Employees' Retirement
System of Georgia

Annual Comprehensive Financial Report

Fiscal Year Ended June 30, 2021

A component unit of the State of Georgia

Georgia's State Symbols

2021

ERSGA

Employees' Retirement System of Georgia

Serving those who serve Georgia

State Bird: Brown Thrasher

The brown thrasher was named as Georgia’s state bird in 1935, and was officially adopted by the Georgia legislature in 1970.

The brown thrasher is bright reddish-brown above with dark streaks on whitish underparts with distinguished teardrop-shaped markings on its chest. Its long tail is rounded and its eyes are a brilliant yellow. Both males and females are similar in appearance.

The brown thrasher is related to the mockingbird and is noted for having over 1000 song types, the largest song repertoire of birds.

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

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Serving Those Who Serve Georgia

James A. Potvin
Executive Director

ERSGA
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State Crop : Peanut

It is believed that peanut cultivation began in Georgia in about 1850. Georgia is the number-one peanut-producing state in the country. The sandy soils and subtropical climate of southern Georgia are ideal for producing almost 50 percent of the nation's peanuts.

Despite its name, the peanut is not a true nut but a member of the legume (bean) family.

State Fruit : Peach

An effort to create a fruit industry began in the Southeast in the 1850s. Horticulturists tried many different crops, and peaches became the most popular. The trees grow readily from seed, and peach pits are easy to preserve and transport.

The Elberta Peach, introduced by Henry Rumph in the 1870s, is one of the most successful varieties of peaches to date. Georgia designated the peach as the official state fruit in 1995.

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Introductory Section

Georgia's State Symbols

ERSGA
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Serving those who serve Georgia

State Fish : Largemouth Bass

Home to the world record largemouth bass, Georgia is a bass fishing paradise. Most waters in Georgia contain bass, which are noted for the excitement of their 'fight', meaning how vigorously the fish resists being hauled into the boat or onto shore after being hooked. The fish will often become airborne in their effort to throw the hook.

Largemouth bass can usually be found in big patches of weeds and other shallow water cover. As one of the world's most tolerant freshwater fish, they are very capable of surviving in a wide variety of climates and waters.

State Marine Mammal : North Atlantic Right Whale

In 1985, Georgia designated the critically endangered North Atlantic Right Whale as the official state marine mammal. Georgia's coastal waters provide a protected environment for calving for the only great whale species native to the state.

North Atlantic right whales have stocky black bodies with no dorsal fins, and their blow spouts are shaped like a "V." Their tails are broad and deeply notched. Calves are about 14 feet at birth and adults can grow to lengths of 52 feet.

Their heads have knobby white patches of rough skin called *callosities*, which appear white because of whale lice covering their otherwise black skin. Each right whale has a unique pattern of callosities that scientists use to identify individual whales, an invaluable tool in tracking population size and health.

Boards of Trustees

as of September 30, 2021

*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.

Introductory Section

Letter of Transmittal

Two Northside 75
Atlanta, GA 30318

September 30, 2021

I am pleased to present the Annual Comprehensive Financial Report (ACFR) of the retirement systems and programs administered by the Employees' Retirement System of Georgia (the System) for the fiscal year ended June 30, 2021. 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 (GDCP) 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 32 through 42 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, GDCP, 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, 2021, the System's defined benefit (DB) plans served a total of 100,637 active members and 75,665 retirees/beneficiaries from 685 employers around the state. There were 71,722 participants in the 401(k) plan with a total investment balance of $1.7 billion. The 457 plan had 12,038 participants with a total investment balance of $773.9 million. There are 459 participating employers from around the state in the 457 and 401(k) plans.

Legislation

The Georgia General Assembly, which adjourned March 31, 2021, passed two bills directly affecting the Employees' Retirement System (ERS) and other defined benefit and defined contribution programs to which it administers.

Act 271 (HB 173) amends the process for selecting certain Board member positions for the ERS Board (Board). Specifically, this bill requires the voting Board members to review and consider any individuals nominated by any organization of state retirees consisting of at least 1,000 members when considering any open positions of the two Board persons that are required to be ERS members who have at least five (5) years of creditable service. It also increases the allowable percentage of assets an eligible large retirement system may invest in alternative investments from 5% to 10%. This excludes the Employees' Retirement System of GA (ERS) and the Teachers Retirement System (TRS) whose maximum allowable percentage to invest in alternative assets cannot exceed 5%. This is a nonfiscal retirement bill, effective July 1, 2021.

The Fiscal Year 2022 Budget (Act 371, HB 81) included funds to increase the benefit multiplier for Public School Employees Retirement System (PSERS) retirees and beneficiaries from $15.50 to $15.75. Such increase is effective July 1, 2021.

There are several fiscal retirement bills that were introduced during the 2021 Legislative Session and subsequently passed on to actuarial study during the interim, where a two-year legislative process is required by Georgia law for all bills with a fiscal impact on any State

(continued)

Letter of Transmittal

retirement system. Such fiscal retirement bills that received an actuarial study will be eligible for final passage during the 2022 Session.

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 17 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 2021, the pooled investment fund generated a time-weighted rate of return of 29.36%. 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 93 through 100 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 133 and 134. The latest actuarial valuations as of June 30, 2020 showed the funded ratio of two of the five of the defined benefit plans increasing. The following table shows the change in funding percentage for each of the pension systems:

	FY2019	**FY2020**
ERS	75.6 %	73.8 %
PSERS	84.0 %	83.1 %
LRS	132.8 %	135.7 %
GJRS	107.6 %	106.4 %
GMPF	57.0 %	57.8 %

Further information regarding the funding condition of the pension plans can be found in the Actuarial Section of this report, beginning on page 101.

Excellence in Financial Reporting

For the tenth 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 annual comprehensive financial report for the fiscal year ended June 30, 2020. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized annual comprehensive 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 annual comprehensive 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.

Initiatives

Pandemic Impact

After more than 15 months of near-exclusive teleworking, ERSGA began to move toward its "new normal" office arrangement. Beginning on June 28, ERSGA staff began to come into the office one day per week. The goal is to ultimately have most employees in the office no less than two days per week; however, the rise in COVID cases over the summer delayed those plans. We anticipate that this three days teleworking / two days in the office schedule (for most positions) will be our long-term arrangement going forward. We will not begin to see visitors in our building until sometime in the fall at the earliest.

(continued)

Letter of Transmittal

Increasing the level of telework from a maximum of two days per week pre-pandemic to three days per week is probably the most visible change to our operations. But we will realize a number of other long-term benefits as well. First, our network has been upgraded in numerous ways to accommodate the requirements of having everyone remotely working at the same time, including capacity and security. Second, our disaster response, particularly in the face of a future event that requires us to leave our building, is significantly more robust.

Further, our communications tools are much more flexible and we can interact with all of our constituencies in numerous fashions, both remote and in-person. Finally, since we had to modify some business processes while working remotely, we are much more flexible in both how we accomplish our work and how we can support one another within our teams to make sure our services are uninterrupted.

Technology

ERSGA accomplished many significant technology initiatives throughout the year and cybersecurity continues to be a major area of effort. ERSGA trains employees using internal tools such as KnowB4, FishMe, Wombat and other tools for sending phishing emails and providing instant feedback on results.

Within our Operations group, we completed several major upgrades. Our imaging and workflow solution, IBM's FileNet product, recently went through a major upgrade and moved to fully virtualized servers, while migrating us to the new DataCap product. From an infrastructure perspective, we have installed new stacked DMZ switches providing redundancy in the DMZ network. We also made improvements to our Disaster Recovery (DR) environment, adding a new virtualization farm supporting many of our applications there. Also, ERSGA upgraded our internal certificate solution to a two tiered, disaster tolerant and FIPS 140-2 level 2 compliant solution.

The support center of course worked tirelessly to handle the seismic shift of workers going fully remote and now back to at least a hybrid office solution for now. We procured and deployed monitors and webcams as necessary to facilitate the remote workforce. We are upgrading our board room technology to support hybrid meetings and allowing us to stream the meetings as well. The support center is also working to install web cams in on-site conference rooms to help facilitate our "new normal" hybrid work environment with some workers at home and some in the office.

Our applications team made many significant improvements and enhancements to support our functional staff. Most notably, the pension system (PARIS) had one of its biggest enhancements since it went live in 2007 with the implementation of the Supplemental Guaranteed Lifetime Income process. Most of the pension calculation routines had to be modified to accommodate this new functionality.

In addition, ERSGA implemented a new check printing process which provides ERSGA with control of check layout, design and electronic signatures printed on the check. The new process also reduced check delivery time as checks go from printing directly to the mailer. This was the last process ERSGA had which required use of the State's mainframe. All ERSGA processing has been removed from the State's mainframe and access has been removed.

The team also completed additional enhancements to Retirement Online, which now allow for members to stipulate a specified amount to their beneficiaries. We created a new web module for agencies to report retirees they have rehired. Finally, we implemented 1099 form changes – eliminated custom envelope cost. We now use standard #10 envelopes.

Other Initiatives

We are pleased to be able to report that our status in working outside of the office did not prevent us from making a number of other enhancements to our pension application and business processes over the past 12 months. These are projects that required significant contributions from all areas of the agency, including IT, Quality Assurance, Financial Management, and Member Services.

Following up on last year's Roll Call, ERSGA completed the implementation of the Escalating Annuity benefit option. This allows individuals to take a reduction in their initial monthly benefit upon retirement, but thereafter receive a 2% increase to their monthly payment each year for the rest of their lives. Beneficiary payments, for those who survive the retiree, would also receive the 2% yearly increase.

Effective January 1, 2021, ERS also now offers the Supplemental Guaranteed Lifetime Income option for those who are members of both ERS and the 401(k) and/or 457 plans. Retirees can roll over a portion or all of their 401(k) or 457 plan balances into the pension system and convert the rollover into a lifetime annuity payment. The

(continued)

Letter of Transmittal

annuity payment can be taken in most of the actuarially equivalent forms of benefit that are offered for the regular pension benefit through ERS.

Legislation passed last year allowed for a new form of service purchase for certain members. Prior service purchases had to be made by the member in a single payment; but pursuant to this new legislation ERS implemented the ability for certain members to pay in installments of up to 120 monthly payments.

In a separate project, ERSGA now has the ability to pay lump sum payments via direct deposit, as opposed to only by check. We also made a number of enhancements to existing web functionality in our Employer Portal and Retirement Online areas.

One key goal during our pandemic-enforced time out of the office was to reduce the amount of paper we ask members and retirees to send to us, especially during their retirement application process. So we greatly enhanced our ability to receive required documents via a secure document electronic upload process.

Part of our communication strategy is to make use of videos for our members to review at their leisure on important topics related to their benefit. The first of these that we completed was a New Hire Overview, in coordination with the state's Department of Administrative Services. We are now focused on producing a series of quick-hit, one-minute videos to highlight key retirement program elements. These will be available throughout our web site and will hopefully encourage members to dive deeper into the other, detailed materials available there. The first two of these short videos are complete, the third is in the production process, and another is in pre-production and should be available by the end of the year.

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.

Acknowledgments

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 ERSGA 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, 2020

Christopher P. Morrill

Executive Director/CEO

Public Pension Coordinating Council

Recognition Award for Funding
2020

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)

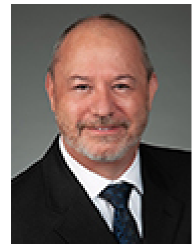
Alan H. Winkle
Program Administrator

Administrative Staff and Organization

James A. Potvin
Executive Director

Angie Surface
Deputy Director

Charles W. Cary, Jr.
CIO - Investment Services



Eddy A. Hicks
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

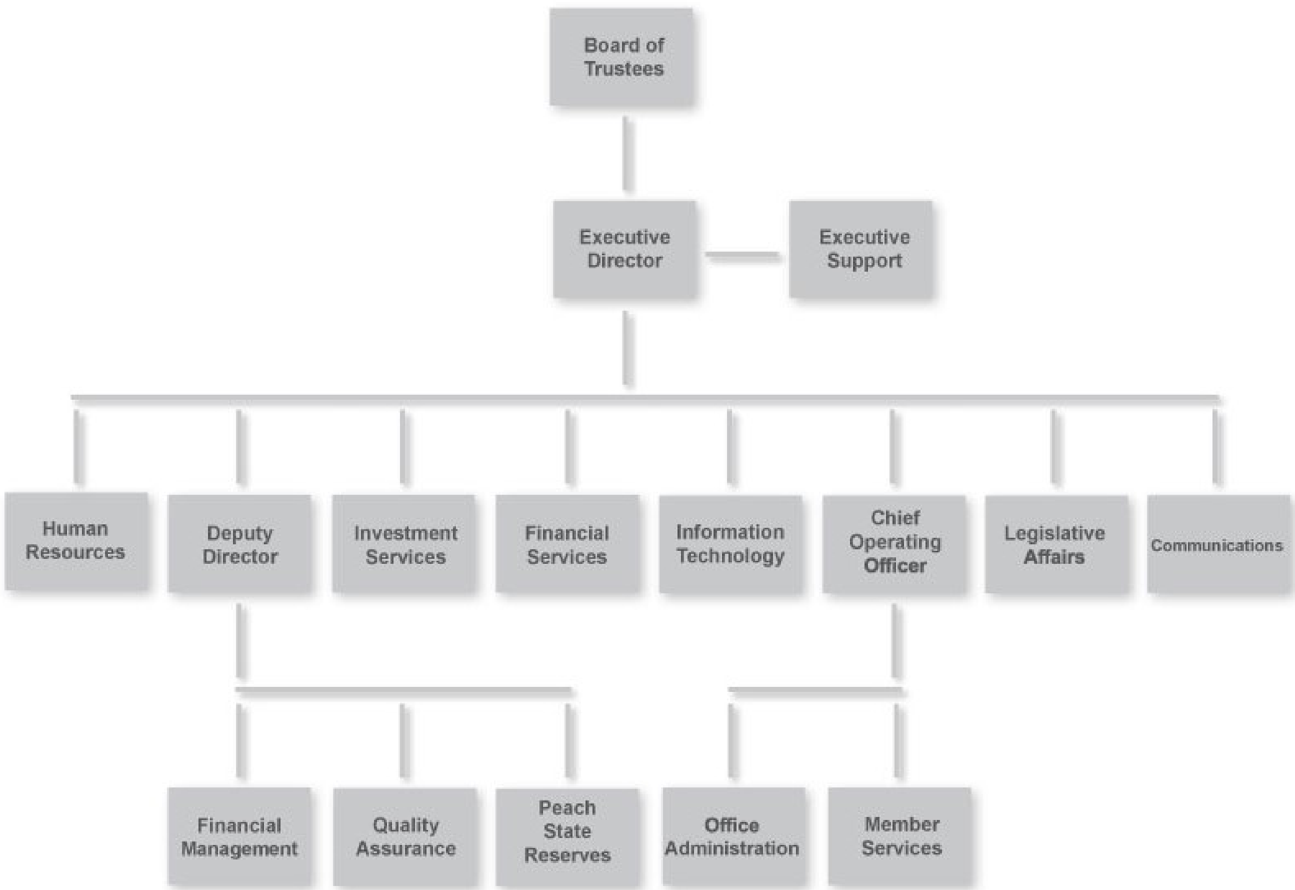
Medical Advisors

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 98 in the Investment Section for a summary of fees paid to investment advisors

Introductory Section

Organizational Chart



Financial Section

Georgia's State Symbols

ERSGA
Employees' Retirement System of Georgia
Serving those who serve Georgia

State Vegetable: Vidalia Onion

During the Great Depression, farmers had tried to grow everything from corn to cotton in Georgia's sandy soil. Onions seemed to hold some promise of better profits. The farmers were surprised when the soil produced sweet onions!

"Those sweet onions from Vidalia" became popular. The Piggly Wiggly chain of grocery stores happened to be headquartered in Vidalia. Recognizing the potential of the peculiar produce, the Piggly Wiggly gladly helped farmers get their onions on the store shelves.

Vidalia onions became the official State Vegetable of Georgia in 1990.

State Tree: Southern Live Oak

Georgia designated the Southern live oak as the official state tree in 1937.

The Southern live oak can grow to massive proportions. Trees grown in the open develop a huge rounded crown, the largest spanning up to 150 feet.

Coastal towns and cities in the south often have these hurricane-resistant trees forming arches over streets in historic districts. Live oaks are the iconic southern tree seen on postcards, draped in Spanish moss.

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, 2021, and the related notes to the financial statements, which collectively comprise the System's basic financial statements for the year then ended as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' 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 relevent to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the fiduciary activities and proprietary activity of the System as of June 30, 2021, 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.

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the management's discussion and analysis on pages 17-24 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 proportionate share of the net OPEB liability, the schedules

(continued)

of the System's contributions to OPEB plans, and the notes to the required supplementary information on pages 72-90, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary and Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's basic financial statements. The schedules of administrative expenses - 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, 2021 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

KPMG LLP

Atlanta, Georgia

September 30, 2021

Management's Discussion and Analysis (Unaudited)

June 30, 2021

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, 2021. 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 (GDCP)
- 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 GDCP, 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,

(continued)

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) S*chedules 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 $4.3 billion, or 23.5%, from $18.5 billion at June 30, 2020 to $22.8 billion at June 30, 2021. The increase in net position was primarily due to positive equity market returns.

- For the year ended June 30, 2021, the total additions to net position were $6.1 billion, compared to $1.9 billion for the year ended June 30, 2020. For the year ended June 30, 2021, the additions consisted of employer, nonemployer contributing entities (nonemployer), and member contributions totaling $917.5 million, insurance premiums of $2.8 million, net investment income of $5.2 billion, and participant fees of $628.0 thousand.

- Net investment income of $5.2 billion in 2021 (comprising interest and dividend income, the change in fair value of investments, and other, reduced by investment expenses) represents a increase of $4.3 billion, or 460.7%, compared to the net investment income of $931.9 million for the year ended June 30, 2020. The change in net investment income was primarily due to larger equity market returns in 2021 compared to 2020.

- The total deductions from net position increased by $9.1 million to $1.804 billion for the year ended June 30, 2021 compared to $1.795 billion for the year ended June 30, 2020. For the year ended June 30, 2021, the increase in deductions primarily consisted of increased death benefit payments.

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

- The net position of the proprietary fund increased by $89.0 million to $408.3 million at June 30, 2021 compared to $319.3 million at June 30, 2020. The increase in net position was primarily due to positive equity market returns.

(continued)

- For the year ended June 30, 2021, total operating loss was $4.4 million compared to $3.1 million for the year ended June 30, 2020. 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 $93.4 million in 2021 represents an increase of $76.8 million, or 463.3%, compared to net investment income allocated from the pooled investment fund of $16.6 million for the year ended June 30, 2020. The change in investment income allocated from the pooled investment fund was primarily due to larger equity market gains in 2021 compared to 2020.

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 25.

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 27.

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 26 and 28, 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 29.

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 30.

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 31.

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 32.

(continued)

Required Supplementary Information begins on page 72. 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 85.

Additional information is presented, beginning on page 91, 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.

(continued)

Financial Analysis of the System

A summary of the System's net position of the fiduciary funds at June 30, 2021 is as follows (dollars in thousands):

	Net position 2021	Net position 2020	Amount change	Percentage change
Assets:				
Cash, cash equivalents, and receivables	$ 491,693	360,965	130,728	36.2 %
Investments	22,790,665	18,495,992	4,294,673	23.2
Capital assets, net	6,388	6,568	(180)	(2.7)
Net OPEB asset	602	569	33	5.8
Total assets	23,289,348	18,864,094	4,425,254	23.5
Deferred outflows of resources	764	681	83	12.2
Liabilities:				
Due to brokers, accounts payable, and insurance premiums payable	31,704	35,902	(4,198)	(11.7)
Due to other funds/plans and participating systems	408,125	319,146	88,979	27.9
Net OPEB liability	2,156	2,350	(194)	(8.3)
Total liabilities	441,985	357,398	84,587	23.7
Deferred inflows of resources	2,227	3,194	(967)	(30.3)
Net position	$ 22,845,900	18,504,183	4,341,717	23.5 %

A summary of the System's net position of the proprietary fund at June 30, 2021 is as follows (dollars in thousands):

	Net position 2021	Net position 2020	Amount change	Percentage change
Assets:				
Cash, cash equivalents, and receivables	$ 244	241	3	1.2 %
Investments	408,125	319,146	88,979	27.9
Total assets	408,369	319,387	88,982	27.9
Liabilities:				
Accounts payable and other	46	47	(1)	(2.1)
Net position	$ 408,323	319,340	88,983	27.9 %

(continued)

Management's Discussion and Analysis (Unaudited)

The following table presents the investment allocation at June 30, 2021, and 2020:

	2021	2020
Asset allocation at June 30 (in percentages):		
Equities:		
Domestic	47.5 %	46.7 %
International	15.8	14.3
Private equity	2.3	2.0
Domestic obligations:		
U.S. treasuries	17.6	19.4
Corporate and other bonds	5.3	6.3
International obligations:		
Corporates	0.9	1.1
Commingled funds	10.6	10.2
Asset allocation at June 30 (in thousands):		
Equities:		
Domestic	$ 10,817,734	$ 8,641,627
International	3,594,250	2,636,114
Private equity	525,508	365,458
Domestic obligations:		
U.S. treasuries	4,008,672	3,584,895
Corporate and other bonds	1,205,160	1,162,433
International obligations:		
Corporates	209,045	212,119
Mutual funds	8,969	7,498
Commingled funds	2,421,327	1,885,848
	$ 22,790,665	$ 18,495,992

The total investment portfolio increased by $4.3 billion, or 23.2%, from 2020, which is due to positive 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, 2021, was 29.4% with a 43.7% return for equities, a 55.6% return for private equity, and a (1.9)% return for fixed income. The five-year annualized rate of return at June 30, 2021, was 12.4% with a 16.4% return for equities, a 20.3% return for private equity, and a 2.6% 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, 2021, was 19.4%, compared to (3.6)% for the fiscal year ended June 30, 2020.

(continued)

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, 2021 is as follows (dollars in thousands):

	Changes in net position		Amount change	Percentage change
	2021	2020		
Additions:				
Employer contributions	$ 665,792	692,253	(26,461)	(3.8)%
Nonemployer contributions	41,552	44,687	(3,135)	(7.0)
Member contributions	210,177	208,018	2,159	1.0
Participant fees	628	451	177	39.2
Insurance premiums	2,817	3,088	(271)	(8.8)
Net investment income	5,224,908	931,916	4,292,992	460.7
Other	16	14	2	14.3
Total additions	6,145,890	1,880,427	4,265,463	226.8
Deductions:				
Benefit payments	1,715,200	1,715,693	(493)	—
Refunds	18,043	17,960	83	0.5
Death benefits	54,680	44,754	9,926	22.2
Administrative expenses	16,250	16,666	(416)	(2.5)
Total deductions	1,804,173	1,795,073	9,100	0.5
Net increase in net position	$ 4,341,717	85,354	4,256,363	4,986.7 %

Additions – The System accumulates resources needed to fund benefit payments through contributions and returns on invested funds. In fiscal year 2021, total contributions decreased $27.4 million, or 2.9%, primarily due to a reduction in active membership offset by modest overall salary increases. Net investment income increased by $4.3 billion, or 460.7%, due primarily to larger equity returns in fiscal year 2021 compared to 2020.

Deductions – For fiscal year 2021, total deductions increased $9.1 million, or 0.5%, primarily because of an increase of $9.9 million, or 22.2%, in death benefit payments. Pension benefit payments were relatively flat with a slight decrease. While there was an increase in benefit payments due to an increase the number of retirees and beneficiaries receiving benefits in 2021, it was offset by one time benefit payments to PSERS, ERS, JRS, and LRS retirees that occurred in 2020. Death benefits increased primarily due to an increase in the number of death claims processed during 2021. Refunds increased by $83.0 thousand, or 0.5%, which was primarily due to an increase in the number of refunds processed during 2021. Administrative expenses decreased by $416.0 thousand over the prior year, or 2.5%, primarily due to decreased contractual services costs.

(continued)

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, 2021 is as follows (dollars in thousands):

		Changes in net position			
		2021	2020	Amount change	Percentage change
Operating revenue:					
Insurance premiums	$	521	547	(26)	(4.8) %
Total operating revenue		521	547	(26)	(4.8)
Operating expenses:					
Death benefits		4,870	3,588	1,282	35.7
Administrative expenses		77	80	(3)	(3.8)
Total operating expenses		4,947	3,668	1,279	34.9
Total operating loss		(4,426)	(3,121)	(1,305)	(41.8)
Nonoperating revenue:					
Allocation of investment income from pooled investment fund, net		93,409	16,584	76,825	463.3
Change in net position	$	88,983	13,463	75,520	561.0 %

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 2021, total premiums earned decreased $26 thousand, or 4.8%, primarily due to a reduction of active membership offset by 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, increased by $76.8 million, or 463.3%, primarily due to larger equity returns in fiscal year 2021 compared to 2020.

Operating expenses – For fiscal year 2021, death benefits increased by $1.3 million, or 35.7%, which was primarily due to an increase in the number of death claims processed during 2021. Administrative expenses decreased by $3.0 thousand over the prior year, or 3.8%, primarily due to decreased 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.

