Teachers Retirement System of Georgia

A COMPONENT UNIT OF
THE STATE OF GEORGIA

ANNUAL COMPREHENSIVE FINANCIAL REPORT

Fiscal Year Ended June 30, 2021

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A COMPONENT UNIT OF THE STATE OF GEORGIA

ANNUAL COMPREHENSIVE FINANCIAL REPORT

Fiscal Year Ended June 30, 2021

PREPARED BY THE FINANCIAL SERVICES DIVISION OF THE TEACHERS RETIREMENT SYSTEM OF GEORGIA

L.C. (BUSTER) EVANS, Ed.D
EXECUTIVE DIRECTOR

OUR MISSION IS TO...

support Georgia educators by providing pension education, safeguarding plan investments, and efficiently administering retirement benefits.

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Presented to

Teachers Retirement System of Georgia

For its Comprehensive Annual Financial Report For the Fiscal Year Ended

June 30, 2020

Christopher P. Morrill

Executive Director/CEO

BOARD OF TRUSTEES

as of June 30, 2021

Ms. Deborah K. Simonds*
CHAIR
Retired Teacher
Elected by the Board of Trustees
Term Expires 6/30/24

Mr. Thomas W. Norwood*
VICE-CHAIR
Investment Professional
Elected by the Board of Trustees
Term Expires 6/30/23

Mr. Kenneth Dyer
School Administrator
Appointed by the Governor
Term Expires 6/30/23

Ms. Marion R. Fedrick
TRS Member
Appointed by the Board of Regents
Term Expires 6/30/24

Mr. Greg S. Griffin*
State Auditor
Ex-Officio

Mr. Steve McCoy
State Treasurer
Ex-Officio

Dr. William G. Sloan, Jr.*
Member-at-Large
Appointed by the Governor
Term Expires 6/30/23

Mr. Christopher M. Swanson
Classroom Teacher
Appointed by the Governor
Term Expires 6/30/24

Dr. Jason L. Branch*
Not Employed by the Board of Regents
Appointed by the Governor
Term Expires 6/30/21

Ms. Miriam Shook
Classroom Teacher
Appointed by the Governor
Term Expires 6/30/23

* Investment Committee Member

Teachers Retirement System of Georgia

L.C. (Buster) Evans, Ed.D.
Executive Director

September 30, 2021
Board of Trustees
Teachers Retirement System of Georgia
Atlanta, Georgia

I am pleased to present the Annual Comprehensive Financial Report of the Teachers Retirement System of Georgia (the System) for the fiscal year ended June 30, 2021. Responsibility for both the accuracy of the data, and completeness and fairness of the presentation, including all disclosures, rests with the management of the System. To the best of our knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of operations of the System. I trust that you will find this report helpful in understanding your retirement system.

During fiscal year 2021, we observed the advancement of the effects of the COVID-19 pandemic and how it impacted all of our business units, employees, and members. Our Division of Investment Services especially had some unique challenges but I am pleased to report that we have observed the highest return on investments since 1986. Despite monumental challenges faced, applied innovations throughout the agency helped us achieve results never observed before and has allowed us to continue to fulfill our core mission of administering pension benefits. Our agency has become much more efficient as a result, and we are now better positioned than ever to face challenges in the future.

Certificate of Achievement

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Teachers Retirement System of Georgia for its Annual Comprehensive Financial Report for the fiscal year ended June 30, 2020. This was the 33rd consecutive year that the System has achieved this prestigious award.

In order to be awarded a Certificate of Achievement, a government unit 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.

History and Overview

The System was created in 1943, by an act of the Georgia General Assembly to provide retirement security to those individuals who choose to dedicate their lives to educating the children of the State of Georgia, and began operations in 1945. A summary of the System's plan provisions is provided on pages 11-12 of this report.

The System is governed by a ten-member Board of Trustees (the Board) which appoints the Executive Director who is responsible for the administration and operations of the System, which serves 489,782 active and retired members, and 321 employers.

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 the cost of a control should not exceed the benefits likely to be derived. Therefore, the objective is to provide reasonable, rather than absolute assurance, that the financial statements are free of any material misstatements. 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, errors or fraud would be quickly detected and corrected.

Please refer to Management's Discussion and Analysis beginning on page 15 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 Investment Allocation.

INVESTMENTS - The System has continued to invest primarily in a mix of liquid, high quality bonds and stocks as it historically has done. We began investing in private markets this year. Our intention is to build the 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 a long period of time. Overall, U.S. equities returned 42% over the past year, while foreign markets rose nearly 36%. Longer-term periods for total equities returns were positive. A comparative analysis of rates of return is presented on page 50. For additional information and analysis pertaining to investment policies and strategies, asset allocations, and yield, see Management's Discussion and Analysis beginning on page 15 and the Investment Section beginning on page 49. The System addresses the safeguarding of investments by requiring that they be held by agent custodial banks in the name of the System and that deposits are insured by the Federal Deposit Insurance Corporation.

As in previous years, maintaining quality was a primary goal and was successfully met. "Conservation of Capital" and "Conservatism" continue to be the guiding principles for investment decisions. The System continued to use a diversified portfolio to accomplish these objectives.

FUNDING - The System's funding policy provides for employee and employer contributions at rates, expressed as a percentage of annual covered payroll, that are sufficient to provide resources to pay benefits when due.

A useful indicator of the funded status of a retirement system is the relationship between the actuarial value of assets and the actuarial accrued liabilities. The System continues to remain strong as evidenced by the ratio of the actuarial value of assets to the actuarial accrued liabilities. This ratio was 76.2% for the fiscal year ended June 30, 2020. The ultimate test of the financial soundness of a retirement system is its ability to pay all promised benefits when due. I am proud to say that through the continued wisdom and the support of Governor Brian Kemp and the Georgia General Assembly, the System has been and will continue to be funded on an actuarially sound basis, thus providing the membership the comfort and security they expect from their retirement system.

Initiatives

It is imperative that developments in processes and technology are applied in order for us to ensure that we provide the best possible customer service for our membership. Never before has our agency experienced a period of extended remote work for the majority of the staff and definitely not one that spanned over the entirety of a fiscal year. One major innovation that proved successful throughout the period was the use of our auto-approval process in our Retirement Services Division. Had this particular process not been implemented prior to the start of the pandemic, it would have proven to be very difficult to manually approve thousands of return-to-work contracts for our employers throughout the state. This process is key to the success of our employers as it allows them to hire highly experienced retirees to fill their employment needs. Additionally, it is one of the many ways we continue to support our members in retirement along with safeguarding investments and ensuring their benefits are distributed as promised on schedule. As of June 30, 2021, we have processed 72% of submitted contracts by auto-approval, a process that is completed in less than 10 minutes, as opposed to all contract's approvals being subject to a manual process that takes several business days.

Our agency is only as successful as its staff is, and the training of our employees continues to be at the top of our priority list. Many employees have become cross-trained in multiple processes within their divisions and some are able to work across several divisions. Cross-trained employees ensure the elimination of single points of failures if an employee becomes ill, terminates employment, or retires. A number of processes no longer require the expertise of only one employee who held the knowledge of a business function. Furthermore, the introduction of our Learning Management System (LMS) provides an on-demand virtual space for all our employees and Board members to educate themselves about processes throughout the agency. This was the first time our Board of Trustees had access to TRS-provided digital content allowing self-paced learning through the access of modules to fulfill educational requirements of their fiduciary responsibility to the System.

Our IT division continues to diligently enhance all of our systems in an effort to mitigate vulnerabilities and cyber-attacks. This year we blocked over 26,000 attacks, which is a 116% increase over last year. Our cyber security team investigated 34 potential security incidents reported to TRS by its managed security services provider. TRS's cyber security defenses and protocols are monitored by the Georgia Technology Authority, which currently has assigned TRS an "Advanced" cyber security rating. We are pleased to report that we had no security breaches and continue our efforts to thwart all cyberattacks.

The IT division continued to support TRS's hybrid workplace, with remote and onsite employees, by adding redundancy and security to our virtual private network (VPN) to support the 100 to 120 employees working remotely, as well as issuing laptops, monitors, headsets and webcams as needed. IT employees responded to a 47% increase in requests from business unit employees requiring technology support assistance. TRS's business information systems achieved 100% uptime this year, permitting our business units to process payroll, finalize retirement estimates and applications, process refunds, accept member and employer contributions, and provide counseling sessions without delay.

Closing our physical doors hindered our ability to meet members face-to-face to provide counseling sessions and workshops; however, we are now more accessible than ever due to the leveraging of several modes of communication. Frequency of our correspondence by phone, mail, and email to our members and employers kept them abreast of important processes they needed to know about. Furthermore, the expansion of our use of FaceTime, Webex, YouTube, Facebook, and podcasts allowed us to reach members in ways in-person events doesn't allow. Our online workshops often attract hundreds of attendees at once and one event in particular hosted more than 1,800 members which is also a TRS attendance record. Additionally, a total of 6,892 members were counseled remotely by TRS staff in both the Atlanta office and our newly opened Macon office. The installation of our Macon satellite office, which began operating in July of 2020, will be key to our future success as it will allow for easier access to our services for those that are located south of the Atlanta metropolitan area.

Other Information

INDEPENDENT AUDIT - The Board 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 - The compilation of this report reflects the combined effort of the staff under the leadership of the Board. It is intended to provide complete and reliable information as a basis for making management decisions, as a means of determining compliance with legal provisions, and as a means for determining responsible stewardship of the assets contributed by the System's members, their employers, and the State of Georgia.

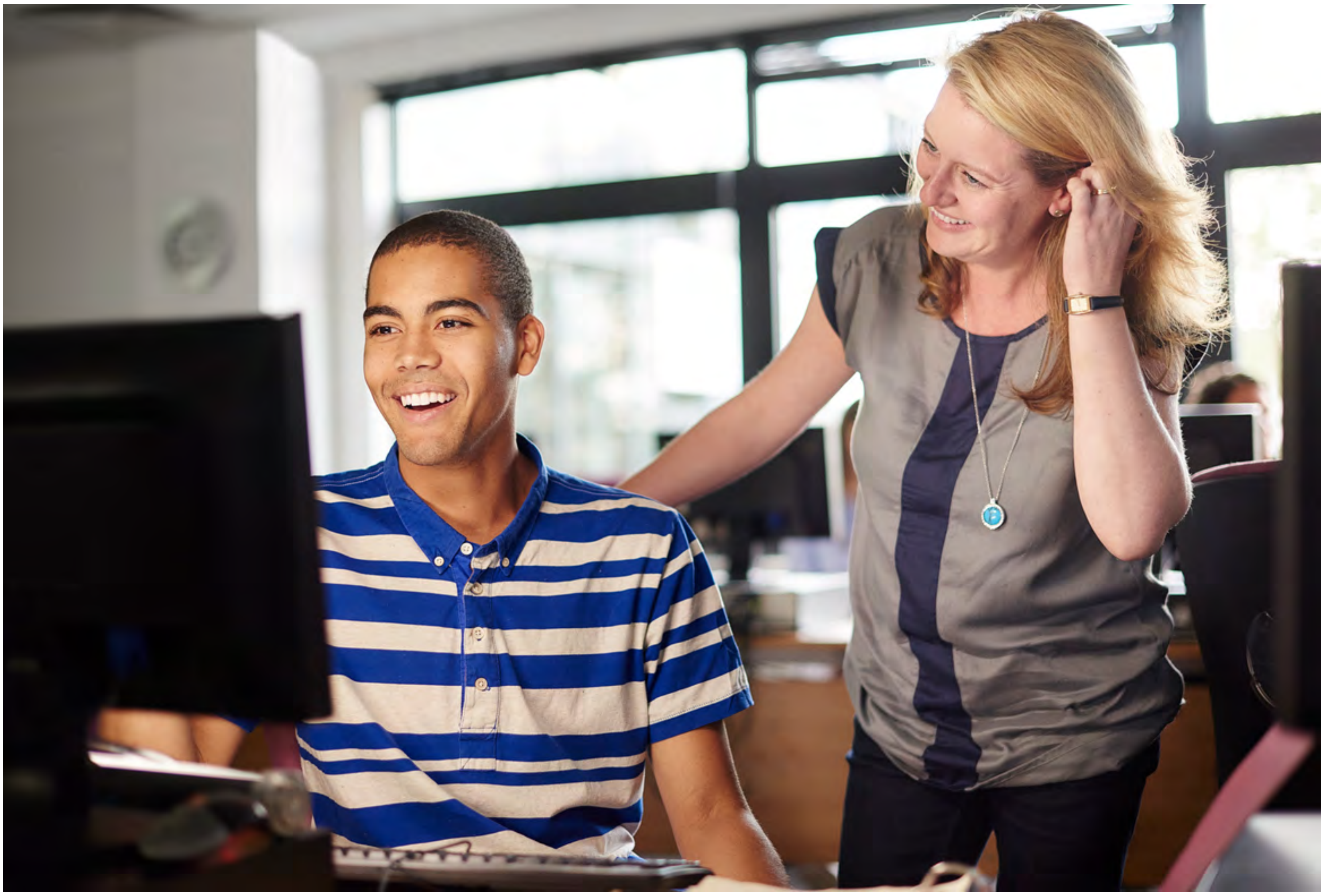
Copies of this report can be obtained by contacting the System, or may be downloaded from the System's website.

I would like to take this opportunity to express my gratitude to Governor Brian Kemp, members of the Georgia General Assembly, the staff, the advisors, and to the many people who have worked so diligently to ensure the successful operation of the System.

Sincerely,

L.C. Evans

L.C. (Buster) Evans, Ed.D.
Executive Director

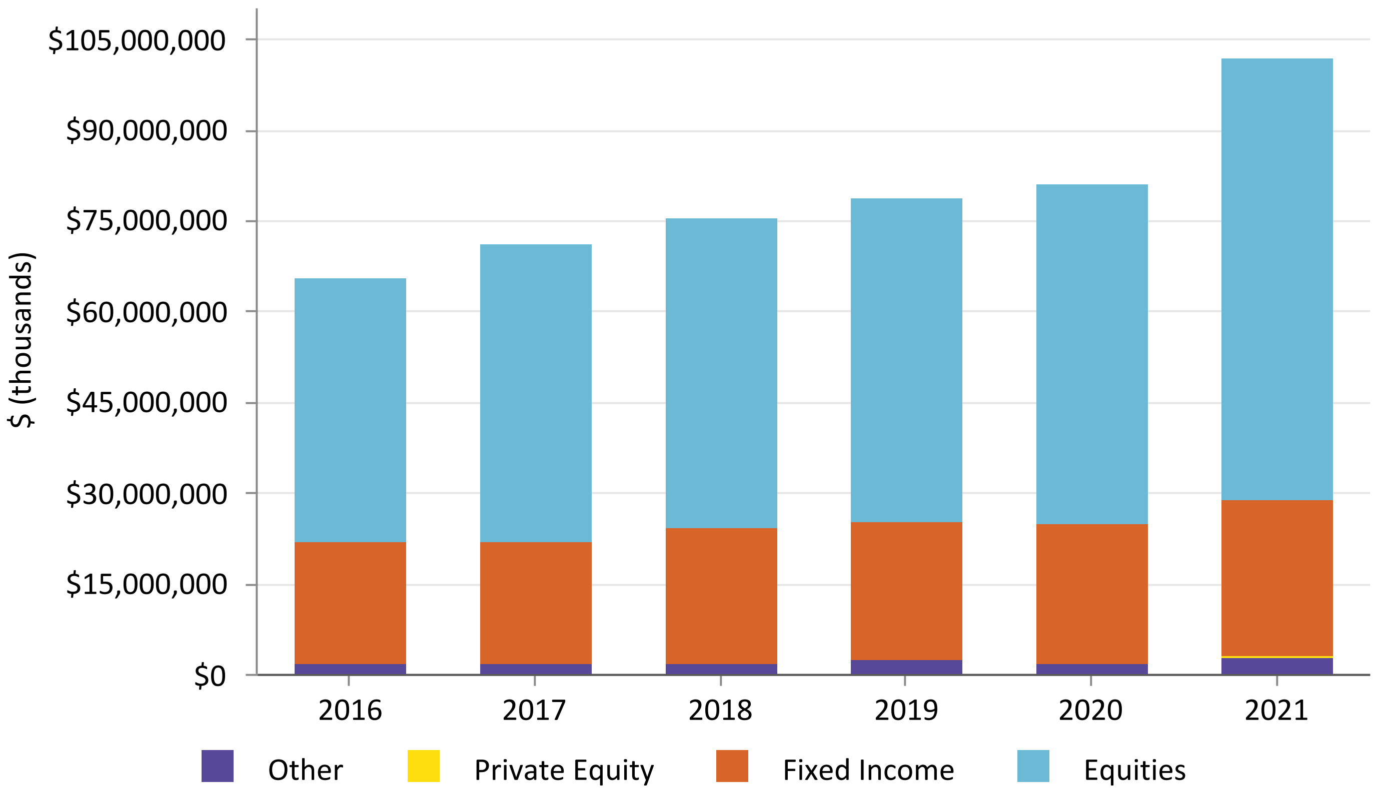


Financial & Statistical Highlights

Financial Highlights (dollars in thousands)	June 30, 2021	2020	% Change
Member Contributions	$ 817,090	$ 800,864	+2.0
Employer and Nonemployer Contributions	$ 2,495,527	$ 2,738,818	-8.9
Interest and Dividend Income	$ 1,670,772	$ 1,731,858	-3.5
Benefits Paid to Retired Members	$ 5,434,414	$ 5,192,283	+4.7
Member Withdrawals	$ 69,166	$ 76,976	-10.1
Interest Credited to Member Contributions	$ 401,968	$ 384,824	+4.5
Statistical Highlights			
Active Membership	227,953	231,047	-1.3
Members Leaving the System	6,190	7,235	-14.4
Retired Members	139,813	135,649	+3.1
Average Monthly Benefit	$ 3,239	$ 3,190	+1.5

Total System Assets at June 30 (dollars in thousands)

	2016	2017	2018	2019	2020	2021
Equities	$43,651,536	$49,236,293	$51,181,613	$53,433,296	$56,198,730	$73,188,525
Fixed Income	19,979,237	20,139,422	22,564,510	22,684,318	23,218,154	25,863,109
Private Equity	—	—	—	—	—	50,450
Other[1]	2,087,314	2,048,417	1,856,129	2,772,805	1,831,024	3,109,708
Total System Assets	$65,718,087	$71,424,132	$75,602,252	$78,890,419	$81,247,908	$102,211,792



[1] Includes cash and equivalents, receivables, net OPEB asset, and capital assets, net.

