



NYSLRS

*A Century of
Pension Security*



2021

COMPREHENSIVE ANNUAL FINANCIAL REPORT

For Fiscal Year Ended March 31, 2021

Office of the New York State Comptroller
Thomas P. DiNapoli

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

2021 COMPREHENSIVE ANNUAL FINANCIAL REPORT

For Fiscal Year Ended March 31, 2021

New York State and Local Retirement System

Employees' Retirement System

Police and Fire Retirement System

A pension trust fund of the State of New York

Prepared by the staff of the



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NYSLRS

*A Century
of Service*



SOURCE: NEW YORK STATE ARCHIVES. NEW YORK (STATE). DEPT. OF HEALTH. BUREAU OF COMMUNICATIONS.



Introduction

Since January 1, 1921, NYSLRS employees have made it their mission to ensure that members of the New York State and Local Retirement System receive responsive, expert service. In addition, we have made it a top priority to make sure our members and retirees understand their rights and benefits. From our plan publications and web presentations, to our Call Center and automated phone line, to our self-service website Retirement Online, we continually develop new and innovative ways to help our members make important decisions about their retirement.

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PROFESSIONAL AWARDS



Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

New York State Employees' Retirement System

For its Comprehensive Annual
Financial Report
For the Fiscal Year Ended

March 31, 2020

Christopher P. Morill

Executive Director/CEO



Public Pension Coordinating Council

***Public Pension Standards Award
For Funding and Administration
2020***

Presented to

New York State and Local Retirement System

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

Presented by the Public Pension Coordinating Council, a confederation of

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

A handwritten signature in black ink that reads "Alan H. Winkle".

Alan H. Winkle
Program Administrator

LETTER OF TRANSMITTAL



Office of the New York State Comptroller
Thomas P. DiNapoli

New York State and Local Retirement System
110 State Street, Albany, New York 12244-0001

Phone: 1-866-805-0990

518-474-7736

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

September 30, 2021



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

I am pleased to present the Comprehensive Annual Financial Report for the New York State and Local Retirement System (the System or NYSLRS) for the fiscal year ended March 31, 2021.

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

Responsibility for the accuracy of the data, and the completeness and fairness of the report, including all disclosures, rests with the System. All disclosures required and necessary to enable the public and the financial community to gain an understanding of the System's financial activities have been included. The Financial section of this report was prepared to conform with Generally Accepted Accounting Principles (GAAP) for governmental units, as set forth by the Governmental Accounting Standards Board (GASB), as well as the reporting requirements prescribed by the Government Finance Officers Association of the United States and Canada (GFOA). GAAP defines uniform minimum standards of, and guidelines for, financial accounting and reporting. These principles establish the framework within which financial transactions are recorded and reported, resulting in financial statements that provide comparability between government entities, consistency between accounting periods, and reliability for both internal and external users of financial statements.

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

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

I am proud that the System was awarded a Certificate of Achievement for Excellence in Financial Reporting from GFOA for its Comprehensive Annual Financial Report for the fiscal year ended March 31, 2020. The Certificate of Achievement is a prestigious national award recognizing excellence in the preparation of state and local government financial reports. GFOA awards these certificates to those governments whose comprehensive annual financial reports meet or exceed the Association's strict criteria. To be awarded a Certificate of Achievement, a governmental unit must publish a comprehensive, easily readable and efficiently organized annual financial report that conforms to program standards and that satisfies both generally accepted accounting principles and applicable legal requirements.

The System has received this respected award for each of the past 17 years. We believe that our current report continues to meet the Certificate of Achievement program requirements and are submitting it to GFOA for consideration again this year.

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

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

The System offers service retirement benefits for members who reach specific ages or have completed a specified number of years of service, depending on the system and plan in which they are enrolled, as well as disability retirement and death benefits. At the end of fiscal year 2020-21, the System had a total of 1,172,147 members, retirees and beneficiaries, and 2,967 participating employers.

The following highlights some of the System's operations for the 2020-21 fiscal year.

NYSLRS' CENTENNIAL

I have the honor of being Comptroller during a special time in our retirement system's history, its 100th anniversary. On January 1, 1921, what was originally called the New York State Employees' Retirement System, began helping New York's public employees achieve financial security in retirement.

In 1920, the State Commission on Pensions presented Governor Al Smith a report showing that, though there were already pension plans covering 8,300 State employees, 10,175 State employees were not covered. The Commission called for establishing a system that would always have funds on hand sufficient to pay benefits to all State employees. On May 11, 1920, Governor Smith signed the legislation creating what would later become NYSLRS.

On June 30, 1921, the pension fund was valued at more than \$8.2 million and provided pensions to 43 retirees. The total amount of their pensions was \$17,420.16. Today, the Fund is valued at an audited \$258.1 billion, and there are 496,628 retirees and beneficiaries. During fiscal year ending 2020-21, NYSLRS paid out \$14.02 billion in retirement and death benefits.

One hundred years after first opening our doors, NYSLRS' mission remains the same: to provide secure pensions to New York's public employees. This has been our promise since 1921, and that promise will continue far into the future.

COVID-19

The COVID-19 pandemic has upended all our lives. Many New Yorkers continue to struggle, and many of our communities and local governments have experienced serious financial hardships while demands for public services have grown.

Helping our members, retirees and beneficiaries through this painful time became one of our top priorities. At my request, an executive order was issued in April 2020 waiving the standard 15-day waiting period from the time a member applies for retirement and the actual retirement date. This waiver protected the families of members who died during the waiting period, ensuring that beneficiaries would receive a monthly pension benefit instead of a one-time death benefit payment. (This executive order is no longer in effect.)

My staff worked with the State Legislature on a new law to protect the families of our front-line public workers who died from contracting COVID-19 on the job. This law helped alleviate financial hardships by providing eligible beneficiaries with a monthly pension instead of a one-time death benefit payment.

Many NYSLRS retirees, such as healthcare professionals and other essential staff, returned to work when coronavirus cases surged and critical workforce shortages occurred. Normally, public retirees under the age of 65 cannot earn more than \$35,000 per year from a public employer. This statutory earnings limit

was suspended by executive order to protect these retirees from reductions in their pensions while they filled critical needs in our communities.

To help New Yorkers overcome the ongoing challenges of the pandemic, my office created a COVID-19 Financial Survival Toolkit. This online toolkit offers useful resources that give New York's residents, non-profits, government entities and businesses easy access to the vital assistance and information they need.

Employers also struggled as they dealt with a financial crisis, as well as a public health crisis. Legislation to help alleviate the financial difficulties of local governments and school districts was introduced at my request and signed into law in August 2020. The law provides greater financial and budgetary flexibility, easing the burdens local governments and school districts will face until our economy fully recovers.

Federal aid totaling nearly \$24 billion that was part of the American Rescue Plan will help our State, cities, towns and counties, as will the New York State budget for fiscal year 2021-22, which will bring some welcome relief to school districts and municipalities.

FUNDING

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

In September 2020, the System announced the fiscal year 2021-22 average contribution rates for participating employers. The ERS average rate will increase from 14.6 percent of payroll to 16.2 percent of payroll. The PFRS average rate will increase from 24.4 percent of payroll to 28.3 percent of payroll.

Demographic factors, such as longer life expectancies and higher rates of service retirement, combined with slightly lower than expected investment results averaged over the last five years, were the key reasons for the increase in the rates.

Because we adhere to our funding policy of collecting what we bill our employers, and we follow sound actuarial principles in the determination of required contribution rates, we continue to be among the best-funded public pension plans in the nation. For the fiscal year ended March 31, 2021, fiduciary net position represented 99.95 percent of total pension liability for ERS and 95.79 percent for PFRS. This is an increase from fiscal year ended March 31, 2020, when fiduciary net position represented 86.39 percent of total pension liability for ERS and 84.86 percent for PFRS. The funded ratios for ERS and PFRS can be found in the Actuarial section, which also provides a detailed discussion of the System's funding.

INVESTMENTS

The Fund's primary objective is to provide the means to pay benefits to the participants and beneficiaries of the System through an investment program designed to protect and enhance the long-term value of the assets within our risk framework. Fund investments are made consistent with the "prudence" and "exclusive benefit" fiduciary standards of investment. Additionally, we have adopted policies and practices to ensure that the Fund is managed with high levels of ethical conduct and transparency. In fact, the most recent independent fiduciary and conflict of interest review conducted in 2019-20 by Duff and Phelps found that the Fund "is demonstrating a high level of operational transparency and in many cases appears to be in the vanguard of industry standards in this area." Additionally, the report found "the Comptroller and the CRF staff manage the Fund to the highest level of ethical standards."

In addition to providing the means to pay benefits, the Fund is responsible for implementing an asset allocation strategy with an appropriate balance of risk and return. As of March 31, 2021, our long-term target allocation for the investment portfolio is 23 percent in fixed income assets (cash, bonds, mortgages and Treasury Inflation-Protected Securities or "TIPS"), 47 percent in public equities, including domestic and international public equities, and 30 percent in alternative investments, including private equity, real estate, real assets, credit and opportunistic and absolute return strategy funds.

Despite the pandemic, we have maintained our status as one of the strongest public funds in the nation. For the State fiscal year 2020-2021, the Fund's overall time-weighted investment return was 33.55 percent, reflecting the financial markets' dramatic rebound from lows reached during the pandemic, and increasing the Fund's audited value to \$258.1 billion.

While the Fund enjoyed the largest one-year investment return in its history, the markets remain unpredictable. I will continue to manage the Fund with prudence, and focus on stable, long-term results that ensure continued retirement security for our members and retirees.

SUSTAINABLE INVESTING AND STEWARDSHIP

The Fund continues to be a leader in sustainable investing because it is essential to protecting the Fund's long-term value. Last December, the Fund adopted a goal to transition its portfolio to net zero greenhouse gas emissions by 2040. This goal will put the Fund in a strong position as the world moves toward net zero greenhouse gas emissions targets.

The Fund's transition process will include a review of investments in energy sector companies using minimum standards to assess transition readiness and climate-related investment risk. This review will help ensure the Fund invests in companies that will have the ability to provide strong investment returns in light of the global consensus on climate change. Companies that fail to meet our minimum standards may be removed from our portfolio. While divestment is a last resort, it is a tool we can use to address companies that consistently put the Fund's long-term value at risk.

We also called on five companies, including Domino's Pizza, to set targets to reduce their greenhouse gas emissions, adopt new energy efficiency measures and increase their use of renewable energy.

In order to protect the value of our holdings, we utilize some of the most robust corporate engagement initiatives of any public pension fund in the country. In February 2021, the Fund launched a multi-faceted initiative to hold publicly-traded corporations and their top executives accountable for their diversity, equity and inclusion policies and practices.

Corporate America must reject racial injustice and confront institutional racism. I have called on companies to eradicate racial inequality, just as they would any other systemic problem that compromises their long-term success, and I promise to vote against any directors of our portfolio companies whose boards are not diverse.

In response to reports of racial discrimination, accusations of discriminatory wages, and the sale of products that promote hatred, I asked for an independent audit to assess Amazon's policies and practices on civil rights, equity, diversity and inclusion, and how they affect the company's business. Among our successes in this area is McDonald's, which has agreed to disclose its workforce diversity data and tie executive compensation to its ability to foster inclusion.

When companies' corporate practices or policies are perceived to be discriminatory, their bottom lines are impacted. That is, in part, what I said when I delivered testimony this past March before the U.S. House Committee on Financial Services Subcommittee on Diversity and Inclusion. Companies that develop a culture of equity and belonging are more likely to outperform their less diverse peers.

ACCOUNTING PRACTICES

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

The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived, and that the valuation of costs and benefits requires estimates and judgments by management. An internal control system includes the organization plan, the appropriate segregation of duties and responsibilities, the implementation of sound practices in the performance of duties, and the employment of personnel whose capabilities are commensurate with their responsibilities.

The System's financial information and internal controls are subject to examination by the New York State Department of Financial Services. Additionally, KPMG LLP, an independent, certified public accountant, audits the System's financial statements. KPMG's opinion appears on page 37 of this report. Lastly, pursuant to the New York State Government Accountability, Audit and Internal Control Act, the System is subject to an audit of its internal controls every three years.

We believe the internal controls in effect during the fiscal year ended March 31, 2021 adequately safeguard the System's assets and provide reasonable assurance regarding the proper recording of financial transactions.

FIGHTING PENSION FRAUD

One of my priorities since taking office has been to detect and prevent pension fraud. This year, I continued to work closely with district attorneys and law enforcement officials to uncover fraud, recoup money stolen from NYSLRS members and retirees and ensure the Fund is reimbursed.

Among our efforts was the conviction last September of two Westchester sisters previously arrested for stealing over \$22,000 in pension benefits by concealing their late mother's death. At their sentencing this past February, they were ordered to repay the full amount they had stolen.

Last July, a NYSLRS member from Rockland County was arrested for allegedly stealing \$3,880 from NYSLRS. The member falsely claimed that a check for the loan he requested was lost. After we stopped payment on the check and issued a replacement check, the member attempted to cash both the original check and the replacement.

These arrests, convictions and recoveries are warnings — pension fraud will not be tolerated. When we identify it, we will work with law enforcement to hold those responsible accountable and ensure money stolen from the Fund is recouped.

NYSLRS SYSTEMS UPGRADES

This year NYSLRS has continued work on our multiyear project to upgrade the computer systems we use to calculate benefits and administer accounts. Since *Retirement Online* was first launched in January 2017, we have added new features that give our members and retirees a convenient way to conduct business with NYSLRS online. During fiscal year 2021, we expanded *Retirement Online* features to include tools that allow members to estimate their pension benefit using current account information and to file for retirement online. New features for our participating employers include a billing dashboard, where employers can access all their billing information, such as estimated, projected and annual invoices, from one location in *Retirement Online*.

As of March 31, 2021, over 345,700 members and retirees had registered for *Retirement Online*. That represents a 33.3 percent increase over the previous fiscal year when there were 259,300 registered members and retirees.

More information about this, as well as other key programs and initiatives, can be found in the Overview of the New York State & Local Retirement System on page 26 and the Overview of Investments on page 87.

ACKNOWLEDGMENTS

I wish to thank the dedicated staff of the Office of the State Comptroller for doing the important work of our agency day in and day out. Like all of New York's public employees, they showed tremendous strength, resolve and flexibility as they dealt with the challenges created by the COVID-19 pandemic, often providing critical help to members who were ill with the coronavirus.

NYSLRS staff provided essential services to our customers without interruption. They found new ways of doing business, limited in-person contact and put new safety protocols in place. I am extremely proud of their commitment to serving our members, retirees, beneficiaries and employers.

I also wish to thank the members of the Advisory Council for the Retirement System, the Investment Advisory Committee, the Real Estate Advisory Committee, the Actuarial Advisory Committee and the Audit Advisory Committee for their commitment to the System's members, retirees and beneficiaries. We are deeply indebted to them for their continued support and counsel. Lastly, I would like to thank the staff in our Division of Retirement Services and our Division of Pension Investment and Cash Management, who are responsible for preparing this report. Their professionalism and dedication are greatly appreciated.

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

Sincerely,



Thomas P. DiNapoli
State Comptroller

ADMINISTRATIVE ORGANIZATION

ADVISORY COMMITTEES

Advisory Council for the Retirement System

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

Honorable Peter J. Abbate, Jr.

Chair
Assembly Governmental Employees Committee
New York State Assembly

Stephen J. Acquario

Executive Director
New York State Association of Counties

Peter A. Baynes

Executive Director
New York State Conference of Mayors

Heather Briccetti

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

Mario Cilento

President
New York State AFL-CIO

Sam Fresina

President
New York State Professional Fire Fighters Association

Gerry Geist

Executive Director
Association of Towns of the State of New York

Honorable Andrew Gounardes

Chair
Senate Civil Service and Pensions Committee
New York State Senate

Diana Hinchcliff

President
Retired Public Employees Association, Inc.

Don Kelly

Director of Research
Civil Service Employees Association Local 1000, AFSCME

Bryant Kolner

President
Alliance of Public Retiree Organizations of New York

President

New York State Troopers
Police Benevolent Association

Michael O'Meara

President
New York State Association of
Police Benevolent Associations

Andrew Pallotta

President
New York State United Teachers

Michael Powers

President
New York State Correctional Officers
& Police Benevolent Association

Raymond Santander

Assistant Director
AFSCME District Council 37

Robert Schneider

Executive Director
New York State School Boards Association

Wayne Spence

President
New York State Public Employees Federation

Ronald J. Walsh, Jr.

President
Council 82, AFSCME

Richard Wells

President
Police Conference of New York, Inc.

Barbara Zaron

President
New York State Organization of
Management Confidential Employees

Investment Advisory Committee

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

Philippe Brugere-Trelat

Former Executive Vice President and Portfolio Manager
Franklin Mutual Advisors, LLC

William G. Clark

Chief Investment Officer
Federal Reserve Employees Benefits System

Timothy C. Collins

CEO & Senior Managing Director
Ripplewood Holdings, LLC

Hugh Johnson

Chairman & Chief Investment Officer
Hugh Johnson Advisors, LLC

Aren LeeKong

Chief Executive Officer
7 Acquisition Corporation

Catherine A. Lynch, CFA (Chair)

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

Valerie Mosley

Chair & CEO
Valmo Ventures

Diane C. Nordin, CFA

Former Partner
Wellington Management Company, LLP

Catherine James Paglia

Director
Enterprise Asset Management

ADMINISTRATIVE ORGANIZATION

CONTINUED

Real Estate Advisory Committee

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

Louis M. Dubin

Managing Partner
Redbrick LMD

G. Gail Edwards

Independent Director

Michael Giliberto

S. Michael Giliberto & Company, Inc.

James M. Gottstine

Chief Operating Officer
Ciminelli Real Estate Corporation

Jo Ann Hanson

President
Church Investment Group

L. Duane Jackson

Managing Member
Alinea Capital Partners, LLC

Rosey Miller

Chief Executive Officer
Regional Investment & Management

David H. Peirez, Esq. (Chair)

Senior Partner
Reisman Peirez Reisman & Capobianco, LLP

Deborah Ratner Salzberg

Partner
RMS Investment Group

Peter Tilles

Developer

ADMINISTRATIVE ORGANIZATION

CONTINUED

Actuarial Advisory Committee

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

Edward W. Brown
(Retired)

Armand de Palo
(Retired)

Michael Heller
(Retired)

Mark T. Koehne
(Retired)

Stanley Talbi
(Retired)

ADMINISTRATIVE ORGANIZATION

CONTINUED

Audit Advisory Committee

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

Jennifer Mulligan (Chair)

Business Office Manager/Controller
Questar III BOCES

Ruben Cardona

Partner
WithumSmith + Brown, PC

Alan Lubin

(Retired)

Julie McDonnell

Schenectady County Auditor

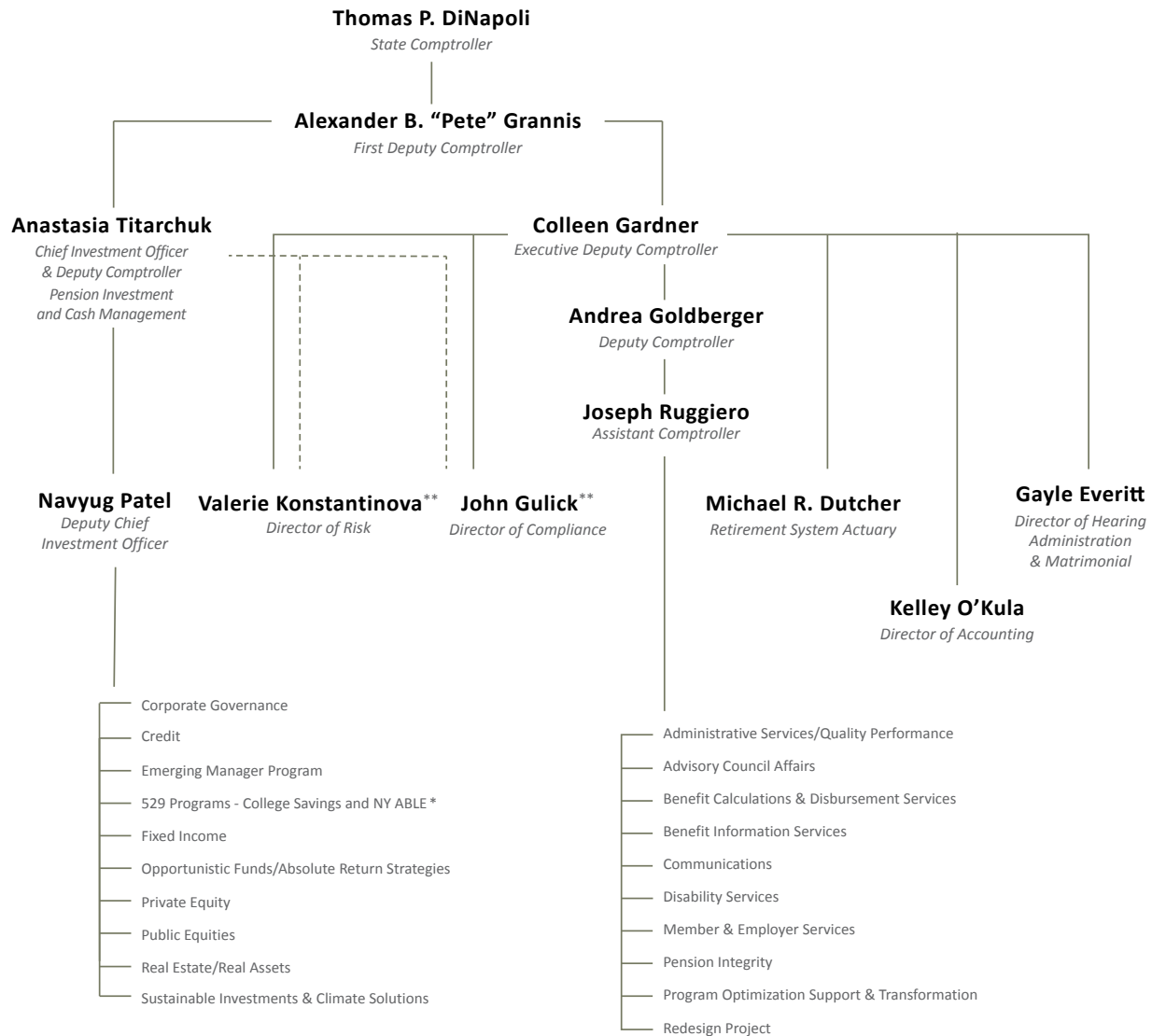
Paul Moore

Past President
Retired Public Employees Association, Inc.

ADMINISTRATIVE ORGANIZATION

CONTINUED

NEW YORK STATE AND LOCAL RETIREMENT SYSTEM ORGANIZATION CHART



*College Savings and NY ABLE are independent programs within OSC.

**Administrative reporting to the Chief Investment Officer.

Notes:

Information regarding investment managers and consultants can be found in the Investment Section on pages 116, 121, and 125-134.

Information regarding consultants other than investment advisors can be found on page 82 in the Financial Section.

OVERVIEW OF THE NEW YORK STATE AND LOCAL RETIREMENT SYSTEM

Report from Executive Deputy Comptroller Colleen Gardner

I am proud of the work NYSLRS has accomplished during the 2020-21 State fiscal year, and I am pleased to share highlights of that work with you.

NYSLRS' CENTENNIAL

This year marked the 100th anniversary of NYSLRS. Originally called the New York State Employees' Retirement System, we first opened our doors on January 1, 1921.

By June 30, 1921, NYSLRS had 4,500 members and provided pension benefits to 43 State retirees and beneficiaries. The pension fund held just over \$8 million dollars. Today, we are one of the largest and best-funded public retirement systems in the country. As of March 31, 2021, NYSLRS had 675,519 members and provided pension benefits to 496,628 retirees and beneficiaries. The Fund's audited value at the end of State fiscal year 2020-21 was \$258.1 billion.

Over the last 100 years, NYSLRS has lived up to its mission to properly fund and deliver secure pensions through sound actuarial practices and an efficient administration of benefits. We are dedicated to fulfilling our mission for years to come.

RESPONSE TO THE PANDEMIC

The 2020-21 State fiscal year was one of our most challenging as we dealt with the COVID-19 health care crisis, but our staff met those challenges with determination, flexibility and an unwavering commitment to our members, retirees, beneficiaries and employers.

It became critically important for our customers to understand their benefits and know what steps to take if they became seriously ill. We created a COVID-19 Help Center on our website so customers could find essential information in one convenient location. The resources featured in the Help Center included information about new laws and policies such as the COVID-19 accidental death benefit and the waiver of the 15-day filing period for service retirements. We provided detailed information about filing for disability retirement, enrolling in direct deposit and filing a power of attorney.

We helped members, retirees and employers transition to *Retirement Online*, our self-service application, so they could do business with us efficiently and safely from home. With *Retirement Online*, members and retirees can view benefit information, update contact information, and view and update beneficiaries. Members can also apply for a loan, estimate their pension, request to purchase service credit and apply for retirement.

Our Call Center remained open, with staff working remotely, but face-to-face consultations with NYSLRS representatives were not possible. Instead, our Call Center offered phone consultations by appointment. In addition to providing members with personalized meetings, these phone consultations allowed us to serve more members than in-person consultations. More than 25,000 members took advantage of this service.

Instead of conducting in-person retirement presentations for employers and members, we used video conferencing. Administrative hearings for members and outreach and training for employers were also held virtually. We used emails, blog posts and social media to help make sure customers had up-to-date information. Newsletters were published electronically instead of distributing hard copy versions through our employers, whose offices were generally closed.

OVERVIEW OF THE NEW YORK STATE AND LOCAL RETIREMENT SYSTEM

Report from Executive Deputy Comptroller Colleen Gardner

CONTINUED

While continuing to provide important information and services to our customers was essential, we were also mindful of ensuring the health and safety of our staff.

Most NYSLRS staff members worked remotely during the past year, but it was necessary for certain essential staff to carry out their critical duties from the office. For example, our Scanning unit scanned 1.79 million paper documents while working on site in our Menands and Albany offices, allowing other staff to complete their work from home. NYSLRS implemented strict guidelines to help ensure the safety of our essential staff.

Our success with telecommuting was a tremendous accomplishment done under extraordinary circumstances. We are grateful to all our staff, whose dedication and commitment enabled NYSLRS to continue to provide benefits to our customers without interruption.

It seems likely that the COVID-19 public health emergency will continue for the foreseeable future. Whatever challenges 2021-22 holds, our members and retirees can count on us to provide them with the benefits they have earned.

RETIREMENT ONLINE

We first launched *Retirement Online* in 2017. Since day one, we have been proud to provide our members and retirees with a new, convenient way to access their benefit information and do business with us.

As of March 31, 2021, more than 345,700 members and retirees had enrolled in *Retirement Online*, an increase of 33.3 percent over the year before. The growth in enrollments and online transactions is due, in part, to the pandemic. *Retirement Online* provided a safe and secure way for our customers to continue to do business with us.

One of the most popular features in *Retirement Online* is our benefit calculator, which gives members the ability to create a customized pension benefit estimate. Although our members' annual statements can now be viewed in *Retirement Online*, the pension estimates in the statement reflect a specific point in time — the end of the fiscal year. *Retirement Online* gives members the ability to calculate a pension estimate anytime using current account information. Members can also enter different retirement dates, beneficiaries, earnings and service credit amounts to see the effect on their potential benefit.

Over the last fiscal year, more than 318,726 benefit estimates were calculated in *Retirement Online*.

In addition, 77 percent of loan requests and 17 percent of new service credit purchase requests are now being made through *Retirement Online*. During fiscal year 2020-21, we received 33,098 loan applications, of which 25,492 were submitted online. We also received 18,584 new service credit purchase requests, of which 3,113 were submitted online.

Overall, 12,188 members have applied for retirement using *Retirement Online*, and 32,917 beneficiary updates have been made. At fiscal year end, half of retirement applications were submitted online.

Work is now underway on the final phase of our redesign project, which focuses on pension payments and disbursements, post-retirement employment, matrimonial review and legal review. New features for retirees will include the ability to manage direct deposit information, update federal tax withholding and view and print 1099-R tax forms.

When the project is complete, we will have a comprehensive system that will enhance service to our customers and streamline the work we do.

OVERVIEW OF THE NEW YORK STATE AND LOCAL RETIREMENT SYSTEM

Report from Executive Deputy Comptroller Colleen Gardner

CONTINUED

OUR EMPLOYER PARTNERSHIP

Our participating employers are key partners in our mission to provide accurate retirement benefits to our members. Those benefits are based on the earnings and service information employers report to us, so it's essential that we provide the tools employers need to complete their retirement-related work more efficiently. Enhanced reporting in *Retirement Online* does just that.

Launched in 2020, enhanced reporting streamlines monthly reporting and automates member enrollments. With enhanced reporting, employers provide more member data upfront, reducing the number of inquiries they receive from us and eliminating the need to provide additional information when an employee retires.

To help employers with the transition to enhanced reporting, we provide them customized training and support, as well as reference tools and training resources on our website. By the end of fiscal year 2020-21, 429 employers had transitioned to enhanced reporting while another 281 were in the process of transitioning, representing nearly 24 percent of our employers.

This past year, we also introduced the *Retirement Online* billing dashboard. Now, employers can access all the billing information they need from one location in *Retirement Online*. The dashboard is where they can find their annual and estimated invoices, the fiscal year earnings they reported to us, prior years' adjustments, the Governmental Accounting Standards Board (GASB) report and other financial information.

We have made tremendous advances in the online tools we offer our employers because, by focusing on providing better service to them, we also provide better service to our members.

CUSTOMER SERVICE

NYSLRS puts a high premium on customer satisfaction. To ensure we are on track to achieve our customer service goals, each year we measure key business elements and compare them to those of peer public retirement systems. This allows us to see where our work is paying off and reflect on areas that need improvement. Ultimately, we use this feedback to better serve our customers and apply best practices.

Our phone system's automatic call back feature continues to be very popular and we are working towards implementing an estimated wait time feature. These improvements, developed as a result of feedback, are designed to provide better call experiences for our customers.

Last spring and fall we continued our efforts to increase direct deposit enrollment by writing to retirees who receive their pension by paper check and encouraging them to take advantage of this service. Direct deposit was essential during the pandemic as it gave retirees access to their monthly pension payment without going to a bank. Our efforts reduced the number of retirees who receive checks by more than 10,000. Over 95 percent of our retirees now receive pension payments electronically.

Throughout the year, we have worked diligently to reduce our inventory of open cases and decrease processing times. For example, we receive approximately 2,200 power of attorney documents each year, and retirement legal services staff must review each request to ensure it meets all New York State requirements. As of the end of the fiscal year, the power of attorney review is current.

Going forward, we will continue to look for ways to improve our customers' experience, by expanding their access to services, improving communication and anticipating their needs.

OVERVIEW OF THE NEW YORK STATE AND LOCAL RETIREMENT SYSTEM

Report from Executive Deputy Comptroller Colleen Gardner

CONTINUED

FIGHTING FRAUD

We take preventing and detecting pension fraud very seriously. Identifying unreported retiree and beneficiary deaths to uncover overpayments is one way we detect fraud. During the last fiscal year, NYSLRS recovered nearly \$356,000 in inappropriate pension overpayments.

One of the duties of our Pension Integrity Bureau is to audit retirement data to verify that it has been reported accurately. Since retirement benefits are based in part on reported data, these audits help ensure that appropriate benefits are paid. The bureau also continually monitors *Retirement Online* for instances of online fraud, and ensures the appropriate internal controls are in place so the system and the data it contains are protected.

We will continue to search out unreported retiree deaths and online fraud. When inappropriate payments are identified, we will pursue full restitution.

NEW LAWS ENACTED IN THE PAST YEAR THAT IMPACT NYSLRS

Special Accidental Death Benefits Increased

Chapter 58 of the Laws of 2020 increases certain special accidental death benefits paid to widows, widowers or children of police officers and firefighters killed in the line of duty.

World Trade Center Sick Leave Bill Amended

Chapter 60 of the Laws of 2020 relates to sick leave for officers and employees with a qualifying World Trade Center condition. It clarifies requirements for those who participated in the World Trade Center rescue and cleanup efforts, extends eligibility to those who filed a notice of participation under the Workers' Compensation Law, specifies that the President of the Civil Service Commission reviews claims and clarifies the appeals process.

COVID-19 Accidental Death Benefit Presumption Established

Chapter 89 of the Laws of 2020 establishes a coronavirus disease (COVID-19) presumption for accidental death benefits for certain public employees.

September 11 Workers Protection Task Force Act Amended

Chapter 169 of the Laws of 2020 revises and extends the September 11th Workers Protection Task Force, as created in the 2005 World Trade Center Presumption Law. It requires new appointments to the task force, establishes a biannual meeting requirement, expands areas of study to include more recently raised issues, resets the deadline for an annual report and extends the provisions of the act to June 10, 2025.

OVERVIEW OF THE NEW YORK STATE AND LOCAL RETIREMENT SYSTEM

Report from Executive Deputy Comptroller Colleen Gardner

CONTINUED

COVID-19 Accidental Death Benefit Presumption Extended

Chapter 78 of the Laws of 2021 extends the coronavirus disease 2019 (COVID-19) presumption for public employee accidental death benefits for an additional two years.

Power of Attorney Requirements Changed

Chapter 84 of the Laws of 2021 adds a requirement that two disinterested witnesses sign the power of attorney form. It also specifies the time period for review of a statutory short form power of attorney and makes technical changes to the statutory short form sections relating to the designation of multiple agents.

Although many initiatives designed to improve customer service were realized in fiscal year 2020-21, moving forward, we will continue to look for more ways to provide responsive and dependable service to our members, retirees, beneficiaries and employers. I look forward to reporting the results of our efforts in our next Comprehensive Annual Financial Report.

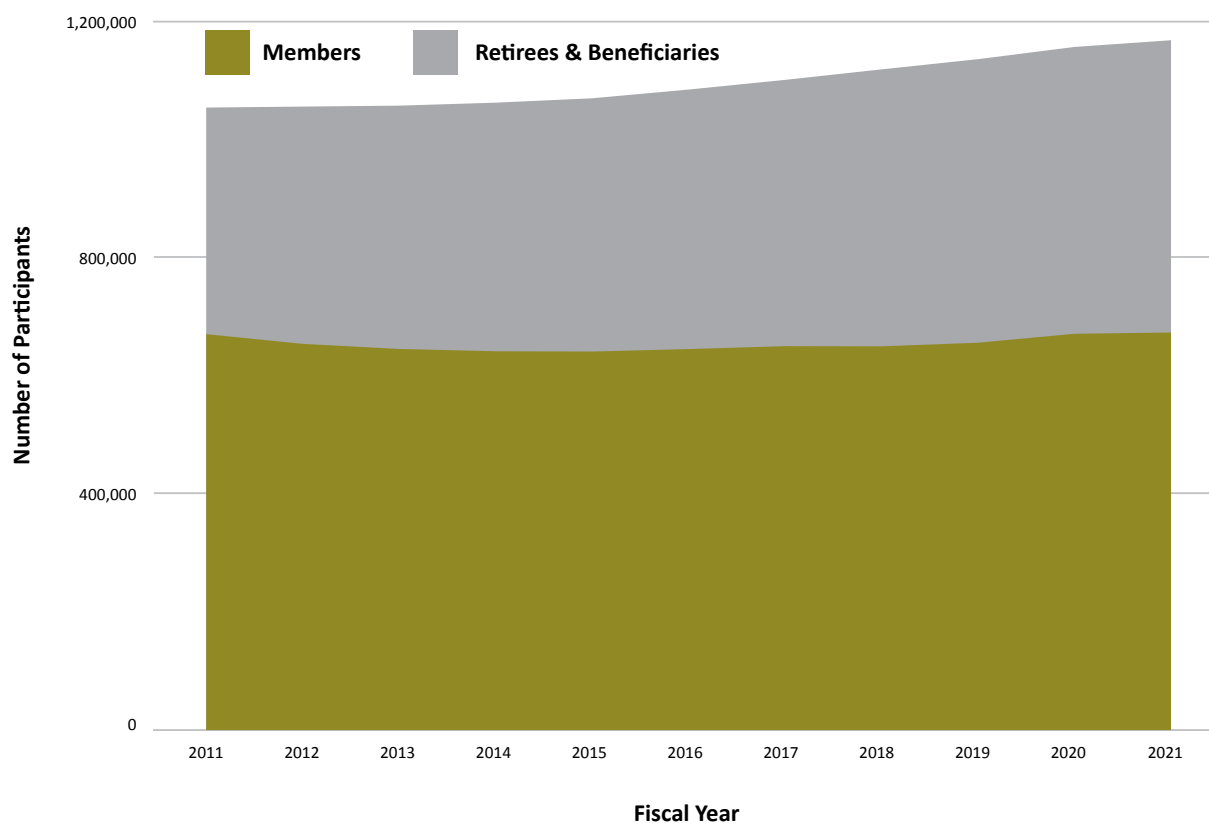
BY THE NUMBERS

MEMBERS AND RETIREES

There are 1,172,147 participants in the System, including 675,519 members and 496,628 retirees and beneficiaries.

The number of retirees is increasing more quickly than members. For example, in 2001 retirees and beneficiaries represented approximately 32 percent of the System's participants. By fiscal year 2021, that number had increased to approximately 42 percent.






Benefit payments continue to rise, reflecting improvements in final average salaries over the past decades, cost-of-living adjustment (COLA) payments and benefit improvements enacted over the years.

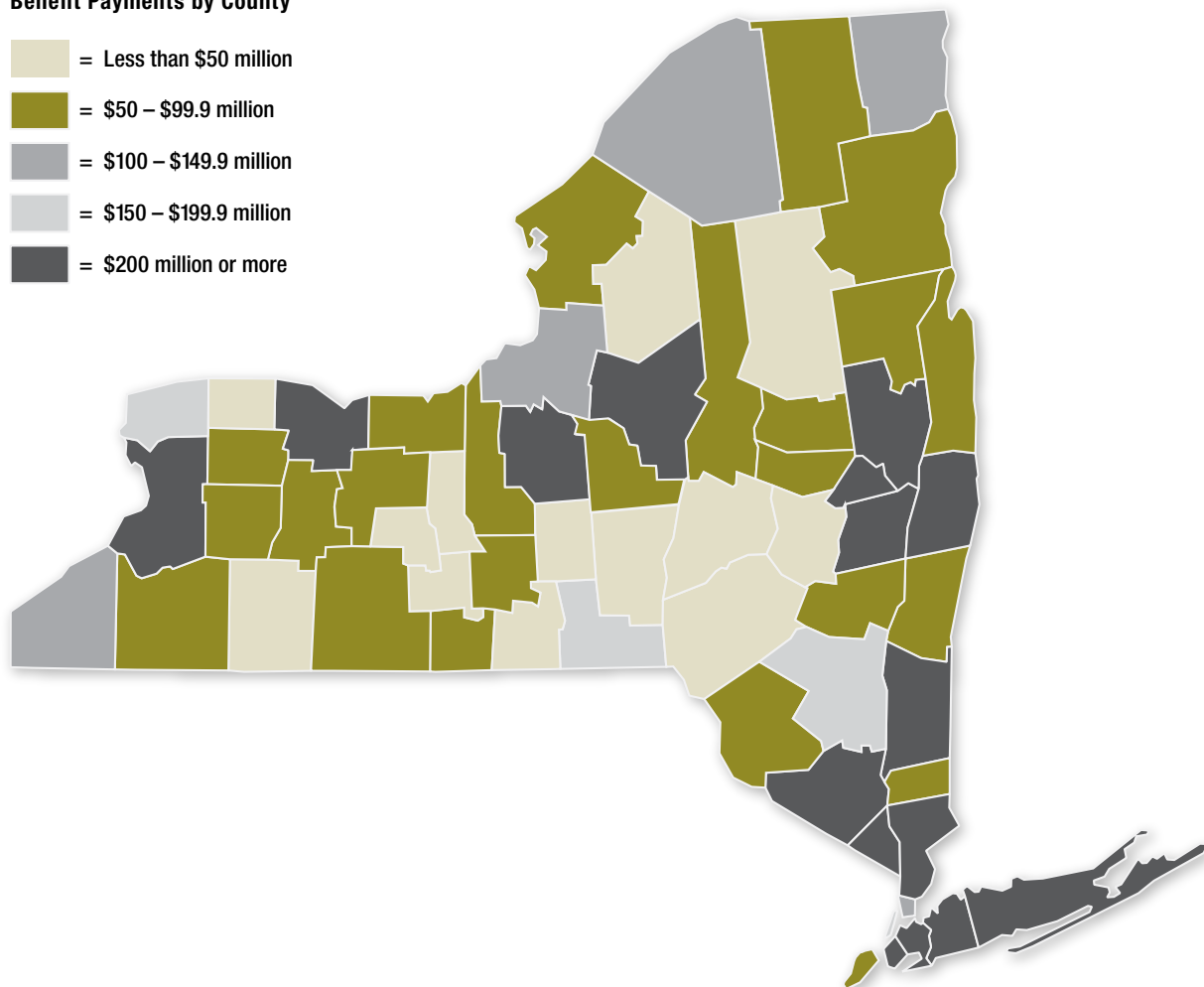


RETIREES IN NEW YORK STATE

Of the 496,628 retirees and beneficiaries in the System, 391,454 (approximately 79 percent) remain New York State residents. As such, benefit payments surpassing \$11.3 billion this year alone reach the State’s communities and businesses, representing a significant stimulus to the State’s economy.

Benefit Payments by County

-  = Less than \$50 million
-  = \$50 – \$99.9 million
-  = \$100 – \$149.9 million
-  = \$150 – \$199.9 million
-  = \$200 million or more



ANNUAL BENEFIT PAYMENTS WITHIN NEW YORK STATE

As of March 31, 2021.

County	Annuitants	Annual Payments
Albany	19,827	\$ 665,881,846
Allegany	1,763	35,293,673
Bronx	3,827	114,248,067
Broome	8,367	180,953,195
Cattaraugus	3,652	81,804,240
Cayuga	3,517	87,885,595
Chautauqua	5,113	113,431,121
Chemung	3,877	98,870,158
Chenango	2,312	45,850,036
Clinton	4,778	132,000,962
Columbia	3,226	91,103,201
Cortland	1,891	41,187,756
Delaware	1,922	41,041,649
Dutchess	10,631	334,730,244
Erie	32,696	914,709,249
Essex	2,165	50,843,305
Franklin	3,434	88,166,559
Fulton	2,372	52,700,990
Genesee	2,578	61,823,633
Greene	2,646	72,716,288
Hamilton	496	11,084,595
Herkimer	2,615	56,326,920
Jefferson	3,968	96,847,481
Kings	6,206	202,725,854
Lewis	1,345	26,730,631
Livingston	3,190	76,726,471
Madison	2,739	61,126,867
Monroe	18,467	443,304,706
Montgomery	2,533	61,209,247
NY Military	10	191,637
Nassau	25,114	927,876,864
New York	4,533	163,243,788

County	Annuitants	Annual Payments
Niagara	6,854	\$ 171,182,809
Oneida	10,561	273,502,480
Onondaga	14,808	369,011,313
Ontario	3,881	91,618,433
Orange	9,988	295,202,572
Orleans	1,695	38,211,805
Oswego	4,660	100,081,178
Otsego	2,324	47,002,534
Putnam	2,655	91,288,629
Queens	6,537	220,495,786
Rensselaer	9,759	306,508,336
Richmond	2,552	90,339,057
Rockland	7,220	245,168,288
Saratoga	11,829	364,400,290
Schenectady	9,077	281,662,803
Schoharie	1,764	43,716,168
Schuyler	891	19,878,796
Seneca	1,549	34,837,393
St. Lawrence	5,765	143,550,831
Steuben	3,597	80,527,290
Suffolk	37,707	1,343,054,505
Sullivan	3,116	83,524,612
Tioga	1,819	36,477,641
Tompkins	2,914	65,237,469
Ulster	6,536	169,492,414
Warren	3,174	80,015,011
Washington	2,971	72,503,424
Wayne	3,575	77,090,236
Westchester	16,696	590,227,708
Wyoming	2,271	55,565,288
Yates	899	19,164,466
Total	391,454	11,333,176,394

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

ANNUAL BENEFIT PAYMENTS WITHIN THE UNITED STATES

As of March 31, 2021.

State	Annuitants	Annual Payments
Alabama	862	\$ 16,796,316
Alaska	56	1,241,981
Arizona	2,724	61,347,617
Arkansas	177	2,766,481
California	2,156	43,103,853
Colorado	861	18,033,648
Connecticut	2,446	65,740,020
Delaware	1,058	30,675,777
Florida	38,872	1,022,083,803
Georgia	4,062	88,447,684
Guam	1	9,791
Hawaii	110	2,455,471
Idaho	117	2,384,866
Illinois	364	6,939,055
Indiana	302	5,264,478
Iowa	77	1,133,119
Kansas	114	1,955,342
Kentucky	424	7,690,952
Louisiana	199	3,608,696
Maine	638	14,047,340
Maryland	1,511	31,466,783
Massachusetts	1,600	37,538,478
Michigan	345	6,079,151
Minnesota	160	2,480,290
Mississippi	197	3,981,373
Missouri	263	4,296,176
Montana	126	2,590,424

State	Annuitants	Annual Payments
Nebraska	52	\$ 902,840
Nevada	1,392	35,978,715
New Hampshire	671	17,886,388
New Jersey	8,078	316,565,891
New Mexico	424	8,295,706
New York	391,454	11,333,176,394
North Carolina	9,695	229,112,481
North Dakota	23	456,109
Ohio	817	14,031,469
Oklahoma	156	2,565,448
Oregon	297	5,489,682
Pennsylvania	5,140	129,136,355
Puerto Rico	428	7,646,582
Rhode Island	267	6,857,485
South Carolina	6,873	182,999,711
South Dakota	85	2,384,390
Tennessee	2,243	56,405,147
Texas	2,390	52,884,330
Utah	167	3,309,055
Vermont	609	13,776,544
Virginia	3,823	82,629,226
Washington	545	11,143,063
Washington, D.C.	105	2,282,320
West Virginia	190	3,847,035
Wisconsin	165	3,024,579
Wyoming	79	1,962,740
Total	495,990	\$ 14,008,908,655

ANNUAL BENEFIT PAYMENTS OUTSIDE THE UNITED STATES

As of March 31, 2021.

Annuitants	Total Annual Payments
638	\$ 11,377,569

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

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NYSLRS

*A Century of
Checks & Balances*



Financial

We are committed to providing our membership with an accurate picture of the Fund's health. In addition to conducting our own reviews, independent auditors are called on to review our work. In this way, we ensure that NYSLRS' financial statements and reports continue to meet the highest program standards expected of public retirement systems.

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INDEPENDENT AUDITORS' REPORT



KPMG LLP
515 Broadway
Albany, NY 12207-2974

Independent Auditors' Report

The Trustee
New York State and Local Retirement System:

Report on the Financial Statements

We have audited the accompanying financial statements of the New York State and Local Retirement System (the System) as of and for the year ended March 31, 2021, and the related notes to the financial statements, which collectively comprise the System's basic financial statements for the year then ended as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

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

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

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

Opinion

In our opinion, the financial statements referred to above present fairly in all material respects, the fiduciary net position of the System as of March 31, 2021, and the changes in its fiduciary net position for the year then ended in accordance with U.S. generally accepted accounting principles.

KPMG LLP a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee.

**Other Matters****Required Supplementary Information**

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

Supplementary and Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's basic financial statements. The schedules of administrative expenses, investment expenses and consulting fees on pages 80-82, as well as the introduction, investment, actuarial and statistical sections are presented for purposes of additional analysis and are not a required part of the basic financial statements.

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

The introduction, investment, actuarial, and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated July 28, 2021 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

A stylized signature of 'KPMG LLP' in a dark, handwritten-style font.

July 28, 2021, except as to note 2 (h),
which is as of August 13, 2021

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

March 31, 2021

The following overview of the financial activity of the New York State and Local Retirement System (the System) for the fiscal year ended March 31, 2021 is intended to provide the reader with an analysis of the System's overall financial position. The System is comprised of the New York State and Local Employees' Retirement System (ERS) and the New York State and Local Police and Fire Retirement System (PFRS). The net position of the System is held in the New York State Common Retirement Fund (the Fund), which was established to hold all assets and record changes in fiduciary net position allocated to the System. This management's discussion and analysis should be read in conjunction with the basic financial statements of the System, which follow.