Combining Statement of Fiduciary Net Position

June 30, 2021
(In thousands)

			Defined contribution plans			Custodial fund		
Assets	Defined benefit plans	Pooled Investment Fund	Georgia Defined Contribution Plan	401(k) Plan	457 Plan	Survivors Benefit Fund	Eliminations	Total
Cash and cash equivalents	$ 24,540	337,486	19,379	20,639	1,413	86	—	403,543
Receivables:								
Contributions	33,980	—	907	3,954	425	—	—	39,266
Interest and dividends	—	42,950	411	3	1	—	—	43,365
Due from brokers for securities sold	—	2,670	—	—	—	—	—	2,670
Other	2,142	—	—	475	232	—	—	2,849
Unremitted insurance premiums	412	—	—	—	—	—	(412)	—
Total receivables	36,534	45,620	1,318	4,432	658	—	(412)	88,150
Investments - at fair value:								
Domestic obligations:								
U.S. treasuries	—	3,910,057	98,615	—	—	—	—	4,008,672
Corporate and other bonds	—	1,183,711	21,449	—	—	—	—	1,205,160
International obligations:								
Corporates	—	209,045	—	—	—	—	—	209,045
Equities:								
Domestic	—	10,787,521	—	19,288	10,925	—	—	10,817,734
International	—	3,590,602	—	1,904	1,744	—	—	3,594,250
Private equity	—	525,508	—	—	—	—	—	525,508
Mutual funds	—	—	—	4,697	4,272	—	—	8,969
Commingled funds	—	—	—	1,664,336	756,991	—	—	2,421,327
Equity in pooled investment fund	19,959,227	—	—	—	—	216,712	(20,175,939)	—
Total investments	19,959,227	20,206,444	120,064	1,690,225	773,932	216,712	(20,175,939)	22,790,665
Capital assets, net	6,388	—	—	—	—	—	—	6,388
Net OPEB asset	602	—	—	—	—	—	—	602
Total assets	20,027,291	20,589,550	140,761	1,715,296	776,003	216,798	(20,176,351)	23,289,348
Deferred outflows of resources	764	—	—	—	—	—	—	764
Liabilities								
Accounts payable and other	21,679	2,781	525	2,623	1,330	—	—	28,938
Due to brokers for securities purchased	—	2,705	—	—	—	—	—	2,705
Insurance premiums payable	473	—	—	—	—	—	(412)	61
Due to participating systems	—	20,584,064	—	—	—	—	(20,175,939)	408,125
Net OPEB liability	2,156	—	—	—	—	—	—	2,156
Total liabilities	24,308	20,589,550	525	2,623	1,330	—	(20,176,351)	441,985
Deferred inflows of resources	2,227	—	—	—	—	—	—	2,227
Net position restricted for:								
Pensions and OPEB	$ 20,001,520	—	140,236	1,712,673	774,673	—	—	22,629,102
Survivors Benefit Fund	$ —	—	—	—	—	216,798	—	216,798

See accompanying notes to financial statements.

Defined Benefit Plans - Combining Statement of Fiduciary Net Position

June 30, 2021
(In thousands)

	Defined benefit pension plans							Defined benefit OPEB plan	
Assets	**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**	**Defined benefit plans total**
Cash and cash equivalents	$ 23,071	232	78	663	52	11	2	431	24,540
Receivables:									
Contributions	33,336	—	—	644	—	—	—	—	33,980
Interest and dividends	—	—	—	—	—	—	—	—	—
Due from brokers for securities sold	—	—	—	—	—	—	—	—	—
Other	1,848	293	1	—	—	—	—	—	2,142
Unremitted insurance premiums	—	—	—	—	—	—	—	412	412
Total receivables	35,184	293	1	644	—	—	—	412	36,534
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	16,506,100	1,200,342	42,744	604,938	38,710	—	—	1,566,393	19,959,227
Total investments	16,506,100	1,200,342	42,744	604,938	38,710	—	—	1,566,393	19,959,227
Capital assets, net	6,388	—	—	—	—	—	—	—	6,388
Net OPEB asset	602	—	—	—	—	—	—	—	602
Total assets	16,571,345	1,200,867	42,823	606,245	38,762	11	2	1,567,236	20,027,291
Deferred outflows of resources	764	—	—	—	—	—	—	—	764
Liabilities									
Accounts payable and other	19,357	897	109	811	85	5	—	415	21,679
Due to brokers for securities purchased	—	—	—	—	—	—	—	—	—
Insurance premiums payable	464	—	1	8	—	—	—	—	473
Due to participating systems	—	—	—	—	—	—	—	—	—
Net OPEB liability	2,156	—	—	—	—	—	—	—	2,156
Total liabilities	21,977	897	110	819	85	5	—	415	24,308
Deferred inflows of resources	2,227	—	—	—	—	—	—	—	2,227
Net position restricted for pensions and OPEB	$ 16,547,905	1,199,970	42,713	605,426	38,677	6	2	1,566,821	20,001,520

See accompanying notes to financial statements.

Combining Statement of Changes in Fiduciary Net Position

Year ended June 30, 2021
(In thousands)

			Defined contribution plans			Custodial fund	
	Defined benefit plans	Pooled Investment Fund	Georgia Defined Contribution Plan	401(k) Plan	457 Plan	Survivors Benefit Fund	Total
Additions:							
Contributions:							
Employer	$ 613,769	—	—	52,023	—	—	665,792
Nonemployer	41,552	—	—	—	—	—	41,552
Member	42,729	—	15,759	132,123	19,566	—	210,177
Participant fees	—	—	—	567	61	—	628
Insurance premiums	2,817	—	—	—	—	—	2,817
Administrative expense allotment	16	—	—	—	—	—	16
Investment income:							
Net increase in fair value of investments	—	4,463,221	(4,304)	373,815	162,826	—	4,995,558
Interest and dividends	—	343,090	2,508	38	12	—	345,648
Other	—	—	—	262	992	—	1,254
Less investment expenses	(10,299)	(10,490)	(71)	(2,340)	(872)	—	(24,072)
Allocation of investment income	4,652,988	(4,795,821)	—	—	—	49,353	(93,480)
Net investment income	4,642,689	—	(1,867)	371,775	162,958	49,353	5,224,908
Total additions	5,343,572	—	13,892	556,488	182,585	49,353	6,145,890
Deductions:							
Benefit payments	1,535,632	—	9	127,352	52,207	—	1,715,200
Refunds of member contributions and interest	7,342	—	10,701	—	—	—	18,043
Death benefits	54,680	—	—	—	—	—	54,680
Administrative expenses	11,123	—	902	3,554	671	—	16,250
Total deductions	1,608,777	—	11,612	130,906	52,878	—	1,804,173
Change in net position	3,734,795	—	2,280	425,582	129,707	49,353	4,341,717
Net position restricted for pension and OPEB and SBF:							
Beginning of year	16,266,725	—	137,956	1,287,091	644,966	167,445	18,504,183
End of year	$ 20,001,520	—	140,236	1,712,673	774,673	216,798	22,845,900

See accompanying notes to financial statements.

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

Year ended June 30, 2021
(In thousands)

	Defined benefit pension plans							Defined benefit OPEB plan	
	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	Defined benefit plans total
Additions:									
Contributions:									
Employer	$ 606,919	—	—	3,830	2,684	302	34	—	613,769
Nonemployer	9,048	30,264	—	2,240	—	—	—	—	41,552
Member	35,027	2,222	290	5,190	—	—	—	—	42,729
Participant fees	—	—	—	—	—	—	—	—	—
Insurance premiums	—	—	—	—	—	—	—	2,817	2,817
Administrative expense allotment	10	—	—	—	—	3	3	—	16
Investment income:									
Net increase in fair value of investments	—	—	—	—	—	—	—	—	—
Interest and dividends	—	—	—	—	—	—	—	—	—
Other	—	—	—	—	—	—	—	—	—
Less investment expenses	(9,027)	(419)	(17)	(202)	(7)	—	—	(627)	(10,299)
Allocation of investment income	3,852,608	278,124	9,945	140,305	8,716	—	—	363,290	4,652,988
Net investment income	3,843,581	277,705	9,928	140,103	8,709	—	—	362,663	4,642,689
Total additions	4,494,585	310,191	10,218	151,363	11,393	305	37	365,480	5,343,572
Deductions:									
Benefit payments	1,434,775	66,415	1,720	30,958	1,428	302	34	—	1,535,632
Refunds of member contributions and interest	6,604	633	42	63	—	—	—	—	7,342
Death benefits	—	—	—	—	—	—	—	54,680	54,680
Administrative expenses	7,587	1,421	311	846	255	3	3	697	11,123
Total deductions	1,448,966	68,469	2,073	31,867	1,683	305	37	55,377	1,608,777
Change in net position	3,045,619	241,722	8,145	119,496	9,710	—	—	310,103	3,734,795
Net position restricted for pensions and OPEB:									
Beginning of year	13,502,286	958,248	34,568	485,930	28,967	6	2	1,256,718	16,266,725
End of year	$ 16,547,905	1,199,970	42,713	605,426	38,677	6	2	1,566,821	20,001,520

See accompanying notes to financial statements.

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

June 30, 2021
(In thousands)

Assets:		
Cash and cash equivalents	$	183
Receivables:		
Unremitted insurance premiums		61
Investments - at fair value:		
Equity share of pooled investment fund		408,125
Total assets		408,369
Liabilities:		
Accounts payable and other		46
Total liabilities		46
Total net position	$	408,323

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, 2021
(In thousands)

Operating revenue:		
Insurance premiums	$	521
Total operating revenue		521
Operating expenses:		
Death benefits		4,870
Administrative expenses		77
Total operating expenses		4,947
Total operating loss		(4,426)
Nonoperating revenues (expenses):		
Allocation of investment income from pooled investment fund		93,479
Investment expenses		(70)
Total nonoperating revenues		93,409
Change in net position		88,983
Total net position:		
Beginning of year		319,340
End of year	$	408,323

See accompanying notes to financial statements.

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

Year ended June 30, 2021
(In thousands)

Cash flows from operating activities:		
Insurance premiums received	$	528
Death benefits paid		(4,870)
Administrative fees paid		(77)
Net cash used in operating activities		(4,419)
Cash flows from investing activities:		
Withdrawals from pooled investment fund		4,500
Investment expenses paid		(70)
Net cash provided by investing activities		4,430
Net increase in cash and cash equivalents		11
Cash and cash equivalents, beginning of year		172
Cash and cash equivalents, end of year		183
Reconciliation of operating loss to net cash used in operating activities:		
Operating loss		(4,426)
Changes in assets and liabilities:		
Unremitted Insurance Premiums		7
Accounts payable and other		—
Net cash used in operating activities	$	(4,419)

See accompanying notes to financial statements.

(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 (GDCP), 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 406 employers and 1 nonemployer contributing entity participating in the plan during 2021. Total participation in ERS at June 30, 2021 was 174,163 as detailed in the following chart:

ERS Membership as of June 30, 2021

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,

(continued)

regardless of age. Additionally, there are some provisions allowing for early retirement after 25 years of creditable service for members under age 60.

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 2021 were based on the June 30, 2018 actuarial valuation for the Old Plan, New Plan, and GSEPS, as follows:

	Old Plan	New Plan	GSEPS
Employer and nonemployer:			
Normal	1.45 %	6.20 %	3.11 %
Employer paid for member	4.75 %	— %	— %
Accrued liability	18.46 %	18.46 %	18.46 %
Total	24.66 %	24.66 %	21.57 %

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 2021. Total participation in PSERS at June 30, 2021 was 103,039 as detailed in the chart on the following page:

(continued)

PSERS Membership as of June 30, 2021

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, 2021 were $865.85 per active member and were based on the June 30, 2018 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 2021. Total participation in LRS at June 30, 2021 was 673 as detailed in the following chart :

LRS Membership as of June 30, 2021

(continued)

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, 2021 based on the June 30, 2018 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, district attorneys of the State of Georgia, and certain other employees of the General Assembly 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 91 employers and 1 nonemployer contributing entity participating in the plan during 2021. Total participation in GJRS at June 30, 2021 was 1,060 as detailed in the following chart:

GJRS Membership as of June 30, 2021

(continued)

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 2021 were based on the June 30, 2018 actuarial valuation, as follows:

Employer and nonemployer:	
Normal	13.70 %
Accrued liability	(5.32)
Total	8.38 %

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, 2021, GMPF had 1,362 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)

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, 2021 were $194.43 per active member and were based on the June 30, 2018 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, 2021, 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, 2021, 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

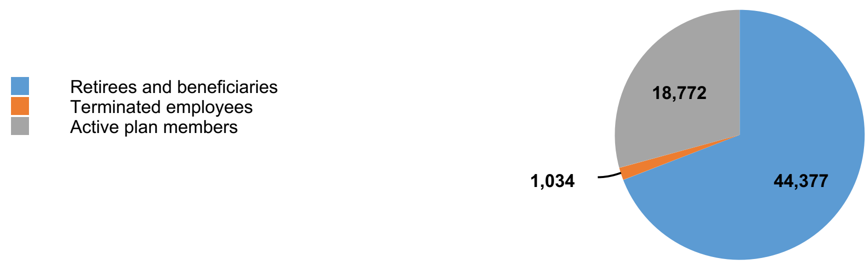
Employer contributions are not actuarially determined, but are provided on an as-needed basis to fund current benefits.

(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)

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 412 employers and 1 nonemployer contributing entity participating in the plan during 2021. Total participation in SEAD-OPEB at June 30, 2021 was 64,183 as detailed in the following chart:

SEAD Membership as of June 30, 2021



Employee contribution rates as a percentage of member's salaries for the fiscal year ended June 30, 2021 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, 2021.

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 65 employers participating in the plan during 2021. There were 132,122 members as of June 30, 2021.

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

(continued)

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.

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, however, on July 1, 2020, Fayette County Board of Education discontinued participation; 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 $285,000 base salary in calendar year 2020 and $290,000 in calendar year 2021). 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.

(continued)

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:

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, 2021, the 401(k) Plan had 71,722 participants with a balance. A total of 459 employers transmitted contributions to the plan during 2021.

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.

(continued)

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 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, 2021, the 457 Plan had 12,038 participants with a balance. A total of 333 employers transmitted contributions to the plan during 2021.

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 412 employers and 1 nonemployer contributing entity participating in the plan during 2021. As of June 30, 2021, there were 18,772 active plan members in SEAD-Active.

Employee contribution rates as a percentage of member's salaries for the fiscal year ended June 30, 2021 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, 2021.

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.

(continued)

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% 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

(continued)

market prices provided by independent pricing sources. Global foreign exchange holdings are translated 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, 2021:

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

Approximately 17.6% 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, 2021, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 19.4%. 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. The following table summarizes the estimated useful life by class:

Capital Asset Class	Estimated Useful Life
Buildings	40 years
Furniture and fixtures	5-7 years
Computer equipment	3-7 years
Computer software	3-10 years

(continued)

(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.

(g) New Accounting Pronouncements

Pronouncements effective for the 2021 financial statements:

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. There are no applicable reporting requirements for the System related to this Statement.

In March 2020, the GASB issued Statement No. 93, *Replacement of Interbank Offered Rates* effective for fiscal years beginning after June 15, 2020, except for the removal of LIBOR as a benchmark interest rate that is effective for fiscal years ending after December 31, 2021. 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). There are no applicable reporting requirements for the System related to this Statement.

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 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.

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

(continued)

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 ending after December 31, 2021 for the removal of LIBOR as a benchmark interest rate. The objective of this Statement is to address the accounting and financial reporting implications that result from the replacement of LIBOR. There are no applicable reporting requirements for the System related to this Statement.

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.

In June 2020, the GASB issued Statement No. 97, *Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans - an amendment of GASB Statements No. 14 and No. 84, and a supersession of GASB Statement No. 32,* effective for fiscal years beginning after June 15, 2021. The objectives of this Statement are to increase consistency and comparability related to the reporting of fiduciary component units when a potential component unit does not have a governing board, mitigate the costs associated with the reporting of defined contribution pension plans or other postemployment benefit plans as fiduciary component units, and enhance the relevance, consistency, and comparability for Internal Revenue Code Section 457 deferred compensation plans. The System is in the process of evaluating the impact of this pronouncement on its financial statements.

(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 $403.5 million at June 30, 2021, with actual bank balances of $403.7 million. The System's bank balances of $367.9 million are fully insured through the Federal Deposit Insurance Corporation, an independent agency of the U.S. government.

(continued)

The remaining bank deposits of $35.8 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.

- 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-l and/or A-l 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-l and/or A-l 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, 2021, the System held U.S. Treasury bonds of approximately $4.0 billion.

- U.S. and foreign corporate obligations. At June 30, 2021, the System held U.S. corporate bonds of approximately $1.2 billion and international corporate bonds of approximately $209.0 million.

- Obligations unconditionally guaranteed by agencies of the U.S. government. At June 30, 2021, the System did not hold agency bonds.

- Private placements are authorized under the same general restrictions applicable to corporate bonds. At June 30, 2021, 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.

(continued)

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, 2021, the System held domestic equities of approximately $10.8 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, 2021, the System held international equities of approximately $1.7 billion and ADRs of approximately $1.9 billion, excluding the 401(k) and 457 plans.
- 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, 2021, the System held private equity investments of approximately $525.5 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, 2021, the deferred compensation plans held commingled funds of approximately $2.4 billion, mutual funds of approximately $9.0 million, domestic equities of approximately $30.2 million, and international equities of approximately $3.6 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, 2021, were as follows (dollars in thousands):

	Fair value	Units
Employees' Retirement System	$ 16,506,100	2,285,540
Public School Employees Retirement System	1,200,342	166,207
Legislative Retirement System	42,744	5,919
Georgia Judicial Retirement System	604,938	83,764
Georgia Military Pension Fund	38,710	5,360
State Employees' Assurance Department - OPEB	1,566,393	216,893
Survivors Benefit Fund	216,712	30,007
Total defined benefit plans	20,175,939	2,793,690
State Employees' Assurance Department - Active	408,125	56,512
Total in pooled investment funds	$ 20,584,064	2,850,202

(continued)

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.

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 on the next page shows the fair value leveling of the System's investments (in thousands):

(continued)

Investments by fair value level	Fair value measures using: Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Total
Equities:				
Domestic	$ 10,817,734	—	—	10,817,734
International	3,578,801	15,449	—	3,594,250
Obligations:				
Domestic:				
U.S. treasuries	4,008,672	—	—	4,008,672
Corporate bonds	—	1,205,160	—	1,205,160
International:				
Corporate bonds	—	209,045	—	209,045
Mutual funds	8,969	—	—	8,969
Commingled funds	103,605	2,317,722	—	2,421,327
Total investments by fair value level	$ 18,517,781	3,747,376	—	22,265,157
Investments measured at NAV*				
Private equity funds				525,508
Total investments				$ 22,790,665

*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*.

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.

(continued)

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, 2021, are as follows (in thousands):

	Investments measured at NAV	Unfunded commitments	Redemption frequency (if currently eligible)	Redemption notice period
Private equity funds	$ 525,508	255,376	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" by one of the rating organizations. 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, 2021, are shown in the table on the following page (in thousands).

(continued)

Quality Ratings of Fixed Income Investments Held at June 30, 2021		
Investment type	**Standard and Poor's/ Moody's quality rating**	**June 30, 2021 fair value**
Domestic obligations:		
U.S. treasuries		$ 4,008,672
Corporates	AAA/Aaa	239,044
	AA/Aa	309,740
	AA/A	101,930
	A/A	363,035
	A/Baa	100,373
	BBB/A	91,038
Total domestic corporates		1,205,160
International obligations:		
Corporates	AA/A	103,916
	A/Aa	105,129
Total international corporates		209,045
Total fixed income investments		$ 5,422,877

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, 2021, 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).

(continued)

Effective Duration of Fixed Income Assets			
Fixed income type	Fair value June 30, 2021	Percent of all fixed income assets	Effective duration (years)
Domestic obligations:			
U.S. treasuries	$ 4,008,672	73.9 %	5.9
Corporates	1,205,160	22.2	5.0
International obligations:			
Corporates	209,045	3.9	4.4
Total	$ 5,422,877	100 %	5.7

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, 2021, 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).

(continued)

Currency	Cash/cash equivalents	Equities	Fixed income	Total
International Investment Securities at Fair Value as of June 30, 2021				
Australian Dollar	$ —	52,985	—	52,985
Brazilian Real	—	31,438	—	31,438
British Pound Sterling	—	118,917	—	118,917
Canadian Dollar	—	46,566	—	46,566
Chilean Peso	—	2,349	—	2,349
Chinese Renminbi Yuan	—	4,221	—	4,221
Colombian Peso	—	734	—	734
Czech Koruna	—	1,807	—	1,807
Danish Krone	—	26,900	—	26,900
Euro	—	426,470	—	426,470
Hong Kong Dollar	—	194,224	—	194,224
Indian Rupee	—	87,441	—	87,441
Indonesian Rupiah	—	4,148	—	4,148
Israeli Shekel	—	2,989	—	2,989
Japanese Yen	—	273,882	—	273,882
Malaysian Ringgit	—	10,838	—	10,838
Mexican Peso	—	8,164	—	8,164
New Taiwan Dollar	—	50,569	—	50,569
New Zealand Dollar	—	1,247	—	1,247
Norwegian Krone	—	2,955	—	2,955
Philippine Peso	2	3,960	—	3,962
Polish Zloty	—	2,988	—	2,988
Qatari Riyal	—	3,850	—	3,850
Singapore Dollar	—	22,144	—	22,144
South African Rand	—	27,403	—	27,403
South Korean Won	—	106,975	—	106,975
Swedish Krona	—	65,540	—	65,540
Swiss Franc	—	46,099	—	46,099
Thailand Baht	—	15,141	—	15,141
UAE Dirham	—	7,320	—	7,320
Total holdings subject to foreign currency risk	2	1,650,264	—	1,650,266
Investment securities payable in U.S. dollars	—	1,940,338	209,045	2,149,383
Total international investment securities - at fair value	$ 2	3,590,602	209,045	3,799,649

(continued)

(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 $2.4 billion at fair value at June 30, 2021. The collateral value was equal to 102.4% of the loaned securities' value at June 30, 2021. 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, 2021 (dollars in thousands):

	Balance at June 30, 2020	Additions	Disposals	Balance at June 30, 2021
Capital assets:				
Land	$ 4,350	—	—	4,350
Building	2,800	—	—	2,800
Equipment	2,241	97	(253)	2,085
Computer software	14,345	—	—	14,345
	23,736	97	(253)	23,580
Accumulated depreciation for:				
Building	(1,120)	(70)	—	(1,190)
Equipment	(1,703)	(207)	253	(1,657)
Computer software	(14,345)	—	—	(14,345)
	(17,168)	(277)	253	(17,192)
Capital assets, net	$ 6,568	(180)	—	6,388

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(7) *Commitments*

As of June 30, 2021, the System had committed to fund certain private equity partnerships for a total capital commitment of approximately $683.3 million. Of this amount, approximately $255.4 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, 2021 were as follows (dollars in thousands):

Total pension liability	$ 18,886,809
Plan fiduciary net position	16,547,905
Employers' and nonemployer net pension liability	$ 2,338,904
Plan fiduciary net position as a percentage of the total pension liability	87.62 %

Actuarial assumptions: The total pension liability was determined by an actuarial valuation as of June 30, 2020, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.5%
Salary increases	3.00 - 6.75%, including inflation
Investment rate of return	7.00%, net of pension plan investment expense, including inflation

Mortality rates are as follows:

- The Pub-2010 General Employee Table, with no adjustments, projected generationally with the MP-2019 scale is used for both males and females while in active service.
- The Pub-2010 Family of Tables projected generationally with the MP-2019 Scale and with further adjustments are used for post-retirement mortality assumptions as follows:

Participant Type	Membership Table	Set Forward (+)/ Setback (-)	Adjustment To Rates
Service Retirees	General Healthy Annuitant	Male: +1; Female: +1	Male: 105%; Female: 108%
Disability Retirees	General Disabled	Male: -3; Female: 0	Male: 103%; Female: 106%
Beneficiaries	General Contingent Survivors	Male: +2; Female: +2	Male: 106%; Female: 105%

The actuarial assumptions used in the June 30, 2020 valuation were based on the results of an actuarial experience study for the period July 1, 2014 – June 30, 2019. In the experience study, the long-term assumed investment rate of return of 7.00% and the assumed annual rate of inflation of 2.50% were recommended by the actuary and adopted by the Board. Therefore, a change in assumptions due to the reduction in the assumed investment rate of return from 7.30% to 7.00% and the assumed annual rate of inflation from 2.75% to 2.50% will be reflected, along with all other assumption changes in the calculation of the total pension liability.

