, 2022	Target June 30, 2021	Range June 30, 2022	Range June 30, 2021
Domestic equity	33%	33%	29-37%	29-37%
International equity	16	16	12-20	12-20
Global equity	4	4	0-8	0-8
Real estate equity	11	11	6-16	6-16
Private equity	8	8	3-13	3-13
Total equity	<u>72</u>	<u>72</u>		
Domestic fixed income	16	16	12-20	12-20
High-yield bonds	1	1	0-3	0-3
Global bonds	2	2	0-4	0-3
Real estate debt	6	7	2-10	3-11
Private debt	2	1	0.5-5	0-5
Cash equivalents	1	1	1-4	0-4
Total debt	<u>28</u>	<u>28</u>		
Total	<u>100%</u>	<u>100%</u>		

(c) Rate of Return

The annual money-weighted rate of return on System investments, net of pension plan investment expense, was 28.97% for the year ended June 30, 2021, but was negative 7.12% for the year ended June 30, 2022. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

NOTES TO FINANCIAL STATEMENTS *(continued)*

June 30, 2022 and 2021

(dollars in thousands)

(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, 2022 and 2021 are as follows:

Quality rating	2022		2021	
	Fair value	Percentage of portfolio	Fair value	Percentage of portfolio
Short-term:				
P-1	\$ 1,899,118	7.2 %	\$ 3,659,642	12.4 %
Long-term:				
Aaa	5,750,836	21.7	5,831,554	19.7
Aa	1,634,395	6.2	1,769,281	6.0
A	4,139,237	15.6	4,301,876	14.5
Baa	2,993,038	11.3	3,214,781	10.9
Ba	663,043	2.5	705,347	2.4
B	588,177	2.2	516,285	1.7
Other	17,223	0.1	33,722	0.1
Total credit risk debt securities	17,685,067	66.8	20,032,488	67.7
U.S. government fixed income securities*	8,807,561	33.2	9,550,305	32.3
Total fixed income securities**	\$ 26,492,628	100.0 %	\$ 29,582,793	100.0 %

* 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.

** Cash equivalents, real estate debt, high-yield and global bond on the Statements of Fiduciary Net Position at June 30, 2022 and 2021 include \$229,059 and \$290,919, respectively, in cash and commingled commercial mortgage backed securities.

Additionally, as of June 30, 2022 and 2021, the System held mortgages, secured by a lien of the properties, valued at \$3.2 billion and \$3.7 billion, respectively, that are not publicly traded assets and are not rated by the rating agencies.

(b) Custodial Credit Risk

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

The head of the Division of the Treasury in the New York State Department of Taxation and Finance (the Treasurer) is the statutory custodian of the funds of the System and, in this capacity, has arranged to have bank accounts collateralized. Collateral is held in the name of the Treasurer, as custodian for the System, by a bank that does not act as an agent for the System. The System's bank accounts were fully collateralized during the year. At June 30, 2022 and 2021, the System's bank balance was a negative \$3,600 and a negative \$3,128, respectively, representing a managed overdraft. Consistent with the System's investment policy, all of the System's securities are held by the System's custodial bank in the System's name.

NOTES TO FINANCIAL STATEMENTS *(continued)*

June 30, 2022 and 2021

(dollars in thousands)

(c) Concentration of Investment and Credit Risk

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

As of June 30, 2022 and 2021, the System did not hold investments in any one issuer that would represent 5.0% or more of fiduciary net position. Obligations issued or explicitly guaranteed by the U.S. government and pooled investments are not considered subject to concentration of credit risk.

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

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

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

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

- Obligations payable in U.S. dollars issued by any department, agency or political subdivision of the U.S. government or issued by any corporation, company or other issuer of any kind or description created or existing under the laws of the U.S.; any state of the U.S., District of Columbia or Commonwealth of Puerto Rico; and obligations of Canada or any province or city of Canada, provided each obligation shall be rated investment grade by two nationally recognized rating services. The aggregate investment by the System in the obligations of any one issuer shall not exceed 2.0% of the assets of the System or 5.0% of the direct liabilities of the issuer.
- Notwithstanding the 2.0% 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 30.0% 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 5.0% 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 5.0% of the System's assets.
- Bonds of the Savings and Loan Bank of the State of New York, Federal Land Bank, Federal Intermediate Credit Banks, and Banks for Cooperatives.
- Bonds of Freddie Mac, Federal Home Loan Banks, Tennessee Valley Authority, Fannie Mae, and the United States Postal Service.
- Obligations issued or guaranteed by the International Bank for Reconstruction and Development, provided the aggregate unpaid principal amount of such obligations at any time held by the System shall not exceed 5.0% 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 5.0% of the assets of the System.

NOTES TO FINANCIAL STATEMENTS *(continued)*

June 30, 2022 and 2021

(dollars in thousands)

- 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 10.0% 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 1.0% of the assets of the System.
- Collateralized Mortgage Obligations, which meet the requirements of applicable statutes.
- Private placements, where the purchase of unrated obligations is authorized by the Banking Law or the RSSL governing fixed income obligations; if not so provided, private placements as well as other domestic fixed income 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 10.0% of the System's assets including emerging market equity securities. To the extent the 10.0% limitation is exceeded, the System's international equity securities may be invested in Leeway investments (which amount shall not exceed 25.0% of System assets).

The maximum amount invested within the System's equities, including domestic and international, may not exceed, in any one year, 15.0% of System assets or 70.0% of the total System assets in aggregate. The System may not own more than 5.0% 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. The value of all real property held by the System shall not exceed ten percent (10.0%) of System assets and the cost of each parcel of real property shall not exceed two percent (2.0%) of the System's assets.

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

NOTES TO FINANCIAL STATEMENTS (continued)

June 30, 2022 and 2021

(dollars in thousands)

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, 2022 and 2021 as follows:

Investment type	2022		2021	
	Fair value	Duration (in years)	Fair value	Duration (in years)
Mortgages	\$ 3,200,577	1.840	\$ 3,707,599	3.017
Cash equivalents*	2,269,278	0.068	4,959,962	0.118
Domestic fixed income	18,271,844	4.334	18,815,502	3.979
CMBS	2,271,723	0.496	1,850,302	0.428
High-yield bonds	958,586	0.207	941,987	0.177
Global bonds	2,950,256	6.810	3,305,959	7.540
Total fair value	\$ 26,721,687		\$ 29,873,712	
Cash equivalents and fixed income portfolio modified duration		4.810		4.170

*Commercial paper, negotiable certificates of deposit and U.S. Treasury, agency, supranational and floating debt issues.

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

NOTES TO FINANCIAL STATEMENTS *(continued)*
June 30, 2022 and 2021

(dollars in thousands)

(d) 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 global and international holdings in commingled investment trust funds and separate accounts, global 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, 2022 and 2021 as follows:

	2022		2021	
	Equity Securities and REITs	Alternatives, Cash, and Global Bonds	Equity Securities and REITs	Alternatives, Cash, and Global Bonds
Currency:				
Euro	\$ 4,405,253	\$ 1,963,947	\$ 5,693,619	\$ 2,794,323
Japanese Yen	3,217,012	242,259	4,108,954	273,212
British Pound Sterling	2,100,950	685,158	2,432,008	801,998
Canadian Dollar	1,536,996	85,709	1,697,618	110,929
Hong Kong Dollar	1,369,233	84	1,803,830	—
Swiss Franc	1,230,812	6,720	1,484,802	9,311
Australian Dollar	959,661	213,899	1,082,800	146,540
China Renminbi	1,176,177	—	1,533,140	(21)
New Taiwan Dollar	831,925	23	1,106,896	(21)
South Korean Won	689,169	40,792	1,137,216	45,698
Indian Rupee	606,821	9	652,103	(1)
Swedish Krona	525,244	6,657	744,941	17,840
Danish Krone	404,039	2,059	475,474	13,990
Brazilian Real	308,605	7,139	451,539	4,771
South African Rand	212,651	16,724	274,992	12,442
Other	1,423,659	93,522	1,465,696	95,802
Totals	\$ 20,998,207	\$ 3,364,701	\$ 26,145,628	\$ 4,326,813

(e) Securities Lending Transactions

The Retirement and Social Security Law authorizes the System to enter into agreements to loan securities. 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. The System lends domestic and international bonds and equities. 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 invested cash collateral is reported as an asset and cash collateral due to borrowers is reported as a liability on the Statement of Fiduciary Net Position. The fair value of the cash collateral invested exceeded the amount the System owed borrowers by approximately \$1.9 million as of June 30, 2022 and \$1.8 million as of June 30, 2021. Non-cash collateral is not reported on the Statement of Fiduciary Net Position as the System does not have the ability to pledge or sell collateral securities without a borrower default. For each year-end, the System had limited credit risk exposure to borrowers because

NOTES TO FINANCIAL STATEMENTS (continued)

June 30, 2022 and 2021

(dollars in thousands)

the amounts the System owes the borrowers (the collateral) exceeds the amounts the borrowers owe the System (the loaned securities).

As of June 30, 2022 and 2021, JPMorgan Chase Bank, N.A. (JP Morgan) acted as agent for the domestic equity and fixed income securities lending program while Bank of New York Mellon (BNY Mellon) acted as agent for the international equity, global bond, and global equity securities lending program. Under the terms of the contracts with the lending agents, the System is fully indemnified against losses resulting from the failure of the borrowers to return the loaned securities (to the extent the collateral is inadequate to replace the loaned securities) or failure to pay the System for income distributions by the securities' issuers while the securities are on loan. There were no significant violations of legal or contractual provisions, no borrower or lending agent defaults, and no material recoveries of prior period losses during the year. The majority of securities on loan can be recalled by the System on demand or returned by the borrower at any time. Cash collateral is invested by the System's lending agents in short-term investment funds managed by the agent lenders pursuant to System approved investment guidelines. 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, 2022 and 2021, the average effective duration of the funds managed by JP Morgan was four and 21 days respectively and of those managed by BNY Mellon and State Street was four days compared to three days, respectively. Securities loans and related collateral investments are monitored on a daily basis to ensure compliance with collateral requirements, limitations and cash collateral investment guidelines.

Securities Lending Program	2022	2021
Fair value of securities on loan — cash collateral	\$ 688,474	\$ 459,107
Fair value of securities on loan — non-cash collateral	853,622	941,509
Total fair value of securities on loan	\$ 1,542,096	\$ 1,400,616
Fair value of liabilities to borrowers — cash collateral	\$ 707,887	\$ 479,186
Fair value of liabilities to borrowers — non-cash collateral	876,174	962,850
Total collateral due to borrowers	\$ 1,584,061	\$ 1,442,036
Fair value of cash collateral invested by System	\$ 709,827	\$ 481,018
Fair value of non-cash collateral held by System	876,174	962,850
Total collateral invested and held by the System	\$ 1,586,001	\$ 1,443,868

(6) Fair Value Measurement

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

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

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

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

NOTES TO FINANCIAL STATEMENTS *(continued)***June 30, 2022 and 2021**

(dollars in thousands)

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

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

NOTES TO FINANCIAL STATEMENTS (continued)

June 30, 2022 and 2021

(dollars in thousands)

NYSTRS' investments and securities lending collateral reinvested have the following fair value measurements or net asset values (NAV) as of June 30, 2022 and 2021, respectively:

Investments by Fair Value Level	June 30, 2022	Fair Value Measurements Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Domestic equity	\$ 41,961,610	\$ 41,958,863	\$ 2,646	\$ 101
International equity	18,598,195	18,438,864	157,797	1,534
Global equity	4,264,158	4,129,267	134,852	39
Real estate equity:				
Direct equity real estate and joint venture investments	4,639,383	—	—	4,639,383
Real estate alternative investments	283,439	—	—	283,439
Domestic REIT	2,681,606	2,470,522	211,084	—
International REIT	—	—	—	—
Global REIT	1,341,873	1,327,542	13,802	529
Total real estate equity	\$ 8,946,301	\$ 3,798,064	\$ 224,886	\$ 4,923,351
Domestic fixed income	18,271,844	100,966	18,170,878	—
High-yield bonds	958,564	1,213	956,433	918
Global bonds	2,920,498	39,718	2,880,780	—
Real estate debt:				
Domestic commercial mortgage backed securities	2,271,723	28,674	2,243,049	—
Real estate alternative investments	559,903	—	—	559,903
Mortgages	3,200,577	—	—	3,200,577
Total real estate debt	\$ 6,032,203	\$ 28,674	\$ 2,243,049	\$ 3,760,480
Cash Equivalents*	2,257,952	—	2,257,952	—
Securities Lending Collateral, Invested	709,827	—	708,364	1,463
Total investments by fair value level	\$ 104,921,152	\$ 68,495,629	\$ 27,737,637	\$ 8,687,886

*Commercial paper, negotiable certificates of deposit and U.S. Treasury, agency, supranational and floating debt issues.

NOTES TO FINANCIAL STATEMENTS (continued)

June 30, 2022 and 2021

(dollars in thousands)

Investments Measured at the NAV	June 30, 2022	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Commingled international equity funds (1)	813,333	—	Daily or Monthly	5-30 days
Privately held real estate investment trusts (2)	1,524,520	85,000	NA	NA
Real estate equity funds (3)				
Closed-end funds	4,687,493	4,242,949		
Open-end funds	1,331,798	86,707	Quarterly	30-120 days
Private equity closed-end funds (4)	14,073,681	6,449,962		
Real estate debt funds (5)				
Closed-end funds	1,584,217	2,051,393		
Open-end funds	114,456	—	Quarterly	90 days
Private debt closed-end funds (6)	1,424,443	1,539,290		
Total investments measured at the NAV	<u>\$ 25,553,941</u>	<u>\$ 14,455,301</u>		
Investment related cash, receivables and payables not included in above	<u>94,917</u>			
Total investments and securities lending collateral reinvested	<u><u>\$ 130,570,010</u></u>			

NOTES TO FINANCIAL STATEMENTS (continued)

June 30, 2022 and 2021

(dollars in thousands)

Investments by Fair Value Level	June 30, 2021	Fair Value Measurements Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Domestic equity	\$ 50,052,876	\$ 50,030,865	\$ 21,903	\$ 108
International equity	23,505,592	23,355,851	147,888	1,853
Global equity	5,081,316	4,968,274	113,042	—
Real estate equity:				
Direct equity real estate and joint venture investments	3,273,467	—	—	3,273,467
Real estate alternative investments	300,716	—	—	300,716
Domestic REIT	3,082,892	2,931,615	151,277	—
International REIT	—	—	—	—
Global REIT	1,532,577	1,521,169	11,402	6
Total real estate equity	\$ 8,189,652	\$ 4,452,784	\$ 162,679	\$ 3,574,189
Domestic fixed income	18,815,503	356,055	18,459,418	30
High-yield bonds	941,593	1,740	939,604	249
Global bonds	3,284,833	40,913	3,243,920	—
Real estate debt:				
Domestic commercial mortgage backed securities	1,860,302	—	1,860,302	—
Real estate alternative investments	549,603	—	—	549,603
Mortgages	3,707,599	—	—	3,707,599
Total real estate debt	\$ 6,117,504	\$ —	\$ 1,860,302	\$ 4,257,202
Cash Equivalents*	4,941,136	—	4,941,136	—
Securities Lending Collateral, Invested	481,018	—	479,412	1,606
Total investments by fair value level	\$ 121,411,023	\$ 83,206,482	\$ 30,369,304	\$ 7,835,237

*Commercial paper, negotiable certificates of deposit and U.S. Treasury, agency, supranational and floating debt issues.

NOTES TO FINANCIAL STATEMENTS (continued)

June 30, 2022 and 2021

(dollars in thousands)

Investments Measured at the NAV	June 30, 2021	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Commingled international equity funds (1)	1,185,388	—	Daily or Monthly	5-30 days
Privately held real estate investment trusts (2)	1,785,335	135,000	NA	NA
Real estate equity funds (3)				
Closed-end funds	3,818,185	3,208,548		
Open-end funds	1,050,544	74,981	Quarterly	30-120 days
Private equity closed-end funds (4)	14,780,950	7,139,617		
Real estate debt funds (5)				
Closed-end funds	1,242,091	1,741,723		
Open-end funds	111,177	—	Quarterly	90 days
Private debt closed-end funds (6)	1,163,794	1,333,484		
Total investments measured at the NAV	<u>\$ 25,137,464</u>	<u>\$ 13,633,353</u>		
Investment related cash, receivables and payables not included in above	<u>151,659</u>			
Total investments and securities lending collateral reinvested	<u><u>\$ 146,700,146</u></u>			

- (1) Commingled international equity funds consist of three commingled investment vehicles which invest primarily in publicly traded global equity securities. The funds are valued at the net asset value of units held at the end of the period based upon the fair value of the underlying investments.
- (2) Privately held real estate investment trusts consist of two trusts which primarily invest in U.S. commercial real estate. The fair values of the investments in this group have been determined using the net asset value of units held at the end of the period based upon the property appraisals of the underlying assets. The trusts are perpetual in nature, making periodic operating distributions to shareholders. Capital calls and redemptions are determined by a unanimous vote of the trust board members.
- (3) Real estate equity funds invest primarily in U.S. commercial real estate with some investing in global commercial real estate. The investment structures are either open-end funds or closed-end funds. In these structures, NYSTRS commits funds along with other investors to create a pool of capital that the fund manager then invests according to an agreed upon strategy such as core, value add or opportunistic. The fair values of the investments in this group have been determined using the NAV per share (or its equivalent) of the Plan's ownership interest in partners' capital. Open-end funds may be redeemed on a quarterly basis with notice. Closed-end funds are not redeemable; however, distributions will be received as the underlying investments of the funds are liquidated, which on average can occur over the span of eight to ten years after final closing.
- (4) Private equity funds include buyout, growth equity, venture capital, co-investment, and turnaround/restructuring strategies. These investments are accessed through primary commitments to commingled funds, secondary funds, fund of funds and separately managed accounts. The fair values have been determined using the NAV per share (or its equivalent) of the Plan's ownership interest in partners' capital.
- (5) Real estate debt funds invest primarily in transitional first mortgage, mezzanine, and subordinate debt positions. The fair values of the investments in this group have been determined using the NAV per share (or its equivalent) of the Plan's ownership, interest in partners' capital. Open-end funds may be redeemed on a quarterly basis with notice.

NOTES TO FINANCIAL STATEMENTS *(continued)*

June 30, 2022 and 2021

(dollars in thousands)

Closed-end funds are not redeemable; however, distributions will be received as the underlying investments of the funds are liquidated, which on average can occur over the span of eight to ten years after final closing.

- (6) Private debt funds consist of direct lending, mezzanine, distressed and special situations. These investments are accessed through primary commitments to closed-end commingled funds and evergreen funds. The fair values have been determined using the NAV per share (or its equivalent) of the Plan's ownership interest in partners' capital.

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

The components of the net pension liability (asset) of the NYSTRS participating school districts at June 30, 2022 and 2021 were as follows:

	2022	2021
Total pension liability	\$ 133,883,474	\$ 130,819,415
Plan fiduciary net position	131,964,582	148,148,457
School districts' net pension liability (asset)	<u>\$ 1,918,892</u>	<u>\$ (17,329,042)</u>
Plan fiduciary net position as a percentage of total pension liability	98.6%	113.2%

NOTES TO FINANCIAL STATEMENTS (continued)

June 30, 2022 and 2021

(dollars in thousands)

(a) Actuarial Methods and Assumptions

The total pension liability at June 30, 2022 was determined using an actuarial valuation as of June 30, 2021, with update procedures used to roll forward the total pension liability to June 30, 2022. The total pension liability at June 30, 2021 was determined using an actuarial valuation as of June 30, 2020, with update procedures used to roll forward the total pension liability to June 30, 2021. These actuarial valuations applied the following actuarial methods and assumptions:

Actuarial cost method	Entry age normal
Inflation	2.40% for June 30, 2022 and June 20, 2021
Projected salary increases	Rates of increase differ based on service They have been calculated based upon recent NYSTRS member experience.

<u>Service</u>	<u>Rate</u>
5	5.18%
15	3.64
25	2.50
35	1.95

Projected COLAs	1.3% for June 30, 2022 and June 30, 2021
Investment rate of return	6.95% for June 30, 2022 and June 30, 2021 measurement of total pension liability. The rates are compounded annually, net of pension plan investment expense, including inflation.
Mortality	Annuitant and active mortality rates are based on plan member experience, with adjustments for mortality improvements based on Society of Actuaries Scale MP2021 for June 30, 2022 and Scale MP2020 for June 30, 2021, applied on a generational basis.
Experience Period	The demographic actuarial assumptions and the salary scale are based on the results of an actuarial experience study for the period July 1, 2015 to June 30, 2020. NYSTRS runs one-year and five-year experience studies annually in order to gauge the appropriateness of the assumptions and has updated the mortality improvement assumption as of June 30, 2022.

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* and generally accepted accounting principles. ASOP No. 27 provides guidance on the selection of an appropriate assumed investment rate of return. Consideration was given to expected future real rates of return (expected returns, net of pension plan investment expense and inflation) for each major asset class as well as historical investment data and plan performance.

NOTES TO FINANCIAL STATEMENTS (continued)

June 30, 2022 and 2021

(dollars in thousands)

The Long-Term Expected Real Rates of Return are presented by asset allocation classification. Best estimates of arithmetic real rates of return for each major asset class included in the System's target asset allocation as of the measurement date of June 30, 2022 and June 30, 2021 (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	2022	2021
Domestic equity	6.5%	6.8%
International equity	7.2	7.6
Global equity	6.9	7.1
Real estate equity	6.2	6.5
Private equity	9.9	10.0
Domestic fixed income	1.1	1.3
Global bonds	0.6	0.8
Private debt	5.3	5.9
Real estate debt	2.4	3.3
High-yield bonds	3.3	3.8
Cash equivalents	(0.3)	(0.2)

*Real rates of return are net of the long-term inflation assumption of 2.4% for 2022 and 2.4% for 2021.

(b) Discount Rate

The discount rate used to measure the total pension liability was 6.95% as of June 30, 2022 and 6.95% as of June 30, 2021. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current member contribution rates and that contributions from school districts will be made at statutorily required rates, actuarially determined. Based on those assumptions, the System's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

(c) Sensitivity of the Net Pension Liability (Asset) to Changes in the Discount Rate

The following presents the net pension liability (asset) of the NYSTRS participating school districts calculated using the discount rate of 6.95% for June 30, 2022 and 6.95% for June 30, 2021, as well as what the school districts' net pension liability (asset) would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate:

System's Net Pension Liability (Asset)				
		1% Decrease (5.95%)	Current Discount Rate (6.95%)	1% Increase (7.95%)
June 30, 2022	\$	\$17,693,081	\$ 1,918,892	\$ (11,347,098)
June 30, 2021	\$	\$(1,818,430)	\$(17,329,042)	\$(30,364,586)

NOTES TO FINANCIAL STATEMENTS *(continued)*

June 30, 2022 and 2021

(dollars in thousands)

(8) Commitments and Contingencies

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

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

The future financial commitments outstanding at June 30, 2022 and 2021, respectively, were: real estate and real estate alternative investments of \$4.5 billion and \$3.6 billion; mortgages and real estate debt funds of \$2.2 billion and \$1.8 billion; CMBS \$123.9 million and \$0.0 million; private equity \$6.4 billion and \$7.1 billion; and private debt investments of \$1.5 billion and \$1.3 billion.

(9) System Employees' Pension Plan*(a) Plan Description*

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

(b) Benefits

The classes of employees covered under ERS range from Tiers 1 – 6. In order to be eligible for retirement, all members must be at least age 55 and have a minimum of five years of service. There is no minimum service requirement for Tier 1 members. Generally, all members are eligible for early retirement at age 55 with a benefit calculation of 1.67% of final average salary. Benefit calculations for Tier 1 – 5 members with greater than 20 years of service credit are 2.0% of final average salary. Tier 3 – 5 members are eligible for an additional 1.5% of final average salary applied to each year of service over 30 years. Generally, Tier 6 member retirement benefits are 1.8% of final average salary with 20 years of service, with an additional 2.0% of final average salary for each year of service over 20 years.

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

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

(c) Funding Policy

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

Plan members are required to contribute between 0% and 6% throughout active service. Employers are required to contribute at an actuarially determined rate. An average employer contribution rate for the tiers of 16.1% and 14.5% was applicable to the annual covered payroll for the years ended March 31, 2022 and March 31, 2021, respectively. The

NOTES TO FINANCIAL STATEMENTS (continued)

June 30, 2022 and 2021

(dollars in thousands)

contributions paid to ERS during the System's years ended June 30, 2022 and 2021 were \$5.4 million and \$4.5 million, respectively, and were 100% of the contributions required.

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

At June 30, 2022 and 2021, the System reported a liability of negative \$9.9 million and \$0.1 million, respectively, for its proportionate share of the ERS net pension liability measured as of March 31, 2022 and 2021, respectively. The balance is reported within "other liabilities."

NYSTRS' proportion of the ERS net pension liability was based on the projection of the long-term share of contributions to ERS relative to the projected contributions of all participating employers, actuarially determined. At March 31, 2022, the System's proportion was 0.1207750% and was 0.1108277% at March 31, 2021.

For the years ended June 30, 2022 and 2021, the System recognized pension expense of \$0.6 million and \$2.5 million, respectively.

Deferred outflows of resources were \$18.1 million and \$21.8 million at June 30, 2022 and 2021, respectively. Deferred inflows of resources were \$33.8 million and \$32.3 million at June 30, 2022 and 2021, respectively.

The following presents a summary of deferred outflows of resources and deferred inflows of resources at June 30, 2022 and 2021:

	2022	2021
Deferred outflows of resources:		
Difference between expected and actual experience	\$ 748	\$ 1,348
Changes of assumptions	16,477	20,291
Changes in proportion and differences between employer contributions and proportionate share of contributions	828	128
	<u>\$ 18,053</u>	<u>\$ 21,767</u>
Deferred inflows of resources:		
Difference between expected and actual experience	\$ 970	\$ —
Net differences between projected and actual investment earnings on pension plan investments	32,329	31,700
Changes of assumptions	278	383
Changes in proportion and differences between employer contributions and proportionate share of contributions	191	192
	<u>\$ 33,768</u>	<u>\$ 32,275</u>

Amounts reported as deferred outflows of resources and deferred inflows of resources at June 30, 2022 related to pensions will be recognized in pension expense as follows:

Year Ended June 30:

2023	\$ (2,355)
2024	(3,490)
2025	(8,282)
2026	(1,588)

NOTES TO FINANCIAL STATEMENTS *(continued)*
June 30, 2022 and 2021

(dollars in thousands)

(e) Actuarial Assumptions

The total pension liability for the March 31, 2022 measurement date was determined by using an actuarial valuation as of April 1, 2021, with update procedures used to roll forward the total pension liability to March 31, 2022. The total pension liability for the March 31, 2021 measurement date was determined by using an actuarial valuation as of April 1, 2020, with update procedures used to roll forward the total pension liability to March 31, 2021. These actuarial valuations applied the following actuarial assumptions

Inflation	2.7%
Salary scale	4.4%, indexed by service
Investment rate of return, including inflation	5.9% compounded annually, net of investment expenses
Cost of living adjustments	1.4% annually
Decrements	Developed from the Plan's experience study of the period April 1, 2015 through March 31, 2020
Mortality improvement	Society of Actuaries Scale MP-2020

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected return, net of investment expenses and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of arithmetic real rates of return for each major asset class for the measurement period March 31, 2022 and 2021 are summarized in the following table:

Asset class	2022		2021	
	Target allocation	Long-term expected real rate of return	Target allocation	Long-term expected real rate of return
Domestic equity	32 %	3.30 %	32 %	4.05 %
International equity	15	5.85	15	6.30
Private equity	10	6.50	10	6.75
Real estate	9	5.00	9	4.95
Opportunistic/ARS portfolio	3	4.10	3	4.50
Credit	4	3.78	4	3.63
Real assets	3	5.58	3	5.95
Fixed income	23	—	23	—
Cash	1	(1.00)	1	0.50
	<u>100 %</u>		<u>100 %</u>	

(f) Discount Rate

The discount rate used to calculate the total pension liability was 5.9% for years ending March 31, 2022 and 2021. The projection of cash flows used to determine the discount rate assumes that contributions from plan members will be made at the current contribution rates and that contributions from employers will be made at statutorily required rates, actuarially determined. Based upon those assumptions, the ERS's fiduciary net position was projected to be available to

NOTES TO FINANCIAL STATEMENTS (continued)

June 30, 2022 and 2021

(dollars in thousands)

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.

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

The following presents the System's proportionate share of the ERS net pension liability calculated using the discount rate of 5.9% for the years ending June 30, 2022 and 2021, as well as what the System's proportionate share of the ERS net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate:

System's net pension liability (asset)					
		1% Decrease (4.9%)	Current discount rate (5.9%)		1% Increase (6.9%)
June 30, 2022	\$	25,413	\$	(9,873)	\$ (39,387)
June 30, 2021	\$	30,630	\$	110	\$ (28,036)

(10) System Employees' Other Post-Employment Benefits

(a) Plan Description

The System's Board established the Trust in 2008 to provide post-employment health insurance benefits. Contributions from the System to the Trust are irrevocable.

The Trust is a defined-benefit, single-employer other post-employment benefit (OPEB) plan that accumulates resources to pay current and future health insurance premiums for retired System employees and beneficiaries. The Trust is administered by a 10-member Board whose members are the same as the System Board. The Trust is a legally separate entity with standalone financial statements and required supplementary information, which can be found on the System's website at www.nystrs.org. The fiduciary net position of the OPEB and changes in fiduciary net position of the OPEB have been determined on the same basis as they are reported in the financial statements of the Trust.

