

Employees' Retirement System of the State of Rhode Island
Pension Trust Funds of the State of Rhode Island

Comprehensive Annual Financial Report

FOR THE FISCAL YEAR ENDED JUNE 30, 2020

2020 Comprehensive Annual Financial Report

For the Fiscal Year Ended June 30, 2020

Employees' Retirement System of Rhode Island

Employees' Retirement System (ERS)

Teachers' Survivors Benefits (TSB)

Municipal Employees' Retirement System (MERS)

State Police Retirement Benefits Trust (SPRBT)

Judicial Retirement Benefits Trust (JRBT)

RI Judicial Retirement Fund Trust (RIJRFT)

RI State Police Retirement Fund Trust (SPRFT)

Rhode Island Defined Contribution Plan

Prepared by the staff of the

Employees' Retirement System of Rhode Island

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

FISCAL YEAR ENDED JUNE 30, 2020

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Introductory Section

Letter of Transmittal

Board Chair Letter

GFOA Certificate of Achievement for Excellence in Financial Reporting

PPCC Public Pension Standards Award for Funding and Administration

Retirement Board Members

State Investment Commission Members & Advisors

Professional Managers, Advisors & Service Providers

Executive Staff Members

Organizational Chart



Employees' Retirement System of Rhode Island

ERSRI Board: December 30, 2020

Seth Magaziner
General Treasurer
Chair

Dear Governor Raimondo, Speaker Mattiello, Senate President Ruggerio, Secretary of State Gorbea, and Members of the Retirement Board for the Employees' Retirement System of Rhode Island:

John P. Maguire
Vice Chair

We are pleased to present you with this Comprehensive Annual Financial Report of the Employees' Retirement System of Rhode Island (ERSRI) for the fiscal year ending June 30, 2020. As required by Rhode Island General Law §36-8-8, this report is intended to provide the Governor, the General Assembly, members and beneficiaries of the System, and the public with current financial information and an overall status report on the operation of the System.

Roger P. Boudreau

Mark A. Carruolo

Brian M. Daniels

Paul L. Dion

Management Responsibility

The management of ERSRI is responsible for the complete and fair presentation of the financial information and the accompanying disclosures in this report.

Thomas M. Lambert

Thomas A. Mullaney

Claire M. Newell

ERSRI management is responsible for ensuring that an adequate internal control structure is in place to provide reasonable, but not absolute, assurance regarding the safeguarding of assets against loss from unauthorized user disposition and the reliability of financial records for preparing financial statements in conformity with generally accepted accounting principles (GAAP). The concept of reasonable assurance recognizes that the costs of internal control should not exceed the benefits likely to be derived and that the evaluation of costs and benefits requires management to make estimates and judgments. The internal control structure is subject to periodic evaluation by management and the System's internal auditors to ensure compliance with applicable laws and regulations.

Raymond J. Pouliot

Jean Rondeau

Laura Shawhughes

Brett Smiley

Michael J. Twohey

Financial Information

The basic financial statements have been prepared in accordance with GAAP. The Management's Discussion and Analysis (MD&A) provides a narrative introduction, overview, and analysis to accompany the basic financial statements. This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it. The System's MD&A can be found immediately following the independent auditors' report.

Lisa A. Whiting

Frank J. Karpinski
Executive Director

Profile of ERSRI

The System is administered by the fifteen members of the State of Rhode Island Retirement Board which was authorized, created and established in the Office of the General Treasurer as an independent retirement board to hold and administer, in trust, the funds of the retirement System. The composition of the Board is listed in the notes to the financial statements and Rhode Island General Law §36-8-4.

The System's purpose is to provide service retirement, disability retirement, and survivor benefits to state employees, public school teachers, certain general and public safety municipal employees, state police officers, and judges.

ERSRI is responsible to administer seven (7) defined benefit plans and one (1) defined contribution plan:

1. *The Employees' Retirement System (ERS)*, established in 1936, which includes the retirement assets of all state employees and public school teachers;

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2. *The Teachers' Survivors Benefit Plan (TSB)*, which provides survivor benefits for teachers who do not participate in Social Security;
3. *The Municipal Employees' Retirement System (MERS)*, established in 1951, which is the municipal retirement plan covering participating municipal general and public safety employers (each unit is actuarially valued independently);
4. *The Judicial Retirement Benefits Trust (JRBT)*, which includes judges appointed after December 31, 1989;
5. *The State Police Retirement Benefits Trust (SPRBT)*, which includes state police hired after July 1, 1987;
6. *The Rhode Island Judicial Retirement Fund Trust (RIJRFT)*, established July 1, 2012, which covers active judges appointed prior January 1, 1990 and do not participate in the JRBT;
7. *The State Police Retirement Fund Trust (SPRFT)*, established June 8, 2016, for the purpose of paying retirement benefits to participating members of the state police initially hired on or before July 1, 1987, or their beneficiaries;
8. *The State of Rhode Island Defined Contribution Retirement Plan*, covers members of the defined benefit plan within the Employees' Retirement System of Rhode Island with less than 20 years of service as of June 30, 2012, excluding legislators, correctional officers and MERS public safety employees who participate in Social Security. For covered employees, participation in the defined contribution plan is mandatory. Judges and State Police officers are excluded from the Plan.

Each plan's assets are accounted for separately and may be used only for the payment of benefits to the members of that plan, in accordance with the terms of each plan.

ERSRI's financial statements are included as Pension Trust Funds within the Fiduciary Funds in the Comprehensive Annual Financial Report of the State of Rhode Island and Providence Plantations. The accompanying financial statements are not intended to present the financial position and results of operations of the State of Rhode Island.

Membership

As of June 30, 2020, active membership in the Employees' Retirement System totaled 24,672. The Municipal Employees' Retirement System totaled 7,643 and 7,208 active teachers were in the Teachers' Survivors Benefit Plan. There are currently 54 judges contributing to the Judicial Retirement Benefits Trust, 251 state police contributing to the State Police Retirement Benefits Trust, and 5 judges contributing to the Rhode Island Judicial Fund Trust. A total of 29,343 retirees and beneficiaries were receiving benefits from the System. As of June 30, 2020 there are 38,055 participants in the State of Rhode Island Defined Contribution Plan.

Financial Performance

The major additions for all ERSRI plans are employee and employer contributions, and investment earnings. Total additions for the fiscal year ending June 30, 2020 included \$807,100,000 in contributions from employers and employees and net investment income of \$364,400,000.

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The deductions from the funds consist primarily of payments made to members and beneficiaries for retirement, disability, death, or survivor benefits. In total, benefit payments for the fiscal year ending June 30, 2020 were \$1,000,200,000.

Administrative expenses of the retirement system are paid from a restricted receipt account that is used solely to pay such expenses. This account is financed through investment earnings up to a maximum of 0.175% of the average total investments before lending activities as reported in the annual report of the Auditor General for the next preceding five (5) fiscal years. Any non-encumbered funds at June 30th are transferred back to the retirement fund. Administrative expenses incurred by the System for the fiscal year ended June 30, 2020 amounted to \$8,880,000.

For the fiscal year ended June 30, 2020 the administrative costs of the defined contribution plan were financed through a budgetary appropriation and participant fees, and are reflected in the State's General Fund. Administrative costs that were allocated to the defined contribution plan as part of the Office of the General Treasurer's operating budget for the fiscal year ended June 30, 2020 were \$221,000. Fees paid to TIAA, custodian of the defined contribution plan, via participant fees were \$963,000 for fiscal year ended June 30, 2020.

Funding

The ERSRI plans are funded through three sources; (1) investment earnings, (2) employee contributions as prescribed in RI General Law for each trust, and (3) employer contributions. Employer contribution rates for ERSRI are determined actuarially. The rate consists of two pieces: the normal cost rate and the amortization rate. The normal cost rate is the employer's Entry Age normal cost, expressed as a percentage of active member payroll. The amortization rate is the contribution required to amortize the unfunded actuarial accrued liability over a number of years as a level percentage of payroll. The employer contribution rates recommended by the actuary must be approved by the ERSRI Retirement Board before they can become effective for each fiscal year.

The actuary determines the actuarial accrued liability of the Plans, which is a measure of the present value of accrued liabilities that is estimated to be payable in the future to current retirees, beneficiaries, and employees for service earned to date. The percentage computed by dividing the actuarial value of net assets for benefits by the actuarial accrued liability is referred to as the funded ratio. The higher the funded ratio, the greater the degree of overall financial health and stability for the pension fund. The funded status alone is not appropriate for assessing the need for future contributions. Also, the funded status is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the Plan's benefit obligations.

The funding objective of the ERSRI is to attempt to develop stable contribution rates and to achieve a funded status of 100%. Per the actuarial valuation dated June 30, 2019, which was the most recent information available at the time the report was prepared, the funded ratio for State employees increased from 52.9% in the prior year to 53.3%, as well as an increase for teachers from 54.9% to 55.3%. During the same period, the funded ratio decreased slightly from 96.7% to 96.0% for the judges. For the state police, the funded ratio increased from 83.5% to 84.9%. The funded ratio for the Rhode Island Judicial Fund Trust increased from 4.2% to 4.9%. After three years of advanced funding, the funded ratio for the State Police Retirement Fund Trust increased from 8.9% to 9.3%. During fiscal year ending June 30, 2019 overall improvement in the funded status for all plans, except for JRBT, was primarily due to liability gains that were partially offset by losses as the return on the actuarial value of assets was less than the assumed rate of 7.0%. The ratios are based on the Entry Age Normal funding method effective June 30, 1999.

The Municipal Employees' Retirement System (MERS) prepares separate valuations for each participating unit. For reference purposes only, the overall funded ratio for MERS – general employees was 81.3% and MERS – public safety employees was 79.1% and all MERS employer units combined were 80.5% per the June 30, 2019 valuation. Consequently, each unit has its own funding ratio that can be found in the Municipal Employees' Retirement System Actuarial Valuation Report at www.ersri.org.

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Net Pension Liability

The total pension liability is the actuarial present value of projected benefit payments attributed to past periods of employee service. The total pension liability is based on the Entry Age Normal funding method. The fiduciary net position is based on the fair market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations based on the Board's adopted assumptions and methods). The net pension liability is measured as the total pension liability, less the amount of the fiduciary net position.

The Net Pension Liability is an accrual accounting measurement calculated in conformity with Governmental Accounting Standard Board (GASB) Statement No. 67 for the Trust and No. 68 for the employer units. The unfunded liability is a funding measure calculated according to generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

ERSRI provides the calculation of Net Pension Liability to comply with GASB's financial reporting requirements and is not applicable for the purposes of funding each Trust or used in the development of the contribution rates for participating employers.

Investments

Assets are invested under the direction and authority of the State Investment Commission (SIC), which meets on a monthly basis. It is authorized, created and established in the office of the General Treasurer per Rhode Island General Law §35-10.

The SIC has established an asset allocation policy which may be amended by the SIC Board by a majority vote of its members. The SIC's asset allocation policy seeks to achieve the assumed rate of return adopted by the System over the long-term while reducing risk through the prudent diversification of the portfolio across various asset classes. The approved asset allocation policy is outlined in Note 5 to the Basic Financial Statements.

NEPC serves as the General Consultant for Policy and Asset Allocation to the State Investment Commission. Meketa serves as the Senior Advisor and Real Estate Consultant to the State Investment Commission. Cliffwater serves as consultant on alternative investments, hedge funds, and private equities. Bank of New York Mellon serves as the custodian for the defined benefit plans. TIAA serves as the record keeper for the State of Rhode Island Defined Contribution Plan and J.P. Morgan is the investment custodian of the defined contribution plan.

The annual time-weighted return (net of fees) on the portfolio for the one-year, three-year, and five-year periods ended June 30, 2020 were 3.78%, 6.10%, and 5.87%, respectively. A discussion regarding annualized returns and related benchmark indices for fiscal year 2020 is explained in the MD&A.

A more detailed exhibit of investment policies and investment performance for ERSRI are in the Investment Section of this report.

Major Initiatives

Information Technology

Beginning in fiscal year 2018, ERSRI began the implementation of a strategic initiative to improve internal processing efficiencies to enhance the membership's experience when interacting with ERSRI. During fiscal year 2020, ERSRI continued to work on the initiative. Included within this initiative were the goals to (1) expediate the processing of pension payments, (2) reduce pension processing time, and (3) provide members with the ability to receive accurate on-demand benefit estimates.

A major component in being able to achieve the stated goals is having accurate and reliable member data. ERSRI has dedicated resources to review and correct, where necessary, historic membership data from its legacy

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systems. ERSRI has retained the services of several temporary employees to analyze and identify data anomalies and potential data conversion issues. The methodology for this data validation project will be to identify the potential data issues, develop queries to determine the population and organizational impact, analyze the query results, evaluate effectiveness of remediation options, verify results of queries, and develop on-going process improvements to maintain a high level of data integrity.

This initiative will be a multi-year process and will require significant financial and human resources. The overall objective is to continue to review the System's member services practices and continually improve the customer service experience for our membership.

Investments

During fiscal year 2020, the SIC continued to execute on its "Back to Basics" asset allocation strategy focused on low-cost equity investments, complemented by other assets designed to help grow the plan assets while protecting ERSRI against risks such as volatility and inflation.

With the assistance of its general consultant, the SIC completed an asset allocation review in December 2019, which resulted in a 2% allocation increase to the Crisis Protection Class ("CPC"). In addition, as a result of the asset allocation review, the SIC implemented new allocations to emerging market debt and U.S. equity options to help further diversify the Income Bucket.

Legislation

There were no relevant pieces of legislation pertaining to ERSRI enacted by the General Assembly during the legislative session that ended June 30, 2020.

Professional Services

Joseph P. Newton, FSA, MAAA, EA, Paul T. Wood, ASA, MAAA, FCA and Brad Stewart, ASA, MAAA, EA of GRS Retirement Consulting provide actuarial services to the ERSRI.

Michael P. Robinson, Esquire, of the law firm Shechtman, Halperin, Savage, LLP of Pawtucket, Rhode Island serves as the Retirement Board's general counsel. Private attorneys are hired on a per diem basis to serve as hearing officers for the System on disputed retirement issues.

In addition to Dr. Christopher Ley, who serves as the Medical Advisor to the Board's Disability Subcommittee, the ERSRI hires independent physicians who conduct medical exams of the System's disability applicants.

The Office of the Auditor General conducts an annual financial audit for each trust within the Employees' Retirement System of Rhode Island.

A separate schedule of professional consultants is included in the Introductory Sections of this report.

Reports to Members

Real-time active member information regarding contributions and creditable service, as well as retiree member information, is found on the System's website at www.ersri.org.

Active and retired members also receive newsletters and other notices on an ad hoc basis.

Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to ERSRI for its Comprehensive Annual Financial Report

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for the fiscal year ended June 30, 2019. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized Comprehensive Annual Financial Report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. ERSRI believes that our Comprehensive Annual Financial Report for the fiscal year ended June 30, 2020 continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

ERSRI also received the 2020 Public Pension Standards Award from the Public Pension Coordinating Council (PPCC). The PPCC presents this award to public employee retirement systems in recognition of their achievement of high professional standards in the areas of comprehensive benefits administration, actuarial valuations, financial reporting, investments, and membership communications.

The PPCC is a coalition of three national associations that represent public retirement systems and administrators: National Association of State Retirement Administrators (NASRA), the National Council on Teacher Retirement (NCTR) and the National Conference on Public Employee Retirement Systems (NCPERS).

The PPCC established the Public Pension Standards to reflect minimum expectations for public retirement system management, administration, and funding. The Standards serve as a benchmark by which to measure public defined benefit plans.

Acknowledgments

The preparation of this report is possible only through the combined efforts of the ERSRI staff. Additionally, we would like to thank the Retirement Board, the actuarial team at GRS Retirement Consulting, the Office of the Auditor General, and the Office of the State Controller. Finally, this report is intended to provide extensive and reliable information as a basis for making management decisions, determining compliance with legal provisions, and determining responsible stewardship for the assets contributed by the System's members and their employers.

We welcome your comments on the issuance of this report.

Respectfully submitted,



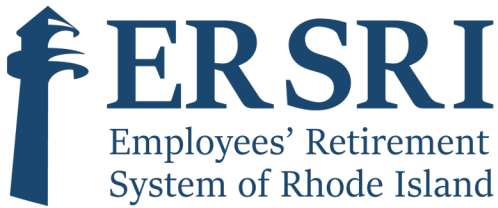
Frank J. Karpinski
Executive Director



Stacey F. Whitton
Chief Financial Officer

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Seth Magaziner
General Treasurer, Chair

Frank J. Karpinski
Executive Director

December 30, 2020

To the Members and Beneficiaries of the Employees' Retirement System of Rhode Island:

On behalf of the Board of the Employees' Retirement System of Rhode Island (ERSRI), I am pleased to present the Fiscal Year 2020 Comprehensive Annual Financial Report. This report describes the financial condition of the System, changes that occurred during the fiscal year, and covers important information related to the management of the System, including investment performance.

In December 2019, a new asset allocation study was carried out that built on the strengths of the "Back to Basics" strategy that was implemented after the 2016 asset allocation study. The revised strategy continues to emphasize a diversified portfolio that seeks to earn an appropriate rate of return, protect the fund in the event of a significant equity market drawdown, and provide liquidity for the ongoing payment of benefits to the beneficiaries of the System.

ERSRI's investments earned 3.78% in net performance, growing to \$8.5 billion in the fiscal year ending on June 30, 2020. While the investment performance was strong during the fiscal year, ERSRI invests for the long term. Over a five-year period, net performance for the fund was 5.87% and 7.80% over the ten-year period, outperforming the System's benchmarks for the respective time periods.

Rhode Island's performance also continues to steadily improve compared to its peers. Fiscal Year 2020 marks the third consecutive fiscal year in which the plan outperformed the median in its peer group. The System's relative performance ranked in the forty-eighth percentile among peers for the trailing ten-year period, while improving to twenty-ninth over the trailing five-year period, and thirteenth over the trailing one-year period.

The investment strategy along with the set of current assumptions should provide for a predictable funding pattern to advance our goal to reach 80% funded and return regular cost of living adjustments (COLA's) by 2031 as well as provide intermittent COLA's in years 2021, 2025 and 2029.

The System conducted an actuarial experience study in May 2019. In general, the current assumption set was reasonable but as recommended by the System actuary, the Board adopted some small changes to better match recent experience or update to latest available information, such as an update to the underlying mortality tables from the RP-2014 set of tables to the public sector-based PUB(10) tables, this had no material impact to the liabilities or contributions. Overall, the adopted assumptions have minimal impact to the valuation process with a slight decrease in liabilities and costs for most groups.

In June of 2020, the System hired a new Chief Investment Officer – Andrew Junkin, CFA. Mr. Junkin served as president of Wilshire Consulting since 2015, leading a team of over 80 investment professionals. Over his 15-year tenure at Wilshire, he worked with public and corporate pension funds, foundations, endowments, and insurance companies.

In November 2020, for the third consecutive year, the Government Finance Officers Association (GFOA) awarded ERSRI its highest form of recognition in governmental accounting and financial reporting for our fiscal year 2019 Comprehensive Annual Financial Report.

The dedication of ERSRI's staff and board is the reason that Rhode Island's retirement system is stronger than it has been in many years. Together, we are working to ensure retirement security for Rhode Island teachers, State and municipal employees, public safety officers and other public servants.

Sincerely,

Seth Magaziner
General Treasurer



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

Employees Retirement System of Rhode Island

For its Comprehensive Annual
Financial Report
For the Fiscal Year Ended

June 30, 2019

Christopher P. Morrill

Executive Director/CEO



Public Pension Coordinating Council

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

Presented to

Employees' Retirement System of Rhode Island

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

Presented by the Public Pension Coordinating Council, a confederation of

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

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

Alan H. Winkle
Program Administrator

Retirement Board Members

The 15-member State Retirement Board oversees the Employees' Retirement System of Rhode Island.

The State Retirement Board, as of June 30, 2020, included:

General Treasurer Seth Magaziner, *Chair, Ex Officio Member*

John P. Maguire, *Vice Chairperson, Active Teacher Representative*

Roger P. Boudreau, *Retired Member Representative*

Mark A. Carruolo, *Public Representative (appointed by the Governor)*

Brian M. Daniels, *Director, Rhode Island League of Cities and Towns, Ex Officio Member*

Paul L. Dion, Ph.D., *Active State Employee Representative*

Thomas M. Lambert, *Active Municipal Employee Representative*

Thomas A. Mullaney, *Associate Director/State Budget Officer (appointed by Director of Administration)*

Claire M. Newell, *Active State Employee Representative*

Raymond J. Pouliot, *Retired Member Representative*

Jean Rondeau, *Public Representative (appointed by the Governor)*

Dr. Laura Shawhughes, *Public Representative (appointed by the General Treasurer)*

Brett Smiley, *Director of Administration*

Michael J. Twohey, *Teacher Representative*

Lisa A. Whiting, *Public Representative (appointed by the General Treasurer)*

The State Investment Commission is responsible for the investment of the assets of the Employees' Retirement System, the Municipal Employees' Retirement System, the State Police Retirement Benefits Trust, the Judicial Retirement Benefits Trust, the Rhode Island Judicial Retirement Fund Trust, the State Police Retirement Fund Trust, and the State of Rhode Island Defined Contribution Retirement Plan.

The State Investment Commission, as of June 30, 2020, included:

General Treasurer Seth Magaziner, *Chair*

Erik Carleton, *General Treasurer's Appointee*

J. Michael Costello, *Governor's Appointee*

Thomas P. Fay, *Governor's Appointee*

Karen Hammond, *Governor's Appointee*

Frank J. Karpinski, *Executive Director, Non-voting Member*

Sylvia Maxfield, *General Treasurer's Appointee*

Thomas Mullaney, *Director of Administration's Designee*

Karen Hazard, *General Treasurer's Appointee*

Al Cumplido, *General Treasurer's Appointee*

Administration and Advisors to State Investment Commission as of June 30, 2020:

Andrew Junkin, *Chief Investment Officer*

Matthew E. Waters, *Legal Counsel, State Investment Commission*

NEPC, *General Consultant, Policy and Asset Allocation Consultant to the State Investment Commission*

Meketa, *Senior Advisor & Real Estate Consultant to the State Investment Commission*

Cliffwater, *Alternative Investments (Hedge Funds/Private Equities) Consultant to the State Investment Commission*

Bank of New York Mellon, *Custodian Bank*

Employees' Retirement System of Rhode Island
Professional Advisors, Investment Consultants, Managers & Service Providers
Fiscal Year Ended June 30, 2020

Actuarial Consultant

Gabriel Roeder Smith & Co.

Legal

Adler Pollock & Sheehan P.C.
 Hinckley, Allen, & Snyder LLP
 Shechtman Halperin Savage LLP

Independent Auditors

R.I. Office of the Auditor General

Medical Advisor

Dr. Christopher Ley, MD

Information Technology Consultant

Morneau Shepell

Investment Advisor

Aberdeen Asset Management
 Cliffwater LLC
 Pension Consulting Alliance
 NECP LLC

Investment Custodian

BNY Mellon - Defined Benefit Plan
 TIAA - Defined Contribution Plan

Investment - Total Growth

Global Equities

State Street Global Advisors

Private Growth

Non-Core Real Estate

Crow Retail Fund
 Exeter Industrial Value Fund III
 Exeter Industrial Value Fund V
 GEM Realty Fund V
 GEM Realty Fund VI
 IC Berkeley Partners III
 IC Berkeley Partners IV
 Linchris Capital Opportunities Fund II
 Lone Star Real Estate Fund IV
 Magna Hotel Fund III
 Raith Real Estate Fund II
 Tri Continental Capital VII
 Waterton Venture XII

Opportunistic Private Credit

Centerbridge Special Credit Partners II
 Clearlake Opportunities Fund II
 Davidson Kempner LDO Fund IV
 Davidson Kempner LDO Fund V
 Oaktree European Principal Fund III
 WLR Recovery Fund IV

Private Equity

Advent International GPE VII
 Advent International GPE VIII
 Advent International GPE IX
 Alta Partners VIII
 Altaris Constellation Partners IV
 Altaris Health Partners IV
 Bain Capital Fund X
 Baring Asia Fund VI
 Baring Asia Fund VII
 Birch Hill Equity Partners III
 Braemar Energy Ventures III
 Carlyle Asia Partners IV
 Carlyle Asia Partners V
 Castile Ventures III
 Centerbridge Capital Partners
 Centerbridge Capital Partners III
 Charterhouse Capital Partners VIII

Investment - Total Growth

Private Growth

Private Equity - continued

Coller International Partners V
 Constellation Ventures III
 CVC European Equity Partners III
 CVC European Equity Partners IV
 CVC European Equity Partners V
 CVC European Equity Partners VI
 CVC European Equity Partners VII
 CVC European Equity Partners VIII
 DCVC Bio II
 EnCap Energy Capital Fund IX
 EnCap Energy Capital Fund X
 EnCap Energy Capital Fund XI
 Endeavor VIII
 Eureka III
 Eureka IV
 Fenway Partners Capital Fund III
 First Reserve Fund XI
 German Equity Partners V
 Granite Global Ventures II
 Granite Global Ventures III
 Green Equity Investors V
 Hastings Equity Fund IV
 Industry Ventures Partnership Holdings III
 Industry Ventures Partnership Holdings III-C
 Industry Ventures Partnership Holdings IV
 Industry Ventures Partnership Holdings IV-Secondary
 Industry Ventures Partnership Holdings V
 Kayne Anderson Energy Fund IV
 Leapfrog Ventures II
 Level Equity Growth Partners IV
 Level Equity Opportunity Fund 2018
 Lighthouse Capital Partners VI
 MHR Institutional Partners III
 Nautic Partners V
 Nautic Partners VI
 Nautic Partners VII
 Nautic Partners VIII
 Nautic Partners IX
 Nordic Capital Fund V
 Nordic Capital Fund VI
 Nordic Capital Fund VII
 Nordic Capital Fund VIII
 Odyssey Invest Partners VI
 Paine Schwartz Food Chain Fund IV
 Paine Schwartz Food Chain Fund V
 Paladin III
 Parthenon Investors II
 Parthenon Investors VI
 Point 406 Ventures
 Point Judith Venture Fund II
 Pollen Street IV
 Providence Equity Partners V
 Providence Equity Partners VI
 Providence Equity Partners VII
 Riverside Capital Appreciation Fund VI
 Riverside Micro-Cap Fund III
 Riverside Micro-Cap Fund IV
 Riverside Micro-Cap Fund V
 RLH Investors IV
 Siris IV
 Sorenson Capital Partners III
 Southwest Fund VII
 Tenex Capital Partners II
 Thomas, Mc Nerney & Partners III
 Thomas, Mc Nerney & Partners II
 TPG Partners IV
 TPG Partners V
 TPG Partners VI
 Trilantic Capital Partners IV
 Vinci III

Investment - Total Growth

Private Growth

Private Equity - continued

W Capital Partners II
 Wynchurch Capital Partners V

Investment - Income

Private Credit

Benefit Street Senior Opportunities Fund II
 CapitalSpring Investment Partners V
 CapitalSpring Investment Partners VI
 Garrison Opportunity Fund IV
 Owl Rock Capital
 Owl Rock Capital II
 Owl Diversified Holdings
 Shamrock IP Content Fund II
 Summit Partners Credit Fund
 Summit Partners Credit Fund II
 Virgo Societas IV
 Zephyrus Aviation Partners

Income - Other

Heitman - REITs
 Harvest Partners - High Yield Infrastructure
 Loomis Sayles - Liquid Credit
 PIMCO - Liquid Credit
 Neuberger Berman - Equity Options
 Wellington Management - EMD

Investment - Stability

Crisis Protection Class

WAMCO - Treasury Long Duration
 Systematic Trend Following (CPC LLC)

Inflation Protection

Core Real Estate

AEW Core Property Trust
 Heitman HART
 JP Morgan Strategic Property Fund
 Morgan Stanley Prime Property Fund

Private Infrastructure

Homestead USA Farmland Fund II
 IFM Global Infrastructure, LP
 ISQ Global Infrastructure Fund, LP
 ISQ Global Infrastructure Fund II, LP
 Star America Infrastructure Fund II
 Stonepeak Infrastructure Fund II, LP
 Stonepeak Infrastructure Fund II - C
 Stonepeak Infrastructure Fund III, LP
 Stonepeak Infrastructure Fund IV, LP

Inflation Protection - Other

Brown Brothers Harriman - TIPS

Volatility Protection

Absolute Return Hedge Funds

Capula Global Relative Value Fund Ltd.
 Davidson Kempner Institutional Partners LP
 DE Shaw Composite International Fund
 Elliott Associates LP
 Graham Capital
 Viking Global Equities LP

Volatility Protection - Other

Fidelity - IG Corporate Credit
 Loomis Sayles - Securitized Credit
 Payden & Rygel

Investment - Other

Hamilton Lane
 Russell Investments

Executive Staff

Day-to-day operations of the Employees' Retirement System of Rhode Island are overseen by the following administrators (as of June 30, 2020):

Frank J. Karpinski, *Executive Director*

Heidi Halbur, *Deputy Director*

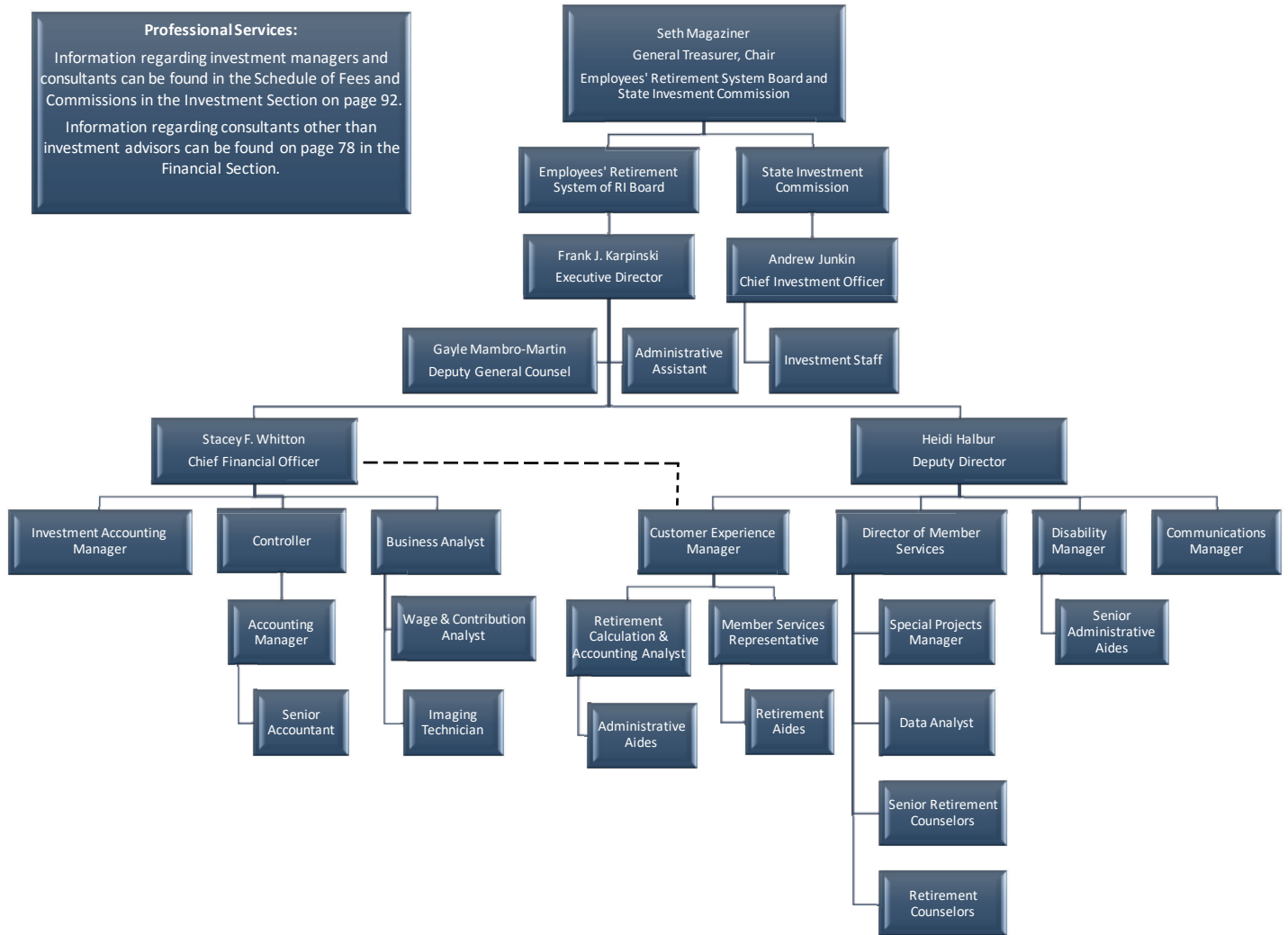
Stacey F. Whitton, *Chief Financial Officer*

Michael P. Robinson, Esquire, *Retirement Board Counsel**

- * Per Rhode Island General Law §36-8-9 legal counsel is appointed by the General Treasurer/Chair of the Retirement Board.

Organizational Chart

Professional Services:
 Information regarding investment managers and consultants can be found in the Schedule of Fees and Commissions in the Investment Section on page 92.
 Information regarding consultants other than investment advisors can be found on page 78 in the Financial Section.



Financial Section

Independent Auditors' Report

Management's Discussion and Analysis

Basic Financial Statements

Notes to Basic Financial Statements

Required Supplementary Information

Notes to Required Supplementary Information

Supplementary Information



Office of the Auditor General

State of Rhode Island - General Assembly
Dennis E. Hoyle, CPA - Auditor General

oag.ri.gov

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tel: 401.222.2435 • fax: 401.222.2111

INDEPENDENT AUDITOR'S REPORT

JOINT COMMITTEE ON LEGISLATIVE SERVICES, GENERAL ASSEMBLY
STATE OF RHODE ISLAND:

RETIREMENT BOARD OF THE EMPLOYEES' RETIREMENT SYSTEM OF THE
STATE OF RHODE ISLAND:

Report on the Financial Statements

We have audited the accompanying financial statements of the plans which comprise the Employees' Retirement System of the State of Rhode Island (the System) as of June 30, 2020 and for the year then ended, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

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

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

Joint Committee on Legislative Services, General Assembly
Retirement Board of the Employees' Retirement System

Opinions

In our opinion, the financial statements of the plans referred to above present fairly, in all material respects, the financial position of the plans within the System as of June 30, 2020, and the changes in financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matters

As described in Note 1, the financial statements of the System present only the pension trust funds of the State of Rhode Island and Providence Plantations (the State) and do not purport to, and do not present fairly the financial position of the State, as of June 30, 2020 and the changes in its financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

As described in Note 5, the fair values of certain investments (hedge funds, private equity, real estate, private infrastructure, crisis protection class - trend following investments, and emerging markets debt - collective unit trust) representing 32.8% of assets within the pooled investment trust, have been estimated by management in the absence of readily determinable fair values. Management's estimates are based on information provided by the fund managers or general partners.

As described in Note 8, the fiduciary net position for the RIJRF plan represents only 5.0% of the total pension liability of that plan at the June 30, 2020 measurement date. Employer contributions were significantly less than actuarially determined amounts. Additional employer contributions will be required to provide benefits to plan members.

Our opinions are not modified with respect to these matters.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 4 through 11 and other required supplementary information as listed in the table of contents and pages 54 through 75 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.

Joint Committee on Legislative Services, General Assembly
Retirement Board of the Employees' Retirement System

Other Information

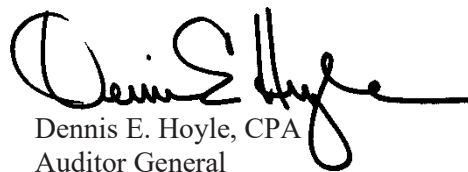
Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's basic financial statements. The supplementary information, such as the Schedules of Investment, Administrative, and Consultant Expenses, is presented for purposes of additional analysis and is not a required part of the basic financial statements.

The Schedules of Investment, Administrative, and Consultant Expenses are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. 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 Investment, Administrative, and Consultant Expenses are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introductory, 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.

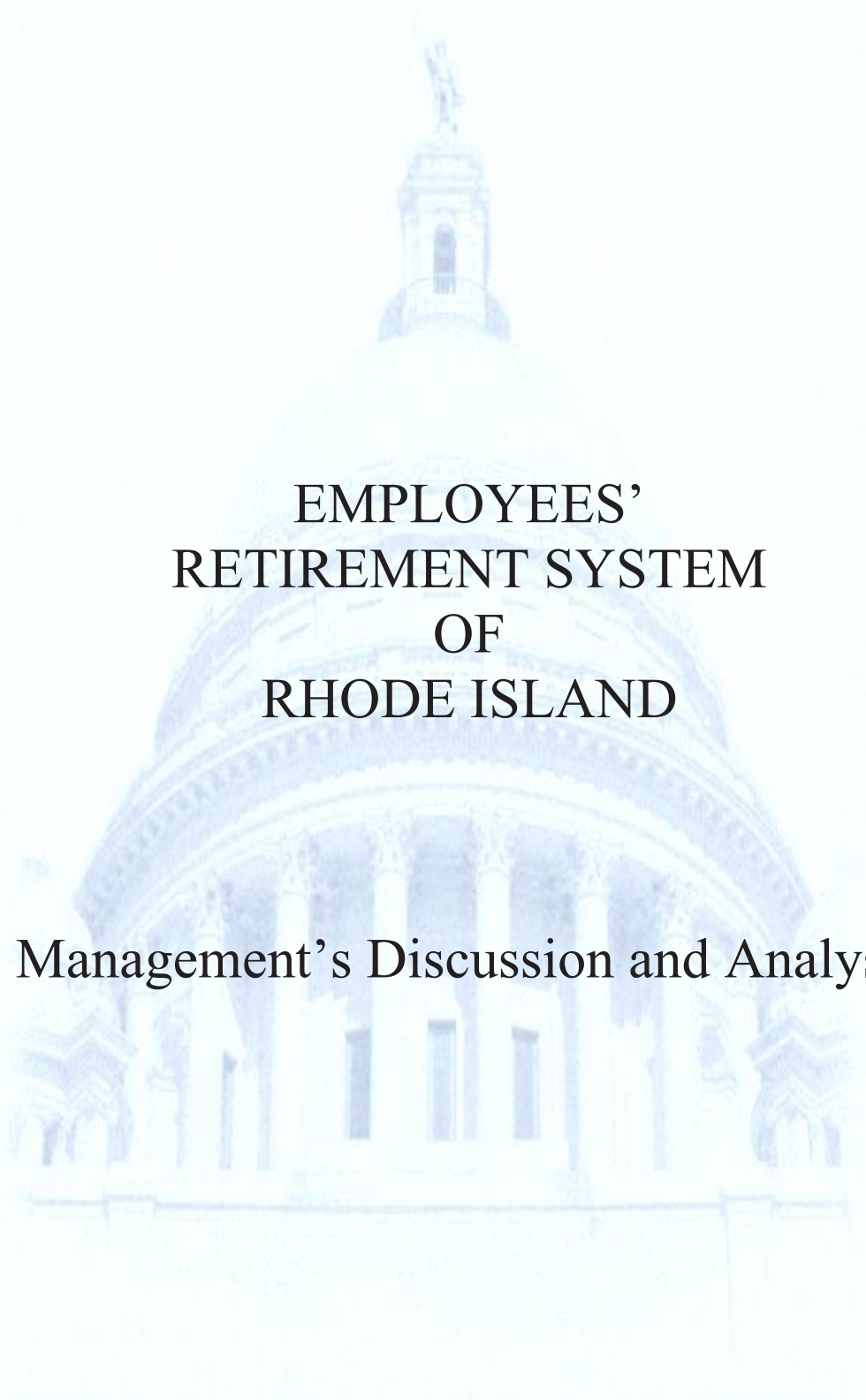
Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have issued a report dated December 29, 2020 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 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.



Dennis E. Hoyle, CPA
Auditor General

December 29, 2020



EMPLOYEES'
RETIREMENT SYSTEM
OF
RHODE ISLAND

Management's Discussion and Analysis

Management's Discussion and Analysis

Management of the Employees' Retirement System of the State of Rhode Island (the System) provides this Management's Discussion and Analysis of their financial performance for the readers of the System's financial statements. This narrative provides an overview of the System's financial activity for the fiscal year ended June 30, 2020. This analysis is to be considered in conjunction with the financial statements to provide an objective analysis of the System's financial activities based on the status of the System and issues currently facing management.

Understanding the Employees' Retirement System Financial Statements

The System administers seven defined benefit pension plans. State employees and teachers are combined into one cost-sharing plan while teachers' survivors benefits are provided from an additional cost-sharing plan. Two plans cover state police and two additional plans cover judges. Municipal employees are covered under a separate agent plan administered by the System. The System also administers a defined contribution plan for certain state employees, teachers, and employees of participating municipalities.

The *Statements of Fiduciary Net Position* provide a snapshot of the financial position of the System at June 30, 2020. The *Statements of Changes in Fiduciary Net Position* summarize the additions and deductions that occurred during the fiscal year.

The *Notes to the Financial Statements* provide additional information essential to a full understanding of the financial statements.

The *Required Supplementary Information* consists of schedules and related notes, which over time will be built to present 10 years of historical data. These schedules present each plan's net pension liability (asset) and changes in the net pension liability (asset) between years. A schedule of investment returns presents the annual money-weighted return for each defined benefit plan. A schedule of contributions is presented for each plan, which details required and actual contributions to the plan including covered payroll information.

Financial Highlights for the Fiscal Year Ended June 30, 2020

- ❑ The System's fiduciary net position increased by \$161.6 million from \$9.6 billion at June 30, 2019 to \$9.8 billion at June 30, 2020.
- ❑ Total pension benefits paid to members from the defined benefit plans were \$968.9 million, an increase of \$5.7 million or 0.6% when compared to the fiscal year ended June 30, 2019.
- ❑ Contributions to all defined benefit plans from both employers and employees at June 30, 2020 were \$675 million, an increase of \$48.8 million or 7.8% compared to the fiscal year ended June 30, 2019.
- ❑ Total employee and employer contributions into the System's defined contribution plan were \$131.4 million at June 30, 2020, an increase of \$5.4 million.
- ❑ Total distributions paid to members from the defined contribution plan were \$23.7 million.
- ❑ The net income from investing activities within the defined benefit plans (Pooled Investment Trust) was \$318.9 million for the fiscal year ended June 30, 2020. Investment gains within the defined contribution plan totaled \$45.6 million.

Management's Discussion and Analysis

Financial Analysis

The System provides retirement and disability benefits from the defined benefit plan to State employees, public school teachers, participating municipal general and public safety employees, state police officers and judges. The ability to provide these benefits are funded through member and employer contributions and investment income. The fiduciary net position is available to satisfy the financial obligations to members, retirees, and beneficiaries.

The total net position restricted for pensions at June 30, 2020 increased to \$9.8 billion when compared to \$9.6 billion at June 30, 2019.

The following tables illustrate the condensed Net Position and Condensed Changes in Net Position for ERSRI for the fiscal years ended June 30, 2020 and June 30, 2019.

Assets, Liabilities and Fiduciary Net Position – All Plans (in millions)		
	<u>June 30, 2020</u>	<u>June 30, 2019</u>
Assets:		
Cash and cash equivalents	\$ 7.5	\$ 4.4
Investments	9,691.0	9,532.3
Contribution and other receivables	<u>61.1</u>	<u>60.2</u>
Total assets	<u>9,759.6</u>	<u>9,596.9</u>
Liabilities:		
Accounts payable	<u>8.1</u>	<u>7.0</u>
Total liabilities	<u>8.1</u>	<u>7.0</u>
Fiduciary Net Position:	<u>\$ 9,751.5</u>	<u>\$ 9,589.9</u>

Total assets increased by \$162.7 million, or 1.7%, for the fiscal year ending June 30, 2020 when compared to the fiscal year ended June 30, 2019. Cash and cash equivalents at June 30, 2020 increased \$3.1 million when compared to the fiscal year ended June 30, 2019. The increase in the total fiduciary net position can primarily be attributed to higher investment earnings. The increase of \$158.7 million, or 1.7%, of investments can be attributed to an increase in the global markets and the allocation policy of the portfolio. Contributions and other receivables increased by a minimal amount of \$0.8 million, or 1.4%, due to the timing of amounts due from employers at June 30, 2020.

Total liabilities increased \$1.1 million, or 16.1%, for the fiscal year ending June 30, 2020 due to the timing of what was owed to vendors, mainly for investment managers fees.

Management's Discussion and Analysis

Summary of Changes in Fiduciary Net Position – All Plans (in millions)		
	Year Ended June 30, 2020	Year Ended June 30, 2019
Additions:		
Contributions	\$ 806.2	\$ 752.0
Net investment gain	364.5	591.8
Service credit transfers	<u>0.9</u>	<u>8.5</u>
Total Additions	<u>1,171.6</u>	<u>1,352.3</u>
Deductions:		
Benefits and distributions	992.6	982.9
Refunds of contributions	6.7	6.8
Administrative expenses	9.8	9.9
Service credit transfers	<u>0.9</u>	<u>8.5</u>
Total Deductions	<u>1,010.0</u>	<u>1,008.1</u>
Increase in Net Position:	161.6	344.2
Fiduciary Net Position:		
Beginning of year	<u>9,589.9</u>	<u>9,245.7</u>
End of year	<u>\$ 9,751.5</u>	<u>\$ 9,589.9</u>

Additions to Net Position

The revenues required to fund retirement and disability benefits for the defined benefit plans are accumulated from the contributions from employees and employers, as well as investment earnings. Employee and employer contribution revenue at June 30, 2020 was \$552.9 million for the defined benefit plan, an increase of 5.7% when compared to \$523.2 million at June 30, 2019. Employee and employer contributions to the defined contribution plan was \$131.4 million at June 30, 2020, an increase of 4.3% when compared to \$125.9 million at June 30, 2019.

The State of Rhode Island's share of contributions for the teachers' defined benefit plan was \$108.6 million for fiscal 2020, an increase of 6.2% when compared to \$102.2 million for fiscal 2019.

Contributions from employees and employers (except for the RIJRFT and SPRFT) are based on covered payroll. During fiscal year 2020 the covered payroll for each trust experienced an increase when compared to fiscal 2019. Also, contribution rates for the members are prescribed in Rhode Island General Law and fixed by statute. The employer contributions are actuarially determined through annual funding valuations and are adjusted accordingly to meet the financial obligations of each Trust.

ERSRI recognized \$364.5 million in new investment gains at June 30, 2020. Improvements in the domestic equity and U.S. Treasury markets were the primary factors driving the increase in Net Position. The investment portfolio for the defined benefit plan recognized a net return of 3.78% at June 30, 2020.

Management's Discussion and Analysis

Deductions from Net Position

ERSRI was established to administer the funds of each Trust in order to provide lifetime retirement, survivor, and disability benefits to its membership. The primary categories that reduce the net position are benefit payments and distributions, refunds of contributions to members exiting the System, and the administrative expenses to operate ERSRI.

Benefits and distributions to members from the defined benefit plan at June 30, 2020 were \$968.9 million, an insignificant difference of less than 1.1% when compared benefits at June 30, 2019. There was a moderate cost-of-living increase to eligible employees, increase in the number of retirees, and the increase of higher average salaries of new retirees.

Distributions to members from the defined contribution plan at June 30, 2020 were \$23.7 million, an increase of 20.6% when compared to \$19.6 million at June 30, 2019. The increase is the result of the increased number of retirees eligible to elect distributions from this plan. The plan was created on July 1, 2012 for eligible members that did not have 20 years of service credit at June 30, 2012. Distributions are expected to increase as this plan matures and becomes a more significant portion of a member's retirement portfolio within ERSRI.

Refunds of contributions from the defined benefit plan at June 30, 2020 were \$6.7 million, a minimal decrease of 1.3% when compared to \$6.8 million at June 30, 2019. The decrease in refunds is the result of a decrease in the number and dollar value of refund requests from terminated members.

Administrative expenses for both the defined benefit and defined contribution plans at June 30, 2020 were \$9.8 million, a decrease of less than 1% when compared to \$9.9 million at June 30, 2019. The decrease in fiscal year 2020 is moderate in nature. Details of administrative expenses are listed in the *Schedule of Administrative Expenses* in the Supplementary Information section of this report.

Investments

The State Investment Commission (SIC) establishes long-term asset allocation policy, selects managers, and monitors investment performance of the plan. An asset allocation study is conducted every two to four years to identify an optimal diversified investment portfolio that maximizes return within an acceptable level of risk. As long-term investors, the SIC has committed to the strategic asset allocation that has been developed as part of a comprehensive asset allocation study. The asset allocation study incorporates return expectations, risks and correlations associated with each asset class, as well as the unique profile and objectives of the System.

The SIC seeks to achieve the targeted investment return set by the Retirement Board, while minimizing risk and satisfying the plan's need for steady cash flows. As a mature defined benefit plan where distributions exceed contributions, the System must balance its short-term cash flow requirements with the much longer time horizon of its total obligations. Diversification across asset classes that respond differently to different market environments is a key tool used by the SIC to seek strong long-term returns. The allocation of assets among stocks, bonds, and alternative investments can have a significant impact on risk-adjusted investment performance.

In December 2019, a new asset allocation study was carried out that built on the strengths of the "Back to Basics" strategy that was implemented after the 2016 asset allocation study. The revised strategy continues to emphasize a diversified portfolio that seeks to earn an appropriate rate of return, protect the fund in the event of a significant equity market drawdown, and provide liquidity for the ongoing payment

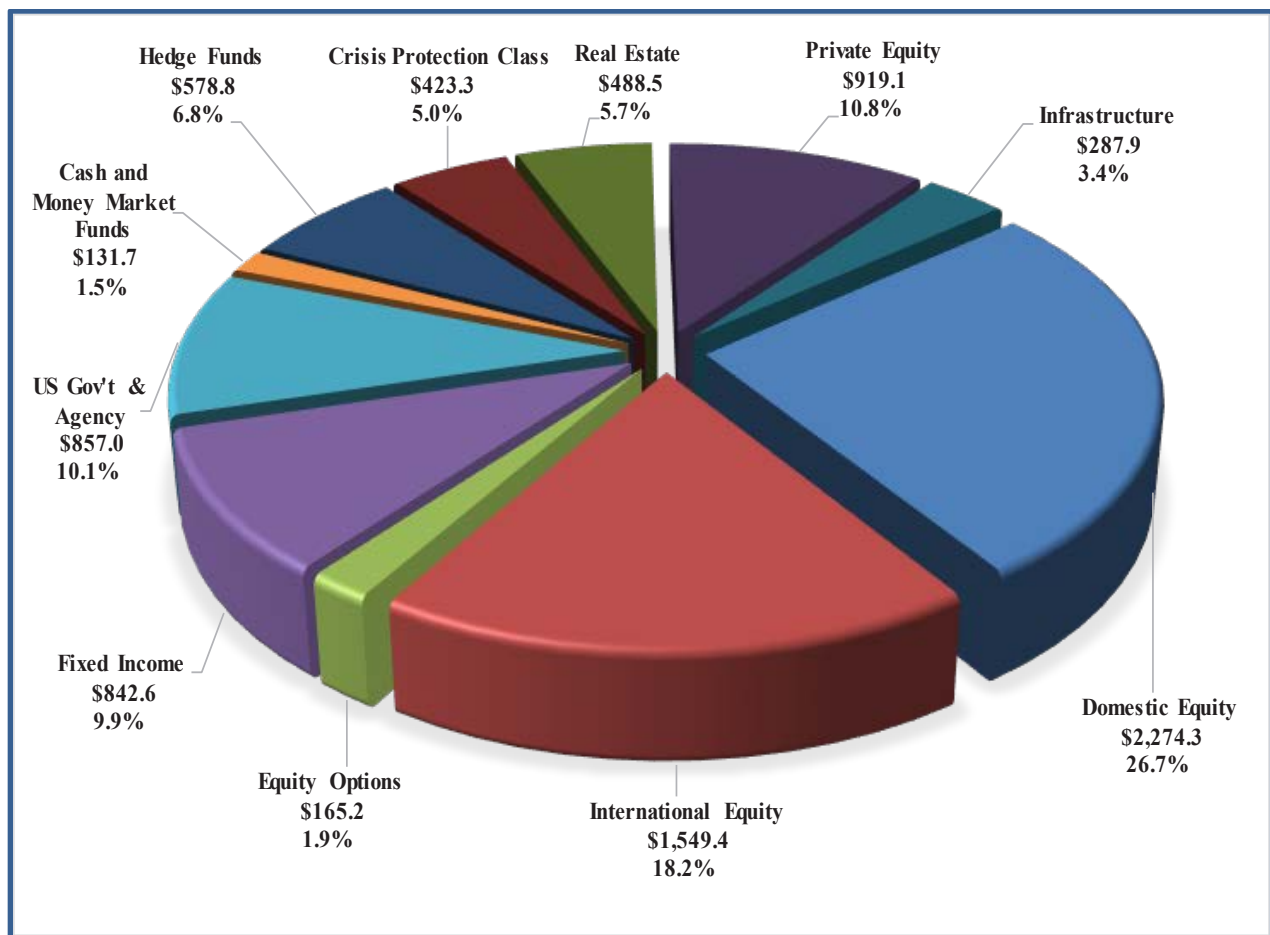
Management's Discussion and Analysis

of benefits to the beneficiaries of the system. During fiscal 2020, the strategic allocation was further updated to include allocations to Emerging Market Debt and Equity Options, which provide additional diversification. The Investment Grade Fixed Income allocation was disaggregated into separate Investment Grade Corporate Bond and Securitized allocations.

Rhode Island maintains one of the most comprehensive expense disclosure policies in the nation. Since 2015, Rhode Island has only invested with fund managers who agree to have their performance and expenses published regularly, a policy that has become a leading practice replicated by other states. In 2017, The Rhode Island General Assembly codified the disclosure policy in statute. While some investment managers selected prior to 2015 are grandfathered from the individualized reporting requirement, the Treasurer's office has requested that they voluntarily allow disclosure, which many have agreed to do. In addition to displaying the fees and expenses charged by each fund individually, this report includes a comprehensive total of all manager fees and expenses paid out of the pension system by asset class. These totals reflect fees and expenses paid to every fund, including those grandfathered funds that declined to allow individualized disclosure.

Pooled Investment Trust – Asset Allocation - June 30, 2020

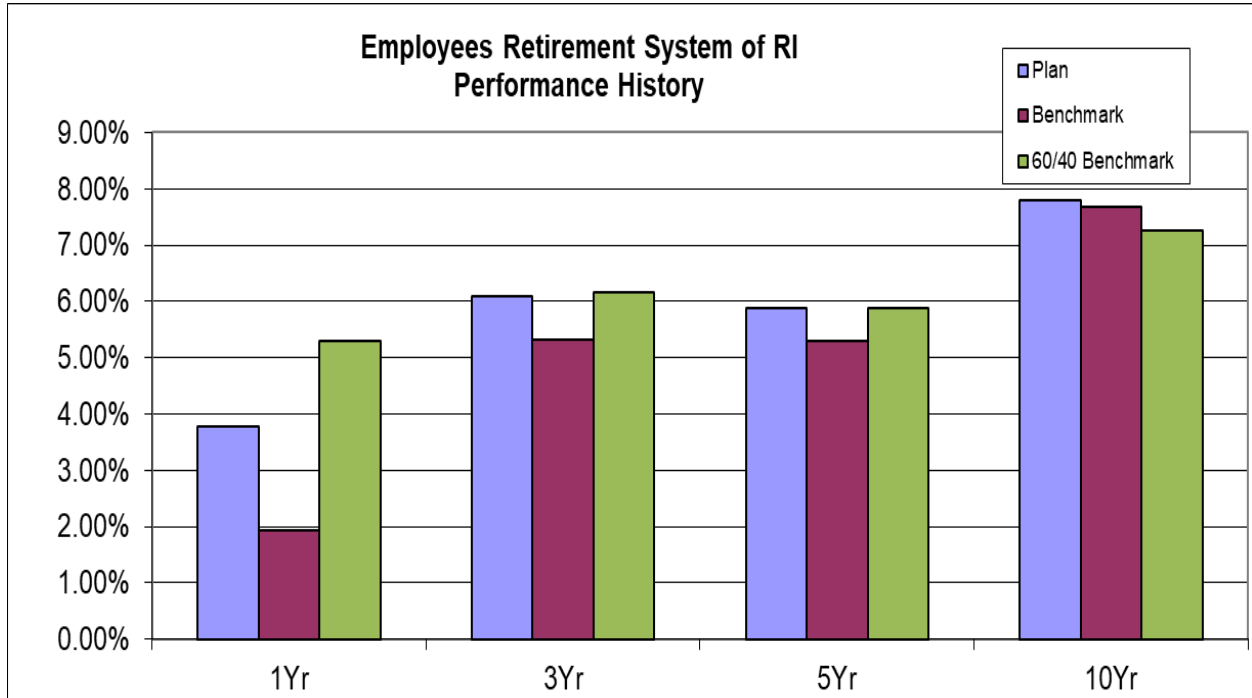
(in millions)



Management's Discussion and Analysis

Investment Performance

The System's one-year, time-weighted net rate of return was 3.78% which outperformed the composite benchmark (1.93%), but lagged the 60/40 benchmark's 5.29% return. The System's three-year annualized return was 6.10%, which was 77 bps above the composite benchmark's 5.33% return and 6 bps below the 60/40 benchmark's 6.16% return. The five-year annualized return was 5.87%, which exceeded the Benchmark's 5.30% return by 57 bps and matched than the 60/40 benchmark's 5.87% return. The System's annualized return over the trailing ten-year period was 7.80%, which was 13 bps and 53 bps above the Benchmark and the 60/40 benchmark, respectively.



The composite benchmark ("The Benchmark") is weighted based on asset allocation targets.

It is currently comprised: 40.0% MSCI All Country World Net Index; 11.25% ILPA All Funds Index 1Q Lag; 2.25% NFI- ODCE Index 1Q Lag + 2.5%; 1.5% ILPA/Cambridge Distressed Securities Index; 1.5% Alerian Master Limited Partnerships Total Return Index; 1% MSCI U.S. REIT Index; 2% CBOE PUT Index; 2% Emerging Market Debt Custom Benchmark (50% JPM EMBI Global Diversified Index + 50% JPM GBI-EM Global Diversified Index); 2.8% Liquid Credit Custom BM (50% BofA US High Yield Index + 50% Credit Suisse Leveraged Loan Index); 3.2% S&P LSTA Leveraged Loan Index 1Q Lag + 3%; 5.0% Credit Suisse Managed Futures (18% Vol) Liquid Index; 5.0% Barclays Long Duration US Treasury Index; 3.6% NFI-ODCE Index 1Q Lag; 2.4% CPI 1 month lag + 4%; 2.0% Barclays US Treasury Inflation Notes: 1-10 Year Index; 3.25% Bloomberg Barclays US Corporate Bond Index; 3.25% Bloomberg Barclays Securitized MBS/ABS/CMBS Index; 6.5% HFRI Fund of Funds Composite Index; 2.0% Bank of America Merrill Lynch 3-month US Treasury Bill.

