

Employees' Retirement
System of Georgia

Comprehensive Annual Financial Report

Fiscal Year Ended June 30, 2020
A component unit of the State of Georgia

Celebrating 70 Years of Service



2020

Our Mission

Our mission is to be the guardian of the State of Georgia's retirement plans and promote a dignified retirement for the members, retirees, and their beneficiaries.

Our vision is to demonstrate an unwavering commitment to delivering accurate and timely retirement benefits utilizing a knowledgeable staff and state-of-the-art technology to best serve the retirement needs of current and future members.

Our Values

Our Core Values are:

Integrity

Customer Service

Operational Excellence

Continuous Improvement and Innovation

Employees' Retirement
System of Georgia

Comprehensive Annual Financial Report

Fiscal Year Ended June 30, 2020
A component unit of the State of Georgia

Serving Those Who Serve Georgia



James A. Potvin
Executive Director

Introductory Section

Boards of Trustees	4
Letter of Transmittal	5
Certificate of Achievement for Excellence in Financial Reporting	9
PPCC Recognition Award for Funding	10
Administrative Staff and Organization	11
Organizational Chart	12

Investment Section

Investment Overview	91
Pooled Investment Fund/Rates of Return	92
Asset Allocation at Fair Value/Investment Summary	93
Schedule of Fees and Commissions	94
Twenty Largest Equity Holdings	95
Top 10 Fixed Income Holdings	96

Financial Section

Independent Auditors' Report	14
Management's Discussion and Analysis (Unaudited)	16
Basic Financial Statements:	
Combining Statement of Fiduciary Net Position as of June 30, 2020	24
Defined Benefit Plans-Combining Statement of Fiduciary Net Position as of June 30, 2020	25
Combining Statement of Changes in Fiduciary Net Position for the Year Ended June 30, 2020	26
Defined Benefit Plans-Combining Statement of Changes in Fiduciary Net Position for the Year Ended June 30, 2020	27
Statement of Net Position-State Employees' Assurance Department Active Members Fund	28
Statement of Revenues, Expenses, and Changes in Net Position-State Employees' Assurance Department Active Members Fund	29
Statement of Cash Flows-State Employees' Assurance Department Active Members Fund	30
Notes to Financial Statements	31
Required Supplementary Information (Unaudited):	
Defined Benefit Plans:	
Schedule of Employers' and Nonemployer Contributions	70
Schedules of Employers' and Nonemployer Net Pension/OPEB Liability and Related Ratios	72
Schedules of Changes in Employers' and Nonemployer Net Pension/OPEB Liability	74
Schedule of Investment Returns	80
Schedules of the Systems' Proportionate Share of the Net OPEB Liability	81
Schedules of the System's Contributions to OPEB Plans	82
Notes to Required Supplementary Information (Unaudited)	83
Additional Information:	
Schedule of Administrative Expenses Contributions and Expenses	88
Schedule of Investment Expenses	89

Actuarial Section

Actuary's Certification Letters	98
Summary of Plan Provisions	110
Summary of Actuarial Assumptions	112
Active Members	124
Member and Employer Contribution Rates	126
Defined Benefit Plans-Schedules of Funding Progress	128
Schedule of Retirees Added to and Removed from Rolls	130
Analysis of Change in Unfunded Accrued Liability (UAL)	132
Solvency Test Results	135

Statistical Section

Introduction	138
Additions by Source-Contribution/Investment Income	139
Deductions by Type	142
Changes in Fiduciary Net Position	146
Number of Retirees	148
Average Monthly Payments to Retirees	149
Annual Benefit	150
Withdrawal Statistics	151
Average Monthly Benefit Payment for New Retirees	152
Retired Members by Retirement Type	157
Retired Members by Optional Form of Benefit	159
Principal Participating Employers	163
Schedule of Revenue and Expenses-State Employees' Assurance Department Active Members Fund	165
Schedule of Membership-State Employees' Assurance Department Active Members Fund	166
Statistical Data at June 30, 2020	167
Appendix	168

Introductory Section



Celebrating 70 Years of Service



Board Chair Eli Niepoky and Executive Director Jim Potvin

Boards of Trustees

as of September 30, 2020

Employees' Retirement System, Legislative Retirement System, Georgia Defined Contribution Plan, and Georgia Military Pension Fund



Eli P. Niepoky
Chair



Frank F. Thach, Jr.
Vice-Chair



Lonice Barrett



Steve McCoy



Greg S. Griffin



Alex Atwood



Homer Bryson

Public School Employee Retirement System*



Michael Lowe



Richard Taylor



Mark Butler



Vacant

State Employees' Assurance Department**

Georgia Judicial Retirement System*



Ellen S. Golden



Ron Mullins



Vacant

*The PSERS and GJRS boards are comprised of the members of the ERS board and additional members shown under each plan.

**SEAD — ERS Board Members Greg S. Griffin, Steve McCoy, Eli P. Niepoky, and Alex Atwood serve in addition to the two members shown above.

Letter of Transmittal



Two Northside 75
Atlanta, GA 30318

September 30, 2020

I am pleased to present the Comprehensive Annual Financial Report of the retirement systems and programs administered by the Employees' Retirement System of Georgia (the System) for the fiscal year ended June 30, 2020. The management of the System is responsible for the accuracy, completeness, and fairness of the presentation, including all disclosures. It is to the best of our knowledge and belief that the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of operations of the System.

Profile of the System

The System was established in 1949 by an Act of the Georgia General Assembly to provide benefits for all State employees. Plans administered by the System include the Employees' Retirement System (ERS), the Legislative Retirement System (LRS) established in 1979, the Public School Employees Retirement System (PSERS) established in 1969, the Georgia Defined Contribution Plan (GDGP) established in 1992, the Georgia Judicial Retirement System (GJRS) established in 1998, and the Georgia Military Pension Fund (GMPF) established in 2002. In addition, the System is responsible for administering a Group Term Life Insurance Plan (SEAD), the 457 Plan established in 1974, and the 401(k) Plan established in 1994. A summary of each plan can be found on pages 31 through 41 of this report. The investments of all plans are pooled together into one fund except for the three defined contribution (DC) plans, which are maintained individually.

The ERS, LRS, GDGP, GMPF, 401(k), and 457 plans are governed by a 7-member Board of Trustees (Board) made up of 3 ex-officio members, 1 governor-appointed member, and 3 Board-appointed members. PSERS has the same Board as ERS with 2 additional governor-appointed members. GJRS has the same Board as ERS with 3 additional governor-appointed members.

As of June 30, 2020, the System's defined benefit (DB) plans served a total of 106,628 active members and 74,395 retirees/beneficiaries from 697 employers around

the state. There were 71,716 participants in the 401(k) plan with a total investment balance of \$1.3 billion. The 457 plan had 12,331 participants with a total investment balance of \$644.3 million. There are 470 participating employers from around the state in the 457 and 401(k) plans.

Legislation

The Georgia General Assembly, which adjourned June 26, 2020 after a three-month hiatus due to COVID-19, passed four Acts affecting the System as it relates to the defined benefit and defined contribution programs it administers.

Act 371 provides for retirement plan membership for the judge and employees of the recently established State-wide Business Court. Specifically, this bill allows individuals employed full-time as a judge for the Business Court to be eligible for JRS membership, while all other Business Court employees are eligible for membership in ERS. This is a fiscal retirement bill which was found to have no cost to either ERS or JRS.

Act 383 changes the required plan membership of new Legislative Counsel for the General Assembly from ERS to JRS for all those employed on or after July 1, 2020. It also allows for current ERS members of Legislative Counsel to elect and continue membership in JRS for such employment. A fiscal retirement bill, Act 383 has a first-year cost to ERS of \$26,000 which is required by law to be appropriated and was concurrently funded in the FY21 Budget (Act 404).

Act 386 allows for ERS members, after meeting specific requirements, to purchase and receive credit for all service under the Georgia Defined Contribution Program (GDGP) which was immediately prior to ERS membership. It also provides for a payment plan option to be implemented in order to pay for such service. This is a fiscal retirement bill which was found to have no cost to either ERS or GDGP as the member is required to cover full actuarial cost.

(continued)

Letter of Transmittal

Act 510 requires employers who hire retirees of the ERS to pay both the employer and employee contributions associated with such employment. The retiree will not accrue any additional service credit and their retirement benefit will be suspended after working 1,040 hours in a calendar year. Exceptions apply for employment with an independent contractor. This is a nonfiscal retirement bill having no financial impact on the System and is effective January 1, 2021.

All fiscal retirement bills are effective July 1, 2020 by law; however, nonfiscal bills become effective when the Governor signs the bill or upon enactment (if the legislation is neither signed nor vetoed). Bills signed before July 1 are effective July 1 of such year, whereas any bills enacted after July 1 and through the end of the calendar year are effective January 1 of the following year.

Summary of Financial Information

The management of the System is charged with the responsibility of maintaining a sound system of internal accounting controls. The objectives of such a system are to provide management with reasonable assurance that assets are safeguarded against loss from unauthorized use or disposition, that transactions are executed in accordance with management's authorizations, and that they are recorded properly to permit the preparation of financial statements in accordance with generally accepted accounting principles. The concept of reasonable assurance recognizes that first, the cost of a control should not exceed the benefits likely to be derived, and second, the evaluation of the cost and benefits requires estimates and judgments by management.

Even though there are inherent limitations in any system of internal control, the management of the System makes every effort to ensure that through systematic reporting and internal reviews, error or fraud would be quickly detected and corrected.

Please refer to the Management's Discussion and Analysis starting on page 16 of this report for an overview of the financial status of the System, including a summary of the System's Fiduciary Net Position, Changes in Fiduciary Net Position, and Asset Allocations.

For fiscal year 2020, the pooled investment fund generated a time-weighted rate of return of 5.48%. The fund continues to invest in a mix of high-quality bonds and stocks which allows the System to participate in rising

markets while controlling the downside risks. This has proven to be a successful strategy for other markets and for the System. For further information on investments of the pooled fund, please refer to the Investment Section on pages 90 through 96 of this report.

The objective of the System's pension trust funds is to meet long-term benefit promises through contributions that remain approximately level as a percent of member payroll over time while maintaining an actuarially sound system. Historical information relating to the progress in meeting this objective is presented on pages 128 and 129. The latest actuarial valuations as of June 30, 2019 showed the funded ratio of four of the five of the defined benefit plans increasing. The following table shows the change in funding percentage for each of the pension systems:

	FY2018	FY2019
ERS	75.3 %	75.6 %
PSERS	83.7 %	84.0 %
LRS	130.7 %	132.8 %
GJRS	108.7 %	107.6 %
GMPF	53.6 %	57.0 %

Further information regarding the funding condition of the pension plans can be found in the Actuarial Section of this report, beginning on page 97.

Excellence in Financial Reporting

For the ninth consecutive year, the Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Employees' Retirement System of Georgia for its comprehensive annual financial report 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. We believe our current comprehensive annual financial report 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.

(continued)

Letter of Transmittal

Initiatives

Pandemic Impact

The System was fortunate in that we already had almost all of the technology infrastructure needed to transition to a mostly-teleworking environment in place before the pandemic began, including critical areas like pension payroll and the call center. We needed about a week to get a handful of individuals set up to work remotely, but the vast majority of our staff was able to telework from the day we decided to leave our office on March 13, 2020.

Management quickly identified a number of business processes that required modification. Internal and external meetings are currently being conducted over teleconferencing platforms, primarily Zoom. This applies to Board meetings as well. We have not been able to see visitors in person, so counseling has been done via telephone or teleconference. To hedge against possible US Mail service interruptions, we launched a project to transition individuals who receive paper checks over to direct deposit; as a result, only just over 1% of retirees still receive a paper check. We invested in our network bandwidth to account for the additional remote workers; currently we have 6-8x the capacity we need for a typical day.

The area that has been the most difficult to move out of the building is our mail services area, what we call the “Doc Center”. Despite our efforts to reduce physical mail, including investing in improvements to our secure web site to allow for electronic transfer of many documents, we still see a significant amount of mail. So we divided our Doc Center staff in half, and the two halves alternated one week in the office, and one week out of the office so that mail can be scanned and put in queues for distribution and archiving. Once the mail is sorted and scanned, it can be handled remotely from that point forward. In the event of a total building closure, we have emergency procedures and equipment in place at the staff’s homes so they can keep things moving.

We have been in close contact with our outsourcing third-party administrator (TPA) for our defined contribution plans and in general, we are pleased with their ability to continue their operations and administration of our plans.

Overall, we are very proud of the way our staff adjusted to their remote working conditions and with their ability to keep up with all of their work. Over the course of several months, we continued to make modest investments in redundant equipment and system enhancements to

prepare for the possibility of the pandemic escalating further and completely shutting down access to our building for a period of time, but we are confident in our ability to keep serving our members at near-peak capacity regardless of the amount of time we will be teleworking.

Long-term, we have a new appreciation for how technology can be used to extend our reach in communicating with our members and other constituents, and we will be able to make much better use of it in the future. This likely also applies to our staff’s work schedules as well. Recent events have clearly shown that we have the ability to maintain most of our services at a high level and our long-term working schedules will likely be reflective of that reality.

Member Self Service

We launched our online refund application process several years ago and have been working to build awareness of the process by educating our members and employers. Our long-term goal was to ultimately have more than 95% of our refunds processed via the online application. After setting a new high in FY20 of over 75%, in early FY21 we are over 91% and very near to achieving our goal. In addition, our Retirement Online Application process, which went live in late 2018, exceeded 52% usage for ERS retirees in late FY20, a new high water mark.

Plan Changes

ERS is currently making two significant changes to the benefit options available to our retirees. The first is our initial foray into providing guaranteed lifetime income for defined contribution plan members. With the Supplemental Guaranteed Lifetime Income, retirees can roll over a portion or all of their 401(k) or 457 plan balances into the ERS pension fund and convert the rollover into a lifetime annuity payment. The annuity payment can be taken in any actuarially equivalent form of benefit that is offered for the regular pension benefit through the fund.

The second change is the creation of an Escalating Annuity. ERS has not provided a Cost-of-Living Adjustment in about 10 years, so we decided to offer a mechanism for retirees to take a reduction in their initial benefit, but thereafter receive an increase of 2% to their monthly payment each year. Like other actuarially equivalent benefits, the amount of the initial reduction is based on the retiree’s age and life expectancy at retirement. This will allow retirees to take their benefit in closer to a “constant dollar” annuity stream, thereby

(continued)

Letter of Transmittal

reducing the erosion of their purchasing power throughout their retirement.

Other Initiatives

During FY20, ERS issued an Request for Proposal for TPA outsourcing services for the Peach State Reserves plans – the state’s 401(k) and 457 plans. After reviewing all proposals and selecting two finalists for in-person presentations, we are very pleased to announce that we have retained Alight Solutions to continue as our outsourcing provider.

At the April 2020 meeting, the Board decided to amend the ERS Funding Policy with an eye toward the future. Many of the amended provisions are unlikely to have any impact on the contributions or funding ratio of the System in the near term, but the Board regarded them as prudent safeguards for the System at a time when our funding level is higher than it is today. The amendments are:

- The minimum Actuarially Determined Employer Contribution (ADEC) will be no less than the Normal Cost of the system unless the system is at least 105% funded.
- The ADEC will not decrease by more than 2% of active member payroll from one year to the next.
- Any unfunded liability created by the granting of a post-retirement benefit adjustment will be amortized over a closed 15-year period.

In 2019 we implemented a new platform for the creating of our CAFR, called WDesk. The platform provides a much more automated way of loading financial data into the CAFR template and also streamlines the editing process. With the new process, we were able to produce our 2020 CAFR a full two months earlier than we have ever been able to do so in the past.

Other Information

Independent Audit

The Board of Trustees requires an annual audit of the financial statements of the System by independent, certified public accountants. The accounting firm of KPMG LLP was selected by the Board. The independent auditors’ report on the statement of fiduciary net position and the related statement of changes in fiduciary net position is included in the Financial Section of this report.

Acknowledgements

This report reflects the combined effort of our staff under the Board’s leadership. Copies of this report, along with other valuable plan information, can be downloaded from the System’s website.

I would like to express my sincere thanks to the Boards of Trustees for their leadership and support. Many thanks are also extended to the offices of the Governor, Lieutenant Governor, members of the House and Senate Retirement Committees and their staff, members of the House and Senate, and the department officials whose support and assistance have helped ERS accomplish its mission over the years.

Respectfully submitted,



James A. Potvin, Executive Director
Employees’ Retirement System of Georgia



Government Finance Officers Association

**Certificate of
Achievement
for Excellence
in Financial
Reporting**

Presented to

**Employees' Retirement System
of Georgia**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2019



Executive Director/CEO



Public Pension Coordinating Council

***Recognition Award for Funding
2019***

Presented to

Employees' Retirement System of Georgia

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

Presented by the Public Pension Coordinating Council, a confederation of

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



Alan H. Winkle
Program Administrator

Administrative Staff and Organization



James A. Potvin
Executive Director



Angie Surface
Deputy Director



Charles W. Cary, Jr.
CIO - Investment Services



Laura L. Lanier
Controller



Chris Hackett
Director
Information
Technology



Nicole Paisant
Director
Human Resources



Susan Anderson
Chief Operating
Officer



Carolyn Kaplan
Director
Financial Mgmt
Quality Assurance



Kelly Moody
Director
Legislative Affairs



Danielle Templeton
Director
Communications

Consulting Services

Cavanaugh Macdonald Consulting, LLC - Actuary
KPMG LLP - Auditor
Alight Solutions - Defined Contribution
Consultant and Administrator

Investment Advisors*

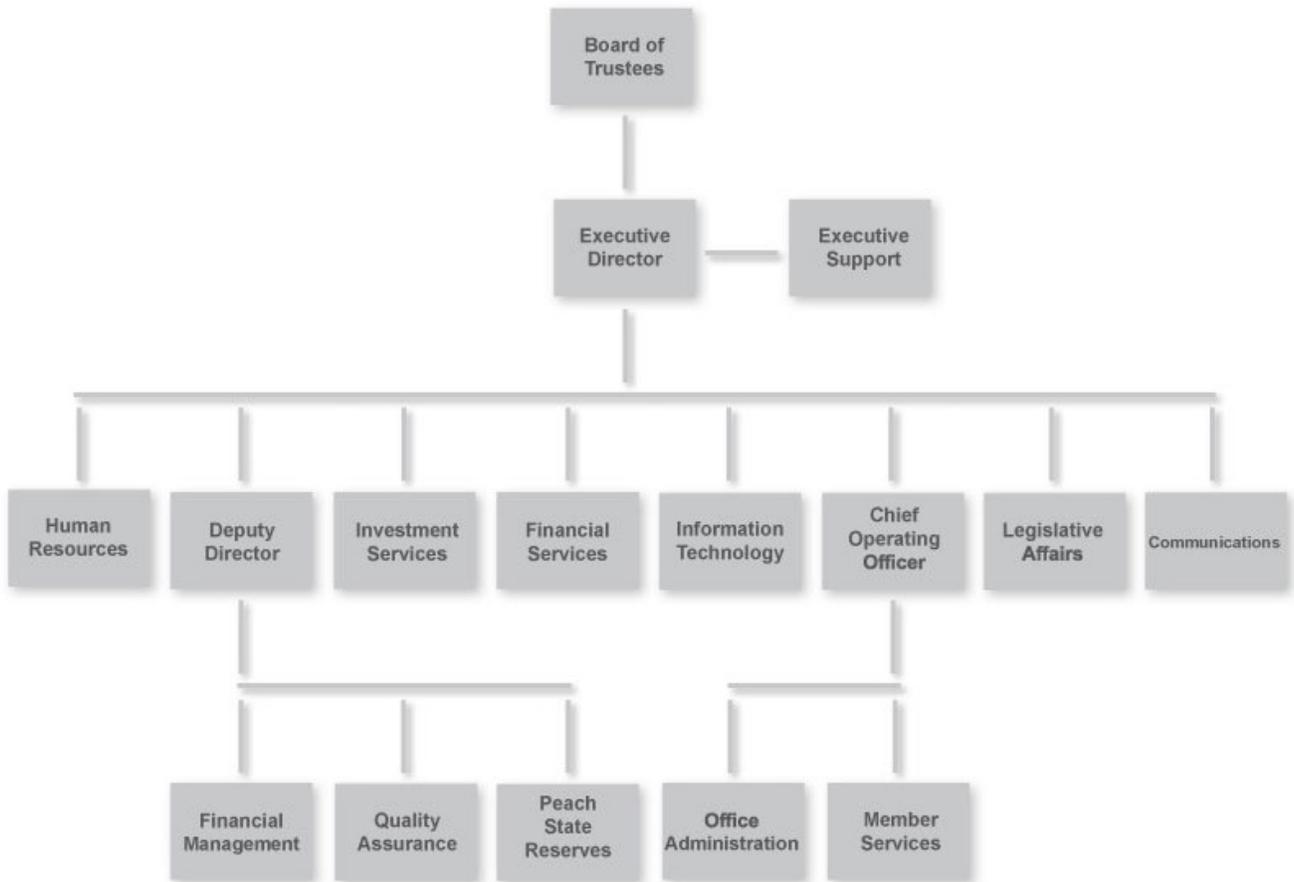
Albritton Capital Management
Baillie Gifford Overseas Limited
Barrow, Hanley, Mewhinney & Strauss
Cooke & Bieler
Fisher Investments
Mondrian Investment Partners Limited
Sands Capital Management
WCM Investment Management

Medical Advisors

Harold E. Sours, M.D., Atlanta, GA
G. Lee Cross, M.D., Atlanta, GA
William H. Biggers, M.D., Atlanta, GA
Pedro F. Garcia, M.D., Atlanta, GA
H. Rudolph Warren, M.D., Dunwoody, GA
Quinton Pirkle, M.D., Atlanta, GA
Marvin Bittinger, M.D., Gainesville, GA
Joseph S. Wilkes, M.D., Sandy Springs, GA
Howard A. McMahan, M.D., Marietta, GA

*See page 94 in the Investment Section for a summary of fees paid to investment advisors

Organizational Chart



Financial Section



Commemorating 70 Years of Service



*ERSGA was recognized in the General Assembly with a resolution from both the House and the Senate.
See the Appendix for the resolution text.*



KPMG LLP
Suite 2000
303 Peachtree Street, NE
Atlanta, GA 30308-3210

Independent Auditors' Report

The Board of Trustees
Employees' Retirement System of Georgia:

Report on the Financial Statements

We have audited the accompanying financial statements of the fiduciary activities and the proprietary activity of the Employees' Retirement System of Georgia (the System), a component unit of the State of Georgia, as of and for the year ended June 30, 2020, and the related notes to the financial statements, which collectively comprise the System's basic financial statements for the year then ended as listed in the table of contents.

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

Auditors' Responsibility

Our responsibility is to express 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 from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but

not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the fiduciary activities and proprietary activity of the System as of June 30, 2020, and the respective changes in financial position and where applicable, cash flows thereof, for the year then ended in accordance with U.S. generally accepted accounting principles.

Emphasis of Matter

As discussed in Note 3(h) to the financial statements, in fiscal year 2020, the System adopted the provisions of Governmental Accounting Standards Board (GASB) Statement No. 84, Fiduciary Activities. Our opinions are not modified with respect to this matter.

Other Matters

Required Supplementary Information U.S. generally accepted accounting principles require that the management's discussion and analysis on pages 16-23 and the schedules of employers' and nonemployer contributions – defined benefit plans, schedules of employers' and nonemployer net pension/OPEB liability and related ratios – defined benefit plans, schedules of changes in employers' and nonemployer net pension/OPEB liability – defined benefit plans, schedule of investment returns, schedules of the System's

(continued)



proportionate share of the net OPEB liability, the schedules of the System's contributions to OPEB plans and the notes to the required supplementary information on pages 70-87, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary and Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the System's basic financial statements. The schedules of administrative expenses - contributions and expenses and investment expenses, and introductory, investment, actuarial and statistical sections are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The schedules of administrative expenses - contributions and expenses and investment expenses are the responsibility of management and were derived from and relates 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 Survivors Benefit Fund statement of changes in assets and liabilities and the schedules of administrative expenses - contributions and expenses and investment 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 also issued our report dated September 30, 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 grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

KPMG LLP

Atlanta, Georgia

September 30, 2020

Management's Discussion and Analysis (Unaudited)

June 30, 2020

This section provides a discussion and analysis of the financial performance of the Employees' Retirement System of Georgia (the System) for the year ended June 30, 2020. The discussion and analysis of the System's financial performance is within the context of the accompanying basic financial statements, notes to the financial statements, required supplementary schedules, and additional information following this section.

The System is responsible for administering a cost-sharing, multiple-employer defined benefit pension plan for various employer agencies of Georgia, along with six other defined benefit pension plans, a defined benefit OPEB plan, three defined contribution plans, and a custodial fund, all of which comprise the fiduciary funds. The System is also responsible for administering an enterprise fund, which comprises the proprietary fund.

The defined benefit pension plans include:

- Employees' Retirement System (ERS)
- Public School Employees Retirement System (PSERS)
- Legislative Retirement System (LRS)
- Georgia Judicial Retirement System (GJRS)
- Georgia Military Pension Fund (GMPF)
- Superior Court Judges Retirement Fund (SCJRF)
- District Attorneys Retirement Fund (DARF)

The defined benefit OPEB plan consists of the State Employees' Assurance Department Retired and Vested Inactive Members Trust Fund (SEAD-OPEB).

The defined contribution retirement plans include:

- Georgia Defined Contribution Plan (GDCCP)
- State of Georgia Employees' Qualified Trust Deferred Compensation Plan (401(k) Plan)
- State of Georgia Employees' Deferred Compensation Plan (457 Plan)

The custodial fund consists of the Survivors Benefit Fund (SBF).

The enterprise fund consists of the State Employees' Assurance Department Active Members Fund (SEAD-Active).

Overview of Financial Statements

A fund is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. The System administers two categories of funds: fiduciary funds and a proprietary fund. Information related to the financial statements of the funds is presented in the notes to the financial statements.

Fiduciary funds are used to account for resources held for the benefit of parties outside of the System. The primary focus of the System's fiduciary funds is the accumulation of resources for and the payment of pension and OPEB benefits. The System maintains four types of fiduciary funds: (1) defined benefit pension trust funds which are used to report resources held in trust for pensions for retirees and beneficiaries covered by ERS, PSERS, LRS, GJRS, GMPF, SCJRF, and DARF (2) a defined benefit OPEB trust fund, which is used to report resources held in trust for other postemployment benefits of retirees and beneficiaries covered by SEAD-OPEB (3) defined contribution pension trust funds, which are used to accumulate contributions and earnings in the accounts of participants covered by GDCCP, the 401(k) Plan, and the 457 Plan, and (4) a custodial fund, which is used to report resources held by the SBF in a custodial capacity for other plans.

Proprietary funds, which include enterprise and internal services funds, are used to account for the System's activities that are similar to private-sector businesses. The System maintains one proprietary fund, which is an enterprise fund,

Management's Discussion and Analysis (Unaudited)

SEAD-Active. The primary focus of the System's enterprise fund is the accumulation of resources for, and payment of, group term life insurance benefits for active members of ERS, LRS, and GJRS covered by SEAD-Active.

The basic financial statements comprise statements for both fiduciary and proprietary funds. The fiduciary fund financial statements include (1) *Combining Statement of Fiduciary Net Position* (2) *Defined Benefit Plans – Combining Statement of Fiduciary Net Position* (3) *Combining Statement of Changes in Fiduciary Net Position*, and (4) *Defined Benefit Plans – Combining Statement of Changes in Fiduciary Net Position*. The proprietary fund financial statements include (1) *Statement of Net Position* (2) *Statement of Revenues, Expenses, and Changes in Net Position* and (3) *Statement of Cash Flows*.

In addition, the System presents six types of required supplementary schedules, which provide historical trend information about the plan. Four of the schedules are presented from the perspective of the System reporting as the plan and include (1) *Schedules of Employers' and Nonemployer Contributions* (2) *Schedules of Employers' and Nonemployer Net Pension/OPEB Liability and Related Ratios* (3) *Schedules of Changes in Employers' and Nonemployer Net Pension/OPEB Liability* and (4) *Schedule of Investment Returns*. Two of the schedules are presented from the perspective of the System reporting as the employer for its employees who participate in the SEAD-OPEB and the Georgia State Employees Postemployment Benefit Fund (State OPEB Fund) and include the (5) *Schedules of the System's Proportionate Share of the Net OPEB Liability* and (6) *Schedules of the System's Contributions to OPEB Plans*. The System also includes in this report additional information to supplement the financial statements.

The System prepares its financial statements on the accrual basis of accounting in accordance with U.S. generally accepted accounting principles as promulgated by the Governmental Accounting Standards Board (GASB). These statements provide information about the System's overall financial status.

Financial Highlights

The highlights of the fiduciary funds of the System are as follows:

- The net position of the fiduciary funds increased by \$85.4 million, or 0.5%, from \$18.4 billion (as restated) at June 30, 2019 to \$18.5 billion at June 30, 2020. The increase in net position from 2019 to 2020 was primarily due to positive fixed income and equity market returns.
- For the year ended June 30, 2020, the total additions to net position were \$1.9 billion, compared to \$2.1 billion for the year ended June 30, 2019. For the year ended June 30, 2020, the additions consisted of employer, nonemployer contributing entities (nonemployer), and member contributions totaling \$945.0 million, insurance premiums of \$3.1 million, net investment income of \$931.9 million, and participant fees of \$451.0 thousand.
- Net investment income of \$931.9 million in 2020 (comprising interest and dividend income, the change in fair value of investments, and other, reduced by investment expenses) represents a decrease of \$234.7 million, or 20.1%, compared to the net investment income of \$1.2 billion for the year ended June 30, 2019. The change in net investment income was primarily due to more moderate equity gains in 2020 compared to 2019.
- The total deductions from net position increased by \$61.8 million to \$1.8 billion for the year ended June 30, 2020 compared to \$1.7 billion for the year ended June 30, 2019. For the year ended June 30, 2020, the deductions primarily consisted of benefit payments.

The highlights of the proprietary fund of the System are as follows:

- The net position of the proprietary fund increased by \$13.5 million to \$319.3 million at June 30, 2020 compared to \$305.9 million at June 30, 2019. The increase in net position from 2019 to 2020 was primarily due to positive fixed income and equity market returns.

Management's Discussion and Analysis (Unaudited)

- For the year ended June 30, 2020, total operating loss was \$3.1 million compared to \$3.0 million for the year ended June 30, 2019. The increase relates primarily to an increase in the number of active members who received death benefits during the year.
- Net investment income allocated from the pooled investment fund of \$16.6 million in 2020 represents a decrease of \$3.1 million, or 15.5%, compared to net investment income allocated from the pooled investment fund of \$19.6 million for the year ended June 30, 2019. The change in investment income allocated from the pooled investment fund was primarily due to more moderate equity gains in 2020 compared to 2019.

Description of the Financial Statements

Fiduciary Funds

The *Combining Statement of Fiduciary Net Position* is the statement of financial position presenting information that includes the fiduciary funds' assets and liabilities, with the balance representing the Net Position Restricted for Pensions and OPEB and SBF. The investments of the funds in this statement are presented at fair value. This statement is presented on page 24.

The *Combining Statement of Changes in Fiduciary Net Position* reports how the fiduciary funds' net position changed during the fiscal year. The additions include contributions to the retirement plans from employers, nonemployer, and members; group term life insurance premiums; participant fees; and net investment income, which includes interest and dividends and the net increase in the fair value of investments, net of investment expenses. The deductions include benefit payments, life insurance death benefit payments, refunds of member contributions and interest, and administrative expenses. This statement is presented on page 26.

The *Defined Benefit Plans' Combining Statement of Fiduciary Net Position* and the *Combining Statement of Changes in Fiduciary Net Position* present the financial position and changes in financial position for each of the defined benefit plans administered by the System. These statements are on pages 25 and 27, respectively.

Proprietary Funds

The *Statement of Net Position* is the statement of financial position presenting information that includes the assets and liabilities, with the balance representing the net position. This statement is presented on page 28.

The *Statement of Revenues, Expenses, and Changes in Net Position* distinguishes operating revenues and expenses from nonoperating items. Principal operating revenues result from insurance premiums from members, while operating expenses result from death benefit payments and administrative expenses. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses. This statement is presented on page 29.

The *Statement of Cash Flows* provides information about cash receipts and cash payments during the year. When used in conjunction with related disclosures and information in the other financial statements, the statement provides relevant information about the plan's ability to generate future net cash flows, the plan's ability to meet its obligations as they come due, and presents the reasons for differences between operating income and associated cash receipts and payments. This statement is presented on page 30.

Notes to Financial Statements are presented to provide the information necessary for a full understanding of the financial statements. The notes to the financial statements begin on page 31.

Management's Discussion and Analysis (Unaudited)

Required Supplementary Information begins on page 70. The required schedules are discussed as follows:

- The *Schedule of Employers' and Nonemployer Contributions* presents historical trend information for the last 10 consecutive fiscal years about the required contributions and the percent of required contributions actually contributed.
- The *Schedule of Employers' and Nonemployer Net Pension/OPEB Liability and Related Ratios* presents the components of the net pension/OPEB liability as of the fiscal year end and the fiduciary net position as a percentage of the total pension/OPEB liability as of that date. This trend information will be accumulated to display a 10-year presentation.
- The *Schedule of Changes in Employers' and Nonemployer Net Pension/OPEB Liability* presents total net pension/OPEB liability and is measured as total pension/OPEB liability less the amount of the fiduciary net position. This trend information will be accumulated to display a 10-year presentation.
- The *Schedule of Investment Returns* presents historical trend information about the annual money-weighted rate of return on plan investments, net of plan investment expense. This trend information will be accumulated to display a 10-year presentation.
- The *Schedule of the System's Proportionate Share of the Net OPEB Liability* presents historical trend information about the System's proportionate share of the net OPEB liability (asset) for its employees who participate in the SEAD-OPEB plan and the State OPEB Fund. This trend information will be accumulated to display a 10-year presentation.
- The *Schedule of the System's Contributions to OPEB Plans* presents historical trend information about the System's contributions for its employees who participate in the SEAD-OPEB plan and the State OPEB Fund. This trend information will be accumulated to display a 10-year presentation.

Three of the required schedules above, the *Schedules of Employers' and Nonemployer Contributions*, the *Schedules of Employers' and Nonemployer Net Pension/OPEB Liability and Related Ratios*, and the *Schedules of Changes in Employers' and Nonemployer Net Pension/OPEB Liability* are applicable to five of the defined benefit pension plans (ERS, PSERS, LRS, GJRS, and GMPF) and the defined benefit OPEB plan (SEAD-OPEB).

Notes to Required Supplementary Information are presented to provide the information necessary for a full understanding of the supplementary schedules. The notes to required supplementary information begin on page 83.

Additional information is presented, beginning on page 88, and includes two schedules. The first schedule is the *Schedule of Administrative Expenses – Contributions and Expenses* and presents the expenses incurred in the administration of the plans and funds, and the contributions from each plan and fund to provide for these expenses. The second schedule is the *Schedule of Investment Expenses* and presents the expenses incurred in the management of the System's investments.

Management's Discussion and Analysis (Unaudited)

Financial Analysis of the System

A summary of the System's net position of the fiduciary funds at June 30, 2020 is as follows (dollars in thousands):

	Net position		Amount change	Percentage change
	2020	2019 (as restated) ¹		
Assets:				
Cash, cash equivalents, and receivables	\$ 360,965	533,422	(172,457)	(32.3)%
Investments	18,495,992	18,226,094	269,898	1.5
Capital assets, net	6,568	6,552	16	0.2
Net OPEB asset	569	541	28	5.2
Total assets	<u>18,864,094</u>	<u>18,766,609</u>	<u>97,485</u>	0.5
Deferred outflows of resources	681	1,156	(475)	(41.1)
Liabilities:				
Due to brokers, accounts payable, and insurance premiums payable	35,902	36,003	(101)	(0.3)
Due to other funds/plans and participating systems	319,146	305,795	13,351	4.4
Net OPEB liability	<u>2,350</u>	<u>4,749</u>	<u>(2,399)</u>	(50.5)
Total liabilities	<u>357,398</u>	<u>346,547</u>	<u>10,851</u>	3.1
Deferred inflows of resources	<u>3,194</u>	<u>2,389</u>	<u>805</u>	33.7
Net position	<u>\$ 18,504,183</u>	<u>18,418,829</u>	<u>85,354</u>	0.5 %

¹Refer to Significant Accounting Policies and System Asset Matters - Changes in Accounting Principal section for details.

A summary of the System's net position of the proprietary fund at June 30, 2020 is as follows (dollars in thousands):

	Net position		Amount change	Percentage change
	2020	2019		
Assets:				
Cash, cash equivalents, and receivables	\$ 241	124	117	94.4 %
Investments	<u>319,146</u>	<u>305,795</u>	<u>13,351</u>	4.4
Total assets	<u>319,387</u>	<u>305,919</u>	<u>13,468</u>	4.4
Liabilities:				
Accounts payable and other	<u>47</u>	<u>42</u>	<u>5</u>	11.9
Net position	<u>\$ 319,340</u>	<u>305,877</u>	<u>13,463</u>	4.4 %

Management's Discussion and Analysis (Unaudited)

The following table presents the investment allocation at June 30, 2020, and 2019:

	2020	2019
<u>Asset allocation at June 30 (in percentages):</u>		
Equities:		
Domestic	46.7 %	45.8 %
International	14.3	15.3
Private equity	2.0	1.8
Domestic obligations:		
U.S. treasuries	19.4	20.8
Corporate and other bonds	6.3	6.1
International obligations:		
Corporates	1.1	0.5
Commingled funds	10.2	9.7
<u>Asset allocation at June 30 (in thousands):</u>		
Equities:		
Domestic	\$ 8,641,627	\$ 8,350,863
International	2,636,114	2,786,569
Private equity	365,458	335,306
Domestic obligations:		
U.S. treasuries	3,584,895	3,784,262
Corporate and other bonds	1,162,433	1,104,643
International obligations:		
Corporates	212,119	95,134
Mutual funds	7,498	8,114
Commingled funds	1,885,848	1,761,203
	<u>\$ 18,495,992</u>	<u>\$ 18,226,094</u>

The total investment portfolio increased by \$269.9 million, or 1.5%, from 2019, which is due to positive fixed income and equity market returns.

Investment performance is calculated using a time-weighted rate of return using the Daily Valuation Method. The time-weighted rate of return for the fiscal year ended June 30, 2020, was 5.5% with a 3.2% return for equities, a 6.4% return for private equity, and a 9.9% return for fixed income. The five-year annualized rate of return at June 30, 2020, was 7.0% with an 8.2% return for equities, an 11.4% return for private equity, and a 4.1% return for fixed income.

A money-weighted return is weighted by the amount of dollars in the fund at the beginning and end of the performance period. A money-weighted return is highly influenced by the timing of cash flows into and out of the fund and is a better measure of an entity or person who controls the cash flows into or out of the fund. The non-discretionary cash flows for the plan, primarily contributions and benefit payments, have a considerable impact on the money-weighted returns of the portfolio. The money-weighted rate of return for the fiscal year ended June 30, 2020, was (3.6)%, compared to (1.8)% for the fiscal year ended June 30, 2019.

Management's Discussion and Analysis (Unaudited)

A summary of the changes in the System's net position of the fiduciary funds for the year ended June 30, 2020 is as follows (dollars in thousands):

	Changes in net position		Amount change	Percentage change
	2020	2019 (as restated) ¹		
Additions:				
Employer contributions	\$ 692,253	692,481	(228)	— %
Nonemployer contributions	44,687	42,620	2,067	4.9
Member contributions	208,018	198,928	9,090	4.6
Participant fees	451	597	(146)	(24.5)
Insurance premiums	3,088	3,328	(240)	(7.2)
Net investment income	931,916	1,166,626	(234,710)	(20.1)
Other	14	13	1	7.7
Total additions	<u>1,880,427</u>	<u>2,104,593</u>	<u>(224,166)</u>	(10.7)
Deductions:				
Benefit payments	1,715,693	1,660,330	55,363	3.3
Refunds	17,960	19,854	(1,894)	(9.5)
Death benefits	44,754	37,421	7,333	19.6
Administrative expenses	16,666	15,620	1,046	6.7
Total deductions	<u>1,795,073</u>	<u>1,733,225</u>	<u>61,848</u>	3.6
Net increase in net position	<u>\$ 85,354</u>	<u>371,368</u>	<u>(286,014)</u>	(77.0)%

¹ Refer to Significant Accounting Policies and System Asset Matters - Changes in Accounting Principal section for details.

Additions – The System accumulates resources needed to fund benefit payments through contributions and returns on invested funds. In fiscal year 2020, total contributions increased \$10.9 million, or 1.2%, primarily due to modest overall salary increases. Net investment income decreased by \$234.7 million, or 20.1%, due primarily to equity returns moderating somewhat in fiscal year 2020 compared to 2019.

Deductions – For fiscal year 2020, total deductions increased \$61.8 million, or 3.6%, primarily because of an increase of \$55.4 million, or 3.3%, in benefit payments. Pension benefit payments increased due to an increase in the number of retirees and beneficiaries receiving benefits in 2020 in addition to cost of living adjustments of 1.5% for PSERS members and two one-time benefit payments of 3% for ERS, JRS, and LRS members. Death benefits increased by \$7.3 million, or 19.6%, which was primarily due to an increase in the number of death claims processed during 2020. Refunds decreased by \$1.9 million, or 9.5%, which was primarily due to a decrease in the number of refunds processed during 2020. Administrative expenses increased by \$1.0 million over the prior year, or 6.7%, primarily due to increased contractual services costs and health insurance costs related to a payment holiday given in the prior year.

Management's Discussion and Analysis (Unaudited)

A summary of the changes in the System's net position of the proprietary fund for the year ended June 30, 2020 is as follows (dollars in thousands):

	Changes in net position		Amount change	Percentage change
	2020	2019		
<u>Operating revenue:</u>				
Insurance premiums	\$ 547	531	14	2.7 %
Total operating revenue	<u>547</u>	<u>531</u>	<u>14</u>	2.7
<u>Operating expenses:</u>				
Death benefits	3,588	3,424	164	4.8
Administrative expenses	<u>80</u>	<u>80</u>	<u>1</u>	1.0
Total operating expenses	<u>3,668</u>	<u>3,504</u>	<u>164</u>	4.7
Total operating loss	(3,121)	(2,973)	(150)	(5.0)
<u>Nonoperating revenue:</u>				
Allocation of investment income from pooled investment fund, net	<u>16,584</u>	<u>19,643</u>	<u>(3,059)</u>	(15.6)
Change in net position	<u>\$ 13,463</u>	<u>16,670</u>	<u>(3,209)</u>	(19.2) %

Operating and nonoperating revenue – The proprietary fund accumulates resources needed to fund death benefit payments through premiums earned and returns on invested funds. In fiscal year 2020, total premiums earned increased \$14 thousand, or 2.7%, primarily due to modest overall salary increases. Effective January 1, 2009, the plan was closed to new members. Allocation of investment income from the pooled investment fund, net of related expenses, decreased by \$3.1 million, or 15.6%, primarily due to equity returns moderating somewhat in fiscal year 2020 compared to 2019.

Operating expenses – For fiscal year 2020, death benefits increased by \$164 thousand, or 4.8%, which was primarily due to an increase in the number of death claims processed during 2020. Administrative expenses increased by \$783.30 over the prior year, or 1.0%, primarily due to increased contractual services costs.

Requests for Information

This financial report is designed to provide a general overview of the System's finances for all those with interest in the System's finances. Questions concerning any of the information provided in this report or requests for additional information should be addressed to Employees' Retirement System of Georgia, Two Northside 75, Suite 300, Atlanta, GA 30318.