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

(continued)

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 %	(1.50) %
Domestic large equities	46.40	9.20
Domestic small equities	1.10	13.40
International developed market equities	11.70	9.20
International emerging market equities	5.80	10.40
Alternatives	5.00	10.60
Total	100.00 %	

* Rates shown are net of inflation

Discount rate: The discount rate used to measure the total pension liability was 7.00%. 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 7.00%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate (dollars in thousands):

	1% Decrease (6.00%)	Current discount rate (7.00%)	1% Increase (8.00%)
Employers' and nonemployer net pension liability	$4,285,987	2,338,904	692,212

Actuarial valuation date: June 30, 2020 is the actuarial valuation date upon which the total pension liability is based. An expected total pension liability is determined as of June 30, 2021 using standard roll-forward techniques for the actual total pension liability both before and after the assumption changes due to the experience study and the change in the assumed investment rate of return. The difference between these two amounts is shown as a change in assumptions. 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, 2021 were as follows (dollars in thousands):

(continued)

Total pension liability	$ 1,224,416
Plan fiduciary net position	1,199,970
Employers' and nonemployer net pension liability	$ 24,446
Plan fiduciary net position as a percentage of the total pension liability	98.00 %

Actuarial assumptions: The total pension liability was determined by an actuarial valuation as of June 30, 2020, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.50%
Salary increases	n/a
Investment rate of return	7.00%, net of pension plan investment expense, including inflation
Cost-of-living adjustment	1.5% semi-annually

Mortality rates are as follows:
- The Pub-2010 General Employee Table, with no adjustments, projected generationally with the MP-2019 scale is used for both males and females while in active service.
- The Pub-2010 Family of Tables projected generationally with the MP-2019 Scale and with further adjustments are used for post-retirement mortality assumptions as follows:

Participant Type	Membership Table	Set Forward (+)/ Setback (-)	Adjustment To Rates
Service Retirees	General Healthy Below-Median Annuitant	Male: +2; Female: +2	Male: 101%; Female: 103%
Disability Retirees	General Disabled	Male: -3; Female: 0	Male: 103%; Female: 106%
Beneficiaries	General Below-Median Contingent Survivors	Male: +2; Female: +2	Male: 104%; Female: 99%

The actuarial assumptions used in the June 30, 2020 valuation were based on the results of an actuarial experience study for the period July 1, 2014 – June 30, 2019. In the experience study, the long-term assumed investment rate of return of 7.00% and the assumed annual rate of inflation of 2.50% were recommended by the actuary and adopted by the Board. Therefore, a change in assumptions due to the reduction in the assumed investment rate of return from 7.30% to 7.00% and the assumed annual rate of inflation from 2.75% to 2.50% will be reflected, along with all other assumption changes in the calculation of the total pension liability.

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:

(continued)

Asset class	Target allocation	Long-term expected real rate of return*
Fixed income	30.00 %	(1.50) %
Domestic large equities	46.40	9.20
Domestic small equities	1.10	13.40
International developed market equities	11.70	9.20
International emerging market equities	5.80	10.40
Alternatives	5.00	10.60
Total	100.00 %	

* Rates shown are net of inflation.

Discount rate: The discount rate used to measure the total pension liability was 7.00%. 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 presents the net pension liability, calculated using the discount rate of 7.00%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate (dollars in thousands):

	1% Decrease (6.00%)	Current discount rate (7.00%)	1% Increase (8.00%)
Employers' and nonemployer net pension liability (asset)	$168,095	24,446	(95,280)

Actuarial valuation date: June 30, 2020 is the actuarial valuation date upon which the total pension liability is based. An expected total pension liability is determined as of June 30, 2021 using standard roll-forward techniques for the actual total pension liability both before and after the assumption changes due to the experience study and the reduction in the assumed investment rate of return. 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, 2021 were as follows (dollars in thousands):

Total pension liability	$	26,695
Plan fiduciary net position		42,713
Employer's net pension liability (asset)	$	(16,018)
Plan fiduciary net position as a percentage of the total pension liability		160.00 %

(continued)

Actuarial assumptions: The total pension liability was determined by an actuarial valuation as of June 30, 2020, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.5%
Salary increases	n/a
Investment rate of return	7.00%, net of pension plan investment expense, including inflation
Cost-of-living adjustment	1.5% semi-annually

Mortality rates are as follows:

- The Pub-2010 General Employee Table, with no adjustments, projected generationally with the MP-2019 scale is used for both males and females while in active service.
- The Pub-2010 Family of Tables projected generationally with the MP-2019 Scale and with further adjustments are used for post-retirement mortality assumptions as follows:

Participant Type	Membership Table	Set Forward (+)/ Setback (-)	Adjustment To Rates
Service Retirees	General Healthy Annuitant	Male: +1; Female: +1	Male: 105%; Female: 108%
Disability Retirees	General Disabled	Male: -3; Female: 0	Male: 103%; Female: 106%
Beneficiaries	General Contingent Survivors	Male: +2; Female: +2	Male: 106%; Female: 105%

The actuarial assumptions used in the June 30, 2020 valuation were based on the results of an actuarial experience study for the period July 1, 2014 – June 30, 2019. In the experience study, the long-term assumed investment rate of return of 7.00% and the assumed annual rate of inflation of 2.50% were recommended by the actuary and adopted by the Board. Therefore, a change in assumptions due to the reduction in the assumed investment rate of return from 7.30% to 7.00% and the assumed annual rate of inflation from 2.75% to 2.50% will be reflected, along with all other assumption changes in the calculation of the total pension liability.

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 %	(1.50)%
Domestic large equities	46.40	9.20
Domestic small equities	1.10	13.40
International developed market equities	11.70	9.20
International emerging market equities	5.80	10.40
Alternatives	5.00	10.60
Total	100.00 %	

* Rates shown are net of inflation.

(continued)

Discount rate: The discount rate used to measure the total pension liability was 7.00%. 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 7.00%, 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 (6.00%) or 1-percentage-point higher (8.00%) than the current rate (dollars in thousands):

	1% Decrease (6.00%)	Current discount rate (7.00%)	1% Increase (8.00%)
Employers' and nonemployer net pension liability (asset)	$(13,273)	(16,018)	(18,334)

Actuarial valuation date: June 30, 2020 is the actuarial valuation date upon which the total pension liability is based. An expected total pension liability is determined as of June 30, 2021 using standard roll-forward techniques for the actual total pension liability both before and after the assumption changes due to the experience study and the change in the assumed investment rate of return. 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.

(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, 2021 were as follows (dollars in thousands):

Total pension liability	$ 485,387
Plan fiduciary net position	605,426
Employer's net pension liability (asset)	$ (120,039)
Plan fiduciary net position as a percentage of the total pension liability	124.73 %

Actuarial assumptions: The total pension liability was determined by an actuarial valuation as of June 30, 2020, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.5%
Salary increases	3.75%, including inflation
Investment rate of return	7.00%, net of pension plan investment expense, including inflation

Mortality rates are as follows:

- The Pub-2010 General Employee Table, with no adjustments, projected generationally with the MP-2019 scale is used for both males and females while in active service.
- The Pub-2010 Family of Tables projected generationally with the MP-2019 Scale and with further adjustments are used for post-retirement mortality assumptions in the table on the following page:

(continued)

Participant Type	Membership Table	Set Forward (+)/ Setback (-)	Adjustment To Rates
Service Retirees	General Healthy Annuitant	Male: +1; Female: +1	Male: 105%; Female: 108%
Disability Retirees	General Disabled	Male: -3; Female: 0	Male: 103%; Female: 106%
Beneficiaries	General Contingent Survivors	Male: +2; Female: +2	Male: 106%; Female: 105%

The actuarial assumptions used in the June 30, 2020 valuation were based on the results of an actuarial experience study for the period July 1, 2014 – June 30, 2019. In the experience study, the long-term assumed investment rate of return of 7.00% and the assumed annual rate of inflation of 2.50% were recommended by the actuary and adopted by the Board. Therefore, a change in assumptions due to the reduction in the assumed investment rate of return from 7.30% to 7.00% and the assumed annual rate of inflation from 2.75% to 2.50% will be reflected, along with all other assumption changes in the calculation of the total pension liability.

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:

Asset class	Target allocation	Long-term expected real rate of return*
Fixed income	30.00 %	(1.50)%
Domestic large equities	46.40	9.20
Domestic small equities	1.10	13.40
International developed market equities	11.70	9.20
International emerging market equities	5.80	10.40
Alternatives	5.00	10.60
Total	100.00 %	

* Rates shown are net of inflation.

Discount rate: The discount rate used to measure the total pension liability was 7.00%. 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 7.00%, 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 (6.00%) or 1-percentage-point higher (8.00%) than the current rate (dollars in thousands):

(continued)

	1% Decrease (6.00%)	Current discount rate (7.00%)	1% Increase (8.00%)
Employers' and nonemployer net pension liability (asset)	$(73,153)	(120,039)	(160,567)

Actuarial valuation date: June 30, 2020 is the actuarial valuation date upon which the total pension liability is based. An expected total pension liability is determined as of June 30, 2021 using standard roll-forward techniques for the actual total pension liability both before and after the assumption changes due to the experience study and the change in the assumed investment rate of return. The difference between these two amounts is shown as a change in assumptions. 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, 2021 were as follows (dollars in thousands):

Total pension liability	$ 54,739
Plan fiduciary net position	38,677
Employer's net pension liability	$ 16,062
Plan fiduciary net position as a percentage of the total pension liability	70.66 %

Actuarial assumptions: The total pension liability was detemined by an actuarial valuation as of June 30, 2020, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.5%
Salary increases	n/a
Investment rate of return	7.00%, net of pension plan investment expense, including inflation

Mortality rates are as follows:

- The Pub-2010 General Employee Table, with no adjustments, projected generationally with the MP-2019 scale is used for both males and females while in active service.
- The Pub-2010 Family of Tables projected generationally with the MP-2019 Scale and with further adjustments are used for post-retirement mortality assumptions as follows:

Participant Type	Membership Table	Set Forward (+)/ Setback (-)	Adjustment To Rates
Service Retirees	General Healthy Annuitant	Male: +1; Female: +1	Male: 105%; Female: 108%

The actuarial assumptions used in the June 30, 2020 valuation were based on the results of an actuarial experience study for the period July 1, 2014 – June 30, 2019. In the experience study, the long-term assumed investment rate of return of 7.00% and the assumed annual rate of inflation of 2.50% were recommended by the actuary and adopted by the Board. Therefore, a change in assumptions due to the reduction in the assumed

(continued)

investment rate of return from 7.30% to 7.00% and the assumed annual rate of inflation from 2.75% to 2.50% will be reflected, along with all other assumption changes in the calculation of the total pension liability.

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 %	(1.50)%
Domestic large equities	46.40	9.20
Domestic small equities	1.10	13.40
International developed market equities	11.70	9.20
International emerging market equities	5.80	10.40
Alternatives	5.00	10.60
Total	100.00 %	

* Rates shown are net of inflation.

Discount rate: The discount rate used to measure the total pension liability was 7.00%. 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 7.00%, 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 (6.00%) or 1-percentage-point higher (8.00%) than the current rate (dollars in thousands):

	1% Decrease (6.00%)	Current discount rate (7.00%)	1% Increase (8.00%)
Employers' net pension liability	$24,082	16,062	9,611

Actuarial valuation date: June 30, 2020 is the actuarial valuation date upon which the total pension liability is based. An expected total pension liability is determined as of June 30, 2021 using standard roll-forward techniques for the actual total pension liability both before and after the assumption changes due to the experience study and the change in the assumed investment rate of return.The difference between these two amounts is shown as a change in assumptions 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, 2021 were as follows (dollars in thousands):

Total OPEB liability	$ 950,995
Plan fiduciary net position	1,566,821
Employers' net OPEB liability (asset)	$ (615,826)
Plan fiduciary net position as a percentage of the total OPEB liability	164.76 %

Actuarial assumptions: The total OPEB liability was determined by an actuarial valuation as of June 30, 2020, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.5%
Salary increases:	
ERS	3.00% - 6.75%
GJRS	3.75%
LRS	n/a
Investment rate of return	7.00%, net of OPEB plan investment expense, including inflation
Healthcare cost trend rate	n/a

Mortality rates are as follows:
- The Pub-2010 General Employee Table, with no adjustments, projected generationally with the MP-2019 scale is used for both males and females while in active service.
- The Pub-2010 Family of Tables projected generationally with the MP-2019 Scale and with further adjustments are used for post-retirement mortality assumptions as follows:

Participant Type	Membership Table	Set Forward (+)/ Setback (-)	Adjustment To Rates
Service Retirees	General Healthy Annuitant	Male: +1; Female: +1	Male: 105%; Female: 108%
Disability Retirees	General Disabled	Male: -3; Female: 0	Male: 103%; Female: 106%
Beneficiaries	General Contingent Survivors	Male: +2; Female: +2	Male: 106%; Female: 105%

The actuarial assumptions used in the June 30, 2020 valuation were based on the results of an actuarial experience study for the period July 1, 2014 – June 30, 2019. In the experience study, the long-term assumed investment rate of return of 7.00% and the assumed annual rate of inflation of 2.50% were recommended by the actuary and adopted by the Board. Therefore, a change in assumptions due to the reduction in the assumed investment rate of return from 7.30% to 7.00% and the assumed annual rate of inflation from 2.75% to 2.50% will be reflected, along with all other assumption changes in the calculation of the total pension liability.

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 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.

(continued)

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 %	(1.50)%
Domestic large equities	46.40	9.20
Domestic small equities	1.10	13.40
International developed market equities	11.70	9.20
International emerging market equities	5.80	10.40
Alternatives	5.00	10.60
Total	100.00 %	

* Rates shown are net of inflation.

Discount rate: The discount rate used to measure the total OPEB liability was 7.00%. 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 7.00%, 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 (6.00%) or 1-percentage-point higher (8.00%) than the current rate (dollars in thousands):

	1% Decrease (6.00%)	Current discount rate (7.00%)	1% Increase (8.00%)
Employers' net OPEB liability (asset)	$(484,342)	(615,826)	(723,187)

Actuarial valuation date: June 30, 2020 is the actuarial valuation date upon which the total OPEB liability is based. An expected total OPEB liability is determined as of June 30, 2021 using standard roll-forward techniques for the actual total OPEB liability both before and after the assumption changes due to the experience study and the change in the assumed investment rate of return. The difference between these two amounts is shown as a change in assumptions. 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 83 and 84 are presented from the perspective of the System as an employer.

(continued)

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 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, 2021.

OPEB Liabilities and OPEB Expense related to SEAD-OPEB

At June 30, 2021, the System reported an asset of $601.6 thousand for its proportionate share of the net OPEB asset. The net OPEB asset was measured as of June 30, 2020. The total OPEB asset used to calculate the net OPEB asset was based on an actuarial valuation as of June 30, 2019. An expected total OPEB asset as of June 30, 2020 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, 2020. At June 30, 2020, the employer's proportionate share was 0.211823%, which was an increase of 0.010556% from its proportionate share measured as of June 30, 2019. For the year ended June 30, 2021, the System recognized a reduction of OPEB expense of $65.1 thousand.

Actuarial assumptions: The total SEAD-OPEB asset as of June 30, 2020 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 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, 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.

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.

(continued)

The target asset allocation and 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 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)	$(334)	(602)	(822)

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 26 and the *Combining Statement of Changes in Fiduciary Net Postion* on page 28.

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

(continued)

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 (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 $300.7 thousand for the year ended June 30, 2021. 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, 2021, the System reported a liability of approximately $2.2 million for its proportionate share of the net OPEB liability. The net OPEB liability was measured as of June 30, 2020. The total OPEB liability used to calculate the net OPEB liability was based on an actuarial valuation as of June 30, 2019. An expected total OPEB liability as of June 30, 2020 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, 2020. At June 30, 2020, the System's proportionate share was 0.191555%, which was a increase of 0.002264% from its proportionate share measured as of June 30, 2019. For the year ended June 30, 2021, the System recognized a reduction in OPEB expense of $910.5 thousand.

Actuarial assumptions: The total OPEB liability as of June 30, 2020 was determined by an actuarial valuation as of June 30, 2019 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, 2020:

Inflation	2.5%
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	7.00%
Medicare Eligible	5.25%
Ultimate trend rate:	
Pre-Medicare Eligible	4.50%
Medicare Eligible	4.50%
Year of Ultimate trend rate	
Pre-Medicare Eligible	2029
Medicare Eligible	2023

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, 2019 valuation were based on the results of the most recent actuarial experience studies for the pension systems, which covered the five-year period ending June 30, 2014,

(continued)

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.

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, 2019 valuation were based on a review of recent plan experience done concurrently with the June 30, 2019 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 %	0.50 %
Equities	70.00	9.20
Total	100.00 %	

* Rates shown are net of inflation.

Discount rate: In order to measure the total OPEB liability for the State OPEB Fund, a single equivalent interest rate of 7.06% was used, as compared with last year’s discount rate of 7.30%. This is comprised of the yield or index rate for 20 year tax-exempt general obligation bonds with an average rating of AA or higher (2.21% per the Municipal Bond Index Rate) and the long-term expected rate of return. 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. The Plan's fiduciary net position was not projected to be available to make all projected future benefit payments to all plan members. The projected depletion date when projected benefits are not covered by projected assets is 2073.

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 7.06%, 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 (6.06%) or 1-percentage-point higher (8.06%) than the current discount rate (dollars in thousands):

	1% Decrease (6.06%)	Current discount rate (7.06%)	1% Increase (8.06%)
System's proportionate share of the net OPEB liability	$2,702	2,156	1,690

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

(continued)

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	$1,620	2,156	2,791

State OPEB plan fiduciary net position: Detailed information about the State OPEB Benefit plan's fiduciary net position is available in the Annual Comprehensive Financial Report which is publicly available at https://sao.georgia.gov/statewide-reporting/acfr.

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

At June 30, 2021, 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:			
Change of assumptions	$ —	39	39
Net difference between projected and actual earnings on plan investments	11	211	222
Change in proportion and differences between the System's contributions and proportionate share of contributions	—	202	202
System's contributions subsequent to the measurement date	—	301	301
Total deferred outflows of resources	$ 11	753	764

	SEAD-OPEB plan	State OPEB fund	Total
Deferred inflows of resources:			
Difference between expected and actual experience	$ 6	815	821
Change of assumptions	—	1,326	1,326
Change in proportion and differences between the System's contributions and proportionate share of contributions	16	64	80
Total deferred inflows of resources	$ 22	2,205	2,227

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 noted on the following page (dollars in thousands):

(continued)

Year ended June 30:	
2022	($34)
2023	—
2024	13
2025	10

State OPEB Fund employer contributions subsequent to the measurement date of $300.7 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, 2022. 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:	
2022	($1,023)
2023	(591)
2024	(147)
2025	8

Required Supplementary Information (UNAUDITED)

Schedules of Employers' and Nonemployer Contributions - Defined Benefit Plans

Year ended June 30, 2021
(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	6/30/2012	$ 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
	6/30/2021	615,967	615,967	—	2,480,422	24.8
Public School Employees Retirement System[1]	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
	6/30/2021	30,264	30,264	—	n/a	n/a
Legislative Retirement System[2]	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
	6/30/2021	—	—	—	3,371	n/a

(continued)

Required Supplementary Information (UNAUDITED)

Schedules of Employers' and Nonemployer Contributions - Defined Benefit Plans

Year ended June 30, 2021
(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	6/30/2012	$ 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
	6/30/2021	6,070	6,070	—	63,421	9.6
Georgia Military Pension Fund[3]	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
	6/30/2021	2,684	2,684	—	n/a	n/a
State Employees' Assurance Department Retired and Vested Inactive Members Trust Fund	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
	6/30/2021	—	—	—	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, 2021
(In thousands)

	June 30, 2021	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	$ 18,886,809	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	16,547,905	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	$ 2,338,904	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	87.62 %	76.21 %	76.74 %	76.68 %	76.33 %	72.34 %	76.20 %	77.99 %
Covered payroll	$ 2,480,422	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	94.29 %	161.19 %	157.77 %	155.96 %	158.28 %	197.89 %	172.16 %	160.57 %
Public School Employees Retirement System:								
Total pension liability	$ 1,224,416	1,134,724	1,107,495	1,072,165	1,013,163	992,292	946,200	930,745
Plan fiduciary net position	1,199,970	958,248	941,587	914,138	868,134	803,775	823,150	821,733
Employers' and nonemployer net pension liability	$ 24,446	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	98.00 %	84.45 %	85.02 %	85.26 %	85.69 %	81.00 %	87.00 %	88.29 %
Covered payroll	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Employers' and nonemployer net pension liability as a percentage of covered payroll	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Legislative Retirement System:								
Total pension liability	$ 26,695	26,081	26,166	26,304	25,898	26,142	25,271	25,216
Plan fiduciary net position	42,713	34,568	34,540	34,189	32,981	30,975	32,359	32,794
Employer's net pension asset	$ (16,018)	(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	160.00 %	132.54 %	132.00 %	129.98 %	127.35 %	118.49 %	128.05 %	130.05 %
Covered payroll	3,371	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	(475.17)%	(223.46)%	n/a	n/a	n/a	n/a	n/a	n/a
Georgia Judicial Retirement System:								
Total pension liability	$ 485,387	455,656	440,041	428,624	394,736	368,669	357,081	350,443
Plan fiduciary net position	605,426	485,930	479,372	466,657	441,182	403,011	404,852	400,790
Employers' and nonemployer net pension asset	$ (120,039)	(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	124.73 %	106.64 %	108.94 %	108.87 %	111.77 %	109.32 %	113.38 %	114.37 %
Covered payroll	$ 63,421	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	(189.27)%	(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, 2021
(In thousands)

	June 30, 2021	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	$ 54,739	47,883	45,639	43,204	40,085	36,950	33,343	31,511
Plan fiduciary net position	38,677	28,967	26,417	23,653	20,711	17,717	16,712	15,251
Employers' net pension liability	$ 16,062	18,916	19,222	19,551	19,374	19,233	16,631	16,260
Plan fiduciary net position as a percentage of the total pension liability	70.66 %	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	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	n/a
State Employees' Assurance Department - Retired and Vested Inactive Members Trust Fund:								
Total pension liability	$ 950,995	972,700	951,091	918,816	861,346	—	—	—
Plan fiduciary net position	1,566,821	1,256,718	1,233,856	1,189,462	1,121,251	—	—	—
Employer's net OPEB asset	$ (615,826)	(284,018)	(282,765)	(270,646)	(259,905)	—	—	—
Plan fiduciary net position as a percentage of the total OPEB liability	164.76 %	129.20 %	129.73 %	129.46 %	130.17 %	— %	— %	— %
Covered payroll	$ 1,030,717	1,135,433	1,211,274	1,328,485	1,383,860	—	—	—
Employers' net OPEB asset as a percentage of covered payroll	59.75 %	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, 2021
(In thousands)

	June 30, 2021	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	$ 129,500	132,004	135,679	129,294	125,910	143,043	145,045	150,075
Interest	1,240,748	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	86,061	25,736	155,573	180,655	72,315	(238)	(53,950)	—
Changes of assumptions	1,154,636	—	—	314,733	—	70,890	—	—
Benefit payments	(1,434,775)	(1,484,445)	(1,443,756)	(1,413,298)	(1,394,283)	(1,347,633)	(1,334,278)	(1,305,998)
Refunds of contributions	(6,604)	(6,644)	(7,691)	(7,585)	(9,033)	(7,087)	(7,450)	(8,757)
Net change in total pension liability	1,169,566	(26,760)	115,784	468,585	55,647	84,625	(22,787)	59,700
Total pension liability-beginning	17,717,243	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)	18,886,809	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	606,919	634,108	638,989	639,302	613,201	583,082	505,668	418,807
Contributions-nonemployer	9,048	9,749	10,220	12,865	12,080	12,484	12,495	10,945
Contributions-member	35,027	35,837	36,252	37,130	35,863	31,961	33,713	32,423
Administrative expense allotment	10	10	10	10	10	10	10	—
Net investment income	3,843,581	703,840	873,404	1,166,013	1,475,626	141,292	474,147	2,021,748
Benefit payments	(1,434,775)	(1,484,445)	(1,443,756)	(1,413,298)	(1,394,283)	(1,347,633)	(1,334,278)	(1,305,998)
Administrative expense	(7,587)	(7,641)	(7,142)	(8,056)	(8,732)	(8,506)	(7,872)	(7,440)
Refunds of contributions	(6,604)	(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	3,045,619	(115,186)	100,286	418,887	724,732	(594,397)	(323,567)	1,161,728
Plan fiduciary net position-beginning	13,502,286	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)	16,547,905	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)	$ 2,338,904	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.