ADMINISTRATIVE STAFF & ORGANIZATION

as of September 30, 2021

Dr. L.C. (Buster) Evans
Executive Director

Laura L. Lanier
Chief Financial Officer

Charles W. Cary, Jr.
Chief Investment Officer
Investment Services

R. Cory Buice
Director
Retirement Services

K. Paige Donaldson
Director
Employer Services & Contact Management

Winston Buckley
Director
Communications & Outreach

Dina N. Jones
Director
Member Services

Sonya Kinley
Director
Human Resources

Eddy A. Hicks
Controller
Financial Services

J. Gregory McQueen
Director
Information Technology

Consulting Services

Actuary

Cavanaugh Macdonald Consulting, LLC

Auditor

KPMG LLP

Medical Advisors

William Biggers, M.D. Atlanta, Georgia
Marvin Bittinger, M.D. Gainesville, Georgia
Pedro Garcia, M.D. Sandy Springs, Georgia
Howard McMahan, M.D. Marietta, Georgia
Quentin Pirkle, M.D. Ellijay, Georgia
Harold Sours, M.D. Avondale Estates, Georgia
Joseph W. Stubbs, M.D. Albany, Georgia

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

* See page 51 in the Investment Section for a summary of fees paid to Investment Advisors.

Purpose

The Teachers Retirement System of Georgia (the System) was established in 1943, by an act of the Georgia General Assembly for the purpose of providing retirement allowances and other benefits for teachers of the State, and began operations in 1945. The System has the power and privileges of a corporation and the right to bring and defend actions.

The major objectives of the System are (1) to pay monthly benefits due to retirees accurately and in a timely manner, (2) to soundly invest retirement funds to ensure adequate financing for future benefits due and for other obligations of the System, (3) to accurately account for the status and contributions of all active and inactive members, (4) to provide statewide educational and counseling services for System members, and (5) to process refunds due to terminated members.

Administration

State statutes provide that the administration of the System be vested in a ten-member Board of Trustees (the Board) comprised as follows:

Ex-officio members:
- the State Auditor
- the State Treasurer

Governor's appointees:
- two active members of the System who are classroom teachers and not employees of the Board of Regents
- one active member of the System who is a public school administrator
- one active member of the System who is not an employee of the Board of Regents
- one member-at-large

Board of Regents appointee:
- one active member of the System who is an employee of the Board of Regents

Trustee appointees:
- one member who has retired under the System
- one individual who is a citizen of the State, not a member of the System, and experienced in the investment of money

A complete listing of the current members of the Board is included on page 4 of this report.

Management of the System is the responsibility of the Executive Director who is appointed by the Board and serves at its pleasure. On behalf of the Board, the Executive Director is responsible for the proper operation of the System, engaging such actuarial and other services as shall be necessary to transact business, and paying expenses necessary for operations. A listing of the administrative staff is included on page 10 of this report.

Membership

All personnel employed in a permanent status position, and not less than one-half time, with local boards of education, charter schools, universities and colleges, technical colleges, Board of Regents, county and regional libraries, Regional Educational Service Agencies, and certain State of Georgia agencies are required to be members as a condition of employment. Exceptions to TRS membership include employees required to participate in another Georgia retirement plan or employees who may elect the Board of Regents Optional Retirement Plan in lieu of TRS membership.

Eligibility

Service Retirement

Active members may retire and elect to receive monthly retirement benefits after one of the following conditions: 1) completion of 10 years of creditable service and attainment of age 60, or 2) completion of 25 years of creditable service.

Disability Retirement

Members are eligible to apply for monthly retirement benefits under the disability provision of the law if they are an active member, have at least 10 years of creditable service, and are permanently disabled.

The Formula

Normal Retirement

Any member who has at least 30 years of creditable service or who has at least 10 years of creditable service and has attained age 60 will receive a benefit calculated by using the percentage of salary formula. Simply stated, two percent (2%) is multiplied by the member's years of creditable service established with the System, including partial years (not to exceed 40 years). The product is then multiplied by the average monthly salary for the two highest consecutive membership years of service. The resulting product is the monthly retirement benefit under the maximum plan of retirement.

Early Retirement

Any member who has not reached the age of 60 and has between 25 and 30 years of creditable service will receive a reduced benefit. The benefit will be calculated using the percentage of salary formula explained above. It will then be reduced by the lesser of 1/12 of 7% for each month the member is below age 60 or 7% for each year or fraction thereof the member has less than 30 years of creditable service. The resulting product is the monthly retirement benefit under the maximum plan of retirement.

Disability Retirement

Disability retirement benefits are also calculated using the percentage of salary formula explained above. The resulting product is the monthly disability retirement benefit under the maximum plan. You must have at least 10 years of creditable service to qualify; however, there is no age requirement for disability retirement.

Plan A - Maximum Plan of Retirement

This plan produces the largest possible monthly benefit payable to the member only during his or her lifetime. There are no survivorship benefits under this plan.

Plan B - Optional Plans of Retirement

Upon retirement, a member of the System may elect one of six optional plans that provide survivorship benefits. The election of an optional form of payment is made upon application for retirement and it becomes irrevocable upon distribution of the first benefit check. The six options are as follows:

Option 1

The retiring member accepts a relatively small reduction from the maximum monthly benefit in order to guarantee to the estate, beneficiary, or beneficiaries named on the retirement application, a lump-sum refund of any remaining portion of member contributions and interest.

Option 2

This plan offers the retiring member a reduced monthly benefit, based on the ages of the member and the beneficiary, payable for life. It further provides a guarantee to the surviving named beneficiary that, at the death of the retired member, the beneficiary will receive the same basic monthly retirement allowance the member received at the date of retirement plus any cost-of-living increases the member received up to the time of death.

Option 2 Pop-Up

Any member may elect a reduced retirement allowance to be designated Option 2 Pop-Up with the provision that if the beneficiary dies prior to the retiree that the basic benefit payable to the retiree shall increase to an amount the retiree would have received under Plan A - Maximum Plan.

Option 3

This plan of retirement offers a reduced monthly benefit that is based on the ages of the member and the beneficiary. The resulting benefit is paid to the retired member for life, with the guarantee to the surviving named beneficiary that at the time of the retired member’s death, the beneficiary will receive a payment for life of one-half of the initial monthly benefit received by the member at the time of retirement plus one-half of any cost-of-living increases the member received up to the time of death.

Option 3 Pop-Up

Any member may elect a reduced retirement allowance to be designated Option 3 Pop-Up with the provision that if the beneficiary dies prior to the retiree, the basic benefit payable to the retiree shall increase to the amount the retiree would have received under Plan A - Maximum Plan.

Option 4

This option offers a reduced monthly lifetime benefit in exchange for the flexibility to designate a specific dollar amount or percentage of your monthly benefit to be paid to your beneficiary after your death. The beneficiary benefits you specify under this plan cannot cause your monthly benefit to be reduced below 50% of the maximum benefit available to you. If multiple beneficiaries predecease you, the dollar amounts for the percentages are not adjusted. Beneficiaries also receive a prorated share of any cost-of-living increases you received up to the date of death.

Partial Lump-Sum Option Plan

TRS offers a Partial Lump-Sum Option Plan (PLOP) at retirement. In exchange for a permanently reduced lifetime benefit, a member may elect to receive a lump-sum distribution in addition to a monthly retirement benefit. The age of the member and plan of retirement are used to determine the reduction in the benefit.

A member is eligible to participate in the PLOP if he or she meets the following criteria. A member must:

- have 30 years of creditable service or 10 years of creditable service and attain age 60 (not early retirement).
- not retire with disability benefits.

At retirement, a member may elect a lump-sum distribution in an amount between 1 and 36 months of his or her normal monthly retirement benefit. This amount will be calculated under Plan A - Maximum Plan of Retirement and will be rounded up or down to be a multiple of $1,000. If a PLOP distribution is elected, the monthly benefit is actuarially reduced to reflect the value of the PLOP distribution. The combination of both the PLOP distribution and the reduced benefit are the same actuarial value as the unreduced normal benefit alone.

Financing the System

The funds to finance the System come from member contributions, 6.00% of annual salary; employer contributions, 19.06% of annual salary; and investment income.

KPMG LLP
Suite 2000, 303 Peachtree Street, NE
Atlanta, GA 30308
www.kpmg.com

Report on the Financial Statements

We have audited the accompanying financial statements of the Teachers 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 relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System as of June 30, 2021, and the changes in fiduciary net position 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 15-18 and the schedule of changes in employers' and nonemployer net pension liability, schedule of employers' and nonemployer net pension liability and related ratios, schedule of employer and nonemployer contributions, schedule of investment returns, schedule of the System's proportionate share of the net pension liability to ERS, schedule of the System's contributions to ERS, schedule of the System's proportionate share of the net OPEB liability (asset), the schedule of the System's contributions to OPEB plans, and the notes to the required supplementary information on pages 42-47, 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 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 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 schedules of administrative 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

This section provides a discussion and analysis of the financial performance of the Teachers 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 financial statements and disclosures following this section.

Financial Highlights

The following highlights are discussed in more detail later in this analysis:

- At June 30, 2021, the System's assets and deferred outflows of resources exceeded its liabilities and deferred inflows of resources by $102.1 billion (reported as net position) as compared to the net position of $81.2 billion at June 30, 2020, representing an increase of $21.0 billion, or 25.9%.
- Contributions from members increased by $16.2 million or 2.0% from $800.9 million in 2020 to $817.1 million in 2021. Employer and nonemployer contributing entity (Nonemployer) contributions decreased by $243.3 million or 8.9% from $2.7 billion in 2020 to $2.5 billion in 2021. The overall increase in member contributions is primarily due to a higher average member payroll during the year, reduced somewhat by a decrease in the number of active members contributing to the System. The decrease in employer contributions is primarily due to a 9.8% decrease in the employer contribution rate coupled with the lower number of active members. Their full effect was lessened slightly by increased contributions on the higher average member payroll.
- Pension benefits paid to retirees and beneficiaries for the years ended June 30, 2021, and 2020 were $5.4 billion and $5.2 billion, respectively, representing an increase of 4.7%. This is due to an increase in the number of retirees and beneficiaries receiving benefit payments and postretirement benefit adjustments.

Overview of the Financial Statements

The basic financial statements include (1) the statement of fiduciary net position, (2) the statement of changes in fiduciary net position, and (3) notes to the financial statements. The System also includes in this report additional information to supplement the financial statements.

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

In addition, the System presents eight required supplementary schedules, which provide historical trend information about the plan. Four of these schedules are presented from the perspective of the System reporting as the plan and include (1) a schedule of changes in employers' and nonemployer's net pension liability; (2) a schedule of employers' and nonemployer's net pension liability and related ratios; (3) a schedule of employer and nonemployer contributions; and (4) a schedule of investment returns. Four schedules are presented from the perspective of the System reporting as the employer for its employees who participate in either the Employees' Retirement System of Georgia (ERS), the State Employees' Assurance Department Retired and Vested Inactive Members Trust Fund (SEAD-OPEB), or the Georgia State Employees Postemployment Benefit Fund (State OPEB) and include (1) a schedule of the System's proportionate share of the net pension liability to ERS; (2) a schedule of the System's contributions to ERS; (3) a schedule of the System's proportionate share of the net OPEB liability (asset); and (4) a schedule of the System's contributions to OPEB plans.

The Statement of Fiduciary Net Position

The *Statement of Fiduciary Net Position* presents information that includes all of the System's assets, deferred outflows of resources, liabilities, and deferred inflows of resources with the balance reported as and representing the Net Position Restricted for Pensions. This statement is presented on page 19.

The Statement of Changes in Fiduciary Net Position

The *Statement of Changes in Fiduciary Net Position* reports how the System's net position changed during the fiscal year. The additions and the deductions to net position are summarized in this statement. The additions include contributions and investment income, which includes the net increase (decrease) in the fair value of investments. The deductions include benefit payments, refunds of member contributions, and administrative expenses. This statement is presented on page 20.

Notes to the Financial Statements

The accompanying notes to the financial statements provide information essential to a full understanding of the System's financial statements. The notes to the financial statements begin on page 21 of this report.

Required Supplementary Information

A brief explanation of the eight required schedules found beginning on page 42 of this report follows:

Schedule of Changes in Employers' and Nonemployer's Net Pension Liability: This schedule presents historical trend information about the changes in the net pension liability and includes the beginning and ending balances of the total pension liability and the plan's fiduciary net position, the net pension liability, and the effects of certain changes on those items. This trend information will be accumulated to display a 10-year presentation.

Schedule of Employers' and Nonemployer's Net Pension Liability and Related Ratios: This schedule presents historical trend information about the net pension liability and includes total pension liability, the plan's fiduciary net position, net pension liability, covered payroll, and the ratios of fiduciary net position to total pension liability and net pension liability to covered payroll. This trend information will be accumulated to display a 10-year presentation.

Schedule of Employer and Nonemployer Contributions: This schedule presents historical trend information for the last ten consecutive fiscal years about the actuarially determined contributions of employers and nonemployer and the contributions made in relation to the requirement.

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.

Schedule of the System's Proportionate Share of the Net Pension Liability to ERS: This schedule presents historical trend information about the System's proportionate share of the net pension liability for its employees who participate in the ERS plan. This trend information will be accumulated to display a 10-year presentation.

Schedule of the System's Contributions to ERS: This schedule presents historical trend information about the System's contributions for its employees who participate in the ERS plan. This trend information will be accumulated to display a 10-year presentation.

Schedule of the System's Proportionate Share of the Net OPEB Liability (Asset): This schedule presents historical trend information about the System's proportionate share of the net OPEB liability (asset) for its employees who participate in the State OPEB plan or the SEAD-OPEB plan. This trend information will be accumulated to display a 10-year presentation.

Schedule of the System's Contributions to OPEB Plans: This schedule presents historical trend information about the System's contributions for its employees who participate in the State OPEB and/or SEAD-OPEB plans. This trend information will be accumulated to display a 10-year presentation.

Financial Analysis of the System

A summary of the System's net position at June 30, 2021 and 2020 is as follows:

Summary of TRS Net Position (dollars in thousands)

	Net position June 30,		Amount change	Percentage change
	2021	**2020**		
Assets:				
Cash and cash equivalents and receivables	$ 3,100,178	1,821,396	1,278,782	70.2 %
Investments	99,102,084	79,416,884	19,685,200	24.8
Net OPEB asset	2,892	2,658	234	8.8
Capital assets, net	6,638	6,970	(332)	(4.8)
Total assets	102,211,792	81,247,908	20,963,884	25.8
Deferred outflows of resources	9,559	8,954	605	6.8
Liabilities:				
Due to brokers and accounts payable	27,102	44,648	(17,546)	(39.3)
Net pension liability	30,500	28,862	1,638	5.7
Net OPEB liability	8,421	8,867	(446)	(5.0)
Total liabilities	66,023	82,377	(16,354)	(19.9)
Deferred inflows of resources	8,640	12,927	(4,287)	(33.2)
Net position	$102,146,688	81,161,558	20,985,130	25.9

The $21.0 billion, or 25.9%, increase in net position from 2020 to 2021 is primarily due to positive equity market returns.

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

Investment Allocation

	2021	2020
Asset allocation at June 30 (in percentages):		
Equities:		
Domestic	56.0 %	54.6 %
International	17.9	16.1
Private equity	0.1	—
Domestic obligations:		
U.S. treasuries	19.5	21.6
Corporate and other bonds	5.7	6.6
International obligations:		
Corporates	0.8	1.1
Asset allocation at June 30 (dollars in thousands):		
Equities:		
Domestic	$ 55,436,661	43,419,674
International	17,751,864	12,779,056
Private equity	50,450	—
Domestic obligations:		
U.S. treasuries	19,357,095	17,124,568
Corporate and other bonds	5,669,834	5,245,110
International obligations:		
Corporates	836,180	848,476
	$ 99,102,084	79,416,884

The total investment portfolio at June 30, 2021 increased $19.7 billion, or 24.8%, from June 30, 2020, which is primarily 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 in fiscal year 2021 was 29.2%, with a 43.7% return for equities, a (5.4)% return on private equity (inception date March 2021), and a (1.8)% return for fixed income. The five-year annualized rate of return at June 30, 2021 was 12.3% with a 16.3% return on equities and a 2.6% return on fixed income.

A money-weighted rate of return is weighted by the amount of dollars in the fund at the beginning and end of the performance period. A money-weighted rate of 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 nondiscretionary 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 25.1%, compared to 2.9% for the fiscal year ended June 30, 2020.

A summary of the changes in the System's net position for the years ended June 30, 2021 and 2020 is as follows:

Changes in TRS Net Position (dollars in thousands)

	Changes in net position		Amount change	Percentage change
	2021	2020		
Additions:				
Employer contributions	$ 2,490,404	2,733,089	(242,685)	(8.9)%
Nonemployer contributions	5,123	5,729	(606)	(10.6)
Member contributions	817,090	800,864	16,226	2.0
Net investment income	23,192,761	4,119,609	19,073,152	463.0
Total additions	26,505,378	7,659,291	18,846,087	246.1
Deductions:				
Benefits payments	5,434,414	5,192,283	242,131	4.7
Refunds	69,166	76,976	(7,810)	(10.1)
Administrative expenses, net	16,668	17,411	(743)	(4.3)
Total deductions	5,520,248	5,286,670	233,578	4.4
Net increase in net position	$20,985,130	2,372,621	18,612,509	784.5

Additions

The System accumulates resources needed to fund benefits through contributions and returns on invested funds. Member contributions were higher with an increase of $16.2 million, or 2.0%, primarily due to an increase in membership salary in 2021. Employer contributions were lower with a decrease of $242.7 million, or 8.9%, compared to 2020 primarily due to a decrease in the employer contribution rate to 19.06% from 21.14% offset somewhat by an increase in membership salary in 2021. The change in net investment income was primarily due to equity gains in 2021.

Deductions

Deductions increased $233.6 million, or 4.4%, in 2021, primarily because of the $242.1 million, or 4.7%, increase in benefit payments. Regular pension benefit payments increased due to an increase in the number of retirees and beneficiaries receiving benefit payments from 135,649 in 2020 to 139,813 in 2021, and an increase in postretirement benefits.

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 Teachers Retirement System of Georgia, Two Northside 75, Suite 100, Atlanta, GA 30318.

June 30, 2021 (in thousands)

Assets	
Cash and cash equivalents	$ 2,623,401
Receivables:	
Interest and dividends	212,082
Due from brokers for securities sold	13,005
Member and employer contributions	250,699
Other	991
Total receivables	476,777
Investments - at fair value:	
Equities:	
Domestic	55,436,661
International	17,751,864
Private equity	50,450
Domestic obligations:	
U.S. treasuries	19,357,095
Corporate and other bonds	5,669,834
International obligations:	
Corporates	836,180
Total investments	99,102,084
Net OPEB asset	2,892
Capital assets, net	6,638
Total assets	102,211,792
Deferred Outflows of Resources	9,559
Liabilities	
Accounts payable and other	13,909
Due to brokers for securities purchased	13,193
Net pension liability	30,500
Net OPEB liability	8,421
Total liabilities	66,023
Deferred Inflows of Resources	8,640
Net Position Restricted for Pensions	$ 102,146,688

See accompanying notes to financial statements.