Financial Section



Combining Statement of Fiduciary Net Position

June 30, 2020
(In thousands)

	Defined contribution plans					Custodial fund	Eliminations	Total
	Defined benefit plans	Pooled Investment Fund	Georgia Defined Contribution Plan	401(k) Plan	457 Plan	Survivors Benefit Fund		
Assets								
Cash and cash equivalents	\$ 33,024	202,930	22,768	16,213	1,297	86	—	276,318
Receivables:								
Contributions	30,309	—	740	3,641	405	—	—	35,095
Interest and dividends	—	41,704	425	2	5	—	—	42,136
Due from brokers for securities sold	—	4,030	—	—	—	—	—	4,030
Other	2,640	—	—	487	259	—	—	3,386
Unremitted insurance premiums	449	—	—	—	—	—	(449)	—
Total receivables	33,398	45,734	1,165	4,130	669	—	(449)	84,647
Investments - at fair value:								
Domestic obligations:								
U.S. treasuries	—	3,492,304	92,591	—	—	—	—	3,584,895
Corporate and other bonds	—	1,140,493	21,940	—	—	—	—	1,162,433
International obligations:								
Corporates	—	212,119	—	—	—	—	—	212,119
Equities:								
Domestic	—	8,622,857	—	11,466	7,304	—	—	8,641,627
International	—	2,634,196	—	582	1,336	—	—	2,636,114
Private equity	—	365,458	—	—	—	—	—	365,458
Mutual funds	—	—	—	3,506	3,992	—	—	7,498
Commingled funds	—	—	—	1,254,153	631,695	—	—	1,885,848
Equity in pooled investment fund	16,220,640	—	—	—	—	167,359	(16,387,999)	—
Total investments	16,220,640	16,467,427	114,531	1,269,707	644,327	167,359	(16,387,999)	18,495,992
Capital assets, net	6,568	—	—	—	—	—	—	6,568
Net OPEB asset	569	—	—	—	—	—	—	569
Total assets	16,294,199	16,716,091	138,464	1,290,050	646,293	167,445	(16,388,448)	18,864,094
Deferred outflows of resources	681	—	—	—	—	—	—	681
Liabilities								
Accounts payable and other	22,093	2,106	508	2,959	1,327	—	—	28,993
Due to brokers for securities purchased	—	6,840	—	—	—	—	—	6,840
Insurance premiums payable	518	—	—	—	—	—	(449)	69
Due to participating systems	—	16,707,145	—	—	—	—	(16,387,999)	319,146
Net OPEB liability	2,350	—	—	—	—	—	—	2,350
Total liabilities	24,961	16,716,091	508	2,959	1,327	—	(16,388,448)	357,398
Deferred inflows of resources	3,194	—	—	—	—	—	—	3,194
Net position restricted for:								
Pensions and OPEB	\$ 16,266,725	—	137,956	1,287,091	644,966	—	—	18,336,738
Survivors Benefit Fund	\$ —	—	—	—	—	167,445	—	167,445

See accompanying notes to financial statements.

Defined Benefit Plans - Combining Statement of Fiduciary Net Position

June 30, 2020

(In thousands)

	Defined benefit pension plans							Defined benefit OPEB plan	Defined benefit plans total
	Employees' Retirement System	Public School Employees Retirement System	Legislative Retirement System	Georgia Judicial Retirement System	Georgia Military Pension Fund	Superior Court Judges Retirement Fund	District Attorneys Retirement Fund	State Employees' Assurance Department OPEB	
Assets									
Cash and cash equivalents	\$ 31,734	266	80	601	48	10	2	283	33,024
Receivables:									
Contributions	29,843	1	—	465	—	—	—	—	30,309
Interest and dividends	—	—	—	—	—	—	—	—	—
Due from brokers for securities sold	—	—	—	—	—	—	—	—	—
Other	2,375	265	—	—	—	—	—	—	2,640
Unremitted insurance premiums	—	—	—	—	—	—	—	449	449
Total receivables	32,218	266	—	465	—	—	—	449	33,398
Investments - at fair value:									
Domestic obligations:									
U.S. treasuries	—	—	—	—	—	—	—	—	—
Corporate and other bonds	—	—	—	—	—	—	—	—	—
International obligations:									
Corporates	—	—	—	—	—	—	—	—	—
Equities:									
Domestic	—	—	—	—	—	—	—	—	—
International	—	—	—	—	—	—	—	—	—
Private equity	—	—	—	—	—	—	—	—	—
Mutual funds	—	—	—	—	—	—	—	—	—
Commingled funds	—	—	—	—	—	—	—	—	—
Equity in pooled investment fund	13,456,293	958,718	34,599	485,633	28,995	—	—	1,256,402	16,220,640
Total investments	13,456,293	958,718	34,599	485,633	28,995	—	—	1,256,402	16,220,640
Capital assets, net	6,568	—	—	—	—	—	—	—	6,568
Net OPEB asset	569	—	—	—	—	—	—	—	569
Total assets	13,527,382	959,250	34,679	486,699	29,043	10	2	1,257,134	16,294,199
Deferred outflows of resources	681	—	—	—	—	—	—	—	681
Liabilities									
Accounts payable and other	19,726	1,002	110	759	76	4	—	416	22,093
Due to brokers for securities purchased	—	—	—	—	—	—	—	—	—
Insurance premiums payable	507	—	1	10	—	—	—	—	518
Due to participating systems	—	—	—	—	—	—	—	—	—
Net OPEB liability	2,350	—	—	—	—	—	—	—	2,350
Total liabilities	22,583	1,002	111	769	76	4	—	416	24,961
Deferred inflows of resources	3,194	—	—	—	—	—	—	—	3,194
Net position restricted for pensions and OPEB	\$ 13,502,286	958,248	34,568	485,930	28,967	6	2	1,256,718	16,266,725

See accompanying notes to financial statements.

Financial Section



Combining Statement of Changes in Fiduciary Net Position

Year ended June 30, 2020
(In thousands)

	Defined contribution plans					Custodial fund	Total
	Defined benefit plans	Pooled Investment Fund	Georgia Defined Contribution Plan	401(k) Plan	457 Plan	Survivors Benefit Fund	
Additions:							
Contributions:							
Employer	\$ 641,115	—	—	51,138	—	—	692,253
Nonemployer	44,687	—	—	—	—	—	44,687
Member	43,505	—	14,658	129,639	20,216	—	208,018
Participant fees	—	—	—	426	25	—	451
Insurance premiums	3,088	—	—	—	—	—	3,088
Administrative expense allotment	14	—	—	—	—	—	14
Investment income:							
Net increase in fair value of investments	—	525,960	6,323	42,324	25,677	—	600,284
Interest and dividends	10	364,852	2,823	170	95	—	367,950
Other	—	—	—	713	703	—	1,416
Less investment expenses	(10,186)	(7,560)	(68)	(2,357)	(912)	—	(21,083)
Allocation of investment income	857,900	(883,252)	—	—	—	8,701	(16,651)
Net investment income	847,724	—	9,078	40,850	25,563	8,701	931,916
Total additions	1,580,133	—	23,736	222,053	45,804	8,701	1,880,427
Deductions:							
Benefit payments	1,583,264	—	7	92,355	40,067	—	1,715,693
Refunds of member contributions and interest	7,450	—	10,510	—	—	—	17,960
Death benefits	44,754	—	—	—	—	—	44,754
Administrative expenses	11,192	—	913	3,816	745	—	16,666
Total deductions	1,646,660	—	11,430	96,171	40,812	—	1,795,073
Change in net position	(66,527)	—	12,306	125,882	4,992	8,701	85,354
Net position restricted for pension and OPEB and SBF:							
Beginning of year (as restated)	16,333,252	—	125,650	1,161,209	639,974	158,744	18,418,829
End of year	\$ 16,266,725	—	137,956	1,287,091	644,966	167,445	18,504,183

See accompanying notes to financial statements.

Defined Benefit Plans - Combining Statement of Changes in Fiduciary Net Position

Year ended June 30, 2020
(In thousands)

	Defined benefit pension plans							Defined benefit OPEB plan	Defined benefit plans total
	Employees' Retirement System	Public School Employees Retirement System	Legislative Retirement System	Georgia Judicial Retirement System	Georgia Military Pension Fund	Superior Court Judges Retirement Fund	District Attorneys Retirement Fund	State Employees' Assurance Department OPEB	
Additions:									
Contributions:									
Employer	\$ 634,108	—	—	4,022	2,611	340	34	—	641,115
Nonemployer	9,749	32,496	—	2,442	—	—	—	—	44,687
Member	35,837	2,338	325	5,005	—	—	—	—	43,505
Participant fees	—	—	—	—	—	—	—	—	—
Insurance premiums	—	—	—	—	—	—	—	3,088	3,088
Administrative expense allotment	10	—	—	—	—	2	2	—	14
Investment income:									
Net increase in fair value of investments	—	—	—	—	—	—	—	—	—
Interest and dividends	10	—	—	—	—	—	—	—	10
Other	—	—	—	—	—	—	—	—	—
Less investment expenses	(8,961)	(404)	(16)	(195)	(6)	—	—	(604)	(10,186)
Allocation of investment income	712,791	50,317	1,840	25,609	1,491	—	—	65,852	857,900
Net investment income	703,840	49,913	1,824	25,414	1,485	—	—	65,248	847,724
Total additions	1,383,544	84,747	2,149	36,883	4,096	342	36	68,336	1,580,133
Deductions:									
Benefit payments	1,484,445	66,090	1,795	29,263	1,297	340	34	—	1,583,264
Refunds of member contributions and interest	6,644	572	21	213	—	—	—	—	7,450
Death benefits	—	—	—	—	—	—	—	44,754	44,754
Administrative expenses	7,641	1,424	305	849	249	2	2	720	11,192
Total deductions	1,498,730	68,086	2,121	30,325	1,546	342	36	45,474	1,646,660
Change in net position	(115,186)	16,661	28	6,558	2,550	—	—	22,862	(66,527)
Net position restricted for pensions and OPEB:									
Beginning of year	13,617,472	941,587	34,540	479,372	26,417	6	2	1,233,856	16,333,252
End of year	\$ 13,502,286	958,248	34,568	485,930	28,967	6	2	1,256,718	16,266,725

See accompanying notes to financial statements.

Statement of Net Position - State Employees' Assurance Department Active Members Fund

June 30, 2020
(In thousands)

Assets:		
Cash and cash equivalents	\$	172
Receivables:		
Unremitted insurance premiums		69
Investments - at fair value:		
Equity share of pooled investment fund		319,146
Total assets		<u>319,387</u>
Liabilities:		
Accounts payable and other		<u>47</u>
Total liabilities		<u>47</u>
Total net position	\$	<u><u>319,340</u></u>

See accompanying notes to financial statements.

Statement of Revenues, Expenses, and Changes in Net Position - State Employees' Assurance Department Active Members Fund

Year ended June 30, 2020
(In thousands)

Operating revenue:	
Insurance premiums	\$ 547
Total operating revenue	<u>547</u>
Operating expenses:	
Death benefits	3,588
Administrative expenses	80
Total operating expenses	<u>3,668</u>
Total operating loss	<u>(3,121)</u>
Nonoperating revenues (expenses):	
Allocation of investment income from pooled investment fund	16,651
Investment expenses	<u>(67)</u>
Total nonoperating revenues	<u>16,584</u>
Change in net position	13,463
Total net position:	
Beginning of year	<u>305,877</u>
End of year	<u><u>\$ 319,340</u></u>

See accompanying notes to financial statements.

Statement of Cash Flows - State Employees' Assurance Department Active Members Fund

Year ended June 30, 2020
(In thousands)

Cash flows from operating activities:	
Insurance premiums received	\$ 550
Death benefits paid	(3,588)
Administrative fees paid	(75)
Net cash used in operating activities	<u>(3,113)</u>
Cash flows from investing activities:	
Withdrawals from pooled investment fund	3,300
Investment expenses paid	(67)
Net cash provided by investing activities	<u>3,233</u>
Net increase in cash and cash equivalents	120
Cash and cash equivalents, beginning of year	52
Cash and cash equivalents, end of year	<u><u>172</u></u>
Reconciliation of operating loss to net cash used in operating activities:	
Operating loss	(3,121)
Changes in assets and liabilities:	
Unremitted Insurance Premiums	3
Accounts payable and other	5
Net cash used in operating activities	<u><u>\$ (3,113)</u></u>

See accompanying notes to financial statements.

Notes to Financial Statements

June 30, 2020

(1) General

The accompanying basic financial statements of the Employees' Retirement System of Georgia, including all plans and funds administered by the Employees' Retirement System of Georgia (collectively, the System), comprises the Employees' Retirement System of Georgia (ERS), Public School Employees Retirement System (PSERS), Legislative Retirement System (LRS), Georgia Judicial Retirement System (GJRS), Georgia Military Pension Fund (GMPF), Superior Court Judges Retirement Fund (SCJRF), District Attorneys Retirement Fund (DARF), State Employees' Assurance Department Retired and Vested Inactive Members Trust Fund (SEAD-OPEB), Georgia Defined Contribution Plan (GDGP), State of Georgia Employees' Qualified Trust Deferred Compensation Plan (401(k) Plan), State of Georgia Employees' Deferred Compensation Plan (457 Plan), Survivors Benefit Fund (SBF), and State Employees' Assurance Department Active Members Fund (SEAD-Active). All significant transactions among the various systems, departments, and funds have been eliminated. The Boards of Trustees, comprising active and retired members, ex officio state employees, and appointees by the Governor, are ultimately responsible for the administration of the System.

(2) Authorizing Legislation and Plan Descriptions

Each plan and fund, including benefit and contribution provisions, was established and can be amended by state law. The following summarizes authorizing legislation and the plan description of each retirement fund:

- (a) ERS is a cost-sharing multiple-employer defined benefit pension plan established by the Georgia General Assembly during the 1949 Legislative Session for the purpose of providing retirement allowances for employees of the State of Georgia and its political subdivisions. ERS is directed by a Board of Trustees (ERS Board) and has the powers and privileges of a corporation. There were 417 employers and 1 nonemployer contributing entity participating in the plan during 2020. Total participation in ERS at June 30, 2020 was 173,803 as detailed in the following chart:

ERS Membership as of June 30, 2020



Benefits

The ERS Plan supports three benefit tiers: Old Plan, New Plan, and Georgia State Employees' Pension and Savings Plan (GSEPS). Employees under the Old Plan started membership prior to July 1, 1982 and are subject to plan provisions in effect prior to July 1, 1982. Members hired on or after July 1, 1982 but prior to January 1, 2009 are New Plan members subject to modified plan provisions. Effective January 1, 2009, new state employees and rehired state employees who did not retain membership rights under the Old or New Plans are members of GSEPS. ERS members hired prior to January 1, 2009 also have the option to irrevocably change their membership to GSEPS.

Under the Old Plan, the New Plan, and GSEPS, a member may retire and receive normal retirement benefits after completion of 10 years of creditable service and attainment of age 60 or 30 years of creditable service, regardless of age. Additionally, there are some provisions allowing for early retirement after 25 years of creditable service for members under age 60.

(continued)

Notes to Financial Statements

June 30, 2020

Retirement benefits paid to members are based upon the monthly average of the member's highest 24 consecutive calendar months, multiplied by the number of years of creditable service, multiplied by the applicable benefit factor. Annually, postretirement cost-of-living adjustments may also be made to members' benefits, provided the members were hired prior to July 1, 2009. The normal retirement pension is payable monthly for life; however, options are available for distribution of the member's monthly pension, at reduced rates, to a designated beneficiary upon the member's death. Death and disability benefits are also available through ERS.

Contributions and Vesting

Member contributions under the Old Plan are 4% of annual compensation, up to \$4,200, plus 6% of annual compensation in excess of \$4,200. Under the Old Plan, the state pays member contributions in excess of 1.25% of annual compensation. These state contributions are included in the members' accounts for refund purposes and are used in the computation of the members' earnable compensation for the purpose of computing retirement benefits. Member contributions under the New Plan and GSEPS are 1.25% of annual compensation. The state is required to contribute at a specified percentage of active member payrolls, determined annually by actuarial valuation. The state contributions are not at any time refundable to the member or his/her beneficiary.

Pursuant to The Official Code of Georgia Annotated (O.C.G.A.) 47-2-292, the employer contributions for local tax commissioners and their employees who took office or were employed prior to July 1, 2012 are funded by the State of Georgia on behalf of the local county employer. Pursuant to O.C.G.A. 47-2-290, the employer contribution for certain State Court employees is funded by the state on behalf of the local county employer.

Employer and nonemployer contributions as a percentage of covered payroll required for fiscal year 2020 were based on the June 30, 2017 actuarial valuation for the Old Plan, New Plan, and GSEPS, as follows:

	Old Plan	New Plan	GSEPS
Employer and nonemployer:			
Normal	1.31 %	6.06 %	3.04 %
Employer paid for member	4.75 %	— %	— %
Accrued liability	18.60 %	18.60 %	18.60 %
Total	<u>24.66 %</u>	<u>24.66 %</u>	<u>21.64 %</u>

Members become vested after 10 years of membership service. Upon termination of employment, member contributions with accumulated interest are refundable upon request by the member. However, if an otherwise vested member terminates and withdraws his/her member contributions, the member forfeits all rights to retirement benefits.

- (b) PSERS is a cost-sharing multiple-employer defined benefit pension plan established by the Georgia General Assembly in 1969 for the purpose of providing retirement allowances for public school employees who are not eligible for membership in the Teachers Retirement System of Georgia. The ERS Board, plus two additional trustees, administers PSERS (PSERS Board). There were 186 employers and 1 nonemployer contributing entity participating in the plan during 2020. Total participation in PSERS at June 30, 2020 was 104,244 as detailed in the chart on the following page:

Notes to Financial Statements

June 30, 2020

PSERS Membership as of June 30, 2020



Benefits

A member may retire and elect to receive normal monthly retirement benefits after completion of 10 years of creditable service and attainment of age 65. A member may choose to receive reduced benefits after age 60 and upon completion of 10 years of service.

Upon retirement, the member will receive a monthly benefit of \$15.50, multiplied by the number of years of creditable service. Death and disability benefits are also available through PSERS. Additionally, PSERS may make periodic cost-of-living adjustments to the monthly benefits.

Contributions and Vesting

Individuals who became members prior to July 1, 2012 contribute \$4 per month for nine months each fiscal year. Individuals who became members on or after July 1, 2012 contribute \$10 per month for nine months each fiscal year. The State of Georgia, although not the employer of PSERS members, is required by statute to make employer contributions actuarially determined and approved and certified by the PSERS Board.

Employer contributions required for the year ended June 30, 2020 were \$825.03 per active member and were based on the June 30, 2017 actuarial valuation.

Members become vested after 10 years of creditable service. Upon termination of employment, member contributions with accumulated interest are refundable upon request by the member. However, if an otherwise vested member terminates and withdraws his/her member contributions, the member forfeits all rights to retirement benefits.

- (c) LRS is a single-employer defined benefit pension plan established by the Georgia General Assembly from 1967–1971, and later reestablished in 1979, for the purpose of providing retirement allowances for all members of the Georgia General Assembly. LRS is administered by the ERS Board. There was one employer in the plan for 2020. Total participation in LRS at June 30, 2020 was 658 as detailed in the following chart :

LRS Membership as of June 30, 2020



Notes to Financial Statements

June 30, 2020

Benefits

A member's normal retirement is after eight years of creditable service and attainment of age 65, or eight years of membership service (four legislative terms) and attainment of age 62. A member may retire early and elect to receive a monthly retirement benefit after completion of eight years of membership service and attainment of age 60; however, the retirement benefit is reduced by 5% for each year the member is under age 62.

Upon retirement, the member will receive a monthly service retirement allowance of \$36, multiplied by the number of years of creditable service. Death benefits are also available through the plan.

Contributions and Vesting

Member contributions are 8.5% of annual salary. The state pays member contributions in excess of 4.75% of annual compensation. Employer contributions are actuarially determined and approved and certified by the ERS Board.

There were no employer contributions required for the year ended June 30, 2020 based on the June 30, 2017 actuarial valuation.

Members become vested after eight years of creditable service. Upon termination of employment, member contributions with accumulated interest are refundable upon request by the member. However, if an otherwise vested member terminates and withdraws his/her member contributions, the member forfeits all rights to retirement benefits.

- (d) GJRS is a cost-sharing multiple-employer defined benefit pension plan established by the Georgia General Assembly in 1998 for the purpose of providing retirement allowances for judges and solicitors general of the state courts and juvenile court judges in Georgia, and their survivors and other beneficiaries, superior court judges of the State of Georgia, and district attorneys of the State of Georgia.

The GJRS was also created to serve the members and beneficiaries of the Trial Judges and Solicitors Retirement Fund, the Superior Court Judges Retirement System, and the District Attorneys Retirement System (collectively, the Predecessor Retirement Systems). As of June 30, 1998, any person who was an active, inactive, or retired member or beneficiary of the Predecessor Retirement Systems was transferred to GJRS in the same status effective July 1, 1998. All assets of the Predecessor Retirement Systems were transferred to GJRS as of July 1, 1998. The ERS Board and three additional trustees administer GJRS (GJRS Board). There were 92 employers and 1 nonemployer contributing entity participating in the plan during 2020. Total participation in GJRS at June 30, 2020 was 1,000 as detailed in the following chart:

GJRS Membership as of June 30, 2020



(continued)

Notes to Financial Statements

June 30, 2020

Benefits

The normal retirement for GJRS is age 60, with 16 years of creditable service; however, a member may retire at age 60 with a minimum of 10 years of creditable service.

Annual retirement benefits paid to members are computed as 66⅔% of state-paid salary at retirement for district attorneys and superior court judges and 66⅔% of the average over 24 consecutive months for trial judges and solicitors, plus 1% for each year of credited service over 16 years, not to exceed 24 years. Early retirement benefits paid to members are computed as the pro rata portion of the normal retirement benefit, based on service not to exceed 16 years. Death, disability, and spousal benefits are also available.

Contributions and Vesting

Members are required to contribute 7.5% of their annual salary. Those who became members prior to July 1, 2012 must also contribute an additional 2.5% of their annual salary if spousal benefit is elected. Employer contributions are actuarially determined and approved and certified by the GJRS Board.

Pursuant to O.C.G.A. 47-23-81, the employer contributions for state court judges and solicitors are funded by the State of Georgia on behalf of the local county employers and pursuant to O.C.G.A. 47-23-82, the employer contributions for juvenile court judges are funded by the state on behalf of local county employers.

Employer and nonemployer contributions required for fiscal year 2020 were based on the June 30, 2017 actuarial valuation, as follows:

Employer and nonemployer:	
Normal	13.76 %
Accrued liability	(4.63)
Total	<u>9.13 %</u>

Members become vested after 10 years of creditable service. Upon termination of employment, member contributions with accumulated interest are refundable upon request by the member. However, if an otherwise vested member terminates and withdraws his/her member contributions, the member forfeits all rights to retirement benefits.

- (e) GMPF is a single-employer defined benefit pension plan established on July 1, 2002 by the Georgia General Assembly for the purpose of providing retirement allowances and other benefits for members of the Georgia National Guard (the National Guard). The ERS Board administers the GMPF.

Membership

As of June 30, 2020, GMPF had 1,223 retirees and beneficiaries currently receiving benefits. Active and inactive plan member information is maintained by one employer, the Georgia Department of Defense.

Benefits

A member becomes eligible for benefits upon attainment of age 60, with 20 or more years of creditable service (including at least 15 years of service as a member of the National Guard), having served at least 10 consecutive years as a member of the National Guard immediately prior to discharge, and having received an honorable discharge from the National Guard.

The retirement allowance is payable for life in the amount of \$50 per month, plus \$5 per month for each year of creditable service in excess of 20 years. The maximum benefit is \$100 per month.

(continued)

Notes to Financial Statements

June 30, 2020

Contributions and Vesting

Employer contributions are actuarially determined and approved and certified by the ERS Board. There are no member contributions required.

Employer contributions required for the year ended June 30, 2020 were \$200.32 per active member and were based on the June 30, 2017 actuarial valuation.

A member becomes vested after 20 years of creditable service (including at least 15 years of service as a member of the National Guard), having served at least 10 consecutive years as a member of the National Guard immediately prior to discharge, and having received an honorable discharge from the National Guard.

- (f) SCJRF is a single-employer defined benefit pension plan established by the Georgia General Assembly in 1945 for the purpose of providing retirement benefits to the superior court judges of the State of Georgia. SCJRF is directed by its own Board of Trustees (SCJRF Board). The ERS Board and SCJRF Board entered into a contract for the System to administer the plan effective July 1, 1995.

Membership

As of June 30, 2020, SCJRF had five retirees and beneficiaries currently receiving benefits and no active members. No new members are allowed in SCJRF.

Benefits

The normal retirement for SCJRF is age 68, with 19 years of creditable service, with a benefit of two-thirds the salary paid to superior court judges. A member may also retire at age 65, with a minimum of 10 years of creditable service, with a benefit of one-half the salary paid to superior court judges. Death, disability, and spousal benefits are also available.

Contributions and Vesting

Employer contributions are not actuarially determined, but are provided on an as-needed basis to fund current benefits.

- (g) DARF is a multiple-employer defined benefit pension plan established by the Georgia General Assembly in 1949 for the purpose of providing retirement benefits to the district attorneys of the State of Georgia. DARF is directed by its own Board of Trustees (DARF Board). The ERS Board and DARF Board entered into a contract for the System to administer the plan effective July 1, 1995.

Membership

As of June 30, 2020, DARF had three retirees and beneficiaries currently receiving benefits and no active members. No new members are allowed into DARF.

Benefits

Persons appointed as district attorney emeritus shall receive an annual benefit of \$15,000, or one-half of the state salary received by such person as a district attorney for the calendar year immediately prior to the person's retirement, whichever is greater.

Contributions and Vesting

Employer contributions are not actuarially determined, but are provided on an as-needed basis to fund current benefits.

- (h) SEAD-OPEB is a cost-sharing multiple-employer defined benefit other postemployment benefit plan created in 2007 by the Georgia General Assembly to amend Title 47 of the O.C.G.A., relating to retirement, so as to establish a fund for the provision of term life insurance to retired and vested inactive members of ERS, LRS, and GJRS. Effective July 1, 2009, no newly hired members of any Georgia public retirement system are

(continued)

Notes to Financial Statements

June 30, 2020

eligible for term life insurance under SEAD. The SEAD-OPEB trust fund accumulates the premiums received from the aforementioned retirement systems, including interest earned on deposits and investments of such payments from retired and vested inactive members. There were 444 employers and 1 nonemployer contributing entity participating in the plan during 2020. Total participation in SEAD-OPEB at June 30, 2020 was 66,166 as detailed in the following chart:

SEAD Membership as of June 30, 2020



Employee contribution rates as a percentage of member's salaries for the fiscal year ended June 30, 2020 were as follows: ERS Old Plan – 0.45% and ERS New Plan, LRS, and GJRS – 0.23%. ERS Old Plan members were hired prior to July 1, 1982 and New Plan members were hired on or after July 1, 1982, but prior to January 1, 2009.

Georgia law provides that employee contributions to the plan shall be in an amount established by the Board of Trustees (SEAD Board) not to exceed one-half of 1% of the member's earnable compensation. There were no employer contributions required for the fiscal year ended June 30, 2020.

According to the policy terms covering the lives of members, insurance coverage is provided on a monthly, renewable term basis, and no return premiums or cash value are earned. The net position represents the excess accumulation of investment income and premiums over benefit payments and expenses, and is held as a reserve for payment of death benefits under existing policies.

The amount of insurance for a retiree with creditable service prior to April 1, 1964 is the full amount of insurance under SEAD-Active in effect on the date of retirement. The amount of insurance for a service retiree with no creditable service prior to April 1, 1964 is 70% of the amount of insurance under SEAD-Active at age 60 or at termination, if earlier. Life insurance proceeds are paid in a lump sum to the beneficiary upon death of the retiree.

Administrative costs for the plan are determined based on the plan's share of overhead costs to accumulate and invest funds, actuarial services, and to process benefit payments to beneficiaries. Administrative fees are financed from the assets of the plan.

- (i) GDCP is a defined contribution plan established by the Georgia General Assembly in July 1992 for the purpose of providing retirement allowances for state employees who are not members of a public retirement or pension system and do not participate in Social Security. GDCP is administered by the ERS Board. There were 69 employers participating in the plan during 2020. There were 128,662 members as of June 30, 2020.

Benefits

A member may retire and elect to receive periodic payments after attainment of age 65. The payments will be based upon mortality tables and interest assumptions adopted by the ERS Board. If a terminated member has less than \$5,000 credited to his/her account, the ERS Board has the option of requiring a lump-sum distribution to the member. Upon the death of a member, a lump-sum distribution equaling the amount credited to his/her account will be paid to the member's designated beneficiary.

(continued)

Notes to Financial Statements

June 30, 2020

Contributions and Vesting

Members are required to contribute 7.5% of their annual salary and vest immediately in the plan upon contribution. There are no employer contributions. Earnings will be credited to each member's account as adopted by the ERS Board. Upon termination of employment, the amount of the member's account is refundable upon request by the member.

- (j) The 401(k) Plan was established by the State of Georgia Employee Benefit Plan Council in accordance with Georgia Law 1985, as amended, O.C.G.A, Sections 45-18-50 through 45-18-58, and Section 401(k) of the Internal Revenue Code (IRC). On October 1, 1994, activity commenced when the 401(k) Plan became available to employees of the State of Georgia Community Service Boards (CSBs). On December 1, 1998, the 401(k) Plan became available to employees of the Georgia Lottery Corporation (GLC). On July 1, 2005, the Plan became available to employees of Fayette County Board of Education; on July 1, 2006, the Plan became available to employees of Walton County Board of Education; on January 1, 2010, the Plan became available to employees of Henry County Board of Education; and on July 1, 2017, the Plan became available to employees of the Baldwin County Board of Education.

Effective July 1, 1998, the State of Georgia Employee's Deferred Compensation Group Trust (the Master Trust) was formed for the State of Georgia Deferred Compensation Program to serve as the funding medium for the 401(k) Plan. At that time, the 401(k) Plan began operating on an employee elective deferral basis for all state employees working at least 1,000 hours in a 12-month period. All assets of the 401(k) Plan are held in trust for the exclusive benefit of the participants and their beneficiaries. The assets of the 401(k) Plan and the 457 Plan are commingled in the Master Trust with the respective trusts owning units of the Master Trust. Participant contributions are invested according to the participant's investment election. If the participant does not make an election, investments are automatically defaulted to a Lifecycle Fund based on the participant's date of birth.

Effective July 1, 2005 (HB275), the ERS Board became the trustee of the 401(k) Plan. Alight Solutions and J.P. Morgan hold, administer, and invest the assets of the Master Trust.

Contributions and Vesting

Participating CSBs, the GLC, and Walton and Henry County Boards of Education offer employer contributions, some matching, some automatic, and some a combination of both, to eligible employees at various rates (limited to a maximum of \$280,000 base salary in calendar year 2019 and \$285,000 in calendar year 2020). As of January 1, 2009, individual participants may defer up to 80% of eligible compensation, or up to limits prescribed by the IRC (whichever is less).

Effective January 1, 2009, in accordance with O.C.G.A. 47-2-350 through 47-2-360, newly hired state employees, as well as rehired state employees who did not maintain eligibility for the ERS Old Plan or New Plan, are members of GSEPS. From January 1, 2009 to June 30, 2014, the GSEPS tier included automatic enrollment in the 401(k) Plan at a contribution rate of 1% of salary. Effective July 1, 2014, in accordance with HB764, the employee contribution rate for automatic enrollment increased from 1% to 5%. The State matches 100% of the employee's initial 1% contribution and 50% of contributions above 1% and up to 5%. Therefore, the state will match 3% of salary when an employee contributes at least 5% to the 401(k) Plan. Employee contributions greater than 5% of salary do not receive any additional matching funds. Plan participants who are not employees of the GLC, a CSB, Walton and Henry County Boards of Education, or who are not GSEPS eligible, do not receive any employer contributions in their 401(k) Plan.

All employer contributions are subject to a vesting schedule, which determines eligibility to receive all or a portion of the employer contribution balance at the time of any distribution from the account after separation from all state service. Vesting is determined based on the schedule on the following page:

Notes to Financial Statements

June 30, 2020

Less than 1 year	— %
1	20
2	40
3	60
4	80
5 or more years	100

For CSB/GLC participants whose services terminated prior to January 1, 2010 but after December 31, 2001, the following vesting schedule applies:

Less than 2 years	— %
2	20
3	40
4	60
5	80
6 or more years	100

For CSB/GLC participants whose services terminated prior to January 1, 2002, the following vesting schedule applies:

Less than 3 years	— %
3	20
4	40
5	60
6	80
7 or more years	100

Employee contributions and earnings thereon are 100% vested at all times. The 401(k) Plan also allows participants to roll over amounts from other qualified plans to their respective account in the 401(k) Plan on approval by the 401(k) plan administrator. Such rollovers are 100% vested at the time of transfer.

Participation

As of June 30, 2020, the 401(k) Plan had 71,716 participants with a balance. A total of 470 employers transmitted contributions to the plan during 2020.

Distributions

The participant may receive the value of his or her vested accounts upon attaining age 59 ½, qualifying financial hardship, or 30 days after retirement or other termination of service (employer contribution balances are only eligible for distribution upon separation from service). Upon the death of a participant, his or her beneficiary shall be entitled to the vested value of his or her accounts. Employees who die while actively employed and eligible for 401(k) Plan employer matching contributions become fully vested in employer contributions upon death. Distributions are made in installments or in a lump sum.

- (k) The 457 Plan was established by the State Personnel Board in accordance with Georgia Law 1974, page 198 as amended, O.C.G.A., Sections 45-18-30 through 45-18-36, and Section 457 of the IRC. The 457 Plan is available to employees of the State of Georgia and county health departments and permits such employees to defer a portion of their annual salary until future years. Employee contributions and earnings thereon are 100% vested at all times.

Effective July 1, 1998, the Master Trust was formed for the State of Georgia Deferred Compensation Program to serve as the funding medium for the 457 Plan. All assets of the 457 Plan are held in trust for the exclusive benefit of the participants and their beneficiaries. The assets of the 457 Plan and the 401(k) Plan are

(continued)

Notes to Financial Statements

June 30, 2020

commingled in the Master Trust with the respective trusts owning units of the Master Trust. Participant contributions are invested according to the participant's investment election. If the participant does not make an election, investments are automatically defaulted to a Lifecycle Fund based on the participant's date of birth.

Effective July 1, 2005 (HB275), the ERS Board became the trustee of the 457 Plan. Alight Solutions and J.P. Morgan hold, administer, and invest the assets of the Master Trust.

Participation

As of June 30, 2020, the 457 Plan had 12,331 participants with a balance. A total of 330 employers transmitted contributions to the plan during 2020.

Distributions

The balance in the employee's account in the 457 Plan is not available to the employee until age 70 ½, termination, retirement, death, or unforeseeable emergency, as defined in the 457 Plan. Upon the death of a participant, his or her beneficiary shall be entitled to the vested value of his or her accounts. Distributions are made in installments or in a lump sum.

- (l) SBF was established under O.C.G.A. 47-2-128(c)(3) within the ERS trust solely for maintaining group term life insurance coverage for members of the plan. All assets of SBF are therefore limited to the payment of benefits and expenses for such coverage and cannot be used to pay pension benefits of ERS. SBF is shown on the financial statements separately as a custodial fund to reflect ERS's custodial responsibility and to account for assets held for distribution to SEAD-Active and SEAD-OPEB. SBF may only be used to pay benefits or expenses of SEAD-OPEB or SEAD-Active with authorization by the ERS Board. An actuarial valuation is not prepared, as there are no funding requirements.
- (m) SEAD-Active is a cost-sharing multiple-employer life insurance plan created in 2007 by the Georgia General Assembly to amend Title 47 of the O.C.G.A., relating to retirement, so as to establish a fund for the provision of term life insurance to active members of ERS, LRS, and GJRS. Effective July 1, 2009, no newly hired members of any Georgia public retirement system are eligible for term life insurance under SEAD. The SEAD-Active fund accumulates the premiums received from the aforementioned retirement systems, including interest earned on deposits and investments of such payments from active members. There were 444 employers and 1 nonemployer contributing entity participating in the plan during 2020. As of June 30, 2020, there were 21,020 active plan members in SEAD-Active.

Employee contribution rates as a percentage of member's salaries for the fiscal year ended June 30, 2020 were as follows: ERS Old Plan – 0.05% and ERS New Plan, LRS, and GJRS – 0.02%. ERS Old Plan members were hired prior to July 1, 1982 and new plan members were hired on or after July 1, 1982, but prior to January 1, 2009.

Georgia law provides that employee contributions to the plan shall be in an amount established by the SEAD Board not to exceed one-half of 1% of the member's earnable compensation. There were no employer contributions required for the fiscal year ended June 30, 2020.

According to the policy terms covering the lives of members, insurance coverage is provided on a monthly, renewable term basis, and no return premiums or cash value are earned. The net position represents the excess accumulation of investment income and premiums over benefit payments and expenses, and is held as a reserve for payment of death benefits under existing policies.

The amount of insurance coverage is equal to 18 times monthly earnable compensation frozen at age 60. For members with no creditable service prior to April 1, 1964, the amount decreases from age 60 by a half of 1%

(continued)

Notes to Financial Statements

June 30, 2020

per month until age 65, at which point the member will be covered for 70% of the age 60 coverage. Life insurance proceeds are paid in a lump sum to the beneficiary upon death of the member.

Administrative costs for the plan are determined based on the plan's share of overhead costs to accumulate and invest funds, actuarial services, and to process benefit payments to beneficiaries. Administrative fees are financed from the assets of the plan.

(3) **Significant Accounting Policies and System Asset Matters**

(a) **Basis of Accounting**

The System's financial statements are prepared in accordance with U.S. generally accepted accounting principles as applicable to governmental organizations. The System follows the reporting requirements established by the GASB.

Fiduciary funds include the defined benefit plans and defined contribution plans, which are accounted for on the flow of economic resources measurement focus and the accrual basis of accounting. Contributions to the defined benefit pension plans and OPEB plan are recognized when due, based on statutory requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of each plan. Contributions to the deferred compensation plans are recognized as received. The SBF is a custodial fund and accounted for on the flow of economic resources measurement focus and the accrual basis of accounting. The proprietary fund comprises the SEAD-Active plan. This fund is accounted for on the flow of economic resources measurement focus and uses the accrual basis of accounting. The principal operating revenues are derived from insurance premiums. Operating expenses include the cost of claims and related expenses.

(b) **Reporting Entity**

The System is a component unit of the State of Georgia; however, it is accountable for its own fiscal matters and presentation of its separate financial statements. The System has considered potential component units under GASB Statements No. 80, *Blending Requirements for Certain Component Units*, No. 61, *The Financial Reporting Entity's Omnibus – An Amendment of GASB Statement No. 14 and No. 34*, and No. 39,

Determining Whether Certain Organizations are Component Units, and determined there were no component units of the System.

(c) **Cash and Cash Equivalents**

Cash and cash equivalents, reported at cost, include cash on deposit at banks and cash on deposit with the investment custodian.

(d) **Investments**

Investments are reported at fair value, and in some cases, net asset value (NAV) as a practical expedient to fair value. Equity securities traded on a national or international exchange are valued at the last reported sales price. Investments in private investment companies are valued utilizing the NAVs provided by the underlying private investment companies as a practical expedient. The Pooled Investment Fund (the Fund) applies the practical expedient to its investments in private investment companies on an investment by investment basis, consistent with the Fund's entire position in a particular investment, unless it is probable that the Fund will sell a portion of an investment at an amount different from the NAV of the investment. Private equity fair value is measured using the valuation of the underlying companies as reported by the general partner. These investments, in the form of limited partnerships, reflect values and related performance on a quarter-lag basis due to the nature of the investments and the time it takes to value them. The estimated fair value of investments without readily determinable market values could differ significantly if a ready market for these assets existed. Fixed income securities are valued based primarily on quoted market prices provided by independent pricing sources. Global foreign exchange holdings are translated

(continued)

Notes to Financial Statements

June 30, 2020

using a third-party vendor. Investment income is recognized as earned by the System. There are no investments in, loans to, or leases with parties related to the System.

The System utilizes various investment instruments. Investment securities, in general, are exposed to various risks, such as interest rate, credit, foreign currency, and overall market volatility. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the financial statements.

The System's policy with regard to the allocation of invested assets is established on a cost basis in compliance with Georgia statute. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the pension and OPEB plans. The following was the System's adopted asset allocation policy as of June 30, 2020:

Asset class	Target allocation
Fixed income	25%-45%
Equities	55%-75%
Alternative investments	0%-5%
Total	100%

Approximately 19.4% of the investments held in trust for pension and OPEB benefits are invested in debt securities of the U.S. government. The System has no investments in any one organization, other than those issued by the U.S. government and its instrumentalities, that represent 5% or more of the System's net position restricted for pensions and OPEB and SBF.

For the year ended June 30, 2020, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was (3.6)%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

(e) Capital Assets

Capital assets, including software development costs, are stated at cost less accumulated depreciation and reside in ERS. The capitalization thresholds are \$100,000 for buildings and building improvements and \$5,000 for equipment and vehicles. Depreciation on capital assets is computed using the straight-line method over estimated useful lives of 3 to 40 years. Depreciation expense is included in administrative expenses. Maintenance and repairs are charged to administrative expenses when incurred. When assets are retired or otherwise disposed of, the costs and related accumulated depreciation are removed from the accounts, and any resulting gain or loss is reflected in the *Combining Statement of Changes in Fiduciary Net Position* in the period of disposal.

(f) Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of net position and changes therein. Actual results could differ from those estimates.

(continued)

Notes to Financial Statements

June 30, 2020

(g) New Accounting Pronouncements

Pronouncements effective for the 2020 financial statements:

In May 2020, the GASB issued Statement No. 95, *Postponement of the Effective Dates of Certain Authoritative Guidance* effective immediately. The primary objective of this Statement is to provide temporary relief to governments and stakeholders as a result of the COVID-19 pandemic. This Statement postpones the effective dates of certain provisions in the Statements and Implementation Guides that first became effective or are scheduled to become effective for periods beginning after June 15, 2018 and later.

Pronouncements issued and not yet effective, but early implemented for the 2020 financial statements:

In January 2017, the GASB issued Statement No. 84, *Fiduciary Activities* effective for fiscal years beginning after December 15, 2018. In May 2020, the GASB issued Statement No. 95 which changed the effective date for Statement No. 84 to fiscal years beginning after December 15, 2019. The objective of this Statement is to improve guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. See Change in Accounting Principle section for the impact to the System.

Pronouncements issued, but not yet effective:

In June 2017, the GASB issued Statement No. 87, *Leases* effective for fiscal years beginning after December 15, 2019. In May 2020, the GASB issued Statement No. 95 which changed the effective date for Statement No. 87 to fiscal years beginning after June 15, 2021. The objective of this Statement is to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. The System is in the process of evaluating the impact of this pronouncement on its financial statements.

In June 2018, the GASB issued Statement No. 89, *Accounting for Interest Costs Incurred before the End of a Construction Period* effective for fiscal years beginning after December 15, 2019. In May 2020, the GASB issued Statement No. 95 which changed the effective date for Statement No. 89 to fiscal years beginning after December 15, 2020. The objectives of this Statement are to enhance the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period. In addition, this Statement's goal is to simplify accounting for interest cost incurred before the end of a construction period. The System does not anticipate this pronouncement will impact its financial statements and related reporting.

In August 2018, the GASB issued Statement No. 90, *Majority Equity Interests-an amendment of GASB Statements No. 14 and No. 61* for fiscal years beginning after December 15, 2018. In May 2020, the GASB issued Statement No. 95 which changed the effective date for Statement No. 90 to fiscal years beginning after December 15, 2019. The objectives of this Statement are to improve the consistency and comparability of reporting a government's majority equity interest in a legally separate organization and to improve the relevance of financial statement information for certain component units. The System is in the process of evaluating the impact of this pronouncement on its financial statements.

In May 2019, the GASB issued Statement No. 91, *Conduit Debt Obligations* effective for fiscal years beginning after December 15, 2020. In May 2020, the GASB issued Statement No. 95 which changed the effective date for Statement No. 91 to fiscal years beginning after December 15, 2021. The objectives of this Statement are to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with commitments extended by issuers, arrangements associated with conduit debt obligations, and related note disclosures. The System does not anticipate this statement will impact its financial statements and related reporting.

(continued)

Notes to Financial Statements

June 30, 2020

In January 2020, the GASB issued Statement No. 92, *Omnibus 2020* effective for fiscal years beginning after June 15, 2020. In May 2020, the GASB issued Statement No. 95 which changed the effective date for Statement No. 92 to fiscal years beginning after June 15, 2021. The objectives of this Statement are to enhance comparability in accounting and financial reporting as well as improve the consistency of authoritative literature. The variety of topics covered include the effective date for Statement No. 87, the reporting of intra-entity transfers, the applicability of certain requirements of Statements No. 73, 74, and 84, and the measurement of liabilities related to asset retirement obligations. The System is in the process of evaluating the impact of this pronouncement on its financial statements.