(b) Benefits

Pursuant to contractual agreement and policy, the System provides post-employment healthcare benefits to eligible System employees who retire from the System and reimburses Medicare eligible retirees for their Medicare Part B premiums. The System is a voluntary participating employer in the New York State Health Insurance Program (NYSHIP), administered by the State of New York. Article XI of the New York State Civil Service Law assigns the authority to NYSHIP to establish and amend the benefit provisions of the plan and to establish maximum obligations of the plan members to contribute to the plan. The System's Board is authorized to establish the contribution rates of System employees and retirees up to 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 ERS. Dependents may also be covered.

System retirees are required to contribute toward the cost of their coverage. Employees who retire on or after July 1, 1985 contribute an amount equal to 14.0% of the premium up to the premium of the Empire Plan option. If more expensive coverage is elected, the retiree pays 14.0% 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.

NOTES TO FINANCIAL STATEMENTS (continued)

June 30, 2022 and 2021

(dollars in thousands)

As of June 30, 2022, 676 participants including 365 current employees and 311 retired and/or spouses of retired employees participated in the healthcare plan. As of June 30, 2021, 673 participants including 374 current employees and 299 retired and/or spouses of retired employees participated in the healthcare plan.

(c) Employer Contribution

The employer contribution, or funding, of the System’s OPEB obligation is at the discretion of the System’s management and Board. The System’s current policy is to prefund benefits by contributing an amount that is, at a minimum, equal to the ADC. At June 30, 2022 and 2021, the Trust recognized contributions of \$6.0 million and \$6.3 million, respectively, which were approximately 112.4% and 107.5% of the ADC or 18.1% and 19.5% of covered payroll, respectively.

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

At June 30, 2022 and 2021, the System reported a net OPEB liability of \$34.8 million and \$47.2 million, respectively. The June 30, 2022 OPEB liability was determined using an actuarial valuation as of July 1, 2020, with update procedures used to roll forward the total OPEB liability to the measurement date of June 30, 2021. The total OPEB liability at June 30, 2021 was determined using an actuarial valuation as of July 1, 2019, with update procedures used to roll forward the total OPEB liability to June 30, 2020.

For the years ended June 30, 2022 and 2021, the System recognized OPEB expense of \$2.8 million and negative \$4.4 million, respectively.

Deferred outflows of resources were \$10.7 million for June 30, 2022 and \$10.9 million for June 30, 2021. Deferred inflows of resources were \$13.2 million at June 30, 2022 and \$4.3 million at June 30, 2021.

The following presents a summary of deferred outflows of resources and deferred inflows of resources at June 30, 2022 and 2021:

	2022	2021
Deferred outflows of resources:		
Difference between expected and actual experience	\$ 1,459	\$ 542
Changes in assumptions	3,244	4,101
Contributions subsequent to the measurement date	6,000	6,261
	<u>\$ 10,703</u>	<u>\$ 10,904</u>
Deferred inflows of resources:		
Difference between expected and actual experience	\$ 724	\$ 1,208
Changes in assumptions	3,500	2,540
Net difference between projected and actual earnings	9,006	528
	<u>\$ 13,230</u>	<u>\$ 4,276</u>

NOTES TO FINANCIAL STATEMENTS (continued)

June 30, 2022 and 2021

(dollars in thousands)

Amounts reported as deferred outflows and deferred inflows of resources will be recognized in OPEB expense as follows:

Year ended June 30:

2023 \$	(3,136)
2024 \$	(2,004)
2025 \$	(1,426)
2026 \$	(1,763)
2027 \$	(198)
Thereafter \$	—

(e) Actuarial Assumptions

	2022	2021
Valuation date	July 1, 2020	July 1, 2019
Investment rate of return	6.50%	6.75%
Payroll increase rate	3.00%	3.00%
Salary increase rate	Varies by service from 3.00%-8.00%	Varies by service from 3.00%-8.00%
Maximum retiree contribution based on salary at retirement	Increase \$100 per year after 2025	Increase \$100 per year after 2024
Healthcare cost and premium trend rates:		
Non-Medicare	7.70% graded to 4.34% over 20 years	6.70% graded to 4.25% over 14 years
Medicare	8.80% graded to 4.34% over 20 years	7.65% graded to 4.50% over 14 years
Medicare Part B	3.50%	3.50%
Blended Medicare	7.69% graded to 4.16% over 20 years	6.78% graded to 4.29% over 14 years
Pre-retirement mortality	The Pub-2010 General Employee Headcount-Weighted Mortality table (PubG.H-2010 Employee) as published by the Society of Actuaries (SOA) with an 98.75% adjustment for both males and females, and with future improvement from the base year of 2010 on a generational basis using SOA's Scale MP-2020. All pre-retirement deaths are assumed ordinary deaths	Mortality rates are based on those used in the NYS/SUNY "Development of Recommended Actuarial Assumptions Participating Agency Version" dated December 2017.

NOTES TO FINANCIAL STATEMENTS *(continued)*

June 30, 2022 and 2021

(dollars in thousands)

Post-retirement mortality	<ul style="list-style-type: none"> • Healthy Retirees: The Pub-2010 General Healthy Retiree Headcount-Weighted Mortality table (PubG.H-2010 Healthy Retiree) as published by the SOA with a 98.75% adjustment for both males and females, and with future improvement from the base year of 2010 on a generational basis using SOA’s Scale MP-2020. • Beneficiaries: Pub-2010 General Contingent Survivors Headcount-Weighted Mortality (PubG.H-2010 Contingent Survivors) as published by the SOA with a 98.75% adjustment for both males and females, and with future improvement from the base year of 2010 on a generational basis using SOA’s Scale MP-2020. • Disabled Retirees: The Pub-2010 General Disabled Retiree Headcount-Weighted Mortality table (PubG.H-2010 Disabled Retiree) as published by the SOA with a 98.75% adjustment for both males and females, and with future improvement from the base year of 2010 on a generational basis using SOA’s Scale MP-2020. 	<p>Mortality rates are based on SOA RP-2014 with White Collar for Healthy Annuitants, which is derived using base year 2006 and then is projected generationally from 2006 to 2014 with Scale MP-2014. These 2014 rates are then projected generationally using Scale MP-2019 with base year 2014.</p>
Banked sick leave	<p>Participants are assumed to accrue 4.74 days of unused sick leave per year and use 100% of accumulated leave at retirement for the sick leave offset.</p>	<p>Participants are assumed to accrue 4.74 days of unused sick leave per year and use 100% of accumulated leave at retirement for the sick leave offset.</p>

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best estimate ranges of expected future rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of arithmetic real rates of return for each major asset class included in the System’s target asset allocation as of June 30, 2021 and June 30, 2020 are summarized in the following table:

NOTES TO FINANCIAL STATEMENTS (continued)

June 30, 2022 and 2021

(dollars in thousands)

Long-Term Expected Real Rate of Return*		
Asset Class	2021	2020
Domestic equity	6.06 %	5.84 %
International equity	6.83	7.16
Domestic fixed income	0.12	0.99
Cash equivalents	-0.32	0.57

* Real rates of return are net of the long-term inflation assumption of 2.60% and 2.50% for 2020 and 2019, respectively.

(f) *Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates*

Healthcare cost trend rates measure the anticipated overall rate at which health plan costs are expected to increase in future years. The following presents the net OPEB liability of the System using the healthcare cost trend rates presented previously in the actuarial assumptions, as well as what the System's net OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage-point lower or 1-percentage-point higher than the applied healthcare cost trend rates:

System's Net OPEB Liability				
Reporting Date	1% Decrease	Current Healthcare Cost Trend Rates	1% Increase	
June 30, 2022	\$ 22,218	\$ 34,792	\$ 50,200	
June 30, 2021	34,469	47,187	62,936	

(g) *Discount Rate*

The discount rate used to measure the total pension liability as of June 30, 2022 and 2021 was 6.50%. The projection of cash flows used to determine the discount rate assumed that contributions would be made at rates equal to the actuarially determined contribution rates. Based on these assumptions, the OPEB Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan participants. Therefore, the long-term expected rate of return on plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

(h) *Sensitivity of the Net OPEB Liability to Changes in the Discount Rate*

The following presents the net OPEB liability of the System as well as what the System's net OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the applied rate:

System's Net OPEB Liability				
Reporting Date	1% Decrease	Current Discount Rate	1% Increase	
June 30, 2022	\$ 48,613	\$ 34,792	\$ 23,387	
June 30, 2021	61,175	47,187	35,761	

NOTES TO FINANCIAL STATEMENTS *(continued)*

June 30, 2022 and 2021

(dollars in thousands)

(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 certain natural disasters for which the System carries commercial insurance. There were no settlements in the past three years that exceeded coverage. Management of the System believes there would be no material adverse effect on the financial statements as a result of the outcome of these matters if they occur.

This page intentionally left blank.

REQUIRED SUPPLEMENTARY INFORMATION
**SCHEDULE OF CHANGES IN THE SCHOOL DISTRICTS' NET PENSION LIABILITY (ASSET)
(UNAUDITED)**

(Last Ten Fiscal Years)

(dollars in thousands)

	2022	2021	2020	2019	2018
Total pension liability					
Service cost	\$ 1,751,453	\$ 1,755,405	\$ 1,563,222	\$ 1,528,402	\$ 1,319,513
Interest	8,959,475	8,752,345	8,418,885	8,189,405	8,224,221
Changes of benefit terms	10,091	—	678	815	—
Differences between expected and actual experience	251,733	558,905	1,169,842	753,802	964,258
Changes of assumptions	69,931	4,241,884	(285,424)	(1,392,886)	—
Benefit payments, incl. refunds of member contributions	(7,978,624)	(7,731,900)	(7,503,901)	(7,307,318)	(7,108,999)
Net change in total pension liability	3,064,059	7,576,639	3,363,302	1,772,220	3,398,993
Total pension liability — beginning	130,819,415	123,242,776	119,879,474	118,107,254	114,708,261
Total pension liability — ending (a)	\$ 133,883,474	\$ 130,819,415	\$ 123,242,776	\$ 119,879,474	\$ 118,107,254
Plan fiduciary net position					
Contributions — employer	\$ 1,735,255	\$ 1,618,437	\$ 1,504,688	\$ 1,774,646	\$ 1,597,139
Contributions — member	190,853	159,874	145,034	136,610	131,595
Net investment income	(10,078,814)	33,668,008	3,923,633	8,023,180	9,928,011
Benefit payments, incl. refunds of member contributions	(7,978,624)	(7,731,900)	(7,503,901)	(7,307,318)	(7,108,999)
Administrative expenses	(61,230)	(55,492)	(71,385)	(74,242)	(60,610)
Other	8,685	10,025	3,955	9,087	9,278
Net change in plan fiduciary net position	(16,183,875)	27,668,952	(1,997,976)	2,561,963	4,496,414
Plan fiduciary net position — beginning	148,148,457	120,479,505	122,477,481	119,915,518	115,468,360
Cumulative effect of change in accounting principle	—	—	—	—	(49,256)
Beginning balance as restated	148,148,457	120,479,505	122,477,481	119,915,518	115,419,104
Plan fiduciary net position — ending (b)	\$ 131,964,582	\$ 148,148,457	\$ 120,479,505	\$ 122,477,481	\$ 119,915,518
School districts' net pension liability (asset) — ending (a) — (b)	\$ 1,918,892	\$ (17,329,042)	\$ 2,763,271	\$ (2,598,007)	\$ (1,808,264)

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION (continued)

SCHEDULE OF CHANGES IN THE SCHOOL DISTRICTS' NET PENSION LIABILITY (ASSET) (UNAUDITED) (continued)
(Last Ten Fiscal Years)

(dollars in thousands)

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

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION *(continued)*

SCHEDULE OF THE SCHOOL DISTRICTS' NET PENSION LIABILITY (ASSET) (UNAUDITED)
(Last Ten Fiscal Years)

(dollars in thousands)

	2022	2021	2020	2019	2018
Total pension liability	\$ 133,883,474	\$ 130,819,415	\$ 123,242,776	\$ 119,879,474	\$ 118,107,254
Plan fiduciary net position	131,964,582	148,148,457	120,479,505	122,477,481	119,915,518
School districts' net pension liability (asset)	<u>\$ 1,918,892</u>	<u>\$ (17,329,042)</u>	<u>\$ 2,763,271</u>	<u>\$ (2,598,007)</u>	<u>\$ (1,808,264)</u>
Plan fiduciary net position as a percentage of the total pension liability	98.6%	113.2%	97.8%	102.2%	101.5%
Covered payroll	\$ 17,715,273	\$ 16,973,207	\$ 16,973,171	\$ 16,691,626	\$ 16,288,884
School districts' net pension liability (asset) as a percentage of covered payroll	10.8%	(102.1)%	16.3%	(15.6)%	(11.1)%

SCHEDULE OF THE SCHOOL DISTRICTS' CONTRIBUTIONS (UNAUDITED)
(Last Ten Fiscal Years)

(dollars in thousands)

	2022	2021	2020	2019	2018
Actuarially determined contribution	\$ 1,736,097	\$ 1,617,547	\$ 1,503,823	\$ 1,772,651	\$ 1,596,311
Contributions in relation to the actuarially determined contribution	1,736,097	1,617,547	1,503,823	1,772,651	1,596,311
Contribution deficiency	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>
Covered payroll	\$ 17,715,273	\$ 16,973,207	\$ 16,973,171	\$ 16,691,626	\$ 16,288,884
Contributions as a percentage of covered payroll	9.80 %	9.53 %	8.86 %	10.62 %	9.80 %

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION (continued)

SCHEDULE OF THE SCHOOL DISTRICTS' NET PENSION LIABILITY (ASSET) (UNAUDITED) (continued)
(Last Ten Fiscal Years)

(dollars in thousands)

	2017	2016	2015	2014	2013
Total pension liability	\$ 114,708,261	\$ 108,577,184	\$ 99,332,104	\$ 97,015,706	\$ 94,708,767
Plan fiduciary net position	115,468,360	107,506,142	109,718,917	108,155,083	95,367,021
School districts' net pension liability (asset)	\$ (760,099)	\$ 1,071,042	\$ (10,386,813)	\$ (11,139,377)	\$ (658,254)
Plan fiduciary net position as a percentage of the total pension liability	100.7%	99.0%	110.5%	111.5%	100.7%
Covered payroll	\$ 15,846,705	\$ 15,431,009	\$ 15,021,357	\$ 14,771,301	\$ 14,647,830
School districts' net pension liability (asset) as a percentage of covered payroll	(4.8)%	6.9%	(69.1)%	(75.4)%	(4.5)%

SCHEDULE OF THE SCHOOL DISTRICTS' CONTRIBUTIONS (UNAUDITED) (continued)
(Last Ten Fiscal Years)

(dollars in thousands)

	2017	2016	2015	2014	2013
Actuarially determined contribution	\$ 1,857,234	\$ 2,046,152	\$ 2,633,244	\$ 2,400,378	\$ 1,734,303
Contributions in relation to the actuarially determined contribution	1,857,234	2,046,152	2,608,266	2,383,145	1,734,303
Contribution deficiency	\$ —	\$ —	\$ 24,978	\$ 17,233	\$ —
Covered payroll	\$ 15,846,705	\$ 15,431,009	\$ 15,021,357	\$ 14,771,301	\$ 14,647,830
Contributions as a percentage of covered payroll	11.72 %	13.26 %	17.36 %	16.13 %	11.84 %

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION *(continued)***SCHEDULE OF INVESTMENT RETURNS (UNAUDITED)**

(Last Ten Fiscal Years)

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Annual money-weighted rate of return, net of investment expense	(7.12)%	28.97%	3.32%	6.93%	8.95%	13.05%	2.28%	5.18%	18.16%	13.73%

See accompanying independent auditors' report.

This page intentionally left blank.

REQUIRED SUPPLEMENTARY INFORMATION *(continued)*

**SCHEDULE OF NYSTRS' PROPORTIONATE SHARE OF THE NET PENSION LIABILITY
NEW YORK STATE AND LOCAL EMPLOYEES' RETIREMENT SYSTEM (ERS)**

(Last Nine Fiscal Years)

(dollars in thousands)

	2022	2021	2020	2019	2018
System's proportion of the net pension liability	0.1207750 %	0.1108277 %	0.1120455 %	0.1095732 %	0.1115115 %
System's proportionate share of the net pension (asset) liability	\$ (9,873)	\$ 110	\$ 29,670	\$ 7,764	\$ 3,599
System's covered payroll	34,055	33,718	31,466	30,546	29,728
System's proportionate share of the net pension liability as a percentage of covered payroll	(29.0)%	— %	94.3 %	25.4 %	12.1 %
ERS fiduciary net position as a percentage of the total pension liability	103.65 %	99.95 %	86.39 %	96.27 %	98.24 %

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

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION *(continued)*

SCHEDULE OF NYSTRS' PROPORTIONATE SHARE OF THE NET PENSION LIABILITY
 NEW YORK STATE AND LOCAL EMPLOYEES' RETIREMENT SYSTEM (ERS) *(continued)*
 (Last Nine Fiscal Years)

(dollars in thousands)

	2017	2016	2015	2014
System's proportion of the net pension liability	0.1098533 %	0.1095719 %	0.1028788 %	0.1028788 %
System's proportionate share of the net pension (asset) liability	\$ 10,322	\$ 17,587	\$ 3,475	\$ 4,649
System's covered payroll	28,994	28,251	28,067	26,188
System's proportionate share of the net pension liability as a percentage of covered payroll	35.6 %	62.3 %	12.4 %	17.8 %
ERS fiduciary net position as a percentage of the total pension liability	94.70 %	90.70 %	97.90 %	97.20 %

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

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION *(continued)*

**SCHEDULE OF NYSTRS' CONTRIBUTIONS (UNAUDITED)
NEW YORK STATE AND LOCAL EMPLOYEES' RETIREMENT SYSTEM (ERS)
(Last Ten Fiscal Years)**

(dollars in thousands)

	2022	2021	2020	2019	2018
Actuarially determined contribution	\$ 5,377	\$ 4,499	\$ 4,360	\$ 4,308	\$ 4,310
Contributions in relation to the actuarially determined contribution	5,377	4,499	4,360	4,308	4,310
Contribution deficiency	\$ —	\$ —	\$ —	\$ —	\$ —
Covered payroll	\$ 34,055	\$ 33,718	\$ 31,466	\$ 30,546	\$ 29,728
Contributions as a percentage of covered payroll	15.79 %	13.34 %	13.86 %	14.10 %	14.50 %

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION *(continued)*

SCHEDULE OF NYSTRS' CONTRIBUTIONS (UNAUDITED)

NEW YORK STATE AND LOCAL EMPLOYEES' RETIREMENT SYSTEM (ERS) *(continued)*

(Last Ten Fiscal Years)

(dollars in thousands)

	2017	2016	2015	2014	2013
Actuarially determined contribution	\$ 4,318	\$ 5,289	\$ 5,131	\$ 5,250	\$ 4,807
Contributions in relation to the actuarially determined contribution	4,318	5,289	5,131	5,250	4,807
Contribution deficiency	\$ —	\$ —	\$ —	\$ —	\$ —
Covered payroll	\$ 28,994	\$ 28,251	\$ 28,067	\$ 26,188	\$ 26,259
Contributions as a percentage of covered payroll	14.89 %	18.72 %	18.28 %	20.05 %	18.31 %

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION *(continued)*
**SCHEDULE OF CHANGES IN THE SYSTEM'S NET OPEB LIABILITY AND RELATED RATIOS
(UNAUDITED)**

(Last Six Fiscal Years)

(dollars in thousands)

Total OPEB liability:

Reporting Date:	2022	2021	2020	2019
Measurement Date:	2021	2020	2019	2018
Service cost	\$ 2,985	\$ 2,915	\$ 2,907	\$ 2,604
Interest	6,586	6,622	6,169	5,747
Changes of benefit terms	—	(9,789)	—	6,211
Differences between expected and actual experience	1,259	79	714	(842)
Changes of assumptions	(2,450)	4,039	1,102	(878)
Benefit payments	(4,527)	(4,413)	(3,965)	(3,757)
Net change in total OPEB liability	3,853	(547)	6,927	9,085
Total OPEB liability - beginning	96,810	97,357	90,430	81,344
Total OPEB liability - ending (a)	<u>\$ 100,663</u>	<u>\$ 96,810</u>	<u>\$ 97,357</u>	<u>\$ 90,430</u>
Plan fiduciary net position:				
Contributions - employer	\$ 6,261	\$ 6,004	\$ 5,500	\$ 5,500
Net investment income	14,535	2,673	3,155	3,213
Benefit payments	(4,527)	(4,413)	(3,965)	(3,757)
Professional fees and services	(20)	(66)	(19)	(53)
Net change in plan fiduciary net position	16,248	4,199	4,671	4,902
Plan fiduciary net position - beginning	49,622	45,424	40,752	35,850
Plan fiduciary net position - ending (b)	<u>\$ 65,871</u>	<u>\$ 49,622</u>	<u>\$ 45,424</u>	<u>\$ 40,752</u>
System's net OPEB liability - ending (a) - (b)	\$ 34,792	\$ 47,187	\$ 51,933	\$ 49,677
Plan fiduciary net position as a percentage of the total OPEB liability	65.44 %	51.26 %	46.66 %	45.07 %
Covered payroll	\$ 33,142	\$ 32,125	\$ 31,189	\$ 30,683
System's net OPEB liability as a percentage of covered payroll	104.98 %	146.89 %	166.51 %	161.90 %

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION (continued)

SCHEDULE OF CHANGES IN THE SYSTEM'S NET OPEB LIABILITY AND RELATED RATIOS (UNAUDITED)

(continued)

(Last Six Fiscal Years)

(dollars in thousands)

Reporting Date:	2018	2017
Measurement Date:	2017	2016
Total OPEB liability:		
Service cost	\$ 2,491	\$ 2,579
Interest	5,959	5,589
Changes of benefit terms	—	—
Differences between expected and actual experience	(2,166)	400
Changes of assumptions	(5,849)	—
Benefit payments	(3,412)	(2,980)
Net change in total OPEB liability	(2,977)	5,589
Total OPEB liability - beginning	84,321	78,732
Total OPEB liability - ending (a)	\$ 81,344	\$ 84,321
Plan fiduciary net position:		
Contributions - employer	\$ 5,500	\$ 5,500
Net investment income	4,212	382
Benefit payments	(3,412)	(2,980)
Professional fees and services	(15)	(13)
Net change in plan fiduciary net position	6,285	2,890
Plan fiduciary net position - beginning	29,565	26,675
Plan fiduciary net position - ending (b)	\$ 35,850	\$ 29,565
System's net OPEB liability - ending (a) - (b)	\$ 45,494	\$ 54,756
Plan fiduciary net position as a percentage of the total OPEB liability	44.07 %	35.06 %
Covered payroll	\$ 29,753	\$ 29,087
System's net OPEB liability as a percentage of covered payroll	152.91 %	188.25 %

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

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION *(continued)*

**SCHEDULE OF SYSTEM AND OTHER CONTRIBUTING ENTITY CONTRIBUTIONS
(UNAUDITED)**

(Last Ten Fiscal Years)

(dollars in thousands)

	2022	2021	2020	2019	2018
Actuarially determined contribution	\$ 5,340	\$ 5,822	\$ 5,958	\$ 5,349	\$ 5,279
Contributions in relation to the actuarially determined contribution:					
System	6,000	6,261	6,004	5,500	5,500
Other contributing entity	—	—	—	—	—
Total contributions	6,000	6,261	6,004	5,500	5,500
Contribution deficiency (excess)	\$ (660)	\$ (439)	\$ (46)	\$ (151)	\$ (221)
Covered payroll	\$ 35,423	\$ 33,142	\$ 32,125	\$ 31,189	\$ 30,683
Contributions as a percentage of covered payroll	16.94 %	18.89 %	18.69 %	17.63 %	17.93 %

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION *(continued)*

SCHEDULE OF SYSTEM AND OTHER CONTRIBUTING ENTITY CONTRIBUTIONS (UNAUDITED)

(continued)

(Last Ten Fiscal Years)

(dollars in thousands)

	2017	2016	2015	2014	2013
Actuarially determined contribution	\$ 5,374	\$ 4,782	\$ 4,542	\$ 4,767	\$ 5,240
Contributions in relation to the actuarially determined contribution:					
System	5,500	5,500	5,500	5,500	5,240
Other contributing entity	—	—	—	1	95
Total contributions	5,500	5,500	5,500	5,501	5,335
Contribution deficiency (excess)	\$ (126)	\$ (718)	\$ (958)	\$ (734)	\$ (95)
Covered payroll	\$ 29,753	\$ 29,087	\$ 26,507	\$ 25,556	\$ 26,500
Contributions as a percentage of covered payroll	18.49 %	18.91 %	20.75 %	21.53 %	20.13 %

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION *(continued)***NOTES TO REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)**
(Last Ten Fiscal Years)*Method and assumptions used in calculations of school districts' Total Pension Liability (TPL)*

Changes of benefit terms. Effective with the 2022 actuarial valuation, the following plan change was effective: The number of years of credited service required for vesting changed from ten years to five years for Tier 5 and 6 members for purposes of eligibility for a service retirement benefit or a deferred-vested benefit.

Changes of assumptions. Actuarial assumptions are revised periodically to more closely reflect actual, as well as anticipated future experience. The actuarial assumptions were revised and adopted by the Retirement Board on October 28, 2021 and first used in the 2021 determination of the Total Pension Liability.

The System's long-term rate of return assumption for purposes of the NPL is 6.95%, effective with the 2021 actuarial valuation. For the 2020 and 2019 actuarial valuations, the System's long-term rate of return assumption was 7.10%. For the 2018 and 2017 actuarial valuations, the System's long-term rate of return assumption was 7.25%. For the 2016 actuarial valuation, the System's long-term rate of return assumption was 7.50%. Prior to the 2016 actuarial valuation, the System's long-term rate of return was 8.00%.

The System's assumed annual inflation rate is 2.40% for 2021 and 2022 and 2.20% for 2019 and 2020. For the 2018 and 2017 actuarial valuations, the System's annual inflation assumption was 2.25%. For the 2016 actuarial valuation, the System's annual inflation assumption was 2.5%. Prior to the 2016 actuarial valuation, the System's annual inflation assumption was 3.00%.

Effective with the 2019 actuarial valuation, COLAs are projected to increase at a rate of 1.30% annually. Effective with the 2015 actuarial valuation, COLAs were projected to increase at a rate of 1.50% annually. Prior to the 2015 actuarial valuation, COLAs were projected to increase at a rate of 1.625% annually.

Effective with the 2022 actuarial valuation, the assumed scale for mortality improvement was changed from MP2020 to MP2021. Effective with the 2021 actuarial valuation, the assumed scale for mortality improvement was changed from MP2019 to MP2020. Effective with the 2020 actuarial valuation, the assumed scale for mortality improvement was changed from MP2018 to MP2019. Effective with the 2019 actuarial valuation, the assumed scale for mortality improvement was changed from MP2014 to MP2018.

See accompanying independent auditors' report.

REQUIRED SUPPLEMENTARY INFORMATION (continued)

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED) (continued)
(Last Ten Fiscal Years)

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. The following actuarial methods and assumptions were used to determine school districts' contributions in 2022. For assumptions and plan provisions used in contributions reported for years prior to 2022, refer to the Annual Actuarial Report for two years prior to the end of the fiscal year in which contributions are reported.

Valuation Date	June 30, 2020										
Actuarial cost method	Aggregate (level percent of payroll)*										
Amortization method	n/a*										
Remaining amortization period	n/a*										
Asset valuation method	Five-year phased-in deferred recognition of each year's net investment income/loss in excess of (or less than) the assumed valuation rate of interest at a rate of 20.0% per year, until fully recognized after 5 years.										
Inflation	2.20%										
Projected salary increases	Rates of increase differ based on service. They have been calculated based upon recent NYSTRS member experience.										
	<table> <thead> <tr> <th><u>Service</u></th> <th><u>Rate</u></th> </tr> </thead> <tbody> <tr> <td>5</td> <td>4.72%</td> </tr> <tr> <td>15</td> <td>3.46</td> </tr> <tr> <td>25</td> <td>2.37</td> </tr> <tr> <td>35</td> <td>1.90</td> </tr> </tbody> </table>	<u>Service</u>	<u>Rate</u>	5	4.72%	15	3.46	25	2.37	35	1.90
<u>Service</u>	<u>Rate</u>										
5	4.72%										
15	3.46										
25	2.37										
35	1.90										
Projected COLAs	1.3% compounded annually										
Valuation rate of interest	7.10% compounded annually, net of pension plan investment expense.										

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

Key Methods and Assumptions Used to Determine OPEB Contribution Rates:

Asset Valuation Method:	Market Value
Amortization Method:	30-Year Closed Amortization, level percentage of payroll
Remaining Amortization Period:	25 years as of July 1, 2021
Discount Rate:	6.50% per annum
Expected Return on Assets:	6.50% per annum
Salary Increases:	Varies by service from 3.00% - 8.00%
Healthcare cost and premium trend rates:	
Non-Medicare	7.70% graded to 4.34% over 20 years
Medicare	8.80% graded to 4.34% over 20 years
Medicare Part B	3.50%
Blended Medicare	7.69% graded to 4.16% over 20 years
Pre-Retirement Mortality:	SOA Pub-2010 General Employees Headcount-Weighted Mortality Table, base year 2010 and on a generational Improvement Scale MP-2020, with a 98.75% adjustment to base rates.
Healthy Retirees Mortality:	SOA Pub-2010 General Healthy Retiree Headcount-Weighted Mortality Table, base year 2010 and on a generational Improvement Scale MP-2020, with a 98.75% adjustment to base rates.
Beneficiaries:	SOA Pub-2010 General Contingent Survivors Headcount-Weighted Mortality Table, base year 2010 and on a generational Improvement Scale MP-2020, with a 98.75% adjustment to base rates.
Disabled Retirees:	SOA Pub-2010 General Disabled Retiree Headcount-Weighted Mortality Table, base year 2010 and on a generational Improvement Scale MP-2020, with a 98.75% adjustment to base rates.