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

For the Year Ended June 30, 2021 (in thousands)

Additions:		
Contributions:		
Employer	$	2,490,404
Nonemployer		5,123
Member		817,090
Investment income:		
Net increase in fair value of investments		21,586,393
Interest, dividends, and other		1,670,772
Total investment income		23,257,165
Less investment expense		64,404
Net investment income		23,192,761
Total additions		26,505,378
Deductions:		
Benefit payments		5,434,414
Refunds of member contributions		69,166
Administrative expenses, net		16,668
Total deductions		5,520,248
Net increase in net position		20,985,130
Net Position Restricted for Pensions:		
Beginning of year		81,161,558
End of year	$	102,146,688

See accompanying notes to financial statements

1. Plan Description

Teachers Retirement System of Georgia (the System) was created in 1943 by an act of the Georgia Legislature (the Act) to provide retirement benefits for teachers who qualify under the Act. The System administers a cost-sharing, multiple-employer defined benefit pension plan as defined in Governmental Accounting Standards Board (GASB) Statement No.67, *Financial Reporting for Pension Plans*. A Board of Trustees (the Board) comprising two appointees of the Board, two ex-officio state employees, five appointees of the Governor, and one appointee of the Board of Regents is ultimately responsible for the administration of the System.

Eligibility and Membership

All teachers in the state public schools, the University System of Georgia (except those professors and principal administrators electing to participate in an optional retirement plan), and certain other designated employees in educational-related work are eligible for membership. There were 321 employers and 1 nonemployer contributing entity participating in the plan during 2021.

Retirement Benefits

As of June 30, 2021, participation in the System is as follows:

Inactive members and beneficiaries currently receiving benefits	139,813
Inactive members not yet receiving benefits, vested	14,366
Inactive members, nonvested	107,650
Active plan members	227,953
Total	489,782

The System provides service retirement, disability retirement, and survivor's benefits. Title 47 of the Official Code of Georgia Annotated (O.C.G.A.) assigns the authority to establish and amend the provisions of the System to the State Legislature. A member is eligible for normal service retirement after 30 years of creditable service, regardless of age, or after 10 years of service and attainment of age 60. A member is eligible for early retirement after 25 years of creditable service.

Normal retirement (pension) benefits paid to members are equal to 2% of the average of the member's two highest paid consecutive years of service, multiplied by the number of years of creditable service up to 40 years. Early retirement benefits are reduced by the lesser of one-twelfth of 7% for each month the member is below age 60 or by 7% for each year, or fraction thereof, by which the member has less than 30 years of service. It is also assumed that certain cost-of-living adjustments, based on the Consumer Price Index, may be made in future years. Retirement benefits are payable monthly for life. A member may elect to receive a partial lump-sum distribution in addition to a reduced monthly retirement benefit. Options are available for distribution of the member's monthly pension, at a reduced rate, to a designated beneficiary upon the member's death.

Death and Disability Benefits

Retirement benefits also include death and disability benefits, whereby the disabled member or surviving spouse is entitled to receive annually an amount equal to the member's service retirement benefit or disability retirement, whichever is greater. The benefit is based on the member's creditable service (minimum of 10 years of service) and compensation up to the time of disability.

The death benefit is the amount that would be payable to the member's beneficiary had the member retired on the date of death with either a service retirement allowance or a disability retirement allowance, whichever is larger. The benefit is based on the member's creditable service (minimum of 10 years of service) and compensation up to the date of death.

Contributions

The System is funded by member, employer, and nonemployer contributions. The contribution rates are adopted and amended by the Board. Pursuant to O.C.G.A. §47-3-63, the employer contributions for certain full-time public school support personnel are funded on behalf of the employers by the State of Georgia.

Contributions, as a percentage of covered payroll, required for fiscal year 2021 were based on the June 30, 2018 actuarial valuation as follows:

Member	6.00 %
Employer:	
Normal	7.25 %
Unfunded accrued liability	11.81 %
Total	19.06 %

Members become fully vested after 10 years of service. If a member terminates with less than 10 years of service, no vesting of employer contributions occurs, but the member's contributions may be refunded with interest. Member contributions with accumulated interest are reported as net position restricted for pensions.

2. Summary of Significant Accounting Policies and Plan Asset Matters

Basis of Accounting

The System's financial statements are prepared on the accrual basis of accounting. Contributions from the employers, nonemployer, and the members are recognized when due, based on statutory requirements. Retirement and refund payments are recognized as deductions when due and payable.

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*, GASB Statement No. 61, *The Financial Reporting Entity's Omnibus – An Amendment of GASB Statements No. 14 and No. 34*, and GASB Statement No. 39, *Determining Whether Certain Organizations are Component Units*, and determined there were no component units of the System.

Cash and Cash Equivalents

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

Investments

Investments are reported at fair value, and in some cases, net asset value (NAV) as a practical expedient to fair value. Equity securities traded on a national or international exchange are valued at the last reported sales price. Investments in private investment companies are valued utilizing the NAVs provided by the underlying private investment companies as a practical expedient. The Pooled Investment Fund (the Fund) applies the practical expedient to its investments in private investment companies on an investment by investment basis, consistent with the Fund's entire position in a particular investment, unless it is probable that the Fund will sell a portion of an investment at an amount different from the NAV of the investment. Private equity fair value is measured using the valuation of the underlying companies as reported by the general partner. These investments, in the form of limited partnerships, reflect values and related performance on a quarter-lag basis due to the nature of the investments and the time it takes to value them. The estimated fair value of investments without readily determinable market values could differ significantly if a ready market for these assets existed. Fixed income securities are valued based primarily on quoted market prices provided by independent pricing sources. Global foreign exchange holdings are translated 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 in 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 plan. 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 19.5% of the investments held for pension 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, that represent 5% or more of the System's net position restricted for pensions.

For the fiscal year ended June 30, 2021, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 25.1%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Capital Assets

Capital assets are stated at cost less accumulated depreciation. Capital assets costing $5,000 or more are capitalized. Depreciation on capital assets is computed using the straight-line method over estimated useful lives of three to forty years. Depreciation expense is included in administrative expenses, net. 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 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

System Employee Pensions and Other Postemployment Benefits (OPEB)

For the plans listed below, for purposes of measuring the net pension liability, net OPEB asset, net OPEB liability, deferred outflows of resources and deferred inflows of resources related to pensions and OPEB, and pension and OPEB expense, information about the fiduciary net position of the plans and additions to and deductions from the fiduciary net position have been determined

2. Summary of Significant Accounting Policies and Plan Asset Matters, *continued*

on the same basis as they are reported by the plans. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value and in some cases NAV as a practical expedient to fair value.

Pensions:
- Employees' Retirement System of Georgia (ERS)

OPEB:
- Georgia State Employees Postemployment Benefit Fund (State OPEB)
- State Employees' Assurance Department Retired and Vested Inactive Members Trust Fund (SEAD-OPEB)

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 fiduciary net position and changes therein. Actual results could differ from those estimates.

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 statement 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 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

2. Summary of Significant Accounting Policies and Plan Asset Matters, *continued*

arrangements and availability payment arrangements. 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. 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.

3. Investment Program

The System maintains sufficient cash to meet its immediate liquidity needs. Cash not immediately needed is invested as directed by the 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:

Cash and Cash Equivalents

The carrying amount of the System's deposits totaled approximately $2.6 billion at June 30, 2021, with actual bank balances of approximately $2.6 billion. The System's cash balances are fully insured through the Federal Deposit Insurance Corporation, an independent agency of the U.S. government.

Short-term securities authorized but not currently used are:

- 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-1 and/or A-1 by national credit rating agencies.

- Master notes, an overnight security administered by a custodian bank, and an obligation of a corporation whose commercial paper is rated P-1 and/or A-1 by national credit rating agencies.

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

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 $19.4 billion.

- U.S. and foreign corporate obligations. At June 30, 2021, the System held U.S. corporate bonds of approximately $5.7 billion and international corporate bonds of approximately $836.2 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 statutes) 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 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 advisors. Buy/sell decisions are based on securities meeting rating criteria established by the 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 Board before being placed on an approved list.

3. Investment Program, *continued*

Equity investments are authorized in the following instruments:

- Domestic equities are those securities considered by the O.C.G.A. to be domiciled in the United States. At June 30, 2021, the System held domestic equities of approximately $55.4 billion.

- 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 ADRs of approximately $9.6 billion and international equities of approximately $8.2 billion.

- 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 $50.5 million.

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.

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.

Equity securities classified in Level 1 are valued using prices quoted in active markets for those securities. Equity securities classified in Level 2 are valued using prices quoted for similar instruments in active markets. Equity securities classified in Level 3 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.

3. Investment Program, *continued*

This table shows the fair value leveling of the System's investments (in thousands):

Investments Measured at Fair Value as of June 30, 2021
(dollars in thousands)

	Fair value measures using			
	Quoted prices in active markets for identical assets	Significant other observable inputs	Significant unobservable inputs	
Investments by fair value level	**Level 1**	**Level 2**	**Level 3**	**Total**
Equities:				
Domestic	$ 55,436,661	$ —	$ —	$ 55,436,661
International	17,674,931	76,933	—	17,751,864
Obligations:				
Domestic:				
U.S. treasuries	19,357,095	—	—	19,357,095
Corporate bonds	—	5,669,834	—	5,669,834
International:				
Corporate bonds	—	836,180	—	836,180
Total investments by fair value level	$ 92,468,687	$ 6,582,947	$ —	$ 99,051,634
Investments measured at NAV*				
Private equity funds				50,450
Total investments				$ 99,102,084

*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 Statement of Fiduciary Net Position.

3. Investment Program, *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	50,450	342,416	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 co-investment. Investments typically have an approximate life of 8–10 years. These investments are considered illiquid since the nature of these private investments prohibits redemption with the fund; instead, distributions are received from the general partner through liquidation of the underlying assets of the fund. The System currently has no plans to sell any of the investments prior to their liquidation, resulting in these assets being carried at the NAV estimated by the general partner and adjusted for second quarter cash flows by the System.

Credit Risk: Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations to the System. O.C.G.A. 47-20-84 limits investments to investment grade securities. It is the System's investment policy to require that the bond portfolio be of high quality and chosen with respect to maturity ranges, coupon levels, refunding characteristics, and marketability. The System's policy is to require that new purchases of bonds be restricted to high grade bonds rated no lower than "A" by any nationally recognized statistical rating organization. If a bond is subsequently downgraded to a rating below "A," it is placed on a watch list. The System holds two bonds that were downgraded to a rating below "A." Obligations of the U.S. government or obligations explicitly guaranteed by the U.S. government are not considered to have credit risk and do not require disclosure of credit quality. The quality ratings of investments in fixed income securities as described by Standard & Poor's and by Moody's Investors Service, which are nationally recognized statistical rating organizations, at June 30, 2021, are shown in the chart on the following page.

3. Investment Program, *continued*

Quality Ratings of Fixed Income Investments held at June 30, 2021 (dollars in thousands)

Investment type	Standard and Poor's/ Moody's quality rating	June 30, 2021 Fair value
Domestic obligations:		
U.S. treasuries		$ 19,357,095
Corporates	AAA/Aaa	1,156,798
	AA/Aa	1,648,840
	AA/A	434,545
	A/A	1,581,397
	A/Baa	433,527
	BBB/A	414,727
Total domestic corporates		5,669,834
International obligations:		
Corporates	AA/A	415,664
	A/Aa	420,516
Total international corporates		836,180
Total fixed income investments		$ 25,863,109

***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 below quantifies to the fullest extent possible the interest rate risk of the System's fixed income assets.

Effective Duration of Fixed Income Assets by Security Type (dollars in thousands)

Fixed income security type	Fair value June 30, 2021	Percentage of all fixed income assets	Effective duration (years)
Domestic obligations:			
U.S. treasuries	$ 19,357,095	74.9 %	5.8
Corporates	5,669,834	21.9	5.0
International obligations:			
Corporates	836,180	3.2	4.4
Total	$ 25,863,109	100.0 %	5.6

3. Investment Program, *continued*

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 is highlighted in this table:

International Investment Securities at Fair Value as of June 30, 2021 (dollars in thousands)

Currency	Cash & cash equivalents	Equities	Fixed income	Total
Australian Dollar	$ —	$ 262,500	$ —	$ 262,500
Brazilian Real	—	157,428	—	157,428
British Pound	—	587,837	—	587,837
Canadian Dollar	—	233,212	—	233,212
Chilean Peso	—	11,790	—	11,790
Chinese Renminbi Yuan	—	21,510	—	21,510
Colombian Peso	—	3,672	—	3,672
Czech Koruna	—	9,045	—	9,045
Danish Krone	—	134,084	—	134,084
Euro	—	2,096,692	—	2,096,692
Hong Kong Dollar	—	959,218	—	959,218
Indian Rupee	—	432,200	—	432,200
Indonesian Rupiah	—	20,755	—	20,755
Israeli Shekel	—	15,008	—	15,008
Japanese Yen	—	1,351,638	—	1,351,638
Malaysian Ringgit	—	54,336	—	54,336
Mexican Peso	—	40,540	—	40,540
New Taiwan Dollar	—	254,556	—	254,556
New Zealand Dollar	—	6,238	—	6,238
Norwegian Krone	—	15,018	—	15,018
Philippine Peso	8	19,783	—	19,791
Polish Zloty	—	15,032	—	15,032
Qatari Riyal	—	19,360	—	19,360
Singapore Dollar	—	108,013	—	108,013
South African Rand	—	136,641	—	136,641
South Korean Won	—	533,471	—	533,471
Swedish Krona	—	325,095	—	325,095
Swiss Franc	—	231,129	—	231,129
Thailand Baht	—	75,390	—	75,390
UAE Dirham	—	36,685	—	36,685
Total holdings subject to foreign currency risk	8	8,167,876	—	8,167,884
Investment securities payable in U.S. dollars	—	9,583,988	836,180	10,420,168
Total international investments - at fair value	$ 8	$ 17,751,864	$ 836,180	$ 18,588,052

4. Securities Lending Program

State statutes and the Board's 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 $10.9 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 triparty custodian.

Loaned securities are included in the accompanying statement of fiduciary net position since the System maintains ownership. The related collateral securities are not recorded as assets on the System's 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 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.

5. Capital Assets

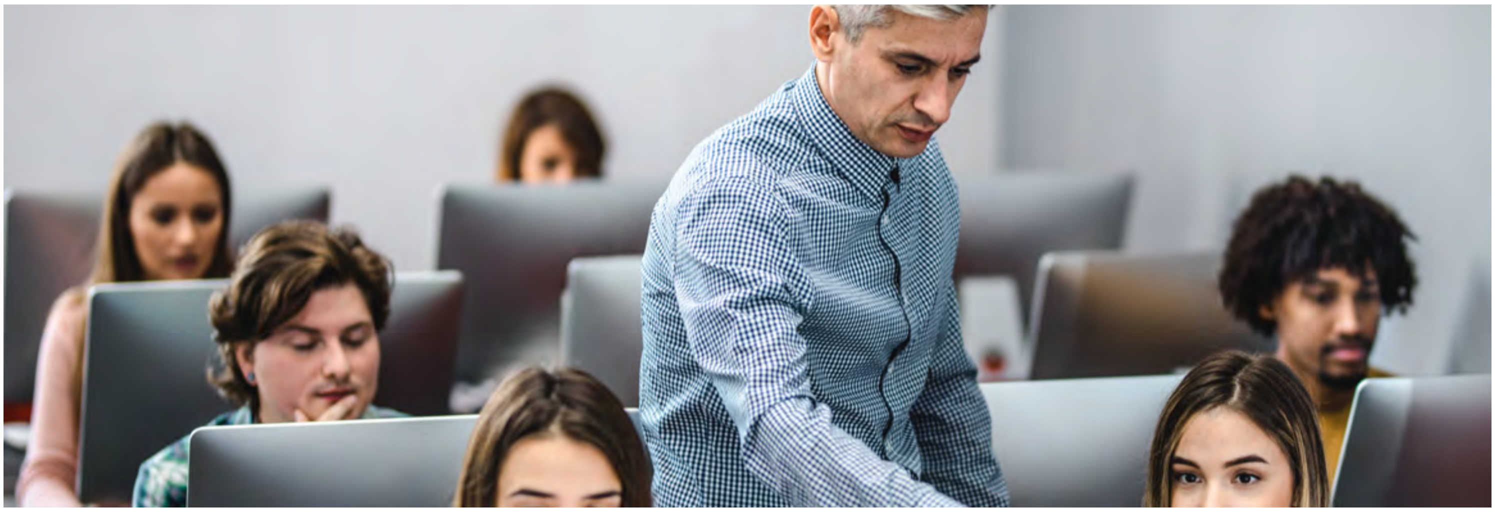
The following is a summary of capital assets and depreciation information as of June 30 and for the years then ended:

Summary of Capital Assets (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
Furniture and fixtures	572	26	(44)	554
Computer equipment	2,431	328	(176)	2,583
Computer software	14,980	—	—	14,980
	25,133	354	(220)	25,267
Accumulated depreciation for:				
Building	(1,120)	(70)	—	(1,190)
Furniture and fixtures	(323)	(68)	44	(347)
Computer equipment	(1,740)	(475)	103	(2,112)
Computer software	(14,980)	—	—	(14,980)
	(18,163)	(613)	147	(18,629)
Capital assets, net	$ 6,970	$ (259)	$ (73)	$ 6,638

6. Commitments

As of June 30, 2021, the System had committed to fund certain private equity partnerships for a total capital commitment of $394.0 million. Of this amount, $342.4 million remained unfunded and is not recorded on the System's *Statement of Fiduciary Net Position.*



7. Net Pension Liability of Employers and Nonemployer

This table summarizes components of the net pension liability of the participating employers and nonemployer at June 30, 2021:

Components of Net Pension Liability (dollars in thousands)

Total pension liability	$	110,991,021
Plan fiduciary net position		102,146,688
Employers' and nonemployer net pension liability	$	8,844,333
Plan fiduciary net position as a percentage of the total pension liability		92.03 %

Actuarial assumptions: The total pension liability was determined by an actuarial valuation as of June 30, 2020 rolled forward to June 30, 2021 using the following actuarial assumptions:

Inflation	2.50%
Salary increases	3.00 - 8.75%, including inflation
Investment rate of return	7.25%, net of pension plan investment expense, including inflation
Post-retirement benefit increases	1.50% semi-annually

Post-retirement mortality rates for service retirements and beneficiaries were based on the Pub-2010 Teachers Headcount Weighted Below Median Healthy Retiree mortality table (ages set forward one year and adjusted 106%) with the MP-2019 Projection scale applied generationally. The rates of improvement were reduced by 20% for all years prior to the ultimate rate. Post-retirement mortality rates for disability retirements were based on the Pub-2010 Teachers Mortality Table for Disabled Retirees (ages set forward one year and adjusted 106%) with the MP-2019 Projection scale applied generationally. The rates of improvement were reduced by 20% for all years prior to the ultimate rate. The Pub-2010 Teachers Headcount Weighted Below Median Employee mortality table with ages set forward one year and adjusted 106% was used for death prior to retirement. Future improvement in mortality rates was assumed using the MP-2019 projection scale generationally. These rates of improvement were reduced by 20% for all years prior to the ultimate rate.

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, 2013 – June 30, 2018, with the exception of the long-term assumed rate of return on assets (discount rate) which was changed from 7.50% to 7.25%, and the assumed annual rate of inflation which was changed from 2.75% to 2.50%, effective with the June 30, 2018 valuation.