In March 2020, the GASB issued Statement No. 93, *Replacement of Interbank Offered Rates* effective for fiscal years beginning after June 15, 2020. In May 2020, the GASB issued Statement No. 95 which changed the effective date for Statement No. 93 to fiscal years beginning after June 15, 2021. The objective of this Statement is to address the accounting and financial reporting implications that result from the replacement of an interbank offered rate (IBOR). The System does not anticipate this pronouncement will impact its financial statements and related reporting.

In March 2020, the GASB issued Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements* effective for fiscal years beginning after June 15, 2022. The objective of this Statement is to improve the comparability of financial statements among governments that enter into public-private and public-public partnership arrangements (PPP) and availability payment arrangements (APAs). The System does not anticipate this pronouncement will impact its financial statements and related reporting.

In May 2020, the GASB issued Statement No. 96, *Subscription-Based Information Technology Arrangements*, effective for fiscal years beginning after June 15, 2022. The objective of this Statement is to better meet the informational needs of financial statement users by establishing uniform accounting and financial reporting requirements and improving the comparability of financial statements among governments that have entered into subscription based information technology arrangements (SBITAs). The System is in the process of evaluating the impact of this pronouncement on its financial statements.

Notes to Financial Statements

June 30, 2020

(h) Change in Accounting Principle

During fiscal year 2020, the System adopted the provisions of GASB Statement No. 84, *Fiduciary Activities*. The impact on the financial statements and related schedules included changing the previously reported agency fund to a custodial fund. The net position of this newly classified SBF is required to be included on the *Combining Statement of Changes in Fiduciary Net Position* resulting in a restated beginning fund balance. Additionally, the previously reported agency fund Statement of Changes in Assets and Liabilities for SBF has been removed from the Additional Information section.

A summary of the changes to beginning net position is as follows (amounts in thousands):

	SBF	System Total
Combining Statement of Fiduciary Net Position:		
Total liabilities as of 6/30/19, as previously reported	\$ 158,744	\$ 505,291
Adoption of GASB Statement No. 84	(158,744)	(158,744)
Total liabilities as of 6/30/19, as restated	<u>\$ —</u>	<u>\$ 346,547</u>
Combining Statement of Changes in Fiduciary Net Position:		
Total additions as of 6/30/19, as previously reported	\$ —	\$ 2,094,385
Adoption of GASB Statement No. 84	10,208	10,208
Total additions as of 6/30/19, as restated	<u>\$ 10,208</u>	<u>\$ 2,104,593</u>
Total deductions as of 6/30/19, as previously reported	\$ —	\$ 1,733,220
Adoption of GASB Statement No. 84	5	5
Total deductions as of 6/30/19, as restated	<u>\$ 5</u>	<u>\$ 1,733,225</u>
Net Position, as of 6/30/19 as previously reported	\$ —	\$ 18,260,085
Adoption of GASB Statement No. 84	158,744	158,744
Net Position as of 6/30/19, as restated	<u>\$ 158,744</u>	<u>\$ 18,418,829</u>

(4) Investment Program

The System maintains sufficient cash to meet its immediate liquidity needs. Cash not immediately needed is invested as directed by the ERS Board. All investments are held by agent custodial banks in the name of the System. State statutes and the System's investment policy authorize the System to invest in a variety of short-term and long-term securities as follows:

(a) Cash and Cash Equivalents

Custodial credit risk is the risk that in the event a depository institution or counterparty fails, the System would not be able to recover the value of its deposits or investments. The System does not have a formal policy relating to custodial credit risk. The carrying amount of the System's deposits totaled \$276.3 million at June 30, 2020, with actual bank balances of \$275.0 million. The System's bank balances of \$253.8 million are fully insured through the Federal Deposit Insurance Corporation, an independent agency of the U.S. government. The remaining bank deposits of \$21.2 million are uninsured and uncollateralized. The System's noncash investments are held in the System's name and are not exposed to custodial credit risk.

Short-term securities authorized but not currently used are as follows:

- Repurchase and reverse repurchase agreements, whereby the System and a broker exchange cash for direct obligations of the U.S. government or obligations unconditionally guaranteed by agencies of the U.S. government or U.S. corporations. The System or broker promises to repay the cash received, plus interest, at a specific date in the future in exchange for the same securities.

(continued)

Notes to Financial Statements

June 30, 2020

- U.S. Treasury obligations
- Commercial paper, with a maturity of 180 days or less. Commercial paper is an unsecured promissory note issued primarily by corporations for a specific amount and maturing on a specific day. The System considers for investment only commercial paper of the highest quality, rated P-1 and/or A-1 by national credit rating agencies.
- Master notes, an overnight security administered by a custodian bank and an obligation of a corporation whose commercial paper is rated P-1 and/or A-1 by national credit rating agencies.

Investments in commercial paper or master notes are limited to no more than \$500 million in any one name.

(b) Investments

Fixed income investments, managed by the Division of Investment Services (the Division), are authorized in the following instruments:

- U.S. and foreign government obligations. At June 30, 2020, the System held U.S. Treasury bonds of approximately \$3.6 billion.
- U.S. and foreign corporate obligations. At June 30, 2020, the System held U.S. corporate bonds of approximately \$1.2 billion and international corporate bonds of approximately \$212.1 million.
- Obligations unconditionally guaranteed by agencies of the U.S. government. At June 30, 2020, the System did not hold agency bonds.
- Private placements are authorized under the same general restrictions applicable to corporate bonds. At June 30, 2020, the System did not hold private placements.

Mortgage investments are authorized to the extent that they are secured by first mortgages on improved real property located in the State of Georgia.

Equity securities are also authorized (in statute) for investment as a complement to the System's fixed income portfolio and as a long-term inflation hedge. By statute, no more than 75% of the total invested assets on a historical cost basis may be placed in equities. Equity holdings in any one corporation may not exceed 5% of the outstanding equity of the issuing corporation. The equity portfolio is managed by the Division, in conjunction with independent advisers. Buy/sell decisions are based on securities meeting rating criteria established by the ERS Board, in-house research considering such matters as yield, growth, and sales statistics, and analysis of independent market research. Equity trades are approved and executed by the Division's staff. Common stocks eligible for investment are approved by the Investment Committee of the ERS Board before being placed on an approved list.

Equity investments are authorized in the following instruments:

- Domestic equities are those securities considered by O.C.G.A. to be domiciled in the United States. At June 30, 2020, the System held domestic equities of approximately \$8.6 billion, excluding the 401(k) and 457 plans.
- International equities, including American Depository Receipts (ADR), are not considered by the O.C.G.A. to be domiciled in the United States. At June 30, 2020, the System held international equities of approximately \$1.1 billion and ADRs of approximately \$1.5 billion, excluding the 401(k) and 457 plans.

(continued)

Notes to Financial Statements

June 30, 2020

- Alternative investments are authorized (in statute) to provide portfolio diversification and to enhance the risk-adjusted rate of return for the retirement fund that benefits the members of the System. By statute, the allocation to alternative investments shall not, in the aggregate, exceed 5% of the System's plan assets at any time. Further, in any calendar year, new commitments to alternative investments shall not, in the aggregate, exceed 1.0% of the System's plan assets until the first occurrence that 4.5% of the assets have been invested, at which time there shall be no limit on the percentage of commitments that may be made in any calendar year, subject to compliance with other provisions of the statute. At June 30, 2020, the System held private equity investments of approximately \$365.5 million.

The Master Trust invests in various mutual funds, common collective trust funds, and separate accounts, as selected by participants. Each participant is allowed to select and invest contributions into investment options that own one or more commingled funds, as authorized by the ERS Board. Participants may also contribute to a self-directed brokerage account that offers investments in various mutual funds and equities. At June 30, 2020, the deferred compensation plans held commingled funds of approximately \$1.9 billion, mutual funds of approximately \$7.5 million, domestic equities of approximately \$18.8 million, and international equities of approximately \$1.9 million.

Substantially all of the investments of ERS, PSERS, LRS, GJRS, GMPF, SEAD-OPEB, SBF, and SEAD-Active are pooled into one common investment fund. Units in the pooled common investment fund are allocated to the respective plans based upon the cost of assets contributed, and additional units are allocated to the participating plans based on the market value of the pooled common investment fund at the date of contribution. Net income of the pooled common investment fund is allocated monthly to the participating plans, based upon the number of units outstanding during the month.

The units and fair value of each plan's equity in the pooled common investment fund at June 30, 2020, were as follows (dollars in thousands):

	Fair value	Units
Employees' Retirement System	\$ 13,456,293	2,412,710
Public School Employees Retirement System	958,718	171,898
Legislative Retirement System	34,599	6,204
Georgia Judicial Retirement System	485,633	87,074
Georgia Military Pension Fund	28,995	5,199
State Employees' Assurance Department - OPEB	1,256,402	225,273
Survivors Benefit Fund	167,359	30,007
	<hr/>	<hr/>
Total defined benefit plans	16,387,999	2,938,365
State Employees' Assurance Department - Active	319,146	57,223
	<hr/>	<hr/>
Total in pooled investment funds	<u>\$ 16,707,145</u>	<u>2,995,588</u>

Fair Value Measurements. The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the inputs used in valuation and gives the highest priority to unadjusted quoted prices in active markets and requires that observable inputs be used in the valuations when available. The disclosure of fair value estimates in the hierarchy is based on whether the significant inputs into the valuations are observable. In determining the level of the hierarchy in which the estimate is disclosed, the highest level, Level 1, is given to unadjusted quoted prices in active markets and the lowest level, Level 3, to unobservable inputs.

(continued)

Notes to Financial Statements

June 30, 2020

The three levels of the fair value hierarchy are as follows:

Level 1 – Valuations based on unadjusted quoted prices for identical instruments in active markets that the System has the ability to access.

Level 2 – Valuations based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-derived valuations in which all significant inputs are observable.

Level 3 – Valuations based on inputs that are unobservable and significant to the overall fair value measurement.

The System also has investments held through limited partnerships for which fair value is estimated using the NAV reported by the general partner as a practical expedient to fair value. Such investments have not been categorized within the fair value hierarchy.

In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The System's assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each investment. The table below shows the fair value leveling of the System's investments (in thousands):

Investments by fair value level	Fair value measures using			Total
	prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	
Equities:				
Domestic	\$ 8,641,627	—	—	8,641,627
International	2,615,352	20,762	—	2,636,114
Obligations:				
Domestic:				
U.S. treasuries	3,584,895	—	—	3,584,895
Corporate bonds	—	1,162,433	—	1,162,433
International:				
Corporate bonds	—	212,119	—	212,119
Mutual funds	7,498	—	—	7,498
Commingled funds	70,297	1,815,551	—	1,885,848
Total investments by fair value level	<u>\$ 14,919,669</u>	<u>3,210,865</u>	<u>—</u>	<u>18,130,534</u>
Investments measured at NAV*				
Private equity funds				<u>365,458</u>
Total investments				<u>\$ 18,495,992</u>

*Certain investments that are measured at fair value using the NAV per share (or its equivalent) as a practical expedient have not been categorized in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the *Combining Statement of Fiduciary Net Position*.

Notes to Financial Statements

June 30, 2020

Equity securities classified in Level 1 are valued using prices quoted in active markets for those securities. Equity securities in Level 2 are valued using prices quoted for similar instruments in active markets. Equity securities classified in Level 3, if any, are valued using third-party valuations not currently observable in the market.

Debt securities classified in Level 1 are valued using prices quoted in active markets. Debt securities classified in Level 2 are valued using either a bid evaluation or a matrix pricing technique. Bid evaluations may include market quotations, yields, maturities, call features, and ratings. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. These securities have nonproprietary information that was readily available to market participants, from multiple independent sources, which are known to be actively involved in the market.

Mutual funds and commingled funds classified in Level 1 are valued using prices quoted in active markets for those investment types. Commingled funds classified in Level 2 are valued using observable underlying inputs that are market corroborated.

Unfunded commitments, redemption frequency, and redemption notice period relative to the System's alternative investments for which the System utilized NAV or its equivalent relative to the determination of fair value at June 30, 2020, are as follows (in thousands):

	Investments measured at NAV	Unfunded commitments	Redemption frequency (if currently eligible)	Redemption notice period
Private equity funds	\$ 365,458	289,352	Not Eligible	N/A

Investments in privately held limited partnerships are valued using the NAV provided by the general partner as of March 31 of each fiscal year, adjusted by the System for cash flows through June 30. The quarterly values of the partnership investments provided from the general partner are reviewed by the System to determine if any adjustments are necessary. The types of partnership strategies held include growth equity, leveraged buyouts, and mezzanine debt. Two of the 21 partnerships held are secondary investments and are in or nearing the wind up phase of the fund. The remaining investments typically have an approximate life of 8–10 years. These investments are considered illiquid since the nature of these private investments prohibits redemption with the fund; instead, distributions are received from the general partner through liquidation of the underlying assets of the fund. The System currently has no plans to sell any of the investments prior to their liquidation resulting in these assets being carried at the NAV estimated by the general partner and adjusted for second quarter cash flows by the System.

Credit Risk: Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations to the System. O.C.G.A. 47-20-84 limits investments to investment grade securities. It is the System's investment policy to require that the bond portfolio be of high quality and chosen with respect to maturity ranges, coupon levels, refunding characteristics, and marketability. The System's policy is to require that new purchases of bonds be restricted to high-grade bonds rated no lower than "A" by any nationally recognized statistical rating organization. If a bond is subsequently downgraded to a rating below "A," it is placed on a watch list. The System holds two bonds that were downgraded to a rating below "A." Obligations of the U.S. government or obligations explicitly guaranteed by the U.S. government are not considered to have credit risk and do not require disclosure of credit quality. The quality ratings of investments in fixed income securities as described by Standard & Poor's and by Moody's Investors Service, which are nationally recognized statistical rating organizations, at June 30, 2020, are shown in the table on the following page (in thousands).

(continued)

Notes to Financial Statements

June 30, 2020

Quality Ratings of Fixed Income Investments Held at June 30, 2020		
Investment type	Standard and Poor's/ Moody's quality rating	June 30, 2020 fair value
Domestic obligations:		
U.S. treasuries		\$ 3,584,895
Corporates	AAA/Aaa	185,401
	AA/Aa	267,962
	AA/A	105,112
	A/A	408,400
	A/Baa	102,518
	BBB/A	<u>93,040</u>
Total domestic corporates		<u>1,162,433</u>
International obligations:		
Corporates	AA/Aa	106,153
	AA/A	<u>105,966</u>
Total international corporates		<u>212,119</u>
Total fixed income investments		<u>\$ 4,959,447</u>

Mutual funds, commingled funds, and various equities of the deferred compensation plans are not considered to have credit risk and do not require disclosure of credit risk rating.

Concentration of Credit Risk: Concentration of credit risk is the risk of loss that may be attributed to the magnitude of a government's investment in a single issuer. At June 30, 2020, the System did not have debt or equity investments in any one organization, other than those issued or guaranteed by the U.S. government or its agencies, which represented greater than 5% of total investments.

Interest Rate Risk: Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. While the System has no formal interest rate risk policy, active management of the bond portfolio incorporates interest rate risk to generate improved returns. This risk is managed within the portfolio using the effective duration method. This method is widely used in the management of fixed income portfolios and quantifies to a much greater degree the sensitivity to interest rate changes when analyzing a bond portfolio with call options, prepayment provisions, and any other cash flows. Effective duration makes assumptions regarding the most likely timing and amounts of variable cash flows and is best utilized to gauge the effect of a change in interest rates on the fair value of a portfolio. It is believed that the reporting of effective duration found in the table on the following page quantifies to the fullest extent possible the interest rate risk of the System's fixed income assets (in thousands).

Notes to Financial Statements

June 30, 2020

Effective Duration of Fixed Income Assets			
Fixed income type	Fair value June 30, 2020	Percent of all fixed income assets	Effective duration (years)
Domestic obligations:			
U.S. treasuries	\$ 3,584,895	72.3 %	6.8
Corporates	1,162,433	23.4	3.9
International obligations:			
Corporates	<u>212,119</u>	<u>4.3</u>	5.3
Total	<u>\$ 4,959,447</u>	<u>100 %</u>	6.0

Foreign Currency Risk: Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. The System's currency risk exposures, or exchange rate risks, primarily reside within the System's international equity investment holdings. The System's asset allocation and investment policies allow for active and passive investments in international securities. The System's Board-adopted foreign exchange risk management policy is to minimize risk and protect the investments from negative impact by hedging foreign currency exposures with foreign exchange instruments when market conditions and circumstances are deemed appropriate. Foreign exchange instruments are used to protect the value of noncash investments from currency movements. The System's foreign exchange risk management policy does not quantify limitations on foreign currency-denominated investments. As of June 30, 2020, the System's exposure to foreign currency risk in U.S. Dollars, excluding the 401(k) and 457 plans, is highlighted in the table on the following page (in thousands).

Notes to Financial Statements

June 30, 2020

International Investment Securities at Fair Value as of June 30, 2020				
Currency	Cash/cash equivalents	Equities	Fixed income	Total
Australian dollar	\$ —	40,080	—	40,080
Brazilian real	—	20,461	—	20,461
British pound	—	78,488	—	78,488
Canadian dollar	—	32,609	—	32,609
Chilean peso	—	1,892	—	1,892
Colombian peso	—	698	—	698
Czech krone	—	1,133	—	1,133
Danish krone	—	18,708	—	18,708
Euro	—	302,113	—	302,113
Hong Kong dollar	—	107,113	—	107,113
Indian rupee	—	51,555	—	51,555
Indonesian rupiah	—	4,184	—	4,184
Israeli shekel	—	1,847	—	1,847
Japanese yen	—	219,848	—	219,848
Malaysian ringgit	—	9,178	—	9,178
Mexican peso	—	9,218	—	9,218
New Taiwan dollar	—	35,284	—	35,284
New Zealand dollar	—	2,112	—	2,112
Norwegian krone	—	1,989	—	1,989
Philippine peso	—	3,662	—	3,662
Polish zloty	—	3,387	—	3,387
Qatari riyal	—	2,644	—	2,644
Singapore dollar	—	16,481	—	16,481
South African rand	—	22,607	—	22,607
South Korean won	—	67,365	—	67,365
Swedish krona	—	39,606	—	39,606
Swiss franc	—	27,143	—	27,143
Thailand baht	—	20,763	—	20,763
UAE dirham	—	3,976	—	3,976
Total holdings subject to foreign currency risk	—	1,146,144	—	1,146,144
Investment securities payable in U.S. dollars	—	1,488,052	212,119	1,700,171
Total international investment securities - at fair value	\$ —	2,634,196	212,119	2,846,315

(continued)

Notes to Financial Statements

June 30, 2020

(5) Securities Lending Program

State statutes and ERS Board policies permit the System to lend its securities to broker/dealers with a simultaneous agreement to return the collateral for the same securities in the future. The System is presently involved in a securities lending program with major brokerage firms. The System lends equity and fixed income securities for varying terms and receives a fee based on the loaned securities' value. The System reports the gross loan fee income earned as investment income on the *Combining Statement of Changes in Fiduciary Net Position*. During a loan, the System continues to receive dividends and interest as the owner of the loaned securities. The brokerage firms pledge collateral securities consisting of U.S. government and agency securities, mortgage-backed securities issued by a U.S. government agency, corporate bonds, and equities. The collateral value must be equal to at least 102% to 109% of the loaned securities' value, depending on the type of collateral security.

Securities loaned totaled approximately \$3.3 billion at fair value at June 30, 2020. The collateral value was equal to 105.1% of the loaned securities' value at June 30, 2020. The System's lending collateral was held in the System's name by the tri-party custodian.

Loaned securities are included in the accompanying *Combining Statement of Fiduciary Net Position* since the System maintains ownership. The related collateral securities are not recorded as assets on the System's *Combining Statement of Fiduciary Net Position*, and a corresponding liability is not recorded, since the System is deemed not to have the ability to pledge or trade the collateral securities. In accordance with the criteria set forth in GASB Statement No. 28, *Accounting and Financial Reporting for Securities Lending Transactions*, the System is deemed not to have the ability to pledge or sell the collateral securities, since the System's lending contracts do not address whether the lender can pledge or sell the collateral securities without a borrower default, the System has not previously demonstrated that ability, and there are no indications of the System's ability to pledge or sell the collateral securities.

(6) Capital Assets

The following is a summary of capital assets and depreciation information as of and for the year ended June 30, 2020 (dollars in thousands):

	Balance at June 30, 2019	Additions	Disposals	Balance at June 30, 2020
Capital assets:				
Land	\$ 4,350	—	—	4,350
Building	2,800	—	—	2,800
Equipment	3,511	326	(1,596)	2,241
Vehicles	—	—	—	—
Computer software	14,345	—	—	14,345
	<u>25,006</u>	<u>326</u>	<u>(1,596)</u>	<u>23,736</u>
Accumulated depreciation for:				
Building	(1,050)	(70)	—	(1,120)
Equipment	(3,059)	(240)	1,596	(1,703)
Vehicles	—	—	—	—
Computer software	(14,345)	—	—	(14,345)
	<u>(18,454)</u>	<u>(310)</u>	<u>1,596</u>	<u>(17,168)</u>
Capital assets, net	<u>\$ 6,552</u>	<u>16</u>	<u>—</u>	<u>6,568</u>

(continued)

Notes to Financial Statements

June 30, 2020

(7) Commitments

As of June 30, 2020, the System had committed to fund certain private equity partnerships for a total capital commitment of approximately \$647.8 million. Of this amount, approximately \$289.4 million remained unfunded and is not recorded on the System's *Combining Statement of Fiduciary Net Position*.

(8) Net Pension Liability of Employers and Nonemployer - ERS

The components of the net pension liability of the participating employers and nonemployer at June 30, 2020 were as follows (dollars in thousands):

Total pension liability	\$ 17,717,243
Plan fiduciary net position	13,502,286
Employers' and nonemployer net pension liability	<u>\$ 4,214,957</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>76.21 %</u>

Actuarial assumptions: The total pension liability was determined by an actuarial valuation as of June 30, 2019, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.75%
Salary increases	3.25 - 7.00%, including inflation
Investment rate of return	7.30%, net of pension plan investment expense, including inflation

Postretirement mortality rates were based on the RP-2000 Combined Mortality Table with future mortality improvement projected to 2025 with the Society of Actuaries' projection scale BB and set forward two years for both males and females for service retirements and dependent beneficiaries. The RP-2000 Disabled Mortality Table with future mortality improvement projected to 2025 with Society of Actuaries' projection scale BB and set back seven years for males and set forward three years for females was used for death after disability retirement. There is a margin for future mortality improvement in the tables used by the System. Based on the results of the most recent experience study adopted by the ERS Board on December 17, 2015, the numbers of expected future deaths are 9-12% less than the actual number of deaths that occurred during the study period for service retirements and beneficiaries and for disability retirements. Rates of mortality in active service were based on the RP-2000 Employee Mortality Table projected to 2025 with projection scale BB.

The actuarial assumptions used in the June 30, 2019 valuation were based on the results of an actuarial experience study for the period July 1, 2009 – June 30, 2014, with the exception of the investment rate of return. Subsequent to the June 30, 2017 measurement date, the ERS Board adopted a new funding policy. Because of this new funding policy, the assumed investment rate of return was reduced from 7.50% to 7.40% for the June 30, 2017 actuarial valuation. In addition, based on the ERS Board's new funding policy, the assumed investment rate of return was further reduced by 0.10% from 7.40% to 7.30% as of the June 30, 2018 actuarial valuation. The assumed investment rate of return remained at 7.30% for the June 30, 2019 actuarial valuation.

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

Notes to Financial Statements

June 30, 2020

The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset class	Target allocation	Long-term expected real rate of return*
Fixed income	30.00 %	(0.10)%
Domestic large equities	46.20	8.90
Domestic small equities	1.30	13.20
International developed market equities	12.40	8.90
International emerging market equities	5.10	10.90
Alternatives	5.00	12.00
Total	<u>100.00 %</u>	

* Rates shown are net of inflation

Discount rate: The discount rate used to measure the total pension liability was 7.30%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. 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.

Sensitivity of the net pension liability to changes in the discount rate: The following presents the net pension liability, calculated using the discount rate of 7.30%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.30%) or 1-percentage-point higher (8.30%) than the current rate (dollars in thousands):

	1% Decrease (6.30%)	Current discount rate (7.30%)	1% Increase (8.30%)
Employers' and nonemployer net pension liability	\$5,929,704	4,214,957	2,751,621

Actuarial valuation date: June 30, 2019 is the actuarial valuation date upon which the total pension liability is based. An expected total pension liability is determined as of June 30, 2020 using standard roll-forward techniques for the actual total pension liability both before and after reflecting the two one-time 3% payments to certain retirees and beneficiaries effective July 2019 and January 2020. The difference between these two amounts is shown as a change in benefit terms. The roll-forward calculation adds the annual normal cost (also called service cost), subtracts the actual benefit payments and refunds for the plan year, and then applies the expected investment rate of return for the year.

(9) Net Pension Liability of Employers and Nonemployer – PSERS

The components of the net pension liability of the participating employers and nonemployer at June 30, 2020 were as follows (dollars in thousands):

Total pension liability	\$ 1,134,724
Plan fiduciary net position	958,248
Employers' and nonemployer net pension liability	<u>\$ 176,476</u>
Plan fiduciary net position as a percentage of the total pension liability	84.45 %

(continued)

Notes to Financial Statements

June 30, 2020

Actuarial assumptions: The total pension liability was determined by an actuarial valuation as of June 30, 2019, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.75%
Salary increases	n/a
Investment rate of return	7.30%, net of pension plan investment expense, including inflation
Cost-of-living adjustment	1.5% semi-annually

Postretirement mortality rates were based on the RP-2000 Blue-Collar Mortality Table projected to 2025 with projection scale BB (set forward three years for males and two years for females) for the period after service retirement and for dependent beneficiaries. The RP-2000 Disabled Mortality projected to 2025 with projection scale BB (set forward five years for both males and females) was used for death after disability retirement. Rates of mortality in active service were based on the RP-2000 Employee Mortality Table projected to 2025 with projection scale BB. There is a margin for future mortality improvement in the tables used by the System. Based on the results of the most recent experience study adopted by the Board on December 17, 2015, the numbers of expected future deaths are 9-12% less than the actual number of deaths that occurred during the study period for service retirements and beneficiaries and for disability retirements. Rates of mortality in active service were based on the RP-2000 Employee Mortality Table projected to 2025 with projection scale BB.

The actuarial assumptions used in the June 30, 2019 valuation were based on the results of an actuarial experience study for the period July 1, 2009 – June 30, 2014, with the exception of the investment rate of return. Subsequent to the June 30, 2017 measurement date, the PSERS Board adopted a new funding policy. Because of this new funding policy, the assumed investment rate of return was reduced from 7.50% to 7.40% for the June 30, 2017 actuarial valuation. In addition, based on the PSERS Board's new funding policy, the assumed investment rate of return was further reduced by 0.10% from 7.40% to 7.30% as of the June 30, 2018 actuarial valuation. The assumed investment rate of return remained at 7.30% for the June 30, 2019 actuarial valuation.

The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset class	Target allocation	Long-term expected real rate of return*
Fixed income	30.00 %	(0.10)%
Domestic large equities	46.20	8.90
Domestic small equities	1.30	13.20
International developed market equities	12.40	8.90
International emerging market equities	5.10	10.90
Alternatives	5.00	12.00
Total	<u>100.00 %</u>	

* Rates shown are net of inflation.

Discount rate: The discount rate used to measure the total pension liability was 7.30%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer and nonemployer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments

Notes to Financial Statements

June 30, 2020

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.

Sensitivity of the net pension liability to changes in the discount rate: The following presents the net pension liability, calculated using the discount rate of 7.30%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.30%) or 1-percentage-point higher (8.30%) than the current rate (dollars in thousands):

	1% Decrease (6.30%)	Current discount rate (7.30%)	1% Increase (8.30%)
Employers' and nonemployer net pension liability	\$300,027	176,476	72,356

Actuarial valuation date: June 30, 2019 is the actuarial valuation date upon which the total pension liability is based. An expected total pension liability is determined as of June 30, 2020 using standard roll-forward techniques for the actual total pension liability before and after any benefit changes, reflecting the increase in the monthly benefit accrual rate from \$15.25 to \$15.50 per year of creditable service. The roll-forward calculation adds the annual normal cost (also called service cost), subtracts the actual benefit payments and refunds for the plan year, and then applies the expected investment rate of return for the year.

(10) Net Pension Liability of Employer – LRS

The components of the net pension liability (asset) of the participating employer at June 30, 2020 were as follows (dollars in thousands):

Total pension liability	\$ 26,081
Plan fiduciary net position	34,568
Employer's net pension liability (asset)	<u>\$ (8,487)</u>
Plan fiduciary net position as a percentage of the total pension liability	132.54 %

Actuarial assumptions: The total pension liability was determined by an actuarial valuation as of June 30, 2019, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.75%
Salary increases	n/a
Investment rate of return	7.30%, net of pension plan investment expense, including inflation
Cost-of-living adjustment	1.5% semi-annually

Postretirement mortality rates were based on the RP-2000 Combined Mortality Table projected to 2025 with projection scale BB (set forward two years for both males and females) for the period after service retirement. There is a margin for future mortality improvement in the tables used by the System. Based on the results of the most recent experience study adopted by the ERS Board on December 17, 2015, the numbers of expected future deaths are 9-12% less than the actual number of deaths that occurred during the study period for service retirements and beneficiaries and for disability retirements. The RP-2000 Employee Mortality table projected to 2025 using projection scale BB was used for deaths in active service.

Notes to Financial Statements

June 30, 2020

The actuarial assumptions used in the June 30, 2019 valuation were based on the results of an actuarial experience study for the period July 1, 2009 – June 30, 2014, with the exception of the investment rate of return. Subsequent to the June 30, 2017 measurement date, the ERS Board adopted a new funding policy. Because of this new funding policy, the assumed investment rate of return was reduced from 7.50% to 7.40% for the June 30, 2017 actuarial valuation. In addition, based on the ERS Board's new funding policy, the assumed investment rate of return was further reduced by 0.10% from 7.40% to 7.30% as of the June 30, 2018 actuarial valuation. The assumed investment rate of return remained at 7.30% for the June 30, 2019 actuarial valuation.

The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset class	Target allocation	Long-term expected real rate of return*
Fixed income	30.00 %	(0.10)%
Domestic large equities	46.20	8.90
Domestic small equities	1.30	13.20
International developed market equities	12.40	8.90
International emerging market equities	5.10	10.90
Alternatives	5.00	12.00
Total	<u>100.00 %</u>	

* Rates shown are net of inflation.

Discount rate: The discount rate used to measure the total pension liability was 7.30%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer and nonemployer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. 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.

Sensitivity of the net pension liability to changes in the discount rate: The following table presents the net pension liability (asset), calculated using the discount rate of 7.30%, as well as what the net pension liability (asset) would be if it were calculated using a discount rate that is 1-percentage-point lower (6.30%) or 1-percentage-point higher (8.30%) than the current rate (dollars in thousands):

	1% Decrease (6.30%)	Current discount rate (7.30%)	1% Increase (8.30%)
Employers' and nonemployer net pension liability (asset)	\$(6,047)	(8,487)	(10,567)

Actuarial valuation date: June 30, 2019 is the actuarial valuation date upon which the total pension liability is based. An expected total pension liability is determined as of June 30, 2020 using standard roll-forward techniques. The roll-forward calculation adds the annual normal cost (also called service cost), subtracts the actual benefit payments and refunds for the plan year, and then applies the expected investment rate of return for the year.

(continued)

Notes to Financial Statements

June 30, 2020

(11) Net Pension Liability of Employers and Nonemployer – GJRS

The components of the net pension liability (asset) of the participating employers and nonemployer at June 30, 2020 were as follows (dollars in thousands):

Total pension liability	\$ 455,656
Plan fiduciary net position	485,930
Employer's net pension liability (asset)	<u>\$ (30,274)</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>106.64 %</u>

Actuarial assumptions: The total pension liability was determined by an actuarial valuation as of June 30, 2019, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.75%
Salary increases	4.50%, including inflation
Investment rate of return	7.30%, net of pension plan investment expense, including inflation

Mortality rates were based on the RP-2000 Combined Mortality Table projected to 2025 with projection scale BB and set forward two years for both males and females for the period after retirement and for dependent beneficiaries. For the period after disability retirement, the RP-2000 Disabled Mortality Table projected to 2025 with projection scale BB and set back seven years for males and set forward three years for females is used. There is a margin for future mortality improvement in the tables used by the System. Based on the results of the most recent experience study adopted by the GJRS Board on December 17, 2015, the numbers of expected future deaths are 9-12% less than the actual number of deaths that occurred during the study period for service retirements and beneficiaries and for disability retirements. Rates of mortality in active service were based on the RP-2000 Employee Mortality Table projected to 2025 with projection scale BB.

The actuarial assumptions used in the June 30, 2019 valuation were based on the results of an actuarial experience study for the period July 1, 2009 – June 30, 2014, with the exception of the investment rate of return. Subsequent to the June 30, 2017 measurement date, the GJRS Board adopted a new funding policy. Because of this new funding policy, the assumed investment rate of return was reduced from 7.50% to 7.40% for the June 30, 2017 actuarial valuation. In addition, based on the GJRS Board's new funding policy, the assumed investment rate of return was further reduced by 0.10% from 7.40% to 7.30% as of the June 30, 2018 actuarial valuation. The assumed investment rate of return remained at 7.30% for the June 30, 2019 actuarial valuation.

The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the table on the following page:

Notes to Financial Statements

June 30, 2020

Asset class	Target allocation	Long-term expected real rate of return*
Fixed income	30.00 %	(0.10)%
Domestic large equities	46.20	8.90
Domestic small equities	1.30	13.20
International developed market equities	12.40	8.90
International emerging market equities	5.10	10.90
Alternatives	5.00	12.00
Total	<u>100.00 %</u>	

* Rates shown are net of inflation.

Discount rate: The discount rate used to measure the total pension liability was 7.30%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer and nonemployer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. 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.

Sensitivity of the net pension liability to changes in the discount rate: The following table presents the net pension liability (asset), calculated using the discount rate of 7.30%, as well as what the net pension liability (asset) would be if it were calculated using a discount rate that is 1-percentage-point lower (6.30%) or 1-percentage-point higher (8.30%) than the current rate (dollars in thousands):

	1% Decrease (6.30%)	Current discount rate (7.30%)	1% Increase (8.30%)
Employers' and nonemployer net pension liability (asset)	\$11,449	(30,274)	(66,607)

Actuarial valuation date: June 30, 2019 is the actuarial valuation date upon which the total pension liability is based. An expected total pension liability is determined as of June 30, 2020 using standard roll-forward techniques for the actual total pension liability both for and after reflecting two one-time 3% payments that were granted to certain retired members and beneficiaries effective July 2019 and January 2020. The difference between these two amounts is shown as a change in benefit terms. The roll forward calculation adds the annual normal cost (also called the service cost), subtracts the actual benefit payments and refunds for the plan year and then applies the expected investment rate of return for the year.

(12) Net Pension Liability of Employer – GMPF

The components of the net pension liability of the participating employer at June 30, 2020 were as follows (dollars in thousands):

Total pension liability	\$ 47,883
Plan fiduciary net position	<u>28,967</u>
Employer's net pension liability	<u>\$ 18,916</u>
Plan fiduciary net position as a percentage of the total pension liability	60.50 %

(continued)

Notes to Financial Statements

June 30, 2020

Actuarial assumptions: The total pension liability was determined by an actuarial valuation as of June 30, 2019, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.75%
Salary increases	n/a
Investment rate of return	7.30%, net of pension plan investment expense, including inflation

Postretirement mortality rates were based on the RP-2000 Combined Mortality Table projected to 2025 with projection scale BB (set forward two years for both males and females) for the period after service retirement. The RP-2000 Employee Mortality Table projected to 2025 using projection scale BB was used for deaths in active service.

The actuarial assumptions used in the June 30, 2019 valuation were based on the results of an actuarial experience study for the period July 1, 2009 – June 30, 2014, with the exception of the investment rate of return. Subsequent to the June 30, 2017 measurement date, the ERS Board adopted a new funding policy. Because of this new funding policy, the assumed investment rate of return was reduced from 7.50% to 7.40% for the June 30, 2017 actuarial valuation. In addition, based on the ERS Board's new funding policy, the assumed investment rate of return was further reduced by 0.10% from 7.40% to 7.30% as of the June 30, 2018 actuarial valuation. The assumed investment rate of return remained at 7.30% for the June 30, 2019 actuarial valuation.

The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset class	Target allocation	Long-term expected real rate of return*
Fixed income	30.00 %	(0.10)%
Domestic large equities	46.20	8.90
Domestic small equities	1.30	13.20
International developed market equities	12.40	8.90
International emerging market equities	5.10	10.90
Alternatives	5.00	12.00
Total	<u>100.00 %</u>	

* Rates shown are net of inflation.

Discount rate: The discount rate used to measure the total pension liability was 7.30%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer and nonemployer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. 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.

Sensitivity of the net pension liability to changes in the discount rate: The following table presents the net pension liability (asset), calculated using the discount rate of 7.30%, as well as what the net pension liability (asset) would be if it were calculated using a discount rate that is 1-percentage-point lower (6.30%) or 1-percentage-point higher (8.30%) than the current rate (dollars in thousands):

(continued)

Notes to Financial Statements

June 30, 2020

	1% Decrease (6.30%)	Current discount rate (7.30%)	1% Increase (8.30%)
Employers' net pension liability	\$25,519	18,916	13,537

Actuarial valuation date: June 30, 2019 is the actuarial valuation date upon which the total pension liability is based. An expected total pension liability is determined as of June 30, 2020 using standard roll-forward techniques. The roll-forward calculation adds the annual normal cost (also called service cost), subtracts the actual benefit payments and refunds for the plan year, and then applies the expected investment rate of return for the year.

(13) Net OPEB Liability of Employers - SEAD-OPEB

The components of the net OPEB liability (asset) of the participating employers at June 30, 2020 were as follows (dollars in thousands):

Total OPEB liability	\$ 972,700
Plan fiduciary net position	1,256,718
Employers' net OPEB liability (asset)	<u>\$ (284,018)</u>
Plan fiduciary net position as a percentage of the total OPEB liability	129.20 %

Actuarial assumptions: The total OPEB liability was determined by an actuarial valuation as of June 30, 2019, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.75%
Salary increases:	
ERS	3.25% - 7.00%
GJRS	4.50%
LRS	n/a
Investment rate of return	7.30%, net of OPEB plan investment expense, including inflation
Healthcare cost trend rate	n/a

Postretirement mortality rates were based on the RP-2000 Combined Mortality Table with future mortality improvement projected to 2025 with the Society of Actuaries' projection scale BB and set forward two years for both males and females for service retirements and dependent beneficiaries. There is a margin for future mortality improvement in the tables used by the plan.

The actuarial assumptions used in the June 30, 2019 valuation were based on the results of an actuarial experience study for the period July 1, 2009 – June 30, 2014, with the exception of the investment rate of return. Subsequent to the June 30, 2017 measurement date, the SEAD Board adopted a new funding policy. Because of this new funding policy, the assumed investment rate of return was reduced from 7.50% to 7.40% for the June 30, 2017 actuarial valuation. In addition, based on the SEAD Board's new funding policy, the assumed investment rate of return was further reduced by 0.10% from 7.40% to 7.30% as of the June 30, 2018 actuarial valuation. The assumed investment rate of return remained at 7.30% for the June 30, 2019 actuarial valuation.

The long-term expected rate of return on OPEB plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of OPEB plan

(continued)

Notes to Financial Statements

June 30, 2020

investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset class	Target allocation	Long-term expected real rate of return*
Fixed income	30.00 %	(0.10)%
Domestic large equities	46.20	8.90
Domestic small equities	1.30	13.20
International developed market equities	12.40	8.90
International emerging market equities	5.10	10.90
Alternatives	5.00	12.00
Total	<u>100.00 %</u>	

* Rates shown are net of inflation.

Discount rate: The discount rate used to measure the total OPEB liability was 7.30%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer and nonemployer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the OPEB 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 OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

Sensitivity of the net OPEB liability to changes in the discount rate: The following table presents the net OPEB liability (asset), calculated using the discount rate of 7.30%, as well as what the net OPEB liability (asset) would be if it were calculated using a discount rate that is 1-percentage-point lower (6.30%) or 1-percentage-point higher (8.30%) than the current rate (dollars in thousands):

	1% Decrease (6.30%)	Current discount rate (7.30%)	1% Increase (8.30%)
Employers' net OPEB liability (asset)	\$(157,545)	(284,018)	(388,280)

Actuarial valuation date: June 30, 2019 is the actuarial valuation date upon which the total OPEB liability is based. An expected total OPEB liability is determined as of June 30, 2020 using standard roll-forward techniques. The roll-forward calculation adds the annual normal cost (also called service cost), subtracts the actual benefit payments and refunds for the plan year, and then applies the expected investment rate of return for the year.

(14) System Employees' Other Postemployment Benefits (OPEB)

Certain of the System's employees are members of the SEAD-OPEB and the Georgia State Employees Postretirement Benefit Fund. The notes to the financial statements that follow and required supplementary information on pages 81 and 82 are presented from the perspective of the System as an employer.

General Information about the SEAD-OPEB

Plan description: SEAD-OPEB was created in 2007 by the Georgia General Assembly to amend Title 47 of the O.C.G.A., relating to retirement, so as to establish a fund for the provision of term life insurance to retired and vested inactive members of ERS, LRS, and GJRS. The plan is a cost-sharing multiple-employer defined benefit

(continued)

Notes to Financial Statements

June 30, 2020

other postemployment benefit plan as defined in GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*. The SEAD-OPEB trust fund accumulates the premiums received from the aforementioned retirement plans, including interest earned on deposits and investments of such payments.

Benefits provided: The amount of insurance for a retiree with creditable service prior to April 1, 1964 is the full amount of insurance in effect on the date of retirement. The amount of insurance for a service retiree with no creditable service prior to April 1, 1964 is 70% of the amount of insurance in effect at age 60 or at termination, if earlier. Life insurance proceeds are paid in a lump sum to the beneficiary upon death of the retiree.

Contributions: Georgia law provides that employee contributions to the plan shall be in an amount established by the SEAD Board not to exceed one-half of 1% of the member’s earnable compensation. There were no employer contributions required for the fiscal year ended June 30, 2020.

OPEB Liabilities and OPEB Expense related to SEAD-OPEB

At June 30, 2020, the System reported an asset of \$569.1 thousand for its proportionate share of the net OPEB asset. The net OPEB asset was measured as of June 30, 2019. The total OPEB asset used to calculate the net OPEB asset was based on an actuarial valuation as of June 30, 2018. An expected total OPEB asset as of June 30, 2019 was determined using standard roll-forward techniques. The System’s proportionate share of the net OPEB asset was based on actual member salaries reported to the SEAD-OPEB plan during the fiscal year ended June 30, 2019. At June 30, 2019, the employer’s proportionate share was 0.201267%, which was an increase of 0.001203% from its proportionate share measured as of June 30, 2018. For the year ended June 30, 2020, the System recognized a reduction of OPEB expense of \$51.7 thousand.

Actuarial assumptions: The total SEAD-OPEB asset as of June 30, 2019 was determined by an actuarial valuation as of June 30, 2018 using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.75%
Salary increase	3.25 - 7.00%, including inflation
Investment rate of return	7.30%, net of OPEB plan investment expense, including inflation
Healthcare cost trend rate	n/a

Postretirement mortality rates were based on the RP-2000 Combined Mortality Table with future mortality improvement projected to 2025 with the Society of Actuaries’ projection scale BB and set forward 2 years for both males and females for service retirements and dependent beneficiaries. There is a margin for future mortality improvement in the tables used by the plan.

The actuarial assumptions used in the June 30, 2018 valuation were based on the results of an actuarial experience study for the period July 1, 2009 – June 30, 2014, with the exception of the investment rate of return.

The long-term expected rate of return on SEAD-OPEB plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected nominal returns, net of plan investment expense and the assumed rate of inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and estimates of arithmetic real rates of return for each major asset class are summarized in the table on the following page:

(continued)

Notes to Financial Statements

June 30, 2020

Asset class	Target allocation	Long-term expected real rate of return*
Fixed income	30.00 %	(0.10)%
Domestic large equities	46.20	8.90
Domestic small equities	1.30	13.20
International developed market equities	12.40	8.90
International emerging market equities	5.10	10.90
Alternatives	5.00	12.00
Total	<u>100.00 %</u>	

* Rates shown are net of inflation.