See accompanying independent auditors' report.

OTHER SUPPLEMENTAL SCHEDULES

SCHEDULES OF ADMINISTRATIVE EXPENSES

Years ended June 30, 2022 and 2021

(dollars in thousands)

	2022	2021
Salaries and benefits:		
Salaries	\$ 36,038	\$ 35,141
Civil service	57	50
Employees retirement	4,451	4,383
Health and dental insurance	12,019	12,679
Overtime salaries	28	12
Social Security	2,511	2,461
Total salaries and benefits	55,104	54,726
Building occupancy expenses:		
Building, grounds and equipment	\$ 1,815	\$ 1,680
Depreciation - building and improvements	1,950	1,996
Depreciation - Equipment	146	189
Office supplies and expenses	164	114
Utilities and municipal assessments	1,127	911
Total building occupancy expenses	5,202	4,890
Computer expenses:		
Amortization/depreciation - computer equipment	\$ 1,108	\$ 1,379
Computer hardware and software	4,027	4,350
Computer maintenance and supplies	44	65
Total computer expenses	5,179	5,794
Personnel and meeting expenses:		
Board - meetings, travel and education	\$ 72	\$ 28
Delegates meeting	5	3
Pre-retirement seminars	(3)	—
Professional development	636	561
Travel and automobile expense	68	3
Other personnel expenses	116	65
Total personnel and meeting expenses	894	660
Professional and governmental services:		
Auditors - financial*	\$ 482	\$ 61
Auditors - Department of Financial Services	—	139
Disability medical examinations	96	94
Postage and cartage	804	780
Professional fees and services	1,218	688
Publications	130	152
Statutory custodian charges	136	130
Total professional and governmental services	2,866	2,044
Total administrative fund expenses	69,245	68,114
Reconciliation of contribution expense to pension and OPEB expense	(8,015)	(12,622)
Total Administrative Expenses	\$ 61,230	\$ 55,492

*Presented on an accrual basis for 2021. Expenses incurred in fiscal year 2022 when services performed.

See accompanying independent auditors' report.

OTHER SUPPLEMENTAL SCHEDULES (continued)

SCHEDULES OF INVESTMENT EXPENSES

Years ended June 30, 2022 and 2021

(dollars in thousands)

Investment Category	2022		2021	
	Fair Value of Assets Serviced or Under Management	Expenses	Fair Value of Assets Serviced or Under Management	Expenses
Externally managed/serviced assets:				
International equity	\$ 19,449,286	\$ 30,362	\$ 24,720,161	\$ 29,958
Real estate equity	16,486,742	134,387	14,839,765	94,632
Private equity	14,073,681	149,217	14,780,950	137,707
Real estate debt	5,756,791	17,590	5,083,135	15,713
Global equity	1,147,137	4,418	5,097,105	17,702
Global bonds	4,218,623	19,896	3,305,959	5,834
Domestic equity	2,950,256	5,589	2,162,554	5,729
Private debt	1,424,443	22,272	1,163,794	17,491
High-yield bonds	958,586	3,992	941,987	2,806
Sub-total	66,465,545	387,723	72,095,410	327,572
General expenses	—	11,841	—	11,968
Totals	\$ 66,465,545	\$ 399,564	\$ 72,095,410	\$ 339,540

See accompanying independent auditors' report.

OTHER SUPPLEMENTAL SCHEDULES (continued)

SCHEDULE OF CONSULTING FEES

Year ended June 30, 2022

Fees in excess of \$50,000 for outside professionals other than investment advisers.

Name	Amount	Nature
Stepstone Group LP	\$ 1,444,800	Investment Consulting
Callan LLC	652,303	Investment Consulting
Turner Construction	496,004	Construction Management
KPMG LLP	421,576	Accounting Services
Graybar Electric Company Inc	401,008	Engineering Services
WCGS Architects, P.C.	286,341	Architectural & Engineering Services
Seward & Kissel LLP	221,287	Investment Consulting
Sidley Austin LLP	171,615	Legal Services
Nixon Peabody LLP	164,727	Legal Services
Cheiron Inc.	126,627	Actuarial Consulting
Mercer Investments LLC	117,500	Investment Consulting
Linea Secure LLC	115,970	IT Professional Services
Nossaman LLP	88,750	Legal Services
DLA Piper LLP (US)	85,353	Legal Services
Hirschler Fleischer	76,501	Legal Services
Grant Thornton Public Sector LLC	75,000	Accounting Services
Katten Muchin Rosenman LLP	65,979	Legal Services
Sheppard Mullin Richter & Hampton LLP	64,497	Legal Services
Plante Moran PC	64,320	Accounting Services
Charles Law PLCC	60,637	Legal Services
JP Morgan Asset Management	59,492	Legal Services
Lisa Mari Bergqvist	57,300	MWBE Consulting
Robinson Bradshaw	54,027	Legal Services

This page intentionally left blank.



INVESTMENTS

*Over a century of providing
retirement security*

INVESTMENTS

Page

85	Report on Investment Activity
91	Asset Allocation
	Changes in Net Asset Value
92	Diversification of Investments
93	Domestic Equity Distribution
	Domestic Equity Externally Managed Style Distribution
94	International Equity Style Distribution
	Global Equity Style Distribution
95	Public Equity Holdings by Industry Distribution
	Ten Largest Public Equity Holdings
96	Public Equity Country Exposure Distribution
	Real Estate Equity by Property Type
97	Breakdown of Real Estate Equity Portfolio
	Geographical Distribution of the Real Estate Equity Portfolio
98	Private Equity Net Asset Value by Investment Type
	Private Equity Net Asset Value by Geography
99	Domestic Fixed Income and High-Yield Bonds Distribution
	Domestic Fixed Income and High-Yield Bonds Quality Distribution
100	Domestic Fixed Income Average Maturity
	Global Bonds Sector Distribution
101	Global Bonds Quality Distribution
	Ten Largest Fixed Income Holdings
102	Real Estate Debt by Property Type
	Breakdown of Real Estate Debt Portfolio
103	Geographical Distribution of the Real Estate Debt Portfolio
	Private Debt Net Asset Value by Investment Type
104	Private Debt Net Asset Value by Geography
	Cash Equivalents Sector Distribution
105	Annual Performance History
106	Investment Performance Results
107	Manager Investment Performance Results
109	Corporate Governance
	Securities Lending Program
110	Schedule of Investment Fees and Expenses
111	Investment Advisory Committee
	Real Estate Advisory Committee
112	Investment Consultants
	Master Custodian
	Securities Lending
	External Investment Managers & Advisors

Disclaimers

‡“Bloomberg®” and the “Bloomberg U.S. Aggregate Float Adjusted Bond Index” and the “Bloomberg Global Aggregate Float Adjusted Bond Index, Ex-CNY” are service marks of Bloomberg Finance L.P. and its affiliates, including Bloomberg Index Services Limited (“BISL”), the administrator of the index (collectively, “Bloomberg”) and have been licensed for use for certain purposes by New York State Teachers’ Retirement System (NYSTRS). Bloomberg is not affiliated with NYSTRS, and Bloomberg does not approve, endorse, review, or recommend NYSTRS’ data herein. Bloomberg does not guarantee the timeliness, accurateness, or completeness of any data or information relating to NYSTRS’ data herein.

Source ICE Data Indices, LLC (“ICE DATA”), is used with permission. ICE DATA, its affiliates and their respective third party suppliers disclaim any and all warranties and representations, express and/or implied, including any warranties of merchantability or fitness for a particular purpose or use, including the indices, index data and any data included in, related to, or derived therefrom. Neither ICE DATA, its affiliates nor their respective third party suppliers shall be subject to any damages or liability with respect to the adequacy, accuracy, timeliness or completeness of the indices or the index data or any component thereof, and the indices and the index data and all components thereof are provided on an “as is” basis and your use is at your own risk. ICE DATA, its affiliates and their respective third party suppliers do not sponsor, endorse, or recommend NYS Teachers’ Retirement System, or any of its products or services.

REPORT ON INVESTMENT ACTIVITY FOR FISCAL YEAR ENDING JUNE 30, 2022

Overall Objectives and Performance

NYSTRS 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. Our long-term investment philosophy has enabled the System to provide retirement security to our members since 1921.

Our net position at fiscal year-end was \$132.0 billion, and our funded ratio was 99.3% based on the June 30, 2021 actuarial value of assets.

The System's total fund return, net of fees, for the fiscal year ended June 30, 2022 was negative 7.1%, compared to the assumed rate of return of 6.95%. Our 10-year and 30-year annualized net rates of return were 8.9% and 8.5%, respectively.

Fiscal Year in Review

Volatility returned across global markets during fiscal year 2022 after declining during the second half of fiscal year 2021. Concerns in markets shifted from uncertainty about unemployment, growth prospects, and low inflation to higher, more persistent inflation and the response by central banks. Growth continued to rebound from the pandemic-induced contraction as personal consumption offset declining fiscal expenditures. Inflation increased due to supply chain disruptions, labor shortages, excess demand from high household savings, and supportive monetary policy at the onset of the fiscal year. More recently, global inflation further spiked due to increasing commodity prices arising from Russia's invasion of Ukraine.

The U.S. Federal Reserve's "dual mandate" of maximum employment and stable prices guides policy undertaken by the Federal Open Market Committee (FOMC). The U.S. unemployment rate declined to near its lowest level in over 50 years. As of June 2022, the FOMC's median expectation for their preferred measure of inflation, which excludes food and energy, in late 2022 was 4.3%, an increase of 2.2 percentage points from its expectation in June 2021 and well above its target level of 2.0%. Other measures of inflation which include the more volatile food and energy components have risen faster.

To address elevated readings of inflation and prevent higher inflation expectations from becoming entrenched, the FOMC embarked on a rate hiking cycle in March 2022. By fiscal year-end, the federal funds target rate was raised by a cumulative 150 basis points to a range of 1.50%-1.75%, with additional increases signaled throughout the remainder of the calendar year and beyond. In addition to raising the federal funds target rate, the FOMC began to reduce the size of its balance sheet (quantitative tightening) which had been used to provide additional monetary policy stimulus in response to the COVID-19 pandemic.

The majority of other global central banks were in a similar position as the Federal Reserve in terms of increasing policy rates in an effort to contain inflation within their respective economies. Select central banks have moved away from negative interest rate policies. With the about-face of global central bank monetary policy, negative yielding debt as measured by Bloomberg ended the fiscal year at \$2.1 trillion after peaking at \$18.4 trillion in December 2020.

Looking ahead, the pace and magnitude of global central bank rate increases will be dictated by the projected path of inflation and the impact these hikes have on economic growth and financial markets.

Basis of Presentation

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

Public Equities

Fiscal 2022 was a turbulent year for global equity markets. In the United States, high inflation and rising interest rates increased fears of a recession, resulting in sharp market declines for the period. The System's policy benchmark for domestic equities, the S&P 1500, fell 11.0%, with consumer discretionary and technology stocks among the worst performers. In stark contrast, energy stocks soared on rising oil prices.

REPORT ON INVESTMENT ACTIVITY FOR FISCAL YEAR ENDING JUNE 30, 2022 *(continued)*

International markets also posted negative returns for the fiscal year with the System's policy benchmark, the MSCI All Country World Ex-U.S. Index, falling 19.4% over the period. Declines were widespread, notably in China where COVID restrictions continued to impact global supply chains. Russia's invasion of Ukraine and resulting sanctions negatively impacted European markets, while U.S. dollar appreciation relative to international currencies also lowered returns for U.S.-based investors.

To minimize the impact from volatile markets, the System's public equity investments are broadly diversified across countries and industries. A significant portion of the System's domestic and international public equity investments are passively managed in strategies that, as expected, generated returns in line with the System's policy benchmarks. The remaining assets, including the allocation to global equities, are invested in actively managed strategies that produced mixed results for the period but have performed well over the long term. At the end of the period, the portfolio's domestic, international, and global allocations were modestly below their respective targets but remained well within their specified ranges.

The domestic equities portfolio, which represented 32.2% of System assets at the end of the fiscal year, declined 11.1%. The international equities portfolio, which represented 15.1% of System assets, declined 19.7%. The global equities portfolio, which represented 3.3% of System assets and is entirely comprised of active strategies, declined 16.8%, underperforming the MSCI All Country World Index by 1.0%.

Overall, NYSTRS' public equity investments declined 14.2% for the period. Despite posting a negative return for the 2022 fiscal year, over the past five years the System's public equity investments have generated an average return of 8.1% per year.

Private Equity

The target allocation for private equity is 8.0% with a range of 3.0% to 13.0%. The System invests through partnership structures that generally cover periods of 10 years or more with the goal to achieve higher long-term returns than available through public markets. The program seeks to outperform the S&P 500 by 5% over the long term. The System is focused on investing with disciplined top-performing managers who have demonstrated an ability to prudently invest across varying macroeconomic backdrops and cycles while maintaining a strong alignment of interest with NYSTRS.

The System's private equity portfolio is comprised of buyout, growth/venture capital, co-investment and turnaround/restructuring strategies that are accessed through a variety of vehicles including, but not limited to, commingled funds, fund of funds, secondary funds, and separately managed accounts.

The System has a mature, cash-flow positive private equity program diversified by both investment strategy and geographic focus. The program continues to focus on recommitting to its top-performing partnerships, while strategically adding new relationships that provide increased exposure to strategies with a track record of strong performance. The System will opportunistically seek to rebalance the private equity portfolio through secondary markets should pricing become compelling.

By fiscal year-end, the System had active commitments of \$21.7 billion across 68 fund sponsors. The private equity portfolio was valued at \$14.1 billion, representing 10.8% of the System's total assets. Unfunded commitments totaled \$6.4 billion. Over the last fiscal year, the private equity program returned 4.6%, versus the stated benchmark of negative 5.6%. Over the last 20 years, the private equity program returned 14.6%, versus the stated benchmark of 14.1%.

REPORT ON INVESTMENT ACTIVITY FOR FISCAL YEAR ENDING JUNE 30, 2022 *(continued)***Real Estate Equity**

The target allocation for equity real estate is 11.0% with a range of 6.0% to 16.0%. The System invests in equity real estate through directly owned properties, investments in commingled funds, and public real estate securities. The portfolio is diversified by geography, property type and investment structure. At the end of the fiscal year, the actual amount of System assets invested was 12.7% which increases to 15.7% when including unfunded commitments. The equity real estate portfolio returned 15.0% for the fiscal year compared to the policy benchmark of 28.3%.

The unlevered NCREIF Property Index (NPI) of privately owned core diversified properties returned 21.45% for the fiscal year. Similar to last year, the returns varied widely by property type. Industrial properties continue to be the best performing property type driven by higher rental rates due to increased demand for space to support distribution, last-mile delivery of online goods, and inventory build-up to avoid supply chain disruptions. Multifamily properties continued to be supported by tenant demand as home affordability is challenged by higher house prices and rising interest rates. Retail property values overall remained relatively stable for grocery-anchored and necessity-based shopping centers. Office returns significantly lagged the other sectors, given the uncertainty surrounding office demand due to employers continuing to offer hybrid work environments and the most recent announcements of staffing cuts.

The System's direct property portfolio generated an overall net return of 26.1% for the period, aided by strong returns in our industrial and multifamily properties. There was a stark contrast in performance between private real estate and public real estate securities during the fiscal year. The System's public real estate securities returned negative 8.46% during the fiscal year, outperforming the broader global equity markets but significantly underperforming the private real estate market. The public real estate returns are often a leading indicator of the future direction of private real estate returns; therefore, we remain focused on leasing to credit tenants and managing expenses in our directly owned properties and partnering with best-in-class investment managers in our commingled funds.

The System's Real Estate department continues to focus on long-term demand drivers to identify property sectors and geographic regions poised to provide the best long-term, risk-adjusted returns.

Fixed Income

NYSTRS manages its fixed income investments with a focus on preserving capital and generating cash flow to meet the System's current and growing \$8.0 billion annual retirement benefit obligation. These goals are accomplished by seeking returns with appropriate levels of risk. To mitigate risk, the System's internally and externally managed fixed income portfolios are well-diversified by sector, issuer and interest rate exposure. In addition, the System's internal and external portfolio managers actively monitor and manage risk while striving to generate excess returns and taking advantage of market opportunities as they arise.

The domestic, investment grade fixed income market as measured by the Bloomberg U.S. Aggregate Float Adjusted Index generated returns of negative 10.4% during the fiscal year. This performance reflected the Federal Reserve's commitment to remove accommodative monetary policy at a faster pace than previously expected in the face of persistent and elevated inflation and a continued strong labor market. The worst performing securities were those with longer maturities and lower credit quality. Among sectors, corporate bonds were hit the hardest on a combination of higher interest rates and credit spreads.

As of June 30, 2022, the internally managed domestic fixed income portfolio represented approximately 14.1% of System investments. The System's long-term bond portfolio's investment return was negative 8.3% for the one-year period ended June 30, 2022, and was 0.9% for the five-year period ended June 30, 2022. This compares to benchmark returns of negative 10.4% for the one-year period and 0.9% for the five-year period. Our portfolio's lower interest rate risk in U.S. Treasuries and corporate bonds contributed to the System's one-year return performing better than the benchmark.

In the global bond universe measured by the Bloomberg Global Aggregate Float Adjusted Ex-CNY in USD hedged to USD Bond Index, returns were negative 10.4% for the fiscal year ended June 30, 2022. The corporate and Treasuries sectors and longer maturities performed the worst. On a regional basis, European securities fared the worst on elevated and rising inflation and recession concerns, which were exacerbated by the war in Ukraine.

REPORT ON INVESTMENT ACTIVITY FOR FISCAL YEAR ENDING JUNE 30, 2022 *(continued)*

As of June 30, 2022, approximately 2.2% of System assets were invested in externally managed global bond portfolios significantly hedged to U.S. dollars. Global bonds' net return was negative 10.4% for the one-year period ended June 30, 2022, and was 1.5% for the five-year period ended June 30, 2022. This compares to benchmark returns of negative 10.4% for the one-year period and 1.0% for the five-year period. For fiscal year 2022, the portfolio's outperformance from lower interest rate risk was offset by underperformance driven by greater credit risk and currency positioning.

In the high-yield space, returns as measured by the ICE BofAML BB-B U.S. High-Yield Constrained Index were negative 12.2%. The worst performers tended to be issues with longer maturities or lower credit quality. Among sectors, financial issuers lagged industrials and utilities.

As of June 30, 2022, approximately 0.8% of System assets were invested in externally managed high-yield portfolios. Net of fees, for the one-year period, high-yield portfolios returned negative 11.8%, compared to negative 12.2% for the benchmark. Sector and security selection were the key drivers to the portfolio performing better than the benchmark during the fiscal year.

Private Debt

As of fiscal year-end, the target allocation for private debt was 2.0% with a range of 0.5% to 5.0% of total plan assets. Partnership structures typically cover periods of 10 years or more, with the objective of achieving a higher current yield than available through core/investment grade fixed income and high-yield securities. The program seeks to outperform the S&P/LSTA U.S. Leveraged Loan Index by 3.0% over the long term.

NYSTRS' strategic focus is on small-to-middle market lenders who seek outsized returns through highly negotiated situations and non-sponsor-led transactions. Given the risk-return characteristics available in the marketplace, NYSTRS will continue to target U.S. dollar denominated investment strategies to avoid taking currency risk.

The System's private debt portfolio is comprised of direct lending, mezzanine, special situation, and distressed debt investments accessed through a variety of vehicles including, but not limited to, commingled funds, separately managed accounts, fund of funds and evergreen structures.

By fiscal year-end, the System had active commitments of \$3.2 billion across 9 fund sponsors. The private debt portfolio was valued at \$1.4 billion, representing 1.1% of the System's total assets. Unfunded commitments totaled \$1.5 billion. Over the last fiscal year, the private debt program returned a time-weighted one-year return of 8.0% versus the stated benchmark time-weighted one-year return of 0.2%. Over the last five years, the private debt program returned 10.1% versus the stated benchmark of 5.9%.

Real Estate Debt

As of fiscal year-end, the target allocation for real estate debt was 6.0% with a range of 2.0% to 10.0%. The System invests in real estate debt through directly held first mortgages, subordinate/mezzanine debt (through commingled funds and separately managed accounts), and public real estate debt securities. The portfolio is diversified by geography, property type and investment structure. At the end of the fiscal year, actual invested was 5.9% which increases to 7.5% when including unfunded commitments. The debt real estate portfolio returned negative 2.8% for the fiscal year compared to the policy benchmark of negative 5.8%.

The System's directly held mortgage portfolio consists of a diverse group of first mortgage investments collateralized by high-quality, core, stabilized properties. Due to increases in interest rates during the year, all-in market yields for similar quality mortgages were in the range of 4.5%-4.75% on June 30, 2022. The System's existing mortgage portfolio was valued at a discount, due to our lower in-place weighted average coupon of 3.9% relative to market rates. While existing mortgages are valued at a discount due to higher current interest rates, the System is actively pursuing new mortgage originations which will benefit from these higher rates.

The public commercial mortgage-backed securities (CMBS) market continued to be volatile throughout the fiscal year, though far more prominent in the second half. Volatility was driven by a variety of factors, including geopolitical risk with a focus on the

REPORT ON INVESTMENT ACTIVITY FOR FISCAL YEAR ENDING JUNE 30, 2022 *(continued)*

Russia—Ukraine conflict, recession concerns, uncontrolled inflation, and the aggressiveness around the FOMC's path to raising the federal funds rate, as well as quantitative tightening to combat inflation, continued supply chain dislocation, and the yield curve inversion, among others. New issuance was relatively strong in the second half of 2021 but trailed off quickly in the first half of 2022. While reference rates and spreads stayed flat during the first half of the fiscal year, they shot up very quickly in the second half with the one-month term Secured Overnight Financing Rate (SOFR) moving from 0.05% to 1.69% and the 10-year U.S. Treasury yield (UST) going from 1.63% to 3.02%. At the same time, credit spreads also widened, creating a meaningful increase in all-in yield and buying opportunities.

The Real Estate department focuses on higher yielding single-asset/single-borrower securities and risk retention bonds. Given the elevated volatility, an additional focus was placed on higher rated AA and A securities, as well as securities that were rated below those levels but had a significant amount of credit enhancement and equity subordinate to our positions. The focus on these securities is underlying collateral/properties that are very high quality with a low loan to value of last dollar exposure. The public debt security portfolio returned negative 8.6% for the fiscal year.

To supplement the direct first mortgage and CMBS investments, the System continues to invest in senior mezzanine and bridge first mortgage loans on transitional assets with experienced, well-capitalized borrowers. These shorter-term investments can generate yields at a 250-300 basis points (bps) premium to the direct first mortgage and CMBS markets. The Real Estate department committed \$800 million to these strategies during the fiscal year.

Cash Equivalents

The System's short-term fixed income portfolio consists of high-quality securities which can easily be converted into cash for the purposes of making monthly payment of pension benefits, facilitating asset allocation, or supporting the operating commitments of the System. Securities held in this portfolio generally mature in 12 months or less.

The System's short-term portfolio has an asset allocation target of 1.0%. As of June 30, 2022, the portfolio represented 1.8% of total invested System assets, within the allowable range of 1.0% to 4.0%. At fiscal year-end, both the portfolio's weighted average maturity and weighted average life were 25 days. For the one- and five-year periods ended June 30, 2022, the System's short-term portfolio's annual return was 0.3% and 1.2%, respectively. This compares to the iMoneyNet Money Fund Averages/All-Taxable Index benchmark returns of 0.1% and 0.8% for the comparable periods.

Other Programs

Securities Lending

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

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

REPORT ON INVESTMENT ACTIVITY FOR FISCAL YEAR ENDING JUNE 30, 2022 *(continued)*

As of June 30, 2022, 1.9% of the System's assets available to lend were on loan and collateralized at 102.7%. Utilization increased slightly from 1.5% on June 30, 2021, driven primarily by the decline in the fair value of securities available to lend. Borrower demand continues to generate the majority of securities lending income, which totaled \$3.9 million for the 2022 fiscal year, compared to \$5.4 million for the fiscal year ended June 30, 2021. The unrealized gain on investments in the System's cash collateral reinvestment portfolio increased from the 2021 fiscal year, settling at \$1.9 million (including unpaid income) as of June 30, 2022.

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

Prepared by the following NYSTRS Executive Staff members:

Paul Cummins

Managing Director of Public Equities

Michael Federici

Managing Director of Fixed Income

David C. Gillan

Managing Director of Real Estate

Gerald J. Yahoudy II

Managing Director of Private Equity

ASSET ALLOCATION — as of June 30, 2022

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
Equity			
Domestic Equity	33 %	29-37%	32.2 %
International Equity	16 %	12-20%	15.1 %
Global Equity	4 %	0-8%	3.3 %
Real Estate Equity	11 %	6-16%	12.7 %
Private Equity	8 %	3-13%	10.8 %
Total Equity	72 %		74.1 %
Debt			
Domestic Fixed Income	16 %	12-20%	14.1 %
High-Yield Bonds	1 %	0-3%	0.8 %
Global Bonds	2 %	0-4%	2.2 %
Real Estate Debt	6 %	2-10%	5.9 %
Private Debt	2 %	0.5-5%	1.1 %
Cash Equivalents	1 %	1-4%	1.8 %
Total Debt	28 %		25.9 %

CHANGES IN NET ASSET VALUE

The fair value of investments presented below are based on net asset value, which differs from the financial statement presentation.