The Benchmark for each of the years shown in the chart reflects the asset allocation targets in place for that fiscal year and the related indices used to measure performance.

The 60% global equity/40% bonds benchmark ("60/40 Benchmark") is 60% MSCI All-Country World and 40% Barclays Aggregate.

Management's Discussion and Analysis

Additional Investment Performance Reporting

The investment performance discussed in the previous section is the time-weighted return, as reported by the System's investment custodian for the Pooled Investment Trust as a whole. In accordance with GASB Statement No. 67, investment performance is also measured on a money-weighted return basis for each defined benefit retirement plan. The money-weighted returns for each defined benefit plan are disclosed in the notes to the financial statements and the required supplementary information section. The money-weighted return reflects each individual plan's specific cash inflows and outflows, as well as the overall portfolio returns.

The System's actuarial investment return assumption is 7.0% for all plans except the Judicial Retirement Fund Trust which uses a 3.13% investment return assumption. This return expectation is adopted by the Retirement Board on recommendation by the plan's actuary. It is based on a thirty-year horizon. The actuarial value of assets is determined based on a five-year smoothing methodology.

Fiscal 2020 investment returns within the defined contribution plan (401a) ranged from -4.19% to +11.20% depending on investment options that plan members chose from the available options.

Net Pension Liability (Asset) of the Plans within the System

Independent actuarial valuations of the System are conducted each year. Due to the implementation of Governmental Accounting Standards Board (GASB) Statement No. 67 – *Financial Reporting for Pension Plans*, the System presents the accounting measures of the net pension liability (asset) for each of the defined benefit plans. Calculation of the net pension liability (asset) of the plans is performed by the actuary in accordance with GASB requirements. The total pension liability and net pension liability are based on actuarial valuations performed as of June 30, 2019, rolled-forward to June 30, 2020 using generally accepted actuarial principles from the valuation date to the plan's fiscal year end. For three new units within the MERS plan, the net pension liability was measured as of actuarial valuations performed as of June 30, 2020.

This accounting measure of the net pension liability (asset) of each plan is different from the actuarial valuations performed for funding purposes and the determination of annual contributions to each of the defined benefit plans. One of the principal differences is that the accounting measure of the net pension liability at June 30, 2020 utilizes each plan's fiduciary net position, which reflects the fair value of investments at that date. For funding purposes, the actuarial valuation uses the actuarial value of assets, which reflects a five-year smoothed asset valuation.

The measurement of the net pension liabilities for all defined benefit plans, except for the RIJRFT, utilized the System's investment return assumption of 7.0%. The RIJRFT utilized Fidelity's 20-Year Municipal GO AA Bond Index rate of 2.45%. The calculation of the net pension liability (asset) was measured as of June 30, 2020.

The Teachers' Survivors Benefit plan was over-funded with a fiduciary net position equal to 153.1% of the plan's total pension liability at June 30, 2020. The fiduciary net position of the ERS plan covering state employees and teachers was equal to 52.6% and 54.3% respectively of the total pension liability measure for each of those employee groups. The fiduciary net position of the two plans covering State Police was equal to 81.9% (SPRBT) and 10.0% (SPRFT) of the total pension liability measure for each of those employee groups. The SPRFT plan was created July 1, 2016 for retired state police hired before July 1, 1987 with a one-time initial contribution of \$15 million from the State and the State's commitment to fund the benefits on an actuarially determined basis rather than the previous pay-as-you-go approach.

Management's Discussion and Analysis

The fiduciary net position of the plans covering Judges was equal to 90.0% (JRBT) and 5.0% (RIJRFT) of the total pension liability measure for each of the employee groups. The RIJRFT plan covers a small group of judges and is funded by the State (employer) using a mostly pay-as-you-go funding approach.

All employers participating in the System's plans contributed 100% of their annual actuarially determined contribution during fiscal 2020, except for the State not providing the full employer contribution for the Rhode Island Judicial Retirement Fund Trust.

Future Contribution Rates

The fiscal 2021 employer contribution rates are based upon the actuarial valuations performed for funding purposes at June 30, 2018. The employer contribution rates for fiscal 2021 are 27.54% for State employees, 25.25% for Teachers, 21.61% for Judges, and 19.82% for State Police. For the Rhode Island Judicial Retirement Fund Trust and Non-Contributing State Police Retirement Fund Trust, the actuarially determined employer contribution is \$1,223,581 and \$16,387,092, respectively, for fiscal 2021.

Contacting the System's Management

This discussion and analysis presentation is designed to provide a general overview of the System's financial activity. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Employees' Retirement System, 50 Service Avenue, Warwick, RI, 02886.

EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
Statements of Fiduciary Net Position
June 30, 2020

	Defined Benefit Plans							Defined Contribution Plan	Total
	ERS	TSB	MERS	SPRBT	JRBT	RIJRFT	SPRFT		
Assets									
Cash and cash equivalents (Note 4)	\$ 4,541,846	\$ 599,113	\$ 861,727	\$ 969,070	\$ 142,388	\$ 430,306	\$ 21,964	\$ -	\$ 7,566,414
Receivables									
Contributions	20,466,998	1,397	2,598,975	259	515	-	-	-	23,068,144
Due from State for teachers	32,238,993	-	-	-	-	-	-	-	32,238,993
Other	834,254	10,479	170,796			33,251	-	-	1,048,780
Total receivables	<u>53,540,245</u>	<u>11,876</u>	<u>2,769,771</u>	<u>259</u>	<u>515</u>	<u>33,251</u>	<u>-</u>	<u>-</u>	<u>56,355,917</u>
Prepaid assets (Note 3)	2,650,272	115,485	536,496	38,155	19,209	27	6,658	-	3,366,302
Due from other plans	240,396	-	1,113,848	-	-	-	-	-	1,354,244
Investments at fair value									
Equity in pooled trust (Note 5)	6,265,010,812	341,750,453	1,660,004,237	153,010,097	80,045,574	650,278	17,242,120	-	8,517,713,571
Defined contribution plan investments (Note 6)	-	-	-	-	-	-	-	1,173,293,922	1,173,293,922
Total investments	<u>6,265,010,812</u>	<u>341,750,453</u>	<u>1,660,004,237</u>	<u>153,010,097</u>	<u>80,045,574</u>	<u>650,278</u>	<u>17,242,120</u>	<u>1,173,293,922</u>	<u>9,691,007,493</u>
Total Assets	<u>6,325,983,571</u>	<u>342,476,927</u>	<u>1,665,286,079</u>	<u>154,017,581</u>	<u>80,207,686</u>	<u>1,113,862</u>	<u>17,270,742</u>	<u>1,173,293,922</u>	<u>9,759,650,370</u>
Liabilities									
Accounts payable	5,321,778	217,609	1,080,165	108,982	49,765	497	15,343	-	6,794,139
Due to other plans	1,113,848	-	240,396	-	-	-	-	-	1,354,244
Total Liabilities	<u>6,435,626</u>	<u>217,609</u>	<u>1,320,561</u>	<u>108,982</u>	<u>49,765</u>	<u>497</u>	<u>15,343</u>	<u>-</u>	<u>8,148,383</u>
Net position restricted for pensions	<u>\$ 6,319,547,945</u>	<u>\$ 342,259,318</u>	<u>\$ 1,663,965,518</u>	<u>\$ 153,908,599</u>	<u>\$ 80,157,921</u>	<u>\$ 1,113,365</u>	<u>\$ 17,255,399</u>	<u>\$ 1,173,293,922</u>	<u>\$ 9,751,501,987</u>

The accompanying notes are an integral part of this financial statement.

EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
Statements of Changes in Fiduciary Net Position - Fiscal Year Ended June 30, 2020

	Defined Benefit Plans							Defined Contribution Plan	Total
	ERS	TSB	MERS	SPRBT	JRBT	RIJRFT	SPRFT		
Additions									
Contributions (Note 7)									
Member contributions	\$ 90,885,505	\$ 745,760	\$ 18,732,373	\$ 2,345,831	\$ 1,204,448	\$ 125,540	\$ -	\$ 101,385,619	\$ 215,425,076
Employer contributions	357,767,131	745,760	56,476,661	4,877,630	2,189,255	399,016	16,387,092	30,030,113	468,872,658
New employer contributions (Note 7e)	-	-	12,757,430	-	-	-	-	-	12,757,430
State contribution for teachers (Note 7c)	108,635,976	-	-	-	-	-	-	-	108,635,976
Supplemental employer contributions (Note 7d)	360,227	-	-	-	-	-	-	-	360,227
Service credit transfer payments	-	-	874,191	-	-	-	-	-	874,191
Interest on service credits purchased	168,105	-	2,981	20,665	-	-	-	-	191,751
Total contributions	557,816,944	1,491,520	88,843,636	7,244,126	3,393,703	524,556	16,387,092	131,415,732	807,117,309
Investment Income									
Net appreciation in fair value of investments	209,481,794	11,302,062	53,783,231	5,028,721	2,632,139	19,739	785,685	43,974,607	327,007,978
Interest	43,632,296	2,367,999	11,396,652	1,040,651	546,299	4,362	161,892	-	59,150,151
Dividends	47,786,072	2,594,685	12,499,058	1,145,749	601,290	4,744	179,302	1,564,939	66,375,839
	300,900,162	16,264,746	77,678,941	7,215,121	3,779,728	28,845	1,126,879	45,539,546	452,533,968
Less investment expense (Note 3)	(64,954,956)	(3,534,505)	(16,931,022)	(1,573,382)	(824,354)	(6,454)	(258,437)	-	(88,083,110)
Net investment income (loss)	235,945,206	12,730,241	60,747,919	5,641,739	2,955,374	22,391	868,442	45,539,546	364,450,858
Miscellaneous revenue	12,624	-	786	4,291	-	-	-	10,734	28,435
Total Additions	793,774,774	14,221,761	149,592,341	12,890,156	6,349,077	546,947	17,255,534	176,966,012	1,171,596,602
Deductions									
Retirement benefits	821,227,362	10,436,948	106,878,477	6,174,388	3,724,121	399,016	16,581,299	-	965,421,611
Death benefits	2,629,334	-	884,875	-	-	-	-	-	3,514,209
Distributions	-	-	-	-	-	-	-	23,675,020	23,675,020
Refund of contributions	4,736,367	592,549	1,327,482	54,537	-	-	-	-	6,710,935
Service credit transfer payments	874,191	-	-	-	-	-	-	-	874,191
Administrative expense (Note 9)	6,600,175	350,178	1,676,254	158,004	79,652	959	17,175	962,910	9,845,307
Total Deductions	836,067,429	11,379,675	110,767,088	6,386,929	3,803,773	399,975	16,598,474	24,637,930	1,010,041,273
Net Increase (Decrease)	(42,292,655)	2,842,086	38,825,253	6,503,227	2,545,304	146,972	657,060	152,328,082	161,555,329
Net position restricted for pensions									
Beginning of year	6,361,840,600	339,417,232	1,625,140,265	147,405,372	77,612,617	966,393	16,598,339	1,020,965,840	9,589,946,658
End of year	\$ 6,319,547,945	\$ 342,259,318	\$ 1,663,965,518	\$ 153,908,599	\$ 80,157,921	\$ 1,113,365	\$ 17,255,399	\$ 1,173,293,922	\$ 9,751,501,987

The accompanying notes are an integral part of this financial statement.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

1. System Description and Governance

The Employees' Retirement System of the State of Rhode Island (the System) acts as a common investment and administrative agent for pension benefits to be provided through seven defined benefit retirement plans and one defined contribution plan as listed below:

<i>Plan Name</i>	<i>Type of Plan</i>
Employees' Retirement System (ERS)	Cost-sharing multiple-employer defined benefit plan
Teachers' Survivors Benefits (TSB)	Cost-sharing multiple-employer defined benefit plan
Municipal Employees' Retirement System (MERS)	Agent multiple-employer defined benefit plan
State Police Retirement Benefits Trust (SPRBT)	Single-employer defined benefit plan
Judicial Retirement Benefits Trust (JRBT)	Single-employer defined benefit plan
RI Judicial Retirement Fund Trust (RIJRFT)	Single-employer defined benefit plan
RI State Police Retirement Fund Trust (SPRFT)	Single-employer defined benefit plan
Rhode Island Defined Contribution Plan	Defined contribution plan

Each plan's assets are accounted for separately and may be used only for the payment of benefits to the members of that plan, in accordance with the terms of that plan.

The System's financial statements are included as Pension Trust Funds within the Fiduciary Funds in the Comprehensive Annual Financial Report of the State of Rhode Island and Providence Plantations. The accompanying financial statements are not intended to present the financial position and results of operations of the State.

The System is administered by the State of Rhode Island Retirement Board which was authorized, created and established in the Office of the General Treasurer as an independent retirement board to hold and administer, in trust, the funds of the retirement system. The fifteen members of the retirement board are: the general treasurer or his or her designee who shall be a subordinate within the general treasurer's office; the director of administration or his or her designee who shall be a subordinate within the department of administration; a representative of the budget office or his or her designee from within the budget office, who shall be appointed by the director of administration; the president of the league of cities and towns or his or her designee; two (2) active state employee members of the retirement system or officials from state employee unions to be elected by active state employees; two (2) active teacher members of the retirement system or officials from a teachers union to be elected by active teachers; one active municipal employee member of the retirement system or an official from a municipal employees union to be elected by active municipal employees; two (2) retired members of the retirement system to be elected by retired members of the system; and four (4) public members, all of whom shall be competent by training or experience in the field of finance, accounting or pensions; two (2) of the public members shall be appointed by the governor, one of whom shall serve an initial term of three (3) years and one of whom shall serve an initial term of four (4) years and until his or her successor is appointed and qualified; and two (2) of the public members shall be appointed by the general treasurer, one of whom shall serve an initial term of three (3) years and one of whom shall serve an initial term of four (4) years and until his or her successor is appointed and qualified. Thereafter, the term of these four (4) public members shall be for four (4) years or until their successors are appointed and qualified by the Senate.

The System's purpose is to provide retirement benefits to state employees, public school teachers, certain general and public safety municipal employees, state police officers, and judges.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

1. System Description and Governance (continued)

A summary of membership by plan follows:

	<i>Retirees and beneficiaries</i>	<i>Terminated plan members entitled to but not yet receiving benefits</i>	<i>Active Vested</i>	<i>Active Non-vested</i>	<i>Total by Plan</i>
Actuarial valuation as of June 30, 2019					
ERS					
State Employees	11,224	3,784	8,071	3,247	26,326
Teachers	11,196	3,888	11,971	1,540	28,595
TSB					
	594	3,366	7,208	-	11,168
MERS					
General Employees	4,827	3,124	3,988	1,983	13,922
Public Safety	863	242	1,181	415	2,701
SPRBT	73	56	56	204	389
JRBT	26	1	14	41	82
RIJRFT	2	-	5	-	7
SPRFT	259	-	-	-	259
Total by type	29,064	14,461	32,494	7,430	83,449

The defined contribution plan at June 30, 2020 included 162 employers and 38,055 plan participants.

2. Plan Membership and Benefit Provisions

Membership and benefit provisions are outlined in the Rhode Island General Laws and are subject to modification by the General Assembly. Modifications to pension benefit and eligibility provisions have been made in recent years as well as the comprehensive pension reform provisions contained in the Rhode Island Retirement Security Act enacted on November 18, 2011 and effective July 1, 2012. Legal challenges to those pension reforms were settled with the final settlement approved by the Court on July 8, 2015. The General Assembly amended the various sections of the General Laws containing those benefit provisions consistent with the terms of the settlement agreement. Those provisions are generally effective beginning July 1, 2015. The benefit provisions for each of the plans as outlined below were those in effect for fiscal 2015. Reference is made in each section to a summary of benefit and contribution provisions that will be in effect for future years.

Accordingly, specific member retirement benefit and eligibility provisions vary depending upon a number of factors including years of service, age, and vesting provisions.

The ERS was established and placed under the management of the Retirement Board for the purpose of providing retirement allowances for employees of the State of Rhode Island under the provisions of chapters 8 to 10, inclusive, of Title 36, and public school teachers under the provisions of chapters 15 to 17, inclusive, of Title 16 of the Rhode Island General Laws.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

2. Plan Membership and Benefit Provisions (continued)

EMPLOYEES' RETIREMENT SYSTEM (ERS)

Plan members - The plan covers most State employees other than certain personnel at the State colleges and university (principally faculty and administrative personnel). The plan also covers teachers, including superintendents, principals, school nurses, and certain other school officials in the public schools in the cities and towns. Membership in the plan is mandatory for all covered state employees and teachers. Elected officials may become members on an optional basis and legislators may participate if elected to office prior to January 1, 1995.

Certain employees of the Rhode Island Airport Corporation (hired before July 1, 1993), the Rhode Island Commerce Corporation (active contributing members and employees of the Department of Economic Development before October 31, 1995 who elected to continue membership) and, the Narragansett Bay Water Quality District Commission (members of a collective bargaining unit) are also covered and have the same benefits as State employees.

Plan vesting provisions – after five years of service.

Retirement eligibility and plan benefits – are summarized in the following table:

Schedule		Retirement Eligibility	Benefit accrual rates	Maximum benefit
(A)	Completed 10 years of service on or before July 1, 2005 and eligible to retire as of September 30, 2009	Age 60 with 10 years of service or after 28 years of service at any age	Effective until June 30, 2012: 1.7% for each of first ten years 1.9% for each of next ten years 3.0% for each of next fourteen years 2% for the 35 th year Effective July 1, 2012: 1.0% per year through June 30, 2015. Effective July 1, 2015, for members with 20 years of service as of July 1, 2012: 2% per year	80% of final average earnings (3 consecutive highest years)
(AB)	Completed 10 years of service on or before July, 1, 2005 but ineligible to retire as of September 30, 2009	Minimum retirement age of 62 and ten years of service with a downward adjustment of the minimum retirement age based on the years of service credit as of September 30, 2009	Effective until June 30, 2012: Same accrual rates as (A) above to September 30, 2009 and then Schedule B rates (below) thereafter Effective July 1, 2012: 1.0% per year through June 30, 2015. Effective July 1, 2015, for members with 20 years of service as of July 1, 2012: 2% per year	80% of final average earnings (5 consecutive highest years)
(B)	Less than 10 years of service before July 1, 2005 and eligible to retire as of September 30, 2009	Age 65 with 10 years of service or after 29 years of service and age 59	Effective until June 30, 2012: 1.6% for each of first ten years 1.8% for each of next ten years 2.0% for each of next five years 2.25% for each of next five years 2.5% for each of next seven years 2.25% for the 38 th year Effective July 1, 2012: 1.0% per year	75% of final average earnings (5 consecutive highest years)

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

2. Plan Membership and Benefit Provisions (continued)

(B1)	Less than 10 years of service before July 1, 2005 and ineligible to retire as of September 30, 2009	Age 65 with ten years of service, or age 62 with at least 29 years of service with a downward adjustment of the minimum retirement age based on the years of service credit as of September 30, 2009	Same as Schedule B	75% of final average earnings (5 consecutive highest years)
(B2)	Less than 5 years of service as of July 1, 2012	Social Security Retirement Age and 5 years of contributory service	1.6% for each of first ten years Effective July 1, 2012: 1.0% per year	75% of final average earnings (5 consecutive highest years)

Effective July 1, 2015 general employees with more than 20 years of service at July 1, 2012 increased their employee contribution rates to 11% and will participate solely in the defined benefit plan. Members will receive a benefit accrual of 2% per year based on the three or five-year average compensation.

Effective July 1, 2015 employees are eligible to retire upon the attainment of: age 65 with 30 years of service, 64 with 31 years of service, 63 with 32 years of service, or 62 with 33 years of service. Members may retire earlier if their RIRSA date is earlier or are eligible under a transition rule.

State correctional officers may retire at age 50 with 20 years of service. However, if not eligible to retire as of September 30, 2009, the minimum retirement age was modified to 55 with 25 years of service credit for correctional officers and registered nurses at the Department of Behavioral Healthcare, Developmental Disabilities, and Hospitals.

The plan provides for survivor's benefits for service-connected death and certain lump sum death benefits.

Joint and survivor options are available to members. For members with 10 years of service as of July 1, 2005, the Service Retirement Allowance (SRA) Plus option provides for the payment of a larger benefit before the attainment of age sixty-two (62) and a reduced amount thereafter. The reduced amount is equal to the benefit before age sixty-two (62), including cost-of-living increases, minus the member's estimated social security benefit payable at age sixty-two (62).

Vested members that have 10 or more years of contributing service credit on June 30, 2012, may choose to retire at a retirement eligibility date that was calculated as of September 30, 2009, if the member continues to work and make retirement contributions until that date. If the member chooses this option, their retirement benefits will be calculated using the benefit that they have accrued as of June 30, 2012 - members will accumulate no additional defined benefits after this date, but the benefit will be paid without any actuarial reduction.

State employees and public school teachers may retire with a reduced pension benefit if they have 20 years of service credit and they are within five years of their retirement date as prescribed in the Rhode Island Retirement Security Act (RIRSA). The actuarially reduced benefit will be calculated based on how close the member is to their RIRSA eligibility date.

2. Plan Membership and Benefit Provisions (continued)

Cost of Living Adjustments – The Cost of Living Adjustment (COLA) has been suspended until the collective ERS, SPRBT and JRBT plans reach a funded status of 80%. The COLA provision will be reviewed in a four-year interval while the plans are less than 80% funded. When the collective funding level of a plan exceeds 80%, eligible retirees may receive a COLA annually effective on their date of retirement plus one month.

The COLA calculation is represented by the following formula: 50% of the COLA is calculated by taking the previous 5-year average investment return, less 5% (5-year return – 5.0%, with a max of 4%) and 50% calculated using the increase in the CPI-U from the prior September 30 (max of 3%) for a total maximum COLA of 3.5%.

The benefit adjustments are provided to all retirees entitled to receive a benefit adjustment as of June 30, 2012 under the law then in effect, and for all other retirees, the benefit adjustments shall commence upon the third anniversary of the date of retirement or the date on which the retiree reaches his or her Social Security retirement age, whichever is later. For members (and their beneficiaries) retiring after June 30, 2015, the annual benefit adjustment provided in any calendar year is equal to the lesser of either the member's retirement allowance or the first \$27,184 (indexed as of January 1, 2020) of retirement allowance multiplied by the percentage resulting from the COLA calculation as outlined in the preceding paragraph. The retirement amount subject to the COLA calculation is indexed annually in the same percentage as the COLA determination and is run annually regardless of the collective funding status.

For members and/or beneficiaries of members who retired on or before June 30, 2015 the current indexed amount of \$27,184 is replaced with \$32,621 (indexed as of January 1, 2020) until the funded ratio of the ERS, SPRBT and JRBT, calculated by the system's actuary on an aggregate basis, exceeds eighty percent (80%). At such time, the benefit adjustments will then be provided on the lower amount (currently indexed at \$27,184).

Disability retirement provisions - the plan also provides nonservice-connected disability benefits after five years of service and service-connected disability pensions with no minimum service requirement. Effective for applications filed after September 30, 2009, accidental disability will be available at 66 2/3% for members who are permanently and totally disabled as determined by the Retirement Board. If the disability is determined to be partial and the member is able to work in other jobs, the benefit will be limited to 50%. Disability benefits are subject to annual review by the Retirement Board.

Other plan provisions - Service credit purchases, excluding contribution refund paybacks and military service, requested after June 16, 2009 are calculated at full actuarial cost.

TEACHERS' SURVIVORS BENEFITS (TSB)

Plan members – the TSB covers all teachers in 24 school districts who do not participate in Social Security.

Plan vesting provisions – Survivors are eligible for benefits if the member has made contributions for at least six months prior to death or retirement.

Eligibility and plan benefits - the plan provides a survivor benefit to public school teachers in lieu of Social Security since not all school districts participate in the plan. The cost of the benefits provided by the plan are two percent (2%) of the member's annual salary up to but not exceeding an annual salary of \$11,500; one-half (1/2) of the cost is contributed by the member by deductions from his or her salary, and the other half (1/2) is contributed and paid by the respective school district by which the member is employed. These contributions are in addition to the contributions required for regular pension benefits.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

2. Plan Membership and Benefit Provisions (continued)

Spouse, parents, family and children's benefits are payable following the death of a member. A spouse shall be entitled to benefits upon attaining the age of sixty (60) years. Children's benefits are payable to the child, including a stepchild or adopted child of a deceased member if the child is unmarried and under the age of eighteen (18) years or twenty-three (23) years and a full-time student, and was dependent upon the member at the time of the member's death. Family benefits are provided if at the time of the member's death the surviving spouse has in his or her care a child of the deceased member entitled to child benefits. Parents' benefits are payable to the parent or parents of a deceased member if the member did not leave a widow, widower, or child who could ever qualify for monthly benefits on the member's wages and the parent has reached the age of 60 years, has not remarried, and received support from the member. In January, a yearly cost-of-living adjustment for spouse's benefits is paid and based on the annual social security adjustment.

The TSB plan provides benefits based on the highest salary at the time of retirement of the teacher. Benefits are payable in accordance with the following table:

<u>Highest Annual Salary</u>	<u>Basic Monthly Spouse's or Domestic Partner's Benefit</u>
\$17,000 or less	\$ 825
\$17,001 to \$25,000	\$ 963
\$25,001 to \$33,000	\$ 1,100
\$33,001 to \$40,000	\$ 1,238
\$40,001 and over	\$ 1,375

Benefits payable to children and families are equal to the spousal benefit multiplied by the percentage below:

Parent and 1 Child	Parent and 2 or more Children	One Child Alone	Two Children Alone	Three or more Children Alone	Dependent Parent
150%	175%	75%	150%	175%	100%

Cost of Living Adjustments – current eligible members' beneficiaries of the TSB receive the same COLA granted to members of Social Security. There was a 1.6% increase as of January 1, 2020.

MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM (MERS)

The MERS was established under the Rhode Island General Laws and placed under the management of the Retirement Board to provide retirement allowances to employees of municipalities, housing authorities, water and sewer districts, and municipal police and fire persons that have elected to participate.

Plan members – A summary of participating employers is listed below:

Municipalities, housing authorities, water and sewer districts	69
Municipal police and fire departments	<u>49</u>
Total participating units as of the actuarial valuation at June 30, 2019	<u>118</u>

Plan vesting provisions – after five years of service.

2. Plan Membership and Benefit Provisions (continued)

Retirement eligibility and plan benefits – For general employees prior to June 30, 2012 the plan provided retirement benefits equal to 2% of a member's final average salary multiplied by the number of years of total service up to a maximum of 75%. Such benefits are available to members at least age 58 with 10 years of service or after 30 years of service at any age. Benefits accrued at June 30, 2012 are protected under the Rhode Island Retirement Security Act until it is exceeded by the member's full years of service credit, including service after June 30, 2012, multiplied by the average of five consecutive years of compensation. Effective July 1, 2012 the retirement age mirrors the Social Security Normal Retirement Age not to exceed age 67. Members will receive a benefit accrual of 1.0% per year based on the five-year average compensation.

Effective July 1, 2015 general employees with more than 20 years of service at July 1, 2012 will increase their employee contribution rates to 8.25% (9.25% for units with a cost of living adjustment provision) and will participate solely in the defined benefit plan. Members will receive a benefit accrual of 2% per year based on the three or five-year average compensation.

Effective July 1, 2015 general employees are eligible to retire upon the attainment of: age 65 with 30 years of service, 64 with 31 years of service, 63 with 32 years of service, or 62 with 33 years of service. Members may retire earlier if their RIRSA date is earlier or are eligible under a transition rule.

Joint and survivor options are available. For members with 10 years of service as of July 1, 2005, the Service Retirement Allowance (SRA) Plus option provides for the payment of a larger benefit before the attainment of age sixty-two (62) and a reduced amount thereafter. The reduced amount is equal to the benefit before age sixty-two (62), including cost-of-living increases, minus the member's estimated social security benefit payable at age sixty-two (62).

Prior to June 30, 2012, police and fire personnel may retire at age 55 if they have 10 years of service or after 25 years of service at any age. An option may be elected to provide a 20-year service pension with a benefit equal to 2.5% for each year of service up to a maximum of 75% for police and fire personnel. Benefits are based on the average of the highest three consecutive years' earnings, exclusive of overtime.

From June 30, 2012 to June 30, 2015, retirement age for police and fire personnel is 55 years old with 25 years of total service or for members with five years of service but less than 25 years of service the new retirement age will mirror the Social Security Normal Retirement Age not to exceed 67. Police officers or firefighters, that are at least 45 years old, have 10 or more years of contributing service and are eligible to retire prior to age 52 under the law in effect on June 30, 2012, may retire at age 52. Effective July 1, 2015, police and fire personnel may retire at age 50 with 25 years of service, or any age with 27 years of service. MERS police and fire personnel will contribute 9.00% (10.00% for units with a cost of living adjustment).

As of June 30, 2012, members will continue to have a frozen benefit accrual of 2.0% per year for a standard 25 year with any age and out plan; 2.5% for a standard 20 year with any age and out plan. Effective July 1, 2012 the optional 20 and 25 year with retirement at any age plans have been eliminated. The benefit accrual for all plans will be 2.0% per year based on the five-year average compensation, exclusive of overtime. Police and fire employees may retire with a reduced pension benefit if they have 20 years of service and are within five years of their retirement eligibility. The actuarially reduced benefit will be calculated based on how close the member is to the eligibility date that is prescribed in the Rhode Island Retirement Security Act.

The plan also provides survivor's benefits and certain lump sum death benefits.

2. Plan Membership and Benefit Provisions (continued)

Cost of Living Adjustments – An optional cost-of-living provision may be elected for police and fire personnel and general employees. The Cost of Living Adjustment (COLA) has been suspended for any unit whose funding level is less than 80%. The COLA provision will be reviewed in a four-year interval while the plans are less than 80% funded. When the funding level of a plan exceeds 80% funded eligible retirees may receive a COLA annually effective on the date of their retirement plus one month.

The COLA calculation is represented by the following formula: 50% of the COLA is calculated by taking the previous 5-year average investment return, less 5% (5-year return – 5.0%, with a max of 4%) and 50% calculated using the increase in the CPI-U from the prior September 30 (max of 3%) for a total maximum COLA of 3.5%.

The benefit adjustments are provided to all retirees entitled to receive a benefit adjustment as of June 30, 2012 under the law then in effect, and for all other retirees the benefit adjustments shall commence upon the third anniversary of the date of retirement or the date on which the retiree reaches his or her Social Security retirement age, whichever is later. For police and fire employees that retired under the provisions of § 45-21.2-5(b)(1)(A), the benefit adjustment provided shall commence on the later of the third anniversary of the date of retirement or the date on which the retiree reaches age fifty-five (55); or for police and fire employees retiring under the provisions of §45-21.2-5(b)(1)(B), the benefit adjustment shall commence on the later of the third anniversary of the date of retirement or the date on which the retiree reaches age fifty (50). For all present and former employees, active and retired members, and beneficiaries receiving any retirement, disability or death allowance or benefit of any kind, the annual benefit adjustment provided in any calendar year is equal to the lesser of either the member's retirement allowance or the first \$26,688 (indexed as of January 1, 2019) of retirement allowance, multiplied by the percentage resulting from the COLA calculation as outlined in the preceding paragraph. The retirement amount subject to the COLA calculation is indexed annually in the same percentage as the COLA determination and is run annually regardless of the collective funding status.

For members and/or beneficiaries of members who retired on or before June 30, 2015, the indexed amount of \$27,184 is replaced with \$32,621 (indexed as of January 1, 2020) until the municipal plan's funded ratio, calculated by the system's actuary, exceeds eighty percent (80%). At such time, the benefit adjustments will then be provided on the lower amount (currently indexed at \$27,184).

The actual COLA paid to retirees effective January 1, 2020 within MERS units that had achieved an 80% funding status was 1.56%. Retirees within 54 MERS units received the COLA.

Disability retirement provisions - The plan also provides nonservice-connected disability benefits after 5 years of service; service-connected disability pensions with no minimum service requirement.

STATE POLICE RETIREMENT BENEFITS TRUST (SPRBT)

The State Police Retirement Benefits Trust was established under Rhode Island General Law Section 42-28-22.1 and was placed under the management of the Retirement Board for the purpose of providing retirement allowances to State Police.

Plan members – the plan covers all State Police and Superintendents hired after July 1, 1987.

Retirement eligibility and plan benefits – Prior to June 30, 2012 the plan generally provides retirement benefits equal to 50% of final salary after 20 years of service, plus 3.0% of final salary times service in excess of 20 years through 25 years to a maximum of 65% of final salary. Such benefits are available to members after 20 years of service regardless of age. The Superintendent of the State Police will receive 50% of his/her final salary and may retire after attainment of age 60 and 10 years of service.

2. Plan Membership and Benefit Provisions (continued)

The General Laws were amended such that any member of the state police, other than the superintendent, who is hired on or after July 1, 2007 and who has served for twenty-five (25) years shall be entitled to a retirement allowance of 50% of the final salary. In addition, any member may serve up to a maximum of 30 years, and shall be allowed an additional amount equal to 3.0% for each completed year served after 25 years to a maximum retirement allowance not to exceed 65% of the final salary.

Benefits are based on the final base salary earned at retirement including longevity increment, holiday pay, clothing allowance and up to 400 overtime hours.

Effective July 1, 2012 state police officers are eligible to retire once they have accrued a retirement benefit equal to 50% of their whole salary, with mandatory retirement once they have accrued a retirement benefit equal to 65% of their whole salary. State police officers will earn a 2% accrual rate for each year of contributing service. Benefits will be calculated on the average of the highest five consecutive years of salary, including up to 400 hours of mandatory overtime service. Benefits accrued as of June 30, 2012 will be protected under the Rhode Island Retirement Security Act.

Cost of Living Adjustments – The Cost of Living Adjustment (COLA) has been suspended until the collective ERS, SPRBT and JRBT plans reach a funded status of 80%. The COLA provision will be reviewed in a four-year interval while the plans are less than 80% funded. When the collective funding level of a plan exceeds 80%, eligible retirees may receive a COLA annually effective on their date of retirement plus one month.

The COLA calculation is represented by the following formula: 50% of the COLA is calculated by taking the previous 5-year average investment return, less 5% (5-year return – 5.0%, with a max of 4%) and 50% calculated using the increase in the CPI-U from the prior September 30 (max of 3%) for a total maximum COLA of 3.5%.

The benefit adjustments are provided to all retirees entitled to receive a benefit adjustment as of June 30, 2012 under the law then in effect, and for all other retirees, the benefit adjustments shall commence upon the third anniversary of the date of retirement or the date on which the retiree reaches his or her Social Security retirement age, whichever is later. For members (and their beneficiaries) retiring after June 30, 2015, the annual benefit adjustment provided in any calendar year is equal to the lesser of either the member's retirement allowance or the first \$27,184 (indexed as of January 1, 2020) of retirement allowance multiplied by the percentage resulting from the COLA calculation as outlined in the preceding paragraph. The retirement amount subject to the COLA calculation is indexed annually in the same percentage as the COLA determination and is run annually regardless of the collective funding status.

For members and/or beneficiaries of members who retired on or before June 30, 2015 the current indexed amount of \$27,184 is replaced with \$32,621 (indexed as of January 1, 2020) until the funded ratio of the ERS, SPRBT and JRBT, calculated by the system's actuary on an aggregate basis, exceeds eighty percent (80%). At such time, the benefit adjustments will then be provided on the lower amount (currently indexed at \$27,184).

Disability retirement provisions - the plan provides nonservice-connected disability benefits after 10 years of service and service-connected disability pensions with no minimum service requirement.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

2. Plan Membership and Benefit Provisions (continued)

JUDICIAL RETIREMENT BENEFITS TRUST (JRBT)

The Judicial Retirement Benefits Trust was established under Rhode Island General Laws 8-8.2-7; 8-3-16; 8-8-10.1; 28-30-18.1; and was placed under the management of the Retirement Board for the purpose of providing retirement allowances to Justices of the Traffic Tribunal, Supreme, Superior, Family, District and Workers Compensation courts.

Plan members – the plan covers all Judges appointed after December 31, 1989.

Retirement eligibility and plan benefits – are summarized in the following table:

Judges appointed	Retirement benefit
<p><i>After:</i> December 31, 1989 but before July 2, 1997</p>	<p>75% of the final salary at the time of retirement after 20 years of service, or 10 years of service and attainment of age 65. Judges retiring after 20 years of service after age 65 or 15 years of service after age 70 receive full retirement benefits, which is the final salary at time of retirement.</p>
<p><i>After:</i> July 2, 1997 but before January 1, 2009</p>	<p>Same as above except, salary is the average highest three (3) consecutive years of compensation rather than final salary.</p>
<p><i>After:</i> January 1, 2009 but before July 1, 2009</p>	<p>Judges with 20 years of service after age 65 or judges with 15 years of service after age 70 will receive 90% of the average of the highest three consecutive years of compensation. Judges appointed on or after January 1, 2009 with 10 years of service and age 65 or 20 years of service at any age are entitled to a reduced benefit of 70% of the average highest three consecutive years of compensation.</p> <p>Judges designating a survivor benefit with 20 years of service and age 65 or 15 years of service and age 70 receive a reduced benefit equal to 80% of the average highest three consecutive years of compensation. Judges designating a survivor benefit with 10 years of service after age 65 or 20 years of service at any age receive a reduced benefit equal to 60% of the average highest three consecutive years of compensation.</p>
<p><i>After:</i> July 1, 2009</p>	<p>Judges with 20 years of service after age 65 or with 15 years of service after age 70 will receive 80% of the average of the highest five consecutive years of compensation. Judges with 10 years of service and age 65 or 20 years of service at any age are entitled to a reduced benefit of 65% of the average highest five consecutive years of compensation.</p> <p>Judges designating a survivor benefit with 20 years of service and age 65 or 15 years of service and age 70 receive a reduced benefit equal to 70% of average highest five consecutive years of compensation. Judges designating a survivor benefit with 10 years of service after age 65 or 20 years of service at any age receive a reduced benefit equal to 55% of average highest five consecutive years of compensation.</p>

Certain survivor benefits are also provided to judges who are plan members, which is 50% of the benefit amount payable to the judicial member.

2. Plan Membership and Benefit Provisions (continued)

Cost of Living Adjustments – The Cost of Living Adjustment (COLA) has been suspended until the collective ERS, SPRBT and JRBT plans reach a funded status of 80%. The COLA provision will be reviewed in a four-year interval while the plans are less than 80% funded. When the collective funding level of a plan exceeds 80%, eligible retirees may receive a COLA annually effective on their date of retirement plus one month.

The COLA calculation is represented by the following formula: 50% of the COLA is calculated by taking the previous 5-year average investment return, less 5% (5-year return – 5.0%, with a max of 4%) and 50% calculated using the increase in the CPI-U from the prior September 30 (max of 3%) for a total maximum COLA of 3.5%.

The benefit adjustments are provided to all retirees entitled to receive a benefit adjustment as of June 30, 2012 under the law then in effect, and for all other retirees, the benefit adjustments shall commence upon the third anniversary of the date of retirement or the date on which the retiree reaches his or her Social Security retirement age, whichever is later. For members (and their beneficiaries) retiring after June 30, 2015, the annual benefit adjustment provided in any calendar year is equal to the lesser of either the member's retirement allowance or the first \$27,184 (indexed as of January 1, 2020) of retirement allowance multiplied by the percentage resulting from the COLA calculation as outlined in the preceding paragraph. The retirement amount subject to the COLA calculation is indexed annually in the same percentage as the COLA determination and is run annually regardless of the collective funding status.

For members and/or beneficiaries of members who retired on or before June 30, 2015 the current indexed amount of \$27,184 is replaced with \$32,621 (indexed as of January 1, 2020) until the funded ratio of the ERS, SPRBT and JRBT, calculated by the system's actuary on an aggregate basis, exceeds eighty percent (80%). At such time, the benefit adjustments will then be provided on the lower amount (currently indexed at \$27,184).

STATE OF RHODE ISLAND JUDICIAL RETIREMENT FUND TRUST (RIJRFT)

Effective July 1, 2012 and pursuant to Rhode Island General Law section 8-3-16, the retirement board established a trust to collect proceeds for the purpose of paying retirement benefits to participating judges or their beneficiaries.

Plan members – the plan covers seven (7) judges appointed prior to January 1, 1990. These members are active judges (as of June 30, 2012) appointed prior to January 1, 1990 that do not participate in the Judicial Retirement Benefit Trust. Prior to creating the trust, benefits for these members were intended to be funded on a pay-as-you-go basis. To the extent assets in the trust are insufficient to fund member benefits, the State would also fund retirement benefits on a pay-as-you-go basis as it does for sixty-five (65) retired judges and surviving beneficiaries that were not members of either judicial plan. The employee contribution rate is 12% of salary (except for members of the Supreme Court who contribute 8.75%).

Retirement eligibility and plan benefits – The plan provides retirement benefits for members who have served for 20 years and have reached the age of 65 years, or has served 15 years, and reached the age of 70 years and may retire from regular service and receive a benefit equal to the annual salary the justice was receiving at the time of their retirement. Members who served as a justice for 20 years or have served for 10 years and reached age 65 years may retire from regular service and receive a benefit equal to 75% of the annual salary at the time of retirement.

2. Plan Membership and Benefit Provisions (continued)

Cost of Living Adjustments – The Cost of Living Adjustment (COLA) has been suspended until the collective ERS, SPRBT and JRBT plans reach a funded status of 80%. The COLA provision will be reviewed in a four-year interval while the plans are less than 80% funded. When the collective funding level of a plan exceeds 80%, eligible retirees may receive a COLA annually effective on their date of retirement plus one month.

The COLA calculation is represented by the following formula: 50% of the COLA is calculated by taking the previous 5-year average investment return, less 5% (5-year return – 5.0%, with a max of 4%) and 50% calculated using the increase in the CPI-U from the prior September 30 (max of 3%) for a total maximum COLA of 3.5%.

The benefit adjustments are provided to all retirees entitled to receive a benefit adjustment as of June 30, 2012 under the law then in effect, and for all other retirees, the benefit adjustments shall commence upon the third anniversary of the date of retirement or the date on which the retiree reaches his or her Social Security retirement age, whichever is later. For members (and their beneficiaries) retiring after June 30, 2015, the annual benefit adjustment provided in any calendar year is equal to the lesser of either the member's retirement allowance or the first \$27,184 (indexed as of January 1, 2020) of retirement allowance multiplied by the percentage resulting from the COLA calculation as outlined in the preceding paragraph. The retirement amount subject to the COLA calculation is indexed annually in the same percentage as the COLA determination and is run annually regardless of the collective funding status.

For members and/or beneficiaries of members who retired on or before June 30, 2015 the current indexed amount of \$27,184 is replaced with \$32,621 (indexed as of January 1, 2020) until the funded ratio of the ERS, SPRBT and JRBT, calculated by the system's actuary on an aggregate basis, exceeds eighty percent (80%). At such time, the benefit adjustments will then be provided on the lower amount (currently indexed at \$27,184).

STATE OF RHODE ISLAND STATE POLICE RETIREMENT FUND TRUST (SPRFT)

Effective June 8, 2016 and pursuant to Rhode Island General Law section 42-28-22.1, the retirement board established a trust to collect proceeds for the purpose of paying retirement benefits to participating members of the state police initially hired on or before July 1, 1987, or their beneficiaries.

The trust was established to reduce the amount of the unfunded liability attributable to the retirement benefits for members of the state police hired on or before July 1, 1987. The trust was funded with monies obtained from the Department of Justice's Equitable Sharing Program, resulting from a settlement in which \$45 million of such settlement was allocated for use by the state police. Pursuant to Rhode Island General Law section 42-28-22.2, the State shall deposit contributions for the members of the state police initially hired on or before July 1, 1987 to be held in trust. The trust was established with a \$15 million supplemental contribution (from funds available to the State from the Department of Justice's Equitable Sharing Program) that was deposited in fiscal 2017. Taking into account the initial supplemental contribution, as certified by the State's actuary, the unfunded actuarial liability will be amortized over an 18 year period. The State will make annual contributions into the trust for this funding period, or until the unfunded accrued liability is fully amortized. This trust is a closed plan because there are no longer any active members.

2. Plan Membership and Benefit Provisions (continued)

Plan members – the plan covers members of the state police hired on or before July 1, 1987. Prior to creating the trust, benefits for these members were intended to be funded on a pay-as-you-go basis.

Retirement eligibility and plan benefits – The plan generally provides retirement benefits equal to 50% of final salary after 20 years of service, members that retired after July 1, 1972 could earn an additional 3.0% of final salary times service in excess of 20 years through 25 years to a maximum of 65% of final salary. Such benefits are available to members after 20 years of service regardless of age.

Cost of Living Adjustments – The Cost of Living Adjustment (COLA) has been suspended until the collective ERS, SPRBT and JRBT plans reach a funded status of 80%. The COLA provision will be reviewed in a four-year interval while the plans are less than 80% funded. When the collective funding level of a plan exceeds 80%, eligible retirees may receive a COLA annually effective on their date of retirement plus one month.

The COLA calculation is represented by the following formula: 50% of the COLA is calculated by taking the previous 5-year average investment return, less 5% (5-year return – 5.0%, with a max of 4%) and 50% calculated using the increase in the CPI-U from the prior September 30 (max of 3%) for a total maximum COLA of 3.5%.

The benefit adjustments are provided to all retirees entitled to receive a benefit adjustment as of June 30, 2012 under the law then in effect, and for all other retirees, the benefit adjustments shall commence upon the third anniversary of the date of retirement or the date on which the retiree reaches his or her Social Security retirement age, whichever is later. For members (and their beneficiaries) retiring after June 30, 2015, the annual benefit adjustment provided in any calendar year is equal to the lesser of either the member's retirement allowance or the first \$27,184 (indexed as of January 1, 2020) of retirement allowance multiplied by the percentage resulting from the COLA calculation as outlined in the preceding paragraph. The retirement amount subject to the COLA calculation is indexed annually in the same percentage as the COLA determination and is run annually regardless of the collective funding status.

For members and/or beneficiaries of members who retired on or before June 30, 2015 the current indexed amount of \$27,184 is replaced with \$32,621 (indexed as of January 1, 2020) until the funded ratio of the ERS, SPRBT and JRBT, calculated by the system's actuary on an aggregate basis, exceeds eighty percent (80%). At such time, the benefit adjustments will then be provided on the lower amount (currently indexed at \$27,184).

DEFINED CONTRIBUTION PLAN

The State of Rhode Island Defined Contribution Retirement Plan (the "Plan") is a defined contribution (money purchase) plan that operates under Section 401(a) of the Internal Revenue Code. The Plan was established under Rhode Island General Law section 36-10.3-2 and was placed under the management of the Retirement Board. The Retirement Board is the Plan administrator and Plan trustee. The law authorizes the State Investment Commission to select the appropriate third-party administrator for the Plan and to adopt Plan, trust, and/or custodial documents subject to certain guidelines outlined in the statute. The State Investment Commission is responsible for implementing the investment policy of the Plan and selecting the investment options available to members. TIAA-CREF serves as record keeper for the Plan and Plan assets are held by J.P. Morgan as investment custodian.

2. Plan Membership and Benefit Provisions (continued)

Plan members – The plan covers members of the defined benefit plan within the Employees' Retirement System of Rhode Island with less than 20 years of service as of June 30, 2012, excluding legislators, correction officers, judges, state police, and MERS general police and fire employees who participate in Social Security. For covered employees, participation in the defined contribution plan is mandatory.

Plan vesting provisions – The total amount contributed by the member, including associated investment gains and losses, shall immediately vest in the member's account and is non-forfeitable. The total amount contributed by the employer, including associated investment gains and losses, vests with the member and is non-forfeitable upon completion of three (3) years of contributory service. Service credit under ERS or MERS prior to July 1, 2012 is credited to the member for vesting purposes.

Member accounts – Each member's account is credited with the member and employer's contribution and an allocation of the plan's earnings. Allocations are based on a relationship of the member's account balance in each investment fund to the total of all account balances in that fund. The retirement benefit to which a member is entitled is the benefit that can be provided from the member's account.

Forfeitures – Non-vested employer contributions are forfeited upon termination of employment. Such forfeitures can be used by employers to offset future remittances to the plan.

Contributions – The plan's benefits are funded by contributions from the participants and the employer, as specified in Rhode Island General Law 36-10.3-4 and 36-10.3-5.

Eligible state employees and teachers and MERS general employees that participate in Social Security contribute 5% of the member's compensation. Teachers and MERS general employees not covered by Social Security must contribute 7% of their compensation.

Employers contribute to these member's individual accounts an amount equal to 1% to 1.5% of the member's compensation depending upon years of service for those participating in Social Security. For eligible members who do not participate in Social Security, the employers contribute an amount equal to 3.0% to 3.5% depending upon years of service.

Investment options – Member and employer contributions may be invested in a variety of investment options broadly diversified with distinct risk and return characteristics. The investment options provide opportunities to diversify across the risk-return spectrum with a range of investment choices within varied asset classes.

The investment programs are managed by TIAA-CREF and have various investment strategies.

Retirement benefits – Benefits may be paid to a member after severance from employment, death, Plan termination, or upon a deemed severance from employment for participants performing qualified military service. At a minimum, retirement benefits must begin no later than April 1 of the calendar year following the year in which you attain age 70 ½ or terminate employment, if later. Members have the option to receive benefit payments in the form of a Single Life Annuity, Two Life Annuity, Lump Sum Benefit, or Installments. These payments are subject to any restrictions in the investment vehicles.

3. Summary of Significant Accounting Policies

These financial statements were prepared in accordance with accounting principles generally accepted in the United States of America as prescribed by the Governmental Accounting Standards Board (GASB). The Governmental Accounting Standards Board (GASB) is responsible for establishing generally accepted accounting principles for defined benefit and defined contribution plans established and administered by governmental entities.

Basis of Accounting - The financial statements of the System are prepared on the accrual basis of accounting. Under this method, revenues are recorded when earned and expenses are recorded when incurred.

Cash and Cash Equivalents - Cash represents cash held in trust in a financial institution. Cash equivalents are highly liquid investments with a maturity of three months or less at the time of purchase.

Investments - Investment transactions are recorded on a trade date basis. Gains or losses on foreign currency exchange contracts are included in income consistent with changes in the underlying exchange rates. Dividend income is recorded on the ex-dividend date.

Method Used to Value Investments - Investments are recorded in the financial statements at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Short-term investments are generally carried at cost or amortized cost, which approximates fair value.

The fair value of fixed income securities and domestic and international equity securities is generally based on published market prices and quotations from national security exchanges and securities pricing services.

Commingled funds and collective unit trusts include institutional international equity index funds and an emerging markets debt fund. The fair value of these funds is based on the reported net asset value (NAV) based upon the fair value of the underlying securities or assets held in the fund.

Derivative investments (e.g., futures contracts and credit default swaps) are valued at the settlement price established each day by the board of trade or exchange on which they are traded.

The System also trades in foreign exchange contracts to manage exposure to foreign currency risks. Such contracts are used to purchase and sell foreign currency at a guaranteed future price. The change in the estimated fair value of these contracts, which reflects current foreign exchange rates, is included in the determination of the fair value of the System's investments.

Other investments that are not traded on a national security exchange (primarily private equity, real estate, hedge funds, private infrastructure investments, Crisis Protection Class – Trend Following, and emerging markets debt) are valued based on the reported Net Asset Value (NAV) by the fund manager or general partner. Publicly traded investments held by the funds or partnerships are valued based on quoted market prices. If not publicly traded, the fair value is determined by the general partner following U.S. generally accepted accounting principles. Financial Accounting Standards Board ASC Topic 820, *Fair Value Measurements and Disclosures*, requires the limited partnership general partners for these investment types to value non-publicly traded assets at current fair value, taking into consideration the financial performance of the issuer, cash flow analysis, recent sales prices, market comparable transactions, a new round of financing, a change in economic conditions, and other pertinent information.

3. Summary of Significant Accounting Policies (continued)

Hedge funds, private equity, real estate, private infrastructure, crisis protection class – trend following investments, and emerging markets debt represented 6.8%, 10.8%, 5.7%, 2.5%, 5.0% and 2.0% respectively of the total reported fair value of all ERSRI investments at June 30, 2020.

Investment expenses – Investment expenses include investment consultant fees, custodial fees, direct investment expenses paid to managers, and certain indirect expenses allocated by managers to fund or partnership investors. Certain Office of the General Treasurer expenses associated with oversight of the pooled investment trust are also allocated and included as investment expenses. When indirect investment expenses for certain types of investments (e.g., hedge funds, private equity, real estate, infrastructure, and crisis protection class), are not reported separately to System management and the investment custodian, additional information is obtained to allow reporting of the System's share of such indirect investment expenses on a gross fee basis.

Net investment income within the defined contribution plan is reported on a net-of-fees basis.

Contributions - Plan member contributions for the defined benefit plans are recognized in the period in which the wages, subject to required contributions, are earned for the performance of duties for covered employment. Employer contributions to each defined benefit plan are recognized when due and the employer has made a formal commitment to provide the contributions.

Plan member and employer contributions for the defined contribution plan are contributed to the member's individual account in the plan as a defined percentage of the member's compensation paid during the plan year ending June 30.

Benefits - Benefits and refunds are recognized when due and payable in accordance with the terms of each plan.

Prepaid Assets – These assets represent the amounts paid to a vendor pursuant to a contract to design, transition, and implement new line-of-business, general ledger accounting system, and payroll administration systems. Under the new system development and operations contract, the vendor will supply and operate the system for the contract period. Consequently, no capital asset related to the new system are recognized or depreciated. The amounts paid before the system became operational have been accounted for as prepaid assets items in prior years. Beginning in fiscal year 2017, when system operations fully commenced, that prepaid amount is amortized ratably over the remaining contract period.

Total Columns - Total columns on the financial statements are presented only to facilitate financial analysis. Data in these columns are not comparable to a consolidation. Inter-fund eliminations have not been made in the aggregation of this data.

Use of Estimates – The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures 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 statements of fiduciary net position. Because of the inherent uncertainty in the valuation of privately held securities, the fair value may differ from the values that would have been used if a ready market for such securities existed, and the difference can be material. Estimates also affect the reported amounts of income/additions and expenses/deductions during the reporting period. Actual results could differ from these estimates.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

4. Cash Deposits and Cash Equivalents

At June 30, 2020, the carrying amounts of the plans' cash deposits are listed below:

<u>Cash Deposits</u>	<u>ERS/TSB</u>	<u>MERS</u>	<u>SPRBT</u>	<u>JRBT</u>	<u>RIJRFT</u>	<u>SPRFT</u>	<u>Total</u>
Book Balance	\$ 5,140,959	\$ 861,727	\$ 969,070	\$ 142,388	\$ 430,306	\$ 21,964	\$ 7,566,414
Bank Balance	\$ 5,280,941	\$ 943,696	\$ 969,070	\$ 142,388	\$ 430,306	\$ 21,964	\$ 7,788,365

The bank and book balances represent the plans' deposits in short-term trust accounts, which include demand deposit accounts and interest-bearing, collateralized bank deposit accounts. The bank balances, include interest-bearing collateralized bank deposits and are either federally insured or collateralized (102%) with U.S. Treasury, agencies, and federal home loan bank letters of credit held by a third party custodian.

In accordance with Rhode Island General Law Chapter 35-10.1, depository institutions holding deposits of the State, its agencies or governmental subdivisions of the State shall, at a minimum, insure or pledge eligible collateral equal to one hundred percent of time deposits with maturities greater than sixty days. Any of these institutions that do not meet minimum capital standards prescribed by federal regulators shall insure or pledge eligible collateral equal to one hundred percent of deposits, regardless of maturity. None of the System's deposits were required to be collateralized at June 30, 2020 (excluding the collateralized interest-bearing deposits). However, the State Investment Commission has adopted a collateralization requirement for institutions holding the State's deposits. Financial institutions are required to pledge collateral equal to 102% of the deposit amounts that are not insured by federal depository insurance. Unless FHLB letters of credit are used as collateral, in which case those are required at 100%.

The General Treasurer makes certain short-term investments on a daily basis. Rhode Island General Law Section 35-10-11 (b)(3) requires that all investments shall be made in securities as would be acquired by prudent persons of discretion and intelligence who are seeking a reasonable income and the preservation of capital.

5. Investments – Pooled Investment Trust

(a). General

The custodian bank holds assets of the System in a Pooled Investment Trust and each plan holds units in the trust. The number of units held by each plan is a function of each plans' respective contributions to, or withdrawals from, the trust.

Investment policy - The State Investment Commission (SIC) oversees all investments made by the State of Rhode Island, including those made for the System's Pooled Investment Trust. The establishment of the SIC, its legal authority and investment powers are outlined in Chapter 35-10 of the Rhode Island General Laws.

The SIC has adopted a Defined Benefit Investment Policy Statement which includes specific asset allocation targets and asset class policies. The most recent policy statement was adopted by the SIC on June 27, 2018 and updated on January 22, 2020 and may be amended by a majority vote of SIC members. The SIC's asset allocation policy seeks to achieve the assumed rate of return adopted by the System over the long-term while reducing risk through the prudent diversification of the portfolio across various asset classes.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

5. Investments – Pooled Investment Trust (continued)

The System leverages the services of actuaries and consultants to provide guidance regarding actuarial matters, asset allocation, and invest policy development. The SIC manages the investment program pursuant to the investment policy, develops asset class guidelines, monitors and evaluates performance, and makes determinations regarding the retention of managers. Professional investment managers are selected by the SIC to manage portfolios in accordance with investment management agreements.

The following was the SIC's adopted asset allocation policy targets as of June 30, 2020:

Asset Class	Long-Term Target Asset Allocation
<i>GROWTH</i>	
Global Equity	40.0%
Private Growth	15.0%
<i>subtotal</i>	55.0%
<i>INCOME</i>	
	12.0%
<i>STABILITY</i>	
Crisis Protection Class	10.0%
Inflation Protection	8.0%
Volatility Protection	15.0%
<i>subtotal</i>	33.0%
Total	100.0%

Consistent with a target asset allocation model adopted by the State Investment Commission (SIC), the System directs its separate-account investment managers to maintain, within the mandate specified by the SIC, diversified portfolios by sector, credit rating and issuer using the prudent person standard, which is the standard of care employed solely in the interest of the participants and beneficiaries of the funds and for the exclusive purpose of providing benefits to participants and defraying reasonable expenses of administering the funds.

Specific manager performance objectives are outlined and generally stated in relation to a benchmark or relevant index. These guidelines also include prohibited investments, limitations on maximum exposure to a single industry or single issuer, a minimum number of holdings within the manager's portfolio and, for fixed income managers, minimum credit quality ratings and duration/maturity targets.

Investment expense is allocated to each plan based on the plan's units in the Pooled Investment Trust at the end of each month.