(continued)

Required Supplementary Information (UNAUDITED)

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

June 30, 2021
(In thousands)

	June 30, 2021	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	$ 14,332	14,017	13,762	13,180	12,788	11,952	12,088	11,049
Interest	80,388	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	(12,739)	(12,220)	(8,159)	(3,943)	(3,665)	(9,483)	(6,858)	—
Changes of assumptions	74,759	—	—	21,354	—	33,215	—	—
Benefit payments	(66,415)	(66,090)	(63,637)	(61,820)	(59,378)	(57,903)	(56,972)	(56,189)
Refunds of contributions	(633)	(572)	(609)	(701)	(1,031)	(465)	(455)	(514)
Net change in total pension liability	89,692	27,229	35,330	59,002	20,871	46,092	15,455	20,489
Total pension liability-beginning	1,134,724	1,107,495	1,072,165	1,013,163	992,292	946,200	930,745	910,256
Total pension liability-end (a)	1,224,416	1,134,724	1,107,495	1,072,165	1,013,163	992,292	946,200	930,745
Plan fiduciary net position:								
Contributions-employer	30,264	32,496	30,263	29,276	26,277	28,580	28,461	27,160
Contributions-member	2,222	2,338	2,256	2,162	2,084	1,925	1,800	1,659
Net investment income	277,705	49,913	60,553	78,418	97,715	9,809	30,129	123,799
Benefit payments	(66,415)	(66,090)	(63,637)	(61,820)	(59,378)	(57,903)	(56,972)	(56,189)
Administrative expense	(1,421)	(1,424)	(1,377)	(1,331)	(1,308)	(1,321)	(1,545)	(1,450)
Refunds of contributions	(633)	(572)	(609)	(701)	(1,031)	(465)	(456)	(514)
Net change in plan fiduciary net position	241,722	16,661	27,449	46,004	64,359	(19,375)	1,417	94,465
Plan fiduciary net position-beginning	958,248	941,587	914,138	868,134	803,775	823,150	821,733	727,268
Plan fiduciary net position-end (b)	1,199,970	958,248	941,587	914,138	868,134	803,775	823,150	821,733
Net pension liability (asset) -end (a)-(b)	$ 24,446	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.

(continued)

Required Supplementary Information (UNAUDITED)

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

June 30, 2021
(In thousands)

	June 30, 2021	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	$ 366	372	366	359	357	331	338	344
Interest	1,840	1,844	1,850	1,875	1,892	1,829	1,824	1,799
Benefit changes	—	—	—	—	—	—	—	—
Differences between expected and actual experience	(643)	(485)	(428)	(481)	(655)	(465)	(325)	—
Changes of assumptions	813	—	—	447	—	938	—	—
Benefit payments	(1,720)	(1,795)	(1,856)	(1,772)	(1,763)	(1,724)	(1,756)	(1,801)
Refunds of contributions	(42)	(21)	(70)	(22)	(75)	(38)	(26)	(30)
Net change in total pension liability	614	(85)	(138)	406	(244)	871	55	312
Total pension liability-beginning	26,081	26,166	26,304	25,898	26,142	25,271	25,216	24,904
Total pension liability-end (a)	26,695	26,081	26,166	26,304	25,898	26,142	25,271	25,216
Plan fiduciary net position:								
Contributions-employer	—	—	—	—	—	—	—	45
Contributions-member	290	325	339	323	327	328	327	282
Net investment income	9,928	1,824	2,228	2,962	3,741	363	1,189	4,969
Benefit payments	(1,720)	(1,795)	(1,856)	(1,772)	(1,763)	(1,724)	(1,756)	(1,801)
Administrative expense	(311)	(305)	(290)	(283)	(224)	(313)	(169)	(152)
Refunds of contributions	(42)	(21)	(70)	(22)	(75)	(38)	(26)	(30)
Net change in plan fiduciary net position	8,145	28	351	1,208	2,006	(1,384)	(435)	3,313
Plan fiduciary net position-beginning	34,568	34,540	34,189	32,981	30,975	32,359	32,794	29,481
Plan fiduciary net position-end (b)	42,713	34,568	34,540	34,189	32,981	30,975	32,359	32,794
Net pension asset-end (a)-(b)	$ (16,018)	(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.

(continued)

Required Supplementary Information (UNAUDITED)

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

June 30, 2021
(In thousands)

	June 30, 2021	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	$ 13,494	13,375	13,350	13,019	12,514	12,713	7,751	7,584
Interest	32,131	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	(2,712)	(24)	(5,250)	6,379	5,258	(3,603)	(7,542)	—
Changes of assumptions	17,839	—	—	7,466	—	(4,308)	—	—
Benefit payments	(30,958)	(29,263)	(27,462)	(24,934)	(21,784)	(19,011)	(18,365)	(17,441)
Refunds of contributions	(63)	(213)	(553)	(150)	(166)	(261)	(772)	(22)
Net change in total pension liability	29,731	15,615	11,417	33,888	26,067	11,588	6,638	14,651
Total pension liability-beginning	455,656	440,041	428,624	394,736	368,669	357,081	350,443	335,792
Total pension liability-end (a)	485,387	455,656	440,041	428,624	394,736	368,669	357,081	350,443
Plan fiduciary net position:								
Contributions-employer	3,830	4,022	3,117	4,725	4,081	4,754	2,696	1,373
Contributions-nonemployer	2,240	2,442	2,137	1,841	2,603	2,869	1,564	1,002
Contributions-member	5,190	5,005	5,469	4,910	4,906	5,507	5,061	4,731
Net investment income	140,103	25,414	30,827	39,877	49,259	5,055	14,697	60,012
Benefit payments	(30,958)	(29,263)	(27,462)	(24,934)	(21,784)	(19,011)	(18,365)	(17,441)
Administrative expense	(846)	(849)	(820)	(794)	(728)	(754)	(819)	(754)
Refunds of contributions	(63)	(213)	(553)	(150)	(166)	(261)	(772)	(22)
Net change in plan fiduciary net position	119,496	6,558	12,715	25,475	38,171	(1,841)	4,062	48,901
Plan fiduciary net position-beginning	485,930	479,372	466,657	441,182	403,011	404,852	400,790	351,889
Plan fiduciary net position-end (b)	605,426	485,930	479,372	466,657	441,182	403,011	404,852	400,790
Net pension asset-end (a)-(b)	$ (120,039)	(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.

(continued)

Required Supplementary Information (UNAUDITED)

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

June 30, 2021
(In thousands)

	June 30, 2021	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	$ 106	95	97	84	89	73	73	73
Interest	3,443	3,284	3,109	2,964	2,732	2,465	2,330	2,223
Benefit changes	—	—	—	—	—	—	—	—
Differences between expected and actual experience	142	162	449	116	1,356	950	326	—
Changes of assumptions	4,593	—	—	1,093	—	1,082	—	—
Benefit payments	(1,428)	(1,297)	(1,220)	(1,138)	(1,042)	(963)	(897)	(841)
Refunds of contributions	—	—	—	—	—	—	—	—
Net change in total pension liability	6,856	2,244	2,435	3,119	3,135	3,607	1,832	1,455
Total pension liability-beginning	47,883	45,639	43,204	40,085	36,950	33,343	31,511	30,056
Total pension liability-end (a)	54,739	47,883	45,639	43,204	40,085	36,950	33,343	31,511
Plan fiduciary net position:								
Contributions-employer	2,684	2,611	2,537	2,377	2,018	1,990	1,893	1,892
Contributions-member	—	—	—	—	—	—	—	—
Net investment income	8,709	1,485	1,683	1,928	2,262	240	585	2,179
Benefit payments	(1,428)	(1,297)	(1,220)	(1,138)	(1,042)	(963)	(896)	(841)
Administrative expense	(255)	(249)	(236)	(225)	(244)	(262)	(121)	(110)
Refunds of contributions	—	—	—	—	—	—	—	—
Other	—	—	—	—	—	—	—	—
Net change in plan fiduciary net position	9,710	2,550	2,764	2,942	2,994	1,005	1,461	3,120
Plan fiduciary net position-beginning	28,967	26,417	23,653	20,711	17,717	16,712	15,251	12,131
Plan fiduciary net position-end (b)	38,677	28,967	26,417	23,653	20,711	17,717	16,712	15,251
Net pension liability-end (a)-(b)	$ 16,062	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.

(continued)

Required Supplementary Information (UNAUDITED)

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

June 30, 2021
(In thousands)

	June 30, 2021	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	$ 2,957	3,237	3,617	3,695	3,959
Interest	69,011	67,796	65,708	63,242	61,076
Benefit changes	—	—	—	—	—
Differences between expected and actual experience	(2,342)	(4,670)	366	4,697	—
Changes of assumptions	(36,651)	—	—	22,085	—
Benefit payments	(54,680)	(44,754)	(37,416)	(36,249)	(36,058)
Refunds of contributions	—	—	—	—	—
Net change in total OPEB liability	(21,705)	21,609	32,275	57,470	28,977
Total OPEB liability-beginning	972,700	951,091	918,816	861,346	832,369
Total OPEB liability-end	950,995	972,700	951,091	918,816	861,346
Plan fiduciary net position:					
Contributions - employer	—	—	—	—	1
Insurance premiums - member	2,817	3,088	3,328	3,599	3,793
Net investment income	362,663	65,248	79,193	101,542	125,550
Benefit payments	(54,680)	(44,754)	(37,416)	(36,249)	(36,058)
Administrative expense	(697)	(720)	(716)	(681)	(576)
Refunds of contributions	—	—	—	—	—
Other	—	—	5	—	—
Net change in plan fiduciary net position	310,103	22,862	44,394	68,211	92,710
Plan fiduciary net position-beginning	1,256,718	1,233,856	1,189,462	1,121,251	1,028,541
Plan fiduciary net position-end (b)	1,566,821	1,256,718	1,233,856	1,189,462	1,121,251
Net OPEB asset-end (a)-(b)	$ (615,826)	(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, 2021

	2021	2020	2019	2018	2017	2016	2015	2014
Pooled Investment Fund:								
Annual money-weighted rate of return, net of investment expense	19.4%	(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, 2021
(In thousands)

	June 30, 2021	June 30, 2020	June 30, 2019	June 30, 2018
SEAD-OPEB:				
System's proportion of the net OPEB asset	0.211823 %	0.201267 %	0.200064 %	0.192864 %
System's proportionate share of the net OPEB asset	$ (602)	$ (569)	$ (541)	$ (501)
System's covered payroll	2,524	2,567	2,770	2,809
System's proportionate share of the net OPEB asset as a percentage of its covered payroll	(23.84) %	(22.17) %	(19.55) %	(17.85) %
Plan fiduciary net position as a percentage of the total OPEB asset	129.2 %	129.73 %	129.46 %	130.17 %
State OPEB Fund:				
System's proportion of the net OPEB liability	0.191555 %	0.189291 %	0.181584 %	0.185830 %
System's proportionate share of the net OPEB liability	$ 2,156	$ 2,350	$ 4,749	$ 7,571
System's covered payroll	5,700	5,578	5,415	5,265
System's proportionate share of the net OPEB liability as a percentage of its covered payroll	37.82 %	42.13 %	87.71 %	143.81 %
System's fiduciary net position as a percentage of the total OPEB liability	59.71 %	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, 2021
(In thousands)

	June 30, 2021	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	2,511	2,524	2,567	2,770
Contributions as a percentage of a covered payroll	— %	— %	— %	— %
State OPEB Fund:				
Contractually required contribution	$ 301	$ 288	$ 1,012	$ 905
Contributions in relation to the contractually required contribution	301	288	1,012	905
Contribution deficiency (excess)	—	—	—	—
System's covered payroll	5,713	5,700	5,578	5,415
Contributions as a percentage of a covered payroll	5.26 %	5.05 %	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, 2021

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, disability, withdrawal, and salary increases. Subsequent to the June 30, 2018 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, 2018 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, 2019 measurement date, and remained unchanged for June 30, 2020. On December 17, 2020, the Board adopted recommended changes to the economic and demographic assumptions utilized by the System. Primary among the changes were the

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updates to rates of mortality, retirement, withdrawal, and salary increases. This also included a change to the long-term assumed investment rate of return to 7.00%.

(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, and withdrawal. Subsequent to the June 30, 2018 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, 2018 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, 2019 measurement date, and remained unchanged for June 30, 2020. On December 17, 2020, 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, disability, and withdrawal. This also included a change to the long-term assumed investment rate of return to 7.00%.

(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, and withdrawal. Subsequent to the June 30, 2018 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, 2018 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, 2019 measurement date, and remained unchanged for June 30, 2020. On December 17, 2020, 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, and withdrawal. This also included a change to the long-term assumed investment rate of return to 7.00%.

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(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.
- 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, disability, withdrawal, and salary increases. Subsequent to the June 30, 2018 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, 2018 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, 2019 measurement date, and remained unchanged for June 30, 2020. On December 17, 2020, 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. This also included a change to the long-term assumed investment rate of return to 7.00%.

(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, and withdrawal. Subsequent to the June 30, 2018 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, 2018 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, 2019 measurement date, and remained unchanged for June 30, 2020. On December 17, 2020, 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, and withdrawal. This also included a change to the long-term assumed investment rate of return to 7.00%.

(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, 2018 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, 2018 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

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June 30, 2019 measurement date, and remained unchanged for June 30, 2020. On December 17, 2020, the Board adopted recommended changes to the economic and demographic assumptions utilized by the Systems. Primary among the changes were the updates to rates of mortality, retirement, withdrawal, and salary increases. This also included a change to the long-term assumed investment rate of return to 7.00%.

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Notes to Required Supplementary Information (UNAUDITED)

June 30, 2021

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	15.3 years	20.4 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	7.30% net of pension plan investment expense, including inflation	7.30% net of pension plan investment expense, including inflation	7.30% 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	15.6 years	15.6 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	7.30% net of pension plan investment expense, including inflation	7.30% 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	7.30% net of pension plan investment expense, including inflation
Cost of living adjustments	None

(continued)

Notes to Required Supplementary Information (UNAUDITED)

June 30, 2021

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 and June 30, 2020.

(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.

In the June 30, 2019 valuation the inflation assumption was lowered from 2.75% to 2.50% in anticipation of the upcoming ERS Experience Study. Additionally, decremental assumptions were changed to reflect the Teachers Retirement Systems experience study. Approximately 6.0% of employees are members of the Teachers Retirement System.

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, to 7.30% as of June 30, 2019, and to 7.06% as of June 30, 2020.

Additional Information

Schedule of Administrative Expenses - Contributions and Expenses

Year ended June 30, 2021
(In thousands)

Contributions from fiduciary funds:	
Employees' Retirement System	$ 7,587
Public School Employees Retirement System	1,421
Legislative Retirement System	311
Georgia Judicial Retirement System	846
Georgia Military Pension Fund	255
Superior Court Judges Retirement Fund	3
District Attorneys Retirement Fund	3
Georgia Defined Contribution Plan	902
401(k) Plan	3,554
457 Plan	671
State Employees' Assurance Department - OPEB	697
Total fiduciary funds	16,250
Contributions from proprietary fund:	
State Employees' Assurance Department Active Members Fund	77
Total contributions	16,327
Expenses:	
Personal services:	
Salaries and fringes	5,783
Retirement contributions	1,298
FICA	416
Health insurance	472
Miscellaneous	50
	8,019
Communications:	
Postage	239
Publications and printing	5
Telecommunications	109
Travel	0
	353
Professional services:	
Accounting services	803
Computer services	931
Contracts	3,610
Actuarial services	510
Medical services	89
Audit fees	327
Legal services	27
	6,297
Management fees:	
Building maintenance	635
Other services and charges:	
Temporary services	560
Supplies and materials	45
Repairs and maintenance	13
Courier services	5
Depreciation	276
Miscellaneous	73
Office equipment	51
	1,023
Total expenses	16,327
Net income	$ —

See accompanying independent auditors' report.

(continued)

Additional Information

Schedule of Investment Expenses

Year ended June 30, 2021
(In thousands)

Investment advisory and custodial fees	$	10,415
Miscellaneous		13,727
Total investment expenses	$	24,142

See accompanying independent auditors' report.

Investment Section

Georgia's State Symbols

State Amphibian: Green Tree Frog

The Green Tree Frog was designated the official state amphibian in 2005.

The State of Georgia is home to 85 different species of amphibians, second only to North Carolina in having the greatest amphibian diversity of any state.

The green tree frog can be recognized by its bright green color with a white stripe down each side. It can be found in trees throughout the state, and its diet consists mainly of bugs. The green tree frog can also be recognized by the characteristic nighttime chorus created by large numbers of calling males.

Investment Section

Investment Overview

In isolation, the past year's economy was fantastic, with GDP up almost four times the average increase since 1950 at 12.2%. Of course, that was off a depressed base due to the effects of COVID-19 in the prior fiscal year. The rebound was due to aggressive fiscal and monetary actions by Congress and the Federal Reserve plus the development of vaccines. Predictably, stock markets reacted favorably to the financial easing and improved sentiment. U.S. equities returned 42% over the past year, while foreign markets rose nearly 36%. Longer-term periods for total equities returns were 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.

The fiscal and monetary stimulus used to combat the economic effect of the pandemic resulted in GDP growth of 12.2% for the past 12 months, the highest year-over-year change in GDP since 1950. The whipsaw in the economy from the June 2020 quarter to the September 2020 quarter was unprecedented. Even after the 33.8% rebound in GDP for the September 2020 quarter, the subsequent quarterly GDP growth rates were among the strongest in the last 20 years. Much like the U.S., foreign economies have also experienced a strong recovery, though the emerging markets are being impacted by the virus to a greater extent since their populations have much lower vaccination rates. All economies are dealing with higher inflation. The question the markets are debating is whether inflation is transitory or perhaps a longer-term phenomenon.

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 40.8%. The S&P MidCap 400 and the S&P SmallCap 600 indexes had returns of 53.2% and 67.4%, respectively. Large cap growth stocks marginally outperformed value stocks for the year, but value outperformed growth in the mid-cap, small cap and international areas. Generally speaking, stocks with cyclical or economic sensitivity performed the best last year. Overall, stocks did well regardless of the economic sector they were in.

Like domestic markets, international stocks posted strong returns. The MSCI EAFE Index returned 32.4% and the Emerging Market Index had a return of 40.9%. There were only three countries that posted negative returns for the year. Austria, Taiwan, and South Korea were the best performing markets, and like the U.S., economically sensitive sectors had the best performance.

The yield curve steepened last year with short-term rates falling nominally and longer term rates rising in response to the economic recovery. The central banks continued to play a large role in the bond market and have kept rates lower than would normally be the case. The increase in yields drove bond prices lower, resulting in a total return of (5.8%) the 10-year Treasury and a total return of (13.6%) for the 30-year Treasury bond compared to 0.1% for Treasury bills. Higher quality corporate bonds also had negative returns for the fiscal year.

We look at two fixed-income indexes to measure the bond market's performance. The Bloomberg Barclays Government / Credit Index had a return of (0.4%). 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 (2.6%) and is a broad index containing higher-rated corporate bonds as well as Treasuries and Government securities.

In summary, due to the long-term investment focus, and despite remarkable market volatility 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."

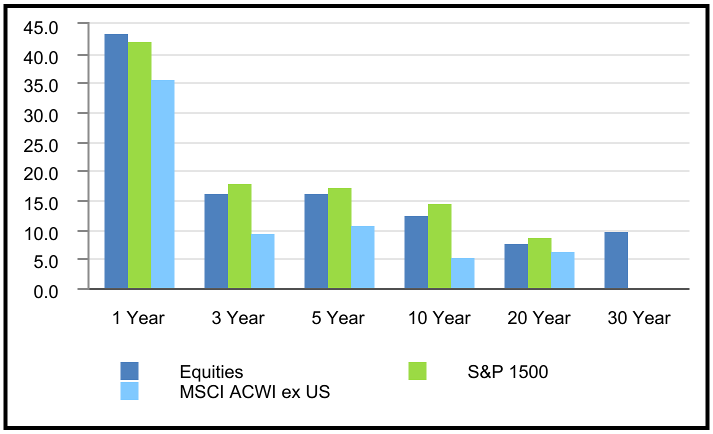
Prepared by the Division of Investment Services

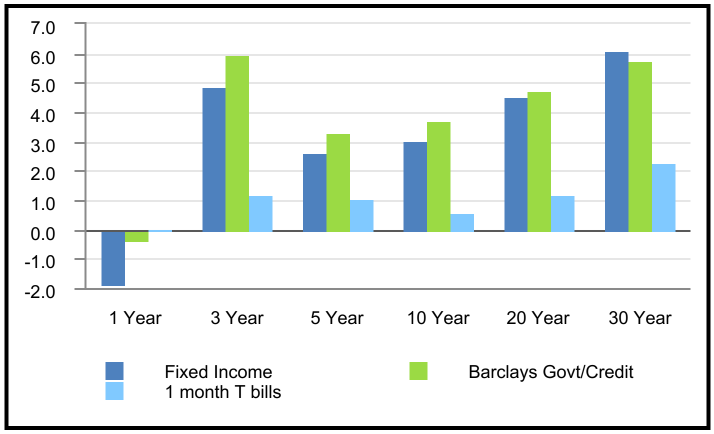
Pooled Investment Fund

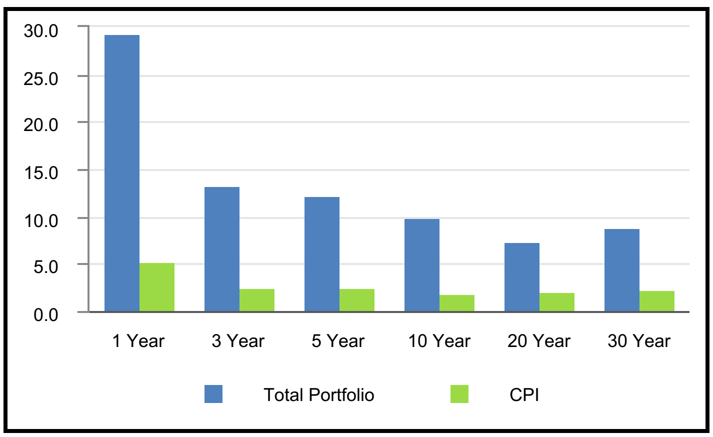
As of June 30, 2021
(in thousands)

Employees' Retirement System (ERS)	$	16,506,100
Public School Employees Retirement System (PSERS)		1,200,342
Legislative Retirement System (LRS)		42,744
Georgia Judicial Retirement System (GJRS)		604,938
State Employees' Assurance Department (SEAD) - Active		408,125
State Employees' Assurance Department (SEAD) - OPEB		1,566,393
Survivors Benefit Fund (SBF)		216,712
Georgia Military Pension Fund (GMPF)		38,710
Total	$	20,584,064

Rates of Return



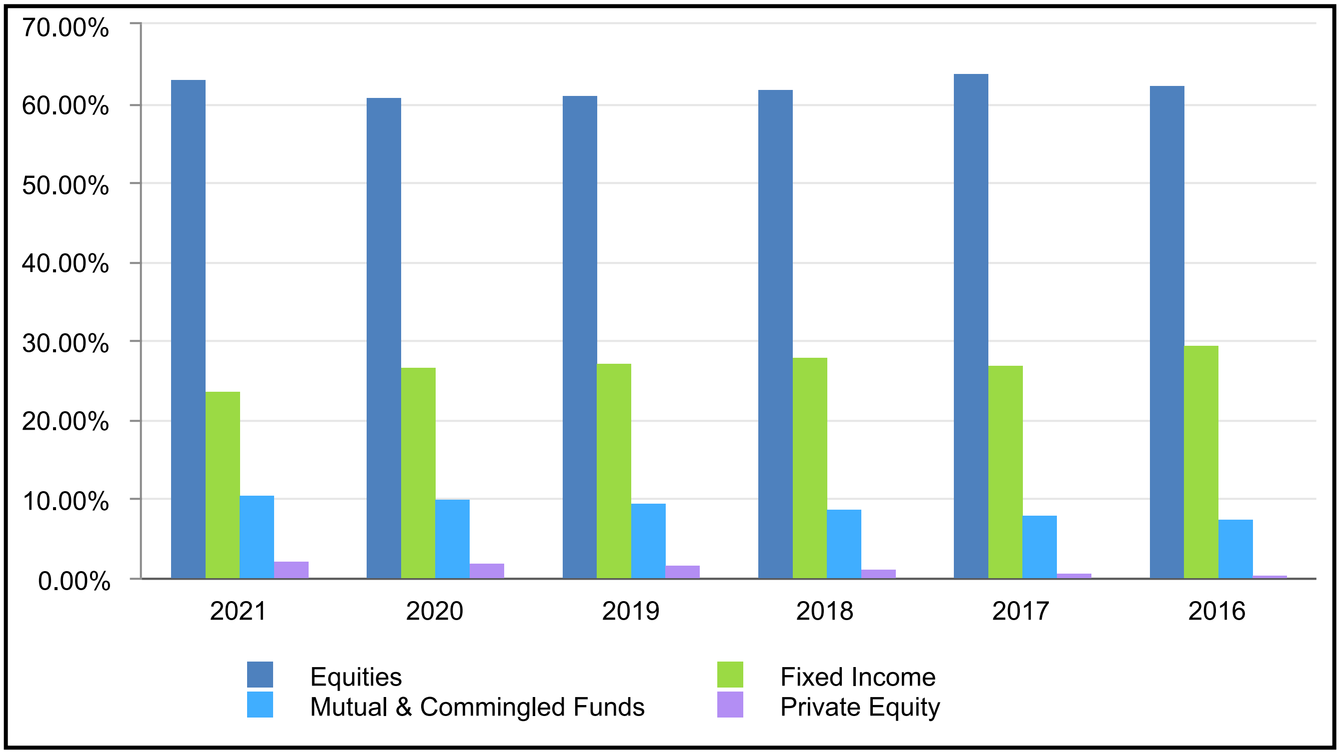




	Equities	S&P 1500	MSCI ACWI ex US	Fixed Income	Barclay's Govt/Credit	1 Month T-Bills	Total Portfolio	CPI
1 year	43.75 %	42.12 %	35.72 %	(1.86)%	(0.39)%	0.06 %	29.36 %	5.32 %
3 year	16.50 %	18.12 %	9.38 %	4.91 %	5.95 %	1.23 %	13.41 %	2.57 %
5 year	16.40 %	17.38 %	11.08 %	2.61 %	3.31 %	1.08 %	12.36 %	2.44 %
10 year	12.56 %	14.63 %	5.45 %	3.04 %	3.71 %	0.56 %	9.85 %	1.89 %
20 year	7.99 %	8.82 %	6.46 %	4.57 %	4.72 %	1.23 %	7.42 %	2.13 %
30 year	9.89 %	— %	— %	6.14 %	5.78 %	2.29 %	8.88 %	2.32 %

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)

	2021	2020	2019	2018	2017	2016
Equities	63.2 %	60.9	61.1	61.9	63.9	62.3
Fixed Income	23.8	26.9	27.4	28.1	27.1	29.5
Mutual and Commingled Funds	10.7	10.2	9.7	8.8	8.2	7.6
Private Equity	2.3	2.0	1.8	1.2	0.8	0.6
Total	**100.0 %**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Asset Allocation as of June 30 (in millions)

	2021	2020	2019	2018	2017	2016
Equities	$ 14,412	11,279	11,138	11,140	11,030	10,005
Fixed Income	5,423	4,959	4,984	5,040	4,668	4,733
Mutual and Commingled Funds	2,430	1,893	1,769	1,599	1,421	1,226
Private Equity	526	365	335	222	134	94
Total	$ 22,791	18,496	18,226	18,001	17,253	16,058

Schedule of Fees and Commissions

Year ended June 30, 2021

(In thousands)

Investment Advisors' Fees:		
U.S. Equity	$	3,556
International Equity		6,196
Investment Commissions:		
U.S. Equity		589
International Equity		1,078
Transaction Fees:		323
Miscellaneous*:		22,832
Total Fees and Commissions	$	34,574

*Includes capitalized fees not included in total investment expenses shown on page 92.