Discount rate: The discount rate used to measure the total SEAD-OPEB liability was 7.30%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer and nonemployer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the SEAD-OPEB 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 SEAD-OPEB plan investments was applied to all periods of projected benefit payments to determine the total SEAD-OPEB liability.

Sensitivity of the System's proportionate share of the net SEAD-OPEB liability to changes in the discount rate: The following presents the System's proportionate share of the net SEAD-OPEB liability (asset) calculated using the discount rate of 7.30%, as well as what the System's proportionate share of the net SEAD-OPEB liability (asset) would be if it were calculated using a discount rate that is 1-percentage-point lower 6.30% or 1-percentage-point higher 8.30% than the current rate (dollars in thousands):

	1% Decrease (6.30%)	Current discount rate (7.30%)	1% Increase (8.30%)
System's proportionate share of the net OPEB liability (asset)	\$(315)	(569)	(778)

SEAD-OPEB plan fiduciary net position: Detailed information about the SEAD-OPEB plan's fiduciary net position is presented in the *Combining Statement of Fiduciary Net Position* on page 25 and the *Combining Statement of Changes in Fiduciary Net Position* on page 27.

General Information about the Georgia State Employees Postemployment Benefit Fund (State OPEB Fund)

Plan description: Employees of State of Georgia (State) organizations as defined in §45-18-25 of the Official Code of Georgia Annotated (O.C.G.A.) are provided OPEB through the State OPEB Fund - a cost-sharing multiple-employer defined benefit postemployment healthcare plan, reported as an employee trust fund and administered by a Board of Community Health (Board). Title 45 of the O.C.G.A. assigns the authority to establish and amend the benefit terms of the group health plan to the Board.

Benefits provided: The State OPEB Fund provides healthcare benefits for retirees and their dependents due under the group health plan for employees of State organizations (including technical colleges) and other entities authorized by law to contract with the Department of Community Health (DCH) for inclusion in the plan. Retiree medical eligibility is attained when an employee retires and is immediately eligible to draw a retirement annuity from ERS, LRS, GJRS, Teachers Retirement System (TRS) or PSERS. If elected, dependent coverage starts on the same day as retiree coverage. Medicare-eligible retirees are offered Standard and Premium Medicare Advantage plan options. Non-Medicare-eligible retiree plan options include Health Reimbursement Arrangement

(continued)

Notes to Financial Statements

June 30, 2020

(HRA), Health Maintenance Organization (HMO) and a High Deductible Health Plan (HDHP). The State OPEB Fund also pays for administrative expenses of the fund. By law, no other use of the assets of the State OPEB Fund is permitted.

Contributions: As established by the DCH Board of Trustees, the State OPEB Fund is funded on a pay-as-you-go basis, with additional contributions by the State as available and deemed necessary; that is, annual cost of providing benefits will be financed in the same year as claims occur. Contributions to the State OPEB Fund from the System were \$288.3 thousand for the year ended June 30, 2020. Active employees are not required to contribute to the State OPEB Fund.

OPEB Liabilities and OPEB Expense related to State OPEB Fund

At June 30, 2020, the System reported a liability of approximately \$2.4 million for its proportionate share of the net OPEB liability. The net OPEB liability was measured as of June 30, 2019. The total OPEB liability used to calculate the net OPEB liability was based on an actuarial valuation as of June 30, 2018. An expected total OPEB liability as of June 30, 2019 was determined using standard roll-forward techniques. The System's proportionate share of the net OPEB liability was actuarially determined based on employer contributions during the fiscal year ended June 30, 2019. At June 30, 2019, the System's proportionate share was 0.189291%, which was a decrease of 0.007707% from its proportionate share measured as of June 30, 2018. For the year ended June 30, 2020, the System recognized a reduction in OPEB expense of \$807.8 thousand.

Actuarial assumptions: The total OPEB liability as of June 30, 2019 was determined by an actuarial valuation as of June 30, 2018 using the following actuarial assumptions and other inputs, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2019:

Inflation	2.75%
Salary increase	3.25 - 7.00%, including inflation
Investment rate of return	7.30%, compounded annually, net of OPEB plan investment expense, including inflation
Healthcare trend rate:	
Pre-Medicare Eligible	7.25%
Medicare Eligible	5.38%
Ultimate trend rate:	
Pre-Medicare Eligible	4.75%
Medicare Eligible	4.75%
Year of Ultimate trend rate	
Pre-Medicare Eligible	2028
Medicare Eligible	2022

Mortality rates were based on the RP-2000 Combined Mortality Table for Males or Females, as appropriate, with adjustments for mortality improvements based on Scale BB. The RP-2000 Combined Mortality Table projected to 2025 with projection scale BB and set forward 2 years or both males and females is used for the period after service retirement and for dependent beneficiaries. The RP-2000 Disabled Mortality Table projected to 2025 with projection scale BB and set back 7 years for males and set forward 3 years for females is used for the period after disability retirement.

The actuarial assumptions used in the June 30, 2018 valuation were based on the results of an actuarial experience study for the pension systems, which covered the five-year period ending June 30, 2014, and was adopted by the ERS Board on December 17, 2015. The next experience study for ERS will be for the period ending June 30, 2019.

(continued)

Notes to Financial Statements

June 30, 2020

The remaining actuarial assumptions (e.g., initial per capita costs, health care cost trends, rate of plan participation, rates of plan election, etc.) used in the June 30, 2018 valuation were based on a review of recent plan experience done concurrently with the June 30, 2018 valuation.

Projection of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculation.

The long-term expected rate of return on OPEB plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected nominal returns, net of investment expense and the assumed rate of inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset class	Target allocation	Long-term expected real rate of return*
Fixed income	30.00 %	(0.10)%
Domestic large equities	46.20	8.90
Domestic small equities	1.30	13.20
International developed market equities	12.40	8.90
International emerging market equities	5.10	10.90
Alternatives	5.00	12.00
Total	100.00 %	

* Rates shown are net of inflation.

Discount rate: The discount rate has changed since the prior measurement date from 5.22% to 7.30%. In order to measure the total OPEB liability for the State OPEB Fund, a single equivalent interest rate of 7.30% was used as the discount rate. The projection of cash flows used to determine the discount rate assumed that contributions from members and from the employer will be made at the current level as averaged over the last five years, adjusted for annual projected changes in headcount. Projected future benefit payments for all current plan members were projected through 2120. Based on these assumptions, the OPEB plan's fiduciary net position was projected to be available to make OPEB payments for inactive employees indefinitely. Therefore, the calculated discount rate of 7.30% was applied to all periods of projected benefit payments to determine the total OPEB liability.

Sensitivity of the System's proportionate share of the net State OPEB liability to changes in the discount rate: The following presents the System's proportionate share of the net OPEB liability calculated using the discount rate of 7.30%, as well as what the System's proportionate share of the net OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.30%) or 1-percentage-point higher (8.30%) than the current discount rate (dollars in thousands):

	1% Decrease (6.30%)	Current discount rate (7.30%)	1% Increase (8.30%)
System's proportionate share of the net OPEB liability	\$2,909	2,350	1,874

(continued)

Notes to Financial Statements

June 30, 2020

Sensitivity of the System's proportionate share of the net State OPEB liability to changes in the healthcare cost trend rates: The following presents the System's proportionate share of the net OPEB liability, as well as what the System's proportionate share of the net OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage-point lower or 1-percentage-point higher than the current healthcare cost trend rates (dollars in thousands):

	1% Decrease	Current healthcare cost trend rate	1% Increase
System's proportionate share of the net OPEB liability	\$1,806	2,350	2,995

State OPEB plan fiduciary net position: Detailed information about the State OPEB Benefit plan's fiduciary net position is available in the Comprehensive Annual Financial Report (CAFR) which is publicly available at <https://sao.georgia.gov/comprehensive-annual-financial-reports>.

Deferred Outflows of Resources and Deferred Inflows of Resources for SEAD-OPEB and State OPEB Fund

At June 30, 2020, the System reported deferred outflows of resources and deferred inflows of resources related to SEAD-OPEB and the State OPEB Fund from the following sources (dollars in thousands):

	SEAD-OPEB plan	State OPEB fund	Total
Deferred outflows of resources:			
Difference between expected and actual experience	\$ 3	—	3
Change of assumptions	12	—	12
Net difference between projected and actual earnings on plan investments	—	158	158
Change in proportion and differences between the System's contributions and proportionate share of contributions	—	220	220
System's contributions subsequent to the measurement date	—	288	288
Total deferred outflows of resources	<u>\$ 15</u>	<u>666</u>	<u>681</u>

	SEAD-OPEB plan	State OPEB fund	Total
Deferred inflows of resources:			
Difference between expected and actual experience	\$ —	815	815
Change of assumptions	—	2,193	2,193
Net difference between projected and actual earnings on plan investments	52	—	52
Change in proportion and differences between the System's contributions and proportionate share of contributions	6	128	134
Total deferred inflows of resources	<u>\$ 58</u>	<u>3,136</u>	<u>3,194</u>

(continued)

Notes to Financial Statements

June 30, 2020

SEAD-OPEB amounts reported as deferred outflows of resources and deferred inflows of resources related to SEAD-OPEB will be recognized in OPEB expense as follows (dollars in thousands):

Year ended June 30:	
2021	(\$16)
2022	(25)
2023	(5)
2024	3

State OPEB Fund employer contributions subsequent to the measurement date of \$288.3 thousand are reported as deferred outflows of resources and will be recognized as a reduction of the net OPEB liability in the year ended June 30, 2021. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to State OPEB Fund will be recognized in OPEB expense as follows (dollars in thousands):

Year ended June 30:	
2021	(\$1,110)
2022	(981)
2023	(553)
2024	(114)

Financial Section



Required Supplementary Information (UNAUDITED)

Schedules of Employers' and Nonemployer Contributions - Defined Benefit Plans

Year ended June 30, 2020

(In thousands)

	Year ended	Actuarially determined contribution (a)	Contributions in relation to the actuarially determined contribution (b)	Contribution deficiency (excess) (a-b)	Covered payroll (c)	Contributions as a percentage of covered payroll (b/c)
Employees' Retirement System	6/30/2011	\$ 261,132	261,132	—	2,486,780	10.5 %
	6/30/2012	273,623	274,034	(411)	2,414,884	11.3
	6/30/2013	358,376	358,992	(616)	2,335,773	15.4
	6/30/2014	428,982	429,752	(770)	2,335,773	18.4
	6/30/2015	517,220	518,163	(943)	2,353,225	22.0
	6/30/2016	595,124	595,566	(442)	2,390,457	24.9
	6/30/2017	624,623	625,281	(658)	2,565,918	24.4
	6/30/2018	650,073	652,167	(2,094)	2,635,896	24.7
	6/30/2019	649,209	649,209	—	2,615,491	24.8
	6/30/2020	643,857	643,857	—	2,614,856	24.6
Public School Employees Retirement System¹	6/30/2011	7,509	7,509	—	n/a	n/a
	6/30/2012	15,884	15,884	—	n/a	n/a
	6/30/2013	24,829	24,829	—	n/a	n/a
	6/30/2014	27,160	27,160	—	n/a	n/a
	6/30/2015	28,461	28,461	—	n/a	n/a
	6/30/2016	28,580	28,580	—	n/a	n/a
	6/30/2017	26,277	26,277	—	n/a	n/a
	6/30/2018	29,276	29,276	—	n/a	n/a
	6/30/2019	30,263	30,263	—	n/a	n/a
	6/30/2020	32,496	32,496	—	n/a	n/a
Legislative Retirement System²	6/30/2011	—	75	(75)	3,780	2.0
	6/30/2012	—	76	(76)	3,815	2.0
	6/30/2013	—	128	(128)	3,867	3.3
	6/30/2014	—	45	(45)	3,850	1.2
	6/30/2015	—	—	—	3,764	n/a
	6/30/2016	—	—	—	3,875	n/a
	6/30/2017	—	—	—	3,830	n/a
	6/30/2018	—	—	—	3,844	n/a
	6/30/2019	—	—	—	3,833	n/a
	6/30/2020	—	—	—	3,798	n/a

Required Supplementary Information (UNAUDITED)

Schedules of Employers' and Nonemployer Contributions - Defined Benefit Plans

Year ended June 30, 2020

(In thousands)

	Year ended	Actuarially determined contribution (a)	Contributions in relation to the actuarially determined contribution (b)	Contribution deficiency (excess) (a-b)	Covered payroll (c)	Contributions as a percentage of covered payroll (b/c)
Georgia Judicial Retirement System	6/30/2011	\$ 1,932	1,932	—	52,331	3.7 %
	6/30/2012	2,083	2,083	—	51,898	4.0
	6/30/2013	2,279	2,279	—	52,807	4.3
	6/30/2014	2,375	2,375	—	54,787	4.3
	6/30/2015	4,261	4,261	—	54,272	7.9
	6/30/2016	7,623	7,623	—	57,401	13.3
	6/30/2017	6,684	6,684	—	59,695	11.2
	6/30/2018	6,566	6,566	—	60,572	10.8
	6/30/2019	5,254	5,254	—	60,532	8.7
	6/30/2020	6,464	6,464	—	63,835	10.1
Georgia Military Pension Fund³	6/30/2011	1,282	1,282	—	n/a	n/a
	6/30/2012	1,521	1,521	—	n/a	n/a
	6/30/2013	1,703	1,703	—	n/a	n/a
	6/30/2014	1,892	1,892	—	n/a	n/a
	6/30/2015	1,893	1,893	—	n/a	n/a
	6/30/2016	1,990	1,990	—	n/a	n/a
	6/30/2017	2,018	2,018	—	n/a	n/a
	6/30/2018	2,377	2,377	—	n/a	n/a
	6/30/2019	2,537	2,537	—	n/a	n/a
	6/30/2020	2,611	2,611	—	n/a	n/a
State Employees' Assurance Department Retired and Vested Inactive Members Trust Fund	6/30/2011	—	—	—	n/a	n/a
	6/30/2012	12,724	12,724	—	2,085,902	0.6
	6/30/2013	5,009	5,009	—	1,855,185	0.3
	6/30/2014	—	—	—	n/a	n/a
	6/30/2015	—	—	—	n/a	n/a
	6/30/2016	—	—	—	n/a	n/a
	6/30/2017	—	—	—	n/a	n/a
	6/30/2018	—	—	—	n/a	n/a
	6/30/2019	—	—	—	n/a	n/a
	6/30/2020	—	—	—	n/a	n/a

This data, except for annual covered payroll, was provided by the System's actuary.

¹ No statistics regarding covered payroll are available. Contributions are not based upon members' salaries but are simply \$4.00 per member, per month, for nine months, each fiscal year if hired prior to July 1, 2012 and \$10 per month, per member, for nine months, if hired after July 1, 2012.

² The Georgia General Assembly made contributions in some years that were not required.

³ No statistics regarding covered payroll are available. Active and inactive plan member information is maintained by the Georgia Department of Defense.

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

Required Supplementary Information (UNAUDITED)

Schedules of Employers' and Nonemployer Net Pension/OPEB Liability and Related Ratios – Defined Benefit Plans

June 30, 2020

(In thousands)

	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014
Employees' Retirement System:							
Total pension liability	\$ 17,717,243	17,744,003	17,628,219	17,159,634	17,103,987	17,019,362	17,042,149
Plan fiduciary net position	13,502,286	13,617,472	13,517,186	13,098,299	12,373,567	12,967,964	13,291,531
Employers' and nonemployer net pension liability	\$ 4,214,957	4,126,531	4,111,033	4,061,335	4,730,420	4,051,398	3,750,618
Plan fiduciary net position as a percentage of the total pension liability	76.21 %	76.74 %	76.68 %	76.33 %	72.34 %	76.20 %	77.99 %
Covered payroll	\$ 2,614,856	2,615,491	2,635,896	2,565,918	2,390,457	2,353,225	2,335,773
Employers' and nonemployer net pension liability as a percentage of covered payroll	161.19 %	157.77 %	155.96 %	158.28 %	197.89 %	172.16 %	160.57 %
Public School Employees Retirement System:							
Total pension liability	\$ 1,134,724	1,107,495	1,072,165	1,013,163	992,292	946,200	930,745
Plan fiduciary net position	958,248	941,587	914,138	868,134	803,775	823,150	821,733
Employers' and nonemployer net pension liability	\$ 176,476	165,908	158,027	145,029	188,517	123,050	109,012
Plan fiduciary net position as a percentage of the total pension liability	84.45 %	85.02 %	85.26 %	85.69 %	81.00 %	87.00 %	88.29 %
Covered payroll	n/a						
Employers' and nonemployer net pension liability as a percentage of covered payroll	n/a						
Legislative Retirement System:							
Total pension liability	\$ 26,081	26,166	26,304	25,898	26,142	25,271	25,216
Plan fiduciary net position	34,568	34,540	34,189	32,981	30,975	32,359	32,794
Employer's net pension asset	\$ (8,487)	(8,374)	(7,885)	(7,083)	(4,833)	(7,088)	(7,578)
Plan fiduciary net position as a percentage of the total pension liability	132.54 %	132.00 %	129.98 %	127.35 %	118.49 %	128.05 %	130.05 %
Covered payroll	3,798	n/a	n/a	n/a	n/a	n/a	n/a
Employer's net pension asset as a percentage of covered payroll	(223.46)%	n/a	n/a	n/a	n/a	n/a	n/a
Georgia Judicial Retirement System:							
Total pension liability	\$ 455,656	440,041	428,624	394,736	368,669	357,081	350,443
Plan fiduciary net position	485,930	479,372	466,657	441,182	403,011	404,852	400,790
Employers' and nonemployer net pension asset	\$ (30,274)	(39,331)	(38,033)	(46,446)	(34,342)	(47,771)	(50,347)
Plan fiduciary net position as a percentage of the total pension liability	106.64 %	108.94 %	108.87 %	111.77 %	109.32 %	113.38 %	114.37 %
Covered payroll	\$ 63,835	60,532	60,572	59,695	57,401	54,272	54,787
Employers' and nonemployer net pension asset as a percentage of covered payroll	47.43 %	64.98 %	62.79 %	77.81 %	59.83 %	88.02 %	91.90 %

(continued)

Required Supplementary Information (UNAUDITED)

Schedules of Employers' and Nonemployer Net Pension/OPEB Liability and Related Ratios – Defined Benefit Plans

June 30, 2020

(In thousands)

	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014
Georgia Military Pension Fund:							
Total pension liability	\$ 47,883	45,639	43,204	40,085	36,950	33,343	31,511
Plan fiduciary net position	28,967	26,417	23,653	20,711	17,717	16,712	15,251
Employers' net pension liability	<u>\$ 18,916</u>	<u>19,222</u>	<u>19,551</u>	<u>19,374</u>	<u>19,233</u>	<u>16,631</u>	<u>16,260</u>
Plan fiduciary net position as a percentage of the total pension liability	60.50 %	57.88 %	54.75 %	51.67 %	47.95 %	50.12 %	48.40 %
Covered payroll	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Employers' net pension liability as a percentage of covered payroll	n/a	n/a	n/a	n/a	n/a	n/a	n/a
State Employees' Assurance Department - Retired and Vested Inactive Members Trust Fund:							
Total pension liability	\$ 972,700	951,091	918,816	861,346	—	—	—
Plan fiduciary net position	1,256,718	1,233,856	1,189,462	1,121,251	—	—	—
Employer's net OPEB asset	<u>\$ (284,018)</u>	<u>(282,765)</u>	<u>(270,646)</u>	<u>(259,905)</u>	<u>—</u>	<u>—</u>	<u>—</u>
Plan fiduciary net position as a percentage of the total OPEB liability	129.20 %	129.73 %	129.46 %	130.17 %	— %	— %	— %
Covered payroll	\$ 1,135,433	1,211,274	1,328,485	1,383,860	—	—	—
Employers' net OPEB asset as a percentage of covered payroll	25.01 %	23.34 %	20.37 %	18.78 %	—	—	—

Schedules above are intended to show information for 10 years. Additional years will be displayed as they become available.

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

Required Supplementary Information (UNAUDITED)

Schedules of Changes in Employers' and Nonemployer Net Pension/OPEB Liability – Defined Benefit Plans

June 30, 2020

(In thousands)

	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014
Employee's Retirement System:							
Total pension liability:							
Service cost	\$ 132,004	135,679	129,294	125,910	143,043	145,045	150,075
Interest	1,240,887	1,233,882	1,233,689	1,230,175	1,225,650	1,227,846	1,224,380
Benefit changes	65,702	42,097	31,097	30,563	—	—	—
Differences between expected and actual experience	25,736	155,573	180,655	72,315	(238)	(53,950)	—
Changes of assumptions	—	—	314,733	—	70,890	—	—
Benefit payments	(1,484,445)	(1,443,756)	(1,413,298)	(1,394,283)	(1,347,633)	(1,334,278)	(1,305,998)
Refunds of contributions	(6,644)	(7,691)	(7,585)	(9,033)	(7,087)	(7,450)	(8,757)
Net change in total pension liability	(26,760)	115,784	468,585	55,647	84,625	(22,787)	59,700
Total pension liability-beginning	17,744,003	17,628,219	17,159,634	17,103,987	17,019,362	17,042,149	16,982,449
Total pension liability-end (a)	17,717,243	17,744,003	17,628,219	17,159,634	17,103,987	17,019,362	17,042,149
Plan fiduciary net position:							
Contributions-employer	634,108	638,989	639,302	613,201	583,082	505,668	418,807
Contributions-nonemployer	9,749	10,220	12,865	12,080	12,484	12,495	10,945
Contributions-member	35,837	36,252	37,130	35,863	31,961	33,713	32,423
Administrative expense allotment	10	10	10	10	10	10	—
Net investment income	703,840	873,404	1,166,013	1,475,626	141,292	474,147	2,021,748
Benefit payments	(1,484,445)	(1,443,756)	(1,413,298)	(1,394,283)	(1,347,633)	(1,334,278)	(1,305,998)
Administrative expense	(7,641)	(7,142)	(8,056)	(8,732)	(8,506)	(7,872)	(7,440)
Refunds of contributions	(6,644)	(7,691)	(7,585)	(9,033)	(7,087)	(7,450)	(8,757)
Other ¹	—	—	(7,494)	—	—	—	—
Net change in plan fiduciary net position	(115,186)	100,286	418,887	724,732	(594,397)	(323,567)	1,161,728
Plan fiduciary net position-beginning	13,617,472	13,517,186	13,098,299	12,373,567	12,967,964	13,291,531	12,129,803
Plan fiduciary net position-end (b)	13,502,286	13,617,472	13,517,186	13,098,299	12,373,567	12,967,964	13,291,531
Net pension liability-end (a)-(b)	\$ 4,214,957	4,126,531	4,111,033	4,061,335	4,730,420	4,051,398	3,750,618

¹ The System is a participating employer in the Georgia State Employees Postemployment Benefit Fund and the State Employees' Assurance Department Retired and Vested Inactive Members Trust Fund. Pursuant to the requirements of GASB Statement No. 75, the fiscal year 2018 beginning Fiduciary Net Position was restated by \$7,494,507. The restatement of net position was made for reporting purposes to reflect the impact of recording the initial deferred outflows of resources, net OPEB liability, and net OPEB asset. For actuarial purposes, this adjustment was recognized in fiscal year 2018 and beginning fiduciary net position was not restated.

Schedules above are intended to show information for 10 years. Additional years will be displayed as they become available.

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

Required Supplementary Information (UNAUDITED)

Schedules of Changes in Employers' and Nonemployer Net Pension/OPEB Liability – Defined Benefit Plans

June 30, 2020

(In thousands)

	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014
Public School Employees Retirement System:							
Total pension liability:							
Service cost	\$ 14,017	13,762	13,180	12,788	11,952	12,088	11,049
Interest	78,414	75,923	73,643	72,157	68,776	67,652	66,143
Benefit changes	13,680	18,050	17,289	—	—	—	—
Differences between expected and actual experience	(12,220)	(8,159)	(3,943)	(3,665)	(9,483)	(6,858)	—
Changes of assumptions	—	—	21,354	—	33,215	—	—
Benefit payments	(66,090)	(63,637)	(61,820)	(59,378)	(57,903)	(56,972)	(56,189)
Refunds of contributions	(572)	(609)	(701)	(1,031)	(465)	(455)	(514)
Net change in total pension liability	27,229	35,330	59,002	20,871	46,092	15,455	20,489
Total pension liability-beginning	1,107,495	1,072,165	1,013,163	992,292	946,200	930,745	910,256
Total pension liability-end (a)	1,134,724	1,107,495	1,072,165	1,013,163	992,292	946,200	930,745
Plan fiduciary net position:							
Contributions-employer	32,496	30,263	29,276	26,277	28,580	28,461	27,160
Contributions-member	2,338	2,256	2,162	2,084	1,925	1,800	1,659
Net investment income	49,913	60,553	78,418	97,715	9,809	30,129	123,799
Benefit payments	(66,090)	(63,637)	(61,820)	(59,378)	(57,903)	(56,972)	(56,189)
Administrative expense	(1,424)	(1,377)	(1,331)	(1,308)	(1,321)	(1,545)	(1,450)
Refunds of contributions	(572)	(609)	(701)	(1,031)	(465)	(456)	(514)
Net change in plan fiduciary net position	16,661	27,449	46,004	64,359	(19,375)	1,417	94,465
Plan fiduciary net position-beginning	941,587	914,138	868,134	803,775	823,150	821,733	727,268
Plan fiduciary net position-end (b)	958,248	941,587	914,138	868,134	803,775	823,150	821,733
Net pension liability-end (a)-(b)	\$ 176,476	165,908	158,027	145,029	188,517	123,050	109,012

Schedules above are intended to show information for 10 years. Additional years will be displayed as they become available.

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

Required Supplementary Information (UNAUDITED)

Schedules of Changes in Employers' and Nonemployer Net Pension/OPEB Liability – Defined Benefit Plans

June 30, 2020

(In thousands)

	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014
Legislative Retirement System:							
Total pension liability:							
Service cost	\$ 372	366	359	357	331	338	344
Interest	1,844	1,850	1,875	1,892	1,829	1,824	1,799
Benefit changes	—	—	—	—	—	—	—
Differences between expected and actual experience	(485)	(428)	(481)	(655)	(465)	(325)	—
Changes of assumptions	—	—	447	—	938	—	—
Benefit payments	(1,795)	(1,856)	(1,772)	(1,763)	(1,724)	(1,756)	(1,801)
Refunds of contributions	(21)	(70)	(22)	(75)	(38)	(26)	(30)
Net change in total pension liability	(85)	(138)	406	(244)	871	55	312
Total pension liability-beginning	26,166	26,304	25,898	26,142	25,271	25,216	24,904
Total pension liability-end (a)	26,081	26,166	26,304	25,898	26,142	25,271	25,216
Plan fiduciary net position:							
Contributions-employer	—	—	—	—	—	—	45
Contributions-member	325	339	323	327	328	327	282
Net investment income	1,824	2,228	2,962	3,741	363	1,189	4,969
Benefit payments	(1,795)	(1,856)	(1,772)	(1,763)	(1,724)	(1,756)	(1,801)
Administrative expense	(305)	(290)	(283)	(224)	(313)	(169)	(152)
Refunds of contributions	(21)	(70)	(22)	(75)	(38)	(26)	(30)
Net change in plan fiduciary net position	28	351	1,208	2,006	(1,384)	(435)	3,313
Plan fiduciary net position-beginning	34,540	34,189	32,981	30,975	32,359	32,794	29,481
Plan fiduciary net position-end (b)	34,568	34,540	34,189	32,981	30,975	32,359	32,794
Net pension asset-end (a)-(b)	\$ (8,487)	(8,374)	(7,885)	(7,083)	(4,833)	(7,088)	(7,578)

Schedules above are intended to show information for 10 years. Additional years will be displayed as they become available.

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

Required Supplementary Information (UNAUDITED)

Schedules of Changes in Employers' and Nonemployer Net Pension/OPEB Liability – Defined Benefit Plans

June 30, 2020

(In thousands)

	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014
Georgia Judicial Retirement System:							
Total pension liability:							
Service cost	\$ 13,375	13,350	13,019	12,514	12,713	7,751	7,584
Interest	31,047	30,267	28,666	26,826	26,058	25,566	24,530
Benefit changes	693	1,065	3,442	3,419	—	—	—
Differences between expected and actual experience	(24)	(5,250)	6,379	5,258	(3,603)	(7,542)	—
Changes of assumptions	—	—	7,466	—	(4,308)	—	—
Benefit payments	(29,263)	(27,462)	(24,934)	(21,784)	(19,011)	(18,365)	(17,441)
Refunds of contributions	(213)	(553)	(150)	(166)	(261)	(772)	(22)
Net change in total pension liability	15,615	11,417	33,888	26,067	11,588	6,638	14,651
Total pension liability-beginning	440,041	428,624	394,736	368,669	357,081	350,443	335,792
Total pension liability-end (a)	455,656	440,041	428,624	394,736	368,669	357,081	350,443
Plan fiduciary net position:							
Contributions-employer	4,022	3,117	4,725	4,081	4,754	2,696	1,373
Contributions-nonemployer	2,442	2,137	1,841	2,603	2,869	1,564	1,002
Contributions-member	5,005	5,469	4,910	4,906	5,507	5,061	4,731
Net investment income	25,414	30,827	39,877	49,259	5,055	14,697	60,012
Benefit payments	(29,263)	(27,462)	(24,934)	(21,784)	(19,011)	(18,365)	(17,441)
Administrative expense	(849)	(820)	(794)	(728)	(754)	(819)	(754)
Refunds of contributions	(213)	(553)	(150)	(166)	(261)	(772)	(22)
Net change in plan fiduciary net position	6,558	12,715	25,475	38,171	(1,841)	4,062	48,901
Plan fiduciary net position-beginning	479,372	466,657	441,182	403,011	404,852	400,790	351,889
Plan fiduciary net position-end (b)	485,930	479,372	466,657	441,182	403,011	404,852	400,790
Net pension asset-end (a)-(b)	\$ (30,274)	(39,331)	(38,033)	(46,446)	(34,342)	(47,771)	(50,347)

Schedules above are intended to show information for 10 years. Additional years will be displayed as they become available.

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

Required Supplementary Information (UNAUDITED)

Schedules of Changes in Employers' and Nonemployer Net Pension/OPEB Liability – Defined Benefit Plans

June 30, 2020

(In thousands)

	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014
Georgia Military Pension Fund:							
Total pension liability:							
Service cost	\$ 95	97	84	89	73	73	73
Interest	3,284	3,109	2,964	2,732	2,465	2,330	2,223
Benefit changes	—	—	—	—	—	—	—
Differences between expected and actual experience	162	449	116	1,356	950	326	—
Changes of assumptions	—	—	1,093	—	1,082	—	—
Benefit payments	(1,297)	(1,220)	(1,138)	(1,042)	(963)	(897)	(841)
Refunds of contributions	—	—	—	—	—	—	—
Net change in total pension liability	2,244	2,435	3,119	3,135	3,607	1,832	1,455
Total pension liability-beginning	45,639	43,204	40,085	36,950	33,343	31,511	30,056
Total pension liability-end (a)	47,883	45,639	43,204	40,085	36,950	33,343	31,511
Plan fiduciary net position:							
Contributions-employer	2,611	2,537	2,377	2,018	1,990	1,893	1,892
Contributions-member	—	—	—	—	—	—	—
Net investment income	1,485	1,683	1,928	2,262	240	585	2,179
Benefit payments	(1,297)	(1,220)	(1,138)	(1,042)	(963)	(896)	(841)
Administrative expense	(249)	(236)	(225)	(244)	(262)	(121)	(110)
Refunds of contributions	—	—	—	—	—	—	—
Other	—	—	—	—	—	—	—
Net change in plan fiduciary net position	2,550	2,764	2,942	2,994	1,005	1,461	3,120
Plan fiduciary net position-beginning	26,417	23,653	20,711	17,717	16,712	15,251	12,131
Plan fiduciary net position-end (b)	28,967	26,417	23,653	20,711	17,717	16,712	15,251
Net pension liability-end (a)-(b)	\$ 18,916	19,222	19,551	19,374	19,233	16,631	16,260

Schedules above are intended to show information for 10 years. Additional years will be displayed as they become available.

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

Required Supplementary Information (UNAUDITED)

Schedules of Changes in Employers' and Nonemployer Net Pension/OPEB Liability – Defined Benefit Plans

June 30, 2020

(In thousands)

	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017
Statement Employees' Assurance Department Retired and Vested Inactive Members Trust Fund:				
Total OPEB Liability:				
Service cost	\$ 3,237	3,617	3,695	3,959
Interest	67,796	65,708	63,242	61,076
Benefit changes	—	—	—	—
Differences between expected and actual experience	(4,670)	366	4,697	—
Changes of assumptions	—	—	22,085	—
Benefit payments	(44,754)	(37,416)	(36,249)	(36,058)
Refunds of contributions	—	—	—	—
Net change in total OPEB liability	21,609	32,275	57,470	28,977
Total OPEB liability-beginning	951,091	918,816	861,346	832,369
Total OPEB liability-end	972,700	951,091	918,816	861,346
Plan fiduciary net position:				
Contributions - employer	—	—	—	1
Insurance premiums - member	3,088	3,328	3,599	3,793
Net investment income	65,248	79,193	101,542	125,550
Benefit payments	(44,754)	(37,416)	(36,249)	(36,058)
Administrative expense	(720)	(716)	(681)	(576)
Refunds of contributions	—	—	—	—
Other	—	5	—	—
Net change in plan fiduciary net position	22,862	44,394	68,211	92,710
Plan fiduciary net position-beginning	1,233,856	1,189,462	1,121,251	1,028,541
Plan fiduciary net position-end (b)	1,256,718	1,233,856	1,189,462	1,121,251
Net OPEB asset-end (a)-(b)	\$ (284,018)	(282,765)	(270,646)	(259,905)

Schedules above are intended to show information for 10 years. Additional years will be displayed as they become available.

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

Required Supplementary Information (UNAUDITED)

Schedule of Investment Returns

Year ended June 30, 2020

	2020	2019	2018	2017	2016	2015	2014
Pooled Investment Fund:							
Annual money-weighted rate of return, net of investment expense	(3.6)%	(1.8)%	0.6%	2.9%	(7.2)%	(5.3)%	6.0%

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

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

Required Supplementary Information (UNAUDITED)

Schedules of the System's Proportionate Share of the Net OPEB Liability

Year ended June 30, 2020

(In thousands)

	June 30, 2020	June 30, 2019	June 30, 2018
SEAD-OPEB:			
System's proportion of the net OPEB asset	0.201267 %	0.200064 %	0.192864 %
System's proportionate share of the net OPEB asset	\$ (569)	\$ (541)	\$ (501)
System's covered payroll	2,567	2,770	\$ 2,809
System's proportionate share of the net OPEB asset as a percentage of its covered payroll	(22.17) %	(19.55) %	(17.85) %
Plan fiduciary net position as a percentage of the total OPEB asset	129.73 %	129.46 %	130.17 %
State OPEB Fund:			
System's proportion of the net OPEB liability	0.189291 %	0.181584 %	0.185830 %
System's proportionate share of the net OPEB liability	\$ 2,350	\$ 4,749	\$ 7,571
System's covered payroll	5,578	5,415	\$ 5,265
System's proportionate share of the net OPEB liability as a percentage of its covered payroll	42.13 %	87.71 %	143.81 %
System's fiduciary net position as a percentage of the total OPEB liability	56.57 %	31.48 %	17.34 %

Schedules above are intended to show information for 10 years. Additional years will be displayed as they become available.

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

Required Supplementary Information (UNAUDITED)

Schedules of the System's Contributions to OPEB Plans

Year ended June 30, 2020

(In thousands)

	June 30, 2020	June 30, 2019	June 30, 2018
SEAD-OPEB:			
Contractually required contribution*	\$ —	\$ —	\$ —
Contributions in relation to the contractually required contribution	—	—	—
Contribution deficiency (excess)	—	—	—
System's covered payroll	2,524	2,567	2,770
Contributions as a percentage of a covered payroll	— %	— %	— %
State OPEB Fund:			
Contractually required contribution	\$ 288	\$ 1,012	\$ 905
Contributions in relation to the contractually required contribution	288	1,012	905
Contribution deficiency (excess)	—	—	—
System's covered payroll	5,716	5,578	5,415
Contributions as a percentage of a covered payroll	5.04 %	18.15 %	16.71 %

*Employer contributions are not currently required for the SEAD-OPEB plan.

Schedules above are intended to show information for 10 years. Additional years will be displayed as they become available.

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

Notes to Required Supplementary Information (UNAUDITED)

June 30, 2020

Required Supplementary Information Schedules for the System as the Plan:

(1) Schedule of Employers' and Nonemployer Contributions – Defined Benefit Plans

This schedule presents the required contributions and the percent of required contributions actually contributed.

(2) Schedule of Employers' and Nonemployer Net Pension/OPEB Liability and Related Ratios – Defined Benefit Plans

The components of the net pension/OPEB liability as of the fiscal year end and the fiduciary net position as a percentage of the total pension/OPEB liability as of that date are presented in this schedule. This trend information will be accumulated to display a 10-year presentation.

(3) Schedule of Changes in Employers' and Nonemployer Net Pension/OPEB Liability – Defined Benefit Plans

Net pension/OPEB liability, which is measured as total pension/OPEB liability less the amount of the fiduciary net position, is presented in this schedule. This trend information will be accumulated to display a 10-year presentation.

(4) Schedule of Investment Returns

This schedule presents historical trend information about the annual money-weighted rate of return on plan investments, net of plan investment expense. This trend information will be accumulated to display a 10-year presentation.

(5) Individual Plan Information

This note provides information about changes of benefit terms, changes of assumptions, and methods and assumptions used in calculations of actuarially determined contributions.

(a) Employees' Retirement System

Changes of benefit terms –

- A one-time 3% payment was granted to certain retirees and beneficiaries effective July 2016.
- A one-time 3% payment was granted to certain retirees and beneficiaries effective July 2017.
- Two one-time 2% payments were granted to certain retirees and beneficiaries effective July 2018 and January 2019.
- Two one-time 3% payments were granted to certain retirees and beneficiaries effective July 2019 and January 2020.

Changes of assumptions – On December 17, 2015, the Board adopted recommended changes to the economic and demographic assumptions utilized by the System. Primary among the changes were the updates to rates of mortality, retirement, withdrawal, and salary increases. Subsequent to the June 30, 2017 measurement date, the ERS Board adopted a new funding policy. Because of this new funding policy, the assumed investment rate of return was reduced from 7.50% to 7.40% for the June 30, 2017 actuarial valuation. In addition, based on the ERS Board's new funding policy, the assumed investment rate of return was reduced by 0.10% from 7.40% to 7.30% as of the June 30, 2018 measurement date, and remained unchanged for June 30, 2019.

Notes to Required Supplementary Information (UNAUDITED)

June 30, 2020

(b) Public School Employees' Retirement System

Changes of benefit terms –

- The member contribution rate was increased from \$4 to \$10 per month for members joining the System on or after July 1, 2012.
- A 2% COLA was granted to certain retirees and beneficiaries effective July 2016.
- The monthly benefit accrual rate was increased from \$14.75 to \$15.00 per year of creditable service effective July 1, 2017.
- A 2% COLA was granted to certain retirees and beneficiaries effective July 2017.
- The monthly benefit accrual rate was increased from \$15.00 to \$15.25 per year of creditable service effective July 1, 2018.
- A 2% COLA was granted to certain retirees and beneficiaries effective July 2018.
- The monthly benefit accrual rate was increased from \$15.25 to \$15.50 per year of creditable service effective July 1, 2019.
- Two 1.5% COLAs were granted to certain retirees and beneficiaries effective July 2019 and January 2020.

Changes of assumptions – On December 17, 2015, the Board adopted recommended changes to the economic and demographic assumptions utilized by the System. Primary among the changes were the updates to rates of mortality, retirement, withdrawal, and salary increases. Subsequent to the June 30, 2017 measurement date, the PSERS Board adopted a new funding policy. Because of this new funding policy, the assumed investment rate of return was reduced from 7.50% to 7.40% for the June 30, 2017 actuarial valuation. In addition, based on the PSERS Board's new funding policy, the assumed investment rate of return was reduced by 0.10% from 7.40% to 7.30% as of the June 30, 2018 measurement date, and remained unchanged for June 30, 2019.

(c) Legislative Retirement System

Changes of benefit terms –

- Two one-time 3% payments were granted to certain retirees and beneficiaries effective July 2019 and January 2020.

Changes of assumptions – On December 17, 2015, the Board adopted recommended changes to the economic and demographic assumptions utilized by the System. Primary among the changes were the updates to rates of mortality, retirement, withdrawal, and salary increases. Subsequent to the June 30, 2017 measurement date, the LRS Board adopted a new funding policy. Because of this new funding policy, the assumed investment rate of return was reduced from 7.50% to 7.40% for the June 30, 2017 actuarial valuation. In addition, based on the LRS Board's new funding policy, the assumed investment rate of return was reduced by 0.10% from 7.40% to 7.30% as of the June 30, 2018 measurement date, and remained unchanged for June 30, 2019.

(d) Georgia Judicial Retirement System

Changes of benefit terms –

- Spouses' benefits were changed for members joining the System on and after July 1, 2012.
- A 2% cost-of-living adjustment was granted to certain retired members and beneficiaries effective July 1, 2016.
- A 2% cost-of-living adjustment was granted to certain retired members and beneficiaries effective July 1, 2017.

(continued)

Notes to Required Supplementary Information (UNAUDITED)

June 30, 2020

- Two one-time 2% payments were granted to certain retired members and beneficiaries effective July 2018 and January 2019.
- Two one-time 3% payments were granted to certain retired members and beneficiaries effective July 2019 and January 2020.

Changes of assumptions – On December 17, 2015, the Board adopted recommended changes to the economic and demographic assumptions utilized by the System. Primary among the changes were the updates to rates of mortality, retirement, withdrawal, and salary increases. Subsequent to the June 30, 2017 measurement date, the GJRS Board adopted a new funding policy. Because of this new funding policy, the assumed investment rate of return was reduced from 7.50% to 7.40% for the June 30, 2017 actuarial valuation. In addition, based on the GJRS Board's new funding policy, the assumed investment rate of return was reduced by 0.10% from 7.40% to 7.30% as of the June 30, 2018 measurement date, and remained unchanged for June 30, 2019.

(e) Georgia Military Pension Fund

Changes of benefit terms – none

Changes of assumptions – On December 17, 2015, the Board adopted recommended changes to the economic and demographic assumptions utilized by the System. Primary among the changes were the updates to rates of mortality, retirement, withdrawal, and salary increases. Subsequent to the June 30, 2017 measurement date, the GMPF Board adopted a new funding policy. Because of this new funding policy, the assumed investment rate of return was reduced from 7.50% to 7.40% for the June 30, 2017 actuarial valuation. In addition, based on the GMPF Board's new funding policy, the assumed investment rate of return was reduced by 0.10% from 7.40% to 7.30% as of the June 30, 2018 measurement date, and remained unchanged for June 30, 2019.

(f) State Employees' Assurance Department Retired and Vested Inactive Members Trust Fund (SEAD-OPEB) as a plan

Changes of benefit terms – none

Changes of assumptions – Subsequent to the June 30, 2017 measurement date, the SEAD Board adopted a new funding policy. Because of this new funding policy, the assumed investment rate of return was reduced from 7.50% to 7.40% for the June 30, 2017 actuarial valuation. In addition, based on the SEAD Board's new funding policy, the assumed investment rate of return was reduced by 0.10% from 7.40% to 7.30% as of the June 30, 2018 measurement date, and remained unchanged for June 30, 2019.