The following table presents the fair value of investments by type that are held within the Pooled Investment Trust for the defined benefit plans at June 30, 2020:

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

5. Investments – Pooled Investment Trust (continued)

Investment Type	June 30, 2020
Investment Type	Fair Value
Cash and Cash Equivalents:	
US Cash	\$ 15,130,093
Commercial Paper	6,235,868
Non-US Cash	2,996,529
Repurchase Agreements	18,200,000
Money Market Mutual Funds	87,118,287
US Government Securities	658,467,057
US Government Agency Securities	198,517,028
Collateralized Mortgage Obligations	25,376,314
Corporate Bonds	508,295,267
Term Loans	137,074,613
Emerging Markets Debt - Collective Unit Trust	171,893,551
Commingled Funds - International Equity	1,125,753,278
Domestic Equity Securities	2,274,277,862
International Equity Securities	423,598,453
Equity Options - Private LLC Investment	165,228,356
Private Equity	919,051,951
Real Estate	488,460,529
Hedge Funds	578,826,257
Crisis Protection Class - Trend Following - Limited partnerships	423,297,498
Infrastructure	287,937,645
Derivatives:	
Futures	229,595
Credit Default Swaps	629
Investments at Fair Value	8,515,966,660
Investment receivable	420,077,607
Investment payable	(418,330,696)
Total Pooled Investment Trust	\$ 8,517,713,571

(b) Fair value hierarchy

The fair value hierarchy categorizes the inputs to valuation techniques used to measure fair value into three levels:

Level 1 inputs are quoted prices (unadjusted) for identical assets or liabilities in active markets that a government can access at the measurement date.

Level 2 inputs are other than quoted prices included within Level 1—that are observable for an asset or liability, either directly or indirectly.

Level 3 includes unobservable inputs for an asset or liability.

The fair value hierarchy gives the highest priority to Level 1 inputs and the lowest priority to Level 3 inputs. If the fair value of an asset or a liability is measured using inputs from more than one level of the fair value hierarchy, the measurement is considered to be based on the lowest priority level input that is significant to the entire measurement.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

5. Investments – Pooled Investment Trust (continued)

Investments and Derivative Instruments Measured at Fair Value

Investments at Fair Value	Fair Value June 30, 2020	Quoted Prices in Active Market for Identical Assets (level 1)	Significant Other Observable Inputs (level 2)	Significant Unobservable Inputs (level 3)
<u>Equity Investments</u>				
Global Equity	\$ 2,697,876,315	\$ 2,697,876,315		
Infrastructure-publicly traded	76,364,678	76,364,678		
	<u>2,774,240,993</u>	<u>2,774,240,993</u>	-	-
<u>Fixed Income</u>				
US Government Securities	658,467,057	658,467,057		
US Government Agency Securities	198,517,028		198,517,028	
Corporate Bonds	508,295,267		508,295,267	
Collateralized Mortgage Obligations	25,376,314		25,376,314	
Term loans	137,074,613			137,074,613
	<u>1,527,730,279</u>	<u>658,467,057</u>	<u>732,188,609</u>	<u>137,074,613</u>
<u>Derivative Investments</u>				
Equity and Fixed Income Index Futures	229,595	229,595		
Other Derivatives	629		629	
	<u>230,224</u>	<u>229,595</u>	<u>629</u>	
Commercial Paper	<u>6,235,868</u>		<u>6,235,868</u>	
Total Investment at Fair Value Level	<u>\$ 4,308,437,364</u>	<u>\$ 3,432,937,645</u>	<u>\$ 738,425,106</u>	<u>\$ 137,074,613</u>

Investments Measured at Net Asset Value (NAV)

Money Market Mutual Funds	\$ 87,118,287
Commingled Funds - International Equity	1,125,753,278
Hedge Funds	578,826,257
Private Equity	919,051,951
Real Estate	488,460,529
Private Infrastructure	211,572,967
Emerging Markets Debt Collective Unit Trust	171,893,551
Equity Options - Private LLC Investment	165,228,356
Crisis Protection Class - Trend Following	423,297,498
	<u>4,171,202,674</u>

Cash and Cash Equivalents

US Cash	15,130,093
Non US Cash	2,996,529
Repurchase Agreements	18,200,000
	<u>36,326,622</u>

Net Investment Receivable

1,746,911

Total Pooled Investment Trust

\$ 8,517,713,571

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

5. Investments – Pooled Investment Trust (continued)

Debt and equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Debt securities classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Term loans classified in Level 3 are valued using consensus pricing.

Derivative instruments classified in Level 2 of the fair value hierarchy are valued using a market approach that considers benchmark interest rates and foreign exchange rates.

The valuation method for investments measured at the net asset value (NAV) per share (or its equivalent) is presented on the following table.

	<u>Fair Value</u>	<u>Unfunded Commitments</u>	<u>Redemption (if currently eligible)</u>	<u>Redemption Notice Period</u>
Money Market Mutual Funds(1)	\$ 87,118,287	-	daily	none
Commingled Funds - International Equity (2)	1,125,753,278	-	daily	see note below
Hedge Funds (3)	578,826,257	-	see note below	see note below
Private Equity (4)	919,051,951	\$ 1,116,647,869	see note below	see note below
Real Estate (5)	488,460,529	153,070,035	see note below	see note below
Private Infrastructure Investments (6)	211,572,967	99,590,275	see note below	see note below
Crisis Protection Class - Trend Following (7)	423,297,498	-	see note below	see note below
Emerging Markets Debt - Collective Unit Trust (8)	171,893,551	-	see note below	see note below
Equity Options - Private LLC Investment (9)	165,228,356	-	see note below	see note below
	<u>\$ 4,171,202,674</u>	<u>\$ 1,369,308,179</u>		

- (1) **Money market mutual funds** - these investments are used as temporary cash management investments for amounts pending investment or for amounts liquidated from investments pending distribution for pension benefits. The fair value of these money market funds reflects the net asset value reported by the fund administrator which is a stable \$1 per unit. The underlying investments, which are short-term cash equivalent type investments, are generally carried at amortized cost which approximates fair value. There are no withdrawal limitations for the money market mutual funds.
- (2) **Commingled funds** – consist of three international equity index funds which are intended to replicate the performance of a specific index; e.g., MSCI EAFE. The fair values of the investments in this type have been determined using the NAV per share of the investments as reported by the commingled fund manager which reflects the exchange pricing of the equity holdings within each fund. The international equity commingled funds may be redeemed daily.
- (3) **Hedge funds** – this portfolio is comprised of 7 limited partnerships divided into two sub-categories: global equity and absolute return. Global equity funds are designed to benefit from the stock market with considerably less risk. They own stakes in companies they expect to outperform and also sell short stocks that they expect to underperform. Absolute return hedge funds employ strategies that seek to generate long-term returns and mitigate risk, regardless of broader market moves. The funds invest across asset classes, including government bonds, other fixed income securities, equity indexes, commodities, and currencies.

The fair values of the investments in this type have been determined using the NAV per share of the investments as reported by the general partner at June 30, 2020. Of the underlying holdings within the hedge funds approximately 68% were valued based on Tier 1 inputs (unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted investments).

5. Investments – Pooled Investment Trust (continued)

The system's investments in hedge fund assets are available for redemption on a monthly, quarterly, semi-annual or annual basis, and are subject to notice periods which vary by fund and range from 30 days to 75 days. Some funds limit redemptions to 25% of invested capital on any one redemption date.

- (4) **Private equity** – these 104 limited partnership funds provide the portfolio exposure to private companies through equity and/or debt investments. Private equity fund managers invest in private companies with the goal of enhancing their value over the long-term.

The fair values of the investments in this type have been determined using the NAV per share of the investments as reported by the general partner at June 30, 2020.

Private equity – the investments cannot be redeemed. The nature of these investments provides for distributions through the liquidation of the underlying assets or net operating cash flows.

During fiscal 2020, the System, through its investment in a limited partnership, received a distribution of common stock as part of an initial public offering (IPO). The shares were subject to a shareholder lock-up provision allowing one-third of the shares to be sold 181, 271 and 366 days after the IPO. At June 30, 2020, one-third of the total shares received remained subject to the lock-up provision. All shares held at June 30, 2020 are included within the domestic equity securities classification.

- (5) **Real Estate** – these 18 limited partnership investments are comprised of two different private real estate equity components, Core and Non-Core, which generally refer to the relative levels of risk in the underlying assets. Core investments include existing, substantially leased, income-producing properties located principally in economically diversified metropolitan areas. Non-Core investments represent those properties and/or investment strategies that require specialized acquisition and management expertise and skill to mitigate the business and leasing risks that may be associated with individual investments. Non-Core investments, which may be referred to as Value Added and Opportunistic investments, are expected to be held for shorter periods, have greater volatility compared to Core investments, and as such, are expected to provide yields higher than those associated with Core investments.

These funds acquire, manage and sell physical properties, including office, retail, apartment, and industrial buildings as well as more niche property types, such as student housing, self-storage and hotels. The primary goals of this asset class are to provide current income, risk-adjusted total returns, and diversification.

The fair values of the investments in this type have been determined using the NAV per share of the investments as reported by the general partner at June 30, 2020.

With the exception of four core open-end funds which allow for quarterly redemptions, the investments cannot be redeemed. The nature of these investments provides for distributions through the liquidation of the underlying assets or net operating cash flows.

(5) Investments – Pooled Investment Trust (continued)

- (6) **Infrastructure** – These nine funds provide inflation-protection and current income to the portfolio through investments in facilities and services required for an economy to function including electricity production and distribution, pipelines, sewers and waste management, airports, roads, bridges, ports, railroads, telephone and cable networks, and hospitals. The fair values of the investments in this type have been determined using the NAV per share of the investments as reported by the general partner at June 30, 2020.

With the exception of one open-end core fund which allows for quarterly liquidity, the investments cannot be redeemed. The nature of these investments provides for distributions through the liquidation of the underlying assets or net operating cash flows.

- (7) **Crisis Protection Class – Trend Following** – These three funds were created as limited liability companies with the Employees' Retirement System of the State of Rhode Island as the sole member. The investment managers' principal investment objectives for the companies include:

- providing diversified exposure to market trends across asset classes, geographies and time horizons to generate sizable profits during the periods when growth-risk exposed assets decline significantly;
- generating significant medium-term capital growth independent of overall movements in traditional stock and bond markets within a rigorous risk management framework; and
- outperforming the Credit Suisse Liquid Alternative Beta Managed Futures Index (CLABT18 Index) over a 5-year period.

The fair values of the investments in this type have been determined using the NAV per share of the investments as reported by the general partner at June 30, 2020. As the Employees' Retirement System of the State of Rhode Island is the sole member, the limited liability company could be liquidated at its option. The nature of these investments provides for distributions through the liquidation of the underlying assets or net operating cash flows.

- (8) **Emerging Markets Debt – Collective Unit Trust** – This collective unit trust seeks to generate attractive returns relative to an emerging markets debt blended benchmark. The strategy seeks to take advantage of investment opportunities across emerging markets fixed income spectrum, including hard and local currency denominated sovereign, quasi sovereign and corporate debt, and their derivatives. Currencies are used both to manage risk and enhance return.

The fair value of the collective unit trust has been determined using the NAV per share of the investments as reported by the manager of the collective trust at June 30, 2020.

This investment includes monthly liquidity provisions (first business day of the month) with notice required by the 22nd of the prior month.

- (9) **Equity Options – Private LLC Investment** – The fund seeks to achieve its goal primarily through a strategy of writing exchange-traded put options on the S&P 500® Index. These options are fully collateralized by short duration U.S. Treasury securities. The advisor attempts to generate returns through the receipt of option premiums from selling puts, as well as through investments in short duration fixed income instruments, which collectively are intended to reduce volatility relative to what it would be if the fund held the underlying equity index on which the options are written.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

5. Investments – Pooled Investment Trust (continued)

The fair value of the equity options – private LLC investment has been determined using the NAV per share of the investments as reported by the general partner at June 30, 2020. The underlying investments at June 30, 2020, which consist of equity options and fixed income investments were publicly traded.

This investment includes monthly liquidity provisions with 7 business days' notice.

(c) Rate of Return

For the year ended June 30, 2020, the annual money-weighted returns on investments within each of the plans, net of investment expense, are shown in the following table. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

	ERS	TSB	MERS	SPRBT	JRBT	RIJRFT	SPRFT
Money-weighted rate of return – year ended June 30, 2020	3.82%	3.64%	4.67%	3.85%	3.84%	2.29%	3.89%

(d) Interest Rate Risk

Interest rate risk is the possibility that the value of a fixed income security will decline due to changes in market interest rates. Due to its significant holdings of fixed income securities, the System manages its investment exposure to interest rate risk by comparing its fixed income and cash managers' portfolio-level and security-level interest rate sensitivities against a predetermined benchmark index based on that manager's mandate. In general, the System uses duration (in years) to measure interest rate sensitivity. However, for its Liquid Credit managers, the System uses effective duration, which takes into effect the embedded optionality, to measure the sensitivity of its investments to changes in interest rates. In some cases, the System also sets absolute restrictions with respect to effective duration or maturity for individual securities or portfolios for manager portfolios. The interest rate risk policies currently utilized by the System vary by asset class which include Investment Grade Fixed Income, Liquid Credit, Long Duration Treasuries, Inflation-Linked Bonds, CPC Enhanced Cash Portfolio, and Strategic Cash.

The fixed income indices currently used by the System are:

- Barclays US Treasury Inflation Notes - 1-10 Year Index
- Liquid Credit Custom BM: 50% BofA US High Yield Index + 50% Credit Suisse Leveraged Loan Index
- Long Duration BM: Barclays Long Duration US Treasury Index
- ICE BofA ML US Treasury Notes 0-1 Year
- Emerging Market Debt Custom BM: 50% JPM EMBI Global Diversified Index + 50% JPM GBI-EM Global Diversified Index
- Bloomberg Barclays US Corporate Bond Index
- Bloomberg Barclays Securitized MBS/ABS/CMBS Index

At June 30, 2020, no fixed income manager was outside of their policy guidelines.

The following table shows the System's fixed income investments by type, fair value and the effective duration at June 30, 2020:

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

5. Investments – Pooled Investment Trust (continued)

<u>Investment Type:</u>	<u>Fair Value (in thousands)</u>	<u>Effective Duration</u>
US Government Agency Securities	\$ 198,517	2.59
US Government Securities	658,467	12.89
Collateralized Mortgage Obligations	25,376	5.12
Corporate Bonds	508,295	5.48
Term Loans	137,075	0.97
Emerging Market Debt	<u>171,894</u>	6.67
Total Fixed Income	<u>\$ 1,699,624</u>	7.76

The System had investments at June 30, 2020 totaling \$87 million in money market mutual funds including \$102 thousand in the Ocean State Investment Pool Trust (OSIP), an investment pool established by the State General Treasurer.

OSIP has met the criteria outlined in GASB Statement No. 79 – *Certain External Investment Pools and Pool Participants* to permit election to report its investments at amortized cost which approximates fair value. OSIP transacts with its participants at a stable net asset value (NAV) per share. Investments reported at the NAV are not subject to the leveling categorization as described above. There are no participant withdrawal limitations. The OSIP is not rated and the weighted average maturity of investments held in the pool, by policy, is not to exceed 60 days. OSIP issues a publicly available financial report that can be obtained by writing to the Office of the General Treasurer, Finance Department, 50 Service Avenue - 2nd Floor, Warwick, RI 02886.

The System's remaining money market mutual fund investments consisted of a short-term money market mutual fund that is not rated and held investments with a weighted average maturity of 47 days at June 30, 2020. The fund, by policy, holds only high-grade, highly liquid cash equivalent-type investments.

The System's investment in commercial paper totaling \$6,235,868 at June 30, 2020 had maturities ranging from 8 to 65 days.

The System invests in various mortgage-backed securities, such as collateralized mortgage obligations (CMO), interest-only and principal-only strips. They are reported in U.S. Government Agency Securities and Collateralized Mortgage Obligations in the table above. CMO's are bonds that are collateralized by whole loan mortgages, mortgage pass-through securities or stripped mortgage-backed securities. Income is derived from payments and prepayments of principal and interest generated from collateral mortgages. Cash flows are distributed to different investment classes or tranches in accordance with the CMO's established payment order. Some CMO tranches have more stable cash flows relative to changes in interest rates while others are significantly sensitive to interest rate fluctuations.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

5. Investments – Pooled Investment Trust (continued)

The System may invest in interest-only and principal-only strips in part to hedge against a rise in interest rates. Interest-only strips are based on cash flows from interest payments on underlying mortgages. Therefore, they are sensitive to pre-payments by mortgagees, which may result from a decline in interest rates. Principal-only strips receive principal cash flows from the underlying mortgages. In periods of rising interest rates, homeowners tend to make fewer mortgage prepayments.

(e) Credit Risk

Credit risk is the possibility of a loss due to the failure of a counterparty to repay a loan or meet another contractual obligation. The System may be exposed to credit risk with respect to its fixed income investments. The System manages its credit risk by setting credit rating criteria to govern the investment activities of its fixed income managers at the portfolio and security level. Ratings criteria may be expressed on a relative basis against predetermined benchmark index or on an absolute basis based on that manager's mandate. If a security is not rated by any Rating Agency, the internal rating assigned by the investment manager or an affiliate (Internal Rating) will be used. The credit risk policies currently utilized by the System vary by asset class and reflect the manager's strategy and the System's overall asset allocation targets and related objectives.

The System manages exposure to credit risk generally by instructing fixed income managers to adhere to an overall target weighted average credit quality for their portfolios and by establishing limits on the percentage of the portfolios that are invested in non-investment grade securities. The System's exposure to credit risk as of June 30, 2020 is as follows:

Rating	Collateralized Mortgage Obligations	US Government Agency Obligations	Corporate Bonds	Term Loans
Aaa	\$ 17,678,549	\$ 194,981,823	\$ 21,524,103	
Aa	5,652,194		29,646,377	
A	504,975	179,538	106,459,081	
Baa			178,323,029	\$ 5,673,164
Ba			76,063,890	31,719,733
B			49,698,775	55,639,669
Caa			8,691,931	694,736
C			11,900	
Not Rated	1,540,596	3,355,667	37,876,181	43,347,311
Fair Value	<u>25,376,314</u>	<u>198,517,028</u>	<u>508,295,267</u>	<u>\$ 137,074,613</u>

Ratings provided by Moody's Investors Service

An emerging market debt portfolio totaling \$171,893,551 at June 30, 2020 and held within a collective unit trust had an overall average credit quality rating of Baa (Moody's).

Investments in commercial paper totaling \$6,235,868 at June 30, 2020 were rated P1 (Moody's).

5. Investments – Pooled Investment Trust (continued)

(f) Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of investments in a single issuer. There is no single issuer exposure within the System's pooled investment trust that comprises 5% of the overall portfolio.

(g) Custodial Credit Risk

For an investment, custodial credit risk is the risk that, in the event of the failure of a counterparty, the System will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. At June 30, 2019, all securities were registered in the name of the System (or in the nominee name of its custodial agent) and were held in the possession of the System's custodial bank, Bank of New York Mellon.

(h) Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. Portfolios are diversified to limit foreign currency and security risk. The System may enter into foreign currency exchange contracts to minimize the short-term impact of foreign currency fluctuations on foreign investments.

The System's exposure to foreign currency risk at June 30, 2020, is detailed in the following table. In addition to the foreign currency exposure highlighted in the following table, certain hedge fund investments may have foreign currency exposure.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

5. Investments – Pooled Investment Trust (continued)

Foreign Currency Risk

Currency	Commingled Funds	Equities	Emerging Market Debt	Private Equity	Cash, Cash Equivalents and Derivatives	Futures	Term Loans	Corporate Bonds	Total
Australian Dollar	\$ 41,960,177	\$ 23,532,754	\$ (431,693)	\$	\$ 195,712	\$ (4,475)	\$	\$	\$ 65,252,475
Brazilian Real	21,284,975		8,188,896						29,473,872
Canadian Dollar	51,413,192	60,301,942	(430,926)	1,180,952	633,295	(19,113)			113,079,342
Chilean Peso	2,434,181		2,064,070						4,498,251
Chinese Yuan	13,273,791		3,723,715						16,997,506
Colombian Peso	776,311		5,603,399						6,379,710
Czech Republic Koruna	513,140		4,762,931						5,276,071
Danish Krone	14,491,214	13,940,173			21,540				28,452,927
Egyptian Pound	517,058								517,058
Euro Currency	195,318,167	102,836,145	(878,182)	58,928,479	(53,457)	(8,312)	1,070,822	1,157,218	358,370,880
Great Britain Pound	86,608,980	41,962,366			615,937	11,755			129,199,038
Hong Kong Dollar	116,283,528	3,081,936			(3,225)	6,771			119,369,010
Hungarian Forint	1,012,487		3,283,953						4,296,440
Indian Rupee	33,268,193		1,686,582						34,954,775
Indonesia Rupiah	6,185,698		9,003,918						15,189,616
Israeli Shekel	1,893,669				320				1,893,989
Japanese Yen	157,717,080	82,794,270			1,026,774	159,218			241,697,342
Kazakhstani Tenge			635						635
Malaysian Ringgit	7,247,988								7,247,988
Mexican Peso	7,003,103		9,846,826						16,849,928
New Taiwan Dollar	50,666,540								50,666,540
New Zealand Dollar	2,077,655	3,323,470	(432,664)						4,968,461
Norwegian Krone	3,280,601	1,135,793			191				4,416,585
Pakistani Rupee	83,742								83,742
Peruvian Nouveau Sol			2,577,543						2,577,543
Philippine Peso	3,496,367								3,496,367
Polish Zloty	2,991,999		8,630,960						11,622,959
Qatari Real	3,443,957								3,443,957
Romanian Ieu			1,292,054						1,292,054
Russian Ruble	10,136,746		8,239,905						18,376,651
Saudi Riyal	11,046,349								11,046,349
Singapore Dollar	7,020,407	14,614,954	1,279,595		339,122				23,254,078
Swedish Krona	18,948,982	24,303,777			164,770	(16,553)			43,400,976
Swiss Franc	62,483,479	51,770,873			55,549				114,309,901
South African Rand	15,138,563		6,056,883		1				21,195,447
South Korean Won	48,401,878								48,401,878
Thailand Baht	9,265,338		9,475,074						18,740,412
Turkish Lira	1,891,095		837,618						2,728,713
Ukrainian Hryvnia			361,368						361,368
United Arab Emirates Dirham	2,187,325								2,187,325
Uruguayan Peso			905,529						905,529
Total	\$ 1,011,763,954	\$ 423,598,453	\$ 85,647,990	\$ 60,109,431	\$ 2,996,529	\$ 129,291	\$ 1,070,822	\$ 1,157,218	\$ 1,586,473,687
United States	\$ 113,989,324		\$ 86,245,561						
Grand Total	\$ 1,125,753,278		\$ 171,893,551						

5. Investments – Pooled Investment Trust (continued)

(i) Derivatives and Other Similar Investments

Certain of the System's investment managers are allowed to invest in derivative type transactions consistent with the terms and limitations governing their investment objective and related contract specifications. Derivatives and other similar investments are financial contracts whose value depends on one or more underlying assets, reference rates, or financial indices.

The System's derivative investments include forward foreign currency transactions, futures contracts, options, rights, and warrants. The System enters into these transactions to enhance performance, rebalance the portfolio consistent with overall asset allocation targets, gain or reduce exposure to a specific market, or mitigate specific risks.

Forward foreign currency contracts – The System enters into foreign currency exchange contracts to minimize the short-term impact of foreign currency fluctuations on foreign investments. A currency forward is a contractual agreement to pay or receive specific amounts of foreign currency at a future date in exchange for another currency at an agreed upon exchange rate. If not offset by a corresponding position with the opposite currency exposure, these contracts involve risk in excess of the amount reflected in the System's Statements of Fiduciary Net Position. The face or contract amount in U.S. dollars reflects the total exposure the System has in currency contracts. The U.S. dollar value of forward foreign currency contracts is determined using forward currency exchange rates supplied by a quotation service. Losses may arise due to changes in the value of the foreign currency or if the counterparty does not perform under the contract.

Futures contracts – The System uses futures to manage its exposure to the domestic and international equity, money market, and bond markets and the fluctuations in interest rates and currency values. Futures are also used to obtain target market exposures in a cost-effective manner and to narrow the gap between the System's actual cash exposures and the target policy exposures. Using futures contracts in this fashion is designed to reduce (or hedge) the risk of the actual plan portfolio deviating from the policy portfolio more efficiently than by using cash securities. The program is only used to manage intended exposures and asset allocation rebalancing.

Buying futures tends to increase the System's exposure to the underlying instrument. Selling futures tends to decrease the System's exposure to the underlying instrument or hedge other System investments. Losses may arise due to movements in the underlying or reference markets.

Credit Default Swaps – A credit manager may use credit default swaps in the portfolio to either obtain exposure to the high yield market efficiently (i.e. by selling protection) at a similar or better price than what can be obtained in cash bonds, or to hedge the credit risk of the portfolio (i.e. buying protection).

Through commingled funds, the System also indirectly holds derivative type instruments, primarily equity index futures.

Additionally, the System is an investor in a private investment fund that writes collateralized put options on both U.S. indices, including the S&P 500® Index and the Russell 2000® Index, and exchange traded funds. The advisor attempts to generate returns through the receipt of option premiums from selling puts, as well as through investments in fixed income instruments, which collectively are intended to reduce volatility relative to what it would be if the fund held the underlying equity index on which the options are written.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

5. Investments – Pooled Investment Trust (continued)

The System invests in mortgage-backed securities, which are included in the categories described as collateralized mortgage obligations and U.S. Government Agency Securities. These securities are based on the cash flows from interest and principal payments by the underlying mortgages. As a result, they are sensitive to prepayments by mortgagees, which are likely in declining interest rate environments, thereby reducing the value of these securities.

Additional information regarding interest rate risks for these investments is included in Note 5(d) *Interest Rate Risk*.

The System may sell a security in anticipation of a decline in the fair value of that security or to lessen the portfolio allocation of an asset class. Short sales may increase the risk of loss to the System when the price of a security underlying the short sale increases and the System is obligated to deliver the security in order to cover the position.

The following summarize the System's exposure to specific derivative investments at June 30, 2020.

Investment Derivative Instruments	Change in fair value included in investment income	Fair Value at June 30, 2020	Notional Amount
Fixed Income futures - long	\$ (645,692)	\$ 214,838	\$ 135,377,023
Fixed Income Futures - short	(159,502)	(159,502)	(26,772,344)
Equity index futures - long	100,664	627,689	36,396,793
Equity index futures - short	(456,330)	(453,430)	(71,741,617)
Credit Default swaps	(189,196)	629	
Total return Swaps	(55,712)		
Total	\$ (1,405,768)	\$ 230,224	
Foreign currency forward contracts:			
Pending (liability)		\$ 189,368	
Pending receivable (asset)		(6,842)	
Total		\$ 182,526	

The System is exposed to counterparty risk on foreign currency contracts that are in asset positions. The aggregate fair value of derivative instruments in asset positions at June 30, 2020 was \$182,526. This represents the maximum loss that would be recognized if all counterparties failed to perform as contracted. Risk is mitigated by using a continuous linked settlement process.

The System executes (through its investment managers) derivative instruments with various counterparties. The credit ratings of these counterparties were Aa3 (Moody's) or better, two counterparties were not rated by Moody's but were rated A+ or better by Fitch.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

6. Other Investments – Defined Contribution Plan

The State Investment Commission selected various investment options for defined contribution plan participants with the overall objective of offering low-cost, strategic, and long-term oriented investment products. Plan participants can choose one or more of the various options and can change options at any time. Plan participants who do not elect a specific option default to a target date retirement fund consistent with their anticipated Social Security retirement eligibility date.

Investment Type	Fair Value	% of Total	Duration (years)
Annuities			
TIAA Stable Value	\$ 20,054,639	1.71%	
Total	\$ 20,054,639	1.71%	
Fixed Income Funds			
Pimco Real Return Institutional Class	8,930,472	0.76%	8.012
State Street US Bd Index Sec XIV	9,874,341	0.84%	5.990
Total	\$ 18,804,813	1.60%	
Target Retirement Funds			
Vanguard Target Retirement 2015 Trust Plus	42,784,594	3.65%	
Vanguard Target Retirement 2020 Trust Plus	113,675,355	9.69%	
Vanguard Target Retirement 2025 Trust Plus	152,043,527	12.96%	
Vanguard Target Retirement 2030 Trust Plus	166,020,137	14.15%	
Vanguard Target Retirement 2035 Trust Plus	186,916,183	15.93%	
Vanguard Target Retirement 2040 Trust Plus	150,999,562	12.87%	
Vanguard Target Retirement 2045 Trust Plus	115,179,373	9.82%	
Vanguard Target Retirement 2050 Trust Plus	71,029,354	6.05%	
Vanguard Target Retirement 2055 Trust Plus	32,386,995	2.76%	
Vanguard Target Retirement 2060 Trust Plus	7,876,722	0.67%	
Vanguard Target Retirement 2065 Trust Plus	710,711	0.06%	
Vanguard Target Retirement Income Trust Plus	11,595,443	0.99%	
Total	\$ 1,051,217,955	89.60%	
Equity Funds			
Vanguard Social Index Admiral	4,649,597	0.40%	
State Street SP 500 Index Sec II	37,452,456	3.19%	
State Street Sm Mid Index Sec II	26,705,948	2.28%	
State Street Cp Eq ExUS Index II	14,408,514	1.23%	
Total	\$ 83,216,515	7.09%	
Total	\$ 1,173,293,922	100.00%	

The majority (98%) of investments held by participants in the defined contribution plan are target date retirement funds, equity or fixed income funds. The target retirement date funds provide for diversified portfolios of equities and bonds that become progressively more conservative as the fund's associated target retirement date approaches. Equity index funds seek to replicate the price and yield performance of a particular index.

6. Other Investments – Defined Contribution Plan (continued)

The target retirement date and equity and fixed income funds are priced daily based on the traded prices of the underlying securities held within the funds. There are no withdrawal limitations for these funds. These funds are classified as Level 1 investments (quoted prices in active markets for identical assets) within the fair value hierarchy. Annuities are reported at contract value, which approximates fair value. Annuities held by participants within the defined contribution plan are classified as Level 3 investments (significant unobservable inputs) within the fair value hierarchy.

For an investment, custodial credit risk is the risk that, in the event of the failure of the counterparty, the System will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. At June 30, 2020, all non-annuity assets, including mutual funds, that are traded and held in retirement plans by TIAA were held at TIAA, FSB (formerly TIAA-CREF Trust Company, FSB) as custodian/trustee.

The majority of the defined contribution plan investment options are funds that invest in diversified portfolios of securities including equity and fixed-income investments. For investment options that are solely fixed income, weighted-average maturity or duration have been disclosed as a measure of interest rate risk.

Fixed income funds and are subject to interest rate, inflation and credit risks. Target-date retirement funds share the risks associated with the types of securities held by each of the underlying funds in which they invest including equity and fixed income funds. Funds may have exposure to foreign currency risk through investment in non-US denominated securities.

7. Contributions

Contribution requirements for plan members and employers are established pursuant to Rhode Island General Laws. With the exception of the RIJRFT plan, employers are required to contribute at an actuarially determined rate or a fixed dollar amount for the defined benefit plans. Employer contributions for the defined contribution plan are prescribed by statute. Plan member contributions for the defined benefit and defined contribution plans are fixed by statute. Member and employer contribution rates are subject to amendment by the General Assembly.

(a). Funding Policy

The funding policies, as set forth in Rhode Island General Law, Sections 36-10-2 and 45-21-42 provide for actuarially determined periodic contributions to the plans. The actuarial valuation uses the Entry Age Normal actuarial cost method. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) a rate that will amortize the unfunded actuarial liability. The valuation is prepared on the projected benefit basis, under which the present value, at the assumed rate of return (currently 7.0 percent for all plans except the RIJRFT which utilizes a 3.13% assumed rate of return), of each participant's expected benefit payable at retirement or death is determined, based on age, service, gender and compensation.

The employer contributions required to support the benefits of the Plan are determined following a level funding approach and consist of a normal contribution and an accrued liability contribution. The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made to determine the rate of contribution which, if applied to the compensation of each individual member during the entire period of anticipated covered service, would be required to meet the cost of all benefits payable on his behalf. This method is commonly referred to as the Individual Entry Age Actuarial Cost Method.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

7. Contributions (continued)

The unfunded actuarial accrued liability (UAAL) is amortized as a level percent of payroll over a closed period. For underfunded plans, the period is 25 years as measured from June 30, 2010, or 21 years as of the current valuation date for any existing UAAL. Beginning with the June 30, 2014 actuarial valuation, new experience gains and losses for underfunded plans are amortized over individual closed periods of 20 years using the process of “laddering”.

Overfunded plans will have an amortization rate calculated using a single base amortized over an open period of 20 years.

(b). Contribution rates

Employer contribution rates for fiscal 2020 for all defined benefit plans were developed based on actuarial valuations performed as of June 30, 2017. Employee contribution rates are statutorily determined.

Rhode Island Judicial Retirement Fund Trust plan is not currently advance funded. Employees make contributions to the plan; however, there are no employer contributions. This plan is for a closed group of individuals and the amortization payment has been calculated based on level-dollar amortization over 17 years from June 30, 2013.

State of Rhode Island State Police Retirement Fund Trust is a closed group of individuals and the annual contributions of \$16,387,092 into the Trust have been calculated based on a level-dollar amortization over 18 years from June 30, 2016.

The table below displays the defined benefit plan contribution rates for the year ended June 30, 2020:

Plan	Employee	Employer
ERS		
State Employees	3.75% Members with more than 20 yrs of service at July 1, 2012 – 11%	26.39%
Teachers (note 1)		
<i>LEA funded</i>	3.75%	14.12%
<i>State funded</i>	Members with more than 20 yrs of service at July 1, 2012 – 11%	10.49%
TSB	1% of the member’s annual salary up to but not exceeding \$11,500	1% of the member’s annual salary up to but not exceeding \$11,500
MERS		
General Employees	1.00% (additional 1% with a cost-of-living adjustment)	69 Municipalities, housing authorities, water and sewer districts contributed various actuarially determined rates.
Public Safety	9.00% (additional 1% with a cost-of-living adjustment)	49 Municipal police and fire departments contributed various actuarially determined rates.
SPRBT	8.75%	18.48%
JRBT	12.00% (8.75% supreme court judges)	21.30%
RIJRFT	12.00% (8.75% supreme court judges)	\$1,215,152 (Note 2)
SPRFT	N/A	\$16,387,092

Note 1 - When teachers’ salaries are charged to federal programs 100% of the employer contribution rate is reimbursed through the federal program without a state funded portion.

Note 2 – The State of Rhode Island is not currently funding this plan on an advance funding basis – full actuarially determined employer contributions have not been made to the plan.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

7. Contributions (continued)

The table below displays the defined contribution plan contribution rates for the year ended June 30, 2020:

Plan	Employee	Employer
Defined Contribution Plan	Eligible state employees, teachers, and MERS general employees participating in social security – 5%	1% to 1.5% based on years of service
	Teachers and MERS general employees not covered by social security – 7%	3% to 3.5% based on years of service
	MERS police and fire employees not covered by social security – 3%	3%

Effective July 1, 2015, members of the defined contribution plan who had 20 or more years of service as of July 1, 2012, remained as plan participants but no longer contributed to the plan (both employee and employer contributions).

(c). Contributions from Non-employer Contributing Entity

Within the ERS plan, the State of Rhode Island, as a non-employer contributing entity, makes a contribution for teachers employed by local educational agencies. This is considered a special funding situation wherein the State, by statute, has assumed responsibility to fund approximately 40% of the annual required employer contribution for teachers.

(d). Supplemental Contributions

The General Laws (Section 36-10-2(e) 1 and 2) also require, in addition to the contributions provided for by the funding policy, for each fiscal year in which the actuarially determined state contribution rate for state employees and teachers, including state contributions to the defined contribution plan, is lower than that for the prior fiscal year, the governor shall include an appropriation to that system equivalent to twenty percent (20%) of the rate reduction to be applied to the actuarial accrued liability. The amounts to be appropriated shall be included in the annual appropriation bill and shall be paid by the general treasurer into the retirement system. The retirement system's actuary shall not adjust the computation of the annual required contribution for the year in which supplemental contributions are received; such contributions once made may be treated as reducing the actuarial liability remaining for amortization in the next following actuarial valuation to be performed. For fiscal 2020, there were no monies contributed to the System in accordance with this provision of the General Laws.

The Retirement Security Act provides for additional contributions to the System based on 5.5% of the value of contracts where the services performed by the contractor were previously performed by state employees. A supplemental contribution of \$360,227 was paid to the System pursuant to Section 42-149-3.1 of the General Laws.

(e). New Employer Contributions

During fiscal 2020, three new units were established within the MERS plan. Upon joining MERS, two of the three units made initial contributions totaling \$12,757,430 which are reflected separately from other required actuarially determined employer contributions on the accompanying financial statements.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

8. Net Pension Liability (Asset) of the Participating Employers

The components of the net pension liability of the employers participating in the various plans of the System at June 30, 2020 were as follows:

Plan	Total Pension Liability	Plan Fiduciary Net Position	Employers' Net Pension Liability (Asset)	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability
ERS				
State Employee	\$ 4,794,937,592	\$ 2,520,792,045	\$ 2,274,145,547	52.6%
Teacher	6,993,761,712	3,798,755,901	3,195,005,811	54.3%
SPRBT	187,811,743	153,908,600	33,903,143	81.9%
JRBT	89,061,571	80,157,923	8,903,648	90.0%
RIJRFT	22,451,179	1,113,365	21,337,814	5.0%
SPRFT	171,976,129	17,255,399	154,720,730	10.0%
TSB	223,495,756	342,259,317	(118,763,561)	153.1%
MERS				
General Employees	1,303,739,292	1,037,147,652	266,591,640	79.6%
Municipal Police/Fire	837,463,506	626,817,874	210,645,632	74.8%

a. Actuarial assumptions

The total pension liability for all defined benefit plans was determined by actuarial valuations performed as of June 30, 2019 and rolled forward to June 30, 2020 using generally accepted actuarial principles, except for three new MERS units that are based on an actuarial valuation performed as of June 30, 2020.

The actuarial assumptions used in the calculation of the total pension liability at the June 30, 2020 measurement date were consistent with the 2019 Actuarial Experience Investigation Study for the six-year period ended June 30, 2019 as approved by the System's Board on May 22, 2020.

The following table summarizes the actuarial assumptions applied to all periods included in the measurement.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

8. Net Pension Liability (Asset) of the Participating Employers (continued)

Summary of Actuarial Assumptions								
Used in the June 30, 2020 measurement date valuations to determine the Net Pension Liability (Asset)								
	ERS		MERS	SPRBT	JRBT	RIJRFT	TSB	SPRFT
	State Employees	Teachers						
Valuation Date	June 30, 2019 valuation rolled forward to the June 30, 2020 measurement date.							
Actuarial Cost Method	Entry Age Normal - the Individual Entry Age Actuarial Cost methodology is used.							
Amortization Method	Level Percent of Payroll – Closed					Level Dollar	Level Dollar	Level Dollar
Actuarial Assumptions:								
Investment Rate of Return	7.0%	7.0%	7.00%	7.0%	7.0%	3.13%	7.00%	7.00%
Projected Salary Increases (1)	3.25% to 6.25%	3.0% to 13.0%	<u>General Employees</u> 3.25% to 7.25% <u>Police & Fire Employees</u> 4.00% to 14.00%	3.75% to 11.75%	3.00%	3.00%	3.0% to 13.0%	
Inflation	2.5%							
Mortality	Variants of the PUB (10) Tables for Healthy and Disabled Retirees, projected with Scale Ultimate MP16.							

(1) **Overall wage inflation** – 3.00% per year composed of an assumed 2.50% inflation assumption rate and a 0.50% general productivity component. This assumption represents wage information for the economy as a whole and is used as a starting point for the determining other wage related assumption and is used as the rate of growth for new entrant salaries in any open group projections.

Cost of Living Adjustments – The known COLA for certain MERS units in calendar years 2019 and 2020 were 1.86% and 1.56%, respectively, and this was reflected in the June 30, 2019 valuation. All future COLAs were assumed to be 2.1% per annum for all MERS units with the COLA provision. For the TSB plan, a 2.5% COLA was assumed. For all other plans, it was assumed that the COLA was suspended for eight years and that it would be 2.1% thereafter.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

8. Net Pension Liability (Asset) of the Participating Employers (continued)

The long-term expected rate of return best-estimate on pension plan investments was determined by the actuary using a building-block method. The actuary started by calculating best-estimate future expected real rates of return (expected returns net of pension plan investment expense and inflation) for each major asset class, based on a collective summary of capital market expectations from 39 sources. The June 30, 2020 expected arithmetic returns over the long-term (20 years) by asset class are summarized in the following table:

Asset Class	Long-Term Target Asset Allocation	Long-Term Expected Arithmetic Real Rate of Return
GROWTH		
Global Equity		
US Equity	23.00%	6.31%
International Developed Equity	12.10%	6.71%
Emerging Markets Equity	4.90%	8.69%
Sub-total	40.00%	
Private Growth		
Private Equity	11.25%	9.71%
Non-Core Real Estate	2.25%	5.66%
Opportunistic Private Credit	1.50%	9.71%
Sub-total	15.00%	
INCOME		
High Yield Infrastructure	1.00%	3.88%
REITS	1.00%	5.66%
Equity Options	2.00%	6.04%
EMD (50/50 Blend)	2.00%	2.28%
Liquid Credit	2.80%	3.88%
Private Credit	3.20%	3.88%
Sub-total	12.00%	
STABILITY		
Crisis Protection Class		
Treasury Duration	5.00%	0.10%
Systematic Trend	5.00%	3.84%
Sub-total	10.00%	
Inflation Protection		
Core Real Estate	3.60%	5.66%
Private Infrastructure	2.40%	6.06%
TIPs	2.00%	0.74%
Sub-total	8.00%	
Volatility Protection		
IG Corp Credit	3.25%	1.54%
Securitized Credit	3.25%	1.54%
Absolute Return	6.50%	3.84%
Cash	2.00%	0.10%
Sub-total	15.00%	
Total	100.00%	

These return assumptions are then weighted by the target asset allocation percentage, factoring in correlation effects, to develop the overall long-term expected rate of return best-estimate on an arithmetic basis.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

8. Net Pension Liability (Asset) of the Participating Employers (continued)

b. Discount rate

The discount rate used to measure the total pension liability of the plans was 7.0 percent for all but the RIJRFT plan. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current contribution rate and that contributions from the employers will be made at statutorily required rates, actuarially determined. Based on those assumptions, the pension plan'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.

For the RIJRFT plan, the State has not opted to make actuarially determined employer contributions and based on those assumptions, the pension plan's fiduciary net position was not projected to be available to make all projected future benefit payments of current plan members. Consequently, for the RIJRFT plan, the municipal bond index rate, based on fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" (2.45% at June 30, 2020) was applied to all periods of projected benefit payments to determine the total pension liability.

c. Sensitivity of the net pension liability (asset) to changes in the discount rate

The following presents the net pension liability (asset) of the employers calculated using the discount rate of 7.0 percent (for all plans except the RIJRFT), as well as what the employers' net pension liability (asset) would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate. The RIJRFT plan's fiduciary net position was not projected to be available to make all projected future benefit payments of current plan members and consequently the municipal bond index rate of 2.45% at June 30, 2020 was used in the determination of the net pension liability for that plan with a similar +/-1% sensitivity analysis.

Plan	1.00% Decrease (6.00%)	Current Discount Rate (7.00%)	1.00% Increase (8.00%)
State Employee	\$ 2,712,520,107	\$ 2,274,145,547	\$ 1,745,116,687
Teacher	3,833,501,595	3,195,005,811	2,424,446,277
General Employees	384,362,938	266,591,640	124,460,872
Municipal Police/Fire	285,152,919	210,645,632	120,898,925
SPRBT	50,430,803	33,903,143	13,957,793
JRBT	16,815,604	8,903,648	(642,485)
SPRFT	170,836,156	154,720,730	135,272,237
TSB	(98,788,120)	(118,763,561)	(142,877,258)
	1.00% Decrease (1.45%)	Current Discount Rate (2.45%)	1.00% Increase (3.45%)
RIJRFT	\$ 23,268,819	\$ 21,337,814	\$ 19,002,483

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

Notes to the Financial Statements - Fiscal Year Ended June 30, 2020

9. Administrative Expenses

Pursuant to General Law section 36-8-10.1, administrative costs of the System are financed through investment earnings up to a maximum of 0.175% of the average total investments before lending activities as reported in the annual report of the Auditor General for the next preceding five (5) fiscal years. Such amounts are transferred to a restricted receipt account within the State's general fund. Any unencumbered funds on June 30 of any fiscal year are credited to the plans in the same proportion as their contributions to the restricted receipt account.

Administrative expenses allocated to the System include personnel costs for employees of the Office of the General Treasurer who, in whole or in part, are involved in administering the System. The personnel costs allocated to the System include the employer share of actuarially determined contributions to the defined benefit pension plan (Employees' Retirement System Plan for State Employees) and the defined benefit post-employment health care plan, a cost sharing multiple employer plan administered through the Rhode Island State Employees' and Electing Teachers OPEB System (OPEB System). Required contributions to the defined contribution pension plan are also included in the allocated personnel costs. The State does not include any proportionate share of the net pension liability or net OPEB liability for cost-sharing pension and OPEB plans in the fiduciary funds of the State. The long-term pension and OPEB liabilities are reflected in the governmental activities of the State's government-wide financial statements.

The employer cost for employees participating in the State Employees' System defined benefit pension plan was 26.39% of covered payroll for fiscal 2020. Employer contributions to the defined benefit pension plan, included as administrative costs for the years ended June 30, 2020, 2019 and 2018 were \$1,028,786, \$972,024, and \$900,172, respectively, which represents 100% of the annual required contributions. The employer cost for employees participating in the System's defined contribution pension plan was 1% to 1.5% of covered payroll based on years of service for fiscal 2020. Effective July 1, 2015, members of the defined contribution plan who had 20 or more years of service as of July 1, 2012, remained as plan participants but no longer contributed to the plan (both employee and employer contributions). Employer contributions to the defined contribution pension plan, included as administrative costs for the years ended June 30, 2020, 2019 and 2018 were \$36,531, \$33,996, and \$32,798, respectively, which represents 100% of the annual required contributions.

The employer cost for employees participating in the State Employees' OPEB plan was 6.65% of covered payroll for fiscal 2020. Employer contributions to the OPEB plan, included as administrative costs for the years ended June 30, 2020, 2019 and 2018 were \$264,373, \$227,964, and \$223,763 respectively, which represents 100% of the annual required contributions.

The OPEB system issues a stand-alone, publicly available financial report that includes the financial statements and required supplementary information including descriptions of benefit provisions and information about the measurement of the net OPEB liability. A copy of the report can be obtained from the Office of Accounts and Control, One Capitol Hill, Providence, RI 02903.

Administrative expenses of the System, financed as previously described, include \$1,701,232 of expenses related to oversight of the System's investment portfolio. Consistent with generally accepted accounting principles, these expenses have been included with investment expenses on the accompanying financial statements.

For fiscal year 2020, the administrative costs of the defined contribution plan were financed solely by participant fees. Fees paid to TIAA-CREF via participant fees for fiscal year ended June 30, 2020 were \$1,040,799, excluding plan transfers. From these participant fees, \$221,189 was transferred to the State of Rhode Island to fund the fiscal 2020 operating expenses of the Office of the General Treasurer related to the administration of the defined contribution plan.

10. Commitments

The State Investment Commission has committed to fund certain private equity, real estate, and infrastructure investment managers at a predetermined subscription amount. Outstanding unfunded investment commitments at June 30, 2020 totaled \$1.4 billion. These commitments will be funded through cash available within the pooled investment trust generated through investment income and/or liquidation of other investments.

The system's investments in hedge funds are generally subject to "lock-up" provisions that limit (subject to certain exceptions) the ability to withdraw amounts previously invested for a period of one to three years after the initial investment. The system's investments in hedge fund assets are available for redemption on a monthly, quarterly, semi-annual or annual basis, and are subject to notice periods which vary by fund and range from 30 days to 75 days. Some funds have limit redemptions to 25% of invested capital on any one redemption date. At June 30, 2020 \$874,000 was in liquidation.

The System is committed under a ten-year development and operating agreement to design, transition, and implement new line-of-business, general ledger accounting system, and payroll administration systems. The contract requires monthly payments through fiscal 2025. Total payments over the contract period are estimated at \$22 million.

11. Related Parties

The State Investment Commission, which sets investment policy and oversees the investments of the System, created three limited liability companies to account for assets invested by managers within its Crisis Protection Class – Trend Following. The System is the sole equity member in each of the limited liability companies. The System's investment is reported at the net asset based on independently audited financial statements as of and for the year ended June 30.

12. Contingencies

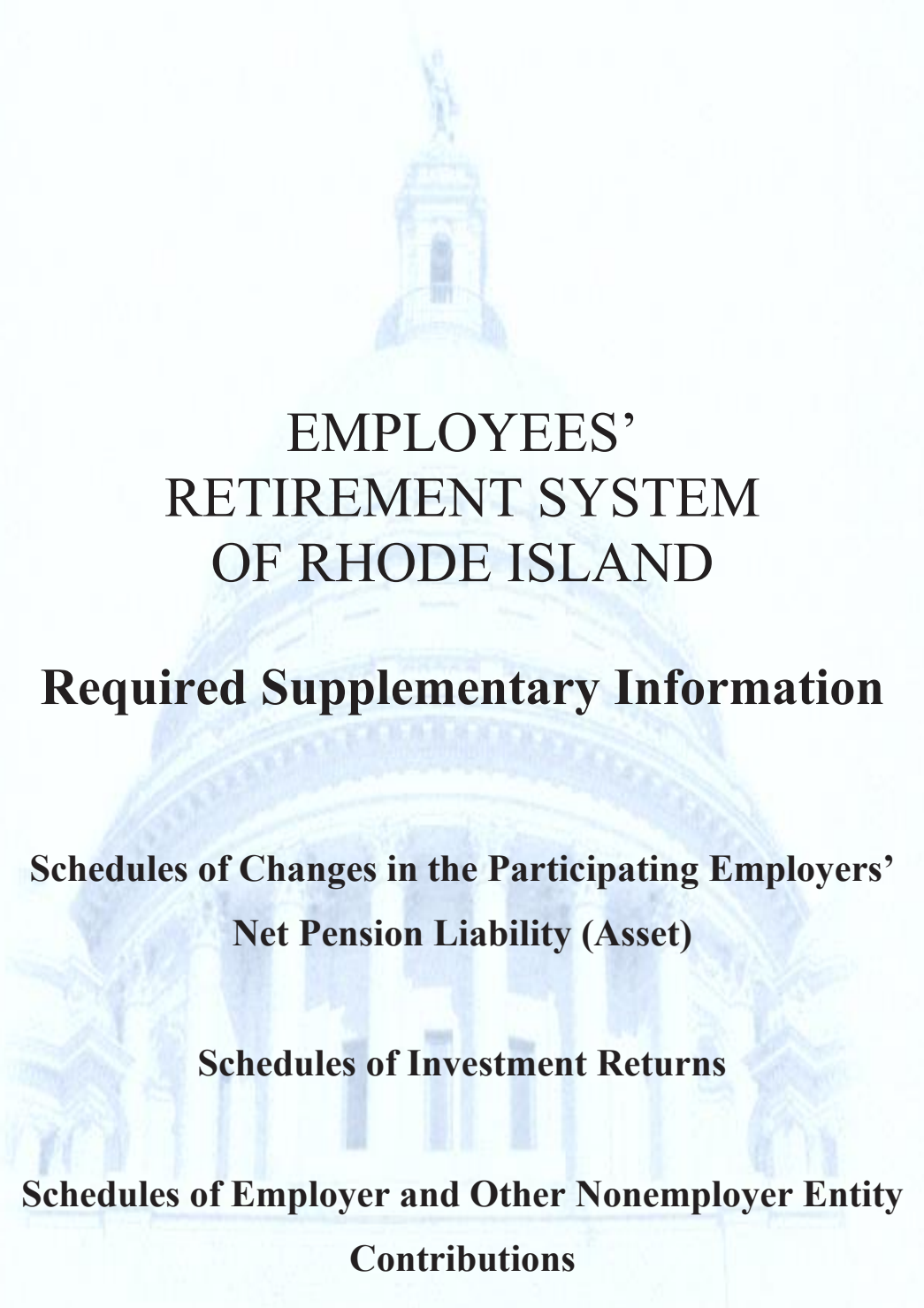
Legal Challenges to Pension Reform - The 2009, 2010 and 2011 legislative pension reforms resulted in numerous lawsuits against the State brought by current and retired employees, as well as their unions. Of these lawsuits, two remain pending as described below.

In September 2014, a case challenging RIRSA was commenced by the Rhode Island State Troopers Association and Rhode Island State Troopers Association ex rel. Kevin M. Grace and Ernest E. Adams in Superior Court against the State and ERSRI as co-defendants. In 2019, the co-defendants filed motions to dismiss. The hearing on the motions to dismiss were heard December 13, 2019. A decision on the motions has not been rendered.

In March 2020, a case challenging RIRSA and/or the settlement agreement was commenced by numerous plaintiffs who were part of the class action in the Rhode Island Federal District Court against the State and ERSRI as co-defendants. The co-defendants have filed a motion to dismiss, which remains pending.

13. Subsequent events

The System has evaluated subsequent events through December 29, 2020, the date the statements were available to be issued.



**EMPLOYEES'
RETIREMENT SYSTEM
OF RHODE ISLAND**

Required Supplementary Information

**Schedules of Changes in the Participating Employers'
Net Pension Liability (Asset)**

Schedules of Investment Returns

**Schedules of Employer and Other Nonemployer Entity
Contributions**

Notes to Required Supplementary Information

EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
REQUIRED SUPPLEMENTARY INFORMATION
Schedules of Changes in the Participating Employers' Net Pension Liability
Employees' Retirement System Plan

	2020		2019		2018		2017	
	State Employees	Teachers	State Employees	Teachers	State Employees	Teachers	State Employees	Teachers
Total Pension Liability								
Service Cost	\$ 63,748,227	\$ 83,770,752	\$ 61,954,710	\$ 83,247,093	\$ 61,430,436	\$ 82,924,148	\$ 58,715,260	\$ 79,219,202
Interest	326,188,559	477,306,043	322,077,303	473,000,055	317,996,827	464,922,181	320,346,656	471,638,608
Benefit Changes								
Differences between expected and actual experience	2,916,361	(28,223,867)	15,518,855	(7,814,369)	18,658,150	54,088,887	(6,891,246)	(29,762,014)
Changes of assumptions	(55,472,975)	(71,972,090)	-	-	-	-	235,517,482	318,950,799
Benefit payments	(340,810,054)	(487,783,008)	(342,620,725)	(486,577,981)	(337,489,367)	(486,818,998)	(337,555,977)	(490,517,793)
Net change in Total Pension Liability	\$ (3,429,882)	\$ (26,902,170)	\$ 56,930,143	\$ 61,854,798	\$ 60,596,046	\$ 115,116,218	\$ 270,132,175	\$ 349,528,802
Total pension liability - beginning	4,798,367,474	7,020,663,882	4,741,437,331	6,958,809,084	4,680,841,285	6,843,692,866	4,410,709,110	6,494,164,064
Total pension liability - ending	\$ 4,794,937,592	\$ 6,993,761,712	\$ 4,798,367,474	\$ 7,020,663,882	\$ 4,741,437,331	\$ 6,958,809,084	\$ 4,680,841,285	\$ 6,843,692,866
Plan Fiduciary Net Position								
Employer contributions	\$ 199,918,013	\$ 266,845,321	\$ 189,415,698	\$ 249,634,988	\$ 174,374,155	\$ 239,092,095	\$ 176,093,310	\$ 233,828,518
Employee contributions	40,930,636	49,954,869	39,830,923	50,213,121	39,996,527	49,906,906	41,537,793	50,071,218
Net investment income	92,022,240	143,922,968	157,159,868	237,724,787	188,629,584	286,398,383	259,237,475	394,975,442
Benefit payments	(340,810,054)	(487,783,008)	(342,620,725)	(486,577,981)	(337,489,367)	(486,818,998)	(337,555,977)	(490,517,793)
Transfers of member contributions								
Administrative expenses	(2,574,169)	(4,026,006)	(2,558,265)	(3,869,709)	(2,544,260)	(3,862,978)	(2,533,747)	(3,860,429)
Transfers to affiliated systems	(804,393)	(69,798)	5,460	359,298	1,456,519	(424,248)	680,142	390,872
Other	164,308	16,421	79,332	849,710	124,217	869,209	180,663	926,185
Net change in fiduciary net position	\$ (11,153,419)	\$ (31,139,233)	\$ 41,312,291	\$ 48,334,214	\$ 64,547,375	\$ 85,160,369	\$ 137,639,659	\$ 185,814,013
Plan Fiduciary net position - beginning	\$ 2,531,945,464	\$ 3,829,895,134	\$ 2,490,633,173	\$ 3,781,560,920	\$ 2,426,085,798	\$ 3,696,400,551	\$ 2,288,446,139	\$ 3,510,586,538
Plan Fiduciary net position - ending	\$ 2,520,792,045	\$ 3,798,755,901	\$ 2,531,945,464	\$ 3,829,895,134	\$ 2,490,633,173	\$ 3,781,560,920	\$ 2,426,085,798	\$ 3,696,400,551
Net Pension Liability	\$ 2,274,145,547	\$ 3,195,005,811	\$ 2,266,422,010	\$ 3,190,768,748	\$ 2,250,804,158	\$ 3,177,248,164	\$ 2,254,755,487	\$ 3,147,292,315
Plan Fiduciary Net Position as a percentage of the total pension liability	52.6%	54.3%	52.8%	54.6%	52.5%	54.3%	51.8%	54.0%
Covered payroll	\$ 755,310,749	\$ 1,080,912,926	\$ 718,732,131	\$ 1,060,472,523	\$ 691,006,031	\$ 1,031,394,874	\$ 683,530,388	\$ 1,010,449,004
Net pension liability as a percentage of covered payroll	301.1%	295.6%	315.3%	300.9%	325.7%	308.1%	329.9%	311.5%

See notes to required supplementary information.