FINANCIAL HIGHLIGHTS

The fiduciary net position of the System held in trust to pay pension benefits was \$260.08 billion as of March 31, 2021 and \$198.08 billion as of March 31, 2020. This amount reflects an increase of \$62.00 billion from the prior fiscal year. This change is primarily the result of the net appreciation of the fair value of the investment portfolio. The Fund continues to diversify and monitor downside risks. Net appreciation (depreciation) in fair value of investments for the fiscal years ended March 31, 2021 and 2020 was \$67.6 billion and (\$12.14) billion, respectively.

- The System's investments reported a positive money weighted rate of return, net of investment expense, of 33.43 percent for the fiscal year ended March 31, 2021 and a negative money weighted rate of return, net of investment expense, of 2.64 percent for the fiscal year ended March 31, 2020.
- Retirement and death benefits paid during the fiscal year ended March 31, 2021 to 496,628 annuitants totaled \$14.02 billion, as compared to \$13.25 billion paid to 487,407 annuitants for the fiscal year ended March 31, 2020. The increase is primarily due to the number of new retirees.
- Contributions from employers increased to \$5.03 billion for the fiscal year ended March 31, 2021, from \$4.78 billion for the fiscal year ended March 31, 2020. The increase in employer contributions was related to an increase in covered employee payroll from the previous year.
- The Net Pension Liability (NPL) for ERS was \$99.6 million for the measurement period ended March 31, 2021 as compared to \$26.48 billion for the measurement period ended March 31, 2020. The fiduciary net position, restricted for pension benefits as of March 31, 2021, was \$220.58 billion, which represents 99.95 percent of the calculated total pension liability for ERS. This NPL is allocated to participating employers and reported in their financial statements pursuant to Governmental Accounting Standards Board (GASB) Statement 68.
- The NPL for PFRS was \$1.73 billion for the measurement period ended March 31, 2021 as compared to \$5.34 billion for the measurement period ended March 31, 2020. The fiduciary net position, restricted for pension benefits as of March 31, 2021, was \$39.50 billion, which represents 96 percent of the calculated total pension liability for PFRS. This NPL is allocated to participating employers and reported in their financial statements pursuant to GASB Statement 68.

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

CONTINUED

OVERVIEW OF THE FINANCIAL STATEMENTS

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

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

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

The notes to the basic financial statements are an integral part of the basic financial statements and provide additional information about the plans, policies, and performance of the System.

The required supplementary information includes: Management's Discussion and Analysis, Schedule of Changes in the Employers' Net Pension Liability and Related Ratios, Schedule of Employer Contributions and Schedule of Investment Returns and related notes to the required supplementary information.

The additional supplementary information includes: Schedule of Administrative Expenses, Schedule of Investment Expenses, and Schedule of Consulting Fees.

ANALYSIS OF THE OVERALL FINANCIAL POSITION OF THE SYSTEM

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

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

CONTINUED

Table 1

Summary schedule of fiduciary net position as of March 31, 2021, as compared to March 31, 2020:

	(Dollars in Thousands)			Percentage Change
	2021	2020	Dollar Change	
Assets:				
Investments	\$ 258,135,801	\$ 194,317,163	\$ 63,818,638	32.8%
Securities lending collateral — invested	16,923,148	6,865,125	10,058,023	146.5
Receivables and other assets	<u>3,317,830</u>	<u>4,633,762</u>	<u>(1,315,932)</u>	<u>(28.4)</u>
Total assets	278,376,779	205,816,050	72,560,729	35.3
Liabilities:				
Securities lending obligations	16,930,860	6,880,350	10,050,510	146.1
Payables and other liabilities	<u>1,364,836</u>	<u>855,938</u>	<u>508,898</u>	<u>59.5</u>
Total liabilities	18,295,696	7,736,288	10,559,408	136.5
Net position, restricted for pension benefits	\$ 260,081,083	\$ 198,079,762	\$ 62,001,321	31.3%

The fiduciary net position of the System totaled \$260.1 billion as of March 31, 2021, an increase of \$62.0 billion from the prior fiscal year, primarily attributable to the net appreciation of invested assets.

Table 2

Schedule of invested assets as of March 31, 2021, as compared to March 31, 2020:

	(Dollars in Thousands)			Percentage Change
	2021	2020	Dollar Change	
Domestic equity	\$ 90,263,828	\$ 62,548,268	\$ 27,715,560	44.3%
Global fixed income	47,722,955	45,410,315	2,312,640	5.1
International equity	43,480,400	30,673,634	12,806,766	41.8
Private equity	29,470,165	20,314,177	9,155,988	45.1
Real estate	17,647,993	15,693,661	1,954,332	12.5
Short-term investments	11,082,651	5,697,690	5,384,961	94.5
Real assets	3,929,594	3,085,682	843,912	27.3
Opportunistic funds/ARS investments	5,016,078	9,881,892	(4,865,814)	(49.2)
Mortgage loans	1,043,621	1,011,844	31,777	3.1
Credit	8,478,516	—	8,478,516	—
Total investments	\$ 258,135,801	\$ 194,317,163	\$ 63,818,638	32.8%

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

CONTINUED

The largest percentage increases to the invested assets were in short-term investments and private equity, which represent 4.29 percent and 11.42 percent of the total portfolio, respectively. In the short-term investment portfolio the growth largely reflected temporary liquidity needs for funding new mandates. In the private equity portfolio the increase was due to a moderate increase in activity and a sharp increase in asset values from the prior year.

The largest percentage decrease to the invested assets was in Opportunistic/ARS investments, which represents 1.94 percent of the total portfolio. The decrease reflects redemptions in the ARS portfolio and a reclassification of assets into the Credit portfolio, which was established in the new asset allocation policy.

Table 3

Summary schedule of changes in fiduciary net position for the year ended March 31, 2021, as compared to the year ended March 31, 2020:

	(Dollars in Thousands)			Percentage Change
	2021	2020	Dollar Change	
Additions:				
Net investment (loss) income	\$ 70,649,606	\$ (8,798,771)	\$ 79,448,377	902.9%
Total contributions	5,638,783	5,383,166	255,617	4.7
Total additions	76,288,389	(3,415,605)	79,703,994	2,333.5
Deductions:				
Total benefits paid	14,121,971	13,311,136	810,835	6.1
Administrative expenses	165,097	139,050	26,047	18.7
OPEB expense	—	223,608	(223,608)	—
Total deductions	14,287,068	13,673,794	613,274	4.5
Net (decrease) increase	62,001,321	(17,089,399)	79,090,720	462.8
Net position, restricted for pension benefits — beginning of year	198,079,762	215,169,161	(17,089,399)	(7.9)
Net position, restricted for pension benefits — end of year	\$ 260,081,083	\$ 198,079,762	\$ 62,001,321	31.3%

The change in net investment income is primarily attributable to the net appreciation in fair value of investments from 2020 to 2021. The increase in total benefits paid is attributable to the number of new retirees.

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

CONTINUED

ECONOMIC FACTORS AND RATES OF RETURN

The Fund announced a positive investment performance for the fiscal year ended March 31, 2021, with a time-weighted rate of return of positive 33.55 percent with equity markets rebounding sharply as the governments across the globe provided unprecedented amounts of monetary and fiscal support. All asset classes performed well in a “risk on” environment. Despite this, uncertainties remain across asset classes, particularly in real estate. The COVID-19 pandemic continues to affect countries across the globe with the long-term implications still uncertain. We continue to monitor inflation, potential earnings erosion, tensions with China, the political climate domestically and other potential risks.

REQUESTS FOR INFORMATION

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

BASIC FINANCIAL STATEMENTS

COMBINING BASIC STATEMENT OF FIDUCIARY NET POSITION

Year Ended March 31, 2021

	(Dollars in Thousands)		
	Employees' Retirement System	Police and Fire Retirement System	Total
Assets:			
Investments (notes 2(b), 4, 5, 8, and 11):			
Domestic equity	\$ 76,558,006	\$ 13,705,822	\$ 90,263,828
Global fixed income	40,476,616	7,246,339	47,722,955
International equity	36,878,258	6,602,142	43,480,400
Private equity	24,995,362	4,474,803	29,470,165
Real estate	14,968,290	2,679,703	17,647,993
Opportunistic/ARSy investments	4,254,428	761,650	5,016,078
Short-term investments	9,399,841	1,682,810	11,082,651
Real assets	3,332,917	596,677	3,929,594
Credit	7,191,123	1,287,393	8,478,516
Mortgage loans	885,156	158,465	1,043,621
Total investments	218,939,997	39,195,804	258,135,801
Securities lending collateral — invested (notes 7 and 8)	14,353,507	2,569,641	16,923,148
Forward foreign exchange contracts (notes 6 and 8)	58,388	10,453	68,841
Receivables:			
Employers' contributions	662,316	266,847	929,163
Members' contributions	5,336	617	5,953
Member loans	916,146	6,807	922,953
Investment income	294,396	52,704	347,100
Investment sales	281,386	50,375	331,761
Other	153,670	26,069	179,739
Total receivables	2,313,250	403,419	2,716,669
Capital assets, at cost, net of accumulated depreciation	451,491	80,829	532,320
Total assets	236,116,633	42,260,146	278,376,779
Liabilities:			
Securities lending obligations (notes 7 and 8)	14,360,048	2,570,812	16,930,860
Forward foreign exchange contracts (notes 6 and 8)	58,338	10,444	68,782
Accounts payable — investments	570,758	102,180	672,938
Benefits payable	125,644	11,641	137,285
Other liabilities (note 2(f))	421,262	64,569	485,831
Total liabilities	15,536,050	2,759,646	18,295,696
Net position, restricted for pension benefits	\$ 220,580,583	\$ 39,500,500	\$ 260,081,083

See accompanying notes to basic financial statements.

BASIC FINANCIAL STATEMENTS

CONTINUED

COMBINING BASIC STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

Year Ended March 31, 2021

	(Dollars in Thousands)		
	Employees' Retirement System	Police and Fire Retirement System	Total
Additions:			
Income from investing activities:			
Interest income	\$ 1,015,078	\$ 180,883	\$ 1,195,961
Dividend income	1,321,312	235,453	1,556,765
Other income	987,386	175,949	1,163,335
Less: investment expenses	(767,490)	(136,764)	(904,254)
Net appreciation in fair value of investments	57,377,655	10,224,678	67,602,333
Total income from investing activities	59,933,941	10,680,199	70,614,140
Income from securities lending activities:			
Securities lending income	40,225	7,168	47,393
Less: securities lending rebates	(7,601)	(1,354)	(8,955)
Less: securities lending management fees	(2,522)	(450)	(2,972)
Total income from securities lending activities	30,102	5,364	35,466
Total net investment income	59,964,043	10,685,563	70,649,606
Contributions:			
Employers	4,062,302	967,488	5,029,790
Members	427,032	65,309	492,341
Interest on accounts receivable	63,096	12,529	75,625
Other, net	40,845	182	41,027
Total contributions	4,593,275	1,045,508	5,638,783
Total additions	64,557,318	11,731,071	76,288,389
Deductions:			
Benefits paid:			
Retirement benefits	11,606,094	2,158,674	13,764,768
Death benefits	244,443	13,556	257,999
Other, net	97,646	1,558	99,204
Total benefits paid	11,948,183	2,173,788	14,121,971
Administrative expenses	144,234	20,863	165,097
Total deductions	12,092,417	2,194,651	14,287,068
Net increase	52,464,901	9,536,420	62,001,321
Net position, restricted for pension benefits — beginning of year	168,115,682	29,964,080	198,079,762
Net position, restricted for pension benefits — end of year	\$ 220,580,583	\$ 39,500,500	\$ 260,081,083

See accompanying notes to basic financial statements.

NOTES TO BASIC FINANCIAL STATEMENTS

March 31, 2021

1. DESCRIPTION OF PLANS

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

The Comptroller of the State of New York serves as the trustee of the Fund and is the administrative head of the System. The Comptroller is an elected official determined in a direct statewide election and serves a four year term. Thomas P. DiNapoli has served as Comptroller since February 7, 2007. In November 2018, he was elected for a new term commencing January 1, 2019.

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

System benefits are established under the provisions of the New York State Retirement and Social Security Law (RSSL). Once a public employer elects to participate in the System, the election is irrevocable. The New York State Constitution provides that pension membership is a contractual relationship and plan benefits cannot be diminished or impaired. Benefits can be changed for future members only by enactment of a State statute. Generally, members of the System are employees, other than teachers, of the State and its municipalities, other than New York City.

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

As of March 31, 2021, the number of participating employers for ERS and PFRS consisted of the following:

	ERS	PFRS
State	1	1
Counties	86	4
Cities	72	61
Towns	937	169
Villages	487	299
Other	763	37
School districts	706	—
Total	3,052	571

BASIC FINANCIAL STATEMENTS

Notes to Basic Financial Statements

CONTINUED

As of March 31, 2021, the System membership for ERS and PFRS consisted of the following:

	ERS	PFRS
Retirees and beneficiaries currently receiving benefits	458,261	38,367
Active members	469,968	31,922
Inactive members*	170,613	3,016
Total members and benefit recipients	1,098,842	73,305

* Includes vested members not currently receiving benefits and nonvested members.

(a) Membership Tiers

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

ERS

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

PFRS

- Tier 1** Those persons who last became members before July 31, 1973.
- Tier 2** Those persons who last became members on or after July 31, 1973, but before July 1, 2009.
- Tier 3** Those persons who last became members on or after July 1, 2009, but before January 9, 2010.
- Tier 4** Not Applicable
- Tier 5** Those persons who last became members on or after January 9, 2010, but before April 1, 2012, or who were previously PFRS Tier 3 members who elected to become Tier 5.
- Tier 6** Those persons who first became members on or after April 1, 2012.

(b) Vesting

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

(c) Employer Contributions

Participating employers are required under the RSSL to contribute to the System at an actuarially determined rate adopted annually by the Comptroller. The average contribution rate for ERS for the fiscal year ended March 31, 2021 was approximately 14.6 percent of covered employee payroll. The average contribution rate for PFRS for the fiscal year ended March 31, 2021 was approximately 24.4 percent of covered employee payroll. Delinquent annual bills for employer contributions accrue interest at the actuarial interest rate applicable during the year. For the fiscal year ended March 31, 2021, the applicable interest rate was 6.8 percent.

(d) Member Contributions

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

(e) Benefits

Tiers 1 and 2

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

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

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

Tiers 3, 4, and 5

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

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

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

BASIC FINANCIAL STATEMENTS

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Notes to Basic Financial Statements

Tier 6

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

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

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

BASIC FINANCIAL STATEMENTS

Notes to Basic Financial Statements

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Special Plans

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

Disability Retirement Benefits

Disability retirement benefits are available to ERS and PFRS members unable to perform their job duties because of permanent physical or mental incapacity. There are three general types of disability benefits: ordinary, performance of duty, and accidental disability benefits. Eligibility, benefit amounts, and other rules such as any offsets of other benefits depend on a member's tier, years of service, and plan.

Ordinary Death Benefits

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

Post-Retirement Benefit Increases

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

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

(a) Basis of Accounting

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

(b) Investments

Investments are recorded on a trade date basis and reported at fair value. Fair value is defined as the amount that can reasonably be expected to be received for an investment in a current sale between a willing buyer and a willing seller. Due to the nature of investments, it is reasonable that changes in the value of investments will occur in the near future, and such changes could materially affect the amounts reported. The amounts reported as investments on the financial statements are allocated between ERS and PFRS based on each system's monthly average equity in the Fund. See note 4(c) for detailed information on the System's policy on investment valuation and note 8 for more detail regarding the methods used to measure the fair value of investments.

(c) Member Loan Programs

Members who joined prior to January 1, 2018 are entitled to participate in a loan program that allows them to borrow up to 75 percent of their member contributions or \$50,000, whichever is less. Members who joined on or after January 1, 2018, may borrow up to 50 percent of their contribution balance or \$50,000, whichever is less. Repayment of outstanding amounts is generally made through payroll deductions within five years. The interest rate charged for COESC Member Loans is fixed at 1 percent below the actuarial interest rate at the time the loan is granted. The rate for loans issued during the fiscal year ended March 31, 2021 was 6.0 percent.

(d) Capital Assets

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

During the fiscal year ended March 31, 2014, the System began capitalizing outlays associated with the redesign of its pension administration system. As of March 31, 2021, capitalized outlays for the project total \$483.6 million. This project is currently ongoing and is expected to be completed in the period ending July 31, 2022, at which time depreciation of the capitalized costs will begin.

(e) Contributions Receivable

Employers' contributions receivable are presented net of withdrawals, refunds, advance employer payments, and credits due employers. Receivable amounts from participating employers include \$20.7 million for amortization of retirement incentives, new plan adoptions, and retroactive membership. The RSSL includes several provisions related to the amortization of employer contribution amounts. These include:

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

The following represents the amortized receivable balance from the State and Local participating employers as of March 31, 2021, including the statutory amortization threshold and interest rate, for each respective fiscal year:

CHAPTER 57, LAWS OF 2010

Year	(Percentage of Payroll)		Interest	(Dollars in Millions)	
	ERS	PFRS		State	Local
2012	10.5%	18.5%	3.75%	\$ —	\$ 18.5
2013	11.5	19.5	3.00	23.3	68.9
2014	12.5	20.5	3.67	36.8	58
2015	13.5	21.5	3.15	41.1	57.6
2016	14.5	22.5	3.21	32.2	34.8
2017	15.1	23.5	2.33	—	3.8
2018	14.9	24.3	2.84	—	3.2
2019	14.4	23.5	3.64	—	3.5
				\$ 133.4	\$ 248.3

BASIC FINANCIAL STATEMENTS

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Notes to Basic Financial Statements

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

The following represents the amortized receivable balance from Local participating employers as of March 31, 2021, including the statutory amortization threshold and interest rate, for each respective fiscal year:

CHAPTER 57, LAWS OF 2013

Year	(Percentage of Payroll)		Interest	(Dollars in Millions)	
	ERS	PFRS		Local	
2014	12.0%	20.0%	3.76%	\$	64.5
2015	12.0	20.0	3.50		97.7
2016	12.5	20.5	3.31		76.7
2017	13.0	21.0	2.63		59.9
2018	13.5	21.5	3.31		58.9
2019	14.0	22.0	3.99		21.7
2020	14.2	22.5	2.87		18.1
2021	14.1	23.0	1.60		45.1
				\$	442.6

(f) Postemployment Benefits Other than Pensions

Employees of the System participate in a Postemployment Benefits Other than Pensions (OPEB) Plan administered by the State. The State administers the OPEB plan on a pay-as-you-go basis. Substantially all of the System's employees may become eligible for postemployment benefits if they reach retirement age while working for the System. The costs of providing the postemployment benefits, which primarily consists of health insurance coverage, are shared between the System and the retired employee.

The System's total OPEB liability was measured as of March 31, 2020 and was determined by an actuarial valuation as of April 1, 2019 rolled forward to March 31, 2020. The total OPEB liability and related OPEB amounts were allocated to the System based on the percentage of the System's full-time equivalents to the total full-time equivalents of the State. The OPEB amounts recorded by the System include the total OPEB liability (\$275.1 million), deferred outflows of resources (\$37.4 million), deferred inflows of resources (\$15.3 million) and OPEB expense (\$35.2 million). OPEB expense is recorded as part of administrative expenses on the combining statement of changes in fiduciary net position. Due to immateriality of the OPEB amounts to the System as a whole, the total OPEB liability, deferred outflows of resources and deferred inflows of resources are netted and included in other liabilities on the combining statement of fiduciary net position. Additionally, due to immateriality, the System has not presented all disclosures and required supplementary information prescribed by GASB Statement No. 75. For the fiscal year ended March 31, 2021, the System paid \$7.9 million in benefit payments.

(g) Use of Estimates

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

(h) Immaterial Correction of an Error

The System corrected an immaterial error in the combining statement of changes in fiduciary net position by reducing member contributions and other deductions by approximately \$872 million.

3. SYSTEM RESERVES

The legally required reserves, as covered by provisions of the RSSL, are maintained by the System, are fully funded as of March 31, 2021, and are described below:

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

As of March 31, 2021, the System reserves for ERS and PFRS consisted of the following:

	(Dollars in Thousands)	
	ERS	PFRS
Annuity savings	\$ 2,540	\$ 70,608
Annuity reserve	54,527	23,179
Pension accumulation	91,304,618	14,535,155
Pension reserve	120,197,818	24,663,154
Designated annuitant	53,494	22,305
Loan insurance	1,275	112
Group Life Insurance Plan reserve	161,746	3,161
COESC contribution	8,804,565	182,826
Total	\$ 220,580,583	\$ 39,500,500

4. INVESTMENTS

(a) Investment Policy

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

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

The asset allocation is not intended to be an absolute limit on the type of investments that can be made by the Comptroller or considered by staff. The Comptroller is expressly permitted to invest the assets of the Fund pursuant to various provisions of State law, including, among others, Article 4-A of the RSSL, which also contains limitations on the amount and quality of investments the Fund may hold in certain asset categories. Investments purchased pursuant to these provisions are so called “legal list” investments. In addition to the foregoing, section 177(9) of the RSSL contains a provision that currently provides that up to 25 percent of the Fund’s assets may be placed in investments not specifically authorized by any other provision of law. In making investments under this provision, the Comptroller is subject to the exclusive benefit and prudence standards in the statute. Subject to such standards, investments made under this provision must also, to the extent reasonably possible, benefit the overall economic health of the State. Investments made pursuant to section 177(9) of the RSSL are so called “basket clause” investments.

(b) Asset Allocation

The following was the adopted asset allocation policy as of March 31, 2021:

Asset Class	Target Allocation
Domestic equity	32.0%
International equity	15.0
Private equity	10.0
Real estate	9.0
Opportunistic/Absolute Return Strategy	3.0
Credit	4.0
Real assets	3.0
Fixed Income	23.0
Cash	1.0
	100.0%

(c) Methods Used to Value Investments

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

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

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

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

Real estate partnerships, global fixed income funds, commingled international equity funds and various alternative investments (private equity, opportunistic/ARS funds, real assets, and credit) are reported at net asset values as provided by the general partners or investment managers.

Information on securities lending is available in note 7. Information on foreign currency risks and derivative financial instruments can be found in note 5(f) and note 6, respectively.

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

(d) Rates of Return

In accordance with U.S. generally accepted accounting principles, the money weighted rate of return on plan investments, net of investment expenses, was 33.43 percent for the year ended March 31, 2021. For internal purposes, the System evaluates investment performance using the time weighted rate of return, gross of certain investment fees, which was 33.55 percent for the year ended March 31, 2021.

5. DEPOSIT AND INVESTMENT RISK DISCLOSURE

(a) Custodial Credit Risk for Investments

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

Equity and fixed income investments owned directly by the Fund, which trade in the United States (U.S.) markets, are generally held by the Fund's custodian, in separate accounts, in the name of the Comptroller of the State of New York in Trust for the Fund. These securities are typically held in electronic form through the Federal Book Entry System and by the Depository Trust Company (DTC) and its subsidiaries acting as an agent of the Fund's custodian bank. Securities held directly by the Fund that trade in markets outside the U.S. are held by a subsidiary of the Fund's custodian bank in the local market, a bank performing custodial services in the local market acting as an agent for the Fund's custodian bank, and in some foreign markets, the securities are held in electronic form by a DTC subsidiary or an organization similar to DTC.

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

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

(b) Custodial Credit Risk for Deposits

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

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

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(c) Interest Rate Risk

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

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

As of March 31, 2021, the duration of the fixed income portfolio is as follows (dollars in thousands):

Category	Fair Value	Percentage of Portfolio	Effective Duration (In Years)
Global fixed income:			
Core Portfolio:			
Treasury	\$ 13,439,002	28.2%	10.93
Treasury Inflation-Protected Securities (TIPS)	2,110,359	4.4	3.33
Federal agency	698,271	1.5	4.64
Corporate	15,301,141	32.1	6.84
Asset-backed	1,819,641	3.8	3.05
Commercial mortgage-backed	1,830,010	3.8	3.11
Mortgage-backed	6,888,716	14.4	4.22
Collateralized loan obligations	2,898,394	6.1	0.10
Municipal bonds	612,624	1.3	11.64
Core Portfolio	45,598,158	95.6	6.17
Externally managed funds:			
Advent Capital	480,884	1.0	2.76
Calvert Research and Management	254,105	0.5	5.93
DoubleLine Capital	283,264	0.6	15.65
New Century Advisors	531,805	1.1	5.60
Semper Capital	315,934	0.7	3.20
Teachers Advisors (Nuveen)	258,805	0.5	6.14
Total global fixed income	\$ 47,722,955	100.0%	
Mortgage loans:			
Berkadia	552,872	53.0	4.19
CPC	490,749	47.0	6.38
Total Mortgage loans	\$ 1,043,621	100.0%	
Total	\$ 48,766,576		

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(d) Credit Risk of Debt Securities

Fixed income obligations purchased pursuant to section 177(1 a) of the RSSL must be investment grade at the time of their acquisition. A bond is considered investment grade if its credit rating is Baa or higher by Moody's or BBB- or higher by Standard & Poor's. Fixed income obligations purchased pursuant to section 177(9) of the RSSL, the "basket clause," are subject to a standard of prudence. As of March 31, 2021, credit ratings, obtained from several industry rating services, for the fixed income portfolio are as follows (dollars in thousands):

Quality Rating	Fair Value	Percentage of Fair Value
Global fixed income:		
AAA	\$ 28,228,352	59.15%
AA	3,404,294	7.13
A	6,805,349	14.26
BBB	8,388,306	17.58
BB	169,865	0.36
B	31,208	0.06
CCC	14,459	0.03
CC	339	0.01
C	20,220	0.04
Not Rated	344,629	0.72
Externally managed funds of one:*		
Semper Capital	315,934	0.66
Total Global fixed income	\$ 47,722,955	100.0%
Mortgage loans:		
Not Rated	\$ 1,043,621	100.0%
Total	\$ 48,766,576	
* These externally managed funds are considered investments under the "basket clause," subject to the standards of prudence. All or a part of the holdings can be non-investment grade. While this fund is not rated, the underlying securities credit ratings range from AAA to CCC & Not Rated.		

(e) Concentration of Credit Risk

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

As of March 31, 2021, the System did not hold any investments in any one issuer that totaled 5 percent or more of the pension plan's fiduciary net position. Investments issued or explicitly guaranteed by the U.S. government and pooled investments are excluded.

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

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

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

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

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

Fixed income investments purchased pursuant to section 177(9) of the RSSL are subject to standards of prudence and the exclusion benefit rules. Subject to such standards, investments made under section 177(9) must, to the extent reasonably possible, benefit the overall economic health of the State.

(f) Foreign Currency Risk

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

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Foreign investments included in the combining basic statement of fiduciary net position as of March 31, 2021 are as follows:
(Dollars in Thousands)

	Equity	Cash	Real Estate	Private Equity, OARS, Real Assets, and Credit	Total
Albanian Lek	\$ —	\$ —	\$ 10	\$ 11	\$ 21
Angolan Kwanza	—	—	—	179	179
Argentine Peso	—	1	29	12,066	12,096
Australian Dollar	529,489	9,593	155,399	292,797	987,278
Bahamian Dollar	—	—	1,336	4,466	5,802
Bahraini Dinar	—	—	—	(146)	(146)
Belarusian Ruble	—	—	—	1,913	1,913
Bermudian Dollar	—	—	—	154,454	154,454
Bolivian Boliviano	—	—	—	(351)	(351)
Botswana Pula	—	—	—	4,102	4,102
Brazilian Real	233,394	240	46,693	424,442	704,769
British Pound Sterling	2,974,941	4,274	563,150	1,970,436	5,512,801
Bulgarian Lev	—	—	116	11,530	11,646
Burmese Kyat	—	—	—	13,409	13,409
Cambodian Riel	—	—	—	3,323	3,323
Canadian Dollar	459,143	7,061	143,381	610,790	1,220,375
Cayman Islands Dollar	—	—	—	661,158	661,158
Central African CFA Franc	—	—	—	(109)	(109)
Chilean Peso	20,197	27	—	18,949	39,173
Chinese Renminbi (Yuan)	303,121	—	195,007	1,316,768	1,814,896
Colombian Peso	5,748	—	2	46,065	51,815
Costa Rican Colon	—	—	—	360	360
Czech Koruna	3,423	5	—	2,880	6,308
Danish Krone	574,819	816	66,073	141,060	782,768
Dominican Peso	—	—	—	2,670	2,670
Egyptian Pound	1,030	14	—	57,350	58,394
Euro	5,917,591	1,803	2,119,016	5,394,641	13,433,051
Georgian Lari	—	—	—	16	16
Ghanaian Cedi	—	—	—	21,731	21,731
Hong Kong Dollar	1,858,685	1,323	60,527	129,149	2,049,684
Hungarian Forint	29,196	60	—	30,454	59,710
Indian Rupee	627,727	717	226,832	971,133	1,826,409
Indonesian Rupiah	27,632	22	—	128,796	156,450
Iraqi Dinar	—	—	—	(409)	(409)
Israeli New Shekel	17,716	1,495	—	434,477	453,688
Japanese Yen	3,392,827	6,315	80,292	320,051	3,799,485
Kazakhstani Tenge	—	—	—	1	1
Kenyan Shilling	—	—	—	25,533	25,533
Malaysian Ringgit	56,016	40	—	48,696	104,752
Maldivian Rufiyaa	—	—	5,189	1,804	6,993
Mauritian Rupee	—	—	39	63,017	63,056
Mexican Peso	62,099	373	7,857	143,058	213,387

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	Equity	Cash	Real Estate	Private Equity, OARS, Real Assets, and Credit	Total
Moroccan Dirham	\$ —	\$ —	\$ —	\$ 8,172	\$ 8,172
Mozambican Metical	—	—	—	1,246	1,246
New Taiwan Dollar	799,382	97	135	19,107	818,721
New Zealand Dollar	22,245	512	—	66,573	89,330
Nigerian Naira	—	—	—	41,714	41,714
Norwegian Krone	126,197	1,031	3,116	105,914	236,258
Omani Rial	—	—	—	(310)	(310)
Pakistan Rupee	2,470	—	—	—	2,470
Panamanian Balboa	—	—	—	(319)	(319)
Peruvian Sol	—	1	—	70,916	70,917
Philippine Peso	11,470	5	—	35,001	46,476
Polish Zloty	25,141	85	65,956	365,199	456,381
Qatari Riyal	6,003	—	—	515	6,518
Romanian Leu	—	—	—	26,058	26,058
Russian Ruble	—	—	2,679	107,909	110,588
Saudi Riyal	17,068	17	—	(4,924)	12,161
Serbian Dinar	—	—	19	1,594	1,613
Singapore Dollar	217,271	3,188	92,428	177,943	490,830
South African Rand	140,876	1,676	—	90,005	232,557
South Korean Won	990,120	77	23,689	152,927	1,166,813
Sri Lankan Rupee	—	—	—	4,492	4,492
Swedish Krona	870,903	5,556	39,761	954,475	1,870,695
Swiss Franc	1,142,357	1,798	11	289,312	1,433,478
Tanzanian Shilling	—	—	—	2,785	2,785
Thai Baht	68,065	—	—	31,583	99,648
Tunisian Dinar	—	—	—	35	35
Turkish Lira	44,320	1,016	—	61,618	106,954
Ugandan Shilling	—	—	—	1,581	1,581
Ukrainian Hryvnia	—	—	3,042	12,945	15,987
United Arab Emirates Dirham	5,274	—	8,193	63,979	77,446
Uruguayan Peso	—	—	—	(949)	(949)
Venezuelan Bolívar Soberano	—	—	—	2,537	2,537
Vietnamese Dong	—	—	116	45,292	45,408
West African CFA Franc	—	—	—	9,637	9,637
Zambian Kwacha	—	—	—	196	196
Other	—	—	23,372	89	23,461
Total subject to foreign currency risk	21,583,956	49,238	3,933,465	16,207,567	41,774,226
Commingled international equity in U.S. Dollars	15,545,326	—	—	—	15,545,326
Foreign investments in U.S. Dollars	6,351,118	—	470	7,831,621	14,183,209
Total foreign investments	\$ 43,480,400	\$ 49,238	\$ 3,933,935	\$ 24,039,188	\$ 71,502,761

6. DERIVATIVES

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

Forward Currency Contracts

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

The table below summarizes the fair value of foreign currency contracts as of March 31, 2021 (dollars in thousands):

Currency	Forward Currency Contracts	Spot Currency Contracts	Totals
Australian Dollar	\$ (725)	\$ (1,077)	\$ (1,802)
Brazilian Real	—	(118)	(118)
British Pound	886	1,733	2,619
Canadian Dollar	(4,057)	(4,475)	(8,532)
Chinese Yuan Renminbi	—	2,244	2,244
Czech Koruna	229	—	229
Danish Krone	4,960	—	4,960
Euro	20,327	(3,947)	16,380
Hong Kong Dollar	(3,964)	1,272	(2,692)
Indonesia Rupiah	—	(923)	(923)
Israeli Shekel	—	(99)	(99)
Japanese Yen	(9,202)	9,674	472
Mexican Peso	112	—	112
New Taiwan Dollar	—	(358)	(358)
New Zealand Dollar	—	(467)	(467)
Norwegian Krone	(70)	—	(70)
Polish Zloty	1,595	—	1,595
Singapore Dollar	(326)	614	288
South African Rand	(855)	—	(855)
South Korean Won	—	341	341
Swedish Krona	(875)	—	(875)
Swiss Franc	5,006	(1,365)	3,641
Thai Baht	—	(224)	(224)
U.S. Dollar	(12,982)	(2,828)	(15,810)
Total	\$ 59	\$ (3)	\$ 56

7. SECURITIES LENDING PROGRAM

Section 177 d of the RSSL authorizes the Fund to enter into security loan agreements with broker/dealers and state or national banks. The Fund has two providers to manage a securities lending program. These programs are subject to written contracts between the Fund and the Contractor who acts as securities lending agent for the Fund. The custodian is authorized to lend securities within the borrower limits and guidelines established by the Fund. Types of collateral received from borrowers for securities loaned are cash, government securities, and obligations of federal agencies. The securities lending providers are authorized to invest the cash collateral in short term investments that are legal for the Fund. These include domestic corporate and bank notes, U.S. Treasury obligations, obligations of federal agencies, repurchase agreements, and specific asset backed securities. All rights of ownership to securities pledged as collateral remain with the borrower except in the event of default. As of March 31, 2021, there were no violations of legal or contractual provisions. The Fund has not experienced any losses resulting from the default of a borrower or lending agent during the year ended March 31, 2021.

The Fund lends fixed income, domestic equity, and international equity securities to approved brokers/dealers. Collateral for securities loaned equals 102 percent of fair market value for domestic securities and 105 percent for international securities. Credit risk associated with the investment of cash collateral pledged by borrowers is mitigated by the maturity restrictions, percentage limitations, and rating requirements for individual asset classes included in the Fund's reinvestment guidelines. Each Contractor acknowledges responsibility to reimburse the Fund for losses that might arise from managing the program in a manner inconsistent with the contract. The Fund manages its market risk by recording investments at market value daily and maintaining the value of the collateral held by the Fund in excess of the value of the securities loaned. As of March 31, 2021, the fair value of securities on loan was \$19.55 billion. The associated collateral was \$19.96 billion, of which \$17.34 billion was cash collateral and \$2.62 billion was securities. The cash collateral has been reinvested in other instruments, which had a fair value of \$16.92 billion as of March 31, 2021. The securities lending obligations were \$16.93 billion. The unrealized loss in invested cash collateral on March 31, 2021 was \$7.71 million, which is reported in the combining basic statement of changes in fiduciary net position as part of "Net appreciation in fair value of investments."

All open security loans can be terminated on demand by either the Fund or the borrower. To provide sufficient liquidity, the policy of the Fund is to maintain a minimum of 10 percent collateral in overnight investments. While the Fund's Securities Lending Investment Guidelines allow investments up to a maximum of three years for U.S. Treasury and federal agency obligations and one year for all other investments, the average term of open security loans at March 31, 2021 was 39 days. All loans were open loans. There were no direct matching loans.

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

8. FAIR VALUE MEASUREMENT

The System's investments, measured and reported at fair value, including securities lending collateral and obligations and forward foreign exchange contracts, 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 – Investment fair values based on prices quoted or published in active markets for identical assets.

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

Level 3 – Investment fair values based on unobservable inputs.

The categorization of investments within the hierarchy above is based solely upon the objectivity of the inputs used in the measurement of the 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 or published prices in active markets which are readily attainable exit values of these securities. Investments classified in Level 2 are subject to alternative pricing sources, including a combination of price sources, descriptive data and pricing models based on attributes such as spread data, sector, quality, duration, and prepayment characteristics. Investments classified as Level 3 are valued using best available sources such as property appraisals, discounted cash flow models and public market comparables of similar assets where applicable. The values are supplied by advisors or general partners who hold those or similar assets in investment vehicles they oversee. These pricing sources may or may not be indicative of realizable exit values attainable for the assets.

BASIC FINANCIAL STATEMENTS

Notes to Basic Financial Statements

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The table below summarizes assets and liabilities carried at fair value based on levels from the fair value hierarchy as of March 31, 2021, with certain assets carried at net asset value (NAV) and cost also included to allow reconciliation to the statement of fiduciary net position (dollars in thousands):

	Total	Level 1	Level 2	Level 3
Assets:				
Investments by fair value level:				
Fixed income securities:				
Short-term instruments	\$ 10,475,420	\$ —	\$ 10,475,420	\$ —
Global fixed income securities	47,407,021	588,256	46,818,765	—
Total fixed income securities	57,882,441	588,256	57,294,185	—
Equity securities:				
Domestic equities	84,941,220	84,941,032	—	188
International equities	40,356,404	40,355,685	460	259
Total equity securities	125,297,624	125,296,717	460	447
Mortgages	1,043,621	—	—	1,043,621
Private equity	364,292	—	—	364,292
Credit	12,601	—	—	12,601
Real estate	1,116,584	—	—	1,116,584
Securities lending collateral	13,799,671	—	13,799,671	—
Forward foreign exchange contracts	68,841	—	68,841	—
Total investment assets by fair value level	\$ 199,585,675	\$ 125,884,973	\$ 71,163,157	\$ 2,537,545
Investments measured at cost:				
Securities lending collateral	\$ 3,123,477			
Total investments measured at cost	\$ 3,123,477			
Investments measured at Net Asset Value (NAV):				
Global fixed income securities ¹	\$ 315,934			
Domestic equities ²	5,322,608			
International equities ³	3,123,996			
Alternative investments:⁴				
Private equity	29,105,873			
Opportunistic/ARS	5,016,078			
Real assets	3,929,594			
Credit	8,465,915			
Real estate	16,531,409			
Total alternative investments	63,048,869			
Total investments measured at NAV	\$ 71,811,407			
Investment related cash and cash equivalents not included in above	607,231			
Total investment assets	\$ 275,127,790			
Liabilities:				
Investments by fair value level:				
Forward foreign exchange contracts	(68,782)	—	(68,782)	—
Total investment liabilities by fair value level	\$ (68,782)	\$ —	\$ (68,782)	\$ —

BASIC FINANCIAL STATEMENTS

Notes to Basic Financial Statements

CONTINUED

The table below summarizes liquidity information for investments valued at NAV (dollars in thousands):

Investments measured at NAV	Amount	Unfunded Commitments	Redemption Frequency	Notice Period
Global fixed income funds ¹	\$ 315,934	\$ N/A	Daily	N/A
Domestic equities ²	5,322,608	N/A	N/A, Weekly, Monthly, Annually	N/A, 2-90 days
International equities ³	3,123,996	N/A	Daily, Monthly, Quarterly,	15-120 days
Alternative investments ⁴				
Private equity	29,105,873	15,270,166	N/A	N/A
Opportunistic/ARS	5,016,078	1,030,820	N/A, Monthly, Quarterly, Annually, Semi-annually	NA, 5-120 days
Real assets	3,929,594	4,606,983	N/A	N/A
Credit	8,465,915	2,931,703	N/A	N/A
Real estate	16,531,409	5,765,474	N/A	N/A
Total investments measured at NAV	\$ 71,811,407	\$ 29,605,146		

¹ Global fixed income consists of one fund for which the System is the only investor. This fund invests primarily in both privately and publicly issued global fixed income securities. The investments 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 Domestic equities consist of two commingled investment vehicles and one fund for which the System is the only investor. The funds invest primarily in publicly traded domestic equity securities. The investments 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.

³ International equities consist of six commingled investment vehicles and one fund for which the System is the only investor. The funds invest primarily in publicly traded international equity securities. The investments are valued at the net asset value of units held at the end of the period based upon the fair value of the underlying investments.

⁴ Alternative investments include private equity, opportunistic/ARS funds, real assets, credit and real estate through various fund structures. Private equity (10.7 percent* at March 31, 2021) consists of buyout, co-investments, distressed debt and turnaround funds, fund of funds, growth equity, special situations, and venture capital. Opportunistic/ARS (1.8 percent* at March 31, 2021) consists of investments in strategies including hedged equity, credit, global macro, closed-end funds, and investments that don't fit the mandates of the other asset classes. Real assets (1.4 percent* at March 31, 2021) consist of commodities, farmland, inflation-linked bonds, infrastructure, and renewables. Credit (3.1 percent* at March 31, 2021) consists of non-investment grade public and private credit strategies in direct lending, distressed and special situations, specialty finance, structured credit and real assets credit through closed-end and open-end funds, co-investments, separately managed accounts and fund-of-funds. Real estate (6.4 percent* at March 31, 2021) consists of investments in closed-end, open-end, and fund of funds. The fair values of the alternative investments have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partner's capital. NAV is used as a practical expedient to estimate fair value. Private equity, opportunistic, real assets, and real estate are not eligible for redemption. Distributions are received as underlying investments within the funds are liquidated, which on average can occur over a span of 5-10 years.

See note 7 for detailed securities lending information and note 6 for detail forward foreign currency information.

*Percentages are stated relative to total investments and securities lending collateral invested.

9. NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS

The components of the net pension liability of the employers participating in the System as of March 31, 2021, were as follows:

	(Dollars in Thousands)		
	Employees' Retirement System	Police and Fire Retirement System	Total
Employers' total pension liability	\$ 220,680,157	\$ 41,236,775	\$ 261,916,932
Fiduciary net position	220,580,583	39,500,500	260,081,083
Employers' net pension liability	\$ 99,574	\$ 1,736,275	\$ 1,835,849
Ratio of fiduciary net position to the employers' total pension liability	99.95%	95.79%	99.30%

(a) Actuarial Assumptions

The total pension liability at March 31, 2021 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. The actuarial valuation used the following actuarial assumptions:

	ERS	PFRS
Inflation	2.7%	2.7%
Salary increases	4.4	6.2
Investment rate of return (net of investment expense, including inflation)	5.9	5.9
Cost-of-living adjustments	1.4%	1.4%

Annuitant mortality rates are based on April 1, 2015 – March 31, 2020 System experience with adjustments for mortality improvements based on the Society of Actuaries' Scale MP 2020. The previous actuarial valuation as of April 1, 2019 used April 1, 2010 – March 31, 2015 System experience, mortality improvements based on the Society of Actuaries Scale MP-2018, inflation of 2.5%, cost-of-living adjustments of 1.3%, salary increases of 4.5% (ERS) and 5.7% (PFRS), and investment rate of return of 6.8%.

The actuarial assumptions used in the April 1, 2020 valuation are based on the results of an actuarial experience study for the period April 1, 2015 – March 31, 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.

BASIC FINANCIAL STATEMENTS

Notes to Basic Financial Statements

CONTINUED

Best estimates of arithmetic real rates of return for each major asset class included in the target asset allocation as of March 31, 2021 (see Investment policy – note 4(a)) are summarized below:

Asset Class	Long-Term Expected Real Rate of Return
Domestic equity	4.05%
International equity	6.30
Private equity	6.75
Real estate	4.95
Opportunistic/ARS portfolio	4.50
Credit	3.63
Real assets	5.95
Fixed income	0.00
Cash	0.50

The real rate of return is net of the long-term inflation assumption of 2.00 percent.

(b) Discount Rate

The discount rate used to calculate the total pension liability was 5.9 percent. The projection of cash flows used to determine the discount rate assumes that contributions from plan members will be made at the current contribution rates and that contributions from employers will be made at statutorily required rates, actuarially. Based upon the assumptions, the System's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

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

The following presents the current period net pension liability of the employers calculated using the current period discount rate assumption of 5.9 percent, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower (4.9 percent) or one percentage point higher (6.9 percent) than the current assumption (dollars in thousands):

	One Percent Decrease (4.9%)	Current Assumption (5.9%)	One Percent Increase (6.9%)
ERS net pension liability (asset)	\$ 27,637,884	\$ 99,574	\$ (25,297,194)
PFRS net pension liability (asset)	\$ 7,383,622	\$ 1,736,275	\$ (2,938,270)

10. FEDERAL INCOME TAX STATUS

ERS and PFRS are qualified defined benefit retirement plans under section 401(a) of the Internal Revenue Code (IRC) and are exempt from federal income taxes under section 501(a) of the IRC. ERS and PFRS last received favorable determination letters from the Internal Revenue Service dated August 28, 2014 stating that ERS and PFRS are in compliance with the applicable requirements of the Internal Revenue Code. Therefore, no provision for income taxes has been included in the System's financial statements.

11. COMMITMENTS

As of March 31, 2021, the System had contractual commitments totaling \$17.41 billion to fund future private equity investments, \$6.65 billion to fund future real estate investments, \$1.43 billion to fund future investments in opportunistic/ARS funds, \$5.75 billion to fund future real asset investments and \$3.27 million to fund future credit investments. When compared to note 8 the variances that exist are due to the above representing total commitments of the investment type inclusive of investments measured at fair value and net asset value. Future commitments will be funded over the commitment period through transaction income including distributions, redemptions, and maturities.

