



Component Units of the State of Alabama

Comprehensive Annual Financial Report

For the Fiscal Year Ended September 30, 2018





The Retirement Systems of Alabama

COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Year Ended September 30, 2018

The Retirement Systems of Alabama
Consists of:

TEACHERS' RETIREMENT SYSTEM of ALABAMA
EMPLOYEES' RETIREMENT SYSTEM of ALABAMA
JUDICIAL RETIREMENT FUND

(Each a Component Unit of the State of Alabama)

David G. Bronner, Ph.D., J.D., Chief Executive Officer

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Introductory Section

Component Units of the State of Alabama
Comprehensive Annual Financial Report

Teachers
Luther P. Hallmark, Chair
John R. Whaley, Vice Chair



Employees
State State Police Public Judicial
Kay Ivey, Chair
Jacqueline B. Graham, Vice Chair

THE RETIREMENT SYSTEMS OF ALABAMA

David G. Bronner, CEO
Donald L. Yancey, Deputy Director

January 15, 2019

The Boards of Control
Teachers' Retirement System of Alabama
Employees' Retirement System of Alabama
201 South Union Street
Montgomery, Alabama 36104

Dear Board Members:

It is with great pleasure that we submit the Comprehensive Annual Financial Report (CAFR) of the Retirement Systems of Alabama (RSA or Systems) for the fiscal year ended September 30, 2018. The Retirement Systems of Alabama includes the Teachers' Retirement System of Alabama (TRS), the Employees' Retirement System of Alabama (ERS), and the Judicial Retirement Fund (JRF). Each system is considered a component unit of the State of Alabama for financial reporting purposes, and, as such, the financial statements contained in this report are also included in the State of Alabama Comprehensive Annual Financial Report.

Responsibility for both the accuracy of the data, and the completeness and fairness of the presentation, including all disclosures, rests with the management of the Systems. Sufficient internal controls exist to provide reasonable assurance regarding the safekeeping of assets and fair presentation of the financial statements, supporting schedules, and statistical tables. We trust that you and the members of the Systems will find this report helpful in understanding your retirement system.

Administration and Plan History

The TRS, ERS, and JRF operate under common management and are collectively referred to as the Retirement Systems of Alabama. In addition to executive management, the TRS, ERS, and JRF share investment management, accounting, and information system services, the costs of which are allocated to the funds on an equitable basis. The TRS was established pursuant to the *Code of Alabama 1975, Title 16, Chapter 25* (Act 419 of the Legislature of 1939) to provide benefits to qualified persons employed by State-supported educational institutions. The ERS was established pursuant to the *Code of Alabama 1975, Title 36, Chapter 27* (Act 515 of the Legislature of 1945) to provide benefits to State employees, State Police, and, on an elective basis, to qualified persons of cities, towns, and quasi-public organizations. The JRF was established pursuant to the *Code of Alabama 1975, Title 12, Chapter 18* (Act 1163 of the Legislature of 1973) to provide benefits to qualified judges and justices. Additional information regarding the administration and history of each system, including laws establishing each plan and services provided, can be found in the Financial Section - Notes to the Combined Financial Statements portion of this report.

Financial Information

Accounting Method - As required by Generally Accepted Accounting Principles (GAAP), the financial information of the TRS, ERS, and JRF is reported on the accrual basis of accounting. Revenues are recognized when earned and expenses are recognized when the corresponding liability is incurred. Investments are reported at fair value.

Internal Controls - The management of the RSA is responsible for maintaining the system of internal controls (system). The system provides management with reasonable, but not absolute, assurance regarding the safeguarding of assets against loss or unauthorized disposition and the reliability of the financial records from which the financial reports are prepared. The concept of reasonable assurance recognizes that the cost of a control should not exceed the resulting benefits.

Summary Comparative Data – Management’s Discussion and Analysis (MD&A) includes a narrative introduction, an overview of the financial statements, including the notes and required supplementary information, and summary comparative data for fiscal years 2018 and 2017. Also, an analysis of significant variances between fiscal years 2018 and 2017 is provided in the MD&A.

In fiscal year 2018, the Systems implemented both GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits other than Pensions*, and GASB Statement No. 85, *Omnibus 2017*. GASB Statement No. 75 requires recognition of the net liability for other postemployment benefit plans (OPEB) and a more comprehensive measure of OPEB expense with GASB Statement No. 85 addressing issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits) identified during implementation and application of certain GASB Statements.

Plan Financial Condition

The funding objective of the RSA pension trust funds is to accumulate sufficient assets during a member’s employment by requiring employer and member contributions to fully finance the benefits the member is expected to receive throughout retirement.

At September 30, 2017, the date of the most recent actuarial valuation, the number of participants in the TRS was 278,583, ERS participants totaled 166,467, and JRF participants totaled 794. The following table compares the funded status as of September 30, 2017 and 2016:

Funded Status (%)			
System	9/30/2017	9/30/2016	% Increase/ (Decrease)
TRS	68.9	68.3	0.6
ERS	67.8	66.2	1.6
JRF	65.4	62.6	2.8

The funded status of TRS did not increase significantly because the rate of return on investments used in the actuarial valuations decreased and salary increases were higher than expected. The actuarial gains from investment earnings were only slightly greater than the losses. The funded status of ERS and JRF increased because of actuarial gains related to compensation higher than expected investment earnings that increased its funded status, despite the decrease in the rate of return on investments used in the actuarial valuations.

Investment Activity

Total investments for the RSA increased in fiscal year 2018, primarily due to increases in the fair value of investments. Total pension fund investments managed by the RSA increased from \$36.7 billion at September 30, 2017, to \$38.5 billion at September 30, 2018, an increase of 5.00%.

	Investments, at Fair Value		Interest & Dividend Income	
	9/30/2018	9/30/2017	9/30/2018	9/30/2017
TRS	\$25.6 billion	\$24.4 billion	\$650.3 million	\$613.4 million
ERS	\$12.6 billion	\$12.0 billion	\$323.2 million	\$302.3 million
JRF	\$313.1 million	\$299.1 million	\$7.5 million	\$6.9 million

Net Change in Fair Value of Investments

	9/30/2018	9/30/2017
TRS	\$1.65 billion	\$2.0 billion
ERS	\$775 million	\$1.1 billion
JRF	\$20.0 million	\$25.6 million

Total returns were 9.42%, 9.29%, and 9.32% for TRS, ERS, and JRF, respectively. U.S. equities were the standout performer within the portfolio with total returns in the high teens. The Federal Reserve has continued hiking the Federal Funds rate which weighed on fixed income returns. The yield curve noticeably flattened over the course of the year, which benefitted our higher than normal cash balance. Within the private investment side of the portfolio, Raycom Media announced that they are being acquired by Gray Television. After the merger, which was approved and closed on January 2, 2019, RSA will continue its investment in Gray/Raycom through preferred and common stock representing roughly 11% ownership in the company. Given recent volatility in the markets, we will likely park most of the proceeds in the short end of the fixed income market until we see more opportunities to redeploy it elsewhere. With that said, we will continue to invest in a diverse mix of assets, and monitor asset class ranges per the guidance given in the respective Investment Policy Statements of each system, with the long term goal of achieving our actuarial assumed rate of return. Additional information concerning investments, including investment policy statements, is located in the Investment Section of this report. The Schedule of Broker Commissions Paid can be found on the last page of the Investment Section in this report.

Management's Discussion and Analysis

GASB Statement No. 34 requires that management provide a narrative introduction, overview, and analysis to accompany the Financial Statements in the form of Management's Discussion and Analysis (MD&A). This letter of transmittal is intended to complement the MD&A and should be read in conjunction with it. The MD&A can be found immediately following the Independent Auditors' Report.

Professional Services

Professional consultants are appointed by the Boards of Control to perform professional services that are essential to the effective operation of the TRS, ERS, and JRF. The certification letters from the independent actuary are included in this report. The professional consultants appointed by the Boards of Control are listed on the last page of the Introductory Section in this report.

Financial Statement Audit

Carr, Riggs & Ingram, LLC, Certified Public Accountants, issued an unqualified ("clean") opinion on the RSA's financial statements for the fiscal year ended September 30, 2018. The independent auditors' report is located at the front of the Financial Section of this report.

Highlights and Initiatives

The aforementioned merger of Gray Television and Raycom Media will create the third largest U.S. television station owner with 142 stations in 92 markets, reaching 24% of all U.S. households. The company's headquarters will remain in Montgomery in addition to supporting a \$30 million annual advertising program for the Robert Trent Jones Golf Trail and other RSA owned properties for the next 10 years.

Also during the fiscal year, the RSA was honored in Toronto, Canada, for economic development throughout Alabama by the International Economic Development Council (IEDC) with the Institutional Leadership Award. This award recognizes leaders of a community institution who have made significant contributions in support of economic development through leadership, financial support, and local investments, along with demonstration of a sustained effort in promotion and support of local economic development programs.

U.S. News and World Report published its list of best hotels and resorts for 2018 and the Grand Hotel Marriott Resort, Golf Club & Spa topped both lists. For the "Best Hotels in Alabama," the Grand Hotel Marriott Resort was named the best, followed by the Battle House Renaissance Mobile Hotel and Spa, while the Renaissance Birmingham Ross Bridge Golf Resort came in fourth. For the "Best Resorts in Alabama," the Grand Hotel Marriott Resort was named the best, while the Renaissance Birmingham Ross Bridge Golf Resort was a close second on the list.

Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Retirement Systems of Alabama for its comprehensive annual financial report for the fiscal year ended September 30, 2017. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe our current comprehensive annual financial report continues to conform to the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

The Retirement Systems received the Public Pension Coordinating Council (PPCC) Recognition Award for Funding 2018. The award recognizes organizations that meet professional standards for plan funding as set forth in the Public Pension Standards.

Acknowledgments

The compilation of this report reflects the combined effort of the staff under the leadership of the Boards of Control. It is intended to provide extensive and reliable information as a basis for making management decisions, determining compliance with legal provisions, and determining responsible stewardship of the funds of the TRS, ERS, and JRF.

We would like to take this opportunity to express our gratitude to the staff, the Boards of Control, the consultants, the Legislature, and to the many people who have worked so diligently through continued cooperative efforts to assure the successful operation and financial soundness of the TRS, ERS, and JRF.

Sincerely,

Diane E. Scott

Diane E. Scott, C.P.A., C.G.M.A.
Chief Accountant & Financial Officer

David G. Bronner

David G. Bronner, Ph.D., J.D.
Chief Executive Officer



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

The Retirement Systems of Alabama

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

September 30, 2017

Christopher P. Morill

Executive Director/CEO



Public Pension Coordinating Council

***Recognition Award for Funding
2018***

Presented to

The Retirement Systems of Alabama

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

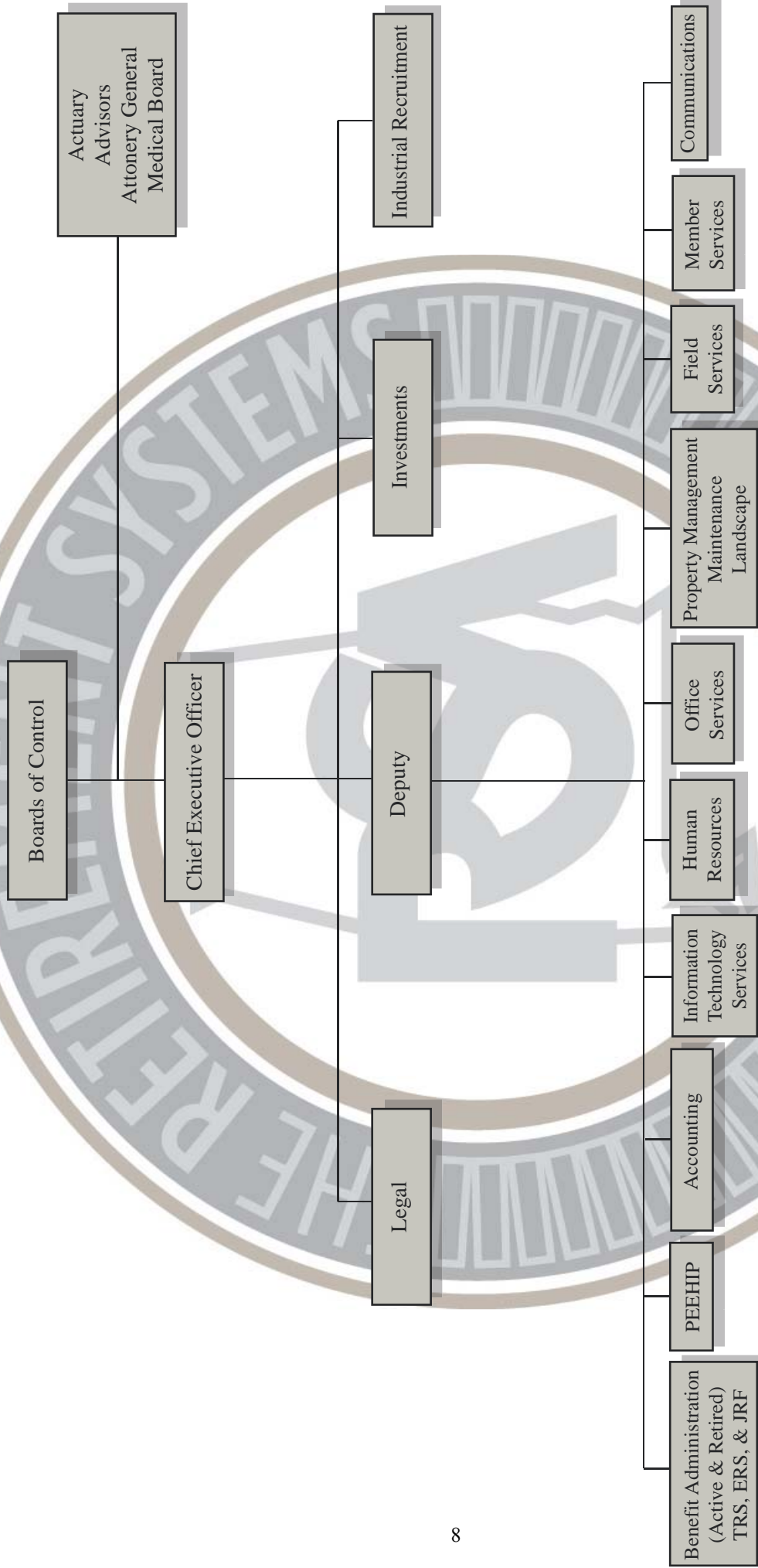
Presented by the Public Pension Coordinating Council, a confederation of

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

A handwritten signature in black ink that reads "Alan H. Winkle". The signature is written in a cursive style.

Alan H. Winkle
Program Administrator

Retirement Systems of Alabama



Note: The Retirement Systems of Alabama (“RSA”) is a public pension plan statutorily formed under the laws of the State of Alabama. RSA consists of the Teachers’ Retirement System of Alabama and the Employees’ Retirement System of Alabama which includes and administers the Judicial Retirement Fund. Each system is considered a body corporate of the State of Alabama and they are referred to collectively for financial reporting purposes as “RSA.” While each system has distinct boards of control, they share executive management and certain other services.