7. Net Pension Liability of Employers and Nonemployer, *continued*

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 nominal returns, net of pension plan investment expense and the assumed rate of inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

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

Target Allocation & Estimated Rates of Return by Asset Class

Asset class	Target allocation	Long-term expected real rate of return*
Fixed income	30.00 %	(0.80)%
Domestic large cap equities	46.30	9.30
Domestic small cap equities	1.20	13.30
International developed market equities	11.50	9.30
International emerging market equities	6.00	11.30
Alternatives	5.00	10.60
Total	100.00 %	

* Net of inflation

***Discount rate**:* The discount rate used to measure the total pension liability was 7.25%. 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 of the employers and nonemployer, calculated using the discount rate of 7.25%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25%) or 1-percentage-point higher (8.25%) than the current rate:

Employers' and Nonemployer Net Pension Liability

(dollars in thousands)

1% Decrease (6.25%)	Current discount rate (7.25%)	1% Increase (8.25%)
$23,824,290	$8,844,333	$(3,430,708)

7. Net Pension Liability of Employers and Nonemployer, *continued*

Actuarial valuation date*:* The total pension liability is based upon the June 30, 2020 actuarial valuation. An expected total pension liability is determined as of June 30, 2021 using standard roll-forward techniques. The roll-forward calculation adds the annual normal cost (also called service cost), subtracts the actual benefit payments and refunds for the plan year, and then applies the expected investment rate of return for the year.

8. System Employees' Retirement Benefits

The System's employees are members of the ERS plan. This note to the financial statements and required supplementary information in the first two tables on page 44 are presented from the perspective of the System as an employer.

General Information about the Employees' Retirement System of Georgia

Plan description: 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. Title 47 of the O.C.G.A. assigns the authority to establish and amend the benefit provisions to the State Legislature. ERS issues a publicly available financial report that can be obtained at www.ers.ga.gov/post/annual-financial-reports.

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

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

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: 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. Under the Old Plan, 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 System's total required contribution rate for the year ended June 30, 2021 was 24.66% of annual covered payroll for old and new plan members and 21.57% for GSEPS members. The System's contributions to ERS for funding purposes totaled approximately $4.6 million for the year ended June 30, 2021. Contributions are expected to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability.

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

At June 30, 2021, the System reported a liability of approximately $30.5 million for its proportionate share of the net pension liability for the ERS plan. The net pension liability was measured as of June 30, 2020. The total pension liability used to calculate the net pension liability was based on an actuarial valuation as of June 30, 2019. An expected total pension liability as of June 30, 2020 was determined using standard roll-forward techniques. The System's proportionate share of the net pension liability was based on contributions to ERS during the fiscal year ended June 30, 2020. At June 30, 2020, the System's proportionate share was 0.723618% which is based on contributions, and an increase of 0.024201% from its proportionate share measured as of June 30, 2019.

For the year ended June 30, 2021, the System recognized pension expense of approximately $5.5 million. Pursuant to GASB Statement No. 67, approximately $2.9 million of the pension expense is included in investment expense as a reduction of investment income. At June 30, 2021, the System reported deferred outflows of resources and deferred inflows of resources related to pensions from the sources shown in the chart on the following page.

8. System Employees' Retirement Benefits, *continued*

Deferred Outflows and Inflows of Resources (dollars in thousands)

	Deferred outflows of resources	Deferred inflows of resources
Differences between expected and actual experience	$ 371	$ —
Net difference between projected and actual earnings on pension plan investments	431	—
Changes in proportion and differences between the System's contributions and proportionate share of contributions	790	—
System's contributions subsequent to the measurement date	4,579	—
Total	$ 6,171	$ —

System contributions subsequent to the measurement date of approximately $4.6 million are reported as deferred outflows of resources and will be recognized as a reduction of the net pension liability in the year ended June 30, 2022. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized as pension expense as follows (dollars in thousands):

Years ended June 30:		
2022	$	289
2023		426
2024		500
2025		377

Actuarial assumptions*:* The total pension liability 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 increases	3.25 - 7.00%, including inflation
Investment rate of return	7.30%, net of pension plan investment expense, including inflation

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

The actuarial assumptions used in the June 30, 2019 valuation were based on the results of an actuarial experience study for the period July 1, 2009 - June 30, 2014, with the exception of the investment rate of return and the assumed rate of inflation.

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 nominal returns, net of pension 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.

8. System Employees' Retirement Benefits, *continued*

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

Target Allocation & Estimated Rates of Return by Asset Class

Asset class	Target allocation	Long-term expected real rate of return*
Fixed income	30.00%	(0.10)%
Domestic large cap equities	46.20	8.90
Domestic small cap 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%	

*Net of inflation

***Discount rate**:* The discount rate used to measure the total pension liability was 7.30%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer and State of Georgia contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the ERS fiduciary net position was projected to be available to make all projected 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 System's proportionate share of the net pension liability to changes in the discount rate: The following presents the System's proportionate share of the net pension liability calculated using the discount rate of 7.30%, as well as what the System's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.30%) or 1-percentage-point higher (8.30%) than the current rate (dollars in thousands):

System's Proportionate Share of the Net Pension Liability

1% Decrease (6.30%)	Current discount rate (7.30%)	1% Increase (8.30%)
$42,908	$30,500	$19,911

Pension plan fiduciary net position: Detailed information about the ERS plan's fiduciary net position is available in the separately issued ERS financial report, which is publically available at www.ers.ga.gov/post/annual-financial-reports.

9. System Employees' Other Postemployment Benefits

Plan descriptions and Funding Policy:

Georgia State Employees Postemployment Benefit Fund (State OPEB Fund)

Plan Description: Employees of State organizations as defined in §45-18-25 of the 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 (DCH 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 DCH 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. If elected, dependent coverage starts on the same day as retiree coverage. Medicare-eligible retirees are offered Standard and Premium Medicare Advantage plan options. Non-Medicare eligible retiree plan options include Health Reimbursement Arrangement (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, the State OPEB Fund is substantially funded on a pay-as-you-go basis; 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 $1.2 million for the year ended June 30, 2021. Active employees are not required to contribute to the State OPEB Fund.

State Employees' Assurance Department Retired and Vested Inactive Members Trust Fund (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 JRS. The plan is a cost-sharing multiple-employer defined benefit OPEB plan as defined in GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans other than OPEB 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 in the SEAD-OPEB plan 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 in the SEAD-OPEB plan 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 SEAD-OPEB plan shall be in an amount established by the Board of Trustees 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, OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

At June 30, 2021, the System reported a liability of $8.4 million for its proportionate share of the State OPEB net liability and an asset of $2.9 million for its proportionate share of the SEAD-OPEB net asset.

The following schedule details the System's proportionate share of the OPEB amounts for all plans as of June 30, 2021:

Aggregate OPEB Amounts - All Plans
(dollars in thousands)

OPEB liabilities	$	8,421
OPEB assets		2,892
Deferred outflows of resources		3,388
Deferred inflows of resources		8,640
OPEB expense		(3,699)

The net OPEB liability and net OPEB asset were measured as of June 30, 2020. The total OPEB liability and OPEB asset were used to calculate the net OPEB liability/asset and were based on actuarial valuations as of June 30, 2019. An expected total OPEB liability and OPEB asset as of June 30, 2020 were determined using standard roll-forward techniques.

The System's proportionate share of the net OPEB liability for the State OPEB plan 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 0.748277%, which was an increase of 0.033939% from its proportionate share measured as of June 30, 2019. The System's proportionate share of the net OPEB asset for the SEAD-OPEB plan 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 System's proportionate share was 1.018190%, which was an increase of 0.078205% from its proportionate share measured as of June 30, 2019.

9. System Employees' Other Postemployment Benefits, *continued*

For the year ended June 30, 2021 the System recognized a reduction of OPEB expense of $3.3 million for the State OPEB plan and a reduction of OPEB expense of $407.6 thousand for the SEAD-OPEB plan. Pursuant to GASB Statement No. 74, approximately $2.0 million of the State OPEB reduction of expense and $218.6 thousand of the SEAD-OPEB reduction of OPEB expense is included in investment expense as a reduction of investment income. At June 30, 2021, the System reported deferred outflows of resources and deferred inflows of resources related to OPEB for each plan from the following sources:

Deferred Outflows and Inflows of Resources (dollars in thousands)

	State OPEB plan		SEAD-OPEB plan	
	Deferred outflows of resources	Deferred inflows of resources	Deferred outflows of resources	Deferred inflows of resources
Differences between expected and actual experience	$ —	$ 3,184	$ 1	$ 27
Change of assumptions	153	5,181	—	—
Net difference between projected and actual earnings on pension plan investments	827	—	51	—
Changes in proportion and differences between the System's contributions and proportionate share of contributions	1,169	95	—	153
System's contributions subsequent to the measurement date	1,187	—	—	—
Total	$ 3,336	$ 8,460	$ 52	$ 180

System contributions subsequent to the measurement date of $1.2 million for the State OPEB plan are reported as deferred outflows of resources and will be recognized as a reduction of the net State OPEB liability in the year ended June 30, 2022. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows (dollars in thousands):

Years ended June 30:	State OPEB	SEAD-OPEB
2022	$ (3,781)	$ (225)
2023	(2,176)	(11)
2024	(435)	60
2025	81	48

9. System Employees' Other Postemployment Benefits, *continued*

Actuarial assumptions: The total OPEB liability and OPEB asset as of June 30, 2020 were 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:

Actuarial Assumptions

	State OPEB plan	SEAD-OPEB plan
Inflation	2.50%	2.75%
Salary increases	3.25 - 7.00%, including inflation	3.25 - 7.00%, including inflation
Investment rate of return	7.30%, compounded annually, net of investment expense, including inflation	7.30%, net of OPEB plan investment expense, including inflation
Single equivalent interest rate	7.06%	n/a
Healthcare cost trend rate:		
Pre-Medicare eligible	7.00%	n/a
Medicare eligible	5.25%	n/a
Ultimate trend rate:		
Pre-Medicare eligible	4.50%	n/a
Medicare eligible	4.50%	n/a
Year of Ultimate trend rate		
Pre-Medicare eligible	2029	n/a
Medicare eligible	2023	n/a

Mortality rates for the State OPEB plan 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 for 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.

Postretirement mortality rates for the SEAD-OPEB plan 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 for the State OPEB and SEAD-OPEB plans 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 and assumed annual rate of inflation for SEAD-OPEB.

Projection of State OPEB benefits for financial reporting purposes is based on the substantive plan (the plan as understood by the employer and plan members) and includes 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 the State OPEB and SEAD-OPEB plan investments were 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.

9. System Employees' Other Postemployment Benefits, *continued*

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

Target Allocation & Estimated Rates of Return by Asset Class

	State OPEB		SEAD-OPEB	
Asset class	Target allocation	Long-term expected real rate of return*	Target allocation	Long-term expected real rate of return*
Fixed income	30.00%	0.50 %	30.00%	(0.10)%
Domestic large cap equities			46.20	8.90
Equities	70.00	9.20	—	—
Domestic small cap 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%		100.00%	

*Net of inflation

Discount rate

In order to measure the total OPEB liability, as of June 30, 2020 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.

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 State of Georgia 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 Employer Agency's proportionate share of the net OPEB liability to changes in the discount rate:

The following presents the System's proportionate share of the net State OPEB liability and net SEAD-OPEB asset calculated using the discount rate detailed below, as well as what the proportionate share of the net State OPEB liability and net

9. System Employees' Other Postemployment Benefits, *continued*

SEAD-OPEB asset would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current discount rate (dollars in thousands):

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

	1% Decrease	Current discount rate	1% Increase
	(6.06%)	(7.06%)	(8.06%)
State OPEB	$10,555	$8,421	$6,602
	(6.30%)	(7.30%)	(8.30%)
SEAD-OPEB	(1,604)	(2,892)	(3,953)

Sensitivity of the Employer Agency's proportionate share of the net OPEB liability to changes in the healthcare cost trend rates: The following presents the System's proportionate share of the State net OPEB liability, as well as what the proportionate share of the State 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):

System's Proportionate Share of the Net State OPEB Liability

1% Decrease	Current healthcare cost trend rate	1% Increase
$6,328	$8,421	$10,901

OPEB plan fiduciary net position: Detailed information about the OPEB plan's fiduciary net position is available in the Annual Comprehensive Financial Reports (ACFR) for each of the plans which are publicly available. The State OPEB plan is located at https://sao.georgia.gov/statewide-reporting/acfr and the SEAD-OPEB plan is located at www.ers.ga.gov/post/annual-financial-reports.

10. Deferred Outflows and Inflows of Resources

Deferred Outflows and Inflows of Resources reported on the Statement of Net Position as of June 30, 2021 consist of the following (dollars in thousands):

Deferred Outflows of Resources

	ERS pension plan	State OPEB plan	SEAD-OPEB plan	Total
Deferred Outflows of Resources				
Differences between expected and actual experience	$ 371	$ —	$ 1	$ 372
Change of assumptions	—	153	—	153
Net difference between projected and actual earnings on plan investments	431	827	51	1,309
Changes in proportion and differences between the System's contributions and proportionate share of contributions	790	1,169	—	1,959
System's contributions subsequent to the measurement date	4,579	1,187	—	5,766
Total Deferred Outflows of Resources	$ 6,171	$ 3,336	$ 52	$ 9,559

Deferred Inflows of Resources

	ERS pension plan	State OPEB plan	SEAD-OPEB plan	Total
Deferred Inflows of Resources				
Differences between expected and actual experience	$ —	$ 3,184	$ 27	$ 3,211
Change of assumptions	—	5,181	—	5,181
Net difference between projected and actual earnings on plan investments	—	—	—	—
Changes in proportion and differences between the System's contributions and proportionate share of contributions	—	95	153	248
Total Deferred Inflows of Resources	$ —	$ 8,460	$ 180	$ 8,640

Schedule of Changes in Employers' & Nonemployer's Net Pension Liability
(dollars in thousands)

	2021	2020	2019	2018	2017	2016	2015	2014
Total pension liability:								
Service cost	$ 1,734,145	$ 1,597,714	$ 1,536,336	$ 1,484,705	$ 1,413,080	$ 1,435,810	$ 1,386,498	$ 1,374,556
Interest	7,440,942	7,080,133	6,868,617	6,565,372	6,293,611	5,990,178	5,779,597	5,557,046
Differences between expected and actual experience	1,934,042	368,463	430,272	894,691	573,483	380,526	(165,785)	—
Changes of assumptions	—	1,316,780	2,388,357	—	—	662,047	—	—
Benefit payments	(5,434,414)	(5,192,283)	(4,950,465)	(4,699,920)	(4,461,124)	(4,228,819)	(3,996,879)	(3,764,452)
Refunds of member contributions	(69,166)	(76,976)	(76,543)	(76,061)	(76,296)	(79,334)	(80,085)	(87,095)
Net change in total pension liability	5,605,549	5,093,831	6,196,574	4,168,787	3,742,754	4,160,408	2,923,346	3,080,055
Total pension liability - beginning	105,385,472	100,291,641	94,095,067	89,926,280	86,183,526	82,023,118	79,099,772	76,019,717
Total pension liability - ending (a)	110,991,021	105,385,472	100,291,641	94,095,067	89,926,280	86,183,526	82,023,118	79,099,772
Plan fiduciary net position:								
Contributions - employer	2,490,404	2,733,089	2,560,989	2,014,308	1,648,669	1,572,624	1,399,668	1,264,546
Contributions - nonemployer	5,123	5,729	5,414	4,416	6,175	7,908	7,038	6,417
Contributions - member	817,090	800,864	759,474	745,574	716,233	685,626	661,835	640,120
Net investment income	23,192,761	4,119,609	4,972,419	6,247,155	7,971,677	810,574	2,384,145	9,826,743
Benefit payments	(5,434,414)	(5,192,283)	(4,950,465)	(4,699,920)	(4,461,124)	(4,228,819)	(3,996,879)	(3,764,452)
Refunds of member contributions	(69,166)	(76,976)	(76,543)	(76,061)	(76,296)	(79,334)	(80,085)	(87,095)
Administrative expense	(16,668)	(17,411)	(15,276)	(15,865)	(16,773)	(15,279)	(14,996)	(15,025)
Other[1]	—	—	—	(27,654)	—	—	(27,706)	—
Net change in plan fiduciary net position	20,985,130	2,372,621	3,256,012	4,191,953	5,788,561	(1,246,700)	333,020	7,871,254
Plan fiduciary net position - beginning	81,161,558	78,788,937	75,532,925	71,340,972	65,552,411	66,799,111	66,466,091	58,594,837
Plan fiduciary net position - ending (b)	102,146,688	81,161,558	78,788,937	75,532,925	71,340,972	65,552,411	66,799,111	66,466,091
Net pension liability-ending (a)-(b)	$ 8,844,333	$24,223,914	$21,502,704	$18,562,142	$18,585,308	$20,631,115	$15,224,007	$12,633,681

[1] The System is a participating employer in the Employees' Retirement System of Georgia, 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. 68, the fiscal year 2015 beginning Fiduciary Net Position was restated by $27,705,937. Pursuant to the requirements of GASB Statement No. 75, the fiscal year 2018 beginning Fiduciary Net Position was restated by $27,653,657. These restatements were made for reporting purposes to reflect the impact of recording the initial deferred outflows of resources and the net pension and OPEB liabilities and OPEB asset. For actuarial purposes, these adjustments are being recognized in fiscal year 2015 and 2018 respectively, and beginning fiduciary net position was not restated.