12. CONTINGENCIES

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

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS (UNAUDITED)

(Dollars in Thousands)

	2021 Employees' Retirement System	2020 Employees' Retirement System	2019 Employees' Retirement System	2018 Employees' Retirement System	2017 Employees' Retirement System
Total pension liability:					
Service cost	\$ 4,157,172	\$ 3,365,522	\$ 3,218,553	\$ 3,004,697	\$ 2,951,979
Interest	11,133,759	12,529,672	12,463,933	12,063,525	11,723,859
Difference between expected and actual experience	299,922	745,602	704,393	1,235,058	226,737
Changes in assumptions	22,441,226	(575,504)	888,656	—	—
Benefit payments	(11,850,537)	(11,207,761)	(10,781,781)	(10,200,205)	(9,740,272)
Refunds of contributions	(97,646)	(64,699)	(90,915)	(103,071)	(65,261)
Net change in total pension liability	26,083,896	4,792,832	6,402,839	6,000,004	5,097,042
Total pension liability — beginning	194,596,261	189,803,429	183,400,590	177,400,586	172,303,544
Total pension liability — ending (a)	220,680,157	194,596,261	189,803,429	183,400,590	177,400,586
Fiduciary net position:					
Contributions — employer	4,062,302	3,920,360	3,890,215	3,949,873	3,949,710
Contributions — member	427,032	395,338	345,846	318,439	306,218
Net investment income (loss)	59,964,043	(7,470,542)	9,140,487	18,128,993	17,194,267
Benefit payments	(11,850,537)	(11,207,761)	(10,781,781)	(10,200,205)	(9,740,272)
Refunds of contributions	(97,646)	(64,699)	(90,915)	(103,071)	(65,261)
Administrative expense	(144,234)	(121,694)	(119,304)	(106,972)	(93,943)
Other additions	103,941	(53,444)	160,431	181,725	200,379
Net change in fiduciary net position	52,464,901	(14,602,442)	2,544,979	12,168,782	11,751,098
Fiduciary net position — beginning	168,115,682	182,718,124	180,173,145	168,004,363	156,253,265
Fiduciary net position — ending (b)	220,580,583	168,115,682	182,718,124	180,173,145	168,004,363
Net pension liability — ending (a) – (b)	\$ 99,574	\$ 26,480,579	\$ 7,085,305	\$ 3,227,445	\$ 9,396,223
Ratio of fiduciary net position to total pension liability	99.95%	86.39%	96.27%	98.24%	94.70%
Covered- employee payroll	\$ 27,976,135	\$ 28,169,321	\$ 27,374,387	\$ 26,686,412	\$ 26,200,001
Net pension liability as a percentage of covered-employee payroll	0.36%	94.01%	25.88%	12.09%	35.86%

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

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

CONTINUED

SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS (UNAUDITED)

(Dollars in Thousands)

	2016 Employees' Retirement System	2015 Employees' Retirement System
Total pension liability:		
Service cost	\$ 2,916,374	\$ 2,989,807
Interest	11,198,823	11,581,437
Difference between expected and actual experience	(2,378,116)	135,177
Changes in assumptions	5,350,157	—
Benefit payments	(9,224,904)	(8,829,751)
Refunds of contributions	<u>(150,294)</u>	<u>(77,388)</u>
Net change in total pension liability	7,712,040	5,799,282
Total pension liability — beginning	164,591,504	158,792,222
Total pension liability — ending (a)	172,303,544	164,591,504
Fiduciary net position:		
Contributions — employer	4,347,619	4,893,110
Contributions — member	289,332	272,004
Net investment income (loss)	(327,068)	10,582,102
Benefit payments	(9,224,904)	(8,829,751)
Refunds of contributions	(150,294)	(77,388)
Administrative expense	(93,012)	(93,357)
Other additions	<u>198,333</u>	<u>193,176</u>
Net change in fiduciary net position	(4,959,994)	6,939,896
Fiduciary net position — beginning	161,213,259	154,273,363
Fiduciary net position — ending (b)	156,253,265	161,213,259
Net pension liability — ending (a) – (b)	\$ 16,050,279	\$ 3,378,245
Ratio of fiduciary net position to total pension liability	90.68%	97.95%
Covered- employee payroll	\$ 25,644,078	\$ 24,480,045
Net pension liability as a percentage of covered-employee payroll	62.59%	13.80%

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

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

CONTINUED

SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS (UNAUDITED)

(Dollars in Thousands)

	2021 Police and Fire Retirement System	2020 Police and Fire Retirement System	2019 Police and Fire Retirement System	2018 Police and Fire Retirement System	2017 Police and Fire Retirement System
Total pension liability:					
Service cost	\$ 970,797	\$ 743,762	\$ 713,480	\$ 674,079	657,407
Interest	2,020,024	2,252,536	2,236,527	2,154,117	2,065,752
Difference between expected and actual experience	180,496	76,209	106,384	241,387	302,375
Changes in assumptions	4,930,229	147,086	118,521	—	—
Benefit payments	(2,172,230)	(2,038,392)	(1,959,831)	(1,827,136)	(1,708,410)
Refunds of contributions	(1,558)	(284)	(1,404)	1,493	5,632
Net change in total pension liability	5,927,758	1,180,917	1,213,677	1,243,940	1,322,756
Total pension liability — beginning	35,309,017	34,128,100	32,914,423	31,670,483	30,347,727
Total pension liability — ending (a)	41,236,775	35,309,017	34,128,100	32,914,423	31,670,483
Fiduciary net position:					
Contributions — employer	967,488	862,346	854,094	873,434	837,253
Contributions — member	65,309	58,360	40,673	30,950	22,609
Net investment income (loss)	10,685,563	(1,328,229)	1,621,289	3,209,040	3,030,977
Benefit payments	(2,172,230)	(2,038,392)	(1,959,831)	(1,827,136)	(1,708,410)
Refunds of contributions	(1,558)	(284)	(1,404)	1,493	5,631
Administrative expense	(20,863)	(17,356)	(17,173)	(15,834)	(13,191)
Other additions/deductions	12,711	(23,402)	9,723	33,889	36,021
Net change in fiduciary net position	9,536,420	(2,486,957)	547,371	2,305,836	2,210,890
Fiduciary net position — beginning	29,964,080	32,451,037	31,903,666	29,597,830	27,386,940
Fiduciary net position — ending (b)	39,500,500	29,964,080	32,451,037	31,903,666	29,597,830
Net pension liability — ending (a) – (b)	\$ 1,736,275	\$ 5,344,937	\$ 1,677,063	\$ 1,010,757	\$ 2,072,653
Ratio of fiduciary net position to total pension liability	95.79%	84.86%	95.09%	96.93%	93.46%
Covered- employee payroll	\$ 3,862,735	\$ 4,024,660	\$ 3,730,337	\$ 3,683,960	\$ 3,633,237
Net pension liability as a percentage of covered-employee payroll	44.95%	132.80%	44.96%	27.44%	57.05%

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

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

CONTINUED

SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS (UNAUDITED)

(Dollars in Thousands)

	2016 Police and Fire Retirement System	2015 Police and Fire Retirement System
Total pension liability:		
Service cost	\$ 628,863	\$ 625,648
Interest	1,935,222	1,997,215
Difference between expected and actual experience	(537,163)	39,833
Changes in assumptions	1,531,662	—
Benefit payments	(1,683,580)	(1,606,417)
Refunds of contributions	(1,694)	(158)
Net change in total pension liability	1,873,310	1,056,121
Total pension liability — beginning	28,474,417	27,418,296
Total pension liability — ending (a)	30,347,727	28,474,417
Fiduciary net position:		
Contributions — employer	792,585	904,339
Contributions — member	17,297	12,789
Net investment income (loss)	(57,765)	1,862,789
Benefit payments	(1,683,580)	(1,606,417)
Refunds of contributions	(1,694)	(158)
Administrative expense	(13,608)	(13,794)
Other additions	134,548	37,623
Net change in fiduciary net position	(812,217)	1,197,171
Fiduciary net position — beginning	28,199,157	27,001,986
Fiduciary net position — ending (b)	27,386,940	28,199,157
Net pension liability — ending (a) – (b)	\$ 2,960,787	\$ 275,260
Ratio of fiduciary net position to total pension liability	90.24%	99.03%
Covered- employee payroll	\$ 3,526,980	\$ 3,257,100
Net pension liability as a percentage of covered-employee payroll	83.95%	8.45%

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

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

CONTINUED

SCHEDULE OF EMPLOYER CONTRIBUTIONS (UNAUDITED)

(Dollars in Millions)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
ERS										
Actuarially determined contribution (1)	\$ 4,062	\$ 3,920	\$ 3,890	\$ 3,950	\$ 3,950	\$ 4,348	\$ 4,893	\$ 5,138	\$ 4,524	\$ 3,879
Contributions in relation to the actuarially determined contribution (2)	4,062	3,920	3,890	3,950	3,950	4,348	4,893	5,138	4,524	3,879
Contribution deficiency (excess)	–	–	–	–	–	–	–	–	–	–
Covered-employee payroll	27,976	28,169	27,374	26,686	26,200	25,644	24,480	24,361	24,405	24,291
Contributions as a percentage of covered-employee payroll	14.52%	13.92%	14.21%	14.80%	15.08%	16.96%	19.99%	21.09%	18.54%	15.97%
PFRS										
Actuarially determined contribution (1)	\$ 968	\$ 862	\$ 854	\$ 873	\$ 837	\$ 793	\$ 904	\$ 926	\$ 812	\$ 706
Contributions in relation to the actuarially determined contribution (2)	968	862	854	873	837	793	904	926	812	706
Contribution deficiency (excess)	–	–	–	–	–	–	–	–	–	–
Covered-employee payroll	3,863	4,025	3,730	3,684	3,633	3,527	3,257	3,233	3,163	3,191
Contributions as a percentage of covered-employee payroll	25.06%	21.42%	22.90%	23.70%	23.04%	22.48%	27.76%	28.64%	25.67%	22.12%
(1) The actuarially determined contribution includes normal costs, the GLIP amounts, adjustments made to record the reconciliation of projected salary to actual salary and miscellaneous accounting adjustments.										
(2) The contributions in relation to the actuarially determined contribution reflects actual payments and installment payment plans.										

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

SCHEDULE OF INVESTMENT RETURNS (UNAUDITED)

	2021	2020	2019	2018	2017	2016	2015
Annual money-weighted rate of return, net of investment expenses ¹	33.43%	(2.64)%	5.14%	11.29%	11.40%	0.03%	6.98%
¹ Investment expenses include management fees, investment and accounting staff salaries and benefits, and other investment-related expenses.							

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

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

CONTINUED

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

Year Ended March 31, 2021

Changes in Benefit Terms

There were no significant legislative changes in benefits for the April 1, 2020 actuarial valuation.

Changes of Assumptions

2021: The demographic assumptions (pensioner mortality and active member decrements) were updated based on the System's experience from April 1, 2015 through March 31, 2020, the mortality improvement assumption was updated to Society of Actuaries' Scale MP-2020, inflation was updated to 2.7%, cost-of-living updated to 1.4%, salary scale updated to 4.4% (ERS) and 6.2% (PFRS), and the interest rate assumption was reduced to 5.9% for the April 1, 2020 actuarial valuation.

2020: The interest rate assumption was reduced to 6.8% and the mortality improvement assumption was updated to Society of Actuaries' Scale MP-2018 for the April 1, 2019 actuarial valuation.

2019: The salary scale for both plans used in the April 1, 2018 actuarial valuation were increased by 10%.

2016: There were changes in the economic (investment rate of return, inflation, COLA, and salary scales) and demographic (pensioner mortality and active member decrements) assumptions used in the April 1, 2015 actuarial valuation.

Methods and Assumptions Used in Calculations of Actuarially Determined Contributions

The April 1, 2019 actuarial valuation determines the employer rates for contributions payable in fiscal year 2021. The following actuarial methods and assumptions were used:

Actuarial cost method	The System is funded using the Aggregate Cost Method. All unfunded actuarial liabilities are evenly amortized (as a percentage of projected pay) over the remaining worker lifetimes of the valuation cohort.
Asset valuation period	5-year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return.
Inflation	2.5%
Salary scale	4.2% in ERS, 5.0% in PFRS, indexed by service
Investment rate of return	6.8% compounded annually, net of investment expenses, including inflation.
Cost-of-living adjustments	1.3% annually
Active member decrements	Based upon FY 2011-2015 experience
Pensioner mortality	Gender/Collar specific tables based upon FY 2011-2015 experience
Mortality improvement	Society of Actuaries' Scale MP-2018

OTHER SUPPLEMENTARY INFORMATION (UNAUDITED)

SCHEDULE OF ADMINISTRATIVE EXPENSES (UNAUDITED)

Year Ended March 31, 2021

(Dollars in Thousands)

Personal services:	
Salaries	\$ 65,996
Overtime salaries	2,903
Fringe benefits	<u>66,270</u>
Total personal services	135,169
Building occupancy expenses:	
Building, lease, and condominium fees	4,058
Utilities and municipal assessments	109
Office supplies and services	210
Telephone	<u>432</u>
Total building occupancy expenses	4,809
Computer expenses:	
IT shared services*	<u>19,621</u>
Total computer expenses	19,621
Personal and operating expenses:	
Training	82
Travel and auto expenses — includes pre-retirement seminars	46
Postage — includes member and retiree communication	1,454
Depreciation expense — Imaging System	1,832
Printing — includes member and retiree communication	116
Subscriptions/memberships	<u>209</u>
Total personal and operating expenses	3,739
Professional expenses:	
Audit services	537
Medical/clinical services	704
Miscellaneous consulting services	<u>518</u>
Total professional expenses	1,759
Total	\$ 165,097
* The System has implemented a shared service, information technology (IT) model within the New York State Office of the State Comptroller, wherein all IT costs, including personal services, will be incorporated into the IT shared services and reflected as nonpersonal service expenditures.	

See accompanying independent auditors' report.

OTHER SUPPLEMENTARY INFORMATION (UNAUDITED)

CONTINUED

SCHEDULE OF INVESTMENT EXPENSES (UNAUDITED)

Year Ended March 31, 2021

(Dollars in Thousands)

Investment expenses:	
Investment management and incentive fees:	
Private equity	\$ 256,901
International equity	177,121
Absolute return strategy funds (ARS)	137,558
Real estate	75,243
Credit assets	71,929
Opportunistic funds	20,390
Domestic equity	80,368
Real assets	43,189
Fixed income	5,223
Total investment management and incentive fees	867,922
Investment-related expenses:	
Data processing expenses/licenses	7,108
Custodial fees	5,104
Mortgage loan servicing fees	3,406
Legal fees	4,469
Compliance/Risk monitoring	2,009
Private equity consulting and monitoring	2,125
General consulting	1,049
Opportunistic consulting and monitoring	600
Miscellaneous expenses	6,209
Administrative expenses	955
Research services	912
Real assets consulting and monitoring	440
Real estate consulting and monitoring	1,118
Global equity consulting	282
Fixed income consulting	263
Audit and audit-related fees	122
Emerging manager program consulting and monitoring	82
Domestic equity consulting and monitoring	79
Total investment-related expenses	36,332
Total investment expenses	\$ 904,254

See accompanying independent auditors' report.

OTHER SUPPLEMENTARY INFORMATION (UNAUDITED)

CONTINUED

SCHEDULE OF CONSULTING FEES (UNAUDITED)

Year Ended March 31, 2021

Fees in excess of \$50,000 paid to outside professionals other than investment advisors.

	Amount	Nature
JP Morgan Chase Bank	\$ 5,104,433	Custodial Banking Services
FIS Investment Systems, LLC	3,717,569	EDP Expense/Licenses
Morgan Lewis & Bockius, LLP	1,342,248	Legal Services
Bloomberg Finance, LP	1,302,223	EDP Expense/Licenses
MSCI BarraOne	810,076	Compliance/Risk Monitoring
Foster Garvey, PC	686,922	Legal Services
Orrick Herrington & Sutcliffe, LLP	682,245	Legal Services
eFront Financial Solutions, Inc.	597,300	EDP Expense/Licenses
DLA Piper, LLP	520,021	Legal Services
Intex Solutions, Inc.	512,400	Compliance/Risk Monitoring
JP Morgan Chase Bank	455,825	Retail Banking Services
KPMG, LLP	447,236	Audit Services
FactSet Research Systems, Inc.	428,857	EDP Expense/Licenses
K&L Gates, LLP	411,938	Legal Services
Moody's Analytics, Inc.	300,202	EDP Expense/Licenses
Strategas Securities, LLC	250,000	Research
Cohen Milstein Sellers & Toll, PLLC	240,000	Legal Services
EFL Associates	235,824	Staff Recruitment Services
Seyfarth Shaw, LLP	222,949	Legal Services
Arthur J Gallagher Risk Management	180,121	Audit Services
First Advantage Back Track Reports, LLC	147,720	Compliance/Risk Monitoring
Verizon Business Network Services, LLC	138,752	IT Consulting Services
Lexisnexis Risk Solutions FI, Inc.	133,825	Miscellaneous Consulting Services
BDO USA, LLP	129,500	Compliance/Risk Monitoring
Seward & Kissel, LLP	128,806	Legal Services
CreditSights, Inc.	126,278	Research
Certified Management Consultants	125,888	Medical/Clinical Services
Institutional Shareholder Services	121,735	Administrative Expense
National Claim Evaluations, Inc.	121,528	Medical/Clinical Services
Lenox Park Solutions, LLC	110,000	Administrative Expense
PitchBook Data, Inc.	110,000	EDP Expense/Licenses
Jurisolutions, Inc.	109,297	Medical/Clinical Services
D & D Medical Associates, PC	109,012	Medical/Clinical Services
Corporate Resolutions, Inc.	105,450	Compliance/Risk Monitoring
Elkins /McSherry State Street Bank and Trust	102,473	Compliance/Risk Monitoring
Cornerstone Macro, LLC	100,000	Research
CoStar Group, Inc.	97,812	Research
First Choice Evaluations, LLC	93,558	Medical/Clinical Services
Marcum Accountants/Advisors	93,504	Compliance/Risk Monitoring
Groom Law Group	93,489	Legal Services
Glass Lewis & Co, LLC	90,480	Administrative Expense
MSCI ESG Research, Inc.	88,500	Research
New York State Industries For The Blind	83,730	Miscellaneous Consulting Services
Ernst & Young, LLP	77,665	Tax Services
Bloomberg Index Services Limited	77,500	EDP Expense/Licenses
Integral Consulting Services, Inc.	63,718	Medical/Clinical Services
Standard & Poors	61,329	EDP Expense/Licenses
CDP Operations, Ltd.	60,000	Research
Eurasia Group	60,000	Research
BCA Research, Inc.	55,000	Research
Castine Consulting, LLC	53,640	Compliance/Risk Monitoring
Compliance Science, Inc.	53,457	Compliance/Risk Monitoring
Labaton Sucharow, LLP	50,000	Legal Services Monitoring
Capital Economics	50,000	Research
CEM Benchmarking	50,000	Miscellaneous Consulting Services

See accompanying independent auditors' report.

INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL



KPMG LLP
515 Broadway
Albany, NY 12207-2974

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

The Trustee
New York State and Local Retirement System:

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of the New York State and Local Retirement System (the System), which comprise the combining basic statement of fiduciary net position as of March 31, 2021, and the related combining basic statement of changes in fiduciary net position for the year then ended, and the related notes to the basic financial statements, and have issued our report thereon dated July 28, 2021, except as to note 2(h), which is as of August 13, 2021.

Internal Control Over Financial Reporting

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

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

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

Internal Controls over Year-end Reserve Fund Transfers

After the release of the March 31, 2021 audited financial statements, the System discovered an immaterial error in amounts reported on the statement of changes in fiduciary net position for member contributions and other deductions. The immaterial error was due to a deficiency in internal controls over financial reporting relating to inadequate oversight of annual internal transfers between System reserve funds. The System corrected the immaterial error and re-issued the March 31, 2021 audited financial statements. We recommend management strengthen internal controls to ensure annual internal transfers to System reserve funds are accurate.

KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee.

INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL

CONTINUED



System's Response:

Training and procedures will be reviewed with General Ledger staff to ensure their comprehension of the proper accounting for internal transfers. Management will review annual internal transfers to System reserve funds more closely and look for opportunities to automate the journal entries in the future.

Compliance and Other Matters

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

The System's Response to the Finding

The System's response to the finding identified in our audit is described previously. The System's response was not subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we express no opinion on the response.

Purpose of this Report

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

KPMG LLP

July 28, 2021, except as to note 2(h), which is as of August 13, 2021



NYSLRS

*A Century of
Steady Growth*



Investment

We are considered one of the best-managed and best-funded public pension plans in the nation thanks to a strategic, long term investment philosophy that looks to the future. With the pension security of our members and retirees in mind, we seek out diverse and stable investments that provide solid returns, keeping the Fund's performance strong. We also look for sustainable investment opportunities to support the environmental well-being of our planet.

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OVERVIEW OF INVESTMENTS

OVERALL OBJECTIVES AND PERFORMANCE

The Division of Pension Investment and Cash Management (PICM) in the Office of the State Comptroller (OSC) is responsible for the management of the assets of the New York State Common Retirement Fund (Fund or CRF). The Fund's primary objective is to provide the means to pay benefits to the participants in the New York State and Local Retirement System (System or NYSLRS) through an investment program designed to protect and enhance the long-term value of the assets. We are responsible for implementing an asset allocation strategy with an appropriate balance of risk and return. Investments in equities, although historically volatile, provide superior long-term performance and growth characteristics, while fixed income investments provide less volatility and more predictable cash flow to meet the System's funding requirements and pension obligations. Alternative investments provide diversification and incremental returns.

The Fund's investment performance for the fiscal year ended March 31, 2021 was 33.55 percent gross of certain investment fees. All asset classes contributed to the positive return in a "risk-on" environment. With ample liquidity and low rates, equity markets soared to new heights with other asset classes following to relative degrees. Despite this, uncertainties remain, particularly in pockets of the global economy especially as it relates to commercial real estate, business travel and other slow to recover post COVID sectors. COVID continues to hit countries across the globe with the long-term implications still uncertain. We continue to monitor inflation, potential earnings erosion, tensions with China, political unrest, climate concerns and other risks.

The Fund's positive performance reflects gains across all asset classes. The equity portfolio returned 60.07 percent, the fixed income portfolio returned 2.61 percent, the real estate portfolio returned 2.19 percent, the private equity portfolio returned 23.83 percent, the opportunistic/absolute return strategies portfolio returned 19.69 percent, the credit portfolio returned 20.38 percent and real assets returned 7.34 percent.

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

PENSION RISK MANAGEMENT

Risk Oversight

Prudent risk-taking in line with strategic priorities is fundamental to providing adequate returns and affordable pension plan funding. The primary objective of risk management is to provide an investment risk framework for the Fund as a whole, and across asset classes, to help maintain the economic viability of the System. Pension Risk Management (PRM) also works to monitor liquidity and other non-investment risks, to the extent that these risks may affect the overall objectives of the Fund. The Fund's risk management framework is based on transparency, management accountability and independent oversight. CRF's approach to risk taking is supported by the following principles:

- Establish a clear risk appetite that sets out the types and levels of risk we are prepared to take;
- Have in place risk management and compliance policies that set out authorities and responsibilities for taking and managing risk across CRF and its asset classes;
- Seek to establish resilient risk constraints that promote multiple perspectives on risk; and
- Actively monitor risks and take mitigating actions when they fall outside of acceptable levels.

Central to the Fund's risk framework is the Risk Appetite Statement, which was approved by the Fund's Trustee, Comptroller DiNapoli, in 2018:

The CRF is dedicated to providing a secure pension for generations of NYSLRS members, retirees and beneficiaries. In the pursuit of this mission, the CRF is committed to the highest standards of ethics and prudent investment management. In their decision making, the Trustee and staff of the CRF may take prudent investment risks when compensated by higher expected returns in order to generate stronger long-term performance. Regardless of potential returns, the CRF endeavors to avoid the risk of a loss of asset value that could compromise the economic viability of the current plan structure or call into question the integrity and responsibility of the CRF or its staff. Therefore, the CRF diligently seeks to identify and avoid such risk.

Risk Governance

Effective governance sets a solid foundation for comprehensive risk management discipline. CRF's risk governance is based on the "Three Lines of Defense" model, where each line has a specific role within defined responsibilities and works in close collaboration to identify, assess and mitigate risks.

The First Line of Defense is the hands-on, active risk management that portfolio management teams practice during day-to-day management of a portfolio or trading position. Examples of first-line risk activities include analyzing risks in support of investment decisions, adjusting portfolio positions in anticipation of developing risks, or analyzing all aspects of risks in support of written investment proposals. First-line activities are generally restricted to one portfolio or to one asset class and are put into practice by personnel whose collective, routine function is to make investment decisions.

The Second Line of Defense includes functions such as Risk Management and Compliance which are a step removed from active asset management. The functions within the second line articulate standards and expectations for the effective management of risk and controls, including providing institutional leadership on CRF-wide risk issues, and advising on, establishing and maintaining related policies. They are responsible for producing an independent risk assessment and risk reporting for senior management and regulatory authorities. Risk Management and Compliance is also responsible for articulating and designing the risk appetite framework across CRF.

The Third Line of Defense is an audit function. This function monitors the effectiveness of risk management, compliance and governance practices.

CRF's operations, financial information and internal controls are subject to examination by the New York State Department of Financial Services. Additionally, KPMG LLP, an independent, certified public accountant, audits the System's financial statements annually. The Comptroller's Office of Internal Audit also regularly reviews various aspects of PICM's operations, investment procedures, and internal controls.

CRF's governance includes a committee structure and a comprehensive set of policies which are reviewed and approved by the Comptroller and his respective committees in accordance with their responsibilities and level of authority.

The Fund's Trustee

The Comptroller, as the Fund's Trustee, is responsible for our strategic direction, supervision and control, and for defining our overall tolerance for risk. In particular, the Comptroller approves the risk management framework and sets overall risk appetite among other responsibilities.

Investment Advisory Committee

The Investment Advisory Committee advises the Comptroller on general investment issues. The Investment Advisory Committee periodically reviews the strategic plan and monitors the CRF's risk profile. The Director of Risk is a participant at each Investment Advisory Committee meeting and provides a formal presentation to the Investment Advisory Committee on liquidity and market risk on an annual basis. Investment Advisory Committee members also receive quarterly risk updates in conjunction with the Investment Advisory Committee meeting.

Risk Committee

The Director of Risk has responsibilities for advising the Chief Investment Officer (CIO), the Executive Deputy Comptroller for Retirement Services (EDCRS) and the Comptroller on risk issues and making formal recommendations to the CIO, the EDCRS and the Comptroller on investment risk and investment-related risk issues. In addition, recognizing that risk is multidimensional and that risk cannot be reduced to a single measure or be fully encompassed by any one professional discipline, the Director of Risk seeks advice from the Committee. The purposes of the Committee are (1) to provide support and advice to the Director of Risk on risk issues and (2) to provide multidisciplinary advice on risk and risk management programs at PICM. In addition, the Committee provides a forum for the discussion of CRF risk issues that may be raised by PICM staff and other stakeholders.

Rebalance Committee

The Rebalance Committee, chaired by the Director of Risk, makes sure the CRF's invested exposure is aligned with its approved asset allocation targets. The Rebalance Committee meets at least monthly to review and analyze the Fund's current asset allocation, cash flow projections including benefit payments and capital calls, and current capital markets conditions and outlook. In addition, the Rebalance Committee ensures that CRF's short-term liquidity needs are adequate. The Rebalance Committee may also discuss the basket bill position, as necessary for the purposes of monitoring the overall allocation per statutory guidelines.

Risk Organization

To ensure functional independence, the Director of Risk reports functionally to the Executive Deputy Comptroller of the Retirement System (EDCRS) and administratively reports to the Chief Investment Officer (CIO). The purpose of the administrative reporting line is to facilitate the ongoing coordination between the risk management and investment management functions, and to provide the physical and financial resources that are necessary for effective risk governance.

PICM's risk organization continues to evolve to support efforts to drive strategic and sustainable returns that reflect the risk appetite of the Fund.

COMPLIANCE

The Compliance Office for the Fund is headed by the Director of Compliance, who reports to the EDCRS and administratively reports to the CIO. The primary purpose of the Compliance Program is to monitor compliance by PICM staff and external managers with applicable statutes, policies and procedures, guidelines, conflict of interest and other ethical standards governing the Fund. In an effort to meet this objective, the activities of the Compliance Office primarily include the reporting, development or monitoring of: the Fund's investment-related policies and procedures; statutory and policy mandates for equity and fixed income trading by both internal staff and external managers; personal trading activities of employees pursuant to the "Insider Trading Policies;" background investigation reports and Annual Compliance Questionnaires for external managers, broker-dealers and consultants; PICM operational risk assessment process; and regulatory filings required under Section 13 of the Securities and Exchange Act of 1934.

PUBLIC EQUITIES

The role of the Fund's public equities portfolio is to provide the largest source of returns in the Fund's portfolio over the long-term through diversified, global equity market exposure. For the fiscal year ended March 31, 2021, the \$134.6 billion Common Retirement Fund global public equity portfolio posted a positive 60.07 percent return, outperforming the MSCI All Country World Index (ACWI) benchmark, which rose 54.60 percent. The Fund continues to benefit from its long-term overweight to U.S. equities, with a five-year return for the total public equity portfolio of positive 15.17 percent. For the fiscal year ended March 31, 2021, the domestic equity portfolio rose 61.40 percent, underperforming the benchmark Russell 3000 return of 62.53 percent. The U.S. portfolio trailed the benchmark as smart beta and defensive portfolios trailed sharply higher markets and small cap active managers had difficulty keeping pace with the Russell 2000, which rose 94.85 percent. Those small cap active managers over a five-year period rose 19.69 percent beating the index return of 16.35 percent. The U.S. equity portfolio was valued at \$85.6 billion at the end of the fiscal year. U.S. stocks rebounded sharply on expectations for a recovering U.S. economy and a rebound in corporate earnings as the U.S. economy led the world in restarting after the COVID shutdown the previous year.

International equity markets also recovered with the Fund's \$34.8 billion non-U.S. equity portfolio posting higher returns for the fiscal year, up 54.57 percent, outperforming the MSCI ACWI ex U.S. IMI benchmark, which rose 51.94 percent. The Fund's \$14.3 billion global portfolio, in which active managers allocate between U.S. and international equities, outperformed the benchmark returning 64.58 percent, compared to the MSCI ACWI return of 54.60 percent. The Fund's emerging markets (EM) portfolio rose 57.62 percent, but, underperformed the MSCI EM benchmark of 58.39 percent.

The public equities program continues to rely on broad passive index funds in the more efficient segments of the equity markets. This allows the Fund to maintain exposure to market returns at very low costs. The staff continues to employ active manager mandates in less efficient markets where active management is likely to outperform.

The Fund's equity brokers undergo a complete review every five years, last conducted in 2018. Staff additionally reviews the broker list annually and makes adjustments as necessary. The Fund now has 18 approved broker-dealer firms to execute trades for the internally managed public equity portfolio. Five of the trading partners are women-owned or minority-owned (MWBE firms), accounting for 38 percent of the internally managed public equity commissions for the fiscal year.

FIXED INCOME

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

The core fixed income portfolio uses the Bloomberg Barclays U.S. Aggregate Bond Index as a benchmark and seeks to add value through sector allocation and security selection. The long-term core fixed income portfolio consists primarily of U.S. Treasury securities, government-sponsored agency debentures, corporate bonds, commercial mortgage-backed securities, mortgage-backed securities, asset-backed securities, collateralized loan obligations, and municipal bonds. For the internal fixed income accounts, the Fund does not invest in securities that are below investment grade. The externally managed fixed income allocation consists primarily of higher yielding credit-focused investments. The Fund also has a large allocation to Treasury Inflation-Protected Securities (TIPS). The Fund's short-term fixed income portfolio may be invested in high quality commercial paper, U.S. Treasury bills, bank certificates of deposit, and agency discount notes, as well as short-term corporate bonds and asset-backed securities.

The Fund's core long-term fixed income portfolio returned 2.61 percent for the year as compared to 0.71 percent for the Bloomberg Barclays U.S. Aggregate Bond Index. The outperformance was largely attributable to significant spread tightening in corporate bonds, commercial mortgage-backed securities, asset-backed securities, and collateralized loan obligations, ABS, and CLO's, as the fixed income markets recovered from the extreme dislocation seen in March 2020, which resulted from the onset of the coronavirus pandemic. The average credit quality of the core portfolio remains at AA2/AA-, in line with the credit quality of the portfolio's benchmark.

Short-term cash investments returned 0.51 percent for the fiscal year. Externally managed fixed income returned 9.83 percent for the fiscal year, as higher-yielding fixed income securities also had a meaningful recovery from the market dislocations seen in the spring of 2020. The external managers provided a meaningful contribution to the overall outperformance of 190 basis points in core fixed income.

The Fund conducts a complete broker review every five years to create a new approved broker list. Annually, the Fund considers additional brokers and may make changes to the approved broker list as the team deems necessary. The Fund now has 24 approved broker-dealer firms to execute trades in the long-term and short-term fixed income portfolios. Thirteen percent of these trading partners are MWBEs, while firms owned by disabled American veterans represent another 4 percent. Women-owned and minority-owned firms continue to play a central role in the Fund's long-term and short-term fixed income strategy, executing 11.9 percent of all long-term trades and 15.0 percent of all short-term broker trades during the past fiscal year.

The Fund participates in a securities lending program, whereby the custodian bank loans a portion of the fixed income and equity securities to qualified counterparties, providing incremental income. For the fiscal year ended March 31, 2021, the securities lending program earned the Fund \$35.5 million in revenue, net of management fees and rebates.

REAL ESTATE

The Real Estate Bureau seeks to create a diversified real estate portfolio by investing across different property types, geographic markets, and investment strategies to minimize portfolio risk and maximize the potential for long-term steady growth. The real estate allocation's mandate to the overall Fund is to provide a steady stream of income through less risky, core investments and capture excess returns through riskier, core-plus/value-add, and opportunistic investments. While the past fiscal year has seen an environment of uncertainty, Real Estate has focused on managing volatility while meeting its long-term investment objectives over the past several years.

The Real Estate Group mainly invests through four primary investment structures: wholly owned, joint ventures, separately managed accounts, and commingled funds (closed-end, open-end, and fund-of-funds). For wholly owned assets, the Fund works with external advisors and third-party service providers to manage properties. For all other structures, CRF invests alongside a sponsor, or general partner, whose interests are aligned to the Fund's via shared risk and incentive.

As of March 31, 2021, equity real estate represented 6.75 percent of total Fund assets, producing a total return of 2.19 percent for the fiscal year compared to the custom real estate benchmark of 1.11 percent. The custom real estate benchmark is an asset-weighted blend of quarter-lagged benchmarks, including the NCREIF NFI ODCE (Net) Index. Over the long term, the real estate portfolio exhibits sustained, strong net performance relative to its benchmark. Looking forward, the Fund will continue to structure and manage a balanced real estate portfolio that is capable of weathering economic cycles through its broad diversification across property types, markets, and risk profiles.

Core strategies include investing in fully leased, trophy properties located in top markets in the U.S. The primary objective of core investing is to provide the Fund a reliable source of current income and moderate value appreciation with limited downside. Core assets are found in highly liquid, gateway cities, often in irreplaceable locations with strong tenant demand. Currently, a significant percentage of the real estate portfolio is being allocated to core properties.

Core-plus/value-add investments may include under-managed properties with existing vacancy or near-term tenant rollover or opportunities for light-to-moderate renovations, allowing an asset to be repositioned and re-leased to create value. Opportunistic investments include strategies such as ground-up development or substantial renovation that can deliver enhanced yield; however, they also carry the increased risk of construction and exposure to changing market conditions.

The Fund manages risk within the real estate portfolio through maintaining strong relationships and diversifying investments by property type, geography, investment strategy, and capital pacing. To achieve long-term appreciation and sustainable returns, the Real Estate Group will seek to continue to leverage existing relationships, and, when starting new relationships, selecting best-in-class sponsors, joint venture partners, consultants and advisors. In addition, the Fund recognizes the importance (and value) of investing with smaller firms and MWBE real estate managers, and through dedicated programs, and will look to capitalize on their talent and expertise.

AFFORDABLE HOUSING PERMANENT LOAN PROGRAM

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

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

Since the inception of this program, 21,578 units representing \$942.5 million have been completed; 1,665 more are in the pipeline. In the 2020-21 fiscal year, the fund invested in affordable housing throughout the state, including Albany, Dutchess, Erie, Monroe, Rockland, Ontario and Orange counties. The Fund remains dedicated to working with CPC and SONYMA to provide New York State residents with opportunities in affordable housing, as long as the investment structures and potential returns fulfill the fiduciary mandate of the Fund to the beneficiaries and retirees.

HELPING NY/EQUITY REAL ESTATE INVESTMENTS

Alongside the CPC program, the Fund also invests in New York State commercial real estate properties through a mix of investment structures such as joint ventures, commingled funds, and club fund investments, as well as wholly owned properties. The Fund owns, in whole or in part, shopping centers, office buildings, residential properties and hotels. Through these investment vehicles, the Fund has been able to acquire, develop, re-lease and reposition properties that are in need of upgrading with the goal of increasing jobs, helping the community and increasing property values. In line with these goals, the Fund completed a major redevelopment of an office building in New York City and has co-invested in a multi-family sidecar vehicle that focuses on affordable housing in the State.

ALTERNATIVE INVESTMENTS

Private Equity

The Fund's private equity portfolio is designed to generate long-term returns that exceed those of public equities. As of March 31, 2021, the private equity program generated a one-year total return of 23.83 percent, as compared to the Cambridge U.S. Private Equity Index benchmark (1Q Lag) of 22.93 percent.

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

The Fund will commit capital to private equity at a disciplined pace to ensure the diversification of the portfolio over time. In addition, the Fund seeks to commit capital across various geographies, including international managers who have the expertise to source attractive investment opportunities in global markets and, more locally, to managers who focus their

investments in New York State (In-State Investment program). The Fund also seeks to commit capital to industry sectors, such as technology, that show high potential for economic growth and capital appreciation, and that will further enhance the diversification of the portfolio.

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

The private equity program seeks to exploit those long-term commitments and alignments of interests by making co-investments alongside select managers on improved economic terms. During the past fiscal year, the Fund made 33 co-investments totaling over \$557 million in invested capital in portfolio companies alongside Fund managers. The Fund has established equity co-investment programs focused on opportunities sourced from its core private equity portfolio, the emerging manager program, the In-State Investment program and its Israel investment program. The In-State program also has the capability to make credit co-investments, and two credit co-investments totaling approximately \$17.5 million have been made during the past fiscal year in companies in New York State, and are included in the co-investment totals above.

Opportunistic Funds/ Absolute Return Strategy Funds

The Opportunistic/ARS (OARS) portfolio invests across a broad range of investment strategies that do not fit neatly into the definition of traditional asset classes or that share characteristics of multiple asset classes. The portfolio includes investments across the capital structures of both public and private companies and assets that are distinguished from the mandates of the other asset classes by their history, investment structures, terms, duration, risk/return profiles, or other relevant characteristics. The role of the OARS asset class is to add alpha (excess return) to the Fund's overall return with a relatively low correlation to other asset classes. Additionally, the portfolio seeks to invest in unique opportunities by identifying skilled external managers who can generate excess returns in all market environments.

The portfolio's objectives are accomplished by investing in opportunities such as market dislocations, regulatory reforms, capital shortages, structural changes, and stress or distress among asset owners. The OARS team allocates capital into investments that may not fit neatly into existing asset classes or span multiple asset classes.

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

The structures of these investments will vary greatly depending on the opportunity. They may range from broad strategic partnerships, where the Fund's staff can leverage an institution's resources to invest across many asset classes or strategies, to a more targeted approach that may include investments focused on sectors, asset types, or geographies. OARS investments span multiple fund structures including open-ended, closed-ended, and evergreen funds. In addition to commingled funds, separate accounts, and minority investment stakes, the OARS team may also seed new investment platforms or take an anchor position in new investment strategies with existing managers.

The OARS portfolio performed well during fiscal year 2021. The performance was primarily due to rapid recovery across most asset classes following the COVID-19-driven downturn in March of 2020. The largest attribution to returns came from event-driven managers, specialty finance, and healthcare investments during this period.

As of March 31, 2021, the portfolio has generated a one-year total return of 19.69 percent compared to 8.80 percent for the benchmark.

Credit

The Credit asset class's mandate is to significantly outperform CRF's actuarial return target while maintaining relatively low correlation to other asset classes outside of the fixed income market. To accomplish this objective, the team invests across the fixed income universe and seeks attractive risk-adjusted returns using a diverse set of investments.

In general, the Credit team seeks investments that will be broadly focused on credit opportunities that exist for the following reasons:

- Opportunities that are driven by a lack of availability of credit due to inefficient markets or market dislocations;
- An investment may seek to take advantage of structural market changes;
- Investments may become available given a mispricing either with a market or an industry; and
- An investment may seek out an ability to capture an illiquidity premium relative to liquid market investments.

The Credit team divides its investments into core and non-core portfolios. Core investments generally take the form of large investments in external managers, while non-core investments are generally smaller ticket investments in niche managers and direct investments into attractive opportunities.

The current portfolio is dominated by liquid credit mandates, which performed extremely well in the past fiscal year, participating in the post-pandemic rebound. The focus of the Credit Team is to increase exposure to relatively illiquid private market strategies, largely due to its less correlated nature to listed equities. In the meantime, existing private market mandates also exceeded return expectations.

As of March 31, 2021, the portfolio has generated a one-year total return of 20.38 percent compared to 23.74 percent for the benchmark.

Real Assets

The Real Assets portfolio was first launched in 2014 and continues to develop. The long-term allocation of the portfolio is 3 percent, and the strategic benchmark is the Consumer Price Index (CPI) plus 500 basis points. Sector allocations include investments in agriculture, capital assets, energy transition, infrastructure, and timber. As of March 31, 2021, the portfolio returned 7.34 percent compared to 7.86 percent for the benchmark. The portfolio has an annualized return of 7.53 and 8.90 percent over three and five years, respectively. Both periods exceeded the benchmark return. The portfolio has begun to outpace its benchmark as allocation ratios move closer to a range typical of mature portfolios and the "J" curve impact normalizes.

The Real Assets portfolio's objectives are to add alpha to the Fund's overall portfolio return and offer inflation participation opportunities while maintaining a low correlation to traditional asset classes over time. The portfolio also seeks to benefit from investment themes that will play out over multiple economic cycles. The performance of the asset class is primarily driven by broad, macroeconomic factors, including resource demand, demographics, inflation, and idiosyncratic supply shocks.

As we invest within the asset class, we seek to source best-in-class real asset fund managers with strong and sustainable track records. To date, we have invested approximately \$3.93 billion across numerous real assets strategies. The real assets portfolio's allocation was 1.54 percent at fiscal year-end. The relative weight is still modest but will grow as the portfolio evolves. Total capital committed exceeds \$8 billion. These commitments include allocations to emerging, secondary, and energy transition managers.

Geographically, the portfolio is diversified across the United States, Organization for Economic Cooperation and Development (OECD) countries, and emerging markets.

Pursuit

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

Pursuit also has a goal of making at least 25 percent of its loans to MWBEs. In the 2020 calendar year, 18 percent of Pursuit loans that were due to Fund investments were made to women-owned businesses and 25 percent were made to minority-owned businesses.

The Common Retirement Fund has been an investor in NYBDC since 1987, with commitments totaling \$500 million. In 2018, the Fund approved a fifth \$100 million commitment to support NYBDC's small business loan program. Since this program began in 1987, NYBDC has made 1,212 loans totaling \$449 million to businesses that employ over 24,900 New Yorkers. During the fiscal year ended March 31, 2021, Pursuit made 16 loans totaling \$11.8 million.

Financing for Businesses in New York State

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

OVERVIEW OF INVESTMENTS

CONTINUED

On March 31, 2021, the Fund's private equity portfolio included investments in over 416 New York businesses with a market value of \$2.2 billion. This figure reflects only the Fund's share of these investments; the total value of New York companies held by the Fund's partnerships was more than \$34.0 billion as of December 31, 2020 (the most recent data available). Included in the Fund's New York State portfolio are: LeverPoint in Clifton Park, Delorios in Utica, Corelle Brands in Corning, Movable Ink in New York City, AeroSafe in Rochester and ACV Auctions in Buffalo.

As of March 31, 2021, the Fund had over \$600 million of remaining commitments available for investment in the In-State Program. Commitments to this program totaled \$2.1 billion. These commitments are devoted exclusively to New York State investment opportunities. The 18 managers in the program are:

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

EMERGING MANAGER PROGRAM

The goal of the Emerging Manager Program is to identify newer and smaller investment managers that have the potential to add value to the CRF's investment portfolio across all asset classes. Due to the size of assets under management, these managers would not typically be identified as an investment opportunity in the CRF's standard institutional investment manager search process. The Emerging Manager Program also provides the CRF with opportunities to invest with qualified business enterprises that are majority owned or are substantially owned and operated by women or minority managers (MWBEs).

Smaller investment management funds may generate superior performance returns because of their entrepreneurial nature and increased investment flexibility. Historically, several CRF emerging managers have outperformed their more established peers, a trend the CRF staff expects to continue. Graduates of the Emerging Manager Program are a natural source of new relationships for the CRF's investment portfolio, allowing the program to organically structure and form new relationships that can evolve to meet institutional investment mandates.

The CRF has established a policy framework for the Emerging Manager Program's operational guidelines and procedures in order to achieve the following objectives:

- To increase the CRF's utilization of emerging managers, including MWBE managers, consistent with applicable investment and fiduciary standards;
- To proactively identify best-in-class emerging managers who demonstrate the capacity and return profile to become viable long-term partners of the Fund;
- To employ prudent selection processes and practices consistent with the high fiduciary standards for all the CRF's investment management decisions and processes;
- To maintain guidelines and funding strategies that will encourage inclusion and ongoing support for the development of emerging managers;
- To generate appropriate risk-adjusted investment returns by identifying new investment opportunities with the potential for strong performance and by further diversifying the portfolio; and
- To cultivate, develop and incubate the next generation of external portfolio managers that would be candidates for transition into the CRF's core pool of investment managers.

As of March 31, 2021, the Fund currently has approximately \$27 billion invested with or committed to minority-owned or women-owned firms. MWBEs now represent approximately 21.5 percent of our externally managed active mandates.

SUSTAINABLE INVESTMENTS AND CLIMATE SOLUTIONS PROGRAM

Sustainable Investments and Climate Solutions Program (SICS) is a thematic, multi-asset class investment program designed to strengthen CRF’s portfolio by capitalizing on investment opportunities that advance one or more of nine themes split equally into three categories: *Resources & Environment*, *Human Rights & Social Inclusion*, and *Economic Development*. The themes are closely aligned to the United Nations Sustainable Development Goals (SDGs). Led by a Director reporting to the Chief Investment Officer, the SICS program works across asset classes to source, identify, and assess sustainable investment opportunities. Investments attributed to SICS will be subject to the same fiduciary and risk and return requirements applicable to investments in the subject asset classes.

CRF SICS THEMES

Resources and Environment	Human Rights and Social Inclusion	Economic Development
Climate and Environment	Education	Financial inclusion
Resource efficiency	Demographic empowerment	Sustainable infrastructure
Pollution and waste management	Health and wellbeing	Affordable housing

Sustainable investments have catalytic capability to augment financial performance by focusing on long-term value creation. The SICS Program improves the diversification of the CRF portfolio and is intended to enhance risk-adjusted returns by both reducing financial risks and seizing investment opportunities.

In its November 2020 Financial Stability Report, the Federal Reserve Board illustrates financial system vulnerabilities caused by climate change. Awareness of various risks (disclosure, physical, and transition risks) has become an increasing expectation of modern fiduciaries. For example, inadequate disclosures can lead to regulatory investigations and shareholder claims; assets can become damaged by weather and climate-related events; and resource-based assets can become devalued due to low-carbon norms.

SICS is a key component of the Fund’s plan to position its portfolio for a low-carbon economy. SICS builds on the Fund’s initial \$10 billion commitment to sustainable investment strategies, with a new total goal of \$20 billion to be realized over the next decade, which includes a \$4 billion investment in a low-carbon index that has a 75 percent lower carbon emissions intensity than its benchmark, achieved by underweighting investments in high emitters.

SICS provides CRF with a systematic platform to opportunistically expand investment opportunities across assets that are consistent with the goals of the Climate Action Plan. As of March 31, 2021, CRF has committed over \$11 billion to investments in SICS including green bonds, clean and green infrastructure, green buildings, renewable energy, and climate indices.

CORPORATE GOVERNANCE

Corporate Governance Program and Environmental, Social and Governance (ESG) Strategy

The Fund's investment philosophy requires the consideration of environmental, social, and governance (ESG) factors in the investment process because they can influence both risks and returns. Assessing company and external manager performance with respect to ESG factors and encouraging both to embrace ESG best practices can help protect the long-term value of the Fund's investments.

During the 2020–21 fiscal year, the Fund released its first ESG Strategy which delineates its ESG beliefs, practices, and key factors, and outlines expectations for asset managers and public equity portfolio companies. The Fund's ESG Strategy can be accessed on the Comptroller's website at www.osc.state.ny.us/files/common-retirement-fund/2020/pdf/ESG-strategy-report-2020.pdf.

The Fund's Corporate Governance Program is tasked with executing the Fund's ESG Strategy, with a focus on the following key ESG factors:

- **Environment (E):** climate risks and opportunities, natural resource and raw material usage, and pollution and waste management.
- **Social (S):** human capital management, labor relations, human rights, health and safety, supply chain labor standards, privacy and data security, product safety and quality, and community impact.
- **Governance (G):** risk oversight, board and governance practices, corporate strategy and capital allocation, executive compensation, inclusion and diversity, and lobbying and political spending.

Implementation of the Fund's ESG commitment and priorities includes promoting sound ESG practices through active ownership — using the CRF's voice and votes to address investment risks. The Fund's active ownership work takes many forms, including voting on nearly 30,000 proxy ballot items annually, engaging directly with portfolio companies, conducting external manager ESG due diligence and risk assessments, and advocating for public policies that will help protect the long-term value of our investments.

Proxy voting at public equity portfolio companies' meetings is an effective means of engaging and communicating with boards of directors and management about the Fund's ESG priorities and can be a powerful tool for enhancing long-term value. The Fund's independent proxy voting is an important fiduciary obligation that is executed pursuant to its *ESG Principles and Proxy Voting Guidelines*, which are updated biennially. Not only do these principles and guidelines provide direction for our voting decisions, they also guide other corporate engagements and policy initiatives, articulating to the capital markets the Fund's view of what constitutes good corporate governance and ESG best practices. Voting guidelines can be accessed on the Comptroller's website at www.osc.state.ny.us/files/common-retirement-fund/corporate-governance/pdf/proxy-voting-guidelines-2020.pdf.

Stewardship, in its many forms, can serve to protect and enhance the value of the Fund's investments. The Fund's stewardship work utilizes various engagement strategies, including shareholder proposals, written correspondence, investor statements, press strategies and private dialogues. The Fund engaged with over 1,700 portfolio companies, 40 percent of companies in the domestic public equity portfolio, during the 2020-21 fiscal year and this stewardship work resulted in companies providing improved disclosures and taking important actions to enhance ESG policies and practices. A recap of the Fund's 2020 stewardship work can be accessed on the Comptroller's website at www.osc.state.ny.us/files/reports/special-topics/pdf/2020-corporate-governance-stewardship-report.pdf.