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EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
REQUIRED SUPPLEMENTARY INFORMATION
Schedules of Changes in the Participating Employers' Net Pension Liability
Employees' Retirement System Plan

	2016		2015		2014	
	State Employees	Teachers	State Employees	Teachers	State Employees	Teachers
Total Pension Liability						
Service Cost	\$ 59,017,905	\$ 78,445,027	\$ 58,003,597	\$ 73,780,964	\$ 56,795,525	\$ 73,917,744
Interest	320,857,388	471,001,292	312,489,666	457,901,918	309,695,399	454,525,784
Benefit Changes			102,727,033	148,006,628		
Differences between expected and actual experience	(48,986,533)	\$ (50,843,400)	(28,729,479)	(20,696,669)		
Changes of assumptions			-	-	(23,761,746)	(98,423,775)
Benefit payments	(337,538,418)	(490,467,141)	(329,318,255)	(482,865,966)	(330,357,881)	(483,854,062)
Net change in Total Pension Liability	\$ (6,649,658)	\$ 8,135,778	\$ 115,172,562	\$ 176,126,875	\$ 12,371,297	\$ (53,834,309)
Total pension liability - beginning	4,417,358,768	6,486,028,286	4,302,186,206	6,309,901,411	4,289,814,909	6,363,735,720
Total pension liability - ending	\$ 4,410,709,110	\$ 6,494,164,064	\$ 4,417,358,768	\$ 6,486,028,286	\$ 4,302,186,206	\$ 6,309,901,411
Plan Fiduciary Net Position						
Employer contributions	\$ 159,534,421	\$ 225,569,556	\$ 155,901,921	\$ 217,902,736	\$ 151,660,705	\$ 197,869,704
Employee contributions	41,021,592	49,502,952	28,477,668	36,470,893	28,105,658	36,306,239
Net investment income	(3,122,838)	(4,788,264)	57,417,358	88,131,991	340,085,721	522,960,223
Benefit payments	(337,538,418)	(490,467,141)	(329,318,255)	(482,865,966)	(330,357,881)	(483,854,062)
Transfers of member contributions					303,014	(290,471)
Administrative expenses	(2,259,017)	(3,463,764)	(2,394,922)	(3,676,564)	(2,234,676)	(3,436,330)
Transfers to affiliated systems	(252,093)	252,093	(107,668)	145,179		
Other	132,016	955,508	673,125	1,016,295	182,841	129,791
Net change in fiduciary net position	\$ (142,484,337)	\$ (222,439,060)	\$ (89,350,773)	\$ (142,875,436)	\$ 187,745,382	\$ 269,685,094
Plan Fiduciary net position - beginning	\$ 2,430,930,476	\$ 3,733,025,598	\$ 2,520,281,249	\$ 3,875,901,034	\$ 2,332,535,867	\$ 3,606,215,939
Plan Fiduciary net position - ending	\$ 2,288,446,139	\$ 3,510,586,538	\$ 2,430,930,476	\$ 3,733,025,598	\$ 2,520,281,249	\$ 3,875,901,033
Net Pension Liability	\$ 2,122,262,971	\$ 2,983,577,526	\$ 1,986,428,292	\$ 2,753,002,688	\$ 1,781,904,957	\$ 2,434,000,378
Plan Fiduciary Net Position as a percentage of the total pension liability	51.9%	54.1%	55.0%	57.6%	58.6%	61.4%
Covered payroll	\$ 671,420,995	\$ 980,562,840	\$ 669,787,489	\$ 966,985,115	\$ 653,573,357	\$ 951,322,312
Net pension liability as a percentage of covered payroll	316.1%	304.3%	296.6%	284.7%	272.6%	255.9%

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EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
REQUIRED SUPPLEMENTARY INFORMATION
Schedules of Changes in the Participating Employers' Net Pension Liability (Asset)
Teachers' Survivors Benefits Plan

	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability							
Service Cost	\$ 1,673,864	\$ 1,673,826	\$ 1,729,578	\$ 2,154,632	\$ 2,151,235	\$ 2,134,663	\$ 2,193,930
Interest	15,490,550	16,383,892	15,761,211	15,439,481	14,803,900	12,500,416	11,958,890
Benefit Changes		-	-	19,564,182		-	-
Differences between expected and actual experience	756,794	(19,959,752)	1,716,443	(23,870,746)		24,212,282	-
Changes of assumptions	(9,367,348)	-	-	15,500,130		-	-
Benefit payments	(11,029,497)	(10,690,518)	(9,877,314)	(8,672,172)	(8,292,668)	(7,992,381)	(7,622,990)
Net change in Total Pension Liability	(2,475,637)	(12,592,552)	9,329,918	20,115,507	8,662,467	30,854,980	6,529,830
Total pension liability - beginning	225,971,393	238,563,945	229,234,027	209,118,520	200,456,053	169,601,073	163,071,243
Total pension liability - ending	\$ 223,495,756	\$ 225,971,393	\$ 238,563,945	\$ 229,234,027	\$ 209,118,520	\$ 200,456,053	\$ 169,601,073
Plan Fiduciary Net Position							
Employer contributions	\$ 745,760	\$ 745,856	\$ 744,035	\$ 589,883	\$ 642,276	\$ 603,388	\$ 609,168
Employee contributions	745,760	745,856	744,035	589,883	642,276	603,388	609,168
Net investment income	12,730,241	21,155,071	24,552,338	33,277,060	(51,004)	6,951,465	39,657,338
Benefit payments	(11,029,497)	(10,690,518)	(9,877,314)	(8,672,172)	(8,292,668)	(7,992,381)	(7,622,990)
Administrative expenses	(350,178)	(332,273)	(330,288)	(309,283)	(267,475)	(276,010)	(260,585)
Other		-	-	5	(1)		
Net change in fiduciary net position	\$ 2,842,086	\$ 11,623,992	\$ 15,832,806	\$ 25,475,376	\$ (7,326,596)	\$ (110,150)	\$ 32,992,099
Plan Fiduciary net position - beginning	\$ 339,417,231	\$ 327,793,239	\$ 311,960,433	\$ 286,485,057	\$ 293,811,653	\$ 293,921,803	\$ 260,929,704
Plan Fiduciary net position - ending	\$ 342,259,317	\$ 339,417,231	\$ 327,793,239	\$ 311,960,433	\$ 286,485,057	\$ 293,811,653	\$ 293,921,803
Net Pension Liability (Asset)	\$ (118,763,561)	\$ (113,445,838)	\$ (89,229,294)	\$ (82,726,406)	\$ (77,366,537)	\$ (93,355,600)	\$ (124,320,730)
Plan Fiduciary Net Position as a percentage of the total pension liability (asset)	153.1%	150.2%	137.4%	136.1%	137.0%	146.6%	173.3%
Covered payroll	\$ 590,286,509	\$ 576,424,716	\$ 557,928,457	\$ 538,657,952	\$ 581,414,779	\$ 561,753,409	\$ 563,134,080
Net pension liability (asset) as a percentage of covered payroll	-20.1%	-19.7%	-16.0%	-15.4%	-13.3%	-16.6%	-22.1%

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EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
REQUIRED SUPPLEMENTARY INFORMATION
Schedules of Changes in the Participating Employers' Net Pension Liability
State Police Retirement Benefits Trust Plan

	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability							
Service Cost	\$ 5,788,358	\$ 5,342,133	\$ 4,999,127	\$ 4,497,800	\$ 4,316,597	\$ 4,198,214	\$ 5,121,964
Interest	12,404,907	11,590,039	10,763,319	9,392,637	9,057,956	8,540,146	7,767,937
Benefit Changes		-	-	-	-	1,169,580	-
Differences between expected and actual experience	(3,126,469)	623,765	1,911,865	10,693,999	(4,139,122)	(3,522,114)	-
Changes of assumptions	1,540,627	-	-	9,274,363		-	(364,277)
Benefit payments	(6,228,924)	(6,047,218)	(6,023,853)	(5,141,978)	(4,585,258)	(2,496,511)	(1,767,304)
Net change in Total Pension Liability	10,378,499	11,508,719	11,650,458	28,716,821	4,650,173	7,889,315	10,758,320
Total pension liability - beginning	177,433,244	165,924,525	154,274,067	125,557,246	120,907,073	113,017,758	102,259,438
Total pension liability - ending	\$ 187,811,743	\$ 177,433,244	\$ 165,924,525	\$ 154,274,067	\$ 125,557,246	\$ 120,907,073	\$ 113,017,758
Plan Fiduciary Net Position							
Employer contributions	\$ 4,877,630	\$ 3,566,922	\$ 2,797,003	\$ 2,980,219	\$ 4,004,656	\$ 3,432,359	\$ 3,330,889
Employee contributions	2,345,831	2,130,140	1,994,057	2,059,884	2,034,676	1,731,585	2,033,664
Net investment income	5,641,739	9,159,909	10,298,412	13,694,012	58,578	2,655,869	14,124,238
Benefit payments	(6,228,924)	(6,047,218)	(6,023,853)	(5,141,978)	(4,585,258)	(2,496,511)	(1,767,304)
Administrative expenses	(158,004)	(139,604)	(136,371)	(125,445)	(102,053)	(99,782)	(83,318)
Other	24,956	1,254	16,057	5,390	390	3,694	5,421
Net change in fiduciary net position	\$ 6,503,228	\$ 8,671,403	\$ 8,945,305	\$ 13,472,082	\$ 1,410,989	\$ 5,227,214	\$ 17,643,590
Plan Fiduciary net position - beginning	\$ 147,405,372	\$ 138,733,969	\$ 129,788,664	\$ 116,316,582	\$ 114,905,593	\$ 109,678,379	\$ 92,034,791
Plan Fiduciary net position - ending	\$ 153,908,600	\$ 147,405,372	\$ 138,733,969	\$ 129,788,664	\$ 116,316,582	\$ 114,905,593	\$ 109,678,381
Net Pension Liability	\$ 33,903,143	\$ 30,027,872	\$ 27,190,556	\$ 24,485,403	\$ 9,240,664	\$ 6,001,480	\$ 3,339,377
Plan Fiduciary Net Position as a percentage of the total pension liability	81.9%	83.1%	83.6%	84.1%	92.6%	95.0%	97.0%
Covered payroll	\$ 26,418,793	\$ 24,216,376	\$ 22,589,818	\$ 22,727,638	\$ 20,984,917	\$ 19,700,678	\$ 23,051,144
Net pension liability as a percentage of covered payroll	128.3%	124.0%	120.4%	107.7%	44.0%	30.5%	14.5%

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REQUIRED SUPPLEMENTARY INFORMATION
Schedules of Changes in the Participating Employers' Net Pension Liability
Judicial Retirement Benefits Trust Plan

	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability							
Service Cost	\$ 3,335,150	\$ 3,184,130	\$ 3,214,534	\$ 3,000,728	\$ 2,858,682	\$ 3,024,124	\$ 3,001,985
Interest	5,662,868	5,526,089	5,302,975	5,031,124	4,743,701	4,540,604	4,133,613
Benefit Changes		-	-	-	-	252,965	-
Differences between expected and actual experience	180,125	(3,165,269)	(2,032,334)	(1,788,628)	(1,205,744)	(2,857,295)	-
Changes of assumptions	2,514,949	-	-	5,173,300	-	-	(671,723)
Benefit payments	(3,724,119)	(3,608,845)	(2,956,407)	(2,740,166)	(2,530,567)	(1,808,864)	(1,631,368)
Net change in Total Pension Liability	7,968,973	1,936,105	3,528,768	8,676,358	3,866,072	3,151,534	4,832,507
Total pension liability - beginning	81,092,598	79,156,493	75,627,725	66,951,367	63,085,295	59,933,761	55,101,254
Total pension liability - ending	\$ 89,061,571	\$ 81,092,598	\$ 79,156,493	\$ 75,627,725	\$ 66,951,367	\$ 63,085,295	\$ 59,933,761
Plan Fiduciary Net Position							
Employer contributions	2,189,255	1,922,023	2,057,529	2,057,159	\$ 2,410,039	\$ 2,709,397	\$ 2,543,510
Employee contributions	1,204,448	1,109,161	1,142,163	1,117,518	1,052,902	1,120,609	1,092,790
Net investment income	2,955,375	4,819,916	5,376,764	7,107,208	28,787	1,367,527	7,220,592
Benefit payments	(3,724,119)	(3,608,845)	(2,956,407)	(2,740,166)	(2,530,567)	(1,808,864)	(1,631,368)
Administrative expenses	(79,652)	(73,533)	(71,270)	(65,088)	(52,548)	(51,039)	(42,538)
Other		-	-	(1)	(1)		
Net change in fiduciary net position	\$ 2,545,307	\$ 4,168,722	\$ 5,548,779	\$ 7,476,630	\$ 908,612	\$ 3,337,630	\$ 9,182,986
Plan Fiduciary net position - beginning	\$ 77,612,616	\$ 73,443,894	\$ 67,895,115	\$ 60,418,485	\$ 59,509,873	\$ 56,172,243	\$ 46,989,257
Plan Fiduciary net position - ending	\$ 80,157,923	\$ 77,612,616	\$ 73,443,894	\$ 67,895,115	\$ 60,418,485	\$ 59,509,873	\$ 56,172,243
Net Pension Liability	\$ 8,903,648	\$ 3,479,982	\$ 5,712,599	\$ 7,732,610	\$ 6,532,882	\$ 3,575,422	\$ 3,761,518
Plan Fiduciary Net Position as a percentage of the total pension liability	90.0%	95.7%	92.8%	89.8%	90.2%	94.3%	93.7%
Covered payroll	\$ 10,284,151	\$ 9,473,758	\$ 9,653,254	\$ 9,532,174	\$ 8,981,094	\$ 9,570,014	\$ 9,314,258
Net pension liability as a percentage of covered payroll	86.6%	36.7%	59.2%	81.1%	72.7%	37.4%	40.4%

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EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
REQUIRED SUPPLEMENTARY INFORMATION
Schedules of Changes in the Participating Employers' Net Pension Liability
Rhode Island Judicial Retirement Fund Trust Plan

	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability							
Service Cost	\$ 322,719	\$ 277,053	\$ 293,825	\$ 349,593	\$ 466,046	\$ 416,208	\$ 497,532
Interest	639,648	756,058	725,852	615,782	719,311	673,131	709,876
Benefit Changes		-	-	-	-	-	-
Differences between expected and actual experience	(646,063)	(2,023,652)	-	(1,090,142)		(642,370)	1,617,560
Changes of assumptions	2,059,715	917,164	(115,788)	(665,634)	1,865,123	858,970	(1,159,812)
Benefit payments	(399,016)	(399,016)	(399,016)	(399,015)	(231,176)	-	-
Net change in Total Pension Liability	1,977,003	(472,393)	504,873	(1,189,416)	2,819,304	1,305,939	1,665,156
Total pension liability - beginning	20,474,176	20,946,569	20,441,696	21,631,112	18,811,808	17,505,869	15,840,713
Total pension liability - ending	\$ 22,451,179	\$ 20,474,176	\$ 20,946,569	\$ 20,441,696	\$ 21,631,112	\$ 18,811,808	\$ 17,505,869
Plan Fiduciary Net Position							
Employer contributions	\$ 399,016	\$ 399,016	\$ 399,012	\$ 332,340	\$ 140,141	\$ -	\$ -
Employee contributions	125,540	121,904	116,757	116,667	135,454	158,718	153,145
Net investment income	22,391	39,005	43,511	63,669	3,869	9,094	12,045
Benefit payments	(399,016)	(399,016)	(399,016)	(399,015)	(231,176)	-	-
Administrative expenses	(959)	(762)	(646)	(558)	(361)	(239)	(77)
Other			-	-	1		
Net change in fiduciary net position	\$ 146,972	\$ 160,147	\$ 159,618	\$ 113,103	\$ 47,928	\$ 167,573	\$ 165,113
Plan Fiduciary net position - beginning	\$ 966,393	\$ 806,246	\$ 646,628	\$ 533,525	\$ 485,597	\$ 318,024	\$ 152,910
Plan Fiduciary net position - ending	\$ 1,113,365	\$ 966,393	\$ 806,246	\$ 646,628	\$ 533,525	\$ 485,597	\$ 318,023
Net Pension Liability	\$ 21,337,814	\$ 19,507,783	\$ 20,140,323	\$ 19,795,068	\$ 21,097,587	\$ 18,326,211	\$ 17,187,846
Plan Fiduciary Net Position as a percentage of the total pension liability	5.0%	4.7%	3.8%	3.2%	2.5%	2.6%	1.8%
Covered payroll	\$ 1,046,167	\$ 1,002,164	\$ 1,020,224	\$ 988,110	\$ 963,703	\$ 1,320,875	\$ 1,276,208
Net pension liability as a percentage of covered payroll	2039.6%	1946.6%	1974.1%	2003.3%	2189.2%	1387.4%	1346.8%

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EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
REQUIRED SUPPLEMENTARY INFORMATION
Schedules of Changes in the Participating Employers' Net Pension Liability
Rhode Island State Police Retirement Fund Trust Plan

	2020	2019	2018	2017
Total Pension Liability				
Service Cost	\$ -	\$ -	\$ -	\$ -
Interest	11,878,027	11,339,743	11,712,422	12,588,781
Benefit Changes		-		-
Differences between expected and actual experience	(161,705)	13,040,378		-
Changes of assumptions	(1,135,641)	-		4,213,754
Benefit payments	(16,581,299)	(16,799,403)	(17,273,412)	(17,391,853)
Net change in Total Pension Liability	(6,000,618)	7,580,718	(5,560,990)	(589,318)
Total pension liability - beginning	177,976,747	170,396,029	175,957,019	176,546,337
Total pension liability - ending	\$ 171,976,129	\$ 177,976,747	\$ 170,396,029	\$ 175,957,019
Plan Fiduciary Net Position				
Employer contributions	16,387,092	16,387,092	16,387,092	31,566,076
Employee contributions		-	-	-
Net investment income	868,442	768,972	1,136,938	1,838,792
Benefit payments	(16,581,299)	(16,799,403)	(17,273,412)	(17,391,853)
Administrative expenses	(17,175)	(16,727)	(5,304)	-
Other		75	1	-
Net change in fiduciary net position	\$ 657,060	\$ 340,009	\$ 245,315	\$ 16,013,015
Plan Fiduciary net position - beginning	16,598,339	16,258,330	16,013,015	-
Plan Fiduciary net position - ending	\$ 17,255,399	\$ 16,598,339	\$ 16,258,330	\$ 16,013,015
Net Pension Liability	\$ 154,720,730	\$ 161,378,408	\$ 154,137,699	\$ 159,944,004
Plan Fiduciary Net Position as a percentage of the total pension liability	10.0%	9.3%	9.5%	9.1%
Covered payroll		-	-	-
Net pension liability as a percentage of covered payroll	-	-	-	-

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EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
REQUIRED SUPPLEMENTARY INFORMATION
Schedules of Changes in the Participating Employers' Net Pension Liability (Asset)
Municipal Employees' Retirement System Plan

	2020		2019		2018		2017	
	General employees	Police & Fire	General employees	Police & Fire	General employees	Police & Fire	General employees	Police & Fire
Total Pension Liability								
Service Cost	\$ 22,054,540	\$ 24,666,454	\$ 22,389,001	\$ 22,704,444	\$ 22,575,669	\$ 21,676,077	\$ 21,557,479	\$ 18,945,916
Interest	88,753,861	52,729,964	86,978,973	50,426,631	84,784,807	47,530,413	83,854,464	44,876,752
Benefit Changes		41,705,800	-	-	-	-	-	-
Differences between expected and actual experience	(11,977,530)	(8,785,684)	(8,058,640)	(10,798,702)	(2,694,614)	(557,654)	(1,116,817)	6,573,580
Changes of assumptions	(13,447,289)	2,211,096	-	-	-	-	60,394,231	35,347,395
Benefit payments	(77,058,642)	(32,032,192)	(74,514,466)	(28,785,059)	(71,940,154)	(26,791,879)	(72,152,762)	(26,127,177)
Net change in Total Pension Liability	8,324,940	80,495,438	26,794,868	33,547,314	32,725,708	41,856,957	92,536,595	79,616,466
Total pension liability - beginning	1,295,414,352	756,968,068	1,268,619,484	723,420,754	1,235,893,776	681,563,797	1,143,357,181	601,947,331
Total pension liability - ending	\$ 1,303,739,292	\$ 837,463,506	\$ 1,295,414,352	\$ 756,968,068	\$ 1,268,619,484	\$ 723,420,754	\$ 1,235,893,776	\$ 681,563,797
Plan Fiduciary Net Position								
Employer contributions	\$ 32,776,043	\$ 23,700,625	\$ 31,732,424	\$ 19,121,064	\$ 30,183,815	\$ 16,819,840	\$ 31,686,825	\$ 16,855,985
New employer contributions		\$ 12,757,430						
Employee contributions	6,914,175	11,818,199	7,076,833	10,965,645	7,208,167	10,500,868	7,332,568	10,079,595
Net investment income	37,864,100	22,883,816	64,456,994	36,572,420	75,536,071	41,229,835	103,015,529	54,186,494
Benefit payments	(77,058,642)	(32,032,192)	(74,514,466)	(28,785,059)	(71,940,154)	(26,791,879)	(72,152,762)	(26,127,177)
Transfers of member contributions								
Administrative expenses	(1,043,244)	(633,007)	(1,007,916)	(571,683)	(1,005,573)	(561,290)	(973,249)	(511,933)
Transfers to affiliated systems	911,905	(37,714)	(427,720)	62,958	(559,793)	(472,477)	(272,164)	(798,852)
Other	3,490	268	1,471	565	(7,392)	23,666	26,504	69,347
Net change in fiduciary net position	\$ 367,827	\$ 38,457,425	\$ 27,317,620	\$ 37,365,910	\$ 39,415,141	\$ 40,748,563	\$ 68,663,251	\$ 53,753,459
Plan Fiduciary net position - beginning	\$ 1,036,779,826	\$ 588,360,443	\$ 1,009,462,206	\$ 550,994,533	\$ 970,047,065	\$ 510,245,970	\$ 901,383,814	\$ 456,492,511
Plan Fiduciary net position - ending	\$ 1,037,147,653	\$ 626,817,868	\$ 1,036,779,826	\$ 588,360,443	\$ 1,009,462,206	\$ 550,994,533	\$ 970,047,065	\$ 510,245,970
Net Pension Liability (Asset)	\$ 266,591,639	\$ 210,645,638	\$ 258,634,526	\$ 168,607,625	\$ 259,157,278	\$ 172,426,221	\$ 265,846,711	\$ 171,317,827
Plan Fiduciary Net Position as a percentage of the total pension liability	79.6%	74.8%	80.0%	77.7%	79.6%	76.2%	78.5%	74.9%
Covered payroll	\$ 261,462,549	\$ 118,932,888	\$ 255,923,274	\$ 111,169,948	\$ 249,731,376	\$ 105,827,416	\$ 244,466,993	\$ 102,020,230
Net pension liability (asset) as a percentage of covered payroll	102.0%	177.1%	101.1%	151.7%	103.8%	162.9%	108.7%	167.9%

See notes to required supplementary information.

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

EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
REQUIRED SUPPLEMENTARY INFORMATION
Schedules of Changes in the Participating Employers' Net Pension Liability (Asset)
Municipal Employees' Retirement System Plan

	2016		2015		2014	
	General employees	Police & Fire	General employees	Police & Fire	General employees	Police & Fire
Total Pension Liability						
Service Cost	\$ 20,993,576	\$ 17,716,756	\$ 20,454,038	\$ 15,802,260	\$ 20,534,252	\$ 15,425,188
Interest	82,527,045	42,922,588	79,553,219	39,209,010	77,208,696	36,969,722
Benefit Changes			18,678,454	20,243,581	-	-
Differences between expected and actual experience	(14,594,497)	(9,510,635)	(10,829,976)	(2,598,079)	-	-
Changes of assumptions					893,569	(4,665,819)
Benefit payments	(70,865,501)	(25,248,345)	(66,083,440)	(22,950,990)	(66,801,709)	(22,501,480)
Net change in Total Pension Liability	18,060,623	25,880,364	41,772,295	49,705,782	31,834,808	25,227,611
Total pension liability - beginning	1,125,296,558	576,066,967	1,083,524,263	526,361,185	1,051,689,455	501,133,574
Total pension liability - ending	\$ 1,143,357,181	\$ 601,947,331	\$ 1,125,296,558	\$ 576,066,967	\$ 1,083,524,263	\$ 526,361,185
Plan Fiduciary Net Position						
Employer contributions	\$ 30,300,536	\$ 16,296,479	\$ 28,763,340	\$ 15,588,547	\$ 26,704,092	\$ 11,193,028
New employer contributions						
Employee contributions	7,244,745	9,561,530	4,368,524	7,223,947	4,333,503	6,979,451
Net investment income	24,225	(156,872)	21,923,799	10,703,150	126,156,827	59,474,454
Benefit payments	(70,865,501)	(25,248,345)	(66,083,440)	(22,950,990)	(66,801,709)	(22,501,480)
Transfers of member contributions			-	-	(85,962)	73,422
Administrative expenses	(1,178,758)	(427,823)	(878,056)	(425,478)	(789,990)	(372,429)
Transfers to affiliated systems	312,940	(312,936)	(48,286)	10,774	-	-
Other	34,888	66,307	262,213	21,917	62,117	23,960
Net change in fiduciary net position	\$ (34,126,925)	\$ (221,660)	\$ (11,691,906)	\$ 10,171,867	\$ 89,578,878	\$ 54,870,406
Plan Fiduciary net position - beginning	\$ 935,510,739	\$ 456,714,171	\$ 947,202,645	\$ 446,542,304	\$ 857,623,766	\$ 391,671,897
Plan Fiduciary net position - ending	\$ 901,383,814	\$ 456,492,511	\$ 935,510,739	\$ 456,714,171	\$ 947,202,644	\$ 446,542,303
Net Pension Liability (Asset)	\$ 241,973,367	\$ 145,454,820	\$ 189,785,819	\$ 119,352,796	\$ 136,321,619	\$ 79,818,882
Plan Fiduciary Net Position as a percentage of the total pension liability	78.8%	75.8%	83.1%	79.3%	87.4%	84.8%
Covered payroll	\$ 233,474,157	\$ 96,737,235	\$ 228,189,238	\$ 91,293,039	\$ 223,124,242	\$ 88,783,926
Net pension liability (asset) as a percentage of covered payroll	103.6%	150.4%	83.2%	130.7%	61.1%	89.9%

See notes to required supplementary information.

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

EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
REQUIRED SUPPLEMENTARY INFORMATION
Schedules of Investment Returns

Annual Money-Weighted Rate of Return, Net of Investment Expense

	<u>ERS</u>	<u>TSB</u>	<u>MERS</u>	<u>SPRBT</u>	<u>JRBT</u>	<u>RIJRFT</u>	<u>SPRFT</u>
Fiscal Year Ended June 30, 2020	3.82%	3.64%	4.67%	3.85%	3.84%	2.29%	3.89%
Fiscal Year Ended June 30, 2019	6.54%	6.54%	6.56%	6.62%	6.60%	4.72%	8.91%
Fiscal Year Ended June 30, 2018	7.85%	7.85%	7.87%	7.83%	7.76%	6.45%	6.91%
Fiscal Year Ended June 30, 2017	12.34%	11.66%	12.17%	11.87%	11.87%	11.46%	9.79%
Fiscal Year Ended June 30, 2016	-0.78%	-0.15%	-0.57%	-0.07%	-0.03%	-1.72%	-
Fiscal Year Ended June 30, 2015	2.06%	2.25%	2.22%	2.28%	2.27%	2.28%	-
Fiscal Year Ended June 30, 2014	15.32%	15.25%	15.12%	14.99%	14.99%	5.61%	-

See notes to required supplementary information.

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

The SPRFT trust plan was created in fiscal 2017.

EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
REQUIRED SUPPLEMENTARY INFORMATION
Schedules of Employer and Other Nonemployer Entity Contributions
Employees' Retirement System Plan

Plan	Actuarially Determined Contribution	Contributions in Relation to Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a % of Covered Payroll
State employees					
2020	\$ 199,918,013	\$ 199,918,013	\$ -	\$ 755,310,749	26.47%
2019	189,415,698	189,415,698	-	718,732,131	26.35%
2018	174,374,155	174,374,155	-	691,006,031	25.23%
2017	176,093,310	176,093,310	-	683,530,388	25.76%
2016	159,534,421	159,534,421	-	671,420,995	23.76%
2015	155,901,921	155,901,921	-	669,787,489	23.28%
2014	151,077,142	151,077,142	-	653,573,357	23.12%
Teachers					
2020	\$ 266,845,321	\$ 266,845,321	* \$ -	\$ 1,080,912,926	24.69%
2019	249,634,988	249,634,988	*	1,060,472,523	23.54%
2018	239,092,095	239,092,095	*	1,031,394,874	23.18%
2017	233,828,517	233,828,517	*	1,010,449,004	23.14%
2016	225,569,556	225,569,556	*	980,562,840	23.00%
2015	217,902,736	217,902,736	*	966,985,115	22.53%
2014	197,869,704	197,869,704	*	951,322,312	20.80%

See notes to required supplementary information.

** includes contributions by the State of Rhode Island as the nonemployer contributing entity.*

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

EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
REQUIRED SUPPLEMENTARY INFORMATION
Schedules of Employer and Other Nonemployer Entity Contributions
Teachers' Survivors Benefits Plan

Plan	Actuarially Determined Contribution	Contributions in Relation to Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a % of Covered Payroll
2020	\$ -	\$ 745,760	\$ (745,760)	\$ 590,286,509	0.13%
2019	-	745,856	(745,856)	576,424,716	0.13%
2018	-	744,035	(744,035)	557,928,457	0.13%
2017	-	589,883	(589,883)	538,657,952	0.11%
2016	-	642,276	(642,276)	581,414,779	0.11%
2015	-	603,388	(603,388)	561,753,409	0.11%
2014	-	609,618	(609,618)	563,134,080	0.11%

See notes to required supplementary information.

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

EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
REQUIRED SUPPLEMENTARY INFORMATION
Schedules of Employer and Other Nonemployer Entity Contributions
State Police Retirement Benefits Trust Plan

Plan	Actuarially Determined Contribution	Contributions in Relation to Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a % of Covered Payroll
2020	\$ 4,877,630	\$ 4,877,630	\$ -	\$ 26,418,793	18.46%
2019	3,566,922	3,566,922	-	24,216,376	14.73%
2018	2,797,003	2,797,003	-	22,589,818	12.38%
2017	2,980,219	2,980,219	-	22,727,638	13.11%
2016	4,004,656	4,004,656	-	20,984,917	19.08%
2015	3,432,359	3,432,359	-	19,700,678	17.42%
2014	3,330,889	3,330,889	-	23,051,144	14.45%

See notes to required supplementary information.

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

EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
REQUIRED SUPPLEMENTARY INFORMATION
Schedules of Employer and Other Nonemployer Entity Contributions
Judicial Retirement Benefits Trust Plan

Plan	Actuarially Determined Contribution	Contributions in Relation to Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a % of Covered Payroll
2020	\$ 2,189,255	\$ 2,189,255	\$ -	\$ 10,284,151	21.29%
2019	1,922,023	1,922,023	-	9,473,758	20.29%
2018	2,057,529	2,057,529	-	9,653,254	21.31%
2017	2,057,159	2,057,159	-	9,532,174	21.58%
2016	2,410,039	2,410,039	-	8,981,094	26.83%
2015	2,709,397	2,709,397	-	9,570,014	28.31%
2014	2,543,510	2,543,510	-	9,314,258	27.31%

See notes to required supplementary information.

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

EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
REQUIRED SUPPLEMENTARY INFORMATION
Schedules of Employer and Other Nonemployer Entity Contributions
Rhode Island Judicial Retirement Fund Trust Plan

Plan	Actuarially Determined Contribution	Contributions in Relation to Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a % of Covered Payroll
2020	\$ 1,215,152	\$ 399,016	\$ 816,136	\$ 1,046,167	38.14%
2019	1,223,581	399,016	824,565	1,002,164	39.82%
2018	1,322,172	399,012	923,160	1,020,224	39.11%
2017	1,240,501	332,340	908,161	988,161	33.63%
2016	1,200,000	140,141	1,059,859	963,703	14.54%
2015	1,623,061	-	1,623,061	1,320,875	0.00%
2014	1,695,434	-	1,695,434	1,276,208	0.00%

See notes to required supplementary information.

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

EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
REQUIRED SUPPLEMENTARY INFORMATION
Schedules of Employer and Other Nonemployer Entity Contributions
Rhode Island State Police Retirement Fund Trust Plan

Plan	Actuarially Determined Contribution	Contributions in Relation to Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a % of Covered Payroll
2020	\$ 16,387,092	\$ 16,387,092	\$ -	n/a	n/a
2019	16,387,092	16,387,092	-	n/a	n/a
2018	16,387,092	16,387,092	-	n/a	n/a
2017	16,387,092	16,566,076	(178,984)	n/a	n/a

See notes to required supplementary information.

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

The SPRFT trust plan was created in fiscal 2017.

EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND
REQUIRED SUPPLEMENTARY INFORMATION
Schedules of Employer and Other Nonemployer Entity Contributions
Municipal Employees' Retirement System Plan

Plan	Actuarially Determined Contribution	Contributions in Relation to Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a % of Covered Payroll
General Employees					
2020	\$ 32,776,043	\$ 32,776,043	\$ -	\$ 261,462,549	12.54%
2019	31,732,424	31,732,424	-	255,923,274	12.40%
2018	30,183,815	30,183,815	-	249,731,376	12.09%
2017	31,686,825	31,686,825	-	244,466,993	12.96%
2016	30,300,536	30,300,536	-	233,474,157	12.98%
2015	28,763,340	28,763,340	-	228,189,238	12.61%
2014	26,704,094	26,704,094	-	223,124,242	11.76%
Police and Fire					
2020	\$ 23,700,625	\$ 23,700,625	\$ -	\$ 118,932,888	19.93%
2019	19,121,064	19,121,064	-	111,169,948	17.20%
2018	16,819,840	16,819,840	-	105,827,416	15.89%
2017	16,855,985	16,855,985	-	102,020,230	16.52%
2016	16,296,479	16,296,479	-	96,737,235	16.85%
2015	15,588,547	15,588,547	-	91,293,039	17.08%
2014	11,193,028	11,193,028	-	88,783,926	12.89%

See notes to required supplementary information.

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

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND
Notes to Required Supplementary Information - Fiscal Year Ended June 30, 2020

The schedules are intended to present ten years of data. Additional years of data will be presented as they become available.

1. Actuarial methods and assumptions used to calculate the net pension liability (asset) of the participating employers

The actuarial methods and assumptions used to calculate the net pension liability (asset) of the participating employers are described in Note 8 to the financial statements. The following information is presented about factors that significantly affect trends in the amounts reported between years.

June 30, 2020 measurement date –

As part of the 2020 Actuarial Experience Study for the six-year period ending June 30, 2019 as approved by the System Board on May 22, 2020, certain assumptions were modified and reflected in the determination of net pension liability (asset) at the June 30, 2020 measurement date. The following summarizes the more significant changes in assumptions:

- Separated Correctional Officers from State Employees for all assumptions.
- Updated the underlying mortality tables from the RP-2014 set of tables to the public sector-based PUB (10) tables.
- Increased slightly the probabilities of turnover.
- Decreased slightly the probabilities of retirement.
- Modified slightly the probabilities of disability, including adding material incidence of disability for members in the age ranges that historically have been eligible to retire but under prospective provisions are not.
- Lowered wage assumptions for Judges from 3.00% to 2.75%.

The RIJFT plan used the municipal bond index rate of 2.45% instead of the plan's assumed investment rate of return of 4.0%.

June 30, 2019 measurement date –

There were no changes in actuarial methods or assumptions reflected in the calculation of the net pension liability (asset) of the plans as of the June 30, 2019 measurement date compared to the June 30, 2018 measurement date except for the changes in assumptions for the RIJFT plan due to use of the municipal bond index rate of 3.13% instead of the plan's assumed investment rate of return of 4.0%.

June 30, 2018 measurement date –

There were no changes in actuarial methods or assumptions reflected in the calculation of the net pension liability (asset) of the plans as of the June 30, 2018 measurement date compared to the June 30, 2017 measurement date except for the changes in assumptions for the RIJFT plan due to use of the municipal bond index rate of 3.62% instead of the plan's assumed investment rate of return of 4.0%.

June 30, 2017 measurement date –

As part of the 2017 Actuarial Experience Investigation Study for the six-year period ending June 30, 2016 as approved by the System Board on May 15, 2017, certain assumptions were modified and reflected in the determination of the net pension liability (asset) at the June 30, 2017 measurement date. The following summarizes the more significant changes in assumptions:

- Decreased the general inflation assumption from 2.75% to 2.50%;
- Decreased the nominal investment return assumption from 7.50% to 7.00%;

1. Actuarial methods and assumptions used to calculate the net pension liability (asset) of the participating employers (continued)

- Decreased the general wage growth assumption from 3.25% to 3.00%;
- Decreased salary increase assumptions; and
- Updated the post-retirement mortality tables to variants of the RP-2014 table. For the improvement scale, update to the ultimate rates of the MP-2016 projection scale.

Additionally, the municipal bond index rate, based on fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" (3.56% at June 30, 2017) was applied to all periods of projected benefit payments to determine the total pension liability instead of the plan's assumed investment rate of return of 4.0%.

June 30, 2016 measurement date –

There were no changes in actuarial methods or assumptions reflected in the calculation of the net pension liability (asset) of the plans as of the June 30, 2016 measurement date compared to the June 30, 2015 measurement date except for the changes in assumptions for the RIJRFT plan due to use of the municipal bond index rate of 2.85% instead of the plan's assumed investment rate of return of 4.0%.

June 30, 2015 measurement date –

There were no changes in actuarial methods or assumptions reflected in the calculation of the net pension liability (asset) of the plans as of the June 30, 2015 measurement date compared to the June 30, 2014 measurement date except for the changes in assumptions for the RIJRFT plan due to use of the municipal bond index rate of 3.8% instead of the plan's assumed investment rate of return of 4.0%.

Benefit changes are reflected in the calculation of the net pension liability at the June 30, 2015 measurement date. The following is a summary of those benefit changes that resulted from the settlement of the pension litigation and the subsequent enactment of those settlement provisions by the General Assembly.

- Employees with more than 20 years of service at July 1, 2012 will increase their employee contribution rates to 11% for state employees and municipal general employees will contribute 8.25% (9.25% for units with a COLA provision) and participate solely in the defined benefit plan going forward – service credit accruals will increase from 1% to 2% per year.
- Members are eligible to retire upon the attainment of: age 65 with 30 years of service, 64 with 31 years of service, 63 with 32 years of service, or 62 with 33 years of service. Members may retire earlier if their RIRSA date is earlier or are eligible under a transition rule.
- MERS public safety employees may retire at age 50 with 25 years of service, or any age with 27 years of service. MERS public safety employees will contribute 9.00% (10.00% for units with a COLA provision)
- Employees with more than 10 but less than 20 years of service at July 1, 2012 will receive an increased employer contribution to the defined contribution plan. Also, members who earn less than \$35,000 per year will not be required to pay the administrative fees to the defined contribution plan.

1. Actuarial methods and assumptions used to calculate the net pension liability (asset) of the participating employers (continued)

- Members who retired from a COLA eligible plan before July 1, 2012 will receive a one-time cost of living adjustment of 2% of the first \$25,000 paid as soon as administratively possible.
- Retirees as of June 30, 2015 will receive two \$500 stipends; the interim cost of living increases will occur at 4 year rather than 5-year intervals.
- The COLA formula was adjusted to: 50% of the COLA is calculated by taking the previous 5-year average investment return, less 5.5% (5yr Return - 5.5%, with a max of 4%) and 50% calculated using previous year's CPI-U (max of 3%) for a total max COLA of 3.5%. This COLA is calculated on the first \$25,855, effective 01/01/16, and indexed as of that date as well. (The indexing formula is run annually regardless of funding level each year.)
- Minor adjustments were made to the actuarial reduction for employees choosing to retire early.

2. Actuarially determined contributions

Actuarially determined contributions are calculated as of June 30, three years prior to the fiscal year in which the contributions are reported. For example, the contribution rates for fiscal 2020 for the plans were based on valuations performed as of June 30, 2017.

Contributions for teachers within the ERS plan include \$108,635,976, \$102,238,747, \$98,120,835, \$96,542,150, \$87,997,637, \$84,943,801 and \$76,700,915 of nonemployer entity contributions made by the State of Rhode Island for fiscal years 2020, 2019, 2018, 2017, 2016, 2015, and 2014, respectively.

Contributions for the TSB plan are required by statute as outlined in the General Laws of Rhode Island. Due to the funded status of the plan, there was no actuarially determined contribution required to the plan in years 2014 through 2020.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND
Notes to Required Supplementary Information - Fiscal Year Ended June 30, 2020

2. Actuarially determined contributions (continued)

Summary of Actuarial Methods and Assumptions Used to determine Fiscal 2020 contribution rates							
	ERS		MERS	SPRBT	JRBT	RIJRFT	SPRFT
	State Employees	Teachers					
Valuation Date	June 30, 2017 for all plans.						
Actuarial Cost Method	Entry Age Normal - the Individual Entry Age Actuarial Cost methodology is used.						
Amortization Method	Level Percent of Payroll – Closed					Level Dollar	Level Dollar
Equivalent Single Remaining Amortization Period	18 years; except for teachers for which the remaining amortization period is 22 years					15 years	14 years
Amortization period for new gain/loss base	20 years						
Asset Valuation Method	5 Year Smoothed Market						Market value
Actuarial Assumptions:							
Investment Rate of Return	7.0%	7.0%	7.0%	7.0%	7.0%	3.56%	7.0%
Projected Salary Increases	4.25% to 6.25%	3.0% to 13.0%	<u>General Employees</u> 3.50% to 7.50% <u>Police & Fire Employees</u> 4.0% to 14.0%	3.75% to 11.75%	3.0%	3.0%	3.75% to 11.75%
Mortality	<ul style="list-style-type: none"> • Male employees, RP-2014 Combined Healthy for Males with Blue Collar adjustments, projected with Scale Ultimate MP16 • Female employees, RP-2014 Combined Healthy for Females with Blue Collar adjustments, projected with Scale Ultimate MP16. 						
		Male and female teachers: RP-2014 Combined Healthy for Males and Females, respectively, with White Collar adjustments, projected with Scale Ultimate MP16					
Inflation	2.5%						

The required contribution for the State Police Retirement Fund Trust (SPRFT), a plan newly created in fiscal 2017 covering a closed group of retired individuals, was calculated based on a level-dollar amortization over 18 years from June 30, 2016.

2. Actuarially determined contributions (continued)

Cost of Living Adjustments

The known COLA for certain MERS units in calendar years 2017 and 2018 were 0.74% and 1.51%, respectively, and this was reflected in the June 30, 2017 valuation. All future COLAs were assumed to be 2.1% per annum for all MERS units with the COLA provision. For the TSB plan, a 2.5% COLA was assumed. For all other plans, it was assumed that the COLA was suspended for ten years and that it would be 2.1% thereafter.

Supplemental contributions

Certain supplemental contributions required by the General Laws were made to the ERS plan as more fully explained in Note 7 (d) to the financial statements. The following table reconciles the ERS plan employer contributions in the Schedule of Changes in the Participating Employers' Net Pension Liability and amounts included in the financial statements for the ERS plan.

	State Employees	Teachers	Total ERS Plan
Employer Contributions included in the Schedules of Changes in the Participating Employers' Net Pension Liability	\$ 199,918,013	\$ 266,845,321	\$ 466,763,334
Employer contributions reported on ERS Plan Fiscal 2020 financial statements	\$ 199,918,013	\$ 266,845,321	\$ 466,763,334
Per ERSRI fiscal 2020 financial statements			
Employer Contributions			\$ 357,767,131
State Contributions for Teachers			108,635,976
Supplemental Employer Contributions			360,227
Total Employer Contributions			<u>\$ 466,763,334</u>

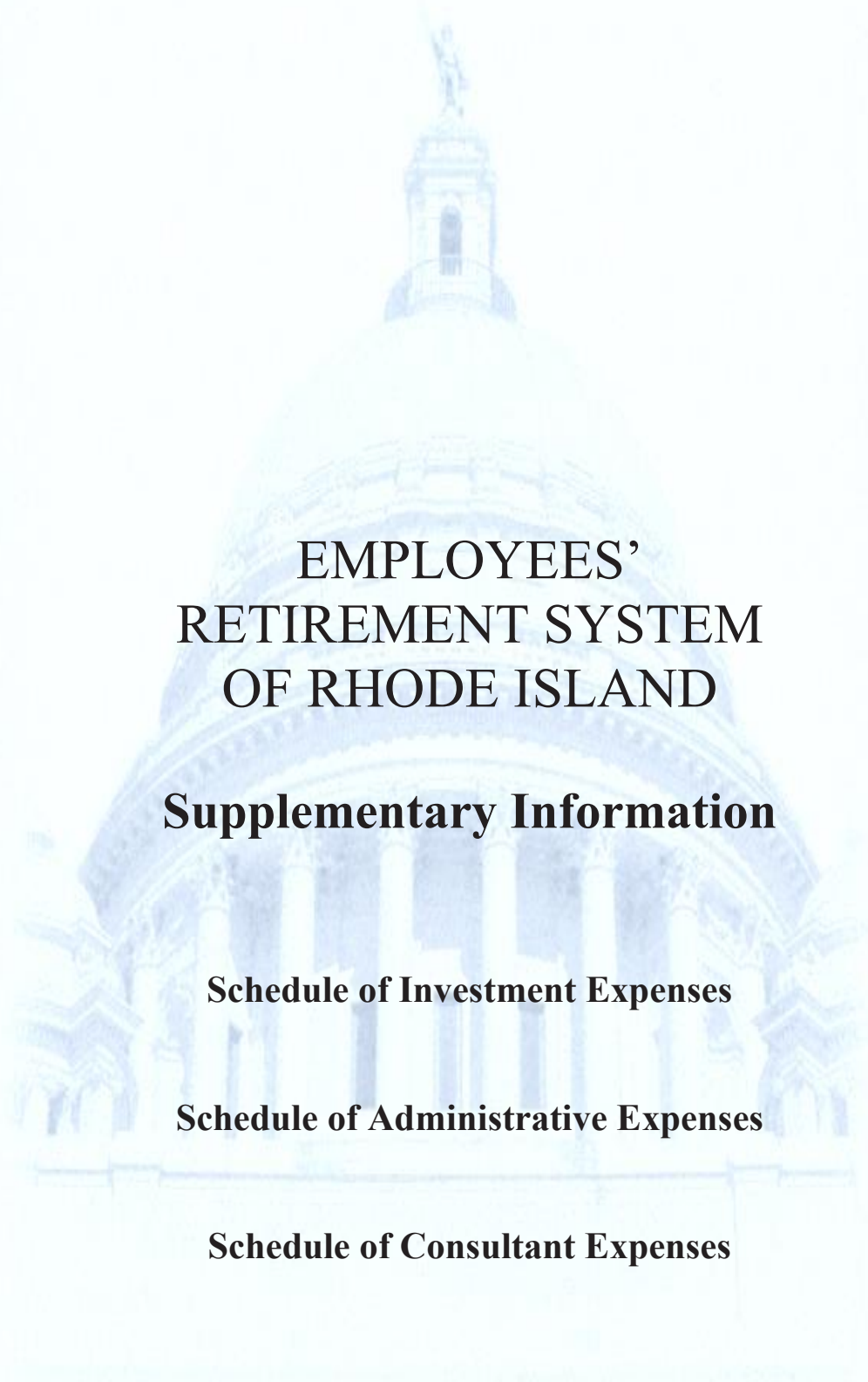
3. Covered payroll

Covered payroll, as included in required supplementary information schedules, includes projected annualized payroll amounts for employees beginning employment during the fiscal year. Consequently, the covered payroll amounts included in the required supplementary information schedules may differ from the actual fiscal year payroll base to which the actuarially determined contribution rate was applied. Additionally, the contribution amount as a percentage of covered payroll may differ from the Board approved contribution rate expressed as a percentage of payroll.

4. Schedules of Investment Returns

The annual money-weighted returns on investments within each of the plans, net of investment expense, are shown in the required supplementary information schedule. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

The schedules are intended to present ten years of data. Additional years of data will be presented as they become available.



**EMPLOYEES'
RETIREMENT SYSTEM
OF RHODE ISLAND**

Supplementary Information

Schedule of Investment Expenses

Schedule of Administrative Expenses

Schedule of Consultant Expenses

EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND

Schedule of Investment Expenses

Fiscal Year Ended June 30, 2020

INVESTMENT MANAGEMENT FEES BY STRATEGY AND ASSET CLASS

TOTAL GROWTH

Global Equity

State Street Global Advisors - Russell 3000	\$	131,094	
State Street Global Advisors - QVM Tilt		570,878	
State Street Global Advisors - MSCI EAFE -Commingled Fund		199,731	
State Street Global Advisors - MSCI CAD - Commingled Fund		12,803	
State Street Global Advisors - MSCI Emerging Markets - Commingled Fund		310,123	

Private Growth

Private Equity		35,964,083	
Non-Core Real Estate		(1,454,563)	
Opportunistic Private Credit		1,043,008	\$ 36,777,157

INCOME

Harvest - High Yield Infrastructure		665,988	
PIMCO - Liquid Credit		441,350	
WAMCO - Liquid Credit		53,982	
Loomis		484,093	
Heitman		740,081	
Wellington		53,649	
Neuberger - Options		410,522	
Private Credit		6,575,121	9,424,786

STABILITY

Crisis Protection Class

WAMCO - Treasury Long Duration		172,403	
Mackay Shields - Treasury Long Duration		68,018	
Systematic Trend Following (CPC LLC)		2,742,077	

Inflation Protection

Core Real Estate		3,228,439	
Private Infrastructure		6,333,844	
Brown Brothers Harriman - TIPS		197,530	

Volatility Protection

Pyramis - Investment Grade Fixed Income		542,192	
Mackay Shields - Investment Grade Fixed Income		283,454	
Loomis		73,315	
Absolute Return Hedge Funds		23,780,328	
Payden & Rygel		219,512	37,641,112

OTHER

Russell Overlay			296,461
Shott Capital/Hamilton Lane			1,514

Subtotal - Investment Management Fees by Strategy and Asset Class

84,141,030

PROFESSIONAL FEES

Legal		155,866	
BNY Mellon - Custodial		488,657	
Cliffwater		450,000	
PCA		68,750	
NEPC		375,083	
Aberdeen		401,530	
PCA Real Estate		131,250	
<i>Subtotal - Professional Fees</i>			2,071,136

OPERATING EXPENSES

Investment Administration - Office of the General Treasurer	\$	1,701,232	
Other Expenses		169,712	
<i>Subtotal - Operating Expenses</i>			1,870,944

TOTAL INVESTMENT EXPENSES

\$ 88,083,110

EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND

Schedule of Administrative Expenses

Fiscal Year Ended June 30, 2020

DEFINED BENEFIT PLANS

Personnel Expenses

Salaries and wages	\$ 2,964,362
Benefits	1,754,193
Total personnel expenses	<u>4,718,555</u>

Purchased Services - Consultant Expenses

Disability determination	273,484
Legal	261,710
Actuary	298,365
Financial services	10,000
Information technology services	2,496,502
Stenographic services	2,793
Office equipment	18,389
Other professional services	174,819
Total purchased services	<u>3,536,062</u>

Operating Expenses

Communications	210,199
Office and supplies	180,515
Printing and advertising	44,070
Travel	16,983
Occupancy	94,155
Insurance	71,516
Other	10,342
Total operating expenses	<u>627,780</u>

Subtotal administrative expenses - defined benefit plans \$ 8,882,397

DEFINED CONTRIBUTION PLANS

Plan Administrative Expenses - TIAA-CREF \$ 962,910

TOTAL ADMINISTRATIVE EXPENSES -- ALL PLANS \$ 9,845,307

EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND

Schedule of Consultant Expenses

Fiscal Year Ended June 30, 2020

Disability Determination Services

Medical exam fees - various physicians \$ 273,484

Legal

Adler Pollock & Sheehan P.C.	\$ 56,503	
Hinckley, Allen, & Snyder LLP	3,320	
Lovett Scheffrin Harnett LTD	2,500	
Schechtman Halperin Savage LLP	196,603	
Hearing officers - various	2,784	261,710

Actuary

Gabriel Roeder Smith & Co. 298,365

Financial Services

Blum Shapiro & Co. 10,000

Information Technology

Flagship Staffing Services Inc.	35,418	
Guidesoft Inc.	145,527	
Morneau Shepell *	2,310,697	
Stonewall Solutions, Inc.	4,860	2,496,502

Stenographic Services

Allied Court Reporters Inc. 2,793

Office Equipment

ACOM Solutions, Inc.	194	
Apple Inc.	198	
Konica Minolta Business Solutions USA	11,779	
Park Place Technologies	6,125	
Robinson Time Service & Sales Co.	93	18,389

Other Professional Services

Bulletproof Solutions Inc.	124,409	
Pension Benefit Information	15,740	
Translator services	34,670	174,819

Total purchased services - consultant expenses \$ 3,536,062

* Amount for this vendor reflected as expense during fiscal year - see note 3 to the financial statements.

Investment Section

Overview of Investments

Investment Summary and Results

Schedule of Investment Expenses

Schedule of Fees and Commissions



WILL FORDE, CFA, CAIA
PRINCIPAL

DOUG MOSELEY
PARTNER

December 2020

Dear ERSRI Fiduciaries:

NEPC, LLC (“NEPC”) is pleased to introduce this overview of the Employees’ Retirement System of Rhode Island (“ERSRI”) investment program for the fiscal year ended June 30, 2020.

The overall objective of ERSRI is to meet all future pension obligations both in the near and long-term. These obligations include service, disability, death and vested retirement benefits, and other post-employment benefits to members and their beneficiaries.

To ensure a solid foundation for the future of the System, ERSRI implements an investment program designed to achieve an appropriate rate of return over the long term, while prudently managing the risk of the portfolio. Furthermore, the Rhode Island State Investment Committee (“SIC”) established an Investment Policy Statement which details their investment objectives and policies in investing the funds of the System as mandated by RI General Law §35-10-6(b): “The commission shall adopt a statement of investment objectives and policies consistent with the Prudent Person Standard.” In addition, the Investment Policy Statement includes asset allocation targets and acceptable ranges as well as asset class benchmarks for performance measurement. The System leverages the services of actuaries and consultants to provide guidance regarding actuarial matters, asset allocation, and invest policy development. The SIC manages the investment program pursuant to the investment policy, develops asset class guidelines, monitors and evaluates performance, and makes determinations regarding the retention of managers. Professional investment managers are selected by the SIC to manage portfolios in accordance with investment management agreements. The following pages report on the performance and attributes of the investment program for fiscal year 2020.

The fiscal year ended June 2020 saw the end of the longest economic expansion on record. Economies around the world were disrupted because of COVID-19 and markets reacted with historically fast-paced declines. Governments and central banks from around the world took extraordinary measures to stimulate shuttered economies. In the U.S., fiscal stimulus reached over 12% of GDP while Germany, Japan, France and the U.K. had materially larger stimulus packages. The Federal Reserve provided additional support to the U.S. economy by reducing the Fed Funds Rate to a targeted range of 0.00% to 0.25%, resumed quantitative easing, and flooded markets with liquidity. Similar actions were taken by central banks globally. These stimulus measures, along with optimism around a potential vaccine for COVID-19 and easing of lockdown restrictions resulted in a historically dramatic reversal in risk assets in the fourth fiscal quarter. As a result, U.S. stocks posted their eleventh consecutive year of positive returns and outperformed international equities, returning 7.5% as measured by the S&P 500 Index. International developed-markets equities returned -5.1% for the year as measured by the MSCI EAFE Index and lagged

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domestic equities by 12.6% as measured by the S&P 500 Index. U.S. equity outperformance was driven in large part by big technology stocks that benefitted from a demand surge in the wake of the pandemic. Emerging markets equities returned -3.4% as measured by the MSCI Emerging Markets Index, underperforming U.S. equities and outperforming international-developed markets equities. Driven by declining interest rates and demand for safe-haven assets, U.S. high quality fixed income investments generated a positive 8.7% return in the fiscal year as measured by the Bloomberg Barclays U.S. Aggregate Bond Index.

For the fiscal year ended June 30, 2020, the ERSRI Fund (“The Fund”) returned +3.78% on a net-of-fees basis, underperforming its assumed rate of return of 7.0% given the unprecedented decline in markets in the first quarter. The Fund’s +3.78% return ranked in the 13th percentile (1st being the highest, 100th being the lowest) relative to other investors in the Investment Metrics Public Defined Benefit >\$1B Net Universe (“universe”). ERSRI’s longer-term performance remains strong as the Fund has returned +7.80% over the trailing 10-year period.

Throughout fiscal year 2020, the SIC completed several important initiatives. Of note, ERSRI continued to execute on its “Back to Basics” asset allocation strategy focused on low-cost equity investments, complemented by other assets designed to help grow the plan assets while protecting against risks such as volatility and inflation. As part of the asset allocation strategy and monitoring, the SIC completed an asset allocation study in December of 2019 which resulted in a 2% increase to the Crisis Protection Class (“CPC”). The CPC was critically important in the first quarter of the year as it returned +15.08% helping to offset some losses from challenged equity markets. In addition, the SIC implemented a new allocation to Emerging Market Debt to help further diversify the investments within the Income Class. The SIC worked with NEPC and its other advisors to accomplish each of these initiatives.

NEPC provides ERSRI with quarterly economic and investment market updates and performance reviews, investment manager monitoring and selection advice, and related investment services for traditional and select non-traditional asset classes. Investment performance analysis and comparisons produced by NEPC have been calculated using standard performance evaluation methodologies and are consistent with industry standards. Performance results are calculated using a time-weighted return methodology and are reported on a net-of-fees basis.

Sincerely,

William Forde

Summary of ERSRI Fiscal Year 2020

For the fiscal year ended June 30, 2020, the ERSRI Fund (“The Fund”) returned +3.78% on a net-of-fees basis, underperforming its assumed rate of return of 7.0% given the unprecedented decline in markets in the first quarter. The Fund’s +3.78% return ranked in the 13th percentile (1st being the highest, 100th being the lowest) relative to other investors in the Investment Metrics Public Defined Benefit >\$1B Net Universe (“universe”). ERSRI’s longer-term performance remains strong as the Fund has returned +7.80% over the trailing 10-year period.

Market Overview

U.S. Equity Markets

U.S. stocks posted their eleventh consecutive year of positive returns and outperformed international equities, returning +7.5% as measured by the S&P 500 Index. U.S. equities outperformance was primarily driven by a few large technology stocks which benefitted from a demand surge in the wake of the pandemic. Although technology companies began the fiscal year detracting from the domestic equity portfolio, the sector was a significant driver of performance with a fiscal year return of 35.9% as measured by the S&P Technology Index. Growth ended the fiscal year outpacing value, driven in part by the markets’ increasing risk appetite, ending the fiscal year with the widest margin for a 6-month period since 1998. Large cap names outpaced their small cap peer, returning +7.5% as measured by the S&P 500 versus the Russell 2000 return which returned -6.6% for the one-year period.

Non-U.S. Equity Markets

International stocks saw a volatile fiscal year, beginning with negative returns driven by increased volatility amid concerns around the global fallout from the ongoing trade war between the United States and China. International names were a part of the equity blaze of glory during the last quarter of 2019, driven by strong emerging market returns as the trade pact between the US and China was used to inject confidence into the international markets. The positive returns from quarter end of 2019 were disintegrated as the equity markets took a nosedive when the world entered a global pandemic. For the fiscal year end, developed markets underperformed emerging markets, although both ended the one-year period with negative returns. One bright spot within international markets was Japan, which was helped during Q2 2020 when the Japanese government approved a record stimulus package equaling almost 40% of GDP to prevent COVID-19. For the one-year period ending June 30, 2020, developed markets, measured by MSCI EAFE, posted a return of -5.1% and emerging markets (measured by MSCI Emerging Markets Index) posted a return of -3.4%.