Twenty Largest Equity Holdings †

As of June 30, 2021

(In thousands)

Shares	Company		Fair Value
2,974,986	Apple Inc.	$	407,454
1,433,264	Microsoft Corp.		388,271
87,911	Amazon.Com Inc.		302,428
118,058	Alphabet Inc.		291,826
515,017	Facebook Inc.		179,077
995,104	Taiwan Semiconductor Manufacturing Company Ltd.		119,572
486,210	Visa Inc.		113,686
626,308	JPMorgan Chase & Co.		97,416
343,440	Berkshire Hathaway Inc.		95,449
137,974	ASML Holding NV		95,318
139,170	Tesla Inc.		94,594
112,503	Nvidia Corp.		90,014
224,669	UnitedHealth Group Inc.		89,966
277,699	The Home Depot Inc.		88,555
515,650	Johnson & Johnson		84,948
159,580	Netflix Inc.		84,292
1,307,857	Verizon Communications Inc.		73,279
934,041	Merck & Co. Inc.		72,640
262,000	Sea Ltd		71,945
149,895	Broadcom Inc.		71,476
	Top Twenty Equities	$	2,912,206
	Remaining Equities		11,499,778
	Total Equities	$	14,411,984

†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, 2021

Issuer	Year of Maturity	Interest Rate	Par Value (in thousands)	Fair Value (in thousands)
U.S. Treasury Note	2024	2.2500 %	$ 313,000	$ 330,876
U.S. Treasury Note	2030	0.8750	315,000	299,546
U.S. Treasury Note	2025	2.6250	200,000	214,820
U.S. Treasury Note	2025	2.5000	200,000	213,586
U.S. Treasury Note	2025	2.7500	190,000	205,800
U.S. Treasury Note	2023	1.5000	195,000	199,351
U.S. Treasury Note	2027	2.2500	160,000	171,150
U.S. Treasury Bond	2039	3.5000	113,000	141,352
U.S. Treasury Bond	2028	5.2500	102,000	130,926
U.S. Treasury Bond	2049	3.0000	100,000	119,723
Total of 10 Largest ERS & GDCP Fixed Income Holdings				2,027,130
Remaining Fixed Income Holdings				$ 3,395,747
Total ERS and Defined Contribution Fixed Income Securities				$ 5,422,877

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

Actuarial Section

Georgia's State Symbols

ERSGA
Employees' Retirement System of Georgia
Serving those who serve Georgia

State Insect: Honey Bee

The honey bee was designated official state insect of Georgia in 1975.

Honey bees live in hives of up to 80,000 individuals. A honey bee hive consists of one queen bee who lays eggs, a small group of male drones who fertilize the eggs, and a larger number of sterile female worker bees. Young worker bees are called house bees - they construct the hive and maintain the comb, care for the eggs and larvae, tend the queen and drones, regulate temperature, and defend the hive. Older workers are field bees - they gather nectar and forage for pollen, water and plant resins used in hive construction. Worker bees have an extra stomach and special pollen baskets on their hind legs to transport the booty. Evidence suggests that the honey bee "dances" to communicate the location of a nectar discovery to other honey bees. Worker bees only live about 6 weeks in summer months, but honey bees born in fall survive until the following spring.

The honey bee contributes to the state's economy through honey production and pollination of more than 50 Georgia crops. Bee pollination is critical to plant and human survival - beeswax and honey are just surplus gifts from this tiny wonder of nature.

ERS

Cavanaugh Macdonald CONSULTING, LLC
The experience and dedication you deserve

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

April 15, 2021

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

Attention: Mr. James Potvin, Executive Director

Members of the Board:

Section 47-2-26 of the law governing the operation of the Employees' Retirement System (ERS) 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, 2020. The report indicates that annual employer contributions at the rate of 19.92% of compensation for Old Plan Members, 24.67% of compensation for New Plan Members, and 21.59% of compensation for GSEPS Members for the fiscal year ending June 30, 2023 are sufficient to support the benefits of the System.

Since the previous valuation, various economic and demographic assumptions and actuarial methods have been revised to reflect the results of the experience investigation for the five-year period ending June 30, 2019. A complete list of these changes is provided on page 2 of the report.

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 2020 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, 2020 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.

(continued)

Actuarial Section

We have provided the following information and supporting schedules for the Actuarial Section of the Annual Comprehensive 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 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 that are internally consistent and reasonably based on the actual experience of the System.

We note that as we are preparing this report, the world is in the midst of a pandemic. We have considered available information, but do not believe that there is yet sufficient data to warrant the modification of any of our assumptions prior to the upcoming experience study.

In order to prepare the results in this report, we have utilized appropriate actuarial models that were developed for this purpose. These models use assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.

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

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

Cathy Turcot

Cathy Turcot
Principal and Managing Director

Ben Mobley

Ben Mobley, ASA, FCA, MAAA
Consulting Actuary

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www.CavMacConsulting.com

April 15, 2021

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

Attention: 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 (PSERS) 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, 2020. Based on a monthly benefit accrual rate of $15.50, which is effective July 1, 2019, the valuation indicates that annual employer contributions of $32,169,000 or $926.09 per active member for the fiscal year ending June 30, 2023 are sufficient to support the benefits of the System.

Since the previous valuation, various economic and demographic assumptions and actuarial methods have been revised to reflect the results of the experience investigation for the five-year period ending June 30, 2019. A complete list of these changes is provided on page 2 of this report.

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 2020 session of the General Assembly.

The results of the valuation reflect that the Board did not grant the anticipated cost-of-living increases (COLAs) to retired members on July 1, 2020 and on January 1, 2021.

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, 2020 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 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.

(continued)

Actuarial Section

We have provided the following information and supporting schedules for the Actuarial Section of the Annual Comprehensive 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 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.

We note that as we are preparing this report, the world is in the midst of a pandemic. We have considered available information, but do not believe that there is yet sufficient data to warrant the modification of any of our assumptions prior to the next experience study.

In order to prepare the results in this report we have utilized appropriate actuarial models that were developed for this purpose. These models use assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.

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

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

Cathy Turcot

Cathy Turcot
Principal and Managing Director

Ben Mobley

Ben Mobley, ASA, FCA, MAAA
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April 15, 2021

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

Attention: 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, 2020. The report indicates that annual employer contributions at the rate of 8.03% of compensation for the fiscal year ending June 30, 2023 are sufficient to support the benefits of the System.

Since the previous valuation, various economic and demographic assumptions and actuarial methods have been revised to reflect the results of the experience investigation for the five-year period ending June 30, 2019. A complete list of the changes is provided on page 2 of this report.

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 2020 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, 2020 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 Annual Comprehensive 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 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.

We note that as we are preparing this report, the world is in the midst of a pandemic. We have considered available information, but do not believe that there is yet sufficient data to warrant the modification of any of our assumptions prior to the upcoming experience study.

In order to prepare the results in this report, we have utilized appropriate actuarial models that were developed for this purpose. These models use assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.

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

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

Cathy Turcot

Cathy Turcot
Principal and Managing Director

Ben Mobley

Ben Mobley, ASA, FCA, MAAA
Consulting Actuary

LRS

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April 15, 2021

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

Attention: 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, 2020. The report indicates that no annual employer contributions for the fiscal year ending June 30, 2023 are required to support the benefits of the System.

Since the previous valuation, various economic and demographic assumptions and actuarial methods have been revised to reflect the results of the experience investigation for the five-year period ending June 30, 2019. A complete list of the changes is provided on page 2 of this report.

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 2020 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, 2020 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 Annual Comprehensive 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.

We note that as we are preparing this report, the world is in the midst of a pandemic. We have considered available information, but do not believe that there is yet sufficient data to warrant the modification of any of our assumptions prior to the upcoming experience study.

In order to prepare the results in this report, we have utilized appropriate actuarial models that were developed for this purpose. These models use assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.

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

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

Cathy Turcot

Cathy Turcot
Principal and Managing Director

Ben Mobley

Ben Mobley, ASA, FCA, MAAA
Consulting Actuary

GMPF

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April 15, 2021

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

Attention: 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, 2020. The report indicates that annual employer contributions of $2,840,988 or $201.56 per active member for the fiscal year ending June 30, 2023 are sufficient to support the benefits of the Fund.

Since the previous valuation, various economic and demographic assumptions and actuarial methods have been revised to reflect the results of the experience investigation for the five-year period ending June 30, 2019. A complete list of the changes is provided on page 2 of this report.

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 2020 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 Annual Comprehensive 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 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 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.

We note that as we are preparing this report, the world is in the midst of a pandemic. We have considered available information, but do not believe that there is yet sufficient data to warrant the modification of any of our assumptions prior to the next experience study.

In order to prepare the results in this report we have utilized appropriate actuarial models that were developed for this purpose. These models use assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.

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

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

Cathy Turcot

Cathy Turcot
Principal and Managing Director

Ben Mobley

Ben Mobley, ASA, FCA, MAAA
Consulting Actuary

SEAD Post-Retirement (SEAD-OPEB)

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April 15, 2021

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

Attention: 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 submitted the report giving the results of the valuation of the Plan prepared as of June 30, 2020. The report indicates that employee contributions at the rate of 0.45% of active payroll for Old Plan members of the Employees' Retirement System, and 0.23% of active payroll for New Plan members of the Employees' Retirement System, certain members of the Legislative Retirement System and certain members of the Judicial Retirement System are sufficient to support the postretirement benefits of the Plan. No employer contribution is required for the fiscal year ending June 30, 2023 for pre-retirement benefits.

Since the previous valuation, various economic and demographic assumptions and actuarial methods have been revised to reflect the results of the experience investigation for the five-year period ending June 30, 2019. A complete list of these changes is provided on page 2 of this report.

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 2020 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, 2020 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. 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.

(continued)

Actuarial Section

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.

We note that as we are preparing this report, the world is in the midst of a pandemic. We have considered available information, but do not believe that there is yet sufficient data to warrant the modification of any of our assumptions prior to the upcoming experience study.

In order to prepare the results in this report, we have utilized appropriate actuarial models that were developed for this purpose. These models use assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.

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

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

Cathy Turcot

Cathy Turcot
Principal and Managing Director

Ben Mobley

Ben Mobley, ASA, FCA, MAAA
Consulting Actuary

Summary of Plan Provisions

ERS – Please see Notes to Financial Statements, (2)(a), pages 32-33.
PSERS – Please see Notes to Financial Statements, (2)(b), page 33-34.
LRS – Please see Notes to Financial Statements, (2)(c), page 34-35.
GJRS – Please see Notes to Financial Statements, (2)(d), pages 35-36.
GMPF – Please see Notes to Financial Statements, (2)(e), pages 36-37.
SEAD-OPEB – Please see Notes to Financial Statements, (2)(h), pages 37-38.

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, 2021 were largely based on the data, assumptions, and results of the annual funding valuations as of June 30, 2020. The Total Pension Liability (TPL) for each plan, determined using the Entry Age Normal method, was then rolled forward to the June 30, 2021 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, 2021.

For the plan covered under GASB 74, the GASB 74 report prepared as of June 30, 2021 was largely based on the data, assumptions, and results of the annual funding valuation as of June 30, 2020. The Total OPEB Liability (TOL) for the plan, determined using the Entry Age Normal method, was then rolled forward to the June 30, 2021 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, 2021.

For the pension plans' funding valuations as of June 30, 2020, 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, 2020, the Actuarial Value of Assets is equal to the Fair Value of Assets as of June 30, 2020.

(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 7.00% 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 7.00% 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, 2020 based on actuarial assumptions approved by the ERS Board, PSERS Board, GJRS Board, and SEAD Board during the last experience study on December 17, 2020.

The more pertinent facts and significant assumptions underlying the computations included in the June 30, 2020 reports are as follows:

	ERS	PSERS	GJRS	LRS	GMPF
Valuation Date	June 30, 2020	June 30, 2020	June 30, 2020	June 30, 2020	June 30, 2020
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, closed	Level dollar, closed
Amortization Period	19.0 years	19.1 years	12.8 years	Infinite	14.1 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	2.50%	2.50%	2.50%	2.50%	2.50%
Projected Salary Increases	3.00 - 6.75%	n/a	3.75%	n/a	n/a
COLA	None	1.50% Semi-annually	None	3.00% Annually	None

	SEAD-OPEB
Valuation Date	June 30, 2020
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	2.50%
Projected Salary Increases	
ERS	3.00-6.75%
GJRS	3.75%
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.

	Annual Rates of Death		Annual Rates of Disability	
Age	Men	Women	Men	Women
20	.0370 %	.0130 %	— %	— %
25	.0280	.0090	—	—
30	.0360	.0150	.010	.005
35	.0470	.0230	.040	.010
40	.0660	.0360	.200	.085
45	.0980	.0560	.375	.215
50	.1490	.0830	.625	.365
55	.2190	.1230	.875	.565
60	.3190	.1860	—	—
65	.4680	.2960	—	—

	Annual Rates of Withdrawal Years of Service					
	0-4		5-9		10 & over	
Age	Men	Women	Men	Women	Men	Women
20	40.00 %	35.00 %	— %	— %	— %	— %
25	30.00	27.00	16.25	18.00	—	—
30	25.00	23.00	12.50	12.50	8.00	9.00
35	23.00	20.00	10.50	10.25	6.25	6.50
40	20.00	18.00	9.50	9.00	4.75	5.25
45	20.00	17.00	8.50	8.00	4.00	4.25
50	17.00	16.00	7.25	7.50	4.50	4.25
55	15.00	15.00	6.75	7.25	4.75	4.25
60	14.50	15.50	5.50	7.00	—	—
65	14.50	16.50	12.50	12.00	—	—

(continued)

Summary of Actuarial Assumptions

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

PSERS

	Annual Rates of Death		Annual Rates of Disability
Age	Men	Women	Both
20	.0410 %	.0130 %	— %
25	.0410	.0120	—
30	.0520	.0190	—
35	.0680	.0300	.0018
40	.0960	.0470	.0110
45	.1430	.0720	.0330
50	.2180	.1070	.0770
55	.3200	.1570	.2250
60	.4660	.2380	.2500
65	.6820	.3800	—

Annual Rates of Withdrawal Years of Service						
	0-4		5-9		10 & over	
Age	Men	Women	Men	Women	Men	Women
20	34.00 %	35.00 %	— %	— %	— %	— %
25	31.00	31.00	19.00	20.00	—	—
30	27.50	25.00	17.00	16.50	12.50	10.00
35	24.50	22.00	15.50	15.00	9.00	10.00
40	22.00	20.00	13.50	14.00	8.25	9.00
45	21.00	18.00	12.50	12.00	7.00	8.00
50	18.50	16.25	11.00	10.00	7.00	7.00
55	15.25	13.50	9.00	9.00	6.00	6.00
60	13.50	13.00	9.00	9.00	—	—

(continued)

Summary of Actuarial Assumptions

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

GJRS

	Annual Rates of			
	Withdrawal	Death		Disability
Age	Both	Men	Women	Both
20	— %	.0370 %	.0130 %	— %
25	5.00	.0280	.0090	.0125
30	5.00	.0360	.0150	.0250
35	5.00	.0470	.0230	.0375
40	4.00	.0660	.0360	.0500
45	3.50	.0980	.0560	.0875
50	2.75	.1490	.0830	.1250
55	2.75	.2190	.1230	.2250
60	2.50	.3190	.1860	.3625
65	2.50	.4680	.2960	.5875

LRS

	Annual Rates of		
	Withdrawal	Death	
Age	Both	Men	Women
20	— %	.0370 %	.0130 %
25	9.0	.0280	.0090
30	9.0	.0360	.0150
35	9.0	.0470	.0230
40	10.0	.0660	.0360
45	11.0	.0980	.0560
50	9.0	.1490	.0830
55	8.0	.2190	.1230
60	8.0	.3190	.1860
65	8.0	.4680	.2960

GMPF

Rates of Withdrawal from Active Service	
Service	Rates
2 or Less	11.5 %
3-7	17.0
8-9	13.0
10-14	11.5
15-19	8.5
20 or more	15.5

Age	Rates of Death	
	Men	Women
20	.0370 %	.0130 %
25	.0280	.0090
30	.0360	.0150
35	.0470	.0230
40	.0660	.0360
45	.0980	.0560
50	.1490	.0830
55	.2190	.1230
60	.3190	.1860
65	.4680	.2960

(continued)

Summary of Actuarial Assumptions

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

SEAD-OPEB

	All Groups		ERS		GJRS
	Annual Rates of Death		Annual Rates of Disability		Annual Rates of Disability
Age	Men	Women	Men	Women	Both
20	.0370 %	.0130 %	— %	— %	— %
25	.0280	.0090	—	—	.0125
30	.0360	.0150	.0100	.0050	.0250
35	.0470	.0230	.0400	.0100	.0375
40	.0660	.0360	.2000	.0850	.0500
45	.0980	.0560	.3750	.2150	.0875
50	.1490	.0830	.6250	.3650	.1250
55	.2190	.1230	.8750	.5650	.2250
60	.3190	.1860	—	—	.3625
65	.4680	.2960	—	—	.5875

	ERS						LRS	GJRS
	Annual Rates of Withdrawal Years of Service						Annual Rates of Withdrawal	Annual Rates of Withdrawal
	0-4		5-9		10 & over			
Age	Men	Women	Men	Women	Men	Women	Both	Both
20	40.00 %	35.00 %	— %	— %	— %	— %	9.00 %	5.00 %
25	30.00	27.00	16.25	18.00	—	—	9.00	5.00
30	25.00	23.00	12.50	12.50	8.00	9.00	9.00	5.00
35	23.00	20.00	10.50	10.25	6.25	6.50	9.00	5.00
40	20.00	18.00	9.50	9.00	4.75	5.25	10.00	4.00
45	20.00	17.00	8.50	8.00	4.00	4.25	11.00	3.50
50	17.00	16.00	7.25	7.50	4.50	4.25	9.25	2.75
55	15.00	15.00	6.75	7.25	4.75	4.25	8.00	2.75
60	14.50	15.50	5.50	7.00	—	—	8.00	2.50
65	14.50	16.50	12.50	12.00	—	—	8.00	2.50

(continued)

Summary of Actuarial Assumptions

Annual Rates of Retirement

ERS

	Old Plan							
	Early Retirement		Age 60 for 30 years		34 years		More than 34 years	
Age	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	3.0	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

	New Plan and GSEPS			
	Early Retirement		Normal Retirement	
Age	Men	Women	Men*	Women**
50	5.0 %	3.8 %	60.0 %	42.0 %
52	5.0	3.8	50.0	42.0
55	6.0	5.8	50.0	40.0
57	6.0	7.3	45.0	37.0
60	—	—	25.0	28.0
62	—	—	37.5	37.5
65	—	—	32.0	33.0
67	—	—	32.0	32.0
70	—	—	30.0	30.0
75	—	—	100.0	100.0

*An additional 20% are assumed to retire in the first year eligible for unreduced retirement with 30 years if service before age 60.

**An additional 25% for ages below 53 and 20% for ages 53 to 59 are assumed to retire in the first year eligible for unreduced retirement with 30 years of service before age 60.

(continued)

Summary of Actuarial Assumptions

Annual Rates of Retirement

PSERS

Age	Annual Rate of Retirement	Age	Annual Rate of Retirement
60	12.0 %	71	25.0 %
61	12.0	72	25.0
62	21.0	73	25.0
63	17.0	74	25.0
64	15.0	75	25.0
65	26.0	76	25.0
66	26.0	77	25.0
67	22.0	78	25.0
68	22.0	79	25.0
69	23.5	80 & over	100.0
70	25.0		

GJRS

Age	Annual Rate of Retirement
60	15.0 %
61-64	10.0
65	13.0
66-67	15.0
68-69	18.0
70-77	25.0
78	100.0

LRS

Age	Annual Rate of Retirement	Age	Annual Rate of Retirement
60	8.0 %	66	10.0 %
61	8.0	67	10.0
62	12.0	68	10.0
63	8.0	69	15.0
64	8.0	70-79	15.0
65	10.0	80	100.0

(continued)

Summary of Actuarial Assumptions

Annual Rates of Retirement

GMPF

Age	Annual Rate of Retirement
60	75.0 %
61	75.0
62	60.0
63	50.0
64	50.0
65 & over	100.0

SEAD-OPEB

ERS Members

	Old Plan							
	Early Retirement		Age 60 or 30 years		34 years		More than 34 years	
Age	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

	New Plan and GSEPS			
	Early Retirement		Normal Retirement	
Age	Men	Women	Men*	Women**
50	5.0 %	3.8 %	60.0 %	42.0 %
52	5.0	3.8	50.0	42.0
55	6.0	5.8	50.0	40.0
57	6.0	7.3	45.0	37.0
60	—	—	25.0	28.0
62	—	—	37.5	37.5
65	—	—	32.0	33.0
67	—	—	32.0	32.0
70	—	—	30.0	30.0
75	—	—	100.0	100.0

*An additional 20% of active male New Plan and GSEPS members are expected to retire in the year in which they attain 30 years of service before age 60.
**An additional 25% of active female New Plan and GSEPS members less than age 53 and 20% for ages 53 to 59 are expected to retire in the year in which they attain 30 years of service before age 60.