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

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

Schedule of Employers' & Nonemployer's Net Pension Liability & Related Ratios (dollars in thousands)

	2021	2020	2019	2018	2017	2016	2015	2014
Total pension liability	$ 110,991,021	$ 105,385,472	$ 100,291,641	$ 94,095,067	$ 89,926,280	$ 86,183,526	$ 82,023,118	$ 79,099,772
Plan fiduciary net position	102,146,688	81,161,558	78,788,937	75,532,925	71,340,972	65,552,411	66,799,111	66,466,091
Employers' and nonemployer's net pension liability	$ 8,844,333	$ 24,223,914	$ 21,502,704	$ 18,562,142	$ 18,585,308	$ 20,631,115	$ 15,224,007	$ 12,633,681
Plan fiduciary net position as a percentage of the total pension liability	92.03 %	77.01 %	78.56 %	80.27 %	79.33 %	76.06 %	81.44 %	84.03 %
Covered payroll	$ 13,093,006	$ 12,955,620	$ 12,279,440	$ 12,009,066	$ 11,596,664	$ 11,075,907	$ 10,697,384	$ 10,349,862
Employers' and nonemployer's net pension liability as a percentage of covered payroll	67.55 %	186.98 %	175.11 %	154.57 %	160.26 %	186.27 %	142.32 %	122.07 %

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

Schedule of Employer and Nonemployer Contributions (dollars in thousands)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Actuarially determined employer and nonemployer contribution	$2,495,527	$2,738,818	$2,566,403	$2,018,724	$1,654,844	$1,580,532	$1,406,706	$1,270,963	$1,180,469	$1,082,224
Contributions in relation to actuarially determined contribution	2,495,527	2,738,818	2,566,403	2,018,724	1,654,844	1,580,532	1,406,706	1,270,963	1,180,469	1,082,224
Contribution deficiency (excess)	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Covered payroll	$13,093,006	$12,955,620	$12,279,440	$12,009,066	$11,596,664	$11,075,907	$10,697,384	$10,349,862	$10,345,916	$10,527,471
Contributions as a percentage of covered payroll	19.06 %	21.14 %	20.90 %	16.81 %	14.27 %	14.27 %	13.15 %	12.28 %	11.41 %	10.28 %

Schedule of Investment Returns

	2021	2020	2019	2018	2017	2016	2015	2014
Annual money-weighted rate of return, net of investment expense	25.08 %	2.91 %	4.08 %	5.05 %	7.62 %	(2.92)%	(0.45)%	12.17 %

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

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

Schedule of the System's Proportionate Share of the Net Pension Liability to ERS (dollars in thousands)

	2021	2020	2019	2018	2017	2016	2015
System's proportion of the net pension liability	0.723618 %	0.699417 %	0.676785 %	0.691037 %	0.698825 %	0.683763 %	0.668620 %
System's proportionate share of the net pension liability	$ 30,500	$ 28,862	$ 27,823	$ 28,065	$ 33,057	$ 27,702	$ 25,077
System's covered payroll	19,214	18,555	18,202	17,756	16,880	16,291	17,622
System's proportionate share of the net pension liability as a percentage of its covered payroll	158.74 %	155.54 %	152.86 %	158.06 %	195.84 %	170.04 %	142.31 %
ERS fiduciary net position as a percentage of the total pension liability	76.21 %	76.74 %	76.68 %	76.33 %	72.34 %	76.20 %	77.99 %

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

Schedule of the System's Contributions to ERS
(dollars in thousands)

	2021	2020	2019	2018	2017	2016	2015
Contractually required contribution	$ 4,579	$ 4,504	$ 4,451	$ 4,423	$ 4,328	$ 4,102	$ 3,433
Contributions in relation to the contractually required contribution	4,579	4,504	4,451	4,423	4,328	4,102	3,433
Contribution deficiency (excess)	$ —	$ —	$ —	$ —	$ —	$ —	$ —
System's covered payroll	$ 19,440	$ 19,214	$ 18,555	$ 18,202	$ 17,756	$ 16,880	$ 16,291
Contributions as a percentage of covered payroll	23.55 %	23.44 %	23.99 %	24.30 %	24.37 %	24.30 %	21.07 %

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

Schedule of the System's Proportionate Share of the Net OPEB Liability (Asset) (dollars in thousands)

	2021	2020	2019	2018
State OPEB plan				
System's proportion of the net OPEB liability (asset)	0.748277 %	0.714338 %	0.691645 %	0.698345 %
System's proportionate share of the net OPEB liability (asset)	$ 8,421	$ 8,867	$ 18,091	$ 28,452
System's covered payroll	22,052	21,061	20,599	19,895
System's proportionate share of the net OPEB liability (asset) as a percentage of its covered payroll	38.19 %	42.10 %	87.82 %	143.01 %
Plan fiduciary net position as a percentage of the total OPEB liability	59.71 %	56.57 %	31.48 %	17.34 %
SEAD-OPEB plan				
System's proportion of the net OPEB liability (asset)	1.018190 %	0.939985 %	0.865387 %	0.837498 %
System's proportionate share of the net OPEB liability (asset)	$ (2,892)	$ (2,658)	$ (2,342)	$ (2,177)
System's covered payroll	12,080	11,996	12,056	12,196
System's proportionate share of the net OPEB liability (asset) as a percentage of its covered payroll	23.94 %	22.16 %	19.43 %	17.85 %
Plan fiduciary net position as a percentage of the total OPEB liability (asset)	129.20 %	129.73 %	129.46 %	130.17 %

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

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

Schedule of the System's Contributions to OPEB Plans (dollars in thousands)

	2021	2020	2019	2018
State OPEB plan				
Contractually required contribution	$ 1,187	$ 1,126	$ 3,820	$ 3,449
Contributions in relation to the contractually required contribution	1,187	1,126	3,820	3,449
Contribution deficiency (excess)	$ —	$ —	$ —	$ —
System's covered payroll	$ 22,732	$ 22,052	$ 21,061	$ 20,599
Contributions as a percentage of covered payroll	5.22 %	5.11 %	18.14 %	16.74 %
SEAD-OPEB plan				
Contractually required contribution[1]	$ —	$ —	$ —	$ —
Contributions in relation to the contractually required contribution	—	—	—	—
Contribution deficiency (excess)	$ —	$ —	$ —	$ —
System's covered payroll	$ 11,996	$ 12,080	$ 11,996	$ 12,056
	— %	— %	— %	— %

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

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

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

Required Supplementary Information for the System as the Plan

Schedule of Changes in the Employers' and Nonemployer's Net Pension Liability

The total pension liability contained in this schedule was provided by the System's actuary, Cavanaugh Macdonald Consulting, LLC. The net pension liability is measured as the total pension liability less the amount of the fiduciary net position of the System.

Schedule of Employer and Nonemployer Contributions

The required employer and nonemployer contributions and percentage of those contributions actually made are presented in the schedule.

Actuarial Methods and Assumptions

Changes of assumptions: On November 18, 2015, the Board adopted recommended changes to the economic and demographic assumptions utilized by the System. Primary among the changes were the updates to rates of mortality, retirement, withdrawal, and salary increases. Based on the funding policy adopted by the Board on May 15, 2019, the investment rate of return assumption was changed to 7.25%. In addition, the assumed rate of inflation was changed to 2.50%. On May 13, 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.

Method and assumptions used in calculations of actuarially determined contributions: The actuarially determined contribution rates in the schedule of employer and nonemployer contributions are calculated as of June 30, three years prior to the end of the fiscal year in which contributions are reported (June 30, 2021 employer contributions are based on June 30, 2018 valuation).

The following actuarial methods and assumptions were used to determine the most recent contribution rate reported in that schedule:

Valuation date:	June 30, 2018
Actuarial cost method:	Entry age
Amortization method:	Level percent of pay, closed
Remaining amortization period:	25.6 years
Asset valuation method:	Five-year smoothed fair
Inflation rate:	2.50%
Salary increases:	3.00 to 8.75%, including inflation
Investment rate of return:	7.25%, net of pension plan investment expense, including inflation
Post-retirement benefit increases:	1.50% semi-annually

Required Supplementary Information for the System as a Participating Employer in ERS

Schedule of the System's Proportionate Share of the Net Pension Liability to ERS

This schedule presents historical trend information about the System's proportionate share of the net pension liability for its employees who participate in the ERS plan. GASB Statement No. 68 was implemented in 2015. Information related to previous years is not available; therefore, trend information will be accumulated going forward to display a 10-year presentation.

Schedule of the System's Contributions to ERS

This schedule presents historical trend information about the System's contributions for its employees who participate in the ERS plan. GASB Statement No. 68 was implemented in 2015. Information related to previous years is not available; therefore, trend information will be accumulated going forward to display a 10-year presentation.

Changes in Benefit Terms and Assumptions

Changes of benefit terms: There were no changes in benefit terms that affect the measurement of the total pension liability since the prior measurement date.

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. In addition, based on the ERS Board's new funding policy, the assumed investment rate of return was reduced by 0.10% from 7.40% to 7.30% as of the June 30, 2018 measurement date, and remained unchanged for June 30, 2019.

Required Supplementary Information for the System as a Participating Employer in the State OPEB plan

Changes in Benefit Terms and Assumptions

Changes of benefit terms: There were no changes in benefit terms that affect the measurement of the total State OPEB liability since the prior measurement date.

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

The 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.

Required Supplementary Information for the System as a Participating Employer in the SEAD-OPEB plan

Changes of assumptions

On December 17, 2015, the Board of Trustees 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. 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.

Schedule of Administrative Expenses (dollars in thousands)

Personal services:	
Salaries and fringes	$ 9,359
Retirement contributions	2,568
Health insurance	977
FICA	674
Miscellaneous	122
Total personal services	13,700
Communications:	
Postage	176
Publications and printing	165
Telecommunications	141
Travel	11
Total communications	493
Professional services:	
Computer services	1,351
Actuarial services	90
Audit fees	218
Legal services	36
Medical services	64
Total professional services	1,759
Management Expenses:	
Building maintenance	617
Total management expenses	617
Other services and charges:	
Repairs and maintenance	7
Supplies and materials	161
Depreciation expense	613
Miscellaneous	272
Total other services and charges	1,053
Total administrative expenses	17,622
Less reimbursement by other state retirement systems for services rendered on their behalf	954
Net administrative expenses	$ 16,668

See accompanying independent auditor's report.

Schedule of Investment Expenses (dollars in thousands)

Investment advisory and custodial fees	$ 49,513
Miscellaneous	14,891
Total investment expenses	$ 64,404

See accompanying independent auditors' report.

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. The System began investing in private markets this year. We intend to build the 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%) for 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.

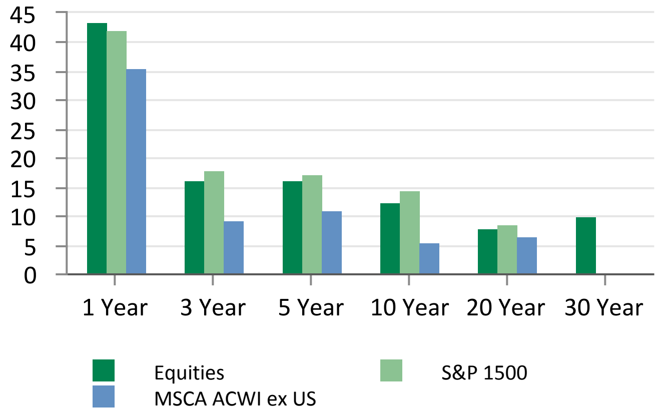
We look at two fixed-income indexes to measure the bond market's performance. The Bloomberg Barclays Government / Credit Index had a return of (0.4%). It is a broad index containing corporate and government-sponsored bonds as well as Treasuries. The FTSE Gov/Corp AAA/AA had a return of (2.6%) and is 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

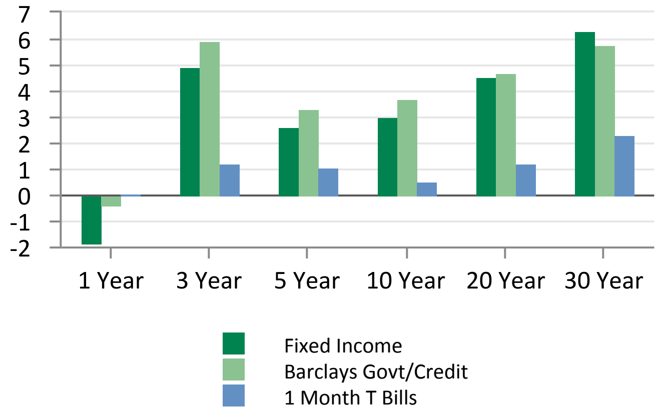
RATES OF RETURN

Equities



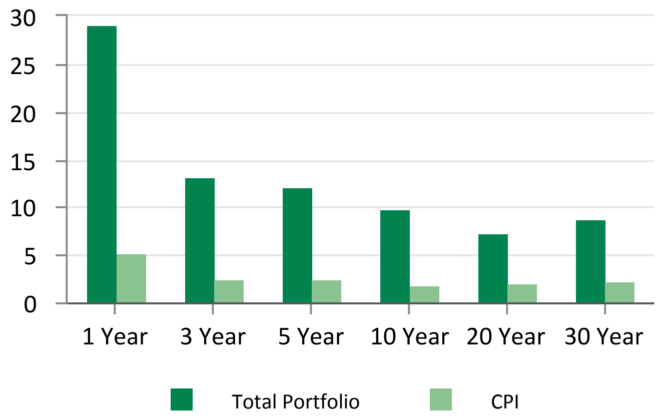
	Equities	S&P 1500	MSCA ACWI ex US
1 Year	43.66%	42.12%	35.72%
3 Year	16.44	18.12	9.38
5 Year	16.32	17.38	11.08
10 Year	12.52	14.63	5.45
20 Year	7.95	8.82	6.46
30 Year	9.89	—	—

Fixed Income



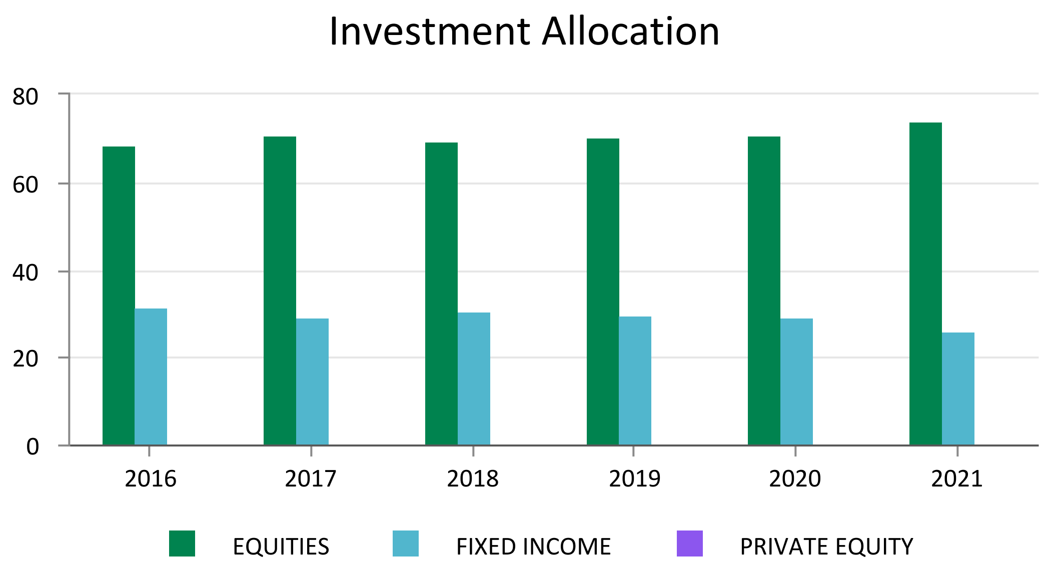
	Fixed Income	Barclays Govt/ Credit	1 Month T Bills
1 Year	(1.83)%	(0.39)%	0.06%
3 Year	4.89	5.95	1.23
5 Year	2.61	3.31	1.08
10 Year	3.03	3.71	0.56
20 Year	4.56	4.72	1.23
30 Year	6.29	5.78	2.29

Total Portfolio



	Total Portfolio	CPI
1 Year	29.19%	5.32%
3 Year	13.30	2.57
5 Year	12.26	2.44
10 Year	9.78	1.89
20 Year	7.38	2.13
30 Year	8.89	2.32

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



Investment Summary

Asset Allocation at June 30	2016	2017	2018	2019	2020	2021
Equities	68.6%	70.9%	69.4%	70.2%	70.8%	73.8%
Fixed Income	31.4%	29.1%	30.6%	29.8%	29.2%	26.1%
Private Equity	—%	—%	—%	—%	—%	0.1%
Asset Allocation at June 30 (in millions)						
Equities	$ 43,652	$ 49,237	$ 51,182	$ 53,433	$ 56,199	$ 73,189
Fixed Income	19,979	20,139	22,564	22,685	23,218	25,863
Private Equity	—	—	—	—	—	50
Total Investments	$ 63,631	$ 69,376	$ 73,746	$ 76,118	$ 79,417	$ 99,102

Schedule of Fees and Commissions (dollars in thousands)

For the Year Ended June 30, 2021

Investment Advisors' Fees:	
U.S. Equity	$ 17,097
International Equity	29,448
Investment Commissions:	
U.S. Equity	2,669
International Equity	4,942
SEC & Foreign Transaction Fees:	1,521
Miscellaneous*:	17,859
Total Fees and Commissions	$ 73,536

*Amount included in total investment expenses shown on page 48.

PORTFOLIO DETAIL STATISTICS

Twenty Largest Equity Holdings (dollars in thousands)*

Shares	Company	Fair Value
15,485,370	Apple Inc.	$ 2,120,876
7,357,602	Microsoft Corp.	1,993,174
460,304	Amazon.Com Inc.	1,583,519
612,815	Alphabet Inc.	1,514,731
2,649,836	Facebook Inc.	921,375
4,909,948	Taiwan Semiconductor Manufacturing Company Ltd.	589,979
2,465,270	Visa Inc.	576,430
3,204,159	JPMorgan Chase & Co.	498,375
1,779,793	Berkshire Hathaway Inc.	494,640
723,440	Tesla Inc.	491,722
584,836	Nvidia Corp.	467,927
676,610	ASML Holding NV	467,429
1,441,216	Home Depot Inc.	459,589
1,130,386	UnitedHealth Group Inc.	452,652
2,652,390	Johnson & Johnson	436,955
801,270	Netflix Inc.	423,239
6,745,288	Verizon Communications Inc.	377,939
4,799,899	Merck & Co. Inc.	373,288
776,142	Broadcom Inc.	370,096
1,271,000	Sea Ltd	349,017
Total of 20 Largest Equity Holdings		$ 14,962,952
Total Equity Holdings		$ 73,188,525

Ten Largest Fixed-Income Holdings (dollars in thousands)*

Description	Maturity Date	Interest Rate %	Par Value	Fair Value
U.S. Treasury Note	11/15/24	2.25	1,297,000	$ 1,371,072
U.S. Treasury Note	11/15/30	0.875	1,200,000	1,141,128
U.S. Treasury Note	3/31/23	1.5	1,105,000	1,129,653
U.S. Treasury Note	10/31/22	2	1,000,000	1,024,650
U.S. Treasury Note	3/31/25	2.625	920,000	988,172
U.S. Treasury Note	1/31/25	2.5	860,000	918,419
U.S. Treasury Note	3/31/28	1.25	900,000	903,555
U.S. Treasury Note	8/31/25	2.75	810,000	877,360
U.S. Treasury Note	2/15/28	2.75	600,000	661,104
U.S. Treasury Bond	2/15/39	3.5	482,000	602,933
Total of 10 Largest Fixed-Income Holdings				$ 9,618,046
Total Fixed-Income Holdings				$ 25,863,109

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

Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

May 12, 2021

Board of Trustees
Teachers Retirement System of Georgia
Suite 100, Two Northside 75
Atlanta, GA 30318

Members of the Board:

Section 47-3-23 of the law governing the operation of the Teachers Retirement System of Georgia provides that the actuary shall make annual valuations of the contingent assets and liabilities of the Retirement System on the basis of regular interest and the tables last adopted by the Board of Trustees. We have submitted the report giving the results of the actuarial valuation of the System prepared as of June 30, 2020. The report indicates that annual employer contributions at the rate of 19.98% of compensation for the fiscal year ending June 30, 2023 are sufficient to support the benefits of the System. 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. 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.

The System is funded on an actuarial reserve basis. The actuarial assumptions recommended by the actuary and adopted by the Board are both individually and, 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 unfunded accrued liability, which is 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 and Methods
- Schedule of Active Members
- Schedule of Retirees and Beneficiaries Added to and Removed from Rolls
- Schedule of Funding Progress
- Analysis of Financial Experience

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. 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.