ESG Integration incorporates ESG factors into the Fund's analysis of investment risk and manager performance. Risk assessments that evaluate material ESG factors are systematically applied across all asset classes. Due diligence of external managers includes an assessment of their ESG policies, and in the last year those assessments have been customized for each asset class. In addition, annual surveys of and engagements with the Fund's managers can provide updated information about their ESG policies and practices. The Fund has expanded the staff resources dedicated to the Fund's ESG integration program to implement its multi-year strategic ESG integration plan.

Public Policy and Advocacy supports policies, laws and regulations that promote the overall stability, transparency and functionality of financial markets and the economy generally, which can improve returns and reduce risks for the Fund. The Fund's public policy activities take many forms, including meetings and correspondence with elected representatives, regulators and other public officials, testimony at hearings and forums, comments on regulatory and legislative proposals, and participation in State, national, and international forums and initiatives.

Climate-Related Financial Disclosures

The purpose of this section is to report on the Fund's efforts to address climate risk in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), an organization established by the Financial Stability Board of the G20 (a forum convened by 19 leading industrial nations and the European Union) to guide the financial community in its understanding and reporting of climate risks. The Fund supports the TCFD recommendations.

1. Governance

As Trustee, the Comptroller is responsible for the prudent investment of the Fund. The Comptroller believes that climate change presents significant risks to the Fund's investments, as well as unique investment opportunities. The Fund's CIO formulates an overall investment strategy for the Comptroller, including climate-related strategy, with the assistance of investment, risk and corporate governance staff, consultants, and external advisory committees. With leadership and direction from the Comptroller, the Fund has established a team to implement its Climate Action Plan, which was published in 2019. This team includes the Chief Investment Officer, investment professionals representing all asset classes, the Corporate Governance unit, the Director of the Sustainable Investment and Climate Solutions Program, and legal, risk, and operations staff. The team is tasked with developing action plans and executing strategies to address climate risks and identify investment opportunities for the Fund. The Fund also calls upon the office's environmental policy expert to help inform its climate strategies. In fiscal year 2020-21, the Fund expanded the Corporate Governance unit's dedicated climate staff, and contracted consultants and data providers who can provide unique research and analysis services.

2. Strategy

The Fund recognizes that there are different short-, medium-, and long-term risks posed by climate change. Because the Fund expects to exist in perpetuity, it must consider all of these time horizons. The transition to a low-carbon economy is already underway and accelerating globally; it is likely to affect virtually every investment in the Fund's broadly diversified portfolio.

The Fund has identified significant short- and medium-term **transition risks** in developed markets due to implementation of the Paris Agreement, technological advances and changing market demand. In 2015, the Fund released a tailored climate change scenario analysis, produced in partnership with Mercer Consulting, describing transition risks under a variety of scenarios, and in fiscal year 2020-21 laid the groundwork for a value-at-risk analysis that incorporates different carbon pricing scenarios.

The Fund also believes **physical risks** are significant in all time frames. Extreme weather events are already affecting businesses around the world and pose a growing threat to the Fund's investments. Measuring these risks is challenging due to difficulties in accurately projecting weather events at the local level, but the Fund expects that better climate, weather and financial modeling will allow for improved assessments in the near term. The Fund expects to see greater physical risks in the long run if the world fails to limit temperature rise.

3. Risk Management

The 2019 Climate Action Plan provides a framework for the Fund to formally integrate climate considerations into risk assessments, investment decision making, engagements, and public policy advocacy. The Fund's staff reviews studies to stay informed about the science associated with climate change, and actively seeks to identify advanced climate risk assessments to inform investment strategies.

Pursuant to the Climate Action Plan, the Fund established an assessment framework and minimum standards to evaluate 27 thermal coal mining companies, which resulted in the May 2020 divestment of 22 coal companies that could not demonstrate readiness for the transition to the low carbon economy. In the fall of 2020, the Fund established an assessment framework and minimum standards to review nine oil sands companies and committed to assessing the transition readiness of shale oil and gas and integrated oil and gas companies next.

In early 2021, the Fund updated the ESG scorecards it uses to evaluate prospective investments with external managers, incorporating new climate-specific criteria into this key risk assessment tool. The criteria used to evaluate each manager's climate capabilities include governance, risk assessments, engagements, proxy voting, and climate reporting in line with TCFD recommendations. In addition, the Fund has been engaging with existing managers regarding these criteria to better understand their approach to addressing climate risks, investing in climate opportunities, and aligning with the goals of the Paris agreement. The Fund also continues to utilize the Global Real Estate Sustainability Benchmark (GRESB) to measure the sustainability performance of the Fund's real estate and infrastructure assets in areas such as energy, greenhouse gas and water.

The Sustainable Investment and Climate Solutions (SICS) Program is a key component of the Fund's plan to position its portfolio for a low-carbon economy. To date, the Fund has committed more than \$11 billion toward its total \$20 billion goal to specific investment opportunities in the SICS Program across all asset classes, including actively and passively managed public equity strategies, green bonds, clean and green infrastructure funds, and private equity, as well as green building real estate funds.

The Fund has undertaken significant corporate engagement as described in its annual Corporate Governance Stewardship Report. This includes filing over 150 climate-change-related shareholder resolutions since 2008 and reaching more than 70 agreements with portfolio companies on climate issues such as setting greenhouse gas (GHG) emissions reduction targets and renewable energy and energy efficiency goals. The Fund continues to engage with high-risk companies directly and in collaboration with other investors through the global Climate Action 100+ initiative. In 2020, the Fund enhanced its proxy voting guidelines by adding criteria on how the Fund reviews low-carbon transition preparedness and delineating situations that would prompt the Fund to withhold support from director nominees for failing to manage climate risks.

Finally, the Fund continues to provide public policy leadership at the international, federal, and state levels on climate change issues that may impact its returns on a variety of issues, including implementation of the Paris Agreement, the Clean Power Plan, tax credits for solar and wind power, low-carbon fuel standards, carbon pricing, the Regional Greenhouse Gas Initiative, and Securities and Exchange Commission requirements for corporate disclosure of material carbon risks.

4. Metrics and Targets

In December 2020, the Fund announced its goal to reduce greenhouse gas emissions from the Fund's entire portfolio to net-zero by 2040.

The Fund currently uses the following metrics to assess climate risks and opportunities:

- **Annual average weighted emissions intensity** assessment of public equity holdings (including Scope 1 and 2 greenhouse gas emissions). In 2020, the Fund's emissions intensity was 16.6 percent lower than its benchmark (72 percent Russell 3000/28 percent MSCI ACWI ex-US). It was 18.3 percent lower than its 2019 intensity. The Fund believes that this metric is useful in assessing transition risks, especially regulatory risks, but does not capture trends over time or the future direction of companies. The Fund also recognizes the significance of Scope 3 emissions as a risk metric in investment analyses but faces challenges in assessing these emissions due to the limited availability of accurate data.
- **Portfolio exposure** to assets that are significantly affected by climate change and the low-carbon transition as recommended by the TCFD.
- **Capital allocation to the SICS Program.** The Fund has committed \$20 billion in total to the SICS Program and has deployed more than \$11 billion toward that goal to date.
- **Transition assessment and minimum standards** to evaluate companies in the high impact sectors recommended by the TCFD. The Fund has established the transition framework and minimum standards for the thermal coal industry to evaluate companies' transition readiness.

INVESTMENT RESULTS

Based on Fair Market Values as of March 31, 2021.

	Annualized Rate of Return ⁽¹⁾			
	1 Year	3 Years	5 Years	10 Years
Total Fund	33.55%	11.00%	11.17%	9.19%
Public Equity	60.07	14.61	15.17	11.55
MSCI All Country World Index	54.60	12.07	13.21	9.14
Private Equity ⁽²⁾	23.83	14.96	14.22	12.66
Cambridge U.S. Private Equity Index (1Q Lag) ⁽³⁾	22.93	15.54	15.59	14.07
Real Estate ⁽²⁾	2.19	3.86	6.24	10.12
Real Estate Benchmark ⁽⁴⁾	1.11	4.31	5.56	8.82
Credit ⁽²⁾	20.38	6.23	6.93	–
Credit Suisse Leveraged Loan Index + 2.5%	23.74	6.73	7.93	–
Opportunistic/Absolute Return Strategy Funds (O/ARS) ⁽²⁾	19.69	5.57	6.16	3.45
CRF Actuarial Return + 2%	8.80	8.80	8.88	9.14
Real Assets ⁽²⁾	7.34	7.53	8.90	–
U.S. CPI + 5%	7.86	7.12	7.35	–
Fixed Income ⁽²⁾	2.61	4.72	3.67	3.64
Bloomberg Barclays Aggregate Bond Index	0.71	4.65	3.10	3.44
Short-Term Investments	0.51	1.83	1.61	1.04

(1) Investment return calculations were prepared by the Custodian using a time-weighted rate of return. These figures are for investment management purposes and may not agree with audited statements. Due to reporting timing differences, actual results may differ from reported results.

(2) Generally, Private Equity, Real Estate and Real Assets are reported on a three-month lag (adjusted by cash flows); Opportunistic Funds and Absolute Return Strategy are reported on a one-month lag (adjusted by cash flows). Alternative asset classes and non-core fixed income are generally reported net of fees.

(3) The vendor's official results are presented as annualized Internal Rate of Return (IRRs). However, the Custodian reports the vendor's index as quarterly delinked returns on a three-month lag. This time-weighted and lagged methodology is most comparable to the Custodian returns for the Private Equity composite.

(4) Effective April 1, 2019, the Real Estate benchmark is an asset-weighted blend of quarter lagged benchmarks. Core Real Estate is proxied to the NCREIF NFI ODCE (Net) Index. Non-Core Real Estate is proxied to the same index with a 100 basis point annual premium. The Real Estate benchmark returns prior to April 1, 2019 follow the NCREIF Property (Gross) Index on a one-quarter lag.

INVESTMENT SUMMARY

The following table summarizes the fair values of Fund investments by asset type for March 31, 2021 and 2020. (Dollars in Thousands)

Asset Type	Fair Value March 31, 2021	Percentage of Total Fair Value	Fair Value March 31, 2020	Percentage of Total Fair Value
Domestic Equity	\$ 90,263,828	35.0%	\$ 62,548,268	32.2%
Global Fixed Income	47,722,955	18.5	45,410,315	23.4
International Equity	43,480,400	16.9	30,673,634	15.8
Private Equity	29,470,165	11.4	20,314,177	10.5
Real Estate	17,647,993	6.8	15,693,661	8.0
Short-Term Investments	11,082,651	4.3	5,697,690	2.9
Opportunistic/ARS	5,016,078	1.9	9,881,892	5.1
Real Assets	3,929,594	1.5	3,085,682	1.6
Mortgage Loans	1,043,621	0.4	1,011,844	0.5
Credit	8,478,516	3.3	-	-
Total Investments	\$ 258,135,801	100.0%	\$ 194,317,163	100.0%

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

ASSET ALLOCATION — MARCH 31, 2021

The Fund diversifies its assets among various classes including domestic and international equity, fixed income, private equity, real estate, opportunistic and absolute return strategy funds, credit and real assets.

Asset liability studies, conducted periodically with help from an investment consultant, identify the optimal mix of assets to meet the growth requirements of pension obligations while controlling risk as measured by return volatility. In the fiscal year ended March 31, 2020, the Fund conducted an asset liability analysis and adopted a Long-Term Policy Allocation which was implemented on April 1, 2020.

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

Asset Type	Allocation as of March 31, 2021	Long-Term Policy Allocation
Equity		
Domestic Equity	36.79%	32.0%
International Equity	16.03	15.0
Alternative Assets		
Private Equity	10.57%	10.0%
Real Estate	6.75	9.0
Opportunistic/Absolute Return Strategy	1.97	3.0
Credit	3.26	4.0
Real Assets	1.49	3.0
Fixed Income	20.82%	23.0%
Cash	2.32%	1.0%

Note: A detailed listing of the New York State and Local Retirement System's assets as of March 31, 2021, is on our website at www.osc.state.ny.us.

PUBLIC EQUITY PERFORMANCE

For the Fiscal Year Ending March 31, 2021.

	Total Assets (Dollars in Millions)	Annualized Rate of Return				Portfolio Since Inception	Benchmark Since Inception*	Inception Date
		1 Year	3 Years	5 Years	10 Years			
Total Public Equity	\$ 134,634.6	60.07%	14.61%	15.17%	11.55%			
MSCI All Country World Index		54.60%	12.07%	13.21%	9.14%			
Total Large Cap Composite	\$ 63,163.2	56.20%	17.84%	17.06%	14.24%	11.81%	11.83%	2/1/83
CRF Large Cap Index Fund	46,829.2	56.05	18.28	17.40	14.42	12.15	12.12	8/1/78
CRF High Efficiency Defensive Index Fund	4,572.3	48.28	17.36	16.11	–	16.20	16.06	1/1/16
CRF Low Emission Index Fund	6,761.6	60.13	17.73	16.76	–	16.11	16.22	1/1/16
AQR Capital Management	3,504.2	56.03	–	–	–	12.85	17.23	6/1/18
Eagle Capital Management	1,495.8	68.29	17.46	18.05	–	13.93	13.19	9/1/14
Russell Top 200 (S&P 500 To 1/1/16)		56.30%	18.30%	17.42%	14.39%			
Russell 1000 Index		60.59%	17.31%	16.66%	13.97%			
Total Mid Cap Composite	\$ 11,513.6	74.11%	14.58%	14.55%	11.70%	12.00%	12.54%	7/1/91
CRF Midcap Index Fund	9,969.5	73.08	14.66	14.61	11.99	12.22	12.23	11/1/91
Fiera Capital	837.6	100.12	21.40	21.06	15.11	14.31	12.95	3/1/08
Iridian Asset Management	619.8	80.22	10.35	11.33	–	8.82	11.79	1/8/15
RockCreek Midcap	86.7	56.18	–	–	–	56.18	73.64	4/1/20
Russell Midcap (S&P 400 Midcap To 1/1/16)		73.64%	14.73%	14.67%	11.90%			
Total Small Cap Composite	\$ 9,015.7	86.73%	17.16%	18.50%	13.30%	11.38%	10.70%	7/1/91
CRF Small Cap Index Fund	2,513.8	94.39	14.76	16.23	12.50	10.18	10.08	10/1/05
Artisan Partners	1,015.7	82.49	28.44	27.31	–	18.59	13.49	8/26/13
Brown Capital Management	1,844.9	62.02	19.69	22.94	17.64	15.98	9.92	9/1/94
Channing Capital Management	395.5	104.29	12.92	14.60	–	10.27	9.70	4/1/15
EARNEST Partners	1,552.4	85.23	14.03	16.26	12.93	11.33	9.23	6/1/01
Leading Edge Investment Advisors	679.2	106.04	18.85	18.70	–	13.42	11.53	4/1/15
Palisade Capital Management	426.0	84.46	–	–	–	13.47	12.97	6/1/18
PENN Capital Management	588.2	139.77	17.57	18.28	–	10.26	11.48	9/27/13
Russell 2000 Index		94.85%	14.76%	16.35%	11.68%			
Total Long-Only Alpha Composite	\$ 1,818.4	54.32%	13.50%	11.69%	–	13.21%	7.81%	9/1/11
Trihan Partners Strategic Investment Fund-N, LP	1,049.6	46.01	14.46	10.53	–	10.01	6.89	2/1/15
ValueAct Capital Partners II, LP	768.8	66.85	13.31	13.23	–	13.61	7.81	9/1/11
HFRI Event Driven Activist Index		64.76%	8.80%	8.28%	–			
Total Domestic Transition Accounts	\$ 100.8							

* Benchmarks for all accounts will vary according to mandate.

PUBLIC EQUITY PERFORMANCE

CONTINUED

For the Fiscal Year Ending March 31, 2021.

	Total Assets (Dollars in Millions)	Annualized Rate of Return				Portfolio Since Inception	Benchmark Since Inception*	Inception Date
		1 Year	3 Years	5 Years	10 Years			
Total Non U.S. Equity Composite	\$ 34,754.3	54.57%	8.42%	11.42%	6.13%	6.52%	5.60%	10/1/89
MSCI ACWI Ex U.S. IMI (MSCI ACWI Ex U.S. to 1/1/17)		51.94%	6.51%	9.98%	5.27%			
Total Non U.S. Passive Composite	\$ 11,775.4	52.27%	7.04%	10.17%	5.21%	6.64%	6.40%	11/1/04
BlackRock ACWI Ex U.S. IMI	11,775.4	52.27	6.89	10.20	5.27	6.68	6.40	11/1/04
Total Active ACWI Ex U.S. Composite	\$ 9,108.8	58.30%	11.80%	14.27%	7.87%	8.24%	6.36%	11/1/04
Acadian Asset Management	2,142.8	55.49	7.12	12.29	7.39	7.96	6.36	11/1/04
Ariel Investments	341.2	26.10	–	–	–	7.41	12.91	11/1/18
Baillie Gifford	3,199.5	67.68	15.03	15.16	10.24	7.55	4.80	2/1/99
GQG Partners	700.1	39.85	13.48	–	–	13.48	6.51	4/1/18
LSV Asset Management	673.9	–	–	–	–	35.02	31.83	10/1/20
Wellington Management	2,051.3	55.55	12.47	15.24	–	16.23	13.44	3/1/16
MSCI ACWI Ex U.S.		49.41%	6.51%	9.76%	4.93%			
Total EAFE Composite	\$ 7,248.5	49.17%	8.64%	10.72%	6.84%	6.47%	4.82%	10/1/89
Capital Group	2,423.5	52.82	13.37	14.17	8.53	8.11	4.96	9/1/89
Fiera International	635.6	45.81	–	–	–	18.15	10.83	10/30/19
Mondrian Investment Partners	1,906.8	39.48	3.76	6.66	5.21	6.58	5.22	1/1/98
Xponance	1,127.6	–	–	–	–	5.74	4.59	2/1/21
Total EAFE Small Cap Composite	\$ 1,153.0	61.38%	–	–	–	8.47%	7.53%	7/1/18
Acadian Asset Management	386.6	73.31	–	–	–	10.59	7.53	7/1/18
Barings International	371.1	52.71	–	–	–	7.14	7.51	8/1/18
Global Alpha Capital Management	395.3	59.12	8.30	13.30	–	12.41	8.20	10/1/13
MSCI EAFE Index		44.57%	6.02%	8.85%	5.52%			
Total Emerging Markets Composite	\$ 5,315.8	57.62%	6.44%	12.22%	4.01%	8.67%	7.73%	1/1/92
Genesis Investment Management	1,055.7	59.73	8.90	13.29	–	6.70	4.70	3/1/12
Martin Currie	726.7	65.92	–	–	–	28.87	22.88	10/8/19
Morgan Stanley	1,404.3	60.28	5.52	11.00	4.68	7.63	6.43	11/1/93
Quantitative Management Associates	1,020.4	58.34	4.55	11.19	–	5.56	5.29	2/1/12
RockCreek Group	781.2	42.90	7.37	14.96	–	6.11	6.54	10/18/13
Wellington Management	327.5	–	–	–	–	7.47	2.70	1/1/21
MSCI Emerging Markets Index		58.39%	6.48%	12.07%	3.65%			
Cevian Capital II, LP	\$ 1,305.9	74.10%	9.97%	11.00%	–	10.49%	7.81%	9/1/11
HFRI Event Driven Activist Index		64.76%	8.80%	8.28%	–			
Total Global Equity Composite	\$ 14,268.2	64.58%	14.29%	15.47%	11.34%	9.23%	7.91%	9/1/94
CRF FTSE Environmental Technology 50	\$ 276.3	120.64%	27.89%	20.91%	10.38%	10.00%	10.19%	11/1/09
Brandes Investment Partners	1,660.7	62.25	8.03	10.02	8.00	7.12	5.73	11/1/99
Generation Investment Management	2,360.8	72.96	20.28	21.84	16.41	18.99	12.89	4/8/09
Goldman Sachs Asset Management	3,920.4	58.05	14.80	15.56	–	12.29	10.33	1/1/15
RockCreek Global	840.5	63.32	–	–	–	63.32	54.60	4/1/20
Rockefeller & Company Asset Management	530.7	57.80	12.01	13.72	–	10.11	9.57	2/23/15
T. Rowe Price	2,603.1	84.90	25.15	24.98	16.39	16.34	9.64	3/1/11
Templeton Investments	2,074.2	48.53	5.32	8.74	7.87	7.78	9.64	3/1/11
MSCI All Country World Index		54.60%	12.07%	13.21%	9.14%			
Global Transition Account	\$ 0.4							

* Benchmarks for all accounts will vary according to mandate. Composite market values include transition accounts and accrued management fees.

PUBLIC EQUITY FUND OF FUND PERFORMANCE

For the Fiscal Year Ending March 31, 2021.

	Total Assets (Dollars in Millions)	Annualized Rate of Return				Portfolio Since Inception	Benchmark Since Inception*	Inception Date
		1 Year	3 Years	5 Years	10 Years			
Total RockCreek Midcap Composite	\$ 86.7	56.18%	–	–	–	56.18%	73.64%	4/1/20
Lisanti Capital	87.1	95.47	26.30%	25.31%	–	18.15	14.40	7/1/14
Russell Midcap Index		73.64%	14.73%	14.67%	–			
Total RockCreek Global Composite	\$ 840.5	63.32%	–	–	–	63.32%	54.60%	4/1/20
ARGA Investment Management	132.3	93.84	13.98%	–	–	13.83	12.60	5/1/17
Ativo Capital Management	123.4	49.98	13.23	–	–	14.17	12.88	5/1/17
Bell Asset Management	110.4	48.43	15.40	–	–	14.79	12.88	5/1/17
QTRON Investments	109.3	56.94	–	–	–	18.53	17.76	5/22/19
Strategic Global Advisors	212.2	49.39	10.02	–	–	11.35	12.88	5/1/17
Trinity Alps Capital	154.1	95.69	–	–	–	28.67	20.14	1/8/19
MSCI All Country World Index		54.60%	12.07%	–	–			
Total Xpionance EAFE Composite	\$ 1,127.6	–	–	–	–	5.74%	4.59%	2/1/21
Applied Research Investments	171.4	–	–	–	–	(1.59)	4.59	2/1/21
ARGA Investment Mgmt.	166.8	80.41%	–	–	–	29.68	13.27	8/5/19
Foresight Global Investors	112.1	–	–	–	–	5.01	4.59	2/1/21
Frontier Global	195.0	60.97	–	–	–	23.85	13.36	8/5/19
Martin Investment Management	164.9	–	–	–	–	3.79	4.59	2/1/21
Osmosis	202.4	44.63	4.10%	8.84%	–	7.55	6.95	11/1/15
Trinity Alps	116.1	–	–	–	–	8.51	4.59	2/1/21
MSCI EAFE Index		44.57%	6.02%	8.85%	–			
Total Leading Edge Investment Advisors Composite	\$ 679.2	106.04%	18.85%	18.70%	–	13.42%	11.53%	4/1/15
Altravue Capital	63.7	–	–	–	–	46.96	62.86	7/29/20
Bridge City Capital	67.7	84.64	–	–	–	40.82	33.98	2/28/20
Denali Advisors	82.7	97.34	–	–	–	26.04	24.70	8/28/19
Granahan Investment Management	141.7	125.10	36.67	–	–	36.14	16.47	9/29/17
Granite Investment Partners	106.5	105.33	22.04	21.58	–	15.49	11.53	4/1/15
Nicholas Investment Partners	64.7	120.43	27.67	25.76	–	17.01	12.89	4/1/15
Palisades Investment Partners	74.7	123.65	25.53	22.47	–	17.00	11.53	4/1/15
Phocas Financial Corporation	78.4	101.34	10.48	12.56	–	9.12	9.70	4/1/15
Russell 2000 Index		94.85%	14.76%	16.35%	–			
Total GSAM Composite	\$ 3,920.4	58.05%	14.80%	15.56%	–	12.29%	10.33%	1/1/15
GSAM AIMS Global Account Cayuga	529.0	59.87	19.41	19.79	–	16.80	9.80	12/23/14
GSAM AIMS Global Account Iroquois	460.0	73.83	18.70	20.27	–	15.48	9.61	11/20/14
GSAM AIMS Global Account Mohawk	389.6	83.25	10.69	11.63	–	7.31	9.70	11/26/14
GSAM AIMS Global Account Mohican	447.1	42.03	11.35	–	–	11.91	12.93	7/22/16
GSAM AIMS Global Account Onondaga	593.1	46.52	16.09	15.97	–	13.55	10.76	12/17/14
GSAM AIMS Global Account Seneca	491.5	31.52	14.41	14.10	–	12.26	10.49	1/30/15
GSAM AIMS Global Account Shinnecock	515.3	72.56	–	–	–	29.47	19.85	10/21/19
GSAM AIMS Global Account Tuscarora	494.9	74.77	10.55	12.94	–	9.91	10.12	12/22/14
MSCI World Index		54.03%	12.81%	13.36%	–			

* Benchmarks for all accounts will vary according to mandate. Composite market values include transition accounts and accrued management fees.

DOMESTIC EQUITY PORTFOLIO — TEN LARGEST HOLDINGS

For the Fiscal Year Ending March 31, 2021.

Company	Shares	Fair Value	Percentage of Domestic Equity
Apple, Inc.	32,311,842	\$ 3,946,891,500	4.4%
Microsoft Corp.	16,370,908	3,859,768,979	4.3
Amazon.com, Inc.	935,200	2,893,583,616	3.2
Facebook, Inc.	5,801,627	1,708,753,200	1.9
Alphabet, Inc. - Class C	756,807	1,565,553,664	1.7
Alphabet, Inc. - Class A	676,611	1,395,523,720	1.5
Berkshire Hathaway, Inc. - Class B	4,115,493	1,051,384,997	1.2
Tesla, Inc.	1,511,646	1,009,673,713	1.1
J.P. Morgan Chase & Company	6,465,900	984,303,957	1.1
UnitedHealth Group, Inc.	2,465,149	917,207,988	1.0

Note: A detailed listing of the New York State and Local Retirement System's assets as of March 31, 2021 is on our website at www.osc.state.ny.us.

FIXED INCOME PORTFOLIO AND COMPARISON

As of March 31, 2021.

Sector	Fair Value (Dollars in Millions)	Fair Value Percentage	Effective Duration	Current Yield
Treasury	\$ 13,439.0	28.8%	10.93	1.69%
Treasury Inflation-Protected Securities (TIPS)	2,110.4	4.5	3.33	0.31
Federal Agency	698.3	1.5	4.64	0.97
Corporate	15,301.1	32.8	6.84	3.01
Asset-Backed	1,819.6	3.9	3.05	2.64
Commercial Mortgage-Backed	1,830.0	3.9	3.11	3.03
Mortgage-Backed	6,888.7	14.8	4.22	2.88
Berkada Mortgages	552.9	1.2	4.19	4.81
CPC Mortgages	490.7	1.1	6.38	4.73
Collateralized Loan Obligations	2,898.4	6.2	0.10	1.64
Municipal Bonds	612.6	1.3	11.64	3.08
Total Core Portfolio	\$ 46,641.8	100.0%	6.15	2.20%
Externally Managed Funds:				
Advent Capital	\$ 480.9		2.76	1.39%
Calvert Research and Management	\$ 254.1		5.93	2.22%
DoubleLine Capital	\$ 283.3		15.65	2.02%
New Century Advisors	\$ 531.8		5.60	0.88%
Semper Capital	\$ 315.9		3.20	3.19%
Teachers Advisors (Nuveen)	\$ 258.8		6.14	1.97%

FIXED INCOME PERFORMANCE

As of March 31, 2021.

	Annualized Rate of Return		
	1 Year	3 Years	5 Years
Common Retirement Fund — Internal Core	2.32%	4.67%	3.64%
Treasuries	(8.81)	3.87	1.82
Treasury Inflation-Protected Securities (TIPS)	5.70	N/A	N/A
Agencies	(0.73)	2.85	1.85
Corporate Bonds	9.52	6.31	5.18
Municipal Bonds	4.93	6.04	5.30
Asset-Backed	13.78	3.56	3.12
Commercial Mortgage-Backed	8.36	5.05	3.48
Mortgage-Backed	1.26	3.78	2.73
Collateralized Loan Obligations	13.12	3.14	4.11
Bloomberg Barclays U.S. Aggregate Bond Index	0.71%	4.65%	3.10%

FIXED INCOME PORTFOLIO — TEN LARGEST HOLDINGS

As of March 31, 2021.

Issue	Fair Value (Dollars in Millions)	Percentage of Fixed Income
Treasury Bonds Due 8/15/2030	\$ 543.3	1.15%
Treasury Bonds Due 2/15/2045	524.5	1.11
Treasury Bonds Due 5/15/2050	488.9	1.03
Treasury Bonds Due 5/30/2030	481.9	1.02
Treasury Bonds Due 11/15/2040	453.8	0.96
Treasury Bonds Due 12/31/2027	428.2	0.90
Treasury Bonds Due 8/15/2029	421.2	0.89
Treasury Bonds Due 8/15/2045	416.7	0.88
Treasury Bonds Due 10/15/2025	415.6	0.88
Treasury Inflation Indexed Securities Due 4/15/2022	414.8	0.88
Total	\$ 4,588.8	9.68%

REAL ESTATE PORTFOLIO

As of March 31, 2021.

	Equity Amount*	Percentage	Mortgage Amount*	Percentage
Property Diversification				
Industrial/R&D	\$ 4,105,863,258	23.3%	\$ -	0.0%
Land for Development	42,115,706	0.2	-	0.0
Lodging	426,480,987	2.4	-	0.0
Office	4,772,822,481	27.1	93,585,779	9.0
Other*	3,135,331,062	17.9	-	0.0
Residential	2,139,259,460	12.2	490,748,578	47.0
Retail	2,969,537,396	16.9	459,286,707	44.0
Total	\$ 17,591,410,351	100.0%	\$ 1,043,621,064	100.0%
Regional Diversification				
Northeast	\$ 3,440,951,824	19.6%	\$ 1,043,621,064	100.0%
Mideast	1,290,147,614	7.3	-	0.0
Southeast	1,166,742,386	6.6	-	0.0
Southwest	1,581,077,097	9.0	-	0.0
Midwest	929,392,618	5.3	-	0.0
Mountain	445,022,846	2.5	-	0.0
Pacific	4,597,563,026	26.1	-	0.0
Non-U.S.	4,140,512,939	23.6	-	0.0
Total	\$ 17,591,410,351	100.0%	\$ 1,043,621,064	100.0%

Note: Equity and mortgage amounts are based on the fair value of the Fund's full real estate portfolio.

* Other includes alternative property types (e.g., self storage, medical offices, data centers, student housing).

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

OPPORTUNISTIC REAL ESTATE

Number of Active Partnerships	Capital Committed (Dollars in Millions)	Capital Contributed (Dollars in Millions)	Current Fair Value (Dollars in Millions)	Cumulative Distributions (Dollars in Millions)	Total Value / Exposure (Dollars in Millions)
91	\$20,700.5	\$ 13,802.9	\$ 6,641.2	\$ 11,273.7	\$ 17,914.9

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

ALTERNATIVE INVESTMENTS SUMMARY

As of March 31, 2021.

	Number of Partnerships	Capital Committed	Capital Contributed	Fair Value	Cumulative Distributions	Total Value
Private Equity Funds						
Corporate Finance/Buyout	153	\$ 31,616,510,720	\$ 25,778,125,276	\$ 15,844,926,357	\$ 25,713,553,067	\$ 41,558,479,424
Co-Investment	26	5,321,582,009	3,180,450,628	2,593,595,509	2,166,257,453	4,759,852,962
Distressed/Turnaround	12	1,836,741,999	1,678,111,359	769,689,118	1,556,559,933	2,326,249,051
Fund of Funds	40	8,166,153,808	7,838,722,242	2,184,751,471	8,859,315,734	11,044,067,205
Growth Equity	40	6,286,986,340	5,499,569,969	4,266,596,053	4,725,705,461	8,992,301,514
Special Situations	28	5,219,717,159	4,568,442,299	2,129,247,481	3,723,324,537	5,852,572,018
Venture Capital	31	1,277,798,060	1,147,160,840	1,619,374,797	657,009,702	2,276,384,499
Other	N/A	N/A	61,984,590	61,984,590	N/A	61,984,590
Total Private Equity*	330	\$ 59,725,490,095	\$ 49,752,567,203	\$ 29,470,165,376	\$ 47,401,725,887	\$ 76,871,891,263
Opportunistic/Absolute Return Strategy Funds (ARS)						
Opportunistic Funds	18	\$ 3,427,000,000	\$ 2,120,281,027	\$ 1,187,929,552	\$ 1,573,706,790	\$ 2,761,636,342
ARS Funds						
Equity Long-Short	3	N/A	N/A	454,093,684	N/A	454,093,684
Event and Merger	1	N/A	N/A	63,501,487	N/A	63,501,487
Event Driven	11	N/A	N/A	1,039,599,001	N/A	1,039,599,001
Fund of Funds	2	N/A	N/A	116,172,453	N/A	116,172,453
Relative Value	2	N/A	N/A	403,393,080	N/A	403,393,080
Structured Credit	3	N/A	N/A	589,698,941	N/A	589,698,941
Tactical Trading	4	N/A	N/A	1,161,690,321	N/A	1,161,690,320
Total ARS Funds	26	N/A	N/A	3,828,148,967	N/A	3,828,148,967
Total Opportunistic/Absolute Return Strategy	44	\$ 3,427,000,000	\$ 2,120,281,027	\$ 5,016,078,519	\$ 1,573,706,790	\$ 6,589,785,309
Real Assets Funds	36	\$ 9,751,375,000	\$ 3,792,875,099	\$ 3,929,593,932	\$ 712,342,280	\$ 4,641,936,212
Credit Funds	31	\$ 10,286,974,386	\$ 8,057,459,404	\$ 8,478,516,272	\$ 1,929,237,083	\$ 10,407,753,355

*The total figures include the Fund's private equity investments and other investments through Pursuit.

PUBLIC EQUITY MANAGEMENT FEES

For the Fiscal Year Ended March 31, 2021.

Manager	Management Fees	Incentive Fees	Total
Acadian Asset Management, LLC	\$ 7,766,963	\$ —	\$ 7,766,963
AQR Capital Management, LLC	3,195,102	—	3,195,102
Ariel Investments, LLC	1,624,639	—	1,624,639
Artisan Partners, LP	7,511,170	—	7,511,170
Baillie Gifford Overseas, Ltd.	7,515,216	—	7,515,216
Baring International Investment, Ltd.	1,963,915	—	1,963,915
BlackRock Institutional Trust Company, NA	4,555,351	—	4,555,351
Brandes Investment Partners, LP	3,190,889	—	3,190,889
Brown Capital Management, Inc.	13,260,412	—	13,260,412
Capital Guardian Trust Company	2,874,934	10,943,554	13,818,488
Cevian Capital, LLP	9,393,164	—	9,393,164
Channing Capital Management, LLC	1,054,601	—	1,054,601
Consilium Frontier Equity Fund, LP	124,216	—	124,216
Eagle Capital Management, LLC	7,934,754	—	7,934,754
EARNEST Partners, LLC	4,497,887	—	4,497,887
Fiera Capital, Inc.	7,106,702	—	7,106,702
Generation Investment Management, LLP	15,200,064	21,292,574	36,492,638
Genesis Investment Management, LLP	5,030,427	—	5,030,427
Global Alpha Capital Management, Ltd.	2,163,146	—	2,163,146
Goldman Sachs Asset Management	1,276,324	—	1,276,324
Goldman Sachs Asset Management *	20,808,288	3,361,699	24,169,987
GQG Partners, LLC	3,203,538	—	3,203,538
Iridian Asset Management, LLC	2,062,958	—	2,062,958
Leading Edge Investment Advisors, LP *	3,971,236	—	3,971,236
LSV Asset Management	1,252,713	—	1,252,713
Martin Currie, Inc.	2,868,657	—	2,868,657
Mondrian Investment Partners, Inc.	5,073,015	—	5,073,015
Morgan Stanley Emerging Markets Fund, Inc.	8,806,101	—	8,806,101
Palisade Capital Management, LLC	1,966,330	—	1,966,330
Penn Capital Management Company, Inc.	2,165,353	—	2,165,353
Progress Investment Management Company *	273,557	—	273,557
Quantitative Management Associates, LLC	2,019,266	—	2,019,266
Rock Creek Group, LP	2,527,391	—	2,527,391
Rock Creek Group, LP *	6,601,000	—	6,601,000
Rockefeller & Company Asset Management	2,814,420	—	2,814,420
Russell Investments Group, LLC	2,499,900	—	2,499,900
T. Rowe Price Associates, Inc.	8,805,358	—	8,805,358
Templeton Investment Counsel, LLC	909,399	—	909,399
Trian Fund Management, LP	6,834,449	(2,293,591)	4,540,858
ValueAct Capital Management, LP	6,446,722	10,026,767	16,473,489
Wellington Management Company, LLP	10,296,793	—	10,296,793
Xponance, Inc. *	4,711,998	—	4,711,998
Total	\$ 214,158,318	\$ 43,331,003	\$ 257,489,321

* Represents Fund of Funds relationship and includes sub-manager fee payments.

PUBLIC EQUITY COMMISSIONS — INTERNALLY MANAGED

For the Fiscal Year Ended March 31, 2021.

Broker	Shares	Commission \$ U.S.
Bank of America Corp.	15,831,909	\$ 158,319
Barclays Capital, Inc.	16,007,372	165,410
BTIG, LLC	18,519,624	55,511
Citigroup Global Markets, Inc.	15,813,350	158,134
Cowen and Company, LLC	15,645,344	156,453
Goldman Sachs & Company	16,602,471	166,025
Great Pacific Securities, Inc.	21,766,498	217,665
Guzman & Company	21,515,618	215,156
Instinet	15,940,608	159,406
J.P. Morgan Securities, LLC	19,839,753	173,722
Loop Capital Markets, LLC	22,387,563	223,876
Morgan Stanley & Company, Inc.	15,578,521	155,785
Penserra Securities, LLC	22,789,195	227,892
Piper Sandler Companies	15,876,385	158,764
Sanford C. Bernstein & Company, LLC	15,144,003	151,440
Siebert Williams Shank & Company, LLC	21,735,977	217,360
Virtu Americas, LLC	15,716,313	156,868
Total	306,710,504	\$ 2,917,786

PUBLIC EQUITY COMMISSIONS — EXTERNALLY MANAGED

For the Fiscal Year Ended March 31, 2021.

Broker	Shares	Commission \$ U.S.
Abel Noser, LLC	2,505,804	\$ 101,919
ABG Sundal Collier ASA	719,208	11,736
Academy Securities, Inc.	10,400	193
Actinver Securities, Inc.	795,500	1,749
Allen & Company, Inc.	1,462	37
Atlantic Equities, LLP	6,006	110
Auerbach Grayson & Company, Inc.	1,360,144	25,356
Aviate Global, LLP	8,654	553
B. Riley FBR, Inc.	545,253	20,099
Baader Bank AG	47,250	2,882
Baird, Robert W. & Company, Inc.	5,295,102	156,910
Banca IMI S.p.A.	129,525	2,328
Banco Bilbao Vizcaya Argentaria S.A.	1,792,411	3,825
Banco Bradesco S.A.	946,226	9,119
Banco BTG Pactual S.A.	96,000	426
Banco Itau Unibanco S.A.	3,916,557	36,672
Banco Santander S.A.	3,168,129	8,370
Bancroft Capital, LLC	1,700	34
Bank of America Corp.	351,606,792	998,249
Bank of New York Mellon Corp.	22,083	431
Barclays Capital, Inc.	12,879,927	225,687
Bay Crest Partners, LLC	2,074,664	36,307
BCS Prime Brokerage, Ltd.	483,222	6,945
Berenberg Bank	6,175,914	119,982
Blair, William & Company	2,556,300	86,240
BMO Capital Markets Corp.	4,026,080	58,531
BNP Paribas Securities Corp.	46,671	2,170
Boenning & Scattergood, Inc.	16,844	674
BTIG, LLC	28,570,432	516,876
C.L. King & Associates, Inc.	1,595,640	54,409
Cabrera Capital Markets, Inc.	1,808,474	38,337
Canaccord Genuity Group, Inc.	633,352	10,734
Canadian Imperial Bank of Commerce	90,346	709
Cantor Fitzgerald & Company	2,897,695	67,365
Capital Institutional Services, Inc.	3,860,951	65,197
Carnegie Investment Bank AB	1,040,120	19,553
CastleOak Securities, LP	886,486	11,880

Broker	Shares	Commission \$ U.S.
China International Capital Corp., Ltd.	17,785,344	\$ 32,889
CIBC World Markets Corp.	2,863,260	11,283
CIMB Securities	15,071,393	11,106
Citadel Securities Institutional, LLC	49,046	368
Citibank	141,511	1,883
Citigroup Global Markets, Inc.	304,513,658	711,315
CJS Securities, Inc.	273,506	10,035
CLSA, Ltd.	207,762,488	411,477
CM-CIC Market Solutions	37,160	2,379
Collins Stewart, LLC	776,188	24,067
Commerzbank AG	117,713	6,277
Compass Point Research & Trading, LLC	175,962	6,680
Concept Capital Markets, LLC	182,020	4,550
Cornerstone Macro, LLC	556,707	12,111
Cowen and Company, LLC	24,262,842	562,453
Craig-Hallum Capital Group, LLC	410,793	15,972
Credit Suisse Securities, Ltd.	479,551,993	1,061,447
Cuttone & Company, Inc.	39,400	394
D.A. Davidson & Company, Inc.	800,505	17,754
Daiwa Capital Markets America, Inc.	13,797,586	68,388
Danske Bank A/S	688,090	12,331
Davy Securities, Ltd.	338,790	5,035
DNB ASA	650,494	14,384
Dougherty & Company, LLC	15,522	621
Drexel Hamilton, LLC	25,500	446
Dundee Securities Corp.	16,312	67
Edelweiss Securities, Ltd.	634,277	31,069
Electronic Brokerage Systems, LLC	153,220	2,948
Equita SIM S.p.A.	710,972	5,136
Evercore ISI	12,507,409	324,332
Exane S.A.	13,734,295	159,021
FBN Securities, Inc.	8,612	258
FIS Brokerage & Securities Services, LLC	2,453,535	12,268
Gabelli & Company	38,537	1,769
Goldman Sachs & Company	151,846,359	634,140
Goodbody Stockbrokers	1,132,805	14,201
Great Pacific Securities, Inc.	767,300	7,673

PUBLIC EQUITY COMMISSIONS — EXTERNALLY MANAGED

CONTINUED

Broker	Shares	Commission \$ U.S.
Guggenheim Securities, LLC	895,654	\$ 27,459
Guzman & Company	1,286,149	2,268
Haitong International Securities Company, Ltd.	76,900	3,070
Helvea S.A.	87,202	4,223
Hilltop Securities, Inc.	13,664	547
HSBC Securities, Inc.	312,421,430	421,808
ICBC International Securities, Ltd.	15,300	2,269
ICICI Brokerage Services Mumbai	7,715	201
India Infoline, Ltd.	752,504	13,736
Instinet	122,519,088	375,854
Intermonte SIM S.p.A.	21,700	1,099
INTL FCStone Financial, Inc.	624,963	4,727
Investec Group	1,009,265	7,230
J & E Davy	487,887	9,820
J.P. Morgan Securities, LLC	348,855,992	1,084,207
Janney Montgomery Scott, Inc.	100,311	3,736
Jefferies & Company, Inc.	113,336,279	761,537
JM Financial Institutional Securities, Ltd.	117,674	1,504
JMP Securities, LLC	810,606	20,338
JNK Securities, Inc.	52,260	1,919
Johnson Rice & Company, LLC	317,260	9,413
JonesTrading Institutional Services, LLC	23,312,161	802,622
Jupiter Securities Sdn Berhad	935,300	881
KB Securities Company, Ltd.	4,683	221
KBC Securities N.V.	2,694	165
Keefe Bruyette & Wood, Inc.	1,858,564	44,503
Kempen & Company N.V.	336,530	2,264
Kepler Cheuvreux S.A.	12,159,430	55,954
KeyBanc Capital Markets, Inc.	1,820,281	63,516
Korea Investment & Securities Company	153,606	7,724
Kotak Securities, Ltd.	545,962	7,282
Liberum Capital, Ltd.	1,306,861	15,619
Liquidnet, Inc.	55,478,110	692,654
Loop Capital Markets, LLC	34,019,893	495,733
Luminex Trading & Analytics, LLC	2,549,132	24,426
M.M. Warburg & Company	20,365	823

Broker	Shares	Commission \$ U.S.
Macquarie Group, Ltd.	60,599,641	\$ 272,558
Mainfirst Bank AG	488,828	10,049
Maxim Group, LLC	12,472,915	142,304
Maybank Kim Eng Holdings, Ltd.	1,799,715	12,725
Mediobanca S.p.A.	457,068	4,291
Mirabaud Securities, LLP	112,646	10,447
Mischler Financial Group, Inc.	1,257,243	17,396
Mitsubishi UFJ Securities Holdings Company, Ltd.	581,300	22,443
Mizuho Securities	99,737,463	540,852
MKM Partners, LLC	1,979,597	37,418
Monness, Crespi, Hardt & Company, Inc.	134,836	5,936
Morgan Stanley & Company, Inc.	518,814,029	1,287,018
Motilal Oswal Financial Services, Ltd.	42,000	3,284
National Bank Financial, Inc.	59,400	881
National Financial Services, LLC	278,932	3,876
Needham & Company, LLC	2,542,670	101,817
NH Investment & Securities Company, Ltd.	11,109	789
Nomura Securities International, Inc.	2,342,362	31,169
Nordea Bank AB	603,691	11,046
North South Capital, LLC	1,048,416	46,823
Northcoast Research Partners, LLC	91,224	3,649
Northern Trust Company	42,254	3,098
Numis Securities, Ltd.	1,694,444	15,515
Oddo Securities Corp.	388,463	10,097
Olivetree Financial, LLC	15,073,760	24,282
O'Neil, William & Company, Inc.	29,589	888
Oppenheimer & Company, Inc.	1,670,649	41,629
Outset Global, LLP	1,912,758	7,686
Panmure Gordon & Company	10,864	24
Pavilion Global Markets, Ltd.	632,200	8,897
Peel Hunt, LLP	5,203,506	6,601
Penserra Securities, LLC	76,438,695	136,084
Pershing, LLC	1,108,381	648
Pickering Energy Partners	48,163	1,927
Pictet	309,120	10,999
Piper Sandler Companies	3,135,074	73,414

PUBLIC EQUITY COMMISSIONS — EXTERNALLY MANAGED

CONTINUED

Broker	Shares	Commission \$ U.S.
Precision Securities, LLC	307,600	\$ 2,615
Raymond James & Associates, Inc.	6,644,934	162,357
RBC Capital Markets	17,422,603	235,578
Redburn Partners, LLP	10,672,520	113,640
Rosenblatt Securities, Inc.	9,776	196
Roth Capital Partners, Inc.	379,771	9,900
Samsung Securites Company, Ltd.	145,044	10,829
Sanford C. Bernstein & Company, LLC	80,414,708	342,712
Scotia Capital, Inc.	441,019	9,878
Seaport Global Securities, LLC	209,813	6,901
Shinhan Investment Corp.	247,369	6,617
Sidoti & Company, LLC	94,896	3,571
Siebert Williams Shank & Company, LLC	5,197,057	109,405
SinoPac Securities Corp.	2,020,000	6,970
Skandinaviska Enskilda Banken AB	1,647,245	26,529
SMBC Nikko Securities	3,888,794	76,101
Societe Generale S.A.	51,482,004	58,963
SpareBank 1 Markets AS	193,100	1,207
State Street Global Markets, LLC	52,346	526
Stephens, Inc.	1,323,545	48,414
Stern Brothers & Company	140,600	3,515
Stifel	10,093,561	120,310
Strategas Securities, LLC	623,095	28,655
Stuart Frankel & Company, Inc.	81,077	3,243
Sturdivant & Company, Inc.	168,942	2,590
SunTrust Robinson Humphrey, Inc.	2,147,785	78,254
SVB Leerink, LLC	393,321	14,254
Svenska Handelsbanken AB	755,150	13,954
TD Securities, Inc.	15,624	245
Telsey Advisory Group, LLC	2,230,026	93,832
The Benchmark Company, LLC	470,170	7,920
Themis Trading, LLC	579,707	10,241
UBS AG	242,334,898	669,095
UOB Kay Hian Pte, Ltd.	5,794,588	9,009
Virtu Americas, LLC	44,448,807	418,639
VTB Capital, PLC	3,231,982	1,324

Broker	Shares	Commission \$ U.S.
Wall Street Access	265,272	\$ 2,571
Wedbush Securities, Inc.	431,079	15,648
Weeden Prime Services, LLC	111,705	2,699
Wells Fargo Advisors	50,500	1,263
Wells Fargo Securities, LLC	4,049,872	102,419
Winslow, Evans & Crocker, Inc.	143,100	2,862
Winterflood Securities, Ltd.	410,698	2,382
Wolfe Research Securities	2,235,848	68,248
XP Securities, LLC	21,379	612
Total	4,052,997,738	\$ 17,687,726

GLOBAL FIXED INCOME MANAGEMENT FEES

For the Fiscal Year Ended March 31, 2021.