Teachers' Retirement System Board of Control

Ex Officio Members

Honorable Young Boozer, State Treasurer
Mr. Kelly Butler, State Finance Director
Dr. Eric Mackey, State Superintendent of Education

Elected Members

Chair, Mr. Luther P. Hallmark, Superintendent Position
Vice Chair, Mr. John R. Whaley, Teacher Position
Ms. Peggy Mobley, Retired Position
Mr. Joseph E. Ward, Retired Position
Ms. Kelli D. Shomaker, Higher Education Position
Dr. Joseph G. Van Matre, Higher Education Position
Dr. Susan Williams Brown, Postsecondary Position
Mr. Richard Brown, Principal Position
Ms. Charlene McCoy, Teacher Position
Dr. Cathy McNeal, Teacher Position
Mrs. Susan Lockridge, Support Personnel Position
Mr. Russell J. Twilley, Support Personnel Position

Employees' Retirement System Board of Control**

Ex Officio Members

Chair, Honorable Kay Ivey, Governor
Vice Chair, Mrs. Jackie B. Graham, State Personnel Director
Honorable Young Boozer, State Treasurer
Mr. Kelly Butler, State Finance Director

Elected Members

Mr. James Fibbe, Retired Local Employee Position
Mr. James H. Rowell, Retired State Employee Position
Mr. David Bollie, Active State Employee Position
Mr. Stephen C. Walkley, Active State Employee Position
Mr. Ben Powell, Active Local Employee Position
Mr. Steven W. Williams, Active Local Employee Position

Appointed Members

Mr. John D. Free
Ms. Ellen Leonard
Mr. Curtis E. Stewart

** The Employees' Retirement System Board of Control is responsible for the administration of both the Employees' Retirement System and the Judicial Retirement Fund.

Introductory Section

Staff, Advisors, and Medical Board

Staff, Advisors, and Medical Board

David G. Bronner, Ph.D., J.D., Chief Executive Officer

Donald L. Yancey, M.P.A., J.D., Deputy Director

Administrative Staff

Chief Accountant & Financial Officer, Diane E. Scott, B.S., C.P.A., C.G.M.A.

Teachers' Retirement Executive, Christopher P. Townes, M.B.A.

Employees' & Judicial Retirement Executive, William F. Kelley, Jr., J.D.

Information Technology Services, Michael T. Baker, B.S.

General Counsel, Leura G. Canary, J.D.

Legislative Counsel, Neah M. Scott, J.D.

Communications, Michael E. Pegues, M.A.

Field Services, Christopher C. Gallup, B.S.

Member Services, Penny K. Wilson, B.S.

Investment Staff

Director of Investments, R. Marc Green, M.B.A., CFA

Director of Private Placements, M. Hunter Harrell, M.B.A., J.D., CFA

Private Placements Analyst, Rachel Daniels, M.A., C.P.A.

Director of Fixed Income, Julie S. Barranco, M.B.A., CFA

Chief Economist, C. Lance Lachney, M.B.A., CFA

Fixed Income Analyst/Portfolio Manager, Nicholas A. Prillaman, M.S., CFA

Director of Equities, G. Allan Carr Jr., M.B.A., CFA

Assistant Director of Equities, Steven R. Lambdin, M.B.A., CFA

Assistant Director of Equities, Hunter Bronson, M.S., CFA

Senior Equity Analyst/Portfolio Manager, Adam Rogers, M.A., CFA

Equity Analyst/Portfolio Manager, Bobby Long, M.B.A., CFA

Equity Analyst/Portfolio Manager, Kevin W. Gamble, M.B.A., CFA

Equity Analyst, Michael J. McNair, M.B.A., CFA

Equity Analyst, Joshua A. Husted, M.B.A.

Equity Analyst, Katie S. Richard, J.D.

Cash Management & Operations, Catherine S. Ray, B.A.

Advisors

Independent Certified Public Accountants, Carr, Riggs, & Ingram, LLC

Investment Consultant, Regions Bank N.A., Mr. Alan McKnight

Investment Custodian, State Street Bank and Trust Company

Consulting Actuary, Cavanaugh Macdonald Consulting, LLC, Mr. Edward A. Macdonald

Attorney General, Honorable Steve Marshall

Chief Examiner, Honorable Rachel Riddle

Medical Board

Chair, Glenn Yates, M.D.

Gregory Borg, M.D.

Malcolm Brown, M.D.



Financial Section

Component Units of the State of Alabama
Comprehensive Annual Financial Report

INDEPENDENT AUDITORS' REPORT

To the Boards of Control
Teachers' Retirement System of Alabama
Employees' Retirement System of Alabama
Judicial Retirement Fund

We have audited the accompanying combined financial statements of the Retirement Systems of Alabama (consisting of the Teachers' Retirement System of Alabama, the Employees' Retirement System of Alabama, and the Judicial Retirement Fund (the RSA), a component unit of the State of Alabama), which comprise the combining statement of fiduciary net position as of September 30, 2018 and the related combining statement of changes in fiduciary net position, for the year then ended, and the related notes to the combined financial statements, which collectively comprise the Retirement Systems of Alabama's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

Our responsibility is to express an opinion on these combined financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. 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 auditors consider 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 combined financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Retirement Systems of Alabama, as of September 30, 2018, and the changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

Adoption of New Accounting Pronouncement

As described in Note 2 and Note 11 to the financial statements, during 2018 the RSA adopted Government Accounting Standards Board Statement No. 75, Accounting and Financial Reporting for Benefits Other than Pensions. Our opinion is not modified with respect to this matter.

Other Matters

Prior-Year Comparative Information

The financial statements include partial prior-year comparative information. Such information does not include all of the information required to constitute a presentation in conformity with accounting principles generally accepted in the United States of America. Accordingly, such information should be read in conjunction with the Retirement Systems of Alabama's financial statements for the year ended September 30, 2017, from which such partial information was derived. We have previously audited the Retirement Systems of Alabama's financial statements and we expressed an unmodified opinion on the respective financial statements in our report dated January 31, 2018. In our opinion, the summarized comparative information presented herein as of and for the year ended September 30, 2017, is consistent, in all material respects, with the audited financial statements from which it has been derived.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, schedule of changes in the net pension liability and related ratios, schedules of employer contributions, schedule of investment returns, schedules of proportionate share of the net pension liability, schedules of contributions and schedules of proportionate share of the net OPEB liability for TRS, ERS and JRF 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 combined financial statements that collectively comprise the Retirement Systems of Alabama's basic financial statements. The introductory section, investment section, actuarial section, statistical section, schedule of administrative expenses, schedule of investment expenses and schedule of professional/consultant fees (supplementary information) are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The schedule of administrative expenses, schedule of investment expenses and schedule of professional/consultant fees are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of administrative expenses, schedule of investment expenses and schedule of professional/consultant fees 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.

Carr, Riggs & Ingram, L.L.C.

January 15, 2019
Montgomery, Alabama

The Retirement Systems of Alabama (RSA) is comprised of the Teachers' Retirement System (TRS), Employees' Retirement System (ERS), and Judicial Retirement Fund (JRF). The following discussion provides an overview of the financial position and results of operation for the RSA as of and for the fiscal year ended September 30, 2018. For more detailed information, please refer to the financial statements, including the Notes to the Combined Financial Statements and the Required Supplementary Information.

Financial Statements and Required Supplementary Information

The financial statements (statements) include the Combining Statement of Fiduciary Net Position and the Combining Statement of Changes in Fiduciary Net Position. The Notes to the Combined Financial Statements are considered an integral part of the financial statements. The statements are prepared using the economic resources measurement focus and accrual basis of accounting. Revenues are recognized when earned, pursuant to plan requirements, and expenses are recognized when incurred, regardless of when cash is received or expended. Investments are reported at fair value.

Combining Statement of Fiduciary Net Position – Includes all assets, deferred outflows of resources, liabilities, and deferred inflows of resources of the RSA and provides a snapshot of the financial position of the RSA as of the end of the fiscal year. Assets and deferred outflows of resources less liabilities and deferred inflows of resources results in the net position restricted for pension benefits at the end of the fiscal year.

Combining Statement of Changes in Fiduciary Net Position – Reports all additions and deductions of the RSA for the fiscal year. Additions primarily consist of employer contributions, employee contributions, and investment income. Deductions are principally made up of retirement allowance payments. Additions minus deductions provide the change in fiduciary net position for the fiscal year. The change in fiduciary net position plus the beginning fiduciary net position results in the fiduciary net position at the end of the fiscal year.

The Notes to the Combined Financial Statements include plan descriptions, a summary of significant accounting policies, a description of legally required reserves and corresponding reserve balances at the end of the fiscal year, credit risk disclosures for cash and investments, concentration of investments disclosures, securities lending disclosures, funded status, net pension liability, net OPEB liability contributions required and made, and additional actuarial information relevant to the latest actuarial valuations.

The Required Supplementary Information following the Notes to the Combined Financial Statements includes Schedules of Changes in the Net Pension Liability & Related Ratios, Schedules of Participating Employer Contributions to the Teachers' Retirement System (TRS) and the Judicial Retirement Fund (JRF), Schedule of Investment Returns, Schedules of Proportionate Share of the Net Pension Liability, Schedules of Retirement Contributions for TRS, ERS, and JRF Employees, Schedules of Proportionate Share of the Net OPEB Liability, and Schedules of SEHIP Contributions for TRS, ERS, and JRF Employees. The Schedules of Employer Contributions provides trend data on the annual required employer contributions and the percentage actually contributed.

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Management's Discussion and Analysis (Continued)

Comparative Summary Statements

Summary Comparative Combining Statement of Fiduciary Net Position

As of September 30, 2018 and 2017

(Dollar Amounts in Thousands)

	2018	2017	Variance	% Increase/ (Decrease)
<i>Assets & Deferred Outflows of Resources</i>				
Cash	\$ 50,246	\$ 69,189	\$ (18,943)	(27.38)
Receivables	308,668	264,704	43,964	16.61
Investment Sales Receivable	-	80,379	(80,379)	(100.00)
Investments, at fair value	38,533,116	36,699,498	1,833,618	5.00
Invested Securities Lending Collateral	1,605,767	1,759,897	(154,130)	(8.76)
Property and Equipment, Net	155,615	154,037	1,578	1.02
Deferred Outflows of Resources	8,405	9,196	(791)	(8.60)
Total Assets & Deferred Outflows of Resources	<u>40,661,817</u>	<u>39,036,900</u>	<u>1,624,917</u>	4.16
<i>Liabilities & Deferred Inflows of Resources</i>				
Accounts Payable and Other Liabilities	10,718	10,424	294	2.82
Federal Withholding Payable	-	23,498	(23,498)	(100.00)
Investment Purchases Payable	2,274	116,269	(113,995)	(98.04)
Net Other Postemployment Benefit Liability	28,678	11,102	17,576	158.31
Net Pension Liability	34,247	38,316	(4,069)	(10.62)
Securities Lending Collateral	1,605,767	1,759,897	(154,130)	(8.76)
Deferred Inflows of Resources	7,034	888	6,146	692.12
Total Liabilities & Deferred Inflows of Resources	<u>1,688,718</u>	<u>1,960,394</u>	<u>(271,676)</u>	(13.86)
<i>Net Position</i>	<u>\$ 38,973,099</u>	<u>\$ 37,076,506</u>	<u>\$ 1,896,593</u>	5.12

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Management's Discussion and Analysis (Continued)

**Summary Comparative Combining Statement of Changes in Fiduciary Net Position
For the Fiscal Years Ended September 30, 2018 and 2017
(Dollar Amounts in Thousands)**

	<u>2018</u>	<u>2017</u>	<u>Variance</u>	<u>% Increase/ (Decrease)</u>
Additions				
Employee Contributions	\$ 729,101	\$ 720,741	\$ 8,360	1.16
Employer Contributions	1,246,118	1,226,283	19,835	1.62
Investment Income	3,390,268	4,070,953	(680,685)	(16.72)
Transfers Between Systems	9,973	6,770	3,203	47.31
Transfer In from the Public Education Employees' Health Insurance Plan	24,700	-	24,700	100.00
Total Additions	<u>5,400,160</u>	<u>6,024,747</u>	<u>(624,587)</u>	<u>(10.37)</u>
Deductions				
Retirement Allowance Payments	3,334,333	3,194,977	139,356	4.36
Return of Contributions, Unit Withdrawals & Death Benefits	104,088	104,670	(582)	(0.56)
Transfers Between Systems	9,973	6,770	3,203	47.31
Administrative Expenses	27,499	28,706	(1,207)	(4.20)
Depreciation	8,882	8,532	350	4.10
Total Deductions	<u>3,484,775</u>	<u>3,343,655</u>	<u>141,120</u>	<u>4.22</u>
Increase in Fiduciary Net Position	<u>1,915,385</u>	<u>2,681,092</u>	<u>(765,707)</u>	<u>(28.56)</u>
Beginning Net Position, as previously rep	37,076,506	34,395,414	2,681,092	7.79
Adjustment for Application of GASB 75	(18,792)	-	(18,792)	100.00
Beginning of Year - as adjusted	<u>37,057,714</u>	<u>34,395,414</u>	<u>2,662,300</u>	<u>7.74</u>
Net Position - End of Year	<u>\$ 38,973,099</u>	<u>\$ 37,076,506</u>	<u>\$ 1,896,593</u>	<u>5.12</u>

**Comparison of Individual Fiduciary Net Position
As of September 30, 2018 and 2017
(Dollar Amounts in Thousands)**

	<u>2018</u>	<u>2017</u>	<u>Variance</u>	<u>% Increase/ (Decrease)</u>
TRS	\$ 25,935,433	\$ 24,651,457	\$ 1,283,976	5.21
ERS	12,720,352	12,122,471	597,881	4.93
JRF	317,314	302,578	14,736	4.87
Total	<u>\$ 38,973,099</u>	<u>\$ 37,076,506</u>	<u>\$ 1,896,593</u>	<u>5.12</u>

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Management's Discussion and Analysis (Continued)

Financial Analysis

- Primarily all cash on hand at September 30, 2018, was held for administrative expenses.
- In the Summary Comparative Combining Statement of Fiduciary Net Position, receivables consist of employee contributions, employer contributions, interest, dividends, real estate, and a transfer from the Public Education Employees' Health Insurance Plan at September 30, 2018.
- Investment sales receivable and investment purchases payable occur as a result of trade date accounting. The decrease in the receivable and payable for fiscal year 2018 was due to the value of securities traded in the current fiscal year and settling in the following fiscal year being smaller than the value of the securities traded but settled in the previous fiscal year.
- The RSA's investment portfolio presented in percentages by investment type:

	<u>TRS</u>	<u>ERS</u>	<u>JRF</u>
Equity	69.57%	70.49%	68.00%
Fixed	21.00%	20.21%	30.69%
Real Estate	9.43%	9.30%	1.31%
Total	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>

- Employer contributions increased as a result of higher employer contribution rates for fiscal year 2018. The employer contribution rates for fiscal year 2018 are in the table below. ERS local participating employer contribution rates differ for each employer.

	<u>Tier 1</u>	<u>Tier 2</u>
TRS	12.24%	11.01%
ERS - State Employees	13.94%	13.29%
ERS - State Police	44.44%	39.29%
JRF - Groups 1 & 2	40.09%	-
JRF - Group 3 - Judges & Clerks' Plan	34.32%	-
JRF - District Attorneys' Plan	19.77%	-

- During fiscal year 2018, returns on investments of the TRS, ERS, and JRF were 9.42%, 9.29%, and 9.32%, respectively. The returns were calculated by State Street Bank.
- During fiscal year 2018, investment income decreased by 16.72% primarily due to a large decrease in the unrealized gains and losses which were offset by an increase in interest and dividend income and realized gains and losses. Net securities lending income decreased by 20% for RSA which was primarily driven by an increase in borrower rebates.
- Retirement allowance payments increased as a result of those members who retired during fiscal year 2018.