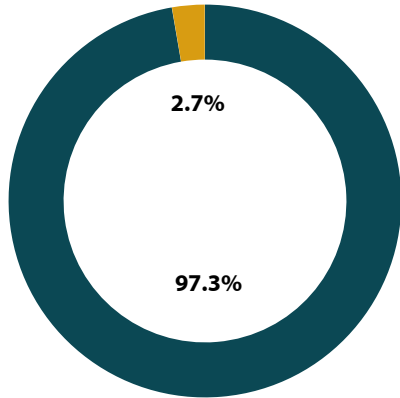
Asset Class	Net Asset Value 6/30/2021	Net Income	Net Appreciation (Depreciation)	Net Cash Inflows (Outflows)	Net Asset Value 6/30/2022
Equity					
Domestic Equity	\$ 50,079,208,958	\$ 730,374,428	\$ (5,876,449,021)	\$ (2,936,265,877)	\$ 41,996,868,488
International Equity	24,874,433,199	442,518,185	(5,210,713,701)	(510,731,864)	19,595,505,819
Global Equity	5,109,716,234	114,163,964	(947,572,066)	(50,000,000)	4,226,308,132
Real Estate Equity	14,863,611,464	489,816,739	1,780,254,814	(632,610,041)	16,501,072,976
Private Equity	14,783,218,541	(149,216,633)	917,692,857	(1,478,013,813)	14,073,680,952
Total Equity	109,710,188,396	1,627,656,683	(9,336,787,117)	(5,607,621,595)	96,393,436,367
Debt					
Domestic Fixed Income	18,895,982,168	469,945,516	(2,142,240,353)	1,138,167,695	18,361,855,026
High-Yield Bonds	950,049,466	51,649,853	(177,478,160)	150,000,000	974,221,159
Global Bonds	3,218,722,937	51,812,098	(381,363,187)	—	2,889,171,848
Real Estate Debt	7,442,475,864	312,687,478	(535,379,065)	488,586,639	7,708,370,916
Private Debt	1,163,794,312	(22,272,133)	117,213,045	165,707,857	1,424,443,081
Cash Equivalents	4,962,393,934	17,135,126	(107,951)	(2,709,929,157)	2,269,491,952
Total Debt	36,633,418,681	880,957,938	(3,119,355,671)	(767,466,966)	33,627,553,982
Total	\$ 146,343,607,077	\$ 2,508,614,621	\$ (12,456,142,788)	\$ (6,375,088,561)	\$ 130,020,990,349

DIVERSIFICATION OF INVESTMENTS — June 30, 2022

Asset Class	Net Asset Value 6/30/2022	Percent	Net Asset Value 6/30/2021	Percent
Equity:				
Public Equity (Domestic Equity, International Equity and Global Equity)				
Communications Services	\$5,013,917		\$7,166,850	
Consumer Discretionary	7,081,510		10,406,382	
Consumer Staples	4,763,774		5,086,795	
Energy	3,217,122		2,633,612	
Financials	9,230,881		10,922,458	
Health Care	8,847,607		9,383,360	
Industrials	6,526,245		8,454,558	
Information Technology	13,825,353		17,720,765	
Materials	2,918,490		3,763,602	
Other	623,574		560,843	
Real Estate	1,833,313		2,043,170	
Utilities	1,936,896		1,920,963	
Total Public Equity	<u>65,818,682</u>	50.6%	<u>80,063,358</u>	54.7%
Real Estate Equity				
Core Funds	1,972,753		1,548,534	
Direct Properties/Other Real Estate Owned	6,163,903		5,058,802	
Opportunistic Funds	2,598,609		2,005,041	
Real Estate Investment Trusts (REITs)	4,034,440		4,635,364	
Timber	283,439		300,716	
Value Added Funds	1,447,929		1,315,154	
Total Real Estate Equity	<u>16,501,073</u>	12.7	<u>14,863,611</u>	10.2
Private Equity				
Co-Investments	1,337,717		1,131,653	
Fund of Funds	720,000		931,472	
LBO/MBO	9,351,261		9,766,804	
Other	—		2,269	
Secondary Funds	178,663		335,633	
Turnaround	1,026,080		782,984	
Venture Capital	1,459,960		1,832,404	
Total Private Equity	<u>14,073,681</u>	10.8	<u>14,783,219</u>	10.1
Total Equity	<u>96,393,436</u>	74.1%	<u>109,710,188</u>	75.0%
Debt:				
Fixed Income (Domestic Fixed Income, High-Yield Bonds, Global Bonds)				
Corporate	7,700,712		8,149,328	
Global Treasuries	9,399,300		9,512,577	
Government Related	1,192,765		1,258,046	
Other	135,833		200,413	
Securitized	3,796,638		3,944,391	
Total Fixed Income	<u>22,225,248</u>	17.1	<u>23,064,755</u>	15.7
Real Estate Debt				
Commercial Mortgage Backed (CMBS)	2,249,218		1,832,006	
Core Plus	1,706,663		1,413,324	
Direct Mortgages	3,200,577		3,707,598	
Opportunistic	551,913		489,548	
Total Real Estate Debt	<u>7,708,371</u>	5.9	<u>7,442,476</u>	5.1
Private Debt				
Direct Lending	674,778		388,530	
Distressed	—		85,840	
Mezzanine	249,091		307,595	
Special Situation	500,574		381,829	
Total Private Debt	<u>1,424,443</u>	1.1	<u>1,163,794</u>	0.8
Cash Equivalents				
Corporate	1,167,659		1,763,389	
Global Treasuries	99,952		1,037,818	
Government Related	436,329		1,067,429	
Other	11,326		18,826	
Securitized	554,226		1,074,932	
Total Cash Equivalents	<u>2,269,492</u>	1.8	<u>4,962,394</u>	3.4
Total Debt	<u>33,627,554</u>	25.9%	<u>36,633,419</u>	25.0%
Total	<u>\$ 130,020,990</u>	100.0%	<u>\$ 146,343,607</u>	100.0%

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

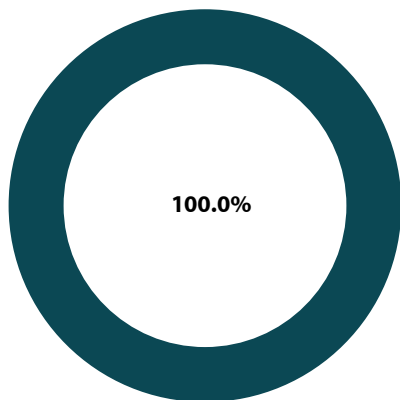
DOMESTIC EQUITY DISTRIBUTION — as of June 30, 2022



● Internal	97.3%
S&P 1500 Index2	79.8%
S&P 100 Index	3.2%
S&P 1500 Value Tilt2	2.9%
S&P 1500 Growth Tilt2	2.9%
S&P 500 Index	5.1%
S&P 600 Index	0.6%
All Cap Disciplined Equity	2.0%
S&P 400 Index	0.8%
● External	2.7%
Large Cap	2.7%

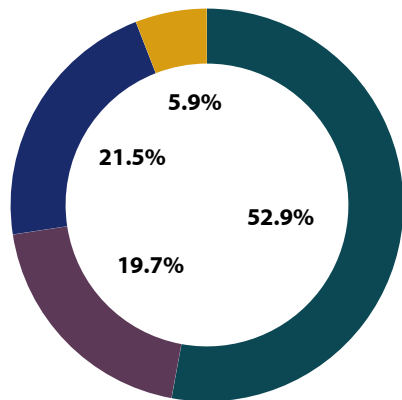
DOMESTIC EQUITY EXTERNALLY MANAGED STYLE DISTRIBUTION

— as of June 30, 2022



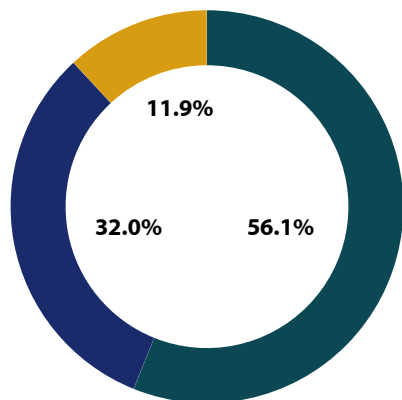
● Large Cap Enhanced	100.0%
----------------------	--------

INTERNATIONAL EQUITY STYLE DISTRIBUTION — as of June 30, 2022

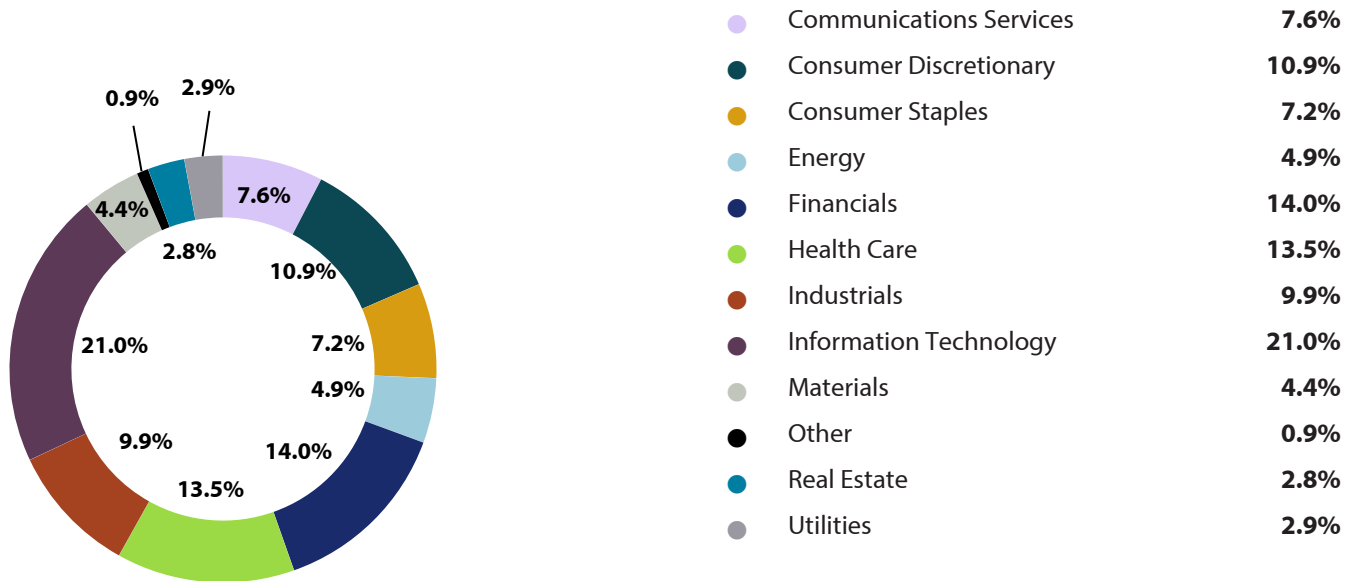


●	Developed Markets - Passive	52.9%
●	Developed Markets - Active	19.7%
●	Emerging, Frontier & Stand Alone Markets-Passive	21.5%
●	Emerging, Frontier & Stand Alone Markets - Active	5.9%

GLOBAL EQUITY STYLE DISTRIBUTION — as of June 30, 2022



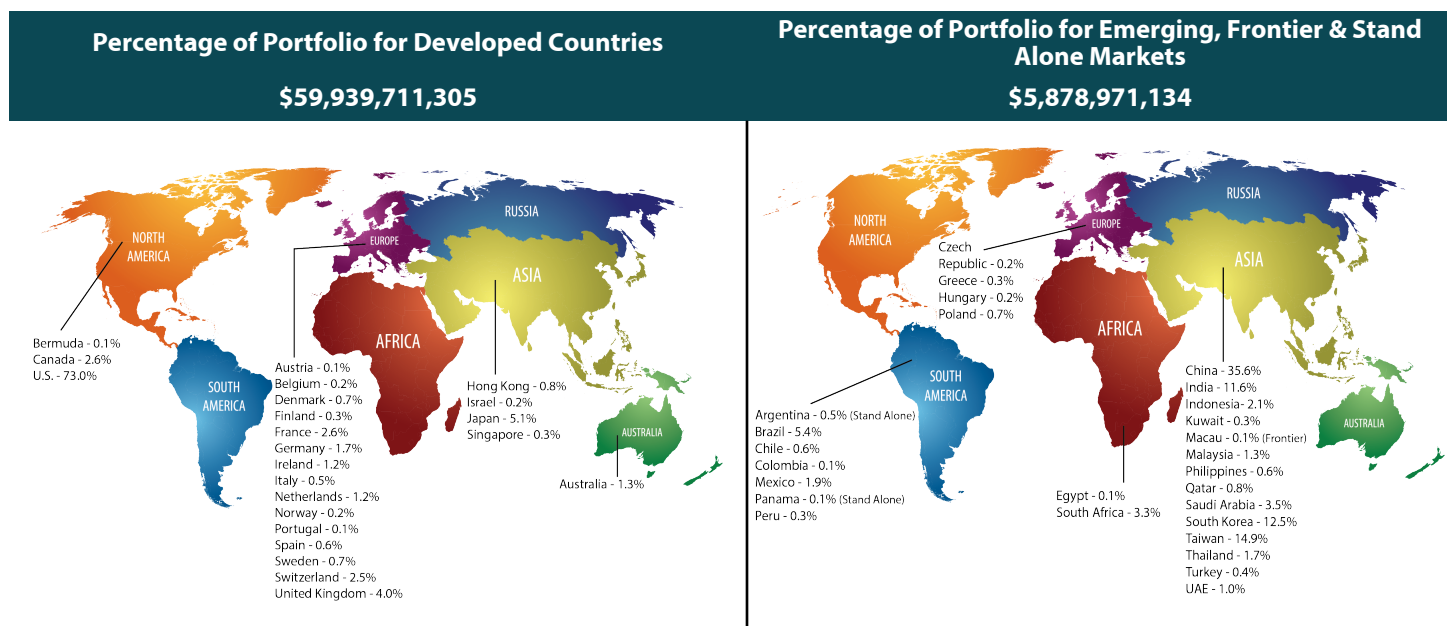
●	U.S. Markets - Active	56.1%
●	International Developed - Active	32.0%
●	International Emerging, Frontier & Stand Alone- Active	11.9%

PUBLIC EQUITY HOLDINGS BY INDUSTRY DISTRIBUTION — as of June 30, 2022

TEN LARGEST PUBLIC EQUITY HOLDINGS — as of June 30, 2022

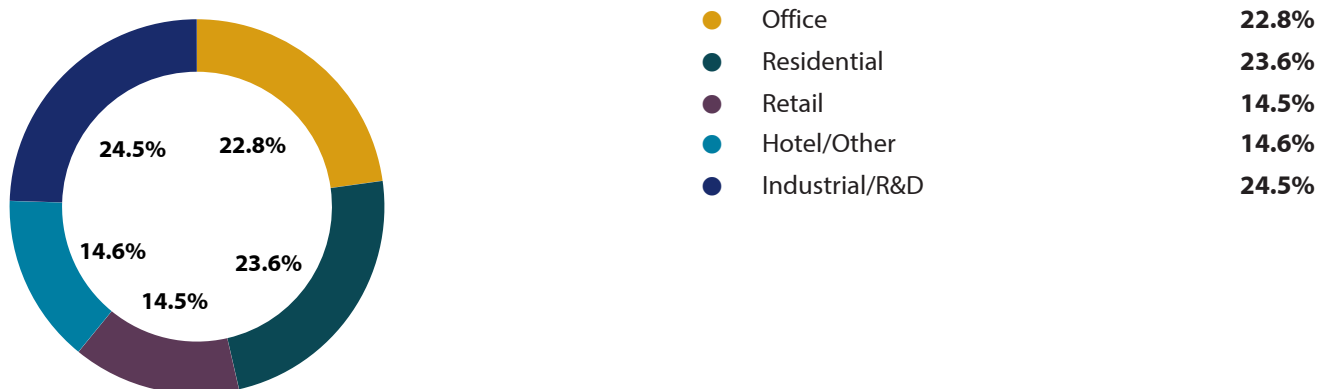
Rank	Company	Cost	Fair Value	Percent of Equities
1	Apple Inc.	\$ 107,145,561	\$ 2,627,098,453	4.0 %
2	Microsoft Corp.	310,942,697	2,484,231,322	3.8
3	Alphabet Inc.	297,947,330	1,677,430,342	2.5
4	Amazon.com Inc.	160,952,291	1,167,380,238	1.8
5	Tesla Inc.	727,294,361	693,149,859	1.1
6	UnitedHealth Group Inc.	95,776,349	663,850,852	1.0
7	Berkshire Hathaway Inc.	220,546,084	631,268,380	1.0
8	Johnson & Johnson	89,473,663	569,272,795	0.9
9	Meta Platforms Inc.	231,961,452	492,348,173	0.7
10	Nvidia Corp	55,273,394	471,538,886	0.7
Total		\$ 2,297,313,182	\$ 11,477,569,300	17.5 %

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

PUBLIC EQUITY COUNTRY EXPOSURE DISTRIBUTION — as of June 30, 2022



REAL ESTATE EQUITY BY PROPERTY TYPE — as of June 30, 2022

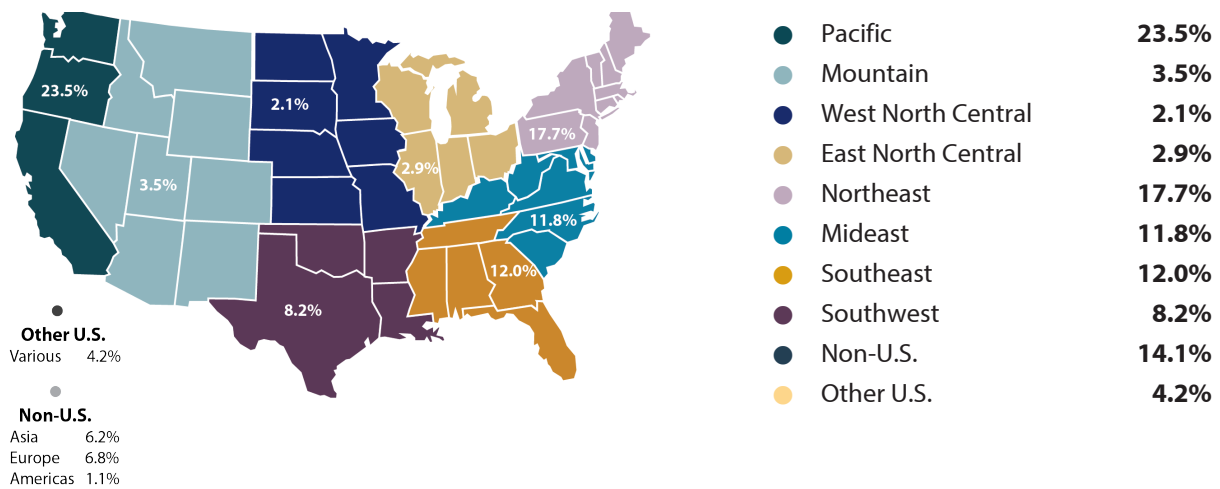


BREAKDOWN OF REAL ESTATE EQUITY PORTFOLIO — as of June 30, 2022



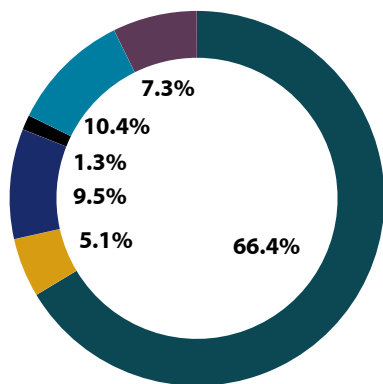
GEOGRAPHICAL DISTRIBUTION OF THE REAL ESTATE EQUITY PORTFOLIO

— as of June 30, 2022



PRIVATE EQUITY NET ASSET VALUE BY INVESTMENT TYPE*

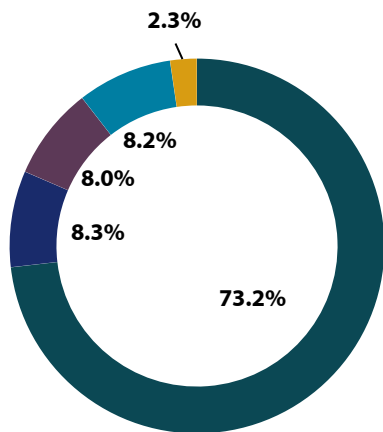
— as of June 30, 2022



● LBO/MBO	66.4%
● Fund of Funds	5.1%
● Co-Investments	9.5%
● Secondary Funds	1.3%
● Venture Capital	10.4%
● Turnaround	7.3%

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

PRIVATE EQUITY NET ASSET VALUE BY GEOGRAPHY* — as of June 30, 2022



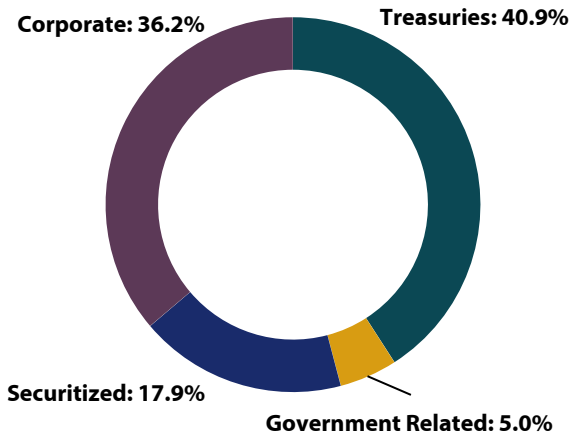
● North America	73.2 %
● Western Europe	8.3 %
● United Kingdom	8.0 %
● Asia	8.2 %
● Rest of World	2.3 %

*Excluding fund of funds and secondary funds.

DOMESTIC FIXED INCOME AND HIGH-YIELD BONDS DISTRIBUTION

— as of June 30, 2022

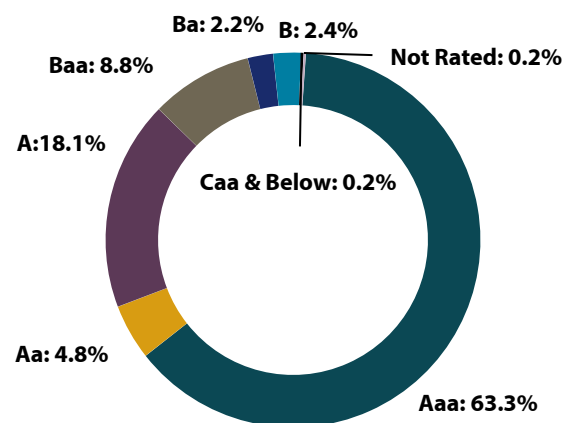
Yield to Maturity 3.8%



	Weight	Yield to Maturity
Treasuries	40.9%	2.98%
Government Related	5.0%	3.14%
Securitized	17.9%	3.79%
Corporate	36.2%	4.71%

DOMESTIC FIXED INCOME AND HIGH-YIELD BONDS QUALITY DISTRIBUTION*

— as of June 30, 2022



**	Aaa	63.3 %
	Aa	4.8 %
	A	18.1 %
	Baa	8.8 %
	Ba	2.2 %
	B	2.4 %
	Caa & Below	0.2 %
***	Not Rated	0.2 %

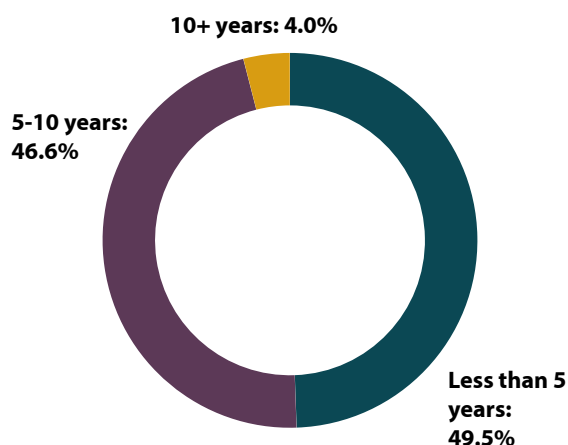
*Percentages may not sum to 100% due to rounding.

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

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

DOMESTIC FIXED INCOME AVERAGE MATURITY* — as of June 30, 2022

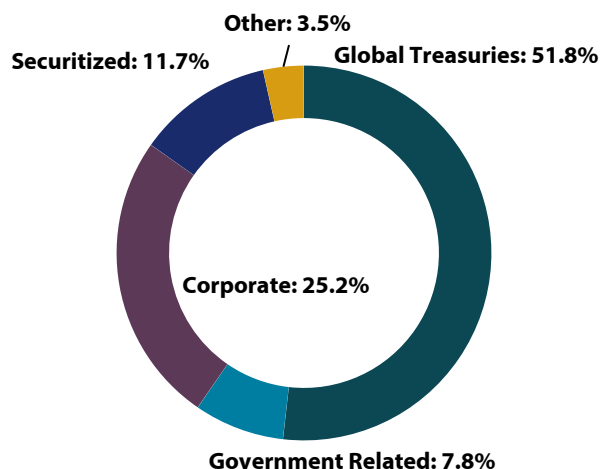
Effective Duration 5 Years



	Weight	Effective Duration in Years
● Less than 5 Years	49.5%	2.69
● 5-10 Years	46.6%	6.53
● 10+ Years	4.0%	15.34

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

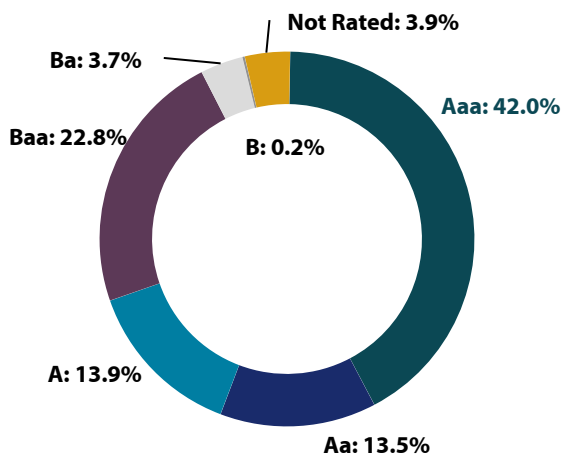
GLOBAL BONDS SECTOR DISTRIBUTION — as of June 30, 2022



● Global Treasuries	51.8%
● Government Related	7.8%
● Corporate	25.2%
● Securitized	11.7%
● * Other	3.5%

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

GLOBAL BONDS QUALITY DISTRIBUTION — as of June 30, 2022



●	Aaa	42.0%
●	Aa	13.5%
●	A	13.9%
●	Baa	22.8%
●	Ba	3.7%
●	B	0.2%
●	Caa & Below	0.0%
●	* Not Rated	3.9%

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

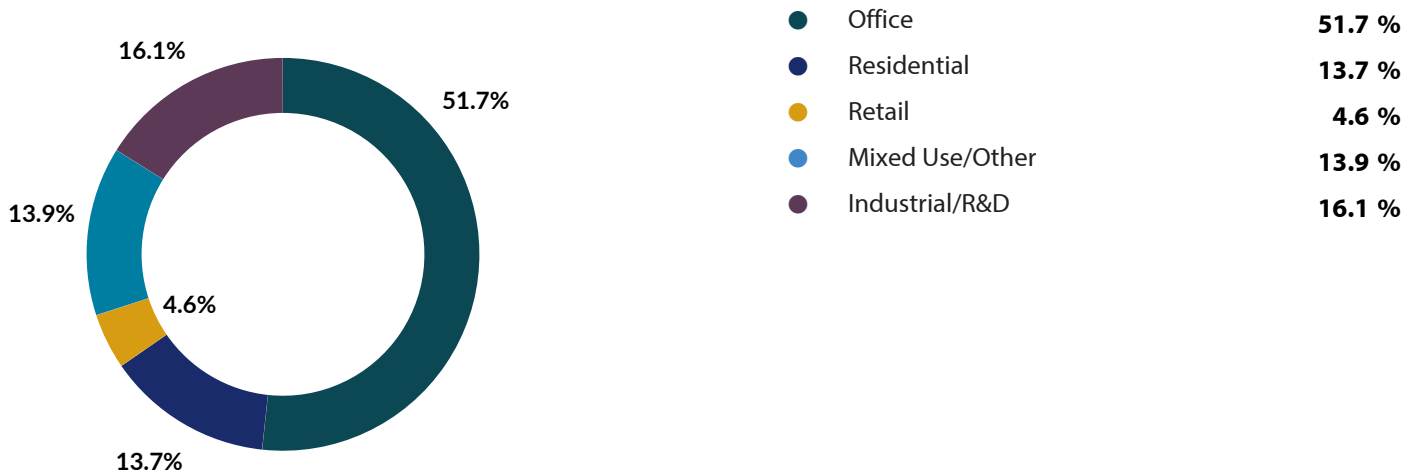
TEN LARGEST FIXED INCOME HOLDINGS* — as of June 30, 2022

Rank	Issue	Fair Value	Percent Total Fixed Income Fair Value
1	US Treasury Note 1.75% Due 11/15/2029	\$233,992,383	1.1%
2	US Treasury Note 1.125% Due 02/15/2031	178,467,369	0.8%
3	US Treasury Note 1.625% Due 05/15/2031	178,336,783	0.8%
4	US Treasury Note 1.25% Due 08/15/2031	138,186,009	0.6%
5	US Treasury Note 0.875% Due 11/15/2030	130,918,509	0.6%
6	US Treasury Note 0.625% Due 05/15/2030	127,746,637	0.6%
7	US Treasury Note 0.625% Due 08/15/2030	124,359,375	0.6%
8	US Treasury Note 2.00% Due 11/15/2041	120,308,256	0.5%
9	US Treasury Note 2.25% Due 05/15/2041	119,485,342	0.5%
10	US Treasury Note 1.75% Due 08/15/2041	113,167,035	0.5%
Total		\$1,464,967,698	6.6%

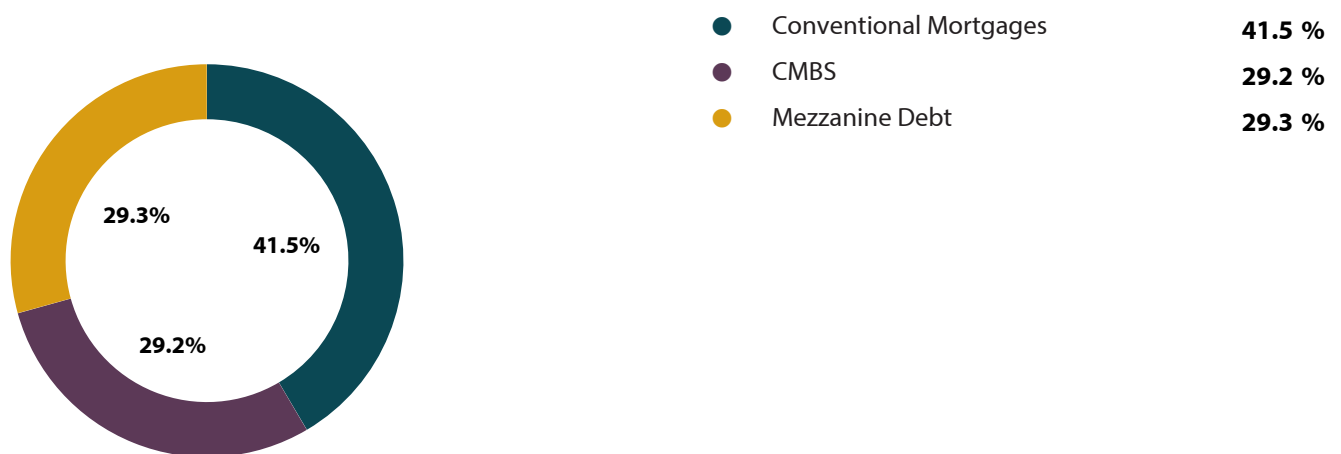
*Includes internally managed domestic and externally managed high-yield and global bond portfolios, excludes short-term portfolio holdings.