Manager	Management Fees	Incentive Fees	Total
Advent Capital Management, LLC	\$ 2,343,933	\$ –	\$ 2,343,933
Calvert Research and Management	387,878	–	387,878
DoubleLine Capital, LP	756,919	–	756,919
New Century Advisors, LLC	248,023	–	248,023
Semper Capital Management, LP	1,088,337	–	1,088,337
Teachers Advisors, LLC (Nuveen)	397,815	–	397,815
Total	\$ 5,222,905	\$ –	\$ 5,222,905

LONG-TERM DOMESTIC BOND TRANSACTIONS — INTERNALLY MANAGED

For the Fiscal Year Ended March 31, 2021.

Summarized by Broker or Direct Issuer.

Long-Term Broker	Par \$ U.S.
Barclays Capital, Inc.	\$ 778,773,000
BMO Capital Markets Corp.	207,554,128
BofA Securities, Inc.	2,230,352,850
Citigroup Global Markets, Inc.	2,198,781,084
Credit Suisse Securities, Ltd.	611,402,353
Deutsche Bank Securities, Inc.	917,129,000
Development Corp. for Israel	100,000,000
Goldman Sachs & Company	2,190,023,000
Great Pacific Securities, Inc.	2,580,290,000
HSBC Securities, Inc.	447,000,000
J.P. Morgan Securities, LLC	3,964,487,200
Jefferies & Company, Inc.	596,838,000
Mischler Financial Group, Inc.	673,025,000
Morgan Stanley & Company, Inc.	2,118,171,663
RBC Capital Markets	1,252,876,000
Samuel A. Ramirez & Company, Inc.	192,500,000
Scotia Capital (USA), Inc.	190,000,000
Siebert Williams Shank & Company, LLC	126,250,000
Toronto Dominion Securities (USA), Inc.	572,961,000
Truist Securities, Inc.	415,937,000
UBS Securities, LLC	1,323,700,000
Wells Fargo Securities, LLC	725,270,764
Total	\$ 24,413,322,042

LONG-TERM DOMESTIC BOND TRANSACTIONS — EXTERNALLY MANAGED

For the Fiscal Year Ended March 31, 2021.
Summarized by Broker or Direct Issuer.

Long-Term Broker	Par \$ U.S.
Amherst Pierpont Securities, LLC	\$ 36,404,599
Baird, Robert W. & Company, Inc.	6,152,400
Barclays Capital, Inc.	389,026,991
BCP Securities, LLC	2,143,000
BMO Capital Markets Corp.	100,950,076
BNP Paribas Securities Corp.	146,933,896
BNY Mellon Capital Markets, LLC	62,737,000
BofA Securities, Inc.	484,463,351
BOK Financial Securities, Inc.	13,821,342
Brean Capital, LLC	802,448
BTIG, LLC	23,885,000
Cabrera Capital Markets, Inc.	79,895,000
Cantor Fitzgerald & Company	2,001,911
CIBC World Markets Corp.	18,195,000
Citadel Securities Institutional, LLC	49,996,700
Citigroup Global Markets, Inc.	693,387,016
Credit Agricole Securities (USA), Inc.	8,982,000
Credit Suisse Securities, Ltd.	122,678,074
Daiwa Capital Markets America, Inc.	10,264,387
Deutsche Bank Securities, Inc.	166,703,000
FHN Financial Securities Corp.	1,212,000
GMP Securities, LLC	3,124,000
Goldman Sachs & Company	198,258,161
Guggenheim Securities, LLC	4,223,900
Hilltop Securities, Inc.	790,000
HSBC Securities, Inc.	252,626,000
ICE Bonds Securities Corp.	119,000
Imperial Capital, LLC	442,000
J.P. Morgan Securities, LLC	363,639,126
Jane Street Execution Services, LLC	7,840,000
Jefferies & Company, Inc.	91,985,000
KeyBanc Capital Markets, Inc.	7,566,000
Liquidnet, Inc.	183,000
Lloyds Securities, Inc.	1,319,000
MarketAxess Corp.	4,197,000
Mesirow Financial, Inc.	470,000
Millennium Advisors, LLC	318,000

Long-Term Broker	Par \$ U.S.
Mischler Financial Group, Inc.	\$ 9,620,000
Mitsubishi UFJ Securities (USA), Inc.	22,348,306
Mizuho Securities USA, Inc.	23,970,730
MKM Partners, LLC	245,000
Morgan Stanley & Company, Inc.	227,903,871
MTS Markets International, Inc.	117,000
NatAlliance Securities, LLC	123,750
National Bank of Canada Financial, Inc.	2,285,000
Natixis Securities Americas, LLC	1,000,000
NatWest Markets Securities, Inc.	18,545,000
Nomura Securities International, Inc.	129,936,792
Odeon Capital Group, LLC	76,819,475
Oppenheimer & Company, Inc.	1,468,000
Performance Trust Capital Partners, LLC	125,000
PNC Capital Markets, LLC	1,029,041
R.W. Pressprich & Company	4,627,019
Raymond James & Associates, Inc.	11,081,189
RBC Capital Markets	129,978,000
Samuel A. Ramirez & Company, Inc.	1,505,000
Santander Investment Securities, Inc.	2,145,000
Scotia Capital (USA), Inc.	5,239,000
Seaport Global Securities, LLC	1,774,000
SG Americas Securities, LLC	85,408,771
SMBC Nikko Securities America, Inc.	1,720,000
Standard Chartered Securities North America, LLC	1,000,000
Stifel Nicolaus & Company, Inc.	3,431,336
StoneX Financial, Inc.	6,527,230
Sumridge Partners, LLC	793,000
Susquehanna Financial Group, LLLP	6,990,000
Toronto Dominion Securities (USA), Inc.	98,993,633
Truist Securities, Inc.	10,682,620
Trumid Financial, LLC	414,000
U.S. Bancorp Investments, Inc.	7,463,000
UBS Securities, LLC	156,946,000
Wells Fargo Securities, LLC	343,227,480
Total	\$ 4,753,218,621

SHORT-TERM DOMESTIC BOND TRANSACTIONS — INTERNALLY MANAGED

For the Fiscal Year Ended March 31, 2021.

Summarized by Broker or Direct Issuer.

Short-Term Broker	Par \$ U.S.
Barclays Capital, Inc.	\$ 89,176,000
BMO Capital Markets Corp.	100,000,000
BNY Mellon Capital Markets, LLC	22,576,614,000
BofA Securities, Inc.	17,038,211,000
Citigroup Global Markets, Inc.	22,015,700,000
Credit Suisse Securities, Ltd.	3,970,831,000
Daiwa Capital Markets America, Inc.	100,000,000
Goldman Sachs & Company	1,285,746,000
Great Pacific Securities, Inc.	19,177,606,000
J.P. Morgan Securities, LLC	20,427,041,000
Mischler Financial Group, Inc.	1,537,246,000
Morgan Stanley & Company, Inc.	275,000,000
RBC Capital Markets	18,917,687,000
Samuel A. Ramirez & Company, Inc.	27,754,000
Siebert Williams Shank & Company, LLC	56,300,000
Toyota Motor Credit Corp.	333,000,000
Wells Fargo Securities, LLC	148,027,000
Total	\$ 128,075,939,000

REAL ESTATE MANAGEMENT AND INCENTIVE FEES (EXPENSED)

For the Fiscal Year Ended March 31, 2021.

Manager	Management Fees	Incentive Fees	Total
ARA Fund Management, Ltd.	\$ 267,000	\$ -	\$ 267,000
ARES Management	1,703,485	-	1,703,485
Artemis Real Estate Partners, LLC	5,740,588	-	5,740,588
Avanath Capital Management, LLC, Series C	536,040	-	536,040
Black Creek Industrial Fund GP, LLC	46,078	-	46,078
Blackstone Real Estate Advisors	17,673,845	-	17,673,845
Brookfield Asset Management, Inc.	7,372,444	-	7,372,444
Carlyle Group	161,564	-	161,564
CIF-H GP, LLC (Cayuga Lake Fund, LP)	195,484	-	195,484
CIM Group, LP	3,842,808	-	3,842,808
Clarion Partners	2,407,522	-	2,407,522
Franklin Templeton Institutional, LLC (Lake Montauk)	1,332,958	-	1,332,958
GCM Grosvenor	1,600,000	-	1,600,000
GreenOak Real Estate Advisors	1,557,269	-	1,557,269
Heitman Capital Management, LLC	1,136,395	-	1,136,395
J.P. Morgan Investment Management, Inc.	8,015,037	-	8,015,037
Jamestown Premier GP, LP	2,233,444	-	2,233,444
LaSalle Investment Management, Inc.	3,085,117	1,663,087	4,748,204
MetLife Investment Management, LLC	906	-	906
Morgan Stanley Group	3,201	-	3,201
NIAM AB	1,641,224	-	1,641,224
Prologis, LP	6,754,814	-	6,754,814
Rockpoint Real Estate Funds	451,918	-	451,918
UBS Realty Investors, LLC	2,151,735	-	2,151,735
Westbrook Realty Management	3,669,467	-	3,669,467
Total	\$ 73,580,343	\$ 1,663,087	\$ 75,243,430

REAL ESTATE MANAGEMENT AND INCENTIVE FEES (CAPITALIZED)

For the Fiscal Year Ended March 31, 2021.

Manager	Management Fees
ACA Advisors (Aetos)	\$ 33,051
ARA Fund Management, Ltd.	327,269
ARES Management	3,666,370
Asana Partners, LP	2,785,089
Avanath Capital Management, LLC, Series C	72,828
BCP Strategic Partners (Beacon)	39,975
Blackstone Real Estate Advisors	9,614,274
Cherokee Advisers, LLC	158,045
Clarion Partners	1,814,764
Colony Advisors, LLC	47,670
Cortland Partners, LLC	681,266
Exeter Europe	2,361,541
Heitman Capital Management, LLC	1,717,958
J.P. Morgan Investment Management, Inc.	1,095,665
Kimex	56,791
Landmark	549,674
Mesa West Capital	73,701
MetLife Investment Advisors, LLC	6,143,087
NIAM AB	1,952,834
NREP	4,896,806
PGIM Fund Management, Ltd.	1,455,792
Stockbridge Real Estate Funds	540,701
Total	\$ 40,085,151

PRIVATE EQUITY MANAGEMENT FEES (EXPENSED)

For the Fiscal Year Ended March 31, 2021.

Manager	Management Fees
57 Stars, LLC	\$ 825,676
Access Capital Advisors, LLC	231,116
ACON Investments, LLC	2,432,390
Affinity Equity Partners	6,551,704
African Capital Alliance Limited	2,048,675
Apollo Management, LP	11,383,616
Ares Management, LP	3,653,667
Armory Square Ventures, LP	187,500
Ascent Biomedical Ventures	120,317
Asia Alternatives Management, LLC	2,895,721
Blackstone Group, LP	8,089,798
Bridgepoint Capital, Ltd.	8,964,919
Brookfield Asset Management	6,705,245
CCMP Capital Advisors	887,752
Centerbridge Partners, LP	2,234,994
Cinven Capital Management	5,269,647
Clearlake Capital Group, LP	2,755,476
Contour Venture Partners	1,225,000
CVC Capital Partners	16,254,019
DeltaPoint Capital Management, LLC	126,933
Dyal Capital Partners	5,329,108
EQT Partners	6,749,630
Fairview Capital Partners, Inc.	202,615
Farol Asset Management, LP	1,386,960
Founders Equity, Inc.	370,000
FountainVest Partners (Asia), Ltd.	281,473
Francisco Partners, L.P.	1,353,261
Freeman, Spogli & Company	3,087,714
GCM Grosvenor	297,111
GenNx360 Capital Partners	4,541,012
Hamilton Lane Advisors, LLC	5,052,156
HarbourVest Partners, LLC	2,210,680
Helios Investment Partners	1,891,430
Hellman & Friedman Investors, Inc.	2,612,638
High Peaks Venture Partners	631,843
Hony Capital	5,865,670
ICV Partners, LLC	1,198,632

Manager	Management Fees
IK Investment Partners	\$ 3,631,083
Insight Partners, LLC	3,500,000
J.P. Morgan Partners, LLC	911,727
KKR & Company, LP	13,526,383
KSL Capital Partners, LLC	3,590,904
Leonard Green & Partners, LP	2,561,008
Lindsay Goldberg & Company, LLC	4,011,297
Lion Capital, LLP	75,914
Muller & Monroe Asset Management, LLC	1,615,849
Neuberger Berman Group, LLC	3,032,579
Nordic Capital	1,337,988
Paladin Capital Group	39,909
Palladium Equity Partners	2,427,466
Performance Equity Management, LLC	737,341
Pine Brook Road Partners, LLC	1,388,313
Primary Venture Partners	213,827
Providence Equity Partners, LLC	2,866,387
Quadrangle Group, LLC	140,637
RRJ Capital	1,457,744
Searchlight Capital Partners	6,726,815
Siris Capital Group, LLC	3,528,404
Snow Phipps Group, LLC	4,200,516
SoftBank Capital	607,151
Stepstone Group, LP	46,341
Summer Street Capital Partners, LLC	99,745
TA Associates Management, LP	9,960,799
Thoma Bravo, LLC	2,592,161
Towerbrook Capital Partners	3,660,063
TPG Capital, LP	15,822,663
Tribeca Venture Partners	289,356
Trillium Group, LLC	101,773
Vista Equity Partners, LLC	32,587,811
Warburg Pincus, LLC	3,704,652
Total	\$ 256,900,704

PRIVATE EQUITY MANAGEMENT FEES (CAPITALIZED)

For the Fiscal Year Ended March 31, 2021.

Manager	Management Fees
Activate Venture Partners	\$ 138,009
Bridgepoint Capital, Ltd.	75,400
Cerberus Capital Management, LP	439
Francisco Partners Management, LP	754,948
Gilde, LP	69,725
Hamilton Lane Advisors, LLC	967,719
HarbourVest Partners, LLC	531,030
Institutional Venture Partners	454,494
JMI Equity	393,180
Leonard Green & Partners, LP	(22,683)
NCH Capital, Inc.	928,069
Oaktree Capital Management, LP	7,797,642
RRJ Capital	1,195,403
SAIF Partners	3,045,301
SoftBank Capital	300,000
Summer Street Capital Partners, LLC	257,268
Tribeca Venture Partners, LLC	598,905
VCFA Group	252,624
Warburg Pincus, LLC	375,986
Total	\$ 18,113,459

PRIVATE EQUITY — FEE, EXPENSE AND CARRIED INTEREST ANALYSIS

For the Fiscal Year Ended March 31, 2021.

Total Expenses		
Net Management Fees	\$	275,014,163
Partnership Expenses		<u>96,612,710</u>
Total Expenses	\$	371,626,873
Ratio — Total Expenses/Total Private Equity Allocation		0.72%
Total Profit Sharing (Carried Interest)		
Profit Sharing (Carried Interest)	\$	<u>393,022,317</u>
Total Profit Sharing	\$	393,022,317
Ratio — Total Profit Sharing/Total Actively Invested Private Equity Allocation		1.14%
Total Expenses + Profit Sharing (Carried Interest)		
Total Expenses	\$	371,626,873
Total Profit Sharing		<u>393,022,317</u>
Total Expenses and Profit Sharing (Carried Interest)	\$	764,649,190
Total Private Equity Allocation		
Unfunded Capital Commitments	\$	17,344,992,969
Net Asset Value (NAV) as of 3/31/2021		<u>29,470,165,376</u>
Distributions for FY 2021		<u>4,995,524,488</u>
Total Private Equity Allocation	\$	51,810,682,833
Ratio — Total Expenses + Profit Sharing/Total Private Equity Allocation		1.48%
Total Actively Invested Private Equity Allocation		
Net Asset Value (NAV) as of 3/31/2021	\$	29,470,165,376
Distributions for FY 2021		<u>4,995,524,488</u>
Total Actively Invested Private Equity Allocation	\$	34,465,689,864
Ratio — Total Expenses + Profit Sharing/Total Actively Invested Private Equity Allocation		2.22%

Note: The profit sharing and partnership expenses were compiled based on information provided directly by the General Partner or calculated by the Fund's consultant applying the Fund's pro-rata ownership to carried interest and/or distribution and expense information provided in the Audited Financial Statements and Quarterly Financial Statements. Materials provided by General Partners consist of partners' capital statements, Institutional Limited Partners Association (ILPA) templates, and/or templates the consultant provided for the purposes of this analysis.

OPPORTUNISTIC/ABSOLUTE RETURN STRATEGIES FUNDS MANAGEMENT AND INCENTIVE FEES (EXPENSED)

For the Fiscal Year Ended March 31, 2021.

Manager	Management Fees	Incentive Fees	Total
ADV Partners Capital Management, Ltd	\$ 4,369,220	\$ -	\$ 4,369,220
Angelo, Gordon & Company, LP	10,752	9,413	20,165
Bain Capital Public Equity, LP	184,004	1,314,790	1,498,794
BCK Capital Management, LP	940,656	620,338	1,560,994
Bridgewater Associates, LP	1,625,590	-	1,625,590
Brigade Capital Management, LLC	1,376,538	-	1,376,538
Caspian Capital, LP	3,792,937	4,377,870	8,170,807
Cowen Investment Management, LLC	5,067,766	-	5,067,766
D.E. Shaw and Company, LP	19,491,103	50,913,038	70,404,141
Fortress Investment Group, LLC	206,143	526,832	732,975
Graticule Asset Management Asia, LP	966,900	-	966,900
HBK Capital Management, LP	3,670,812	5,399,234	9,070,046
Highland Capital Management, LP	173	-	173
Hollis Park Partners, LP	503,021	-	503,021
Horizon Asset, LLP	1,883,504	-	1,883,504
Insight Venture Management, LLC	290,421	-	290,421
King Street Capital Management, LP	2,586,943	4,328,734	6,915,677
Knighthood Capital Management, LLC	2,691,541	-	2,691,541
Landmark Partners, LLC	3,500,000	-	3,500,000
Lansdowne Partners, Ltd	562,397	-	562,397
Mariner Investment Group, LLC	1,054,485	-	1,054,485
Marshall Wace, LLP	5,622,366	8,948,363	14,570,729
Mezzacappa Management, LLC	5,836	-	5,836
Pacific Alternative Asset Management Company, LLC	78,152	-	78,152
Pharo Management, LLC	3,628,752	5,208,858	8,837,610
Rock Creek Group, LP	164,423	-	164,423
Schultze Asset Management, LLC	61,585	4,277	65,862
Stellex Capital Management, LP	3,391,817	-	3,391,817
Systematica Investments, Ltd	970,507	60,761	1,031,268
Tilden Park Capital Management, LP	4,347,525	-	4,347,525
Varde Management, LP	1,872,537	-	1,872,537
Vivo Capital, LLC	1,316,721	-	1,316,721
Total	\$ 76,235,127	\$ 81,712,508	\$ 157,947,635

OPPORTUNISTIC FUNDS MANAGEMENT FEES (CAPITALIZED)

For the Fiscal Year Ended March 31, 2021.

Manager	Management Fees
Landmark Partners, LLC	\$ 2,954,884
Stellex Capital Management, LP	11,397
Total	\$ 2,966,281

REAL ASSETS MANAGEMENT FEES (EXPENSED)

For the Fiscal Year Ended March 31, 2021.

Manager	Management Fees
Blackstone Group, LP	\$ 2,499,833
Brookfield Asset Management	7,117,449
EQT Fund Management S.a.r.l.	1,742,000
Excelsior Capital	3,565,068
Global Infrastructure Management, LLC	6,047,411
Grain Management, LLC	3,650,010
GSO Capital Partners	1,191,079
I Squared Capital Advisors (US), LLC	1,881,175
ITE Management	113,218
Kayne Anderson Capital Advisors, LP	1,692,506
KKR & Company, LP	5,834,563
Meridiam Infrastructure North America Corporation	2,400,000
Morgan Stanley Investment Management, Ltd.	748,452
Patria Investments, Ltd.	1,545,216
Stonepeak Partners, LP	3,160,809
Total	\$ 43,188,789

REAL ASSETS MANAGEMENT FEES (CAPITALIZED)

For the Fiscal Year Ended March 31, 2021.

Manager	Management Fees
Castlelake, LP	\$ 364,681
IFM Investors, Ltd.	4,402,375
ITE Management, LP	28,305
Nuveen	2,959,588
Pantheon Ventures, LP	2,425,905
Total	\$ 10,180,854

CREDIT MANAGEMENT FEES (EXPENSED)

For the Fiscal Year Ended March 31, 2021.

Manager	Management Fees	Incentive Fees	Total
Ares SSG Capital Management	\$ 4,215,061	\$ 234,029	\$ 4,449,090
Avenue Capital Group	333,948	-	333,948
Blackrock Inc.	8,936,922	-	8,936,922
Blackstone Group, LP	6,961,833	8,511,503	15,473,336
Blantyre Capital, Ltd.	1,696,168	-	1,696,168
Bridgepoint Capital, Ltd.	640,942	-	640,942
Brightwood Capital Advisors, LLC	231,265	-	231,265
Clearlake Capital Group, LP	784,281	8,625,785	9,410,066
Hollis Park Partners, LP	2,000,944	-	2,000,944
Neuberger Berman Group, LLC	4,717,870	3,445,556	8,163,426
Oak Hill Advisors, LP	2,069,441	1,509,126	3,578,567
Orchard Global Asset Management, LLP	1,756,235	-	1,756,235
Pearl Diver Capital, LLP	1,000,000	-	1,000,000
Sixth Street Partners, LLC	7,457,683	3,909,489	11,367,172
Strategic Value Partners, LLC	2,190,864	-	2,190,864
Whitehorse Liquidity Partners	700,000	-	700,000
Total	\$ 45,693,457	\$ 26,235,488	\$ 71,928,945

CONSULTANT AND ADVISOR FEES

For the Fiscal Year Ended March 31, 2021.

Aksia, LLC	\$	600,000
Albourne America, LLC		440,000
Callan, LLC		88,750
FX Transparency, LLC		35,000
Hamilton Lane Advisors, LLC		1,875,000
J.P. Morgan Asset Management, Inc.		9,902
MCL Associates, Inc.		26,007
Meketa Investment Group		40,000
Mercer Investments		397,283
Mosaic Global Partners, Inc.		355,769
RV Kuhns & Associates, Inc.		1,075,254
Stockbridge Risk Management, Inc.		11,047
The Townsend Group		1,006,276
Total	\$	5,960,288

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NYSLRS

*A Century of
Managing Risk*



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Actuarial

Our team of actuaries meticulously plan for the future, a trait that consistently helps the Fund maintain its financial stability. NYSLRS actuaries reduce risk by calculating the assets the Fund will need to pay current and future benefits, keeping our members and retirees at the center of the equation.

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STATEMENT OF THE ACTUARY

September 30, 2021

As the Actuary for the Employees' Retirement System (ERS) and the Police and Fire Retirement System (PFRS), it is my duty to ensure that the New York State and Local Retirement System (the System) properly funds the benefits of members, retirees, and beneficiaries. A discussion of the plan provisions can be found at the beginning of the Notes to Basic Financial Statements. The System's funding policy is established by New York State Retirement and Social Security Law. The System has a funding objective of employer contributions that, over time, are a level percentage of payroll, and accumulate assets over an employee's working lifetime sufficient to pay benefits as they become due.

The Actuarial Bureau annually generates actuarial valuations which determine the annual contributions required of employers. The most recent valuation was for valuation date April 1, 2020 and determined the employer contribution rates for February 1, 2022. A valuation relies on valuation date data for active members, retirees, and beneficiaries. Data for active members includes date of birth, salary, credited service, tier, and plan. For retired members and beneficiaries, data includes date of birth, monthly benefits and benefit option. In preparation for the valuation, we extensively validate the System's data by running reasonableness tests and accounting for every individual on a year-to-year basis. We also review the information contained in the financial statements.

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

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

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

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

STATEMENT OF THE ACTUARY

CONTINUED

The April 1, 2019 valuation for determining the February 1, 2021 employer contribution rates found in this report was performed under my direction and supervision, using the assumptions adopted by the Comptroller, a summary of which is included later in this section. The assumptions and methods used for funding purposes meet the parameters set by Actuarial Standards of Practice.

I am responsible for all of the valuation results and other actuarial calculations contained in this report. In the Notes to Basic Financial Statements, I prepared the Net Pension Liability of Participating Employers. While I prepared the employer contribution rates that determined the 2021 employer billing, I did not prepare the Schedule of Employer Contributions. I prepared the following schedules in the Actuarial section: Actuarial Valuation Balance Sheets, Local Government Employers' Final Contribution Rates for Select Plans, Contribution Rate Trends for Local Governments, Employer Contributions, Historical Trends, Changes in Contributions, Assets and Accrued Liabilities, Solvency Test, Schedule of Active Member Data, and Schedule of Retired Members and Beneficiaries.

In addition to the funding valuation report for ERS and PFRS, separate reports are issued to provide financial reporting for the System in accordance with Governmental Accounting Standard Board (GASB) Statement No. 67. Reports containing the actuarial results of the financial reporting valuations are based upon the measurement date of March 31, 2021.

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



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

Actuary

New York State and Local Employees' Retirement System

New York State and Local Police and Fire Retirement System

ACTUARIAL COST METHOD AND VALUATION

ACTUARIAL COST METHOD

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

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

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

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

ACTUARIAL VALUATION

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

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

Two examples help make this clear:

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

AGGREGATE ACTUARIAL FUNDING METHOD

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

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

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

ELEMENTS OF THE ACTUARIAL VALUATION

ACTUARIAL ASSUMPTIONS

The actuarial assumptions for employer contribution rates for the fiscal year ending 2021 were adopted effective April 1, 2015. These assumptions and their predecessors are shown below. All assumptions presume ongoing systems.

Fiscal Year Ended 3/31	Salary Scale*			Interest Rate	Multiple-Decrement Tables Based on Systems' Experience
1987 – 88	Inflation Productivity & Merit	5.00% <u>2.30%</u> 7.30%		8.00%	4/1/81– 3/31/86 experience
1989 – 92	Inflation Productivity & Merit	5.00% <u>2.00%</u> 7.00%		8.75%	4/1/81– 3/31/86 experience
1993 – 96	Inflation Productivity & Merit	5.00% <u>2.00%</u> 7.00%		8.75%	4/1/86 – 3/31/91 experience
		ERS	PFRS		
1997 – 98	Inflation Productivity & Merit	4.75% <u>1.25%</u> 6.00%	4.75% <u>1.75%</u> 6.50%	8.50%	4/1/90 – 3/31/95 experience
1999 – 2000	Inflation Productivity & Merit	3.50% <u>2.50%</u> 6.00%	3.50% <u>3.00%</u> 6.50%	8.50%	4/1/90 – 3/31/95 experience
2001	Inflation Productivity & Merit	3.00% <u>2.50%</u> 5.50%	3.00% <u>3.00%</u> 6.00%	8.00%	4/1/90 – 3/31/95 experience
2002 – 04	Inflation Productivity & Merit	3.00% <u>2.90%</u> 5.90%	3.00% <u>3.90%</u> 6.90%	8.00%	4/1/95 – 3/31/00 experience
2005	Inflation Productivity & Merit	3.00% <u>2.40%</u> 5.40%	3.00% <u>3.90%</u> 6.90%	8.00%	4/1/95 – 3/31/00 experience
2006	Inflation Productivity & Merit	3.00% <u>2.40%</u> 5.40%	3.00% <u>3.90%</u> 6.90%	8.00%	4/1/95 – 3/31/00 experience with subsequent adjustments
2007 – 11	Inflation Productivity & Merit	3.00% <u>2.40%</u> 5.40%	3.00% <u>3.70%</u> 6.70%	8.00%	4/1/00 – 3/31/05 experience with subsequent adjustments
2012 – 16	Inflation Productivity & Merit	2.70% <u>2.20%</u> 4.90%	2.70% <u>3.30%</u> 6.00%	7.50%	4/1/05 – 3/31/10 experience with subsequent adjustments
2017 – 19	Inflation Productivity & Merit	2.50% <u>1.30%</u> 3.80%	2.50% <u>2.00%</u> 4.50%	7.00%	4/1/10 – 3/31/15 experience with subsequent adjustments
2020	Inflation Productivity & Merit	2.50% <u>1.70%</u> 4.20%	2.50% <u>2.50%</u> 5.00%	7.00%	4/1/10 – 3/31/15 experience with subsequent adjustments
2021	Inflation Productivity & Merit	2.50% <u>1.70%</u> 4.20%	2.50% <u>2.50%</u> 5.00%	6.80%	4/1/10 – 3/31/15 experience with subsequent adjustments

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

ELEMENTS OF THE ACTUARIAL VALUATION

CONTINUED

SELECTED ACTUARIAL ASSUMPTIONS USED IN THE APRIL 1, 2019 VALUATION

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

Service Retirement — ERS

Age	Service (in years)		
	< 20	20 – 29.99	≥ 30
Tier 1			
55	1,566	2,977	5,586
60	982	1,600	1,930
65	2,050	2,553	2,321
Tiers 2 – 4			
55	555	925	3,977
60	526	812	1,919
65	1,532	2,527	2,058
Tiers 5 – 6			
55	447	747	925
60	423	655	812
65	1,532	2,527	2,058

Service Retirement — PFRS

Service	20-year (All Tiers)	20-year with additional 60ths (All Tiers)
20	2,292	887
25	770	714
30	735	1,625

Service Retirees — Mortality

Age	ERS Male Clerk	ERS Female Clerk	PFRS
55	50	37	28
60	69	46	48
70	136	106	134
80	440	313	469

Disability Retirees — Mortality

Age	ERS Male	ERS Female	PFRS
30	35	36	13
40	81	111	14
60	300	261	61
80	730	610	576

ELEMENTS OF THE ACTUARIAL VALUATION

CONTINUED

Disability Retirement — Ordinary and Accidental

Age	ERS Ordinary	ERS Accidental	PFRS Ordinary*	PFRS Accidental
35	9	0	14	13
40	11	0	23	23
45	21	1	37	34
50	35	1	44	38

* Includes performance of duty.

Ordinary Death

Age	ERS	PFRS
35	5	4
40	7	4
45	10	6
50	14	8

Withdrawal — ERS (Ten-year ultimate rates)

Age	ERS
35	192
40	168
45	157
50	130

Withdrawal — PFRS

Service	PFRS
5	117
10	55
15	28

Salary Scale — Annual Percentage Increase

Service	ERS	PFRS
5	4.95	8.25
10	4.18	4.51
15	3.63	3.96
20	3.30	3.63
25	3.30	3.63

ACTUARIAL VALUE OF ASSETS

The actuarial asset values are determined by applying the assumed return on investments (6.8 percent for the April 1, 2019 valuation) to the financial statement plan net position with adjustments for cash flow (contributions and deductions). This smoothing method expects and immediately recognizes the assumed return on assets while phasing in unexpected gains and losses over a five-year period. The method treats realized and unrealized gains in the same manner. The Group Term Life Insurance Plan assets appreciate at the same rate as our short-term investment pool.

In the April 1, 2019 valuation of the System and Group Life Insurance Plan (GLIP) for fiscal year 2021, the difference between market and actuarial values of smoothed investments was:

	Investments (Dollars in Millions)	
Actuarial Value	\$	208,370
Market Value		<u>210,524</u>
Difference	\$	(2,154)

ADMINISTRATIVE EXPENSES

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

GROUP LIFE INSURANCE PLAN (GLIP)

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

DEFICIENCY COSTS

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

RATE AND CONTRIBUTION COMPARABILITY

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

ACTUARIAL VALUATION BALANCE SHEETS

Actuarial assets and liabilities are used to determine employer contributions for the fiscal year ending March 31. Values are in millions of dollars, as calculated in the April 1, 2018 valuation for fiscal year end (FYE) 2020 billing and the April 1, 2019 valuation for fiscal year end 2021 billing.

	FYE 2020 Billing*	FYE 2021 Billing*
	(Dollars in Millions)	
ERS		
Actuarial Assets		
Actuarial Value of Present Assets:		
Held for Current Retirees & Beneficiaries	\$ 107,506	\$ 111,708
Held for Members	59,387	60,447
Member Contributions	<u>8,537</u>	<u>8,567</u>
Total	\$ 175,430	\$ 180,723
Actuarial Present Value of Prospective Contributions:		
From Employers	\$ 31,991	\$ 32,969
From Members	<u>4,237</u>	<u>5,050</u>
Total	\$ 36,228	\$ 38,019
Total Actuarial Assets	\$ 211,658	\$ 218,742
Actuarial Liabilities		
Actuarial Present Value of Benefits for Current Retirees & Beneficiaries:		
Service Retirement Benefits	\$ 102,793	\$ 106,892
Disability Retirement Benefits	4,604	4,710
Death Benefits	<u>109</u>	<u>106</u>
Total	\$ 107,506	\$ 111,708
Actuarial Present Value of Benefits for Members:		
Service Retirement Benefits	\$ 100,693	\$ 103,368
Disability Retirement Benefits	1,796	1,849
Death Benefits	1,071	1,149
Other	<u>593</u>	<u>668</u>
Total	\$ 104,152	\$ 107,034
Total Actuarial Liabilities	\$ 211,658	\$ 218,742
* Numbers may not add up due to rounding.		

ACTUARIAL VALUATION BALANCE SHEETS

CONTINUED

	FYE 2020 Billing*	FYE 2021 Billing*
	(Dollars in Millions)	
PFRS		
Actuarial Assets		
Actuarial Value of Present Assets:		
Held for Current Retirees & Beneficiaries	\$ 20,265	\$ 21,625
Held for Members	10,659	10,299
Member Contributions	85	125
Total	\$ 31,009	\$ 32,050
Actuarial Present Value of Prospective Contributions:		
From Employers	\$ 8,083	\$ 8,651
From Members	664	812
Total	\$ 8,746	\$ 9,462
Total Actuarial Assets	\$ 39,755	\$ 41,512
Actuarial Liabilities		
Actuarial Present Value of Benefits for Current Retirees & Beneficiaries:		
Service Retirement Benefits	\$ 16,609	\$ 17,731
Disability Retirement Benefits	3,458	3,668
Death Benefits	199	226
Total	\$ 20,265	\$ 21,625
Actuarial Present Value of Benefits for Members:		
Service Retirement Benefits	\$ 17,503	\$ 17,854
Disability Retirement Benefits	1,663	1,699
Death Benefits	301	307
Other	22	27
Total	\$ 19,490	\$ 19,887
Total Actuarial Liabilities	\$ 39,755	\$ 41,512
* Numbers may not add up due to rounding.		

New York Public Employees' Group Life Insurance Plan

Actuarial Assets	2020	2021
	(Dollars in Millions)	
Assets		
Investments	\$ 181	\$ 205
Premiums Receivable	-	-
Total Assets	\$ 181	\$ 205
Liabilities		
Managed Overdraft (cash)	10	13
Claims Being Processed	18	28
Claims Unreported	18	21
Reserve for Mortality Fluctuations	135	143
Total Liabilities	\$ 181	\$ 205

LOCAL GOVERNMENT EMPLOYERS' FINAL CONTRIBUTION RATES FOR SELECT PLANS

The following contribution rates are for the fiscal year ending March 31, 2021 and assume a February 1, 2021 payment date.

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

	Plan ID	Percentage of Payroll				
		Tier 1	Tier 2	Tiers 3 & 4	Tier 5	Tier 6
ERS						
Age-based plans						
Basic, Age 55, Age 60 Contributory	71-a	10.6	9.8	n/a	n/a	n/a
Article 14	A14	n/a	n/a	16.0	n/a	n/a
Article 15	A15	n/a	n/a	16.0	13.3	9.5
Guaranteed Benefits	75-e	19.4	17.5	n/a	n/a	n/a
Career	75-g	20.6	18.7	n/a	n/a	n/a
New Career	75-h/75-i	21.4	19.5	n/a	n/a	n/a
25-year plans						
Sheriffs and Deputies	89-a	24.3	22.8	n/a	n/a	n/a
Article 14B Sheriffs — 25-year	551	22.8	22.5	20.6	18.2	13.4
Article 14B Sheriffs — 25-year + 1/60th	551-e	24.1	23.9	22.0	19.8	15.0
full service for 1/60th	551-ee	25.0	24.8	22.8	20.5	15.6
County Law Enforcement	89-e, etc.	24.8	24.5	18.7	16.2	11.6
20-year plans						
Sheriffs and Deputies	89-b	27.6	22.5	n/a	n/a	n/a
additional 1/60th	89-b(m)	27.8	23.8	n/a	n/a	n/a
Article 14B Sheriffs — 20-year	552	28.1	27.9	25.5	23.1	18.2
Article 14B Sheriffs — 20-year + 1/60th	553	28.1	27.9	26.1	24.0	19.4
full service for 1/60th	553b	29.2	29.0	27.1	24.9	20.1
Detective Investigators	89-d	27.0	26.8	n/a	n/a	n/a
additional 1/60th	89-d(m)	27.1	26.9	n/a	n/a	n/a

LOCAL GOVERNMENT EMPLOYERS' FINAL CONTRIBUTION RATES FOR SELECT PLANS

CONTINUED

	Plan ID	Percentage of Payroll				
		Tier 1	Tier 2	Tier 3	Tier 5*	Tier 6*
PFRS						
Age-based plans						
Basic, Age 55, Age 60 Contributory	371-a	12.7	11.1	11.1	7.5	3.4
Guaranteed Benefits	375-e	20.0	16.5	16.5	12.6	8.0
Career	375-g	21.9	18.1	18.1	14.0	9.3
New Career	375-i	22.6	18.6	18.6	14.5	9.6
Improved Career	375-j	22.6	18.6	18.6	14.5	9.6
25-year plans						
Contributory	384	n/a	n/a	n/a	17.3	12.2
additional 1/60th	384(f)	n/a	n/a	n/a	18.8	13.6
Non-Contributory	384	22.5	21.6	21.6	20.7	18.7
additional 1/60th	384(f)	23.6	23.4	23.4	22.3	20.2
20-year plans						
Contributory	384-d	n/a	n/a	n/a	21.0	15.7
additional 1/60th	384-e	n/a	n/a	n/a	21.9	16.4
Non-Contributory	384-d	26.4	25.6	25.7	24.5	22.2
additional 1/60th	384-e	26.7	26.6	25.7	25.3	23.0
* Age-based plans in Tier 5 and Tier 6 are contributory.						
There is no Tier 4 in PFRS.						

CONTRIBUTION RATE TRENDS FOR LOCAL GOVERNMENTS

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

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

Plan Name (Section)	Percentage of Payroll									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
ERS										
Guaranteed Benefits (75-e)										
Tier 1	19.4	22.9	25.8	24.8	22.6	19.6	19.5	19.4	19.2	19.4
Tier 2	17.5	20.7	23.3	22.5	20.5	17.6	17.5	17.4	17.3	17.5
Career (75-g)										
Tier 1	20.4	24.1	27.3	26.3	24.0	20.7	20.7	20.5	20.4	20.6
Tier 2	18.6	22.0	24.9	24.0	21.9	18.7	18.7	18.6	18.5	18.7
New Career (75-i)										
Tier 1	21.3	25.2	28.5	27.4	25.0	21.6	21.5	21.4	21.2	21.4
Tier 2	19.5	23.0	26.0	25.1	22.9	19.6	19.5	19.4	19.3	19.5
Article 14/15 — Tier 3	15.6	18.4	20.8	20.1	18.6	15.8	15.8	15.7	15.7	16.0
Article 15 — Tier 4	15.6	18.4	20.8	20.1	18.6	15.8	15.8	15.7	15.7	16.0
Article 15 — Tier 5	12.6	14.9	16.7	16.4	15.3	13.0	13.0	12.9	13.1	13.3
Article 15 — Tier 6	—	9.9	11.3	10.8	10.4	9.2	9.2	9.2	9.2	9.5

CONTRIBUTION RATE TRENDS FOR LOCAL GOVERNMENTS

CONTINUED

Plan Name (Section)	Percentage of Payroll									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
PFRS										
Guaranteed Benefits (375-e)										
Tier 1	16.1	19.6	22.1	21.4	19.4	18.6	19.0	18.5	18.9	20.0
Tiers 2 & 3	13.0	16.2	18.1	17.8	16.1	15.4	15.7	15.3	15.6	16.5
Tier 5*	9.3	11.8	13.0	12.7	12.1	11.4	11.7	11.3	11.8	12.6
Tier 6*	—	7.0	7.3	7.2	6.4	7.1	7.3	7.0	7.3	8.0
Career (375-g)										
Tier 1	17.6	21.3	24.1	23.4	21.2	20.3	20.8	20.3	20.7	21.9
Tiers 2 & 3	14.2	17.6	19.7	19.4	17.6	16.8	17.2	16.7	17.1	18.1
Tier 5*	10.4	13.1	14.5	14.2	13.5	12.8	13.0	12.6	13.2	14.0
Tier 6*	—	8.2	8.6	8.5	7.6	8.4	8.5	8.2	8.6	9.3
New Career (375-i)										
Tier 1	18.1	22.1	24.9	24.2	21.9	21.0	21.5	21.0	21.4	22.6
Tiers 2 & 3	14.6	18.1	20.3	19.9	18.1	17.3	17.7	17.2	17.6	18.6
Tier 5*	10.8	13.6	15.1	14.7	14.0	13.2	13.5	13.1	13.6	14.5
Tier 6*	—	8.5	8.9	8.7	7.9	8.6	8.8	8.5	8.8	9.6
25-Year (384) — Contributory										
Tiers 1, 2 & 3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Tier 5	13.7	16.5	18.4	18.1	16.6	15.9	16.2	15.8	16.2	17.3
Tier 6	—	11.4	12.3	12.0	11.2	11.2	11.4	11.0	11.3	12.2
25-Year + 1/60ths (384(f)) — Contributory										
Tiers 1, 2 & 3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Tier 5	15.0	18.0	20.2	19.7	17.9	17.3	17.7	17.2	17.7	18.8
Tier 6	—	12.8	13.8	13.3	12.4	12.4	12.7	12.3	12.6	13.6
25-Year (384) — Non-Contributory										
Tier 1	17.7	21.2	24.0	23.2	21.2	20.9	21.4	20.8	21.2	22.5
Tiers 2 & 3	17.6	21.2	23.9	23.1	21.0	20.2	20.6	20.1	20.5	21.6
Tier 5	16.9	20.4	22.9	22.1	20.1	19.3	19.7	19.2	19.5	20.7
Tier 6	—	18.4	20.4	19.6	17.9	17.7	18.1	17.6	17.7	18.7
25-Year + 1/60ths (384(f)) — Non-Contributory										
Tier 1	19.2	23.1	26.1	25.1	22.7	22.0	22.5	21.9	22.3	23.6
Tiers 2 & 3	19.0	22.9	25.9	24.8	22.5	21.8	22.3	21.7	22.1	23.4
Tier 5	18.3	21.9	24.7	23.7	21.5	20.8	21.2	20.7	21.1	22.3
Tier 6	—	19.9	22.0	21.1	19.2	19.0	19.4	18.9	19.1	20.2

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

There is no Tier 4 in PFRS.

CONTRIBUTION RATE TRENDS FOR LOCAL GOVERNMENTS

CONTINUED

Plan Name (Section)	Percentage of Payroll									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
20-Year (384-d) — Contributory										
Tiers 1, 2 & 3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Tier 5	16.7	20.1	22.7	22.0	20.1	19.5	19.9	19.4	19.8	21.0
Tier 6	—	14.6	16.0	15.4	14.3	14.5	14.8	14.4	14.6	15.7
20-Year + 1/60ths (384-e) — Contributory										
Tiers 1, 2 & 3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Tier 5	17.0	20.5	23.0	22.3	20.4	20.2	20.6	20.1	20.6	21.9
Tier 6	—	14.9	16.3	15.6	14.5	15.1	15.4	15.0	15.3	16.4
20-Year (384-d) — Non-Contributory										
Tier 1	21.5	25.7	29.2	28.0	25.4	24.7	25.2	24.6	25.0	26.4
Tier 2	20.9	25.1	28.4	27.3	24.7	24.1	24.6	24.0	24.3	25.6
Tier 3	20.4	24.2	27.5	26.1	24.4	23.8	24.3	23.7	24.2	25.7
Tier 5	20.0	24.1	27.1	26.1	23.6	22.9	23.4	22.9	23.2	24.5
Tier 6	—	21.6	24.1	23.1	21.0	21.0	21.5	20.9	21.0	22.2
20-Year + 1/60ths (384-e) — Non-Contributory										
Tier 1										
1990-1998 elections (avg.)	21.8	26.1	29.6	28.4	25.8	25.0	25.6	25.0	25.3	26.7
all other years	21.8	26.1	29.6	28.4	25.8	25.0	25.6	25.0	25.3	26.7
Tier 2										
1990-1998 elections (avg.)	21.2	25.4	28.8	27.6	25.1	24.8	25.3	24.7	25.1	26.6
all other years	21.2	25.4	28.8	27.6	25.1	24.8	25.3	24.7	25.1	26.6
Tier 3	20.4	24.2	27.5	26.1	24.4	23.8	24.3	23.7	24.2	25.7
Tier 5	20.3	24.4	27.5	26.3	23.9	23.7	24.2	23.6	24.0	25.3
Tier 6	—	22.0	24.4	23.3	21.3	21.7	22.1	21.6	21.7	23.0

There is no Tier 4 in PFRS.

EMPLOYER CONTRIBUTIONS

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

COMPARISON OF EMPLOYER CONTRIBUTIONS*

For fiscal years ending 2020 and 2021. (Dollars in Millions)

	2021 Contribution			2020 Contribution		
	Salary	Contribution	Average Rate	Salary	Contribution	Average Rate
ERS						
Tier 1	\$ 67	\$ 15	21.6%	\$ 87	\$ 19	21.4%
Tier 2	82	16	19.7	108	21	19.5
Tiers 3 & 4	17,314	2,866	16.6	18,417	2,998	16.3
Tier 5	1,564	217	13.9	1,568	214	13.7
Tier 6	8,948	897	10.0	7,989	779	9.7
Total	\$ 27,976	\$ 4,011	14.3%	\$ 28,169	\$ 4,031	14.3%
PFRS						
Tier 1	\$ 2	\$ -	30.6%	\$ 2	\$ 1	29.1%
Tier 2	2,613	705	27.0	2,916	743	25.5
Tier 3	21	5	24.4	20	5	22.9
Tier 5	196	44	22.5	186	39	20.9
Tier 6	1,031	170	16.4	901	138	15.3
Total	\$ 3,863	\$ 924	23.9%	\$ 4,025	\$ 925	23.0%
There is no Tier 4 in PFRS.						

Deficiency contributions for Fiscal Year 2021 (as of February 1, 2021) totaled \$1,367,275.

*Numbers may not add up due to rounding.

EMPLOYER CONTRIBUTIONS

CONTINUED

FINAL EMPLOYER CONTRIBUTIONS BY EMPLOYER TYPE*

Attributable to fiscal year 2021 costs only. (Dollars in Millions)

Employer	Normal	Administrative	GLIP	Total
ERS				
State	\$ 1,584	\$ 58	\$ 51	\$ 1,694
Counties	674	24	20	717
Cities	96	4	4	104
Towns	218	8	8	234
Villages	71	3	3	76
Miscellaneous	614	24	24	663
Schools	485	19	19	522
Total	\$ 3,742	\$ 140	\$ 129	\$ 4,011
PFRS				
State	\$ 188	\$ 5	\$ -	\$ 193
Counties	195	5	-	200
Cities	248	6	-	254
Towns	94	2	-	97
Villages	77	2	-	79
Miscellaneous	99	3	-	101
Total	\$ 901	\$ 23	\$ -	\$ 924

*Numbers may not add up due to rounding.