Funding Status

The Governmental Accounting Standards Board (GASB) has issued Statement No. 67, *Financial Reporting for Pension Plans*, which amends GASB Statement No. 25. Under GASB Statement No. 67, the methodology for determining the net pension liability disclosed in the Notes to the Combined Financial Statements has shifted from a funding perspective to an accounting perspective.

At September 30, 2018, TRS and JRF employers' total pension liability was \$35.9 billion and \$462 million, respectively. The plan fiduciary net position of TRS and JRF employers was \$25.9 billion and \$317.3 million, respectively, resulting in a net pension liability of \$9.9 billion and \$144.7 million, respectively. The plan fiduciary net position as a percentage of the total pension liability for TRS and JRF employers was 72.29% and 68.68%, respectively, using GASB Statement No. 67 measurements.

Under the provisions of GASB Statement No. 67, agent-multiple employer plans such as ERS apply the measurements and recognition of net pension liability at the individual plan level for each retirement plan administered. Therefore, aggregate information for ERS related to the net pension liability has not been presented.

Financial Highlights

- Net position held in trust of \$39 billion at September 30, 2018, was available to meet future benefit payments.
- At September 30, 2017, the date of the most recent actuarial valuation, the funding level (actuarial value of assets as a percentage of actuarial accrued liabilities) was 68.9% for the TRS, 67.8% for the ERS, and 65.4% for the JRF.
- GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits other than Pensions*, was implemented in the accompanying financial statements as of September 30, 2018, and resulted in a prior period adjustment to the Fiduciary Net Position, as previously reported.



RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Combining Statement of Fiduciary Net Position
September 30, 2018 with comparative figures for 2017

(Dollar Amounts in Thousands)

	2018			Total
	Teachers' Retirement System	Employees' Retirement System	Judicial Retirement Fund	
Assets				
Cash (Note 4)	\$ 34,831	\$ 12,547	\$ 2,868	\$ 50,246
Receivables				
Employee Contributions	40,209	18,268	176	58,653
Employer Contributions	67,229	32,457	602	100,288
Real Estate Investment Receivable	815	408	-	1,223
Dividends and Interest	81,420	41,407	977	123,804
Transfer from Public Education Employees' Health Insurance Plan	24,700	-	-	24,700
Total Receivables	<u>214,373</u>	<u>92,540</u>	<u>1,755</u>	<u>308,668</u>
Investments, at Fair Value (Note 5)				
Domestic Equity	14,407,115	7,277,756	168,449	21,853,320
Domestic Fixed Income	4,044,570	1,997,706	72,713	6,114,989
International Equities	3,417,268	1,602,600	44,473	5,064,341
Real Estate	2,415,071	1,171,372	4,107	3,590,550
Short-Term	1,337,670	548,882	23,364	1,909,916
Total Investments	<u>25,621,694</u>	<u>12,598,316</u>	<u>313,106</u>	<u>38,533,116</u>
Invested Securities Lending Collateral (Note 5)	1,052,082	543,229	10,456	1,605,767
Property and Equipment less				
Accumulated Depreciation (Note 8)	107,508	48,107	-	155,615
Total Assets	<u>27,030,488</u>	<u>13,294,739</u>	<u>328,185</u>	<u>40,653,412</u>
Deferred Outflows of Resources - Pensions				
Deferred Outflows of Resources - Other Postemployment Benefits	4,567	2,501	48	7,116
Total Assets and Deferred Outflows of Resources	<u>27,036,035</u>	<u>13,297,546</u>	<u>328,236</u>	<u>40,661,817</u>
Liabilities				
Accounts Payable and Other Liabilities	7,093	3,566	59	10,718
Investment Purchases Payable	1,475	799	-	2,274
Net Other Postemployment Benefits Liability (Note 9)	16,708	11,871	99	28,678
Net Pension Liability (Note 10)	19,504	14,468	275	34,247
Securities Lending Collateral (Note 5)	1,052,082	543,229	10,456	1,605,767
Total Liabilities	<u>1,096,862</u>	<u>573,933</u>	<u>10,889</u>	<u>1,681,684</u>
Deferred Inflows of Resources - Pensions				
Deferred Inflows of Resources - Other Postemployment Benefits	2,106	1,859	23	3,988
Total Liabilities and Deferred Inflows of Resources	<u>1,634</u>	<u>1,402</u>	<u>10</u>	<u>3,046</u>
	<u>1,100,602</u>	<u>577,194</u>	<u>10,922</u>	<u>1,688,718</u>
Net Position Restricted for Pension Benefits (Note 3)	<u>\$ 25,935,433</u>	<u>\$ 12,720,352</u>	<u>\$ 317,314</u>	<u>\$ 38,973,099</u>

See accompanying *Notes to the Combined Financial Statements*.

	2017			
	Teachers' Retirement System	Employees' Retirement System	Judicial Retirement Fund	Total
Assets				
Cash	\$ 57,413	\$ 9,140	\$ 2,636	\$ 69,189
Receivables				
Employee Contributions	38,750	19,124	173	58,047
Employer Contributions	63,362	34,545	614	98,521
Investment Sales Receivable	52,290	28,075	14	80,379
Real Estate Investment Receivable	866	433	-	1,299
Dividends and Interest	72,031	33,903	903	106,837
Total Receivables	<u>227,299</u>	<u>116,080</u>	<u>1,704</u>	<u>345,083</u>
Investments, at Fair Value				
Domestic Equity	13,901,047	7,025,435	164,278	21,090,760
Domestic Fixed Income	3,928,819	1,933,088	69,172	5,931,079
International Equities	3,294,618	1,467,563	45,067	4,807,248
Real Estate	2,401,236	1,163,825	4,101	3,569,162
Short-Term	864,603	420,173	16,473	1,301,249
Total Investments	<u>24,390,323</u>	<u>12,010,084</u>	<u>299,091</u>	<u>36,699,498</u>
Invested Securities Lending Collateral	1,189,852	551,930	18,115	1,759,897
Property and Equipment less Accumulated Depreciation	105,664	48,373	-	154,037
Total Assets	<u>25,970,551</u>	<u>12,735,607</u>	<u>321,546</u>	<u>39,027,704</u>
Deferred Outflows of Resources	5,355	3,758	83	9,196
Total Assets and Deferred Outflows of Resources	<u>25,975,906</u>	<u>12,739,365</u>	<u>321,629</u>	<u>39,036,900</u>
Liabilities				
Accounts Payable and Other Liabilities	6,732	3,630	62	10,424
Federal Withholding Payable	23,498	-	-	23,498
Investment Purchases Payable	76,787	38,979	503	116,269
Other Postemployment Benefits	5,720	5,335	47	11,102
Net Pension Liability	21,164	16,850	302	38,316
Securities Lending Collateral	1,189,852	551,930	18,115	1,759,897
Total Liabilities	<u>1,323,753</u>	<u>616,724</u>	<u>19,029</u>	<u>1,959,506</u>
Deferred Inflows of Resources	696	170	22	888
Total Liabilities and Deferred Inflows of Resources	<u>1,324,449</u>	<u>616,894</u>	<u>19,051</u>	<u>1,960,394</u>
Net Position Restricted for Pension Benefits	<u>\$ 24,651,457</u>	<u>\$ 12,122,471</u>	<u>\$ 302,578</u>	<u>\$ 37,076,506</u>

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Combining Statement of Changes in Fiduciary Net Position

For the Fiscal Year Ended September 30, 2018 with comparative figures for 2017

(Dollar Amounts in Thousands)

	2018			Total
	Teachers' Retirement System	Employees' Retirement System	Judicial Retirement Fund	
Additions				
Contributions				
Employee	\$ 488,503	\$ 236,842	\$ 3,756	\$ 729,101
Employer	802,598	426,340	17,180	1,246,118
Transfers from Teachers' Retirement System	-	4,899	9	4,908
Transfers from Employees' Retirement System	4,963	-	102	5,065
Transfers from PEEHIP	24,700	-	-	24,700
Total Contributions	<u>1,320,764</u>	<u>668,081</u>	<u>21,047</u>	<u>2,009,892</u>
Investment Income (Note 5)				
From Investing Activities				
Net Increase in Fair Value of Investments	1,615,440	775,132	20,071	2,410,643
Interest and Dividends	650,293	323,182	7,471	980,946
Total Investment Income from Investing Activities	<u>2,265,733</u>	<u>1,098,314</u>	<u>27,542</u>	<u>3,391,589</u>
Less: Investment Expenses, Net	9,171	3,395	-	12,566
Net Investment Income from Investing Activities	<u>2,256,562</u>	<u>1,094,919</u>	<u>27,542</u>	<u>3,379,023</u>
From Securities Lending Activities				
Securities Lending Income	23,246	10,589	248	34,083
Less Securities Lending Expenses:				
Borrower Rebates	12,385	5,647	134	18,166
Management Fees	3,189	1,449	34	4,672
Total Securities Lending Expenses	<u>15,574</u>	<u>7,096</u>	<u>168</u>	<u>22,838</u>
Net Income from Securities Lending Activities	<u>7,672</u>	<u>3,493</u>	<u>80</u>	<u>11,245</u>
Total Net Investment Income	<u>2,264,234</u>	<u>1,098,412</u>	<u>27,622</u>	<u>3,390,268</u>
Total Additions	<u>3,584,998</u>	<u>1,766,493</u>	<u>48,669</u>	<u>5,400,160</u>
Deductions				
Retirement Allowance Payments	2,204,031	1,096,883	33,419	3,334,333
Return of Contributions and Death Benefits	58,538	45,070	130	103,738
Unit Withdrawals	-	350	-	350
Transfers to Employees' Retirement System	4,899	-	-	4,899
Transfers to Teachers' Retirement System	-	4,963	-	4,963
Transfers to Judicial Retirement Fund	9	102	-	111
Administrative Expenses	15,952	11,219	328	27,499
Depreciation (Note 8)	6,338	2,544	-	8,882
Total Deductions	<u>2,289,767</u>	<u>1,161,131</u>	<u>33,877</u>	<u>3,484,775</u>
Net Increase	<u>1,295,231</u>	<u>605,362</u>	<u>14,792</u>	<u>1,915,385</u>
Net Position Restricted for Pension Benefits (Note 3)				
Beginning of Year - as previously reported	24,651,457	12,122,471	302,578	37,076,506
Adjustment for Application of GASB 75 (Note 9)	(11,255)	(7,481)	(56)	(18,792)
Beginning of Year - as adjusted	<u>24,640,202</u>	<u>12,114,990</u>	<u>302,522</u>	<u>37,057,714</u>
End of Year	<u>\$ 25,935,433</u>	<u>\$ 12,720,352</u>	<u>\$ 317,314</u>	<u>\$ 38,973,099</u>

See accompanying Notes to the Combined Financial Statements.

	2017			
	Teachers' Retirement System	Employees' Retirement System	Judicial Retirement Fund	Total
Additions				
Contributions				
Employee	\$ 486,542	\$ 230,488	\$ 3,711	\$ 720,741
Employer	782,695	426,215	17,373	1,226,283
Transfers from Teachers' Retirement System	-	3,413	-	3,413
Transfers from Employees' Retirement System	3,096	-	261	3,357
Total Contributions	<u>1,272,333</u>	<u>660,116</u>	<u>21,345</u>	<u>1,953,794</u>
Investment Income				
<i>From Investing Activities</i>				
Net Increase in Fair Value of Investments	2,021,774	1,098,859	25,639	3,146,272
Interest and Dividends	613,353	302,295	6,910	922,558
Total Investment Income from Investing Activities	<u>2,635,127</u>	<u>1,401,154</u>	<u>32,549</u>	<u>4,068,830</u>
Less: Investment Expenses, Net	8,685	3,305	-	11,990
Net Investment Income from Investing Activities	<u>2,626,442</u>	<u>1,397,849</u>	<u>32,549</u>	<u>4,056,840</u>
<i>From Securities Lending Activities</i>				
Securities Lending Income	20,125	9,127	270	29,522
Less Securities Lending Expenses:				
Borrower Rebates	7,350	3,424	90	10,864
Management Fees	3,112	1,389	44	4,545
Total Securities Lending Expenses	<u>10,462</u>	<u>4,813</u>	<u>134</u>	<u>15,409</u>
Net Income from Securities Lending Activities	<u>9,663</u>	<u>4,314</u>	<u>136</u>	<u>14,113</u>
Total Net Investment Income	<u>2,636,105</u>	<u>1,402,163</u>	<u>32,685</u>	<u>4,070,953</u>
Total Additions	<u>3,908,438</u>	<u>2,062,279</u>	<u>54,030</u>	<u>6,024,747</u>
Deductions				
Retirement Allowance Payments	2,111,830	1,050,340	32,807	3,194,977
Return of Contributions and Death Benefits	55,634	47,683	353	103,670
Unit Withdrawals	-	1,000	-	1,000
Transfers to Employees' Retirement System	3,413	-	-	3,413
Transfers to Teachers' Retirement System	-	3,096	-	3,096
Transfers to Judicial Retirement Fund	-	261	-	261
Administrative Expenses	16,390	11,982	334	28,706
Depreciation	6,012	2,520	-	8,532
Total Deductions	<u>2,193,279</u>	<u>1,116,882</u>	<u>33,494</u>	<u>3,343,655</u>
Net Increase	<u>1,715,159</u>	<u>945,397</u>	<u>20,536</u>	<u>2,681,092</u>
Net Position Restricted for Pension Benefits				
Beginning of Year	22,936,298	11,177,074	282,042	34,395,414
End of Year	<u>\$ 24,651,457</u>	<u>\$ 12,122,471</u>	<u>\$ 302,578</u>	<u>\$ 37,076,506</u>

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2018

(Dollar Amounts in Thousands)

1) PLAN DESCRIPTION

The Teachers' Retirement System (TRS), Employees' Retirement System (ERS), and Judicial Retirement Fund (JRF) operate under common management and are collectively referred to as the Retirement Systems of Alabama (RSA or Systems). In addition to executive management, the TRS, ERS, and JRF share investment management, accounting, and information system services, the costs of which are allocated to the funds on an equitable basis.

The TRS, a cost-sharing multiple-employer public employee retirement plan, was established as of September 15, 1939, pursuant to the *Code of Alabama 1975, Title 16, Chapter 25* (Act 419 of the Legislature of 1939) for the purpose of providing retirement allowances and other specified benefits for qualified persons employed by State-supported educational institutions. The responsibility for the general administration and operation of the TRS is vested in its Board of Control, which consists of 15 trustees as follows:

- 1) The State Superintendent of Education, ex officio.
- 2) The State Treasurer, ex officio.
- 3) The State Director of Finance, ex officio.
- 4) Twelve members of TRS who are elected by members from the same category of TRS for a term of three years as follows:
 - a. Teacher Place #1.
 - b. Teacher Place #2.
 - c. Teacher Place #3.
 - d. Educational Support Personnel Place #1.
 - e. Educational Support Personnel Place #2.
 - f. Retired Place #1.
 - g. Retired Place #2.
 - h. Superintendents' Place.
 - i. Principals' Place.
 - j. Postsecondary Place.
 - k. Higher Education Place #1.
 - l. Higher Education Place #2.