Notes to Required Supplementary Information (UNAUDITED)

June 30, 2020

The following actuarial methods and assumptions were used to determine the most recent contribution rates reported in the schedules of employer and nonemployer contributions calculated as of June 30, three years prior to the end of the first calendar year in which contributions are reported:

	ERS	PSERS	LRS
Actuarial cost method	Entry age	Entry age	Entry age
Amortization method	Level dollar, closed	Level dollar, closed	Level dollar, open
Remaining amortization period	16.5 years	21.2 years	Infinite
Asset valuation method	Five-year smoothed fair	Five-year smoothed fair	Five-year smoothed fair
Inflation	2.75%	2.75%	2.75%
Salary increases	3.25 to 7.00%	n/a	n/a
Investment rate of return	7.50% net of pension plan investment expense, including inflation	7.50% net of pension plan investment expense, including inflation	7.50% net of pension plan investment expense, including inflation
Cost of living adjustments	None	1.50% Semi-annually	3.00% Annually
	GJRS	GMPF	
Actuarial cost method	Entry age	Entry age	
Amortization method	Level percent of pay, closed	Level dollar, closed	
Remaining amortization period	16.1 years	16.5 years	
Asset valuation method	Five-year smoothed fair	Five-year smoothed fair	
Inflation	2.75%	2.75%	
Salary increases	4.50%	n/a	
Investment rate of return	7.50% net of pension plan investment expense, including inflation	7.50% net of pension plan investment expense, including inflation	
Cost of living adjustments	None	None	
	SEAD - OPEB		
Actuarial cost method	Entry age		
Amortization method	Level percent, open		
Remaining amortization period	Infinite		
Asset valuation method	Fair Value of Assets		
Inflation	2.75%		
Salary increases			
ERS	3.25-7.00%		
JRS	4.50%		
LRS	n/a		
Investment rate of return	7.50% net of pension plan investment expense, including inflation		
Cost of living adjustments	None		

(continued)

Notes to Required Supplementary Information (UNAUDITED)

June 30, 2020

Required Supplementary Information Schedules for the System as a participating employer:

(1) Schedules of the System's Proportionate Share of the Net OPEB Liability

The information in this schedule presents historical information related to the OPEB liability that is recognized by the System in the current period financial statements. This trend information will be accumulated to display a 10 year presentation.

(2) Schedules of the System's Contributions to OPEB Plans

This schedule presents the required contributions and the percent of required contributions actually contributed.

(3) Individual Plan Information

This note provides information about changes of benefit terms, changes of assumptions, and methods and assumptions used in calculations of actuarially determined contributions.

(a) SEAD-OPEB

Changes of benefit terms – none

Changes of assumptions – On December 17, 2015, the SEAD Board adopted recommended changes to the economic and demographic assumptions utilized by the Plan. Primary among the changes were the updates to rates of mortality, retirement, disability, withdrawal and salary increases. On March 15, 2018, the Board adopted a new funding policy. Because of this new funding policy, the assumed investment rate of return was reduced from 7.50% to 7.40% for June 30, 2017 actuarial valuation. In addition, based on the SEAD Board's new funding policy, the assumed investment rate of return was reduced by 0.10% from 7.40% to 7.30% as of the June 30, 2018 measurement date, and remained unchanged for June 30, 2019.

(b) State OPEB Fund

Changes of benefit terms – none

Changes of assumptions – The June 30, 2017 actuarial valuation was revised, for various factors, including the methodology used to determine how employees and retirees were assigned to each of the OPEB Funds and anticipated participation percentages. Current and former employees of State organizations (including technical colleges, community service boards and public health departments) are now assigned to the State OPEB fund based on their last employer payroll location: irrespective of retirement affiliation.

The discount rate was updated from 3.09% as of June 30, 2016 to 3.60% as of June 30, 2017 to 5.22% as of June 30, 2018, and to 7.30% as of June 30, 2019.

Additional Information

Schedule of Administrative Expenses - Contributions and Expenses

Year ended June 30, 2020

(In thousands)

Contributions from fiduciary funds:	
Employees' Retirement System	\$ 7,641
Public School Employees Retirement System	1,424
Legislative Retirement System	305
Georgia Judicial Retirement System	849
Georgia Military Pension Fund	249
Superior Court Judges Retirement Fund	2
District Attorneys Retirement Fund	2
Georgia Defined Contribution Plan	913
401(k) Plan	3,816
457 Plan	745
State Employees' Assurance Department - OPEB	720
Total fiduciary funds	16,666
Contributions from proprietary fund:	
State Employees' Assurance Department Active Members Fund	80
Total contributions	16,746
Expenses:	
Personal services:	
Salaries and fringes	5,702
Retirement contributions	1,297
FICA	411
Health insurance	583
Miscellaneous	51
	8,044
Communications:	
Postage	294
Publications and printing	4
Telecommunications	116
Travel	13
	427
Professional services:	
Accounting services	782
Computer services	907
Contracts	3,923
Actuarial services	317
Medical services	108
Audit fees	354
Legal services	33
	6,424
Management fees:	
Building maintenance	635
Other services and charges:	
Temporary services	697
Supplies and materials	91
Repairs and maintenance	22
Courier services	5
Depreciation	310
Miscellaneous	89
Office equipment	2
	1,216
Total expenses	16,746
Net income	\$ —

See accompanying independent auditors' report.

Additional Information

Schedule of Investment Expenses

Year ended June 30, 2020

(In thousands)

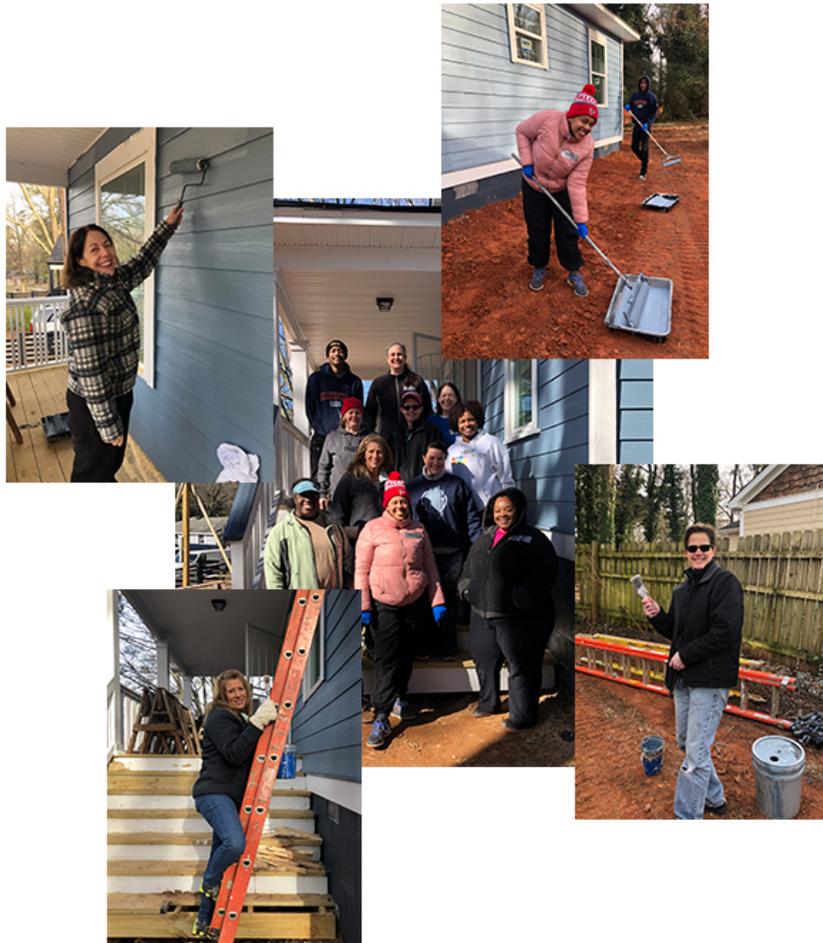
Investment advisory and custodial fees	\$	8,359
Miscellaneous		<u>12,791</u>
Total investment expenses	\$	<u><u>21,150</u></u>

See accompanying independent auditors' report.

Investment Section



Investing in Our Community



ERSGA Staff volunteering with Habitat for Humanity

Investment Overview

The first half of the fiscal year was essentially a continuation of the prior year, steady global growth and increasing geopolitical tensions. The second half of the year turned tumultuous as the markets first reacted to the economic effects of the COVID-19 pandemic, and then the monetary and fiscal response which followed. U.S. Real GDP ended up being down 9.5% for the fiscal year after an astonishing decline in the June quarter of 32.9% annualized. The sharp drop in global growth was truly a black swan type of event. In spite of the pandemic, U.S. equities returned 6% over the past year, while foreign markets were down less than 5%, as central banks flooded the world economies with liquidity. Longer-term periods for total equities were generally quite positive.

We continually emphasize that the pension plan has a long-term investment horizon and that short-term concerns should not drive investment decisions. The System invests primarily in a mix of liquid, high-quality bonds and stocks. In addition, the System continues to build its private markets program in a disciplined manner. These types of investments further diversify the portfolio and allow the System to participate in rising markets while moderating the risks on the downside. A high-quality balanced fund has proven to be a successful strategy in a variety of markets over long periods of time.

As in previous years, the bias to quality was a primary goal and was successfully met. “Conservation of Capital” and “Conservatism” remain the guiding principles for investment decisions. The Board of Trustees continues to use a diversified portfolio to accomplish these objectives.

U.S. economic growth plummeted in the final six months of the year, pulling the year over year Real GDP down almost 10%. The sharp decline in the economy transitioned into a vigorous rebound by the end of the year as the nation began to open back up and the economy responded to the massive fiscal and monetary stimulus. Globally, the developed countries have largely followed a similar pattern to the U.S. The emerging markets were more differentiated in their responses, impacts and recoveries from the global shutdown. Economic and earnings growth for the next year are highly dependent on the course the COVID-19 virus takes.

Studies undertaken to evaluate the investment returns of pension funds over very long-time horizons indicate that the asset allocation decision has the largest impact on the fund’s returns. Although the returns for the various asset categories vary from year-to-year, over the long term, equities typically outperform fixed income and cash by a very wide margin. For that reason, the System has generally maintained significant equity exposure with the remainder of the fund invested in fixed income securities designed to generate income and preserve capital.

Returns for one, three, five, ten, twenty, and thirty-year periods are presented in this section. Longer periods allow for a more valid evaluation of returns, both in absolute

terms and relative to an asset class index, by reducing emphasis on the short-term volatility of markets. The Daily Valuation Method, a time-weighted rate of return, was used to calculate returns in a manner consistent with the CFA Institute’s objectives as stated in its publication “Global Investment Performance Standards Handbook,” third edition.

The return for the S&P 500 was 7.5%. The S&P MidCap 400 and the S&P SmallCap 600 indexes had returns of (6.7%) and (11.3%), respectively. Growth stocks generally outperformed value stocks by a wide margin for the year, while by sector, information technology had the best performance. Energy was the worst-performing sector again as energy prices collapsed due to high inventories and an oil price war by major producers.

International market returns were negative. The MSCI EAFE Index returned (5.1%) and the Emerging Market Index had a return of (3.4%). Interestingly, although the emerging markets index outperformed the developed markets index, only 3 of the 26 emerging markets country indexes had positive performance compared to 9 of the 22 countries in the developed index. The three emerging market countries with positive performance, China, Korea and Taiwan, have the largest weightings in the index.

Interest rates declined dramatically last year particularly on the short end of the yield curve, again in response to central bank policies. Nominal rates were barely positive, driving real rates into negative territory. The decline in yields drove bond prices higher resulting in the 10-year Treasury having a total return of 14.0% and the 30-year Treasury bond returning nearly 30% compared to the 1.4% return in Treasury bills. Higher quality corporate bonds also provided decent returns.

We look at two fixed-income indexes to measure the bond market’s performance. The Bloomberg Barclays Government / Credit Index had a return of 10.0%. It is a broad index containing corporate and government-sponsored bonds as well as Treasuries. The FTSE Gov/ Corp AAA/AA had a return of 10.2% and is a broad index containing higher-rated corporate bonds as well as Treasuries and Government securities.

In summary, despite unprecedented upheavals related to a global pandemic, the investment status of the System is excellent. The high quality of the System’s investments is in keeping with the continued policy of “Conservatism” and “Conservation of Capital.”

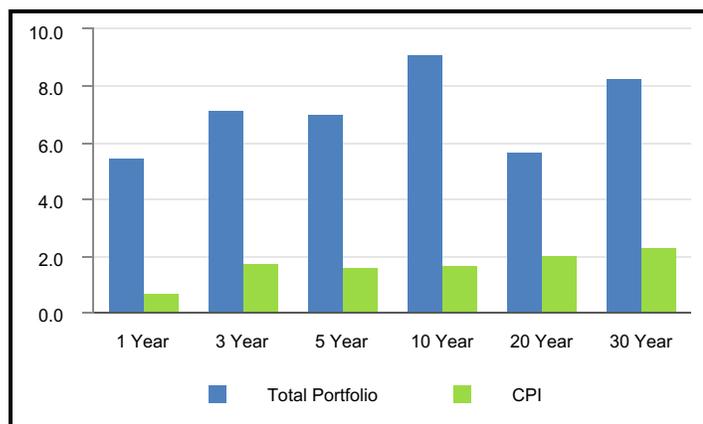
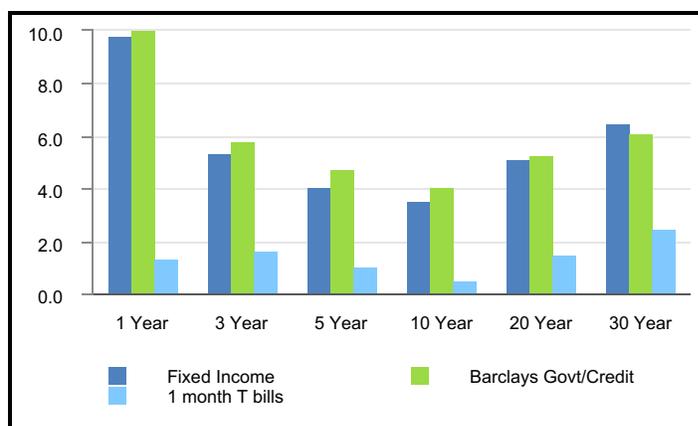
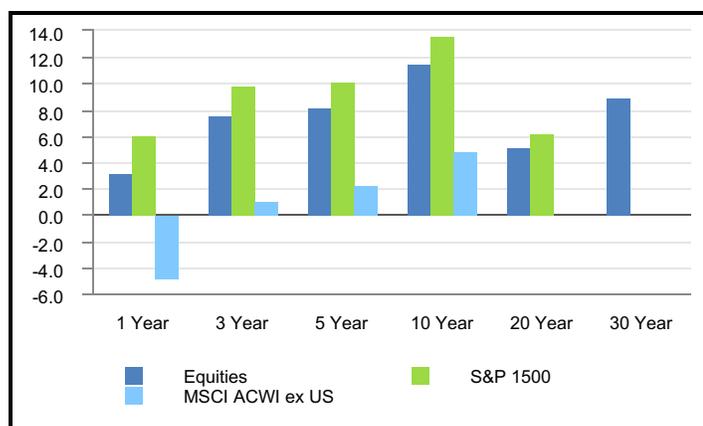
Prepared by the Division of Investment Services

Pooled Investment Fund

As of June 30, 2020
(in thousands)

Employees' Retirement System (ERS)	\$	13,456,293
Public School Employees Retirement System (PSERS)		958,718
Legislative Retirement System (LRS)		34,599
Georgia Judicial Retirement System (GJRS)		485,633
State Employees' Assurance Department (SEAD) - Active		319,146
State Employees' Assurance Department (SEAD) - OPEB		1,256,402
Survivors Benefit Fund (SBF)		167,359
Georgia Military Pension Fund (GMPF)		28,995
Total	\$	16,707,145

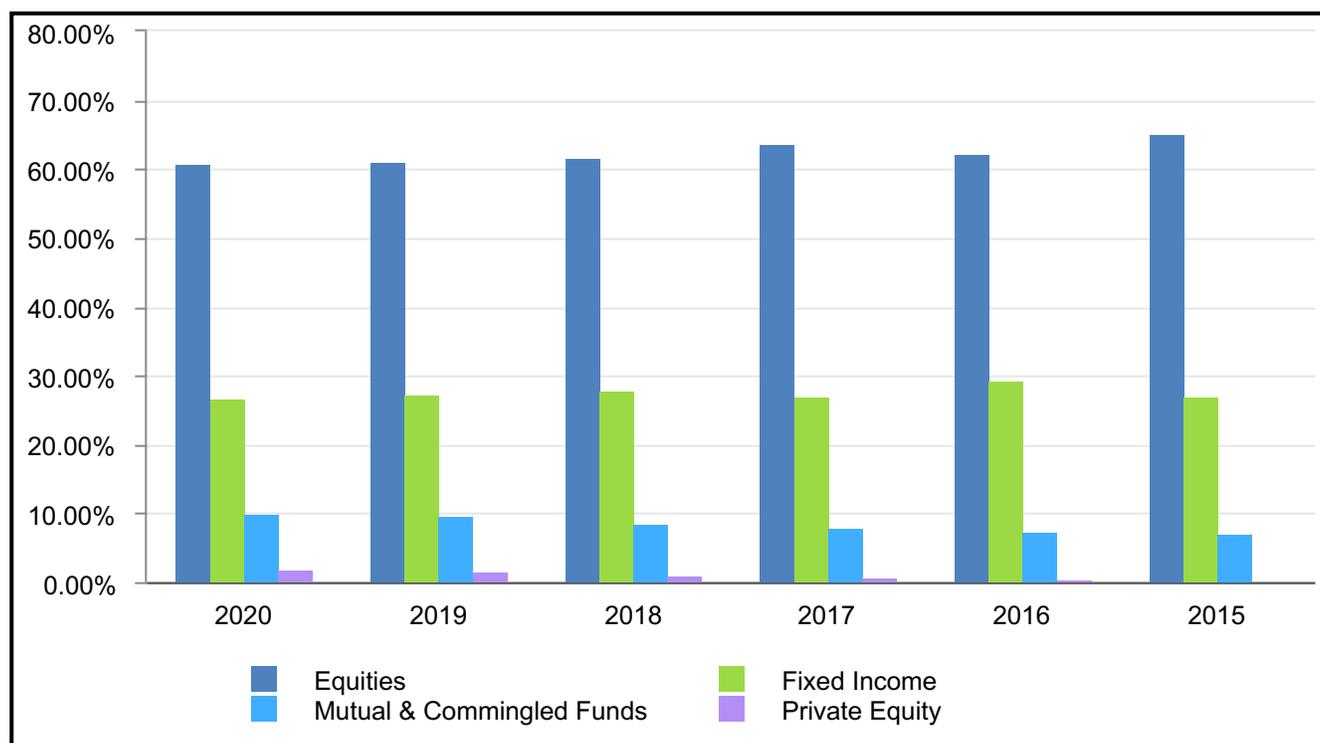
Rates of Return



	Equities	S&P 1500	MSCI ACWI ex US	Fixed Income	Barclay's Govt/Credit	1 Month T-Bills	Total Portfolio	CPI
1 year	3.23 %	6.08 %	(4.80)%	9.87 %	10.02 %	1.37 %	5.48 %	0.71 %
3 year	7.64 %	9.91 %	1.13 %	5.40 %	5.87 %	1.64 %	7.18 %	1.75 %
5 year	8.17 %	10.20 %	2.26 %	4.11 %	4.74 %	1.09 %	7.02 %	1.59 %
10 year	11.61 %	13.75 %	4.97 %	3.54 %	4.13 %	0.57 %	9.15 %	1.71 %
20 year	5.16 %	6.20 %		5.17 %	5.30 %	1.49 %	5.72 %	2.03 %
30 year	8.93 %			6.54 %	6.14 %	2.49 %	8.31 %	2.30 %

Note: Time-weighted rates of return are calculated using the Daily Valuation Method based on market rates of return.

Asset Allocation at Fair Value



Investment Summary

Asset Allocation as of June 30 (in percentages)

	2020	2019	2018	2017	2016	2015
Equities	60.9 %	61.1	61.9	63.9	62.3	65.3
Fixed Income	26.9	27.4	28.1	27.1	29.5	27.2
Mutual and Commingled Funds	10.2	9.7	8.8	8.2	7.6	7.2
Private Equity	2.0	1.8	1.2	0.8	0.6	0.3
Total	100.0 %	100.0	100.0	100.0	100.0	100.0

Asset Allocation as of June 30 (in millions)

	2020	2019	2018	2017	2016	2015
Equities	\$ 11,279	11,138	11,140	11,030	10,005	10,915
Fixed Income	4,959	4,984	5,040	4,668	4,733	4,543
Mutual and Commingled Funds	1,893	1,769	1,599	1,421	1,226	1,204
Private Equity	365	335	222	134	94	52
Total	\$ 18,496	18,226	18,001	17,253	16,058	16,714

Investment Section



Schedule of Fees and Commissions

Year ended June 30, 2020

(In thousands)

Investment Advisors' Fees:	
U.S. Equity	\$ 3,073
International Equity	4,746
Fixed Income	—
Investment Commissions:	
U.S. Equity	947
International Equity	1,332
Transaction Fees:	376
Miscellaneous*:	21,565
Total Fees and Commissions	\$ 32,039

*Includes capitalized fees not included in total investment expenses shown on page 89.

Twenty Largest Equity Holdings[†]

As of June 30, 2020

(In thousands)

Shares	Company	Fair Value
1,751,724	Microsoft Corp.	\$ 356,493
897,334	Apple Inc.	327,347
107,051	Amazon.Com Inc.	295,334
147,578	Alphabet Inc.	208,979
671,180	SPDR S&P 500 Trust ETF	206,965
581,207	Facebook Inc.	131,975
549,150	Visa Inc.	106,079
600,710	Johnson & Johnson	84,478
179,300	Netflix Inc.	81,589
261,899	UnitedHealth Group	77,247
428,480	Berkshire Hathaway Inc.	76,488
786,248	JPMorgan Chase & Co.	73,954
1,274,504	Taiwan Semiconductor Manufacturing Company Limited	72,354
1,071,830	Tencent Holdings Ltd.	68,953
1,244,257	Verizon Communications Inc.	68,597
288,610	Alibaba Group Holding Ltd.	62,253
142,379	Adobe Inc.	61,979
518,208	Procter & Gamble Co.	61,962
164,254	ASML Holding NV	60,450
1,310,513	Exxon Mobil Corp.	58,606
	Top Twenty Equities	\$ 2,542,082
	Remaining Equities	8,735,659
	Total Equities	<u>\$ 11,277,741</u>

[†]A complete listing is available upon written request, subject to restrictions of O.C.G.A. Section 47-1-14.

Top 10 Fixed Income Holdings*

As of June 30, 2020

Issuer	Year of Maturity	Interest Rate	Par Value (in thousands)	Fair Value (in thousands)
US TREAS. NOTE	2024	2.2500 %	\$ 313,000	\$ 340,278
US TREAS. NOTE	2025	2.6250	200,000	222,164
US TREAS. NOTE	2025	2.5000	200,000	220,406
US TREAS. NOTE	2025	2.7500	190,000	213,684
US TREAS. NOTE	2023	1.5000	195,000	202,092
US TREAS. NOTE	2027	2.2500	160,000	180,200
US TREAS. BOND	2039	3.5000	113,000	159,869
US TREAS. BOND	2028	5.2500	102,000	141,190
US TREAS. BOND	2049	3.0000	100,000	138,063
INTEL CORP	2024	2.7000	120,000	128,963
Total of 10 Largest ERS & GDCP Fixed Income Holdings				1,946,909
Remaining Fixed Income Holdings				\$ 3,012,538
Total ERS and Defined Contribution Fixed Income Securities				\$ 4,959,447

*A complete listing is available upon written request, subject to restrictions of O.C.G.A. Section 47-1-14.

Actuarial Section



Serving Our Members for 70 Years



*ERSGA Outreach and Recognition
See the Appendix for staff SCCP awards.*

ERS



3550 Busbee Pkwy, Suite 250
Kennesaw, GA 30144
Phone (678) 388-1700 • Fax (678) 388-1730
www.CavMacConsulting.com

April 16, 2020

Board of Trustees
Employees' Retirement System of Georgia
Two Northside 75, Suite 300
Atlanta, GA 30318

Attn: Mr. James Potvin, Executive Director

Members of the Board:

Section 47-2-26 of the law governing the operation of the Employees' Retirement System of Georgia provides that the actuary shall make annual valuations of the contingent assets and liabilities of the Retirement System on the basis of regular interest and the tables last adopted by the Board of Trustees. We have submitted the report giving the results of the actuarial valuation of the System prepared as of June 30, 2019. The report indicates that annual employer contributions at the rate of 19.88% of compensation for Old Plan Members, 24.63% of compensation for New Plan Members, and 21.57% of compensation for GSEPS Members for the fiscal year ending June 30, 2022 are sufficient to support the benefits of the System.

In preparing the valuation, the actuary relied on data provided by the System. While not verifying data at the source, the actuary performed tests for consistency and reasonableness. Our firm, as actuary, is responsible for all of the actuarial trend data in the financial section of the annual report and the supporting schedules in the actuarial section of the annual report.

In our opinion, the valuation is complete and accurate, and the methodology and assumptions are reasonable as a basis for the valuation. The valuation takes into account the effect of all amendments to the System enacted through the 2019 session of the General Assembly. The valuation reflects two one-time 3% payments to certain retirees and beneficiaries effective July 2019 and January 2020.

Effective with the June 30, 2017 valuation, the assumed rate of return will be reduced by 0.10% (10 basis points) from the immediate prior actuarial valuation, as long as the actual rate of return for the fiscal year ending with the current valuation date exceeds the assumed rate of return

from the immediate prior actuarial valuation. The assumed rate of return may not decrease below 7.00% net of investment expenses. Since the actual rate of return for the year ending June 30, 2019 was less than 7.30%, the assumed rate of return used in the current valuation remained at 7.30%.

The System is funded on an actuarial reserve basis. The actuarial assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the System and to reasonable expectations of anticipated experience under the System. The assumptions and methods used for financial reporting purposes meet the parameters set by Actuarial Standards of Practice (ASOPs). The funding objective of the plan is that contribution rates over time will remain level as a percent of payroll. The valuation method used is the entry age normal cost method. The normal contribution rate to cover current cost has been determined as a level percent of payroll. Gains and losses are reflected in the total unfunded accrued liability which is being amortized on a level dollar basis in accordance with the funding policy adopted by the Board.

The Plan and the employers are required to comply with the financial reporting requirements of GASB Statements No. 67 and 68. The necessary disclosure information is provided in separate supplemental reports.

We have provided the following information and supporting schedules for the Actuarial Section of the Comprehensive Annual Financial Report:

- Summary of Actuarial Assumptions
- Schedule of Active Members
- Schedule of Funding Progress

(continued)

- Schedule of Retirees Added to and Removed from Rolls
- Analysis of Change in Unfunded Accrued Liability
- Solvency Test Results

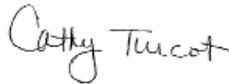
The System is being funded in conformity with the minimum funding standard set forth in Code Section 47-20-10 of the Public Retirement Systems Standards Law and the funding policy adopted by the Board. In our opinion the System is operating on an actuarially sound basis. Assuming that contributions to the System are made by the employer from year to year in the future at the rates recommended on the basis of the successive valuations, the continued sufficiency of the retirement fund to provide the benefits called for under the System may be safely anticipated.

This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the System and on actuarial assumptions

Sincerely yours,



Edward J. Koebel, EA, FCA, MAAA
Chief Executive Officer



Cathy Turcot
Principal and Managing Director



Ben Mobley, ASA, FCA, MAAA
Senior Actuary

that are internally consistent and reasonably based on the actual experience of the System.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

The actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. Use of these computations for purposes other than meeting these requirements may not be appropriate.

PSERS



3550 Busbee Pkwy, Suite 250
Kennesaw, GA 30144
Phone (678) 388-1700 • Fax (678) 388-1730
www.CavMacConsulting.com

April 16, 2020

Board of Trustees
Georgia Public School Employees Retirement System
Two Northside 75, Suite 300
Atlanta, GA 30318

Attn: Mr. James Potvin, Executive Director

Members of the Board:

Section 47-4-60 of the law governing the operation of the Georgia Public School Employees Retirement System provides that the employer contribution shall be actuarially determined and approved by the Board of Trustees. We have submitted the report giving the results of the actuarial valuation of the System prepared as of June 30, 2019. Based on a monthly benefit accrual rate of \$15.50, which is effective July 1, 2019, the valuation indicates that annual employer contributions of \$30,891,000 or \$888.52 per active member for the fiscal year ending June 30, 2022 are sufficient to support the benefits of the System.

Since the previous valuation, the monthly benefit accrual rate has been increased from \$15.25 to \$15.50 per year of creditable service with an effective date of July 1, 2019 for members retiring after August 1, 2012. In addition, the results of the valuation reflect that the Board granted a 1.50% cost-of-living adjustment (COLA) on January 1, 2020 to certain retired members and beneficiaries rather than the 1.50% anticipated cost-of-living adjustments to retired members on both July 1, 2019 and on January 1, 2020.

Effective with the June 30, 2017 valuation, the assumed rate of return will be reduced by 0.10% (10 basis points) from the immediate prior actuarial valuation, as long as the actual rate of return for the fiscal year ending with the current valuation date exceeds the assumed rate of return from the immediate prior actuarial valuation. The assumed rate of return may not decrease below 7.00% net of investment expenses. Since the actual rate of return for the year ending June 30, 2019 was less than 7.30%, the assumed rate of return used in the current valuation remained at 7.30%.

In preparing the valuation, the actuary relied on data provided by the System. While not verifying data at the source, the actuary performed tests for consistency and reasonableness. Our firm, as actuary, is responsible for all

of the actuarial trend data in the financial section of the annual report and the supporting schedules in the actuarial section of the annual report.

In our opinion, the valuation is complete and accurate, and the methodology and assumptions are reasonable as a basis for the valuation. The valuation takes into account the effect of all amendments to the System enacted through the 2019 session of the General Assembly.

The System is funded on an actuarial reserve basis. The actuarial assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the System and to reasonable expectations of anticipated experience under the System. The assumptions and methods used for financial reporting purposes meet the parameters set by Actuarial Standards of Practice (ASOPs). The funding objective of the plan is that contribution rates over time will remain level as a dollar per active member. The valuation method used is the entry age normal cost method. The normal contribution rate to cover current cost has been determined as a dollar per active member. Gains and losses are reflected in the total unfunded accrued liability which is being amortized as a level dollar per active member in accordance with the funding policy adopted by the Board.

The Plan and the employers are required to comply with the financial reporting requirements of GASB Statements No. 67 and 68. The necessary disclosure information is provided in separate supplemental reports.

We have provided the following information and supporting schedules for the Actuarial Section of the Comprehensive Annual Financial Report:

- Summary of Actuarial Assumptions
- Schedule of Active Members

(continued)

- Schedule of Funding Progress
- Schedule of Retirees Added to and Removed from Rolls
- Analysis of Change in Unfunded Accrued Liability
- Solvency Test Results

The System is currently being funded in conformity with the minimum funding standard set forth in Code Section 47-20-10 of the Public Retirement Systems Standards Law and the funding policy adopted by the Board. In our opinion the System is currently operating on an actuarially sound basis. Assuming that contributions to the System are made by the employer from year to year in the future at the rates recommended on the basis of the successive actuarial valuations, the continued sufficiency of the retirement fund to provide the benefits called for under the System may be safely anticipated.

This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with

accepted actuarial procedures, based on the current provisions of the System and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

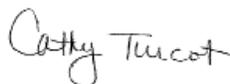
Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

The actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. Use of these computations for purposes other than meeting these requirements may not be appropriate.

Sincerely yours,



Edward J. Koebel, EA, FCA, MAAA
Chief Executive Officer



Cathy Turcot
Principal and Managing Director



Ben Mobley, ASA, FCA, MAAA
Senior Actuary

GJRS



3550 Busbee Pkwy, Suite 250
Kennesaw, GA 30144
Phone (678) 388-1700 • Fax (678) 388-1730
www.CavMacConsulting.com

April 16, 2020

Board of Trustees
Georgia Judicial Retirement System
Two Northside 75, Suite 300
Atlanta, GA 30318

Attn: Mr. James Potvin, Executive Director

Members of the Board:

Section 47-23-21 of the law governing the operation of the Georgia Judicial Retirement System provides that the actuary shall make annual valuations of the contingent assets and liabilities of the Retirement System on the basis of regular interest and the tables last adopted by the Board of Trustees. We have submitted the report giving the results of the actuarial valuation of the System prepared as of June 30, 2019. The report indicates that annual employer contributions at the rate of 8.81% of compensation for the fiscal year ending June 30, 2022 are sufficient to support the benefits of the System.

The results of the valuation reflect the two one-time payments to certain retirees and beneficiaries effective July 2019 and January 2020.

In preparing the valuation, the actuary relied on data provided by the System. While not verifying data at the source, the actuary performed tests for consistency and reasonableness. Our firm, as actuary, is responsible for all of the actuarial trend data in the financial section of the annual report and the supporting schedules in the actuarial section of the annual report.

In our opinion, the valuation is complete and accurate, and the methodology and assumptions are reasonable as a basis for the valuation. The valuation takes into account the effect of all amendments to the System enacted through the 2019 session of the General Assembly.

Effective with the June 30, 2017 valuation, the assumed rate of return will be reduced by 0.10% (10 basis points) from the immediate prior actuarial valuation, as long as the actual rate of return for the fiscal year ending with the current valuation date exceeds the assumed rate of return from the immediate prior actuarial valuation. The assumed rate of return may not decrease below 7.00% net of investment expenses. Since the actual rate of return for the year ending in June 30, 2019 was less than 7.30%, the

assumed rate of return used in the current valuation remained at 7.30%.

The System is funded on an actuarial reserve basis. The actuarial assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the System and to reasonable expectations of anticipated experience under the System. The assumptions and methods used for financial reporting purposes meet the parameters set by Actuarial Standards of Practice (ASOPs). The funding objective of the plan is that contribution rates over time will remain level as a percent of payroll. The valuation method used is the entry age normal cost method. The normal contribution rate to cover current cost has been determined as a level percent of payroll. Gains and losses are reflected in the total unfunded accrued liability which is negative and being amortized as a level percent of payroll in accordance with the funding policy adopted by the Board.

The Plan and the employers are required to comply with the financial reporting requirements of GASB Statements No. 67 and 68. The necessary disclosure information is provided in separate supplemental reports.

We have provided the following information and supporting schedules for the Actuarial Section of the Comprehensive Annual Financial Report:

- Summary of Actuarial Assumptions
- Schedule of Active Members
- Schedule of Funding Progress
- Schedule of Retirees Added to and Removed from Rolls
- Analysis of Change in Unfunded Accrued Liability
- Solvency Test Results

(continued)

The System is being funded in conformity with the minimum funding standard set forth in Code Section 47-20-10 of the Public Retirement Systems Standards Law and the funding policy adopted by the Board. In our opinion the System is operating on an actuarially sound basis. Assuming that contributions to the System are made by the employer from year to year in the future at the rates recommended on the basis of the successive actuarial valuations, the continued sufficiency of the retirement fund to provide the benefits called for under the System may be safely anticipated.

This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

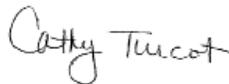
Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

The actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. Use of these computations for purposes other than meeting these requirements may not be appropriate.

Sincerely yours,



Edward J. Koebel, EA, FCA, MAAA
Chief Executive Officer



Cathy Turcot
Principal and Managing Director



Ben Mobley, ASA, FCA, MAAA
Senior Actuary

LRS



3550 Busbee Pkwy, Suite 250
Kennesaw, GA 30144
Phone (678) 388-1700 • Fax (678) 388-1730
www.CavMacConsulting.com

April 16, 2020

Board of Trustees
Legislative Retirement System of Georgia
Two Northside 75, Suite 300
Atlanta, GA 30318

Attn: Mr. James Potvin, Executive Director

Members of the Board:

Section 47-6-22 of the law governing the operation of the Georgia Legislative Retirement System provides that the actuary shall make periodic valuations of the contingent assets and liabilities of the Retirement System on the basis of regular interest and the tables last adopted by the Board of Trustees. We have submitted the report giving the results of the actuarial valuation of the System prepared as of June 30, 2019. The report indicates that no annual employer contributions for the fiscal year ending June 30, 2022 are required to support the benefits of the System.

The results of the valuation reflect that the Board did not grant the anticipated cost-of-living adjustments (COLAs) to retired members on July 1, 2019 and on January 1, 2020. In addition, the results of the valuation reflect the two one-time payments to certain retirees and beneficiaries effective July 2019 and January 2020.

In preparing the valuation, the actuary relied on data provided by the System. While not verifying data at the source, the actuary performed tests for consistency and reasonableness. Our firm, as actuary, is responsible for all of the actuarial trend data in the financial section of the annual report and the supporting schedules in the actuarial section of the annual report.

In our opinion, the valuation is complete and accurate, and the methodology and assumptions are reasonable as a basis for the valuation. The valuation takes into account the effect of all amendments to the System enacted through the 2019 session of the General Assembly.

Effective with the June 30, 2017 valuation, the assumed rate of return will be reduced by 0.10% (10 basis points) from the immediate prior actuarial valuation, as long as the actual rate of return for the fiscal year ending with the current valuation date exceeds the assumed rate of return from the immediate prior actuarial valuation. The assumed rate of return may not decrease below 7.00% net of

investment expenses. Since the actual rate of return for the year ending June 30, 2019 was less than 7.30%, the assumed rate of return used in the current valuation remained at 7.30%.

The System is funded on an actuarial reserve basis. The actuarial assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the System and to reasonable expectations of anticipated experience under the System. The assumptions and methods used for financial reporting purposes meet the parameters set by Actuarial Standards of Practice (ASOPs). The funding objective of the plan is that contribution rates over time will remain level as a dollar per active member. The valuation method used is the entry age normal cost method. The normal contribution rate to cover current cost has been determined as a level dollar per active member. Gains and losses are reflected in the total unfunded accrued liability which is negative and being amortized as a level dollar per active member in accordance with the funding policy adopted by the Board.

The Plan and the employers are required to comply with the financial reporting requirements of GASB Statements No. 67 and 68. The necessary disclosure information is provided in separate supplemental reports.

We have provided the following information and supporting schedules for the Actuarial Section of the Comprehensive Annual Financial Report:

- Summary of Actuarial Assumptions
- Schedule of Active Members
- Schedule of Funding Progress
- Schedule of Retirees Added to and Removed from Rolls
- Analysis of Change in Unfunded Accrued Liability
- Solvency Test Results

(continued)

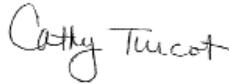
The System is being funded in conformity with the minimum funding standard set forth in Code Section 47-20-10 of the Public Retirement Systems Standards Law and the funding policy adopted by the Board. In our opinion the System is operating on an actuarially sound basis. Assuming that contributions to the System are made by the employer from year to year in the future at the rates recommended on the basis of the successive actuarial valuations, the continued sufficiency of the retirement fund to provide the benefits called for under the System may be safely anticipated.

This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

Sincerely yours,



Edward J. Koebel, EA, FCA, MAAA
Chief Executive Officer



Cathy Turcot
Principal and Managing Director



Ben Mobley, ASA, FCA, MAAA
Senior Actuary

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

The actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. Use of these computations for purposes other than meeting these requirements may not be appropriate.

GMPF



3550 Busbee Pkwy, Suite 250
Kennesaw, GA 30144
Phone (678) 388-1700 • Fax (678) 388-1730
www.CavMacConsulting.com

April 16, 2020

Board of Trustees
Georgia Military Pension Fund
Two Northside 75, Suite 300
Atlanta, GA 30318

Attn: Mr. James Potvin, Executive Director

Members of the Board:

Section 47-24-22 of the law governing the operation of the Georgia Military Pension Fund provides that the actuary shall make periodic valuations of the contingent assets and liabilities of the Pension Fund on the basis of regular interest and the tables last adopted by the Board of Trustees. We have submitted the report giving the results of the actuarial valuation of the Fund prepared as of June 30, 2019. The report indicates that annual employer contributions of \$2,697,265 or \$196.72 per active member for the fiscal year ending June 30, 2022 are sufficient to support the benefits of the Fund.

In preparing the valuation, the actuary relied on data provided by the Fund. While not verifying data at the source, the actuary performed tests for consistency and reasonableness. Our firm, as actuary, is responsible for all of the actuarial trend data in the financial section of the annual report and the supporting schedules in the actuarial section of the annual report.

In our opinion, the valuation is complete and accurate, and the methodology and assumptions are reasonable as a basis for the valuation. The valuation takes into account the effect of all amendments to the Fund enacted through the 2019 session of the General Assembly.

Effective with the June 30, 2017 valuation, the assumed rate of return will be reduced by 0.10% (10 basis points) from the immediate prior actuarial valuation, as long as the actual rate of return for the fiscal year ending with the current valuation date exceeds the assumed rate of return from the immediate prior actuarial valuation. The assumed rate of return may not decrease below 7.00% net of investment expenses. Since the actual rate of return for the year ending June 30, 2019 was less than 7.30%, the assumed rate of return used in the current valuation remained at 7.30%.

The Fund is funded on an actuarial reserve basis. The actuarial assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the Fund and to reasonable expectations of anticipated experience under the Fund. The assumptions and methods used for financial reporting purposes meet the parameters set by Actuarial Standards of Practice (ASOPs). The funding objective of the plan is that contribution rates over time will remain level as a dollar per active member. The valuation method used is the entry age normal cost method. The normal contribution rate to cover current cost has been determined as a dollar per active member. Gains and losses are reflected in the total unfunded accrued liability which is being amortized as a level dollar per active member in accordance with the funding policy adopted by the Board.

The Plan and the employers are required to comply with the financial reporting requirements of GASB Statements No. 67 and 68. The necessary disclosure information is provided in separate supplemental reports.

We have provided the following information and supporting schedules for the Actuarial Section of the Comprehensive Annual Financial Report:

- Summary of Actuarial Assumptions
- Schedule of Active Members
- Schedule of Funding Progress
- Schedule of Retirees Added to and Removed from Rolls
- Analysis of Change in Unfunded Accrued Liability
- Solvency Test Results

The Fund is being funded in conformity with the minimum funding standard set forth in Code Section 47-20-10 of the Public Retirement Systems Standards Law and the funding policy adopted by the Board. In our opinion the

(continued)

Fund is operating on an actuarially sound basis. Assuming that contributions to the Fund are made by the employer from year to year in the future at the rates recommended on the basis of the successive actuarial valuations, the continued sufficiency of the retirement fund to provide the benefits called for under the Fund may be safely anticipated.

This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience is performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the Fund.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

The actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. Use of these computations for purposes other than meeting these requirements may not be appropriate.

Sincerely yours,



Edward J. Koebel, EA, FCA, MAAA
Chief Executive Officer



Cathy Turcot
Principal and Managing Director



Ben Mobley, ASA, FCA, MAAA
Senior Actuary

SEAD Post-Retirement (SEAD-OPEB)



3550 Busbee Pkwy, Suite 250
Kennesaw, GA 30144
Phone (678) 388-1700 • Fax (678) 388-1730
www.CavMacConsulting.com

April 16, 2020

Board of Trustees
Employees' Retirement System of Georgia
Two Northside 75, Suite 300
Atlanta, GA 30318

Attn: Mr. James Potvin, Executive Director

Members of the Board:

Chapters 47-2 and 47-19 of the Code of Georgia which govern the operation of the Georgia Employees' Group Term Life Insurance Plan provide that the actuary shall make periodic valuations of the contingent assets and liabilities of the Insurance Plan on the basis of regular interest and the tables last adopted by the Board of Trustees. In this report, we have determined liabilities for life insurance benefits payable upon death after retirement (Post-Retirement).

We have determined the liabilities for life insurance benefits payable upon death after retirement. We have submitted the report giving the results of the valuation of the Plan prepared as of June 30, 2019. The report indicates, for post-retirement benefits, there is no employer annual required contribution for the fiscal year ending June 30, 2022.

Effective with the June 30, 2017 valuation, the assumed rate of return will be reduced by 0.10% (10 basis points) from the immediate prior actuarial valuation, as long as the actual rate of return for the fiscal year ending with the current valuation date exceeds the assumed rate of return from the immediate prior actuarial valuation. The assumed rate of return may not decrease below 7.00% net of investment expenses. Since the actual rate of return for the year ending June 30, 2019 was less than 7.30%, the assumed rate of return used in the current valuation remained at 7.30%. Gains and losses are reflected in the unfunded accrued liability. The actuarial assumptions used are in the aggregate reasonably related to the experience under the Plan and to reasonable expectations of anticipated experience under the Plan. In our opinion, the Plan is operating on an actuarially sound basis and the sufficiency of the funds to provide the benefits called for by the Plan may be safely anticipated assuming future actuarially determined contributions (ADC) are contributed when due.