EMPLOYER CONTRIBUTIONS BY TIER*

(Dollars in Millions)

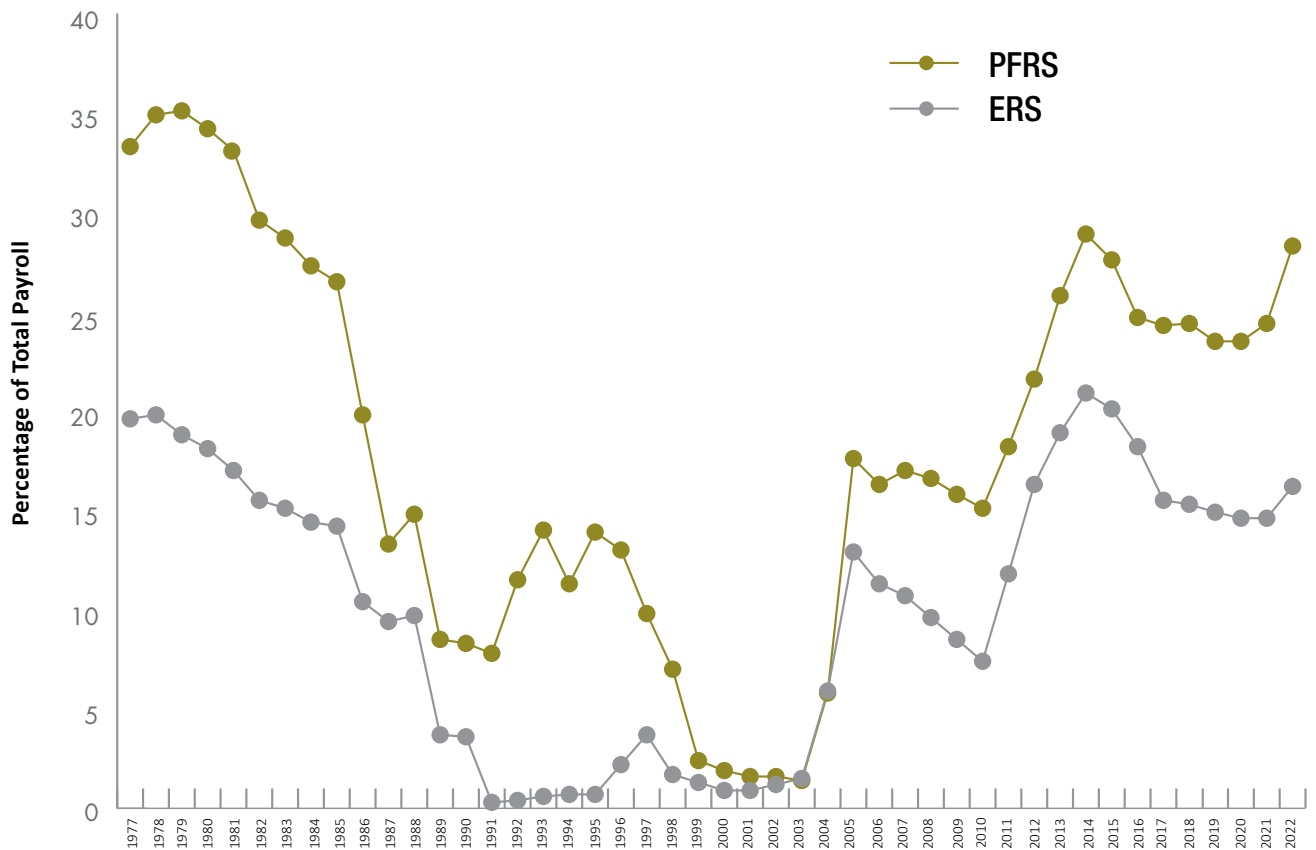
	2021 (as of February 1, 2021)		2020 (as of February 1, 2020)	
	Employer Contributions Attributable to Year	Percentage	Employer Contributions Attributable to Year	Percentage
ERS				
Tier 1	\$ 15	0.4%	\$ 19	0.5%
Tier 2	16	0.4	21	0.5
Tiers 3 & 4	2,866	71.5	2,998	74.4
Tier 5	217	5.4	214	5.3
Tier 6	897	22.4	779	19.3
Total	\$ 4,011	100.0%	\$ 4,031	100.0%
PFRS				
Tier 1	\$ 0	0.1%	\$ 1	0.1%
Tier 2	705	76.3	743	80.3
Tier 3	5	0.6	5	0.5
Tier 5	44	4.8	39	4.2
Tier 6	170	18.3	138	14.9
Total	\$ 924	100.0%	\$ 925	100.0%
There is no Tier 4 in PFRS.				

*Numbers may not add up due to rounding.

HISTORICAL TRENDS (RATES AS A PERCENTAGE OF SALARY, 1977 – 2022)

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

TRENDS IN EMPLOYER CONTRIBUTIONS



CHANGES IN CONTRIBUTIONS

The System's experience in many areas (employee salary growth or decrease, investment return, legislative enactment of benefits) is assessed and quantified yearly. Each element can exert an increasing or decreasing pressure, or have no impact on contributions to be charged for that year.

ANALYSIS OF CHANGES (BY SOURCE)

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

(Dollars in Millions)

Fiscal Year Valuation Date	Fiscal Year Bill Date	Contributions for Preceding Fiscal Year Bill	Salary Growth	Return on Investments	Assumption Changes	Changes in Benefits	Other Adjustments	Projected Contributions for Fiscal Year Shown*
ERS								
2011	2013	3,948	15	570	202	n/a	(81)	4,654
2012	2014	4,627	119	870	(9)	n/a	(343)	5,264
2013	2015	5,243	97	521	(539)	n/a	(182)	5,140
2014	2016	5,143	(24)	(937)	633	n/a	(187)	4,628
2015	2017	4,515	35	(396)	273	n/a	(433)	3,994
2016	2018	3,995	85	120	22	n/a	(195)	4,027
2017	2019	4,005	108	(123)	131	n/a	(111)	4,010
2018	2020	3,977	39	(210)	298	n/a	(123)	3,981
2019	2021	3,998	128	50	105	n/a	(166)	4,115
2020	2022	4,113	120	511	246	n/a	(308)	4,682
PFRS								
2011	2013	693	18	93	(8)	n/a	53	849
2012	2014	827	25	142	(1)	n/a	(36)	957
2013	2015	936	3	79	(83)	n/a	(18)	917
2014	2016	917	23	(143)	52	n/a	(7)	842
2015	2017	809	1	(70)	161	n/a	(73)	828
2016	2018	857	60	17	36	n/a	(75)	895
2017	2019	888	31	(21)	12	n/a	(19)	891
2018	2020	866	(3)	(34)	49	n/a	8	886
2019	2021	875	12	6	53	n/a	(15)	931
2020	2022	981	136	85	133	n/a	(115)	1,220

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

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

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

ASSETS AND ACCRUED LIABILITIES

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

(Dollars in Millions)

Valuation Date	Market Value of Assets (MVA)	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AL)	Ratio of Assets to AL based on	
				MVA	AVA
ERS					
4/1/11	\$ 127,192	\$ 126,395	\$ 140,087	90.8%	90.2%
4/1/12	130,349	125,688	144,107	90.5	87.2
4/1/13	139,580	132,067	149,211	93.5	88.5
4/1/14	154,119	145,985	158,638	97.2	92.0
4/1/15	161,065	156,648	167,065	96.4	93.8
4/1/16	156,088	162,119	172,246	90.6	94.1
4/1/17	167,820	168,246	178,216	94.2	94.4
4/1/18	179,995	175,430	184,504	97.6	95.1
4/1/19	182,541	180,723	189,751	96.2	95.2
4/1/20	168,116	181,509	195,734	85.9	92.7
PFRS					
4/1/11	\$ 22,357	\$ 22,205	\$ 24,169	92.5%	91.9%
4/1/12	22,837	22,009	25,048	91.2	87.9
4/1/13	24,436	23,112	25,815	94.7	89.5
4/1/14	26,961	25,474	27,377	98.5	93.0
4/1/15	28,154	27,330	29,336	96.0	93.2
4/1/16	27,337	28,362	30,620	89.3	92.6
4/1/17	29,539	29,586	31,776	93.0	93.1
4/1/18	31,838	31,009	32,989	96.5	94.0
4/1/19	32,386	32,050	34,260	94.5	93.5
4/1/20	29,964	32,303	36,170	82.8	89.3

SOLVENCY TEST

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

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

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

Valuation Date	Accrued Liability (Dollars in Millions)				Actuarial Assets (Dollars in Millions)	Portion of Actuarial Accrued Liabilities Covered by Actuarial Assets		
	Member Contributions (1)	Retiree (2)	Active (3)	Total (1) + (2) + (3)		(1)	(2)	(3)
ERS								
4/1/11	\$ 8,214	\$ 67,412	\$ 64,461	\$ 140,087	\$ 126,395	100.0%	100.0%	78.8%
4/1/12	8,168	75,210	60,729	144,107	125,688	100.0	100.0	69.7
4/1/13	8,328	78,743	62,140	149,211	132,067	100.0	100.0	72.4
4/1/14	8,462	85,528	64,648	158,638	145,985	100.0	100.0	80.4
4/1/15	8,608	90,163	68,294	167,065	156,648	100.0	100.0	84.7
4/1/16	8,635	95,102	68,509	172,246	162,119	100.0	100.0	85.2
4/1/17	8,666	100,320	69,230	178,216	168,246	100.0	100.0	85.6
4/1/18	8,537	107,506	68,461	184,504	175,430	100.0	100.0	86.7
4/1/19	8,567	111,708	69,476	189,751	180,723	100.0	100.0	87.0
4/1/20	8,273	116,711	70,750	195,734	181,509	100.0	100.0	79.9
PFRS								
4/1/11	\$ 29	\$ 13,383	\$ 10,757	\$ 24,169	\$ 22,205	100.0%	100.0%	81.7%
4/1/12	2	14,060	10,986	25,048	22,009	100.0	100.0	72.3
4/1/13	5	14,948	10,862	25,815	23,112	100.0	100.0	75.1
4/1/14	10	15,958	11,409	27,377	25,474	100.0	100.0	83.3
4/1/15	20	17,072	12,244	29,336	27,330	100.0	100.0	83.6
4/1/16	34	17,599	12,987	30,620	28,362	100.0	100.0	82.6
4/1/17	55	18,920	12,801	31,776	29,586	100.0	100.0	82.9
4/1/18	85	20,265	12,639	32,989	31,009	100.0	100.0	84.3
4/1/19	125	21,625	12,510	34,260	32,050	100.0	100.0	82.3
4/1/20	175	23,038	12,957	36,170	32,303	100.0	100.0	70.2

SCHEDULE OF ACTIVE MEMBER DATA

Fiscal Year Ending March 31	Active Members	Annual Member Payroll (Dollars in Millions)	Percentage Increase in Annual Member Payroll	Average Salary
ERS				
2011	513,092	\$ 24,389	(2.3)%	\$ 47,534
2012	505,575	24,291	(0.4)	48,046
2013	498,266	24,405	0.5	48,979
2014	493,209	24,361	(0.2)	49,392
2015	491,558	24,480	0.5	49,801
2016	494,411	24,985	2.1	50,536
2017	496,441	25,520	2.1	51,406
2018	500,945	25,973	1.8	51,847
2019	501,037	26,668	2.7	53,226
2020	497,659	27,350	2.6	54,958
PFRS				
2011	31,659	\$ 3,146	1.0%	\$ 99,357
2012	31,024	3,191	1.4	102,850
2013	30,780	3,163	(0.9)	102,754
2014	31,218	3,233	2.2	103,549
2015	31,372	3,257	0.8	103,822
2016	31,720	3,416	4.9	107,700
2017	32,332	3,522	3.1	108,930
2018	32,470	3,548	0.7	109,265
2019	32,573	3,593	1.3	110,309
2020	32,888	3,910	8.8	118,902

SCHEDULE OF RETIRED MEMBERS AND BENEFICIARIES

Added to and Removed from Benefit Payroll

Fiscal Year	Number of Retired Members and Beneficiaries		Annual Benefits of Retired Members and Beneficiaries		Total Number of Retired Members and Beneficiaries	Total Annual Benefit	Percentage Increase in Total Annual Benefits	Average Annual Benefit
	Added During the Year	Removed During the Year	Added During the Year	Removed During the Year				
ERS								
2011	22,733	13,899	\$ 683,435,574	\$ 186,508,676	353,940	\$ 7,302,355,926	7.30%	\$ 20,632
2012	31,906	14,378	990,541,993	198,660,208	371,468	8,094,237,711	10.84	21,790
2013	23,424	13,993	627,992,358	207,014,141	380,899	8,515,215,928	5.20	22,356
2014	23,320	14,931	636,672,277	229,131,028	389,288	8,922,757,178	4.79	22,921
2015	21,832	14,339	615,594,488	225,462,412	396,781	9,312,889,254	4.37	23,471
2016	25,517	15,186	764,025,727	247,047,150	407,112	9,829,867,831	5.55	24,145
2017	25,828	15,441	783,795,021	260,190,707	417,499	10,353,472,145	5.33	24,799
2018	31,709	14,655	974,084,983	248,074,441	434,553	11,079,482,687	7.01	25,496
2019	26,559	16,393	860,370,424	283,931,808	444,719	11,655,921,302	5.20	26,210
2020	25,018	19,931	824,249,961	318,809,092	449,806	12,161,362,171	4.34	27,037
PFRS								
2011	1,184	790	\$ 80,517,204	\$ 24,073,826	31,091	\$ 1,349,973,282	4.36%	\$ 43,420
2012	1,403	788	97,599,791	23,890,471	31,706	1,423,682,602	5.46	44,903
2013	1,629	798	120,115,279	25,836,637	32,537	1,517,961,244	6.62	46,653
2014	1,431	851	99,767,882	27,650,778	33,117	1,590,078,348	4.75	48,014
2015	1,222	812	89,763,321	27,980,968	33,527	1,651,860,701	3.89	49,270
2016	1,163	859	90,801,381	30,667,776	33,831	1,711,994,306	3.64	50,604
2017	2,028	903	157,020,746	32,764,190	34,956	1,836,250,862	7.26	52,530
2018	2,027	940	162,851,223	34,346,639	36,043	1,964,755,446	7.00	54,511
2019	2,011	978	169,652,095	37,229,104	37,076	2,097,178,437	6.74	55,564
2020	1,763	1,238	146,089,459	59,162,270	37,601	2,184,105,626	4.14	58,086

For both systems, annual benefits are based on option 0 benefits (prior to option selection and partial lump sum distribution) plus cost-of-living adjustments (COLA).

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NYSLRS

*A Century of
Accountability*



Statistical

We are accountable to our membership. Our members and retirees rely on us to manage the Fund responsibly and keep their future benefits secure. By being transparent about our financial health and reporting practices, NYSLRS members can remain confident that their pensions will be there for them in retirement.

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SCHEDULE OF ADDITIONS TO FIDUCIARY NET POSITION

(Dollars in Thousands)

Year Ending	Member Contributions	Employer Contributions	Other Income*	Investment Income/(Loss)	Total
2021	\$ 492,341	\$ 5,029,790	\$ 116,652	\$ 70,649,606	\$ 76,288,389
ERS	427,032	4,062,302	103,941	59,964,043	64,557,318
PFRS	65,309	967,488	12,711	10,685,563	11,731,071
2020	\$ 453,698	\$ 4,782,706	\$ 146,762	\$ (8,798,771)	\$ (3,415,605)
ERS	395,338	3,920,360	138,859	(7,470,542)	(3,015,985)
PFRS	58,360	862,346	7,903	(1,328,229)	(399,620)
2019	\$ 386,519	\$ 4,744,309	\$ 170,154	\$ 10,761,776	\$ 16,062,758
ERS	345,846	3,890,215	160,431	9,140,487	13,536,979
PFRS	40,673	854,094	9,723	1,621,289	2,525,779
2018	\$ 349,389	\$ 4,823,307	\$ 215,614	\$ 21,338,033	\$ 26,726,343
ERS	318,439	3,949,873	181,725	18,128,993	22,579,030
PFRS	30,950	873,434	33,889	3,209,040	4,147,313
2017	\$ 328,827	\$ 4,786,963	\$ 236,401	\$ 20,225,244	\$ 25,577,435
ERS	306,218	3,949,710	200,379	17,194,267	21,650,574
PFRS	22,609	837,253	36,022	3,030,977	3,926,861
2016	\$ 306,631	\$ 5,140,204	\$ 332,880	\$ (384,834)	\$ 5,394,881
ERS	289,333	4,347,619	198,332	(327,069)	4,508,215
PFRS	17,298	792,585	134,548	(57,765)	886,666
2015	\$ 284,793	\$ 5,797,449	\$ 230,799	\$ 12,444,891	\$ 18,757,932
ERS	272,004	4,893,110	193,176	10,582,102	15,940,392
PFRS	12,789	904,339	37,623	1,862,789	2,817,540
2014	\$ 281,398	\$ 6,064,133	\$ 192,581	\$ 20,598,593	\$ 27,136,705
ERS	273,545	5,137,935	175,677	17,496,541	23,083,698
PFRS	7,853	926,198	16,904	3,102,052	4,053,007
2013	\$ 269,134	\$ 5,336,045	\$ 131,853	\$ 14,717,622	\$ 20,454,654
ERS	264,788	4,524,395	122,931	12,496,378	17,408,492
PFRS	4,346	811,650	8,922	2,221,244	3,046,162
2012	\$ 273,247	\$ 4,585,178	\$ 157,625	\$ 7,868,313	\$ 12,884,363
ERS	268,545	3,878,717	134,821	6,681,603	10,963,686
PFRS	4,702	706,461	22,804	1,186,710	1,920,677

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

SCHEDULE OF INVESTMENT INCOME/(LOSS)

(Dollars in Thousands)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Net Change in Fair Value of Investments	\$ 67,602,333	\$ (12,135,353)	\$ 7,179,934	\$ 17,859,769	\$ 16,923,203	\$ (3,934,853)	\$ 9,275,335	\$ 17,432,110	\$ 11,592,363	\$ 4,958,927
Interest	1,195,961	1,321,234	1,321,174	1,312,608	1,349,658	1,446,569	1,447,757	1,366,175	1,394,442	1,379,423
Dividends	1,556,765	1,794,002	1,825,117	1,723,896	1,611,929	1,593,010	1,589,248	1,498,622	1,512,908	1,405,870
Real Estate and Mortgages	500,894	459,732	523,165	472,188	531,225	491,949	414,345	353,821	382,315	239,038
Alternative	598,918	440,806	354,214	352,488	230,919	174,552	174,850	259,960	377,664	170,225
Security Lending Income	47,393	29,326	48,942	73,563	74,428	52,878	35,639	28,381	32,617	33,323
International Equity	148,733	197,033	242,877	295,388	153,368	360,723	137,227	220,090	146,314	153,157
Other Including Prior Year Adjustment	(85,210)	(117,563)	(5,575)	(14,581)	33,456	1,461	(40,881)	17,187	(247,988)	(44,790)
Security Lending Expenses	(11,927)	(2,735)	(4,893)	(49,128)	(18,001)	(5,278)	(3,563)	(2,838)	(3,261)	(3,332)
Investment Expenses	(904,254)	(785,253)	(723,179)	(688,158)	(664,941)	(565,845)	(585,066)	(574,915)	(469,752)	(423,528)
Net Investment Income/(Loss)	\$ 70,649,606	\$ (8,798,771)	\$ 10,761,776	\$ 21,338,033	\$ 20,225,244	\$ (384,834)	\$ 12,444,891	\$ 20,598,593	\$ 14,717,622	\$ 7,868,313

SCHEDULE OF DEDUCTIONS FROM FIDUCIARY NET POSITION

(Dollars in Thousands)

Year Ending	Retirement Allowances	Post-Retirement Supplements	Death Benefits	Separation from Service	Administrative Expenses	Other Expenses	Total
2021	\$ 13,096,127	\$ 668,641	\$ 257,999	\$ 37,390	\$ 165,097	\$ 61,814	\$ 14,287,068
ERS	11,034,609	571,485	244,443	36,158	144,234	61,488	12,092,417
PFRS	2,061,518	97,156	13,556	1,232	20,863	326	2,194,651
2020	\$ 12,424,608	\$ 662,035	\$ 159,510	\$ 12,760	\$ 139,050	\$ 275,831	\$ 13,673,794
ERS	10,489,929	563,583	154,249	12,472	121,694	244,530	11,586,457
PFRS	1,934,679	98,452	5,261	288	17,356	31,301	2,087,337
2019	\$ 11,880,340	\$ 646,606	\$ 214,666	\$ 34,645	\$ 136,477	\$ 57,674	\$ 12,970,408
ERS	10,030,590	548,382	202,809	32,984	119,304	57,931	10,992,000
PFRS	1,849,750	98,224	11,857	1,661	17,173	(257)	1,978,408
2018	\$ 11,197,802	\$ 628,287	\$ 201,252	\$ 34,969	\$ 122,806	\$ 66,609	\$ 12,251,725
ERS	9,478,272	530,354	191,579	34,302	106,972	68,769	10,410,248
PFRS	1,719,530	97,933	9,673	667	15,834	(2,160)	1,841,477
2017	\$ 10,617,500	\$ 615,032	\$ 216,150	\$ (5,406)	\$ 107,134	\$ 65,037	\$ 11,615,447
ERS	9,015,444	516,852	207,976	820	93,943	64,441	9,899,476
PFRS	1,602,056	98,180	8,174	(6,226)	13,191	596	1,715,971
2016	\$ 10,113,758	\$ 606,536	\$ 188,190	\$ 34,488	\$ 106,620	\$ 117,500	\$ 11,167,092
ERS	8,536,930	508,112	179,861	33,097	93,012	117,197	9,468,209
PFRS	1,576,828	98,424	8,329	1,391	13,608	303	1,698,883
2015	\$ 9,651,227	\$ 601,850	\$ 183,091	\$ 27,628	\$ 107,151	\$ 49,918	\$ 10,620,865
ERS	8,152,183	502,916	174,652	26,067	93,357	51,321	9,000,496
PFRS	1,499,044	98,934	8,439	1,561	13,794	(1,403)	1,620,369
2014	\$ 9,098,453	\$ 596,556	\$ 203,820	\$ 29,972	\$ 105,662	\$ 48,725	\$ 10,083,188
ERS	7,702,970	497,142	185,169	28,439	92,266	51,341	8,557,327
PFRS	1,395,483	99,414	18,651	1,533	13,396	(2,616)	1,525,861
2013	\$ 8,669,843	\$ 586,209	\$ 194,170	\$ 29,265	\$ 105,720	\$ 42,049	\$ 9,627,256
ERS	7,339,678	487,100	177,113	28,294	92,134	43,221	8,167,540
PFRS	1,330,165	99,109	17,057	971	13,586	(1,172)	1,459,716
2012	\$ 8,109,356	\$ 568,466	\$ 184,960	\$ 29,789	\$ 100,649	\$ 45,260	\$ 9,038,480
ERS	6,845,843	470,310	172,340	28,866	87,232	44,949	7,649,540
PFRS	1,263,513	98,156	12,620	923	13,417	311	1,388,940

SCHEDULE OF TOTAL CHANGES IN FIDUCIARY NET POSITION

(Dollars in Thousands)

Year Ending	Member Contributions	Employer Contributions	Other Income	Investment Income/(Loss)	Total Additions
2021	\$ 492,341	\$ 5,029,790	\$ 116,652	\$ 70,649,606	\$ 76,288,389
ERS	427,032	4,062,302	103,941	59,964,043	64,557,318
PFRS	65,309	967,488	12,711	10,685,563	11,731,071
2020	\$ 453,698	\$ 4,782,706	\$ 146,762	\$ (8,798,771)	\$ (3,415,605)
ERS	395,338	3,920,360	138,859	(7,470,542)	(3,015,985)
PFRS	58,360	862,346	7,903	(1,328,229)	(399,620)
2019	\$ 386,519	\$ 4,744,309	\$ 170,154	\$ 10,761,776	\$ 16,062,758
ERS	345,846	3,890,215	160,431	9,140,487	13,536,979
PFRS	40,673	854,094	9,723	1,621,289	2,525,779
2018	\$ 349,389	\$ 4,823,307	\$ 215,614	\$ 21,338,033	\$ 26,726,343
ERS	318,439	3,949,873	181,725	18,128,993	22,579,030
PFRS	30,950	873,434	33,889	3,209,040	4,147,313
2017	\$ 328,827	\$ 4,786,963	\$ 236,401	\$ 20,225,244	\$ 25,577,435
ERS	306,218	3,949,710	200,379	17,194,267	21,650,574
PFRS	22,609	837,253	36,022	3,030,977	3,926,861
2016	\$ 306,631	\$ 5,140,204	\$ 332,880	\$ (384,834)	\$ 5,394,881
ERS	289,333	4,347,619	198,332	(327,069)	4,508,215
PFRS	17,298	792,585	134,548	(57,765)	886,666
2015	\$ 284,793	\$ 5,797,449	\$ 230,799	\$ 12,444,891	\$ 18,757,932
ERS	272,004	4,893,110	193,176	10,582,102	15,940,392
PFRS	12,789	904,339	37,623	1,862,789	2,817,540
2014	\$ 281,398	\$ 6,064,133	\$ 192,581	\$ 20,598,593	\$ 27,136,705
ERS	273,545	5,137,935	175,677	17,496,541	23,083,698
PFRS	7,853	926,198	16,904	3,102,052	4,053,007
2013	\$ 269,134	\$ 5,336,045	\$ 131,853	\$ 14,717,622	\$ 20,454,654
ERS	264,788	4,524,395	122,931	12,496,378	17,408,492
PFRS	4,346	811,650	8,922	2,221,244	3,046,162
2012	\$ 273,247	\$ 4,585,178	\$ 157,625	\$ 7,868,313	\$ 12,884,363
ERS	268,545	3,878,717	134,821	6,681,603	10,963,686
PFRS	4,702	706,461	22,804	1,186,710	1,920,677

SCHEDULE OF TOTAL CHANGES IN FIDUCIARY NET POSITION

CONTINUED

Retirement Allowances	Post-Retirement Supplement	Death Benefits	Separation from Service	Administrative Expenses	Other Expenses	Total Deductions	Net Increase / Decrease
\$ 13,096,127	\$ 668,641	\$ 257,999	\$ 37,390	\$ 165,097	\$ 61,814	\$ 14,287,068	\$ 62,001,321
11,034,609	571,485	244,443	36,158	144,234	61,488	12,092,417	52,464,901
2,061,518	97,156	13,556	1,232	20,863	326	2,194,651	9,536,420
\$ 12,424,608	\$ 662,035	\$ 159,510	\$ 12,760	\$ 139,050	\$ 275,831	\$ 13,673,794	\$ (17,089,399)
10,489,929	563,583	154,249	12,472	121,694	244,530	11,586,457	(14,602,442)
1,934,679	98,452	5,261	288	17,356	31,301	2,087,337	(2,486,957)
\$ 11,880,340	\$ 646,606	\$ 214,666	\$ 34,645	\$ 136,477	\$ 57,674	\$ 12,970,408	\$ 3,092,350
10,030,590	548,382	202,809	32,984	119,304	57,931	10,992,000	2,544,979
1,849,750	98,224	11,857	1,661	17,173	(257)	1,978,408	547,371
\$ 11,197,802	\$ 628,287	\$ 201,252	\$ 34,969	\$ 122,806	\$ 66,609	\$ 12,251,725	\$ 14,474,618
9,478,272	530,354	191,579	34,302	106,972	68,769	10,410,248	12,168,782
1,719,530	97,933	9,673	667	15,834	(2,160)	1,841,477	2,305,836
\$ 10,617,500	\$ 615,032	\$ 216,150	\$ (5,406)	\$ 107,134	\$ 65,037	\$ 11,615,447	\$ 13,961,988
9,015,444	516,852	207,976	820	93,943	64,441	9,899,476	11,751,098
1,602,056	98,180	8,174	(6,226)	13,191	596	1,715,971	2,210,890
\$ 10,113,758	\$ 606,536	\$ 188,190	\$ 34,488	\$ 106,620	\$ 117,500	\$ 11,167,092	\$ (5,772,211)
8,536,930	508,112	179,861	33,097	93,012	117,197	9,468,209	(4,959,994)
1,576,828	98,424	8,329	1,391	13,608	303	1,698,883	(812,217)
\$ 9,651,227	\$ 601,850	\$ 183,091	\$ 27,628	\$ 107,151	\$ 49,918	\$ 10,620,865	\$ 8,137,067
8,152,183	502,916	174,652	26,067	93,357	51,321	9,000,496	6,939,896
1,499,044	98,934	8,439	1,561	13,794	(1,403)	1,620,369	1,197,171
\$ 9,098,453	\$ 596,556	\$ 203,820	\$ 29,972	\$ 105,662	\$ 48,725	\$ 10,083,188	\$ 17,053,517
7,702,970	497,142	185,169	28,439	92,266	51,341	8,557,327	14,526,371
1,395,483	99,414	18,651	1,533	13,396	(2,616)	1,525,861	2,527,146
\$ 8,669,843	\$ 586,209	\$ 194,170	\$ 29,265	\$ 105,720	\$ 42,049	\$ 9,627,256	\$ 10,827,398
7,339,678	487,100	177,113	28,294	92,134	43,221	8,167,540	9,240,952
1,330,165	99,109	17,057	971	13,586	(1,172)	1,459,716	1,586,446
\$ 8,109,356	\$ 568,466	\$ 184,960	\$ 29,789	\$ 100,649	\$ 45,260	\$ 9,038,480	\$ 3,845,883
6,845,843	470,310	172,340	28,866	87,232	44,949	7,649,540	3,314,146
1,263,513	98,156	12,620	923	13,417	311	1,388,940	531,737

SERVICE RETIREES — ERS

This table shows the number (*Number*), average final average salary (*Avg FAS*), and average annual pension benefit prior to option selection, including any cost-of-living adjustment (*Avg Pen*), of surviving Employees' Retirement System service retirees on March 31, 2021. Groupings are based on years of service and age, with a breakdown by category of employer.

Years of Service	Nearest Age														
	Under 55			55 – 64			65 – 74			75 – 84			85 & Over		
	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen
State															
Under 10	-	-	-	1,041	45,175	4,249	2,332	45,688	5,442	1,235	38,717	5,294	368	27,071	4,281
10 – 14	-	-	-	3,074	47,681	7,488	8,472	43,396	8,366	5,004	36,270	7,810	2,543	28,672	7,457
15 – 19	-	-	-	2,126	54,225	12,152	5,332	52,931	14,234	3,800	42,544	12,929	2,126	32,524	12,045
20 – 24	-	-	-	2,649	67,499	24,744	7,878	64,003	27,242	6,123	50,685	23,689	3,077	37,480	20,597
25 – 29	795	96,861	48,155	6,462	80,475	39,400	10,582	70,081	37,100	6,669	54,557	31,805	2,541	41,591	27,778
30 – 34	57	109,333	54,459	11,363	82,940	50,527	15,234	73,795	47,188	6,906	57,064	39,317	1,864	45,480	34,998
35 & Over	-	-	-	6,368	78,550	54,417	19,372	73,059	55,875	8,889	64,613	52,423	1,994	55,555	48,600
Total	852	97,696	48,577	33,083	74,067	39,116	69,202	65,630	37,108	38,626	52,648	30,793	14,513	39,177	23,583
Counties															
Under 10	-	-	-	872	41,218	3,907	2,062	38,134	4,395	1,133	34,658	4,552	308	25,198	4,010
10 – 14	-	-	-	1,884	43,704	6,844	5,269	38,958	7,471	3,288	32,848	7,050	1,702	25,079	6,522
15 – 19	1	70,627	35,313	1,258	48,890	10,791	3,415	45,198	12,115	2,566	39,119	11,859	1,419	29,055	10,800
20 – 24	313	91,699	47,578	2,030	60,768	24,371	5,270	54,873	23,554	3,587	45,031	21,334	1,658	33,526	18,210
25 – 29	537	93,395	48,500	2,386	79,864	39,468	4,762	61,613	32,693	2,808	49,428	28,782	1,189	37,047	24,692
30 – 34	29	115,388	71,332	4,666	75,997	47,473	5,746	63,870	41,075	2,407	52,693	36,473	624	40,512	30,894
35 & Over	-	-	-	1,969	73,643	51,835	6,357	68,707	52,765	2,493	62,171	50,608	547	49,131	42,869
Total	880	93,490	48,909	15,065	65,935	32,996	32,881	55,491	28,620	18,282	45,389	23,524	7,447	32,693	17,448
Cities															
Under 10	-	-	-	118	36,169	3,285	322	34,073	3,980	168	29,262	3,802	57	21,568	3,199
10 – 14	-	-	-	316	41,501	6,329	824	35,333	6,748	523	30,148	6,582	248	21,441	5,616
15 – 19	-	-	-	193	45,947	10,530	589	43,902	11,835	356	34,184	10,492	207	25,441	9,605
20 – 24	1	84,593	42,297	241	58,464	21,721	709	53,242	22,332	468	40,828	19,259	220	28,099	15,379
25 – 29	-	-	-	227	61,717	28,060	662	58,007	30,585	419	45,618	26,913	201	32,583	22,441
30 – 34	-	-	-	869	67,383	42,068	1,056	59,459	38,199	438	48,154	33,644	155	36,416	28,739
35 & Over	-	-	-	419	68,603	48,177	1,331	62,351	48,078	488	50,606	41,518	133	39,826	36,000
Total	1	84,593	42,297	2,383	59,442	30,536	5,493	52,407	28,076	2,860	40,861	22,064	1,221	29,062	16,953
Towns															
Under 10	-	-	-	267	37,754	3,646	794	31,092	3,707	600	28,041	3,682	140	20,735	2,992
10 – 14	-	-	-	518	45,973	7,411	1,462	39,935	7,765	1,074	30,538	6,551	491	23,250	5,903
15 – 19	-	-	-	409	49,806	11,350	1,194	45,029	12,203	865	36,846	11,120	447	27,477	9,853
20 – 24	-	-	-	552	59,329	21,836	1,519	55,625	23,712	1,093	43,978	20,523	486	33,720	18,128
25 – 29	1	82,713	41,356	389	64,056	29,620	1,266	61,830	32,796	820	49,105	28,426	337	37,563	24,251
30 – 34	-	-	-	1,580	78,467	48,911	1,504	66,266	42,488	716	51,277	35,105	216	40,666	30,301
35 & Over	-	-	-	931	85,840	60,327	2,203	74,088	57,263	762	59,707	48,327	189	43,710	37,519
Total	1	82,713	41,356	4,646	67,978	35,832	9,942	56,577	29,819	5,930	42,502	21,343	2,306	31,523	16,626

SERVICE RETIREES — ERS

CONTINUED

Years of Service	Nearest Age														
	Under 55			55 – 64			65 – 74			75 – 84			85 & Over		
	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen
Villages															
Under 10	-	-	-	88	36,902	3,685	220	32,492	3,675	168	28,759	3,775	49	19,887	2,725
10 – 14	-	-	-	176	44,611	6,959	467	38,161	7,385	325	31,065	6,584	173	23,300	5,786
15 – 19	-	-	-	98	53,213	12,053	356	44,036	12,109	253	40,181	11,973	153	26,162	9,799
20 – 24	1	87,276	48,074	174	57,403	21,130	442	59,360	25,160	308	47,528	22,094	168	31,060	16,805
25 – 29	-	-	-	113	68,718	32,499	340	62,970	33,039	246	49,861	28,940	129	35,692	22,864
30 – 34	-	-	-	415	77,659	48,576	478	63,030	40,109	243	49,616	34,189	75	36,537	28,160
35 & Over	-	-	-	238	83,526	58,501	600	70,031	53,834	236	59,066	48,076	69	45,081	39,378
Total	1	87,276	48,074	1,302	66,187	33,918	2,903	55,267	28,383	1,779	43,841	22,137	816	30,247	16,220
Miscellaneous															
Under 10	-	-	-	790	50,896	4,917	1,702	48,364	5,468	875	40,448	5,218	163	33,262	5,010
10 – 14	-	-	-	1,650	56,173	8,907	3,716	49,973	9,543	2,068	41,229	8,766	909	29,149	7,383
15 – 19	-	-	-	1,236	59,789	13,142	2,767	58,409	15,592	1,690	46,356	13,920	620	33,252	11,768
20 – 24	-	-	-	1,393	69,651	25,184	4,097	65,035	27,184	2,227	54,933	25,178	743	37,151	19,661
25 – 29	-	-	-	937	76,909	35,456	3,277	72,205	37,851	1,751	59,839	33,847	545	44,177	28,714
30 – 34	-	-	-	3,378	91,272	56,954	3,942	81,293	51,737	1,353	65,315	43,994	431	48,753	36,281
35 & Over	-	-	-	1,532	92,325	64,726	3,670	81,642	62,349	1,628	73,885	59,309	443	59,475	50,719
Total	-	-	-	10,916	75,635	36,156	23,171	67,014	32,631	11,592	54,759	27,401	3,854	39,329	21,585
School Districts															
Under 10	-	-	-	1,220	24,684	2,378	3,107	22,958	2,684	1,944	19,807	2,605	589	13,370	2,082
10 – 14	-	-	-	2,334	31,619	5,172	5,826	29,500	5,723	4,228	24,509	5,250	2,465	17,489	4,512
15 – 19	-	-	-	1,848	36,071	8,394	5,181	34,012	9,267	3,605	28,838	8,724	2,027	20,816	7,760
20 – 24	1	86,642	45,747	2,337	44,192	16,694	7,914	42,376	18,242	4,716	34,752	16,439	2,324	22,992	12,675
25 – 29	3	73,913	36,706	1,212	51,319	24,179	5,391	46,592	24,859	3,441	37,118	21,758	1,629	25,548	17,224
30 – 34	-	-	-	2,197	64,927	40,334	3,765	52,423	33,494	2,026	40,492	27,798	763	29,888	22,659
35 & Over	-	-	-	1,007	70,785	49,924	2,242	59,281	45,306	1,229	46,732	37,564	398	35,856	31,456
Total	4	77,095	38,966	12,155	45,247	19,555	33,426	39,976	17,823	21,189	31,959	14,800	10,195	22,100	11,319

SERVICE RETIREES — PFRS

This table shows the number (*Number*), average final average salary (*Avg FAS*), and average annual pension benefit prior to option selection, including any cost-of-living adjustment (*Avg Pen*), of surviving Police and Fire Retirement System service retirees on March 31, 2021. Groupings are based on years of service and age, with a breakdown by category of employer.

Years of Service	Nearest Age														
	Under 40			40 – 49			50 – 59			60 – 69			70 & Over		
	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen
State															
Under 10	-	-	-	-	-	-	14	43,328	5,887	5	52,803	20,459	8	19,124	2,643
10 – 14	-	-	-	-	-	-	21	56,339	11,338	31	42,184	8,703	24	20,692	5,002
15 – 19	-	-	-	-	-	-	7	79,309	23,101	20	76,560	25,104	22	35,543	13,705
20 – 24	-	-	-	159	140,579	73,489	482	123,248	65,834	351	84,936	46,733	767	38,127	27,695
25 – 29	-	-	-	14	155,448	89,591	496	141,429	86,558	344	111,745	69,034	381	58,719	40,798
30 – 34	-	-	-	-	-	-	398	153,308	104,658	496	134,631	92,294	459	76,254	55,438
35 & Over	-	-	-	-	-	-	13	169,511	117,884	176	143,898	99,575	245	86,246	66,896
Total	-	-	-	173	141,782	74,792	1,431	136,352	82,693	1,423	114,869	73,315	1,906	57,281	41,482
Counties															
Under 10	-	-	-	-	-	-	5	66,974	8,137	4	62,594	8,416	2	21,473	2,784
10 – 14	-	-	-	-	-	-	6	76,992	15,724	13	72,575	14,418	23	29,787	7,071
15 – 19	-	-	-	-	-	-	6	122,927	35,026	3	74,125	25,057	17	42,256	14,691
20 – 24	-	-	-	54	177,127	92,411	381	161,354	85,382	246	124,228	66,899	1,078	61,730	39,324
25 – 29	-	-	-	13	210,860	123,548	429	188,197	115,509	332	164,004	102,411	445	95,481	62,905
30 – 34	-	-	-	-	-	-	391	206,979	141,997	527	187,268	129,578	795	124,824	90,090
35 & Over	-	-	-	-	-	-	37	229,537	159,821	172	207,327	147,743	681	151,547	116,570
Total	-	-	-	67	183,672	98,453	1,255	185,792	114,632	1,297	170,221	111,375	3,041	102,900	72,939
Cities															
Under 10	-	-	-	-	-	-	20	42,553	4,883	14	37,467	4,949	11	42,128	8,277
10 – 14	-	-	-	-	-	-	21	51,550	10,181	70	38,033	7,999	77	22,943	5,936
15 – 19	-	-	-	-	-	-	14	71,765	19,302	47	48,635	14,009	38	33,791	12,517
20 – 24	-	-	-	322	118,586	60,307	1,702	99,423	51,117	1,359	77,367	41,284	1,732	42,886	28,177
25 – 29	-	-	-	34	153,231	86,158	639	116,065	67,621	833	99,177	59,518	829	59,983	39,166
30 – 34	-	-	-	-	-	-	350	132,745	86,927	796	114,562	76,061	1,080	71,794	51,603
35 & Over	-	-	-	-	-	-	18	132,602	86,214	322	113,636	76,604	791	87,117	67,158
Total	-	-	-	356	121,895	62,776	2,764	106,791	58,889	3,441	93,290	55,851	4,558	60,107	41,937
Towns															
Under 10	-	-	-	-	-	-	18	36,503	3,777	24	32,821	3,901	35	24,330	3,925
10 – 14	-	-	-	-	-	-	12	57,394	11,594	35	42,102	8,756	54	28,651	7,012
15 – 19	-	-	-	-	-	-	6	73,015	19,350	24	52,483	14,676	24	33,882	13,365
20 – 24	-	-	-	145	127,208	64,197	543	107,404	54,692	429	83,735	44,154	403	51,392	32,311
25 – 29	-	-	-	9	151,338	84,553	177	126,701	71,973	201	104,536	60,098	129	68,660	41,803
30 – 34	-	-	-	-	-	-	113	160,462	103,059	191	129,412	84,394	224	90,052	63,386
35 & Over	-	-	-	-	-	-	7	166,749	109,132	134	149,427	100,310	168	107,795	81,788
Total	-	-	-	154	128,618	65,386	876	116,244	62,979	1,038	101,345	59,090	1,037	68,526	45,506

SERVICE RETIREES — PFRS

CONTINUED

Years of Service	Nearest Age														
	Under 40			40 – 49			50 – 59			60 – 69			70 & Over		
	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen
Villages															
Under 10	-	-	-	-	-	-	17	39,576	4,009	50	28,777	3,506	36	15,774	1,997
10 – 14	-	-	-	-	-	-	10	47,304	9,205	48	38,759	8,064	71	22,079	5,527
15 – 19	-	-	-	-	-	-	9	60,574	16,583	24	48,877	15,154	42	28,626	10,786
20 – 24	-	-	-	93	117,771	59,075	524	102,577	52,010	362	76,124	39,722	462	48,070	30,330
25 – 29	-	-	-	4	150,833	75,416	157	133,398	73,560	168	103,991	56,972	145	61,524	37,557
30 – 34	-	-	-	-	-	-	81	177,040	110,048	156	142,509	91,045	162	85,571	59,021
35 & Over	-	-	-	-	-	-	11	184,077	119,799	96	163,068	106,947	168	112,040	84,366
Total	-	-	-	97	119,135	59,749	809	114,648	60,993	904	96,665	54,587	1,086	61,835	40,617
Miscellaneous															
Under 10	-	-	-	-	-	-	7	57,266	7,271	5	67,858	7,726	3	72,595	7,850
10 – 14	-	-	-	-	-	-	1	75,375	14,321	6	72,210	16,114	16	27,392	6,475
15 – 19	-	-	-	-	-	-	3	162,734	45,764	6	93,692	26,687	8	48,037	18,423
20 – 24	-	-	-	97	168,370	87,984	153	157,534	83,536	201	126,484	67,356	363	77,514	47,188
25 – 29	-	-	-	8	171,041	101,013	125	181,490	109,823	204	155,468	96,139	161	109,401	69,111
30 – 34	-	-	-	-	-	-	50	168,833	113,584	156	168,250	115,482	148	145,155	102,201
35 & Over	-	-	-	-	-	-	3	177,703	108,895	48	179,278	124,796	93	128,291	98,493
Total	-	-	-	105	168,574	88,976	342	165,872	95,664	626	149,083	91,776	792	101,270	66,687

DISABILITY RETIREES — ERS

This table shows the number (*Number*), average final average salary (*Avg FAS*), and average annual pension benefit prior to option selection, including any cost-of-living adjustment (*Avg Pen*), of surviving Employees' Retirement System disability retirees on March 31, 2021. Groupings are based on years of service and age, with a breakdown by category of employer.