(continued)

Summary of Actuarial Assumptions

Annual Rates of Retirement

LRS Members

Age	Annual Rate of Retirement	Age	Annual Rate of Retirement
60	8.0 %	68	10.0 %
61	8.0	69	15.0
62	12.0	70-77	15.0
63-64	8.0	78-79	15.0
65	10.0	80	100.0
66-67	10.0		

SEAD-OPEB

GJRS Members

Age	Annual Rate of Retirement
60	15.0 %
61	10.0
62	10.0
63-64	10.0
65	13.0
66-67	15.0
68	18.0
69	18.0
70-77	25.0
78-79	100.0
80	100.0

(continued)

Summary of Actuarial Assumptions

Annual Rates of Death After Retirement[1]

For all plans except PSERS, the Pub-2010 Family of Tables projected generationally with MP-2019 Scale and with further adjustments are used for post-retirement mortality assumptions as follows:

Participant Type	Membership Table	Set Forward (+)/ Setback (-)	Adjustment To Rates
Service Retirees	General Healthy Annuitant	Male: +1; Female: +1	Male: 105%; Female: 108%
Disability Retirees	General Disabled	Male: -3; Female: 0	Male: 103%; Female: 106%
Beneficiaries	General Contingent Survivors	Male: +2; Female: +2	Male: 106%; Female: 105%

For PSERS, the Pub-2010 Family of Tables projected generationally with MP-2019 Scale and with further adjustments are used for post-retirement mortality assumptions as follows:

Participant Type	Membership Table	Set Forward (+)/ Setback (-)	Adjustment To Rates
Service Retirees	General Healthy Below-Median Annuitant	Male: +2; Female: +2	Male: 101%; Female: 103%
Disability Retirees	General Disabled	Male: -3; Female: 0	Male: 103%; Female: 106%
Beneficiaries	General Below-Median Contingent Survivors	Male: +2; Female: +2	Male: 104%; Female: 99%

ERS

	Service Retirement		Disability Retirement		Beneficiaries	
Age	Men	Women	Men	Women	Men	Women
50	0.3371 %	0.2516 %	1.2576 %	1.5720 %	0.7918 %	0.3843 %
55	0.4861	0.3251	1.8725	1.8465	0.9402	0.5334
60	0.6941	0.4493	2.3484	2.0734	1.1978	0.7529
65	1.0532	0.7366	2.7573	2.3914	1.7257	1.1057
70	1.7882	1.2863	3.4536	3.0337	2.7157	1.7000
75	3.1448	2.2799	4.4743	4.2432	4.3036	2.7500
80	5.6427	4.0900	6.0986	6.3674	6.8879	4.6778
85	10.0958	7.6043	8.8220	9.8909	11.3049	8.4315
90	16.9785	13.8596	12.9831	14.4849	18.6083	14.6496

(continued)

Summary of Actuarial Assumptions

Annual Rates of Death After Retirement[1]

PSERS

Age	Service Retirement Men	Service Retirement Women	Disability Retirement Men	Disability Retirement Women	Beneficiaries Men	Beneficiaries Women
50	0.7989 %	0.4532 %	1.2576 %	1.5720 %	0.9984 %	0.5930 %
55	0.9837	0.5037	1.8725	1.8465	1.1523	0.7742
60	1.1726	0.6015	2.3484	2.0734	1.4258	1.0237
65	1.5736	0.8827	2.7573	2.3914	1.9978	1.4147
70	2.5785	1.5296	3.4536	3.0337	3.0680	2.0731
75	4.3329	2.6770	4.4743	4.2432	4.7414	3.1878
80	7.4043	4.7679	6.0986	6.3674	7.3944	5.1450
85	12.4301	8.7849	8.8220	9.8909	11.8154	8.7684
90	19.3173	15.3594	12.9831	14.4849	19.0320	14.3778

GJRS

Age	**Service Retirement** Men	**Service Retirement** Women	**Disability Retirement** Men	**Disability Retirement** Women	**Beneficiaries** Men	**Beneficiaries** Women
50	0.3371 %	0.2516 %	1.2576 %	1.5720 %	0.7918 %	0.3843 %
55	0.4861	0.3251	1.8725	1.8465	0.9402	0.5334
60	0.6941	0.4493	2.3484	2.0734	1.1978	0.7529
65	1.0532	0.7366	2.7573	2.3914	1.7257	1.1057
70	1.7882	1.2863	3.4536	3.0337	2.7157	1.7000
75	3.1448	2.2799	4.4743	4.2432	4.3036	2.7500
80	5.6427	4.0900	6.0986	6.3674	6.8879	4.6778
85	10.0958	7.6043	8.8220	9.8909	11.3049	8.4315
90	16.9785	13.8596	12.9831	14.4849	18.6083	14.6496

LRS

Age	**Service Retirement** Men	**Service Retirement** Women	**Disability Retirement** Men	**Disability Retirement** Women	**Beneficiaries** Men	**Beneficiaries** Women
50	0.3371 %	0.2516 %	1.2576 %	1.5720 %	0.7918 %	0.3843 %
55	0.4861	0.3251	1.8725	1.8465	0.9402	0.5334
60	0.6941	0.4493	2.3484	2.0734	1.1978	0.7529
65	1.0532	0.7366	2.7573	2.3914	1.7257	1.1057
70	1.7882	1.2863	3.4536	3.0337	2.7157	1.7000
75	3.1448	2.2799	4.4743	4.2432	4.3036	2.7500
80	5.6427	4.0900	6.0986	6.3674	6.8879	4.6778
85	10.0958	7.6043	8.8220	9.8909	11.3049	8.4315
90	16.9785	13.8596	12.9831	14.4849	18.6083	14.6496

(continued)

Summary of Actuarial Assumptions

Annual Rates of Death After Retirement[1]

GMPF

Age	Service Retirement Men	Service Retirement Women
50	0.3371 %	0.2516 %
55	0.4861	0.3251
60	0.6941	0.4493
65	1.0532	0.7366
70	1.7882	1.2863
75	3.1448	2.2799
80	5.6427	4.0900
85	10.0958	7.6043
90	16.9785	13.8596

SEAD-OPEB

	Service Retirement		Disability Retirement		Beneficiaries	
Age	Men	Women	Men	Women	Men	Women
50	0.3371 %	0.2516 %	1.2576 %	1.5720 %	0.7918 %	0.3843 %
55	0.4861	0.3251	1.8725	1.8465	0.9402	0.5334
60	0.6941	0.4493	2.3484	2.0734	1.1978	0.7529
65	1.0532	0.7366	2.7573	2.3914	1.7257	1.1057
70	1.7882	1.2863	3.4536	3.0337	2.7157	1.7000
75	3.1448	2.2799	4.4743	4.2432	4.3036	2.7500
80	5.6427	4.0900	6.0986	6.3674	6.8879	4.6778
85	10.0958	7.6043	8.8220	9.8909	11.3049	8.4315
90	16.9785	13.8596	12.9831	14.4849	18.6083	14.6496

[1]Base mortality rates as of 2010 before application of the improvement scale

Active Members

ERS

Year	Employers	Active Members	Annual Payroll (in thousands)	Average Pay	Change
2011	737	66,081	$ 2,486,780	$ 37,632	0.4 %
2012	723	63,942	2,414,884	37,767	0.4
2013	716	61,550	2,335,773	37,949	0.5
2014	425	60,486	2,315,625	38,284	0.9
2015	423	60,416	2,352,920	38,945	1.7
2016	425	59,766	2,384,358	39,895	2.4
2017	427	60,906	2,546,492	41,810	4.8
2018	419	60,405	2,634,129	43,608	4.3
2019	420	59,207	2,611,965	44,116	1.2
2020	417	57,059	2,612,773	45,791	3.8

PSERS

PSERS is not a compensation based plan.

Year	Employers	Active Members
2011	195	39,249
2012	189	38,654
2013	187	37,361
2014	184	36,096
2015	183	35,477
2016	182	34,866
2017	184	35,509
2018	184	34,953
2019	187	34,767
2020	186	34,736

GJRS

Year	Employers	Active Members	Annual Payroll (in thousands)	Average Pay	Change
2011	95	507	$ 52,331	$ 103,216	(0.4) %
2012	96	503	51,898	103,177	0.0
2013	97	506	52,807	104,362	1.1
2014	92	513	53,628	104,539	0.2
2015	91	516	54,272	105,178	0.6
2016	93	526	57,401	109,128	3.8
2017	94	527	59,695	113,273	3.8
2018	93	527	60,572	114,937	1.5
2019	93	521	60,532	116,184	1.1
2020	92	522	61,544	117,900	1.5

(continued)

Active Members

LRS

LRS is not a compensation based plan.

Year	Employers	Active Members
2011	1	218
2012	1	220
2013	1	223
2014	1	222
2015	1	218
2016	1	224
2017	1	222
2018	1	222
2019	1	221
2020	1	219

GMPF

GMPF is not a compensation based plan.

Year	Employers	Active Members
2011	1	13,776
2012	1	13,526
2013	1	13,573
2014	1	13,469
2015	1	13,754
2016	1	13,850
2017	1	13,037
2018	1	13,804
2019	1	13,711
2020	1	14,095

SEAD-OPEB

Year	Employers	Active Members
2011	833	55,516
2012	815	49,261
2013	811	43,512
2014	482	39,101
2015	481	35,189
2016	477	32,076
2017	455	29,024
2018	459	26,224
2019	456	23,499
2020	444	21,144

Note: Payroll data on page 129 for fiscal year 2020 will not equal that which is presented in the Financial section in the Schedules of Employers' and Nonemployer Contributions on pages 72-73. 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
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
2021	1.25	24.66	24.66	21.57

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

PSERS

Year	Pre 7/1/12 Member	Post 7/1/12 Member	Employer
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	n/a	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
2021	$ 36 per year	$ 90 per year	30,264,000

GJRS

Year	Member	Employer
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
2021	7.50	8.38

(continued)

Member and Employer Contribution Rates

LRS

Year	Member	Employer
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	—
2021	8.50	—

GMPF

Year	Member	Employer
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
2021	n/a	2,683,883

SEAD-OPEB

Year	Member - Old Plan	Member - New Plan, LRS, GJRS	Employer
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	—
2021	0.45	0.23	—

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	6/30/2011		$ 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
	6/30/2020	**	13,556,622	18,375,797	4,819,175	73.8	2,612,773	184.4
Public School Employees Retirement System[1]	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
	6/30/2020	**	961,431	1,156,997	195,566	83.1	n/a	n/a
Legislative Retirement System	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)
	6/30/2020	**	34,661	25,543	(9,118)	135.7	3,798	(240.1)
Georgia Judicial Retirement System	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)
	6/30/2020	**	487,591	458,188	(29,403)	106.4	61,544	(47.8)

(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 Fund[2]	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
	6/30/2020 **	29,083	50,329	21,246	57.8	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 129 for fiscal year 2020 will not equal that which is presented in the Financial section in the Schedules of Employers' and Nonemployer Contributions on pages 72-73. 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.

*Reflects change in assumed rate of return
**Reflects changes in actuarial assumptions

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)		
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
2020	2,553	53,509	1,606	38,185	53,032	1,403,624	1.1	26,467

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)		
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
2020	1,165	5,679	932	3,484	19,161	66,057	3.4	3,447

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)		
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
2020	34	2,060	19	1,058	413	29,115	3.6	70,496

(continued)

Schedule of Retirees Added to and Removed from Rolls

LRS

Year Ended	Added to Rolls Number	Added to Rolls Annual Allowances (in thousands)	Removed from Rolls Number	Removed from Rolls Annual Allowances (in thousands)	Roll End of Year Number	Roll End of Year Annual Allowances (in thousands)	% Increase in Annual Allowance	Average Annual Allowances
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
2020	14	95	14	123	269	1,690	(1.6)	6,283

GMPF

Year Ended	Added to Rolls Number	Added to Rolls Annual Allowances (in thousands)	Removed from Rolls Number	Removed from Rolls Annual Allowances (in thousands)	Roll End of Year Number	Roll End of Year Annual Allowances (in thousands)	% Increase in Annual Allowance	Average Annual Allowances
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
2020	89	93	17	20	1,220	1,311	5.9	1,075

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

Analysis of Change in Unfunded Accrued Liability (UAL)

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
	Amount of Increase (Decrease) (in millions)									
ERS										
Interest (7.30) added to previous UAL	$ 317.4	$ 321.2	$ 327.6	$ 325.9	$ 331.8	$ 346.2	$ 363.9	$ 338.8	$ 299.2	$ 243.7
Accrued liability contribution	(564.6)	(567.4)	(574.4)	(551.0)	(514.7)	(419.4)	(321.7)	(239.1)	(147.7)	(122.9)
Experience:										
Valuation asset growth	59.8	108.6	(130.4)	(48.6)	8.5	(198.9)	(228.9)	253.7	396.3	433.6
Pensioners' mortality	13.3	(1.2)	2.6	9.0	12.8	13.9	60.4	20.6	15.5	16.4
Turnover and retirements	41.6	40.7	58.7	39.9	43.6	50.8	45.5	103.7	93.8	91.4
New entrants	9.3	9.6	12.4	7.8	7.8	10.3	9.3	14.1	12.1	28.4
Salary increases	9.5	(43.5)	53.5	127.5	(0.6)	(89.6)	(159.4)	(46.8)	(74.2)	49.0
Method changes	—	—	—	—	—	—	—	(128.3)	—	—
Amendments (COLAs)	—	61.2	39.2	28.9	28.4	—	—	—	(118.8)	—
Assumption changes	578.3	—	161.1	158.3	—	80.4	—	—	—	—
Programming modification	—	—	—	—	—	—	—	—	26.3	(28.7)
Data changes	6.5	18.4	15.3	(16.2)	3.6	14.4	(6.0)	18.7	12.9	9.1
Misc. changes	0.1	—	8.1	—	0.1	(0.1)	0.1	(0.1)	12.6	20.2
Total	$ 471.2	$ (52.4)	$ (26.3)	$ 81.5	$ (78.7)	$ (192.0)	$ (236.8)	$ 335.3	$ 528.0	$ 740.2

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
	Amount of Increase (Decrease) (in thousands)									
PSERS										
Interest (7.30) added to previous UAL	$ 12,966.7	$ 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
Accrued liability contribution	(20,400.5)	(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
Experience:										
Valuation asset growth	3,100.0	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
Pensioners' mortality	(2,626.4)	(1,104.1)	(2,859.3)	(308.6)	(643.8)	414.9	1,286.7	(381.9)	(1,149.5)	(3,000.5)
Turnover and retirements	814.7	(859.2)	(1,024.6)	(879.7)	(228.2)	2,618.5	2,580.8	4,772.4	4,974.5	3,403.6
New entrants	3,516.1	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
Method changes	—	—	—	—	—	—	—	(9,259.0)	—	—
Amendments	—	12,551.0	16,292.1	15,892.7	—	—	—	—	—	—
COLAs	(13,371.6)	(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)
Assumption changes	34,145.2	—	10,995.2	10,547.5	—	30,030.0	—	—	—	—
Data Changes	—	—	—	—	—	—	—	—	—	—
Allotment for Expenses	—	—	—	—	—	—	—	—	—	2,122.7
Misc. changes	(204.7)	(4,405.3)	(352.4)	(29.5)	157.2	43.0	(64.9)	301.7	2,586.9	872.4
Total	$ 17,939.5	$ 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

(continued)

Analysis of Change in Unfunded Accrued Liability (UAL)

		2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
		Amount of Increase (Decrease) (in thousands)									
GJRS											
Interest (7.30) added to previous UAL	$	(2,433.7) $	(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)
Accrued liability contribution		2,367.2	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
Experience:											
Valuation asset growth		1,470.0	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
Pensioners' mortality		1,109.5	1,456.8	543.1	(339.7)	1,530.2	639.6	2,138.5	533.8	376.9	2,076.8
Turnover and retirements		(1,383.9)	1,100.3	(162.6)	2,307.0	872.4	(370.0)	(5,962.8)	3,941.4	2,080.7	(276.3)
New entrants		492.4	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		(4,160.2)	(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
Method changes		—	—	—	—	—	—	—	(6,827.0)	—	—
Amendments (COLAs)		—	645.9	993.1	3,345.4	3,179.6	—	—	—	(870.0)	—
Assumption changes		5,058.9	—	3,696.0	3,615.6	—	(5,030.9)	—	—	—	—
Data changes		1,416.2	1,484.4	—	—	—	—	—	—	—	—
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)
Total	$	3,936.4 $	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

		2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
		Amount of Increase (Decrease) (in thousands)									
LRS											
Interest (7.30) added to previous UAL	$	(616.1) $	(581.5) $	(535.7) $	(497.8) $	(445.9) $	(421.9) $	(343.3) $	(301.8) $	(302.5) $	(343.4)
Accrued liability contribution		352.1	315.2	322.9	250.3	338.3	173.4	161.9	(62.4)	33.9	107.1
Experience:											
Valuation asset growth		123.6	245.1	(342.2)	(129.2)	24.1	(491.6)	(576.5)	513.9	829.0	906.2
Pensioners' mortality		(19.8)	29.6	118.3	245.9	(66.1)	(50.8)	323.8	(29.6)	19.1	(18.7)
Turnover and retirements		(119.1)	(180.7)	(175.2)	(257.7)	(198.9)	(10.1)	(347.5)	17.4	(84.3)	254.5
New entrants		3.7	57.2	16.7	99.2	26.8	35.1	135.2	144.5	16.9	74.0
Method changes		—	—	—	—	—	—	—	(418.0)	—	—
Amendments		—	101.9	67.6	50.4	51.5	—	—	(488.1)	(549.7)	(481.8)
COLAs		(444.3)	(457.4)	(462.8)	(458.3)	(418.2)	(452.6)	(470.8)	—	—	—
Assumption changes		60.4	—	229.1	223.7	—	852.3	—	—	—	—
Data changes		(19.8)	(3.6)	—	—	—	—	—	—	—	—
Misc. changes		—	0.9	34.8	(127.9)	(4.7)	46.2	69.9	71.1	46.4	46.9
Total	$	(679.3) $	(473.3) $	(726.5) $	(601.5) $	(693.1) $	(320.0) $	(1,047.3) $	(553.1) $	8.8 $	544.9

(continued)

Analysis of Change in Unfunded Accrued Liability (UAL)

	2020	2019	2018	2017	2016	2015	2014	2013	2012
	Amount of Increase (Decrease) (in thousands)								
GMPF									
Interest (7.30) added to previous UAL	$ 1,436.0	$ 1,479.0	$ 1,489.4	$ 1,484.8	$ 1,407.5	$ 1,316.3	$ 1,344.3	$ 1,360.8	$ 1,354.9
Accrued liability contribution	(2,348.7)	(2,285.4)	(2,140.6)	(1,747.5)	(1,698.6)	(1,765.6)	(1,775.3)	(1,661.5)	(1,502.4)
Experience:									
Valuation asset growth	47.0	68.0	(181.0)	(50.0)	59.0	(203.0)	(247.0)	39.3	107.0
Pensioners' mortality	(36.1)	(20.1)	40.7	(109.2)	119.3	126.1	88.8	80.2	68.3
Turnover and retirements	78.5	(17.0)	143.1	11.0	233.3	120.5	(87.9)	186.4	17.9
New entrants	331.6	179.1	208.9	138.9	165.1	236.9	142.6	137.8	127.1
Method changes	—	—	—	—	—	—	—	(393.0)	—
Assumption changes	2,313.3	—	570.2	537.6	—	985.8	—	—	—
Data changes	(243.0)	10.4	—	—	—	—	—	—	—
Misc. changes	(3.9)	(3.0)	2.6	64.2	744.4	398.7	161.1	30.6	(93.6)
Total	$ 1,574.7	$ (589.0)	$ 133.3	$ 329.8	$ 1,030.0	$ 1,215.7	$ (373.4)	$ (219.4)	$ 79.2

SEAD-OPEB: Data is not available.

Solvency Test Results
(in thousands)

ERS

Actuarial Valuation as of 6/30	Actuarial Accrued Liability for: Active Member Contributions (1)	Retirants & Beneficiaries (2)	Active Member (Employer Funded Portion) (3)	Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets (1)	(2)	(3)
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
2020	372,510	13,406,538	4,596,749	13,556,622	100.0	98.3	—

PSERS

Actuarial Valuation as of 6/30	Actuarial Accrued Liability for: Active Member Contributions (1)	Retirants & Beneficiaries (2)	Active Member (Employer Funded Portion) (3)	Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets (1)	(2)	(3)
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
2020	19,898	721,554	415,545	961,431	100.0	100.0	52.9

GJRS

Actuarial Valuation as of 6/30	Actuarial Accrued Liability for: Active Member Contributions (1)	Retirants & Beneficiaries (2)	Active Member (Employer Funded Portion) (3)	Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets (1)	(2)	(3)
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
2020	89,842	267,433	100,913	487,591	100.0	100.0	100.0

(continued)

Solvency Test Results

(in thousands)

LRS

Actuarial Valuation as of 6/30	Actuarial Accrued Liability for: Active Member Contributions (1)	Retirants & Beneficiaries (2)	Active Member (Employer Funded Portion) (3)	Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets (1)	(2)	(3)
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
2020	4,007	18,936	2,600	34,661	100.0	100.0	100.0

GMPF

Actuarial Valuation as of 6/30	Actuarial Accrued Liability for: Active Member Contributions (1)	Retirants & Beneficiaries (2)	Active Member (Employer Funded Portion) (3)	Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets (1)	(2)	(3)
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	—
2020	—	37,021	13,308	29,083	n/a	78.6	—

SEAD-OPEB

Actuarial Valuation as of 6/30	Actuarial Accrued Liability for: Active Member Contributions (1)	Retirants & Beneficiaries (2)	Active Member (Employer Funded Portion) (3)	Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets (1)	(2)	(3)
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
2020	—	757,612	146,920	1,256,718	n/a	100.0	100.0

Statistical Section

Georgia's State Symbols

State Reptile: Gopher Tortoise

Georgia designated the endangered gopher tortoise as the official state reptile in 1989.

The gopher tortoise is one of the oldest living species native to Georgia, and is the only land tortoise native to the Southeast. It dwells in pine forests with deep, well drained soils providing food and nesting sites. The gopher tortoise provides shelter to hundreds of other animal species by digging burrows in the soil. Predation and habitat destruction threaten this important species.

Statistical Section

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 readers 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, 2021

Proprietary Fund

Schedule of Revenue and Expenses
10-year Schedule of Membership

Additions by Source - Contribution/Investment Income

(in thousands)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
ERS										
Member Contributions	$ 36,561	$ 38,955	$ 32,423	$ 33,713	$ 31,961	$ 35,863	$ 37,130	$ 36,252	$ 35,837	$ 35,027
Employer Contributions	274,034	358,992	418,807	505,668	583,082	613,201	639,302	638,989	634,108	606,919
Nonemployer Contributions	—	—	10,945	12,495	12,484	12,080	12,865	10,220	9,749	9,048
Net Investment Income (Loss)	231,782	1,495,849	2,021,748	474,147	141,292	1,475,626	1,166,013	873,404	703,840	3,843,581
Other	—	—	—	10	10	10	10	10	10	10
Total Additions to (Deductions from) Fiduciary Net Position	$ 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	$4,494,585
PSERS										
Member Contributions	$ 1,426	$ 1,538	$ 1,659	$ 1,800	$ 1,925	$ 2,084	$ 2,162	$ 2,256	$ 2,338	$ 2,222
Employer Contributions	15,884	24,829	—	—	—	—	—	—	—	—
Nonemployer Contributions	—	—	27,160	28,461	28,580	26,277	29,276	30,263	32,496	30,264
Net Investment Income (Loss)	13,554	88,067	123,799	30,129	9,809	97,715	78,418	60,553	49,913	277,705
Other	—	—	—	—	—	—	—	—	—	—
Total Additions to (Deductions from) Fiduciary Net Position	$ 30,864	$ 114,434	$ 152,618	$ 60,390	$ 40,314	$ 126,076	$ 109,856	$ 93,072	$ 84,747	$ 310,191
GJRS										
Member Contributions	$ 4,904	$ 4,408	$ 4,731	$ 5,061	$ 5,507	$ 4,906	$ 4,910	$ 5,469	$ 5,005	$ 5,190
Employer Contributions	2,083	2,279	1,373	2,696	4,754	4,081	4,725	3,117	4,022	3,830
Nonemployer Contributions	—	—	1,002	1,564	2,869	2,603	1,841	2,137	2,442	2,240
Net Investment Income (Loss)	6,571	42,104	60,012	14,697	5,055	49,259	39,877	30,827	25,414	140,103
Other	—	—	—	—	—	—	—	—	—	—
Total Additions to (Deductions from) Fiduciary Net Position	$ 13,558	$ 48,791	$ 67,118	$ 24,018	$ 18,185	$ 60,849	$ 51,353	$ 41,550	$ 36,883	$ 151,363
LRS										
Member Contributions	$ 323	$ 373	$ 282	$ 327	$ 328	$ 327	$ 323	$ 339	$ 325	$ 290
Employer Contributions	76	128	45	—	—	—	—	—	—	—
Nonemployer Contributions	—	—	—	—	—	—	—	—	—	—
Net Investment Income (Loss)	550	3,573	4,969	1,189	363	3,741	2,962	2,228	1,824	9,928
Other	—	—	—	—	—	—	—	—	—	—
Total Additions to (Deductions from) Fiduciary Net Position	$ 949	$ 4,074	$ 5,296	$ 1,516	$ 691	$ 4,068	$ 3,285	$ 2,567	$ 2,149	$ 10,218

(continued)

Additions by Source - Contribution/Investment Income
(in thousands)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
GMPF										
Member Contributions	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Employer Contributions	1,521	1,703	1,892	1,893	1,990	2,018	2,377	2,537	2,611	2,684
Nonemployer Contributions	—	—	—	—	—	—	—	—	—	—
Net Investment Income (Loss)	221	1,374	2,179	585	240	2,262	1,928	1,683	1,485	8,709
Other	—	—	—	—	—	—	—	—	—	—
Total Additions to (Deductions from) Fiduciary Net Position	$ 1,742	$ 3,077	$ 4,071	$ 2,478	$ 2,230	$ 4,280	$ 4,305	$ 4,220	$ 4,096	$ 11,393
SEAD - OPEB										
Member Contributions	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Employer Contributions	—	—	—	—	—	1	—	5	—	—
Insurance Premiums	5,532	5,075	4,502	4,187	3,931	3,793	3,599	3,328	3,088	2,817
Net Investment Income (Loss)	17,193	108,148	154,868	37,876	12,559	125,550	101,542	79,193	65,248	362,663
Other	—	—	—	—	—	—	—	—	—	—
Total Additions to (Deductions from) Fiduciary Net Position	$ 22,725	$ 113,223	$ 159,370	$ 42,063	$ 16,490	$ 129,344	$ 105,141	$ 82,526	$ 68,336	$ 365,480
Defined Contribution Plan - GDCP										
Member Contributions	$ 17,171	$ 16,676	$ 16,290	$ 15,655	$ 14,708	$ 14,921	$ 14,585	$ 14,578	$ 14,658	$ 15,759
Employer Contributions	—	—	—	—	—	—	—	—	—	—
Nonemployer Contributions	—	—	—	—	—	—	—	—	—	—
Net Investment Income (Loss)	652	137	1,368	1,326	5,591	(1,056)	(356)	8,324	9,078	(1,867)
Other	—	—	—	—	—	—	—	—	—	—
Total Additions to (Deductions from) Fiduciary Net Position	$ 17,823	$ 16,813	$ 17,658	$ 16,981	$ 20,299	$ 13,865	$ 14,229	$ 22,902	$ 23,736	$ 13,892