The Plan and the employers are required to comply with the financial reporting requirements of GASB Statements No. 74 and 75. The necessary disclosure information is provided in separate supplemental reports.

This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the Plan.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

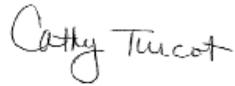
The actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. Use of these computations for purposes other than meeting these requirements may not be appropriate.

(continued)

Sincerely yours,

A handwritten signature in blue ink that reads 'Edward J. Koebel'.

Edward J. Koebel, EA, FCA, MAAA
Chief Executive Officer

A handwritten signature in blue ink that reads 'Cathy Turcot'.

Cathy Turcot
Principal and Managing Director

A handwritten signature in blue ink that reads 'Ben Mobley'.

Ben Mobley, ASA, FCA, MAAA
Senior Actuary

Summary of Plan Provisions

- ERS – Please see Notes to Financial Statements, (2)(a), pages 31-32.
- PSERS – Please see Notes to Financial Statements, (2)(b), page 32-33.
- LRS – Please see Notes to Financial Statements, (2)(c), page 33-34.
- GJRS – Please see Notes to Financial Statements, (2)(d), pages 34-35.
- GMPF – Please see Notes to Financial Statements, (2)(e), pages 35-36.
- SEAD-OPEB – Please see Notes to Financial Statements, (2)(h), pages 36-37.

The following Boards are responsible for establishing and maintaining the funding policies of the various defined benefit pension plans administered by the System:

- Board of Trustees of the Employees' Retirement System: ERS, LRS, and GMPF
- Board of Trustees of the Public School Employees Retirement System: PSERS
- Board of Trustees of the Georgia Judicial Retirement System: GJRS

The following Board is responsible for establishing and maintaining the funding policy of the defined benefit post-employment life insurance plan administered by the System:

- Board of Directors of the State Employees' Assurance Department: SEAD-OPEB

ERS, PSERS, LRS, GJRS, and GMPF are all subject to the provisions of GASB Statement No. 67, *Financial Reporting for Pension Plans*, an amendment of GASB Statement No. 25 (GASB 67). All of the plans covered under GASB 67 use the Entry Age Normal actuarial cost method for both funding and financial reporting purposes. This continues a long-standing practice for all of those plans and provides a point of consistency between the funding provisions and the GASB 67 requirements.

SEAD-OPEB is subject to the provisions of GASB 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*. SEAD-OPEB uses the Entry Age Normal actuarial cost method for both funding and financial reporting purposes.

For all of the plans covered under GASB 67, the GASB 67 reports prepared as of June 30, 2020 were largely based on the data, assumptions, and results of the annual funding valuations as of June 30, 2019. The Total Pension Liability (TPL) for each plan, determined using the Entry Age Normal method, was then rolled forward to the June 30, 2020 measurement date. The Net Pension Liability for each plan is equal to the rolled forward TPL less the plan's net position as of June 30, 2020.

For the plan covered under GASB 74, the GASB 74 report prepared as of June 30, 2020 was largely based on the data, assumptions, and results of the annual funding valuation as of June 30, 2019. The Total OPEB Liability (TOL) for the plan, determined using the Entry Age Normal method, was then rolled forward to the June 30, 2020 measurement date. The Net OPEB Liability for the plan is equal to the rolled forward TOL less the plan's net position as of June 30, 2020.

For the pension plans' funding valuations as of June 30, 2019, the Actuarial Value of Assets is calculated using a five-year smoothing methodology, whereby excesses and shortfalls of actual investment income over or under the expected investment return will be recognized over the succeeding five-year periods.

For the life insurance plan's funding valuation as of June 30, 2019, the Actuarial Value of Assets is equal to the Fair Value of Assets as of June 30, 2019.

(continued)

Summary of Plan Provisions

For the funding valuations, each plan covered under GASB 67 utilizes a 7.30% assumed rate of return and a 7.30% discount rate for the calculation of the respective plans' liabilities. The Single Equivalent Interest Rate required under GASB 67 has been determined to be 7.30% by the plans' actuaries.

The plan covered under GASB 74 utilizes a 7.30% assumed rate of return and a 7.30% discount rate for the calculation of the plan's liabilities. The Single Equivalent Interest Rate required under GASB 74 has been determined to be 7.30% by the plan's actuaries.

Summary of Actuarial Assumptions

The laws governing the Employees' Retirement System and the plans it administers require an actuary to perform an annual valuation of the soundness of the plans. In addition, the actuary must perform at least once every five years an actuarial investigation of the mortality, service, and compensation experience of the members and beneficiaries of the System. The latest valuations were performed as of June 30, 2019 based on actuarial assumptions approved by the ERS Board, PSERS Board, GJRS Board, and SEAD Board during the last experience study on December 17, 2015.

The more pertinent facts and significant assumptions underlying the computations included in the June 30, 2019 reports are as follows:

	ERS	PSERS	GJRS	LRS	GMPF
Valuation Date	June 30, 2019	June 30, 2019	June 30, 2019	June 30, 2019	June 30, 2019
Actuarial Cost Method	Entry age	Entry age	Entry age	Entry age	Entry age
Amortization Method	Level dollar, closed	Level dollar, closed	Level percent of pay, closed	Level dollar, open	Level dollar, closed
Amortization Period	15.3 years	19.6 years	14.3 years	Infinite	14.6 years
Actuarial Asset Valuation Method	The actuarial value of assets was based on the total fair value income of investments, with the excess or shortfall of actual investment income over or under the expected investment return smoothed over five years. One-fifth of the excess or shortfall is recognized each year for five years.				
Investment Rate of Return	7.30%	7.30%	7.30%	7.30%	7.30%
Inflation Rate	2.75%	2.75%	2.75%	2.75%	2.75%
Projected Salary Increases	3.25 to 7.00%	n/a	4.50%	n/a	n/a
COLA	None	1.50% Semi-annually	None	3.00% Annually	None

	SEAD-OPEB
Valuation Date	June 30, 2019
Actuarial Cost Method	Entry age
Amortization Method	Level dollar, open
Amortization Period	Infinite
Actuarial Asset Valuation Method	Fair Value of Assets
Investment Rate of Return	7.30%
Inflation Rate	2.75%
Projected Salary Increases	
ERS	3.25-7.00%
GJRS	4.50%
LRS	n/a
COLA	None

(continued)

Summary of Actuarial Assumptions

Rates of Withdrawal Prior to Retirement (Withdrawal, Death, Disability)

ERS

Representative values of the assumed annual rates of separation other than retirement for non-law enforcement officers are as follows. Special rates of separation apply to law enforcement officers.

Age	Annual Rates of Death		Annual Rates of Disability	
	Men	Women	Men	Women
20	.0320 %	.0177 %	.05 %	.02 %
25	.0349	.0192	.05	.02
30	.0412	.0245	.05	.02
35	.0717	.0441	.05	.02
40	.1001	.0655	.25	.10
45	.1399	.1043	.48	.25
50	.1983	.1555	.70	.45
55	.2810	.2228	1.05	.73
60	.4092	.3058	—	—
65	.5600	.4304	—	—

Age	Annual Rates of Withdrawal					
	Years of Service					
	0-4		5-9		10 & over	
	Men	Women	Men	Women	Men	Women
20	35.00 %	30.00 %	— %	— %	— %	— %
25	27.50	25.00	15.00	17.50	—	—
30	23.00	21.50	11.50	12.50	7.50	8.25
35	21.50	19.50	10.00	10.50	6.00	6.00
40	19.50	18.25	9.50	9.50	4.75	5.00
45	18.60	16.50	9.00	8.00	4.00	4.00
50	16.60	15.00	7.25	7.25	4.25	4.25
55	14.50	14.00	7.00	7.00	4.75	4.50
60	14.00	14.50	6.00	6.25	—	—
65	15.00	17.00	10.00	11.00	—	—

(continued)

Summary of Actuarial Assumptions

Rates of Withdrawal Prior to Retirement (Withdrawal, Death, Disability)

PSERS

Age	Annual Rates of Death		Annual Rates of Disability
	Men	Women	Both
20	.0320 %	.0177 %	— %
25	.0349	.0192	—
30	.0412	.0245	—
35	.0717	.0441	.0025
40	.1001	.0655	.0110
45	.1399	.1043	.0370
50	.1983	.1555	.0865
55	.2810	.2228	.2250
60	.4092	.3058	.3500
65	.5600	.4304	—

Annual Rates of Withdrawal Years of Service						
Age	0-4		5-9		10 & over	
	Men	Women	Men	Women	Men	Women
20	37.00 %	32.00 %	— %	— %	— %	— %
25	28.00	28.00	17.00	18.00	—	—
30	25.00	23.00	15.00	15.00	12.00	10.00
35	23.00	19.00	13.00	13.00	9.00	10.00
40	21.00	17.00	12.00	12.00	7.50	8.00
45	19.00	15.50	11.00	10.00	6.50	7.00
50	17.00	14.00	9.00	8.50	6.50	6.00
55	15.00	12.00	9.00	8.00	6.00	5.50
60	12.00	11.00	7.50	7.50	—	—

Summary of Actuarial Assumptions

Rates of Withdrawal Prior to Retirement (Withdrawal, Death, Disability)

GJRS

Age	Annual Rates of			
	Withdrawal Both	Death Men Women		Disability Both
20	4.0 %	.032 %	.018 %	.03 %
25	4.0	.035	.019	.03
30	4.0	.041	.025	.05
35	4.0	.072	.044	.08
40	6.0	.100	.066	.10
45	4.0	.140	.104	.18
50	3.0	.198	.156	.25
55	2.5	.281	.223	.45
60	2.5	.409	.306	.73
65	2.5	.560	.430	1.18

LRS

Age	Annual Rates of		
	Withdrawal Both	Death Men Women	
20	8.0 %	.032 %	.018 %
25	8.0	.035	.019
30	8.0	.041	.025
35	8.0	.072	.044
40	8.0	.100	.066
45	8.5	.140	.104
50	8.5	.198	.156
55	9.0	.281	.223
60	9.0	.409	.306
65	9.0	.560	.430

GMPF

Rates of Withdrawal from Active Service	
Service	Rates
2 or Less	13.0 %
3-7	17.5
8-9	14.0
10-14	13.5
15-19	8.5
20 or more	14.5

Age	Rates of Death	
	Men	Women
25	.0349 %	.0192 %
30	.0412	.0245
35	.0717	.0441
40	.1001	.0655
45	.1399	.1043
50	.1983	.1555
55	.2810	.2228
60	.4092	.3058

(continued)

Summary of Actuarial Assumptions

Rates of Withdrawal Prior to Retirement (Withdrawal, Death, Disability)

SEAD-OPEB

Age	All Groups		ERS		GJRS
	Annual Rates of Death		Annual Rates of Disability		Annual Rates of Disability
	Men	Women	Men	Women	Both
20	.0320 %	.0177 %	.05 %	.02 %	.03 %
25	.0349	.0192	.05	.02	.03
30	.0412	.0245	.05	.02	.05
35	.0717	.0441	.05	.02	.08
40	.1001	.0655	.25	.10	.10
45	.1399	.1043	.48	.25	.18
50	.1983	.1555	.70	.45	.25
55	.2810	.2228	1.05	.73	.45
60	.4092	.3058	—	—	.73
65	.5600	.4304	—	—	1.18

Age	ERS						LRS	GJRS
	Annual Rates of Withdrawal Years of Service						Annual Rates of Withdrawal	Annual Rates of Withdrawal
	0-4		5-9		10 & over		Both	Both
	Men	Women	Men	Women	Men	Women		
20	35.00 %	30.00 %	— %	— %	— %	— %	8.00 %	4.00 %
25	27.50	25.00	15.00	17.50	—	—	8.00	4.00
30	23.00	21.50	11.50	12.50	7.50	8.25	8.00	4.00
35	21.50	19.50	10.00	10.50	6.00	6.00	8.00	4.00
40	19.50	18.25	9.50	9.50	4.75	5.00	8.00	6.00
45	18.60	16.50	9.00	8.00	4.00	4.00	8.50	4.00
50	16.60	15.00	7.25	7.25	4.25	4.25	8.50	3.00
55	14.50	14.00	7.00	7.00	4.75	4.50	9.00	2.50
60	14.00	14.50	6.00	6.25	—	—	9.00	2.50
65	15.00	17.00	10.00	11.00	—	—	9.00	2.50

Summary of Actuarial Assumptions

Annual Rates of Retirement

ERS

Age	Old Plan							
	Early Retirement		Age 60 for 30 years		34 years		More than 34 years	
	Men	Women	Men	Women	Men	Women	Men	Women
50	2.0 %	2.0 %	7.5 %	6.0 %	100.0 %	100.0 %	90.0 %	100.0 %
52	2.0	2.0	7.5	6.0	100.0	100.0	90.0	100.0
55	3.0	3.5	7.5	10.0	100.0	100.0	75.0	90.0
57	3.5	5.0	10.5	10.0	100.0	100.0	70.0	70.0
60	—	—	15.0	20.0	97.5	95.0	40.0	55.0
62	—	—	32.0	40.0	97.5	95.0	40.0	65.0
65	—	—	35.0	40.0	35.0	40.0	35.0	40.0
67	—	—	35.0	35.0	35.0	35.0	35.0	35.0
70	—	—	35.0	35.0	35.0	35.0	35.0	35.0
75	—	—	100.0	100.0	100.0	100.0	100.0	100.0

Age	New Plan and GSEPS			
	Early Retirement		Normal Retirement	
	Men	Women	Men*	Women**
50	7.0 %	4.5 %	70.0 %	50.0 %
52	7.0	4.5	70.0	45.0
55	7.0	6.5	60.0	50.0
57	8.0	8.0	50.0	40.0
60	—	—	25.0	30.0
62	—	—	40.0	40.0
65	—	—	32.0	35.0
67	—	—	32.0	32.0
70	—	—	30.0	30.0
75	—	—	100.0	100.0

*An additional 10% of active male New Plan and GSEPS members less than age 55 and 20% between ages 55-59, inclusive, are expected to retire in the year in which they attain 30 years of service.

**An additional 20% of active female New Plan and GSEPS members less than age 60 are expected to retire in the year in which they attain 30 years of service.

Summary of Actuarial Assumptions

Annual Rates of Retirement

PSERS

Age	Annual Rate of Retirement	Age	Annual Rate of Retirement
60	13.0 %	68	23.0 %
61	13.0	69	26.0
62	22.0	70	27.0
63	17.5	71	27.0
64	17.0	72	27.0
65	28.0	73	27.0
66	27.0	74	27.0
67	23.0	75 & over	100.0

GJRS

Age	Annual Rate of Retirement
60	15.0 %
61	10.0
62	12.0
63-64	10.0
65-69	15.0
70-74	25.0
75	100.0

LRS

Age	Annual Rate of Retirement	Age	Annual Rate of Retirement
60	10.0 %	66	12.0 %
61	10.0	67	15.0
62	15.0	68	12.0
63	10.0	69	12.0
64	10.0	70-74	20.0
65	12.0	75	100.0

Summary of Actuarial Assumptions

Annual Rates of Retirement

GMPF

Age	Annual Rate of Retirement
60	75.0 %
61	60.0
62	70.0
63	60.0
64	60.0
65 & over	100.0

Summary of Actuarial Assumptions

Annual Rates of Retirement

SEAD-OPEB

ERS Members

Age	Old Plan							
	Early Retirement		Age 60 or 30 years		34 years		More than 34 years	
	Men	Women	Men	Women	Men	Women	Men	Women
50	2.0 %	2.0 %	7.5 %	6.0 %	100.0 %	100.0 %	90.0 %	100.0 %
52	2.0	2.0	7.5	6.0	100.0	100.0	90.0	100.0
55	3.0	3.5	7.5	10.0	100.0	100.0	75.0	90.0
57	3.5	5.0	10.5	10.0	100.0	100.0	70.0	70.0
60	—	—	15.0	20.0	97.5	95.0	40.0	55.0
62	—	—	32.0	40.0	97.5	95.0	40.0	65.0
65	—	—	35.0	40.0	35.0	40.0	35.0	40.0
67	—	—	35.0	35.0	35.0	35.0	35.0	35.0
70	—	—	35.0	35.0	35.0	35.0	35.0	35.0
75	—	—	100.0	100.0	100.0	100.0	100.0	100.0

Age	New Plan and GSEPS			
	Early Retirement		Normal Retirement	
	Men	Women	Men*	Women**
50	7.0 %	4.5 %	70.0 %	50.0 %
52	7.0	4.5	70.0	45.0
55	7.0	6.5	60.0	50.0
57	8.0	8.0	50.0	40.0
60	—	—	25.0	30.0
62	—	—	40.0	40.0
65	—	—	32.0	35.0
67	—	—	32.0	32.0
70	—	—	30.0	30.0
75	—	—	100.0	100.0

*An additional 10% of active male New Plan and GSEPS members less than age 55 and 20% between ages 55-59, inclusive, are expected to retire in the year in which they attain 30 years of service.

**An additional 20% of active female New Plan and GSEPS members less than age 60 are expected to retire in the year in which they attain 30 years of service.

LRS Members

Age	Annual Rate of Retirement	Age	Annual Rate of Retirement
60	10.0 %	67	15.0 %
61	10.0	68-69	12.0
62	15.0	70-74	20.0
63-64	10.0	75	100.0
65-66	12.0		

(continued)

Summary of Actuarial Assumptions

Annual Rates of Retirement

SEAD-OPEB

GJRS Members

Age	Annual Rate of Retirement
60	15.0 %
61	10.0
62	12.0
63-64	10.0
65-66	15.0
67	15.0
68-69	15.0
70-74	25.0
75	100.0

Summary of Actuarial Assumptions

Annual Rates of Death After Retirement

For all plans except PSERS, the RP-2000 Combined Mortality Table (projected to 2025 with projection scale BB and set forward two years for both males and females) is used for the period after retirement and for dependent beneficiaries. The RP-2000 Disabled Mortality Table (projected to 2025 with projection scale BB and set back seven years for males and set forward three years for females) is used for the period after disability retirement. For PSERS, the RP-2000 Blue-Collar Mortality Table (projected to 2025 with projection scale BB and set forward three years for males and two years for females) is used for the period after service retirement and for beneficiaries of deceased members. The RP-2000 Disabled Mortality Table (projected to 2025 with projection scale BB and set forward five years for both males and females) is used for the period after disability retirement. For all plans, there is a margin for future mortality improvement in the tables.

ERS

Age	Men	Women	Age	Men	Women
40	0.1127%	0.0790%	65	1.1300%	0.8994%
45	0.1609	0.1230	70	1.8697	1.5281
50	0.2474	0.1872	75	3.2147	2.5220
55	0.4246	0.2918	80	5.5160	4.1628
60	0.6985	0.4923	85	9.5631	7.1239

PSERS

Age	Men	Women	Age	Men	Women
40	0.1476%	0.0995%	65	1.4859 %	0.9774%
45	0.1974	0.1484	70	2.4262	1.7054
50	0.3057	0.2084	75	3.9830	2.7288
55	0.5644	0.2844	80	6.5238	4.4542
60	0.9575	0.5014	85	10.9551	7.5727

GJRS

Age	Men	Women	Age	Men	Women
40	0.1130%	0.0790%	65	1.1300%	0.8994%
45	0.1610	0.1230	70	1.8697	1.5281
50	0.2470	0.1872	75	3.2147	2.5220
55	0.4250	0.2918	80	5.5160	4.1628
60	0.6985	0.4923	85	9.5631	7.1239

Summary of Actuarial Assumptions

Annual Rates of Death After Retirement

LRS

Age	Men	Women	Age	Men	Women
40	0.1127%	0.0790%	65	1.1300%	0.8994%
45	0.1609	0.1230	70	1.8697	1.5281
50	0.2474	0.1872	75	3.2147	2.5220
55	0.4246	0.2918	80	5.5160	4.1628
60	0.6985	0.4923	85	9.5631	7.1239

GMPF

Age	Men	Women	Age	Men	Women
40	0.1127%	0.0790%	65	1.1300%	0.8994%
45	0.1609	0.1230	70	1.8697	1.5281
50	0.2474	0.1872	75	3.2147	2.5220
55	0.4246	0.2918	80	5.5160	4.1628
60	0.6985	0.4923	85	9.5631	7.1239

SEAD-OPEB

Age	Men	Women	Age	Men	Women
40	0.1127%	0.0790%	65	1.1300%	0.8994%
45	0.1609	0.1230	70	1.8697	1.5281
50	0.2474	0.1872	75	3.2147	2.5220
55	0.4246	0.2918	80	5.5160	4.1628
60	0.6985	0.4923	85	9.5631	7.1239

Active Members

ERS

Year	Active Members	Annual Payroll (in thousands)	Average Pay	Change
2010	68,566	\$ 2,571,042	\$ 37,497	(0.1)%
2011	66,081	2,486,780	37,632	0.4
2012	63,942	2,414,884	37,767	0.4
2013	61,550	2,335,773	37,949	0.5
2014	60,486	2,315,625	38,284	0.9
2015	60,416	2,352,920	38,945	1.7
2016	59,766	2,384,358	39,895	2.4
2017	60,906	2,546,492	41,810	4.8
2018	60,405	2,634,129	43,608	4.3
2019	59,207	2,611,965	44,116	1.2

PSERS

PSERS is not a compensation based plan.

Year	Active Members
2010	39,962
2011	39,249
2012	38,654
2013	37,361
2014	36,096
2015	35,477
2016	34,866
2017	35,509
2018	34,953
2019	34,767

GJRS

Year	Active Members	Annual Payroll (in thousands)	Average Pay	Change
2010	495	\$ 51,293	\$ 103,622	(0.1)%
2011	507	52,331	103,216	(0.4)
2012	503	51,898	103,177	0.0
2013	506	52,807	104,362	1.1
2014	513	53,628	104,539	0.2
2015	516	54,272	105,178	0.6
2016	526	57,401	109,128	3.8
2017	527	59,695	113,273	3.8
2018	527	60,572	114,937	1.5
2019	521	60,532	116,184	1.1

(continued)

Active Members

LRS

LRS is not a compensation based plan.

Year	Active Members
2010	216
2011	218
2012	220
2013	223
2014	222
2015	218
2016	224
2017	222
2018	222
2019	221

GMPF

GMPF is not a compensation based plan.

Year	Active Members
2010	13,032
2011	13,776
2012	13,526
2013	13,573
2014	13,469
2015	13,754
2016	13,850
2017	13,037
2018	13,804
2019	13,711

SEAD-OPEB

Year	Active Members
2010	62,305
2011	55,516
2012	49,261
2013	43,512
2014	39,101
2015	35,189
2016	32,076
2017	29,024
2018	26,224
2019	23,499

Note: Payroll data on page 124 for fiscal year 2019 will not equal that which is presented in the Financial section in the Schedules of Employers' and Nonemployer Contributions on pages 70-71. Valuation data at that time was a snapshot of the valuation date, annualized for new hires, but does not include those who terminated during the year.

Member and Employer Contribution Rates

ERS

Employer Rates				
Year	Member	Old Plan*	New Plan	GSEPS
2011	1.25 %	10.41 %	10.41 %	6.54 %
2012	1.25	11.63	11.63	7.42
2013	1.25	14.90	14.90	11.54
2014	1.25	18.46	18.46	15.18
2015	1.25	21.96	21.96	18.87
2016	1.25	24.72	24.72	21.69
2017	1.25	24.69	24.69	21.69
2018	1.25	24.69	24.69	21.66
2019	1.25	24.66	24.66	21.66
2020	1.25	24.66	24.66	21.64

* Old Plan rate includes an employer pick-up of employee contributions.

PSERS

Year	Member	Post 7/1/12 Member	Employer
2011	\$ 36 per year	n/a	\$ 7,509,000
2012	\$ 36 per year	n/a	15,884,000
2013	\$ 36 per year	n/a	24,829,000
2014	\$ 36 per year	n/a	27,160,000
2015	\$ 36 per year	n/a	28,461,000
2016	\$ 36 per year	\$ 90 per year	28,580,000
2017	\$ 36 per year	\$ 90 per year	26,277,000
2018	\$ 36 per year	\$ 90 per year	29,276,000
2019	\$ 36 per year	\$ 90 per year	30,263,000
2020	\$ 36 per year	\$ 90 per year	32,496,000

GJRS

Year	Member	Employer
2011	7.50 %	3.85 %
2012	7.50	3.90
2013	7.50	3.90
2014	7.50	4.23
2015	7.50	6.98
2016	7.50	12.19
2017	7.50	10.48
2018	7.50	7.17
2019	7.50	7.83
2020	7.50	9.13

(continued)

Member and Employer Contribution Rates

LRS

Year	Member	Employer
2011	8.50 %	\$ 75,000
2012	8.50	75,000
2013	8.50	128,000
2014	8.50	45,000
2015	8.50	—
2016	8.50	—
2017	8.50	—
2018	8.50	—
2019	8.50	—
2020	8.50	—

GMPF

Year	Member	Employer
2011	n/a	\$ 1,282,000
2012	n/a	1,521,000
2013	n/a	1,703,000
2014	n/a	1,892,000
2015	n/a	1,893,369
2016	n/a	1,989,530
2017	n/a	2,017,875
2018	n/a	2,377,312
2019	n/a	2,537,272
2020	n/a	2,611,590

SEAD-OPEB

Year	Member - Old Plan	Member - New Plan, LRS, GJRS	Employer
2011	0.45%	0.23 %	— %
2012	0.45	0.23	0.61
2013	0.45	0.23	0.27
2014	0.45	0.23	—
2015	0.45	0.23	—
2016	0.45	0.23	—
2017	0.45	0.23	—
2018	0.45	0.23	—
2019	0.45	0.23	—
2020	0.45	0.23	—

Actuarial Section



Schedules of Funding Progress - Defined Benefit Plans

(in thousands)

	Actuarial Valuation Date	Actuarial Value of Plan Assets (a)	Actuarial Accrued Liability (AAL) Entry-Age (b)	Unfunded AAL/ (Funded Excess) (b-a)	Funded Ratio (a/b)	Annual Covered Payroll (c)	Unfunded AAL/ (Funded Excess) as Percentage of Covered Payroll [(b-a)/c]
Employees' Retirement System	6/30/2010	\$ 13,046,193	\$ 16,295,352	\$ 3,249,159	80.1 %	\$ 2,571,042	126.4 %
	6/30/2011	12,667,577	16,656,905	3,989,348	76.0	2,486,780	160.4
	6/30/2012	12,260,595	16,777,922	4,517,327	73.1	2,414,884	187.1
	6/30/2013	12,129,804	16,982,449	4,852,645	71.4	2,335,773	207.8
	6/30/2014	12,376,120	16,991,963	4,615,843	72.8	2,315,625	199.3
	6/30/2015	12,675,649	17,099,527	4,423,878	74.1	2,352,920	188.0
	6/30/2016	12,854,518	17,199,688	4,345,170	74.7	2,384,358	182.2
	6/30/2017	13,088,185	17,514,898	4,426,713	74.7	2,546,492	173.8
	6/30/2018	13,412,046	17,812,441	4,400,395	75.3	2,634,129	167.1
	6/30/2019	13,481,219	17,829,220	4,348,001	75.6	2,611,965	166.5
Public School Employees Retirement System¹	6/30/2010	737,406	875,396	137,990	84.2	n/a	n/a
	6/30/2011	719,601	885,927	166,326	81.2	n/a	n/a
	6/30/2012	710,915	895,324	184,409	79.4	n/a	n/a
	6/30/2013	727,268	910,256	182,988	79.9	n/a	n/a
	6/30/2014	765,450	924,365	158,915	82.8	n/a	n/a
	6/30/2015	805,277	967,409	162,132	83.2	n/a	n/a
	6/30/2016	834,554	988,883	154,329	84.4	n/a	n/a
	6/30/2017	865,786	1,035,935	170,149	83.6	n/a	n/a
	6/30/2018	905,046	1,081,184	176,138	83.7	n/a	n/a
	6/30/2019	931,032	1,108,658	177,626	84.0	n/a	n/a
Legislative Retirement System	6/30/2010	29,581	25,003	(4,578)	118.3	3,745	(122.2)
	6/30/2011	29,278	25,245	(4,033)	116.0	3,780	(106.7)
	6/30/2012	28,990	24,966	(4,024)	116.1	3,815	(105.5)
	6/30/2013	29,481	24,904	(4,577)	118.4	3,867	(118.4)
	6/30/2014	30,538	24,913	(5,624)	122.6	3,850	(146.1)
	6/30/2015	31,635	25,690	(5,945)	123.1	3,764	(157.9)
	6/30/2016	32,171	25,533	(6,638)	126.0	3,875	(171.3)
	6/30/2017	32,913	25,674	(7,239)	128.2	3,830	(189.0)
	6/30/2018	33,871	25,905	(7,966)	130.7	3,844	(207.2)
	6/30/2019	34,153	25,714	(8,439)	132.8	3,833	(220.2)
Georgia Judicial Retirement System	6/30/2010	320,050	281,496	(38,554)	113.7	51,293	(75.2)
	6/30/2011	327,483	290,486	(36,997)	112.7	52,331	(70.7)
	6/30/2012	335,225	308,862	(26,363)	108.5	51,898	(50.8)
	6/30/2013	351,889	335,792	(16,097)	104.8	52,807	(30.5)
	6/30/2014	373,560	343,428	(30,132)	108.8	53,628	(56.2)
	6/30/2015	396,399	350,298	(46,101)	113.2	54,272	(84.9)
	6/30/2016	418,412	376,740	(41,672)	111.1	57,401	(72.6)
	6/30/2017	439,828	407,607	(32,221)	107.9	59,695	(54.0)
	6/30/2018	461,787	424,724	(37,063)	108.7	60,572	(61.2)
	6/30/2019	474,003	440,664	(33,339)	107.6	60,532	(55.1)

(continued)

Schedules of Funding Progress - Defined Benefit Plans

(in thousands)

	Actuarial Valuation Date	Actuarial Value of Plan Assets (a)	Actuarial Accrued Liability (AAL) Entry-Age (b)	Unfunded AAL/ (Funded Excess) (b-a)	Funded Ratio (a/b)	Annual Covered Payroll (c)	Unfunded AAL/ (Funded Excess) as Percentage of Covered Payroll [(b-a)/c]
Georgia Military Pension Fund²	6/30/2010	\$ 7,558	\$ 23,773	\$ 16,215	31.8 %	n/a	n/a
	6/30/2011	8,702	26,767	18,065	32.5	n/a	n/a
	6/30/2012	10,087	28,231	18,144	35.7	n/a	n/a
	6/30/2013	12,131	30,056	17,925	40.4	n/a	n/a
	6/30/2014	14,264	31,815	17,551	44.8	n/a	n/a
	6/30/2015	16,446	35,213	18,767	46.7	n/a	n/a
	6/30/2016	18,414	38,211	19,797	48.2	n/a	n/a
	6/30/2017	20,604	40,731	20,127	50.6	n/a	n/a
	6/30/2018	23,362	43,622	20,260	53.6	n/a	n/a
	6/30/2019	26,119	45,790	19,671	57.0	n/a	n/a

This data, except for annual covered payroll, was provided by the System's actuary.

¹ No statistics regarding covered payroll are available. Contributions are not based on members' salaries, but are simply \$4.00 per month, per member for nine months each fiscal year if hired prior to July 1, 2012 and \$10 per month, per member for nine months if hired after July 1, 2012.

² No statistics regarding covered payroll are available. Active and inactive plan member information is maintained by the Georgia Department of Defense.

Note: Payroll data on page 128 for fiscal year 2019 will not equal that which is presented in the Financial section in the Schedules of Employers' and Nonemployer Contributions on pages 70-71. Valuation data at that time was a snapshot of the valuation date, annualized for new hires, but does not include those who terminated during the year.

Schedule of Retirees Added to and Removed from Rolls

ERS

Year Ended	Added to Rolls		Removed from Rolls		Roll End of Year		% Increase in Annual Allowance	Average Annual Allowances
	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)		
2010	2,665	\$ 70,383	1,051	\$ 22,413	38,582	\$ 1,110,728	4.5 %	\$ 28,789
2011	2,797	69,031	1,170	25,347	40,209	1,154,412	3.9	28,710
2012	2,956	71,464	1,305	27,696	41,860	1,198,180	3.8	28,624
2013	3,664	88,855	1,176	26,334	44,348	1,260,701	5.2	28,427
2014	2,440	51,178	1,059	22,997	45,729	1,288,882	2.2	28,185
2015	2,656	54,003	1,350	30,927	47,035	1,311,958	1.8	27,893
2016	2,572	51,031	1,342	30,724	48,265	1,332,265	1.5	27,603
2017	2,630	45,833	1,420	32,372	49,475	1,345,726	1.0	27,200
2018	2,612	50,005	1,422	33,530	50,665	1,362,201	1.2	26,886
2019	2,777	58,673	1,357	32,574	52,085	1,388,300	1.9	26,655

PSERS

Year Ended	Added to Rolls		Removed from Rolls		Roll End of Year		% Increase in Annual Allowance	Average Annual Allowances
	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)		
2010	1,001	\$ 4,494	642	\$ 2,666	14,157	\$ 53,663	3.5 %	\$ 3,791
2011	1,174	3,168	731	3,072	14,600	53,759	0.2	3,682
2012	1,133	3,192	684	2,834	15,049	54,117	0.7	3,596
2013	1,298	3,803	650	2,738	15,697	55,182	2.0	3,515
2014	1,345	3,749	647	2,604	16,395	56,327	2.1	3,436
2015	1,247	3,482	690	2,679	16,952	57,130	1.4	3,370
2016	1,363	3,927	763	2,890	17,552	58,167	1.8	3,314
2017	1,253	4,322	756	2,927	18,049	59,562	2.4	3,300
2018	1,258	5,436	885	3,354	18,422	61,644	3.5	3,346
2019	1,301	5,319	795	3,101	18,928	63,862	3.6	3,374

GJRS

Year Ended	Added to Rolls		Removed from Rolls		Roll End of Year		% Increase in Annual Allowance	Average Annual Allowances
	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)		
2010	16	\$ 933	10	\$ 508	207	\$ 12,437	3.5 %	\$ 60,082
2011	15	1,168	2	105	220	13,500	8.5	61,364
2012	22	1,732	8	405	234	14,827	9.8	63,363
2013	42	2,763	13	629	263	16,961	14.4	64,490
2014	23	1,175	9	326	277	17,810	5.0	64,296
2015	21	1,416	11	561	287	18,665	4.8	65,035
2016	13	919	5	269	295	19,315	3.5	65,475
2017	62	5,304	10	771	347	23,848	23.5	68,726
2018	23	1,950	12	558	358	25,240	5.8	70,503
2019	52	3,435	12	562	398	28,113	11.4	70,636

(continued)

Schedule of Retirees Added to and Removed from Rolls

LRS

Year Ended	Added to Rolls		Removed from Rolls		Roll End of Year		% Increase in Annual Allowance	Average Annual Allowances
	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)		
2010	10	\$ 106	3	\$ 36	236	\$ 1,772	4.1 %	\$ 7,508
2011	18	104	10	86	244	1,790	1.0	7,336
2012	10	66	11	82	243	1,774	(0.9)	7,300
2013	32	200	15	140	260	1,834	3.4	7,054
2014	6	30	7	61	259	1,803	(1.7)	6,961
2015	13	87	12	112	260	1,778	(1.4)	6,838
2016	9	58	13	111	256	1,725	(3.0)	6,738
2017	13	80	6	74	263	1,731	0.3	6,582
2018	11	57	7	56	267	1,732	0.4	6,489
2019	14	82	12	96	269	1,718	(0.8)	6,386

GMPF

Year Ended	Added to Rolls		Removed from Rolls		Roll End of Year		% Increase in Annual Allowance	Average Annual Allowances
	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)		
2010	92	\$ 100	1	\$ 1	477	\$ 520	23.5 %	\$ 1,090
2011	94	101	3	4	568	617	18.7	1,086
2012	95	106	3	3	660	720	16.7	1,091
2013	83	87	5	5	738	802	11.4	1,087
2014	62	68	5	6	795	864	7.7	1,087
2015	54	55	6	5	843	914	5.8	1,084
2016	79	82	9	9	913	987	8.0	1,081
2017	83	90	11	11	985	1,066	8.0	1,082
2018	97	106	7	8	1,075	1,164	9.2	1,083
2019	91	94	18	20	1,148	1,238	6.4	1,078

SEAD-OPEB is a post-employment life insurance plan which does not have annuity payments.

Analysis of Change in Unfunded Accrued Liability (UAL)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Amount of Increase (Decrease) (in millions)										
ERS										
Interest (7.30) added to previous UAL	\$ 321.2	\$ 327.6	\$ 325.9	\$ 331.8	\$ 346.2	\$ 363.9	\$ 338.8	\$ 299.2	\$ 243.7	\$ 169.8
Accrued liability contribution	(567.4)	(574.4)	(551.0)	(514.7)	(419.4)	(321.7)	(239.1)	(147.7)	(122.9)	(89.4)
Experience:										
Valuation asset growth	108.6	(130.4)	(48.6)	8.5	(198.9)	(228.9)	253.7	396.3	433.6	710.1
Pensioners' mortality	(1.2)	2.6	9.0	12.8	13.9	60.4	20.6	15.5	16.4	49.2
Turnover and retirements	40.7	58.7	39.9	43.6	50.8	45.5	103.7	93.8	91.4	118.4
New entrants	9.6	12.4	7.8	7.8	10.3	9.3	14.1	12.1	28.4	15.0
Salary increases	(43.5)	53.5	127.5	(0.6)	(89.6)	(159.4)	(46.8)	(74.2)	49.0	(259.2)
Method changes	—	—	—	—	—	—	(128.3)	—	—	—
Amendments (COLAs)	61.2	39.2	28.9	28.4	—	—	—	(118.8)	—	—
Assumption changes	—	161.1	158.3	—	80.4	—	—	—	—	250.7
Programming modification	—	—	—	—	—	—	—	26.3	(28.7)	—
Data changes	18.4	15.3	(16.2)	3.6	14.4	(6.0)	18.7	12.9	9.1	(2.4)
Misc. changes	—	8.1	—	0.1	(0.1)	0.1	(0.1)	12.6	20.2	22.5
Total	\$ (52.4)	\$ (26.3)	\$ 81.5	\$ (78.7)	\$ (192.0)	\$ (236.8)	\$ 335.3	\$ 528.0	\$ 740.2	\$ 984.7

	Amount of Increase (Decrease) (in thousands)									
PSERS										
Interest (7.30) added to previous UAL	\$ 12,858.1	\$ 12,591.0	\$ 11,574.7	\$ 12,159.9	\$ 11,918.7	\$ 13,724.1	\$ 13,830.7	\$ 12,474.4	\$ 10,349.3	\$ 4,021.0
Accrued liability contribution	(18,303.2)	(17,584.7)	(15,278.9)	(17,394.7)	(17,704.8)	(15,915.4)	(12,497.7)	(4,843.8)	4,022.8	6,403.4
Experience:										
Valuation asset growth	5,770.0	(8,805.0)	(3,247.0)	841.0	(12,207.0)	(14,071.0)	13,868.0	21,922.0	24,002.0	39,729.0
Pensioners' mortality	(1,104.1)	(2,859.3)	(308.6)	(643.8)	414.9	1,286.7	(381.9)	(1,149.5)	(3,000.5)	(828.9)
Turnover and retirements	(859.2)	(1,024.6)	(879.7)	(228.2)	2,618.5	2,580.8	4,772.4	4,974.5	3,403.6	12,375.8
New entrants	3,701.8	3,206.8	4,334.7	2,798.1	2,875.9	2,786.0	2,757.7	2,783.8	3,167.0	3,047.8
Method changes	—	—	—	—	—	—	(9,259.0)	—	—	—
Amendments	12,551.0	16,292.1	15,892.7	—	—	—	—	—	—	—
COLAs	(8,832.0)	(6,469.5)	(6,786.4)	(5,492.0)	(14,772.9)	(14,398.9)	(14,813.1)	(20,664.9)	(16,603.6)	(14,121.2)
Assumption changes	—	10,995.2	10,547.5	—	30,030.0	—	—	—	—	33,717.7
Data Changes	110.9	—	—	—	—	—	—	—	—	(2,192.3)
Allotment for Expenses	—	—	—	—	—	—	—	—	2,122.7	2,029.0
Misc. changes	(4,405.3)	(352.4)	(29.5)	157.2	43.0	(64.9)	301.7	2,586.9	872.4	195.0
Total	\$ 1,488.0	\$ 5,989.6	\$ 15,819.5	\$ (7,802.5)	\$ 3,216.3	\$ (24,072.6)	\$ (1,421.2)	\$ 18,083.4	\$ 28,335.7	\$ 84,376.3

(continued)

Analysis of Change in Unfunded Accrued Liability (UAL)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Amount of Increase (Decrease) (in thousands)										
GJRS										
Interest (7.30) added to previous UAL	\$ (2,705.6)	\$ (2,416.5)	\$ (3,125.4)	\$ (3,457.6)	\$ (2,259.9)	\$ (1,207.3)	\$ (1,977.2)	\$ (2,774.8)	\$ (2,891.5)	\$ (2,636.2)
Accrued liability contribution	3,085.8	2,005.4	1,245.0	(746.2)	3,754.1	5,803.3	5,187.8	4,710.8	4,079.8	4,592.1
Experience:										
Valuation asset growth	2,721.4	(4,346.6)	(1,538.9)	562.3	(5,855.8)	(6,807.0)	4,949.6	8,638.5	9,404.0	16,228.0
Pensioners' mortality	1,456.8	543.1	(339.7)	1,530.2	639.6	2,138.5	533.8	376.9	2,076.8	560.9
Turnover and retirements	1,100.3	(162.6)	2,307.0	872.4	(370.0)	(5,962.8)	3,941.4	2,080.7	(276.3)	2,290.6
New entrants	1,774.9	338.7	2,353.1	1,190.9	1,539.1	1,272.3	3,138.0	442.3	750.1	—
Salary increases	(5,839.7)	(5,756.8)	187.7	209.7	(8,848.5)	(10,382.5)	(4,620.6)	(4,536.5)	1,265.9	(10,213.5)
Method changes	—	—	—	—	—	—	(6,827.0)	—	—	—
Amendments (COLAs)	645.9	993.1	3,345.4	3,179.6	—	—	—	(870.0)	—	—
Assumption changes	—	3,696.0	3,615.6	—	(5,030.9)	—	—	—	—	(14,826.5)
Data changes	1,484.4	—	—	—	—	—	—	—	—	579.1
Programming modification	—	—	—	—	—	—	4,606.4	1,648.9	—	—
Misc. changes	—	263.6	1,402.0	1,086.9	464.1	1,110.1	1,333.8	917.5	(12,852.1)	21.3
Total	\$ 3,724.2	\$ (4,842.6)	\$ 9,451.8	\$ 4,428.2	\$ (15,968.2)	\$ (14,035.4)	\$ 10,266.0	\$ 10,634.3	\$ 1,556.7	\$ (3,404.2)

Amount of Increase (Decrease) (in thousands)										
LRS										
Interest (7.30) added to previous UAL	\$ (581.5)	\$ (535.7)	\$ (497.8)	\$ (445.9)	\$ (421.9)	\$ (343.3)	\$ (301.8)	\$ (302.5)	\$ (343.4)	\$ (508.5)
Accrued liability contribution	315.2	322.9	250.3	338.3	173.4	161.9	(62.4)	33.9	107.1	(32.5)
Experience:										
Valuation asset growth	245.1	(342.2)	(129.2)	24.1	(491.6)	(576.5)	513.9	829.0	906.2	1,534.0
Pensioners' mortality	29.6	118.3	245.9	(66.1)	(50.8)	323.8	(29.6)	19.1	(18.7)	339.2
Turnover and retirements	(180.7)	(175.2)	(257.7)	(198.9)	(10.1)	(347.5)	17.4	(84.3)	254.5	105.1
New entrants	57.2	16.7	99.2	26.8	35.1	135.2	144.5	16.9	74.0	98.8
Method changes	—	—	—	—	—	—	(418.0)	—	—	—
Amendments	101.9	67.6	50.4	51.5	—	—	(488.1)	(549.7)	(481.8)	(465.3)
No COLAs	(457.4)	(462.8)	(458.3)	(418.2)	(452.6)	(470.8)	—	—	—	—
Assumption changes	—	229.1	223.7	—	852.3	—	—	—	—	975.2
Data changes	(3.6)	—	—	—	—	—	—	—	—	114.8
Misc. changes	0.9	34.8	(127.9)	(4.7)	46.2	69.9	71.1	46.4	46.9	41.6
Total	\$ (473.3)	\$ (726.5)	\$ (601.5)	\$ (693.1)	\$ (320.0)	\$ (1,047.3)	\$ (553.1)	\$ 8.8	\$ 544.9	\$ 2,202.4

(continued)

Analysis of Change in Unfunded Accrued Liability (UAL)

	2019	2018	2017	2016	2015	2014	2013	2012	2011
	Amount of Increase (Decrease) (in thousands)								
GMPF*									
Interest (7.30) added to previous UAL	\$ 1,479.0	\$ 1,489.4	\$ 1,484.8	\$ 1,407.5	\$ 1,316.3	\$ 1,344.3	\$ 1,360.8	\$ 1,354.9	\$ 1,216.1
Accrued liability contribution	(2,285.4)	(2,140.6)	(1,747.5)	(1,698.6)	(1,765.6)	(1,775.3)	(1,661.5)	(1,502.4)	(1,173.3)
Experience:									
Valuation asset growth	68.0	(181.0)	(50.0)	59.0	(203.0)	(247.0)	39.3	107.0	113.8
Pensioners' mortality	(20.1)	40.7	(109.2)	119.3	126.1	88.8	80.2	68.3	58.5
Turnover and retirements	(17.0)	143.1	11.0	233.3	120.5	(87.9)	186.4	17.9	205.4
New entrants	179.1	208.9	138.9	165.1	236.9	142.6	137.8	127.1	1,469.6
Method changes	—	—	—	—	—	—	(393.0)	—	—
Assumption changes	—	570.2	537.6	—	985.8	—	—	—	—
Expense deficit	—	—	—	—	—	—	—	—	37.0
Misc. changes	(3.0)	2.6	64.2	744.4	398.7	161.1	30.6	(93.6)	(77.0)
Total	\$ (589.0)	\$ 133.3	\$ 329.8	\$ 1,030.0	\$ 1,215.7	\$ (373.4)	\$ (219.4)	\$ 79.2	\$ 1,850.1

*Note: Data prior to 2011 is not available for GMPF.