Years of Service	Nearest Age														
	Under 55			55 – 64			65 – 74			75 – 84			85 & Over		
	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen
State															
Under 10	108	46,481	27,999	263	31,677	14,469	363	24,112	12,342	263	18,660	10,831	143	15,507	8,713
10 – 14	356	56,662	25,637	881	44,213	16,515	905	37,169	14,513	431	29,632	13,123	125	24,587	12,593
15 – 19	291	63,234	28,416	858	50,706	20,403	972	40,896	18,069	431	33,319	17,110	108	25,822	17,287
20 – 24	128	69,730	35,459	762	56,673	25,585	797	44,970	22,363	368	35,847	22,847	42	28,809	24,348
25 – 29	72	80,239	48,414	646	65,990	38,132	433	50,075	29,142	189	37,460	25,190	18	31,067	30,427
30 – 34	12	72,444	38,803	162	70,116	43,285	193	46,341	30,326	72	38,649	29,493	10	29,563	27,852
35 & Over	-	-	-	29	53,828	29,070	64	48,693	31,145	8	36,896	26,166	1	24,445	21,327
Total	967	61,184	29,897	3,601	52,631	24,394	3,727	40,710	19,712	1,762	31,435	17,809	447	22,749	14,670
Counties															
Under 10	39	71,054	46,855	53	37,319	19,687	63	27,474	14,290	53	18,369	10,268	43	14,703	9,104
10 – 14	177	63,979	32,664	333	48,945	21,536	343	37,307	14,019	187	29,879	12,360	39	20,365	10,427
15 – 19	166	74,806	37,877	377	53,628	23,738	327	44,313	20,215	174	31,280	14,862	44	24,734	14,879
20 – 24	85	80,179	43,354	318	68,146	34,699	281	47,959	25,293	100	38,414	25,158	15	35,496	28,108
25 – 29	22	91,184	57,447	210	73,379	43,290	156	51,380	30,392	38	40,198	28,826	9	31,131	29,490
30 – 34	6	62,145	31,932	43	79,313	49,749	58	57,508	37,687	8	43,461	32,521	2	36,590	32,708
35 & Over	-	-	-	5	66,354	41,940	16	57,112	38,085	-	-	-	1	19,429	4,689
Total	495	72,136	38,459	1,339	59,236	29,603	1,244	44,018	21,675	560	31,643	16,630	153	22,353	14,444
Cities															
Under 10	4	51,732	17,766	11	29,096	11,674	17	24,906	11,351	14	17,703	9,913	16	17,636	10,238
10 – 14	16	55,830	19,061	62	41,325	14,076	79	35,793	11,651	25	29,965	11,771	5	23,722	10,923
15 – 19	14	53,714	17,976	62	46,107	15,914	80	38,035	14,689	38	31,906	13,610	5	23,968	11,120
20 – 24	10	62,651	22,216	49	51,160	19,360	52	37,938	17,536	20	33,266	19,812	4	31,345	30,482
25 – 29	8	52,841	22,746	35	51,346	22,862	50	39,330	22,004	15	32,538	22,272	3	21,475	17,441
30 – 34	1	69,093	37,713	12	64,150	33,300	16	39,917	24,957	2	27,620	19,388	-	-	-
35 & Over	-	-	-	2	71,083	41,836	1	40,615	27,765	-	-	-	-	-	-
Total	53	56,048	20,180	233	47,025	18,111	295	36,991	16,026	114	29,983	15,082	33	21,528	13,584
Towns															
Under 10	12	39,067	16,278	11	33,369	13,537	16	31,439	16,013	18	19,026	11,377	7	12,794	9,123
10 – 14	31	57,175	19,561	98	45,031	14,961	88	37,615	13,345	38	30,297	14,845	13	20,319	7,794
15 – 19	31	58,178	19,969	121	50,466	17,619	105	42,235	16,327	36	34,510	14,893	6	31,492	14,361
20 – 24	27	63,368	23,603	91	61,186	23,199	87	45,287	22,511	26	39,510	27,969	8	36,519	31,636
25 – 29	7	72,716	31,952	63	65,534	30,376	49	45,615	24,172	25	40,985	31,611	-	-	-
30 – 34	2	89,912	47,443	16	73,776	39,426	31	50,060	31,932	7	41,252	34,263	2	28,738	28,308
35 & Over	-	-	-	3	46,266	23,319	7	55,448	33,731	1	60,147	48,728	-	-	-
Total	110	58,586	21,605	403	54,348	21,024	383	42,723	19,618	151	34,019	20,603	36	24,786	15,585

DISABILITY RETIREES — ERS

CONTINUED

Years of Service	Nearest Age														
	Under 55			55 – 64			65 – 74			75 – 84			85 & Over		
	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen
Villages															
Under 10	2	49,803	16,955	5	32,822	13,674	5	25,417	11,846	7	18,142	11,870	2	12,386	11,520
10 – 14	15	55,017	18,737	32	44,227	15,128	26	36,949	14,134	13	27,053	11,888	-	-	-
15 – 19	13	52,886	17,842	31	55,334	18,949	27	43,060	17,460	12	35,562	17,663	4	17,509	11,678
20 – 24	7	62,337	23,018	28	59,198	23,116	22	40,253	19,810	5	36,856	24,769	1	19,619	34,179
25 – 29	7	70,769	30,727	22	72,202	32,675	13	45,068	22,832	8	38,453	25,693	1	14,979	24,334
30 – 34	1	68,368	37,477	7	72,241	38,355	8	61,098	37,027	5	35,275	24,474	1	28,768	27,834
35 & Over	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	45	58,055	21,347	125	56,371	22,196	101	41,689	19,079	50	31,474	18,027	9	17,575	17,344
Miscellaneous															
Under 10	12	42,178	14,751	32	38,938	14,628	40	31,841	14,202	24	25,032	11,094	10	17,149	12,662
10 – 14	52	50,905	17,337	184	47,147	15,371	217	44,882	14,795	77	35,648	12,422	24	25,278	11,757
15 – 19	43	57,393	19,337	173	53,971	18,785	228	44,111	16,016	69	36,009	15,446	10	24,623	11,945
20 – 24	25	62,563	22,065	157	57,255	21,617	122	51,406	20,715	29	44,220	22,461	6	25,397	18,338
25 – 29	10	71,951	31,101	116	61,350	27,596	68	50,221	26,803	13	39,347	27,315	3	39,690	33,436
30 – 34	1	50,108	25,711	37	63,394	33,263	32	59,554	36,778	7	41,734	30,207	2	49,944	45,606
35 & Over	-	-	-	4	56,488	26,943	9	50,958	30,340	1	28,043	22,488	-	-	-
Total	143	55,628	19,569	703	53,962	20,597	716	46,259	18,478	220	36,111	16,040	55	25,377	15,087
School Districts															
Under 10	4	31,650	11,409	22	27,083	10,169	57	20,322	8,888	45	14,935	6,855	49	11,641	6,967
10 – 14	67	38,400	13,162	304	33,771	11,003	350	29,261	9,241	206	24,804	8,691	42	21,241	7,874
15 – 19	40	48,703	16,529	282	39,244	13,148	317	33,880	11,837	154	29,459	11,262	23	20,668	13,376
20 – 24	22	44,015	16,163	185	44,041	16,650	136	35,610	15,371	57	27,866	14,358	8	21,135	13,815
25 – 29	9	70,458	30,998	93	51,064	23,082	69	40,522	20,190	31	32,872	21,239	4	33,129	27,999
30 – 34	3	72,350	37,589	30	52,984	28,515	22	45,255	26,299	2	64,539	46,491	-	-	-
35 & Over	-	-	-	3	64,842	39,853	4	48,920	31,747	-	-	-	-	-	-
Total	145	44,600	16,110	919	39,837	14,666	955	32,429	12,233	495	26,373	10,915	126	17,774	9,542

DISABILITY RETIREES — PFRS

This table shows the number (*Number*), average final average salary (*Avg FAS*), and average annual pension benefit prior to option selection, including any cost-of-living adjustment (*Avg Pen*), of surviving Police and Fire Retirement System disability retirees on March 31, 2021. Groupings are based on years of service and age, with a breakdown by category of employer.

Years of Service	Nearest Age														
	Under 40			40 – 49			50 – 59			60 – 69			70 & Over		
	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen
State															
Under 10	3	95,244	55,300	14	79,433	52,435	41	49,396	31,739	35	30,458	21,826	69	20,199	20,128
10 – 14	2	109,304	82,158	10	103,829	61,363	34	74,014	43,404	27	42,787	27,225	43	22,899	23,709
15 – 19	-	-	-	14	121,245	71,087	45	93,122	59,831	39	58,625	34,667	67	30,728	27,744
20 – 24	-	-	-	10	135,361	89,378	55	116,474	76,840	30	79,287	53,192	75	43,590	34,333
25 – 29	-	-	-	-	-	-	31	137,339	92,077	25	107,946	74,112	45	61,998	44,505
30 – 34	-	-	-	-	-	-	5	139,927	100,332	17	128,495	93,284	22	77,633	59,795
35 & Over	-	-	-	-	-	-	-	-	-	3	122,525	84,708	12	85,471	67,051
Total	5	100,868	66,044	48	108,362	67,431	211	95,239	61,857	176	68,960	46,248	333	39,729	32,928
Counties															
Under 10	1	89,295	67,547	9	86,309	57,005	32	78,549	47,762	17	49,866	37,461	50	27,508	28,341
10 – 14	3	137,754	68,937	31	135,041	88,295	80	102,375	71,970	39	68,612	48,142	102	35,733	36,294
15 – 19	-	-	-	35	151,390	104,116	107	121,122	86,116	37	89,746	63,760	214	50,180	44,701
20 – 24	-	-	-	16	176,953	116,566	126	145,430	98,872	78	120,006	84,318	252	64,825	53,891
25 – 29	-	-	-	3	175,345	118,260	71	170,313	121,777	43	146,292	100,630	82	82,625	64,734
30 – 34	-	-	-	-	-	-	17	205,747	155,184	24	171,857	126,974	42	113,065	85,875
35 & Over	-	-	-	-	-	-	-	-	-	3	158,072	90,908	23	132,740	102,726
Total	4	125,640	68,590	94	144,883	96,959	433	132,974	92,939	241	112,423	79,243	765	61,009	51,690
Cities															
Under 10	9	74,367	42,035	22	72,166	45,405	56	55,372	36,621	47	39,404	27,576	44	21,155	18,012
10 – 14	13	90,482	53,902	53	83,921	50,606	130	67,576	42,453	95	45,380	30,909	84	25,686	25,287
15 – 19	1	79,930	26,823	60	96,287	57,537	172	77,239	48,680	116	57,362	38,871	146	35,003	29,895
20 – 24	-	-	-	13	102,321	62,317	178	99,844	60,817	165	73,329	48,452	250	43,233	35,103
25 – 29	-	-	-	-	-	-	72	105,863	67,251	117	86,823	55,995	145	51,031	39,101
30 – 34	-	-	-	-	-	-	11	141,422	86,740	51	92,766	62,200	83	62,324	45,682
35 & Over	-	-	-	-	-	-	-	-	-	9	128,002	92,783	29	63,212	45,108
Total	23	83,717	48,081	148	88,803	53,671	619	84,202	52,608	600	68,263	45,491	781	42,782	34,349
Towns															
Under 10	1	89,005	66,754	15	82,134	54,471	25	57,529	36,960	21	42,476	28,933	17	19,863	16,350
10 – 14	4	103,777	59,008	25	100,625	61,134	42	75,868	49,894	35	58,109	35,521	34	32,599	29,440
15 – 19	1	138,901	69,450	21	119,073	75,432	56	95,900	62,095	27	61,968	41,560	45	39,642	35,379
20 – 24	-	-	-	7	116,137	83,346	67	116,326	77,593	65	81,440	55,918	65	50,896	40,046
25 – 29	-	-	-	-	-	-	26	127,243	77,984	32	102,882	70,384	21	65,639	51,592
30 – 34	-	-	-	-	-	-	6	160,946	101,616	16	146,000	100,171	16	82,709	60,060
35 & Over	-	-	-	-	-	-	-	-	-	1	120,255	60,128	5	104,791	80,909
Total	6	107,169	62,039	68	103,840	66,366	222	99,383	64,562	197	79,396	53,415	203	48,098	39,029

DISABILITY RETIREES — PFRS

CONTINUED

Years of Service	Nearest Age														
	Under 40			40 – 49			50 – 59			60 – 69			70 & Over		
	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen	Number	Avg FAS	Avg Pen
Villages															
Under 10	3	95,070	71,303	9	66,389	46,385	22	59,986	38,634	23	36,825	25,738	23	19,413	20,575
10 – 14	1	179,606	134,704	18	92,798	48,028	44	81,869	55,045	32	52,632	32,920	36	29,449	27,241
15 – 19	-	-	-	10	102,453	64,290	69	91,414	58,546	42	67,076	43,385	55	42,594	36,150
20 – 24	-	-	-	6	144,942	84,961	52	110,257	69,923	43	81,627	53,276	52	51,912	42,005
25 – 29	-	-	-	1	132,173	66,087	19	156,878	96,275	16	103,689	69,588	21	71,695	52,952
30 – 34	-	-	-	-	-	-	2	168,326	86,997	13	135,450	89,093	9	85,007	65,258
35 & Over	-	-	-	-	-	-	-	-	-	4	140,837	76,286	7	78,591	48,747
Total	4	116,204	87,153	44	97,596	56,834	208	97,501	62,264	173	74,229	48,180	203	46,155	37,768
Miscellaneous															
Under 10	2	94,099	56,698	13	89,133	62,572	12	67,007	41,988	14	49,970	33,846	10	48,557	39,154
10 – 14	-	-	-	24	113,099	70,983	37	112,613	77,620	22	71,005	47,894	17	54,837	38,305
15 – 19	-	-	-	10	126,149	82,427	26	123,154	82,978	29	93,973	65,591	38	58,451	46,447
20 – 24	-	-	-	9	158,813	99,835	31	153,160	104,094	76	121,231	84,532	40	87,628	67,127
25 – 29	-	-	-	-	-	-	9	155,680	106,378	37	143,664	105,573	18	100,070	73,191
30 – 34	-	-	-	-	-	-	1	177,397	136,222	10	153,756	112,482	4	120,005	88,898
35 & Over	-	-	-	-	-	-	-	-	-	-	-	-	5	140,180	109,099
Total	2	94,099	56,698	56	117,213	75,711	116	124,993	84,946	188	111,987	79,176	132	76,714	58,419

NEW OPTION SELECTIONS

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

Options	2017		2018		2019		2020		2021	
	Number	\$ Amount	Number	\$ Amount	Number	\$ Amount	Number	\$ Amount	Number	\$ Amount
ERS Females										
Single Life Allowance**	7,413	183,872,745	8,852	209,575,192	7,072	175,527,699	7,494	193,955,163	8,077	213,349,680
Cash Refund	7	234,374	16	580,262	3	116,424	8	255,096	3	238,208
Joint Allowance — Full	803	13,434,417	1,050	16,771,815	867	14,305,912	606	11,590,002	843	17,598,093
Joint Allowance — Half	131	3,357,590	147	4,065,239	164	4,603,746	135	3,982,328	199	5,438,576
Five Year Certain	109	2,729,206	142	3,612,207	122	3,271,204	92	2,756,281	109	2,911,558
Ten Year Certain	361	8,035,482	439	9,949,556	390	8,617,407	298	7,529,028	294	8,230,932
Pop-Up — Full	1,696	40,354,572	2,413	58,537,182	1,922	49,174,363	2,103	54,882,652	1,932	50,079,503
Pop-Up — Half	789	25,869,734	1,046	34,464,128	862	30,449,620	848	29,941,152	829	28,910,032
Other (Option 4)	660	22,628,793	776	28,321,409	676	24,896,907	764	29,259,512	1,402	51,651,839
Total	11,969	300,516,917	14,881	365,876,993	12,078	310,963,285	12,348	334,151,218	13,688	378,408,424
ERS Males										
Single Life Allowance**	3,397	108,315,670	4,416	135,424,027	3,489	112,196,278	3,501	118,808,585	3,578	123,212,184
Cash Refund	6	242,131	8	95,032	2	89,243	2	45,768	1	132,310
Joint Allowance — Full	1,742	54,862,090	2,300	71,932,738	1,740	55,387,988	1,409	50,905,250	1,641	62,449,602
Joint Allowance — Half	219	9,282,560	303	12,609,739	239	9,581,695	213	9,828,230	249	11,298,867
Five Year Certain	66	1,910,993	89	2,895,753	55	1,895,058	35	1,258,873	55	2,096,271
Ten Year Certain	206	5,973,927	321	10,313,589	229	6,929,664	148	4,733,889	161	6,148,667
Pop-Up — Full	2,452	83,670,111	3,237	113,230,443	2,559	93,913,676	2,740	102,742,477	2,341	91,433,789
Pop-Up — Half	741	31,599,049	894	41,086,014	728	33,166,966	715	32,589,400	685	32,704,597
Other (Option 4)	886	39,641,518	1,040	47,525,434	956	46,899,818	972	48,802,333	1,288	60,908,507
Total	9,715	335,498,055	12,608	435,112,773	9,997	360,060,391	9,735	369,714,808	9,999	390,384,798
PFRS Females										
Single Life Allowance**	85	6,071,215	75	5,769,780	66	4,677,275	83	6,433,337	60	4,520,475
Cash Refund	-	-	-	-	-	-	-	-	-	-
Joint Allowance — Full	4	288,938	5	329,517	6	296,999	4	301,195	3	179,244
Joint Allowance — Half	3	259,007	1	88,083	1	77,433	-	-	5	511,519
Five Year Certain	2	220,344	1	89,883	1	77,829	1	116,993	-	-
Ten Year Certain	6	406,985	6	395,390	6	464,880	6	496,751	11	1,107,545
Pop-Up — Full	13	878,840	12	629,577	18	1,049,748	19	1,396,329	15	1,056,648
Pop-Up — Half	9	654,009	8	416,178	8	531,088	8	632,727	11	936,944
Other (Option 4)	8	714,073	1	115,472	9	762,431	9	695,924	14	1,251,756
Total	130	9,493,415	109	7,833,885	115	7,937,687	130	10,073,259	119	9,564,134
PFRS Males										
Single Life Allowance**	499	35,551,463	433	31,209,987	421	29,947,306	391	31,485,743	449	36,727,925
Cash Refund	-	-	-	-	-	-	1	71,591	-	-
Joint Allowance — Full	232	16,971,860	272	20,499,283	244	18,881,698	173	13,985,544	247	20,403,913
Joint Allowance — Half	84	7,826,713	46	3,635,453	52	4,741,723	40	3,776,545	63	6,339,285
Five Year Certain	6	387,703	9	514,073	6	469,869	3	137,439	3	303,062
Ten Year Certain	39	2,722,041	33	2,622,059	47	3,861,153	19	1,560,943	45	3,986,930
Pop-Up — Full	399	25,316,535	468	33,096,113	430	30,376,811	428	30,749,752	456	34,128,873
Pop-Up — Half	185	15,082,654	146	11,290,976	174	14,765,782	142	12,705,827	141	13,414,969
Other (Option 4)	222	19,064,090	229	19,787,409	247	22,890,719	223	21,908,590	298	28,192,059
Total	1,666	122,923,063	1,636	122,655,356	1,621	125,935,066	1,420	116,381,978	1,702	143,497,020

* In 2021, 11 ERS retirees selected partial lump sums which totaled \$1,641,202 and 158 PFRS retirees selected partial lump sums which totaled \$31,498,247.

There was also one new retiree whose gender was unknown and whose annual benefits totaled \$63,109.

** Includes Single Life Allowance and Option ½.

OPTION SELECTIONS — TOTAL PAYMENTS

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

Options	2017		2018		2019		2020		2021	
	Number	\$ Amount	Number	\$ Amount	Number	\$ Amount	Number	\$ Amount	Number	\$ Amount
ERS Females										
Single Life Allowance**	145,621	2,576,016,448	150,277	2,739,135,518	152,563	2,862,124,619	153,725	2,979,273,483	155,918	3,112,384,906
Cash Refund	6,107	83,233,943	5,714	80,322,054	5,299	76,843,755	4,775	72,194,493	4,377	67,916,247
Joint Allowance — Full	10,183	127,899,065	10,913	141,398,327	11,421	152,048,415	11,615	159,884,469	12,092	173,056,112
Joint Allowance — Half	2,769	54,789,535	2,807	57,380,922	2,872	60,904,589	2,870	63,111,606	2,938	66,541,788
Five Year Certain	3,886	66,210,411	3,862	67,906,786	3,779	69,125,708	3,662	69,572,558	3,567	70,224,731
Ten Year Certain	6,743	99,655,096	6,940	107,287,519	7,041	112,567,552	7,011	116,331,193	7,012	120,916,879
Pop-Up — Full	18,662	343,869,918	20,800	399,772,716	22,346	444,996,611	24,020	494,118,843	25,427	537,220,378
Pop-Up — Half	14,316	345,395,206	15,051	375,601,607	15,549	401,594,114	15,958	424,654,736	16,377	447,014,336
Other (Option 4)	6,861	202,888,985	7,533	229,338,653	8,110	252,826,035	8,745	279,543,719	9,961	326,165,307
Total	215,148	3,899,958,607	223,897	4,198,144,103	228,980	4,433,031,398	232,381	4,658,685,104	237,669	4,921,440,687
ERS Males										
Single Life Allowance**	64,058	1,707,602,045	66,276	1,803,709,752	67,333	1,873,321,039	67,614	1,928,355,918	68,033	1,984,790,144
Cash Refund	3,696	83,476,833	3,441	78,804,268	3,178	74,872,721	2,886	69,453,638	2,610	64,292,207
Joint Allowance — Full	30,795	788,151,000	31,961	839,107,754	32,422	871,363,515	32,469	897,130,873	32,642	929,668,182
Joint Allowance — Half	8,229	274,227,687	8,135	277,712,944	7,976	278,040,483	7,730	276,376,551	7,510	274,849,146
Five Year Certain	1,842	46,702,985	1,830	47,617,006	1,785	47,612,911	1,689	46,783,149	1,614	46,456,806
Ten Year Certain	4,567	108,728,127	4,683	115,864,288	4,675	118,606,728	4,572	118,557,208	4,490	120,039,266
Pop-Up — Full	28,304	798,701,377	30,932	900,951,147	32,789	982,552,440	34,682	1,068,486,475	36,002	1,137,566,580
Pop-Up — Half	14,241	504,090,575	14,760	536,626,853	15,050	558,862,486	15,290	579,559,321	15,395	596,573,836
Other (Option 4)	10,541	426,193,527	11,411	469,149,907	12,191	511,565,281	12,908	552,402,528	13,851	602,998,488
Total	166,273	4,737,874,156	173,429	5,069,543,917	177,399	5,316,797,601	179,840	5,537,105,666	182,147	5,757,234,659
PFRS Females										
Single Life Allowance**	998	56,133,650	1,071	62,012,419	1,135	66,721,803	1,214	73,186,217	1,263	77,230,840
Cash Refund	5	295,261	5	295,261	4	253,161	4	253,162	4	253,162
Joint Allowance — Full	51	2,360,691	55	2,661,736	57	2,785,671	59	3,019,737	62	3,199,695
Joint Allowance — Half	30	1,807,825	31	1,904,049	32	1,981,483	32	1,981,483	37	2,494,102
Five Year Certain	16	944,258	17	1,034,142	18	1,114,808	19	1,231,800	19	1,231,800
Ten Year Certain	95	5,349,217	101	5,744,608	105	6,090,277	109	6,540,722	119	7,592,549
Pop-Up — Full	165	8,484,706	176	9,100,567	194	10,236,019	212	11,625,143	227	12,710,126
Pop-Up — Half	98	5,205,253	105	5,615,901	112	6,088,553	119	6,627,755	129	7,505,354
Other (Option 4)	46	3,514,927	47	3,642,814	56	4,412,811	65	5,108,735	77	6,266,123
Total	1,504	84,095,788	1,608	92,011,497	1,713	99,684,586	1,833	109,574,757	1,937	118,483,754
PFRS Males										
Single Life Allowance**	15,088	620,012,783	15,090	641,656,655	15,058	662,634,652	14,859	679,609,710	14,675	699,432,337
Cash Refund	1,349	45,479,028	1,271	43,185,558	1,198	41,381,216	1,127	39,497,836	1,049	37,116,794
Joint Allowance — Full	3,258	161,342,953	3,459	179,355,572	3,641	196,644,810	3,729	207,687,851	3,882	224,780,152
Joint Allowance — Half	1,456	83,747,797	1,461	86,401,483	1,477	90,168,956	1,466	91,967,811	1,473	95,942,110
Five Year Certain	345	13,749,301	345	13,967,834	330	13,837,335	317	13,555,294	307	13,470,260
Ten Year Certain	1,375	55,505,892	1,371	57,290,017	1,375	59,847,097	1,330	59,371,442	1,319	61,808,085
Pop-Up — Full	3,733	181,480,456	4,159	214,127,077	4,544	244,142,774	4,915	273,727,808	5,270	303,350,605
Pop-Up — Half	2,821	173,548,925	2,920	183,945,752	3,055	197,956,731	3,137	207,905,337	3,201	218,102,071
Other (Option 4)	1,870	145,785,609	2,085	165,413,074	2,318	188,071,753	2,513	208,535,266	2,768	233,826,623
Total	31,295	1,480,652,744	32,161	1,585,343,023	32,996	1,694,685,323	33,393	1,781,858,359	33,944	1,887,829,041

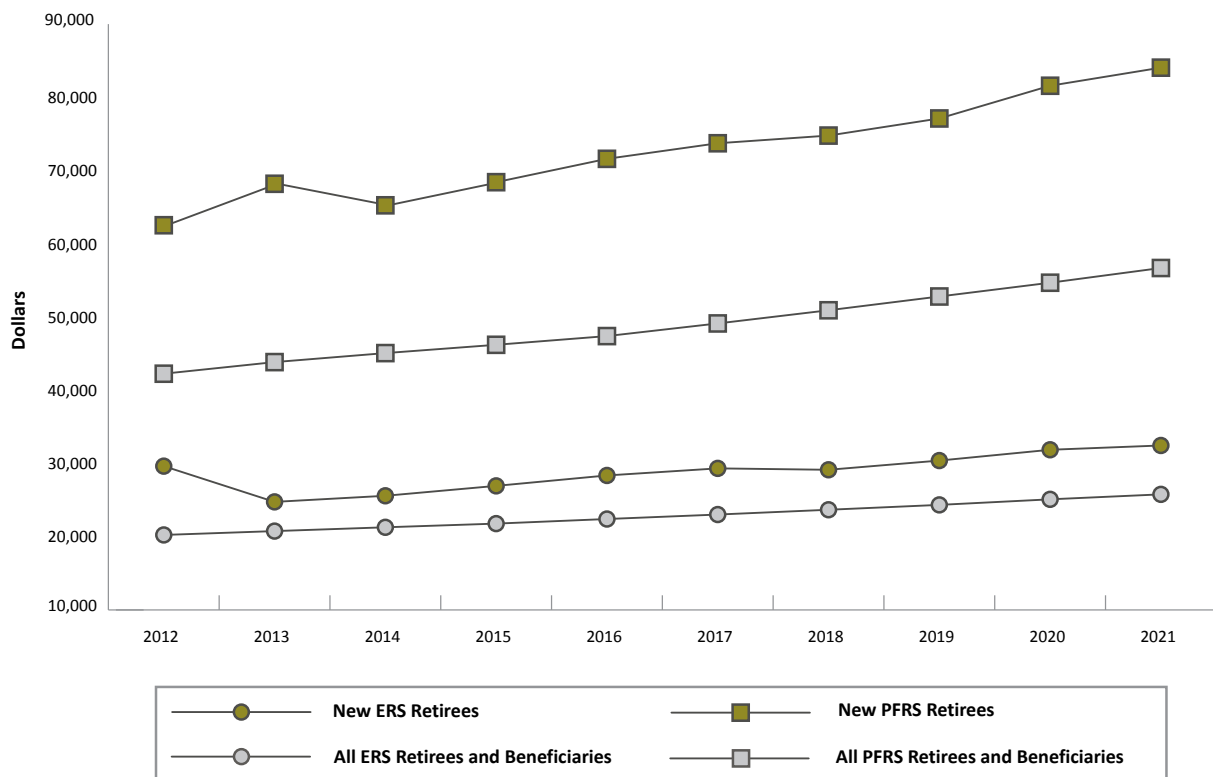
* In the seven years since this program began, 49 ERS retirees have selected partial lump sums which totaled approximately \$6,670,734. In the 13 years since the program began, 1,839 PFRS retirees have selected partial lump sums which totaled \$259,146,056. As of the fiscal year ending March 31, 2021, there are an additional 14 retirees whose gender is unknown and whose annual benefits total \$202,123.

** Includes Single Life Allowance figures and Option %.

AVERAGE PENSION BENEFITS PAID DURING YEAR SHOWN

This table shows the average annual benefit payments to all retirees and beneficiaries receiving benefits during the given fiscal year compared with average annual benefit payments to new retirees during the year. The benefit consists of actual payments after option selection and any partial lump sum distribution, plus any cost-of-living adjustment. A breakdown is provided by retirement system. The marked line graph (below) shows the trend in these benefit payments over the past 10 years.

Year	ERS		PFRS	
	All Retirees & Beneficiaries	New Retirees	All Retirees & Beneficiaries	New Retirees
2012	\$ 20,241	\$ 29,636	\$ 42,259	\$ 62,535
2013	20,766	24,756	43,844	68,197
2014	21,285	25,588	45,074	65,256
2015	21,788	26,941	46,207	68,414
2016	22,415	28,364	47,397	71,603
2017	23,026	29,331	49,123	73,729
2018	23,680	29,139	50,922	74,779
2019	24,345	30,397	52,804	77,116
2020	25,105	31,872	54,684	81,584
2021	25,783	32,458	56,695	84,053



AVERAGE BENEFIT PAY TYPES

NEW BENEFITS: ERS

This table shows the number of retirements granted (*Number*), the average monthly retirement allowance prior to option selection or any partial lump sum distribution (*Monthly Allowance*), and the average final average salary (*Average FAS*) of members retiring during the fiscal year ending March 31, 2021. Groupings are based on years of service, with a breakdown by retirement type.

Years of Service	Number	Monthly Allowance	Average FAS
Service Retirements			
Under 5	3	\$ 3,994	\$ 77,559
5 – 9	1,012	346	37,850
10 – 14	3,247	787	50,360
15 – 19	2,725	1,191	54,252
20 – 24	4,536	2,200	63,803
25 – 29	3,233	3,263	76,242
30 – 34	5,595	4,322	84,062
35 – 39	2,327	5,073	88,211
40 & Over	781	6,055	92,791
Total	23,459	\$ 2,873	\$ 69,647
Ordinary Disability Retirements			
Under 5	1	\$ 884	\$ 32,507
5 – 9	2	2,034	75,052
10 – 14	38	1,414	54,370
15 – 19	69	1,612	59,778
20 – 24	25	2,112	71,183
25 – 29	26	2,605	71,683
30 – 34	13	3,066	71,353
35 – 39	2	3,068	63,064
40 & Over	-	-	-
Total	176	\$ 1,911	\$ 62,900
Performance of Duty Disability Retirements			
Under 5	2	\$ 3,060	\$ 48,994
5 – 9	5	4,150	66,518
10 – 14	14	5,079	83,371
15 – 19	8	5,135	82,404
20 – 24	16	6,212	99,720
25 – 29	4	5,253	84,787
30 – 34	-	-	-
35 – 39	-	-	-
40 & Over	-	-	-
Total	49	\$ 5,295	\$ 85,544
Accidental Disability Retirements			
Under 5	-	\$ -	\$ -
5 – 9	-	-	-
10 – 14	1	5,061	80,981
15 – 19	-	-	-
20 – 24	2	5,174	83,462
25 – 29	1	8,251	132,021
30 – 34	-	-	-
35 – 39	-	-	-
40 & Over	-	-	-
Total	4	\$ 5,915	\$ 94,981

AVERAGE BENEFIT PAY TYPES

CONTINUED

NEW BENEFITS: PFRS

This table shows the number of retirements granted (*Number*), the average monthly retirement allowance prior to option selection or any partial lump sum distribution (*Monthly Allowance*), and the average final average salary (*Average FAS*) of members retiring during the fiscal year ending March 31, 2021. Groupings are based on years of service, with a breakdown by retirement type.

Years of Service	Number	Monthly Allowance	Average FAS
Service Retirements			
Under 5	-	\$ -	\$ -
5 – 9	22	322	36,894
10 – 14	19	1,069	55,013
15 – 19	17	2,066	88,203
20 – 24	603	5,866	136,632
25 – 29	464	7,827	158,449
30 – 34	452	9,108	164,554
35 – 39	134	9,852	175,092
40 & Over	42	9,143	157,302
Total	1,753	\$ 7,446	\$ 150,435
Ordinary Disability Retirements			
Under 5	-	\$ -	\$ -
5 – 9	1	3,964	95,142
10 – 14	3	2,799	100,763
15 – 19	-	-	-
20 – 24	1	3,708	133,520
25 – 29	-	-	-
30 – 34	-	-	-
35 – 39	-	-	-
40 & Over	-	-	-
Total	5	\$ 3,214	\$ 106,190
Performance of Duty Disability Retirements			
Under 5	-	\$ -	\$ -
5 – 9	2	3,107	74,577
10 – 14	7	4,038	97,108
15 – 19	5	4,516	108,401
20 – 24	6	5,837	140,096
25 – 29	3	5,489	131,735
30 – 34	-	-	-
35 – 39	-	-	-
40 & Over	-	-	-
Total	23	\$ 4,719	\$ 113,335
Accidental Disability Retirements			
Under 5	-	\$ -	\$ -
5 – 9	-	-	-
10 – 14	4	6,825	109,201
15 – 19	15	7,453	131,005
20 – 24	9	8,243	138,957
25 – 29	11	8,789	143,455
30 – 34	1	12,910	206,563
35 – 39	-	-	-
40 & Over	-	-	-
Total	40	\$ 8,072	\$ 135,926

NEW BENEFITS — SERVICE RETIREMENTS BY AGE AND SERVICE

This table shows the number of retirements granted (*Number*), the average annual retirement allowance prior to option selection or any partial lump sum distribution (*Allowance*), and the average allowance as a percentage of the average final average salary (%) of new service retirees during the fiscal year ending March 31, 2021. Groupings are based on years of service and age at retirement, within each retirement system.

Years of Service	Age at Retirement											
	50 – 59			60 – 64			65 – 69			70 & Over		
	Number	Allowance	%	Number	Allowance	%	Number	Allowance	%	Number	Allowance	%
ERS												
Under 5	-	\$ -	-	1	\$ 2,256	10	-	\$ -	-	2	\$ 74,655	62
5 – 9	234	3,830	9	336	4,235	11	307	4,277	11	135	4,236	12
10 – 14	664	7,609	15	1,092	9,623	19	1,057	9,997	20	434	10,499	20
15 – 19	527	11,165	21	950	14,550	27	848	15,526	28	400	15,212	28
20 – 24	773	23,502	35	1,797	26,675	42	1,398	27,604	43	568	26,592	43
25 – 29	841	41,945	46	1,275	38,091	52	795	38,123	54	322	38,654	54
30 – 34	2,793	52,959	62	1,851	51,427	62	659	50,690	63	292	46,885	63
35 – 39	957	57,654	68	875	63,246	69	330	60,752	70	165	67,408	71
40 & Over	26	57,035	75	290	62,186	76	280	73,694	78	185	89,724	82
Total	6,815	\$ 39,596	48	8,467	\$ 34,348	46	5,674	\$ 29,614	42	2,503	\$ 32,091	43

Years of Service	Age at Retirement											
	40 – 49			50 – 54			55 – 59			60 & Over		
	Number	Allowance	%	Number	Allowance	%	Number	Allowance	%	Number	Allowance	%
PFRS												
Under 5	-	\$ -	-	-	\$ -	-	-	\$ -	-	-	\$ -	-
5 – 9	-	-	-	-	-	-	16	4,334	10	6	2,647	11
10 – 14	1	35,526	50	-	-	-	13	11,122	20	5	12,739	23
15 – 19	-	-	-	-	-	-	13	25,857	26	4	21,356	38
20 – 24	308	69,804	51	203	72,898	52	65	69,785	51	27	59,890	50
25 – 29	48	92,771	56	217	92,698	58	170	95,588	60	29	95,303	59
30 – 34	-	-	-	98	108,570	64	266	112,521	67	88	100,408	66
35 – 39	-	-	-	1	151,924	70	51	133,150	68	82	108,529	66
40 & Over	-	-	-	-	-	-	1	172,333	70	41	108,192	85
Total	357	\$ 72,796	52	519	\$ 88,065	57	595	\$ 97,865	60	282	\$ 94,741	64

NEW BENEFITS — ACCIDENTAL AND ORDINARY DEATH

ACCIDENTAL DEATH BENEFITS

During the fiscal year ending March 31, 2021, the Employees' Retirement System approved 21 accidental death benefits which averaged \$40,945 annually. The Police and Fire Retirement System approved six accidental death benefits, which averaged \$81,447 annually.

ORDINARY DEATH BENEFITS

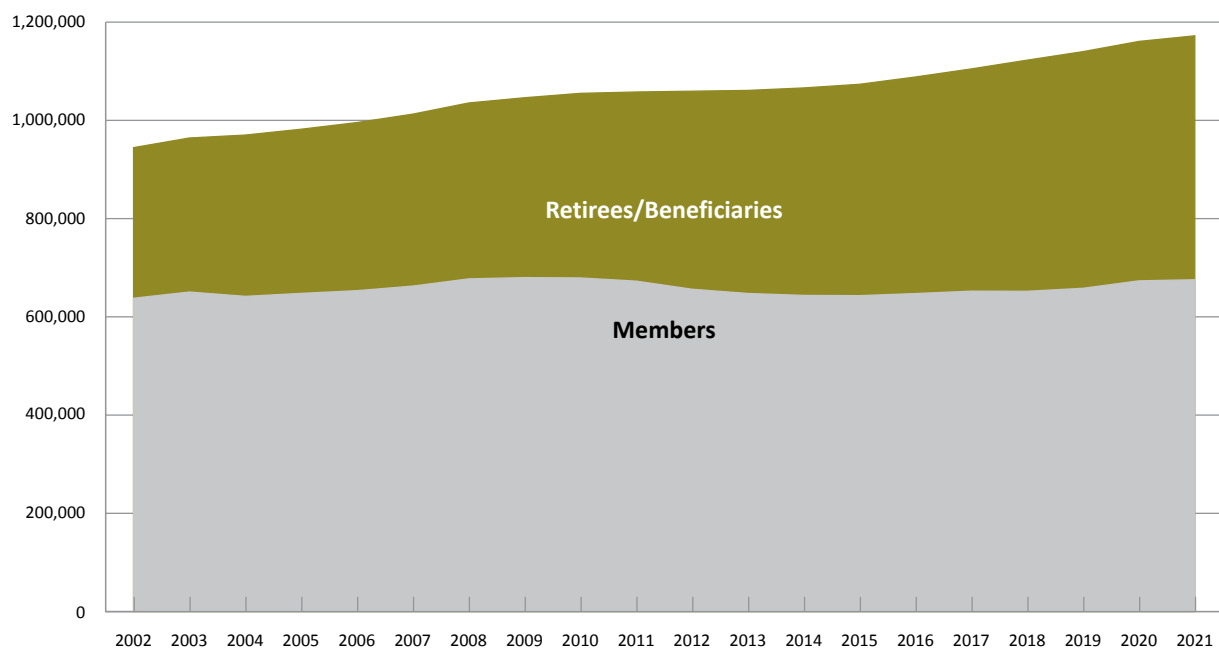
This table shows the number of ordinary death benefits granted (*Number*), the average benefit paid (*Average Benefit*), and the average benefit paid as a percentage of average final average salary (*Percentage of Salary*) of new ordinary death beneficiaries during the fiscal year ending March 31, 2021. Groupings are based on years of service, with a breakdown by retirement system.

Years of Service	ERS			PFRS		
	Number	Average Benefit	Percentage of Salary	Number	Average Benefit	Percentage of Salary
Under 5	180	\$ 41,058	95.1	4	\$ 156,045	267.2
5 – 9	222	76,672	166.3	3	-	-
10 – 14	223	108,009	224.7	2	110,500	301.3
15 – 19	185	143,928	247.6	2	275,500	300.2
20 – 24	100	161,444	264.5	3	743,237	568.7
25 – 29	72	195,344	274.8	2	961,936	736.0
30 – 34	47	211,263	287.8	1	2,050,009	822.8
35 – 39	22	201,502	267.4	1	1,202,295	601.1
40 & Over	12	209,900	301.2	-	-	-
Total	1,063	\$ 114,972	207.1	18	\$ 489,004	485.0

COMBINED SYSTEM PARTICIPANTS

This table shows participant counts for ERS and PFRS combined. Members represent those participants not currently collecting a benefit, while Retirees/Beneficiaries represent those currently collecting a benefit. The Total Participants column represents the sum of the member and retiree/beneficiary counts. The Percentage Changed column shows the percentage change increase or decrease in counts calculated on a year-over-year basis. The stacked line graph (below) shows the trends in these counts over the prior 20 years.

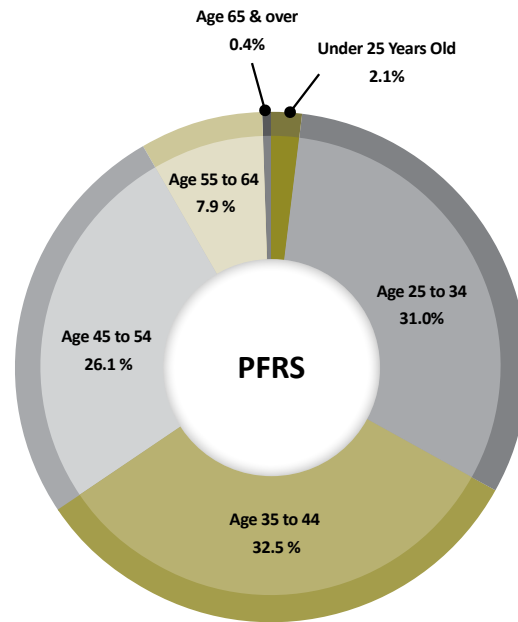
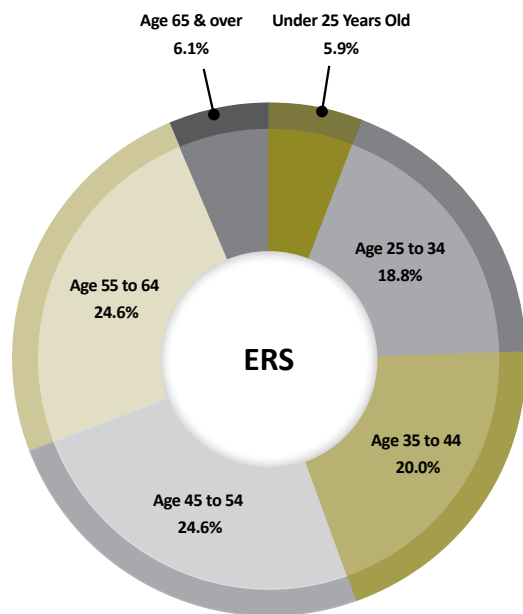
Fiscal Year	Members	Percentage Changed	Retirees/ Beneficiaries	Percentage Changed	Total Participants	Percentage Changed
2002	637,896	2	306,604	3	944,500	2
2003	650,543	2	313,597	2	964,140	2
2004	641,721	(1)	328,357	5	970,078	1
2005	647,758	1	334,251	2	982,009	1
2006	653,291	1	342,245	2	995,536	1
2007	662,633	1	350,066	2	1,012,699	2
2008	677,321	2	358,109	2	1,035,430	2
2009	679,908	0	366,178	2	1,046,086	1
2010	679,217	0	375,803	3	1,055,020	1
2011	672,723	(1)	385,031	2	1,057,754	0
2012	656,224	(2)	403,174	5	1,059,398	0
2013	647,574	(1)	413,436	3	1,061,010	0
2014	643,659	(1)	422,405	2	1,066,064	0
2015	643,178	0	430,308	2	1,073,486	1
2016	647,399	1	440,943	2	1,088,342	1
2017	652,324	1	452,455	3	1,104,779	2
2018	652,030	0	470,596	4	1,122,626	2
2019	658,176	1	481,795	2	1,139,971	2
2020	673,336	2	487,407	1	1,160,743	2
2021	675,519	0	496,628	2	1,172,147	1



MEMBERSHIP BY AGE AND YEARS OF SERVICE

This table shows membership counts (*Number*), and percentage of the system's total membership count (*Percentage*), as of the fiscal year ending March 31, 2021. Groupings are based on age and years of service, with a breakdown by retirement system.

Age	Years of Service											
	Total		0 – 4		5 – 9		10 – 19		20 – 29		30 & Over	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
ERS												
Under 25	37,741	5.9	37,409	5.8	332	0.1	–	–	–	–	–	–
25 – 34	120,304	18.8	90,441	14.1	25,190	3.9	4,673	0.7	–	–	–	–
35 – 44	128,170	20.0	52,005	8.1	31,389	4.9	40,675	6.3	4,101	0.6	–	–
45 – 54	157,631	24.6	39,925	6.2	29,996	4.7	49,871	7.8	32,131	5.0	5,708	0.9
55 – 64	157,578	24.6	27,483	4.3	25,394	4.0	51,021	8.0	35,947	5.6	17,733	2.8
65 & Over	39,157	6.1	6,853	1.1	6,708	1.0	12,505	2.0	8,179	1.3	4,912	0.8
Total	640,581	100.0	254,116	39.7	119,009	18.6	158,745	24.8	80,358	12.5	28,353	4.4
PFRS												
Under 25	749	2.1	745	2.1	4	–	–	–	–	–	–	–
25 – 34	10,826	31.0	6,400	18.3	3,703	10.6	723	2.1	–	–	–	–
35 – 44	11,358	32.5	1,574	4.5	2,589	7.4	6,612	18.9	583	1.7	–	–
45 – 54	9,105	26.1	316	0.9	554	1.6	3,226	9.2	4,581	13.1	428	1.2
55 – 64	2,747	7.9	95	0.3	238	0.7	278	0.8	951	2.7	1,185	3.4
65 & Over	153	0.4	22	0.1	49	0.1	21	0.1	10	–	51	0.1
Total	34,938	100.0	9,152	26.2	7,137	20.4	10,860	31.1	6,125	17.5	1,664	4.8



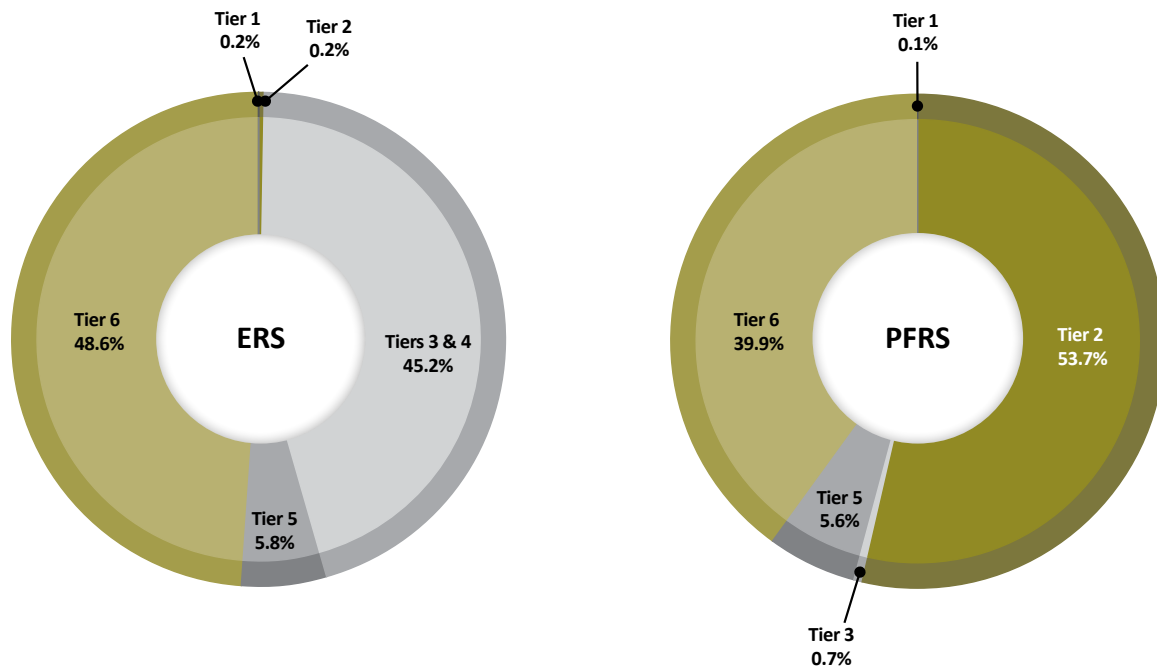
Note: Percentages may not sum to 100% due to rounding.

MEMBERSHIP BY TIER

This table shows membership counts (*Number*), and percentage of the system's total membership count (*Percentage*), as of the fiscal year ending March 31, 2021. Groupings are based on tier, with a breakdown by retirement system.

	ERS		PFRS		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
Tier 1	1,305	0.2	19	0.1	1,324	0.2
Tier 2	1,364	0.2	18,763	53.7	20,127	3.0
Tiers 3 & 4*	289,329	45.2	233	0.7	289,562	42.9
Tier 5	37,114	5.8	1,967	5.6	39,081	5.8
Tier 6	311,469	48.6	13,956	39.9	325,425	48.2
Total	640,581	100.0	34,938	100.0	675,519	100.0

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



Note: Percentages may not sum to 100% due to rounding.

MEMBERSHIP BY STATUS

This table shows membership counts by status — active or inactive — as of the fiscal year ending March 31, 2021, with a breakdown by retirement system. Active status means the member was reported on payroll at the fiscal year end. Inactive status means the member was not reported on payroll (including pending retirement and pending deaths) at the fiscal year end. The sum of these two statuses represent the total membership count for the system.

	ERS			PFRS		
	Active	Inactive	Total	Active	Inactive	Total
2012	505,575	116,532	622,107	31,024	3,093	34,117
2013	498,266	115,664	613,930	30,780	2,864	33,644
2014	493,209	116,356	609,565	31,218	2,876	34,094
2015	491,558	117,079	608,637	31,372	3,169	34,541
2016	494,411	117,883	612,294	31,720	3,385	35,105
2017	496,441	120,702	617,143	32,332	2,849	35,181
2018	500,945	115,961	616,906	32,470	2,654	35,124
2019	501,037	122,053	623,090	32,573	2,513	35,086
2020	497,659	140,087	637,746	32,888	2,702	35,590
2021	469,968	170,613	640,581	31,922	3,016	34,938

NUMBER OF EMPLOYERS

As of March 31, 2021.