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.

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.

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.

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

Sincerely yours,

John J. Garrett, ASA, FCA, MAAA
Principal and Consulting Actuary

Cathy Turcot
Principal and Managing Director

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

The laws governing the Teachers Retirement System of Georgia (the System) provide that an actuary perform an annual valuation of the contingent assets and liabilities of the System and 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 actuarial valuation of the System, prepared as of June 30, 2020, was made on the basis of the funding policy adopted by the Board on November 20, 2013 and the 5-year experience study adopted by the Board on May 13, 2020, with the exception of the investment rate of return and salary increases assumptions adopted by the Board on May 15, 2019. The Board is responsible for maintaining this funding policy. A summary of plan provisions can be found in the Introductory Section beginning on page 11, and a plan description can be found in the Financial Section beginning on page 21.

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

a) Actuarial Method Used

The actuarial cost method used for funding purposes is the Entry Age Normal method, which is the same cost method used for financial reporting purposes. The Entry Age Normal method is the most commonly used funding method among public retirement plans. This cost method allocates the cost of benefits over each member's expected career as a level percentage of their expected salary and demonstrates the highest degree of stability in the calculation of a plan's normal cost over time. Gains and losses are reflected in the unfunded accrued liability. Adopted November 20, 2013.

b) Investment Rate of Return

The assumed investment rate of return is 7.25% compounded annually, which consists of a 4.75% assumed real rate of return and a 2.50% assumed annual rate of inflation. This long-term expected rate of return is used to determine the total pension liability for financial reporting purposes. Adopted May 15, 2019.

c) Salary Increases

Salaries are expected to increase 3.00% to 8.75% annually depending upon the members' years of creditable service. The salary increase includes a 0.50% assumed real rate of wage inflation and a 2.50% assumed annual rate of inflation. Adopted May 15, 2019.

d) Death, Disability and Withdrawal Rates

Death, disability and withdrawal rates for active employees and service retirement tables are based upon the System's historical experience. The death-after-retirement rates are based on the Pub-2010 Teachers Headcount Weighted Below Median Healthy Retiree mortality table (ages set forward one year and adjusted 106%) with the MP-2019 Projection scale applied generationally is used for death after service retirement and beneficiaries. The rates of improvement have been reduced by 20% for all years prior to the ultimate rate. The Pub-2010 Teachers Mortality Table fro Disabled Retirees (ages set forward one year and adjusted 106%) with the MP-2019 Projection scale applied generationally is used for death after disability retirement. The rates of improvement have been reduced by 20% for all years prior to the ultimate rate. Adopted May 13, 2020.

e) Asset Valuation Method

In accordance with the funding policy, the actuarial value of the assets was set equal to the fair value of assets on June 30, 2013. Five-year smoothing of investment gains and losses commenced in the subsequent year. The actuarial value of assets recognizes a portion of the difference between the fair value of the assets and the expected fair value of assets, based on the assumed valuation rate of return. The amount recognized is one-fifth of the difference between fair value and actuarial expected value. Adopted November 20, 2013. The actuarial value of assets is limited to a range between 75% and 125% of fair value. Adopted July 27, 2011.

f) Service Retirement Benefit

The service benefit (pension) paid to members is an annuity that is owed to them at retirement that will provide a total annual pension equal to 2% of the member's average compensation over the two consecutive years of membership service producing the highest such average, multiplied by the number of years of creditable service up to 40 years. It is also assumed that certain cost-of-living adjustments will be made in future years.

g) Actuarially Determined Unfunded Accrued Liability

The present value of the unfunded accrued liability, based on unaudited data provided the actuary by the System, was approximately $25.6 billion at June 30, 2020.

h) Required Contributions (% of compensation)

Contributions required by the annual actuarial valuation as of June 30, 2020, to be made for the year ended June 30, 2023:

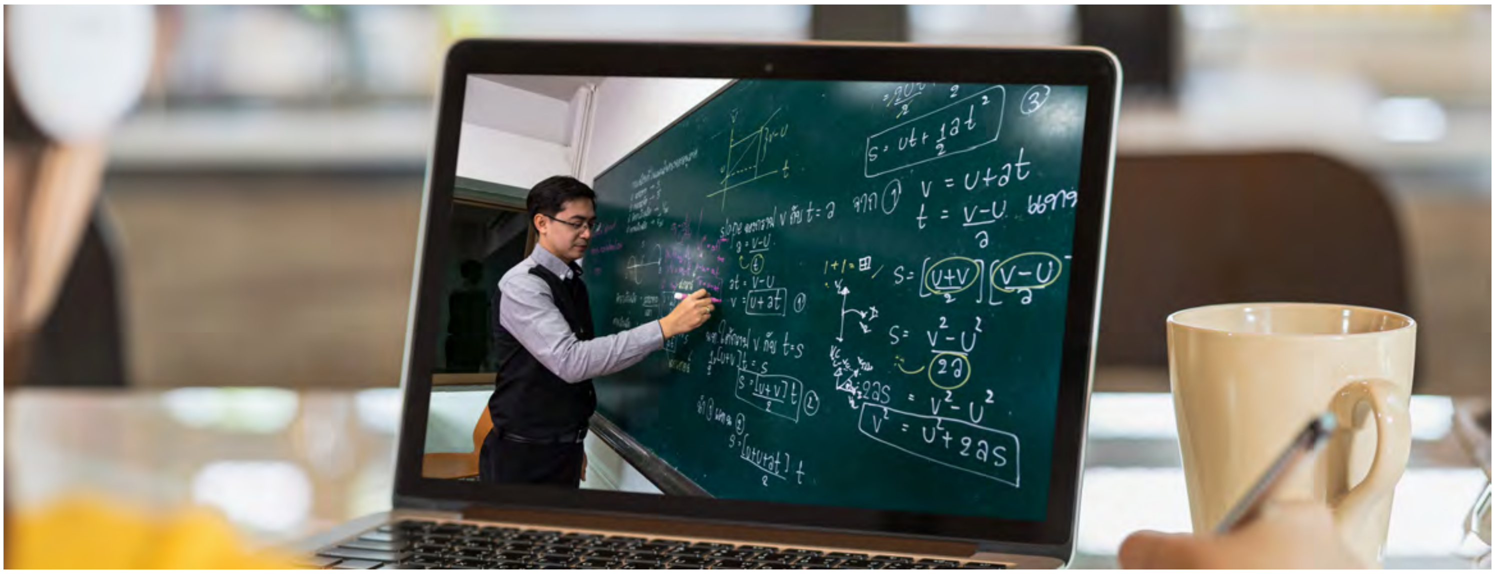
(1) Member	**6.00 %**
(2) Employer:	
Normal	**7.35 %**
Unfunded Accrued Liability	**12.63 %**
Total	**19.98 %**

Service Retirement
Adopted May 13, 2020

	Male		Female	
Age	< 30 years of service	≥ 30 years [1] of service	< 30 years of service	≥ 30 years [2] of service
50	3.00%	52.00%	2.75%	50.00%
55	5.00	37.00	5.75	35.00
60	20.00	34.00	25.00	40.00
61	18.00	30.00	25.00	40.00
62	25.00	35.00	25.00	43.00
63	22.00	28.00	25.00	43.00
64	22.00	28.00	24.00	43.00
65	27.00	27.00	32.00	32.00
66	32.00	32.00	32.00	32.00
67	30.00	30.00	32.00	32.00
68	30.00	30.00	30.00	30.00
69	30.00	30.00	30.00	30.00
70	30.00	30.00	30.00	30.00

(1) An additional 10% are assumed to retire at 30 years of service for ages between 50 and 64.

(2) An additional 15% are assumed to retire at 30 years of service for ages between 50 and 61.



Separation Before Service Retirement

Adopted May 13, 2020

	Annual Rate of				
Age	**Death [1]**	**Disability**	**Withdrawal Years of Service**		
			0-4 Yrs	**5-9 Yrs**	**10+ Yrs.**
Male					
20	0.0375%	—%	27.00%	—%	—%
25	0.0336	—	17.00	13.00	—
30	0.0437	—	14.00	6.50	6.00
35	0.0549	0.0165	14.00	6.25	3.50
40	0.0714	0.0275	13.00	6.25	2.75
45	0.1087	0.0720	13.00	6.00	2.50
50	0.1799	0.1360	11.25	5.75	2.75
55	0.2828	0.2400	11.75	5.50	3.25
60	0.4441	—	12.00	6.00	—
64	0.6475	—	15.00	7.50	—
Female					
20	0.0139%	—%	28.00%	—%	—%
25	0.0148	—	13.50	12.00	—
30	0.0235	—	13.50	7.00	6.00
35	0.0345	0.0152	13.00	7.00	4.00
40	0.0493	0.0312	12.00	6.50	3.00
45	0.0728	0.0650	10.75	6.00	2.50
50	0.1107	0.1400	10.75	5.50	3.00
55	0.1687	0.3400	10.75	5.00	3.00
60	0.2554	—	11.50	5.50	—
64	0.3665	—	15.00	7.50	—

(1) The Pub-2010 Teachers Headcount Weighted Below Median Employee mortality table with ages set forward one year and adjusted 106% is used for death prior to retirement. Future improvement in mortality rates is assumed using the MP-2019 projection scale generationally. These rates of improvement have been reduced by 20% for all years prior to the ultimate rate. The proposed rates shown above are based on a projection to 2015. Actual mortality rates would be projected generationally.

Active Members

Fiscal Year[1]	Number of Participating Employers	Members	Annual Payroll[2] (000's)	Average Pay	% Increase
2011	399	216,137	$ 10,099,278	$ 46,726	(0.6)%
2012	404	213,648	10,036,023	46,975	0.5
2013	401	209,854	9,924,682	47,293	0.7
2014	405	209,828	9,993,686	47,628	0.7
2015	414	213,990	10,347,332	48,354	1.5
2016	416	218,193	10,783,277	49,421	2.2
2017	419	222,902	11,333,997	50,847	2.9
2018	422	226,039	11,704,334	51,780	1.8
2019	426	226,366	11,882,828	52,494	1.4
2020	430	231,032	12,737,375	55,133	5.0

[1] Fiscal year refers to the actuarial valuation performed as of June 30 of that year and determines the funding necessary for the fiscal year beginning two years after the valuation date. An actuarial valuation for the fiscal year ended June 30, 2021 is currently in process and was not available for this analysis.

[2] The annual payroll shown in the schedule of active member valuation data is the annual compensation of the active members at the date of the valuation. The covered payroll reported in the financial section represents the payroll during the fiscal year upon which employer contributions were made.

Retirees and Beneficiaries

Fiscal Year[(1)]	*Added to Roll* Number	*Added to Roll* Annual Allowances (000's)	*Removed from Roll* Number	*Removed from Roll* Annual Allowances (000's)	*Roll-End of Year* Number	*Roll-End of Year* Annual Allowances (000's)	% Increase in Annual Allowances	Average Annual Allowances
2011	7,136	295,192	1,937	55,062	92,177	3,102,607	8.4%	33,659
2012	7,055	298,471	1,915	55,565	97,317	3,345,513	7.8	34,377
2013	7,937	322,853	1,983	59,453	103,271	3,608,913	7.9	34,946
2014	7,078	291,066	2,195	68,324	108,154	3,831,655	6.2	35,428
2015	7,207	306,751	2,237	72,818	113,124	4,065,588	6.1	35,939
2016	7,225	312,063	2,392	80,359	117,957	4,297,292	5.7	36,431
2017	7,189	318,594	2,459	84,596	122,687	4,531,290	5.4	36,934
2018	7,345	341,242	2,732	98,829	127,300	4,773,703	5.3	37,500
2019	7,247	347,533	2,727	100,233	131,820	5,021,003	5.2	38,090
2020	6,894	346,319	3,036	114,317	135,678	5,253,005	4.6	38,717

(1) Fiscal year refers to the actuarial valuation performed as of June 30 of that year and determines the funding necessary for the fiscal year beginning two years after the valuation date. An actuarial valuation for the fiscal year ended June 30, 2021 is currently in process and was not available for this analysis.

Solvency Test (dollars in thousands)

	Aggregate Actuarial Accrued Liabilities For				Portion of Accrued Liabilities Covered by Assets		
Fiscal Year[1]	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Members (Employer-Financed Portion)	Actuarial Value of Assets	(1)	(2)	(3)
2011	$6,973,343	$37,271,020	$21,734,277	$55,427,716	100.0 %	100.0 %	51.5 %
2012	7,242,569	39,759,145	21,346,964	56,262,332	100.0	100.0	43.4
2013	7,480,767	43,152,402	21,587,696	58,594,837	100.0	100.0	36.9
2014	7,815,630	45,841,742	22,114,745	62,061,722	100.0	100.0	38.0
2015	8,153,958	50,251,964	24,385,088	65,514,119	100.0	100.0	29.1
2016	8,522,267	55,186,998	28,012,510	68,161,710	100.0	100.0	15.9
2017	8,936,010	57,659,259	29,385,762	71,212,660	100.0	100.0	15.7
2018	9,350,031	58,993,494	28,561,728	75,024,364	100.0	100.0	23.4
2019	9,791,208	61,856,920	30,191,271	78,126,922	100.0	100.0	21.5
2020	10,320,195	64,144,338	32,724,242	81,632,571	100.0	100.0	21.9

[1]Fiscal year refers to the actuarial valuation performed as of June 30 of that year and determines the funding necessary for the fiscal year beginning two years after the valuation date. An actuarial valuation for the fiscal year ended June 30, 2021 is currently in process and was not available for this analysis.

Member & Employer Contribution Rates

Fiscal Year	Member	Employer
2013	6.00%	11.41%
2014	6.00	12.28
2015	6.00	13.15
2016	6.00	14.27
2017	6.00	14.27
2018	6.00	16.81
2019	6.00	20.90
2020	6.00	21.14
2021	6.00	19.06
2022	6.00	19.81

Schedule of Funding Progress (dollars in thousands)

Actuarial Valuation Date	Actuarial Value of Plan Assets (a)	Actuarial Accrued Liability (AAL) -Entry Age (b)	Unfunded AAL (UAAL) (Funding Excess) (b-a)	Funded Ratio (a/b)	Annual Covered Payroll [1] (c)	UAAL (Funding Excess) as a Percentage of Covered Payroll [(b-a)/c]
6/30/11	$ 55,427,716	$ 65,978,640	$ 10,550,924	84.0%	$ 10,099,278	104.5%
6/30/12	56,262,332	68,348,678	12,086,346	82.3	10,036,023	120.4
6/30/13	58,594,837	72,220,865	13,626,028	81.1	9,924,682	137.3
6/30/14	62,061,722	75,772,117	13,710,395	81.9	9,993,686	137.2
6/30/15	65,514,119	82,791,010	17,276,891	79.1	10,347,332	167.0
6/30/16	68,161,710	91,721,775	23,560,065	74.3	10,783,277	218.5
6/30/17	71,212,660	95,981,031	24,768,371	74.2	11,333,997	218.5
6/30/18	75,024,364	96,905,253	21,880,889	77.4	11,704,334	186.9
6/30/19	78,126,922	101,839,399	23,712,477	76.7	11,882,828	199.6
6/30/20	81,632,571	107,188,775	25,556,204	76.2	12,737,375	200.6

[1] The annual covered payroll shown in the schedule of funding progress valuation data is the annual compensation of the active members at the date of the valuation. The covered payroll reported in the financial section represents the payroll during the fiscal year upon which employer contributions were made.

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

Analysis of Financial Experience (dollars in millions)

Analysis of the Change in Unfunded Accrued Liability Increase (Decrease) During the Years Ended June 30,

Item	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Interest Added to Previous Unfunded Accrued Liability	$ 1,719.2	$ 1,586.4	$ 1,733.8	$ 1,649.2	$ 1,300.9	$ 1,077.6	$ 1,084.6	$ 977.8	$ 846.2	$ 733.2
Accrued Liability Contribution	(2,027.0)	(1,834.2)	(1,261.0)	(929.4)	(985.4)	(796.1)	(662.0)	(604.7)	(443.5)	(396.3)
Experience:										
Valuation Asset Growth	348.2	558.1	(925.3)	(539.2)	150.9	(677.3)	(836.1)	1,241.1	1,855.1	2,018.7
Pensioners' Mortality	(26.4)	53.9	(32.4)	40.5	(13.4)	37.7	35.3	52.7	51.6	24.2
Turnover and Retirements	153.1	147.8	266.2	246.9	209.2	335.9	119.6	378.2	319.1	195.3
New Entrants	285.7	151.3	161.2	172.7	153.1	138.9	115.3	96.2	101.2	89.6
Salary Increases	1,066.8	(213.2)	(103.6)	327.9	72.3	(227.6)	(624.9)	(715.2)	(709.9)	(1,132.2)
Interest Smoothing	—	—	(2,744.0)	121.6	5,286.1	2,861.2	739.8	915.9	(627.0)	412.8
Amendments (1)	—	—	—	—	—	—	—	—	—	(685.5)
Change in Member Contribution Rate	—	—	—	—	—	—	—	—	—	—
Assumption and Method Changes(2)	—	1,204.2	(133.4)	—	—	688.3	—	(926.7)	—	—
Miscellaneous	324.1	177.3	151.0	118.1	109.5	127.9	112.8	124.4	142.6	228.5
Total Increase	$ 1,843.7	$ 1,831.6	$ (2,887.5)	$ 1,208.3	$ 6,283.2	$ 3,566.5	$ 84.4	$ 1,539.7	$ 1,535.4	$ 1,488.3

(1) Amendments

2011 - Reflects the impact of discontinuing the one-time 3% increase on the first $37,500 of members' allowances for all members who retire on or after January 1, 2013

(2) Assumption and Method Changes

2013 - Reflects change to asset smoothing methodology where the final actuarial value of assets used for the current valuation was set to the fair value of assets as of June 30, 2013. Five-year smoothing of investment gains and losses will commence in subsequent years.

2015 - The assumed rates of withdrawal, disability, retirement, and mortality and the assumed rates of salary increase have been revised to more closely reflect the actual and anticipated experience of the System. In addition, assumptions related to percent married, unused sick leave, and termination benefits were also revised.

2018 - Reflects elimination of the interest smoothing methodology and the reductions in the long-term discount rate and the inflation assumption.

2019 - The assumed rates of withdrawal, disability, retirement, mortality, and the assumed rates of salary increase and administrative expenses have been revised to more closely reflect the actual and anticipated experience of the System.

The statistical section presents additional information to provide financial statement users with added historical perspective, context, and detail to assist in using the information in the financial statements, notes to financial statements, and required supplementary information to understand and assess the System's financial condition.

Financial Trends

The schedules presented on pages 63 through 64 contain trend information to help the reader understand how the System's financial position has changed over time.

Operating Information

The schedules presented on pages 65 through 71 contain benefits, service, and employer data to help the reader understand how the System's financial report relates to the services of the System and the activities it performs.