Fixed Income Markets

Driven by declining interest rates and demand for safe-haven assets, U.S. high quality fixed income investments generated a positive 8.7% return in the fiscal year as measured by the Bloomberg Barclays U.S. Aggregate Bond Index. Credit markets ended the fiscal year with Corporate bond spreads compressed significantly in the second quarter of 2020 amid the Fed’s massive intervention in fixed income markets. The central bank held benchmark rates at a range of 0% to 0.25%. US corporate credit benefitted from improved market liquidity with the Bloomberg Barclays US Aggregate Index returning 2.9% in the second quarter bringing fiscal year end gains to +8.7%; the Bloomberg Barclays US Corporate High Yield Index was flat, while the S&P/LSTA Leveraged Loan Index returned -2.0% for the fiscal year. In emerging market debt, the JPM EMBI

Global Diversified Index returned 0.5% and the JPM GBI-EM Global Diversified Index returned -2.8% in the fiscal year. The fiscal outlook and economic strains associated with COVID-19 pose a near-term risk for investors.

Real Estate and Alternative Investments

The real estate market returned 2.2% for the fiscal year as measured by the NCREIF ODCE Index. Positive returns in the second half of 2019 helped mitigate the losses faced year-to-date as the real estate market has been challenged in 2020, specifically the hospitality and retail sectors.

Alternative investments posted negative returns for the fiscal year as non-essential goods and services experienced very low demand. Commodities were in the red in fiscal year 2020, returning -17.4%, according to the Bloomberg Commodity Index; losses were fueled by ongoing concerns about the global outlook and pandemic-resistant sectors.

Equity						
	Jun-20	YTD	1 YR	3 YR	5 YR	10 YR
MSCI ACWI	3.2%	-6.3%	2.1%	6.1%	6.5%	9.2%
S&P 500	2.0%	-3.1%	7.5%	10.7%	10.7%	14.0%
Russell 1000	2.2%	-2.8%	7.5%	10.6%	10.5%	14.0%
Russell 2000	3.5%	-13.0%	-6.6%	2.0%	4.3%	10.5%
Russell 2500	2.9%	-11.1%	-4.7%	4.1%	5.4%	11.5%
MSCI EAFE	3.4%	-11.3%	-5.1%	0.8%	2.1%	5.7%
MSCI EM	7.4%	-9.8%	-3.4%	1.9%	2.9%	3.3%
Credit						
	Jun-20	YTD	1 YR	3 YR	5 YR	10 YR
BC Global Agg	0.9%	3.0%	4.2%	3.8%	3.6%	2.8%
BC US Agg	0.6%	6.1%	8.7%	5.3%	4.3%	3.8%
BC Credit	1.8%	4.8%	9.1%	6.1%	5.5%	5.2%
BC US HY	1.0%	-3.8%	0.0%	3.3%	4.8%	6.7%
BC Muni	0.8%	2.1%	4.4%	4.2%	3.9%	4.2%
BC Muni HY	4.0%	-2.6%	1.0%	5.3%	5.8%	6.1%
BC TIPS	1.1%	6.0%	8.3%	5.0%	3.7%	3.5%
BC 20+ STRIPS	0.2%	28.7%	35.6%	16.2%	12.9%	10.9%
BC Long Treasuries	0.1%	21.2%	25.4%	12.0%	9.3%	7.7%
BC Long Credit	2.5%	5.9%	13.2%	8.7%	8.5%	7.8%
BC Govt/Credit 1-3 Yr	0.2%	2.9%	4.2%	2.9%	2.1%	1.6%
JPM EMBI Glob Div	3.5%	-2.8%	0.5%	3.6%	5.3%	6.0%
JPM GBI-EM Glob Div	0.5%	-6.9%	-2.8%	1.1%	2.3%	1.6%
Real Assets						
	Jun-20	YTD	1 YR	3 YR	5 YR	10 YR
BBG Commodity	2.3%	-19.4%	-17.4%	-6.1%	-7.7%	-5.8%
Alerian Midstream Index	-4.5%	-32.5%	-34.5%	-18.5%	-13.6%	-
FTSE NAREIT Equity REITs	3.1%	-18.7%	-13.0%	0.0%	4.1%	9.1%

S&P 500 Sectors (sorted by best to worst 1-year performers)

Index Summary (6/30/2019-6/30/2020)	Benchmark Weight	Benchmark Return
Information Technology	27.50%	35.90%
Consumer Discretionary	10.80%	12.60%
Communication Services	10.80%	11.10%
Health Care	14.60%	10.90%
Consumer Staples	7.00%	3.60%
Materials	2.50%	-1.10%
Real Estate	2.80%	-2.00%
Utilities	3.10%	-2.10%
Industrials	8.00%	-9.00%
Financials	10.10%	-13.90%
Energy	2.80%	-36.10%

**Source: FactSet*

Fund Performance Review

The Fund's +3.78% net of fee time weighted return outperformed the policy benchmark return of +1.93%. However, the Fund underperformed the 60/40 benchmark return of +5.29%. The 60/40 benchmark is comprised of a 60% allocation to the MSCI All Country World index and a 40% allocation to the Barclays U.S. Aggregate Bond index.

The Fund's return was primarily driven by strong performance within its Stability bucket. The Fund's Stability bucket, which is further subdivided into Crisis Protection, Inflation Protection, and Volatility Protection classes, provided diversification and risk-mitigation as COVID-19 fueled global equity market declines. The Fund has a 33% target allocation to the Stability bucket, which returned +8.40% net of fees for the fiscal year.

The Fund's Growth bucket, which primarily consists of public and private equity, was also a positive contributor to performance as Global equity markets started to recover the COVID-19 driven losses towards the end of the Fiscal Year. The Growth bucket withstood a turbulent equity market, returning +1.36% during Fiscal 2020. The Fund's Income allocation, which is focused on producing relatively high and stable income to help mitigate any negative cash flow, detracted from performance, returning -5.31%.

We believe that the asset allocation of the ERSRI portfolio will benefit from its diversification in the event that we see another increase in volatility. Most importantly the long-term focus remains to reduce the volatility of the portfolio, achieve above-market returns, and position the portfolio to meet the objectives of the pension plan.

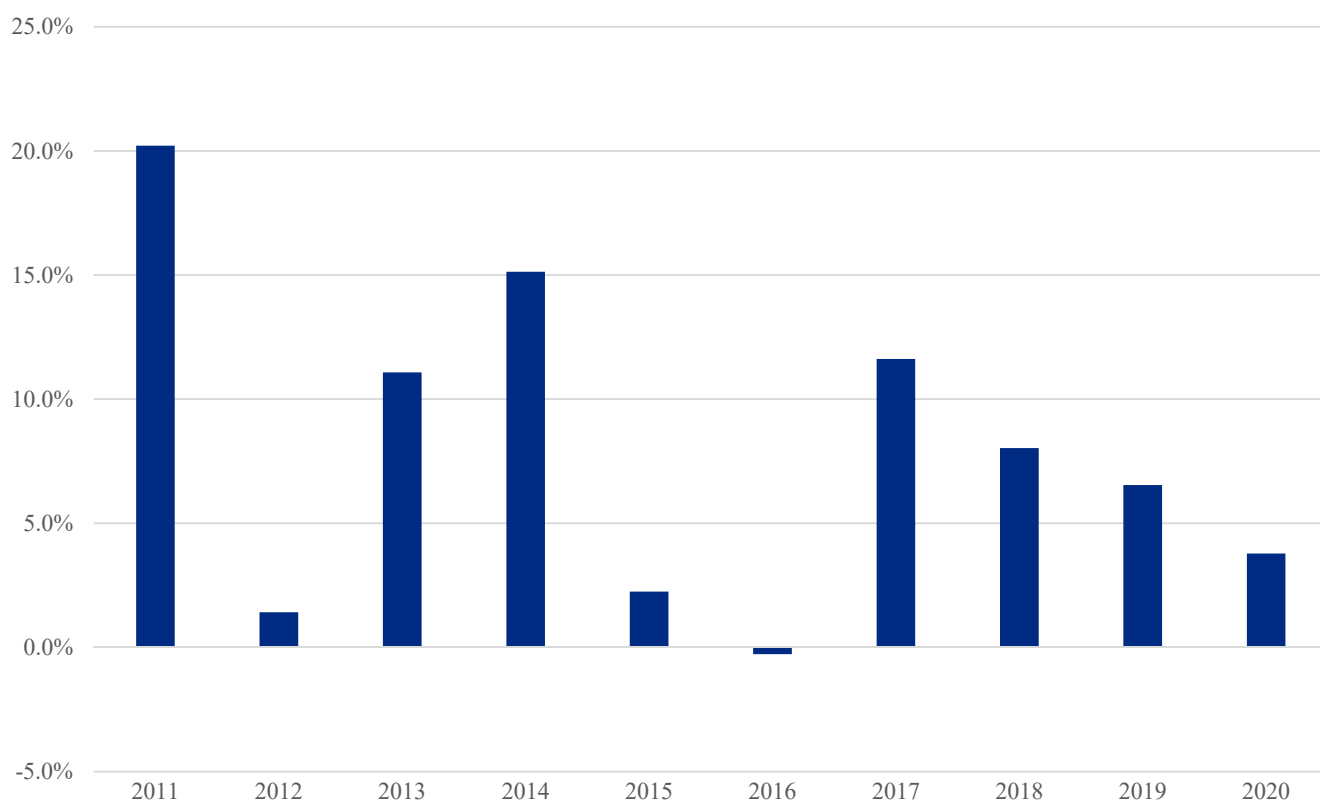
The net return by asset class for fiscal year ending June 30, 2020:

Asset Classes	Fiscal Year Return (net)
Public Equity	1.3%
Private Growth	1.9%
Income	-5.3%
Crisis Protection Class	12.4%
Inflation Protection	6.0%
Volatility Protection	7.0%
Total ERSRI Fund	3.8%

ANNUALIZED TIME-WEIGHTED NET INVESTMENT RETURNS – ACTUAL VERSUS INDICES

	Current	Annualized		
	Fiscal Year	3 Year	5 Years	10 Years
	2020			
TOTAL PLAN	3.78 %	6.10 %	5.87 %	7.80 %
Total Plan Benchmark	1.93	5.33	5.30	7.67
US Public Equity	6.61	10.14	10.13	13.50
Russell 3000 Index	6.53	10.04	10.03	13.72
Non-US Public Equity	-4.35	1.45	2.55	5.19
International Equity Custom BM	-4.80	1.13	2.26	5.07
QVM Tilt (Global Equity)	1.10	5.99	-	-
MSCI World Net Dividend Index	2.84	6.70	-	-
Private Equity	4.09	11.68	10.99	11.31
ILPA All Fds BM, 1Q Lag	1.62	9.44	9.28	13.98
Non-Core Real Estate	-4.40	10.89	-	-
NFI-ODCE Index, 1Q Lag + 2.5%	6.43	8.35	-	-
Opportunistic Private Credit	-5.91	4.87	-	-
ILPA/Cambridge Distressed Securities Index, 1Q Lag	-8.43	1.89	-	-
HY Infrastructure	-35.34	-12.68	-10.73	-
Alerian MLP Index	-41.43	-16.79	-12.85	-
Liquid Credit	-1.06	3.02	3.19	-
Liquid Credit Custom BM	-1.68	2.55	3.35	-
Private Credit	-0.76	1.76	-	-
S&P LSTA Leveraged Loan Index + 3%	-6.16	2.22	-	-
Crisis Protection Class - Systematic Trend	0.55	1.16	-	-
Credit Suisse Managed Futures (18% Vol) Liquid Index	-16.73	-7.16	-	-
Crisis Protection Class - Long Duration Treasuries	25.38	11.92	-	-
Barclays Long Duration US Treasury Index	25.40	12.04	-	-
Private Infrastructure	11.31	12.75	12.35	-
CPI +4%	4.12	5.56	5.52	-
Core Real Estate	3.29	5.34	-	-
NFI-ODCE Index 1Q Lag	3.93	5.85	-	-
Inflation-Linked Bonds	5.71	3.98	2.92	3.61
Barclays 1-10 Year US TIPS Index	5.75	3.94	2.97	3.62
Absolute Return	6.44	6.90	-	-
HFRI Fund of Funds Composite Index	-0.19	2.02	-	-
Traditional (IG) Fixed Income	8.47	5.27	4.33	4.08
Bloomberg Barclays U.S. Aggregate Bond Index	8.74	5.32	4.30	3.82
ERSRI SMA Cash	2.46	2.24	-	-
ICE BofAML US Treasury Notes 0-1 Year (G0QA)	2.15	2.01	-	-

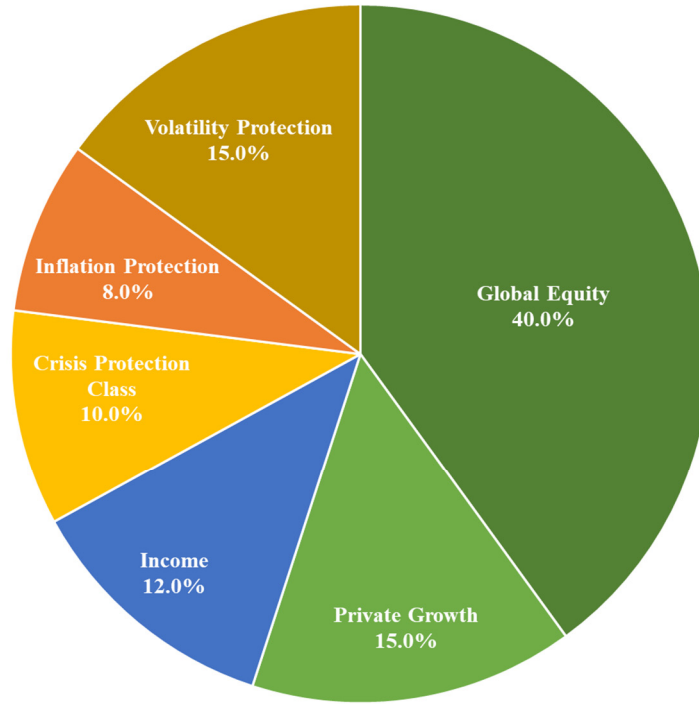
Ten Year History of Total ERSRI Fund Time-Weighted Annual Net Returns



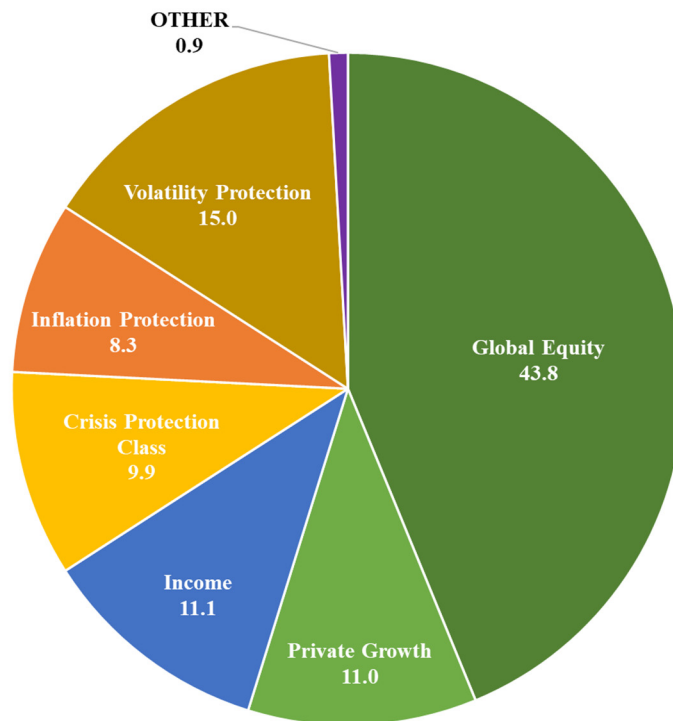
ACTUAL ASSET ALLOCATION VERSUS TARGET ASSET ALLOCATION

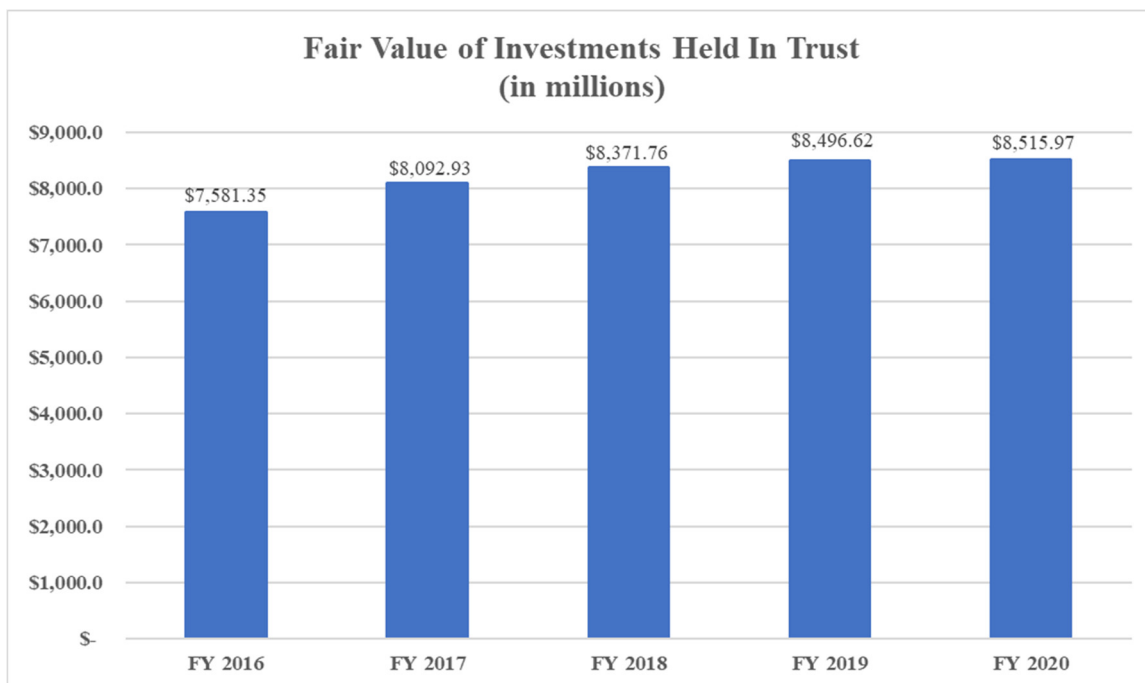
	As of June 30, 2020	
	Actual	Target
GROWTH		
Global Equity	43.8 %	40.0 %
Private Growth	11.0	15.0
INCOME		
	11.1	12.0
STABILITY		
Crisis Protection Class	9.9	10.0
Inflation Protection	8.3	8.0
Volatility Protection	15.0	15.0
<i>OTHER</i>	0.9	0.0
TOTAL FUND	100.0 %	100.0 %

**Target Asset Allocation
as of June 30, 2020**



**Actual Asset Allocation
as of June 30, 2020**





SUMMARY OF INVESTMENTS

June 30, 2020

TYPE OF INVESTMENT	Fair Value (in millions)	Percent of Total Fair Value
DOMESTIC EQUITY		
Domestic Equity Securities	2,274.3	26.7%
Commingled Funds - Domestic Equity	0.0	0.0%
TOTAL DOMESTIC EQUITY	\$ 2,274.3	26.7%
INTERNATIONAL EQUITY		
International Equity Securities	423.6	5.0%
Commingled Funds - International Equity	1,125.8	13.2%
TOTAL INTERNATIONAL EQUITY	\$ 1,549.4	18.2%
FIXED INCOME		
Collateralized Mortgage Obligations	25.4	0.3%
Corporate Bonds	508.3	6.0%
US Government Securities	658.5	7.7%
US Government Agency Securities	198.5	2.3%
TOTAL FIXED INCOME	\$ 1,390.7	16.3%
REAL ASSETS		
Real Estate	488.5	5.7%
Infrastructure	287.9	3.4%
TOTAL REAL ASSETS	\$ 776.4	9.1%
CASH		
Cash and Cash Equivalents	42.6	0.5%
Money Market Mutual Funds	87.1	1.0%
TOTAL CASH	\$ 129.7	1.5%
OTHER INVESTMENTS		
Term Loans	137.1	1.6%
Private Equity	919.1	10.8%
Hedge Funds	578.8	6.8%
Crisis Protection Class -Trend Following - Limited Partnerships	423.3	5.0%
Emerging Markets Debt - Collective Unit Trust	171.9	2.0%
Equity Options - Private LLC Investment	165.2	1.9%
Derivative Investments	0.2	0.0%
TOTAL INVESTMENTS	\$ 8,516.0	100.0%

*This represents the fair value of investments before the \$1.7 million net investment receivables.

TEN LARGEST EQUITY HOLDINGS BY FAIR VALUE*

	Shares	Top Equity Holdings	Fair Value
1	635,675	MICROSOFT CORP	\$ 129,366,219
2	339,984	APPLE INC	124,026,163
3	27,336	AMAZON.COM INC	75,415,104
4	236,861	BERKSHIRE HATHAWAY INC	42,282,057
5	28,760	ALPHABET INC-CL C	40,655,424
6	3,251,813	OWL ROCK CAPITAL CORP	40,094,854
7	163,710	FACEBOOK INC	37,173,630
8	213,234	JOHNSON & JOHNSON	29,987,097
9	253,154	JPMORGAN CHASE & CO	23,811,665
10	374,290	INTEL CORP	22,393,771

TEN LARGEST FIXED INCOME HOLDINGS BY FAIR VALUE*

	Security	Rate/Maturity	Fair Value
1	U.S. TREASURY BOND	3.000% 05/15/2047 DD 05/15/17	\$ 56,225,813
2	U.S. TREASURY BOND	3.000% 05/15/2045 DD 05/15/15	27,282,851
3	U.S. TREASURY BOND	3.000% 11/15/2044 DD 11/15/14	25,310,581
4	U.S. TREASURY BOND	3.000% 02/15/2048 DD 02/15/18	25,229,749
5	U.S. TREASURY BOND	3.375% 05/15/2044 DD 05/15/14	24,794,081
6	U.S. TIPS	0.750% 07/15/2028 DD 07/15/18	23,784,585
7	U.S. TIPS	2.000% 01/15/2026 DD 01/15/06	23,018,614
8	U.S. TIPS	2.375% 01/15/2025 DD 07/15/04	22,963,953
9	U.S. TREASURY BOND	4.500% 08/15/2039 DD 08/15/09	22,934,880
10	U.S. TIPS	0.125% 10/15/2024 DD 10/15/19	22,763,497

*A complete listing of separate account portfolio holdings is available by contacting the ERSRI Investment offices. ERSRI also invests in various limited partnerships for which individual holdings data is not factored into this analysis

SCHEDULE OF INVESTMENT MANAGEMENT AND SERVICE FEES

FISCAL YEAR ENDED JUNE 30, 2020

	Fair Value of Assets Under Management ¹ (in thousands)	Fees (in thousands)	Basis Points
INVESTMENT MANAGEMENT FEES			
Total Growth Composite	\$ 4,667,559	\$ 36,777	79
Total Income Composite	942,847	9,425	100
Total Stability Composite	2,831,967	37,641	133
Other	73,594	298	40
TOTAL INVESTMENT MANAGEMENT FEES	\$ 8,515,967	\$ 84,141	99
PROFESSIONAL FEES AND OPERATING EXPENSES			
Custodial Fees	\$ 8,515,967	\$ 489	1
Professional Fees — External	8,515,967	1,582	2
Investment Administration Expenses — Internal	8,515,967	1,701	2
Other	8,515,967	170	0
TOTAL PROFESSIONAL FEES AND OPERATING EXPENSES	\$ 8,515,967	\$ 3,942	5
TOTAL INVESTMENT EXPENSES	\$ 8,515,967	\$ 88,083	103

¹ This represents the fair value of investments before the \$1.7 million net receivable.

Employees' Retirement System of Rhode Island
Schedule of Investment Expenses
Fiscal Year Ended June 30, 2020

INVESTMENT MANAGEMENT FEES BY STRATEGY AND ASSET CLASS

TOTAL GROWTH

Global Equity

State Street Global Advisors - Russell 3000	\$ 131,094	
State Street Global Advisors - QVM Tilt	570,878	
State Street Global Advisors - MSCI EAFE - Commingled Fund	199,731	
State Street Global Advisors - MSCI CAD - Commingled Fund	12,803	
State Street Global Advisors - MSCI Emerging Markets - Commingled Fund	310,123	

Private Growth

Private Equity	35,964,083	
Non-Core Real Estate	(1,454,563)	
Opportunistic Private Credit	1,043,008	\$ 36,777,157

INCOME

Harvest - High Yield Infrastructure	665,988	
PIMCO - Liquid Credit	441,350	
WAMCO - Liquid Credit	53,982	
Loomis	484,093	
Heitman	740,081	
Wellington	53,649	
Neuberger - Options	410,522	
Private Credit	6,575,121	9,424,786

STABILITY

Crisis Protection Class

WAMCO – Treasury Long Duration	172,403	
Mackay Shields – Treasury Long Duration	68,018	
Systematic Trend Following (CPC LLC)	2,742,077	

Inflation Protection

Core Real Estate	3,228,439	
Private Infrastructure	6,333,844	
Brown Brothers Harriman - TIPS	197,530	

Volatility Protection

Pyramis - Investment Grade Fixed Income	542,192	
Mackay Shields - Investment Grade Fixed Income	283,454	
Loomis	73,315	
Absolute Return Hedge Funds	23,780,328	
Payden & Rygel	219,512	37,641,112

OTHER

Russell Overlay		296,461
Shott Capital/Hamilton Lane		1,514

Subtotal - Investment Management Fees by Strategy and Asset Class

84,141,030

PROFESSIONAL FEES

Legal	155,866	
BNY Mellon - Custodial	488,657	
Cliffwater	450,000	
PCA	68,750	
NEPC	375,083	
Aberdeen	401,530	
PCA Real Estate	131,250	

Subtotal - Professional Fees

2,071,136

Subtotal - Investment Management & Professional Fees

\$ 86,212,166

OPERATING EXPENSES

Investment Administration - Office of the General Treasurer	\$ 1,701,232	
Other Expenses	169,712	

Subtotal - Operating Expenses

1,870,944

TOTAL INVESTMENT EXPENSES

\$ 88,083,110

**Employees' Retirement System of Rhode Island
Schedule of Fees and Commissions
Fees & Expenses for Investment Consultants, Managers, Advisors, & Service Providers
Fiscal Year Ended June 30, 2020**

Global Equities		Total Growth	Private Growth		Stability			
State Street Global Advisors	\$	1,224,628	<i>Private Equity (continued)</i>					
Subtotal - Global Equities	\$	1,224,628	Kayne Anderson Energy Fund IV	\$	4,443	WAMCO - Treasury Long Duration	\$	172,403
<i>Private Growth</i>			Leapfrog Ventures II		143,264	Mackay Shields - Treasury Long Duration		68,018
Non-Core Real Estate			Leeds Equity IV		2,022	Systematic Trend Following (CPC LLC)		2,742,077
Crow Retail Fund	\$	357,744	Level Equity Growth Partners IV		425,343	Subtotal - Crisis Protection	\$	2,982,498
Exeter Industrial Value Fund III		306,789	Level Equity Opportunity Fund 2018		98,789	<i>Inflation Protection</i>		
GEM Realty Fund V		(3,641,166)	Lighthouse Capital Partners VI		3,943	Core Real Estate		
GEM Realty Fund VI		344,355	MHR Institutional Partners III		82,801	AEW Core Property Trust	\$	795,087
IC Berkeley Partners III		11,881	Nautic Partners V		(16,807)	Heitman HART		757,575
IC Berkeley Partners IV		841,296	Nautic Partners VII		(72,619)	JP Morgan Strategic Property Fund		1,010,801
Linchris Capital Opportunity Fund II		1,066,181	Nautic Partners VIII		643,556	Morgan Stanley Prime Property Fund		664,977
Lone Star Real Estate Fund IV		(755,325)	Nautic Partners IX		276,861	Subtotal - Core Real Estate	\$	3,228,439
Magna Hotel Fund III		1,888	Nordic Capital Fund V		42,973	<i>Private Infrastructure</i>		
Raith Real Estate Fund II		358,568	Nordic Capital Fund VI		72,809	IFM Global Infrastructure, LP	\$	1,021,259
Tri Continental Capital VII		1,695	Nordic Capital Fund VII		(87,274)	ISQ Global Infrastructure Fund, LP		1,775,946
Waterton Venture XII		(348,469)	Nordic Capital Fund VIII		542,409	ISQ Global Infrastructure Fund II, LP		1,186,758
Subtotal - Non-Core Real Estate	\$	(1,454,563)	Odyssey Partners VI		434,959	Star America Infrastructure Fund II		228,725
<i>Opportunistic Private Credit</i>			Paine & Partners Fund IV		111,796	Stonepeak Infrastructure Fund II, LP		11,680
Centerbridge Special Credit Partners II	\$	91,948	Paine & Partners Fund V		1,209,741	Stonepeak Infrastructure Fund II - C		807,266
Clearlake Opportunities Fund II		430,641	Paladin III		2,282,643	Stonepeak Infrastructure Fund III, LP		925,590
Davidson Kempner LDO Fund IV		260,381	Parthenon Investors II		30,051	Homestead USA Farmland Fund II		376,620
Davidson Kempner LDO Fund V		180,798	Point 406 Ventures	*		Subtotal - Private Infrastructure	\$	6,333,844
Oaktree European Principal Fund III		91,088	Point Judith Venture Fund II		70,667	<i>Volatility Protection</i>		
WLR Recovery Fund IV		(11,848)	Providence Equity Partners V		3,043	Absolute Return Hedge Funds		
Subtotal - Opportunistic Private Credit	\$	1,043,008	Providence Equity Partners VI		7,830	Capula Global Relative Value Fund Ltd.	\$	3,521,000
<i>Private Equity</i>			Providence Equity Partners VII		161,418	Davidson Kempner Institutional Partners LP		1,965,290
Advent International GPE VII	\$	289,304	Riverside Capital Appreciation Fund VI		216,007	DE Shaw Composite International Fund		10,655,284
Advent International GPE VIII		931,965	Riverside Micro-Cap Fund III		1,580,808	Elliott Associates LP		3,397,003
Advent International GPE IX		950,257	Riverside Micro-Cap Fund IV		294,378	Graham Capital		1,371,033
Alta Partners VIII	*		Riverside Micro-Cap Fund V		481,354	Viking Global Equities LP		1,151,707
Altaris Constellation Partners IV		174,034	RLH Investors IV		849,847	Winton Futures Fund Ltd.		542,262
Altaris Health Partners IV		834,535	Siris IV		741,431	Undisclosed Manager fees*		1,176,751
Bain Capital Fund X		467,863	Sorenson Capital Partners III		1,157,928	Subtotal - Absolute Return Hedge Funds	\$	23,780,328
Baring Asia Fund VI		419,113	Southwest Fund VII		608,202	Pyramis - Investment Grade Fixed Income	\$	542,192
Baring Asia Fund VII		1,050,748	Tenex Capital Partners II		1,399,583	Mackay Shields - Investment Grade Fixed Income		283,454
Birch Hill Equity Partners III		(332,882)	Thomas, McNeerney & Partners		2,664	Loomis Sayles - Securitized Credit		73,315
Braemar Energy Ventures III	*		Thomas, McNeerney & Partners II		528,259	Payden & Rygel	\$	219,512
Carlyle Asia Partners IV		2,067,873	TPG Partners IV		(55,137)	Subtotal - Volatility Protection	\$	24,898,801
Carlyle Asia Partners V		925,647	TPG Partners V		15,501	<i>Subtotal - Stability</i>		
Castile Ventures III		4,653	TPG Partners VI		107,086	\$		
Centerbridge Capital Partners		(59,984)	Trilantic Capital Partners IV		(78,692)	37,641,112		
Centerbridge Capital Partners III		1,840,437	Vinci III		1,217,650	Other		
Charterhouse Capital Partners VIII		987	W Capital Partners II		8,145	Russell Investments	\$	296,461
Coller International Partners V	*		Wynchurch Capital V		206,607	Hamilton Lane	\$	1,514
Constellation Ventures III	*		Undisclosed Manager fees*		6,282,946	Professional Fees		
CVC European Equity Partners III		(34,919)	Subtotal - Private Equity	\$	35,964,083	Legal		
CVC European Equity Partners IV		2,723	Subtotal - Total Growth	\$	36,777,157	Adler Pollock & Sheehan P.C.		
CVC European Equity Partners V		387,253	Income			\$		
CVC European Equity Partners VI		361,560	<i>Private Credit</i>			155,866		
CVC European Equity Partners VII		779,638	Benefit Street Senior Opps. II	\$	302,262	<i>Investment Custodian</i>		
DCVC Bio II		14,256	Capital Spring Investment Partners V		1,257,097	BNY Mellon - Defined Benefit Plan		
EnCap Energy Capital Fund IX		(1,425,685)	Garrison Opportunity Fund IV		644,410	<i>Investment Advisor</i>		
EnCap Energy Capital Fund X		(828,054)	Owl Rock Capital		487,665	Cliffwater LLC		
EnCap Energy Capital Fund XI		756,050	Summit Partners Credit Fund	*		Pension Consulting Alliance		
Eureka III		38,025	Summit Partners Credit Fund II	*		Pension Consulting Alliance Real Estate		
Eureka IV		200,338	Shamrock IP Content Fund II		249,185	NECP LLC		
Fenway Partners Capital Fund III		(35,392)	Virgo Societas IV		943,898	Aberdeen Asset Management		
First Reserve Fund X		1,279	Zephyrus Aviation Partners		63,205	Subtotal - Investment Advisor		
First Reserve Fund XI		6,048	Undisclosed Manager fees*		2,627,399	\$		
German Equity Partners V		588,338	Sub-total Private Credit	\$	6,575,121	2,071,136		
Granite Global Ventures II	*		Heitman - REITs	\$	740,081	Subtotal - Professional Fees		
Granite Global Ventures III	*		Harvest Partners - High Yield Infrastructure		665,988	\$		
Green Equity Investors V		174,311	Loomis Sayles - Liquid Credit		484,093	86,212,166		
Hastings Equity Fund IV		438,595	PIMCO - Liquid Credit		441,350	Total Investment Management & Professional Fees		
Industry Ventures Partnership Holdings III		1,538,744	WAMCO - Liquid Credit		53,982	\$		
Industry Ventures Partnership Holdings III-C		316,720	Neuberger Berman - Equity Options		410,522	86,212,166		
Industry Ventures Partnership Holdings IV		219,281	Wellington Management - EMD		53,649	Total Investment Management & Professional Fees		
Industry Ventures Partnership Holdings IV-Secondary		88,272	Subtotal - Total Income	\$	9,424,786	\$		
Industry Ventures Partnership Holdings V		479,773				86,212,166		

* Due to contractual obligations with the specific investment firm, ERSRI is prohibited from disclosing all fees charged during the fiscal year.

^ Due to contractual obligations with the specific hedge fund, ERSRI is prohibited from disclosing fund expenses. The amounts presented in this schedule represent management and performance fees incurred during the fiscal year.

Note: Negative amounts listed for managers in Private Equity represents a reversal of accrued carried interest that was previously recorded against the NAV based on unrealized increases to the fair value.

Actuarial Section

Actuary's Certification

General Information

Summary of Benefit Provisions

Actuarial Assumptions and Methods

Solvency Test

Schedule of Funding Progress

Schedule of Employees Added to and Removed from Rolls

Analysis of Financial Experience

Schedule of Active Member Valuation Data



December 16, 2020

Retirement Board
50 Service Avenue, 2nd Floor
Warwick, RI 02886-1021

Members of the Board:

At the request of the Employees' Retirement System of Rhode Island (ERSRI), Gabriel Roeder Smith & Company (GRS) has performed the actuarial valuation for each of the retirement systems administered by ERSRI. The information in the Actuarial Section is based on our annual actuarial valuation reports, with the most recent valuations conducted as of June 30, 2019, and is intended to be used in conjunction with the full reports. The actuarial information in the Financial Section is based on our GASB Statement No. 67 actuarial valuation reports as of June 30, 2020, and is intended to be used in conjunction with the full reports. The valuation reports were approved by the Board.

This letter and the schedules listed below represent GRS' certification of the funded status as required for the financial report for the fiscal year ended June 30, 2020. GRS prepared the following schedules (information prior to 2016 was provided by ERSRI):

- Net Pension Liability of Employers
- Discount Rate Sensitivity
- Schedule of Changes in the Net Pension Liability
- Schedule of Net Pension Liability
- Schedule of Employer Contributions
- Schedule of Active Member Valuation Data
- Schedule of Retirees Added to and Removed from Rolls
- Analysis of Financial Experience
- Solvency Test
- Schedule of Funding Progress
- Retired Members by Benefit Type
- Average Benefit Payments

Data

The ERSRI staff supplied data for retired, active and inactive members as of June 30, 2019. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data. The ERSRI staff also supplied asset data as of June 30, 2019.

Actuarial Assumptions and Methods

The assumptions used for information in the Actuarial Section that is based on our annual actuarial valuation reports, with the most recent valuations conducted as of June 30, 2019, are the same as those used in the last actuarial valuation based on the 2017 Actuarial Experience Investigation Study for the six-year period ending June 30, 2016, approved by the Board on May 15, 2017.

The assumptions used for the actuarial information in the Financial Section that is based on our GASB Statement No. 67 actuarial valuation reports as of June 30, 2020 have been updated from the last actuarial valuation based on the Actuarial Experience Investigation Study for the six-year period ending June 30, 2019, adopted by the Board on May 22, 2020.

We believe the assumptions are internally consistent and are reasonable, based on the actual experience of ERSRI.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities and the calculated contribution rates.

The actuarial assumptions and methods used in this report comply with the parameters for disclosure that appear in Governmental Accounting Standards Board (GASB) Statement Number 67. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of ERSRI.

Furthermore, the assumptions and methods used for funding purposes meet the parameters set by Actuarial Standards of Practice.

Benefits

The benefit provisions reflected in this valuation are those which were in effect on June 30, 2019, and there have been no changes to the benefit provisions since the preceding valuation.

Funding Policy and Objectives

The actuarial cost method and the amortization periods are set by statute. Normal cost rate (as a percent of pay) and actuarial accrued liabilities are computed using the Entry Age Normal actuarial cost method. The employer contribution rate is the sum of two pieces: the employer normal cost rate and the amortization rate. The employer normal cost rate is the difference between the normal cost rate and the member contribution rate. The amortization rate, also determined as a level percent of pay, is the amount required to amortize the unfunded actuarial accrued liability over a closed period. The amortization rate is adjusted for the two-year deferral in contribution rates.



Certification

All of our work conforms with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of Rhode Island state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board.

The undersigned are independent actuaries. All are Members of the American Academy of Actuaries. They all meet the Qualification Standards of the American Academy of Actuaries and they are experienced in performing valuations for large public retirement systems.

Respectfully submitted,



Joseph P. Newton, FSA, MAAA, EA
Pension Market Leader and Actuary



Paul T. Wood, ASA, MAAA, FCA
Consultant

General Information

As required in Rhode Island General Laws, the defined benefit plans within the Employees' Retirement System of Rhode Island (ERSRI) are required to have a certified actuary perform the actuarial valuation of each Plan.

The primary purpose of the actuarial valuation is to provide an amount that the employers should contribute to the Plans, which is referred to as the Annual Required Contribution (ARC). The ARC consists of two components. First, for each fiscal year, the actuary calculates an amount that will be necessary to pay the actuarial estimate of retirement benefits earned in that fiscal year (which is referred to as the "Normal Cost"). Second, in each actuarial valuation, the actuary calculates the funding status of each of the Plans (also known as a "Funded Ratio"), develops a schedule for restoring the funding status of the Plans to 100%, and then includes that fiscal year's portion of that schedule into the calculation of the ARC.

Responsibilities of ERSRI Board

As required in Rhode Island General Laws the employer contribution rates for each Plan are certified annually by the ERSRI Board. These rates are determined actuarially, based on the Plans' provisions, actuarial assumptions, and statutorily approved methodologies in effect as of the valuation date. The Board's current policy is that the contribution rates determined by a given actuarial valuation become effective two years after the valuation date. For example, the rates determined in the June 30, 2019 valuation will be applicable for the fiscal year beginning July 1, 2021 and ending June 30, 2022.

The Retirement Board is required to approve, based on both the recommendations of the actuary and prescribed in Rhode Island General Law, the actuarial methods and assumptions used in the preparation of the actuarial funding valuations. These assumptions include, but are not limited to, mortality, service, economic (investment return, wage inflation, etc.), demographic, and other assumptions.

Actuarial Experience Investigation Studies are conducted every three years by the actuary for the Plans within ERSRI. The actuary will provide a discussion of recent experience, present potential recommendations for new actuarial assumptions and methods, and provide information about the actuarial impact of these recommendations on the liabilities and other key actuarial measures. The study will be conducted in accordance with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. The actuaries preparing the study will have to meet the Qualification Standards of the American Academy of Actuaries. The Board will consider the recommendations and impact of the results of these studies when approving the assumptions and methods to be used in the actuarial funding valuations of each Plan.

For the actuarial valuation for the fiscal year ending June 30, 2020, the methods and assumptions used in the preparation of the valuation were based on the recommendations in the experience

study (for the six-year period ending June 30, 2019) that were approved by the Board on May 22, 2020.

The Retirement Board will conduct an actuarial audit every five to seven years, or if the Board hires a new actuary firm. The basic objectives of the audit are to determine if the valuation results provided by the existing actuary are accurate, if the valuation results are based upon reasonable actuarial assumptions and methods and if they are in compliance with Actuarial Standards of Practice. Finally, is the actuarial information being provided to ERSRI comprehensive enough to assess the present and future financial status of the System.

Actuarial Schedules and Reports

A copy of the June 30, 2019 actuarial valuation report for each Trust is available on our website at www.ersri.org.

Employees' Retirement System (ERS)

Summary of Plan & Benefit Provisions

1. **Effective Date and Authority:** The Employees' Retirement System of Rhode Island (ERSRI) became effective on July 1, 1936 for State Employees and on July 1, 1949 for Teachers. Benefits for State Employees are described in Rhode Island General Laws, Title 36, Chapter 36-10, and benefits for Teachers are described in Rhode Island General Laws, Title 16, Chapter 16-16.
2. **Plan Year:** A twelve-month period ending June 30th.
3. **Administration:** ERSRI is administered by the State of Rhode Island Retirement Board. However, the State Investment Commission is responsible for the investment of the trust assets, including the establishment of the asset allocation policy.
4. **Type of Plan:** ERSRI is a qualified governmental defined benefit retirement plan. Separate contribution rates are determined for state employees and for teachers. For Governmental Accounting Standards Board purposes, it is a cost-sharing multiple employer plan.
5. **Eligibility:** Most Rhode Island state employees and certified public school teachers participate in ERSRI. Certain employees of the Airport Corporation, the Economic Development Corporation, and the Narragansett Bay Commission participate in the plan as though they were state employees. State police officers, state judges, and teachers and administrators in the public colleges and universities are covered by their own separate systems, and are therefore excluded. Certain elected state officials are excluded unless they make an election to join ERSRI. Superintendents, principals, business agents and other administrators participate as teachers. Non-certified public school employees, such as teacher's aides, janitors, secretaries, and bus drivers, cannot participate in ERSRI, although they may be covered by the Municipal Employees Retirement System (MERS) or a separate plan maintained by the town or city. Eligible employees become members as of their date of employment.
6. **Employee Contributions:** Effective July 1, 2012, State Employees (excluding Correctional Officers) and Teachers contribute 3.75% of their salary per year. For State Employees and Teachers with 20 or more years of service as of June 30, 2012 the contribution rate beginning July 1, 2015 will be 11.0%. Correctional Officers contribute 8.75% of their salary per year. The state "picks up" the members' contributions for its employees under the provisions of Internal Revenue Code (IRC) Section 414(h). At their option, the city or town employing a Teacher may also pick up their members' contributions.
7. **Salary:** Salary includes the member's base earnings plus any payments under a regular longevity or incentive plan. Salary excludes overtime, unused sick and vacation leave, severance pay, and other extraordinary compensation. Certain amounts that are excluded from taxable wages, such as amounts sheltered under a Section 125 plan or amounts picked up by the employer under IRC Section 414(h), are not excluded from salary.
8. **Employer Contributions:** For Teachers, the state contributes 40% of the employer contribution rate and the city, town or other local employer contributes the remaining 60%. (This basic 40-

60 split is further adjusted, since the State bears the cost of repaying certain amounts taken from the trust in the early 1990's.) Contributions determined in a given actuarial valuation go into effect two years after the actuarial valuation.

In fiscal years beginning after June 30, 2005, if the State's contribution on behalf of State Employees decreases, the State shall appropriate an additional amount to the retirement trust. Such amount shall be equal to 20% of any decrease in expected contributions.

9. Service: Employees receive credit for service while a member. In addition, a member may purchase credit for certain periods, such as time spent teaching at a public school in another state, by making an additional contribution to purchase the additional service and those costs will be determined at full actuarial value, except for purchases of military service and redeposits of previously refunded contributions. Special rules and limits govern the purchase of additional service and the contribution required.
10. Final Average Compensation (FAC): For members eligible to retire as of September 30, 2009, their Final Average Compensation (FAC) will be based on the highest three consecutive annual salaries. For members not eligible to retire as of September 30, 2009, their FAC will be based on the highest five consecutive years of salary. Monthly benefits are based on one-twelfth of this amount.

11. Retirement

a. Eligibility: As of July 1, 2012, retirement eligibility dates will be as follows.

- (i) Members with less than five years of contributory service as of June 30, 2012 and members hired on or after that date are eligible for retirement on or after their Social Security normal retirement age.
- (ii) Members who had at least five years of contributory service as of June 30, 2012 will be eligible for retirement at an individually determined age. This age is the result of interpolating between the member's Article 7 Retirement Date, described in Section 11(b) below, and the retirement age applicable to members hired after June 30, 2012 in (i) above. The interpolation is based on service as of June 30, 2012 divided by projected service at the member's Article 7 Retirement Date. The minimum retirement age is 59.
- (iii) Members with 10 or more years of contributory service on June 30, 2012 may choose to retire at their Article 7 Retirement Date if they continue to work and contribute until that date. If option is elected, the retirement benefit will be calculated using the benefits you have accrued as of June 30, 2012, i.e., the member will accumulate no additional defined benefits after this date, but the benefit will be paid without any actuarial reduction.
- (iv) Effective July 1, 2015, members will be eligible to retire with full benefits at the earlier of their current RIRSA date described in sections (i) – (iii) above or upon the attainment of age 65 with 30 years of service, age 64 with 31 years of service, age 63 with 32 years of service, or age 62 with 33 years of service.

(v) A member who is within five years of reaching their retirement eligibility date,

described in this section, and has 20 or more years of service, may elect to retire at any time with a reduced benefit. The reduction is 9% for year 1, 8% for year 2, and 7% for each year thereafter.

- (vi) Nurses (RNs) employed by MHRH are eligible to retire when they are at least 55 years old and have a minimum of 25 years of contributing service.
 - (vii) Correctional officers are eligible to retire when they are at least 55 years old and have a minimum of 25 years of contributing service. If a member has 25 years of service as of June 30, 2012, they may retain their Article 7 Retirement Date. Correctional officers who do not work for 25 years will not receive their pension benefit until they reach their Social Security normal retirement age.
- b. Article 7 Retirement Date (member's retirement date as of September 30, 2009):
- (i) Grandfathered Schedule A members—members with at least 10 years of contributory service at June 30, 2005 and eligible for retirement at September 30, 2009—are eligible to retire on or after age 60 if they have credit for 10 years of service, or at any age if they have credit for 28 years of service.
 - (ii) Correctional officers who have reached age 50 and have credit for 20 years of service as of September 30, 2009 are eligible to retire and are grandfathered.
 - (iii) Nurses (RNs) employed by MHRH who have reached age 50 with 25 years of service by September 30, 2009 are eligible to retire and are grandfathered.
 - (iv) Schedule B members—members with less than 10 years of contributory service as of June 30, 2005 and members hired on or after that date—are eligible for retirement on or after age 65 if they have credit for 10 years of service, or on or after age 62 if they have credit for 29 years of service. In addition, a member who attains age 62 with at least 20 years of service credit may retire with an actuarially reduced retirement benefit. The reduction is based on the difference between 65 and the member's age at retirement.
 - (v) Correctional officers who are hired after September 30, 2009 become eligible to retire when they have reach age 55 and have credit for 25 years of service.
 - (vi) Nurses (RNs) employed by MHRH who are hired after September 30, 2009 become eligible when they have reach age 55 and have credit for 25 years of service.
 - (vii) Schedule A members who are not grandfathered, i.e., members who had at least 10 years of creditable service at June 30, 2005 but who were not eligible to retire on September 30, 2009, will be eligible for retirement at an individually determined age. This age is the result of interpolating between the retirement age under the rules applicable to grandfathered employees in (i) above and the retirement age applicable to members hired after September 30, 2009 in (iv) above. The interpolation is based on service as of September 30, 2009 divided by projected service at the retirement age under (i) above.
 - (viii) Correctional officers hired on or before September 30, 2009 who are not eligible for retirement at that date will have an individually determined retirement age. This age

is the result of interpolating between the retirement age for grandfathered employees in (ii) above and the retirement age applicable to members hired after September 30, 2009 in (v) above.

- (ix) Similarly, MHRH nurses (RNs) hired on or before September 30, 2009 who are not eligible to retire at that date will have an individually determined retirement age. This age is the result of interpolating between the retirement age for grandfathered employees in (iii) above and the retirement age applicable to members hired after September 30, 2009 in (vi) above.
- c. Monthly Benefit: Upon retirement, members are eligible to commence a benefit determined as the sum of:
- (i) Benefit accrual of 1.0% per year for all service after June 30, 2015 unless the member had 20 or more years of service as of June 30, 2012 in which case the benefit accrual is 2.0% per year for service after June 30, 2015, and
 - (ii) Benefit accrual of 1.0% per year for all service from July 1, 2012 through June 30, 2015, and
 - (iii) Benefit accruals earned as of June 30, 2012, described in Section (d), below.

For purposes of calculating benefit accruals for service after June 30, 2012, the FAC is determined through retirement. Additionally, Correctional Officers who have completed 25 years of service on or before June 30, 2012 will continue to receive the benefit accrual rate under previous law for years 31 through 35 of service.

- d. Benefit accruals earned as of June 30, 2012: The retirement benefit is a percentage of the member's monthly FAC. This percentage is a function of the member's service as described below. For purposes of determining the benefit accruals earned as of June 30, 2012, the service and FAC are frozen as of June 30, 2012.
- (i) For grandfathered Schedule A members (members with at least 10 years of contributory service at June 30, 2005 and eligible for retirement at September 30, 2009), benefits are based under this schedule (Schedule A):

For Service In:	Years	Benefit Percentage Earned
The first 10 years of service	1 – 10	1.7% per year
The next 10 years of service	11 – 20	1.9% per year
The next 14 years of service	21 – 34	3.0% per year
The next 1 year of service	35	2.0% per year

The maximum benefit is 80% of FAC.

- (ii) For Schedule B members (members with less than 10 years of contributory service

as of June 30, 2005) and for all future hires, benefits are based on the following schedule (Schedule B):

For Service In:	Years	Benefit Percentage Earned
The first 10 years of service	1 – 10	1.6% per year
The next 10 years of service	11 – 20	1.8% per year
The next 5 years of service	21 – 25	2.0% per year
The next 5 years of service	26 – 30	2.25% per year
The next 7 years of service	31 – 37	2.50% per year
The next 1 year of service	38	2.25% per year

The maximum benefit is 80% of FAC.

(iii) For Schedule A members who are not grandfathered, i.e., members who had at least 10 years of creditable service at June 30, 2005 but who were not eligible to retire on September 30, 2009, benefits are based on Schedule A (under (i) above) for service through September 30, 2009 and on Schedule B (under (ii) above) for service after September 30, 2009. The maximum benefit is 80% of FAC.

(iv) MHRH nurses receive a benefit determined under the appropriate formula above.

(v) Correctional Officers receive a benefit computed under a different formula:

For Service In:	Years	Benefit Percentage Earned
The first 30 years of service	1 – 30	2.0% per year
The next 1 year of service	31	6.0% per year
The next 1 year of service	32	5.0% per year
The next 1 year of service	33	4.0% per year
The next 1 year of service	34	3.0% per year
The next 14 years of service	35	2.0% per year

Members with less than 25 years of service as of June 30, 2012 receive a flat 2.0% per year of service for years 1-30, 3.0 per year of service for years 31-35, and 2.0% per year of service in excess of 35. The maximum benefit for correctional officers is the greater of the benefit accrual as of June 30, 2012 or 75% of FAC.

e. Payment Form: Benefits are paid as a monthly life annuity. Optional forms of payment are available; see Item 16 below.

- f. Death benefit: After retirement, death benefits are based on the form of annuity elected. If no option is elected, i.e., if payments are made as a life annuity, there is a minimum death benefit equal to the sum of the member's contributions without interest, less the sum of the monthly benefit payments made before the member's death. In addition, a lump-sum death benefit is payable upon the death of any retired member, regardless of option elected. This lump sum is equal to a percentage of the lump-sum death benefit that was available to the member at the time of retirement. The percentage is 100% in the first year of retirement, 75% in the second year, 50% in the third year, and 25% in the fourth and subsequent years of retirement. However, in no event will the lump sum death benefit be less than \$4,000.

12. Disability Retirement

- a. Eligibility: A member is eligible provided he/she has credit for at least five years of service or if the disability is work-related. Members are not eligible for an ordinary disability benefit if they are eligible for unreduced retirement.
- b. Ordinary Disability Benefit: The benefit payable under the retirement formula, using FAC and service at the time of disability, but not less than 10 years of service.
- c. Accidental Disability Benefit:
 - (i) For applications filed before or on September 30, 2009: An annual annuity equal to two-thirds (66 2/3%) of salary at the time of disability.
 - (ii) For applications filed after September 30, 2009: An accidental disability will be available at two-thirds (66 2/3%) of salary for members who are permanently and totally disabled from engaging in any occupation as determined by the retirement board. If the member is eligible for an accidental disability benefit but deemed able to work in other jobs, the benefit is limited to fifty percent (50%) of salary.
 - (iii) Benefits will be subject to an annual review by ERSRI.
- d. Payment Form: The disability benefit commences immediately upon the member's retirement. Benefits cease upon recovery or reemployment. Disability benefits are payable as a monthly life annuity with a guarantee that, at the member's death, the sum of the member's contributions plus interest as of the date of retirement will be paid in a lump-sum to the member's beneficiary. All alternative forms of payment except for the Social Security Option are permitted in the case of disability retirement.

13. Deferred Termination Benefit

- a. Eligibility: A member with at least five years of service is vested. A vested member who does not withdraw his/her contributions from the fund is eligible for a deferred termination benefit.
- b. Monthly Benefit: The monthly benefit is based on the retirement formula described above. Both FAC and service are determined at the time the member leaves active employment. Benefits may commence when the member has met the requirements for a retirement benefit.

- c. Payment Form: The same as for Retirement above.
- d. Death Benefit before retirement: A member who dies after leaving active service but before retiring is entitled to receive a benefit as described below in item 15.
- e. Death Benefit after Retirement: The same as for Retirement above.

14. Withdrawal (Refund) Benefit

- a. Eligibility: All members leaving covered employment with less than five years of service are eligible. Optionally, vested members (those with five or more years of service) may withdraw their accumulated contributions in lieu of the deferred benefits otherwise due.
- b. Benefit: The member who withdraws receives a lump-sum payment equal to the sum of his/her employee contributions. No interest is credited on these contributions.

15. Death Benefit of Active or Inactive Members

- a. Eligibility: Death must have occurred while an active or an inactive, non-retired member.
- b. Basic Benefit: Upon the death of a nonvested member, or upon the death of an inactive, vested member, or upon the death of an active, unmarried member, a refund of the member's contributions (without interest) is paid. Upon the death of a vested, married, active member, the spouse may elect (i) the refund benefit described above, or (ii) a life annuity paid to the spouse or beneficiary. The amount of the annuity is equal to the amount which would have been paid had the member retired at the time of his death and elected the Joint and 100% Survivor option. If the member was not eligible for retirement, the annuity benefit is reduced 9% per year from the date at which the member would have been eligible had he or she remained in service.
- c. Lump-sum Benefit: \$800 per year of service, with a maximum benefit of \$16,000 and a minimum of \$4,000. This benefit is only available to active members.
- d. Accidental Duty-related Death Benefit: If a member dies as the result of an accident while in the course of his or her duties, in lieu of the above benefits the member's spouse may elect to receive (i) a refund of all contributions made (including interest), and (ii) an annual life annuity equal to 50% of the member's salary at the time of death. The annuity benefit stops when the spouse remarries or dies, although it may be continued to any children under age 18 or to any dependent parents.

16. Optional Forms of Payment: In addition to a life annuity, ERSRI offers members these optional forms of payment on an actuarially equivalent basis:

- a. Option 1 (Joint and 100% Survivor) - A life annuity payable while either the participant or his beneficiary is alive.
- b. Option 2 (Joint and 50% Survivor) - A life annuity payable to the member while both the

member and beneficiary are alive, reducing to 50% of this amount if the member predeceases the beneficiary.

- c. Social Security Option – An annuity paid at one amount prior to age 62, and at a reduced amount after age 62, designed to provide a level total income when combined with the member's age 62 Social Security benefit. Benefits cease upon the member's death. This option is only available for members with at least 10 years of contributory service as of June 30, 2005.

Actuarial equivalence is based on tables adopted by the Employees' Retirement Board.

17. Post-retirement Benefit Increase:

- a. For members with at least 10 years of contributory service as of June 30, 2005 who are retired or eligible to retire as of September 30, 2009, and for all members receiving a disability retirement benefit on that date: a 3.00% compound increase in their retirement benefit each year, beginning in January of the year in which the member reaches the third anniversary of retirement. This increase is not a function of actual increases in the cost of living.
- b. For other members who were retired or were eligible to retire as of June 30, 2010: a compound increase in their retirement benefit each year equal to the increase in the CPI, effective on each anniversary date beginning on the third anniversary of retirement. This increase is limited to 3.00%.
- c. For other members who were not retired or eligible to retire as of June 30, 2010: a compound increase in their first \$35,000 of annual retirement benefit each year equal to the increase in the CPI, effective on each anniversary date beginning on the later of the member's third anniversary of retirement and the month following their 65th birthday. This increase is limited to 3.00%. Additionally, the \$35,000 annual COLA limit is applicable for benefits paid in 2010 and would be indexed annually to increase in the same manner as COLAs for Schedule B members (CPI increase for the year, not greater than 3.00%).
- d. For members who retire after June 30, 2012: members will be eligible to receive cost of living increases at the later of the member's third anniversary of retirement and the month following their SSNRA.
- e. Effective July 1, 2012, the following provisions will apply to all members:
 - (i) The COLA will be suspended for all state employees, teachers, BHDDH nurses, correctional officers, judges and state police until the aggregate funding level of their plans exceeds 80%; however, an interim COLA will be granted in four-year intervals while the COLA is suspended. The first interim COLA may begin January 1, 2017.
 - (ii) Effective July 1, 2015, the COLA is determined based on 50% of the plan's five-year average investment rate of return less 5.0% limited to a range of 0.0% to 4.0%, plus 50% of the lesser of 3.0% or last year's CPI-U increase for a total maximum increase of 3.50%. Previously, it was the plan's five-year average investment rate of return less 5.5% limited to a range of 0.0% to 4.0%

- (iii) The COLA will be limited to the first \$25,000 of the member's annual pension benefit. For retirees and beneficiaries who retired on or before July 1, 2015, years in which a COLA is payable based on the every fourth year provision described in (i) above will be limited to the first \$30,000. These limits will be indexed annually to increase in the same manner as COLAs, with the known values of \$25,000 for 2013, \$25,000 for 2014, \$25,168 for 2015, \$25,855 for 2016, and \$26,098 for 2017.