(continued)

Additions by Source - Contribution/Investment Income

(in thousands)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Defined Contribution Plan - 401(k)										
Member Contributions	$ 40,331	$ 44,428	$ 53,724	$ 64,870	$ 79,422	$ 93,608	$ 110,848	$ 119,770	$ 129,639	$ 132,123
Employer Contributions	4,355	18,279	21,513	25,615	29,982	36,761	43,176	47,170	51,138	52,023
Nonemployer Contributions	—	—	—	—	—	—	—	—	—	—
Net Investment Income (Loss)	3,112	52,835	78,583	17,665	5,281	88,771	72,671	61,106	40,850	371,775
Other	800	948	1,122	1,298	1,429	1,584	1,744	544	426	567
Total Additions to (Deductions from) Fiduciary Net Position	$ 48,598	$ 116,490	$ 154,942	$ 109,448	$ 116,114	$ 220,724	$ 228,439	$ 228,590	$ 222,053	$ 556,488
Defined Contribution Plan - 457										
Member Contributions	$ 19,551	$ 18,753	$ 17,623	$ 17,445	$ 17,413	$ 18,899	$ 20,133	$ 20,264	$ 20,216	$ 19,566
Employer Contributions	—	—	—	—	—	—	—	—	—	—
Nonemployer Contributions	—	—	—	—	—	—	—	—	—	—
Net Investment Income (Loss)	7,785	55,737	73,746	18,991	7,855	59,541	46,748	39,100	25,563	162,958
Other	—	—	—	—	—	—	—	53	25	61
Total Additions to (Deductions from) Fiduciary Net Position	$ 27,336	$ 74,490	$ 91,369	$ 36,436	$ 25,268	$ 78,440	$ 66,881	$ 59,417	$ 45,804	$ 182,585
Suvivor's Benefit Fund - SBF										
Member Contributions	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	—	—
Nonemployer Contributions	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	8,701	49,353
Other	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	$ 8,701	$ 49,353

Deductions by Type
(in thousands)

ERS

Fiscal Year	Benefit Payments: Service	Partial Lump-Sum Option	Disability	Survivor Benefits	Total Benefit Payments	Net Administrative Expenses	Refunds	Total Deductions from Fiduciary Net Position
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
2021	1,164,687	15,991	154,948	99,149	1,434,775	7,587	6,604	1,448,966

PSERS

Fiscal Year	Benefit Payments: Service	Disability	Survivor Benefits	Total Benefit Payments	Net Administrative Expenses	Refunds	Total Deductions from Fiduciary Net Position
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
2021	58,744	4,850	2,821	66,415	1,421	633	68,469

GJRS

Fiscal Year	Benefit Payments: Service	Disability	Survivor Benefits	Total Benefit Payments	Net Administrative Expenses	Refunds	Total Deductions from Fiduciary Net Position
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
2021	27,870	117	2,971	30,958	846	63	31,867

(continued)

Deductions by Type
(in thousands)

LRS

Fiscal Year	Benefit Payments: Service	Benefit Payments: Survivor Benefits	Benefit Payments: Total Benefit Payments	Net Administrative Expenses	Refunds	Total Deductions from Fiduciary Net Position
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
2021	1,293	427	1,720	311	42	2,073

GMPF

Fiscal Year	Benefit Payments: Service*	Benefit Payments: Total Benefit Payments	Net Administrative Expenses	Total Deductions from Fiduciary Net Position
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
2021	1,428	1,428	255	1,683

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

SEAD-OPEB

Fiscal Year	Benefit Payments: Death Benefits**	Benefit Payments: Total Benefit Payments	Net Administrative Expenses	Total Deductions from Fiduciary Net Position
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
2021	54,680	54,680	697	55,377

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

(continued)

Deductions by Type

(in thousands)

Defined Contribution Plan - GDCP

Fiscal Year	Benefit Payments: Periodic Payments	Benefit Payments: Total Benefit Payments	Net Administrative Expenses	Refunds	Total Deductions from Fiduciary Net Position
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
2021	9	9	902	10,701	11,612

Defined Contribution Plan - 401(k)

Fiscal Year	Benefit Payments: Distribu-tions	Benefit Payments: Total Benefit Payments	Net Administrative Expenses	Total Deductions from Fiduciary Net Position
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
2021	127,352	127,352	3,554	130,906

Defined Contribution Plan - 457

Fiscal Year	Benefit Payments: Distribu-tions	Benefit Payments: Total Benefit Payments	Net Administrative Expenses	Total Deductions from Fiduciary Net Position
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
2021	52,207	52,207	671	52,878

(continued)

Deductions by Type

(in thousands)

Survivors' Benefit Fund				
	Benefit Payments			
Fiscal Year	Death Benefits	Total Benefit Payments	Net Administrative Expenses	Total Deductions from Fiduciary Net Position
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	—	—	—	—
2021	—	—	—	—

Changes in Fiduciary Net Position

(in thousands)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
ERS										
Total Additions	$ 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	$4,494,585
Total Deductions	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	1,448,966
Transfer In (Out)	(12,724)	(5,009)	—	—	—	—	—	—	—	—
Changes in Fiduciary Net Position	(706,903)	599,307	1,161,728	(323,567)	(594,397)	724,732	426,381	100,286	(115,186)	3,045,619
PSERS										
Total Additions	30,864	114,434	152,618	60,390	40,314	126,076	109,856	93,072	84,747	310,191
Total Deductions	56,572	57,554	58,153	58,973	59,689	61,717	63,852	65,623	68,086	68,469
Transfer In (Out)	—	—	—	—	—	—	—	—	—	—
Changes in Fiduciary Net Position	(25,708)	56,880	94,465	1,417	(19,375)	64,359	46,004	27,449	16,661	241,722
GJRS										
Total Additions	13,558	48,791	67,118	24,018	18,185	60,849	51,353	41,550	36,883	151,363
Total Deductions	14,872	16,668	18,217	19,956	20,026	22,678	25,878	28,835	30,325	31,867
Transfer In (Out)	—	—	—	—	—	—	—	—	—	—
Changes in Fiduciary Net Position	(1,314)	32,123	48,901	4,062	(1,841)	38,171	25,475	12,715	6,558	119,496
LRS										
Total Additions	949	4,074	5,296	1,516	691	4,068	3,285	2,567	2,149	10,218
Total Deductions	1,994	2,031	1,983	1,951	2,075	2,062	2,077	2,216	2,121	2,073
Transfer In (Out)	—	—	—	—	—	—	—	—	—	—
Changes in Fiduciary Net Position	(1,045)	2,043	3,313	(435)	(1,384)	2,006	1,208	351	28	8,145
GMPF										
Total Additions	1,742	3,077	4,071	2,478	2,230	4,280	4,305	4,220	4,096	11,393
Total Deductions	712	803	951	1,017	1,225	1,286	1,363	1,456	1,546	1,683
Transfer In (Out)	—	—	—	—	—	—	—	—	—	—
Changes in Fiduciary Net Position	1,030	2,274	3,120	1,461	1,005	2,994	2,942	2,764	2,550	9,710

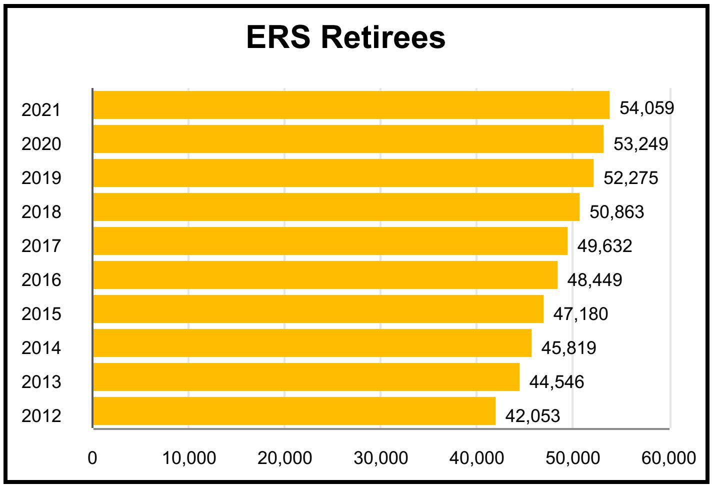
(continued)

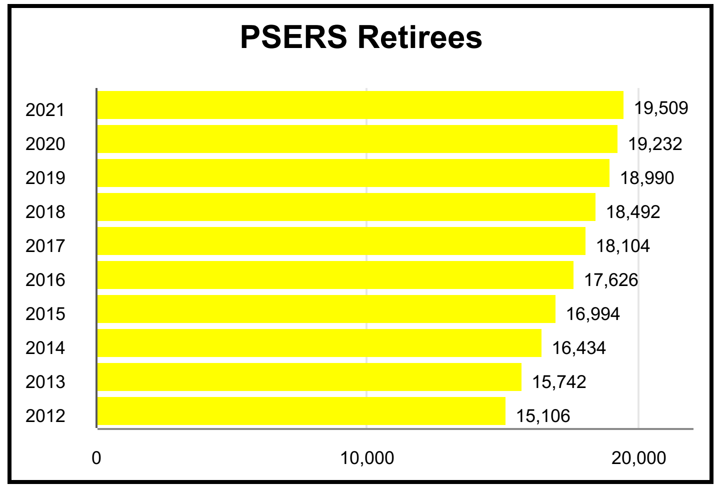
Changes in Fiduciary Net Position

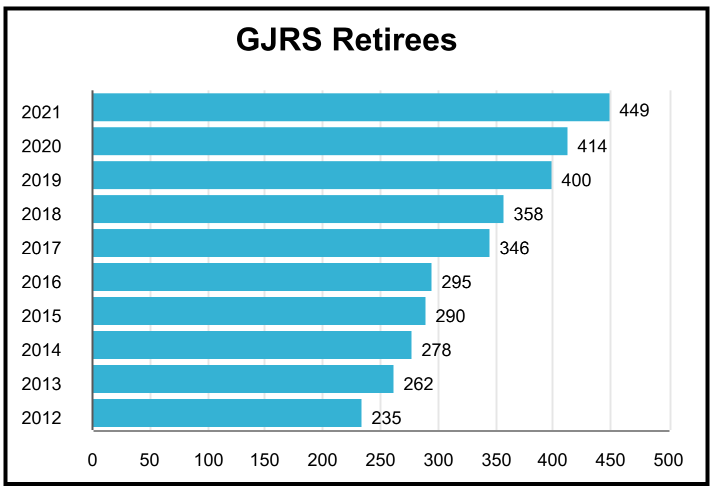
(in thousands)

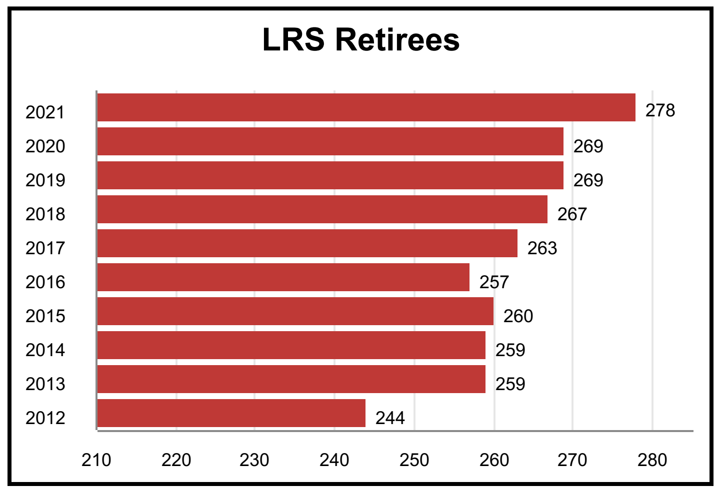
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
SEAD - OPEB										
Total Additions	$ 22,725	$ 113,223	$ 159,370	$ 42,063	$ 16,490	$ 129,344	$ 105,141	$ 82,526	$ 68,336	$ 365,480
Total Deductions	25,058	28,685	29,305	33,407	34,510	36,634	36,930	38,132	45,474	55,377
Transfer In (Out)	12,724	5,009	5	2	2	—	—	—	—	—
Changes in Fiduciary Net Position	10,391	89,547	130,070	8,658	(18,018)	92,710	68,211	44,394	22,862	310,103
Defined Contribution Plan - GDCP										
Total Additions	17,823	16,813	17,658	16,981	20,299	13,865	14,229	22,902	23,736	13,892
Total Deductions	13,898	15,584	18,721	23,330	12,712	12,329	10,932	11,823	11,430	11,612
Transfer In (Out)	—	—	—	—	—	—	—	—	—	—
Changes in Fiduciary Net Position	3,925	1,229	(1,063)	(6,349)	7,587	1,536	3,297	11,079	12,306	2,280
Defined Contribution Plan - 401(k)										
Total Additions	48,598	116,490	154,942	109,448	116,114	220,724	228,439	228,590	222,053	556,488
Total Deductions	39,097	59,808	45,433	98,183	49,340	58,962	67,742	83,075	96,171	130,906
Transfer In (Out)	—	—	—	—	—	—	—	—	—	—
Changes in Fiduciary Net Position	9,501	56,682	109,509	11,265	66,774	161,762	160,697	145,515	125,882	425,582
Defined Contribution Plan - 457										
Total Additions	27,336	74,490	91,369	36,436	25,268	78,440	66,881	59,417	45,804	182,585
Total Deductions	42,745	64,384	46,619	51,345	44,108	39,661	41,132	42,805	40,812	52,878
Transfer In (Out)	—	—	—	—	—	—	—	—	—	—
Changes in Fiduciary Net Position	(15,409)	10,106	44,750	(14,909)	(18,840)	38,779	25,749	16,612	4,992	129,707
Survivors' Benefit Fund										
Total Additions	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8,701	49,353
Total Deductions	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	—	—
Changes in Fiduciary Net Position	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8,701	49,353