Additions by Source (dollars in thousands)

Fiscal Year	Member Contributions	Employer and Nonemployer Contributions	Net Investment Income (Loss)	Total Additions to (Deductions from) Fiduciary Net Position
2012	$ 601,512	$ 1,082,224	$ 1,090,900	$ 2,774,636
2013	640,745	1,180,469	6,938,349	8,759,563
2014	640,120	1,270,963	9,826,743	11,737,826
2015	661,835	1,406,706	2,384,145	4,452,686
2016	685,626	1,580,532	810,574	3,076,732
2017	716,233	1,654,844	7,971,677	10,342,754
2018	745,574	2,018,724	6,247,155	9,011,453
2019	759,474	2,566,403	4,972,419	8,298,296
2020	800,864	2,738,818	4,119,609	7,659,291
2021	817,090	2,495,527	23,192,761	26,505,378

Contributions were made in accordance with actuarially determined contribution requirements

Deductions by Type (dollars in thousands)

Fiscal Year	Benefit Payments: Service	Partial Lump-Sum Option	Disability	Survivor Benefits	Supplemental Payments[1]	Lump-Sum Death Settlement	Total Benefit Payments	Net Administrative Expenses	Refunds	Total Deductions From Fiduciary Net Position
2012	$3,091,370	$42,441	$85,830	$55,328	$754	$1,829	$3,277,552	$21,954	$72,157	$3,371,663
2013	3,353,295	42,259	91,727	58,234	633	2,001	3,548,149	22,584	81,142	3,651,875
2014	3,569,374	33,148	98,145	61,203	508	2,074	3,764,452	15,025	87,095	3,866,572
2015	3,791,526	34,494	103,483	64,911	379	2,086	3,996,879	14,996	80,085	4,091,960
2016	4,015,786	33,929	109,669	67,013	312	2,110	4,228,819	15,279	79,334	4,323,432
2017	4,241,760	31,839	114,813	70,179	297	2,236	4,461,124	16,773	76,296	4,554,193
2018	4,473,928	32,100	118,567	73,385	250	1,690	4,699,920	15,865	76,061	4,791,846
2019	4,714,549	32,714	124,071	76,912	204	2,015	4,950,465	15,276	76,543	5,042,284
2020	4,951,973	28,420	128,984	80,529	181	2,196	5,192,283	17,411	76,976	5,286,670
2021	5,182,724	34,084	131,500	83,773	152	2,181	5,434,414	16,668	69,166	5,520,248

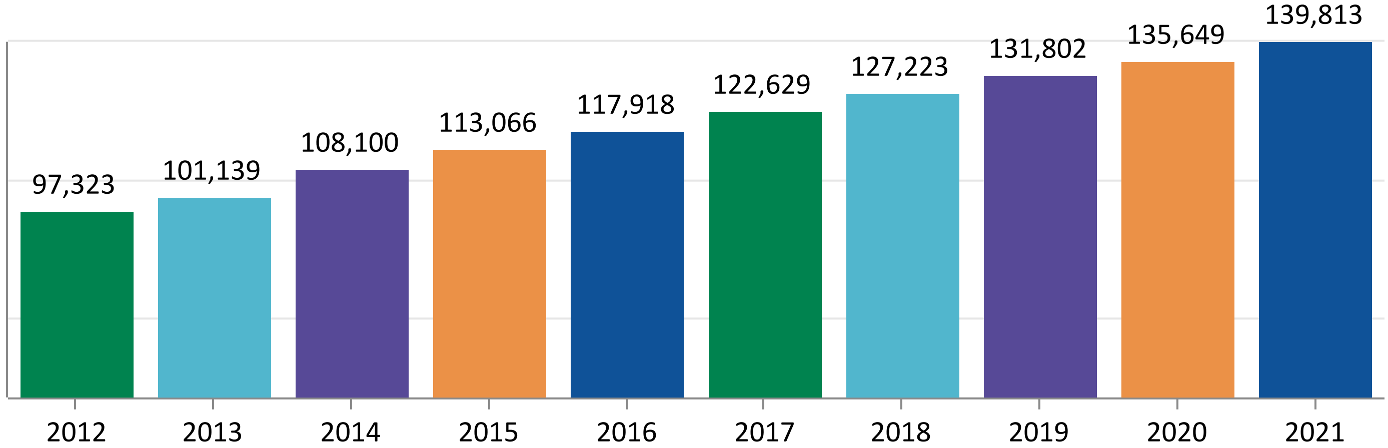
[1] Supplemental payments to retirees who belong to a local retirement system.

Changes in Fiduciary Net Position (dollars in thousands)

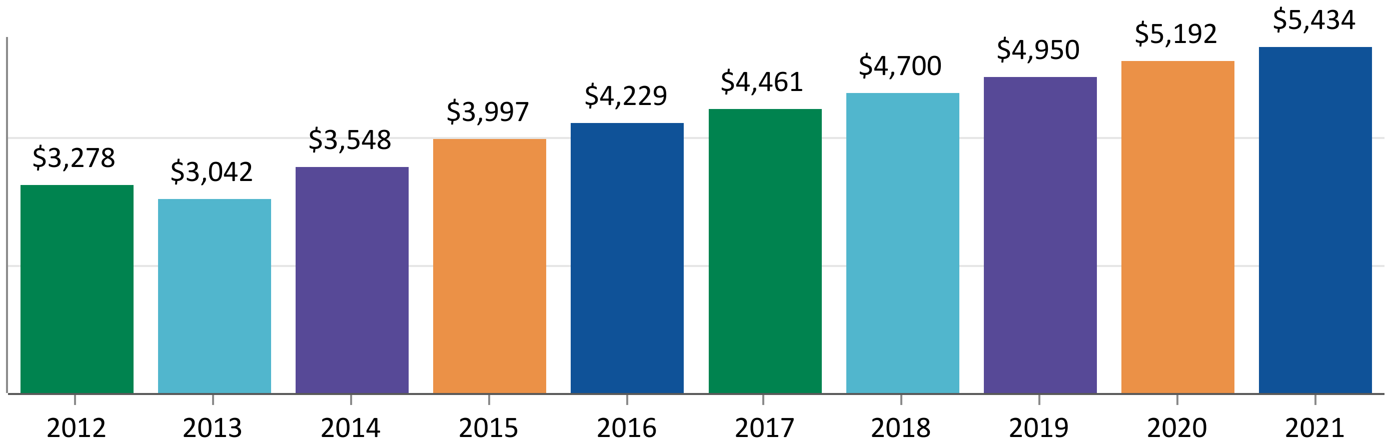
Fiscal Year	Total Additions to (Deductions from) Fiduciary Net Position	Total Deductions from Fiduciary Net Position	Changes in Fiduciary Net Position
2012	$ 2,774,636	$ 3,371,663	$ (597,027)
2013	8,759,563	3,651,875	5,107,688
2014	11,737,826	3,866,572	7,871,254
2015	4,452,686	4,091,960	360,726
2016	3,076,732	4,323,432	(1,246,700)
2017	10,342,754	4,554,193	5,788,561
2018	9,011,453	4,791,846	4,219,607
2019	8,298,296	5,042,284	3,256,012
2020	7,659,291	5,286,670	2,372,621
2021	26,505,378	5,520,248	20,985,130

Benefit Payment Statistics

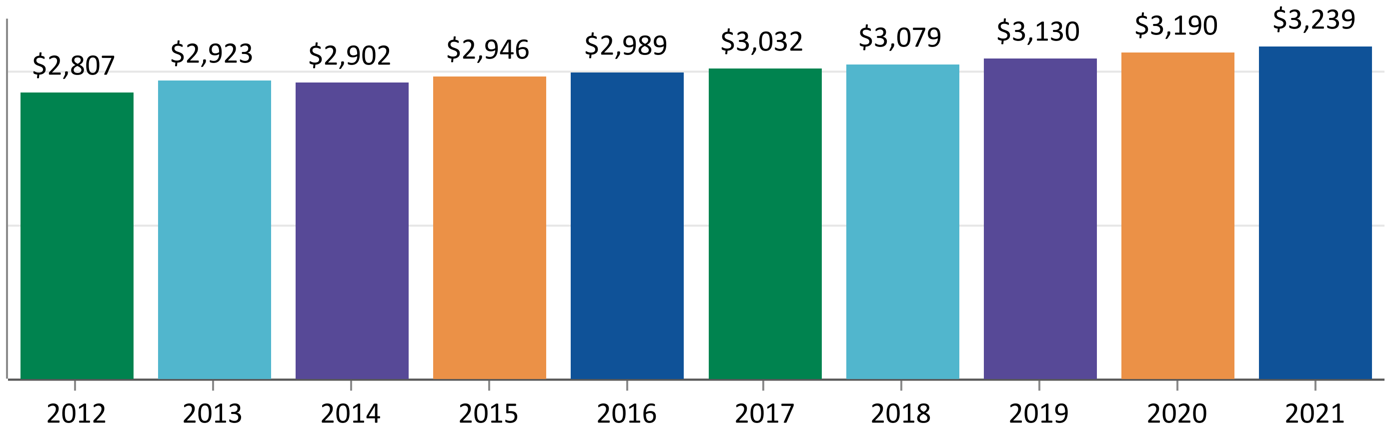
Number of Retirees



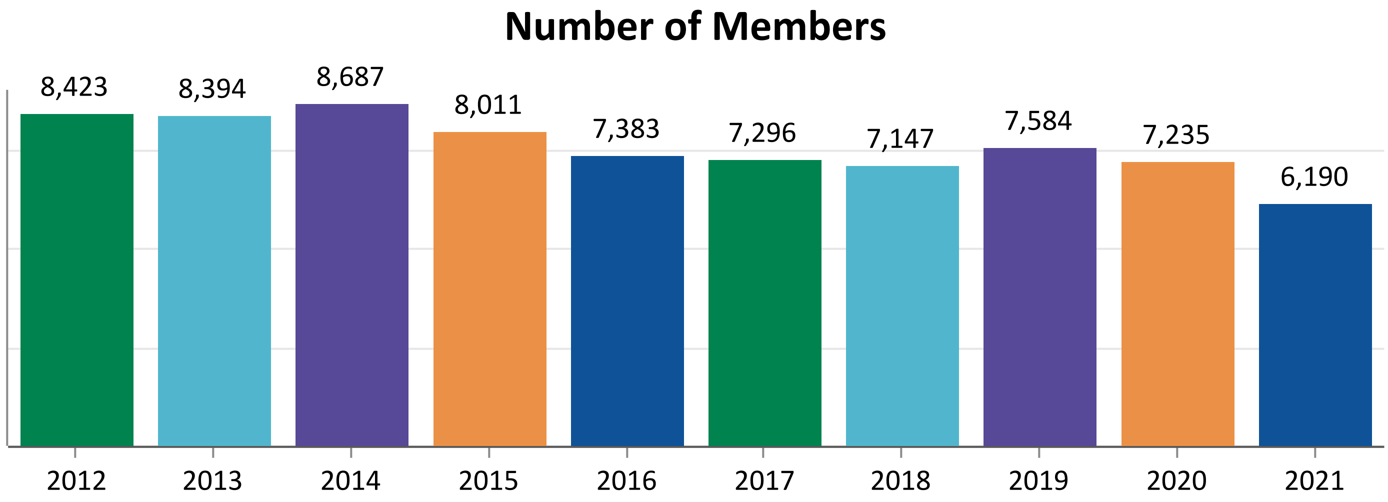
Annual Benefit (dollars in millions)

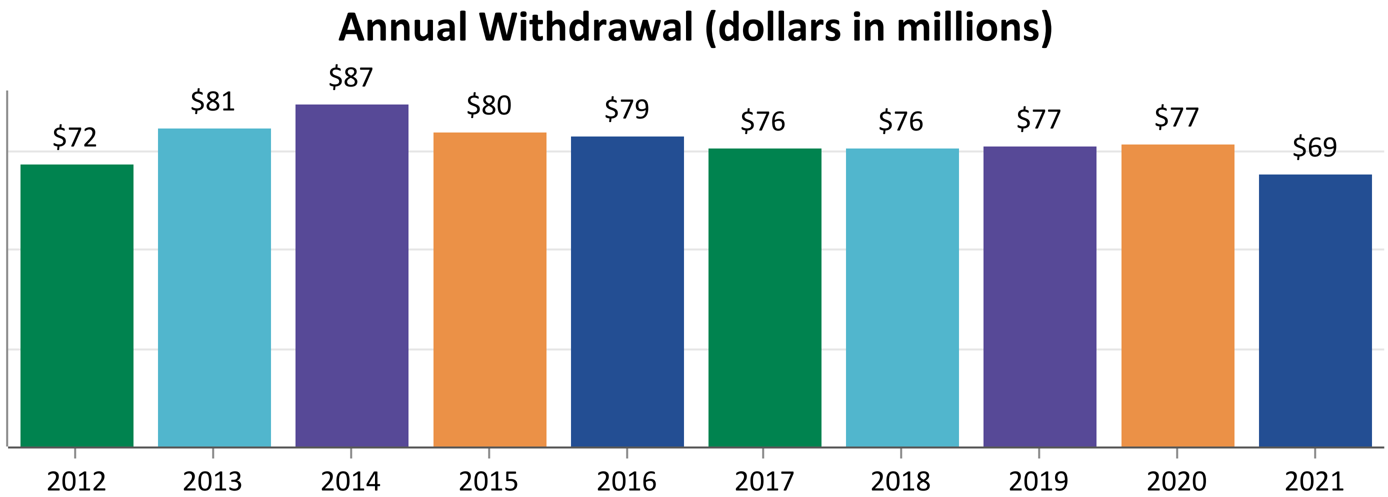


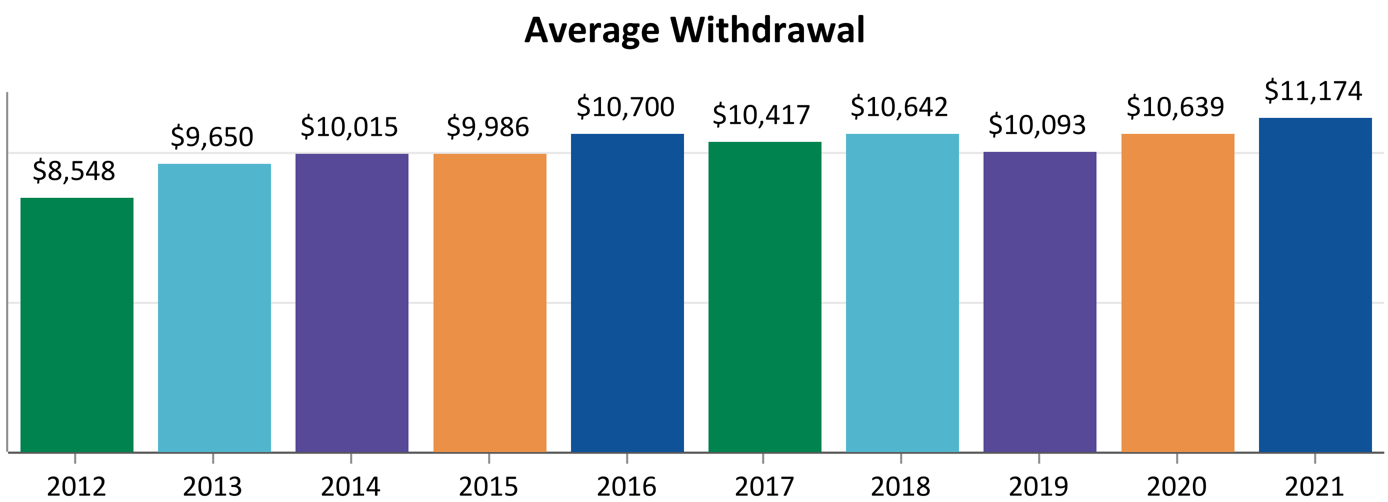
Average Monthly Benefit



Member Withdrawal Statistics







Average Monthly Benefit Payments for New Retirees

Effective Retirement Dates for Fiscal Years Ended June 30,	Years Credited Service 10 - 15	16 - 20	21 - 25	26 - 30	Over 30	Total
2012						
Average monthly benefit	$900.60	$1,417.23	$2,008.09	$2,723.70	$3,764.35	$2,425.05
Average final average salary	$3,813.60	$4,070.28	$4,564.72	$5,250.18	$5,995.69	$4,948.47
Number of retirees	1,532	920	1,125	885	2,589	7,051
2013						
Average monthly benefit	$881.25	$1,465.23	$1,979.00	$2,626.66	$3,642.94	$2,335.21
Average final average salary	$3,720.18	$4,200.63	$4,506.44	$5,060.19	$5,811.25	$4,821.63
Number of retirees	1,721	1,107	1,279	1,060	2,762	7,929
2014						
Average monthly benefit	$877.35	$1,410.94	$1,902.93	$2,515.64	$3,556.03	$2,152.62
Average final average salary	$3,801.40	$4,136.09	$4,454.29	$4,962.86	$5,868.78	$4,736.63
Number of retirees	1,744	1,066	1,169	994	2,099	7,072
2015						
Average monthly benefit	$897.66	$1,416.36	$2,008.34	$2,566.87	$3,573.41	$2,217.71
Average final average salary	$3,818.45	$4,161.17	$4,635.36	$5,007.10	$5,900.24	$4,812.42
Number of retirees	1,659	1,119	1,164	1,035	2,190	7,167
2016						
Average monthly benefit	$883.07	$1,447.47	$1,979.68	$2,582.75	$3,496.30	$2,207.94
Average final average salary	$3,786.36	$4,215.09	$4,558.19	$5,046.61	$5,796.47	$4,786.10
Number of retirees	1,695	1,094	1,130	1,001	2,297	7,217
2017						
Average monthly benefit	$870.72	$1,455.45	$1,997.91	$2,588.80	$3,535.59	$2,220.50
Average final average salary	$3,778.31	$4,230.72	$4,657.44	$5,139.34	$5,877.02	$4,839.84
Number of retirees	1,692	1,120	1,089	973	2,300	7,174
2018						
Average monthly benefit	$880.97	$1,503.44	$2,106.91	$2,703.58	$3,625.69	$2,331.31
Average final average salary	$3,789.48	$4,388.19	$4,882.12	$5,295.62	$6,009.09	$4,997.10
Number of retirees	1,609	1,184	1,090	967	2,471	7,321
2019						
Average monthly benefit	$932.13	$1,504.91	$2,051.21	$2,709.96	$3,638.98	$2,330.77
Average final average salary	$3,964.41	$4,434.82	$4,826.46	$5,401.88	$6,125.55	$5,080.38
Number of retirees	1,537	1,206	1,188	909	2,395	7,235
2020						
Average monthly benefit	$948.76	$1,535.47	$2,086.78	$2,702.45	$3,692.62	$2,371.48
Average final average salary	$3,980.66	$4,512.99	$4,875.02	$5,322.40	$6,140.51	$5,107.67
Number of retirees	1,443	1,168	1,127	822	2,330	6,890
2021						
Average monthly benefit	$959.48	$1,590.49	$2,170.32	$2,821.35	$3,851.38	$2,472.46
Average final average salary	$4,001.19	$4,523.33	$5,031.91	$5,608.36	$6,295.60	$5,233.87
Number of retirees	1,642	1,263	1,280	1,055	2,623	7,863

Retired Members by Type of Benefit

		Type of Retirement [1]				Option Selected [2]						
Amount of Monthly Benefit	Number of Retirees	A	B	C	D	Max	Opt-1	Opt-2	Opt-3	Opt-4	Opt-2 Pop-Up	Opt-3 Pop-Up
1 - 500	4,990	4,119	358	502	11	2,719	138	1,153	284	158	420	118
500 - 1000	14,976	13,077	1,052	845	2	9,010	580	2,587	624	157	1,510	508
1000 - 1500	15,590	13,837	1,002	748	3	9,029	565	2,664	720	101	1,843	668
1500 - 2000	12,339	11,043	783	513	—	6,870	485	2,052	649	98	1,511	674
2000 - 2500	10,721	9,691	626	403	1	5,796	424	1,749	591	95	1,347	719
2500 - 3000	10,057	9,288	528	240	1	5,318	443	1,482	577	106	1,419	712
3000 - 3500	11,107	10,431	494	182	—	5,803	492	1,572	595	138	1,695	812
3500 - 4000	11,846	11,383	319	144	—	6,693	540	1,401	603	168	1,593	848
4000 - 4500	11,808	11,557	172	79	—	7,130	629	1,173	530	182	1,384	780
4500 - 5000	10,287	10,153	86	48	—	6,538	531	905	470	160	1,014	669
5000 - 5500	7,706	7,609	43	54	—	4,995	437	694	364	112	688	416
5500 - 6000	5,236	5,190	18	28	—	3,448	282	460	257	93	407	289
6000 - 6500	3,455	3,430	12	13	—	2,197	192	365	189	81	257	174
6500 - 7000	2,544	2,521	7	16	—	1,532	142	302	141	60	209	158
7000 - 7500	1,814	1,801	2	11	—	1,102	103	219	120	39	126	105
7500 - 8000	1,370	1,359	1	10	—	772	92	194	100	35	94	83
8000 - 8500	935	921	3	11	—	548	43	147	73	30	53	41
8500 - 9000	723	717	1	5	—	423	47	89	51	21	59	33
9000 - 9500	542	535	2	5	—	294	29	82	53	21	31	32
9500 - 10000	391	387	—	4	—	207	18	65	35	16	23	27
Over 10000	1,376	1,365	1	10	—	554	52	333	160	77	112	88
TOTALS	**139,813**	**130,414**	**5,510**	**3,871**	**18**	**80,978**	**6,264**	**19,688**	**7,186**	**1,948**	**15,795**	**7,954**

[1] Type of Retirement
A - Service
B - Disability
C - Survivor Benefit
D - Supplemental payments to retirees who belonged to a local retirement system.