- f. In addition to the scheduled increases described in section (e) above, there will be a one-time 2% COLA paid in FY2016 on the first \$25,000 of pension benefit for all retirees and beneficiaries who retired on or before June 30, 2012. There will also be two one-time stipends of \$500 payable in FY2016 and FY2017 to retirees and beneficiaries who retired on or before June 30, 2015.

Teachers' Survivors Benefit Plan (TSB) Summary of Plan & Benefit Provisions

1. Plan: The Teachers' Survivors Benefit Plan (TSB) is a qualified governmental plan designed to provide death benefits in the form of a monthly annuity to survivors of covered employees and retirees.
2. Authority: Benefits under the TSB are established by the Rhode Island General Laws, Sections 16-16-25 through 16-16-38
3. Administration: The TSB is administered by the Retirement Board for the Employees' Retirement System of Rhode Island (ERSRI). However, the State investment commission is responsible for the investment of the trust assets, including the establishment of the asset allocation policy.
4. Trust Fund: All contributions are credited to the Teachers' Survivors Benefits Fund, and all benefit payments and refunds are paid from this fund. The fund is commingled with ERSRI for investment purposes.
5. Plan Year: A twelve-month period ending June 30.
6. Coverage and Eligibility: The TSB covers Rhode Island teachers who are (i) covered by the Employees' Retirement System of Rhode Island (ERSRI) but (ii) are not covered under Social Security. State employees, school support personnel, and teachers whose employment is covered by Social Security may not participate. Participation is mandatory for eligible teachers, and all teachers covered by the plan must make contributions. Survivors are eligible for benefits if the member has made contributions for at least six months prior to death or retirement. A covered teacher remains covered after retirement unless the teacher withdraws his or her contributions.
7. Districts Covered: The following school districts are not covered under Social Security, so all of their teachers participate in this plan:

Barrington	Johnston
Bristol/Warren Regional	Lincoln
Burrillville	Little Compton
Central Falls Collaborative	Middletown
Coventry	Newport
Cranston	North Smithfield
Cumberland	Northern RI Collaborative
East Greenwich	Portsmouth
East Providence	Scituate
Foster	Smithfield
Foster-Glocester	Tiverton
Glocester	Westerly

In addition, there are a number of active teachers who teach for districts that are now covered by Social Security, but at one time were not covered. When the district elected to be covered by Social Security, some teachers opted to remain outside that system. These teachers continue to participate in the TSB.

8. Contributions: An annual contribution of 2% of salary, up to \$230 per year, is required. This contribution is divided equally between members and their employers. I.e., members contribute 1.00% of salary, up to \$115 per year.

9. Salary: For TSB, the salary used for contribution purposes and to determine the amount of the survivor benefit is the same salary used for ERSRI.

10. Benefit Schedule: Benefits are paid as a monthly annuity to survivors upon the death of a covered active teacher or a covered retiree. To determine the benefit payable in any situation, the basic monthly spouse's benefit must first be determined. The basic monthly spouse's benefit is a function of the member's highest annual salary, as shown in the following schedule:

Highest Annual Salary	Basic Monthly Spouse's Benefit
\$17,000 or less	\$ 825.00
\$17,001 - \$25,000	\$ 962.50
\$25,001 - \$33,000	\$ 1,100.00
\$33,001 - \$40,000	\$ 1,237.50
More than \$40,000	\$ 1,375.00

If the member is retired at the time of death, the salary used is the highest annual salary that the member earned while teaching.

11. Spouse's benefit: If a covered, married, active or retired member dies, the spouse is entitled to receive the basic monthly spouse's benefit. If there are other survivors entitled to benefits, as described below, this benefit may be increased. The benefit paid to the spouse may not begin prior to age 60, unless family benefits are payable. Benefits to the spouse cease if the spouse remarries.

12. Family Benefit: If at the time of the member's death, the member is married and there are one or more eligible children, then a monthly benefit is payable to the spouse, even if younger than age 60. An eligible child is one under age 18, or under age 23 if a full-time student, or any age, if disabled prior to age 18. The family benefit is a multiple of the basic monthly spouse's benefit. If there is only one eligible child, then the multiple is 150%. If there are two or more eligible children, the multiple is 175%. The benefit continues as long as the spouse is alive and there is at least one eligible child. If the spouse remarries, benefits cease, although children's benefits will be due if there are still eligible children. If family benefits cease because there are no children who remain eligible, spouse's benefits will be paid when the spouse reaches age 60, if he or she has not remarried.

13. Children's Benefits: If a covered member dies, and there is no eligible spouse but there are one or more eligible children, then a child's benefit is payable. The amount payable by the plan is a multiple of the basic monthly spouse's benefit: 75% if there is only one eligible child, 150% if there are two eligible children, and 175% if there are three or more eligible children. Benefits cease when there are no children eligible.

14. Dependent Parent's Benefits: If a member dies with no surviving spouse and no eligible children, but the member has a dependent parent, a benefit equal to the basic monthly spouse's benefit is paid to the dependent parent for life. For this purpose, a dependent parent is one who:
- Is at least 60 years of age,
 - Was dependent on the member for at least half his or her support,
 - Has not remarried since the member's death, and
 - Is not entitled to Social Security benefit from his or her own earnings equal to or greater the TSB benefit

15. Summary of benefits: The following table summarizes the benefit multiples that apply in the different family situations:

Recipients	Multiple of Basic Spouse's Benefit
Spouse alone	100%
Spouse and 1 Child	150%
Spouse and 2 or More Children	175%
One Child Alone	75%
Two Children Alone	150%
Three or More Children Alone	175%
Dependent Parent	100%

16. Refunds: If, prior to retirement, a member terminates service in ERSRI or ceases to be covered under TSB for any other reason, a refund equal to the sum of the member's TSB contributions will be paid to him or her. No interest is credited on these contributions.

If a covered, active teacher dies without an eligible spouse, eligible child or dependent parent, the accumulated member contribution balance, with interest credited at 5.00%, is refunded to the member's beneficiary or estate.

At the time a member retires, the member must choose whether or not to remain covered under the TSB during retirement. If the member chooses not to remain covered, then a refund of the member's contributions, accumulated with interest at 5.00%, is paid to the member. If the member chooses to remain covered, no action is necessary. Retired members who do not elect a refund at the time of retirement may not later elect a refund.

If a covered retired teacher dies without an eligible spouse, eligible child or dependent parent, no benefit is payable, and the member's contribution account remains in the fund.

17. Post-retirement Benefit Increases: Spouses over age 60 receive a cost-of-living adjustment (COLA), each year, in January. The COLA is expressed as a percentage increase in the benefit, equal to the percentage cost-of-living increase provided to Social Security recipients. This increase is a function of increases in the Consumer Price Index. No COLA is paid on children's or family benefits.

Municipal Employees' Retirement System (MERS)

Summary of Plan & Benefit Provisions

1. **Authority:** The Municipal Employees' Retirement System (MERS) covers employees of certain participating Rhode Island municipalities and other local governmental units, such as housing authorities, water districts, etc. Benefits are described in Rhode Island General Laws, Title 45, Chapters 19, 19.1, 21, 21.1, 21.2, and 21.3.
2. **Plan Year:** A twelve-month period ending June 30th.
3. **Administration:** MERS is administered by the State of Rhode Island Retirement Board. However, the State Investment Commission is responsible for the investment of the trust assets, including the establishment of the asset allocation policy.
4. **Type of Plan:** MERS is a qualified governmental defined benefit retirement plan. Separate contribution rates are determined for each participating governmental unit. For Governmental Accounting Standards Board purposes, it is an agent multiple-employer plan.
5. **Eligibility:** General employees, police officers and firefighters employed by electing municipalities participate in MERS. Teachers and administrators are covered by the separate Employees' Retirement System of Rhode Island, but other school employees may be covered by MERS. Eligible employees become members at their date of employment. Anyone employed by a municipality at the time the municipality joins MERS may elect not to be covered. Elected officials may opt to be covered by MERS. Employees covered under another plan maintained by the municipality may not become members of MERS. Police officers and/or firefighters may be designated as such by the municipality, in which case the special contribution and benefit provisions described below will apply to them, or they may be designated as general employees with no special benefits. Members designated as police officers and/or firefighters are treated as belonging to a unit separate from the general employees, with separate contribution rates applicable.
6. **Employee Contributions:** Effective July 1, 2012, General employees contribute 1.00% of their salary per year, and police officers and firefighters contribute 7.00%. General MERS active members with 20 years of service as of June 30, 2012 will contribute 8.25% beginning July 1, 2015. Also, beginning July 1, 2015, MERS Police and Fire active members will contribute 9.00%. In addition, if the municipality has elected one of the optional cost-of-living provisions, an additional member contribution of 1.00% of salary is required. The municipality, at its election, may choose to "pick up" the members' contributions for its employees under the provisions of Internal Revenue Code (IRC) Section 414(h).
7. **Salary:** Salary includes the member's base earnings plus any payments under a regular longevity or incentive plan. Salary excludes overtime, unused sick and vacation leave, severance pay, and other extraordinary compensation. Certain amounts that are excluded from taxable wages, such as amounts sheltered under a Section 125 plan or amounts picked up by the employer under IRC Section 414(h), are not excluded from salary.

8. Employer Contributions: Each participating unit's contribution rate is determined actuarially. Contributions determined in a given actuarial valuation go into effect two years after the actuarial valuation.
9. Service: Employees receive credit for service while a member. In addition, a member may purchase credit for certain periods by making an additional contribution to purchase the additional service. Special rules and limits govern the purchase of additional service and the contribution required.
10. Final Average Compensation (FAC): Prior to July 1, 2012 and for general employee members eligible to retire as of June 30, 2012, the average was based on the member's highest three consecutive annual salaries. Effective July 1, 2012, the average was based on the member's highest five consecutive annual salaries. Once a member retires or is terminated, the applicable FAC will be the greater of the member's highest three year FAC as of July 1, 2012 or the five year FAC as of the retirement/termination date. Monthly benefits are based on one-twelfth of this amount.

11. Retirement

a. General employees: Eligibility

- (i) Members with less than five years of contributory service as of June 30, 2012 and members hired on or after that date are eligible for retirement on or after their Social Security normal retirement age.
- (ii) Members who had at least five years of contributory service as of June 30, 2012 will be eligible for retirement at an individually determined age. This age is the result of interpolating between the member's prior Retirement Date, described in Section (e) below, and the retirement age applicable to members hired after June 30, 2012 in (a) above. The interpolation is based on service as of June 30, 2012 divided by projected service at the member's prior Retirement Date. The minimum retirement age is 59.
- (iii) Members with 10 or more years of contributory service on June 30, 2012 may choose to retire at their prior Retirement Date if they continue to work and contribute until that date. If option is elected, the retirement benefit will be calculated using the benefits accrued as of June 30, 2012, i.e., the member will accumulate no additional defined benefits after this date, but the benefit will be paid without any actuarial reduction.
- (iv) Effective July 1, 2015, members will be eligible to retire with full benefits at the earlier of their current RIRSA date described in sections (a) – (c) above or upon the attainment of age 65 with 30 years of service, age 64 with 31 years of service, age 63 with 32 years of service, or age 62 with 33 years of service.
- (v) A member who is within five years of reaching their retirement eligibility date, as described in this section, and has 20 or more years of service, may elect to retire at any time with an actuarially reduced benefit.

(vi) Prior to July 1, 2012, members were eligible for retirement on or after age 58 if they had credit for 10 or more years of service, or at any age if they had credit for at least 30 years of service. Members eligible to retire before July 1, 2012 were not impacted by the changes to retirement eligibility above.

b. General employees: Monthly Benefit

2.00% of the member's monthly FAC for each year of service prior to July 1, 2012 and 1.00% of the member's monthly FAC for each year of service from July 1, 2012 through June 30, 2105. 1.0% per year for all service after June 30, 2015 unless the member had 20 or more years of service as of June 30, 2012 in which case the benefit accrual is 2.0% per year for service after June 30, 2015. The benefit cannot exceed 75% of the member's monthly FAC

c. Police and Fire employees: Eligibility

- (i) Members are eligible to retire when they are at least 50 years old and have a minimum of 25 years of contributing service or if they have 27 years of contributing service at any age. Members with less than 25 years of contributing service are eligible for retirement on or after their Social Security normal retirement age.
- (ii) Members who, as of June 30, 2012, had at least 10 years of contributing service, had attained age 45, and had a prior Retirement Date (described in Section (e)) before age 52 may retire at age 52.
- (iii) Active members on June 30, 2012 may choose to retire at their prior Retirement Date if they continue to work and contribute until that date. If option is elected, the retirement benefit will be calculated using the benefits accrued as of June 30, 2012, i.e., the member will accumulate no additional defined benefits after this date, but the benefit will be paid without any actuarial reduction.
- (iv) A member who is within five years of reaching their retirement eligibility date, as described in this section, and has 20 or more years of service, may elect to retire at any time with an actuarially reduced benefit.
- (v) Prior to July 1, 2012, members designated as police officers or firefighters were eligible for retirement at or after age 55 with credit for at least 10 years of service or at any age with credit for 25 or more years of service. Members were also eligible to retire and receive a reduced benefit if they are at least age 50 and have at least 20 years of service. If the municipality elected to adopt the 20-year retirement provisions for police officers and/or firefighters, then such a member was eligible to retire at any age with 20 or more years of service. Members eligible to retire before July 1, 2012 were not impacted by the changes to retirement eligibility above.

- d. Police and Fire employees: Monthly Benefit
 - (i) 2.00% of the member's monthly FAC for each year of service, up to 37.5 years (75% of FAC maximum)
 - (ii) If the optional 20-year retirement provisions were adopted by the municipality prior to July 1, 2012: 2.50% of the member's monthly FAC for each year of service prior to July 1, 2012 and 2.00% of the member's monthly FAC for each year of service after July 1, 2012. The benefit cannot exceed 75% of the member's monthly FAC.
 - (iii) Active members (including future hires), members who retire after July 1, 2015 and after attaining age 57 with 30 years of service will have a benefit equal to the greater of their current benefit described in (a) and (b) above and one calculated based on a 2.25% multiplier for all years of service.
- e. Payment Form: Benefits are paid as a monthly life annuity. Optional forms of payment are available; see item 16. Below.
- f. Death Benefit
 - (i) a. After retirement, death benefits are based on the form of annuity elected. If no option is elected, i.e., if payments are made as a life annuity, there is a minimum death benefit equal to the sum of the member's contributions without interest, less the sum of the monthly benefit payments made before the member's death. In addition, a lump-sum death benefit is payable upon the death of any retired member, regardless of option elected. This lump sum is equal to a percentage of the lump-sum death benefit that was available to the member at the time of retirement. The percentage is 100% in the first year of retirement, 75% in the second year, 50% in the third year, and 25% in the fourth and subsequent years of retirement. However, in no event will the lump sum death benefit be less than \$4,000.
 - (ii) Special Police/Fire Death Benefit: A member that does not elect an optional form of payment at retirement will be eligible the active member death benefit, which is an annuity of 30% of the member's salary that will be paid to the member's spouse upon death, for life or until remarriage. Children's benefits may also be payable.

12. Disability Retirement

- a. Eligibility: A member is eligible for a disability retirement provided he/she has credit for at least five years of service or if the disability is work-related. Members are not eligible for an ordinary disability benefit if they are eligible for unreduced retirement.
- b. Ordinary Disability Benefit: The benefit payable under the retirement formula, using FAC and service at the time of disability, but not less than 10 years of service.
- c. Occupational Disability Benefit: An annual annuity equal to two-thirds of salary at the time of disability.
- d. Payment Form: The disability benefit commences immediately upon the member's retirement. Benefits cease upon recovery or reemployment. Disability benefits are payable as a monthly life annuity with a guarantee that, at the member's death, the sum of the member's contributions plus interest as of the date of retirement will be paid in a lump-sum to the member's beneficiary. All alternative forms of payment except for the Social Security Option are permitted in the case of disability retirement.

13. Deferred Termination Benefit

- a. Eligibility: A member with at least ten years of service is vested. Effective July 1, 2012, a member with at least 5 years of service is vested. A vested member who does not withdraw his/her contributions from the fund is eligible for a deferred termination benefit.
- b. Monthly Benefit: The monthly benefit is based on the retirement formula described above. Both FAC and service are determined at the time the member leaves active employment. Benefits may commence at Social Security normal retirement age provided that the member has met the requirements for a retirement benefit.
- c. Payment Form: The same as for Retirement above.
- d. Death Benefit before retirement: A member who dies after leaving active service but before retiring is entitled to receive a benefit as described below in Item 15.
- e. Death Benefit after Retirement: The same as for Retirement above.

14. Withdrawal (Refund) Benefit

- a. Eligibility: All members leaving covered employment with less than ten years (5 years, effective July 1, 2012) of service are eligible. Optionally, vested members (described in Item 13, above) may withdraw their accumulated contributions in lieu of the deferred benefits otherwise due.

- b. Benefit: The member who withdraws receives a lump-sum payment equal to the sum of his/her employee contributions. No interest is credited on these contributions.

15. Death Benefit of Active or Inactive Members

- a. Eligibility: Death must have occurred while an active member or while an inactive, non-retired member. The basic benefit plus the lump-sum benefit are paid on behalf of an active, general employee, and the special police/fire benefit and the lump-sum benefit are paid on behalf of an active police officer or firefighter. If the death was due to accidental, duty-related causes, the accidental death benefit is paid regardless of whether the employee is a general employee, a police officer, or a firefighter. Inactive members receive a refund of their accumulated contributions without interest.
- b. Basic Benefit: Upon the death of a non-vested member, or upon the death of a vested, inactive member, or upon the death of an active, unmarried member, a refund of the member's contributions (without interest) is paid. Upon the death of a vested, married, active member, the spouse may elect (i) the refund benefit described above, or (ii) a life annuity paid to the spouse or beneficiary. The amount of the annuity is equal to the amount which would have been paid had the member retired at the time of his death and elected the Joint and 100% Survivor option. If the member was not eligible for retirement, the annuity benefit is reduced 9% per year from the date at which the member would have been eligible had he or she remained in service.
- c. Lump-sum Benefit: \$800 per year of service, with a maximum benefit of \$16,000 and a minimum of \$4,000. This benefit is only available to active members.
- d. Special Police/Fire Death Benefit: In lieu of the basic benefit above, if a police officer or firefighter dies while an active member, an annuity of 30% of the member's salary will be paid to the member's spouse, for life or until remarriage. Children's benefits may also be payable.
- e. Accidental Duty-related Death Benefit: If a member dies as the result of an accident while in the course of his or her duties, in lieu of the above benefits the member's spouse may elect to receive (i) a refund of all contributions made (including interest), and (ii) an annual life annuity equal to 50% of the member's salary at the time of death. The annuity benefit stops when the spouse remarries or dies, although it may be continued to any children under age 18 or to any dependent parents.

16. Optional Forms of Payment: In addition to a life annuity, MERS offers members these optional forms of payment on an actuarially equivalent basis:

- a. Option 1 (Joint and 100% Survivor) - A life annuity payable while either the participant or his beneficiary is alive.
- b. Option 2 (Joint and 50% Survivor) - A life annuity payable to the member while both the member and beneficiary are alive, reducing to 50% of this amount if the member predeceases the beneficiary.
- c. Social Security Option – An annuity paid at one amount prior to age 62, and at a reduced amount after age 62, designed to provide a level total income when combined with the member's age 62 Social Security benefit. Benefits cease upon the member's death.

Actuarial equivalence is based on tables adopted by the Employees' Retirement Board.

17. Post-retirement Benefit Increase: For members who retire after June 30, 2012: members will be eligible to receive cost of living increases at the later of the member's third anniversary of retirement and the month following their SSNRA (age 55 for members designated as police officers and/or firefighters). When a municipality elects coverage, it may elect either COLA C (covering only current and future active members and excluding members already retired) or COLA B (covering current retired members as well as current and future active members).

- a. The COLA will be suspended for any unit whose funding level is less than 80%; however, an interim COLA may be granted in four-year intervals while the COLA is suspended. The first interim COLA may begin January 1, 2018.
- b. Effective July 1, 2015, the COLA is determined based on 50% of the plan's five-year average investment rate of return less 5.5% limited to a range of 0.0% to 4.0%, plus 50% of the lesser of 3.0% or last year's CPI-U increase for a total maximum increase of 3.50%. Previously, it was the plan's five-year average investment rate of return less 5.5% limited to a range of 0.0% to 4.0%.
- c. The COLA will be limited to the first \$25,000 of the member's annual pension benefit. For retirees and beneficiaries who retired on or before July 1, 2015, years in which a COLA is payable based on the every fourth year provision described in (i) above will be limited to the first \$30,000. These limits will be indexed annually to increase in the same manner as COLAs, with the known values of \$25,000 for 2013, \$25,000 for 2014, \$25,168 for 2015, \$25,855 for 2016, \$26,098 for 2017, \$26,290 for 2018, \$26,687 for 2019, \$27,184 for 2020, and \$27,608 for 2021.

18. Special Provisions Applying to Specific Units: Prior to July 1, 2012, some units had specific provisions that apply only to that unit. The transition rules outlined in Item 11, above, apply to these units in a similar manner.

The following summarizes those provisions:

- a. Rhode Island General Law §45-21.2-22.1 contains special provisions that apply to employees of Burrillville Police, but only if adopted by the Town of Burrillville. The Town adopted these provisions effective July 1, 2006. Under these special provisions, the retirement benefit for a member with 20 or more years of service is improved. The new formula is $60.00\% \times \text{Final Average Compensation (FAC)}$, plus $1.50\% \times \text{FAC} \times \text{Years of Service in Excess of 20}$, with a maximum benefit equal to 75% of FAC. In addition to this benefit change, the member contribution rate increased from 9.00% to 10.20%.
- b. Rhode Island General Law § 45-21.2-6.1, § 45-21.2-5(5), and § 45-21.2-14(d) contain special provisions that apply to members of the South Kingstown police department. Under these special provisions, the member receives a retirement allowance which is a life annuity terminable at the death of the annuitant, and is an amount equal to the sum of two and one-half percent (2.5%) of final compensation multiplied by the years of service accrued after July 1, 1993 and two percent (2%) of final compensation multiplied by the years of service accrued prior to July 1, 1993. The annual retirement allowance in no event shall exceed seventy-five percent (75%) of final compensation. The member contribution rate is 8.00%, plus 1.00% for the adoption of the optional COLA, for a total of 9.00%.
- c. Rhode Island General Law § 45-21.2-5 (9) contains special provisions that apply to members of the Hopkinton police department. Under these special provisions, the final compensation for benefit computation is based on the members' highest year of earnings. In addition, the members shall receive a three percent (3%) escalation of their pension payment compounded each year on January 1st following the year of retirement and continuing on an annual basis on that date. The member contribution rate is 9.00%. Compensation for benefit purposes includes base, longevity, and holiday pay.
- d. Rhode Island General Law § 45-21.2-5 (7) and § 45-21.2-14 contain special provisions that apply to members of the Cranston fire department hired after July 1, 1995 or with less than 5 years of service at that date. Under these special provisions, the final compensation for benefit computation is based on the members' highest year of earnings. In addition, the members shall receive a three percent (3%) escalation of their pension payment compounded each year on January 1st following the year of retirement and continuing on an annual basis on that date. The member contribution rate is 10.00%. Compensation for benefit purposes includes base, longevity, and holiday pay.

- e. Rhode Island General Law §§ 45-21.2-5 (8) and § 45-21.2-14 contain special provisions that apply to members of the Cranston police department hired after July 1, 1995 or with less than 5 years of service at that date. Under these special provisions, the final compensation for benefit computation is based on the members' highest year of earnings. In addition, the members shall receive a three percent (3%) escalation of their pension payment compounded each year on January 1st following the year of retirement and continuing on an annual basis on that date. The member contribution rate is 10.00%. Compensation for benefit purposes includes base, longevity, and holiday pay.

- f. Rhode Island General Law §§ 45-21.2-6.3 contains special provisions that apply to employees of Richmond Police. The Town adopted these provisions on April 3, 2008, effective July 1, 2008. Under these special provisions, members are eligible to retire after attaining 22 years of service. The retirement benefit for a member with 22 or more years of service was improved to $50.00\% \times \text{Final Average Compensation (FAC)}$, plus $2.2727\% \times \text{FAC} \times \text{Years of Service in Excess of 22}$, with a maximum benefit equal to 75% of FAC.

State Police Retirement Benefits Trust (SPRBT) Summary of Plan & Benefit Provisions

1. Effective Date and Authority: The State Police Retirement Benefits Trust (SPRBT) became effective on July 1, 1989 for State police officers originally hired on or after July 1, 1987. Benefits are described in Rhode Island General Laws, Title 42, Chapter 28.
2. Plan Year: A twelve-month period ending June 30th.
3. Administration: The State Police Retirement Benefits Trust is administered by the State of Rhode Island Retirement Board. However, the State Treasurer is responsible for the investment of the trust assets, including the establishment of the asset allocation policy. Assets are commingled for investment purposes with those of the Employees' Retirement System of Rhode Island and various other plans and programs.
4. Type of Plan: The State Police Retirement Benefits Trust is a qualified governmental defined benefit retirement plan. For Governmental Accounting Standards Board purposes, it is a single-employer plan.
5. Eligibility: All State police officers, and the Superintendent of State Police, hired on or after July 1, 1987, participate in this plan. Benefits for State police officers hired before July 1, 1987 are being paid by the State from the general assets of the State, on a pay-as-you-go basis. Eligible employees become members at their date of employment.
6. Salary for Contribution Purposes: Salary includes the member's base earnings plus any payments under a regular longevity or incentive plan. Salary excludes, unused sick and vacation leave, severance pay, and other extraordinary compensation. Members may contribute on up to 400 hours of overtime during their final averaging period to be included in the determination of their benefit. Certain amounts that are excluded from taxable wages, such as amounts sheltered under a Section 125 plan or amounts picked up by the employer under IRC Section 414(h), are not excluded from salary.
7. Employee Contributions: State police officers contribute 8.75% of their salary per year. The State "picks up" the members' contributions for its employees under the provisions of Internal Revenue Code (IRC) Section 414(h).
8. Employer Contributions: The State contributes an actuarially determined percentage of the member's annual salary. Contributions determined in a given actuarial valuation go into effect two years after the actuarial valuation.
9. Service: Employees receive credit for service while a member. In addition, a member may purchase credit for certain periods by making an additional contribution to purchase the

additional service. Special rules and limits govern the purchase of additional service and the contribution required.

10. Final Salary (Salary for Benefit Purposes): Final Salary includes base pay, longevity increases, up to 400 hours of overtime pay, holiday pay and the member's clothing allowance. For members who work more than 25 years, their Final Salary shall not be more than the Final Salary in the 25th year.

11. Final Average Compensation (FAC): For members eligible to retire after June 30, 2012, their FAC will be based on the average of the highest five consecutive years of compensation, which includes base pay, longevity, up to 400 hours of overtime pay and holiday pay.

12. Retirement

a. Eligibility:

- (i) Members other than Superintendent of State Police can retire on or after the attainment of a 50% benefit multiplier.
- (ii) The Superintendent of State Police may retire on or after age 60 if he has credit for 10 years of service.

b. Monthly Benefit:

- (i) For members hired before June 30, 2007:
 - (1) For members eligible to retire as of June 30, 2012, their benefit multiplier will be two and one half percent (2.5%) for a member's first twenty (20) total years, plus three percent (3%) for years after 20. Their monthly benefit will be Final Salary times the benefit multiplier divided by 12.
 - (2) For members who become eligible to retire after July 1, 2012, their benefit multiplier will be two and one half percent (2.5%) for a member's years of service prior to July 1, 2012, plus two percent (2%) for years thereafter. Their monthly benefit will be FAC times the benefit multiplier divided by 12.
- (ii) For members hired after June 30, 2007: Their benefit multiplier is two percent (2.0%) for all years of service. Their monthly benefit will be FAC times the benefit multiplier divided by 12.
- (iii) The Superintendent of State Police receives a minimum benefit of 50% of FAC. The member also earns an additional 3% of FAC for each year of service in excess of 25.
- (iv) In no event shall a member's original retirement allowance exceed sixty-five percent (65%) of FAC.
- (v) Benefits accrued as of June 30, 2012 are protected.

c. Payment Form: Benefits are paid as a monthly life annuity. There are no optional forms of payment available.

d. Death benefit: After the death of a retired member, if the member was married, a benefit

will be paid to the spouse equal to 2.00% of the member's Final Salary for each year of service. There is a minimum benefit of 25% of Final Salary. Benefits are increased one-third for each dependent child. The maximum benefit is 50% of Final Salary. Benefits may not begin before the spouse is age 40, and benefits stop upon the spouse's death or remarriage. Effective July 1, 2012, death benefits will be based on FAC, and not Final Salary.

13. Disability Retirement

- a. Eligibility: A member is eligible if the disability is work-related. (Non work-related disabilities result in a refund.)
- b. Occupational Disability Benefit: 75% of Final Salary.
- c. Payment Form: The disability benefit commences immediately upon the member's retirement. Benefits cease upon recovery or reemployment. Disability benefits are payable as a monthly life annuity. The same provisions that apply upon the death of a retired member apply upon the death of a disabled member.

14. Refunds

- a. Eligibility: All members leaving covered employment prior to eligibility for other benefits.
- b. Benefit: A lump-sum payment equal to the sum of his/her employee contributions. No interest is credited on these contributions.

15. Death Benefit of Active Members

- a. Eligibility: Death must have occurred from a service-related cause, or the member must have 10 or more years of service.
- b. Ordinary Benefit: After the death of an active member, if the member was married, a benefit will be paid to the spouse equal to 2.00% of the member's Final Salary for each year of service. There is a minimum benefit of 25% of Final Salary. Benefits are increased one-third for each dependent child. The maximum benefit is 50% of Final Salary. Benefits may not begin before the spouse is age 40 without a dependent child, and benefits stop upon the spouse's death or remarriage. Effective July 1, 2012, death benefits will be based on FAC, and not Final Salary.
- c. Duty-related Death Benefit: 75% of Final Salary, paid to the spouse or other dependent relative. Benefits cease when the spouse or other relatives die or are no longer dependent.

16. Post-retirement Benefit Increase:

- a. The first COLA will be granted at the later of age 55 and the member's third anniversary of retirement for retirees as of June 30, 2012 and the later of SSNRA and the member's third anniversary of retirement for all other current and future retirees.
- b. Effective July 1, 2012, the following provisions will apply to all members:
 - (i) The COLA will be suspended for all state employees, teachers, BHDDH nurses, correctional officers, judges and state police until the aggregate funding level of their plans exceeds 80%; however, an interim COLA will be granted in four-year intervals while the COLA is suspended. The first interim COLA may begin January 1, 2017.
 - (ii) Effective July 1, 2015, the COLA is determined based on 50% of the plan's five-year average investment rate of return less 5.5% limited to a range of 0.0% to 4.0%, plus 50% of the lesser of 3.0% or last year's CPI-U increase for a total maximum increase of 3.50%. Previously, it was the plan's five-year average investment rate of return less 5.5% limited to a range of 0.0% to 4.0%
 - (iii) The COLA will be limited to the first \$25,000 of the member's annual pension benefit. For retirees and beneficiaries who retired on or before July 1, 2015, years in which a COLA is payable based on the every fourth year provision described in (i) above will be limited to the first \$30,000. These limits will be indexed annually to increase in the same manner as COLAs, with the known values of \$25,000 for 2013, \$25,000 for 2014, \$25,168 for 2015, \$25,855 for 2016, \$26,098 for 2017, \$26,291 for 2018, \$26,687 for 2019, \$27,184 for 2020 and \$27,608 for 2021.
- c. In addition to the increases described in section (b) above, there will be a one-time 2% COLA paid in FY2016 on the first \$25,000 of pension benefit for all retirees and beneficiaries who retired on or before June 30, 2012. There will also be two one-time stipends of \$500 payable in FY2016 and FY2017 to retirees and beneficiaries who retired on or before June 30, 2015.

Judicial Retirement Benefits Trust (JRBT)

Summary of Plan & Benefit Provisions

1. Effective Date and Authority: The Judicial Retirement Benefits Trust (JRBT) became effective on January 1, 1990 for judges hired on or after that date. Benefits are described in Rhode Island General Laws, Title 8, Chapters 3, 8, and 16, Title 28, Chapter 30, and Title 31, Chapter 43.
2. Plan Year: A twelve-month period ending June 30th.
3. Administration: The Judicial Retirement Benefits Trust is administered by the State of Rhode Island Retirement Board. However, the State Investment Commission is responsible for the investment of the trust assets, including the establishment of the asset allocation policy. Assets are commingled for investment purposes with those of the Employees' Retirement System of Rhode Island and various other plans and programs.
4. Type of Plan: The Judicial Retirement Benefits Trust is a qualified governmental defined benefit retirement plan. For Governmental Accounting Standards Board purposes, it is a single-employer plan.
5. Eligibility: All judges or justices of the Supreme Court, a superior court, a district court, a family court, an administrative adjudication court or a workers' compensation court participate in this plan if they were hired on or after January 1, 1990. (These are referred to collectively as state judges.) Benefits for state judges hired before January 1, 1990 are being paid by the state from the general assets of the state, on a pay-as-you-go basis. Eligible state judges become members at their date of employment.
6. Salary: Contributions are based on the judge's salary. Benefits are based on the judge's salary at the time of retirement.
7. Employee Contributions: State judges contribute 8.75% of their salary per year. Effective July 1, 2012, State judges (excluding justices of supreme, superior, family, and district courts) will contribute 12.00% of their salary per year. Active justices of supreme, superior, and family courts as of June 30, 2011 contribute the rate in effect as of June 30, 2012. The State "picks up" the members' contributions for its employees under the provisions of Internal Revenue Code (IRC) Section 414(h).
8. Employer Contributions: The State contributes an actuarially determined percentage of the member's annual salary. Contributions determined in a given actuarial valuation go into effect two years after the actuarial valuation.

9. Final Average Compensation (FAC)

- a. For judges who became members on or before July 2, 1997, one-twelfth of the judge's annual salary at the time of retirement.
- b. For judges who became members after July 2, 1997 but before July 1, 2009, one-twelfth of the average of the judge's highest three consecutive annual salaries.
- c. For judges who became members on or after July 1, 2009, one-twelfth of the average of the judge's highest five consecutive annual salaries.
- d. Benefits for death while an active member are based on the member's salary at the time of death, regardless of when the judge became a member.

10. Full Retirement

- a. Eligibility: All judges are eligible for unreduced retirement at or after age 65 if the judge has served for 20 years, or at or after age 70 after 15 years of service.
- b. Monthly Benefit:
 - (i) Judges who were appointed prior to January 1, 2009 receive 100% of FAC at retirement.
 - (ii) Judges who were appointed on or after January 1, 2009 but prior to July 1, 2009 receive 90% of FAC at retirement, and take an additional 10% reduction to 80% of FAC at retirement if they wish to elect the spouse's death benefit.
 - (iii) Judges who were appointed on or after July 1, 2009 receive 80% of FAC at retirement, or 70% of FAC at retirement if they wish to elect the spouse's death benefit.
- c. Payment Form: Benefits are paid as a monthly life annuity. Members appointed prior to January 1, 2009 automatically receive the spouse's death benefit described below. Members appointed on or after January 1, 2009 must elect to a reduced benefit as described above if they wish to receive the spouse's death benefit. There are no other optional forms of payment available.
- d. Death Benefit: After the death of a retired member, if the member was married, 50% of the retiree's benefit is paid to the surviving spouse for life (or until remarriage) if spouse's death benefit is elected. (No election or benefit reduction is required for members appointed prior to January 1, 2009.)

11. Reduced Retirement

- a. Eligibility: A judge is eligible for a reduced retirement benefit at age 65 if the judge has served for 10 years, or at any age after 20 years of service.
- b. Reduced Retirement Benefit:
 - (i) For judges who were appointed prior to January 1, 2009: 75% of FAC at retirement.
 - (ii) For judges who were appointed on or after January 1, 2009 but prior to July 1, 2009: receive 70% of FAC at retirement, or take an additional 10% reduction to 60% of FAC at retirement if they wish to elect the spouse's death benefit.
 - (iii) For judges who were appointed on or after July 1, 2009: receive 65% of FAC at retirement, or 55% of FAC at retirement if they wish to elect the spouse's death benefit.
- c. Payment Form: Same as for Full Retirement.
- d. Death Benefit: Same as for Full Retirement.

12. Refunds

- a. Eligibility: All judges leaving covered employment for a reason other than death or retirement.
- b. Benefit: A lump-sum payment equal to the sum of his/her employee contributions. No interest is credited on these contributions.

13. Death Benefit of Active Members

After the death of an active member, if the member was married, a benefit will be paid to the spouse until his/her death or remarriage. The benefit is equal to 25% of the judge's salary at death if the member had less than seven years of service. If the judge had at least seven but less than 15 years of service, the benefit is equal to 1/3 of the judge's salary at death. If the judge had at least 15 years of service or if the judge was eligible for retirement, the spouse receives 50% of the judge's salary at death. Benefits are payable until the spouse's death or remarriage. Benefits may be paid to any minor children after the death of the spouse. If an active member dies without having a spouse or minor children, a refund is paid to the member's beneficiary.

14. Post-retirement Benefit Increase:

- a. For members who retired or will be eligible for retirement as of June 12, 2010: members receive an increase equal to 3.00% of the original benefit each year, beginning in January of the year in which the member reaches the third anniversary of retirement. The increase applies to both retirement and death benefits. This increase is not tied in any way to actual increases in the cost of living. (Judges of the administrative adjudication and workers compensation courts receive a compound 3.00% increase, rather than a simple 3.00% increase.)
- b. For members who are or were formally justices of supreme, superior, family, and district courts and were not retired or were not eligible to retire as of June 12, 2010: The member will receive the first COLA upon the later of their third anniversary of retirement or when the member reaches age 65. The annual increase in the member's benefit will be equal to the lesser of their original benefit and the COLA limit in effect in the year the member retires, multiplied by the percentage increase in CPI up to a maximum of 3.0% per year. The COLA will be provided on a simple basis. The applicable annual COLA limit will be \$35,000 in 2010, and increase annually by the percentage increase in the Consumer Price Index (CPI) up to a maximum of 3.0% per year. No COLA would be paid on any part of the annual benefit in excess of this limit. The annual increase in the COLA limit will be determined on a compound basis.
- c. For members who are or were formally judges of the administrative adjudication court, traffic tribunal, and workers' compensation court and were not retired or were not eligible to retire as of June 12, 2010: The member will receive the first COLA upon the later of their third anniversary of retirement or when the member reaches age 65. The annual increase in the member's benefit will be equal to the lesser of the current benefit and the current COLA limit, multiplied by the percentage increase in CPI up to a maximum of 3.0% per year. The COLA will be provided on a compound basis. The applicable annual COLA limit will initially be \$35,000, and increase annually by the percentage increase in the Consumer Price Index (CPI) up to a maximum of 3.0% per year. No COLA would be paid on any part of the annual benefit in excess of this limit. The annual increase in the COLA limit will be determined on a compound basis.
- d. For members who retire after June 30, 2012: members will be eligible to receive cost of living increases at the later of the member's third anniversary of retirement and the month following their SSNRA.
- e. Effective July 1, 2012, the following provisions will apply to all members:
 - (i) The COLA will be suspended for all state employees, teachers, BHDDH nurses, correctional officers, judges and state police until the aggregate funding level of their plans exceeds 80%; however, an interim COLA will be granted in four-year

intervals while the COLA is suspended. The first interim COLA may begin January 1, 2017.

- (ii) Effective July 1, 2015, the COLA is determined based on 50% of the plan's five-year average investment rate of return less 5.5% limited to a range of 0.0% to 4.0%, plus 50% of the lesser of 3.0% or last year's CPI-U increase for a total maximum increase of 3.50%. Previously, it was the plan's five-year average investment rate of return less 5.5% limited to a range of 0.0% to 4.0%
 - (iii) The COLA will be limited to the first \$25,000 of the member's annual pension benefit. For retirees and beneficiaries who retired on or before July 1, 2015, years in which a COLA is payable based on the every fourth year provision described in (i) above will be limited to the first \$30,000. These limits will be indexed annually to increase in the same manner as COLAs, with the known values of \$25,000 for 2013, \$25,000 for 2014, \$25,168 for 2015, \$25,855 for 2016, and \$26,098 for 2017.
- f. In addition to the scheduled increases described in section (e) above, there will be a one-time 2% COLA paid in FY2016 on the first \$25,000 of pension benefit for all retirees and beneficiaries who retired on or before June 30, 2012. There will also be two one-time stipends of \$500 payable in FY2016 and FY2017 to retirees and beneficiaries who retired on or before June 30, 2015.

Rhode Island Judicial Retirement Fund Trust (RIJRFT) Summary of Plan & Benefit Provisions

The benefit provisions reflected in this valuation are those which were in effect on June 30, 2019. The benefit provisions are summarized in Appendix B in the June 30, 2019 actuarial valuation of the JRBT dated December 10, 2019.

State Police Retirement Fund Trust (SPRFT) Summary of Plan & Benefit Provisions

The benefit provisions reflected in this valuation are those which were in effect on June 30, 2019. The benefit provisions are summarized in Appendix B in the June 30, 2019 actuarial valuation of the SPRBT dated December 10, 2019.

Employees' Retirement System (ERS)

Summary of Actuarial Methods and Assumptions

I. Valuation Date

The valuation date is June 30th of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

II. Actuarial Cost Method

The actuarial valuation uses the Entry Age actuarial cost method. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) a rate that will amortize the unfunded actuarial accrued liability (UAAL).

1. First, the actuarial present value of future benefits is determined by discounting the projected benefits for each member back to the valuation date using the assumed investment return rate as the discount rate. For active members, the projected benefits are based on the member's age, service, gender and compensation, and based on the actuarial assumptions. The calculations take into account the probability of the member's death, disability, or termination of employment prior to becoming eligible for a retirement benefit, as well as the possibility of the member will remain in service and receive a service retirement benefit. Future salary increases are anticipated. The present value of the expected benefits payable to all active members is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits. Liabilities for future members are not included.
- B. The employer contributions required to support the benefits are determined as a level percentage of salary, and consist of a normal contribution and an amortization contribution.
- C. The normal contribution is determined using the Entry Age Normal method. Under this method, a calculation is made to determine the rate of contribution which, if applied to the compensation of each individual member during the entire period of anticipated covered service, would be required to meet the cost of all benefits payable on his behalf. The salary-weighted average of these rates is the normal cost rate. This calculation reflects the plan provisions that apply to each individual member.
- D. The employer normal cost rate is equal to (i) the normal cost rate, minus (ii) the member contribution rate.
- E. The actuarial accrued liability is equal to the present value of all benefits less the present value of future normal costs. The present value of the supplemental member contributions for members with 20 years of service as of June 30, 2012 is also subtracted. The unfunded actuarial accrued liability (UAAL) is then determined as (i) the actuarial accrued liability, minus (ii) the actuarial value of assets.

- F. The amortization contribution rate is the level percentage of payroll required to reduce the UAAL to zero over the remaining amortization period. The employer contribution rate determined by this valuation will not be effective until two years after the valuation date. The determination of the contribution rate reflects this deferral. The amortization payment for the applicable fiscal year is first determined based on the individual amortization bases. The covered payroll is projected forward for two years, and we then determine the amortization rate by dividing the amortization payment by the projected payroll. Contributions are assumed to be made monthly throughout the year.

The UAAL was initially being amortized over the remainder of a closed 30-year period from June 30, 1999. In conjunction with The Rhode Island Retirement Security Act of 2011, the amortization period was reset to 25 years as of June 30, 2010 for the UAAL that existed at that time. In addition, in conjunction with the Article 21 legislation, the amortization period for the local portion of the UAAL of the Teacher's Plan existing as of June 30, 2014 was reset to 25 years from June 30, 2014. New gains and losses each year will be amortized over individual 20 year periods. At any time that the System is in an overfunded status, the amortization schedule will be a rolling 20 year amortization of any surplus.

III. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Offsetting unrecognized gains and losses are immediately recognized, with the shortest remaining bases recognized first and the net remaining bases continue to be recognized on their original timeframe. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses.

IV. Actuarial Assumptions

A. Economic Assumptions

1. Investment return: 7.00% per year, compounded annually, composed of an assumed 2.50% inflation rate and a 4.50% net real rate of return. This rate represents the assumed return, net of all investment and administrative expenses.
2. Overall Wage Inflation: 3.00% per year composed of an assumed 2.50% inflation assumption rate and a 0.50% general productivity component. This assumption represents wage inflation for the economy as a whole and is used as a starting point for determining other wage related assumptions and is used as the rate of growth for new entrant salaries in any open group projections.

3. Salary increase rate: The sum of (i) a 3.00% wage inflation assumption (composed of a 2.50% price inflation assumption and a 0.50% additional general increase and (ii) a service-related component for promotion and merit as shown below:

Salary Increase Rates				
Service	State Employees		Teachers	
	Service-Related Component	Total Increase	Service-Related Component	Total Increase
(1)	(2)	(3)	(4)	(5)
1	1.25%	4.25%	10.00%	13.00%
2	2.25%	5.25%	9.00%	12.00%
3	3.25%	6.25%	6.25%	9.25%
4	3.00%	6.00%	5.50%	8.50%
5	3.00%	6.00%	5.00%	8.00%
6	2.75%	5.75%	5.00%	8.00%
7	1.50%	4.50%	4.50%	7.50%
8	1.25%	4.25%	4.25%	7.25%
9	1.25%	4.25%	4.00%	7.00%
10	1.25%	4.25%	4.00%	7.00%
11	1.25%	4.25%	0.00%	3.00%
12	2.25%	5.25%	0.00%	3.00%
13	1.50%	4.50%	0.00%	3.00%
14	1.25%	4.25%	0.00%	3.00%
15	1.25%	4.25%	0.00%	3.00%
16	1.25%	4.25%	0.00%	3.00%
17	0.75%	3.75%	0.00%	3.00%
18	0.75%	3.75%	0.00%	3.00%
19	0.75%	3.75%	0.00%	3.00%
20	0.75%	3.75%	0.00%	3.00%
21	0.75%	3.75%	0.00%	3.00%
22-24	0.50%	3.50%	0.00%	3.00%
25 or more	0.25%	3.25%	0.00%	3.00%

Salary increases are assumed to occur once a year, on July 1. Therefore the pay used for the period year following the valuation date is equal to the reported pay for the prior year, increased by the salary increase assumption. For employees with less than one year of service, the reported rate of pay is used rather than the fiscal year salary paid.

4. Payroll growth rate: In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 3.00% for State Employees and 2.50% for Teachers per year. This increase rate is solely due to the effect of wage inflation on salaries and the demographics of the current population, with no allowance for future membership growth.
5. Post-retirement Benefit Increase: Post-retirement benefit increases are assumed to be 2.1%, per annum, while the plan has a funding level that exceeds 80%; however, an interim COLA will be granted in four-year intervals while the COLA is suspended. The second such COLA will be applicable in Calendar Year 2021. As of June 30, 2018, it is assumed that the COLAs will be suspended for 9 years due to the current funding level of the plans. The actual amount of the COLA is determined based on 50% of the plan's five-year average investment rate of return minus 5.00% which will range from zero to 4.0%, and 50% of the lesser of 3% or last year's CPI-U increase for a total maximum increase of 3.50%.

B. Demographic Assumptions

1. Post-termination mortality rates (non-disabled)
 - a. Male state employees: RP-2014 Combined Healthy for Males with Blue Collar adjustments, projected with the ultimate values of the MP Scale.
 - b. Female state employees: RP-2014 Combined Healthy for Females, projected with the ultimate values of the MP Scale.
 - c. Male teachers: RP-2014 Combined Healthy for Males with White Collar adjustments, projected with the ultimate values of the MP Scale.
 - d. Female teachers: RP-2014 Combined Healthy for Females with White Collar adjustments, projected with the ultimate values of the MP Scale.

The following table provides the life expectancy for individuals retiring in future years based on the assumption with full generational projection

Life Expectancy for an Age 65 Retiree in Years					
Group	Year of Retirement				
	2010	2015	2020	2025	2030
State Employee - Male	21.0	21.4	21.8	22.3	22.7
State Employee - Female	24.1	24.5	24.9	25.3	25.8
Teacher – Male	23.4	23.8	24.2	24.6	25.0
Teacher – Female	25.1	25.5	25.9	26.2	26.6

2. Post-retirement mortality (disabled lives): One set of rates is used for both state employees and teachers
 - a. Males: RP-2014 Disabled Retiree Table for males, projected with the ultimate values of the MP Scale.
 - b. Females: RP-2014 Disabled Retiree Table for males, projected with the ultimate values of the MP Scale.

Sample rates are shown below:

Number of Deaths per 100		
Age	Males	Females
25	0.20	0.09
30	0.49	0.23
35	0.86	0.42
40	1.27	0.66
45	1.68	0.92
50	2.04	1.19
55	2.34	1.45
60	2.66	1.70
65	3.17	2.09
70	4.03	2.82
75	5.43	4.10

3. Pre-retirement mortality: Use the RP-2014 employee table for males and females. Teacher rates are 75% of the base table. Sample rates are shown below:

Number of Deaths per 100				
Age	State Employees		Teachers	
	Males	Females	Males	Females
25	0.05	0.02	0.04	0.01
30	0.05	0.02	0.03	0.02
35	0.05	0.03	0.04	0.02
40	0.06	0.04	0.05	0.03
45	0.10	0.07	0.07	0.05
50	0.17	0.12	0.13	0.08
55	0.28	0.17	0.21	0.13
60	0.47	0.24	0.35	0.18
65	0.83	0.37	0.62	0.28
70	1.39	0.63	1.04	0.47

4. Disability rates: Sample rates are shown below. Ordinary disability rates are not applied to members eligible for retirement. One half the accidental disabilities are assumed to be totally and permanently disabled from any occupation.

Age	Number of Disabilities per 1,000							
	State Ordinary Males	State Accidental Males	State Ordinary Females	State Accidental Females	Teachers Ordinary Males	Teachers Accidental Males	Teachers Ordinary Females	Teachers Accidental Females
25	0.32	0.14	0.36	0.11	0.27	0.03	0.18	0.03
30	0.39	0.17	0.44	0.13	0.33	0.03	0.22	0.03
35	0.53	0.23	0.60	0.18	0.45	0.05	0.30	0.05
40	0.77	0.33	0.88	0.26	0.66	0.07	0.44	0.07
45	1.26	0.54	1.44	0.43	1.08	0.11	0.72	0.11
50	2.14	0.92	2.44	0.73	1.83	0.18	1.22	0.18
55	3.54	1.52	4.04	1.21	3.03	0.30	2.02	0.30
60	4.94	2.12	5.64	1.69	4.23	0.42	2.82	0.42
65	8.09	3.47	9.24	2.77	6.93	0.69	4.62	0.69

5. Termination rates (for causes other than death, disability, or retirement) are a function of the member's gender and service. Termination rates are not applied to members eligible for retirement. Rates are shown below:

Service	State Employees	Teachers
1	0.160000	0.150000
2	0.101160	0.100000
3	0.080768	0.075000
4	0.068839	0.064811
5	0.060375	0.048163
6	0.053810	0.038256
7	0.048446	0.031695
8	0.043911	0.027033
9	0.039983	0.023553
10	0.036518	0.020857
11	0.033418	0.018708
12	0.030614	0.016956
13	0.028054	0.015500
14	0.025699	0.014271
15	0.023519	0.013220
16	0.021489	0.012312
17	0.019590	0.011518
18	0.017807	0.010820
19	0.016125	0.010200
20	0.014535	0.009646
21	0.013026	0.009149
22	0.011590	0.008700
23	0.010222	0.008292
24	0.008914	0.007920
25	0.007662	0.007580

6. Retirement rates (unreduced):

For State Employees (except Correctional Officers) and MERS General: a flat 20% per year retirement probability for members eligible for unreduced retirement. A 35% retirement probability at first eligibility will be only applied if they have reached age 65 or with at least 25 years of service.

For Teachers: a flat 25% per year retirement probability for members under the age of 67 eligible for unreduced retirement, a flat 35% per year retirement probability for members at age 67 or older eligible for unreduced retirement. A 40% retirement probability at first eligibility will be only applied if they have reached age 65 or with at least 25 years of service.

For Correctional Officers: A set of unisex rates, indexed by service, as shown below. Because of the enactment of Article 7 in 2009 and the RIRSA in 2011, the retirement assumption was modified for members whose retirement ages were delayed. Members who would have been assumed to retire prior to under the rules in effect before the enactment of the provision changes are assumed to retire when first eligible for an unreduced benefit. This demand is recognized by adding a 5% probability for every year the member has been deferred.

Corrections	
Service	Ret. Rate
20-24	2.0%
25-27	3.0%
28	4.0%
29	5.0%
30	6.0%
31	7.0%
32	8.0%
33	9.0%
34	10.0%
35	30.0%
36-39	25.0%
40	100.0%

7. Reduced retirement: Rates based on the years from Normal Retirement Age, as shown below:

Years from Normal Retirement Age	Ret. Rate
5	2%
4	2%
3	2%
2	3%
1	4%

C. Other Assumptions:

1. Valuation payroll (used for determining the amortization contribution rate): Prior aggregate fiscal year payroll projected forward one year using the overall payroll growth rate.
2. Percent married: 85% of employees are assumed to be married.
3. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
4. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity. The spousal annuity death benefit for vested married participants is valued using a static optional form conversion factor of 0.84 and 0.78 for males and females respectively.
5. For active death benefits, the liability is initially calculated based on the ordinary death benefit provisions, and then a 7.5% load is applied to account for duty related benefits.
6. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.
7. Recovery from disability: None assumed.
8. Remarriage: It is assumed that no surviving spouse will remarry and there will be no children's benefit.
9. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available.

10. Investment and administrative expenses: The assumed investment return rate represents the anticipated net return after payment of all investment and administrative expenses.
11. Inactive members: For members who terminated service prior to June 30, 2017 liabilities for inactive members are approximated as a multiple of their member contribution account balances. For non-vested inactive members, the multiple is 1.0. For vested inactive members, the multiple is 8.0 for members with 25 or more years of service, 3.0 for vested inactive members age 45 or older with less than 25 years of service, and 1.0 for other vested inactive members younger than age 45. For members who terminated service after June 30, 2017, the expected liability at termination has been carried forward with interest from the last valuation the member was active.
12. Decrement timing: For all non-teachers employees (State Employees, MERS General, and MERS P&F), decrements are assumed to occur at the middle of the year. For Teachers the retirement and termination decrements are assumed to occur at the beginning of the year, while death and disability are assumed to occur at the middle of the year.
13. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
14. Decrement relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
15. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
16. Benefit Service: All members are assumed to accrue one year of eligibility service each year.
17. All calculations were performed without regard to the compensation limit in IRC Section 401(a)(17) and the benefit limit under IRC Section 415.

D. Participant Data

Participant data was supplied on electronic files. There are separate files for (i) active and inactive members, and (ii) members and beneficiaries receiving benefits.

The data for active members included name, an identification number, gender, a code indicating whether the member was active or inactive, a code indicating employee type (State Employee or Teacher), date of birth, service, salary, date of last contribution, accumulated member contributions without interest, accrued benefit multiplier as of June 30, 2014, Final Average Compensation as of June 30, 2012, Article 7 Retirement Date, and the Rhode Island Retirement Security Act Retirement Date. For retired members and beneficiaries, the data included name, an identification number, gender, date of birth, date of retirement, amount of benefit, the amount of adjustment after age 62 for anyone electing the Social Security option, a code indicating the option elected and the type of retiree (service retiree, disabled retiree, beneficiary), and if applicable, the joint pensioner's date of birth and gender.

Salary supplied for the current year was based on the earnings for the fiscal year preceding the valuation date. However, for members with less than one year of service, the current rate of salary was used. This salary was adjusted by the salary increase rate for one year. An additional adjustment was made so that a member's compensation would not be less than it was in the previous year.

In defining who was an active member, members with a date of last contribution in the final quarter of the fiscal year were considered active. Otherwise, the member was defined as inactive.

To correct for incomplete and inconsistent data, we first attempted to pulled data from prior valuation files and then made general assumptions to fill in the rest. These modifications had no material impact on the results presented.

Teachers' Survivors Benefit Plan (TSB)

Summary of Actuarial Methods and Assumptions

A. Basic Actuarial Assumptions

Except for special assumptions that are specific to the Teachers' Survivors Benefit Plan, described below, the actuarial assumptions used in this valuation are the same as the ones used for Teachers in the June 30, 2018 actuarial valuation of the Employees' Retirement System of Rhode Island (ERSRI). I.e., this valuation uses the same 7.00% investment return rate, the same salary increase rates, the same mortality, disability, and retirement rates used in that valuation.

B. Special TSB Assumptions

1. Family Makeup: The following schedule shows the assumptions about the makeup of the member's family at the time of death:

Family Makeup	Probability (By Attained Age)								
	20	25	30	35	40	45	50	60	65
Spouse Only	5%	14%	14%	10%	11%	15%	32%	75%	70%
Spouse and 1 Child	5%	12%	20%	17%	22%	23%	18%	0%	0%
Spouse and 2 or More Children	4%	13%	36%	46%	41%	35%	24%	0%	0%
One Child Alone	5%	6%	3%	7%	8%	10%	6%	0%	0%
Two Children Alone	3%	7%	4%	7%	6%	3%	1%	0%	0%
Three or More Children Alone	1%	4%	4%	5%	4%	1%	1%	0%	0%
Dependent Parent Alone	0%	0%	0%	0%	0%	0%	0%	0%	0%
No Dependents	77%	44%	19%	8%	8%	13%	18%	25%	30%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

2. Ages: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses. Parents are assumed to be 30 years older than the member, and children are assumed to be 30 years younger than the member. All children are assumed to remain in school until age 23.

3. Remarriage: It was assumed that no spouses would remarry after the member's death.

4. Refunds at Retirement: Please refer to the Family Makeup grid above for the assumed percentage of members will elect a refund at retirement. (it is the proportion of the membership assumed to be without an eligible dependent.)