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

REAL ESTATE DEBT BY PROPERTY TYPE — as of June 30, 2022

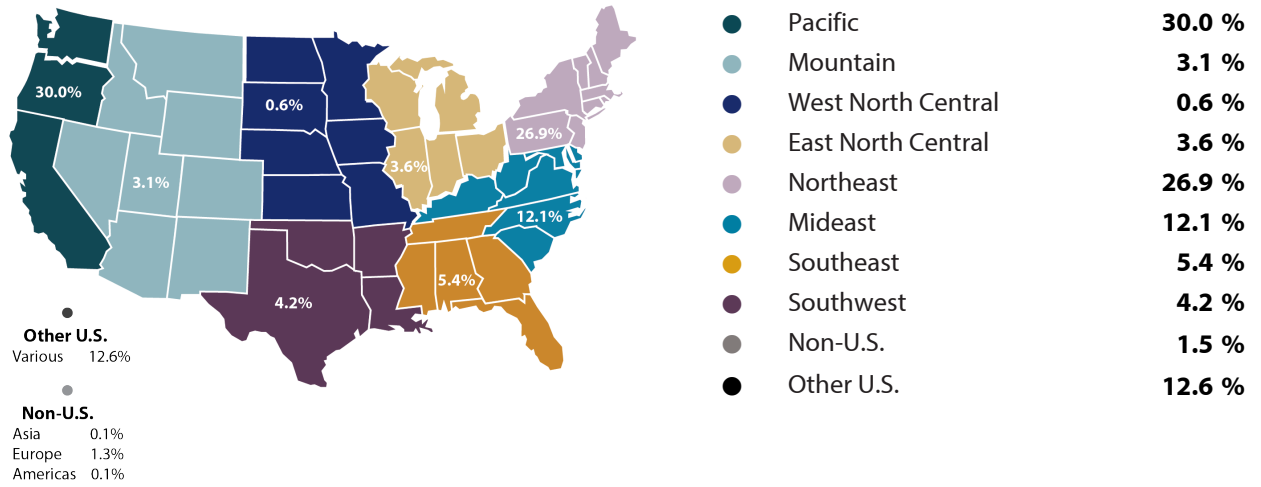


BREAKDOWN OF REAL ESTATE DEBT PORTFOLIO — as of June 30, 2022

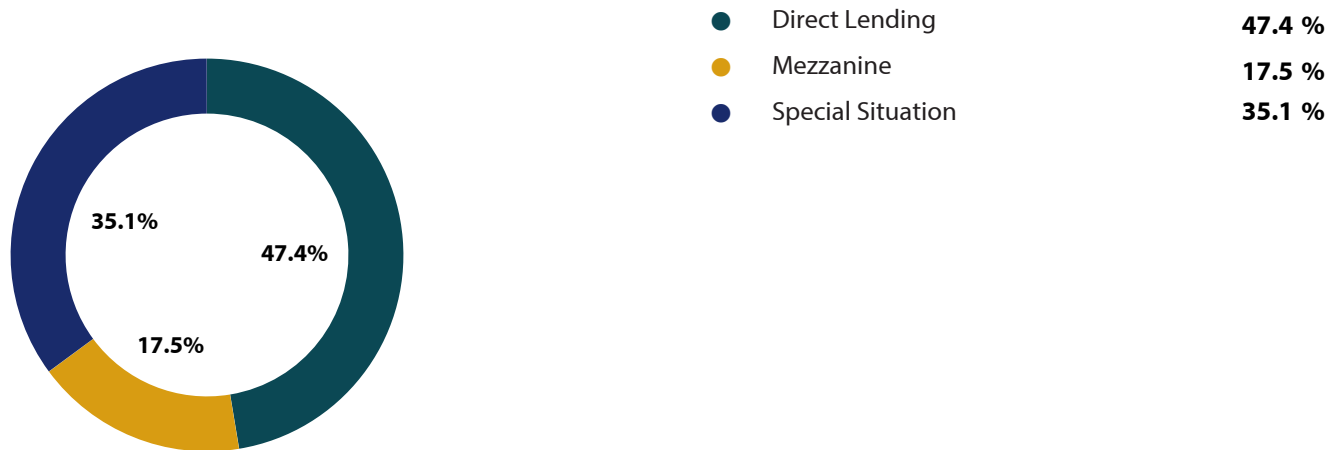


GEOGRAPHICAL DISTRIBUTION OF THE REAL ESTATE DEBT PORTFOLIO

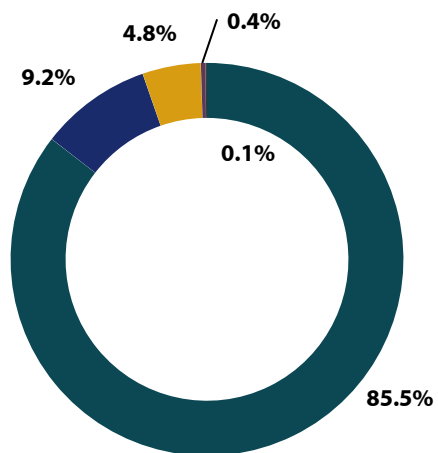
— as of June 30, 2022



PRIVATE DEBT NET ASSET VALUE BY INVESTMENT TYPE — as of June 30, 2022



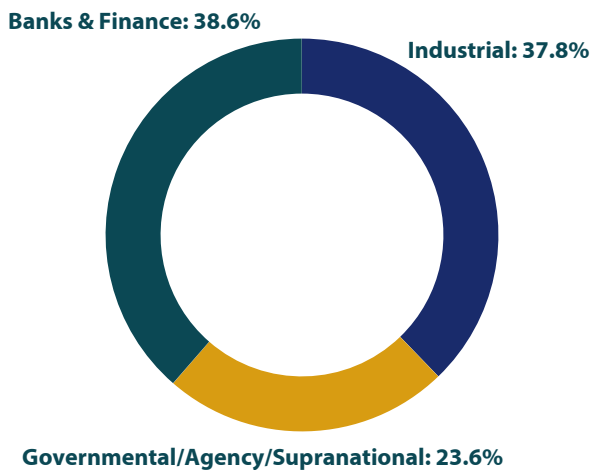
PRIVATE DEBT NET ASSET VALUE BY GEOGRAPHY* — as of June 30, 2022



● North America	85.5 %
● Western Europe	9.2 %
● United Kingdom	4.8 %
● Asia	0.4 %
● Rest of World	0.1 %

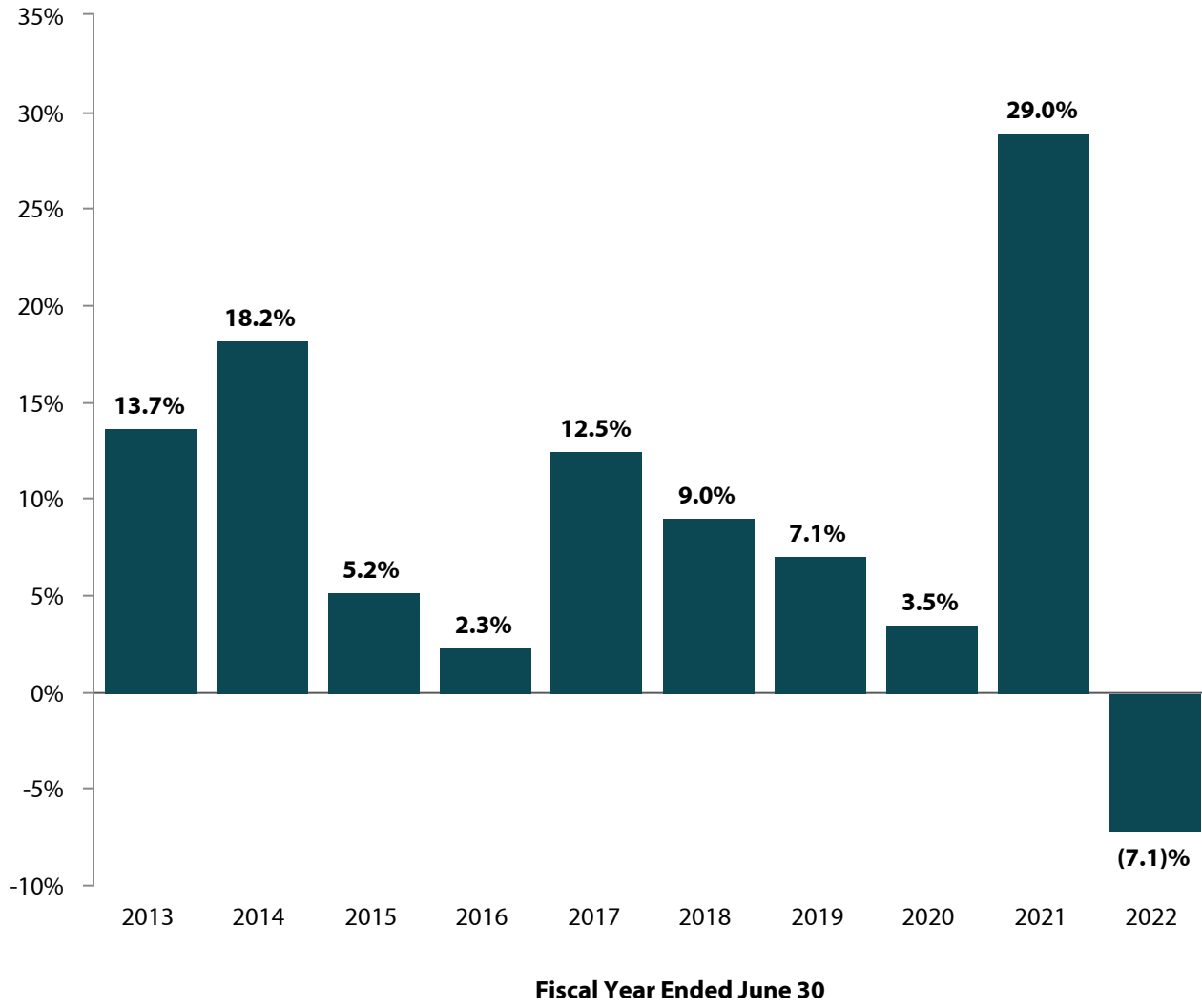
**Excluding fund of funds and secondary funds.*

CASH EQUIVALENTS SECTOR DISTRIBUTION — as of June 30, 2022



● Industrial	37.8%
● Governmental/Agency/Supranational	23.6%
● Banks & Finance	38.6%

ANNUAL PERFORMANCE HISTORY



INVESTMENT PERFORMANCE RESULTS — as of June 30, 2022

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. Some benchmarks have varied over time and those shown below are the current policy benchmarks.

	Annualized Rates of Return				
	1-YR	3-YR	5-YR	10-YR	30-YR
Domestic Equity	(11.1)%	10.3 %	10.8 %	12.7 %	10.0 %
Benchmark: S&P Composite 1500 Index	(11.0)	10.3	10.9	12.8	10.0
International Equity	(19.7)	1.9	2.9	5.3	5.4
Benchmark: MSCI ACWI Ex-U.S. Index	(19.4)	1.4	2.5	4.9	5.1
Global Equity	(16.8)	7.4	—	—	—
Benchmark: MSCI ACWI Index	(15.8)	6.2	—	—	—
Real Estate Equity	15.0	10.0	9.3	10.7	9.8
Benchmark: NCREIF - ODCE Index	28.3	12.1	10.1	10.3	8.2
Private Equity	4.6	20.1	18.1	16.6	—
Benchmark: S&P 500 Index plus 5%	(5.6)	15.6	16.3	18.0	—
Domestic Fixed Income	(8.3)	(0.5)	0.9	1.4	4.9
Benchmark: Bloomberg U.S. Aggregate Float Adjusted Bond Index ¹	(10.4)	(0.9)	0.9	1.6	4.9
High-Yield Bonds	(11.8)	(0.2)	—	—	—
Benchmark: ICE BofAML U.S. BB-B Constrained Index ¹	(12.2)	0.0	—	—	—
Global Bonds	(10.4)	(0.9)	1.5	—	—
Benchmark: Bloomberg Global Aggregate Float Adjusted Ex-CNY Bond Index (in USD hedged to USD) ¹	(10.4)	(1.5)	1.0	2.2	—
Real Estate Debt	(2.8)	2.3	3.4	4.2	6.6
Benchmark: Giliberto-Levy Custom Index	(5.8)	1.4	2.9	3.6	6.9
Private Debt	8.0	9.0	10.1	—	—
Benchmark: S&P/LSTA Leveraged Loan Index plus 3%	0.2	5.1	5.9	—	—
Cash Equivalents	0.3	0.7	1.2	0.7	2.5
Benchmark: iMoneyNet Money Fund Avg/Taxable (All)	0.1	0.4	0.8	0.4	2.1
Total Fund	(7.1)	7.4	7.7	8.9	8.5
Benchmark: Blended Benchmark	(7.4)%	6.9 %	7.6 %	8.8 %	8.2 %

¹ See footnote on the Investments divider page.

MANAGER INVESTMENT PERFORMANCE RESULTS — as of June 30, 2022

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

	Assets Managed (\$ millions)	Rates of Return from Inception ¹	Benchmark from Inception ¹	Equity Multiple ³	Inception Date
Domestic Equity					
Managers					
T. Rowe Price Associates Inc.	\$1,149.3	14.5 %	14.1 %		Jan-09
International Equity					
Managers					
AQR Capital Management LLC	906.3	4.7	4.5		Feb-12
Ariel Investments LLC	298.1	3.5	3.1		Apr-17
Arrowstreet Capital LP	729.9	7.0	1.8		Jul-17
Baillie Gifford Overseas Ltd.	655.4	6.3	4.8		Sep-11
BlackRock Institutional Trust Co. NA	6,934.4	5.4	5.2		Dec-11
Dimensional Fund Advisors	197.1	2.6	1.9		Feb-13
LSV Asset Management	767.8	3.9	3.0		Jul-11
Marathon Asset Management LLP	436.8	5.8	4.9		Jan-12
Rhumblin Advisors Limited Partnership	852.8	5.2	5.0		Jun-20
State Street Global Advisors	6,794.9	5.0	4.7		Jul-12
William Blair Investment Management LLC	676.6	5.7	3.5		Oct-10
Xponance Inc.	284.8	3.2	3.2		May-13
Global Equity					
Managers					
Arrowstreet Capital LP	1,439.5	12.6	7.0		May-19
Harding Loevner LP	1,170.1	3.8	5.4		May-18
Leading Edge Investment Advisors	450.8	8.1	7.9		Jun-20
LSV Asset Management	1,165.9	2.1	5.4		May-18
Real Estate Equity					
Advisors					
BentallGreenOak	872.4	11.4	8.5		Apr-95
Cabot Properties LP	61.3	24.4	11.0		May-19
CBRE Investment Management	295.2	17.2	10.5		Nov-18
Clarion Partners	506.6	9.2	6.9		Jun-90
Forest Investment Associates	283.4	4.4	5.2		Dec-98
Invesco Advisors Inc. - Industrial	329.7	11.0	8.5		Nov-94
Invesco Advisors Inc. - Multifamily	175.7	12.9	8.0		Dec-98
J.P. Morgan Asset Management	3,234.7	10.3	7.0		Oct-90
Sentinel Real Estate Corporation	\$683.5	13.7 %	8.6 %		Mar-96

¹ Returns for periods over 1 year are annualized.

² Return is an IRR (Internal Rate of Return), not time-weighted.

³ Equity multiples are only shown for aggregates where returns are calculated as an IRR.

MANAGER INVESTMENT PERFORMANCE RESULTS — as of June 30, 2022 (continued)

	Assets Managed (\$ millions)	Rates of Return from Inception ¹	Benchmark from Inception ¹	Equity Multiple ³	Inception Date
Real Estate Equity (continued)					
Managers					
Adelante Capital Management LLC	\$371.6	9.7 %	9.0 %		Aug-98
AEW Capital Management LP	328.5	2.1	2.5		Oct-17
Brookfield Public Securities Group LLC	318.8	1.1	2.3		Sep-17
Cohen & Steers Capital Management Inc.	1,754.2	9.5	6.5		Feb-18
Dimensional Fund Advisors	354.9	4.2	2.3		Nov-17
Heitman Real Estate Securities LLC	345.9	3.3	2.3		Sep-17
Fund Investments					
Real Estate Equity Core Funds	1,972.8	7.0	6.7		Jul-85
Real Estate Equity Opportunistic Funds	2,598.6	11.5 ²	—	1.4	Mar-99
Real Estate Equity Value-Added Funds	1,447.9	12.5 ²	—	1.5	Dec-89
Private Equity					
Fund Investments	14,073.7	13.1 ²	—	1.7	Oct-92
High-Yield Bonds					
Managers					
Columbia Management Investment Advisers, LLC	328.3	1.6	2.1		Oct-18
J.P. Morgan Investment Management Inc.	320.1	2.2	2.1		Apr-18
Nomura Corp. Research and Asset Mgt. Inc.	325.8	1.2	1.8		Dec-17
Global Bonds					
Managers					
Goldman Sachs Asset Management LP	754.6	0.8	0.7		Aug-16
Loomis, Sayles & Company LP	1,094.1	2.5	2.0		Nov-12
Wellington Management Company LLP	1,040.5	2.2	2.3		Aug-13
Real Estate Debt					
Managers					
BlackRock Financial Management Inc.	1,470.2	4.5	4.5		Apr-01
Prima Capital Advisors LLC	734.0	4.6	4.1		Nov-03
Raith Capital Partners LLC	45.0	0.6	0.6		Mar-19
Fund Investments					
Real Estate Debt Core Plus Funds	1,706.7	4.7 ²	—	1.1	Dec-04
Real Estate Debt Opportunistic Funds	551.9	0.8 ²	—	1.0	Jun-98
Private Debt					
Fund Investments	\$1,424.4	10.8% ²	— %	1.2	Jul-17

¹ Returns for periods over 1 year are annualized.

² Return is an IRR (Internal Rate of Return), not time-weighted.

³ Equity multiples are only shown for aggregates where returns are calculated as an IRR.

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, promote responsible corporate policies and activities, and enhance long-term value.

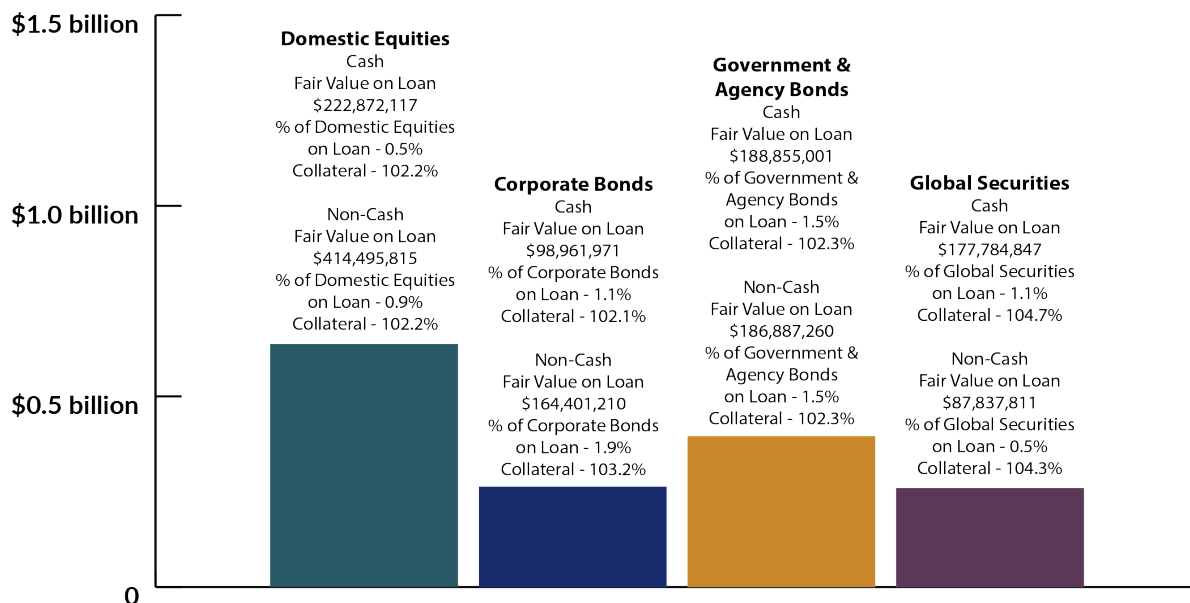
For the 2021 calendar year, a total of 136,090 proposals* were voted, many of which focused on board-related issues, ratification of auditors, and executive compensation. System policy generally supports management if the position is reasonable, not detrimental to the long-term economic prospects of the company, and does not tend to diminish the rights of shareholders.

Domestic & Canadian Portfolios			International & Global Portfolios		
Position	Number of Proposals	Percentage of Position	Position	Number of Proposals	Percentage of Position
For	16,504	88.0%	For	102,025	86.9%
Against	2,193	11.7%	Against	12,677	10.8%
Abstain	47	0.3%	Abstain	2,644	2.3%
Total	18,744	100.0%	Total	117,346	100.0%

*Proposals at companies held in multiple externally managed international and global portfolios are counted once for each portfolio.

SECURITIES LENDING PROGRAM — as of June 30, 2022

Cash: \$688,473,936 - Non-Cash: \$853,622,096 - Total: \$1,542,096,032



SCHEDULE OF INVESTMENT FEES AND EXPENSES — Year ended June 30, 2022*
(dollars in thousands)

	Assets Managed (\$ millions)	Investment Management Expenses 2021-2022		Investment Management Expenses 2021-2022
Domestic Equity:			Legal Expenses:	
Managers	\$ 1,149	\$ 4,418	Charles Law PLLC	\$ 61
			DLA Piper LLP (US)	85
International Equity:			Hirschler Fleischer	59
Managers	\$ 19,535	\$ 30,362	Katten Muchin Rosenman LLP	66
			Nixon Peabody LLP	165
Global Equity:			Nossaman LLP	89
Managers	\$ 4,226	\$ 19,896	Robinson Bradshaw	54
			Sheppard Mullin Richter & Hampton LLP	64
Real Estate Equity:			Sidley Austin LLP	172
Advisors	\$ 6,442	\$ 21,746	Other Legal Expenses	98
Managers	4,034	13,252		
Fund Investments	6,019	99,389	Total Legal Expenses:	\$ 913
Total Real Estate Equity:	\$ 16,495	\$ 134,387		
			General Expenses:	
Private Equity:			Advisory Committee - Investment	\$ 56
Fund Investments	\$ 14,074	\$ 149,217	Advisory Committee - Real Estate	93
			Abel Noser Solutions, LLC	39
High-Yield:			Callan LLC	851
Managers	\$ 974	\$ 3,992	Callan Associates	652
			Investment Information Services	5,784
Global Bonds:			JPMorgan Chase	56
Managers	\$ 2,889	\$ 5,589	Mercer Investments LLC	50
			Real Estate Origination Costs	359
Real Estate Debt:			Real Estate Professional Fees	140
Managers	\$ 2,249	\$ 3,356	Real Estate Service Costs	37
Servicers	1,226	66	State Street Corporation	1,366
Fund Investments	2,259	14,168	StepStone Group LP	1,445
Total Real Estate Debt:	\$ 5,734	\$ 17,590	Total General Expenses:	\$ 10,928
Private Debt:			Total Investment Fees and Expenses:	
Fund Investments	\$ 1,424	\$ 22,272		\$ 399,564
Total Investment Manager Fees:		\$ 387,723		

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

INVESTMENT ADVISORY COMMITTEE

Robert Levine, CFA, Chairman

Chief Investment Officer, President & CEO (Retired)
Nomura Corporate Research and Asset Management, Inc.
New York, New York

Howard J. Bicker

Executive Director/CIO (Retired)
Minnesota State Board of Investment
Saint Paul, Minnesota

Daniel J. Bukowski

Managing Partner
Net Alpha Advisors, LLC
Chicago, Illinois

Johanna Fink

President
The Hovenden Group, LLC
Charlestown, Massachusetts

Laura Hotaling

Portfolio Manager
MLC Asset Management
New York, New York

Steven Huber, CFA, FSA

*Portfolio Manager for Global Multi-Sector
Bond Strategies (Retired)*
T. Rowe Price Group, Inc.
Baltimore, Maryland

James W. O'Keefe

Managing Director (Retired)
UBS Global Asset Management
Hartford, Connecticut

June W. Yearwood

Managing Director
The Church Pension Fund
New York, New York

REAL ESTATE ADVISORY COMMITTEE

James W. O'Keefe, Chairman

Managing Director (Retired)
UBS Realty Investors LLC
Hartford, Connecticut

Herman Bulls

Vice Chairman, Americas
JLL
Washington, DC

Eileen Byrne

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

Paul J. Dolinoy

President (Retired)
Equitable Real Estate/Lend Lease
Atlanta, Georgia

Maureen A. Ehrenberg

Chief Executive Officer
Blue Skyre IBE
Chicago, Illinois

Jill S. Hatton

Managing Director (Retired)
BlackRock Inc.
Boston, Massachusetts

Daniel J. Hogarty Jr.

President and CEO (Retired)
Troy Savings Bank.
Albany, New York

Laura Huntington, CFA

President
Institutional Property Consultants
Lakewood, Washington

INVESTMENT CONSULTANTS

Abel Noser Solutions, LLC

New York, New York

Callan LLC

San Francisco, California

Mercer Investments LLC

Boston, Massachusetts

StepStone Group LP

La Jolla, California

MASTER CUSTODIAN

State Street Bank & Trust Co.

Boston, Massachusetts

SECURITIES LENDING

JPMorgan Chase Bank N.A.

New York, New York

The Bank of New York Mellon

New York, New York

EXTERNAL INVESTMENT MANAGERS & ADVISORS

Domestic Equity:

T. Rowe Price Associates Inc.

International Equity:

AQR Capital Management LLC
Ariel Investments LLC
Arrowstreet Capital LP
Baillie Gifford Overseas Ltd.
BlackRock Institutional Trust Co. NA
Dimensional Fund Advisors
LSV Asset Management
Marathon Asset Management LLP (Marathon-London)
Rhumbline Advisors Limited Partnership
State Street Global Advisors
William Blair Investment Management LLC
Xponance Inc. (Manager of Managers)

Global Equity:

Arrowstreet Capital LP
Harding Loevner LP
LSV Asset Management
Leading Edge Investment Advisors (Manager of Managers)

Real Estate Equity:

Advisors:

Abacus Capital Group LLC
BentallGreenOak
Cabot Properties LP
CBRE Investment Management
Clarion Partners
Federal Capital Partners
Forest Investment Associates
Invesco Advisers Inc.
J.P. Morgan Asset Management
Sentinel Real Estate Corporation

Managers:

Adelante Capital Management LLC
AEW Capital Management LP
Brookfield Public Securities Group LLC
Cohen & Steers Capital Management Inc.
Dimensional Fund Advisors LP
Heitman Real Estate Securities LLC
Principal Real Estate Investors LLC

Fund Investments:

Abacus Multi-Family Partners III LP
Abacus Multi-Family Partners IV LP
Abacus Multi-Family Partners V LP
Aermont Capital Real Estate Fund IV SCSP
AG Core Plus Realty Fund IV LP

EXTERNAL INVESTMENT MANAGERS & ADVISORS *(continued)***Real Estate Equity:** *(continued)***Fund Investments:** *(continued)*

AG Realty Fund VII LP
 AG Realty Fund VIII LP
 AG Realty Fund IX LP
 AG Realty Value Fund X LP
 Artemis Real Estate Partners Fund I LP
 Artemis Real Estate Partners Fund II LP
 Artemis Real Estate Partners Fund III LP
 Artemis Real Estate Partners Fund IV LP
 BentallGreenOak US Cold Storage LP
 BlackRock Europe Parallel Property Fund II LP
 BlackRock Europe Property Fund III LP
 Blackstone BioMed Life Science Real Estate LP
 Blackstone Real Estate Partners Asia LP
 Blackstone Real Estate Partners Asia II LP
 Blackstone Real Estate Partners Europe IV LP
 Blackstone Real Estate Partners Europe V LP
 Blackstone Real Estate Partners Europe Fund VI SCSp
 Blackstone Real Estate Partners V TE2 LP
 Blackstone Real Estate Partners VI TE2 LP
 Blackstone Real Estate Partners VII TE1 LP
 Blackstone Real Estate Partners VIII LP
 Blackstone Real Estate Partners IX LP
 Brockton Capital Fund III LP
 Brookfield DC Office Partners LLC
 Brookfield DTLA Holdings LLC
 Brookfield Properties Office Partners Inc.
 Brookfield Real Estate Secondaries Account (N) LP
 Brookfield Strategic Real Estate Partners III LP
 Cabot Industrial Core Fund LP
 Cabot Industrial Core Fund II LP
 Cabot Industrial Value Fund V LP
 Cabot Industrial Value Fund VI LP
 CBRE Strategic Partners Europe III LP
 CBRE Strategic Partners U.S. Opportunity 5 LP
 CBRE Strategic Partners U.S. Value Fund 7 LP
 Cerberus Institutional Real Estate Partners LP - Series Two
 Cerberus Institutional Real Estate Partners III LP
 Clarion Development Ventures III LP
 DLJ Real Estate Capital Partners III LP
 DLJ Real Estate Capital Partners IV LP
 Excelsior II LLC
 Exeter Europe Industrial Core Fund SCSp
 Exeter Europe Logistics Value Fund IV SCSp
 Exeter Industrial Value Fund LP
 Exeter Industrial Value Fund II LP
 Exeter Industrial Value Fund III LP
 Exeter Industrial Value Fund IV LP
 Exeter Industrial Value Fund V LP
 FCP Realty Fund II LP
 FCP Realty Fund III LP
 FCP Realty Fund IV LP
 FCP Realty Fund V LP
 Gateway Real Estate Fund IV LP
 Gateway Real Estate Fund V LP
 Gateway Real Estate Fund VI LP
 GCM Grosvenor - NYSTRS RE Inv. Partners LP
 GCM Grosvenor - NYSTRS RE Inv. Partners LP 2016-1
 GCM Grosvenor - NYSTRS CRE Opportunity Partners LP
 GCM Grosvenor - NYSTRS RE Inv. Partners LP 2018-1
 GCM Grosvenor - NYSTRS RE Inv. Partners LP 2021-1
 GreenOak US III LP
 Harrison Real Estate Partners VIII LP
 Heritage Fields LLC
 LaSalle Asia Opportunity Fund III
 Lone Star Fund III (U.S.) LP
 Lone Star Fund IV (U.S.) LP
 Lone Star Fund V (U.S.) LP
 Lone Star Fund VI (U.S.) LP
 Lone Star Fund VII (U.S.) LP
 Lone Star Fund IX (U.S.) LP
 Lone Star Fund X (U.S.) LP
 Lone Star Fund XI LP
 Lone Star Real Estate Fund II (U.S.) LP
 Lone Star Real Estate Fund III (U.S.) LP
 Northwood Real Estate Partners LP - Series VI
 Northwood Real Estate Partners LP - Series VIII
 NYSTRS/FCP Multifamily Preferred Equity and Mezzanine Program
 O'Connor North America Property Partners LP
 O'Connor North America Property Partners II LP
 Pennybacker EIV LP
 Pennybacker V LP
 Penwood Select Industrial Partners IV LP
 Penwood Select Industrial Partners V LP
 Penwood Select Industrial Partners VI LP
 Perella Weinberg Real Estate Fund II LP
 PLA Residential Fund III LP
 PRISA I
 PRISA II
 PRISA III
 PW Real Estate Fund III LP
 Rockpoint Finance Fund I LP
 Rockpoint Growth and Income Real Estate Fund I LP
 Rockpoint Growth and Income Real Estate Fund II LP
 Rockpoint Growth and Income Real Estate Fund III LP
 Rockpoint Real Estate Fund II LP
 Rockpoint Real Estate Fund III LP
 Rockpoint Real Estate Fund IV LP
 Rockpoint Real Estate Fund V LP
 Rockpoint Real Estate Fund VI LP
 Rockwood Capital Real Estate Partners Fund VI LP
 Rockwood Capital Real Estate Partners Fund VII LP
 Starwood Distressed Opportunity Fund IX LP
 Starwood Global Opportunity Fund VII-A LP
 Starwood Opportunity Fund X Global LP
 Starwood Opportunity Fund XI Global LP
 TA Realty Logistics Fund LP
 UBS Trumbull Property Fund
 Walton Street Real Estate Fund VI LP
 WB SJC Residential Site Partnership LP
 Westbrook Real Estate Fund VI LP
 Westbrook Real Estate Fund VII LP
 Westbrook Real Estate Fund VIII LP
 Westbrook Real Estate Fund IX LP