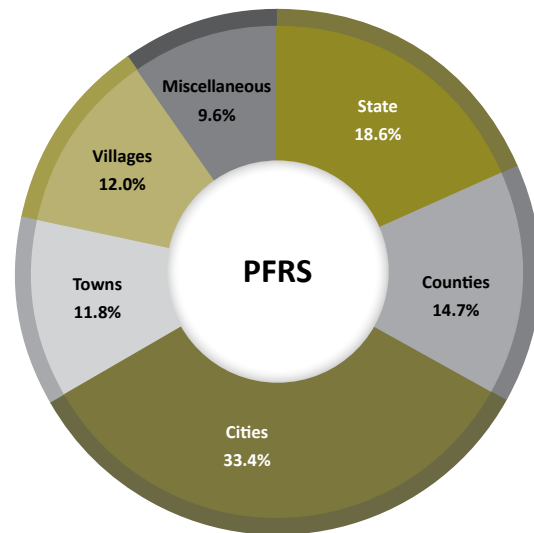
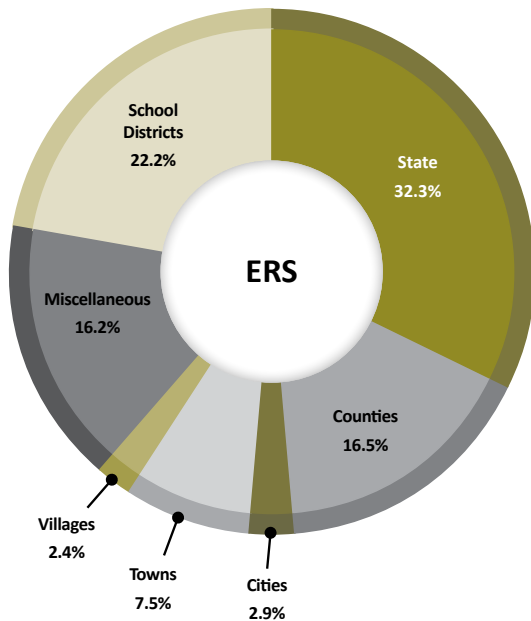
Category	ERS	PFRS
State	1	1
Counties	86	4
Cities	72	61
Towns	937	169
Villages	487	299
Miscellaneous	763	37
School Districts	706	0
Total*	3,052	571

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

TOTAL MEMBERSHIP BY EMPLOYER TYPE

This table shows total and active membership counts, grouped by primary employer type as of the fiscal year ending March 31, 2021, with a breakdown by retirement system. Active status means the member was reported on payroll at the fiscal year end.

	ERS		PFRS		Total	
	Total	Active	Total	Active	Total	Active
State	206,913	156,266	6,493	5,914	213,406	162,180
Counties	105,523	78,464	5,149	5,031	110,672	83,495
Cities	18,530	13,493	11,654	10,819	30,184	24,312
Towns	48,351	33,158	4,108	3,669	52,459	36,827
Villages	15,543	10,646	4,181	3,357	19,724	14,003
Miscellaneous	103,731	73,361	3,353	3,132	107,084	76,493
School Districts	141,990	104,580	–	–	141,990	104,580
Total	640,581	469,968	34,938	31,922	675,519	501,890



Note: Numbers may not add up due to rounding. A detailed listing of employers as of March 31, 2021 is available on our website at www.osc.state.ny.us/files/retirement/employers/pdf/participating-employers.pdf.

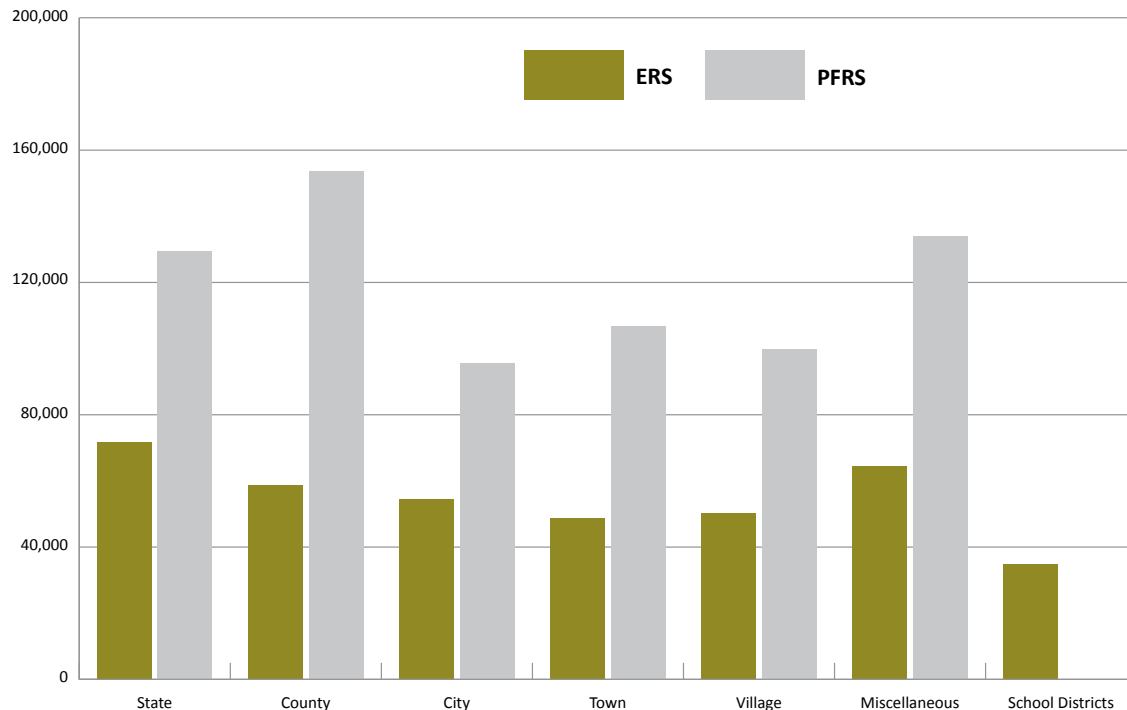
AVERAGE SALARY BY EMPLOYER TYPE

This table shows the average salary (*Average Salary*), membership counts (*Total Members**), and total salary (*Total Salaries*) for active members as of the fiscal year ending March 31, 2021. Groupings are based on primary employer type, with a breakdown by retirement system. Active status means the member was reported on payroll at the fiscal year end.

	Average Salary	Total Members*	Total Salaries
ERS			
State	\$ 71,685	156,266	\$ 11,201,973,205
Counties	58,622	78,464	4,599,729,225
Cities	54,502	13,493	735,399,647
Towns	48,896	33,158	1,621,310,079
Villages	50,119	10,646	533,567,165
Miscellaneous	64,572	73,361	4,737,096,890
School Districts	34,853	104,580	3,644,876,140
Total	\$ 57,608	469,968	\$ 27,073,952,351
PFRS			
State	\$ 129,516	5,914	\$ 765,956,462
Counties	153,531	5,031	772,412,449
Cities	95,506	10,819	1,033,283,000
Towns	106,840	3,669	391,997,753
Villages	99,987	3,357	335,656,943
Miscellaneous	133,961	3,132	419,565,946
Total	\$ 116,499	31,922	\$ 3,718,872,552

* Active members receiving salary.

The bar graph below represents the average salary by retirement system for each primary employer type.



MEMBERS AND SALARIES BY PLAN — ERS

These tables show membership counts (*Members*) and total salary (*Total Salaries*) for active members in the Employees' Retirement System, as of the fiscal year ending March 31, 2021. Groupings are based on plan, with a breakdown by tier. Active status means the member was reported on payroll at the end of the fiscal year.

Plan	Tier 1		Tier 2	
	Members	Total Salaries	Members	Total Salaries
Age 55/60 Contributory	1	\$ 10,903	1	\$ 60,105
Age 55 75-c	7	132,680	12	387,168
Age 55 75-e	1	43,300	2	89,133
Age 55 75-g	13	665,171	9	353,030
Age 55 75-h	322	28,679,601	353	33,158,479
Age 55 75-i	455	27,242,433	564	32,071,547
Regular Correction Officers/Security Hospital Treatment Asst. ¼ Disability	-	-	-	-
Correction Officers 89	2	192,336	2	276,001
Sheriffs 89-a	1	129,300	-	-
Sheriffs 89-b	-	-	-	-
Sheriffs 89-b(m)	-	-	-	-
Investigators 89-d	-	-	-	-
Investigators 89-d(m)	-	-	-	-
Sheriffs — 551	-	-	-	-
Sheriffs — 551e	-	-	-	-
Sheriffs — 552	-	-	-	-
Sheriffs — 553	-	-	-	-
Legislators 80-a	1	114,231	-	-
Unified Court Peace Officers	-	-	7	947,707
25-Year Correction Officers/Sheriffs/Office of Mental Health	5	415,732	5	443,585
25-Year 1/60 Peace Officers, Amb Med Techs, Paramedics	1	123,846	1	139,864
Total	809	\$ 57,749,532	956	\$ 67,926,618

MEMBERS AND SALARIES BY PLAN — ERS

CONTINUED

Plan	Tier 3 & 4		Tier 5		Tier 6	
	Members	Total Salaries	Members	Total Salaries	Members	Total Salaries*
Article 14 & 15	211,108	\$ 14,507,526,450	24,309	\$ 1,372,024,668	194,560	\$ 7,798,548,958
Regular Correction Officers/ Security Hospital Treatment Asst. % Disability	337	34,852,359	26	1,992,605	174	12,309,749
Article 14 Correction Officers	9,782	923,406,758	848	65,866,830	8,324	570,177,957
Sheriffs — 551	184	17,773,819	11	770,914	76	4,682,123
Sheriffs — 551e	53	3,992,119	9	640,408	43	2,227,299
Sheriffs — 552	283	24,997,680	37	2,737,487	198	11,580,098
Sheriffs — 553	1,066	120,314,475	167	15,819,746	663	46,279,535
Unified Court Peace Officers	4,429	457,545,078	281	24,086,016	1,814	125,144,169
25-Year Correction Officers/Sheriffs/Office of Mental Health	5,029	501,115,286	648	57,589,118	3,514	215,757,366
25-Year 1/60 Peace Officers, Paramedics	10	687,099	1	50,445	7	165,863
20-Year 1/60 Investigators	12	2,263,241	1	187,349	4	226,564
Westchester County Criminal Investigators	23	3,273,550	1	147,906	5	562,725
25-Year 1/60 % Accidental Disability Amb Med Techs	102	14,402,706	5	582,794	11	581,819
25-Year % Accidental Disability Fire Marshals	32	4,157,187	5	485,596	11	742,289
Total	232,450	\$ 16,616,307,807	26,349	\$ 1,542,981,880	209,404	\$ 8,788,986,514

* Reportable Tier 6 salary is capped at the Governor's salary, which was \$225,000 for fiscal year 2021.

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

MEMBERS AND SALARIES BY PLAN — PFRS

These tables show membership counts (Members), and total salary (Total Salaries) for active members in the Police and Fire Retirement System, as of the fiscal year ending March 31, 2021. Groupings are based on plan, with a breakdown by tier and contributory status. Active status means the member was reported on payroll at the end of the fiscal year.

Plan	Tier 1		Tier 2		Tier 3	
	Members	Total Salaries	Members	Total Salaries	Members	Total Salaries
Age 55/60 Basic	–	\$ –	18	\$ 219,298	–	\$ –
Age 55 375-c	–	–	78	2,235,798	2	74,262
Age 55 375-e	–	–	18	357,573	–	–
Age 55 375-g	–	–	22	648,989	–	–
Age 55 375-h	–	–	2	212,035	–	–
Age 55 375-i	2	241,515	93	7,270,458	3	178,863
Age 55 375-j	–	–	7	1,042,180	–	–
State Police 381-b	–	–	2,813	431,250,978	–	–
Regional Park Police 383-a	–	–	131	13,539,853	–	–
EnCon Police 383-b	–	–	191	21,043,520	1	77,817
Forest Ranger 383-c	–	–	84	9,318,152	2	163,093
SUNY Police 383-d	–	–	240	22,216,055	10	824,107
25-Year 384	–	–	23	1,515,528	14	1,645,800
25-Year 384(f)	–	–	62	8,415,135	69	7,101,050
20-Year 384-d	–	–	5,035	610,347,835	–	–
20-Year 1/60 384-e	4	857,248	8,534	1,341,236,435	–	–
Article 14 Police and Fire	–	–	–	–	108	11,071,177
Total	6	\$ 1,098,763	17,351	\$ 2,470,869,821	209	\$ 21,136,171

MEMBERS AND SALARIES BY PLAN — PFRS

CONTINUED

Plan	Tier 5 Contributory		Tier 5 Non-Contributory		Tier 6 Contributory		Tier 6 Non-Contributory	
	Members	Total Salaries	Members	Total Salaries	Members	Total Salaries*	Members	Total Salaries*
Age 55/60 Basic	2	\$ 38,205	–	\$ –	13	\$ 71,670	–	\$ –
Age 55 375-c	6	110,125	–	–	55	961,054	–	–
Age 55 375-e	1	16,295	–	–	35	429,142	–	–
Age 55 375-g	2	32,019	–	–	13	290,616	–	–
Age 55 375-h	-	–	–	–	2	121,439	–	–
Age 55 375-i	8	513,470	–	–	25	1,958,412	–	–
Age 55 375-j	-	–	–	–	-	–	–	–
State Police 381-b	116	14,680,906	–	–	1,814	212,839,060	–	–
Regional Park Police 383-a	3	331,393	–	–	92	7,906,374	–	–
EnCon Police 383-b	8	623,874	–	–	102	8,886,589	–	–
Forest Ranger 383-c	2	206,298	–	–	42	3,702,649	–	–
SUNY Police 383-d	46	3,723,049	–	–	214	13,779,987	–	–
25-Year 384	5	386,480	–	–	30	1,737,115	–	–
25-Year 384(f)	6	1,003,916	4	804,155	31	2,770,805	1	92,980
20-Year 384-d	574	57,004,798	137	12,220,589	4,156	289,887,868	–	–
20-Year 1/60 384-e	754	86,859,657	156	17,714,590	5,859	477,632,145	42	6,430,075
Article 14 Police and Fire	–	–	-	–	–	–	–	–
Total	1,533	\$ 165,530,486	297	\$ 30,739,334	12,483	\$ 1,022,974,922	43	\$ 6,523,055

* Reportable Tier 6 salary is capped at the Governor's salary, which was \$225,000 for fiscal year 2021.

There may be plans with no member count and salary greater than zero. A member who works for multiple employers may have salary under multiple plans but will only be counted once, under his/her primary plan.

RETIREES AND BENEFICIARIES BY AGE

This table shows retiree and beneficiary counts as of the fiscal year ending March 31, 2021, grouped by age, with a breakdown by retirement system.

Age	ERS			PFRS		
	Retirees & Beneficiaries	Retirees	Beneficiaries	Retirees & Beneficiaries	Retirees	Beneficiaries
0 – 25	315		315	22		22
26 – 30	193		193	10	1	9
31 – 35	317	5	312	17	9	8
36 – 40	520	79	441	60	44	16
41 – 45	723	214	509	370	347	23
46 – 50	1,575	845	730	1,617	1,574	43
51 – 55	5,387	4,289	1,098	3,977	3,878	99
56 – 60	35,516	33,631	1,885	6,225	6,070	155
61 – 65	71,121	67,883	3,238	5,162	4,950	212
66 – 70	97,068	92,365	4,703	5,631	5,304	327
71 – 75	96,454	90,190	6,264	6,283	5,795	488
76 – 80	64,841	58,826	6,015	4,487	4,029	458
81 – 85	41,546	36,227	5,319	2,616	2,332	284
86 – 90	25,693	21,602	4,091	1,270	1,058	212
91 – 95	12,715	10,272	2,443	507	413	94
96 – 100	3,763	3,014	749	104	72	32
101+	514	388	126	9	5	4
Total	458,261	419,830	38,431	38,367	35,881	2,486

RETIREES AND BENEFICIARIES — ERS

This table shows the number (*Number*), the average annual modified pension benefit prior to option selection and without any cost-of-living adjustment (*Average Option 0 Benefit w/o COLA*), and the average cost-of-living adjustment (*Average COLA*) of surviving Employees' Retirement System retirees and beneficiaries* as of March 31, 2021. Groupings are based on the fiscal year of the member's retirement. The modified pension benefit has been reduced for any partial lump sum distribution.

Year of Retirement	Number	Average Option 0 Benefit w/o COLA*	Average COLA	Total
1956	-	\$ -	\$ -	\$ -
1957	-	-	-	-
1958	-	-	-	-
1959	1	3,518	10,282	13,800
1960	-	-	-	-
1961	-	-	-	-
1962	-	-	-	-
1963	2	2,112	7,602	9,714
1964	-	-	-	-
1965	1	2,284	3,943	6,227
1966	2	2,779	9,009	11,788
1967	-	-	-	-
1968	2	1,476	1,947	3,423
1969	7	1,866	3,821	5,687
1970	7	2,481	3,548	6,029
1971	10	5,842	6,913	12,755
1972	17	5,775	6,675	12,450
1973	29	4,646	5,499	10,145
1974	38	7,838	8,286	16,124
1975	57	6,202	6,464	12,666
1976	117	5,780	5,690	11,470
1977	169	5,879	5,905	11,784
1978	215	6,220	5,599	11,818
1979	296	5,660	4,936	10,595
1980	400	5,991	4,533	10,524
1981	502	5,752	3,897	9,649
1982	656	6,934	4,019	10,953
1983	750	6,915	3,715	10,630
1984	1,105	9,114	4,340	13,454
1985	1,130	8,754	3,959	12,713
1986	1,610	9,241	3,928	13,169
1987	1,896	10,098	4,081	14,179
1988	2,036	11,083	4,047	15,130

* 8,420 of the 38,431 beneficiaries are not eligible for COLA and are not included in the above counts.

Year of Retirement	Number	Average Option 0 Benefit w/o COLA*	Average COLA	Total
1989	2,504	\$ 11,954	\$ 3,958	\$ 15,912
1990	3,043	13,358	3,836	17,193
1991	5,227	17,620	4,193	21,813
1992	5,022	14,673	3,633	18,306
1993	4,366	15,564	3,451	19,015
1994	4,130	15,551	3,228	18,780
1995	5,213	16,385	3,220	19,605
1996	9,778	21,440	3,496	24,936
1997	9,234	19,791	3,125	22,915
1998	7,142	17,464	2,644	20,108
1999	8,040	17,246	2,484	19,730
2000	9,859	18,651	2,391	21,043
2001	10,906	22,033	2,425	24,458
2002	9,232	19,872	2,163	22,034
2003	20,710	28,801	2,286	31,087
2004	10,386	19,836	1,748	21,584
2005	12,734	22,039	1,660	23,699
2006	14,278	22,872	1,518	24,389
2007	14,974	25,332	1,427	26,759
2008	15,580	27,083	1,305	28,388
2009	14,551	27,027	1,141	28,168
2010	16,800	28,672	1,014	29,687
2011	26,232	34,894	933	35,827
2012	16,824	27,589	723	28,312
2013	17,026	27,245	584	27,829
2014	18,606	28,207	450	28,657
2015	19,705	29,476	290	29,766
2016	20,161	31,088	159	31,247
2017	20,522	31,844	-	31,844
2018	21,621	32,264	-	32,264
2019	21,014	33,188	-	33,188
2020	20,921	34,256	-	34,256
2021	22,445	\$ 34,341	\$ -	\$ 34,341

* 8,420 of the 38,431 beneficiaries are not eligible for COLA and are not included in the above counts.

RETIREES AND BENEFICIARIES — PFRS

This table shows the number (*Number*), the average annual modified pension benefit prior to option selection and without any cost-of-living adjustment (*Average Option 0 Benefit w/o COLA*), and the average cost-of-living adjustment (*Average COLA*) of surviving Police and Fire Retirement System retirees and beneficiaries* as of March 31, 2021. Groupings are based on the fiscal year of the member's retirement. The modified pension benefit has been reduced for any partial lump sum distribution.

Year of Retirement	Number	Average Option 0 w/o COLA*	Average COLA	Total
1956	1	\$ 3,614	\$ 22,581	\$ 26,195
1957	-	-	-	-
1958	-	-	-	-
1959	-	-	-	-
1960	-	-	-	-
1961	-	-	-	-
1962	-	-	-	-
1963	1	4,134	18,807	22,941
1964	-	-	-	-
1965	1	6,492	22,168	28,660
1966	2	4,280	14,429	18,708
1967	4	5,204	14,179	19,383
1968	2	7,081	18,432	25,513
1969	4	5,070	11,938	17,008
1970	2	5,035	9,661	14,696
1971	9	8,443	13,780	22,223
1972	25	7,385	14,502	21,886
1973	35	7,475	13,308	20,782
1974	43	8,196	14,350	22,546
1975	32	8,963	12,986	21,949
1976	38	10,026	13,801	23,827
1977	106	10,682	13,238	23,921
1978	101	11,304	13,034	24,339
1979	143	11,240	11,891	23,131
1980	147	12,424	11,111	23,535
1981	149	13,439	9,850	23,289
1982	230	14,274	9,092	23,366
1983	242	15,550	8,781	24,331
1984	250	17,594	8,806	26,400
1985	299	19,480	8,420	27,901
1986	450	20,762	8,200	28,962
1987	472	22,660	8,173	30,833
1988	610	24,799	7,663	32,462

* 458 of the 2,486 beneficiaries are not eligible for COLA and are not included in the above counts.

Year of Retirement	Number	Average Option 0 w/o COLA*	Average COLA	Total
1989	658	\$ 24,833	\$ 7,263	\$ 32,096
1990	706	27,744	6,611	34,355
1991	813	30,553	6,128	36,682
1992	884	34,809	5,536	40,345
1993	858	33,651	5,226	38,877
1994	786	32,958	4,756	37,714
1995	681	38,082	4,328	42,410
1996	684	36,647	4,091	40,737
1997	678	40,780	3,760	44,540
1998	649	39,078	3,346	42,423
1999	701	40,418	3,203	43,622
2000	826	47,177	2,874	50,051
2001	1,041	52,637	2,803	55,440
2002	903	53,926	2,571	56,497
2003	1,217	60,852	2,348	63,200
2004	1,157	58,571	2,165	60,736
2005	1,055	58,723	1,879	60,603
2006	1,067	59,642	1,650	61,292
2007	1,084	60,461	1,471	61,932
2008	1,102	62,737	1,233	63,970
2009	1,046	66,116	1,085	67,201
2010	1,086	68,211	904	69,115
2011	1,236	68,913	712	69,625
2012	1,199	70,695	514	71,209
2013	1,212	69,267	394	69,661
2014	1,208	72,414	290	72,704
2015	1,311	75,346	178	75,523
2016	1,267	78,452	92	78,544
2017	1,213	79,635	-	79,635
2018	1,518	84,436	-	84,436
2019	1,563	84,794	-	84,794
2020	1,442	86,822	-	86,822
2021	1,660	\$ 88,915	\$ -	\$ 88,915

* 458 of the 2,486 beneficiaries are not eligible for COLA and are not included in the above counts.

LOCAL GOVERNMENT SALARIES AND BILLINGS — ERS

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

FYE	Salaries	Contributions	Normal	Deficiency	GLIP*	Administrative
Counties						
2012	\$ 4,443,930,817	\$ 776,404,451	\$ 748,265,831	\$ —	\$ 14,983,770	\$ 13,154,850
2013	4,373,201,590	869,913,388	836,809,946	—	15,242,472	17,860,970
2014	4,336,303,275	961,029,407	932,736,131	—	15,028,728	13,264,548
2015	4,268,067,445	916,967,766	884,569,811	—	14,822,845	17,575,110
2016	4,268,067,445	764,800,462	729,885,087	—	17,843,119	17,072,256
2017	4,442,433,004	718,015,326	685,263,761	—	14,981,831	17,769,734
2018	4,526,327,445	719,117,404	685,809,717	—	15,202,362	18,105,325
2019	4,550,654,486	704,395,273	671,966,793	—	18,776,511	13,651,969
2020	4,711,426,453	721,858,881	682,580,561	—	15,721,198	23,557,122
2021	4,760,305,412	731,642,789	688,184,857	—	19,656,355	23,801,577
Cities						
2012	663,784,626	107,570,937	102,977,843	—	2,624,624	1,968,470
2013	657,761,044	124,229,355	118,894,947	—	2,667,204	2,667,204
2014	673,091,884	137,981,259	133,304,614	—	2,672,375	2,004,270
2015	679,974,366	134,647,196	129,157,994	—	2,744,601	2,744,601
2016	679,974,366	118,631,364	112,511,612	—	3,399,861	2,719,891
2017	711,933,076	106,482,115	100,786,663	—	2,847,726	2,847,726
2018	742,043,938	108,756,209	102,819,863	—	2,968,173	2,968,173
2019	744,199,863	105,742,763	99,789,168	—	3,721,006	2,232,589
2020	758,132,484	105,255,949	98,432,744	—	3,032,535	3,790,670
2021	772,791,379	107,820,375	100,092,450	—	3,863,959	3,863,966
Towns						
2012	1,499,756,171	243,005,724	232,009,841	701,186	5,881,293	4,413,404
2013	1,523,144,059	282,487,748	269,746,224	730,975	6,003,677	6,006,872
2014	1,514,279,860	320,436,350	308,991,586	729,377	6,121,687	4,593,700
2015	1,541,087,303	304,935,776	292,018,266	704,881	6,104,792	6,107,837
2016	1,541,087,303	277,193,215	262,917,719	409,489	7,701,640	6,164,367
2017	1,579,960,510	240,525,450	227,504,169	384,233	6,317,184	6,319,864
2018	1,615,922,678	241,429,341	228,132,484	372,380	6,460,806	6,463,671
2019	1,624,034,309	236,023,695	222,651,419	385,020	8,115,114	4,872,142
2020	1,654,262,964	235,874,419	220,645,937	343,749	6,613,385	8,271,348
2021	1,666,644,088	238,596,311	221,621,654	312,725	8,328,687	8,333,245
Villages						
2012	456,923,176	75,242,014	71,732,124	359,252	1,800,376	1,350,262
2013	464,343,459	84,603,712	80,734,045	210,055	1,829,806	1,829,806
2014	468,173,558	96,707,532	93,193,118	224,737	1,879,811	1,409,866
2015	475,868,379	93,000,032	88,986,865	214,831	1,899,168	1,899,168
2016	475,868,379	84,779,246	80,364,318	134,970	2,377,750	1,902,208
2017	492,146,116	74,142,234	70,095,276	109,818	1,968,570	1,968,570
2018	505,159,356	74,546,172	70,399,418	105,502	2,020,626	2,020,626
2019	514,793,219	73,871,365	69,638,093	114,888	2,573,977	1,544,407
2020	526,403,820	74,482,744	69,641,376	103,704	2,105,622	2,632,042
2021	537,296,960	76,180,937	70,693,112	114,846	2,686,487	2,686,492

*Group Life Insurance Plan (GLIP).

LOCAL GOVERNMENT SALARIES AND BILLINGS — ERS CONTINUED

FYE	Salaries	Contributions	Normal	Deficiency	GLIP	Administrative
Miscellaneous						
2012	\$ 4,074,206,349	\$ 705,637,232	\$ 676,397,501	\$ 1,117,975	\$ 16,069,562	\$ 12,052,194
2013	3,971,661,743	749,635,292	716,057,300	835,444	16,371,274	16,371,274
2014	3,968,529,764	826,997,637	797,752,084	791,616	16,258,823	12,195,114
2015	4,016,329,736	786,826,716	753,471,524	785,464	16,284,864	16,284,864
2016	4,016,329,736	692,441,164	656,011,033	285,120	20,080,556	16,064,455
2017	4,218,674,267	624,983,230	590,938,378	295,426	16,874,713	16,874,713
2018	4,400,266,244	636,996,945	601,504,023	292,092	17,600,415	17,600,415
2019	4,548,171,902	639,193,644	602,507,287	300,990	22,740,865	13,644,502
2020	4,769,848,444	656,970,743	613,752,143	289,923	19,079,412	23,849,265
2021	4,928,473,582	681,965,509	632,481,941	198,772	24,642,379	24,642,417
Schools						
2012	3,363,257,728	530,456,512	507,067,857	433,238	13,117,370	9,838,047
2013	3,295,559,464	623,154,200	595,786,408	426,060	13,470,866	13,470,866
2014	3,295,866,762	685,241,928	661,805,954	135,753	13,314,400	9,985,821
2015	3,337,348,846	654,771,133	627,945,059	139,518	13,343,278	13,343,278
2016	3,337,348,846	593,311,380	563,142,438	134,423	16,685,833	13,348,686
2017	3,463,921,681	524,114,526	496,273,503	129,599	13,855,712	13,855,712
2018	3,591,452,866	533,074,424	504,209,323	133,487	14,365,807	14,365,807
2019	3,656,797,566	527,849,814	498,457,959	137,491	18,283,980	10,970,384
2020	3,739,951,074	528,865,706	495,064,555	141,616	14,959,764	18,699,771
2021	3,841,977,275	544,514,579	505,949,072	145,661	19,209,895	19,209,951

For the FYEs 2012-2015, the contribution amounts include the normal cost of benefits including supplemental pensions and, in some cases, the Retirement Incentive Program, Deficiency Contributions, the Group Life Insurance Plan (GLIP), and the administrative cost of the System for the fiscal year.

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

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

LOCAL GOVERNMENT SALARIES AND BILLINGS — PFRS

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

FYE	Salaries	Contributions	Normal	Deficiency	GLIP	Administrative
Counties						
2012	\$ 741,170,663	\$ 165,977,875	\$ 162,848,546	\$ -	\$ -	\$ 3,129,329
2013	750,476,797	186,487,909	182,070,522	-	736,230	3,681,157
2014	742,952,940	215,606,426	212,605,235	-	-	3,001,191
2015	748,062,218	204,532,593	200,811,227	-	744,273	2,977,093
2016	748,062,218	183,660,699	180,668,452	-	-	2,992,247
2017	813,351,565	197,749,660	193,682,901	-	-	4,066,759
2018	837,536,191	205,595,002	201,407,318	-	837,538	3,350,146
2019	826,111,820	194,974,879	192,496,544	-	-	2,478,335
2020	829,447,380	197,111,060	192,963,822	-	-	4,147,238
2021	820,311,457	204,533,703	199,611,831	-	-	4,921,872
Cities						
2012	919,665,789	202,376,328	198,704,804	-	-	3,671,524
2013	904,451,691	242,732,696	237,147,463	-	930,870	4,654,363
2014	940,121,957	270,589,638	266,868,512	-	-	3,721,126
2015	935,625,377	266,374,021	261,525,612	-	969,687	3,878,722
2016	935,625,377	220,521,730	216,779,231	-	-	3,742,499
2017	1,012,327,983	244,289,630	239,227,991	-	-	5,061,639
2018	1,032,008,361	249,454,963	244,294,924	-	1,032,013	4,128,026
2019	1,046,903,046	244,069,656	240,928,943	-	-	3,140,713
2020	1,073,918,736	249,937,319	244,567,724	-	-	5,369,595
2021	1,068,635,389	258,554,169	252,142,350	-	-	6,411,819
Towns						
2012	345,481,241	74,297,961	72,943,723	-	-	1,354,238
2013	344,465,630	90,102,480	88,024,012	-	346,422	1,732,046
2014	351,821,273	101,830,050	100,430,452	-	-	1,399,598
2015	361,105,021	99,600,409	97,809,899	-	358,100	1,432,410
2016	361,105,021	103,194,597	101,750,184	-	-	1,444,413
2017	375,409,567	91,053,202	89,176,144	-	-	1,877,058
2018	385,731,210	94,187,748	92,259,099	-	385,724	1,542,925
2019	386,276,966	90,799,386	89,640,559	-	-	1,158,827
2020	396,084,139	92,527,775	90,547,356	-	-	1,980,419
2021	406,409,795	98,904,597	96,466,136	-	-	2,438,461
Villages						
2012	288,899,267	61,448,733	60,286,366	-	-	1,162,367
2013	289,479,125	72,871,202	71,130,551	-	290,108	1,450,543
2014	296,688,354	83,549,031	82,367,874	-	-	1,181,157
2015	298,766,157	81,460,417	79,943,884	-	303,296	1,213,237
2016	298,766,157	69,981,037	68,788,007	-	-	1,193,030
2017	316,804,801	73,308,396	71,724,373	-	-	1,584,023
2018	323,473,812	75,751,635	74,134,267	-	323,456	1,293,912
2019	327,388,623	73,872,681	72,890,527	-	-	982,154
2020	337,679,673	76,094,089	74,405,690	-	-	1,688,399
2021	344,249,844	80,165,375	78,099,874	-	-	2,065,501

LOCAL GOVERNMENT SALARIES AND BILLINGS — PFRS CONTINUED

FYE	Salaries	Contributions	Normal	Deficiency	GLIP	Administrative
Miscellaneous						
2012	\$ 305,193,545	\$ 60,344,419	\$ 59,216,144	\$ —	\$ —	\$ 1,128,275
2013	303,608,075	77,558,504	75,734,743	—	303,957	1,519,804
2014	324,198,568	88,966,389	87,744,530	—	—	1,221,859
2015	322,131,168	89,840,321	88,189,827	—	330,099	1,320,395
2016	322,131,168	73,328,115	72,039,593	—	—	1,288,522
2017	332,682,130	78,709,281	77,045,873	—	—	1,663,408
2018	345,926,023	82,341,868	80,612,241	—	345,923	1,383,704
2019	355,303,151	81,963,609	80,897,700	—	—	1,065,909
2020	368,595,543	84,573,906	82,730,930	—	—	1,842,976
2021	612,045,010	147,894,883	144,222,611	—	—	3,672,272

For the FYEs 2012-2015, the contribution amounts include the normal cost of benefits including supplemental pensions and, in some cases, the Retirement Incentive Program, Deficiency Contributions, the Group Life Insurance Plan (GLIP), and the administrative cost of the System for the fiscal year.

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

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

CONTRIBUTIONS RECORDED 2012 – 2021

(Dollars in Millions)

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

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

Year Ended 3/31	Employer Contributions*	Member Contributions
2017		
Total	\$ 4,787.0	\$ 328.8
State	1,813.6	
Local	2,973.4	
2018		
Total	\$ 4,823.3	\$ 349.4
State	1,802.1	
Local	3,021.2	
2019		
Total	\$ 4,744.3	\$ 386.5
State	1,771.5	
Local	2,972.8	
2020		
Total	\$ 4,782.7	\$ 453.7
State	1,759.3	
Local	3,023.4	
2021		
Total	\$ 5,029.8	\$ 492.3
State	1,870.5	
Local	3,159.3	
* Includes employer premiums to Group Life Insurance Plan.		

20-YEAR SUMMARY*

	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total Participants	1,172,147	1,160,743	1,139,971	1,122,626	1,104,779	1,088,342	1,073,486	1,066,064	1,061,010
Number of Members	675,519	673,336	658,176	652,030	652,324	647,399	643,178	643,659	647,574
ERS (a)	640,581	637,746	623,090	616,906	617,143	612,294	608,637	609,565	613,930
State	206,913	207,643	203,421	201,912	203,317	202,153	201,194	201,192	202,570
Counties	105,523	105,939	103,965	103,438	104,452	104,756	105,582	106,688	108,302
Cities	18,530	18,583	18,251	18,138	18,146	18,048	18,079	18,182	18,176
Towns	48,351	47,833	46,611	45,897	45,608	45,450	44,826	44,676	44,407
Villages	15,543	15,257	14,867	14,615	14,474	14,256	14,129	14,073	14,040
Miscellaneous	103,731	101,807	99,042	98,035	97,376	95,759	94,341	94,396	95,199
School Districts	141,990	140,684	136,933	134,871	133,770	131,872	130,486	130,358	131,236
PFRS (a)	34,938	35,590	35,086	35,124	35,181	35,105	34,541	34,094	33,644
State	6,493	6,785	6,712	6,606	6,596	6,309	6,009	5,792	5,630
Counties	5,149	5,306	5,303	5,386	5,323	5,348	5,179	5,003	5,076
Cities	11,654	11,745	11,659	11,757	11,880	12,018	11,856	11,812	11,868
Towns	4,108	4,147	4,090	4,061	4,127	4,182	4,196	4,162	4,153
Villages	4,181	4,175	4,072	4,160	4,213	4,340	4,343	4,330	4,370
Miscellaneous	3,353	3,432	3,250	3,154	3,042	2,908	2,958	2,995	2,547
Members by Tier (b)									
ERS Tier 1	1,305	1,552	1,937	2,313	3,241	3,809	4,520	5,249	6,230
ERS Tier 2	1,364	1,762	2,278	2,817	3,668	4,420	5,375	6,297	7,538
ERS Tiers 3 through 6	637,912	634,432	618,875	611,776	610,234	604,065	598,742	598,019	600,162
PFRS Tier 1	19	24	27	40	54	77	92	123	172
PFRS Tier 2	18,763	20,500	21,938	23,733	25,518	27,364	28,179	29,188	30,295
PFRS Tiers 3, 5 & 6	16,156	15,066	13,121	11,351	9,609	7,664	6,270	4,783	3,177
Retirees & Beneficiaries	496,628	487,407	481,795	470,596	452,455	440,943	430,308	422,405	413,436
ERS	458,261	449,806	444,719	434,553	417,499	407,112	396,781	389,288	380,899
PFRS	38,367	37,601	37,076	36,043	34,956	33,831	33,527	33,117	32,537
Employers	3,623	3,616	3,692	3,044	3,040	3,040	3,032	3,027	3,029
ERS	3,052	2,959	3,015	3,017	3,013	3,010	3,006	3,002	3,004
PFRS	571	657	677	684	687	686	682	681	681
Benefit Payments (c)	\$ 14,022.7	\$ 13,246.1	\$ 12,741.6	\$ 12,027.3	\$ 11,448.7	\$ 10,908.5	\$ 10,436.2	\$ 9,898.8	\$ 9,450.2
Retirement Allowances	13,096.1	12,424.6	11,880.3	11,197.8	10,617.5	10,113.8	9,651.2	9,098.4	8,669.8
Death Benefits (Lump Sum)	258.0	159.5	214.7	201.2	216.2	188.2	183.1	203.8	194.2
COLA Payments	668.6	662.0	646.6	628.3	615.0	606.5	601.9	596.6	586.2
# of Service Retirements	25,212	23,159	22,928	28,312	22,762	21,984	18,039	19,702	19,962
# of Death Benefits Paid	1,108	897	793	857	915	751	900	810	844
# of Disability Retirements	297	477	883	922	718	626	720	963	1,026
Employer Contributions	\$ 5,029.8	\$ 4,782.7	\$ 4,744.3	\$ 4,823.3	\$ 4,787.0	\$ 5,140.2	\$ 5,797.4	\$ 6,064.1	\$ 5,336.1
ERS	3,932.9	3,818.3	3,766.8	3,852.5	3,858.6	4,232.4	4,802.2	5,045.6	4,435.6
PFRS	967.5	862.3	854.1	869.8	837.3	792.6	901.0	926.3	808.5
Group Life Insurance Plan	129.4	102.1	123.4	101.0	91.1	115.2	94.2	92.2	92.0
Rate (as a % of Salary) (d)									
ERS	14.6%	14.6%	14.9%	15.3%	15.5%	18.2%	20.1%	20.9%	18.9%
PFRS	24.4%	23.5%	23.5%	24.4%	24.3%	24.7%	27.6%	28.9%	25.8%
Employee Contributions	\$ 492.3	\$ 453.7	\$ 386.5	\$ 349.4	\$ 328.8	\$ 306.6	\$ 284.8	\$ 281.4	\$ 269.1
ERS	427.0	395.3	345.8	318.4	306.2	289.3	272.0	273.5	264.8
PFRS	65.3	58.4	40.7	31.0	22.6	17.3	12.8	7.9	4.3
Investments (e)	\$ 258,135.8	\$ 194,317.2	\$ 210,523.7	\$ 207,416.0	\$ 192,410.6	\$ 178,639.7	\$ 184,502.0	\$ 176,835.1	\$ 160,660.8
Equities	133,744.2	93,221.9	109,560.6	114,797.1	103,688.4	90,755.4	94,293.5	93,191.7	83,049.5
Global Fixed Income	47,722.9	45,410.3	45,651.6	44,820.8	44,002.6	44,661.2	47,652.2	41,410.6	38,559.5
Commercial Mortgages	1,043.6	1,011.8	897.0	843.4	800.3	796.4	852.9	853.9	812.7
Short-Term Investments	11,082.7	5,697.7	6,119.0	3,366.6	5,653.3	5,578.8	5,252.5	6,592.8	6,461.3
Private Equity	29,470.2	20,314.2	19,751.0	17,500.5	15,348.5	13,961.4	14,247.4	14,369.8	14,072.6
Equity Real Estate	17,648.0	15,693.7	15,678.5	14,182.7	12,937.4	12,639.7	12,123.4	12,529.3	11,195.4
Opportunistic/ Absolute Return Strategy	5,016.1	9,881.9	10,646.0	10,386.3	9,589.5	9,748.7	9,681.0	7,887.0	6,509.8
Credit	8,478.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	3,929.6	3,085.7	2,220.0	1,518.6	390.6	498.1	399.1	0.0	0.0
Rate of Return (f)	33.6%	(2.7)%	5.2%	11.4%	11.5%	0.2%	7.2%	13.0%	10.4%
Core Fixed Income	2.6%	7.4%	4.8%	2.1%	2.5%	1.8%	5.5%	(0.5)%	4.7%
Equity Investments	44.2%	(5.4)%	5.6%	14.5%	14.8%	(0.4)%	8.3%	19.1%	12.5%
Administrative Cost	\$ 165.1	\$ 139.1	\$ 136.5	\$ 122.8	\$ 107.1	\$ 106.6	\$ 107.2	\$ 105.7	\$ 105.7
Financial Statement Assets	\$ 260,081.1	\$ 198,079.8	\$ 215,169.2	\$ 212,076.8	\$ 197,602.2	\$ 183,640.2	\$ 189,412.4	\$ 181,275.3	\$ 164,221.8

20-YEAR SUMMARY*

CONTINUED

2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
1,059,398	1,057,754	1,055,020	1,046,086	1,035,430	1,012,699	995,536	982,009	970,078	964,140	944,500
656,224	672,723	679,217	679,908	677,321	662,633	653,291	647,758	641,721	650,543	637,896
622,107	637,921	643,875	643,700	641,119	626,923	617,989	612,410	606,155	614,555	602,428
203,274	213,089	216,582	219,741	220,216	215,296	211,041	208,899	207,641	216,005	216,507
111,051	114,111	115,722	116,515	117,084	115,944	115,472	118,006	117,514	119,319	118,318
18,420	18,667	18,897	18,893	18,992	18,843	18,891	18,979	18,933	19,637	19,671
44,644	44,416	44,361	43,403	43,203	41,989	41,393	40,561	39,841	39,395	38,063
14,051	14,165	14,150	14,000	13,891	13,597	13,388	13,106	12,878	12,823	12,360
97,225	98,115	97,960	97,272	95,601	92,736	90,879	86,791	85,732	85,708	81,752
133,442	135,358	136,203	133,876	132,132	128,518	126,925	126,068	123,616	121,668	115,757
34,117	34,802	35,342	36,208	36,202	35,710	35,302	35,348	35,566	35,988	35,468
5,548	5,779	5,973	6,222	6,223	6,219	5,955	6,038	5,898	5,802	5,679
5,372	5,499	5,560	5,841	5,898	5,873	5,850	5,833	5,814	5,901	6,029
11,974	12,137	12,289	12,433	12,414	12,206	12,147	12,113	12,374	12,541	12,612
4,178	4,205	4,249	4,340	4,364	4,295	4,261	4,217	4,231	4,233	4,191
4,433	4,512	4,547	4,592	4,621	4,591	4,641	4,653	4,732	4,867	4,795
2,612	2,670	2,724	2,780	2,682	2,526	2,448	2,494	2,517	2,644	2,162
7,551	10,718	13,395	16,829	20,513	25,053	29,492	34,980	39,622	50,032	56,541
9,222	12,911	15,651	18,097	20,315	22,458	24,263	25,938	27,398	30,122	31,981
605,334	614,292	614,829	608,774	600,291	579,412	564,234	551,492	539,135	534,401	513,906
230	304	393	576	745	924	1,143	1,503	2,076	2,597	3,260
31,830	33,091	34,261	35,632	35,457	34,786	34,159	33,845	33,490	33,391	32,208
2,057	1,407	688	0	0	0	0	0	0	0	0
403,174	385,031	375,803	366,178	358,109	350,066	342,245	334,251	328,357	313,597	306,604
371,468	353,940	345,106	336,273	328,726	321,113	313,837	306,531	301,528	287,341	280,997
31,706	31,091	30,697	29,905	29,383	28,953	28,408	27,720	26,829	26,256	25,607
3,040	3,039	3,035	3,026	3,021	3,010	3,001	2,993	2,985	2,968	2,922
3,016	3,016	3,011	3,001	2,995	2,983	2,974	2,967	2,959	2,943	2,917
682	681	681	683	683	683	685	684	684	681	679
\$ 8,862.8	\$ 8,464.6	\$ 7,663.1	\$ 7,212.1	\$ 6,835.6	\$ 6,383.4	\$ 6,028.9	\$ 5,674.7	\$ 5,347.5	\$ 4,984.6	\$ 4,488.3
8,109.3	7,717.0	6,931.8	6,497.1	6,142.8	5,722.9	5,388.6	5,041.0	4,722.1	4,373.3	3,872.0
185.0	192.3	183.0	180.5	181.7	164.6	161.2	161.9	157.3	148.4	151.8
568.5	555.3	548.3	534.5	511.1	495.9	479.1	471.8	468.1	462.9	464.5
28,259	19,092	19,193	17,979	17,261	16,390	16,827	14,533	23,655	16,078	17,499
879	984	955	935	1,014	832	932	1,041	1,025	1,019	1,068
1,161	844	1,421	1,020	950	1,227	1,267	1,463	1,103	1,064	1,038
\$ 4,585.2	\$ 4,164.5	\$ 2,344.2	\$ 2,456.2	\$ 2,648.4	\$ 2,718.6	\$ 2,782.2	\$ 2,964.8	\$ 1,286.5	\$ 651.9	\$ 263.8
3,790.6	3,525.8	1,785.5	1,898.7	2,073.5	2,116.0	2,271.4	2,434.5	1,052.3	525.5	179.1
706.4	538.8	465.0	492.8	510.6	502.5	433.4	455.3	158.4	66.3	47.3
88.2	99.9	93.7	64.7	64.3	100.1	77.3	75.0	75.8	60.1	37.4
16.3%	11.9%	7.4%	8.5%	9.6%	10.7%	11.3%	12.9%	5.9%	1.5%	1.2%
21.6%	18.2%	15.1%	15.8%	16.6%	17.0%	16.3%	17.6%	5.8%	1.4%	1.6%
\$ 273.2	\$ 286.2	\$ 284.3	\$ 273.3	\$ 265.7	\$ 250.2	\$ 241.2	\$ 227.3	\$ 221.9	\$ 219.2	\$ 210.2
268.5	284.5	282.8	269.0	263.1	247.2	237.7	224.5	217.4	214.1	206.0
4.7	1.7	1.5	4.3	2.6	2.9	3.5	2.8	4.5	5.1	4.2
\$ 150,658.9	\$ 147,237.0	\$ 132,500.2	\$ 108,960.7	\$ 153,877.7	\$ 154,575.5	\$ 140,453.3	\$ 126,083.5	\$ 119,245.0	\$ 95,598.3	\$ 111,168.5
79,059.2	79,945.0	72,674.0	47,871.0	83,153.7	90,119.7	88,550.9	80,917.2	74,876.5	51,357.0	66,375.5
33,440.5	31,037.9	33,726.1	36,541.6	36,571.4	33,536.2	28,889.0	29,310.8	29,691.2	32,019.7	31,839.2
803.0	851.3	845.7	710.2	772.4	889.7	1,162.7	1,281.9	1,530.0	1,723.6	1,628.7
7,397.7	8,360.2	3,086.1	3,826.7	6,443.1	8,551.1	6,619.3	2,602.5	1,879.1	771.2	1,429.0
14,925.9	14,620.4	12,584.0	10,563.7	12,699.4	10,044.8	8,284.8	6,832.4	6,738.8	5,564.8	5,579.5
9,339.5	7,631.0	5,551.1	7,066.5	8,909.4	6,752.7	5,430.7	4,634.0	4,529.4	4,162.0	4,316.6
5,693.1	4,791.2	4,033.2	2,381.0	5,328.3	4,681.3	1,516.0	504.7	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.0%	14.6%	25.9%	(26.4)%	2.6%	12.6%	14.6%	8.5%	28.8%	(10.2)%	2.8%
9.0%	8.0%	7.4%	2.4%	8.6%	6.0%	1.7%	3.0%	8.9%	16.8%	4.3%
4.9%	17.1%	41.3%	(30.8)%	0.9%	15.0%	19.1%	10.6%	42.8%	(24.3)%	2.9%
\$ 100.6	\$ 101.3	\$ 100.0	\$ 99.2	\$ 90.3	\$ 79.8	\$ 78.5	\$ 65.3	\$ 69.6	\$ 67.5	\$ 66.6
\$ 153,394.4	\$ 149,548.6	\$ 134,251.7	\$ 110,937.8	\$ 155,845.9	\$ 156,625.2	\$ 142,620.1	\$ 128,037.7	\$ 120,799.0	\$ 97,372.7	\$ 112,724.9

NOTES TO 20-YEAR SUMMARY

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

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



Office of the New York State Comptroller
Thomas P. DiNapoli