5. Deferred beneficiaries: No specific data was available for deferred beneficiaries— those spouses of deceased members who are not yet age 60 and who are not receiving family benefits. They will be entitled to receive a spouse’s benefit upon reaching age 60. To estimate this liability, we assumed that these members would receive an immediate refund of their TSB contributions.

6. Inactive members with contributions on deposit: It was assumed that 100% of members who are inactive, nonretired, and nonvested would receive an immediate refund of their TSB contributions.

7. Cost-of-living adjustment (COLA): COLAs are assumed to be 2.50% per year, since that is the ERSRI inflation assumption.

C. Actuarial Methods

1. Valuation date: The TSB plan is valued as of June 30, the last day of the plan’s fiscal year. Valuations in the future will be done biennially, in every odd year.

2. Actuarial cost method: The Entry Age Normal actuarial cost method is used to determine the normal cost and actuarial accrued liability. The normal cost is the level dollar amount (not the level percentage of pay used for ERSRI) required to fund a members benefit from entry age to ultimate retirement. The level-dollar version of the Entry Age Normal method was used for consistency with the current contribution requirement of \$115.00/year for almost all members.

3. Actuarial asset method: The market value of fund assets is used as the actuarial value, rather than using a smoothed value.

D. Participant Data

Participant data was supplied on electronic files. There were separate files for (i) covered active and inactive, nonretired members, (ii) retirees who had left their contributions on deposit, and (iii) survivors receiving benefits. For active and inactive/nonretired members, we used the same participant data that we used for the valuation of ERSRI, but excluded members not covered under the TSB. For covered retirees, we received a file showing each member’s date of birth, sex, TSB contribution account balance (without interest), and final average salary. For beneficiaries receiving benefits, we received a file that included for each deceased member the spouse’s (or child’s) date of birth, sex, the amount of the monthly benefit, and a code indicating the kind of benefit being paid (e.g., spouse’s benefit, family benefit with two or more children, child’s benefit, etc.).

Municipal Employees' Retirement System (MERS) Summary of Actuarial Methods and Assumptions

I. Valuation Date

The valuation date is June 30th of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

II. Actuarial Cost Method

The actuarial valuation uses the Entry Age actuarial cost method. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) a rate that will amortize the unfunded actuarial accrued liability (UAAL).

The employer normal cost rate is the total normal cost rate, less the member contribution rate. The total normal cost rate is the level percentage-of-pay contribution which would theoretically pay for all benefits if it had been made each year from the inception of the plan and if there had never been any changes of benefits, any changes of assumptions or methods, or any experience gains or losses. The normal costs are determined on an individual basis.

The actuarial accrued liability is the difference between the actuarial present value of all future benefits and the actuarial present value of future normal costs. It is the amount to which the normal costs would have accumulated under the assumptions described in the preceding paragraph. The unfunded actuarial accrued liability (UAAL) is the difference between the actuarial accrued liability and the actuarial value of assets.

The amortization contribution rate is the level percentage of payroll required to reduce the UAAL to zero over the remaining amortization period. The employer contribution rate determined by this valuation will not be effective until two years after the valuation date. The determination of the contribution rate reflects this deferral. The amortization payment for the applicable fiscal year is first determined based on the individual amortization bases. The covered payroll is projected forward for two years, and we then determine the amortization rate by dividing the amortization payment by the projected payroll. Contributions are assumed to be made monthly throughout the year.

For underfunded units, the amortization period for the UAAL as of June 30, 2010 was set to 25 years, or 17 years as of the current valuation date. In conjunction with the Article 21 legislation, employers were given the option to reset the amortization period for the UAAL existing as of June 30, 2014 to 25 years from June 30, 2014. All new gains and losses each year will be amortized over individual 20 year periods. At any time that a unit is in an overfunded status, the amortization schedule will be a rolling 20 year amortization of any surplus.

III. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Offsetting unrecognized gains and losses are immediately recognized, with the shortest remaining bases recognized first and the net remaining bases continue to be recognized on their original timeframe. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. The actuarial value is calculated in the aggregate for all units combined, and then it is allocated to each unit in proportion to that unit's market value.

IV. Actuarial Assumptions

A. Economic Assumptions

1. Investment return: 7.00% per year, compounded annually, composed of an assumed 2.50% inflation rate and a 4.50% net real rate of return. This rate represents the assumed return, net of all investment and administrative expenses.
2. Salary increase rate: For general employees, the sum of (i) a 3.00% wage inflation assumption (composed of a 2.50% price inflation assumption and a 0.50% additional general increase), and (ii) a service-related component as shown below:

General Employees		
Years of Service	Service-Related Component	Total Increase
1	4.25%	7.25%
2	3.25	6.25
3	3.00	6.00
4	2.75	5.75
5	2.50	5.50
6	2.25	5.25
7	1.50	4.50
8	1.00	4.00
9-10	0.75	3.75
11-15	0.50	3.50
16 or more	0.25	3.25

For police/fire employees, the sum of (i) a 3.00% wage inflation assumption (composed of a 2.50% price inflation assumption and a 0.50% additional general increase), and (ii) a service-related component as shown below:

Police/Fire Employees		
Years of Service	Service-Related Component	Total Increase
1	11.00%	14.00%
2	10.00	13.00
3	8.00	11.00
4	5.00	8.00
5	3.50	6.50
6	4.00	7.00
7	1.50	4.50
8	1.50	4.50
9 or more	1.00	4.00

Salary increases are assumed to occur once a year, on July 1. Therefore the pay used for the period year following the valuation date is equal to the reported pay for the prior year, increased by the salary increase assumption. For employees with less than one year of service, the reported rate of pay is used rather than the fiscal year salary paid.

3. Payroll growth rate: In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 3.00% per year. This increase rate is solely due to the effect of wage inflation on salaries, with no allowance for future membership growth.
4. Post-retirement Benefit Increase: Post-retirement benefit increases are assumed to be 2.10%, per annum for all units with the COLA provision. The actual COLA will be determined based on the plan's four-year average investment rate of and actual CPI. It is known that the COLA for calendar years 2019 and 2020 will be 1.86% and 1.56% respectively, and this has been reflected in the valuation.

B. Demographic Assumptions

1. Post-retirement mortality rates:

- a. Male employees: RP-2014 Combined Healthy for Males with Blue Collar adjustments, projected with Scale Ultimate MP16.
- b. Female employees: RP-2014 Combined Healthy for Females, projected with Scale Ultimate MP16.
- c. Disabled males – RP-2014 Disabled Retiree Table for males, projected with Scale Ultimate MP16.
- d. Disabled females – RP-2014 Disabled Retiree Table for males, projected with Scale Ultimate MP16.

2. Pre-retirement mortality (combined ordinary and duty):

- a. Male employees: RP-2014 Employee table for Males.
- b. Female employees: RP-2014 Employee table for

Females.. Sample rates are shown below:

Number of Deaths per 100		
Age	Males	Females
25	0.05	0.02
30	0.05	0.02
35	0.05	0.03
40	0.06	0.04
45	0.10	0.07
50	0.17	0.11
55	0.28	0.17
60	0.47	0.24
65	0.83	0.37
70	1.39	0.63

3. Disability rates: Sample rates per 1,000 active members are shown below. Ordinary disability rates are not applied to members eligible for unreduced retirement.

Age	Number of Disabilities per 1,000					
	General Employees, Ordinary, Males	General Employees, Accidental, Males	General Employees, Ordinary, Females	General Employees, Accidental, Females	Police & Fire, Ordinary, Males and Females	Police & Fire, Accidental, Males and Females
25	0.45	0.14	0.23	0.05	0.26	1.70
30	0.55	0.17	0.28	0.06	0.33	2.20
35	0.75	0.23	0.38	0.08	0.44	2.90
40	1.10	0.33	0.55	0.11	0.66	4.40
45	1.80	0.54	0.90	0.18	1.08	7.20
50	3.05	0.92	1.53	0.31	1.82	12.10
55	5.05	1.52	2.53	0.51	1.82	12.10
60	7.05	2.12	3.53	0.71	1.82	12.10
65	11.55	3.47	5.78	1.16	1.82	12.10

4. Termination rates (for causes other than death, disability, or retirement) are a function of the member's service. Termination rates are not applied to members eligible for retirement. Rates are shown below:

Service	General Employees, Males & Females	Police & Fire, Males & Females
1	0.175000	0.100000
2	0.118774	0.047300
3	0.101396	0.036903
4	0.086148	0.030821
5	0.072887	0.026506
6	0.061471	0.023158
7	0.051757	0.020424
8	0.043604	0.018111
9	0.036868	0.016108
10	0.031408	0.014342
11	0.027082	0.012761
12	0.023746	0.011332
13	0.021259	0.010026
14	0.019479	0.008826
15	0.018263	0.007714
16	0.017470	0.006679
17	0.016956	0.005711
18	0.016579	0.004802
19	0.016198	0.003944
20	0.015669	0.000000
21	0.014851	0.000000
22	0.013602	0.000000
23	0.011778	0.000000
24	0.009239	0.000000
25	0.005841	0.000000

5. Retirement rates (unreduced):

For MERS General Employees: a flat 20% per year retirement probability for members eligible for unreduced retirement. A 35% retirement probability at first eligibility will be only applied if they have reached age 65 or with at least 25 years of service.

For MERS P&F: Unisex, service based rates are used for police and fire. Rates depend on whether the unit had elected the optional 20-year retirement provisions. All members are assumed to retire upon reaching age 65 with at least ten years of service. Because of the enactment of the RIRSA in 2011, the retirement assumption was modified for members not eligible for retirement by July 1, 2012. Members who would have been assumed to retire at an earlier age under the rules in effect before the enactment of the provision changes are assumed to retire when first eligible for an unreduced benefit. This demand is recognized by adding a 5% probability for every year the member has been deferred.

Police and Fire		
Service	Units with the Optional 20-year retirement election	Units without the Optional 20-year retirement election
20	12.0%	
21	10.0%	
22	10.0%	
23	10.0%	
24	12.0%	
25	14.0%	50.0%
26	16.0%	16.0%
27	18.0%	18.0%
28	20.0%	20.0%
29	20.0%	20.0%
30+	35.0%	35.0%

100% of members eligible to retire as of June 30, 2012 are assumed to retire once they reach 35 years of service. All members not eligible to retire as of June 30, 2012 are assumed retire at SSNRA, if eligible.

Members are eligible to receive an enhanced benefit if they are at least age 57 with 30 or more years of service. In the year prior to becoming eligible for this provision, no members are assumed to retire and 20% is added to the retirement rate in the first year that they are eligible for this benefit.

6. Reduced retirement rates: No early retirements are assumed for police and fire. Rates for general employees are based on the years from Retirement Eligibility for unreduced benefits, as shown below:

Years from Normal Retirement Age	Ret. Rate
5	2%
4	2%
3	2%
2	3%
1	4%

C. Other Assumptions:

1. Valuation payroll (used for determining the amortization contribution rate): Prior aggregate fiscal year payroll projected forward one year using the overall payroll growth rate.
2. Percent married: 80% of employees are assumed to be married.
3. For the special post-retirement police and fire survivor benefit, we have assumed 80% of members will have a spouse at the time of retirement and 10% of those members would choose option 1 or option 2.
4. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
5. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity. The spousal annuity death benefit for vested married participants is valued using optional form conversion factors based on a unisex mortality table.
6. For active death benefits, the liability is initially calculated based on the ordinary death benefit provisions, and then a 7.5% load is applied to account for duty related benefits.
7. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.
8. Recovery from disability: None assumed.
9. Remarriage: It is assumed that no surviving spouse will remarry and there will be no children's benefit.

C. Other Assumptions:

10. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available.
11. Investment and administrative expenses: The assumed investment return rate represents the anticipated net return after payment of all investment and administrative expenses.
12. Inactive members: For members who terminated service prior to June 30, 2017 liabilities for inactive members are approximated as a multiple of their member contribution account balances. For nonvested inactive members, the multiple is 1.0. For vested inactive members, the multiple is 8.0 for members with 25 or more years of service, 3.0 for vested inactive members age 45 or older with less than 25 years of service, and 1.0 for other vested inactive members younger than age 45. For members who terminated service after June 30, 2017, the expected liability at termination has been carried forward with interest from the last valuation the member was active.
13. Decrement timing: For all members, decrements are assumed to occur at the middle of the year.
14. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
15. Decrement relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
16. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
17. Benefit Service: All members are assumed to accrue one year of eligibility service each year.
18. All calculations were performed without regard to the compensation limit in IRC Section 401(a)(17) and the benefit limit under IRC Section 415.

D. Participant Data

Participant data was supplied on electronic files. There were separate files for (i) active and inactive members, and (ii) members and beneficiaries receiving benefits.

The data for active members included name, identification number, sex, a code indicating whether the member was active or inactive, date of birth, service, salary, unit indicator, date of last contribution, accumulated member contributions without interest, accrued benefit multiplier as of Valuation Date, Final Average Compensation as of June 30, 2012, and the Rhode Island Retirement Security Act Retirement Date. For retired members and beneficiaries, the data included date of birth, sex, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and a form of payment code.

Salary supplied for the current year was based on the earnings for the year preceding the valuation date. This salary was adjusted by the salary increase rate for one year. However, for members with less than one year of service, the current rate of salary was used. This salary was adjusted by the salary increase rate for one year. An additional adjustment was made so that a member's compensation would not be less than it was in the previous year.

In defining who was an active member, members with a date of last contribution in the final quarter of the fiscal year were considered active. Otherwise, the member was defined as inactive.

Beneficiary data for police and fire employees was completed, based on the Age Difference stated above, if the information was not originally supplied on the electronic files.

To correct for incomplete and inconsistent data, we first attempted to pull data from prior valuation files and then made general assumptions to complete the rest. These had no material impact on the results presented.

For members who transferred during the prior fiscal year adjustments were made for certain data records as needed. The active record for a member who transferred into a MERS unit was compared to the prior active record to test for reasonability of service and account balances relative to the prior year's active record and adjusted if needed. The inactive record for any member who transferred out of a MERS unit was deleted when calculating the inactive liability.

State Police Retirement Benefits Trust (SPRBT) Summary of Actuarial Methods and Assumptions

I. Valuation Date

The valuation date is June 30th of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

II. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal actuarial cost method. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) a rate that will amortize the unfunded actuarial accrued liability (UAAL).

1. First, the actuarial present value of future benefits is determined by discounting the projected benefits for each member back to the valuation date using the assumed investment return rate as the discount rate. For active members, the projected benefits are based on the member's age, service, sex and compensation, and based on the actuarial assumptions. The calculations take into account the probability of the member's death, disability, or termination of employment prior to becoming eligible for a retirement benefit, as well as the possibility of the member will remain in service and receive a service retirement benefit. Future salary increases are anticipated. The present value of the expected benefits payable to all active members is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits. Liabilities for future members are not included.
2. The employer contributions required to support the benefits are determined as a level percentage of salary, and consist of a normal contribution and an amortization contribution.
3. The normal contribution is determined using the Entry Age Normal method. Under this method, a calculation is made to determine the rate of contribution which, if applied to the compensation of each individual member during the entire period of anticipated covered service, would be required to meet the cost of all benefits payable on his behalf. The salary-weighted average of these rates is the normal cost rate. This calculation reflects the plan provisions that apply to each individual member.
4. The employer normal cost rate is equal to (i) the normal cost rate, minus (ii) the member contribution rate.
5. The actuarial accrued liability is equal to the present value of all benefits less the present value of future normal costs. The unfunded actuarial accrued liability (UAAL) is then determined as (i) the actuarial accrued liability, minus (ii) the actuarial value of assets.
6. The amortization contribution rate is the level percentage of payroll required to reduce the UAAL to zero over the remaining amortization period. The employer contribution rate determined by this valuation will not be effective until two years after the valuation date. The determination of the contribution rate reflects this deferral. The amortization payment for the applicable fiscal year is first determined based on the individual amortization bases. The covered payroll is projected forward for two years, and we then

determine the amortization rate by dividing the amortization payment by the projected payroll. Contributions are assumed to be made monthly throughout the year.

- (a) In conjunction with The Rhode Island Retirement Security Act of 2011, the amortization period was reset to 25 years as of June 30, 2010 for the UAAL that existed at that time. New gains and losses each year will be amortized over individual 20 year periods. At any time that the System is in an overfunded status, the amortization schedule will be a rolling 20 year amortization of any surplus.

III. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Offsetting unrecognized gains and losses are immediately recognized, with the shortest remaining bases recognized first and the net remaining bases continue to be recognized on their original timeframe. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses.

IV. Actuarial Assumptions

A. Economic Assumptions

1. Investment return: 7.00% per year, compounded annually, composed of an assumed 2.50% inflation rate and a 4.50% net real rate of return. This rate represents the assumed return, net of all investment and administrative expenses.

2. Salary increase rate: The sum of (i) a 3.00% wage inflation assumption (composed of a 2.50% price inflation assumption and a 0.50% additional general increase), and (ii) a service-related component as shown below:

Years of Service	Service-Related Component	Total Increase
0	5.00%	8.00%
1	4.75	7.75
2	4.75	7.75
3	8.75	11.75
4	5.75	8.75
5	4.00	7.00
6	2.00	5.00
7	2.00	5.00
8	1.75	4.75
9	1.50	4.75
10-14	1.50	4.50
15-19	1.25	4.25
20-24	1.00	4.00
25&up	0.75	3.75

Salary increases are assumed to occur once a year, on July 1. Therefore the pay used for the period between the valuation date and the first anniversary of the valuation date is equal to the reported pay for the prior year, increased by the salary increase assumption.

3. Payroll growth rate: In the amortization of the unfunded frozen liability, payroll is assumed to increase 3.00% per year. This assumption includes no allowance for future membership growth.
4. Post-retirement Benefit Increase: Post-retirement benefit increases are assumed to be 2.1%, per annum, while the plan has a funding level that exceeds 80%; however, an interim COLA will be granted in four-year intervals while the COLA is suspended. The first such COLA will be applicable in Calendar Year 2017. As of June 30, 2019, it is assumed that the COLAs will be suspended for 8 years due to the current funding level of the plans. The actual amount of the COLA is determined based on 50% of the plan's five-year average investment rate of return minus 5.0% which will range from zero to 4.0%, and 50% of the lesser of 3% or last year's CPI-U increase for a total maximum increase of 3.50%.

B. Demographic Assumptions

1. Post-termination mortality rates
 - a. Healthy males – RP-2014 Combined Healthy for Males with Blue Collar adjustments, projected with Scale Ultimate MP16.
 - b. Healthy females - RP-2014 Combined Healthy for Females, projected with Scale Ultimate MP16.
 - c. Disabled males – RP-2014 Disabled Retiree Table for males, projected with Scale Ultimate MP16.
 - d. Disabled females – RP-2014 Disabled Retiree Table for females, projected with Scale Ultimate MP16.
2. Pre-retirement mortality: RP-2014 employee table for males and females.
3. Disability rates – Rates are applied, with 75% of disabilities considered work related, and no recoveries assumed once disabled:

Age	Rate
20	0.12%
25	0.17
30	0.22
35	0.29
40	0.44
45	0.72
50	1.21

Disabilities that are not work-related are assumed to result in a refund. The disability rates for non work-related causes stop once the member is eligible for retirement.

4. Termination rates – None

5. Retirement rates – State police are assumed to retire in accordance with the probabilities as shown below. For Employees hired before July 1, 2007 and whose first eligibility to retire is after June 30, 2012, the normal retirement rate in their first year of eligibility is increased by 5% for each year of service greater than 20 at which they first become eligible to retire due to the change in the accrual rate for service credit earned after June 30, 2012. Any member of the State police, other than the superintendent of State police may retire at any time subsequent to the date the member’s retirement allowance equals or exceeds 50% of average compensation, provided that a member shall retire upon the first to occur of (i) the date the member’s retirement allowance equals 65%; or (ii) the later of the attainment of age 62 or completion of 5 years of service. However, any current member as of June 30, 2012 who has not accrued 50% upon attaining the age of 62 shall retire upon accruing 50%. 100% are assumed to retire at the attainment of a 65% benefit multiplier if still active.

State Police Employed Before July 1, 2007	
Service	Ret. Rate
20	25.0%
21	15.0%
22	10.0%
23	20.0%
24+	30.0%

State Police Employed On or After July 1, 2007	
Service	Ret. Rate
25	35.0%
26	25.0%
27	20.0%
28	30.0%
29+	40.0%

C. Other Assumptions

1. Percent married: 85% of employees are assumed to be married.
2. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
3. Remarriage: It is assumed that no surviving spouse will remarry and there will be no children's benefit.
4. Investment and administrative expenses: The assumed investment return rate represents the anticipated net return after payment of all investment and administrative expenses.
5. Overtime: Members eligible for overtime are assumed to work and contribute on 400 hours of overtime during their final averaging period.

V. Participant Data

Participant data was supplied in electronic files for active and retired members. The data for active members included birth date, sex, service, salary and employee contribution account balance. For retired members and beneficiaries, the data included date of birth, sex, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and a form of payment code.

Judicial Retirement Benefits Trust (JRBT)

Summary of Actuarial Methods and Assumptions

I. Valuation Date

The valuation date is June 30th of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

II. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal actuarial cost method. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) a rate that will amortize the unfunded actuarial accrued liability (UAAL).

1. First, the actuarial present value of future benefits is determined by discounting the projected benefits for each member back to the valuation date using the assumed investment return rate as the discount rate. For active members, the projected benefits are based on the member's age, service, sex and compensation, and based on the actuarial assumptions. The calculations take into account the probability of the member's death, disability, or termination of employment prior to becoming eligible for a retirement benefit, as well as the possibility of the member will remain in service and receive a service retirement benefit. Future salary increases are anticipated. The present value of the expected benefits payable to all active members is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits. Liabilities for future members are not included.
2. The employer contributions required to support the benefits are determined as a level percentage of salary, and consist of a normal contribution and an amortization contribution.
3. The normal contribution is determined using the Entry Age Normal method. Under this method, a calculation is made to determine the rate of contribution which, if applied to the compensation of each individual member during the entire period of anticipated covered service, would be required to meet the cost of all benefits payable on his behalf. The salary-weighted average of these rates is the normal cost rate. This calculation reflects the plan provisions that apply to each individual member.
4. The employer normal cost rate is equal to (i) the normal cost rate, minus (ii) the member contribution rate.

5. The actuarial accrued liability is equal to the present value of all benefits less the present value of future normal costs. The unfunded actuarial accrued liability (UAAL) is then determined as (i) the actuarial accrued liability, minus (ii) the actuarial value of assets.
6. The amortization contribution rate is the level percentage of payroll required to reduce the UAAL to zero over the remaining amortization period. The employer contribution rate determined by this valuation will not be effective until two years after the valuation date. The determination of the contribution rate reflects this deferral. The amortization payment for the applicable fiscal year is first determined based on the individual amortization bases. The covered payroll is projected forward for two years, and we then determine the amortization rate by dividing the amortization payment by the projected payroll. Contributions are assumed to be made monthly throughout the year.
 - (a) The UAAL was initially being amortized over the remainder of a closed 30-year period from June 30, 1999. In conjunction with The Rhode Island Retirement Security Act of 2011, the amortization period was reset to 25 years as of June 30, 2010 for the UAAL that existed at that time. New gains and losses each year will be amortized over individual 20 year periods. At any time that the System is in an overfunded status, the amortization schedule will be a rolling 20 year amortization of any surplus.

III. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Offsetting unrecognized gains and losses are immediately recognized, with the shortest remaining bases recognized first and the net remaining bases continue to be recognized on their original timeframe. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses.

IV. Actuarial Assumptions

A. Economic Assumptions

1. Investment return: 7.00% per year, compounded annually, composed of an assumed 2.50% inflation rate and a 4.50% net real rate of return. This rate represents the assumed return, net of all investment and administrative expenses.
2. Salary increase rate: Salaries are assumed to increase at the rate of 3.00% per year.

Salary increases are assumed to occur once a year, on July 1. Therefore the pay used for the period between the valuation date and the first anniversary of the valuation date is equal to the reported pay for the prior year, increased by the salary increase assumption.

3. Payroll growth rate: In the amortization of the unfunded frozen liability, payroll is assumed to increase 3.00% per year. This assumption includes no allowance for future membership growth.
4. Post-retirement Benefit Increase: Post-retirement benefit increases are assumed to be 2.1%, per annum, while the plan has a funding level that exceeds 80%; however, an interim COLA will be granted in four-year intervals while the COLA is suspended. The first such COLA will be applicable in Calendar Year 2017. As of June 30, 2019, it is assumed that the COLAs will be suspended for 8 years due to the current funding level of the plans. The actual amount of the COLA is determined based on 50% of the plan's five-year average investment rate of return minus 5.0% which will range from zero to 4.0%, and 50% of the lesser of 3% or last year's CPI-U increase for a total maximum increase of 3.50%.

B. Demographic Assumptions

1. Post-termination mortality rates (non-disabled lives)
 - a. Males: RP-2014 Combined Healthy for Males with Blue Collar adjustments, projected with Scale Ultimate MP16.
 - b. Females: RP-2014 Combined Healthy for Females, projected with Scale Ultimate MP16.
2. Post-termination mortality rates (disabled lives)
 - a. Males: RP-2014 Disabled Retiree Table for males, projected with Scale Ultimate MP16.
 - b. Females: RP-2014 Disabled Retiree Table for males, projected with Scale Ultimate MP16.
3. Pre-termination mortality rates – Use the RP-2014 employee table for males and females.
4. Disability rates – None
5. Termination rates – None
6. Retirement rates – 33% of members are assumed to retire when first eligible for a reduced retirement benefit (age 65 with 10 years of service, or any age with 20 years of service). All other members are assumed to retire when eligible for an unreduced retirement benefit (age 65 with 20 years of service, or age 70 with 15 years of service). Judges who have not reached eligibility for a retirement benefit by age 75 are assumed to terminate at age 75 and receive either a reduced retirement benefit, if eligible, or a refund.

C. Other Assumptions

1. Percent married: 85% of employees are assumed to be married.
2. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
3. Remarriage: It is assumed that no surviving spouse will remarry and there will be no children's benefit.
4. All married members appointed after January 1, 2009 will elect the optional spouse's coverage at retirement.

5. Investment and administrative expenses: The assumed investment return rate represents the anticipated net return after payment of all investment and administrative expenses.

V. Participant Data

Participant data was supplied in electronic files for active members and retirees. The data for active members included birth date, sex, service, salary and employee contribution account balance. For retired members and beneficiaries, the data included date of birth, sex, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and a form of payment code.

Rhode Island Judicial Retirement Fund Trust (RIJRFT) Summary of Actuarial Methods and Assumptions

The assumptions used in this valuation, with the exception of the 3.13% discount rate, are the same as those summarized in Appendix A in the June 30, 2019 actuarial valuation of the JRBT dated December 10, 2019. We believe the assumptions are internally consistent and are reasonable.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities and the calculated contribution rates.

State Police Retirement Fund Trust (SPRFT) Summary of Actuarial Methods and Assumptions

The assumptions used in this valuation, including the 7.00% discount rate, are the same as those summarized in Appendix A in the June 30, 2019 actuarial valuation of the SPRBT dated December 10, 2019. We believe the assumptions are internally consistent and are reasonable.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities and the calculated contribution rates.

Employees' Retirement System of Rhode Island Solvency Test

Year End June 30,	Aggregate Accrued Liabilities for:		Active Members (Employer Financed Portion) (3)	Net Assets Available for Benefits	Portion of Accrued Liabilities Covered by Net Assets Available for Benefits		
	Active Member Contributions (1)	Retirees and Beneficiaries (2)			(1)	(2)	(3)
ERS - State Employees							
2019	\$ 528,120,259	\$ 3,331,271,133	\$ 941,701,653	\$ 2,557,560,104	100%	61%	0%
2018	\$ 522,247,476	\$ 3,337,610,239	\$ 896,083,219	\$ 2,516,618,305	100%	60%	0%
2017	\$ 547,320,112	\$ 3,209,626,083	\$ 941,332,613	\$ 2,485,576,642	100%	60%	0%
2016	\$ 546,139,313	\$ 2,972,758,380	\$ 885,400,955	\$ 2,468,446,998	100%	65%	0%
ERS - Teachers							
2019	\$ 909,520,697	\$ 4,883,816,473	\$ 1,200,949,267	\$ 3,866,452,572	100%	61%	0%
2018	\$ 877,444,344	\$ 4,998,662,267	\$ 1,075,399,324	\$ 3,815,698,266	100%	59%	0%
2017	\$ 877,443,418	\$ 4,999,290,131	\$ 1,017,509,679	\$ 3,778,302,063	100%	58%	0%
2016	\$ 869,811,233	\$ 4,734,334,535	\$ 862,332,702	\$ 3,772,348,051	100%	61%	0%
Teachers' Survivors Benefits Plan							
2019	\$ 9,862,849	\$ 181,086,356	\$ 35,729,472	\$ 339,417,231	100%	100%	416%
2018	\$ 9,406,475	\$ 175,999,379	\$ 34,504,117	\$ 327,793,239	100%	100%	413%
2017	\$ 9,068,290	\$ 187,447,735	\$ 34,322,154	\$ 311,960,433	100%	100%	336%
2016	\$ 8,836,898	\$ 157,052,544	\$ 21,023,733	\$ 286,485,057	100%	100%	574%
Municipal Employees' Retirement System - General Employees							
2019	\$ 116,450,119	\$ 823,938,329	\$ 343,831,951	\$ 1,043,754,252	100%	100%	30%
2018	\$ 120,470,385	\$ 797,722,285	\$ 342,991,323	\$ 1,014,741,014	100%	100%	28%
2017	\$ 124,901,116	\$ 768,391,585	\$ 339,993,188	\$ 986,459,230	100%	100%	27%
2016	\$ 127,744,740	\$ 697,200,387	\$ 317,373,150	\$ 964,595,506	100%	100%	44%
Municipal Employees' Retirement System - Police/Fire Employees							
2019	\$ 99,277,350	\$ 381,050,359	\$ 268,429,439	\$ 592,318,349	100%	100%	42%
2018	\$ 93,666,060	\$ 361,082,233	\$ 258,579,954	\$ 553,875,865	100%	100%	38%
2017	\$ 87,989,399	\$ 345,463,983	\$ 247,593,371	\$ 518,878,790	100%	100%	35%
2016	\$ 81,825,506	\$ 309,878,907	\$ 216,362,006	\$ 488,505,138	100%	100%	45%
State Police Retirement Benefits Trust							
2019	\$ 18,699,574	\$ 82,309,802	\$ 73,501,934	\$ 148,085,853	100%	100%	64%
2018	\$ 16,645,723	\$ 82,570,555	\$ 67,291,205	\$ 139,008,754	100%	100%	59%
2017	\$ 14,999,688	\$ 80,543,721	\$ 60,517,447	\$ 131,320,263	100%	100%	59%
2016	\$ 14,978,441	\$ 59,616,701	\$ 60,910,010	\$ 123,788,498	100%	100%	81%
Judicial Retirement Benefits Trust							
2019	\$ 9,685,548	\$ 34,447,598	\$ 37,127,793	\$ 78,027,132	100%	100%	91%
2018	\$ 9,659,842	\$ 29,508,120	\$ 37,030,335	\$ 73,673,771	100%	100%	93%
2017	\$ 9,637,212	\$ 25,688,803	\$ 38,402,332	\$ 68,784,251	100%	100%	87%
2016	\$ 8,519,694	\$ 24,405,717	\$ 32,362,116	\$ 64,401,616	100%	100%	97%
Rhode Island Judicial Retirement Fund Trust*							
2019	\$ 399,016	\$ 5,418,246	\$ 13,064,067	\$ 966,392	100%	10%	0%
2018	\$ 399,012	\$ 5,332,955	\$ 13,261,647	\$ 806,246	100%	8%	0%
2017	\$ 349,593	\$ 3,796,504	\$ 16,295,598	\$ 646,628	100%	8%	0%
2016	\$ 334,265	\$ 3,914,017	\$ 16,322,895	\$ 582,245	100%	6%	0%
* 3.13% Discount rate used for fiscal year ending June 30, 2019. 3.62% Discount rate used for fiscal year ending June 30, 2018. 3.56% Discount rate used for fiscal year ending June 30, 2017.							
State Police Retirement Fund Trust							
2019	\$ -	\$ 177,825,621	\$ -	\$ 16,598,339	0%	9%	0%
2018	\$ -	\$ 182,583,298	\$ -	\$ 16,258,330	0%	9%	0%
2017	\$ -	\$ 175,957,019	\$ -	\$ 16,013,015	0%	9%	0%

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

Source: The most recent actuarial valuation for ERSRI is as of June 30, 2017. Data in this schedule prior to fiscal year ending June 30, 2017 was derived from actuarial valuations prepared by GRS and certified by the ERSRI Board in prior fiscal years.

**Employees' Retirement System of Rhode Island
Schedule of Funding Progress**

Year End June 30,	Actuarial Accrued Liabilities	Actuarial Value of Assets	Assets as a % of Accrued Liabilities	Unfunded Actuarial Accrued Liabilities (UAAL)	Covered Employee Payroll	UAAL as a % of Covered Employee Payroll
ERS - State Employees						
2019	\$ 4,801,093,045	\$ 2,557,560,104	53.3%	\$ 2,243,532,941	\$ 740,294,095	303.1%
2018	4,755,940,934	2,516,618,305	52.9%	2,239,322,629	711,736,212	314.6%
2017	4,698,278,808	2,485,576,642	52.9%	2,212,702,166	704,036,300	314.3%
2016	4,404,298,648	2,468,446,998	56.0%	1,935,851,650	693,242,177	279.2%
2015	4,371,789,900	2,476,485,327	56.6%	1,895,304,573	691,555,582	274.1%
2014	4,369,081,872	2,449,125,421	56.1%	1,919,956,451	675,204,750	284.4%
2013	4,266,053,163	2,411,057,214	56.5%	1,854,995,949	664,118,904	279.3%
2012	4,297,261,311	2,421,191,542	56.3%	1,876,069,769	669,477,539	280.2%
2011	4,255,362,463	2,443,690,798	57.4%	1,811,671,665	633,146,197	286.1%
2010	4,234,409,675	2,532,090,798	59.8%	1,702,318,877	630,246,973	270.1%
ERS - Teachers						
2019	\$ 6,994,286,436	\$ 3,866,452,572	55.3%	\$ 3,127,833,864	\$ 1,086,984,336	287.8%
2018	6,951,505,936	3,815,698,266	54.9%	3,135,807,670	1,057,179,746	296.6%
2017	6,894,243,228	3,778,302,063	54.8%	3,115,941,165	1,035,710,229	300.9%
2016	6,466,478,470	3,772,348,051	58.3%	2,694,130,419	1,009,979,725	266.8%
2015	6,438,732,100	3,783,601,053	58.8%	2,655,131,047	995,994,669	266.6%
2014	6,424,596,267	3,742,152,714	58.2%	2,682,443,553	982,565,406	273.0%
2013	6,265,311,945	3,697,787,537	59.0%	2,567,524,408	963,525,547	266.5%
2012	6,373,081,344	3,746,299,871	58.8%	2,626,781,473	971,904,991	270.3%
2011	6,325,941,951	3,776,407,834	59.7%	2,549,534,117	1,002,656,294	254.3%
2010	6,266,400,444	3,873,118,262	61.8%	2,393,282,182	989,236,951	241.9%
Teachers' Survivors Benefits Plan[^]						
2019	\$ 226,678,677	\$ 339,417,231	149.7%	\$ (112,738,554)	\$ 575,889,277	-19.6%
2018	219,909,971	327,793,239	149.1%	(107,883,268)	562,365,576	-19.2%
2017	230,838,179	311,960,433	135.1%	(81,122,254)	544,320,446	-14.9%
2016	186,913,175	286,485,057	153.3%	(99,571,882)	522,968,886	-19.0%
2014	192,124,126	293,921,803	153.0%	(101,797,677)	542,756,917	-19.0%
2013	175,233,723	261,365,155	149.0%	(86,131,432)	544,090,898	-16.0%
2011	133,569,376	242,885,805	182.0%	(109,316,429)	537,264,193	-20.0%
2009	129,110,000	186,737,083	145.0%	(57,627,083)	509,416,780	-11.0%
2007	116,599,601	259,851,904	223.0%	(143,252,303)	466,208,437	-31.0%

**Employees' Retirement System of Rhode Island
Schedule of Funding Progress**

Year End June 30,	Actuarial Accrued Liabilities	Actuarial Value of Assets	Assets as a % of Accrued Liabilities	Unfunded Actuarial Accrued Liabilities (UAAL)	Covered Employee Payroll	UAAL as a % of Covered Employee Payroll
Municipal Employees' Retirement System - General Employees**						
2019	\$ 1,284,220,399	\$ 1,043,754,252	81.3%	\$ 240,466,147	\$ 253,727,796	94.8%
2018	1,261,183,994	1,014,741,014	80.5%	246,442,980	248,559,707	99.1%
2017	1,233,285,889	986,459,230	80.0%	246,826,659	242,305,025	101.9%
2016	1,142,318,277	964,595,506	84.4%	177,722,771	232,291,647	76.5%
2015	1,111,720,282	945,727,947	85.1%	165,992,335	230,499,170	72.0%
2014	1,071,641,207	911,399,108	85.0%	160,242,099	223,736,632	71.6%
2013	1,051,689,455	875,652,368	83.3%	176,037,087	223,380,413	78.8%
2012	1,023,568,790	859,515,584	84.0%	164,053,206	223,065,778	73.5%
2011	1,005,419,698	846,426,631	84.2%	158,993,067	226,932,538	70.1%
2010	1,138,019,716	851,172,779	74.8%	286,846,937	229,149,276	125.2%
Municipal Employees' Retirement System - Police/Fire Employees**						
2019	\$ 748,757,148	\$ 592,318,349	79.1%	\$ 156,438,799	\$ 111,701,541	140.1%
2018	713,328,247	553,875,865	77.6%	159,452,382	106,541,018	149.7%
2017	681,046,753	518,878,790	76.2%	162,167,963	102,020,460	159.0%
2016	608,066,419	488,505,138	80.3%	119,561,281	96,834,672	123.5%
2015	567,219,865	461,702,185	81.4%	105,517,680	93,380,954	113.0%
2014	522,149,230	429,663,343	82.3%	92,485,887	89,936,969	102.8%
2013	501,133,572	399,905,455	79.8%	101,228,117	87,428,024	115.8%
2012	476,905,589	378,659,964	79.4%	98,245,625	83,164,238	118.1%
2011	423,459,603	358,388,192	84.6%	65,071,411	78,461,560	82.9%
2010	488,601,649	345,212,363	70.7%	143,389,286	76,664,402	187.0%
** Each employer unit participating in MERS is financially responsible for its own plan. Therefore, the aggregate numbers shown on the above schedules reflect only the aggregate condition of MERS and do not indicate the status of any particular employer unit.						
State Police Retirement Benefits Trust						
2019	\$ 174,511,310	\$ 148,085,853	84.9%	\$ 26,425,457	\$ 26,467,266	99.8%
2018	166,507,483	139,008,754	83.5%	27,498,729	23,455,654	117.2%
2017	156,060,856	131,320,263	84.1%	24,740,593	22,612,234	109.4%
2016	135,505,152	123,788,498	91.4%	11,716,654	22,555,315	51.9%
2015	117,056,727	115,585,013	98.7%	1,471,714	19,940,052	7.4%
2014	108,363,537	104,781,384	96.7%	3,582,153	20,814,621	17.2%
2013	102,259,438	92,916,758	90.9%	9,342,680	19,904,363	46.9%
2012	94,031,687	84,293,968	89.6%	9,737,719	23,669,619	41.1%
2011	74,185,705	73,151,768	98.6%	1,033,937	19,711,694	5.2%
2010	73,048,680	65,760,284	90.0%	7,288,396	19,715,070	37.0%

**Employees' Retirement System of Rhode Island
Schedule of Funding Progress**

Year End June 30,	Actuarial Accrued Liabilities	Actuarial Value of Assets	Assets as a % of Accrued Liabilities	Unfunded Actuarial Accrued Liabilities (UAAL)	Covered Employee Payroll	UAAL as a % of Covered Employee Payroll
Judicial Retirement Benefits Trust						
2019	\$ 81,260,939	\$ 78,027,132	96.0%	\$ 3,233,807	\$ 9,928,890	32.6%
2018	76,198,297	73,673,771	96.7%	2,524,526	9,237,641	27.3%
2017	73,728,347	68,784,251	93.3%	4,944,096	9,569,304	51.7%
2016	65,287,527	64,401,616	98.6%	885,911	9,034,080	9.8%
2015	61,963,672	60,004,470	96.8%	1,959,202	9,285,354	21.1%
2014	57,504,663	53,830,516	93.6%	3,674,147	9,309,572	39.5%
2013	54,429,531	47,640,773	87.5%	6,788,758	8,975,536	75.6%
2012	52,085,154	43,428,646	83.4%	8,656,508	8,822,823	98.1%
2011	46,594,407	40,105,919	86.1%	6,488,488	8,474,716	76.6%
2010	46,641,701	38,074,287	81.6%	8,567,414	7,461,120	114.8%
Rhode Island Judicial Retirement Fund Trust^{^*}						
2019	\$ 18,881,329	\$ 966,392	5.1%	\$ 17,914,937	\$ 1,002,164	1787.6%
2018	18,993,614	806,246	4.2%	18,187,368	1,020,224	1782.7%
2017	20,441,696	646,628	3.2%	19,795,068	988,110	2003.3%
2016	20,571,178	582,245	2.8%	19,988,933	957,007	2088.7%
2013	12,077,841	152,910	1.3%	11,924,931	1,255,256	950.0%
2012	16,387,206	-	0.0%	16,387,206	1,230,644	1331.6%
* 3.13% Discount rate used for fiscal year ending June 30, 2019. 3.62% Discount rate used for fiscal year ending June 30, 2018. 3.56% Discount rate used for fiscal year ending June 30, 2017.						
State Police Retirement Fund Trust[^]						
2019	\$ 177,825,621	\$ 16,598,339	9.3%	\$ 161,227,282	\$ -	N/A
2018	182,583,298	16,258,330	8.9%	166,324,968	-	N/A
2017	175,957,019	16,013,015	9.1%	159,944,004	-	N/A
2016	176,546,337	-	0.0%	176,546,337	-	N/A

[^] Actuarial valuations are required, at a minimum, to be performed biennially. Additional years will be displayed as they become available.

Note: The most recent actuarial valuation for ERSRI is as of June 30, 2017. Data in this schedule prior to fiscal year ending June 30, 2017 was derived from actuarial valuations prepared by GRS and certified by the ERSRI Board in prior fiscal years.

**Employees' Retirement System of Rhode Island
Schedule of Employees Added to and Removed from Rolls**

Year End June 30,	Added To Rolls			Removed From Rolls				Rolls - End of Year			% Increase (Decrease) in Average Annual Allowance
	Number	Annual Allowance	Average Annual Allowance	Number	Annual Allowance	Average Annual Allowance	Number	Annual Allowance	Average Annual Allowance		
ERS - State Employees											
2019	388	\$ 9,889,701	\$ 25,489	424	\$ 10,222,120	\$ 24,109	11,224	\$ 342,395,219	\$ 30,506	0.22%	
2018	806	\$ 24,596,110	\$ 30,516	624	\$ 12,663,676	\$ 20,294	11,260	\$ 342,727,638	\$ 30,438	1.93%	
2017	455	\$ 12,172,340	\$ 26,752	435	\$ 9,602,683	\$ 22,075	11,078	\$ 330,795,204	\$ 29,861	0.60%	
2016	613	\$ 15,388,026	\$ 25,103	596	\$ 12,112,805	\$ 20,323	11,058	\$ 328,225,547	\$ 29,682	0.85%	
2015							11,041	\$ 324,950,326	\$ 29,431	N/A	
ERS- Teachers											
2019	162	\$ 4,122,942	\$ 25,450	286	\$ 11,548,092	\$ 40,378	11,196	\$ 480,289,497	\$ 42,898	-0.43%	
2018	477	\$ 15,971,597	\$ 33,483	368	\$ 12,006,352	\$ 32,626	11,320	\$ 487,714,647	\$ 43,084	-0.15%	
2017	362	\$ 11,066,132	\$ 30,569	238	\$ 9,045,857	\$ 38,008	11,211	\$ 483,749,402	\$ 43,150	-0.69%	
2016	514	\$ 15,986,350	\$ 31,102	329	\$ 10,981,290	\$ 33,378	11,087	\$ 481,729,127	\$ 43,450	-0.64%	
2015							10,902	\$ 476,724,067	\$ 43,728		
Teachers' Survivors Benefits Plan											
2019	53	\$ 1,265,533	\$ 23,878	26	\$ 441,191	\$ 16,969	594	\$ 10,882,622	\$ 18,321	3.28%	
2018	49	\$ 422,704	\$ 8,627	55	\$ 869,336	\$ -	567	\$ 10,058,280	\$ 17,739	-3.24%	
2017*	56	\$ 2,245,448	\$ 40,097	-	\$ -	\$ -	573	\$ 10,504,912	\$ 18,333	14.76%	
2016	101	\$ 498,715	\$ 4,938	121	\$ 1,948,382	\$ 16,102	517	\$ 8,259,464	\$ 15,976	-5.82%	
2014							537	\$ 9,709,131	\$ 18,080		
<i>* Amount added to rolls includes cost of living adjustments and other benefit changes.</i>											
Municipal Employees' Retirement System - General Employees											
2019	261	\$ 4,626,978	\$ 17,728	166	\$ 2,017,433	\$ 12,153	4,827	\$ 74,759,564	\$ 15,488	1.58%	
2018	354	\$ 5,430,634	\$ 15,341	258	\$ 3,032,762	\$ 11,755	4,732	\$ 72,150,019	\$ 15,247	1.34%	
2017	283	\$ 4,347,813	\$ 15,363	208	\$ 2,416,800	\$ 11,619	4,636	\$ 69,752,147	\$ 15,046	1.18%	
2016	303	\$ 4,738,481	\$ 15,639	182	\$ 2,033,016	\$ 11,170	4,561	\$ 67,821,134	\$ 14,870	1.39%	
2015							4,440	\$ 65,115,669	\$ 14,666		
Municipal Employees' Retirement System Plan - Police/Fire Employees											
2019	53	\$ 2,044,241	\$ 38,571	14	\$ 334,595	\$ 23,900	863	\$ 28,829,661	\$ 33,406	1.50%	
2018	91	\$ 2,094,183	\$ 23,013	68	\$ 854,017	\$ 12,559	824	\$ 27,120,015	\$ 32,913	1.87%	
2017	36	\$ 1,308,081	\$ 36,336	8	\$ 138,119	\$ 17,265	801	\$ 25,879,849	\$ 32,309	1.07%	
2016	109	\$ 2,563,207	\$ 23,516	64	\$ 754,694	\$ 11,792	773	\$ 24,709,887	\$ 31,966	1.62%	
2015							728	\$ 22,901,374	\$ 31,458		
State Police Retirement Benefits Trust											
2019	-	\$ 589	\$ -	-	\$ -	\$ -	73	\$ 6,098,901	\$ 83,547	0.01%	
2018	2	\$ 176,199	\$ 88,100	-	\$ -	\$ -	73	\$ 6,098,312	\$ 83,539	0.15%	
2017	15	\$ 1,305,421	\$ 87,028	-	\$ -	\$ -	71	\$ 5,922,113	\$ 83,410	1.18%	
2016	17	\$ 1,562,823	\$ 91,931	-	\$ -	\$ -	56	\$ 4,616,692	\$ 82,441	5.28%	
2015							39	\$ 3,053,869	\$ 78,304	N/A	
Judicial Retirement Benefits Trust											
2019	4	\$ 641,939	\$ 160,485	1	\$ 95,654	\$ 95,654	26	\$ 3,691,475	\$ 141,980	3.83%	
2018	3	\$ 409,712	\$ -	-	\$ -	\$ -	23	\$ 3,145,190	\$ 136,747	-0.02%	
2017	-	\$ 1,390	\$ -	-	\$ -	\$ -	20	\$ 2,735,478	\$ 136,774	0.05%	
2016	5	\$ 702,976	\$ 140,595	1	\$ 59,888	\$ 59,888	20	\$ 2,734,088	\$ 136,704	4.60%	
2015							16	\$ 2,091,000	\$ 130,688		
Rhode Island Judicial Retirement Fund Trust											
2019	-	\$ -	\$ -	-	\$ -	\$ -	2	\$ 399,016	\$ 199,508	0.00%	
2018	-	\$ -	\$ -	-	\$ -	\$ -	2	\$ 399,016	\$ 199,508	0.00%	
2017	-	\$ -	\$ -	-	\$ -	\$ -	2	\$ 399,016	\$ 199,508	0.00%	
2016	2	\$ 399,016	\$ 199,508	-	\$ -	\$ -	2	\$ 399,016	\$ 199,508	N/A	
2015							-	\$ -	\$ -		
State Police Retirement Fund Trust											
2019	-	\$ -	\$ -	7	\$ 342,251	\$ 48,893	259	\$ 16,690,951	\$ 64,444		
2018	9	\$ 29,688	\$ 3,299	12	\$ 309,127	\$ 25,761	266	\$ 17,033,202	\$ 64,035	N/A	
2017**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
2016	-	\$ -	\$ -	5	\$ 334,183	\$ 66,837	269	\$ 17,312,641	\$ 64,359	-0.07%	
2015							274	\$ 17,646,824	\$ 64,404	N/A	

** Plan is required, at a minimum, to only have biennial valuations. The 2017 results are based on fiscal year 2016 valuation rolled forward one year and updated census data as of June 30, 2017 is not available.

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

Source: The most recent actuarial valuation for ERSRI is as of June 30, 2017. Data in this schedule prior to fiscal year ending June 30, 2017 was derived from actuarial valuations prepared by GRS and certified by the ERSRI Board in prior fiscal years.

Employees' Retirement System of Rhode Island
Analysis of Financial Experience

Basis	ERS - State Employees	ERS - Teachers	Teachers' Survivors Benefits Plan	State Police Retirement Benefit Trust	Judicial Retirement Benefit Trust	Rhode Island Judicial Retirement Fund Trust	Municipal Employees Retirement System - General Employees	Municipal Employees Retirement System - Police/Fire Employees	State Police Retirement Fund Trust
1. UAAL as of June 30, 2018	\$ 2,239	\$ 3,136	\$ (108)	\$ 27	\$ 3	\$ 18	\$ 246	\$ 159	\$ 166
2. Impact of changes, gains and losses									
a. Interest at 7.00% for one year*	157	220	(8)	2	-	1	17	11	12
b. Expected amortization payments	(163)	(214)	1	(1)	-	1	(14)	(10)	(17)
c. Investment experience (gain)/loss	17	24	1	-	-	-	5	2	-
d. Actual COLA (1.86%)	(1)	(2)	-	-	-	-	(8)	(4)	-
e. Salary (gain)/loss	8	(11)	-	(1)	-	-	(2)	(3)	-
f. Non-economic liability experience (gain)/loss	(13)	(25)	1	(1)	-	(3)	(4)	2	-
g. Changes in assumptions/methods	-	-	-	-	-	1	-	-	-
h. Changes in plan provisions	-	-	-	-	-	-	-	-	-
i. Total	\$ 5	\$ (8)	\$ (5)	\$ (1)	\$ -	\$ -	\$ (6)	\$ (3)	\$ (5)
3. UAAL as of June 30, 2019	\$ 2,244	\$ 3,128	\$ (113)	\$ 26	\$ 3	\$ 18	\$ 240	\$ 156	\$ 161

* 3.13% Discount rate used for RLJRFT.

Note: All dollar amounts are shown in millions.

Source: Data in this schedule was obtained from the most recent actuarial valuation for the fiscal year ending June 30, 2019.

**Employees' Retirement System of Rhode Island
Schedule of Active Member Valuation Data**

Year End June 30,	Count of Active Members	Annualized Salary	Average Annual Salary	% Increase (Decrease) in Average Annual Salary	Count of Employers
ERS - State Employees					
2019	11,318	\$ 729,415,756	\$ 64,447	3.1%	N/A
2018	10,978	686,337,066	62,519	1.6%	-
2017	11,152	686,271,036	61,538	1.7%	-
2016	11,083	670,317,639	60,482	1.5%	-
2015	11,194	667,333,687	59,615	3.1%	-
2014	11,301	653,343,732	57,813	0.3%	-
2013	11,280	649,998,544	57,624	4.9%	-
2012	11,166	643,909,132	57,667	4.9%	-
2011	11,233	617,247,186	54,949	1.9%	-
2010	11,122	599,879,497	53,936	3.5%	-
ERS - Teachers					
2019	13,511	\$ 1,070,499,270	\$ 79,232	2.1%	N/A
2018	13,297	1,031,588,592	77,581	3.2%	-
2017	13,310	1,000,795,004	75,191	2.6%	-
2016	13,206	967,531,930	73,265	0.4%	-
2015	13,272	968,080,817	72,942	1.7%	-
2014	13,266	951,892,247	71,754	1.1%	-
2013	13,193	936,234,816	70,965	-1.7%	-
2012	13,212	961,958,877	72,809	0.9%	-
2011	13,381	965,764,287	72,174	4.2%	-
2010	13,530	936,748,851	69,235	1.8%	-
Teachers' Survivors Benefits Plan*					
2019	7,208	\$ 575,889,277	\$ 79,896	1.6%	N/A
2018	7,151	562,365,576	78,642	2.9%	-
2017	7,121	544,320,446	76,439	2.7%	-
2016	7,028	522,968,886	74,412	-1.1%	-
2014	7,139	542,756,917	76,027	0.1%	-
2013	7,227	544,090,898	75,286	0.5%	-
2011	7,215	537,264,193	74,465	2.4%	-
2009	7,173	509,416,780	71,019	3.4%	-
2007	7,013	466,208,437	66,478	7.7%	-

*Plan is required, at a minimum, to only have biennial valuations. Additional years will be displayed as they become available.

**Employees' Retirement System of Rhode Island
Schedule of Active Member Valuation Data**

Year End June 30,	Count of Active Members	Annualized Salary	Average Annual Salary	% Increase (Decrease) in Average Annual Salary	Count of Employers
Municipal Employees' Retirement System - General Employees					
2019	5,971	\$ 253,727,796	\$ 42,493	1.7%	69
2018	5,946	248,559,707	41,803	3.2%	68
2017	5,980	242,305,025	40,519	2.6%	69
2016	5,882	232,291,647	39,492	0.6%	69
2015	5,869	230,499,170	39,274	2.0%	68
2014	5,813	223,736,632	38,489	1.7%	68
2013	5,901	223,380,413	37,855	2.0%	68
2012	6,012	223,065,778	37,103	1.2%	68
2011	6,192	226,932,538	36,649	2.1%	68
2010	6,383	229,149,276	35,900	1.9%	66
Municipal Employees' Retirement System - Police/Fire Employees					
2019	1,596	\$ 111,701,541	\$ 69,988	2.0%	49
2018	1,552	106,541,018	68,648	2.3%	48
2017	1,521	102,020,460	67,075	3.3%	48
2016	1,491	96,834,672	64,946	2.7%	47
2015	1,476	93,380,954	63,266	2.0%	45
2014	1,450	89,936,969	62,025	3.2%	45
2013	1,455	87,428,024	60,088	1.9%	45
2012	1,410	83,164,238	58,982	4.0%	45
2011	1,384	78,461,560	56,692	1.8%	43
2010	1,376	76,664,402	55,715	3.0%	43
State Police Retirement Benefits Trust					
2019	260	\$ 26,467,266	\$ 101,797	-1.9%	N/A
2018	226	23,455,654	103,786	6.5%	-
2017	232	22,612,234	97,467	6.3%	-
2016	246	22,555,315	91,688	9.0%	-
2015	237	19,940,052	84,135	1.1%	-
2014	250	20,814,621	83,258	-7.1%	-
2013	222	19,904,363	89,659	-12.5%	-
2012	231	23,669,619	102,466	7.1%	-
2011	206	19,711,694	95,688	2.4%	-
2010	211	19,715,070	93,436	-3.8%	-

**Employees' Retirement System of Rhode Island
Schedule of Active Member Valuation Data**

Year End June 30,	Count of Active Members	Annualized Salary	Average Annual Salary	% Increase (Decrease) in Average Annual Salary	Count of Employers
Judicial Retirement Benefits Trust					
2019	55	\$ 9,928,890	\$ 180,525	3.6%	N/A
2018	53	9,237,641	174,295	0.2%	-
2017	55	9,569,304	173,987	0.1%	-
2016	52	9,034,080	173,732	1.0%	-
2015	54	9,285,354	171,951	3.4%	-
2014	56	9,309,572	166,242	0.0%	-
2013	54	8,975,536	166,214	-0.2%	-
2012	53	8,822,823	166,468	6.1%	-
2011	54	8,474,716	156,939	3.1%	-
2010	49	7,461,120	152,268	0.1%	-
Rhode Island Judicial Retirement Fund Trust**					
2019	5	\$ 1,002,164	\$ 200,433	-1.8%	N/A
2018	5	1,020,224	204,045	3.3%	-
2017	5	988,110	197,622	3.3%	-
2016	5	957,007	191,401	1.3%	-
2015	7	1,322,650	188,950	3.6%	-
2014	7	1,276,208	182,315	0.2%	-
2013	7	1,274,247	182,035	-	-

***Plan was established July 1, 2012 additional years will be displayed as they become available.*

State Police Retirement Fund Trust

This is a closed plan and does not have any active members.

Source: The most recent actuarial valuation for ERSRI is as of June 30, 2017. Data in this schedule prior to fiscal year ending June 30, 2017 was derived from actuarial valuations prepared by GRS and certified by the ERSRI Board in prior fiscal years.

Statistical Section

Schedule of Changes in Fiduciary Net Position

Schedule of Employer Contribution Rates

Schedule of Benefits and Refunds by Type

Schedule of Retired Members by Type of Pension Benefit

Schedule of Average Benefit Payments

Top Ten Contributing Employers by Member Count

Statistical Section Information

Summary of Statistical Section

The objective of the Statistical Section is to provide historical perspective, additional context, and detail to complement and assist those using the information in the financial statements, notes to the financial statements, and required supplementary information to better understand and assess ERSRI's economic condition.

ERSRI is responsible for administering seven defined plans and one defined contribution plan. The major features and benefit provisions of each plan are provided in Note 2 to the Basic Financial Statements contained in this report.

Statistical section information is presented in the following categories:

Financial Trend Information

These schedules present financial trend information to assist the reader in understanding how ERSRI's financial position has changed over time:

- Changes in Fiduciary Net Position
- Employer Contribution Rates

Operational Information

These schedules are intended to provide the reader more contextual information regarding the operations of ERSRI when using the financial statement data:

- Schedule of Benefits and Refunds by Type
- Schedule of Retired Members by Type of Benefit
- Schedule of Average Benefit Payments

Demographic Information

This schedule is intended to provide the reader an enhanced understanding of the ERSRI's environment:

- Top Ten Contributing Employers by Member Count

Sources: Unless otherwise noted, the information in the tables is derived from the annual financial reports for the relevant year.