EXTERNAL INVESTMENT MANAGERS & ADVISORS *(continued)*

Real Estate Equity: *(continued)*

Fund Investments: *(continued)*

Westbrook Real Estate Fund X LP
Westbrook Real Estate Fund XI LP

Westbrook Real Estate Partners LP (Fund V)

Private Equity:

Fund Investments:

A&M Capital Partners II, LP
A&M Capital Partners III, LP
Abbott Select Buyouts Fund
Abbott Select Buyouts Fund II
Abbot Select EM Buyouts LP
ABRY Partners Fund V
ABRY Partners Fund VI
ABRY Partners Fund VII
ABRY Partners Fund VIII
ABRY Partners IX LP
ADV Opportunities Fund II LP
Advent GPE X
Aisling Capital II LP
Aisling Capital III LP
Amulet Capital Fund I LP
Amulet Capital Fund II LP
Amulet Capital Overage Fund I LP
Apex VI
Ares Corporate Opportunities Fund II LP
Ares Corporate Opportunities Fund III LP
Ares Corporate Opportunities Fund IV LP
Ares Corporate Opportunities Fund V LP
Astorg VII
BGH Capital Fund I LP
CapStreet IV LP
CapStreet V LP
Capvis Equity V LP
Carlyle Asia Partners IV LP
Carlyle Asia Partners V LP
Carlyle European Partners III LP
Carlyle Partners V LP
Carlyle/Riverstone Global Energy & Power Fund III
Chisholm Partners III
Chryscapital VIII LP
Cinven III
Cinven IV
Cinven V
Cinven VI
Cinven VII
Cinven Strategic Financials Co-Investment Fund LP
Cinven Strategic Financials Fund LP
Clayton Dubilier & Rice VI
Clearlake Capital Partners III LP
Clearlake Capital Partners IV LP
Clearlake Capital Partners V LP
Clearlake Capital Partners VI LP
Clearlake Capital Partners VII, LP
Co-Investment Partners (NY) LP
Co-Investment Partners (NY) II LP
Co-Investment Partners (NY) III LP
Co-Investment Partners Europe LP

Cortec Group Fund V LP
Cortec Group Fund VI LP
Cortec Group Fund VII LP
Cressey & Co. V LP
Cressey & Co. Fund VI LP
Cressey & Co. Overage Fund VI LP
CVC Capital Partners Asia Pacific IV LP
CVC Capital Partners VI LP
CVC European Equity Partners V LP
DCP Capital Partners LP
DCP Capital Partners II LP
ECI 11 LP
EIV Capital III LP
EIV Capital Fund IV LP
EIV Capital IV Top-Up Fund LP
Energy Capital Partners II LP
Energy Capital Partners III LP
GCM Grosvenor Cleantech
GCM Grosvenor Seasoned Primaries
GCM Grosvenor Seasoned Primaries II
GCM Grosvenor Seasoned Primaries III
Gilde Buy-Out Fund V CV
Gilde Buy-Out Fund VI
GTCR Fund VIII
GTCR Fund X
GTCR Fund XI
GTCR Fund XII
GTCR Fund XIII
Hahn & Company III LP
Hahn & Company III-S LP
HarbourVest International PEP IV
HarbourVest International PEP V
HarbourVest International PEP VI - Asia Pacific Fund
HarbourVest Partners VII-Mezzanine Fund
HarbourVest Partners VII-Venture Fund
HarbourVest Partners VIII-Venture Fund
HarbourVest VI - Partnership Fund
HarbourVest/The Maple Fund (Tranche H1)
HarbourVest/The Maple Fund (Tranche H2)
HarbourVest/The Maple Fund (Tranche H3)
HarbourVest/The Maple Fund (Tranche N1)
HarbourVest/The Maple Fund (Tranche N2)
HarbourVest/The Maple Fund (Tranche N3)
HarbourVest/The Maple Fund (Tranche N4)
HarbourVest/The Maple Fund (Tranche N5)
HarbourVest/The Maple Fund (Tranche N6)
HarbourVest/NYSTRS Co-Investment Fund
HarbourVest/NYSTRS Co-Investment Fund II
HarbourVest/NYSTRS Co-Investment Fund III, LP
Hg Genesis 10 A LP
Hg Saturn 3 A LP

EXTERNAL INVESTMENT MANAGERS & ADVISORS *(continued)***Private Equity:** *(continued)***Fund Investments:** *(continued)*

Hellman & Friedman VI LP
 Hellman & Friedman VII LP
 Hellman & Friedman VIII LP
 Hellman & Friedman IX LP
 Hellman & Friedman X LP
 HIPEP Select Asia Fund LP
 HIPEP Select Asia II LP
 HIPEP Select Asia III LP
 IK Fund VII LP
 IK Fund VIII LP
 IK Small Cap II Fund
 Industri Kapital 2007 Fund
 Inflexion 2010 Buyout Fund
 Inflexion Buyout Fund IV LP
 Inflexion Buyout Fund V LP
 Inflexion Enterprise Fund IV LP
 Inflexion Enterprise Fund V LP
 Inflexion Partnership Capital Fund LP
 Inflexion Partnership Capital Fund II LP
 Inflexion Strategic Partners LP
 Inflexion Supplemental Fund IV LP
 Inflexion Supplemental Fund V LP
 Institutional Venture Partners XIV LP
 Institutional Venture Partners XV LP
 JFL Equity Investors V LP
 Kinderhook Capital Fund VI LP
 Kinderhook Capital Fund 7 LP
 KKR Asian Fund II LP
 Lexington Capital Partners V
 Lexington Capital Partners VI
 Lexington Capital Partners VII
 Lexington Emerging Partners LP
 Lexington Middle Market Investors
 Lexington Middle Market Investors II
 Lightspeed Venture Partners IX LP
 Lightspeed Venture Partners X LP
 Lightspeed Venture Partners Select LP
 Linden Capital Partners Fund IV LP
 Linden Capital Partners Fund V LP
 Livingbridge 7 LP
 Lovell Minnick Partners Fund V LP
 LS Power Equity Partners IV LP
 Madison Dearborn Capital Partners V
 MBK Partners Fund IV LP
 MBK Partners Fund V LP
 Metalmark Capital Partners LP
 Mill Point Capital Partners II LP
 Monomoy Capital Partners III LP
 Monomoy Capital Partners IV LP
 Nautic V LP
 Nautic VI LP
 Nautic VII LP
 Nautic Partners VIII LP
 Nautic Partners IX LP
 Nautic Partners X LP
 NMS Fund III LP
 NMS Fund IV LP
 Olympus Growth Fund V
 Olympus Growth Fund VI
 One Rock Capital Partners II LP
 One Rock Capital Partners III LP
 P123 Ltd
 PBPE V LP
 Pacific Equity Partners Fund V LP
 Pacific Equity Partners Fund VI LP
 Patria - Private Equity Fund VI LP
 Phoenix Equity Partners 2010 Fund
 Phoenix Equity Partners 2016 Fund
 Pine Brook Capital Partners LP
 Pine Brook Capital Partners II LP
 Primavera Capital Fund III LP
 Primavera Capital Fund IV LP
 Rhone Partners IV LP
 Rhone Partners V LP
 Riverstone/Carlyle Global Energy and Power Fund IV
 Silver Lake Partners II LP
 Silver Lake Partners III LP
 Silver Lake Partners IV LP
 Silver Lake Partners V LP
 Silver Lake Partners VI LP
 Siris Partners III LP
 Siris Partners IV LP
 SK Capital Partners V LP
 SK Capital Partners VI LP
 SK Capital Partners Overage V LP
 SKCP Catalyst Fund I LP
 Spark Capital Growth Fund II LP
 Spark Capital Partners IV LP
 Spark Capital Partners V LP
 StepStone Pioneer Capital Europe I LP
 StepStone Pioneer Capital Europe II LP
 StepStone Pioneer Capital Fund III LP
 Sterling Group Partners III LP
 Sterling Group Partners IV LP
 Sterling Group Partners V LP
 Strategic Partners III - Venture LP
 Strategic Partners III LP
 Strategic Partners IV - VC LP
 Strategic Partners IV LP
 Strategic Partners V LP
 Sycamore Partners III LP
 Tailwater Energy Fund III LP
 Tailwater Energy Fund IV LP
 TCV IX LP
 TCV X LP
 TCV XI LP
 TDR Capital IV LP
 Technology Crossover Ventures V
 Technology Crossover Ventures VI
 Technology Crossover Ventures VII
 Tenex Capital Partners II LP
 Tenex Capital Partners III LP
 The First Capital Access Fund LP
 Thoma Bravo Discover Fund LP

EXTERNAL INVESTMENT MANAGERS & ADVISORS *(continued)*

Private Equity: *(continued)*

Fund Investments: *(continued)*

Thoma Bravo Discover Fund II LP
 Thoma Bravo Discover Fund III LP
 Thoma Bravo Fund X
 Thoma Bravo Fund XI LP
 Thoma Bravo Fund XII LP
 Thoma Bravo Fund XIII LP
 Thoma Bravo Fund XIV LP
 Thoma Bravo Special Opportunities Fund I LP
 Thoma Bravo Special Opportunities Fund II LP
 Thomas H. Lee VI
 TPG Partners IV
 TPG Partners V
 TPG Partners VI
 Trident VII LP
 TSG6 LP
 TSG7 A LP
 TSG7 B LP
 TSG8 LP
 TSG9 LP
 Valor Equity Partners Opportunity Fund I LP
 Valor Equity Partners IV LP
 Valor Equity Partners V LP
 Valor Equity Partners VI LP
 Veritas Capital Buyout Fund VI LP
 Vista Equity Partners Fund IV
 Waud Capital Partners III LP
 Waud Capital Partners IV LP

High-Yield Bonds:

Columbia Management Investment Advisors LLC
 J.P. Morgan Investment Management Inc.
 Nomura Corp. Research and Asset Mgt. Inc.

Global Bonds:

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

Real Estate Debt:

Managers:

Blackrock Financial Management Inc.
 Prima Capital Advisors LLC
 Raith Capital Partners LLC

Fund Investments:

Artemis Real Estate Partners Debt Fund LP
 Barings Real Estate Credit Strategies Account-NY LP
 Blackstone Real Estate Debt Strategies II LP
 Blackstone Real Estate Debt Strategies IV LP
 Blackstone Real Estate Debt Strategies High-Grade LP
 Brookfield Real Estate Finance Fund IV LP
 Brookfield Real Estate Finance Fund V LP
 Brookfield Real Estate Finance Fund VI LP
 Brookfield Senior Mezzanine Real Estate Finance Fund LP
 Brookfield Senior Real Estate Finance Account (N) LP

Real Estate Debt: *(continued)*

Fund Investments: *(continued)*

Capri Select Income II
 GCM Grosvenor - NYSTRS Debt Inv. Partners LP
 GCM Grosvenor - NYSTRS Debt Inv. Partners LP 2018-1
 GCM Grosvenor - NYSTRS Debt Inv. Partners LP 2021-1
 Madison Realty Capital Debt Fund III LP
 PCCP Mezzanine Recovery Partners I LP
 Pramerica Real Estate Capital IV LP
 Prima Capital Advisors LLC
 Raith Real Estate Debt Separate Account
 Sullivan Debt Fund LP
 TCI Real Estate Partners Fund II LP

Private Debt:

Fund Investments:

ABRY Advanced Securities Fund II
 ABRY Advanced Securities Fund III
 ABRY Advanced Securities Fund IV
 ABRY Mezzanine Partners
 ABRY Senior Equity Fund II
 ABRY Senior Equity Fund III
 ABRY Senior Equity Fund IV
 ABRY Senior Equity Fund V
 ABRY Senior Equity VI
 AG Capital Recovery Partners VII LP
 Blue Torch Credit Opportunities Fund II LP
 Blue Torch Credit Opportunities Fund III LP
 Caltius Partners IV LP
 Clearlake Flagship Plus Partners LP
 Clearlake Opportunities Partners LP
 Clearlake Opportunities Partners II LP
 Clearlake Opportunities Partners III LP
 Comvest Credit Partners V LP
 Comvest Credit Partners VI LP
 H.I.G. Whitehorse Direct Lending 2020 Fund LP
 H.I.G. Whitehorse Principal Lending Fund
 ICG Europe Fund V
 ICG Europe Fund VI
 ICG Europe Fund VII
 ICG North American Private Debt Fund II LP
 MGG SF Evergreen Fund LP
 MGG Special Opportunities Fund LP
 Oaktree European Principal Fund III L
 Orion Energy Credit Opportunities Fund II LP
 Orion Energy Credit Opportunities Fund III LP
 Peninsula Fund V
 Peninsula Fund VII
 WCAS Capital Partners IV



ACTUARIAL

*Over a century of providing
retirement security*

ACTUARIAL

Page

119	Actuarial Certification Letter
121	Summary of Plan Provisions and Actuarial Methods and Assumptions
122	Actuarial Present Value of Future Benefits

Funding Progress

123	Funding Progress Analysis of Funding Progress Percent Funded
124	Solvency Test Analysis of Financial Experience
125	History of Member Payroll and the Employer Contribution Rate Schedule of Retired Members and Beneficiaries Added to and Removed from the Benefit Payroll
126	Independent Actuarial Review

ACTUARIAL CERTIFICATION LETTER



New York State Teachers' Retirement System

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

Thomas K. Lee, Executive Director & CIO

Office of the Actuary

October 27, 2022

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

Dear Members of the Board:

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

The most recently completed actuarial valuation was made as of June 30, 2021. 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. We believe the member and financial data to be reasonable and appropriate for purposes of this valuation. Plan provisions are summarized in both the introduction section and the financial section of this report.

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. Assumptions are typically revised every five years. The actuarial assumptions used in the June 30, 2021 valuation were adopted by the Retirement Board in October 2021 and first effective with the June 30, 2021 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 as part of the annual normal rate calculation over the present value of future salaries of active members. This method is an appropriate contribution allocation procedure for the purpose of ongoing plan funding and having sufficient assets to pay benefits as they become due. 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 actuarial cost method for funding differs from that used for financial reporting purposes as required by the Governmental Accounting Standards Board.

ACTUARIAL CERTIFICATION LETTER *(continued)*

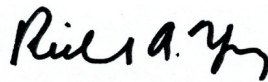
The System's market value rate of return on assets for the fiscal year ending June 30, 2021 was 29.0%. The System's five-year annualized rate of return stood at 11.9%. The June 30, 2021 actuarial valuation produced a required employer contribution rate of 10.29% of payroll, representing an increase of 5% over the prior year's rate of 9.80%. The change in actuarial assumptions, offset by the investment gain related to the System's rate of return assumption was the primary reason for the increase in the employer contribution rate.

Looking ahead to next year, the capital markets produced returns significantly below expectations during the fiscal year ending June 30, 2022. The System's total fund net rate of return was negative 7.1% for the fiscal year. This will lower the System's five-year annualized rate of return to 7.7%. The actuarial value of assets smoothing method recognizes gains and losses gradually over a five-year period, thereby moderating their impact on the employer contribution rate.

The plan's funded ratio, as of June 30, 2021, calculated using the Actuarial Value of Assets (AVA) was 99.3% and calculated using the Market Value of Assets (MVA) was 113.0%. While the funded ratios will fluctuate from year to year, a funded ratio of 100% is desirable and indicative of a well-funded System. The primary reason for this healthy funded ratio is that, in accordance with statute, the System has collected the actuarially required contribution annually from employers. The significance of this cannot be overstated. It does not, however, imply that future contributions will not be required. A 10-year schedule of actuarially determined and actual contributions made are provided as required supplementary information in the financial section. Various exhibits in the actuarial section provide further information on the actuarial assets, liabilities, and the funding level. More detailed information can be found in the System's Actuarial Valuation Report.

All actuarial calculations have been prepared using actuarial assumptions and methods determined in accordance with generally accepted actuarial principles, procedures, and standards of practice as prescribed by the Actuarial Standards Board, and Statements of the Governmental Accounting Standards Board, where applicable. All schedules in the actuarial section were prepared under my direction. Specifically, these schedules consist of the Summary of Actuarial Methods and Assumptions, Actuarial Present Value of Future Benefits, Analysis of Funding Progress, Percent Funded, Solvency Test, Analysis of Financial Experience, History of Member Payroll and the Employer Contribution Rate, and Schedule of Retired Members and Beneficiaries Added to and Removed from the Benefit Payroll. I am a member of the Society of Actuaries and the American Academy of Actuaries and meet the qualification standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,



Richard A. Young, ASA, EA, MAAA, FCA
Chief Actuary

cc: T. Lee

SUMMARY OF PLAN PROVISIONS AND ACTUARIAL METHODS AND ASSUMPTIONS — as of June 30, 2021

Plan Provisions

Plan Provisions are summarized in the Introduction section and Notes to the Financial Statements. Detailed Plan Provisions are available in the annual Actuarial Valuation Report and online at NYSTRS.org. All Plan Provisions and all changes in Plan Provisions are valued as part of the Actuarial Valuation.

Methods

Actuarial funding method: Aggregate Cost Method (gains and losses are smoothed over the average future working lifetime of active members). All benefits are included in the actuarial valuation. See *Summary of Benefits* in the Introduction.

Actuarial asset valuation method: Five-year phased-in deferred recognition of each year's net investment income/loss, in excess of (or less than) the assumed gain for each year in the five-year period.

Assumptions

Assumptions are computed by the Actuary and were adopted by the Retirement Board in October 2021. They are based upon recent NYSTRS member experience. Selected sample rates are shown below. Detailed assumption information may be found in NYSTRS' annual Actuarial Valuation Report.

Valuation Rate of Interest 6.95% compounded annually. The valuation rate of interest contains a 2.40% assumed annual rate of inflation.

Projected COLA Rate 1.3% annually

Base Rates of Mortality*					
Active Members			Retired Members		
Age	Male	Female	Age	Male	Female
30	0.03%	0.02%	60	0.35%	0.26%
40	0.05	0.03	70	0.94	0.62
50	0.10	0.07	80	3.84	2.62
60	0.26	0.16	90	13.57	10.98
Disabled Members			Survivor and Beneficiaries		
Age	Male	Female	Age	Male	Female
30	0.47%	0.34%	30	0.04%	0.02%
40	0.77	0.72	40	0.07	0.04
60	2.65	2.14	60	0.64	0.41
80	6.96	5.95	80	4.52	3.27

Rates of Salary Increase Including Cost-of-Living, Merit and Productivity	
Years of Service	Rate
5	5.18%
15	3.64
25	2.50
35	1.95

Rates of Withdrawal	
Years of Service	Male
5	4.67%
15	0.84
20	0.50
25	0.32
Years of Service	Female
5	4.86%
15	0.98
20	0.43
25	0.25

Rates of Service Retirement (By Years of Service)				
Male Age	5 - 20 Years	20 - 30 Years	30+ Years	
55	1.69%	3.69%	35.74%	
60	3.25	7.49	31.11	
65	13.52	28.48	31.11	
70	17.84	34.58	25.91	
Female Age	5 - 20 Years	20 - 30 Years	30+ Years	
55	2.20%	4.89%	36.05%	
60	3.67	8.58	32.94	
65	13.46	30.66	34.52	
70	16.93	27.62	26.82	

Rates of Disability Retirement	
Age	Male
35	0.02%
40	0.03
45	0.06
50	0.10
Age	Female
35	0.02%
40	0.03
45	0.08
50	0.13

No assumption is made for optional forms of benefit available at retirement because options are actuarially equivalent to the single life benefit.

There are no other specific assumptions or significant events that have a material impact on the most recent Actuarial Valuation.

*Future annuitant mortality rates are the annuitant mortality base rates adjusted for mortality improvement using Society of Actuaries Scale MP-2020.

ACTUARIAL PRESENT VALUE OF FUTURE BENEFITS

— as of June 30, 2021 and June 30, 2020

(in thousands)

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

	2021	2020
Present Value of Benefits Currently Being Paid:		
Service Retirement Benefits	\$ 68,662,650	\$ 65,897,141
Disability Retirement Benefits	413,056	375,951
Death Benefits	2,523	2,083
Survivor Benefits	1,169,906	1,150,016
Cost-of-Living Allowance	5,052,489	4,889,298
Total Present Value of Benefits Currently Being Paid	75,300,623	72,314,489
Present Value of Benefits Payable in the Future to Current Active Members:		
Service Retirement Benefits	65,619,677	60,165,966
Disability Retirement Benefits	632,570	238,303
Termination Benefits	1,735,183	2,298,335
Death and Survivor Benefits	501,731	439,006
Cost-of-Living Allowance	1,490,590	1,346,999
Total Active Member Liabilities	69,979,750	64,488,609
Present Value of Benefits Payable in the Future to Current Inactive (Vested) Members:		
Retirement Benefits	492,184	426,494
Death Benefits	269	346
Cost-of-Living Allowance	41,246	35,125
Total Vested Liabilities	533,698	461,965
Unclaimed Funds	24,600	22,012
Total Actuarial Present Value of Future Benefits	\$ 145,838,672	\$ 137,287,075

Note: Totals may not sum due to rounding.

FUNDING PROGRESS

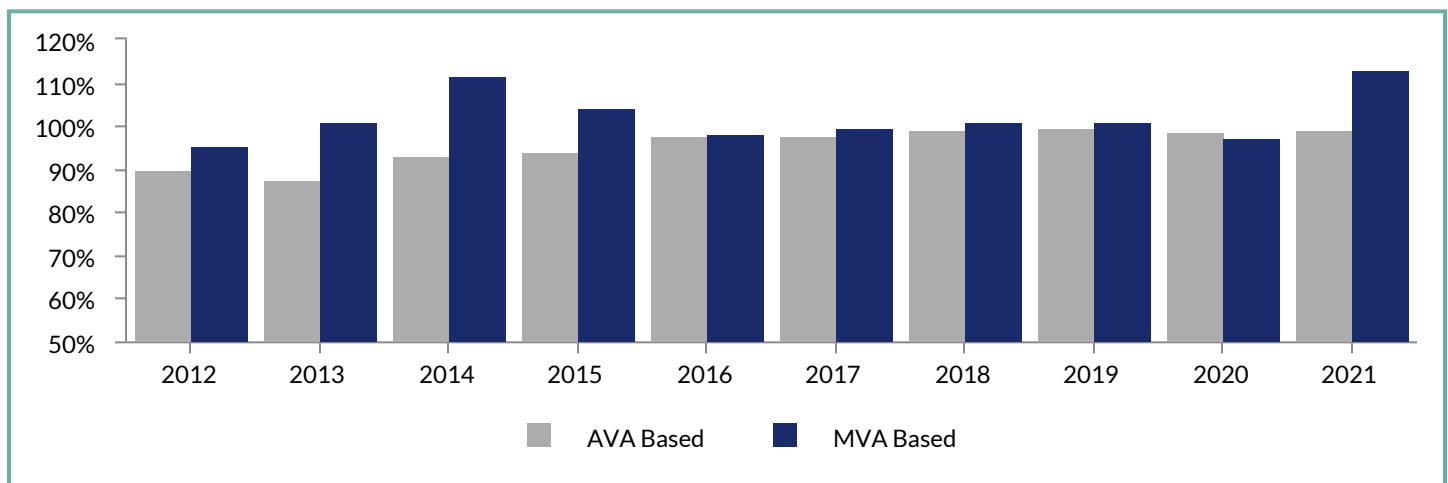
The portion of the actuarial present value of future benefits that is attributed to service rendered as of the valuation date is known as the actuarial accrued liability. In order to effectively assess the funding progress of a retirement system, it is necessary to compare the ratio of plan assets to 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 smooths the volatility inherent in the market value of assets by phasing in unexpected gains and losses over a period of five years, and represents more of an average value. The Retirement System’s funding method has allowed the accumulation of assets appropriate for the funding of its liabilities in a systematic and reasonable manner.

ANALYSIS OF FUNDING PROGRESS

(in millions)

Fiscal Year Ended	Market Value of Assets (MVA)	Actuarial Value of Assets (AVA) ¹	Actuarial Accrued Liability ²	Unfunded Actuarial Accrued Liability (Surplus)	Annual Member Payroll	Unfunded Actuarial Accrued Liability as a Percentage of Payroll	Percent Funded Based On	
							MVA	AVA
2012	\$88,056.3	\$82,871.4	\$92,250.9	\$9,379.5	\$14,640.8	64.1 %	95.5 %	89.8 %
2013	95,367.0	82,742.5	94,583.8	11,841.3	14,647.8	80.8	100.8	87.5
2014	108,155.1	90,007.1	96,904.5	6,897.4	14,771.3	46.7	111.6	92.9
2015	109,718.9	99,301.8	105,401.8	6,100.0	15,021.4	40.6	104.1	94.2
2016	107,506.1	107,039.2	109,305.1	2,265.9	15,431.0	14.7	98.4	97.9
2017	115,468.4	113,059.7	115,672.5	2,612.8	15,846.7	16.5	99.8	97.7
2018	119,915.5	117,859.5	118,861.1	1,001.6	16,288.9	6.1	100.9	99.2
2019	122,477.5	120,586.9	121,049.3	462.4	16,691.6	2.8	101.2	99.6
2020	120,479.5	122,400.4	123,801.7	1,401.3	16,973.2	8.3	97.3	98.9
2021	148,148.5	130,173.8	131,077.4	903.6	16,973.2	5.3	113.0	99.3

PERCENT FUNDED



¹ The Retirement System’s asset valuation method was changed effective with the June 30, 2015 actuarial valuation.

² Effective June 30, 2006, the Actuarial Accrued Liability is calculated under the Entry Age Normal Cost Method, including the Group Life Insurance Fund, as was required by Governmental Accounting Standards Board (GASB) Statement No. 50 prior to its replacement by GASB Statement No. 67. The System is funded in accordance with the Aggregate Cost Method. GASB Statement No. 50 required that the Entry Age Normal Cost Method be used to calculate the accrued liability for purposes of presenting the funded percentage.

SOLVENCY TEST

(in millions)

Fiscal Year Ended	Aggregate Accrued Liabilities* for:			Actuarial Value of Assets (D)	Percentage of Aggregate Accrued Liabilities Covered by Actuarial Value of Assets		
	Active Member Accumulated Contributions (A)	Current Retired Members and Beneficiaries (B)	Service Rendered by Active Members (Employer-Financed Portion) (C)		(A)	(B)	(C)
	2012	\$4,256.4	\$56,197.6		\$31,796.9	\$82,871.4	100.0 %
2013	4,366.3	57,681.9	32,535.6	82,742.5	100.0	100.0	63.6
2014	4,457.8	59,190.2	33,256.5	90,007.1	100.0	100.0	79.3
2015	4,555.1	64,504.9	36,341.8	99,301.8	100.0	100.0	83.2
2016	4,657.8	65,858.4	38,788.9	107,039.2	100.0	100.0	94.2
2017	4,751.2	68,736.2	42,185.1	113,059.7	100.0	100.0	93.8
2018	4,844.9	70,128.9	43,887.3	117,859.5	100.0	100.0	97.7
2019	5,114.7	70,971.4	44,963.2	120,586.9	100.0	100.0	99.0
2020	5,397.7	72,839.6	45,564.4	122,400.4	100.0	100.0	96.9
2021	5,696.0	75,887.8	49,493.6	130,173.8	100.0	100.0	98.2

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

ANALYSIS OF FINANCIAL EXPERIENCE

The table below shows, for each potentially significant experience source, the effect on the employer contribution rate due to the difference between actual experience and that predicted by the actuarial assumptions. A positive number (+) represents an actuarial loss and the negative numbers (-) represent an actuarial gain.

Experience Source	Change in the Employer Contribution Rate during Fiscal Year Ended	
	June 30, 2021	June 30, 2020
Revised Actuarial Assumptions:	+4.50%	-0.25%
Net Investment (Gain)/Loss:	-3.64	+0.38
Salary/Service:	-0.10	-0.06
New Entrants:	-0.08	-0.07
Withdrawal:	+0.02	+0.03
Mortality:	+0.04	+0.05
Retirement:	+0.13	+0.11
Pension Payments:	-0.07	-0.07
Cost-of-Living Adjustment:	+0.02	-0.03
Change in the Administrative Rate:	+0.01	0.00
Miscellaneous:	-0.34	+0.18
Total Change in Employer Contribution Rate	+0.49%	+0.27%
Employer Contribution Rate at Prior Year-End	9.80%	9.53%
Employer Contribution Rate at Year-End	10.29%	9.80%

HISTORY OF MEMBER PAYROLL AND THE EMPLOYER CONTRIBUTION RATE*

Fiscal Year Ended	Participating Employers	Active Members	Annual Member Payroll (in millions)	Percentage Increase in Annual Member Payroll	Average Full-Time Member Salary	Percentage Increase in Average Full-Time Member Salary	Employer Contribution Rate (Percent of Payroll)
2013	827	273,328	\$14,647.8	0.0%	\$76,348	1.9%	11.84%
2014	824	270,039	14,771.3	0.8	77,585	1.6	16.25
2015	822	267,715	15,021.4	1.7	78,695	1.4	17.53
2016	821	266,350	15,431.0	2.7	79,813	1.4	13.26
2017	822	264,761	15,846.7	2.7	80,951	1.4	11.72
2018	824	264,590	16,288.9	2.8	82,071	1.4	9.80
2019	823	263,517	16,691.6	2.5	84,078	2.4	10.62
2020	822	261,232	16,973.2	1.7	84,985	1.1	8.86
2021	821	259,158	16,973.2	0.0	86,307	1.6	9.53
2022	822	263,475	17,715.3	4.4	88,698	2.8	9.80

*For recent changes in the actuarial methods and assumptions, plan provisions, or significant events, please refer to the annual Actuarial Valuation Report and the Report on Recommended Actuarial Assumptions.