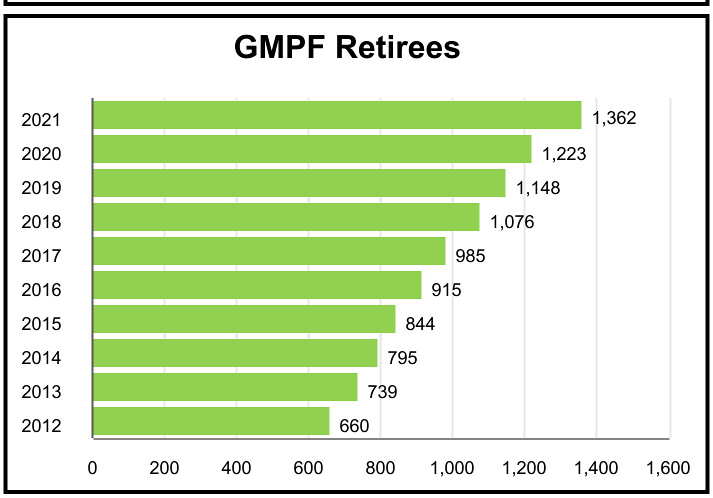
Number of Retirees



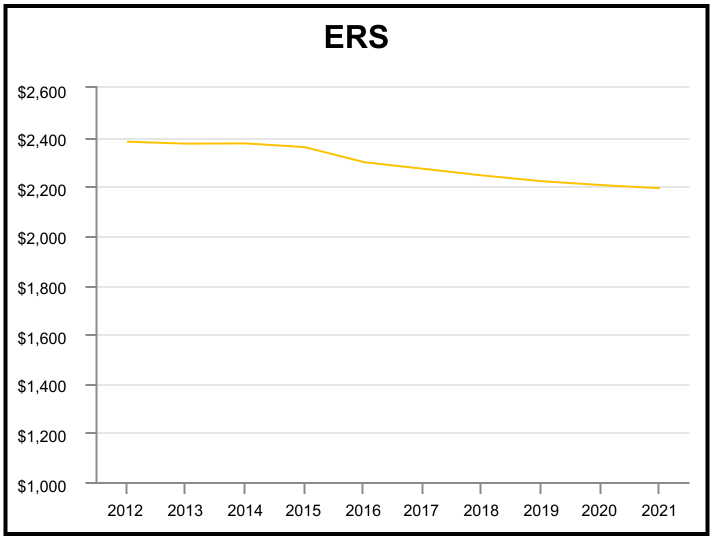


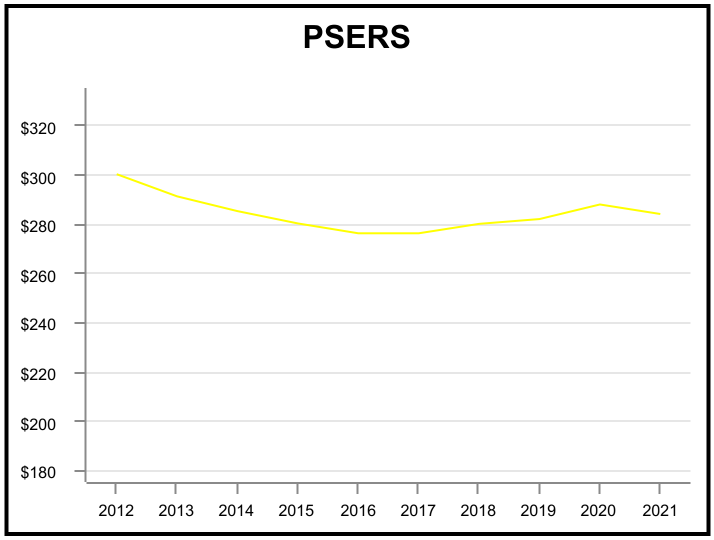


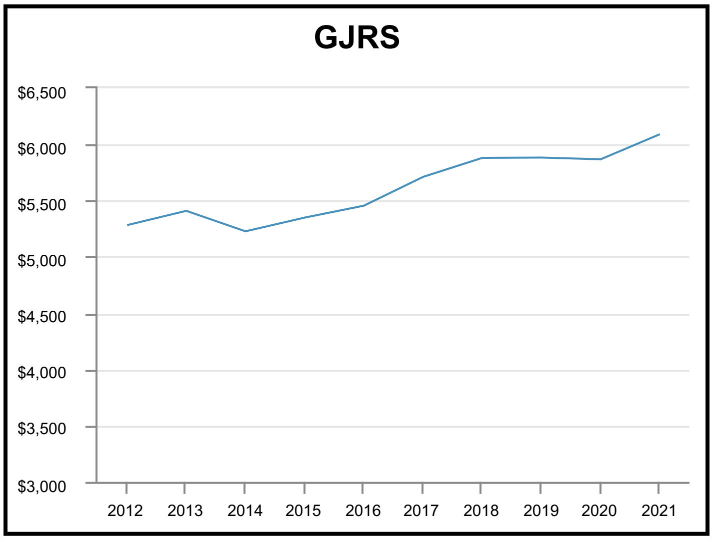


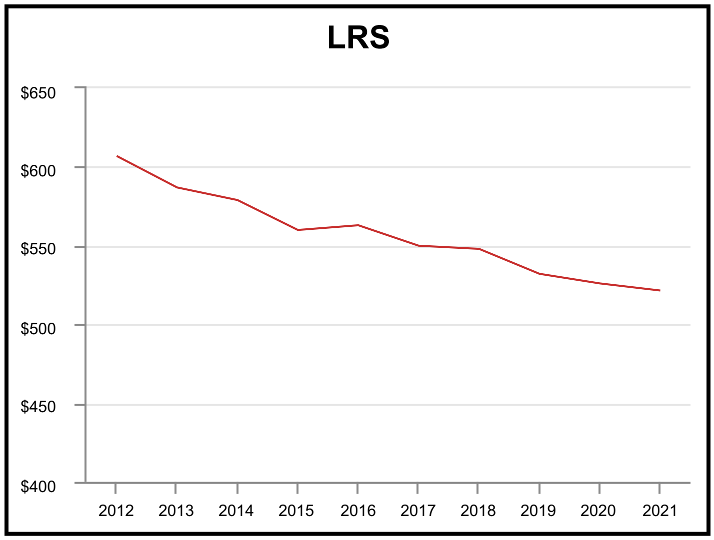


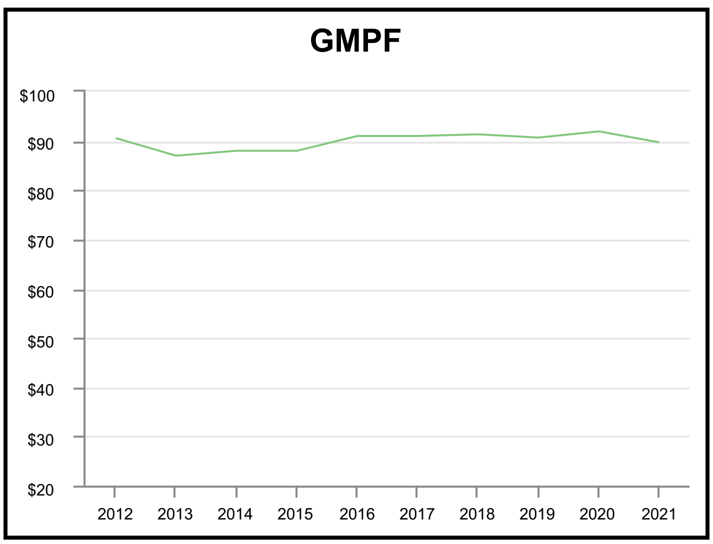
Average Monthly Payments to Retirees



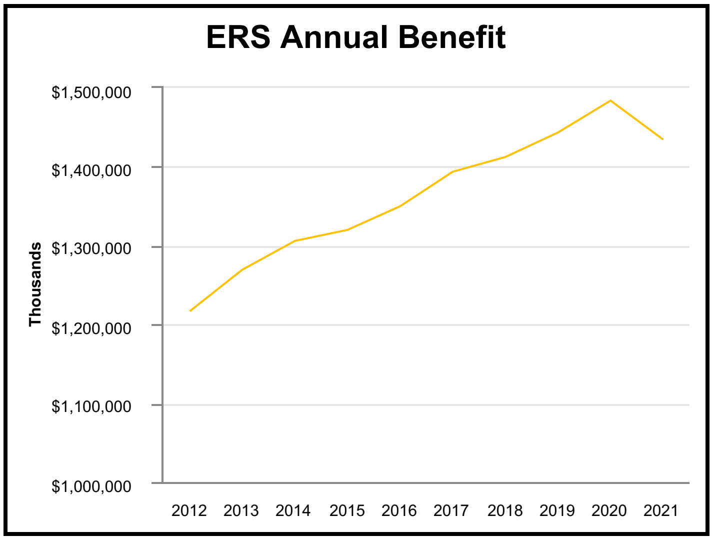


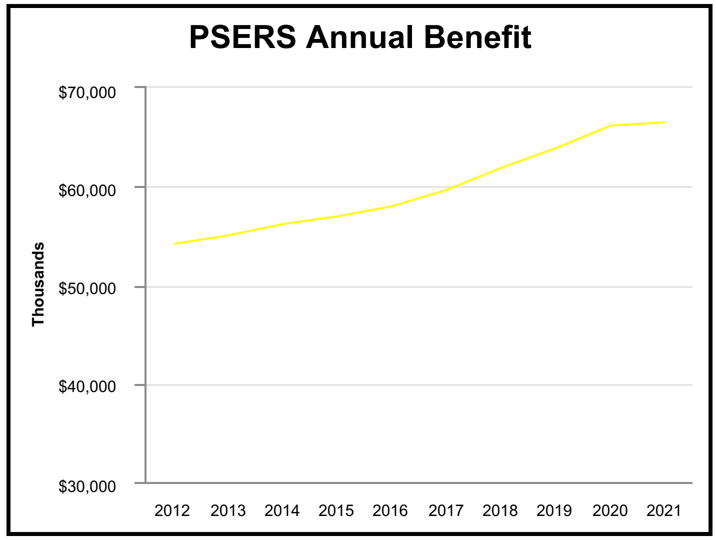


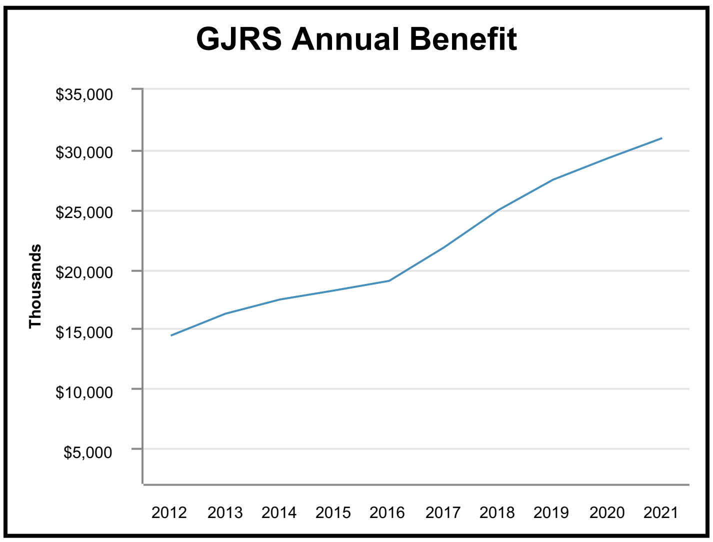


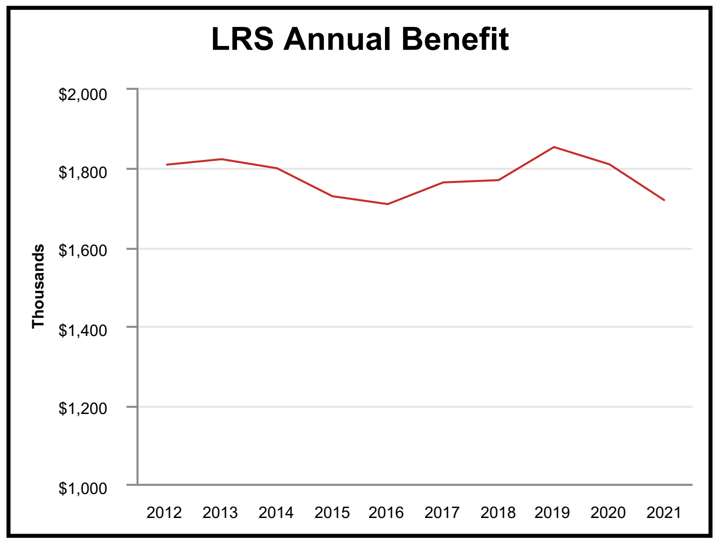


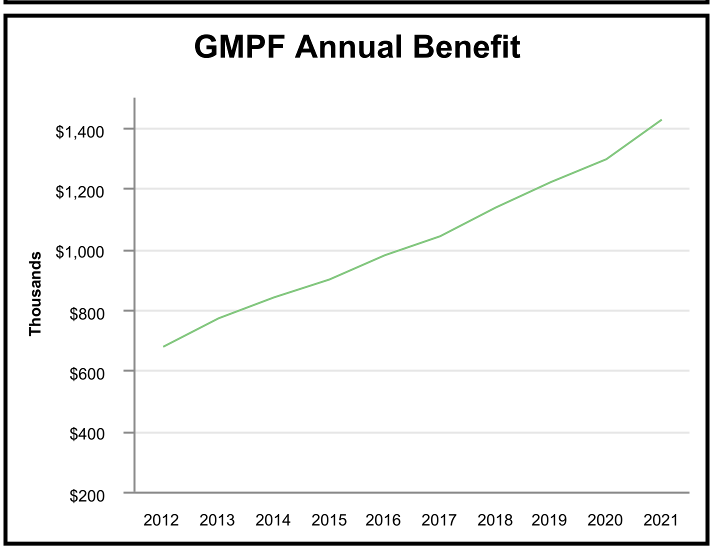
Annual Benefit





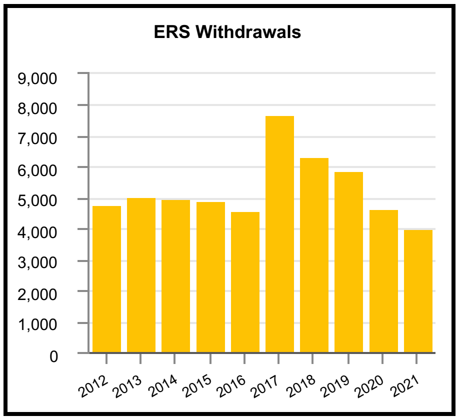


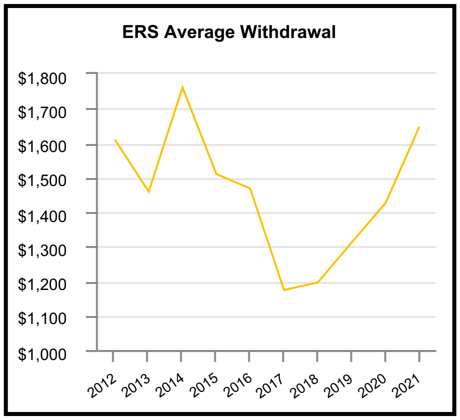


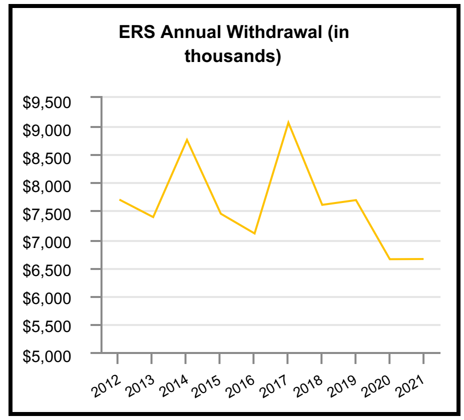


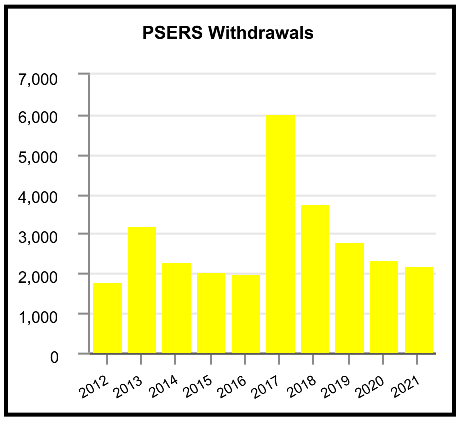
Statistical Section

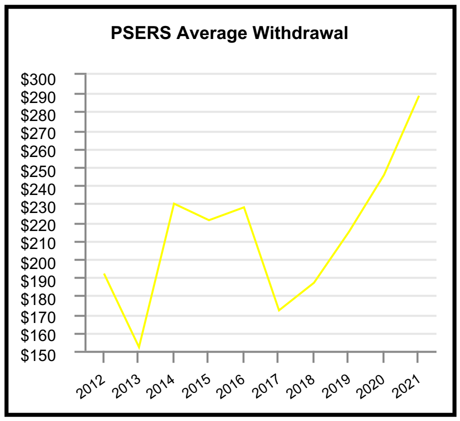
Withdrawal Statistics

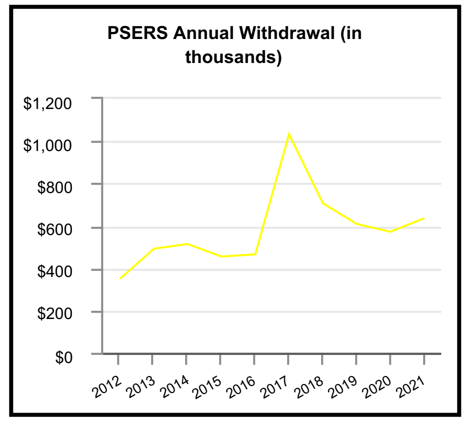


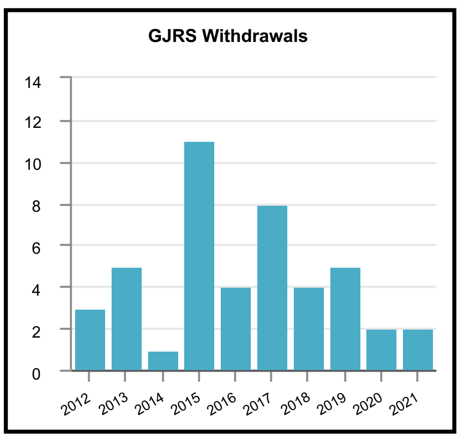


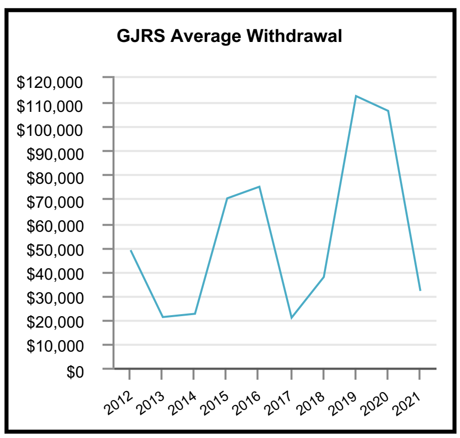


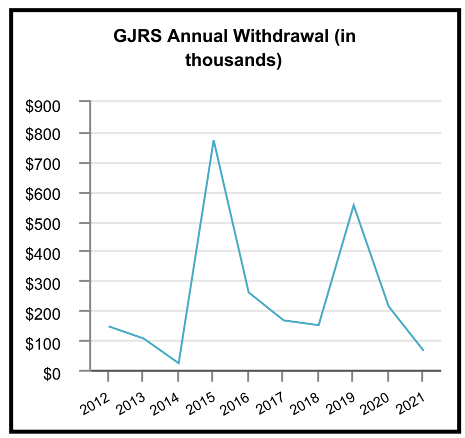


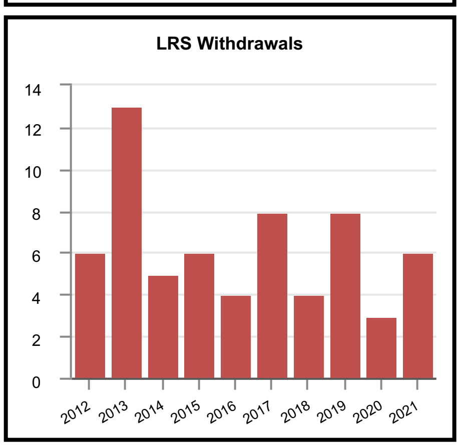


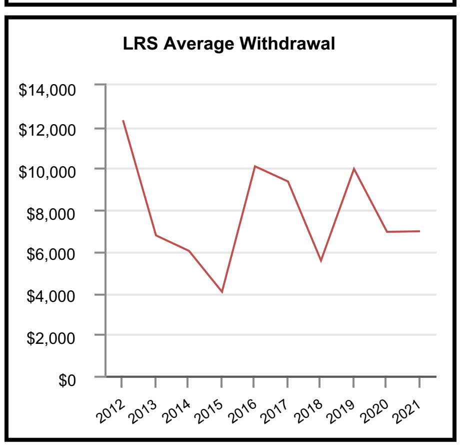


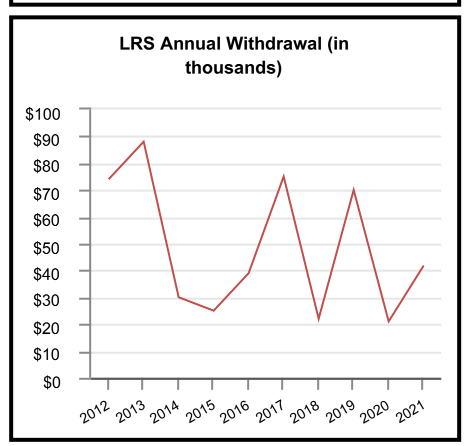












Note: The GMPF Plan does not have a refund feature.

Average Monthly Benefit Payment for New Retirees - ERS

	Years of Credited Service					
	10-15	16-20	21-25	26-30	Over 30	Total
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
2021						
Average Monthly Benefit	$ 796.58	$ 1,418.00	$ 1,900.60	$ 2,530.98	$ 3,365.15	$ 2,011.77
Average Final Average Salary	$ 3,746.21	$ 3,920.47	$ 4,121.21	$ 4,605.37	$ 5,274.73	$ 4,350.21
Number of Retirees	493	405	364	462	473	2,197

(continued)

Average Monthly Benefit Payment for New Retirees - PSERS

	Years of Credited Service					
	10-15	16-20	21-25	26-30	Over 30	Total
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
2021						
Average Monthly Benefit	$ 168.36	$ 232.23	$ 299.31	$ 382.30	$ 486.34	$ 262.55
Number of Retirees	454	270	185	94	147	1,150

Note: PSERS is not a final average pay plan.

(continued)

Average Monthly Benefit Payment for New Retirees - GJRS

	Years of Credited Service					
	10-15	16-20	21-25	26-30	Over 30	Total
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
2021						
Average Monthly Benefit	$ 4,694.76	$ 7,567.54	$ 8,213.18	$ 7,598.85	$ 8,109.37	$ 7,518.43
Average Final Average Salary	$ 8,627.67	$ 11,611.51	$ 11,133.07	$ 10,177.95	$ 10,861.73	$ 10,737.85
Number of Retirees	5	10	12	7	8	42

(continued)

Average Monthly Benefit Payment for New Retirees - LRS

	Years of Credited Service					
	8-14	15-19	20-24	25-29	Over 29	Total
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
2021						
Average Monthly Benefit	$ 303.85	$ 568.87	$ 733.00	$ 922.17	$ 1,080.00	$ 539.53
Number of Retirees	10	3	3	3	1	20

Note: LRS is not a final average pay plan.

(continued)

Average Monthly Benefit Payment for New Retirees - GMPF

	Years of Credited Service			
	20-25	26-30	Over 30	Total
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
2021				
Average Monthly Benefit	$ 59.57	$ 90.91	$ 100.00	$ 85.09
Number of Retirees	35	33	47	115

Note: GMPF is not a final average pay plan.

Retired Members by Retirement Type

ERS
June 30, 2021

Amount of Monthly Benefit	Retirement Type		
	Service	Disability	Survivor
$ 1 - 500	4,004	272	528
501 - 1,000	8,929	1,052	429
1,001 - 1,500	7,454	1,164	282
1,501 - 2,000	5,676	982	185
2,001 - 2,500	4,526	784	127
2,501 - 3,000	3,445	597	83
3,001 - 3,500	2,663	454	59
3,501 - 4,000	2,203	353	44
4,001 - 4,500	1,693	248	25
4,501 - 5,000	1,461	184	15
5,001 - 5,500	1,162	128	7
5,501 - 6,000	778	79	8
over 6,000	1,838	124	14
Totals	45,832	6,421	1,806

PSERS
June 30, 2021

Amount of Monthly Benefit	Retirement Type		
	Service	Disability	Survivor
$ 1 - 100	112	5	229
101 - 200	6,013	32	209
201 - 300	5,618	235	54
301 - 400	2,898	363	7
401 - 500	1,770	268	6
over 500	1,477	212	1
Totals	17,888	1,115	506

(continued)

Retired Members by Retirement Type

GJRS
June 30, 2021

Amount of Monthly Benefit	Retirement Type		
	Service	Disability	Survivor
$ 1 - 1,000	21	—	2
1,001 - 2,000	22	—	8
2,001 - 3,000	28	—	4
3,001 - 4,000	36	—	3
4,001 - 5,000	30	2	5
5,001 - 6,000	19	—	—
6,001 - 7,000	40	—	—
7,001 - 8,000	79	—	—
over 8,000	150	—	—
Totals	425	2	22

LRS
June 30, 2021

Amount of Monthly Benefit	Retirement Type		
	Service	Disability	Survivor
$ 1 - 250	21	—	—
251 - 500	131	—	10
501 - 750	68	—	2
751 - 1,000	24	—	3
over 1,000	18	—	1
Totals	262	—	16

GMPF
June 30, 2021

Amount of Monthly Benefit	Retirement Type
	Service
$ 1 - 49	—
50 - 100	1,362
over 100	—
Totals	1,362

Retired Members by Optional Form of Benefit

ERS

June 30, 2021

Amount of Monthly Benefit	Form of Benefit						
	Maximum Plan	Option 1	Option 2	Option 3	Option 4	Option 5A	Option 5B
$ 1 - 500	1,326	414	1,287	476	1,071	169	61
501 - 1,000	4,283	1,245	2,039	700	1,485	445	213
1,001 - 1,500	3,568	1,121	1,562	665	1,207	518	259
1,501 - 2,000	2,821	988	1,024	579	750	367	314
2,001 - 2,500	2,187	744	731	514	600	367	294
2,501 - 3,000	1,635	548	526	359	617	221	219
3,001 - 3,500	1,151	404	358	300	596	192	175
3,501 - 4,000	899	273	293	205	642	140	148
4,001 - 4,500	634	190	182	176	591	69	124
4,501 - 5,000	505	116	137	168	587	62	85
5,001 - 5,500	324	113	93	108	562	45	52
5,501 - 6,000	210	47	67	114	349	33	45
over 6,000	434	115	171	215	907	50	84
Totals	19,977	6,318	8,470	4,579	9,964	2,678	2,073
2% Escalation*	27	—	20	8	9	5	2

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

**The option to add an escalating component to the form of benefit selected was added in FY21. When escalation is selected, the monthly benefit amount increases 2% each year.*

(continued)

Retired Members by Optional Form of Benefit

PSERS
June 30, 2021

Amount of Monthly Benefit	Form of Benefit					
	Maximum Plan	Option AA	Option AB	Option AC	Option AD	Option B
$ 1 - 100	—	40	263	5	25	13
101 - 200	3,920	1,310	428	11	179	406
201 - 300	4,659	662	223	4	94	265
301 - 400	2,629	377	92	7	42	121
401 - 500	1,755	160	52	6	16	55
over 500	1,542	82	31	3	2	30
Totals	14,505	2,631	1,089	36	358	890

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

(continued)

Retired Members by Optional Form of Benefit

GJRS
June 30, 2021

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	22	—	—	—	—	—	—
1,001 - 2,000	3	27	—	—	—	—	—	—
2,001 - 3,000	7	25	—	—	—	—	—	—
3,001 - 4,000	3	36	—	—	—	—	—	—
4,001 - 5,000	6	31	—	—	—	—	—	—
5,001 - 6,000	7	11	1	—	—	—	—	—
6,001 - 7,000	9	31	—	—	—	—	—	—
7,000 - 8,000	23	56	—	—	—	—	—	—
over 8,000	28	122	—	—	—	—	—	—
Totals	87	361	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

(continued)

Retired Members by Optional Form of Benefit

LRS
June 30, 2021

Amount of Monthly Benefit	Form of Benefit		
	Maximum Plan	Option B1	Option B2
$ 1 - 250	—	17	4
251 - 500	51	79	11
501 - 750	42	18	10
751 - 1,000	6	18	3
over 1,000	9	8	2
Totals	108	140	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, 2021

The GMPF Plan provides a benefit only in one form, a life annuity. All 1,362 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).

Statistical Section

Principal Participating Employers FY12

	Member Count	% of Total Plan
ERS		
Department of Corrections	11,927	18.6 %
Department of Behavioral Health and Developmental Disabilities	5,628	8.8
Department of Transportation	4,437	6.9
Department of Juvenile Justice	3,520	5.5
Department of Labor	3,441	5.4
Department of Human Services	2,013	3.1
Department of Natural Resources	1,807	2.8
Department of Public Safety	1,701	2.7
Department of Revenue	1,115	1.7
Department of Public Health	969	1.5
Total Top Employers	36,558	57.2
Total ERS Member Count	63,963	
PSERS		
Gwinnett County Schools	3,922	10.1
Cobb County Schools	2,507	6.5
Dekalb County Schools	2,344	6.1
Clayton County Schools	1,085	2.8
Muscogee County Schools	920	2.4
Cherokee County Schools	911	2.4
Henry County Schools	866	2.2
Forsyth County Schools	860	2.2
Richmond County Schools	829	2.1
Houston County Schools	756	2.0
Total Top Employers	15,000	38.7
Total PSERS Member Count	38,659	
GJRS		
Superior Court of Georgia	204	40.4
Prosecuting Attorney's Council	116	23.0
Georgia Department of Law	93	18.4
Cobb County Board of Commissioners	77	15.2
Total Top Employers	490	97.0
Total GJRS Member Count	505	

Data for SEAD-OPEB is not available.

Principal Participating Employers FY21

	Member Count	% of Total Plan
ERS		
Department of Corrections	6,838	12.8 %
Department of Transportation	3,531	6.6
Department of Behavioral Health and Developmental Disabilities	3,407	6.4
Department of Human Services	3,301	6.2
Department of Juvenile Justice	2,476	4.6
Department of Community Supervision	1,773	3.3
Department of Natural Resources	1,691	3.2
Department of Public Safety	1,685	3.2
Department of Labor	982	1.8
Department of Public Health	973	1.8
Total Top Employers	26,657	50.0
Total ERS Member Count	53,330	
PSERS		
Gwinnett County Schools	3,281	10.2
Cobb County Schools	2,050	6.4
Dekalb County Schools	1,984	6.2
Clayton County Schools	1,109	3.5
Forsyth County Schools	911	2.8
Chatham County Schools	854	2.7
Houston County Schools	761	2.4
Richmond County Schools	690	2.2
Muscogee County Schools	649	2.0
Cherokee County Schools	646	2.0
Total Top Employers	12,935	40.2
Total PSERS Member Count	32,157	
GJRS		
Council of Superior Courts	213	39.6
Council of State Court Judges	127	23.6
Council of Juvenile Courts	77	14.3
Solicitor General	60	11.2
Total Top Employers	477	88.7
Total GJRS Member Count	538	
SEAD - OPEB		
Department of Corrections	2,451	13.1
Department of Transportation	1,702	9.1
Department of Human Services	1,242	6.6
Department of Behavioral Health and Developmental Disabilities	880	4.7
Department of Juvenile Justice	745	4.0
Department of Natural Resources	729	3.9
Department of Community Supervision	684	3.6
Department of Public Safety	578	3.1
Department of Labor	489	2.6
Bureau of Investigation	333	1.8
Total Top Employers	9,833	52.4
Total Active Member Count	18,772	

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

Year ended June 30, 2021
(In thousands)

	2021	2020	2019	2018	2017
Operating revenue:					
Insurance premiums	$ 521	$ 547	$ 531	$ 540	$ 599
Total operating revenue	521	547	531	540	599
Operating expenses:					
Death benefits	4,870	3,588	3,424	2,972	4,019
Administrative expenses	77	80	80	76	64
Total operating expenses	4,947	3,668	3,504	3,048	4,083
Total operating loss	(4,426)	(3,121)	(2,973)	(2,508)	(3,484)
Nonoperating revenues (expenses):					
Allocation of investment income from pooled investment fund	93,479	16,651	19,708	24,493	29,847
Investment expenses	(70)	(67)	(65)	(64)	(62)
Total nonoperating revenues	93,409	16,584	19,643	24,429	29,785
Change in net position	88,983	13,463	16,670	21,921	26,301
Total net position:					
Beginning of year	319,340	305,877	289,207	267,286	240,985
End of year	$ 408,323	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
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
2021	18,772

Statistical Data at June 30, 2021

System	Net Position	Employer and Nonemployer Contributions	Employee Contributions	Active Members	Inactives	Retirees	Annual Payment	Average Monthly Benefit[1]
ERS	$16.5 billion	Old Plan: 19.91% New Plan: 24.66% GSEPS 21.57% ($616 million)	Old Plan: 6% (with 4.75% pickup) New Plan: 1.25% GSEPS: 1.25% ($35.0 million)	Old Plan: (0.04%) 22 New Plan: (34.94%) 18,633 GSEPS: (65.02%) 34,675 Total: 53,330	66,774	Total: 54,059 Service: 41,698 Beneficiary: 6,296 Disability: 5,509 Inv. Sep.: 407 Law. Enf.: 149	$1.4 billion	$2,193
PSERS	$1.2 billion	$30.3 million	$36 yr prior July 1, 2012 $90 yr after July 1, 2012 ($2.2 million)	32,157	51,373	19,509	$66.5 million	$284
GJRS	$605.4 million	8.38% ($6.1 million)	7.5% +2.5% Spousal, if applicable ($5.2 million)	538	73	449	$31.0 million	$6,091
LRS	$42.7 million	0% (None)	8.5% (with 4.75% pickup) ($290 thousand)	216	179	278	$1.7 million	$522
GDCP	$140.2 million	None	7.5% ($15.8 million)	11,732	120,388	2	$10 thousand	$4,928
SCJRF	$6 thousand	$302 thousand	None	None	None	5	$302 thousand	$5,035
DARF	$2 thousand	$34 thousand	None	None	None	3	$34 thousand	$953
SEAD	$1.6 billion	None	New Plan: 0.23% Old Plan: 0.45% ($2.8 million)	No. Insured: 18,772	1,034	No. Insured: 44,377	No. of Claims: 1,572 Amt. Pd: $58.9 million	Average Claim: $37,499
GMPF	$38.7 million	$2.7 million	None	14,396	3,514	1,362	$1.4 million	$90

[1] GDCP average benefit payment is an annual amount.