The ERS, an agent multiple-employer public employee retirement plan, was established as of October 1, 1945, pursuant to the *Code of Alabama 1975, Title 36, Chapter 27* (Act 515 of the Legislature of 1945). The purpose of the ERS is to provide retirement allowances and other specified benefits for state employees, State Police, and, on an elective basis, to all cities, counties, towns, and quasi-public organizations. Assets of the ERS are pooled for investment purposes. However, separate accounts are maintained for each individual employer so that each employer's share of the pooled assets is legally available to pay the benefits of its employees only. The responsibility for the general administration and operation of the ERS is vested in its Board of Control, which consists of 13 trustees as follows:

- 1) The Governor, ex officio.
- 2) The State Treasurer, ex officio.
- 3) The State Personnel Director, ex officio.
- 4) The State Director of Finance, ex officio.
- 5) Three vested members of ERS appointed by the Governor for a term of four years, no two of whom are from the same department of state government nor from any department of which an ex officio trustee is the head.
- 6) Six members of ERS who are elected by members from the same category of ERS for a term of four years as follows:
 - a. Two retired members with one from the ranks of retired state employees and one from the ranks of retired employees of a city, county, or a public agency each of whom is an active beneficiary of ERS.
 - b. Two vested active state employees.
 - c. Two vested active employees of an employer participating in ERS pursuant to the *Code of Alabama 1975, Section 36-27-6*.

The JRF, a cost-sharing multiple-employer public employee retirement plan, was established as of September 18, 1973, pursuant to the *Code of Alabama 1975, Title 12, Chapter 18* (Act 1163 of the Legislature of 1973) for the purpose of providing retirement allowances and other specified benefits for any Justice of the Supreme Court of Alabama, Judge of the Court of Civil Appeals, Judge of the Court of Criminal Appeals, Judge of the Circuit Court, or office holder of any newly created judicial office receiving compensation from the State Treasury. The *Code of Alabama 1975, Title 12, Chapter 18, Articles 3 & 4* (Act 1205 of the Legislature of 1975) enlarged the scope and coverage of the JRF to include District and Probate Judges, respectively. The *Code of Alabama 1975, Title 12, Chapter 18, Article 7* (Act 498 of the Legislature of 2015) established the Judges' and Clerks' Plan within the JRF for any Judge or Clerk who was first elected or appointed on or after November 8, 2016, and was not a member of the JRF or the Clerks' and Registers' Supernumerary Fund prior to that date. The *Code of Alabama 1975, Section 12-17-22* (Act 498 of the Legislature of 2015) established the District Attorneys' Plan within the JRF for any District Attorney serving in the capacity of District Attorney on or after November 8, 2016. The responsibility for the general administration and operation of the JRF is vested in the Board of Control of the ERS.

At September 30, 2018, the number of participating units in each system was as follows:

	<u>TRS</u>	<u>ERS</u>	<u>JRF</u>
Cities	-	297	-
Counties	-	65	67
Other Public Entities	-	511	-
Universities	13	-	-
Postsecondary			
Institutions	25	-	-
City and County			
Boards of Education	139	-	-
State Agencies & Other	33	1	1
Total	<u>210</u>	<u>874</u>	<u>68</u>

At September 30, 2017, the date of the most recent actuarial valuation, membership consisted of:

	<u>TRS</u>	<u>ERS</u>	<u>JRF</u>
Retirees and beneficiaries currently receiving benefits:			
General	93,850	23,860	403
State Police	-	895	-
Employees of Local Employers	-	24,021	-
Terminated employees entitled to benefits but not yet receiving benefits:			
General	17,564	3,348	15
State Police	-	18	-
Employees of Local Employers	-	8,557	-
Non-vested inactive members who have not contributed for more than 5 years	30,228	20,111	25
Active Employees:			
General	136,941	28,926	351
State Police	-	622	-
Employees of Local Employers	-	56,109	-
Total	<u>278,583</u>	<u>166,467</u>	<u>794</u>

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2018

(Dollar Amounts in Thousands)

State law establishes retirement benefits as well as death and disability benefits and any ad hoc increase in postretirement benefits for the TRS, ERS, and JRF. Benefits for TRS and ERS members vest after 10 years of creditable service. Teachers and state employees who retire after age 60 (52 for State Police) with 10 years or more of creditable service or with 25 years of service (regardless of age) are entitled to an annual retirement benefit, payable monthly for life. Local employees who retire after age 60 with 10 years or more of creditable service or with 25 or 30 years of service (regardless of age), depending on the particular entity's election, are entitled to an annual retirement benefit, payable monthly for life. Service and disability retirement benefits are based on a guaranteed minimum or a formula method, with the member receiving payment under the method that yields the highest monthly benefit. Under the formula method, members of the TRS and ERS (except State Police) are allowed 2.0125% of their average final compensation (highest 3 of the last 10 years) for each year of service. State Police are allowed 2.875% for each year of State Police service in computing the formula method.

Act 377 of the Legislature of 2012 established a new tier of benefits (Tier 2) for members hired on or after January 1, 2013. Tier 2 TRS and ERS members are eligible for retirement after age 62 (56 for State Police) with 10 years or more of creditable service and are entitled to an annual retirement benefit, payable monthly for life. Service and disability retirement benefits are based on a guaranteed minimum or a formula method, with the member receiving payment under the method that yields the highest monthly benefit. Under the formula method, Tier 2 members of the TRS and ERS (except State Police) are allowed 1.65% of their average final compensation (highest 5 of the last 10 years) for each year of service. State Police are allowed 2.375% for each year of state police service in computing the formula method.

The JRF benefits vest from five to eighteen years. Except for justices or judges who were either disabled, elected prior to July 30, 1979, or have at least 25 years of creditable service, no justice or judge is eligible to receive judicial service retirement pay prior to attaining age 60. Service retirement benefits for justices and judges are dependent upon the particular office held in the judicial branch of government. A retirement benefit is payable upon the request of any member who has: (1) 25 years of creditable service (regardless of age), (2) completed 12 years of creditable service and has attained age 65, (3) completed 15 years of creditable service and whose age plus service equals or exceeds 77, (4) completed 10 years of creditable service and has attained age 70 or (5) been elected prior to July 30, 1979, and has 18 years of service (regardless of age). A member eligible to retire who has not requested his or her retirement benefit to commence at the end of the term in which the member's 70th birthday occurs is entitled only to the refund of his or her contributions (except for members with at least 25 years of creditable service). The service retirement benefit for circuit, appellate, and probate judges is 75% of the member's salary at the time of separation from service. The service retirement benefit for a district judge is 75% of the position's salary immediately prior to retirement.

Act 498 of the Legislature of 2015 established a new group (Group 3) of members within JRF which consists of all justices, judges, and circuit clerks first elected or appointed on or after November 8, 2016, and district attorneys serving in the capacity of district attorney on or after November 8, 2016. Group 3 members are eligible for retirement after age 62 with 10 years or more of creditable service and are entitled to an annual retirement benefit, payable monthly for life. A district attorney who has Tier 1 ERS transferred service as an assistant or deputy district attorney is eligible for service retirement with 25 years of service credit, regardless of age. Service and disability retirement benefits are calculated using a retirement formula. Group 3 members who are judges or justices are allowed 4% of their average final compensation (highest 5 of the last 10 years) for each year of service up to 75% of their average final compensation. Group 3 members who are clerks or district attorneys are allowed 3% of their average final compensation (highest 5 of the last 10 years) for each year of service up to 80% of their average final compensation.

Covered members of the TRS and ERS (except State Police and certified law enforcement, correctional officers, and firefighters) contributed 5% of earnable compensation to the TRS and ERS as required by statute until September 30, 2011. From October 1, 2011, to September 30, 2012, covered members of the TRS and ERS (except State Police and certified law enforcement, correctional officers, and firefighters) were required by statute to contribute 7.25% of earnable compensation. Effective October 1, 2012, covered members of the TRS and ERS (except State Police and certified law enforcement, correctional officers, and firefighters) are required by statute to contribute 7.50% of earnable compensation. JRF members and certified law enforcement, correctional officers, and firefighters of the TRS and ERS contributed 6% of earnable compensation as required by statute until September 30, 2011. From October 1, 2011, to September 30, 2012, JRF members and certified law enforcement, correctional officers, and firefighters of the TRS and ERS were required by statute to contribute 8.25% of earnable compensation. Effective October 1, 2012, JRF members and certified law enforcement, correctional officers, and firefighters of the TRS and ERS are required by statute to contribute 8.50% of earnable compensation. State Police members of the ERS contribute 10% of earnable compensation. ERS local participating employers are not required by statute to increase contribution rates for their members.

Tier 2 covered members of the TRS and ERS (except State Police and certified law enforcement, correctional officers, and firefighters) contribute 6% of earnable compensation to the TRS and ERS as required by statute. Tier 2 certified law enforcement, correctional officers, and firefighters of the TRS and ERS are required by statute to contribute 7% of earnable compensation. Tier 2 State Police members of the ERS contribute 10% of earnable compensation. These contribution rates are the same for Tier 2 covered members of ERS local participating employers.

Group 3 members of the JRF contribute 8.50% of earnable compensation to the JRF as required by statute.

2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. Basis of Accounting

The TRS, ERS, and JRF financial statements are prepared using the economic resources measurement focus and accrual basis of accounting. Contributions are recognized as revenues when earned, pursuant to plan requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of the plans. Expenses are recognized when the corresponding liability is incurred, regardless of when the payment is made. The accompanying financial statements are prepared in accordance with the requirements of the Governmental Accounting Standards Board (GASB). Under these requirements, the TRS, ERS, and JRF are considered component units of the State of Alabama and are included in the State's Comprehensive Annual Financial Report. Subsequent events were evaluated by management through the date the financial statements were issued.

B. Investments

The Boards of Control of the Systems have the responsibility and authority to invest and reinvest available funds, through the Secretary-Treasurer (CEO) and Investment Committee, in bonds, mortgage-backed securities, common and preferred stock, and other investment vehicles with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use. All plan assets are carried at fair value. Securities traded on national or international exchanges are valued at the last reported sales price at current exchange rates. Short-term investments are reported at cost, which approximates fair value. Mortgage-backed securities are reported based on future principal and interest payments discounted at the prevailing interest rate for similar instruments. The fair value of real estate investments is based on independent appraisals or cost, when cost approximates fair value. Generally, private placements are valued based on the selling price of similar investments sold in the open market. In those instances where there are no similar investments sold in the open market, an independent appraisal is performed to determine the fair value of the private placements. RSA invests in limited partnerships which are long-term and generally illiquid. As a result, investors are subject to redemption restrictions which generally limit distributions and restrict the ability of limited partners to exit a partnership investment prior to its dissolution. These partnership investments are valued using their respective net asset values (NAV) and are generally audited annually. The most significant element of the NAV is the fair value of the investment holdings. These holdings are valued by the general partners in conjunction with management, investment advisors, and valuation specialists. The valuation techniques vary based on investment type and involve a certain degree of expert judgment. The fair value for these investments could differ significantly if a ready market for these assets existed.

C. Comparative Combining Statements

The basic financial statements include the prior year Combining Statement of Fiduciary Net Position and Combining Statement of Changes in Fiduciary Net Position (Statements) for comparative purposes only. Prior year note disclosures are not included. Therefore, the prior year basic financial statement presentation does not meet the minimum level of detail required for a presentation in conformity with generally accepted accounting principles. Accordingly, the prior year Statements should be read in conjunction with the RSA's prior year financial report from which the prior year Statements were derived.

D. Interfund Transfers

Interfund transfers result from transfers of members between retirement systems and transfers between related parties as described in Note 12.

E. Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts and disclosure in the financial statements. Actual results may differ from these estimates.

F. Deferred Outflows & Inflows of Resources

In addition to assets, the Combining Statement of Fiduciary Net Position reports a separate section for deferred outflows of resources. This separate financial statement element, *Deferred Outflows of Resources*, represents a consumption of fiduciary net position that applies to future periods and will not be recognized as an outflow of resources until that period. Employer contributions subsequent to the measurement date related to both the employer's net pension liability and net OPEB liability are reported as deferred outflows of resources until the next measurement date.

In addition to liabilities, the Combining Statement of Fiduciary Net Position reports a separate section for *Deferred Inflows of Resources*. This separate financial statement element represents an acquisition of fiduciary net position that applies to future periods and will not be recognized until then. Net differences between projected and actual experience, projected and actual earnings on plan investments and changes in assumptions between employer contributions and the proportionate share of contributions identified during the measurement period are deferred and amortized as a component of pension expense and other postemployment benefit expense.

G. New Accounting Pronouncements

In fiscal year 2018, the Systems implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits other than Pensions*. GASB Statement No. 75 requires recognition of the net liability for other postemployment benefit plans (OPEB) and a more comprehensive measure of OPEB expense.

The Systems also implemented GASB Statement No. 85, *Omnibus 2017*, in fiscal year 2018. This statement addresses a variety of issues including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits) identified during implementation and application of certain GASB Statements.

3) LEGALLY REQUIRED RESERVES

A. Annuity Savings

Member contributions are credited to the Annuity Savings account. Interest at 4% per annum is credited to the annuity savings account of each member on the basis of the average of the beginning and end of year balances (as of June 30 for the TRS and September 30 for the ERS and JRF).

When a member withdraws from service prior to becoming vested, the member's accumulated contributions and a portion of accumulated interest credited to the Annuity Savings account are returned to the member. The portion of accumulated interest that, by law, is not payable to the member is transferred to the Expense fund.

When a TRS or ERS member dies prior to becoming eligible for retirement, the member's accumulated contributions and accumulated interest credited to the Annuity Savings account are returned to the member's designated beneficiary. If the preretirement death benefit defined below is not payable, an additional death benefit equal to the member's accumulated contributions, up to five thousand dollars, is paid from the Pension Accumulation account to the member's beneficiary.

When a member retires or when a survivor allowance becomes payable, the amount of the member's accumulated contributions and accumulated interest is transferred from the Annuity Savings account to the Pension Accumulation account.

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(Dollar Amounts in Thousands)

B. Pension Accumulation

The Pension Accumulation account is credited with contributions made by the employer and net investment income. The lump sum death benefit is paid from this account when a TRS or ERS member dies prior to becoming eligible for the preretirement death benefit or retirement. Periodic interest representing member's earnings is transferred from the Pension Accumulation account to the Annuity Savings account. When a TRS, ERS, or JRF member retires or when a survivor allowance becomes payable, the member's accumulated contributions and accumulated interest is credited to the Pension Accumulation account, and all monthly benefit payments are paid from this account.

C. Preretirement Death Benefit

The Preretirement Death Benefit (PRDB) was established as of October 1, 1983, pursuant to the *Code of Alabama 1975, Title 36, Chapter 27B* (Act 616 of the Legislature of 1983). The PRDB account is credited with contributions made by TRS, ERS, and JRF Group 3 members' employers and investment income on such funds. The preretirement death benefit (in the form of group term life insurance) is paid in addition to the return of member contributions upon the death of an active TRS, ERS, and JRF Group 3 member who has completed at least one year of active membership in the system and whose date of death was within 180 days of such member's last date of actual service. However, a surviving spouse beneficiary of a deceased member who was eligible for service retirement may elect a survivor allowance in lieu of this benefit. The preretirement death benefit is equal to the annual earnable compensation of the member as reported to the System for the preceding year ending June 30 for the TRS and September 30 for the ERS and the JRF. These assets are not included in the actuarial valuation and the liabilities associated with these death benefits are not included in the actuarial valuation.

D. Term Life Insurance

The Alabama Teacher's Group Term Life Insurance Plan (established October 1, 1987) is credited with a portion of the employer contributions. All active contributing members of the TRS are covered by this plan. Contingent on availability of funds, upon death, a benefit is paid to the designated beneficiary of an insured member of the TRS. Beneficiaries of full-time employees receive fifteen thousand dollars while beneficiaries of part-time employees receive a prorated amount of fifteen thousand dollars. These assets are not included in the actuarial valuation and the liabilities associated with these life insurance benefits are not included in the valuation.