SCHEDULE OF RETIRED MEMBERS AND BENEFICIARIES ADDED TO AND REMOVED FROM THE BENEFIT PAYROLL*

Fiscal Year Ended	Number of Retired Members and Beneficiaries		Annual Benefit of Retired Members and Beneficiaries		Total Number of Retired Members and Beneficiaries	Total Annual Benefit**	Percentage Increase in Total Annual Benefit	Average Annual Benefit	Percentage Increase in Average Annual Benefit
	Added During the Year	Removed During the Year	Added During the Year	Removed During the Year					
2013	6,776	3,766	\$327,889,400	\$104,595,554	152,822	\$ 6,272,678,556	3.7%	\$41,046	1.6%
2014	7,003	3,894	332,495,800	110,681,561	155,931	6,494,492,795	3.5	41,650	1.5
2015	6,679	4,152	314,972,220	123,973,317	158,458	6,685,491,698	2.9	42,191	1.3
2016	6,719	4,029	318,693,576	122,540,821	161,148	6,881,644,453	2.9	42,704	1.2
2017	6,880	4,210	332,625,259	131,259,139	163,818	7,083,010,573	2.9	43,237	1.2
2018	6,951	4,484	342,878,955	144,338,778	166,285	7,281,550,750	2.8	43,790	1.3
2019	7,424	4,506	366,842,566	149,818,310	169,203	7,498,575,006	3.0	44,317	1.2
2020	8,205	4,839	417,236,881	163,825,172	172,569	7,751,986,715	3.4	44,921	1.4
2021	8,205	4,984	429,827,431	175,457,944	175,790	8,006,356,202	3.3	45,545	1.4
2022	7,812	5,033	421,461,528	185,748,482	178,569	8,242,069,248	2.9	46,156	1.3

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

**Annual benefits paid in this chart may differ from retirement benefit payments that appear elsewhere in this report because this chart reflects the rate of annual payment for retired members and their beneficiaries in pay as of the last day of the fiscal year.

**Plante Moran, PC**

P.O. Box 307
 3000 Town Center, Suite 100
 Southfield, MI 48075
 Tel: 248.352.2500
 Fax: 248.352.0018
 plantemoran.com

To the Retirement Board**Re: New York State Teachers' Retirement System**

As part of our audit of the financial statements of the New York State Teachers' Retirement System (the "System") for the year ended June 30, 2022, we performed procedures on the actuarial assumptions, methods, and procedures used by the System's actuary to calculate the employer contributions for the System to determine the reasonableness of the employer contributions reported in the System's June 30, 2022 basic financial statements. As part of those procedures, an actuary from our firm reviewed the following for reasonableness as compared to Actuarial Standard of Practice (ASOP) No. 4, *Measuring Pension Obligations*, as adopted by the Actuarial Standards Board:

- The actuarial assumptions, methods and procedures described in the System's actuarial valuation report as of June 30, 2020 used to derive the resultant employer contribution rate of 9.80 percent applied to employer payroll for the fiscal year ended June 30, 2022
- The System's experience studies incorporated in the System's actuarial report as of June 30, 2020 and the opinions of the System's actuary presented therein

Based on the results of the above procedures, we determined that the methods, procedures, and actuarial assumptions used to develop the employer contributions reported in the System's 2022 basic financial statements appeared reasonable in the context of ASOP No. 4.

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

A handwritten signature in black ink that reads "Plante Moran, PC".

PLANTE MORAN, PC

October 27, 2022



STATISTICAL

*Over a century of providing
retirement security*

STATISTICAL

The objective of the statistical section is to provide financial statement users with historical perspective, context and detail to assist in using the information in the financial statements, notes to financial statements, and required supplementary information to better understand and assess the economic condition of NYSTRS. This section relies on a snapshot of member data provided by the participating employers to the Retirement System taken at the end of each fiscal year.

Demographic & Economic Information

The schedules on pages 129-141 are intended to assist users in understanding the environment within which NYSTRS operates and to provide information that facilitates comparison of financial statement information over time and among similar entities. The demographic and economic information schedules presented are:

Page

129	Number of Active Members, Retired Members and Beneficiaries of Deceased
130	Distribution of Active Members by Age and Years of Service Distribution of Active Members by Age
131	Distribution of Active Members by Service
132	Active Members and Annuitants 1922-2022
133	Number of Active Members by Tier
134	Retirement Statistics
136	Retirement Benefit Options and Percent of Election Retired Members' Characteristics by Year of Retirement
137	Distribution of Benefits Paid by County
138	Distribution of Retired Members and Beneficiaries by Tier History of the Number of New Retirees
139	Retired Members and Beneficiaries With Monthly Benefits by Decade of Retirement Distribution of the Annual Benefit of All Retired Members
140	History of the Monthly COLA
141	Distribution of Monthly COLA Increase Commencing September 2022 Distribution of Cumulative Monthly COLA Commencing September 2022

Financial Trends Information

The schedules on pages 142-145 are intended to assist users in understanding and assessing how the financial position of NYSTRS has changed over time. The financial trend schedules presented are:

Page

142	Changes in Fiduciary Net Position
143	Breakdown of Income Sources
144	Benefits and Return of Contributions by Type

Operating Information

The schedules on pages 146-151 are intended to provide contextual information about the operations and resources of NYSTRS to assist readers in using financial statement information. The operating information schedules are:

Page

146	Average Benefit Payments
148	Retired Members and Beneficiaries by Type of Benefit
150	Principal Participating Employers

Demographic & Economic Information

ACTIVE MEMBERS:

	Male	Female	Total
June 30, 2021	60,592	198,566	259,158
Changes During Year:			
Added	3,329	12,373	15,702
Withdrawn	1,031	3,039	4,070
Retired	1,453	5,682	7,135
Died	69	111	180
June 30, 2022	61,368	202,107	263,475

MEMBERS RETIRED FOR:

	Service*			Disability			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
June 30, 2021	49,020	117,993	167,013	414	1,641	2,055	49,434	119,634	169,068
Changes During Year:									
Retired	1,432	5,593	7,025	21	89	110	1,453	5,682	7,135
Died	1,801	2,593	4,394	27	88	115	1,828	2,681	4,509
Lump Sum	14	62	76	0	0	0	14	62	76
Restored to Active Membership	0	0	0	0	2	2	0	2	2
June 30, 2022	48,637	120,931	169,568	408	1,640	2,048 **	49,045	122,571	171,616

BENEFICIARIES OF DECEASED:

	Service Annuitants			Disability Annuitants			Active Members			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
June 30, 2021	1,539	4,807	6,346	113	161	274	21	81	102	1,673	5,049	6,722
Changes During Year:												
Added	211	456	667	0	4	4	2	4	6	213	464	677
Died	102	325	427	4	8	12	1	6	7	107	339	446
June 30, 2022	1,648	4,938	6,586	109	157	266	22	79	101	1,779	5,174	6,953

SUMMARY:

	Male	Female	Total
Active Members	61,368	202,107	263,475
Retired Members	49,045	122,571	171,616
Beneficiaries	1,779	5,174	6,953
Total	112,192	329,852	442,044

*Also includes vested retirees.

**Includes 13 males and 32 females retired for disability who receive a service benefit.

DISTRIBUTION OF ACTIVE MEMBERS BY AGE AND YEARS OF SERVICE*

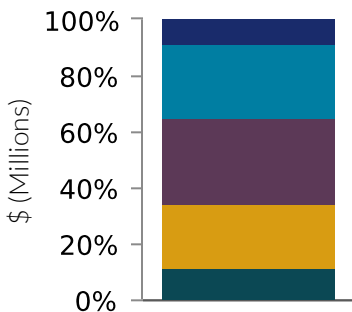
— as of June 30, 2022

Age		Years of Credited Service					
		0-5	6-10	11-15	16-20	21-25	26-30
20-24	Count of Members	8,850	0	0	0	0	0
	Average Salary	\$44,964	\$0	\$0	\$0	\$0	\$0
25-29	Count of Members	20,243	1,385	0	0	0	0
	Average Salary	\$56,546	\$66,949	\$0	\$0	\$0	\$0
30-34	Count of Members	15,993	11,154	1,140	0	0	0
	Average Salary	\$61,093	\$71,003	\$81,680	\$0	\$0	\$0
35-39	Count of Members	10,427	8,470	11,251	2,111	2	0
	Average Salary	\$59,585	\$72,193	\$84,927	\$96,036	\$103,392	\$0
40-44	Count of Members	8,345	5,940	7,371	15,757	2,704	1
	Average Salary	\$57,161	\$70,822	\$86,359	\$101,039	\$109,757	\$136,094
45-49	Count of Members	6,398	4,704	4,117	9,091	15,114	1,266
	Average Salary	\$53,906	\$65,332	\$82,415	\$103,126	\$113,394	\$121,013
50-54	Count of Members	5,605	4,733	3,932	5,668	11,075	10,085
	Average Salary	\$49,011	\$60,764	\$76,634	\$95,487	\$112,207	\$119,397
55-59	Count of Members	3,750	2,943	2,828	4,005	5,045	5,398
	Average Salary	\$47,653	\$55,623	\$68,117	\$87,596	\$104,223	\$117,625
60-64	Count of Members	2,327	1,479	1,520	2,743	3,185	2,153
	Average Salary	\$47,397	\$53,723	\$61,883	\$81,691	\$95,372	\$108,179
65-69	Count of Members	1,021	550	518	870	919	533
	Average Salary	\$47,761	\$53,217	\$71,247	\$84,087	\$93,023	\$100,773
70+	Count of Members	500	232	182	227	236	148
	Average Salary	\$40,538	\$51,533	\$60,041	\$72,680	\$84,191	\$90,210
Total	Count of Members	83,459	41,590	32,859	40,472	38,280	19,584
	Average Salary	\$56,040	\$68,613	\$81,634	\$97,456	\$109,456	\$117,080

*Average salary data is for the 192,198 members who earned a full year of service. The average salary for all active members, full-time and part-time, is \$79,715.

DISTRIBUTION OF ACTIVE MEMBERS BY AGE

— as of June 30, 2022



Age Group	Percent
60+ Years of Age	8%
50-59 Years of Age	26%
40-49 Years of Age	31%
30-39 Years of Age	23%
20-29 Years of Age	12%

AVERAGES

— as of June 30, 2022

Gender	Age	Years of Service
Female	44	12
Male	44	14

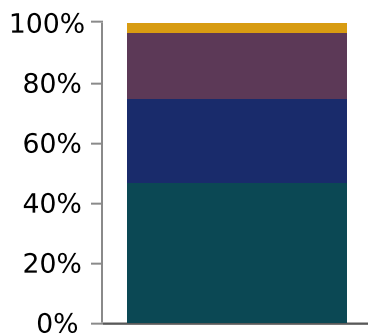
DISTRIBUTION OF ACTIVE MEMBERS BY AGE AND YEARS OF SERVICE* (continued)

— as of June 30, 2022

Age		Years of Credited Service					Total
		31-35	36-40	41-45	46-50	51+	
20-24	Count of Members	0	0	0	0	0	8,850
	Average Salary	\$0	\$0	\$0	\$0	\$0	\$44,964
25-29	Count of Members	0	0	0	0	0	21,628
	Average Salary	\$0	\$0	\$0	\$0	\$0	\$57,632
30-34	Count of Members	0	0	0	0	0	28,287
	Average Salary	\$0	\$0	\$0	\$0	\$0	\$67,724
35-39	Count of Members	0	0	0	0	0	32,261
	Average Salary	\$0	\$0	\$0	\$0	\$0	\$77,634
40-44	Count of Members	0	0	0	0	0	40,118
	Average Salary	\$0	\$0	\$0	\$0	\$0	\$90,536
45-49	Count of Members	3	0	0	0	0	40,693
	Average Salary	\$102,988	\$0	\$0	\$0	\$0	\$100,113
50-54	Count of Members	983	1	0	0	0	42,082
	Average Salary	\$119,901	\$151,721	\$0	\$0	\$0	\$102,608
55-59	Count of Members	3,450	269	0	0	0	27,688
	Average Salary	\$122,525	\$121,639	\$0	\$0	\$0	\$99,173
60-64	Count of Members	1,036	629	46	0	0	15,118
	Average Salary	\$119,628	\$129,810	\$123,091	\$0	\$0	\$91,280
65-69	Count of Members	265	166	108	12	0	4,962
	Average Salary	\$112,235	\$126,622	\$132,264	\$118,191	\$0	\$90,048
70+	Count of Members	95	50	47	50	21	1,788
	Average Salary	\$95,200	\$112,814	\$122,914	\$147,852	\$181,129	\$86,613
Total	Count of Members	5,832	1,115	201	62	21	263,475
	Average Salary	\$120,664	\$126,640	\$127,978	\$142,017	\$181,129	\$88,698

*Average salary data is for the 192,198 members who earned a full year of service. The average salary for all active members, full-time and part-time, is \$79,715.

DISTRIBUTION OF ACTIVE MEMBERS BY SERVICE — as of June 30, 2022

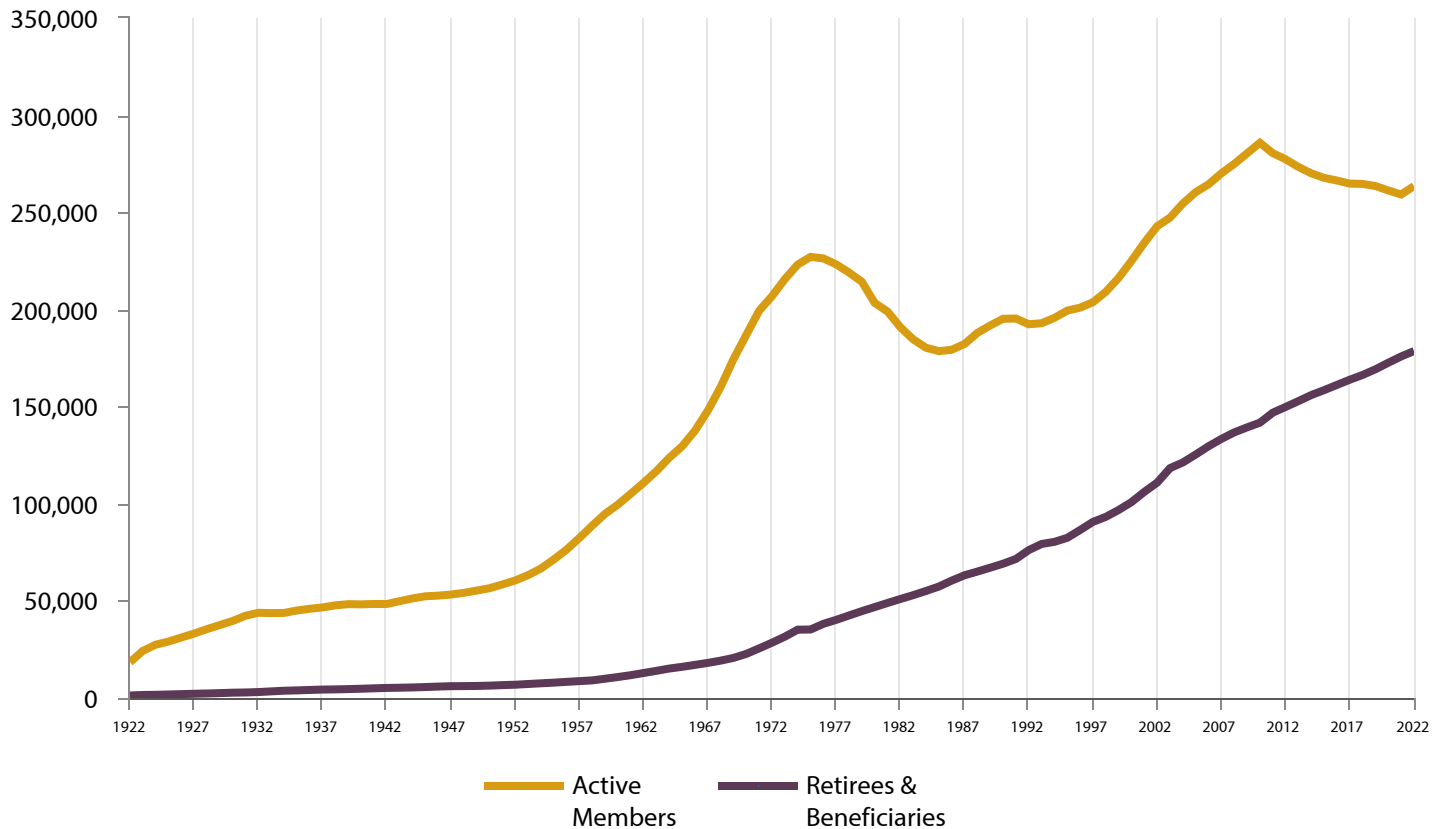


Service Group	Percent
31+ Years of Service	3%
21-30 Years of Service	22%
11-20 Years of Service	28%
0-10 Years of Service	47%

ACTIVE MEMBERS AND ANNUITANTS 1922-2022

As of June 30	Active Members	Retirees & Beneficiaries	As of June 30	Active Members	Retirees & Beneficiaries
1922	18,412	1,296	1975	227,038	35,252
1925	29,057	1,815	1980	203,330	46,812
1930	39,663	2,732	1985	178,516	57,366
1935	45,031	3,919	1990	195,194	69,127
1940	48,193	4,771	1995	199,398	82,459
1945	52,359	5,637	2000	224,986	100,839
1950	56,504	6,374	2005	260,356	125,325
1955	71,273	7,897	2010	285,774	141,716
1960	99,555	10,796	2015	267,715	158,458
1965	129,543	16,043	2020	261,232	172,569
1970	186,914	22,700	2022	263,475	178,569

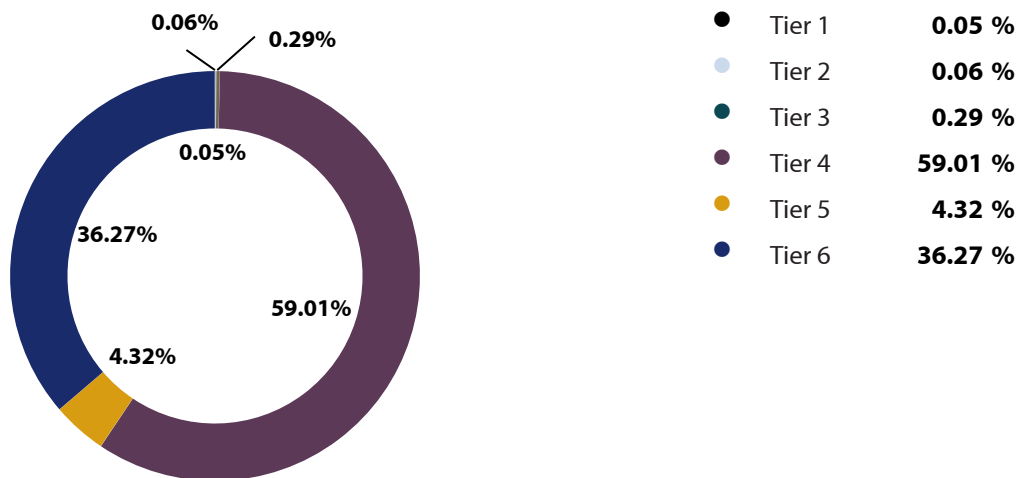
See related graph below.



NUMBER OF ACTIVE MEMBERS BY TIER

As of June 30	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Tier 6	Total
2003	28,327	14,463	19,083	185,374	—	—	247,247
2004	22,986	13,947	18,835	198,747	—	—	254,515
2005	17,901	13,210	18,535	210,710	—	—	260,356
2006	13,621	12,084	18,173	220,532	—	—	264,410
2007	10,838	10,178	17,743	231,286	—	—	270,045
2008	8,630	8,171	17,007	241,093	—	—	274,901
2009	6,943	6,752	16,111	250,532	—	—	280,338
2010	5,582	5,706	14,942	255,966	3,578	—	285,774
2011	3,814	4,137	12,690	247,530	12,264	—	280,435
2012	2,756	3,253	11,180	239,199	19,969	916	277,273
2013	1,968	2,447	9,450	231,258	19,452	8,753	273,328
2014	1,439	1,810	7,753	222,545	19,124	17,368	270,039
2015	1,116	1,348	6,222	214,020	18,878	26,131	267,715
2016	832	974	4,920	204,912	18,540	36,172	266,350
2017	607	720	3,881	195,226	17,722	46,605	264,761
2018	446	546	2,993	186,581	16,499	57,525	264,590
2019	349	403	2,276	178,516	14,595	67,378	263,517
2020	249	282	1,638	170,306	13,040	75,717	261,232
2021	169	202	1,106	162,627	12,061	82,993	259,158
2022	121	160	771	155,480	11,369	95,574	263,475

ACTIVE MEMBERS BY TIER



MEMBERS RETIRED IN 2021-2022 FOR:

	Service*	Disability
Number Retired	7,025	110
Age at Retirement:		
Average	61 yrs., 3 mos.	51 yrs., 0 mos.
Median	61 yrs., 2 mos.	50 yrs., 6 mos.
Years of Service:		
Average	25 yrs., 7 mos.	20 yrs., 4 mos.
Median	27 yrs., 1 mo.	19 yrs., 8 mos.
**Benefit:		
Average	\$48,724	\$34,430
Median	\$49,571	\$34,678
Final Average Salary (FAS):		
Average	\$92,434	\$92,122
Median	\$92,494	\$92,410
***Benefit as % of FAS:		
Average	48.12%	36.74%
Median	51.56%	33.33%

MEMBERS RETIRED IN 2021-2022 FOR SERVICE* WITH:

	Less Than 10 Yrs. Svc.	10 or More Yrs. and Less Than 20 Yrs. Svc.	20 or More Yrs. and Less Than 30 Yrs. Svc.	30 or More Yrs. Svc.
Number Retired	388	994	2,574	3,069
Age at Retirement:				
Average	62 yrs., 4 mos.	62 yrs., 5 mos.	63 yrs., 0 mos.	59 yrs., 4 mos.
Median	61 yrs., 11 mos.	62 yrs., 3 mos.	62 yrs., 7 mos.	58 yrs., 4 mos.
Years of Service:				
Average	7 yrs., 2 mos.	15 yrs., 1 mo.	23 yrs., 8 mos.	33 yrs., 1 mo.
Median	7 yrs., 1 mo.	15 yrs., 3 mos.	23 yrs., 4 mos.	32 yrs., 2 mos.
**Benefit:				
Average	\$3,909	\$13,516	\$40,285	\$72,871
Median	\$3,487	\$10,346	\$38,809	\$68,744
Final Average Salary (FAS):				
Average	\$37,519	\$57,671	\$88,720	\$113,752
Median	\$35,069	\$49,931	\$86,822	\$106,789
***Benefit as % of FAS:				
Average	10.36%	22.86%	44.83%	63.84%
Median	10.19%	22.68%	44.33%	63.17%

*Also includes vested retirees.

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

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

ALL RETIREES AS OF JUNE 30, 2022 RETIRED FOR:

	Service*	Disability
Number Retired	169,613	2,003
Age at Retirement:		
Average	59 yrs., 2 mos.	49 yrs., 7 mos.
Median	58 yrs., 2 mos.	50 yrs., 4 mos.
Age Attained as of June 30, 2022:		
Average	73 yrs., 8 mos.	66 yrs., 2 mos.
Median	73 yrs., 5 mos.	66 yrs., 8 mos.
Years of Service:		
Average	27 yrs., 7 mos.	18 yrs., 4 mos.
Median	30 yrs., 1 mo.	17 yrs., 6 mos.
**Benefit:		
Average	\$44,484	\$22,491
Median	\$44,941	\$20,461
Final Average Salary (FAS):		
Average	\$77,478	\$62,169
Median	\$75,373	\$58,823
***Benefit as % of FAS:		
Average	53.34%	35.42%
Median	60.00%	33.33%

ALL RETIREES AS OF JUNE 30, 2022 RETIRED FOR SERVICE* WITH:

	Less Than 10 Yrs. Svc.	10 or More Yrs. and Less Than 20 Yrs. Svc.	20 or More Yrs. and Less Than 30 Yrs. Svc.	30 or More Yrs. Svc.
Number Retired	5,230	24,125	50,677	89,581
Age at Retirement:				
Average	60 yrs., 5 mos.	59 yrs., 5 mos.	60 yrs., 6 mos.	58 yrs., 3 mos.
Median	59 yrs., 8 mos.	58 yrs., 1 mo.	60 yrs., 11 mos.	57 yrs., 2 mos.
Years of Service:				
Average	7 yrs., 4 mos.	14 yrs., 5 mos.	24 yrs., 6 mos.	34 yrs., 2 mos.
Median	7 yrs., 5 mos.	14 yrs., 5 mos.	24 yrs., 8 mos.	33 yrs., 8 mos.
**Benefit:				
Average	\$4,279	\$10,095	\$35,221	\$61,333
Median	\$3,687	\$7,825	\$32,726	\$57,454
Final Average Salary (FAS):				
Average	\$40,839	\$44,965	\$73,882	\$90,407
Median	\$37,398	\$38,003	\$69,669	\$85,151
***Benefit as % of FAS:				
Average	10.54%	21.79%	47.37%	67.72%
Median	10.19%	21.03%	47.78%	66.89%

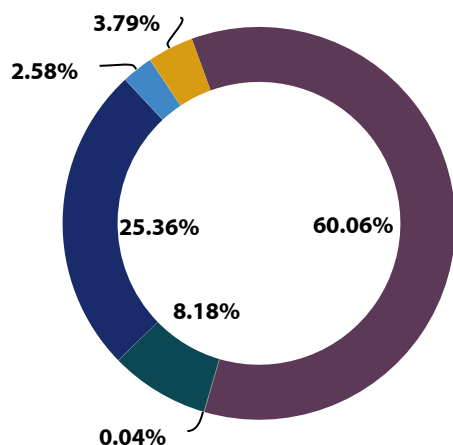
*Also includes vested retirees.

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

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

RETIREMENT BENEFIT OPTIONS AND PERCENT OF ELECTION

2018-2022 Retirees



Option	Number Electing	Percent of Election*
Maximum	21,440	60.06 %
Annuity/Declining Reserve	13	0.04 %
Joint & Survivor	2,921	8.18 %
Pop-Up	9,052	25.36 %
Guarantee	922	2.58 %
Alternative	1,352	3.79 %
Total	35,700	100.00 %

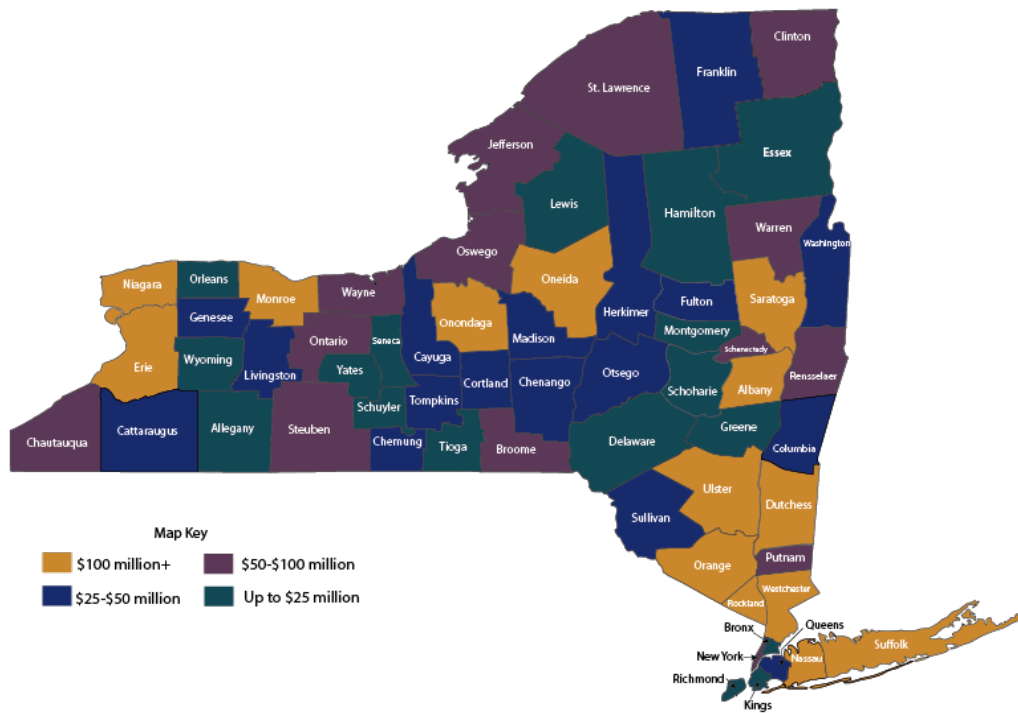
*Percentages may not sum to 100% due to rounding.