[2] Refer to Summary of Plan Provisions, beginning on page 11 for descriptions of Options.

Retirement Payments by County of Residence During Fiscal Year 2021

County	Number of Retirees		FY21 Total Gross Pay (in thousands)	County	Number of Retirees		FY21 Total Gross Pay (in thousands)
Appling	373	$	13,804	Dade	135	$	4,576
Atkinson	101		3,879	Dawson	329		13,241
Bacon	197		6,906	Decatur	379		14,152
Baker	55		1,964	DeKalb	6,787		298,535
Baldwin	845		30,312	Dodge	334		11,520
Banks	226		7,787	Dooly	160		5,809
Barrow	845		28,648	Dougherty	1,660		65,538
Bartow	1,207		43,329	Douglas	1,067		38,678
Ben Hill	296		10,074	Early	241		9,290
Berrien	279		9,286	Echols	49		1,517
Bibb	2,002		73,713	Effingham	643		20,144
Bleckley	326		11,048	Elbert	345		11,196
Brantley	202		6,836	Emanuel	435		16,104
Brooks	270		9,189	Evans	175		5,761
Bryan	393		12,748	Fannin	466		17,653
Bulloch	1,615		60,467	Fayette	2,097		87,128
Burke	350		11,046	Floyd	1,660		65,770
Butts	283		10,705	Forsyth	1,861		71,587
Calhoun	109		3,826	Franklin	415		15,377
Camden	511		17,756	Fulton	6,986		309,851
Candler	210		6,867	Gilmer	531		20,138
Carroll	2,035		74,572	Glascock	35		993
Catoosa	675		22,922	Glynn	1,579		63,771
Charlton	114		4,103	Gordon	655		23,790
Chatham	3,357		123,028	Grady	365		13,408
Chattahoochee	32		1,181	Greene	373		16,321
Chattooga	346		11,626	Gwinnett	6,261		231,257
Cherokee	2,916		110,026	Habersham	717		26,661
Clarke	3,518		153,688	Hall	2,703		108,866
Clay	60		2,375	Hancock	203		6,379
Clayton	1,603		56,276	Haralson	420		14,301
Clinch	114		4,592	Harris	673		25,441
Cobb	7,095		272,274	Hart	478		18,908
Coffee	602		21,888	Heard	138		4,424
Colquitt	691		25,450	Henry	2,142		81,623
Columbia	2,604		97,074	Houston	1,866		68,765
Cook	271		9,455	Irwin	181		6,499
Coweta	1,758		68,547	Jackson	1,198		43,600
Crawford	209		7,096	Jasper	238		8,571
Crisp	362		13,806	Jeff Davis	180		6,871

County	Number of Retirees	FY21 Total Gross Pay (in thousands)	County	Number of Retirees	FY21 Total Gross Pay (in thousands)
Jefferson	260	$ 9,251	Richmond	3,332	$ 114,568
Jenkins	156	5,453	Rockdale	995	38,789
Johnson	145	5,254	Schley	74	2,183
Jones	432	16,683	Screven	286	9,937
Lamar	288	10,284	Seminole	171	6,135
Lanier	111	3,924	Spalding	1,018	37,947
Laurens	826	31,585	Stephens	425	16,303
Lee	459	16,745	Stewart	81	2,986
Liberty	412	13,264	Sumter	600	23,395
Lincoln	210	8,429	Talbot	111	3,298
Long	85	2,437	Taliaferro	20	720
Lowndes	1,837	66,113	Tattnall	242	8,475
Lumpkin	640	23,183	Taylor	142	5,190
Macon	179	6,089	Telfair	179	6,695
Madison	933	28,438	Terrell	144	5,297
Marion	105	3,284	Thomas	775	30,477
McDuffie	356	13,080	Tift	942	35,395
McIntosh	216	7,975	Toombs	403	14,534
Meriwether	301	10,525	Towns	301	11,665
Miller	107	3,850	Treutlen	124	4,241
Mitchell	298	10,196	Troup	928	34,556
Monroe	467	17,282	Turner	173	5,967
Montgomery	175	6,731	Twiggs	98	3,099
Morgan	465	19,125	Union	474	18,820
Murray	422	16,209	Upson	463	16,591
Muscogee	2,658	98,208	Walker	665	23,006
Newton	993	35,937	Walton	1,277	47,857
Oconee	1,637	73,305	Ware	569	21,768
Oglethorpe	536	17,621	Warren	78	2,719
Paulding	1,222	40,699	Washington	315	11,704
Peach	521	21,158	Wayne	471	15,776
Pickens	766	30,495	Webster	41	1,379
Pierce	317	11,130	Wheeler	109	4,638
Pike	349	12,354	White	576	21,642
Polk	533	20,768	Whitfield	1,081	42,232
Pulaski	172	6,330	Wilcox	158	6,269
Putnam	472	18,700	Wilkes	198	6,903
Quitman	31	925	Wilkinson	153	5,228
Rabun	358	15,594	Worth	307	10,370
Randolph	126	4,529	Outside GA	18,232	658,332
			Total Benefit Payments		**$ 5,434,414**

Principal Participating Employers

	2021			2012		
Employers	Covered Employees	Rank	Percentage of Total System	Covered Employees	Rank	Percentage of Total System
State of Georgia	37,129	1	16.29 %	—	—	— %
Gwinnett County Schools	17,501	2	7.68 %	15,637	1	7.32 %
Cobb County Schools	11,550	3	5.07 %	11,214	2	5.26 %
Dekalb County Schools	11,229	4	4.92 %	10,671	3	4.99 %
Fulton County Schools	9,912	5	4.35 %	9,427	4	4.41 %
Atlanta Public Schools	5,329	6	2.34 %	5,354	6	2.51 %
Clayton County Schools	5,296	7	2.32 %	4,991	7	2.34 %
Forsyth County Schools	4,579	8	2.01 %	—	—	— %
Chatham County Schools	4,435	9	1.94 %	4,183	8	1.96 %
Henry County Schools	4,282	10	1.88 %	4,002	9	1.87 %
Muscogee County School District	—	—	—	3,727	10	1.74 %
University of Georgia	*	—	*	7,273	5	3.40 %
Top 10	**111,242**		**48.80 %**	**76,479**		**35.80 %**
Total	**227,953**		**100.00 %**	**213,674**		**100.00 %**

* Amount is included in State of Georgia totals

Note: GASB Statement No. 67 was implemented during the fiscal year ended June 30, 2014 and required legally separate employers within the same financial reporting entity to be treated as a single employer for reporting purposes. Therefore, information presented for fiscal years prior to implementation is not comparable with information presented for fiscal years after implementation.

Reporting Entities

Universities and Colleges

Abraham Baldwin Agricultural College
Albany State University
Atlanta Metropolitan State College
Augusta University
Clayton College & State University
College of Coastal Georgia
Columbus State University
Cooperative Extension Service
Dalton State College
East Georgia State College
Fort Valley State University
Georgia College & State University
Georgia Gwinnett College
Georgia Highlands College
Georgia Institute of Technology
Georgia Southern University
Georgia Southwestern State University
Georgia State University
Gordon College
Kennesaw State University
Middle Georgia State College
Savannah State University
South Georgia State College
The University of Georgia
University of North Georgia
University of West Georgia
Valdosta State University

Boards of Education

Appling County
Atkinson County
Atlanta Public
Bacon County
Baker County
Baldwin County
Banks County
Barrow County
Bartow County
Ben Hill County
Berrien County
Bibb County
Bleckley County
Brantley County
Bremen City
Brooks County
Bryan County
Buford City
Bulloch County
Burke County
Butts County
Calhoun City
Calhoun County
Camden County
Candler County
Carroll County
Carrollton City Schools
Cartersville City
Catoosa County
Charlton County
Chatham County
Chattahoochee County
Chattooga County
Cherokee County
Chickamauga City
Clarke County
Clay County
Clayton County
Clinch County
Cobb County
Coffee County
Colquitt County
Columbia County
Commerce City
Cook County
Coweta County
Crawford County
Crisp County
Dade County
Dalton City
Dawson County
Decatur City
Decatur County
DeKalb County

Dodge County
Dooly County
Dougherty County
Douglas County
Dublin City
Early County
Echols County
Effingham County
Elbert County
Emanuel County
Evans County
Fannin County
Fayette County
Floyd County
Forsyth County
Franklin County
Fulton County
Gainesville City
Gilmer County
Glascock County
Glynn County
Gordon County
Grady County
Greene County
Griffin-Spalding County
Gwinnett County
Habersham County
Hall County
Hancock County
Haralson County
Harris County
Hart County
Heard County
Henry County
Houston County
Irwin County
Jackson County
Jasper County
Jeff Davis County
Jefferson City
Jefferson County
Jenkins County
Johnson County
Jones County
Lamar County
Lanier County
Laurens County
Lee County
Liberty County
Lincoln County
Long County
Lowndes County
Lumpkin County
Macon County
Madison County
Marietta City
Marion County
McDuffie County
McIntosh County
Meriwether County
Miller County
Mitchell County
Monroe County
Montgomery County
Morgan County
Murray County
Muscogee County
Newton County
Oconee County
Oglethorpe County
Paulding County
Peach County
Pelham City
Pickens County
Pierce County
Pike County
Polk School District
Pulaski County
Putnam County
Quitman County
Rabun County
Randolph County
Richmond County
Rockdale County
Rome City
Schley County
Screven County
Seminole County
Social Circle City
Stephens County
Stewart County
Sumter County

Talbot County
Taliaferro County
Tattnall County
Taylor County
Telfair County
Terrell County
Thomas County
Thomaston-Upson County
Thomasville City
Tift County
Toombs County
Towns County
Treutlen County
Trion City
Troup County
Turner County
Twiggs County
Union County
Valdosta City
Vidalia City
Walker County
Walton County
Ware County
Warren County
Washington County
Wayne County
Webster County
Wheeler County
White County
Whitfield County
Wilcox County
Wilkes County
Wilkinson County
Worth County

Public Libraries

Athens Regional Library
Augusta Richmond County Library
Barnesville-Lamar County Library
Bartow County Library
Bartram Trail Regional Library
Brooks County Library
Catoosa County Library
Chattooga County Public Library
Cherokee Regional Library
Chestatee Regional Library
Clayton County Regional Library
Coastal Plains Regional Library
Cobb County Public Library
Conyers-Rockdale Library System
Coweta Public Library
DeKalb County Public Library
DeSoto Trail Regional Library
Dougherty County Public Library
Elbert County Library
Flint River Regional Library
Forsyth County Public Library
Gwinnett County Public Library
Hall County Library
Hart County Library
Henry County Library
Houston County Public Library
Jefferson County Library System
Kinchafoonee Regional Library
Lake Blackshear Regional Library
Lee County Library
Lincoln County Library
Live Oak Public Libraries
Mary Vinson Memorial Library
Middle Georgia Regional Library
Moultrie-Colquitt County Library
Mountain Regional Library
Newton County Library
Northeast Georgia Regional Library
Northwest Georgia Regional Library
Ocmulgee Regional Library
Oconee Regional Library
Ohoopee Regional Library
Okefenokee Regional Library
Peach Public Library
Piedmont Regional Library
Pine Mountain Regional Library
Roddenbery Memorial Library
Sara Hightower Regional Library
Satilla Regional Library
Screven-Jenkins Regional Library
Sequoyah Regional Library
South Georgia Regional Library
Southwest Georgia Regional Library
Statesboro Regional Library
Thomas County Public Library

Three Rivers Regional Library
Troup-Harris-Coweta Regional Library
Uncle Remus Regional Library
Warren County Public Library
West Georgia Regional Library
Worth County Library System

Technical Colleges

Albany Technical Institute
Athens Technical College
Atlanta Technical College
Augusta Technical Institute
Central Georgia Technical College
Chattahoochee Technical College
Coastal Pines Technical College
Columbus Technical Institute
Georgia Piedmont Technical College
Georgia Northwestern Technical College
Gwinnett Technical College
Lanier Technical College
North Georgia Technical Institute
Oconee Fall Line Technical College
Ogeechee Technical College
Savannah Technical College
South Georgia Technical College
Southeastern Technical College
Southern Crescent Technical College
Southern Regional Technical College
West Georgia Technical College
Wiregrass Georgia Technical College

Regional Educational Service Agencies

Central Savannah River Area RESA
Chattahoochee Flint RESA
Coastal Plains RESA
First District RESA
Griffin RESA
Heart of Georgia RESA
Metro RESA
Middle Georgia RESA
North Georgia RESA
Northeast Georgia RESA
Northwest Georgia RESA
Oconee RESA
Okefenokee RESA
Pioneer RESA
Southwest Georgia RESA
West Georgia RESA

Charter Schools

Academy for Classical Education, Inc.
Amana Academy
Atlanta Classical Academy
Atlanta Heights Charter School
Atlanta Neighborhood Charter School, Inc.
Atlanta Unbound Academy
Baconton Community Charter School
Brighten Academy
Brookhaven Innovation Academy
Centennial Academy
Charles Drew Charter School
Charter Conservatory for Liberal Arts and Technology
Chattahoochee Hills Charter School, Inc.
Cherokee Charter Academy
Cirrus Academy
Coastal Plains Education Center
Coweta Charter Academy
DeKalb Academy of Technology and Environment
DeKalb Path Academy
DeKalb Preparatory Academy
Delta Steam Academy
Dubois Integrity Academy
Ethos Classical Charter School
Foothills Education Charter High School
Fulton Academy of Science and Technology
Fulton Leadership Academy
Furlow Charter School
Genesis Innovation Academy for Boys
Genesis Innovation Academy for Girls
Georgia Connections Academy
Georgia Cyber Academy
Georgia Fugees Academy Charter School, Inc.
Georgia High School for Accelerated Learning
Georgia Magnet Charter School
Georgia School for Innovation and the Classics
Harriet Tubman School of Science and Technology
International Academy of Smyrna Charter School

International Charter Academy of Georgia
International Charter School of Atlanta
International Community School
Ivy Preparatory Academy for Girls
Kennesaw Charter Science and Math Academy
Kipp Metro Atlanta Collaborative
Latin College Prep
Latin Grammar School
Leadership Preparatory Academy Charter School
Liberty Technical Charter School
Main Street Academy
Mountain Education Center Inc.
Museum School of Avondale
North Metro Academy of Performing Arts
New Life Academy of Excellence Inc.
Odyssey Charter School
Pataula Charter Academy
Purpose Built Schools of Atlanta
Sail Charter School
Savannah Classical Academy
Scintilla Charter Academy
Seven Pillars Career Academy
SLAM Academy of Atlanta
Southwest Georgia STEM Charter
Spring Creek Charter Academy
Resurgence Hall
Tapestry Public Charter School
The Globe Academy
The Kindezi School
Utopian Academy for the Arts
Utopian Academy for the Arts Elem School
Wesley International Academy
Westside Atlanta Charter School
Yi Hwang Academy of Language Excellence

State Agencies

Board of Regents
Department of Administrative Service
Department of Agriculture
Department of Behavioral Health and Development Disability
Department of Community Health
Department of Corrections
Department of Human Services
Department of Natural Resources
Department of Public Health
Department of Public Safety
Georgia Agricultural Exposition Authority
Georgia Building Authority
Georgia Bureau of Investigation
Georgia Department of Community Supervision
Georgia Department of Defense
Georgia Department of Driver Services
Georgia Department of Early Care and Learning
Georgia Department of Economic Development
Georgia Department of Education
Georgia Department of Juvenile Justice
Georgia Department of Labor
Georgia Department of Law
Georgia Department of Revenue
Georgia Department of Transportation
Georgia Financing and Investment Commission
Georgia General Assembly
Georgia Military College
Georgia Public Defender Standards Council
Georgia Public Telecommunications Commission
Georgia Student Finance Commission
Office of Commissioner of Insurance and Safety Fire
Governor's Office of Planning and Budget
Jekyll Island State Park Authority
Prosecuting Attorneys' Council of Georgia
Secretary of State
Technical College System of Georgia

Other

Ben Hill County DFACS
Cherokee County Board of Health
Clarke County DFACS
Clayton Center Community Service Board
DeKalb County DFACS
Department of Family and Children Services Region IX
Douglas County DFACS
East Central Health District
Effingham County Tax Commissioner Office
Floyd County DFACS
Glynn County Health Dept
Gwinnett County DFCS
Hart Count Board of Health
Richmond County DFACS
Tift County Board of Health
Ware County Health Department
Whitfield County Board of Health

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