E. Expense

The Expense fund is used to pay the administrative expenses of the RSA. A portion of the employer contributions and the interest not payable upon member withdrawal provide the funding of the expense fund. The majority of expenses are directly identifiable as expenses of the TRS, ERS, or JRF. As discussed in Note 1, certain administrative salaries and other expenses are shared on an equitable basis between the TRS and ERS. These assets are not included in the actuarial valuation.

F. Deferred Retirement Option Plan (DROP)

The DROP was established for election to participate on or after June 1, 2002, pursuant to the *Code of Alabama 1975, Title 16, Chapter 25, Article 9* for TRS participants and the *Code of Alabama 1975, Title 36, Chapter 27B, Article 9* for ERS participants (Act 23 of the Legislature of 2002). Eligible members may elect to retire, and, in lieu of immediate withdrawal from service, continue employment for a period of three to five years. The retirement allowance, employee contributions, and interest earned are accumulated in an account for the benefit of the member. At the end of participation, the account balance is paid to the member. DROP participation is an option available to eligible members that have at least 25 years of service (exclusive of sick leave), are at least 55 years of age, and are eligible for retirement. See the actuarial section for additional information.

The DROP was repealed by Act 27 of the Legislature of 2011. The effect of Act 27 is that no new participants were allowed to enter the DROP with an effective participation date after June 1, 2011.

G. Reserves

The reserves of the RSA included in the Net Position Restricted for Pension Benefits in the accompanying Combining Statement of Fiduciary Net Position are funded to the full extent required by statute. The reserve balances as of September 30, 2018, are as follows (dollar amounts in thousands):

	<u>TRS</u>	<u>ERS</u>	<u>JRF</u>
Annuity Savings	\$ 5,788,187	\$ 2,922,432	\$ 48,607
Pension Accumulation	19,773,148	9,627,806	266,192
Deferred Retirement Option Plan	195,159	106,493	-
Preretirement Death Benefit	57,717	30,958	41
Term Life Insurance	10,851	-	-
Plant Fund	107,508	48,107	-
Expense	2,863	(15,444)	2,474
Net Position at 9/30/2018	<u>\$ 25,935,433</u>	<u>\$ 12,720,352</u>	<u>\$ 317,314</u>

4) CASH

Cash consists of deposits held by the State Treasurer in the respective retirement systems' name. Deposits are entirely insured by the Federal Deposit Insurance Corporation or protected under the Security for Alabama Funds Enhancement (SAFE) Program. The *Code of Alabama 1975*, as amended, requires all State organizations to participate in the SAFE Program. The SAFE Program is a multiple financial institution collateral pool. The SAFE Program requires all public funds to be deposited in a financial institution designated by the State Treasurer as a qualified public depository. Each qualified public depository is required to pledge collateral in accordance with the rules established by the SAFE Board of Directors. In the event that a qualified public depository defaults or becomes insolvent and the pledged collateral is insufficient to satisfy the claims of public depositors, the *Code of Alabama 1975, Section 41-14A-9(3)* authorizes the State Treasurer to make assessments against the other qualified public depositories in the pool so that there will be no loss of public funds. Virtually all cash on hand at September 30, 2018, was held for administrative expenses.

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5) INVESTMENTS

A. Investment Authority

Investment authority is granted to the Boards of Control, as Trustees of the Teachers' Retirement System and Employees' Retirement System (Systems), by Alabama statutes. Each System's Board of Control, therefore, has full power, through each System's Secretary-Treasurer, to invest and reinvest System funds in accordance with the Prudent Person Rule: "with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims." An important component of any investment strategy is the decision regarding allocation of investments among the various asset classes. The purpose of formulating asset allocation guidelines is to maximize investment returns within the standards of prudence established for the whole portfolio.

Each System's Board of Control is responsible for approving an Investment Policy Statement (IPS) that outlines investment strategies and the related asset allocation guidelines. Below are the asset allocation guidelines for both Systems.

Asset Class	TRS		ERS		JRF	
	Target Allocation	Strategic Range	Target Allocation	Strategic Range	Target Allocation	Strategic Range
Domestic Equity	45%	30-60%	45%	30-60%	55%	30-60%
International Equity	15%	10-25%	15%	10-25%	15%	10-25%
Fixed Income	17%	10-50%	17%	10-40%	22%	10-40%
Alternative Investments	10%	0-20%	10%	0-15%	1%	0-15%
Real Estate	10%	0-15%	10%	0-15%	2%	0-15%
Short-Term Investments	3%	1-6%	3%	0-7%	5%	0-7%

B. Money-Weighted Rate of Return

The annual money-weighted rates of return for TRS, ERS, and JRF are 9.42%, 9.29%, and 9.35%, respectively. A money-weighted rate of return expresses investment performance, which is net of investment expense and is adjusted for the changing amounts actually invested. The annual money-weighted rate of return on investments is calculated as the internal rate of return on plan investments, net of plan investment expense.

C. Investment Risks

Investments are subject to certain types of risks, including interest rate risk, custodial credit risk, credit quality risk, foreign currency risk, and concentration of credit risk. The following describes those risks and the RSA's policies regarding those risks:

Interest Rate Risk – The fair value of fixed-maturity investments fluctuates in response to changes in market interest rates. Increases in prevailing interest rates generally translate into decreases in fair value of those instruments. There is no stated limitation on the duration level of the fixed income portfolio; however, this level is assessed on a regular basis to determine if adjustments are needed. The fair value of interest sensitive instruments may also be affected by the creditworthiness of the issuer, prepayment options, relative values of alternative investments, and other general market conditions. Certain fixed maturity investments have call provisions that could result in shorter maturity periods.

Custodial Credit Risk – For an investment, custodial credit risk is the risk that an entity will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party if the counterparty fails. The RSA's custodial credit risk policy requires the custodial agent to hold or direct its agents or sub custodians to hold, for the account of the RSA, all securities and other non-cash property other than securities in the Federal Reserve book-entry system, in a clearing agency which acts as a securities depository, or in another book-entry system. The RSA's safekeeping agent holds all investments of the RSA in the RSA's name with the exception of securities purchased with securities lending cash collateral.

Credit Quality Risk – Nationally recognized statistical rating organizations provide ratings of debt securities' quality based on a variety of factors, such as the financial condition of the issuers, which provide investors with some idea of the issuer's ability to meet its obligations. Domestic fixed-maturity investments may consist of rated or non-rated securities. There are no stated limitations on the credit quality of the fixed income portfolio; however, ratings are assessed on a regular basis. The Systems may hedge against the possible adverse effects of currency fluctuations on each System's portfolio of international fixed income obligations when it is considered appropriate. Short-term investments may consist of commercial paper rated at least A-2 and/or P-2, repurchase agreements, short-term U.S. securities, and other money market investments.

Foreign Currency Risk – The risk that changes in exchange rates will adversely affect the fair value of an investment. In order for an international security to be eligible for purchase by the Systems, the issuing company must be incorporated in a country whose debt securities are eligible for purchase and the fair value of the aggregate outstanding equity of the issuing company must be at least \$100 million.

Concentration of Credit Risk – As of September 30, 2018, the TRS and ERS owned debt and equity securities of Raycom Media Corporation which represented approximately 7.20% of the TRS investments and 8.69% of the ERS investments. Additionally, TRS owned debt and equity securities of Goldman Sachs Group, Inc., and equity securities of New Water Street Corporation which represented approximately 5.39% and 5.00%, respectively, of the TRS investments.

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The following tables provide information as of September 30, 2018, concerning the fair value of investments, interest rate risk, and foreign currency risk:

Type of Investment	TRS Maturity in Years at Fair Value				Total Fair Value	Cost
	Less Than 1	1-5	6-10	More Than 10		
<i>Fixed Maturity</i>						
Domestic						
Money Market Funds	\$ 416,490	\$ -	\$ -	\$ -	\$ 416,490	\$ 416,490
Commercial Paper	921,180	-	-	-	921,180	921,180
U.S. Agency	24,164	94,062	30,394	11,769	160,389	165,224
U.S. Government Guaranteed	-	411,325	327,107	95,326	833,758	863,193
Corporate Bonds	107,499	423,010	254,013	296,567	1,081,089	1,070,618
Private Placements	-	165,663	13,400	1,259,284	1,438,347	1,453,921
GNMAs	1	141	4,268	86,580	90,990	92,356
CMOs	-	166	48,837	390,994	439,997	454,262
Total Domestic Fixed Maturity	<u>\$ 1,469,334</u>	<u>\$ 1,094,367</u>	<u>\$ 678,019</u>	<u>\$ 2,140,520</u>	<u>5,382,240</u>	<u>5,437,244</u>
<i>Equities</i>						
Preferred						
					23,880	24,441
Domestic						
					13,265,988	7,564,614
Private						
					1,117,247	414,417
International						
Emerging Markets					616,174	577,350
United Kingdom - Pound Sterling					479,991	443,817
Japan - Yen					730,862	493,574
France - Euro					293,920	195,491
Germany - Euro					245,234	156,760
Switzerland - Franc					250,619	125,020
Netherlands - Euro					104,481	68,540
Italy - Euro					53,650	64,243
Ireland - Euro					10,825	7,097
Spain - Euro					68,124	80,162
Australia - Dollar					188,261	119,609
Singapore - Dollar					35,743	29,147
Belgium - Euro					34,493	27,074
Finland - Euro					30,798	25,146
Hong Kong - Dollar					99,694	51,564
Sweden - Krona					82,069	43,203
Denmark - Krone					45,144	16,510
Israel - Shekel					15,394	18,110
Norway - Krone					20,863	12,510
Austria - Euro					8,860	5,938
New Zealand - Dollar					2,069	2,218
Total International Equities					<u>3,417,268</u>	<u>2,563,083</u>
Total Equities					<u>17,824,383</u>	<u>10,566,555</u>
Real Estate					<u>2,415,071</u>	<u>1,848,955</u>
Total Investments					<u>\$ 25,621,694</u>	<u>\$ 17,852,754</u>

Type of Investment	ERS Maturity in Years at Fair Value				Total Fair Value	Cost
	Less Than 1	1-5	6-10	More Than 10		
<i>Fixed Maturity</i>						
Domestic						
Money Market Funds	\$ 229,579	\$ -	\$ -	\$ -	\$ 229,579	\$ 229,579
Commercial Paper	319,303	-	-	-	319,303	319,303
U.S. Agency	10,899	47,122	14,456	5,660	78,137	80,481
U.S. Government Guaranteed	-	203,641	160,005	43,580	407,226	421,457
Corporate Bonds	50,912	211,643	130,117	139,542	532,214	528,247
Private Placements	-	81,595	6,600	624,056	712,251	720,509
GNMAs	3	20	1,541	42,036	43,600	44,249
CMOs	-	9	22,833	201,436	224,278	231,527
Total Domestic Fixed Maturity	<u>\$ 610,696</u>	<u>\$ 544,030</u>	<u>\$ 335,552</u>	<u>\$ 1,056,310</u>	<u>2,546,588</u>	<u>2,575,352</u>
<i>Equities</i>						
Preferred					10,857	11,112
Domestic					6,534,881	3,720,986
Private					732,018	246,764
International						
Emerging Markets					370,546	357,363
United Kingdom - Pound Sterling					211,121	194,248
Japan - Yen					321,405	217,529
France - Euro					129,427	85,855
Germany - Euro					107,864	68,766
Switzerland - Franc					110,171	54,274
Netherlands - Euro					45,955	29,770
Italy - Euro					23,595	28,047
Ireland - Euro					4,782	3,138
Spain - Euro					29,965	34,616
Australia - Dollar					82,803	52,627
Singapore - Dollar					15,716	12,768
Belgium - Euro					15,173	11,853
Finland - Euro					13,546	11,193
Hong Kong - Dollar					43,835	22,779
Sweden - Krona					36,101	19,106
Denmark - Krone					19,845	7,220
Israel - Shekel					6,771	7,965
Norway - Krone					9,173	5,583
Austria - Euro					3,897	2,658
New Zealand - Dollar					909	989
Total International Equities					1,602,600	1,228,347
Total Equities					8,880,356	5,207,209
Real Estate					1,171,372	921,910
Total Investments					\$ 12,598,316	\$ 8,704,471

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Type of Investment	JRF Maturity in Years at Fair Value				Total Fair Value	Cost
	Less	1-5	6-10	More		
	Than 1					
<i>Fixed Maturity</i>						
Domestic						
Money Market Funds	\$ 16,362	\$ -	\$ -	\$ -	\$ 16,362	\$ 16,362
Commercial Paper	7,002	-	-	-	7,002	7,002
U.S. Agency	547	2,837	872	318	4,574	4,713
U.S. Government Guaranteed	-	10,805	9,461	2,552	22,818	23,704
Corporate Bonds	4,659	11,944	6,968	7,131	30,702	30,627
Private Placements	-	-	-	500	500	500
GNMAs	-	-	-	2,289	2,289	2,327
CMOs	-	-	1,058	10,772	11,830	12,234
Total Domestic Fixed Maturity	<u>\$28,570</u>	<u>\$25,586</u>	<u>\$18,359</u>	<u>\$ 23,562</u>	<u>96,077</u>	<u>97,469</u>
<i>Equities</i>						
Preferred					592	607
Domestic					167,737	73,896
Private					120	-
International						
Emerging Markets					7,599	6,843
United Kingdom - Pound Sterling					6,299	6,269
Japan - Yen					9,688	6,913
France - Euro					3,863	2,988
Germany - Euro					3,222	2,315
Switzerland - Franc					3,262	2,179
Netherlands - Euro					1,373	972
Italy - Euro					709	817
Ireland - Euro					149	101
Spain - Euro					895	1,156
Australia - Dollar					2,472	2,153
Singapore - Dollar					457	405
Belgium - Euro					453	347
Finland - Euro					405	328
Hong Kong - Dollar					1,327	804
Sweden - Krona					1,079	740
Denmark - Krone					600	297
Israel - Shekel					202	237
Norway - Krone					275	222
Austria - Euro					117	91
New Zealand - Dollar					27	23
Total International Equities					44,473	36,200
Total Equities					212,922	110,703
Real Estate					4,107	1,067
Total Investments					<u>\$ 313,106</u>	<u>\$ 209,239</u>

The following tables provide information as of September 30, 2018, concerning credit risk (dollar amounts in thousands):

TRS

Moody's Ratings	Cost	Fair Value	Fair Value as a Percentage of Total Fair Value of Fixed Maturities
Aaa	\$ 182,046	\$ 177,204	3.292
Aa1	16,433	16,377	0.304
Aa2	21,592	21,556	0.401
P-1	31,064	31,064	0.577
P-2	879,014	879,014	16.332
P-3	11,102	11,102	0.206
A1	91,396	93,248	1.733
A2	64,278	62,798	1.167
A3	159,965	165,617	3.077
Baa1	234,346	237,930	4.421
Baa2	309,406	311,688	5.791
Baa3	79,481	79,487	1.477
Ba1	37,525	36,017	0.669
Ba2	8,346	8,964	0.167
Ba3	18,981	18,367	0.341
Not Rated	1,882,458	1,867,062	34.689
Total Moody's Rated Fixed Maturities	4,027,433	4,017,495	74.644
U.S. Agency Mortgage-Backed Securities	454,262	439,997	8.175
U.S. Government Guaranteed	955,549	924,748	17.181
Total Fixed Maturities	\$ 5,437,244	\$ 5,382,240	100.000