RETIRED MEMBERS' CHARACTERISTICS* BY YEAR OF RETIREMENT

Retired in Fiscal Year Ended	Number of Retired Members	Average Age at Retirement (yrs.- mos.)	Average Service at Retirement (yrs.- mos.)	Average Final Average Salary	Average Maximum Annual Benefit
2013	6,330	60-10	25-6	\$81,987	\$44,768
2014	6,547	61-0	25-4	84,545	44,978
2015	6,161	60-11	25-4	84,362	44,487
2016	6,245	61-2	25-0	84,308	44,215
2017	6,396	61-3	25-0	85,242	45,049
2018	6,416	61-1	25-1	86,910	45,725
2019	6,890	61-0	25-1	87,085	45,713
2020	7,642	61-4	25-8	90,228	48,273
2021	7,617	61-5	26-3	91,713	49,145
2022	7,135	61-3	25-7	92,434	48,724

*Averages are for service and vested retirees.

DISTRIBUTION OF BENEFITS PAID BY COUNTY* — as of June 30, 2022



County	Retired Members and Beneficiaries	Annual Benefits Paid**	County	Retired Members and Beneficiaries	Annual Benefits Paid**	County	Retired Members and Beneficiaries	Annual Benefits Paid**
Albany	3,261	\$136,597,650	Jefferson	1,485	\$58,086,361	St. Lawrence	1,809	\$65,843,896
Allegany	665	\$24,295,581	Kings	219	\$10,239,693	Saratoga	3,980	\$172,915,534
Bronx	274	\$14,070,175	Lewis	385	\$14,334,890	Schenectady	1,821	\$75,126,190
Broome	2,384	\$91,823,444	Livingston	1,053	\$42,371,422	Schoharie	486	\$17,824,257
Cattaraugus	963	\$39,261,540	Madison	1,049	\$40,698,553	Schuyler	286	\$10,392,795
Cayuga	1,085	\$41,549,371	Monroe	9,606	\$394,938,390	Seneca	457	\$17,247,014
Chautauqua	1,972	\$82,712,596	Montgomery	549	\$22,074,786	Steuben	1,421	\$51,490,937
Chemung	1,129	\$42,177,950	Nassau	10,015	\$587,622,985	Suffolk	18,319	\$1,108,987,561
Chenango	739	\$26,800,850	New York	1,168	\$59,007,571	Sullivan	864	\$40,873,176
Clinton	1,315	\$51,132,481	Niagara	2,375	\$107,343,283	Tioga	577	\$21,945,158
Columbia	768	\$31,883,393	Oneida	3,356	\$131,357,475	Tompkins	1,108	\$37,730,463
Cortland	811	\$30,588,361	Onondaga	7,360	\$281,168,828	Ulster	2,978	\$136,015,148
Delaware	648	\$23,459,728	Ontario	2,170	\$87,004,198	Warren	1,522	\$61,812,491
Dutchess	3,614	\$171,361,327	Orange	3,512	\$174,220,527	Washington	774	\$29,954,467
Erie	11,350	\$499,209,789	Orleans	478	\$21,220,717	Wayne	1,358	\$51,011,814
Essex	668	\$23,686,263	Oswego	1,786	\$65,542,113	Westchester	7,101	\$406,747,867
Franklin	761	\$27,563,766	Otsego	1,120	\$38,891,115	Wyoming	538	\$20,513,640
Fulton	790	\$32,124,564	Putnam	1,086	\$61,690,961	Yates	424	\$15,843,368
Genesee	797	\$32,397,458	Queens	827	\$46,832,014			
Greene	587	\$22,874,117	Rensselaer	1,775	\$70,850,490	Out of State	43,143	\$1,654,094,777
Hamilton	143	\$5,792,229	Richmond	38	\$1,433,514			
Herkimer	1,001	\$36,407,172	Rockland	2,466	\$124,700,886	Grand Total	178,569	\$7,925,771,130

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

**Annual benefits paid in this chart may differ from retirement benefit payments that appear elsewhere in this report because this chart reflects the rate of annual payment for retired members and their beneficiaries in pay as of the last day of the fiscal year.

DISTRIBUTION OF RETIRED MEMBERS AND BENEFICIARIES BY TIER

— as of June 30, 2022

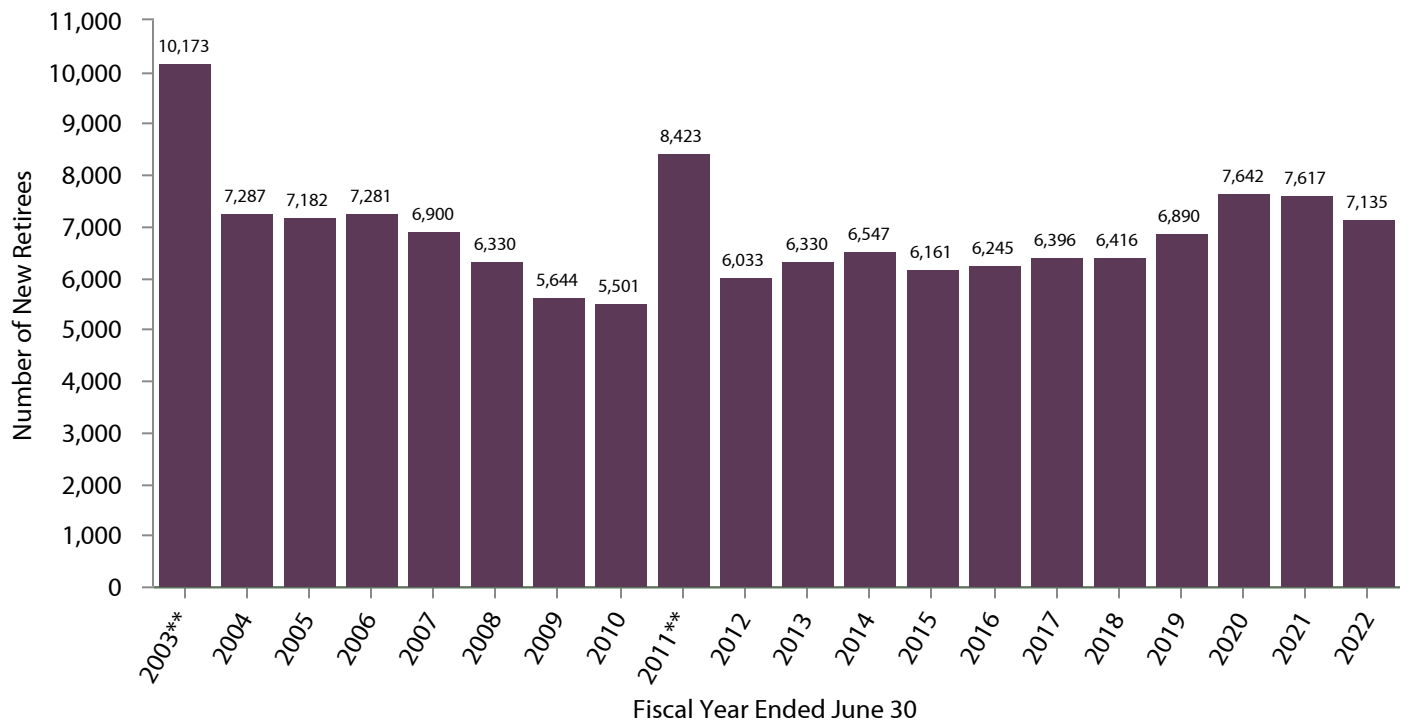
	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Tier 6	Total	
Members Retired for:								
Service*	74,405	16,308	20,292	(182) **	58,371	134	58	169,568
Disability	455	158	224	(27) **	1,211	0	0	2,048
Beneficiaries of Deceased:								
Service Annuitants	5,134	437	379	(7) **	635	1	0	6,586
Disability Annuitants	148	25	27	(4) **	66	0	0	266
Active Members	90	1	2	(0) **	7	0	1	101
Total	80,232	16,929	20,924	(220)**	60,290	135	59	178,569

*Also includes vested retirees.

**Those receiving an Article 14 (Tier 3) benefit. The remainder are receiving an Article 15 (Tier 4) benefit.

Tier 3 members receive the better of the two benefits.

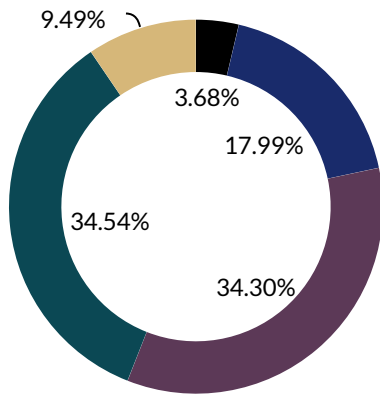
HISTORY OF THE NUMBER OF NEW RETIREES*



*Includes service, vested and disability retirements.

**Retirements in this fiscal year include the impact of legislatively enacted early retirement incentive programs.

RETIRED MEMBERS AND BENEFICIARIES* WITH MONTHLY BENEFITS BY DECADE OF RETIREMENT — as of June 30, 2022



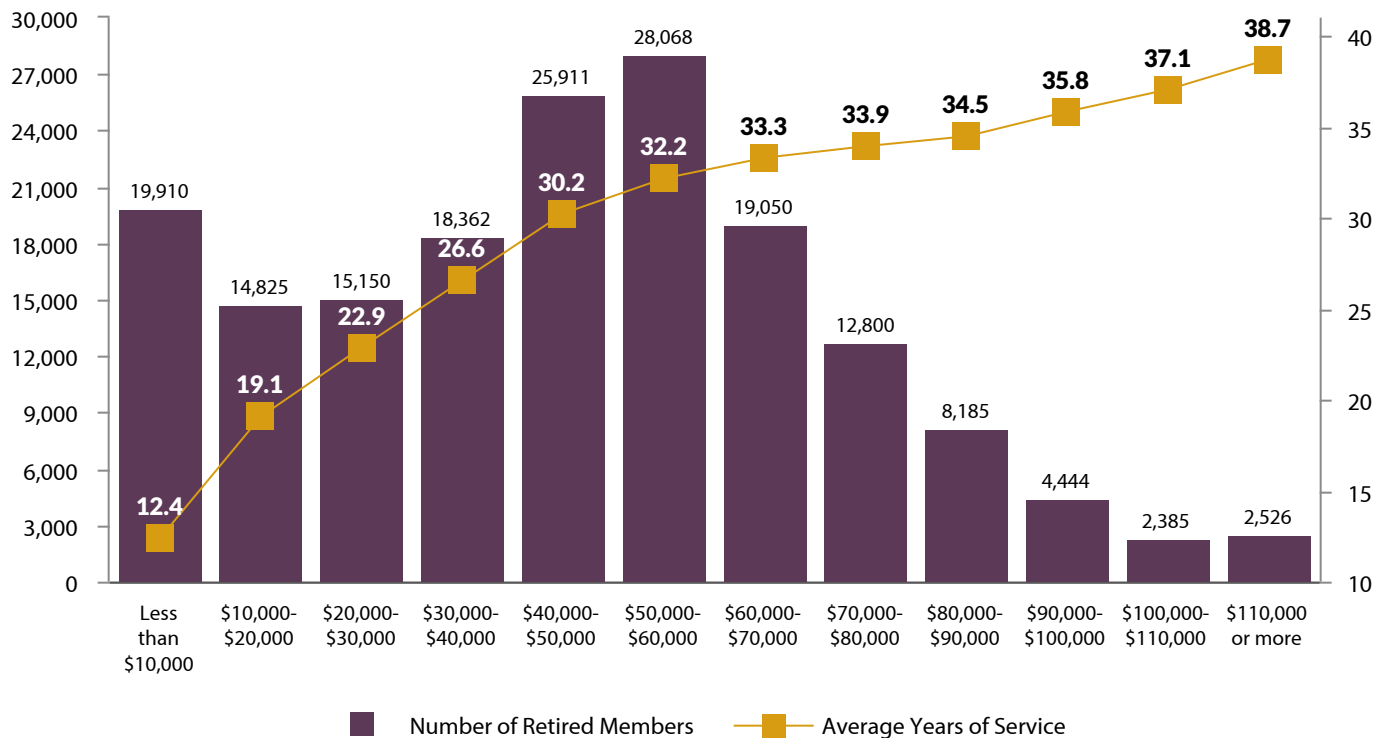
Calendar Years	Number of People	Percentage**	Average Monthly Maximum Benefit	Average Total Monthly Maximum Benefit***
● 1989 or earlier	6,575	3.68%	\$1,475.01	\$2,043.74
● 1990-1999	32,108	17.99%	\$2,898.85	\$3,261.24
● 2000-2009	61,207	34.30%	\$3,895.68	\$4,097.47
● 2010-2019	61,643	34.54%	\$3,977.01	\$4,026.56
● 2020-2022	16,935	9.49%	\$4,111.80	\$4,111.80
Total	178,468			

*Excludes 101 beneficiaries of deceased active members.

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

***Average total monthly Maximum benefit includes supplementation and COLA.

DISTRIBUTION OF THE ANNUAL BENEFIT* OF ALL RETIRED MEMBERS — as of June 30, 2022



*Maximum annual retirement benefit including supplementation and COLA.

HISTORY OF THE MONTHLY COLA

Commencing September	Year Ended March 31 CPI* Percentage Change	Applicable COLA Percentage	Maximum Annual Base Benefit Amount	Maximum Monthly COLA Increase	Cumulative Maximum Monthly COLA	Average Monthly COLA Increase	Cumulative Average Monthly COLA
2001	2.92%	1.5%	\$18,000	\$22.50	\$22.50	\$18.80	\$18.80
2002	1.48%	1.0%	\$18,000	\$15.00	\$37.50	\$12.64	\$31.44
2003	3.02%	1.6%	\$18,000	\$24.00	\$61.50	\$20.32	\$51.76
2004	1.74%	1.0%	\$18,000	\$15.00	\$76.50	\$12.85	\$64.61
2005	3.15%	1.6%	\$18,000	\$24.00	\$100.50	\$20.68	\$85.29
2006	3.36%	1.7%	\$18,000	\$25.50	\$126.00	\$22.09	\$107.38
2007	2.78%	1.4%	\$18,000	\$21.00	\$147.00	\$18.29	\$125.67
2008	3.98%	2.0%	\$18,000	\$30.00	\$177.00	\$26.24	\$151.91
2009	-0.38%	1.0%	\$18,000	\$15.00	\$192.00	\$13.17	\$165.08
2010	2.31%	1.2%	\$18,000	\$18.00	\$210.00	\$15.86	\$180.94
2011	2.68%	1.4%	\$18,000	\$21.00	\$231.00	\$18.55	\$199.49
2012	2.65%	1.4%	\$18,000	\$21.00	\$252.00	\$18.59	\$218.08
2013	1.47%	1.0%	\$18,000	\$15.00	\$267.00	\$13.30	\$231.38
2014	1.51%	1.0%	\$18,000	\$15.00	\$282.00	\$13.32	\$244.70
2015	-0.07%	1.0%	\$18,000	\$15.00	\$297.00	\$13.36	\$258.06
2016	0.85%	1.0%	\$18,000	\$15.00	\$312.00	\$13.36	\$271.42
2017	2.38%	1.2%	\$18,000	\$18.00	\$330.00	\$16.03	\$287.45
2018	2.36%	1.2%	\$18,000	\$18.00	\$348.00	\$16.02	\$303.47
2019	1.86%	1.0%	\$18,000	\$15.00	\$363.00	\$13.35	\$316.82
2020	1.54%	1.0%	\$18,000	\$15.00	\$378.00	\$13.35	\$330.17
2021	2.62%	1.4%	\$18,000	\$21.00	\$399.00	\$18.69	\$348.86
2022	8.54%	3.0%	\$18,000	\$45.00	\$444.00	\$40.02	\$388.88

*Consumer Price Index

**DISTRIBUTION OF MONTHLY COLA INCREASE
COMMENCING SEPTEMBER 2022**

Monthly COLA Increase	Number of Retired Members and Beneficiaries
\$45.00	114,555
\$37.50 - \$44.99	3,160
\$30.00 - \$37.49	3,463
\$22.50 - \$29.99	9,322
\$15.00 - \$22.49	4,975
\$7.50 - \$14.99	6,989
\$0.01 - \$7.49	2,710
\$0 (currently ineligible)	33,395
Total	178,569

**DISTRIBUTION OF CUMULATIVE MONTHLY COLA
COMMENCING SEPTEMBER 2022**

Cumulative Monthly COLA	Number of Retired Members and Beneficiaries
\$444.00	16,196
\$383.50 - \$443.99	7,531
\$323.00 - \$383.49	14,756
\$262.50 - \$322.99	18,772
\$202.00 - \$262.49	20,924
\$141.50 - \$201.99	24,461
\$0.01 - \$141.49	42,534
\$0 (currently ineligible)	33,395
Total	178,569

Financial Trends Information

CHANGES IN FIDUCIARY NET POSITION

Last Ten Fiscal Years

(dollars in thousands)

Additions:	2013	2014	2015	2016	2017
Net investment income	\$11,636,480	\$16,664,703	\$ 5,400,265	\$ 2,392,354	\$ 12,951,892
Employer contributions	1,734,908	2,400,386	2,633,682	2,046,562	1,857,359
Member contributions	128,903	120,762	119,411	124,587	129,770
Transfers	4,522	1,365	3,213	4,014	7,845
Total additions	13,504,813	19,187,216	8,156,571	4,567,517	14,946,866
Deductions: (See Benefits and Return of Contributions by Type on Pages 144-145)					
Benefit payments	6,118,849	6,324,546	6,513,931	6,701,637	6,903,361
Return of contributions	20,869	18,992	17,209	18,229	19,676
Administrative expenses	54,338	55,616	56,948	60,426	61,611
Total deductions	6,194,056	6,399,154	6,588,088	6,780,292	6,984,648
Change in fiduciary net position restricted for pensions	\$ 7,310,757	\$12,788,062	\$ 1,568,483	\$ (2,212,775)	\$ 7,962,218

CHANGES IN FIDUCIARY NET POSITION *(continued)*
 Last Ten Fiscal Years
 (dollars in thousands)

Additions:	2018	2019	2020	2021	2022
Net investment income	\$ 9,928,009	\$ 8,023,180	\$ 3,923,633	\$ 33,668,008	\$ (10,078,814)
Employer contributions	1,597,139	1,774,646	1,504,688	1,618,437	1,735,255
Member contributions	131,595	136,610	145,034	159,874	190,853
Transfers	9,278	9,087	3,955	10,025	8,685
Total additions	11,666,021	9,943,523	5,577,310	35,456,344	(8,144,021)
Deductions: (See Benefits and Return of Contributions by Type on Pages 144-145)					
Benefit payments	7,088,949	7,285,362	7,484,462	7,717,521	7,961,870
Return of contributions	20,049	21,956	19,439	14,379	16,754
Administrative expenses	60,610	74,242	71,385	55,492	61,230
Total deductions	7,169,608	7,381,560	7,575,286	7,787,392	8,039,854
Change in fiduciary net position restricted for pensions	\$ 4,496,413	\$ 2,561,963	\$ (1,997,976)	\$ 27,668,952	\$ (16,183,875)

BREAKDOWN OF INCOME SOURCES

Fiscal Years Ended 1993-2022



BENEFITS AND RETURN OF CONTRIBUTIONS BY TYPE

Last Ten Fiscal Years

(dollars in thousands)

Type of Benefit	2013	2014	2015	2016	2017
Age and service benefits:					
Retirees	\$ 6,023,506	\$ 6,233,619	\$ 6,419,576	\$ 6,601,664	\$ 6,794,278
Survivors	32,879	28,918	31,888	34,051	41,662
In-service death benefits	23,666	21,634	20,730	22,801	23,606
Disability benefits:					
Ordinary	38,507	39,871	41,251	42,591	43,469
Accidental	291	504	486	530	346
Total benefits	<u>\$ 6,118,849</u>	<u>\$ 6,324,546</u>	<u>\$ 6,513,931</u>	<u>\$ 6,701,107</u>	<u>\$ 6,903,015</u>
Type of Return of Contributions					
Death	\$ 2,434	\$ 2,325	\$ 2,350	\$ 3,011	\$ 3,061
Separation from service	18,435	16,667	14,859	15,218	16,615
Total return of contributions	<u>\$ 20,869</u>	<u>\$ 18,992</u>	<u>\$ 17,209</u>	<u>\$ 18,229</u>	<u>\$ 19,676</u>

BENEFITS AND RETURN OF CONTRIBUTIONS BY TYPE *(continued)*
 Last Ten Fiscal Years
 (dollars in thousands)

Type of Benefit	2018	2019	2020	2021	2022
Age and service benefits:					
Retirees	\$ 6,978,694	\$ 7,179,640	\$ 7,375,088	\$ 7,614,539	\$ 7,847,887
Survivors	35,234	40,775	38,101	35,205	44,429
In-service death benefits	29,845	21,339	25,873	22,366	22,184
Disability benefits:					
Ordinary	44,828	43,256	45,045	45,055	46,963
Accidental	348	352	355	356	407
Total benefits	<u>\$ 7,088,949</u>	<u>\$ 7,285,362</u>	<u>\$ 7,484,462</u>	<u>\$ 7,717,521</u>	<u>\$ 7,961,870</u>
Type of Return of Contributions					
Death	\$ 3,211	\$ 2,865	\$ 3,215	\$ 2,497	\$ 3,167
Separation from service	16,838	19,091	16,224	11,882	13,587
Total return of contributions	<u>\$ 20,049</u>	<u>\$ 21,956</u>	<u>\$ 19,439</u>	<u>\$ 14,379</u>	<u>\$ 16,754</u>

Operating Information

AVERAGE BENEFIT PAYMENTS — JULY 1, 2012 – JUNE 30, 2022

Retirement Effective Dates	Years of Credited Service							
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35+
Period 7/1/2012 to 6/30/2013								
Average monthly benefit	\$201	\$326	\$782	\$1,513	\$2,721	\$3,910	\$5,285	\$7,061
Average final average salary	\$33,171	\$34,780	\$47,730	\$62,797	\$76,501	\$89,200	\$100,095	\$110,455
Number of retired members	48	501	705	452	1,061	954	1,709	900
Period 7/1/2013 to 6/30/2014								
Average monthly benefit	\$221	\$367	\$837	\$1,571	\$2,836	\$4,140	\$5,275	\$7,305
Average final average salary	\$41,966	\$38,623	\$51,493	\$65,104	\$80,215	\$93,124	\$100,079	\$115,852
Number of retired members	47	484	649	562	1,133	1,161	1,778	733
Period 7/1/2014 to 6/30/2015								
Average monthly benefit	\$255	\$306	\$842	\$1,543	\$2,879	\$4,163	\$5,277	\$6,887
Average final average salary	\$35,508	\$33,815	\$51,353	\$64,139	\$82,057	\$92,745	\$100,927	\$110,667
Number of retired members	37	400	615	521	1,081	1,255	1,660	592
Period 7/1/2015 to 6/30/2016								
Average monthly benefit	\$188	\$321	\$873	\$1,532	\$2,873	\$4,280	\$5,353	\$6,907
Average final average salary	\$35,355	\$34,747	\$51,987	\$63,932	\$81,515	\$94,402	\$102,221	\$112,592
Number of retired members	32	491	589	582	1,079	1,223	1,676	573
Period 7/1/2016 to 6/30/2017								
Average monthly benefit	\$120	\$329	\$868	\$1,645	\$2,871	\$4,282	\$5,452	\$7,076
Average final average salary	\$23,555	\$35,957	\$52,383	\$66,494	\$81,188	\$94,415	\$104,070	\$115,549
Number of retired members	117	457	569	565	1,079	1,185	1,864	560
Period 7/1/2017 to 6/30/2018								
Average monthly benefit	\$119	\$335	\$854	\$1,665	\$2,960	\$4,499	\$5,433	\$7,112
Average final average salary	\$29,014	\$36,702	\$51,465	\$68,612	\$83,811	\$98,562	\$103,842	\$116,274
Number of retired members	51	493	567	581	1,173	1,088	1,921	542
Period 7/1/2018 to 6/30/2019								
Average monthly benefit	\$172	\$329	\$813	\$1,733	\$2,972	\$4,406	\$5,518	\$7,006
Average final average salary	\$39,231	\$35,270	\$51,300	\$70,026	\$84,394	\$96,529	\$105,222	\$115,394
Number of retired members	55	516	582	657	1,250	1,177	2,124	529
Period 7/1/2019 to 6/30/2020								
Average monthly benefit	\$136	\$364	\$838	\$1,684	\$2,903	\$4,449	\$5,623	\$7,062
Average final average salary	\$30,831	\$38,777	\$50,970	\$67,553	\$82,646	\$98,885	\$107,546	\$117,306
Number of retired members	39	423	562	718	1,455	1,255	2,499	691
Period 7/1/2020 to 6/30/2021								
Average monthly benefit	\$213	\$399	\$819	\$1,586	\$2,868	\$4,375	\$5,702	\$7,273
Average final average salary	\$41,885	\$39,264	\$49,996	\$63,726	\$81,929	\$98,964	\$109,407	\$120,727
Number of retired members	20	305	520	710	1,551	1,378	2,466	667
Period 7/1/2021 to 6/30/2022								
Average monthly benefit	\$166	\$363	\$843	\$1,736	\$2,903	\$4,429	\$5,846	\$7,247
Average final average salary	\$33,158	\$39,216	\$51,881	\$69,624	\$83,482	\$100,211	\$112,474	\$120,833
Number of retired members	30	380	464	717	1,547	1,145	2,262	590

This page intentionally left blank.

RETIRED MEMBERS AND BENEFICIARIES BY TYPE OF BENEFIT

— as of June 30, 2022

Amount of Monthly Benefit	Number of Retired Members	Type of Retirement					
		1	2	3	4	5	6
\$1 - \$500	13,924	7,125	6,307	94	310	19	69
\$501 - \$1,000	12,870	6,342	5,738	327	395	58	10
\$1,001 - \$1,500	10,586	6,458	3,235	407	413	65	8
\$1,501 - \$2,000	9,916	6,374	2,622	396	475	48	1
\$2,001 - \$2,500	10,765	7,430	2,438	315	547	33	2
\$2,501 - \$3,000	11,518	8,582	2,077	214	624	17	4
\$3,001 - \$3,500	13,509	11,052	1,613	133	699	11	1
\$3,501 - \$4,000	16,565	14,601	1,226	78	655	4	1
\$4,001 - \$4,500	17,662	16,088	876	45	642	8	3
\$4,501 - \$5,000	15,056	13,932	554	19	550	1	0
over \$5,000	46,198	44,016	882	20	1,276	2	2
Total	178,569	142,000	27,568	2,048	6,586	266	101

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, in-service death benefit

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

RETIRED MEMBERS AND BENEFICIARIES BY TYPE OF BENEFIT *(continued)*

— as of June 30, 2022

Amount of Monthly Benefit	Number of Retired Members	Option Selected					
		1	2	3	4	5	6
\$1 - \$500	13,924	10,717	768	1,103	602	316	418
\$501 - \$1,000	12,870	9,418	843	1,580	519	182	328
\$1,001 - \$1,500	10,586	7,470	727	1,607	406	154	222
\$1,501 - \$2,000	9,916	6,884	783	1,640	301	137	171
\$2,001 - \$2,500	10,765	7,390	881	1,896	323	108	167
\$2,501 - \$3,000	11,518	7,729	991	2,201	285	133	179
\$3,001 - \$3,500	13,509	9,008	1,179	2,659	341	79	243
\$3,501 - \$4,000	16,565	10,840	1,274	3,672	380	104	295
\$4,001 - \$4,500	17,662	11,224	1,383	4,258	372	78	347
\$4,501 - \$5,000	15,056	9,219	1,307	3,821	298	63	348
over \$5,000	46,198	26,303	4,392	12,968	886	125	1,524
Total	178,569	116,202	14,528	37,405	4,713	1,479	4,242

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

Participating Employer 2022	Covered Employees	Rank	Percentage of Total System**
Buffalo Public Schools	4,478	1	1.70%
Rochester City School District	3,503	2	1.33%
Syracuse City School District	2,964	3	1.12%
Yonkers Public Schools	2,147	4	0.81%
Brentwood Union Free Schools	1,818	5	0.69%
Greece Central Schools	1,389	6	0.53%
Sachem City School District	1,355	7	0.51%
Newburgh Central Schools	1,322	8	0.50%
Albany City School District	1,212	9	0.46%
Clarkstown Central Schools	1,193	10	0.45%
All Other*	242,094 +		91.88%
Total	263,475 +		100.00%

+ Covered Employees represents members of the System which includes those currently employed and members formerly employed by a participating employer but not yet retired.

* For a breakdown of the "All Other" category, please see below.

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

All Other Participating Employers:

Type	Number	Covered Employees
Public School Districts	669	220,451 +
Boards of Cooperative Educational Services (BOCES)	37	13,658
SUNY	31	2,491
Community Colleges	30	2,543
Charter Schools	27	2,141
Special Act Districts	9	473
Other	9	337
Total All Other	812	242,094 +

+ Covered Employees represents members of the System which includes those currently employed and members formerly employed by a participating employer but not yet retired.

PRINCIPAL PARTICIPATING EMPLOYERS *(continued)*

Current Year and Nine Years Ago

Participating Employer 2013	Covered Employees	Rank	Percentage of Total System**
Buffalo Public Schools	4,613	1	1.69%
Rochester City School District	4,037	2	1.48%
Syracuse City School District	2,669	3	0.98%
Yonkers Public Schools	1,993	4	0.73%
Brentwood Union Free Schools	1,755	5	0.64%
Sachem Central Schools	1,520	6	0.56%
Greece Central Schools	1,444	7	0.53%
Newburgh City School District	1,313	8	0.48%
Wappingers Central Schools	1,239	9	0.45%
Clarkstown Central Schools	1,229	10	0.45%
All Other	251,516 +		92.02%
Total	273,328 +		100.00%

+ Covered Employees represents members of the System which includes those currently employed and members formerly employed by a participating employer but not yet retired.

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

This page intentionally left blank.

New York State Teachers' Retirement System

10 Corporate Woods Drive

Albany, NY 12211-2395

(800) 348-7298 ◆ NYSTRS.org