SEAD-OPEB: Data is not available.

Solvency Test Results

(in thousands)

ERS

Actuarial Valuation as of 6/30	Actuarial Accrued Liability for:			Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets		
	Active Member Contributions	Retirants & Beneficiaries	Active Member (Employer Funded Portion)		(1)	(2)	(3)
	(1)	(2)	(3)		(1)	(2)	(3)
2010	\$ 551,607	\$ 10,652,040	\$ 5,091,705	\$ 13,046,193	100.0 %	100.0 %	36.2 %
2011	503,867	11,058,344	5,094,694	12,667,557	100.0	100.0	21.7
2012	460,861	11,420,011	4,897,050	12,260,595	100.0	100.0	7.8
2013	405,841	11,935,364	4,641,244	12,129,803	100.0	98.2	—
2014	385,058	12,108,737	4,498,168	12,376,120	100.0	99.0	—
2015	367,462	12,520,321	4,211,744	12,675,649	100.0	98.3	—
2016	368,281	12,592,980	4,238,427	12,854,518	100.0	99.2	—
2017	368,935	12,729,977	4,415,986	13,088,185	100.0	99.9	—
2018	372,375	12,927,796	4,512,270	13,412,046	100.0	100.0	2.5
2019	371,147	13,077,253	4,380,820	13,481,219	100.0	100.0	0.7

PSERS

Actuarial Valuation as of 6/30	Actuarial Accrued Liability for:			Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets		
	Active Member Contributions	Retirants & Beneficiaries	Active Member (Employer Funded Portion)		(1)	(2)	(3)
	(1)	(2)	(3)		(1)	(2)	(3)
2010	\$ 16,361	\$ 528,808	\$ 330,227	\$ 737,406	100.0 %	100.0 %	58.2 %
2011	16,627	532,509	336,790	719,601	100.0	100.0	50.6
2012	16,917	537,284	341,123	710,915	100.0	100.0	45.9
2013	17,016	549,796	343,444	727,268	100.0	100.0	46.7
2014	16,995	566,344	341,026	765,450	100.0	100.0	53.4
2015	17,196	585,471	364,742	805,277	100.0	100.0	55.5
2016	17,413	609,807	361,663	834,554	100.0	100.0	57.3
2017	18,077	640,197	377,661	865,786	100.0	100.0	54.9
2018	18,570	674,222	388,392	905,046	100.0	100.0	54.6
2019	19,109	695,624	393,925	931,032	100.0	100.0	54.9

GJRS

Actuarial Valuation as of 6/30	Actuarial Accrued Liability for:			Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets		
	Active Member Contributions	Retirants & Beneficiaries	Active Member (Employer Funded Portion)		(1)	(2)	(3)
	(1)	(2)	(3)		(1)	(2)	(3)
2010	\$ 67,293	\$ 117,730	\$ 96,473	\$ 320,050	100.0 %	100.0 %	100.0 %
2011	71,047	128,991	90,440	327,483	100.0	100.0	100.0
2012	73,998	141,880	92,984	335,225	100.0	100.0	100.0
2013	73,949	162,364	99,479	351,889	100.0	100.0	100.0
2014	80,007	162,527	100,894	373,560	100.0	100.0	100.0
2015	84,170	174,147	91,981	396,399	100.0	100.0	100.0
2016	91,991	180,107	104,642	418,412	100.0	100.0	100.0
2017	84,841	220,738	102,028	439,828	100.0	100.0	100.0
2018	88,890	231,811	104,023	461,787	100.0	100.0	100.0
2019	85,722	256,060	98,882	474,003	100.0	100.0	100.0

(continued)

Solvency Test Results

(in thousands)

LRS

Actuarial Valuation as of 6/30	Actuarial Accrued Liability for:			Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets		
	Active Member Contributions	Retirants & Beneficiaries	Active Member (Employer Funded Portion)		(1)	(2)	(3)
	(1)	(2)	(3)		(1)	(2)	(3)
2010	\$ 3,166	\$ 19,208	\$ 2,629	\$ 29,581	100.0 %	100.0 %	100.0 %
2011	2,921	19,759	2,564	29,278	100.0	100.0	100.0
2012	3,185	19,200	2,581	28,990	100.0	100.0	100.0
2013	2,951	19,623	2,330	29,481	100.0	100.0	100.0
2014	3,430	19,006	2,477	30,538	100.0	100.0	100.0
2015	3,287	19,873	2,530	31,635	100.0	100.0	100.0
2016	3,630	19,202	2,701	32,171	100.0	100.0	100.0
2017	3,543	19,382	2,749	32,913	100.0	100.0	100.0
2018	3,862	19,048	2,995	33,871	100.0	100.0	100.0
2019	3,664	19,204	2,846	34,153	100.0	100.0	100.0

GMPP

Actuarial Valuation as of 6/30	Actuarial Accrued Liability for:			Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets		
	Active Member Contributions	Retirants & Beneficiaries	Active Member (Employer Funded Portion)		(1)	(2)	(3)
	(1)	(2)	(3)		(1)	(2)	(3)
2010	\$ —	\$ 14,015	\$ 9,758	\$ 7,558	n/a	53.9 %	— %
2011	—	15,379	11,388	8,702	n/a	56.6	—
2012	—	17,518	10,713	10,087	n/a	57.6	—
2013	—	19,396	10,660	12,131	n/a	62.5	—
2014	—	21,389	10,426	14,264	n/a	66.7	—
2015	—	24,075	11,138	16,446	n/a	68.3	—
2016	—	26,337	11,874	18,414	n/a	69.9	—
2017	—	28,867	11,864	20,604	n/a	71.4	—
2018	—	30,964	12,658	23,362	n/a	75.4	—
2019	—	33,435	12,355	26,119	n/a	78.1	—

SEAD-OPEB

Actuarial Valuation as of 6/30	Actuarial Accrued Liability for:			Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets		
	Active Member Contributions	Retirants & Beneficiaries	Active Member (Employer Funded Portion)		(1)	(2)	(3)
	(1)	(2)	(3)		(1)	(2)	(3)
2010	\$ —	\$ 516,633	\$ 174,368	\$ 680,449	n/a	100.0 %	93.9 %
2011	—	503,327	175,093	807,893	n/a	100.0	100.0
2012	—	528,165	176,452	818,284	n/a	100.0	100.0
2013	—	586,228	168,558	907,831	n/a	100.0	100.0
2014	—	621,502	166,518	1,037,901	n/a	100.0	100.0
2015	—	621,426	148,321	1,046,559	n/a	100.0	100.0
2016	—	652,291	180,078	1,028,541	n/a	100.0	100.0
2017	—	693,118	183,468	1,121,251	n/a	100.0	100.0
2018	—	735,214	183,943	1,189,462	n/a	100.0	100.0
2019	—	772,657	174,082	1,233,856	n/a	100.0	100.0

Statistical Section



Celebrating Together



*ERSGA 70th Anniversary Party
See the Appendix for kind words from our members and retirees.*

Introduction

The objective of the statistical section is to provide a historical perspective, context and relevant details to assist readers in evaluating the condition of the plans. All non-accounting data is taken from the System's internal sources except for information which is derived from the actuarial valuations. Due to the adoption of GASB 74 in FY2017, historical detail may not be complete for the Schedule of Revenue and Expense and will be added each year. Statistical information is not presented for SCJRF and DARF as both plans are immaterial, have no active members, and are closed to new members.

Fiduciary Funds

Financial Trends

The following schedules have been included to help the reader understand how the System's financial position has changed over the past 10 years:

- Additions by Source
- Deductions by Type
- Changes in Fiduciary Net Position

Operational Trends

The following schedules have been included to help the readers understand how the System's financial report relates to the services provided by the System and the activities it performs:

- Retiree Information Withdrawal (Refund) Data
- New Retiree Elections
- Principal Participating Employers
- Statistical Data as of June 30, 2020

Proprietary Fund

- Schedule of Revenue and Expenses
- 10-year Schedule of Membership

Additions by Source - Contribution/Investment Income

(in thousands)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ERS										
Member Contributions	\$ 39,480	\$ 36,561	\$ 38,955	\$ 32,423	\$ 33,713	\$ 31,961	\$ 35,863	\$ 37,130	\$ 36,252	\$ 35,837
Employer Contributions	261,132	274,034	358,992	418,807	505,668	583,082	613,201	639,302	638,989	634,108
Nonemployer Contributions	—	—	—	10,945	12,495	12,484	12,080	12,865	10,220	9,749
Net Investment Income (Loss)	2,269,270	231,782	1,495,849	2,021,748	474,147	141,292	1,475,626	1,166,013	873,404	703,840
Other	—	—	—	—	10	10	10	10	10	10
Total Additions to (Deductions from) Fiduciary Net Position	\$2,569,882	\$ 542,377	\$1,893,796	\$2,483,923	\$1,026,033	\$ 768,829	\$2,136,780	\$1,855,320	\$1,558,875	\$1,383,544
PSERS										
Member Contributions	\$ 1,451	\$ 1,426	\$ 1,538	\$ 1,659	\$ 1,800	\$ 1,925	\$ 2,084	\$ 2,162	\$ 2,256	\$ 2,338
Employer Contributions	7,509	15,884	24,829	—	—	—	—	—	—	—
Nonemployer Contributions	—	—	—	27,160	28,461	28,580	26,277	29,276	30,263	32,496
Net Investment Income (Loss)	128,096	13,554	88,067	123,799	30,129	9,809	97,715	78,418	60,553	49,913
Other	—	—	—	—	—	—	—	—	—	—
Total Additions to (Deductions from) Fiduciary Net Position	\$ 137,056	\$ 30,864	\$ 114,434	\$ 152,618	\$ 60,390	\$ 40,314	\$ 126,076	\$ 109,856	\$ 93,072	\$ 84,747
GJRS										
Member Contributions	\$ 4,721	\$ 4,904	\$ 4,408	\$ 4,731	\$ 5,061	\$ 5,507	\$ 4,906	\$ 4,910	\$ 5,469	\$ 5,005
Employer Contributions	1,163	2,083	2,279	1,373	2,696	4,754	4,081	4,725	3,117	4,022
Nonemployer Contributions	—	—	—	1,002	1,564	2,869	2,603	1,841	2,137	2,442
Net Investment Income (Loss)	57,330	6,571	42,104	60,012	14,697	5,055	49,259	39,877	30,827	25,414
Other	—	—	—	—	—	—	—	—	—	—
Total Additions to (Deductions from) Fiduciary Net Position	\$ 63,214	\$ 13,558	\$ 48,791	\$ 67,118	\$ 24,018	\$ 18,185	\$ 60,849	\$ 51,353	\$ 41,550	\$ 36,883
LRS										
Member Contributions	\$ 320	\$ 323	\$ 373	\$ 282	\$ 327	\$ 328	\$ 327	\$ 323	\$ 339	\$ 325
Employer Contributions	75	76	128	45	—	—	—	—	—	—
Nonemployer Contributions	—	—	—	—	—	—	—	—	—	—
Net Investment Income (Loss)	5,194	550	3,573	4,969	1,189	363	3,741	2,962	2,228	1,824
Other	—	—	—	—	—	—	—	—	—	—
Total Additions to (Deductions from) Fiduciary Net Position	\$ 5,589	\$ 949	\$ 4,074	\$ 5,296	\$ 1,516	\$ 691	\$ 4,068	\$ 3,285	\$ 2,567	\$ 2,149

(continued)

Additions by Source - Contribution/Investment Income

(in thousands)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
GMPF										
Member Contributions	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Employer Contributions	1,282	1,521	1,703	1,892	1,893	1,990	2,018	2,377	2,537	2,611
Nonemployer Contributions	—	—	—	—	—	—	—	—	—	—
Net Investment Income (Loss)	1,465	221	1,374	2,179	585	240	2,262	1,928	1,683	1,485
Other	—	—	—	—	—	—	—	—	—	—
Total Additions to (Deductions from) Fiduciary Net Position	\$ 2,747	\$ 1,742	\$ 3,077	\$ 4,071	\$ 2,478	\$ 2,230	\$ 4,280	\$ 4,305	\$ 4,220	\$ 4,096
SEAD - OPEB										
Member Contributions	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Employer Contributions	—	—	—	—	—	—	1	—	5	—
Insurance Premiums	6,437	5,532	5,075	4,502	4,187	3,931	3,793	3,599	3,328	3,088
Net Investment Income (Loss)	144,270	17,193	108,148	154,868	37,876	12,559	125,550	101,542	79,193	65,248
Other	—	—	—	—	—	—	—	—	—	—
Total Additions to (Deductions from) Fiduciary Net Position	\$ 150,707	\$ 22,725	\$ 113,223	\$ 159,370	\$ 42,063	\$ 16,490	\$ 129,344	\$ 105,141	\$ 82,526	\$ 68,336
Defined Contribution Plan - GDCP										
Member Contributions	\$ 17,656	\$ 17,171	\$ 16,676	\$ 16,290	\$ 15,655	\$ 14,708	\$ 14,921	\$ 14,585	\$ 14,578	\$ 14,658
Employer Contributions	—	—	—	—	—	—	—	—	—	—
Nonemployer Contributions	—	—	—	—	—	—	—	—	—	—
Net Investment Income (Loss)	775	652	137	1,368	1,326	5,591	(1,056)	(356)	8,324	9,078
Other	—	—	—	—	—	—	—	—	—	—
Total Additions to (Deductions from) Fiduciary Net Position	\$ 18,431	\$ 17,823	\$ 16,813	\$ 17,658	\$ 16,981	\$ 20,299	\$ 13,865	\$ 14,229	\$ 22,902	\$ 23,736

Additions by Source - Contribution/Investment Income

(in thousands)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Defined Contribution Plan - 401(k)										
Member Contributions	\$ 38,006	\$ 40,331	\$ 44,428	\$ 53,724	\$ 64,870	\$ 79,422	\$ 93,608	\$ 110,848	\$ 119,770	\$ 129,639
Employer Contributions	25,442	4,355	18,279	21,513	25,615	29,982	36,761	43,176	47,170	51,138
Nonemployer Contributions	—	—	—	—	—	—	—	—	—	—
Net Investment Income (Loss)	59,581	3,112	52,835	78,583	17,665	5,281	88,771	72,671	61,106	40,850
Other	446	800	948	1,122	1,298	1,429	1,584	1,744	544	426
Total Additions to (Deductions from) Fiduciary Net Position	\$ 123,475	\$ 48,598	\$ 116,490	\$ 154,942	\$ 109,448	\$ 116,114	\$ 220,724	\$ 228,439	\$ 228,590	\$ 222,053
Defined Contribution Plan - 457										
Member Contributions	\$ 20,108	\$ 19,551	\$ 18,753	\$ 17,623	\$ 17,445	\$ 17,413	\$ 18,899	\$ 20,133	\$ 20,264	\$ 20,216
Employer Contributions	—	—	—	—	—	—	—	—	—	—
Nonemployer Contributions	—	—	—	—	—	—	—	—	—	—
Net Investment Income (Loss)	70,963	7,785	55,737	73,746	18,991	7,855	59,541	46,748	39,100	25,563
Other	339	—	—	—	—	—	—	—	53	25
Total Additions to (Deductions from) Fiduciary Net Position	\$ 91,410	\$ 27,336	\$ 74,490	\$ 91,369	\$ 36,436	\$ 25,268	\$ 78,440	\$ 66,881	\$ 59,417	\$ 45,804
Survivor's Benefit Fund - SBF										
Member Contributions	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$ —
Employer Contributions	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	—
Nonemployer Contributions	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	—
Net Investment Income (Loss)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8,701
Other	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	—
Total Additions to (Deductions from) Fiduciary Net Position	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	\$ 8,701

Deductions by Type

(in thousands)

ERS								
Fiscal Year	Benefit Payments					Net Administrative Expenses	Refunds	Total Deductions from Fiduciary Net Position
	Service	Partial Lump-Sum Option	Disability	Survivor Benefits	Total Benefit Payments			
2011	\$ 921,136	\$ 30,946	\$ 140,849	\$ 75,891	\$ 1,168,822	\$ 14,431	\$ 7,515	\$1,190,768
2012	964,485	31,963	143,317	76,973	1,216,738	12,051	7,767	1,236,556
2013	1,007,816	35,933	145,152	80,300	1,269,201	12,889	7,390	1,289,480
2014	1,051,993	24,567	146,245	83,193	1,305,998	7,440	8,757	1,322,195
2015	1,076,676	24,391	147,418	85,794	1,334,278	7,872	7,450	1,349,600
2016	1,092,909	19,154	147,706	87,843	1,347,633	8,506	7,087	1,363,226
2017	1,130,996	19,765	151,772	91,750	1,394,283	8,732	9,033	1,412,048
2018	1,146,226	21,624	152,469	92,979	1,413,298	8,056	7,585	1,428,939
2019	1,171,942	20,535	155,193	96,086	1,443,756	7,142	7,691	1,458,589
2020	1,205,502	19,108	159,443	100,392	1,484,445	7,641	6,644	1,498,730

PSERS							
Fiscal Year	Benefit Payments				Net Administrative Expenses	Refunds	Total Deductions from Fiduciary Net Position
	Service	Disability	Survivor Benefits	Total Benefit Payments			
2011	\$ 46,548	\$ 5,369	\$ 2,063	\$ 53,980	\$ 2,046	\$ 267	\$ 56,293
2012	46,911	5,369	1,903	54,183	2,040	349	56,572
2013	47,805	5,328	1,908	55,041	2,021	492	57,554
2014	48,911	5,280	1,998	56,189	1,450	514	58,153
2015	49,704	5,227	2,041	56,972	1,545	456	58,973
2016	50,572	5,172	2,160	57,903	1,321	465	59,689
2017	52,012	5,117	2,249	59,378	1,308	1,031	61,717
2018	54,257	5,114	2,449	61,820	1,331	701	63,852
2019	56,008	4,991	2,638	63,637	1,377	609	65,623
2020	58,412	5,000	2,678	66,090	1,424	572	68,086

GJRS							
Fiscal Year	Benefit Payments				Net Administrative Expenses	Refunds	Total Deductions from Fiduciary Net Position
	Service	Disability	Survivor Benefits	Total Benefit Payments			
2011	\$ 11,245	\$ 112	\$ 1,654	\$ 13,011	\$ 290	\$ 260	\$ 13,561
2012	12,608	113	1,695	14,416	310	146	14,872
2013	14,273	112	1,865	16,250	313	105	16,668
2014	15,305	112	2,024	17,441	754	22	18,217
2015	16,084	112	2,169	18,365	819	772	19,956
2016	16,677	112	2,222	19,011	754	261	20,026
2017	19,349	114	2,321	21,784	728	166	22,678
2018	22,239	117	2,578	24,934	794	150	25,878
2019	24,642	119	2,701	27,462	820	553	28,835
2020	26,203	120	2,940	29,263	849	213	30,325

(continued)

Deductions by Type

(in thousands)

LRS						
Fiscal Year	Benefit Payments			Net Administrative Expenses	Refunds	Total Deductions from Fiduciary Net Position
	Service	Survivor Benefits	Total Benefit Payments			
2011	\$ 1,309	\$ 452	\$ 1,761	\$ 131	\$ 60	\$ 1,952
2012	1,364	446	1,810	110	74	1,994
2013	1,376	448	1,824	119	88	2,031
2014	1,336	465	1,801	152	30	1,983
2015	1,315	441	1,756	169	26	1,951
2016	1,294	429	1,724	313	38	2,075
2017	1,323	440	1,763	224	75	2,062
2018	1,347	425	1,772	283	22	2,077
2019	1,383	473	1,856	290	70	2,216
2020	1,362	433	1,795	305	21	2,121

GMPF				
Fiscal Year	Benefit Payments		Net Administrative Expenses	Total Deductions from Fiduciary Net Position
	Service*	Total Benefit Payments		
2011	\$ 579	\$ 579	\$ 37	\$ 616
2012	678	678	34	712
2013	772	772	31	803
2014	841	841	110	951
2015	896	896	121	1,017
2016	963	963	262	1,225
2017	1,042	1,042	244	1,286
2018	1,138	1,138	225	1,363
2019	1,221	1,221	235	1,456
2020	1,297	1,297	249	1,546

*The only type of retirement in GMPF is a service retirement.

SEAD-OPEB				
Fiscal Year	Benefit Payments		Net Administrative Expenses	Total Deductions from Fiduciary Net Position
	Death Benefits**	Total Benefit Payments		
2011	\$ 23,060	\$ 23,060	\$ 203	\$ 23,263
2012	24,855	24,855	203	25,058
2013	28,482	28,482	203	28,685
2014	28,891	28,891	414	29,305
2015	32,979	32,979	428	33,407
2016	33,911	33,911	599	34,510
2017	36,058	36,058	576	36,634
2018	36,249	36,249	681	36,930
2019	37,416	37,416	716	38,132
2020	44,754	44,754	720	45,474

**The only type of benefit in SEAD-OPEB is a death benefit.

Deductions by Type

(in thousands)

Defined Contribution Plan - GDCP					
Fiscal Year	Benefit Payments		Net Administrative Expenses	Refunds	Total Deductions from Fiduciary Net Position
	Periodic Payments	Total Benefit Payments			
2011	\$ 9	\$ 9	\$ 1,180	\$ 11,390	\$ 12,579
2012	11	11	1,138	12,749	13,898
2013	9	9	1,160	14,415	15,584
2014	9	9	991	17,721	18,721
2015	—	—	990	22,340	23,330
2016	—	35	766	11,911	12,712
2017	—	—	785	11,544	12,329
2018	—	—	852	10,080	10,932
2019	10	10	882	10,931	11,823
2020	7	7	913	10,510	11,430

Defined Contribution Plan - 401(k)				
Fiscal Year	Benefit Payments		Net Administrative Expenses	Total Deductions from Fiduciary Net Position
	Distributions	Total Benefit Payments		
2011	\$ 42,457	\$ 42,457	\$ 2,054	\$ 44,511
2012	36,986	36,986	2,111	39,097
2013	57,351	57,351	2,457	59,808
2014	43,133	43,133	2,300	45,433
2015	95,428	95,428	2,755	98,183
2016	46,508	46,508	2,832	49,340
2017	55,866	55,866	3,096	58,962
2018	64,103	64,103	3,639	67,742
2019	79,644	79,644	3,431	83,075
2020	92,355	92,355	3,816	96,171

Defined Contribution Plan - 457				
Fiscal Year	Benefit Payments		Net Administrative Expenses	Total Deductions from Fiduciary Net Position
	Distributions	Total Benefit Payments		
2011	\$ 44,773	\$ 44,773	\$ 1,064	\$ 45,837
2012	41,835	41,835	910	42,745
2013	63,388	63,388	996	64,384
2014	45,807	45,807	812	46,619
2015	50,479	50,479	866	51,345
2016	43,288	43,288	820	44,108
2017	38,872	38,872	789	39,661
2018	40,690	40,690	442	41,132
2019	42,081	42,081	724	42,805
2020	40,067	40,067	745	40,812

Deductions by Type

(in thousands)

Survivors' Benefit Fund				
Fiscal Year	Benefit Payments		Net Administrative Expenses	Total Deductions from Fiduciary Net Position
	Death Benefits	Total Benefit Payments		
2011	n/a	n/a	n/a	n/a
2012	n/a	n/a	n/a	n/a
2013	n/a	n/a	n/a	n/a
2014	n/a	n/a	n/a	n/a
2015	n/a	n/a	n/a	n/a
2016	n/a	n/a	n/a	n/a
2017	n/a	n/a	n/a	n/a
2018	n/a	n/a	n/a	n/a
2019	n/a	n/a	n/a	n/a
2020	—	—	—	—

Changes in Fiduciary Net Position

(in thousands)

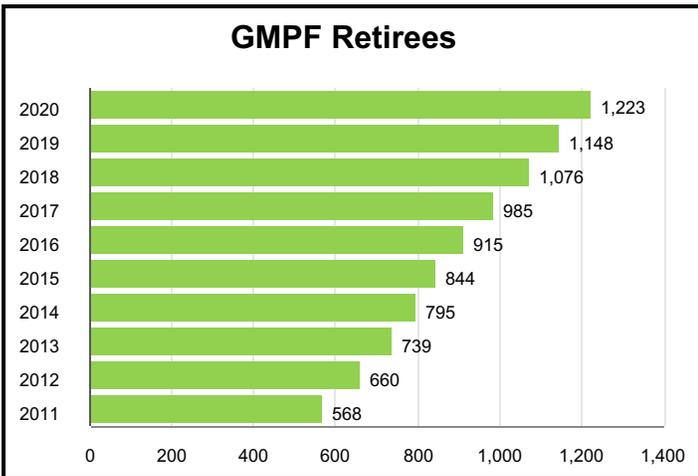
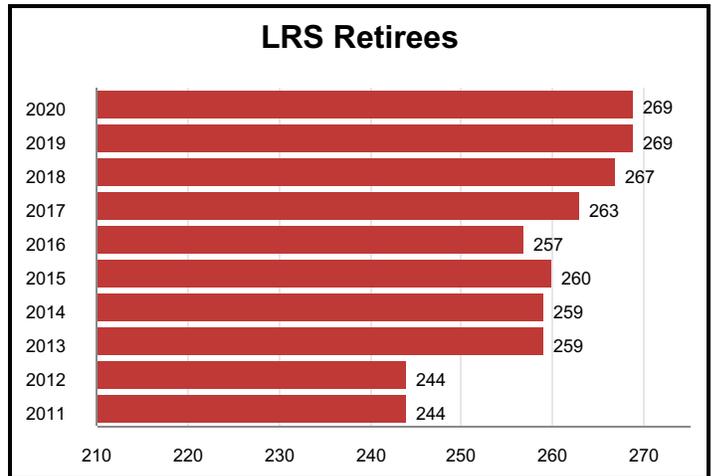
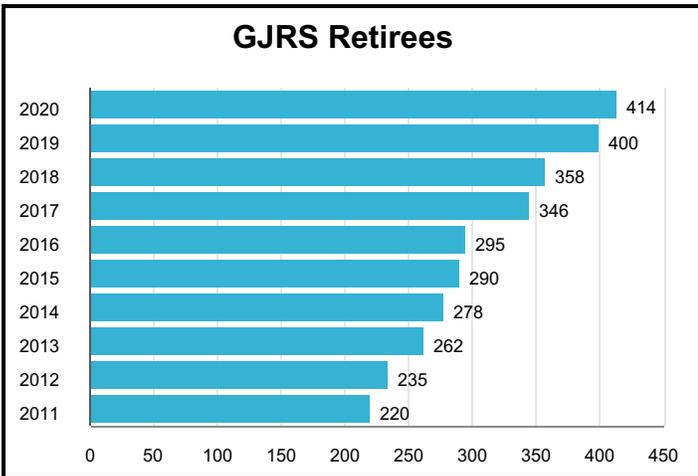
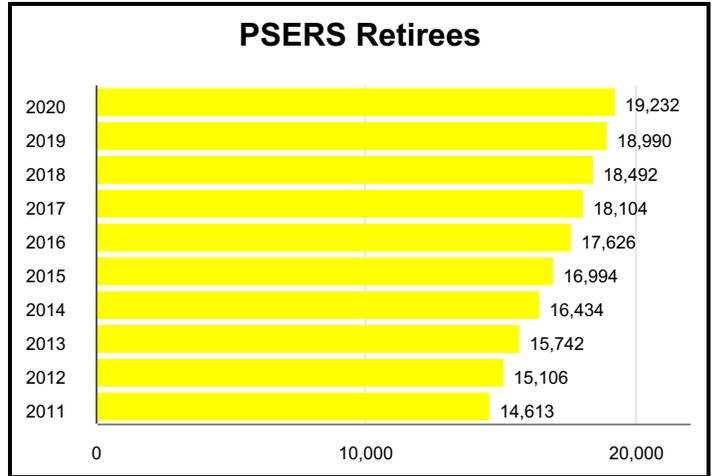
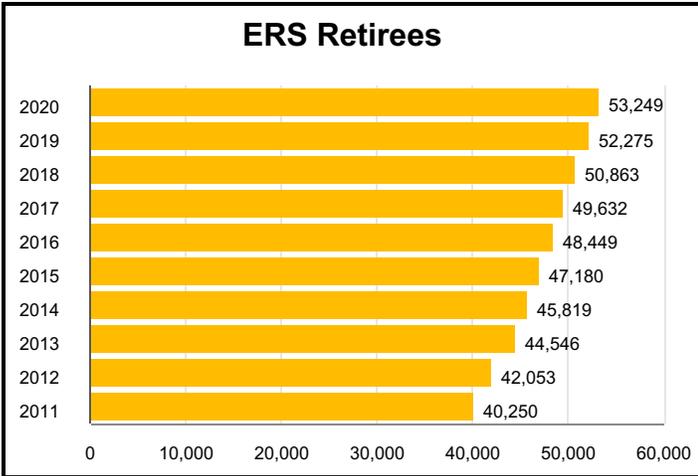
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ERS										
Total Additions	\$2,569,882	\$ 542,377	\$1,893,796	\$2,483,923	\$1,026,033	\$ 768,829	\$2,136,780	\$1,855,320	\$1,558,875	\$1,383,544
Total Deductions	1,190,768	1,236,556	1,289,480	1,322,195	1,349,600	1,363,226	1,412,048	1,428,939	1,458,589	1,498,730
Transfer In (Out)	—	(12,724)	(5,009)	—	—	—	—	—	—	—
Changes in Fiduciary Net Position	1,379,114	(706,903)	599,307	1,161,728	(323,567)	(594,397)	724,732	426,381	100,286	(115,186)
PSERS										
Total Additions	137,056	30,864	114,434	152,618	60,390	40,314	126,076	109,856	93,072	84,747
Total Deductions	56,293	56,572	57,554	58,153	58,973	59,689	61,717	63,852	65,623	68,086
Transfer In (Out)	—	—	—	—	—	—	—	—	—	—
Changes in Fiduciary Net Position	80,763	(25,708)	56,880	94,465	1,417	(19,375)	64,359	46,004	27,449	16,661
GJRS										
Total Additions	63,214	13,558	48,791	67,118	24,018	18,185	60,849	51,353	41,550	36,883
Total Deductions	13,561	14,872	16,668	18,217	19,956	20,026	22,678	25,878	28,835	30,325
Transfer In (Out)	—	—	—	—	—	—	—	—	—	—
Changes in Fiduciary Net Position	49,653	(1,314)	32,123	48,901	4,062	(1,841)	38,171	25,475	12,715	6,558
LRS										
Total Additions	5,589	949	4,074	5,296	1,516	691	4,068	3,285	2,567	2,149
Total Deductions	1,952	1,994	2,031	1,983	1,951	2,075	2,062	2,077	2,216	2,121
Transfer In (Out)	—	—	—	—	—	—	—	—	—	—
Changes in Fiduciary Net Position	3,637	(1,045)	2,043	3,313	(435)	(1,384)	2,006	1,208	351	28
GMPF										
Total Additions	2,747	1,742	3,077	4,071	2,478	2,230	4,280	4,305	4,220	4,096
Total Deductions	616	712	803	951	1,017	1,225	1,286	1,363	1,456	1,546
Transfer In (Out)	—	—	—	—	—	—	—	—	—	—
Changes in Fiduciary Net Position	2,131	1,030	2,274	3,120	1,461	1,005	2,994	2,942	2,764	2,550

Changes in Fiduciary Net Position

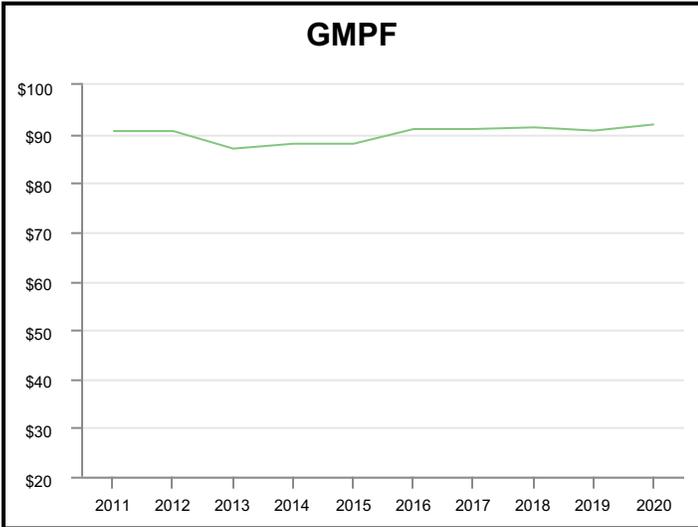
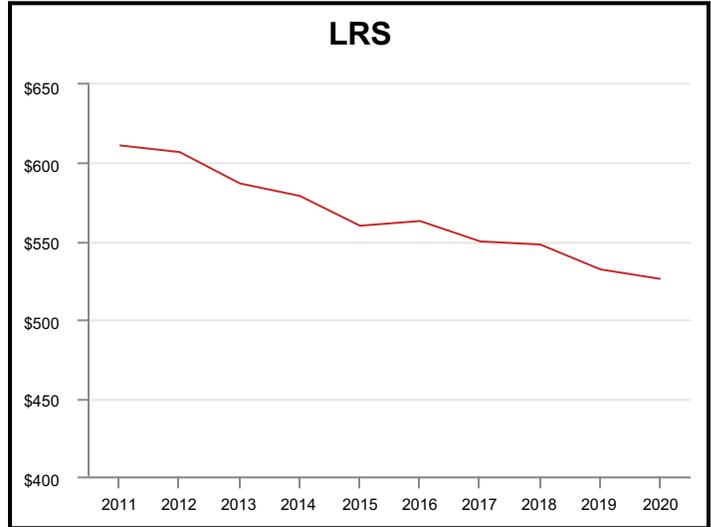
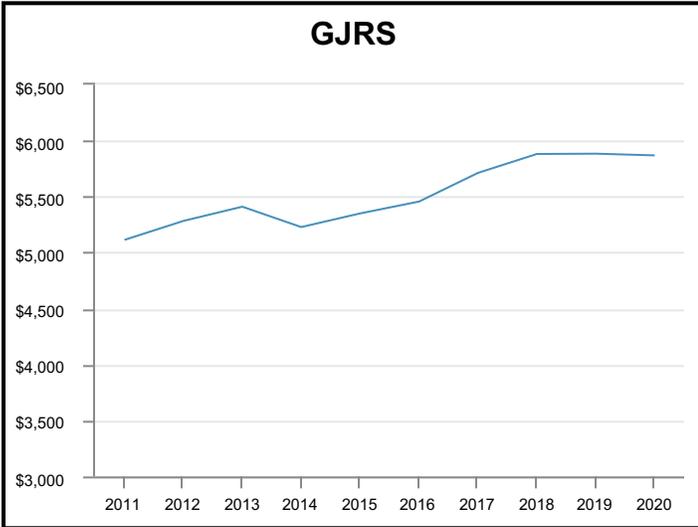
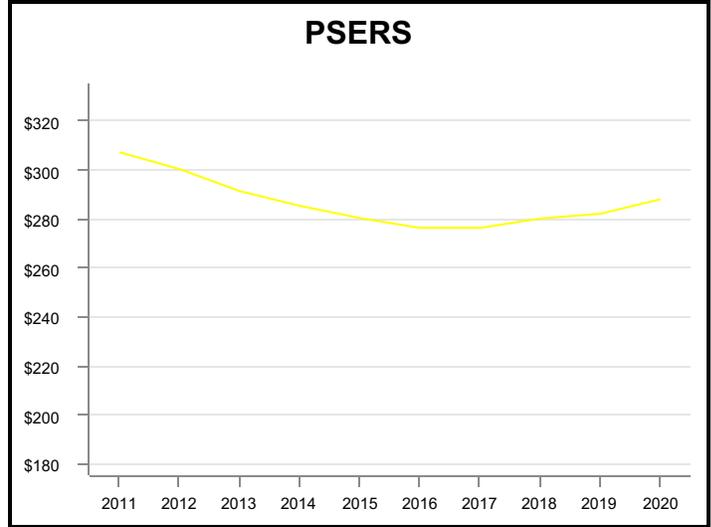
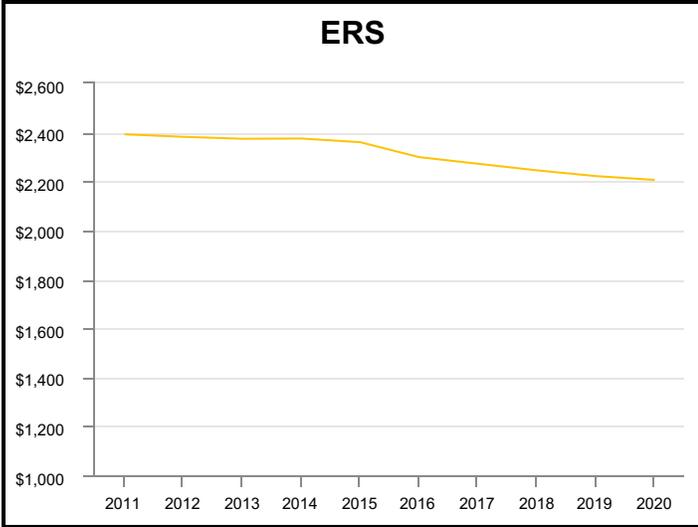
(in thousands)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SEAD - OPEB										
Total Additions	\$ 150,707	\$ 22,725	\$ 113,223	\$ 159,370	\$ 42,063	\$ 16,490	\$ 129,344	\$ 105,141	\$ 82,526	\$ 68,336
Total Deductions	23,263	25,058	28,685	29,305	33,407	34,510	36,634	36,930	38,132	45,474
Transfer In (Out)	—	12,724	5,009	5	2	2	—	—	—	—
Changes in Fiduciary Net Position	127,444	10,391	89,547	130,070	8,658	(18,018)	92,710	68,211	44,394	22,862
Defined Contribution Plan - GDCP										
Total Additions	18,431	17,823	16,813	17,658	16,981	20,299	13,865	14,229	22,902	23,736
Total Deductions	12,579	13,898	15,584	18,721	23,330	12,712	12,329	10,932	11,823	11,430
Transfer In (Out)	—	—	—	—	—	—	—	—	—	—
Changes in Fiduciary Net Position	5,852	3,925	1,229	(1,063)	(6,349)	7,587	1,536	3,297	11,079	12,306
Defined Contribution Plan - 401(k)										
Total Additions	123,475	48,598	116,490	154,942	109,448	116,114	220,724	228,439	228,590	222,053
Total Deductions	44,511	39,097	59,808	45,433	98,183	49,340	58,962	67,742	83,075	96,171
Transfer In (Out)	—	—	—	—	—	—	—	—	—	—
Changes in Fiduciary Net Position	78,964	9,501	56,682	109,509	11,265	66,774	161,762	160,697	145,515	125,882
Defined Contribution Plan - 457										
Total Additions	91,410	27,336	74,490	91,369	36,436	25,268	78,440	66,881	59,417	45,804
Total Deductions	45,837	42,745	64,384	46,619	51,345	44,108	39,661	41,132	42,805	40,812
Transfer In (Out)	—	—	—	—	—	—	—	—	—	—
Changes in Fiduciary Net Position	45,573	(15,409)	10,106	44,750	(14,909)	(18,840)	38,779	25,749	16,612	4,992
Survivors' Benefit Fund										
Total Additions	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8,701
Total Deductions	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	—
Transfer In (Out)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	—
Changes in Fiduciary Net Position	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8,701

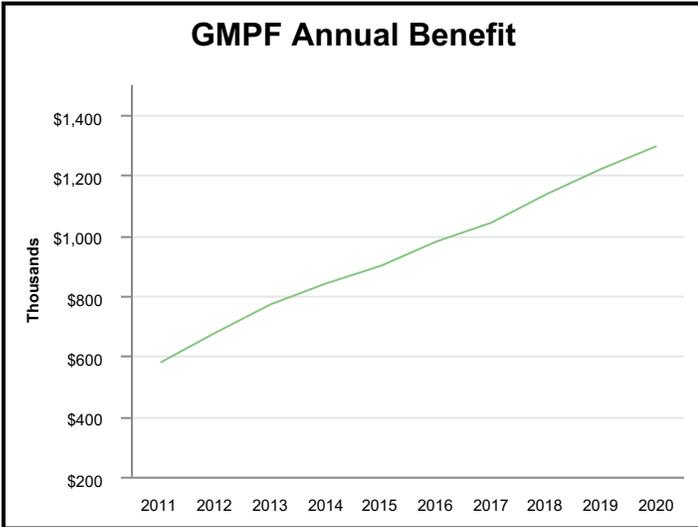
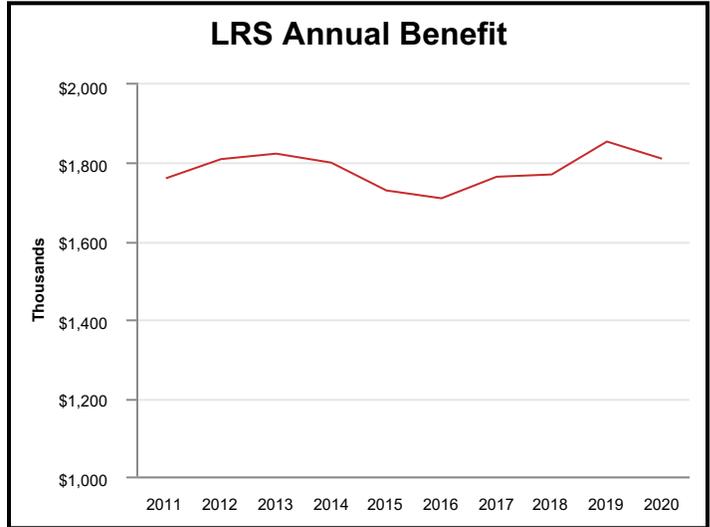
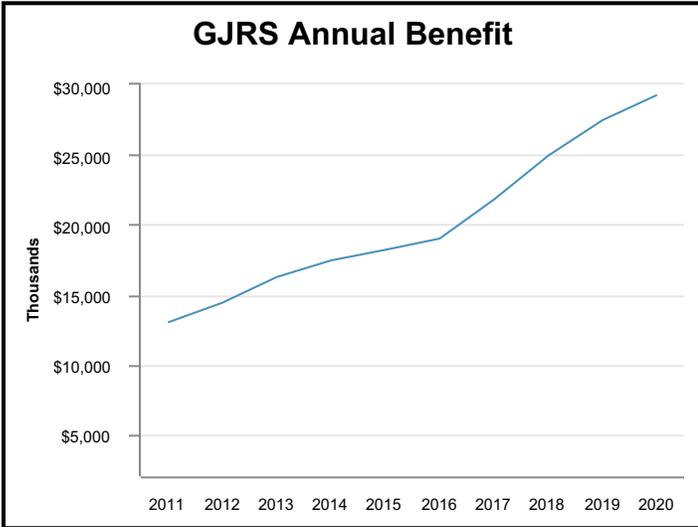
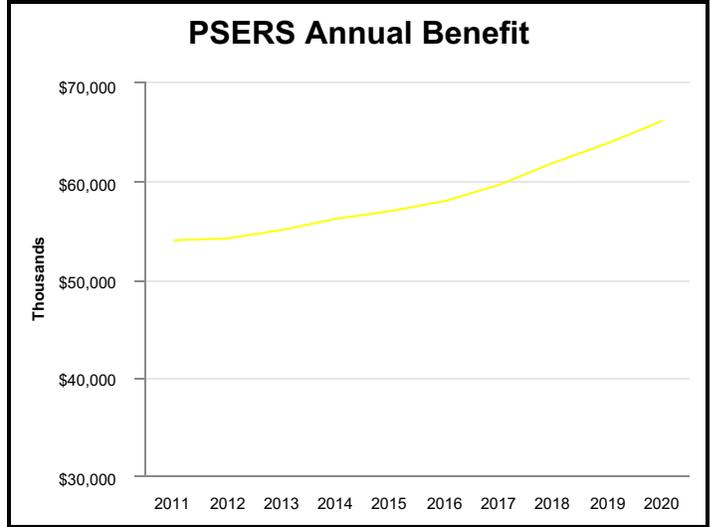
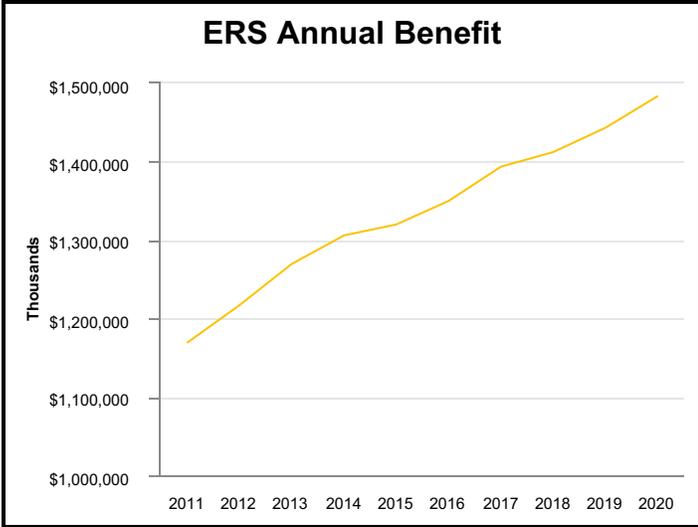
Number of Retirees