Standard & Poor's Ratings	Cost	Fair Value	Fair Value as a Percentage of Total Fair Value of Fixed Maturities
AAA	\$ 14,887	\$ 14,806	0.275
AA+	181,657	176,766	3.284
AA-	34,577	34,743	0.646
A-1	74,141	74,141	1.378
A-2	847,039	847,039	15.738
A+	81,597	83,596	1.553
A	109,238	109,743	2.039
A-	163,340	173,973	3.232
BBB+	246,298	244,568	4.544
BBB	261,176	262,778	4.882
BBB-	115,540	113,545	2.110
BB	4,331	4,079	0.076
BB-	8,015	7,542	0.140
Not Rated	1,885,597	1,870,176	34.747
Total Standard & Poor's Rated Fixed Maturities	4,027,433	4,017,495	74.644
U.S. Agency Mortgage-Backed Securities	454,262	439,997	8.175
U.S. Government Guaranteed	955,549	924,748	17.181
Total Fixed Maturities	\$ 5,437,244	\$ 5,382,240	100.000

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ERS

Moody's Ratings	Cost	Fair Value	Fair Value as a Percentage of Total Fair Value of Fixed Maturities
Aaa	\$ 88,166	\$ 85,819	3.370
Aa1	9,041	8,985	0.353
Aa2	10,457	10,440	0.410
P-1	5,000	5,000	0.196
P-2	297,286	297,286	11.674
P-3	17,017	17,017	0.668
A1	41,953	42,800	1.681
A2	33,596	32,823	1.289
A3	79,233	81,618	3.205
Baa1	114,135	115,512	4.536
Baa2	160,405	161,253	6.332
Baa3	36,577	36,572	1.436
Ba1	16,958	16,263	0.638
Ba2	3,814	4,091	0.161
Ba3	8,498	8,198	0.322
Not Rated	955,983	947,807	37.219
Total Moody's Rated Fixed Maturities	1,878,119	1,871,484	73.490
U.S. Agency Mortgage-Backed Securities	231,527	224,278	8.807
U.S. Government Guaranteed	465,706	450,826	17.703
Total Fixed Maturities	\$ 2,575,352	\$ 2,546,588	100.000

Standard & Poor's Ratings	Cost	Fair Value	Fair Value as a Percentage of Total Fair Value of Fixed Maturities
AAA	\$ 6,807	\$ 6,769	0.266
AA+	89,521	87,122	3.421
AA-	15,734	15,803	0.621
A-2	319,303	319,303	12.538
A+	38,315	39,232	1.541
A	50,036	50,253	1.973
A-	83,624	88,113	3.460
BBB+	120,993	120,020	4.713
BBB	137,425	138,021	5.420
BBB-	53,081	52,132	2.047
BB	1,974	1,852	0.073
BB-	3,582	3,364	0.132
Not Rated	957,724	949,500	37.285
Total Standard & Poor's Rated Fixed Maturities	1,878,119	1,871,484	73.490
U.S. Agency Mortgage-Backed Securities	231,527	224,278	8.807
U.S. Government Guaranteed	465,706	450,826	17.703
Total Fixed Maturities	\$ 2,575,352	\$ 2,546,588	100.000

JRF

Moody's Ratings	Cost	Fair Value	Fair Value as a Percentage of Total Fair Value of Fixed Maturities
Aaa	\$ 5,192	\$ 5,053	5.259
Aa1	508	504	0.525
Aa2	584	583	0.607
P-2	7,002	7,002	7.288
A1	2,009	2,030	2.113
A2	2,578	2,510	2.612
A3	3,895	3,952	4.113
Baa1	6,953	7,048	7.336
Baa2	9,169	9,175	9.550
Baa3	2,602	2,598	2.702
Ba1	908	874	0.910
Ba2	231	249	0.260
Ba3	425	410	0.427
Not Rated	17,148	17,152	17.852
Total Moody's Rated Fixed Maturities	59,204	59,140	61.554
U.S. Agency Mortgage-Backed Securities	12,234	11,830	12.313
U.S. Government Guaranteed	26,031	25,107	26.133
Total Fixed Maturities	\$ 97,469	\$ 96,077	100.000

Standard & Poor's Ratings	Cost	Fair Value	Fair Value as a Percentage of Total Fair Value of Fixed Maturities
AAA	\$ 435	\$ 433	0.451
AA+	5,221	5,079	5.286
AA-	870	873	0.909
A-2	7,002	7,002	7.288
A+	1,838	1,863	1.938
A	3,709	3,682	3.832
A-	4,643	4,816	5.012
BBB+	6,717	6,673	6.945
BBB	8,219	8,220	8.556
BBB-	3,215	3,164	3.294
BB	115	107	0.111
BB-	179	168	0.175
Not Rated	17,041	17,060	17.757
Total Standard & Poor's Rated Fixed Maturities	59,204	59,140	61.554
U.S. Agency Mortgage-Backed Securities	12,234	11,830	12.313
U.S. Government Guaranteed	26,031	25,107	26.133
Total Fixed Maturities	\$ 97,469	\$ 96,077	100.000

(Dollar Amounts in Thousands)

D. Fair Value Measurement

The RSA categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy prioritizes the inputs to valuation used to measure the fair value of the asset, giving the highest priority to quoted prices in an active market for identical assets (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The inputs to the three levels of the fair value hierarchy are described as follows:

- Level 1: Quoted (unadjusted) prices in an active market for identical assets or liabilities.
- Level 2: Significant other inputs which are observable either directly or indirectly, including quoted prices for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in a less active market, or other market-corroborated inputs.
- Level 3: Valuations derived from valuation techniques using significant unobservable inputs for the asset or liabilities.

The categorization of investments within the hierarchy is based upon pricing transparency of the instrument and should not be perceived as the particular investment's risk.

Investments in equity securities classified as Level 1 are valued using quoted prices in an active market for those securities.

Investments in securities classified as Level 2 are valued using non-proprietary information that is readily available to market participants from multiple independent sources, which are known to be actively involved in the market. Pricing inputs may include market quotation, yields, maturities, call features, and ratings.

Investments in non-market traded private equity, debt, and direct investments in real estate are classified as Level 3 due to lack of observable pricing inputs and are valued using annual appraisals based on a combination of market data and projected cash flows.

The following tables provide information as of September 30, 2018, concerning fair value measurement (dollar amounts in thousands):

	TRS			
	9/30/2018	Fair Value Measurements Using		
		Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<i>Domestic Fixed Maturity</i>				
Money Market Funds	\$ 416,490	\$ -	\$ 416,490	\$ -
Commercial Paper	921,180	-	921,180	-
U.S. Agency	160,389	-	160,389	-
U.S. Government Guaranteed	833,758	-	833,758	-
Corporate Bonds	1,081,089	-	1,081,089	-
Private Placements	1,438,347	-	-	1,438,347
GNMAs	90,990	-	90,990	-
CMOs	439,997	-	439,997	-
Total Domestic Fixed Maturity	<u>5,382,240</u>	<u>-</u>	<u>3,943,893</u>	<u>1,438,347</u>
<i>Equities</i>				
Preferred	23,880	23,880	-	-
Domestic	13,265,988	11,964,955	1,301,033	-
Private	1,117,247	-	9,219	1,108,028
International	3,417,268	3,417,268	-	-
Total Equities	<u>17,824,383</u>	<u>15,406,103</u>	<u>1,310,252</u>	<u>1,108,028</u>
Real Estate	2,415,071	-	-	2,415,071
Total Investments	<u>25,621,694</u>	<u>15,406,103</u>	<u>5,254,145</u>	<u>4,961,446</u>
Securities Lending Collateral	1,052,082	-	1,052,082	-
Total Fair Value	<u>\$ 26,673,776</u>	<u>\$ 15,406,103</u>	<u>\$ 6,306,227</u>	<u>\$ 4,961,446</u>

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	ERS			
	9/30/2018	Fair Value Measurements Using		
		Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<i>Domestic Fixed Maturity</i>				
Money Market Funds	\$ 229,579	\$ -	\$ 229,579	\$ -
Commercial Paper	319,303	-	319,303	-
U.S. Agency	78,137	-	78,137	-
U.S. Government Guaranteed	407,226	-	407,226	-
Corporate Bonds	532,214	-	532,214	-
Private Placements	712,251	-	-	712,251
GNMAs	43,600	-	43,600	-
CMOs	224,278	-	224,278	-
Total Domestic Fixed Maturity	<u>2,546,588</u>	<u>-</u>	<u>1,834,337</u>	<u>712,251</u>
<i>Equities</i>				
Preferred	10,857	10,857	-	-
Domestic	6,534,881	6,001,011	533,870	-
Private	732,018	-	4,541	727,477
International	1,602,600	1,602,600	-	-
Total Equities	<u>8,880,356</u>	<u>7,614,468</u>	<u>538,411</u>	<u>727,477</u>
Real Estate	1,171,372	-	-	1,171,372
Total Investments	<u>12,598,316</u>	<u>7,614,468</u>	<u>2,372,748</u>	<u>2,611,100</u>
Securities Lending Collateral	543,229	-	543,229	-
Total Fair Value	<u>\$ 13,141,545</u>	<u>\$ 7,614,468</u>	<u>\$ 2,915,977</u>	<u>\$ 2,611,100</u>

		JRF		
		Fair Value Measurements Using		
		Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
9/30/2018				
<i>Domestic Fixed Maturity</i>				
Money Market Funds	\$ 16,362	\$ -	\$ 16,362	\$ -
Commercial Paper	7,002	-	7,002	-
U.S. Agency	4,574	-	4,574	-
U.S. Government Guaranteed	22,818	-	22,818	-
Corporate Bonds	30,702	-	30,702	-
Private Placements	500	-	-	500
GNMAs	2,289	-	2,289	-
CMOs	11,830	-	11,830	-
Total Domestic Fixed Maturity	<u>96,077</u>	<u>-</u>	<u>95,577</u>	<u>500</u>
<i>Equities</i>				
Preferred	592	592	-	-
Domestic	167,737	156,147	11,590	-
Private	120	-	-	120
International	44,473	44,473	-	-
Total Equities	<u>212,922</u>	<u>201,212</u>	<u>11,590</u>	<u>120</u>
Real Estate	4,107	-	-	4,107
Total Investments	<u>313,106</u>	<u>201,212</u>	<u>107,167</u>	<u>4,727</u>
Securities Lending Collateral	10,456	-	10,456	-
Total Fair Value	<u>\$ 323,562</u>	<u>\$ 201,212</u>	<u>\$ 117,623</u>	<u>\$ 4,727</u>

E. Securities Lending Program

The TRS, ERS, and JRF are authorized by the Boards of Control to participate in a securities lending program. The Systems' custodian, State Street Bank and Trust Company (State Street), administers the program. Certain securities from the TRS, ERS, and JRF are loaned to borrowers approved by the Systems for collateral that will be returned for the same type of securities. Approved borrowers of securities provide acceptable collateral in the form of cash (U.S. and foreign currency), any other assets permissible under Rule 15c3-3 under the Exchange Act of 1934, U.S. and non-U.S. equities, and such other collateral as the parties may agree to in writing from time to time. All security loans are open loans and can be terminated on demand by the TRS, ERS, JRF, or borrower. The initial collateral received shall have (depending on the nature of the loaned securities and the collateral received) a value of 102% or 105% of the fair value of the loaned securities, or such other value, but not less than 102% of the fair value of the loaned securities, as may be applicable in the jurisdiction in which such loaned securities are customarily traded. Pursuant to the terms of the applicable securities loan agreement, State Street shall, in accordance with State Street's reasonable and customary practices, mark loaned securities and collateral to their fair value each business day based upon the fair value of the collateral and the loaned securities at the close of the business day employing the most recently available pricing information and shall receive and deliver collateral in order to maintain the value of the collateral at no less than 100% of the fair value of the loaned securities.

The TRS, ERS, and JRF cannot pledge or sell collateral securities received unless the borrower defaults. Cash collateral is invested in the State Street Quality D Short-term Investments Fund (QDF). The collateral fund is separated into two pools, a liquidity pool and a duration pool. This split allows greater flexibility in managing the available liquidity in the investment in the fund and the outstanding balance of securities on loan.

The following describes the QDF's guidelines. The QDF's Investment Manager (State Street Bank) shall maintain the dollar-weighted average maturity of QDF in a manner that the Investment Manager believes is appropriate to the objective of QDF; provided, that (i) in no event shall any eligible security be acquired with a remaining legal final maturity (i.e., the date on which principal must be repaid) of greater than 18 months, (ii) the Investment Manager shall endeavor to maintain a dollar-weighted average maturity of the QDF not to exceed 75 calendar days, and (iii) the Investment Manager shall endeavor to maintain a dollar-weighted average maturity to final of the QDF not to exceed 180 calendar days. At the time of purchase (i) all eligible securities with maturities of 13 months or less shall (x) be rated at least A1, P1, or F1 by at least any two of the following nationally recognized statistical rating organizations: Standard & Poor's Corp. ("S&P"), Moody's Investor Services, Inc. ("Moody's"), or Fitch, Inc. ("Fitch"), or (y) be determined by the Investment Manager to be of comparable quality and (ii) all eligible securities with maturities in excess of 13 months shall (x) be rated at least A-, A3, or A- by at least any two of S & P, Moody's, or Fitch, or (y) be determined by the Investment Manager to be of comparable quality. The QDF may invest up to 10% of its assets at a time of purchase in commingled vehicles managed by State Street Global Advisors or its affiliates that conform to the Investment Policy Guidelines. The QDF duration pool includes all asset-backed securities (regardless of maturity) and securities of any type with a remaining maturity of 91 days or greater. Each QDF investor owns a specified percentage interest in the duration pool which is redeemable only in kind, not in cash. The QDF duration pool will not make additional investments.

As of September 30, 2018, the average term of the loans secured by QDF was 9, 11, and 23 days, respectively for the TRS, ERS, and JRF. Cash collateral investments in the QDF are matured as needed to fulfill loan obligations. There is no direct matching of the maturities of the loans with the investments made with cash collateral.

At September 30, 2018, the fair value of the securities on loan was \$3,794,496, \$1,824,858, and \$37,735 for the TRS, ERS, and JRF, respectively. The fair value of the collateral pledged by the borrowers was \$4,028,984, \$1,935,672, and \$39,974 for the TRS, ERS, and JRF, respectively. Since the amounts owed by the TRS, ERS, and JRF exceeded the amounts the borrowers owed to the TRS, ERS, and JRF, there was no credit risk exposure as of September 30, 2018. There were no significant violations of legal or contractual provisions, no borrower or lending agent default losses, and no recoveries of prior period losses during the year.

Investments purchased with cash collateral are held by the custodial agent, but not in the name of the Systems. Securities pledged as collateral are held by the custodial agent, but not in the name of the Systems. Letters of credit pledged as collateral are issued by the borrower's bank and are irrevocable. Tri Party Collateral is held by a third party bank in the name of the custodial agent. State Street, as custodial agent, is authorized to request a third party bank to undertake certain custodial functions in connection with holding of the collateral provided by a borrower. State Street may instruct the third party bank to establish and maintain a borrower's account and a State Street account wherein all collateral, including cash shall be maintained by the third party bank in accordance with the terms of the agreement.