TABLE 1

**Employees' Retirement System of Rhode Island
Schedule of Changes in Fiduciary Net Position
Last Ten Fiscal Years**

ERS	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Additions:										
Member contributions	\$ 90,885,505	90,044,045	\$ 89,903,432	\$ 91,609,012	\$ 90,524,544	\$ 64,948,561	\$ 64,411,897	\$ 63,259,241	\$ 149,017,700	\$ 146,937,507
Employer contributions	357,767,131	337,162,608	315,176,351	313,845,677	297,637,568	289,837,778	272,245,931	246,166,720	281,923,941	241,143,752
State contribution for teachers	108,635,976	102,238,747	98,120,835	96,542,150	87,997,637	84,943,801	76,700,915	70,703,201	80,385,930	70,286,262
Supplemental employer contributions	360,227	510,899	1,058,820	445,280	408,209	414,450	583,563	15,690,364	-	-
Interest on service credits purchased	168,105	50,057	81,455	152,432	109,084	241,501	233,769	616,647	612,783	911,405
Service credit transfers	-	6,879,644	14,456,756	1,810,490	37,511	12,543	-	-	-	-
Net Investment income (Loss)	235,945,206	394,884,656	475,027,968	654,212,917	(7,911,102)	145,549,349	863,045,946	607,847,067	90,726,999	1,004,339,787
Miscellaneous revenue	12,624	17,417	22,217	43,138	39,003	56,546	78,863	-	-	-
Total Additions	\$ 793,774,774	931,788,073	\$ 993,847,834	\$ 1,158,661,096	\$ 468,804,943	\$ 586,029,497	\$ 1,277,313,427	\$ 1,004,283,240	\$ 602,667,353	\$ 1,463,618,713
Deductions:										
Retirement benefits	\$ 821,227,362	821,402,171	\$ 816,851,265	\$ 819,929,757	\$ 818,820,664	\$ 800,245,103	\$ 801,448,787	\$ 804,829,970	\$ 789,838,446	\$ 761,258,156
Death benefits	2,629,334	2,672,900	2,778,667	2,432,232	2,878,655	3,320,919	2,700,200	2,822,400	2,824,800	2,606,747
Refund of contributions	4,736,366	5,123,636	4,678,432	5,711,781	6,306,239	8,618,199	10,062,956	9,419,071	9,796,997	8,890,203
Administrative and Other	6,600,175	6,427,974	6,407,239	6,394,177	5,722,782	6,071,486	5,671,006	5,184,623	7,040,136	6,840,973
Service credit transfers	874,191	6,514,886	13,424,486	739,477	-	-	-	593,421	-	-
Total Deductions	\$ 836,067,428	842,141,567	\$ 844,140,089	\$ 835,207,424	\$ 833,728,340	\$ 818,255,707	\$ 819,882,949	\$ 822,849,485	\$ 809,500,379	\$ 779,596,079
Net change	(42,292,654)	89,646,506	149,707,745	323,453,672	(364,923,397)	(232,226,210)	457,430,478	181,433,755	(206,833,026)	684,022,634
Fiduciary net position, beginning of year	6,361,840,600	6,272,194,094	6,122,486,349	5,799,032,677	6,163,956,074	6,396,182,285	5,938,751,807	5,757,318,052	5,964,151,078	5,280,128,444
Net position restricted for benefits	\$ 6,319,547,946	6,361,840,600	\$ 6,272,194,094	\$ 6,122,486,349	\$ 5,799,032,677	\$ 6,163,956,075	\$ 6,396,182,285	\$ 5,938,751,807	\$ 5,757,318,052	\$ 5,964,151,078
TSB										
Additions:										
Member contributions	\$ 745,760	745,856	\$ 744,035	\$ 589,883	\$ 642,276	\$ 603,388	\$ 609,168	\$ 628,553	\$ 664,900	\$ 617,434
Employer contributions	745,760	745,856	744,035	589,883	642,276	603,388	609,168	628,553	664,900	617,434
Net Investment income (Loss)	12,730,241	21,155,071	24,552,340	33,277,060	(51,004)	6,951,465	39,657,338	26,705,768	3,792,013	40,926,777
Miscellaneous revenue	-	-	-	4	-	-	-	-	-	-
Total Additions	\$ 14,221,761	22,646,783	\$ 26,040,410	\$ 34,456,830	\$ 1,233,548	\$ 8,158,241	\$ 40,875,674	\$ 27,962,874	\$ 5,121,813	\$ 42,161,645
Deductions:										
Retirement benefits	\$ 10,436,948	10,236,365	\$ 9,602,181	\$ 8,405,649	\$ 8,097,067	\$ 7,750,955	\$ 7,421,004	\$ 7,127,856	\$ 6,708,490	\$ 6,528,540
Death benefits	-	-	-	-	-	-	-	-	-	-
Refund of contributions	592,550	454,153	275,135	266,523	195,601	241,427	201,986	341,232	369,108	235,943
Administrative and Other	350,178	332,273	330,288	309,283	267,475	276,010	260,585	227,789	294,245	278,769
Total Deductions	\$ 11,379,676	11,022,791	\$ 10,207,604	\$ 8,981,455	\$ 8,560,143	\$ 8,268,392	\$ 7,883,575	\$ 7,696,877	\$ 7,371,843	\$ 7,043,252
Net change	2,842,085	11,623,992	15,832,806	25,475,375	(7,326,595)	(110,151)	32,992,099	20,265,997	(2,250,030)	35,118,393
Fiduciary net position, beginning of year	339,417,232	327,793,239	311,960,433	286,485,058	293,811,653	293,921,803	260,929,704	240,663,707	242,913,737	207,795,344
Net position restricted for benefits	\$ 342,259,317	339,417,232	\$ 327,793,239	\$ 311,960,433	\$ 286,485,058	\$ 293,811,652	\$ 293,921,803	\$ 260,929,704	\$ 240,663,707	\$ 242,913,737

**Employees' Retirement System of Rhode Island
Schedule of Changes in Fiduciary Net Position
Last Ten Fiscal Years**

MERS	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Additions:										
Member contributions	\$ 18,732,373	18,042,478	\$ 17,709,035	\$ 17,412,163	\$ 16,806,273	\$ 11,592,465	\$ 11,312,953	\$ 11,233,301	\$ 23,546,848	\$ 23,169,991
Employer contributions	56,476,661	50,853,489	47,003,638	48,542,830	46,597,024	44,576,294	37,897,122	35,553,402	35,998,489	29,469,064
New employer contributions	12,757,430									
Interest on service credits purchased	2,981	814	16,143	44,273	36,443	44,515	69,544	379,124	325,305	238,743
Service credit transfers	874,191	1,619,044	3,114,275	5,549,444	-	-	-	593,421	-	-
Net Investment income (Loss)	60,747,919	101,029,412	116,765,906	157,202,022	(471,319)	32,626,946	185,631,284	125,322,718	19,022,046	193,948,795
Miscellaneous revenue	786	1,213	147	51,557	64,748	15,218	16,532	-	-	-
Total Additions	\$ 149,592,341	171,546,450	\$ 184,609,144	\$ 228,802,289	\$ 63,033,169	\$ 88,855,438	\$ 234,927,435	\$ 173,081,966	\$ 78,892,688	\$ 246,826,593
Deductions:										
Retirement benefits	\$ 106,878,477	101,357,689	\$ 96,822,308	\$ 96,075,721	\$ 93,966,785	\$ 86,995,021	\$ 86,388,373	\$ 84,724,492	\$ 79,388,347	\$ 73,312,669
Death benefits	884,875	761,200	702,000	778,333	603,208	678,865	763,200	695,200	585,600	729,400
Refund of contributions	1,327,483	1,180,637	1,207,726	1,425,882	1,543,855	1,360,545	2,151,611	2,180,177	2,770,982	2,109,439
Service credit transfer payments	-	1,983,801	4,146,545	6,620,457	-	37,511	12,543	-	-	-
Administrative and Other	1,676,254	1,579,595	1,566,863	1,485,182	1,267,911	1,303,530	1,162,418	1,005,124	1,283,433	1,201,862
Total Deductions	\$ 110,767,089	106,862,922	\$ 104,445,442	\$ 106,385,575	\$ 97,381,759	\$ 90,375,472	\$ 90,478,145	\$ 88,604,993	\$ 84,028,362	\$ 77,353,370
Net change	38,825,252	64,683,528	80,163,702	122,416,714	(34,348,590)	(1,520,034)	144,449,290	84,476,973	(5,135,674)	169,473,223
Fiduciary net position, beginning of year	1,625,140,265	1,560,456,739	1,480,293,037	1,357,876,323	1,392,224,913	1,393,744,947	1,249,295,657	1,164,818,684	1,169,954,358	1,000,481,135
Net position restricted for benefits	\$ 1,663,965,517	1,625,140,265	\$ 1,560,456,739	\$ 1,480,293,037	\$ 1,357,876,323	\$ 1,392,224,913	\$ 1,393,744,947	\$ 1,249,295,657	\$ 1,164,818,684	\$ 1,169,954,358
SPRBT										
Additions:										
Member contributions	\$ 2,345,831	2,130,140	\$ 2,007,867	\$ 2,061,465	\$ 2,034,676	\$ 1,731,585	\$ 2,033,664	\$ 1,706,227	\$ 1,699,879	\$ 1,361,092
Employer contributions	4,877,630	3,566,922	2,797,003	2,980,219	4,004,656	3,432,359	3,330,889	2,103,209	5,333,298	3,786,553
Interest on service credits purchased	20,665	1,088	2,002	3,635	391	3,368	4,660	5,889	36,452	13,384
Net Investment income (Loss)	5,641,739	9,159,909	10,298,412	13,694,012	58,549	2,655,869	14,124,238	8,844,873	1,393,461	11,237,050
Miscellaneous revenue	4,291	166	245	174	29	325	759	-	-	-
Total Additions	\$ 12,890,156	14,858,225	\$ 15,105,529	\$ 18,739,505	\$ 6,098,301	\$ 7,823,506	\$ 19,494,210	\$ 12,660,198	\$ 8,463,090	\$ 16,398,079
Deductions:										
Retirement benefits	\$ 6,174,388	6,005,175	\$ 5,933,726	\$ 5,078,677	\$ 4,585,258	\$ 2,496,511	\$ 1,659,383	\$ 1,038,157	\$ 405,708	\$ 322,250
Refund of contributions	54,536	42,043	90,127	63,301	-	-	107,921	-	-	7,726
Administrative and Other	158,004	139,604	136,371	125,445	102,055	99,782	83,318	60,143	63,519	53,799
Total Deductions	\$ 6,386,928	6,186,822	\$ 6,160,224	\$ 5,267,423	\$ 4,687,313	\$ 2,596,293	\$ 1,850,622	\$ 1,098,300	\$ 469,227	\$ 383,775
Net change	6,503,228	8,671,403	8,945,305	13,472,082	1,410,988	5,227,213	17,643,588	11,561,898	7,993,863	16,014,304
Fiduciary net position, beginning of year	147,405,372	138,733,969	129,788,664	116,316,582	114,905,593	109,678,380	92,034,792	80,472,894	72,479,031	56,464,727
Net position restricted for benefits	\$ 153,908,600	147,405,372	\$ 138,733,969	\$ 129,788,664	\$ 116,316,581	\$ 114,905,593	\$ 109,678,380	\$ 92,034,792	\$ 80,472,894	\$ 72,479,031

**Employees' Retirement System of Rhode Island
Schedule of Changes in Fiduciary Net Position
Last Ten Fiscal Years**

JRBT	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Additions:										
Member contributions	\$ 1,204,448	1,109,161	\$ 1,142,163	\$ 1,117,518	\$ 1,052,902	\$ 1,120,609	\$ 1,092,790	\$ 1,042,291	\$ 808,534	\$ 711,151
Employer contributions	2,189,255	1,922,023	2,057,529	2,057,159	2,410,039	2,709,397	2,543,510	1,752,049	1,718,379	1,298,278
Net Investment income (Loss)	2,955,374	4,819,915	5,376,763	7,107,208	28,787	1,367,527	7,220,591	4,528,408	690,844	6,366,574
Miscellaneous revenue	-	-	-	-	-	-	-	-	-	-
Total Additions	\$ 6,349,077	7,851,099	\$ 8,576,455	\$ 10,281,885	\$ 3,491,728	\$ 5,197,533	\$ 10,856,891	\$ 7,322,748	\$ 3,217,757	\$ 8,376,003
Deductions:										
Retirement benefits	\$ 3,724,119	3,608,844	\$ 2,833,077	\$ 2,740,166	\$ 2,530,567	\$ 1,800,863	\$ 1,631,368	\$ 1,503,666	\$ 1,383,169	\$ 1,205,765
Death benefits	-	-	-	-	-	8,000	-	-	-	-
Refund of contributions	-	-	123,329	-	-	-	-	-	-	-
Administrative and Other	79,652	73,533	71,270	65,088	52,550	51,039	42,538	32,823	36,534	32,763
Total Deductions	\$ 3,803,771	3,682,377	\$ 3,027,676	\$ 2,805,254	\$ 2,583,117	\$ 1,859,902	\$ 1,673,906	\$ 1,536,489	\$ 1,419,703	\$ 1,238,528
Net change	2,545,306	4,168,722	5,548,779	7,476,631	908,611	3,337,631	9,182,985	5,786,259	1,798,054	7,137,475
Fiduciary net position, beginning of year	77,612,617	73,443,894	67,895,115	60,418,484	59,509,873	56,172,242	46,989,257	41,202,998	39,404,944	32,267,469
Net position restricted for benefits	\$ 80,157,923	77,612,617	\$ 73,443,894	\$ 67,895,115	\$ 60,418,484	\$ 59,509,873	\$ 56,172,242	\$ 46,989,257	\$ 41,202,998	\$ 39,404,944
RIJRF										
Additions:										
Member contributions	\$ 125,540	121,904	\$ 116,757	\$ 116,667	\$ 135,454	\$ 158,718	\$ 153,145	\$ 152,910	\$ -	\$ -
Employer contributions	399,016	399,016	399,012	332,340	140,141	-	-	-	-	-
Net Investment income (Loss)	22,391	39,005	43,510	63,669	3,869	9,094	12,045	-	-	-
Miscellaneous revenue	-	-	-	-	-	-	-	-	-	-
Total Additions	\$ 546,947	559,925	\$ 559,279	\$ 512,676	\$ 279,464	\$ 167,812	\$ 165,190	\$ 152,910	\$ -	\$ -
Deductions:										
Retirement benefits	\$ 399,016	399,016	\$ 399,015	\$ 399,015	\$ 231,175	\$ -	\$ -	\$ -	\$ -	\$ -
Administrative and Other	959	762	646	558	361	237	77	-	-	-
Total Deductions	\$ 399,975	399,778	\$ 399,661	\$ 399,573	\$ 231,536	\$ 237	\$ 77	\$ -	\$ -	\$ -
Net change	146,972	160,147	159,618	113,103	47,928	167,575	165,113	152,910	-	-
Fiduciary net position, beginning of year	966,393	806,246	646,628	533,525	485,597	318,023	152,910	-	-	-
Net position restricted for benefits	\$ 1,113,365	966,393	\$ 806,246	\$ 646,628	\$ 533,525	\$ 485,598	\$ 318,023	\$ 152,910	\$ -	\$ -

**Employees' Retirement System of Rhode Island
Schedule of Changes in Fiduciary Net Position
Last Ten Fiscal Years**

SPRFT	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Additions:										
Employer contributions	\$ 16,387,092	16,387,092	\$ 16,387,092	\$ 16,566,076	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Supplemental employer contributions	-	-	-	15,000,000	-	-	-	-	-	-
Net Investment income (Loss)	868,442	768,973	1,136,938	1,838,792	-	-	-	-	-	-
Miscellaneous revenue	-	75	-	-	-	-	-	-	-	-
Total Additions	\$ 17,255,534	17,156,140	\$ 17,524,030	\$ 33,404,868	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Deductions:										
Retirement benefits	\$ 16,581,299	16,799,403	\$ 17,273,412	\$ 17,391,853	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Administrative and Other	17,175	16,727	5,304	-	-	-	-	-	-	-
Total Deductions	\$ 16,598,474	16,816,130	\$ 17,278,716	\$ 17,391,853	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net change	657,060	340,010	245,314	16,013,015	-	-	-	-	-	-
Fiduciary net position, beginning of year	16,598,339	16,258,329	16,013,015	-	-	-	-	-	-	-
Net position restricted for benefits	\$ 17,255,399	16,598,339	\$ 16,258,329	\$ 16,013,015	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Defined Contribution Plan										
Additions:										
Member contributions*	\$ 101,385,619	96,801,137	\$ 92,018,737	\$ 89,202,835	\$ 83,417,174	\$ 101,335,771	\$ 98,970,355	\$ 92,972,909	\$ -	\$ -
Employer contributions	30,030,113	29,132,886	27,828,956	27,229,405	26,117,372	28,222,896	27,755,911	26,070,631	-	-
Net Investment income (Loss)	45,539,546	59,988,056	61,431,415	74,924,355	4,314,212	10,458,458	32,157,857	4,663,091	-	-
Miscellaneous revenue	10,733	9,690	11,500	7,500	6,550	911	-	-	-	-
Total Additions	\$ 176,966,011	185,931,769	\$ 181,290,608	\$ 191,364,095	\$ 113,855,308	\$ 140,018,036	\$ 158,884,123	\$ 123,706,631	\$ -	\$ -
Deductions:										
Distributions	\$ 23,675,020	19,633,067	\$ 16,181,976	\$ 12,298,997	\$ 9,224,425	\$ 5,331,383	\$ 2,643,923	\$ 338,109	\$ -	\$ -
Administrative and other	962,910	1,342,728	1,232,204	1,177,819	1,160,872	1,298,471	1,257,208	963,548	-	-
Total Deductions	\$ 24,637,930	20,975,795	\$ 17,414,180	\$ 13,476,816	\$ 10,385,297	\$ 6,629,854	\$ 3,901,131	\$ 1,301,657	\$ -	\$ -
Net change	152,328,081	164,955,974	163,876,428	177,887,279	103,470,011	133,388,182	154,982,992	122,404,974	-	-
Fiduciary net position, beginning of year	1,020,965,840	856,009,867	692,133,439	514,246,160	410,776,149	277,387,966	122,404,974	-	-	-
Net position restricted for benefits	\$ 1,173,293,921	1,020,965,840	\$ 856,009,867	\$ 692,133,439	\$ 514,246,160	\$ 410,776,148	\$ 277,387,966	\$ 122,404,974	\$ -	\$ -

* Effective July 1, 2015 members with at least 20 years of service as of June 30, 2012 were no longer required to participate in the Defined Contribution Plan. These members participate solely in the Defined Benefit Plan. This was the result of the mediated settlement from the pension reform challenge.

TABLE 2

Employees' Retirement System of Rhode Island Schedule of Employer Contribution Rates

Valuation Date as of June 30,	Fiscal Year Ending June 30,	Employer Contribution Rate
ERS - State Employees		
2019	2022	28.01%
2018	2021	27.54%
2017	2020	26.39%
2016	2019	26.28% ⁵
2015	2018	24.87%
2014	2017	25.34% ⁴
2013	2016	23.64%
2012	2015	23.33%
2011	2014	23.05%
2010	2013	21.18% ³
ERS - Teachers		
2019	2022	28.75%
2018	2021	25.25%
2017	2020	24.61%
2016	2019	23.51%
2015	2018	23.13%
2014	2017	23.13% ⁴
2013	2016	23.14%
2012	2015	22.60%
2011	2014	20.68%
2010	2013	19.29% ³

¹ Restated after adopting the amendment of Article 7.

² Restated after adopting the amendment of Article 16.

³ Restated after reflecting the Rhode Island Retirement Security Act of 2011.

⁴ Restated after adopting the amendment of Article 21.

⁵ Restated for voluntary retirement incentive offered.

Employees' Retirement System of Rhode Island Schedule of Employer Contribution Rates

Valuation Date as of June 30,	Fiscal Year Ending June 30,	Contribution Rate
Municipal Employees' Retirement System - General Employees*		
2019	2022	12.57%
2018	2021	12.57%
2017	2020	12.43%
2016	2019	12.23%
2015	2018	11.91%
2014	2017	12.06%
2013	2016	12.74%
2012	2015	12.63%
2011	2014	11.85%
2010	2013	18.35%
Municipal Employees' Retirement System - Police/Fire Employees*		
2019	2022	19.70%
2018	2021	19.57%
2017	2020	19.31%
2016	2019	17.20%
2015	2018	15.90%
2014	2017	16.15%
2013	2016	16.89%
2012	2015	17.26%
2011	2014	13.27%
2010	2013	31.91%

* Each employer unit participating in MERS is financially responsible for its own plan. Therefore, the aggregate numbers shown on the above schedules reflect only the aggregate condition of MERS and does not indicate the status of any particular employer unit.

Employees' Retirement System of Rhode Island Schedule of Employer Contribution Rates

State Police Retirement Benefits Trust

Valuation Date as of June 30,	Fiscal Year Ending June 30,	Employer Contribution Rate
2019	2022	19.24%
2018	2021	19.82%
2017	2020	18.48%
2016	2019	14.74%
2015	2018	12.22%
2014	2017	12.66% ³
2013	2016	17.22%
2012	2015	17.24%
2011	2014	14.45%
2010	2013	11.07% ²

¹ Revised pursuant to Article 22 (2008).

² Restated after reflecting the Rhode Island Retirement Security Act of 2011.

³ Restated to reflect impact of Article 21.

Judicial Retirement Benefits Trust

Valuation Date as of June 30,	Fiscal Year Ending June 30,	Employer Contribution Rate
2019	2022	21.82%
2018	2021	21.61%
2017	2020	21.30%
2016	2019	20.28%
2015	2018	21.13%
2014	2017	21.58% ⁴
2013	2016	26.80%
2012	2015	28.32%
2011	2014	27.28%
2010	2013	19.69% ³

¹ Reflects changes in benefit provisions enacted by Article 35.

² Restated to reflect changes in benefit provisions enacted by Article 16.

³ Restated after reflecting the Rhode Island Retirement Security Act of 2011.

⁴ Restated after reflecting the impact of Article 21.

Employees' Retirement System of Rhode Island Schedule of Employer Contribution Rates

Teachers' Survivors Benefits Plan

The calculation for the contributions for TSB are prescribed in Rhode Island General Law §16-16-35. The annual salary limit used in the calculation of the 2% contribution rate due to the Teachers Survivors' Benefit Plan is \$11,500; one-half (1/2) of the cost shall be contributed by the member by deductions from his or her salary, and the other half (1/2) shall be contributed and paid by the respective city, town, or school district by which the member is employed.

Rhode Island Judicial Retirement Fund Trust

RIJRFT is a closed plan and the actuarial determined contribution is calculated as a level dollar amount.

State Police Retirement Fund Trust

SPRFT is a closed plan and the actuarial determined contribution is calculated as a level dollar amount.

Note: The most recent actuarial valuation for ERSRI is as of June 30, 2019. Data in this schedule prior to fiscal year ending June 30, 2019 was derived from actuarial valuations prepared by GRS and certified by the ERSRI Board in prior fiscal years.

TABLE 3

**Employees' Retirement System of Rhode Island
Schedule of Benefits and Refunds by Type
Last Ten Fiscal Years**

ERS	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Deductions:										
Service Retirement	\$ 756,094,996	756,671,233	\$ 753,958,832	\$ 756,807,010	\$ 757,469,257	\$ 755,331,153	\$ 768,819,629	\$ 772,592,699	\$ 758,007,433	\$ 730,240,340
Survivor Retirement	35,243,048	35,260,158	34,500,460	34,563,403	36,200,420	21,694,578	6,768,753	6,635,029	6,375,087	6,159,078
Disability Retirement	29,055,170	28,609,057	27,502,977	27,648,067	24,211,576	22,262,866	24,860,878	24,574,363	24,398,424	23,770,292
Supplemental Retirement	834,148	861,723	888,996	911,277	939,411	956,506	999,527	1,027,913	1,061,420	1,089,321
Death benefits	2,629,334	2,672,900	2,778,667	2,432,232	2,878,655	3,320,919	2,700,200	2,822,400	2,824,800	2,606,747
Refund of contributions	4,736,366	5,123,636	4,678,432	5,711,781	6,306,239	8,618,199	10,062,956	9,417,426	9,796,997	8,890,203
Total	\$ 828,593,062	829,198,707	\$ 824,308,364	\$ 828,073,769	\$ 828,005,558	\$ 812,184,221	\$ 814,211,943	\$ 817,069,830	\$ 802,464,161	\$ 772,755,981
TSB	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Deductions:										
Survivor Retirement	\$ 10,436,948	10,236,365	\$ 9,602,181	\$ 8,405,649	\$ 8,097,067	\$ 7,750,955	\$ 7,421,004	\$ 7,127,822	\$ 6,704,572	\$ 6,527,665
Refund of contributions	592,550	454,152	275,135	266,523	195,601	241,427	201,986	342,877	369,108	235,943
Total	\$ 11,029,498	10,690,517	\$ 9,877,316	\$ 8,672,172	\$ 8,292,668	\$ 7,992,382	\$ 7,622,990	\$ 7,470,699	\$ 7,073,680	\$ 6,763,608
MERS	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Deductions:										
Service Retirement	\$ 82,293,176	85,618,391	\$ 81,864,846	\$ 81,297,434	\$ 80,167,328	\$ 76,240,655	\$ 77,579,600	\$ 76,142,106	\$ 70,963,734	\$ 65,199,269
Survivor Retirement	5,746,999	5,178,516	4,931,551	4,986,860	5,281,693	3,029,126	739,423	684,165	666,693	649,604
Disability Retirement	11,838,302	10,560,782	10,025,911	9,791,427	8,517,764	7,725,240	8,069,350	7,898,221	7,757,920	7,463,796
Death benefits	884,875	761,200	702,000	778,333	603,208	678,865	763,200	695,200	585,600	729,400
Refund of contributions	1,327,483	1,180,639	1,207,726	1,425,882	1,543,855	1,360,545	2,151,611	2,180,177	2,770,982	2,109,439
Total	\$ 102,090,835	103,299,528	\$ 98,732,034	\$ 98,279,937	\$ 96,113,847	\$ 89,034,430	\$ 89,303,185	\$ 87,599,869	\$ 82,744,929	\$ 76,151,508
SPRBT	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Deductions:										
Service Retirement	\$ 5,677,926	5,508,713	\$ 5,449,859	\$ 4,673,084	\$ 4,179,857	\$ 2,122,230	\$ 1,363,462	\$ 821,056	\$ 224,733	\$ 145,775
Survivor Retirement	113,428	113,428	113,428	114,234	114,196	112,696	112,696	33,876	-	-
Disability Retirement	383,034	383,034	370,439	291,359	291,205	261,585	183,225	183,225	180,975	176,475
Refund of contributions	54,536	42,043	90,127	63,301	-	-	107,921	-	-	7,726
Total	\$ 6,228,924	6,047,218	\$ 6,023,853	\$ 5,141,979	\$ 4,585,258	\$ 2,496,511	\$ 1,767,304	\$ 1,038,157	\$ 405,708	\$ 329,976
JRBT	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Deductions:										
Service Retirement	\$ 3,362,118	3,217,719	\$ 2,461,524	\$ 2,388,732	\$ 2,222,569	\$ 1,649,394	\$ 1,594,682	\$ 1,466,980	\$ 1,328,974	\$ 1,117,296
Survivor Retirement	362,001	391,125	371,553	351,434	307,998	151,469	36,686	36,686	54,195	88,469
Death benefits	-	-	-	-	-	8,000	-	-	-	-
Refund of contributions	-	-	123,329	-	-	-	-	-	-	-
Total	\$ 3,724,119	3,608,844	\$ 2,956,406	\$ 2,740,166	\$ 2,530,567	\$ 1,808,863	\$ 1,631,368	\$ 1,503,666	\$ 1,383,169	\$ 1,205,765

**Employees' Retirement System of Rhode Island
Schedule of Benefits and Refunds by Type
Last Ten Fiscal Years**

RIJRF	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Deductions:										
Service Retirement	\$ 399,016	399,016	\$ 399,015	\$ 399,015	\$ 231,175	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 399,016	399,016	\$ 399,015	\$ 399,015	\$ 231,175	\$ -	\$ -	\$ -	\$ -	\$ -
SPRFT										
Deductions:										
Service Retirement	\$ 13,446,562	13,594,008	\$ 13,973,618	\$ 14,245,610	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Survivor Retirement	2,151,349	2,222,007	2,273,423	2,092,513	-	-	-	-	-	-
Disability Retirement	983,388	983,388	1,026,371	1,053,730	-	-	-	-	-	-
Total	\$ 16,581,299	16,799,403	\$ 17,273,412	\$ 17,391,853	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Employees' Retirement System of Rhode Island
Schedule of Retired Members by Type of Pension Benefit

ERS - State Employees					
Monthly Amount	Service Retirement Allowance	Option One:	Option Two:	Service Retirement Allowance Plus	Total
		Joint and Survivor Full	Joint and Survivor Half		
Under \$500	472	66	26		564
\$500-\$1,000	1,161	144	92		1,397
\$1,000-\$1,500	1,140	166	136	2	1,444
\$1,500-\$2,000	1,120	172	132	11	1,435
\$2,000-\$2,500	1,046	147	141	112	1,446
\$2,500-\$3,000	869	98	106	142	1,215
\$3,000-\$3,500	595	109	112	146	962
\$3,500-\$4,000	483	87	125	115	810
\$4,000-\$4,500	357	75	104	78	614
\$4,500-\$5,000	245	40	62	58	405
\$5,000-\$5,500	214	25	41	33	313
\$5,500-\$6,000	137	23	41	17	218
\$6,000-\$6,500	89	18	29	7	143
\$6,500-\$7,000	51	9	17	2	79
\$7,000-\$7,500	40	9	20	4	73
Over \$7,500	61	18	22	5	106
Total	8,080	1,206	1,206	732	11,224

ERS - Teachers					
Monthly Amount	Service Retirement Allowance	Option One:	Option Two:	Service Retirement Allowance Plus	Total
		Joint and Survivor Full	Joint and Survivor Half		
Under \$500	66	9	1		76
\$500-\$1,000	221	53	30		304
\$1,000-\$1,500	398	88	54		540
\$1,500-\$2,000	473	96	69	2	640
\$2,000-\$2,500	527	79	79	7	692
\$2,500-\$3,000	811	77	106	9	1,003
\$3,000-\$3,500	1,399	100	154	7	1,660
\$3,500-\$4,000	1,542	112	201	76	1,931
\$4,000-\$4,500	1,298	75	239	99	1,711
\$4,500-\$5,000	1,134	34	134	73	1,375
\$5,000-\$5,500	612	17	59	27	715
\$5,500-\$6,000	226	5	37	12	280
\$6,000-\$6,500	91	5	17	8	121
\$6,500-\$7,000	60	1	3	1	65
\$7,000-\$7,500	30		2		32
Over \$7,500	43	3	5		51
Total	8,931	754	1,190	321	11,196

**Employees' Retirement System of Rhode Island
Schedule of Retired Members by Type of Pension Benefit**

Teachers' Survivors Benefits Plan					
Life Insurance Benefit	Life Insurance	N/A	N/A	N/A	Total
Under \$10,000	1				1
\$10,000-\$11,000	2				2
\$11,000-\$12,000	5				5
\$12,000-\$13,000	7				7
\$13,000-\$14,000	21				21
\$14,000-\$15,000	21				21
\$15,000-\$16,000	66				66
\$16,000-\$17,000	85				85
\$17,000-\$18,000	169				169
\$18,000-\$19,000	86				86
\$19,000-\$20,000	46				46
Over \$20,000	85				85
Total	594	0	0	0	594

Municipal Employees' Retirement System - General Employees					
Monthly Amount	Service Retirement Allowance	Option One: Joint and Survivor Full	Option Two: Joint and Survivor Half	Service Retirement Allowance Plus	Total
	Under \$500	729	97	55	
\$500-\$1,000	1,049	249	147		1,445
\$1,000-\$1,500	680	171	106		957
\$1,500-\$2,000	430	113	84	2	629
\$2,000-\$2,500	292	51	68	1	412
\$2,500-\$3,000	163	36	26	9	234
\$3,000-\$3,500	71	11	18	16	116
\$3,500-\$4,000	43	6	6	8	63
\$4,000-\$4,500	27	1	4	4	36
\$4,500-\$5,000	20	4	4	2	30
\$5,000-\$5,500	7	2	1		10
\$5,500-\$6,000	2			1	3
\$6,000-\$6,500	5		1		6
\$6,500-\$7,000		1			1
\$7,000-\$7,500	1				1
Over \$7,500	2	1			3
Total	3,521	743	520	43	4,827

Employees' Retirement System of Rhode Island
Schedule of Retired Members by Type of Pension Benefit

Municipal Employees' Retirement System - Police/Fire Employees

Monthly Amount	Service	Option One:	Option Two:	Service Retirement Allowance Plus	Total
	Retirement Allowance	Joint and Survivor Full	Joint and Survivor Half		
Under \$500	24	1	1		26
\$500-\$1,000	60	1	1		62
\$1,000-\$1,500	55	4	4		63
\$1,500-\$2,000	56	2	9		67
\$2,000-\$2,500	81	9	12		102
\$2,500-\$3,000	101	15	23		139
\$3,000-\$3,500	142	14	21		177
\$3,500-\$4,000	88	3	7		98
\$4,000-\$4,500	62	7	6		75
\$4,500-\$5,000	24	1	2		27
\$5,000-\$5,500	14	2			16
\$5,500-\$6,000	8		1		9
\$6,000-\$6,500	2				2
\$6,500-\$7,000					
\$7,000-\$7,500					
Over \$7,500					
Total	717	59	87	0	863

State Police Retirement Benefits Trust

Monthly Amount	Service	Option One:	Option Two:	Service Retirement Allowance Plus	Total
	Retirement Allowance	Joint and Survivor Full	Joint and Survivor Half		
Under \$500					
\$500-\$1,000					
\$1,000-\$1,500	1				1
\$1,500-\$2,000					
\$2,000-\$2,500					
\$2,500-\$3,000	1				1
\$3,000-\$3,500					
\$3,500-\$4,000	4				4
\$4,000-\$4,500	3				3
\$4,500-\$5,000					
\$5,000-\$5,500	1				1
\$5,500-\$6,000	9				9
\$6,000-\$6,500	4				4
\$6,500-\$7,000	6				6
\$7,000-\$7,500	8				8
Over \$7,500	36				36
Total	73	0	0	0	73

**Employees' Retirement System of Rhode Island
Schedule of Retired Members by Type of Pension Benefit**

Judicial Retirement Benefits Trust					
Monthly Amount	Service Retirement Allowance	Option One: Joint and Survivor Full	Option Two: Joint and Survivor Half	Service Retirement Allowance Plus	Total
Under \$500					
\$500-\$1,000					
\$1,000-\$1,500					
\$1,500-\$2,000					
\$2,000-\$2,500					
\$2,500-\$3,000					
\$3,000-\$3,500	1				1
\$3,500-\$4,000					
\$4,000-\$4,500					
\$4,500-\$5,000					
\$5,000-\$5,500	2				2
\$5,500-\$6,000					
\$6,000-\$6,500					
\$6,500-\$7,000	1				1
\$7,000-\$7,500					
Over \$7,500	22				22
Total	26	0	0	0	26

Rhode Island Judicial Retirement Fund Trust					
Monthly Amount	Service Retirement Allowance	Option One: Joint and Survivor Full	Option Two: Joint and Survivor Half	Service Retirement Allowance Plus	Total
Under \$500					
\$500-\$1,000					
\$1,000-\$1,500					
\$1,500-\$2,000					
\$2,000-\$2,500					
\$2,500-\$3,000					
\$3,000-\$3,500					
\$3,500-\$4,000					
\$4,000-\$4,500					
\$4,500-\$5,000					
\$5,000-\$5,500					
\$5,500-\$6,000					
\$6,000-\$6,500					
\$6,500-\$7,000					
\$7,000-\$7,500					
Over \$7,500	2				2
Total	2	0	0	0	2

Employees' Retirement System of Rhode Island Schedule of Retired Members by Type of Pension Benefit

State Police Retirement Fund Trust					
Monthly Amount	Service Retirement Allowance	Option One:	Option Two:	Service Retirement Allowance Plus	Total
		Joint and Survivor Full	Joint and Survivor Half		
Under \$500	1				1
\$500-\$1,000					
\$1,000-\$1,500	2				2
\$1,500-\$2,000	3				3
\$2,000-\$2,500	5				5
\$2,500-\$3,000	9				9
\$3,000-\$3,500	5				5
\$3,500-\$4,000	21				23
\$4,000-\$4,500	26				28
\$4,500-\$5,000	24				27
\$5,000-\$5,500	29				29
\$5,500-\$6,000	34				35
\$6,000-\$6,500	40				40
\$6,500-\$7,000	31				30
\$7,000-\$7,500	13				13
Over \$7,500	16				16
Total	259				259

Service Retirement Allowance - is a life annuity that is calculated based on the member's years of service credit and average salary as a participating employee.

Option 1: Joint and Survivor Full - is an annuity that is actuarially reduced based on the age difference of the member and the designated beneficiary. The retirement benefit that the member and the beneficiary (upon death of the member) will receive will be equal for the respective lives of each recipient.

Option 2: Joint and Survivor Half - is an annuity that is actuarially reduced based on the age difference of the member and the designated beneficiary. The retirement benefit for the member is reduced based on the actuarial reduction calculation. However, this benefit will be higher than the Joint and Survivor Full option. Upon the death of the member, the designated beneficiary will receive 50% of the member's benefit for the remainder of their life.

Service Retirement Allowance Plus - is a life annuity that is calculated based on the member's years of service credit and average salary as a participating employee. In addition, a supplemental amount will be added to the pension benefit. The supplementary amount is determined based on the member's age at retirement and a percentage of an estimate of the average Social Security payment that a member might receive at the age of 62 (calculated on a national average figure). During the month the member turns 62, the pension benefit amount will be reduced by the full national average amount of Social Security payment that a person might receive at the age of 62 (calculated on a national average figure). Also, the pension benefit will be reduced by the full estimated amount and not by the supplemental amount that the member had been receiving. Estimate of Social Security benefits used by ERSRI to calculate pension benefits are general estimates and are not guaranteed by ERSRI or the Social Security Administration (SSA). This option is not related to a member's participation in Social Security or any programs of the SSA.

Note: This schedule was prepared based on the source data that was certified in the most recent actuarial valuations as of June 30, 2019.

TABLE 5

Employees' Retirement System of Rhode Island
Schedule of Average Benefit Payments - Retirement

		ERS - State Employees							
		0-5 Yrs.	5-10 Yrs.	10-15 Yrs.	15-20 Yrs.	20-25 Yrs.	25-30 Yrs.	>30 Yrs.	Total
2019	Average annual benefit	\$ 24,840	\$ 11,793	\$ 11,972	\$ 17,505	\$ 24,418	\$ 34,958	\$ 47,848	\$ 30,506
	Average monthly benefit	\$ 2,070	\$ 983	\$ 998	\$ 1,459	\$ 2,035	\$ 2,913	\$ 3,987	\$ 2,542
	Average monthly FAC	\$ 2,550	\$ 2,894	\$ 3,562	\$ 3,906	\$ 4,394	\$ 4,672	\$ 5,313	\$ 3,960
	Number of retired members	3,567	193	690	818	1,178	2,207	2,571	11,224
2018	Average annual benefit	\$ 24,614	\$ 12,158	\$ 11,697	\$ 17,571	\$ 24,667	\$ 35,384	\$ 47,920	\$ 30,438
	Average monthly benefit	\$ 2,051	\$ 1,013	\$ 975	\$ 1,464	\$ 2,056	\$ 2,949	\$ 3,993	\$ 2,537
	Average monthly FAC	\$ 2,536	\$ 3,168	\$ 3,679	\$ 3,955	\$ 4,439	\$ 4,693	\$ 5,318	\$ 3,940
	Number of retired members	3,820	166	650	798	1,158	2,169	2,499	11,260
2017	Average annual benefit	\$ 24,171	\$ 12,650	\$ 11,832	\$ 17,481	\$ 24,822	\$ 35,679	\$ 47,637	\$ 29,861
	Average monthly benefit	\$ 2,014	\$ 1,054	\$ 986	\$ 1,457	\$ 2,068	\$ 2,973	\$ 3,970	\$ 2,488
	Average monthly FAC	\$ 2,515	\$ 3,177	\$ 3,644	\$ 3,904	\$ 4,422	\$ 4,682	\$ 5,233	\$ 3,826
	Number of retired members	4,149	151	600	768	1,095	2,062	2,253	11,078
		ERS - Teachers							
		0-5 Yrs.	5-10 Yrs.	10-15 Yrs.	15-20 Yrs.	20-25 Yrs.	25-30 Yrs.	>30 Yrs.	Total
2019	Average annual benefit	\$ 42,786	\$ 34,205	\$ 17,506	\$ 26,562	\$ 44,296	\$ 53,200	\$ 57,557	\$ 42,898
	Average monthly benefit	\$ 3,566	\$ 2,850	\$ 1,459	\$ 2,213	\$ 3,691	\$ 4,433	\$ 4,796	\$ 3,575
	Average monthly FAC	\$ 3,896	\$ 4,713	\$ 5,323	\$ 5,739	\$ 5,781	\$ 6,058	\$ 6,563	\$ 5,109
	Number of retired members	4,114	425	564	913	2,474	2,234	472	11,196
2018	Average annual benefit	\$ 42,720	\$ 34,676	\$ 17,618	\$ 26,683	\$ 44,683	\$ 53,536	\$ 58,093	\$ 43,085
	Average monthly benefit	\$ 3,560	\$ 2,890	\$ 1,468	\$ 2,224	\$ 3,724	\$ 4,461	\$ 4,841	\$ 3,590
	Average monthly FAC	\$ 3,882	\$ 4,799	\$ 5,453	\$ 5,838	\$ 5,798	\$ 6,111	\$ 6,623	\$ 5,112
	Number of retired members	4,309	426	552	898	2,463	2,216	456	11,320
2017	Average annual benefit	\$ 42,307	\$ 34,952	\$ 17,827	\$ 26,980	\$ 45,153	\$ 54,382	\$ 58,761	\$ 43,150
	Average monthly benefit	\$ 3,526	\$ 2,913	\$ 1,486	\$ 2,248	\$ 3,763	\$ 4,532	\$ 4,897	\$ 3,596
	Average monthly FAC	\$ 3,866	\$ 4,789	\$ 5,412	\$ 5,838	\$ 5,821	\$ 6,145	\$ 6,574	\$ 5,062
	Number of retired members	4,517	424	519	856	2,420	2,106	369	11,211

TABLE 5

**Employees' Retirement System of Rhode Island
Schedule of Average Benefit Payments - Retirement**

		Teachers' Survivors Benefits Plan							
		0-5 Yrs.	5-10 Yrs.	10-15 Yrs.	15-20 Yrs.	20-25 Yrs.	25-30 Yrs.	>30 Yrs.	Total
2019	Average annual benefit	\$ 18,321	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,321
	Number of retired members	594	-	-	-	-	-	-	594
2018	Average annual benefit	\$ 17,739	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 17,739
	Number of retired members	567	-	-	-	-	-	-	567
2017	Average annual benefit	\$ 18,333	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,333
	Number of retired members	573	-	-	-	-	-	-	573
		Municipal Employees' Retirement System - General Employees							
		0-5 Yrs.	5-10 Yrs.	10-15 Yrs.	15-20 Yrs.	20-25 Yrs.	25-30 Yrs.	>30 Yrs.	Total
2019	Average annual benefit	\$ 22,634	\$ 7,617	\$ 8,468	\$ 12,067	\$ 16,938	\$ 15,535	\$ 31,687	\$ 15,488
	Average monthly benefit	\$ 1,886	\$ 635	\$ 706	\$ 1,006	\$ 1,412	\$ 1,295	\$ 2,641	\$ 1,291
	Average monthly FAC	\$ 2,236	\$ 2,520	\$ 2,601	\$ 2,817	\$ 3,003	\$ 2,283	\$ 3,766	\$ 2,693
	Number of retired members	15	180	831	720	710	1,847	524	4,827
2018	Average annual benefit	\$ 21,885	\$ 7,797	\$ 8,415	\$ 12,049	\$ 16,986	\$ 15,054	\$ 31,895	\$ 15,248
	Average monthly benefit	\$ 1,824	\$ 650	\$ 701	\$ 1,004	\$ 1,416	\$ 1,255	\$ 2,658	\$ 1,271
	Average monthly FAC	\$ 2,395	\$ 2,556	\$ 2,656	\$ 2,854	\$ 3,066	\$ 2,238	\$ 3,778	\$ 2,686
	Number of retired members	14	174	802	694	660	1,900	488	4,732
2017	Average annual benefit	\$ 21,762	\$ 8,071	\$ 8,445	\$ 12,129	\$ 17,339	\$ 14,476	\$ 31,638	\$ 15,046
	Average monthly benefit	\$ 1,813	\$ 673	\$ 704	\$ 1,011	\$ 1,445	\$ 1,206	\$ 2,636	\$ 1,254
	Average monthly FAC	\$ 2,308	\$ 2,556	\$ 2,644	\$ 2,799	\$ 3,062	\$ 2,188	\$ 3,816	\$ 2,638
	Number of retired members	14	152	768	641	619	1,983	459	4,636
		Municipal Employees' Retirement System - Police/Fire Employees							
		0-5 Yrs.	5-10 Yrs.	10-15 Yrs.	15-20 Yrs.	20-25 Yrs.	25-30 Yrs.	>30 Yrs.	Total
2019	Average annual benefit	\$ 35,530	\$ 34,893	\$ 35,915	\$ 32,824	\$ 32,336	\$ 31,267	\$ 46,931	\$ 33,406
	Average monthly benefit	\$ 2,961	\$ 2,908	\$ 2,993	\$ 2,735	\$ 2,695	\$ 2,606	\$ 3,911	\$ 2,784
	Average monthly FAC	\$ 3,823	\$ 4,275	\$ 4,647	\$ 4,616	\$ 4,484	\$ 3,690	\$ 5,083	\$ 4,185
	Number of retired members	8	20	62	72	242	390	69	863
2018	Average annual benefit	\$ 35,842	\$ 34,795	\$ 36,202	\$ 31,855	\$ 32,365	\$ 30,622	\$ 46,976	\$ 32,913
	Average monthly benefit	\$ 2,987	\$ 2,900	\$ 3,017	\$ 2,655	\$ 2,697	\$ 2,552	\$ 3,915	\$ 2,743
	Average monthly FAC	\$ 3,836	\$ 4,275	\$ 4,736	\$ 4,530	\$ 4,470	\$ 3,639	\$ 5,201	\$ 4,156
	Number of retired members	7	20	57	66	241	375	58	824
2017	Average annual benefit	\$ 35,752	\$ 34,796	\$ 35,663	\$ 31,627	\$ 32,398	\$ 29,852	\$ 45,583	\$ 32,309
	Average monthly benefit	\$ 2,979	\$ 2,900	\$ 2,972	\$ 2,636	\$ 2,700	\$ 2,488	\$ 3,799	\$ 2,692
	Average monthly FAC	\$ 3,836	\$ 4,577	\$ 4,802	\$ 4,766	\$ 4,919	\$ 3,786	\$ 5,216	\$ 4,378
	Number of retired members	7	19	54	64	237	369	51	801

TABLE 5

Employees' Retirement System of Rhode Island
Schedule of Average Benefit Payments - Retirement

		State Police Retirement Benefits Trust							
		0-5 Yrs.	5-10 Yrs.	10-15 Yrs.	15-20 Yrs.	20-25 Yrs.	25-30 Yrs.	>30 Yrs.	Total
2019	Average annual benefit	\$ -	\$ 43,489	\$ 70,878	\$ 45,006	\$ 80,379	\$ 87,831	\$ -	\$ 83,547
	Average monthly benefit	\$ -	\$ 3,624	\$ 5,907	\$ 3,751	\$ 6,698	\$ 7,319	\$ -	\$ 6,962
	Average monthly FAC	\$ -	\$ 4,084	\$ 7,461	\$ 7,198	\$ 10,557	\$ 11,609	\$ -	\$ 10,985
	Number of retired members	-	1	1	1	28	42	-	73
2018	Average annual benefit	\$ -	\$ 43,488	\$ 70,884	\$ 45,012	\$ 80,358	\$ 87,831	\$ -	\$ 83,544
	Average monthly benefit	\$ -	\$ 3,624	\$ 5,907	\$ 3,751	\$ 6,696	\$ 7,319	\$ -	\$ 6,962
	Average monthly FAC	\$ -	\$ 4,084	\$ 7,461	\$ 7,198	\$ 10,557	\$ 11,609	\$ -	\$ 10,985
	Number of retired members	-	1	1	1	28	42	-	73
2017	Average annual benefit	\$ -	\$ 43,489	\$ 70,878	\$ 45,006	\$ 79,780	\$ 87,820	\$ -	\$ 83,410
	Average monthly benefit	\$ -	\$ 3,624	\$ 5,907	\$ 3,751	\$ 6,648	\$ 7,318	\$ -	\$ 6,951
	Average monthly FAC	\$ -	\$ 4,084	\$ 7,461	\$ 7,198	\$ 11,065	\$ 11,609	\$ -	\$ 11,183
	Number of retired members	-	1	1	1	26	42	-	71
		Judicial Retirement Benefits Trust							
		0-5 Yrs.	5-10 Yrs.	10-15 Yrs.	15-20 Yrs.	20-25 Yrs.	25-30 Yrs.	>30 Yrs.	Total
2019	Average annual benefit	\$ 130,631	\$ 64,348	\$ 111,341	\$ 168,129	\$ 161,380	\$ 166,831	\$ -	\$ 141,980
	Average monthly benefit	\$ 10,886	\$ 5,362	\$ 9,278	\$ 14,011	\$ 13,448	\$ 13,903	\$ -	\$ 11,832
	Average monthly FAC	\$ 11,147	\$ 7,587	\$ 10,483	\$ 12,308	\$ 12,209	\$ 10,336	\$ -	\$ 11,252
	Number of retired members	2	2	6	6	8	2	-	26
2018	Average annual benefit	\$ 130,632	\$ 64,344	\$ 105,943	\$ 154,860	\$ 160,934	\$ 165,384	\$ -	\$ 136,774
	Average monthly benefit	\$ 10,886	\$ 5,362	\$ 8,829	\$ 12,905	\$ 13,411	\$ 13,782	\$ -	\$ 11,398
	Average monthly FAC	\$ 11,147	\$ 7,587	\$ 9,714	\$ 12,263	\$ 11,585	\$ 10,336	\$ -	\$ 10,861
	Number of retired members	2	2	5	6	6	2	-	23
2017	Average annual benefit	\$ 130,515	\$ 64,348	\$ 112,185	\$ 149,212	\$ 160,817	\$ 186,050	\$ -	\$ 136,774
	Average monthly benefit	\$ 10,876	\$ 5,362	\$ 9,349	\$ 12,434	\$ 13,401	\$ 15,504	\$ -	\$ 11,398
	Average monthly FAC	\$ 11,147	\$ 13,058	\$ 12,143	\$ 14,086	\$ 11,585	\$ 20,672	\$ -	\$ 12,880
	Number of retired members	2	2	4	5	6	1	-	20

Employees' Retirement System of Rhode Island
Schedule of Average Benefit Payments - Retirement

		Rhode Island Judicial Retirement Fund Trust							
		0-5 Yrs.	5-10 Yrs.	10-15 Yrs.	15-20 Yrs.	20-25 Yrs.	25-30 Yrs.	>30 Yrs.	Total
2019	Average annual benefit	\$ 199,508	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	199,508
	Average monthly benefit	\$ 16,626	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	16,626
	Average monthly FAC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
	Number of retired members	2	-	-	-	-	-	-	2
2018	Average annual benefit	\$ 199,512	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	199,512
	Average monthly benefit	\$ 16,626	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	16,626
	Average monthly FAC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
	Number of retired members	2	-	-	-	-	-	-	2
2017	Average annual benefit	\$ 199,508	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	199,508
	Average monthly benefit	\$ 16,626	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	16,626
	Average monthly FAC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
	Number of retired members	2	-	-	-	-	-	-	2
		State Police Retirement Fund Trust							
		0-5 Yrs.	5-10 Yrs.	10-15 Yrs.	15-20 Yrs.	20-25 Yrs.	25-30 Yrs.	>30 Yrs.	Total
2019	Average annual benefit	\$ 64,444	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	64,444
	Average monthly benefit	\$ 5,370	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	5,370
	Average monthly FAC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
	Number of retired members	259	-	-	-	-	-	-	259
2018	Average annual benefit	\$ 64,032	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	64,032
	Average monthly benefit	\$ 5,336	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	5,336
	Average monthly FAC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
	Number of retired members	266	-	-	-	-	-	-	266
2017	Average annual benefit	\$ 64,359	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	64,359
	Average monthly benefit	\$ 5,363	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	5,363
	Average monthly FAC	\$ 4,034	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
	Number of retired members	269	-	-	-	-	-	-	269

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

Source: The most recent actuarial valuation for ERSRI is as of June 30, 2018. Data in this schedule prior to fiscal year ending June 30, 2017 was derived from actuarial valuations prepared by GRS and certified by the ERSRI Board in prior fiscal years.

FAC: Final Average Compensation

TABLE 6

**Employees' Retirement System of Rhode Island
Schedule of Top Ten Employers With Most Covered Employees
Current Fiscal Period and Fiscal Period Ended Nine Years Prior**

2019			2010		
ERS - Teachers	Number of Covered Employees	Percentage of Total Covered Employees	ERS - Teachers	Number of Covered Employees	Percentage of Total Covered Employees
Providence School Department	1,937	15.05%	Providence School Department	1,888	13.59%
Cranston School Department	1,007	7.82%	Warwick School Department	1,097	7.89%
Warwick School Department	869	6.75%	Cranston School Department	1,014	7.30%
Pawtucket School Department	745	5.79%	Pawtucket School Department	770	5.54%
Woonsocket School Department	528	4.10%	Woonsocket School Department	565	4.07%
East Providence School Department	506	3.93%	East Providence School Department	548	3.94%
Coventry School Department	438	3.40%	Coventry School Department	498	3.58%
Cumberland School Department	416	3.23%	Cumberland School Department	412	2.97%
North Kingstown School Department	366	2.84%	North Kingstown School Department	404	2.91%
West Warwick School Department	343	2.67%	South Kingstown School Department	382	2.75%
Remaining employers	5,715	44.41%	Remaining employers	6,317	45.46%
	<u>12,870</u>	<u>100.00%</u>		<u>13,895</u>	<u>100.00%</u>

TABLE 6

**Employees' Retirement System of Rhode Island
Schedule of Top Ten Employers With Most Covered Employees
Current Fiscal Period and Fiscal Period Ended Nine Years Prior**

2019			2010		
TSB	Number of Covered Employees	Percentage of Total Covered Employees	TSB	Number of Covered Employees	Percentage of Total Covered Employees
Cranston School Department	1,002	14.81%	Cranston School Department	1,014	15.04%
East Providence School Department	503	7.44%	East Providence School Department	548	8.13%
Coventry School Department	433	6.40%	Coventry School Department	498	7.38%
Cumberland School Department	413	6.10%	Cumberland School Department	412	6.11%
Johnston School Department	327	4.83%	Lincoln School Department	355	5.26%
Westerly School Department	282	4.17%	Central Falls Collaborative	352	5.22%
Lincoln School Department	279	4.12%	Westerly School Department	338	5.01%
Barrington School Department	276	4.08%	Bristol Warren Regional School District	323	4.79%
Bristol Warren Regional School District	274	4.05%	Johnston School Department	315	4.67%
Central Falls Collaborative	242	3.58%	Barrington School Department	306	4.54%
Remaining employers	2,734	40.41%	Remaining employers	2,283	33.85%
	<u>6,765</u>	<u>100.00%</u>		<u>6,744</u>	<u>100.00%</u>

TABLE 6

**Employees' Retirement System of Rhode Island
Schedule of Top Ten Employers With Most Covered Employees
Current Fiscal Period and Fiscal Period Ended Nine Years Prior**

2019			2010		
	Number of Covered Employees	Percentage of Total Covered Employees		Number of Covered Employees	Percentage of Total Covered Employees
MERS - General Employees			MERS - General Employees		
City of Cranston	640	10.72%	City of Cranston	774	12.13%
City of Pawtucket	517	8.66%	City of Pawtucket	577	9.04%
City of East Providence	431	7.22%	City of East Providence	430	6.74%
City of Woonsocket	367	6.15%	City of Woonsocket	370	5.80%
Town of North Kingstown	303	5.07%	Town of South Kingstown	344	5.39%
City of Newport	296	4.96%	Town North Kingstown	331	5.19%
Town of South Kingstown	295	4.94%	City of Newport	276	4.32%
Town of Cumberland	242	4.05%	Town of Johnston	253	3.96%
Town of Johnston	223	3.73%	Town of Cumberland	250	3.92%
Town of North Providence	217	3.63%	Town of North Providence	246	3.85%
Remaining employers	2,440	40.86%	Remaining employers	2,532	39.67%
	<u>5,971</u>	<u>100.00%</u>		<u>6,383</u>	<u>100.00%</u>

TABLE 6

**Employees' Retirement System of Rhode Island
Schedule of Top Ten Employers With Most Covered Employees
Current Fiscal Period and Fiscal Period Ended Nine Years Prior**

2019			2010		
	Number of Covered Employees	Percentage of Total Covered Employees		Number of Covered Employees	Percentage of Total Covered Employees
MERS - Police/Fire Employees			MERS - Police/Fire Employees		
Cranston Fire Department	171	10.71%	Cranston Fire Department	136	9.88%
Cranston Police Department	144	9.02%	Cranston Police Department	123	8.94%
Woonsocket Fire Department	107	6.70%	Woonsocket Fire Department	113	8.21%
North Providence Fire Department	94	5.89%	North Providence Fire Department	93	6.76%
Woonsocket Police Department	93	5.83%	Woonsocket Police Department	90	6.54%
North Kingstown Fire Department	73	4.57%	North Kingstown Fire Department	68	4.94%
Johnston Fire Department	68	4.26%	South Kingstown Police Department	50	3.63%
Middletown Police & Fire Departments	61	3.82%	North Kingstown Police Department	49	3.56%
South Kingstown Police Department	55	3.45%	Johnston Fire Department	45	3.27%
North Kingstown Police Department	50	3.13%	Central Coventry Fire Department	41	2.98%
Remaining employers	680	42.61%	Remaining employers	568	41.28%
	<u>1,596</u>	<u>100.00%</u>		<u>1,376</u>	<u>100.00%</u>

Note: Data provided in this schedule is based upon the most recent actuarial valuations prepared as of June 30, 2019. Data in this schedule prior to fiscal year ending June 30, 2019 was derived from actuarial valuations prepared by GRS and certified by the ERSRI Board in prior fiscal years.