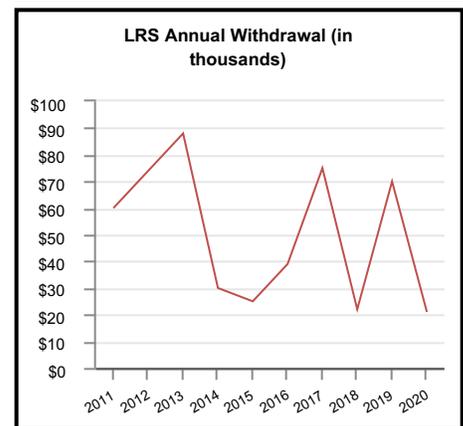
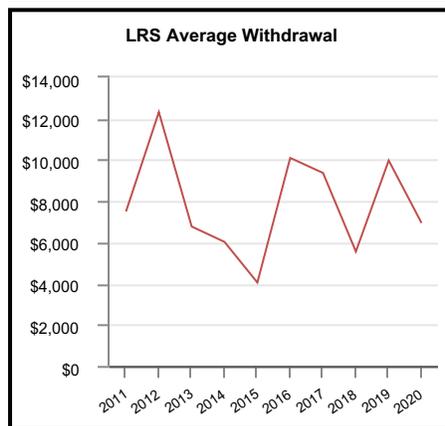
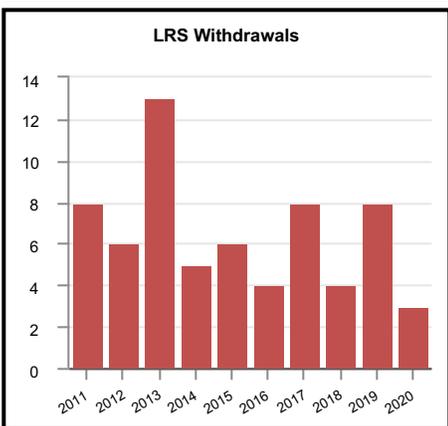
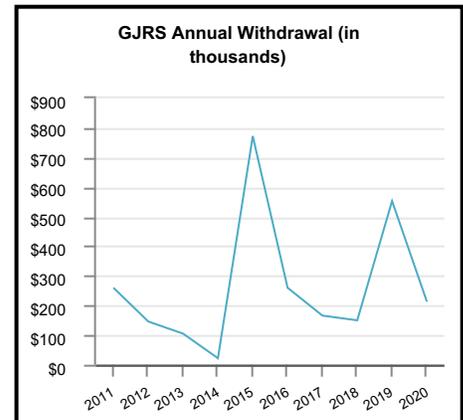
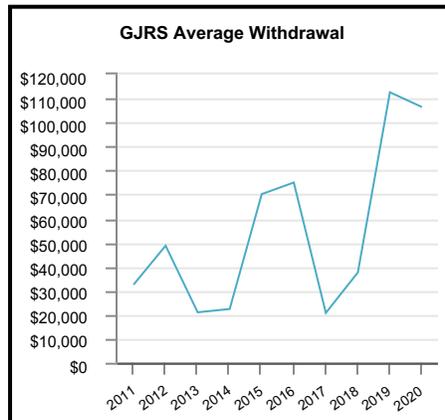
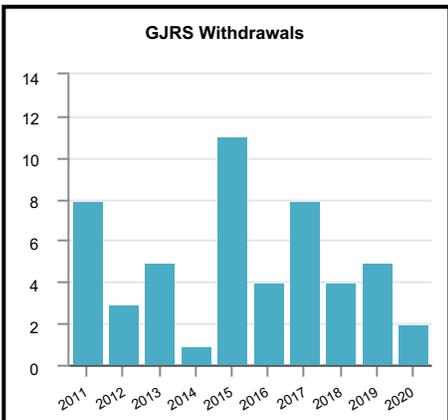
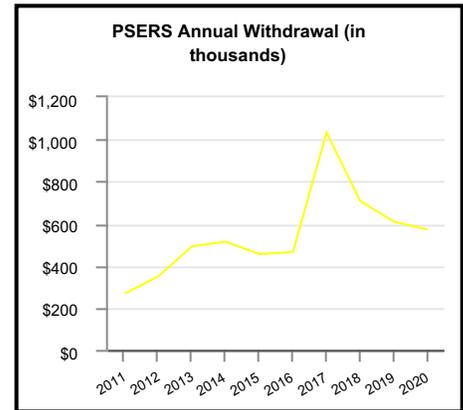
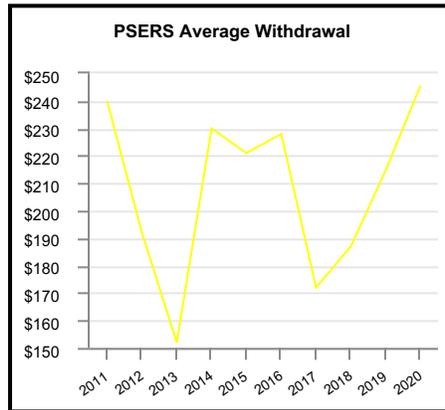
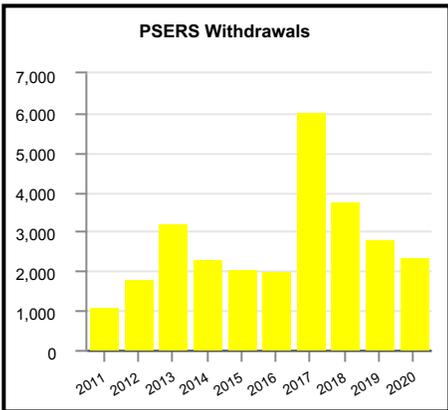
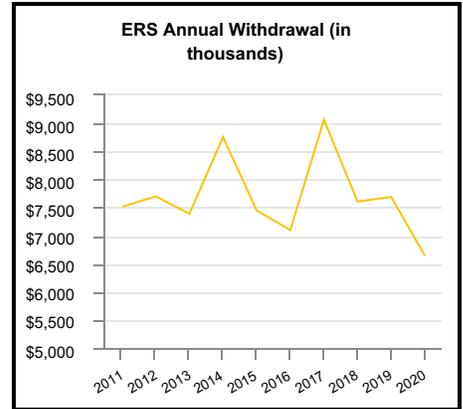
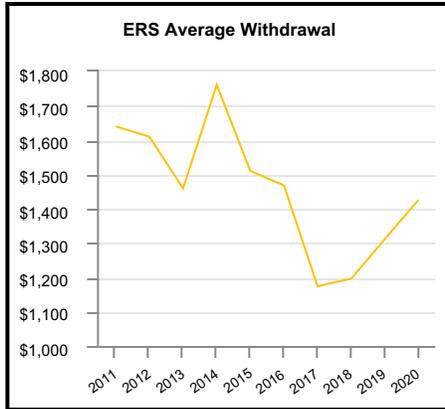
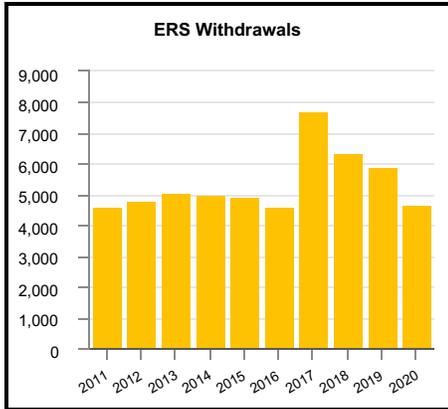
Average Monthly Payments to Retirees



Annual Benefit



Withdrawal Statistics



Note: The GMPF Plan does not have a refund feature.

Average Monthly Benefit Payment for New Retirees - ERS

	Years of Credited Service					Total
	10-15	16-20	21-25	26-30	Over 30	
2011						
Average Monthly Benefit	\$ 734.74	\$ 1,107.16	\$ 1,504.51	\$ 1,995.24	\$ 3,575.54	\$ 2,143.95
Average Final Average Salary	\$ 3,228.07	\$ 3,205.88	\$ 3,478.73	\$ 3,762.88	\$ 4,532.07	\$ 3,825.88
Number of Retirees	437	322	389	461	885	2,494
2012						
Average Monthly Benefit	\$ 729.60	\$ 1,247.16	\$ 1,624.82	\$ 2,125.35	\$ 3,708.26	\$ 2,109.84
Average Final Average Salary	\$ 3,040.00	\$ 3,275.37	\$ 3,388.85	\$ 3,807.26	\$ 4,702.47	\$ 3,775.94
Number of Retirees	518	385	414	486	776	2,578
2013						
Average Monthly Benefit	\$ 836.73	\$ 1,183.19	\$ 1,650.14	\$ 2,120.33	\$ 3,487.96	\$ 2,088.46
Average Final Average Salary	\$ 3,391.36	\$ 3,339.84	\$ 3,411.24	\$ 3,765.16	\$ 4,659.17	\$ 3,855.98
Number of Retirees	684	453	466	780	1,033	3,416
2014						
Average Monthly Benefit	\$ 769.91	\$ 1,232.07	\$ 1,527.47	\$ 2,057.32	\$ 3,242.25	\$ 1,870.02
Average Final Average Salary	\$ 3,309.44	\$ 3,337.66	\$ 3,263.54	\$ 3,718.37	\$ 4,486.34	\$ 3,699.86
Number of Retirees	483	306	311	477	542	2,119
2015						
Average Monthly Benefit	\$ 750.98	\$ 1,224.00	\$ 1,620.88	\$ 2,068.82	\$ 3,074.69	\$ 1,837.97
Average Final Average Salary	\$ 3,269.25	\$ 3,443.88	\$ 3,547.63	\$ 3,750.99	\$ 4,536.68	\$ 3,760.27
Number of Retirees	524	316	341	623	561	2,365
2016						
Average Monthly Benefit	\$ 759.54	\$ 1,224.52	\$ 1,760.28	\$ 2,171.75	\$ 2,996.81	\$ 1,783.98
Average Final Average Salary	\$ 3,189.20	\$ 3,376.84	\$ 3,657.08	\$ 3,935.01	\$ 4,618.83	\$ 3,764.34
Number of Retirees	559	340	330	530	466	2,225
2017						
Average Monthly Benefit	\$ 796.76	\$ 1,204.27	\$ 1,786.30	\$ 2,109.53	\$ 2,870.19	\$ 1,732.36
Average Final Average Salary	\$ 3,479.90	\$ 3,405.67	\$ 3,850.73	\$ 3,813.78	\$ 4,595.25	\$ 3,829.66
Number of Retirees	551	395	359	453	470	2,228
2018						
Average Monthly Benefit	\$ 794.94	\$ 1,318.26	\$ 1,679.64	\$ 2,302.80	\$ 2,879.55	\$ 1,791.49
Average Final Average Salary	\$ 3,505.83	\$ 3,674.56	\$ 3,707.56	\$ 4,154.11	\$ 4,638.01	\$ 3,950.06
Number of Retirees	570	389	306	525	476	2,266
2019						
Average Monthly Benefit	\$ 806.32	\$ 1,332.96	\$ 1,888.94	\$ 2,269.75	\$ 3,089.58	\$ 1,852.26
Average Final Average Salary	\$ 3,624.77	\$ 3,867.03	\$ 4,173.06	\$ 4,178.96	\$ 4,954.06	\$ 4,153.40
Number of Retirees	624	436	335	461	545	2,401
2020						
Average Monthly Benefit	\$ 790.83	\$ 1,310.46	\$ 1,755.20	\$ 2,335.40	\$ 3,234.98	\$ 1,935.05
Average Final Average Salary	\$ 3,609.89	\$ 3,733.97	\$ 3,853.51	\$ 4,268.19	\$ 5,132.48	\$ 4,167.37
Number of Retirees	469	368	341	441	501	2,120

(continued)

Average Monthly Benefit Payment for New Retirees - PSERS

	Years of Credited Service					Total
	10-15	16-20	21-25	26-30	Over 30	
2011						
Average Monthly Benefit	\$ 158.67	\$ 227.68	\$ 297.01	\$ 374.01	\$ 479.42	\$ 245.04
Number of Retirees	463	200	126	79	114	982
2012						
Average Monthly Benefit	\$ 159.25	\$ 236.46	\$ 303.66	\$ 362.36	\$ 476.51	\$ 238.59
Number of Retirees	480	182	136	74	87	958
2013						
Average Monthly Benefit	\$ 159.34	\$ 232.10	\$ 300.66	\$ 360.75	\$ 478.49	\$ 245.72
Number of Retirees	580	255	175	113	133	1,256
2014						
Average Monthly Benefit	\$ 154.20	\$ 227.41	\$ 297.58	\$ 345.98	\$ 437.20	\$ 233.71
Number of Retirees	603	268	147	121	131	1,270
2015						
Average Monthly Benefit	\$ 155.20	\$ 225.02	\$ 290.82	\$ 360.11	\$ 471.12	\$ 233.25
Number of Retirees	568	254	166	105	99	1,192
2016						
Average Monthly Benefit	\$ 160.28	\$ 232.09	\$ 298.45	\$ 358.11	\$ 489.48	\$ 242.18
Number of Retirees	529	273	454	103	103	1,162
2017						
Average Monthly Benefit	\$ 153.93	\$ 226.90	\$ 286.35	\$ 348.16	\$ 437.62	\$ 228.12
Number of Retirees	515	230	126	78	104	1,053
2018						
Average Monthly Benefit	\$ 156.77	\$ 228.48	\$ 293.26	\$ 363.46	\$ 480.15	\$ 238.68
Number of Retirees	508	241	148	91	102	1,090
2019						
Average Monthly Benefit	\$ 162.22	\$ 225.88	\$ 301.08	\$ 366.63	\$ 485.44	\$ 245.95
Number of Retirees	486	266	162	109	100	1,123
2020						
Average Monthly Benefit	\$ 169.11	\$ 237.94	\$ 306.69	\$ 376.31	\$ 479.54	\$ 257.59
Number of Retirees	424	230	119	73	124	970

Note: PSERS is not a final average pay plan.

Average Monthly Benefit Payment for New Retirees - GJRS

	Years of Credited Service					Total
	10-15	16-20	21-25	26-30	Over 30	
2011						
Average Monthly Benefit	\$ 4,632.24	\$ 10,170.24	\$ 9,799.81	\$ 8,428.40	\$ —	\$ 7,614.02
Average Final Average Salary	\$ 9,211.23	\$ 14,910.13	\$ 13,052.66	\$ 11,264.63	\$ —	\$ 11,505.85
Number of Retirees	4	2	2	3	—	11
2012						
Average Monthly Benefit	\$ 4,204.95	\$ 6,610.26	\$ 7,565.84	\$ 8,791.96	\$ 7,831.84	\$ 6,915.64
Average Final Average Salary	\$ 7,788.39	\$ 9,887.17	\$ 10,361.29	\$ 11,714.95	\$ 10,490.01	\$ 10,035.77
Number of Retirees	5	4	4	7	1	20
2013						
Average Monthly Benefit	\$ 5,179.20	\$ 5,844.29	\$ 6,170.52	\$ 7,954.14	\$ 6,169.77	\$ 6,132.24
Average Final Average Salary	\$ 9,271.48	\$ 8,344.35	\$ 8,370.72	\$ 10,624.52	\$ 8,864.27	\$ 9,010.27
Number of Retirees	8	7	7	5	7	34
2014						
Average Monthly Benefit	\$ 2,989.92	\$ 4,468.12	\$ 6,496.50	\$ —	\$ 2,703.82	\$ 4,470.15
Average Final Average Salary	\$ 6,265.39	\$ 7,772.95	\$ 8,998.48	\$ —	\$ 4,289.57	\$ 7,166.46
Number of Retirees	6	2	7	—	3	18
2015						
Average Monthly Benefit	\$ 4,010.30	\$ 6,317.44	\$ 7,051.15	\$ 7,589.28	\$ 2,406.28	\$ 6,267.69
Average Final Average Salary	\$ 6,937.39	\$ 9,141.51	\$ 9,751.01	\$ 10,165.12	\$ 3,222.98	\$ 8,905.45
Number of Retirees	2	5	7	2	1	17
2016						
Average Monthly Benefit	\$ —	\$ 6,534.36	\$ 8,121.58	\$ —	\$ 8,635.31	\$ 7,120.51
Average Final Average Salary	\$ —	\$ 9,655.37	\$ 11,204.04	\$ —	\$ 11,566.18	\$ 10,211.83
Number of Retirees	—	6	2	—	1	9
2017						
Average Monthly Benefit	\$ 4,519.89	\$ 6,690.09	\$ 8,737.31	\$ 5,895.46	\$ 8,026.56	\$ 6,964.60
Average Final Average Salary	\$ 9,049.84	\$ 9,833.21	\$ 12,013.62	\$ 7,896.41	\$ 10,750.81	\$ 10,232.13
Number of Retirees	10	18	13	4	10	55
2018						
Average Monthly Benefit	\$ 6,056.07	\$ 7,565.45	\$ 7,700.44	\$ 7,979.26	\$ —	\$ 7,403.36
Average Final Average Salary	\$ 11,385.55	\$ 11,096.74	\$ 10,618.33	\$ 10,687.46	\$ —	\$ 10,902.57
Number of Retirees	3	5	7	2	—	17
2019						
Average Monthly Benefit	\$ 4,646.94	\$ 6,293.69	\$ 8,486.61	\$ 7,795.06	\$ 8,348.20	\$ 6,878.64
Average Final Average Salary	\$ 8,909.34	\$ 9,278.67	\$ 11,566.18	\$ 11,014.40	\$ 11,181.62	\$ 10,204.03
Number of Retirees	9	10	7	8	5	39
2020						
Average Monthly Benefit	\$ 4,438.61	\$ 5,557.00	\$ 7,647.49	\$ 8,800.28	\$ 9,205.45	\$ 6,727.54
Average Final Average Salary	\$ 9,230.72	\$ 10,079.17	\$ 11,629.28	\$ 11,787.15	\$ 12,329.82	\$ 10,805.40
Number of Retirees	4	6	5	2	3	20

(continued)

Average Monthly Benefit Payment for New Retirees - LRS

	Years of Credited Service					Total
	8-14	15-19	20-24	25-29	Over 29	
2011						
Average Monthly Benefit	\$ 341.79	\$ 589.12	\$ —	\$ 843.26	\$ 934.73	\$ 456.99
Number of Retirees	12	1	—	2	1	16
2012						
Average Monthly Benefit	\$ 363.66	\$ 549.08	\$ —	\$ —	\$ 1,286.43	\$ 548.46
Number of Retirees	4	2	—	—	1	7
2013						
Average Monthly Benefit	\$ 308.15	\$ 568.93	\$ 670.94	\$ —	\$ 1,166.93	\$ 497.03
Number of Retirees	14	4	2	—	3	23
2014						
Average Monthly Benefit	\$ 289.25	\$ 480.21	\$ —	\$ —	\$ —	\$ 336.99
Number of Retirees	3	1	—	—	—	4
2015						
Average Monthly Benefit	\$ 341.03	\$ 382.95	\$ 642.84	\$ —	\$ 1,228.50	\$ 588.51
Number of Retirees	5	1	3	—	2	11
2016						
Average Monthly Benefit	\$ 322.51	\$ 524.09	\$ —	\$ —	\$ —	\$ 380.11
Number of Retirees	5	2	—	—	—	7
2017						
Average Monthly Benefit	\$ 362.52	\$ 557.02	\$ 740.79	\$ —	\$ —	\$ 484.34
Number of Retirees	6	3	2	—	—	11
2018						
Average Monthly Benefit	\$ 323.56	\$ 476.35	\$ 719.16	\$ —	\$ —	\$ 418.44
Number of Retirees	5	3	1	—	—	9
2019						
Average Monthly Benefit	\$ 358.24	\$ 493.00	\$ 658.44	\$ 793.55	\$ —	\$ 503.28
Number of Retirees	6	2	2	2	—	12
2020						
Average Monthly Benefit	\$ 374.69	\$ 494.79	\$ —	\$ 640.36	\$ —	\$ 444.25
Number of Retirees	5	3	—	1	—	9

Note: LRS is not a final average pay plan.

Average Monthly Benefit Payment for New Retirees - GMPF

	Years of Credited Service			
	20-25	26-30	Over 30	Total
2011				
Average Monthly Benefit	\$ 63.16	\$ 91.47	\$ 100.00	\$ 90.40
Number of Retirees	19	17	52	88
2012				
Average Monthly Benefit	\$ 61.54	\$ 90.33	\$ 100.00	\$ 92.83
Number of Retirees	13	15	63	90
2013				
Average Monthly Benefit	\$ 59.44	\$ 89.55	\$ 100.00	\$ 88.29
Number of Retirees	18	22	42	82
2014				
Average Monthly Benefit	\$ 61.11	\$ 90.53	\$ 100.00	\$ 91.02
Number of Retirees	9	19	31	59
2015				
Average Monthly Benefit	\$ 62.07	\$ 94.10	\$ 100.00	\$ 86.99
Number of Retirees	15	16	20	51
2016				
Average Monthly Benefit	\$ 66.30	\$ 89.29	\$ 100.00	\$ 85.07
Number of Retirees	27	14	30	71
2017				
Average Monthly Benefit	\$ 65.00	\$ 89.05	\$ 100.00	\$ 91.09
Number of Retirees	11	21	37	69
2018				
Average Monthly Benefit	\$ 61.00	\$ 87.39	\$ 100.00	\$ 91.17
Number of Retirees	10	23	44	77
2019				
Average Monthly Benefit	\$ 67.14	\$ 91.11	\$ 100.00	\$ 87.38
Number of Retirees	21	36	23	80
2020				
Average Monthly Benefit	\$ 61.25	\$ 89.29	\$ 100.00	\$ 86.49
Number of Retirees	20	21	33	74

Note: GMPF is not a final average pay plan.

Retired Members by Retirement Type

ERS

June 30, 2020

Amount of Monthly Benefit	Retirement Type		
	Service	Disability	Survivor
\$ 1 - 500	3,851	262	533
501 - 1,000	8,770	1,047	421
1,001 - 1,500	7,255	1,171	286
1,501 - 2,000	5,548	977	187
2,001 - 2,500	4,424	792	127
2,501 - 3,000	3,419	601	83
3,001 - 3,500	2,650	455	58
3,501 - 4,000	2,163	334	45
4,001 - 4,500	1,694	240	26
4,501 - 5,000	1,494	183	15
5,001 - 5,500	1,165	126	7
5,501 - 6,000	783	78	8
over 6,000	1,857	103	11
Totals	45,073	6,369	1,807

PSERS

June 30, 2020

Amount of Monthly Benefit	Retirement Type		
	Service	Disability	Survivor
\$ 1 - 100	87	5	225
101 - 200	5,780	33	194
201 - 300	5,526	220	54
301 - 400	2,880	374	9
401 - 500	1,799	278	6
over 500	1,534	227	1
Totals	17,606	1,137	489

Retired Members by Retirement Type

GJRS

June 30, 2020

Amount of Monthly Benefit	Retirement Type		
	Service	Disability	Survivor
\$ 1 - 1,000	20	—	2
1,001 - 2,000	22	—	8
2,001 - 3,000	26	—	5
3,001 - 4,000	40	—	3
4,001 - 5,000	27	2	4
5,001 - 6,000	17	—	—
6,001 - 7,000	37	—	—
7,001 - 8,000	70	—	—
over 8,000	131	—	—
Totals	390	2	22

LRS

June 30, 2020

Amount of Monthly Benefit	Retirement Type		
	Service	Disability	Survivor
\$ 1 - 250	20	—	—
251 - 500	126	—	10
501 - 750	66	—	3
751 - 1,000	23	—	3
over 1,000	16	—	2
Totals	251	—	18

GMPF

June 30, 2020

Amount of Monthly Benefit	Retirement Type
	Service
\$ 1 - 49	—
50 - 100	1,223
over 100	—
Totals	1,223

Retired Members by Optional Form of Benefit

ERS

June 30, 2020

Amount of Monthly Benefit	Form of Benefit						
	Maximum Plan	Option 1	Option 2	Option 3	Option 4	Option 5A	Option 5B
\$ 1 - 500	1,332	419	1,261	433	970	170	61
501 - 1,000	4,249	1,260	1,997	689	1,405	430	208
1,001 - 1,500	3,511	1,137	1,511	648	1,152	502	251
1,501 - 2,000	2,766	995	983	574	730	356	308
2,001 - 2,500	2,137	751	700	511	604	353	287
2,501 - 3,000	1,637	552	502	348	634	214	216
3,001 - 3,500	1,135	410	344	308	618	174	174
3,501 - 4,000	870	266	280	206	640	134	146
4,001 - 4,500	624	196	177	174	602	63	124
4,501 - 5,000	498	120	136	173	617	63	85
5,001 - 5,500	320	112	92	110	569	44	51
5,501 - 6,000	208	48	65	112	360	28	48
over 6,000	421	118	163	219	924	47	79
Totals	19,708	6,384	8,211	4,505	9,825	2,578	2,038

Maximum Plan Single life annuity

- Option 1** Reduced single life annuity with a guarantee of the remainder of the annuity savings fund account (contributions and interest), if any, to be paid upon the retiree's death
- Option 2** 100% joint and survivor annuity with a popup option upon divorce
- Option 3** 50% joint and survivor annuity with a popup option upon divorce
- Option 4** Various options, including a specified monthly amount payable to a beneficiary upon the retiree's death, several period certain annuities of varying length, and a five-year accelerated benefit
- Option 5A** 100% joint and survivor annuity with a popup option upon divorce or the death of the beneficiary before the retiree
- Option 5B** 50% joint and survivor annuity with a popup option upon divorce or the death of the beneficiary before the retiree

Retired Members by Optional Form of Benefit

PSERS

June 30, 2020

Amount of Monthly Benefit	Form of Benefit					
	Maximum Plan	Option AA	Option AB	Option AC	Option AD	Option B
\$ 1 - 100	—	33	249	6	22	7
101 - 200	3,876	1,210	390	10	154	367
201 - 300	4,638	619	216	4	84	239
301 - 400	2,659	361	90	7	36	110
401 - 500	1,808	153	51	6	13	52
over 500	1,617	77	32	4	2	30
Totals	14,598	2,453	1,028	37	311	805

Maximum Plan Single life annuity

Option AA 100% joint and survivor annuity

Option AB 50% joint and survivor annuity

Option AC Joint and survivor annuity with a specified monthly amount payable to a beneficiary

Option AD Joint and survivor annuity with the amount payable to a beneficiary limited by the age difference between the retiree and the beneficiary

Option B Annuity for a guaranteed period of time (5, 10, 15, or 20 years). If retiree outlives guarantee period, there is no benefit due after retiree's death

Retired Members by Optional Form of Benefit

GJRS

June 30, 2020

Amount of Monthly Benefit	Form of Benefit							
	Maximum Plan	Spousal Coverage	Option 1	Option 2	Option 3	Option 4A	Option 4B	Option 4C
\$ 1 - 1,000	1	21	—	—	—	—	—	—
1,001 - 2,000	3	27	—	—	—	—	—	—
2,001 - 3,000	5	26	—	—	—	—	—	—
3,001 - 4,000	3	40	—	—	—	—	—	—
4,001 - 5,000	5	28	—	—	—	—	—	—
5,001 - 6,000	7	9	1	—	—	—	—	—
6,001 - 7,000	8	29	—	—	—	—	—	—
7,000 - 8,000	22	48	—	—	—	—	—	—
over 8,000	25	106	—	—	—	—	—	—
Totals	79	334	1	—	—	—	—	—

Maximum Plan Single life annuity

Spousal Coverage* Indicates the member paid additional contributions to provide a 50% joint and survivor annuity at retirement

Option 1** 100% joint and survivor annuity

Option 2** 66 ⅔% joint and survivor annuity

Option 3** 50% joint and survivor annuity

Option 4A** 100% joint and survivor annuity with a popup option upon death of beneficiary before the retiree

Option 4B** 66 ⅔% joint and survivor annuity with a popup option upon death of beneficiary before the retiree

Option 4C** 50% joint and survivor annuity with a popup option upon death of beneficiary before the retiree

*Only available if membership start date prior to July 1, 2012

**Only available if membership start date on or after July 1, 2012

Retired Members by Optional Form of Benefit

LRS

June 30, 2020

Amount of Monthly Benefit	Form of Benefit		
	Maximum Plan	Option B1	Option B2
\$ 1 - 250	—	16	4
251 - 500	50	76	10
501 - 750	39	20	10
751 - 1,000	6	17	3
over 1,000	7	8	3
Totals	102	137	30

Maximum Plan Single life annuity

Option B1 100% joint and survivor annuity

Option B2 50% joint and survivor annuity

GMPF and SEAD - OPEB

June 30, 2020

The GMPF Plan provides a benefit only in one form, a life annuity. All 1,223 current retirees, therefore, have this same form of benefit. The SEAD-OPEB plan provides only a lump sum death benefit to a member's beneficiary(ies).

Principal Participating Employers FY11

	Member Count	% of Total Plan
ERS		
Department of Corrections	12,102	18.3 %
Department of Behavioral Health and Developmental Disabilities	6,533	9.9
Department of Transportation	4,599	7.0
Department of Labor	3,687	5.6
Department of Juvenile Justice	3,494	5.3
Department of Natural Resources	1,991	3.0
Department of Human Services	1,918	2.9
Department of Public Safety	1,630	2.5
Department of Community Health	1,574	2.4
Department of Revenue	1,069	1.6
Total Top Employers	38,597	58.4
Total ERS Member Count	66,081	
PSERS		
Gwinnett County Schools	3,936	10.0
Cobb County Schools	2,458	6.3
Dekalb County Schools	2,269	5.8
Clayton County Schools	1,279	3.3
Muscogee County Schools	942	2.4
Cherokee County Schools	904	2.3
Henry County Schools	892	2.3
Forsyth County Schools	881	2.2
Richmond County Schools	859	2.2
Houston County Schools	722	1.8
Total Top Employers	15,142	38.6
Total PSERS Member Count	39,255	
GJRS		
Council of Superior Court Judges	202	39.8
Council of State Court Judges	114	22.4
Prosecuting Attorney's Council	95	18.7
Council of Juvenile Judges	72	14.2
Total Top Employers	483	95.1
Total GJRS Member Count	508	

Data for SEAD-OPEB is not available.

Principal Participating Employers FY20

	Member Count	% of Total Plan
ERS		
Department of Corrections	8,110	14.2 %
Department of Behavioral Health and Developmental Disabilities	3,980	7.0
Department of Transportation	3,808	6.7
Department of Human Services	3,459	6.1
Department of Juvenile Justice	2,842	5.0
Department of Community Supervision	1,877	3.3
Department of Public Safety	1,779	3.1
Department of Natural Resources	1,728	3.0
Department of Labor	1,000	1.8
Department of Public Health	936	1.6
Total Top Employers	29,519	51.7
Total ERS Member Count	57,059	
PSERS		
Gwinnett County Schools	3,489	10.0
Cobb County Schools	2,323	6.7
Dekalb County Schools	2,120	6.1
Clayton County Schools	1,192	3.4
Forsyth County Schools	1,037	3.0
Chatham County Schools	921	2.7
Houston County Schools	810	2.3
Muscogee County Schools	765	2.2
Richmond County Schools	749	2.2
Cherokee County Schools	715	2.1
Total Top Employers	14,121	40.7
Total PSERS Member Count	34,736	
GJRS		
Council of Superior Court Judges	210	40.2
Council of State Court Judges	125	24.0
Council of Juvenile Judges	74	14.2
Solicitor General	58	11.1
Total Top Employers	467	89.5
Total GJRS Member Count	522	
SEAD - OPEB		
Department of Corrections	2,844	13.5
Department of Transportation	1,886	9.0
Department of Human Services	1,349	6.4
Department of Behavioral Health and Developmental Disabilities	1,077	5.1
Department of Juvenile Justice	825	3.9
Department of Natural Resources	801	3.8
Department of Community Supervision	752	3.6
Department of Public Safety	685	3.3
Department of Labor	529	2.5
Georgia Bureau of Investigation	363	1.7
Total Top Employers	11,111	52.9
Total Active Member Count	21,020	

**Schedule of Revenue and Expenses -
State Employees' Assurance Department Active Members Fund**

Year ended June 30, 2020
(In thousands)

	2020	2019	2018	2017
<u>Operating revenue:</u>				
Insurance premiums	\$ 547	531	540	599
Total operating revenue	547	531	540	599
<u>Operating expenses:</u>				
Death benefits	3,588	3,424	2,972	4,019
Administrative expenses	80	80	76	64
Total operating expenses	3,668	3,504	3,048	4,083
Total operating loss	(3,121)	(2,973)	(2,508)	(3,484)
<u>Nonoperating revenues (expenses):</u>				
Allocation of investment income from pooled investment fund	16,651	19,708	24,493	29,847
Investment expenses	(67)	(65)	(64)	(62)
Total nonoperating revenues	16,584	19,643	24,429	29,785
Change in net position	13,463	16,670	21,921	26,301
<u>Total net position:</u>				
Beginning of year	305,877	289,207	267,286	240,985
End of year	\$ 319,340	305,877	289,207	267,286

In fiscal year 2017, the System adopted the provisions of GASB Statement No. 74 and revised its accounting methodology with regard to the presentation of SEAD-Active, and began reporting it as a proprietary fund. In previous years it was reported as a fiduciary fund. Additional years will be displayed as they become available.

Schedule of Membership - State Employees' Assurance Department Active Members Fund

Fiscal Year	Covered Lives
2011	55,412
2012	49,212
2013	43,127
2014	38,711
2015	35,142
2016	31,869
2017	28,873
2018	26,032
2019	23,368
2020	21,020

Statistical Section



Statistical Data at June 30, 2020

System	Net Position	Employer and Nonemployer Contributions	Employee Contributions	Active Members	Inactives	Retirees	Annual Payment	Average Monthly Benefit ⁽¹⁾
ERS	\$13.5 billion	Old Plan: 19.91% New Plan: 24.66% GSEPS 21.64% (\$643.9 million)	Old Plan: 6% (with 4.75% pickup) New Plan: 1.25% GSEPS: 1.25% (\$35.8 million)	Old Plan: (0.05%) 29 New Plan: (36.54%) 20,850 GSEPS: (63.41%) 36,180 Total: 57,059	63,495	Total: 53,249 Service: 41,100 Beneficiary: 6,065 Disability: 5,494 Inv. Sep.: 435 Law. Enf.: 155	\$1.5 billion	\$2,206
PSERS	\$958.2 million	\$32.5 million	\$36 yr prior July 1, 2012 \$90 yr after July 1, 2012 (\$2.3 million)	34,736	50,276	19,232	\$66.2 million	\$288
GJRS	\$485.9 million	7.83% (\$6.5 million)	7.5% +2.5% Spousal, if applicable (\$5.0 million)	522	64	414	\$29.3 million	\$5,868
LRS	\$34.6 million	0% (None)	8.5% (with 4.75% pickup) (\$325 thousand)	219	170	269	\$1.8 million	\$526
GDCP	\$138.0 million	None	7.5% (\$14.7 million)	9,633	119,029	2	\$10 thousand	\$4,868
SCJRF	\$6 thousand	\$340 thousand	None	None	None	5	\$340 thousand	\$5,035
DARF	\$2 thousand	\$34 thousand	None	None	None	3	\$34 thousand	\$953
SEAD	\$1.3 billion	None	New Plan: 0.25% Old Plan: 0.50% (\$3.1 million)	No. Insured: 21,020	1,016	No. Insured: 44,130	No. of Claims: 1,298 Amt. Pd: \$48.0 million	Average Claim: \$36,989
GMPF	\$29.0 million	\$2.6 million	None	14,092	66	1,223	\$1.3 million	\$92

⁽¹⁾ GDCP average benefit payment is an annual amount.

House Resolution 1126

By: Representatives Benton of the 31st, Greene of the 151st, Frye of the 118th, Bentley of the 139th, and Erwin of the 28th

A RESOLUTION

*1 Recognizing and commending the Employees' Retirement System of Georgia on the grand
2 occasion of its 70th anniversary; and for other purposes.*

*3 WHEREAS, the Employees' Retirement System of Georgia (ERSGA) was established on
4 January 1, 1950, by an Act of the Georgia General Assembly to provide retirement benefits
5 for all state employees and is governed by a seven-member board of trustees; and*

*6 WHEREAS, as of January 2020, ERSGA pension plans serve over 108,000 active members
7 and 72,000 retirees and beneficiaries from over 700 employers around the state; and*

*8 WHEREAS, through their mission to be the guardian of the State of Georgia's retirement
9 plans, ERSGA employees strive to best serve the retirement needs of current and retired state
10 employees; and*

*11 WHEREAS, ERSGA demonstrates an unwavering commitment to integrity, operational
12 excellence, and customer service to deliver accurate and timely retirement benefits; and*

*13 WHEREAS, ERSGA also demonstrates leadership with legislative issues, continuous
14 improvement through the areas of data security and communications, and innovation with
15 process improvements to best serve the retirement needs of current and future members; and*

*16 WHEREAS, ERSGA promotes retirement education to enhance the lives of Georgia's
17 dedicated state employees and to promote a dignified retirement for members, retirees, and
18 their beneficiaries; and*

*19 WHEREAS, this remarkable organization has established a glowing reputation of renown
20 throughout Georgia for its ability to accommodate changes in retirement service, and it
21 continues to meet the diversified needs of its members with efficient and professional
22 service; and*

*23 WHEREAS, it is abundantly fitting and proper that the outstanding accomplishments of this
24 extraordinary organization be appropriately recognized.*

*25 NOW, THEREFORE, BE IT RESOLVED BY THE HOUSE OF REPRESENTATIVES that
26 the members of this body recognize and commend the Employees' Retirement System of
27 Georgia on the grand occasion of its 70th anniversary.*

*28 BE IT FURTHER RESOLVED that the Clerk of the House of Representatives is authorized
29 and directed to make an appropriate copy of this resolution available for distribution to the
30 Employees' Retirement System of Georgia.*

Senate Resolution 760

By: Senators Black of the 8th, Robertson of the 29th, Hufstetler of the 52nd, Rhett of the 33rd and Henson of the 41st

A RESOLUTION

*1 Recognizing and commending the Employees' Retirement System of Georgia on the grand
2 occasion of its 70th anniversary; and for other purposes.*

*3 WHEREAS, the Employees' Retirement System of Georgia (ERSGA) was established on
4 January 1, 1950, by an Act of the Georgia General Assembly to provide retirement benefits
5 for all state employees and is governed by a seven-member board of trustees; and*

*6 WHEREAS, as of January 2020, ERSGA pension plans serve over 108,000 active members
7 and 72,000 retirees and beneficiaries from over 700 employers around the state; and*

*8 WHEREAS, through their mission to be the guardian of the State of Georgia's retirement
9 plans, ERSGA employees strive to best serve the retirement needs of current and retired state
10 employees; and*

*11 WHEREAS, this distinguished organization demonstrates an unwavering commitment to
12 integrity, operational excellence, and customer service to deliver accurate and timely
13 retirement benefits; and*

*14 WHEREAS, ERSGA also demonstrates leadership with legislative issues, continuous
15 improvement through the areas of data security and communications, and innovation with
16 process improvements to best serve the retirement needs of current and future members; and*

*17 WHEREAS, ERSGA promotes retirement education to enhance the lives of Georgia's
18 dedicated state employees and to promote a dignified retirement for members, retirees, and
19 their beneficiaries; and*

*20 WHEREAS, it is abundantly fitting and proper that the outstanding accomplishments of this
21 organization be appropriately recognized.*

*22 NOW, THEREFORE, BE IT RESOLVED BY THE SENATE that the members of this body
23 recognize and commend the Employees' Retirement System of Georgia on the grand
24 occasion of its 70th anniversary.*

*25 BE IT FURTHER RESOLVED that the Secretary of the Senate is authorized and directed
26 to make an appropriate copy of this resolution available for distribution to the Employees'
27 Retirement System of Georgia.*

Congratulations from Our Members and Retirees!

"Happy Birthday! You guys have a big, and often thankless, job. I can only say that while I was working you were very positive and helpful when I called you with questions. Now that I am retired I get the same friendliness and helpfulness. Y'all are good people, competent people, and deserving of accolades. It just occurred to me that your 70th year is also my 70th year (born 10-04-50). I never confess that (except my barber). I only confess to 29 of those years. Last year my son sent me a "Happy 50th anniversary of your 29th birthday" card. Again, I say "Thank you." You guys are great."
- *cwalters150*

"Congratulations!!"
- *Mary C.*

"Congratulations!! 70 years is a long time for good service. Please continue making our retirement a pleasant transition. God Bless You."
- *Sandra*

"Thank you for all that is being done to protect our retirement!"
- *Dee Dee R.*

"CONGRATULATIONS!!! And thank you for your service to to the State Retirees."
- *Bernice B., December 1, 2000 Retiree*

"I retired from the Department of Family and Children Services in 2004. I am thankful everyday for my retirement benefits and the guardians of ERSGA."
- *Gratefully, Doris B.*

"Thank you for having employees that are very helpful when I have a question. Keep up the great work."
- *A retiree. Dale H.*

"Great results & good communications. Appreciated the recent COLA bonus. Thanks!"
- *Carl E.*

"Happy 70th Birthday!!"
- *Larry S.*

"Congrats to ERSGA for 70 Years for us Current Retires. I am thankful for having retired on May, 2001. I worked for the State of Georgia for 32 years and 7 months. I am a pride retiree and so congratulations again. Please continue with the great work for our future retirees."
- *Josephine S. of Americus, Georgia.*

State Charitable Contributions Program (SCCP) Awards