The following table provides information as of September 30, 2018, concerning securities lent (dollar amounts in thousands):

Securities Lending - Investments Lent & Collateral Received				
(at Fair Value)				
Type of Investment Lent	TRS	ERS	JRF	Total
<i>For Cash Collateral</i>				
Domestic Fixed Maturities	\$ 178,251	\$ 129,136	\$ 5,485	\$ 312,872
Domestic Equity	791,709	390,226	4,552	1,186,487
International Equity - JPY	7,013	2,114	28	9,155
International Equity - USD	47,801	8,529	146	56,476
Total Lent for Cash Collateral	<u>1,024,774</u>	<u>530,005</u>	<u>10,211</u>	<u>1,564,990</u>
<i>For Non-Cash Collateral</i>				
Domestic Fixed Maturities	607,526	290,149	12,416	910,091
Domestic Equity	2,076,624	970,493	14,324	3,061,441
International Equity	85,572	34,211	784	120,567
Total Lent for Non-Cash Collateral	<u>2,769,722</u>	<u>1,294,853</u>	<u>27,524</u>	<u>4,092,099</u>
Total Securities Lent	<u>\$ 3,794,496</u>	<u>\$ 1,824,858</u>	<u>\$ 37,735</u>	<u>\$ 5,657,089</u>
Type of Collateral Received				
<i>Cash Collateral</i>				
Invested in State Street Global Securities Lending Trust - JPY	\$ 7,352	\$ 2,220	\$ 30	\$ 9,602
Invested in State Street Global Securities Lending Trust - USD	1,044,730	541,009	10,426	1,596,165
Total Cash Collateral Denominated in USD	<u>1,052,082</u>	<u>543,229</u>	<u>10,456</u>	<u>1,605,767</u>
<i>Non-Cash Collateral</i>				
Domestic Fixed Securities				
CAD	14,832	-	-	14,832
EUR	36,264	7,582	1,593	45,439
GBP	10,113	2,114	444	12,671
USD	539,704	281,457	8,609	829,770
Domestic Equity Securities				
EUR	1,967	566	-	2,533
USD	2,268,534	1,040,421	15,754	3,324,709
International Fixed Maturities & Equity				
EUR	7,757	1,936	62	9,755
GBP	4,255	1,640	12	5,907
USD	93,476	56,727	3,044	153,247
Total Non-Cash Collateral	<u>2,976,902</u>	<u>1,392,443</u>	<u>29,518</u>	<u>4,398,863</u>
Total Collateral Received	<u>\$ 4,028,984</u>	<u>\$ 1,935,672</u>	<u>\$ 39,974</u>	<u>\$ 6,004,630</u>

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F. Mortgage-backed Securities

As of September 30, 2018, the TRS, ERS, and JRF had investments in mortgaged-backed securities. Embedded prepayment options cause these investments to be highly sensitive to changes in interest rates. Prepayments of the underlying assets reduce the total interest payments to be received. Generally, when interest rates fall, obligees tend to prepay the mortgages thus eliminating the stream of interest payments that would have been received under the original amortization schedule. The resulting reduction in cash flow diminishes the fair value of the mortgage-backed securities. Additionally, the prepayment activity associated with this type of security can lead to changes in the average life and duration of the security; higher prepayments will effectively shorten the expected life of the security while slower prepayments can lengthen the expected life of the security.

G. Investment Derivatives

Derivative instruments are financial arrangements used by governments to manage specific risks or to make investments. From time to time, the RSA enters into certain derivative transactions, specifically call options and put options. The RSA uses these derivative instruments to make an investment, control risk with certain investment positions, or as a yield enhancement strategy. During the fiscal year, these investment derivative instruments were used exclusively within the RSA's domestic and international equity portfolios and are presented in the financial statements in their respective equity classifications. These derivative instruments are either listed options or executed in the over-the-counter (OTC) market using only credit worthy counterparties. The fair value of the investment derivative instruments is based on market prices. Investment risks related to investment derivatives have been considered and included in the Investment Risks note in the preceding pages. The following table presents the investment derivative instruments outstanding as of September 30, 2018, as reported in the System's Combining Statement of Fiduciary Net Position and Combining Statement of Changes in Fiduciary Net Position:

Investment Derivative Instruments					
Changes in Fair Value			Fair Value as of September 30, 2018		
	Classification	Amount	Classification	Amount	Notional
TRS					
Domestic Options Written	Investment Income	\$ 9,560	Domestic Equity	\$ (18,119)	\$ (689,687)
Domestic Options Purchased	Investment Income	(27,678)	Domestic Equity	-	-
Total Domestic Options		(18,118)		(18,119)	(689,687)
International Options Written	Investment Income	18	International Equity	-	-
Grand Total TRS Options		<u>\$ (18,100)</u>		<u>\$ (18,119)</u>	<u>\$ (689,687)</u>
ERS					
Domestic Options Written	Investment Income	\$ 4,560	Domestic Equity	\$ (8,646)	\$ (329,084)
Domestic Options Purchased	Investment Income	(13,206)	Domestic Equity	-	-
Total Domestic Options		(8,646)		(8,646)	(329,084)
International Options Written	Investment Income	9	International Equity	-	-
Grand Total ERS Options		<u>\$ (8,637)</u>		<u>\$ (8,646)</u>	<u>\$ (329,084)</u>
JRF					
Domestic Options Written	Investment Income	\$ 153	Domestic Equity	\$ (292)	\$ (11,073)
Domestic Options Purchased	Investment Income	(445)	Domestic Equity	-	-
Total Domestic Options		(292)		(292)	(11,073)
International Options Written	Investment Income	-	International Equity	-	-
Grand Total JRF Options		<u>\$ (292)</u>		<u>\$ (292)</u>	<u>\$ (11,073)</u>
Total					
Domestic Options Written	Investment Income	\$ 14,273	Domestic Equity	\$ (27,057)	\$ (1,029,844)
Domestic Options Purchased	Investment Income	(41,329)	Domestic Equity	-	-
Total Domestic Options		(27,056)		(27,057)	(1,029,844)
International Options Written	Investment Income	27	International Equity	-	-
Grand Total Options		<u>\$ (27,029)</u>		<u>\$ (27,057)</u>	<u>\$ (1,029,844)</u>

6) NET PENSION LIABILITY OF THE PLANS

The components of the net pension liability related to the TRS, ERS, and JRF retirement plans determined in accordance with GASB Statement No. 67, *Financial Reporting for Pension Plans*, as of September 30, 2018, were as follows (dollar amounts in thousands):

	<u>TRS</u>	<u>ERS</u>	<u>JRF</u>
Total Pension Liability	\$ 35,878,014	\$ 17,861,887	\$ 462,040
Less: Plan Net Position (see Note 3G)	(25,935,433)	(12,720,352)	(317,314)
Net Pension Liability	<u>\$ 9,942,581</u>	<u>\$ 5,141,535</u>	<u>\$ 144,726</u>
Plan Net Position as a Percentage of the Total Pension Liability	72.29%	71.22%	68.68%

The net pension liability is allocated to employers in accordance with GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*. The net pension liability was determined by an actuarial valuation as of September 30, 2017, and rolled forward in accordance with GASB Statement No. 67 to the measurement date of September 30, 2018, using the following actuarial assumptions, applied to all periods included in the measurement:

	<u>TRS</u>	<u>ERS</u>	<u>JRF</u>
Inflation	2.75%	2.75%	2.75%
Projected Salary Increases	3.25% - 5.00%	3.25% - 5.00%	3.25% - 3.50%
Investment Rate of Return*	7.70%	7.70%	7.65%

*Net of pension plan investment expense.

There were no ad hoc postemployment benefit changes, including ad hoc COLAs, during fiscal year 2018.

The actuarial assumptions used in the actuarial valuation as of September 30, 2017, were based on the results of an investigation of the economic and demographic experience for the TRS, ERS, and JRF based upon participant data as of September 30, 2015, completed by the RSA and its actuaries. The purpose of the investigation was to assess the reasonableness of the actuarial assumptions and methods currently used by the RSA. This investigation resulted in changes to the actuarial assumptions. The Boards of Control for each accepted and approved these changes in September 2016 which became effective at the beginning of fiscal year 2016.

The assumed investment rate of return used to prepare the actuarial valuation as of September 30, 2017, was 7.75% for the Systems. Subsequent to the valuation, the respective Boards of Control adopted new assumed investment rates of return which were 7.70% for TRS & ERS and 7.65% for JRF. The Boards of Control accepted and approved these changes in December 2018 which became effective September 30, 2018 (the measurement date). Since the effective date was the same as the measurement date, the new assumed investment rates of return were used to measure the total pension liability as of September 30, 2018.

Mortality rates for TRS and JRF were based on the sex distinct RP-2000 White Collar Mortality Table projected to 2020 using scale BB and adjusted 115% for males and 112% for females age 78 and older. The rates of disabled mortality for TRS and JRF were based on the sex distinct RP-2000 Disabled Mortality Table projected to 2020 using scale BB and adjusted 105% for males and 120% for females. Mortality rates for ERS were based on the sex distinct RP-2000 Blue Collar Mortality Table projected to 2020 using scale BB with an adjustment of 125% for males and 120% for females age 78 and older. The rates of disabled mortality for ERS were based on the sex distinct RP-2000 Disabled Retiree Mortality Table projected to 2020 using scale BB with an adjustment of 130% for females.

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The total pension liability related to the cost-sharing retirement plans is based on the actuarial valuation as of September 30, 2017. The expected total pension liability is determined as of September 30, 2018, using standard roll-forward techniques as shown in the following table:

	TRS		
	Expected	Actual Before the Discount Rate Change	Actual After the Discount Rate Change
Total Pension Liability as of 9/30/2017 (a)	\$ 34,479,936	\$ 34,726,473	\$ 34,901,803
Entry Age Normal Cost* for 10/1/2017 - 9/30/2018 (b)	\$ 637,532	\$ 637,532	\$ 643,547
Actual Benefit Payments for 10/1/2017 - 9/30/2018 (c)	\$ 2,267,477	\$ 2,267,477	\$ 2,267,477
Total Pension Liability as of 9/30/2018**	\$ 35,434,321	\$ 35,699,965	\$ 35,878,014
Difference between Expected & Actual Experience (Gain)/Loss		\$ 265,644	
Difference Due to Changes of Assumptions			\$ 178,049

	ERS		
	Expected	Actual Before the Discount Rate Change	Actual After the Discount Rate Change
Total Pension Liability as of 9/30/2017 (a)	\$ 17,390,739	\$ 17,316,978	\$ 17,403,611
Entry Age Normal Cost* for 10/1/2017 - 9/30/2018 (b)	\$ 307,064	\$ 307,064	\$ 309,740
Actual Benefit Payments for 10/1/2017 - 9/30/2018 (c)	\$ 1,147,368	\$ 1,147,368	\$ 1,147,368
Total Pension Liability as of 9/30/2018**	\$ 17,853,757	\$ 17,774,279	\$ 17,861,887
Difference between Expected & Actual Experience (Gain)/Loss		\$ (79,477)	
Difference Due to Changes of Assumptions			\$ 87,608

	JRF		
	Expected	Actual Before the Discount Rate Change	Actual After the Discount Rate Change
Total Pension Liability as of 9/30/2017 (a)	\$ 456,927	\$ 448,450	\$ 452,289
Entry Age Normal Cost* for 10/1/2017 - 9/30/2018 (b)	\$ 9,811	\$ 9,811	\$ 9,983
Actual Benefit Payments for 10/1/2017 - 9/30/2018 (c)	\$ 33,549	\$ 33,549	\$ 33,549
Total Pension Liability as of 9/30/2018**	\$ 467,301	\$ 458,167	\$ 462,040
Difference between Expected & Actual Experience (Gain)/Loss		\$ (9,134)	
Difference Due to Changes of Assumptions			\$ 3,873

*Also called the Service Cost.

**Expected and Actual Before Discount Rate Change Calculation for TRS, ERS & JRF:

$$[(a) \times (1.0775)] + (b) - [(c) \times (1.03875)].$$

**Actual After Discount Rate Change Calculation for TRS and ERS:

$$[(a) \times (1.0770)] + (b) - [(c) \times (1.03850)].$$

**After Discount Rate Change Calculation for JRF:

$$[(a) \times (1.0765)] + (b) - [(c) \times (1.03825)].$$

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

	Target Allocation			Long-Term Expected Rate of Return*		
	TRS	ERS	JRF	TRS	ERS	JRF
Fixed Income	17.00%	17.00%	22.00%	4.40%	4.40%	4.40%
U.S. Large Stocks	32.00%	32.00%	41.00%	8.00%	8.00%	8.00%
U.S. Mid Stocks	9.00%	9.00%	11.00%	10.00%	10.00%	10.00%
U.S. Small Stocks	4.00%	4.00%	3.00%	11.00%	11.00%	11.00%
International Developed Market Stocks	12.00%	12.00%	12.00%	9.50%	9.50%	9.50%
International Emerging Market Stocks	3.00%	3.00%	3.00%	11.00%	11.00%	11.00%
Alternatives	10.00%	10.00%	1.00%	10.10%	10.10%	10.10%
Real Estate	10.00%	10.00%	2.00%	7.50%	7.50%	7.50%
Cash	3.00%	3.00%	5.00%	1.50%	1.50%	1.50%
Total	100.00%	100.00%	100.00%			

*Includes assumed rate of inflation of 2.50%.

The discount rate used to measure the total pension liability was 7.70% for TRS and ERS and 7.65% for JRF. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, components of the pension plan's fiduciary net position were 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.

The following table presents the net pension liability of the TRS, ERS, and JRF calculated using their respective discount rates, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate (dollar amounts in thousands):

	Current		
	1% Decrease (6.70%)	Discount Rate (7.70%)	1% Increase (8.70%)
TRS	\$ 13,840,181	\$ 9,942,581	\$ 6,645,815
ERS	\$ 7,075,796	\$ 5,141,535	\$ 3,502,224

	Current		
	1% Decrease (6.65%)	Discount Rate (7.65%)	1% Increase (8.65%)
JRF	\$ 186,716	\$ 144,726	\$ 108,355

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(Dollar Amounts in Thousands)

7) CONTRIBUTIONS REQUIRED AND MADE

The actuary has computed, as of the date of the latest available actuarial valuations, the estimated present value of benefits payable to retired members, beneficiaries, and active members. The actuarial valuations for the TRS, ERS, and JRF are prepared on the projected benefit basis utilizing the entry age normal method. The present value of all expected benefits payable from each system to the present group of members and beneficiaries is calculated by adding the present value of the expected benefits payable to the active members to the present value of the expected future payments to retired members and beneficiaries.

As required by statute, the TRS, ERS, and JRF provide for employer contributions at actuarially determined rates (expressed as percentages of annual covered payroll) that accumulate sufficient assets to pay benefits when due. The employer contributions required to support the benefits of each system are determined following a level funding approach and consist of a normal contribution, an accrued liability contribution, and a portion to finance administrative costs. Additionally, a portion of the TRS and ERS employer contributions fund a preretirement death benefit. Also, a portion of the TRS employer contributions fund a term-life benefit.

For the TRS, ERS, and JRF, the normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made to determine the uniform and constant percentage rate of employer contributions which, if applied to the compensation of the average new member during the entire period of the member's anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on the member's behalf.

The 2018 retirement contributions were made in accordance with actuarially determined contribution requirements.

The RSA and its actuaries completed an investigation of the economic and demographic experience for the TRS, ERS, and JRF based upon participant data as of September 30, 2015. The purpose of the investigation was to assess the reasonableness of the actuarial assumptions and methods currently used by the RSA. This investigation resulted in changes to actuarial assumptions which are outlined in Note 6. The Boards of Control for each accepted and approved these changes in September 2016, which became effective at the beginning of fiscal year 2016.

8) PROPERTY AND EQUIPMENT

Plan assets used in plan operations are reported at historical cost less accumulated depreciation. Depreciation is determined on the straight-line basis using estimated useful lives of 30 years for buildings and 3 to 10 years for furniture and equipment. Property and equipment was comprised of the following amounts as of September 30, 2018:

	<u>TRS</u>	<u>ERS</u>
Land	\$ 5,085	\$ 2,535
Building and Improvements	107,896	53,948
Software	17,186	5,728
Furniture and Equipment	8,892	2,230
Intangible Assets in Progress	<u>14,282</u>	<u>4,729</u>
Total Property and Equipment	153,341	69,170
Less: Accumulated Depreciation	<u>(45,833)</u>	<u>(21,063)</u>
Net Property and Equipment	<u>\$ 107,508</u>	<u>\$ 48,107</u>

Intangible assets in progress represents the cost of software and professional services related to RSA's pension administration system. RSA entered into a contract with Deloitte Consulting, LLP, for an initial term of 3 years beginning October 24th, 2014, with an option to renew for two additional 1 year periods for a total term of no more than 5 years. The cost of the system is being split between TRS and ERS with TRS incurring 75% of the cost and ERS incurring 25%. This project is being accounted for pursuant to the requirements of GASB Statement No. 51, *Accounting and Financial Reporting for Intangible Assets*.

9) POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS FOR RSA EMPLOYEES

The Alabama Retired State Employees' Health Care Trust (SEIF Retired - Trust) financial statements are prepared by using the economic resources measurement focus and accrual basis of accounting. This includes for purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, information about the fiduciary net position of the SEIF Retired - Trust and additions to/deductions from its fiduciary net position. Plan member contributions are recognized in the period in which the contributions are due. Employer contributions are recognized when due pursuant to plan requirements. Benefits are recognized when due and payable in accordance with the terms of the plan. Subsequent events were evaluated by management through the date the financial statements were issued.

The SEIF - Retired Trust is a single employer defined benefit health care plan, also known as other postemployment benefits (OPEB) trust, established in 2007 under the provisions of the Alabama Retiree Health Care Funding Act of 2007 (2007-16) as an irrevocable trust fund. Constitutional amendment 798 provides further legal authority to the SEIF - Retired Trust as an irrevocable trust fund. Active and retiree health insurance benefits are paid through the State Employees' Insurance Board (SEIB) pursuant to Act 833 of the Legislature of 1965. The assets of the SEIF - Retired Trust may not be used for any purpose other than to acquire permitted investments, pay administrative expenses, and provide postemployment health care benefits to or for retired employees and their dependents in accordance with the terms of the plan. Plan assets of SEIF - Retired Trust are legally protected from creditors. The legislature has no authority or power to appropriate the assets of the SEIF - Retired Trust. Responsibility for the general administration and operations of the SEIF - Retired Trust is vested in its trustees who consist of the Board's members. In accordance with GASB pronouncements, the SEIF Retired - Trust is considered a component unit of the State of Alabama (State) and is included in the State's Comprehensive Annual Financial Report.

The SEIF plan (the Plan) provides basic medical coverage for up to 365 days of care during each hospital confinement, outpatient care, physicians' benefits, radiation therapy, and major medical benefits with no lifetime maximum. A group dental contract provides basic dental maintenance coverage with a maximum benefit amount of \$1,500 during each year for each eligible participant who elects coverage.

At September 30, 2017, the membership covered by the benefit terms consisted of:

Active Members	32,263
Inactive Members	<u>24,405</u>
Total	<u>56,668</u>

The Plan provides that the employers contribute monthly for the medical and dental insurance of participating employees. Coverage is also available to dependents of employees with their medical premiums typically being paid by the employee. Employee and dependent premium amounts are determined annually and are set at a rate necessary to provide sufficient funds to pay all claims and reasonable expenses of administering the plans.

At September 30, 2018, the TRS reported a liability of \$16,708 (dollar amount in thousands) for its proportionate share of the net OPEB liability. The net OPEB liability was measured as of September 30, 2017, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of September 30, 2016. The TRS's proportion of the net OPEB liability was based on a projection of the TRS's long-term share of contributions to the OPEB plan relative to the projected contributions of all participating employers, actuarially determined. At September 30, 2017, the TRS's proportion was 0.528190%, which was an increase of 0.018865% from its proportion measured as of September 30, 2016.

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Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2018

(Dollar Amounts in Thousands)

For the year ended September 30, 2018, the TRS recognized OPEB expense of \$2,084. At September 30, 2018, the TRS reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected & Actual Experience	\$ -	\$ -
Changes of Assumptions	-	1,606
Net Difference between Projected & Actual		
Earnings on OPEB Plan Investments	-	28
Changes in Proportion & Differences between Employer		
Contributions & Proportionate Share of Contributions	526	-
Employer Contributions Subsequent to the Measurement Date	454	-
Total	\$ 980	\$ 1,634

The TRS will recognize \$454 of reported deferred outflows of resources related to OPEB resulting from contributions subsequent to the measurement date as a reduction of net OPEB liability in the fiscal year ended September 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

Fiscal Year Ended September 30:	
2019	\$ (254)
2020	\$ (254)
2021	\$ (254)
2022	\$ (254)
2023	\$ (91)
Thereafter	\$ -

At September 30, 2018, the ERS reported a liability of \$11,871 for its proportionate share of the net OPEB liability. The net OPEB liability was measured as of September 30, 2017, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of September 30, 2016. The ERS's proportion of the net OPEB liability was based on a projection of the ERS's long-term share of contributions to the OPEB plan relative to the projected contributions of all participating employers, actuarially determined. At September 30, 2017, the ERS's proportion was 0.375277%, which was a decrease of 0.008636% from its proportion measured as of September 30, 2016.

For the year ended September 30, 2018, the ERS recognized OPEB expense of \$1,212. At September 30, 2018, the ERS reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected & Actual Experience	\$ -	\$ -
Changes of Assumptions	-	1,141
Net Difference between Projected & Actual		
Earnings on OPEB Plan Investments	-	20
Changes in Proportion & Differences between Employer		
Contributions & Proportionate Share of Contributions	-	241
Employer Contributions Subsequent to the Measurement Date	306	-
Total	\$ 306	\$ 1,402

The ERS will recognize \$306 of reported deferred outflows of resources related to OPEB resulting from contributions subsequent to the measurement date as a reduction of net OPEB liability in the fiscal year ended September 30, 2019 (dollar amount in thousands). Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows (dollar amounts in thousands):

Fiscal Year Ended	
September 30:	
2019	\$ (321)
2020	\$ (321)
2021	\$ (321)
2022	\$ (321)
2023	\$ (117)
Thereafter	\$ -

At September 30, 2018, the JRF reported a liability of \$99 for its proportionate share of the net OPEB liability (dollar amount in thousands). The net OPEB liability was measured as of September 30, 2017, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of September 30, 2016. The JRF's proportion of the net OPEB liability was based on a projection of the JRF's long-term share of contributions to the OPEB plan relative to the projected contributions of all participating employers, actuarially determined. At September 30, 2017, the JRF's proportion was 0.003141%, which was an increase of 0.000028% from its proportion measured as of September 30, 2016.

For the year ended September 30, 2018, the JRF recognized OPEB expense of \$13 (dollar amount in thousands). At September 30, 2018, the JRF reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources (dollar amounts in thousands):

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected & Actual Experience	\$ -	\$ -
Changes of Assumptions	-	10
Net Difference between Projected & Actual		
Earnings on OPEB Plan Investments	-	-
Changes in Proportion & Differences between Employer		
Contributions & Proportionate Share of Contributions	1	-
Employer Contributions Subsequent to the Measurement Date	2	-
Total	\$ 3	\$ 10

The JRF will recognize \$3 of reported deferred outflows of resources related to OPEB resulting from contributions subsequent to the measurement date as a reduction of net OPEB liability in the fiscal year ended September 30, 2019 (dollar amount in thousands). Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows (dollar amounts in thousands):

Fiscal Year Ended	
September 30:	
2019	\$ (2)
2020	\$ (2)
2021	\$ (2)
2022	\$ (2)
2023	\$ (1)
Thereafter	\$ -

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(Dollar Amounts in Thousands)

The total OPEB liability was determined by an actuarial valuation as of September 30, 2016, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.75%
Salary Increases*	5.00-3.25% for State and Local Employees 4.50% for State Police 3.50-3.25% for Judges
Long-Term Investment Rate of Return**	7.50%
Municipal Bond Index Rate at Measurement Date	3.57%
Municipal Bond Index Rate at Prior Measurement Date	2.93%
Projected Year for Fiduciary Net Position to be Depleted	2021
Single Equivalent Interest Rate at Measurement Date	3.60%
Single Equivalent Interest Rate at Prior Measurement Date	2.96%
Healthcare Cost Trend Rate	
Pre-Medicare Eligible	7.75%
Medicare Eligible	5.00%
Ultimate Trend Rate	
Pre-Medicare Eligible	5.00%
Medicare Eligible	5.00%
Year of Ultimate Trend Rate	2021

*Includes 3.00% wage inflation.

**Compounded annually, net of investment expense, and includes inflation.

The rates of mortality for the period after service retirement are according to the sex distinct RP-2000 Blue Collar Mortality Table projected to 2020 using scale BB with an adjustment of 125% for males and 120% for females age 78 and older. The rates of mortality for the period after disability retirement are according to the sex distinct RP-2000 Disabled Retiree Mortality Table projected to 2020 using scale BB with an adjustment of 130% for females.

The decremental assumptions and methods used in the valuation were selected based on the actuarial experience study prepared as of September 30, 2015, submitted to and adopted by the State Employees' Insurance Board on September 29, 2016.

The remaining actuarial assumptions (e.g., initial per capita costs, health care cost trends, rate of plan participation, rates of plan election, etc.) used in the September 30, 2016 valuation were based on a review of recent plan experience done concurrently with the September 30, 2016 valuation.

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

	Target Allocation	Long-Term Expected Rate of Return*
Fixed Income	28.20%	4.40%
U.S. Domestic Stocks	55.20%	8.70%
International Developed Market Stocks	10.80%	9.80%
Cash	5.80%	1.50%
Total	<u>100.00%</u>	

*Includes assumed rate of inflation of 2.50%.

The discount rate (also known as the Single Equivalent Interest Rate (SEIR), as described by GASB 74) used to measure the total OPEB liability at September 30, 2017 was 3.60%. The discount rate used to measure the total OPEB liability at the prior measurement date was 2.96%. The projection of cash flows used to determine the discount rate assumed that plan contributions will be made based on the average of the last five years of current contribution rates, indexed with inflation. The discount rate determination will use a municipal bond rate to the extent the trust is projected to run out of money before all benefits are paid. The rate used, if necessary, for this purpose is the monthly average of the Bond Buyers General Obligation 20-year Municipal Bond Index Rate (formerly published monthly by the Board of Governors of the Federal Reserve System). Projected future benefit payments for all current plan members were projected through 2115.

The following table presents the TRS, ERS, and JRF's proportionate shares of the net OPEB liability of the Trust calculated using the current healthcare trend rate, as well as what the net OPEB liability would be if calculated using one percentage point lower or one percentage point higher than the current rate (dollar amounts in thousands):

	1% Decrease (6.75% decreasing to 4% for pre-Medicare and Medicare Eligible)	Current Healthcare Trend Rate (7.75% decreasing to 5% for pre-Medicare and Medicare Eligible)	1% Increase (8.75% decreasing to 6% for pre-Medicare and Medicare Eligible)
TRS	\$ 13,825	\$ 16,708	\$ 20,446
ERS	\$ 9,823	\$ 11,871	\$ 14,527
JRF	\$ 82	\$ 99	\$ 122

The following table presents the proportionate share of the net OPEB liability for TRS, ERS, and JRF calculated using the discount rate of 3.60%, as well as what the net OPEB liability would be if calculated using one percentage point lower or one percentage point higher than the current rate (dollar amounts in thousands):

	1% Decrease (2.60%)	Current Discount Rate (3.60%)	1% Increase (4.60%)
TRS	\$ 19,931	\$ 16,708	\$ 14,154
ERS	\$ 14,161	\$ 11,871	\$ 10,056
JRF	\$ 119	\$ 99	\$ 84

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10) PENSION PLAN FOR RSA EMPLOYEES

A portion of the RSA employees participates in the TRS pension plan, which is a cost-sharing plan, and a portion of the RSA employees participates in the ERS pension plan, which is an agent multiple-employer pension plan. As a component unit, RSA employees participating in the ERS pension plan are valued with all other State of Alabama employees, and therefore, report under the requirements of a cost-sharing unit.

A. Teachers' Retirement System of Alabama

The TRS, a cost-sharing multiple-employer public employee retirement plan, was established as of September 15, 1939, pursuant to the *Code of Alabama 1975, Title 16, Chapter 25* (Act 419 of the Legislature of 1939) for the purpose of providing retirement allowances and other specified benefits for qualified persons employed by State-supported educational institutions. The responsibility for the general administration and operation of the TRS is vested in its Board of Control. The TRS Board of Control consists of 15 trustees. Note 1 of this report outlines the composition of the TRS Board of Control. The Plan is administered by RSA and the Plan issues a Comprehensive Annual Financial Report each year. It is available at www.rsa-al.gov.

State law establishes retirement benefits as well as death and disability benefits and any ad hoc increase in postretirement benefits for the TRS. Benefits for TRS members vest after 10 years of creditable service. TRS members who retire after age 60 with 10 years or more of creditable service or with 25 years of service (regardless of age) are entitled to an annual retirement benefit, payable monthly for life. Service and disability retirement benefits are based on a guaranteed minimum or a formula method, with the member receiving payment under the method that yields the highest monthly benefit. Under the formula method, members of the TRS are allowed 2.0125% of their average final compensation (highest 3 of the last 10 years) for each year of service.

Act 377 of the Legislature of 2012 established a new tier of benefits (Tier 2) for members hired on or after January 1, 2013. Tier 2 TRS members are eligible for retirement after age 62 with 10 years or more of creditable service and are entitled to an annual retirement benefit, payable monthly for life. Service and disability retirement benefits are based on a guaranteed minimum or a formula method, with the member receiving payment under the method that yields the highest monthly benefit. Under the formula method, Tier 2 members of the TRS are allowed 1.65% of their average final compensation (highest 5 of the last 10 years) for each year of service. Members are eligible for disability retirement if they have 10 years of credible service, are currently in-service, and determined by the RSA Medical Board to be permanently incapacitated from further performance of duty. Preretirement death benefits are calculated and paid to the beneficiary based on the member's age, service credit, employment status, and eligibility for retirement.

Covered members of the TRS contributed 5% of earnable compensation to the TRS as required by statute until September 30, 2011. From October 1, 2011, to September 30, 2012, covered members of the TRS were required by statute to contribute 7.25% of earnable compensation. Effective October 1, 2012, covered members of the TRS are required by statute to contribute 7.50% of earnable compensation. Certified law enforcement, correctional officers, and firefighters of the TRS contributed 6% of earnable compensation as required by statute until September 30, 2011. From October 1, 2011, to September 30, 2012, certified law enforcement, correctional officers, and firefighters of the TRS were required by statute to contribute 8.25% of earnable compensation. Effective October 1, 2012, certified law enforcement, correctional officers, and firefighters of the TRS are required by statute to contribute 8.50% of earnable compensation. Tier 2 covered members of the TRS contribute 6% of earnable compensation to the TRS as required by statute. Tier 2 certified law enforcement, correctional officers, and firefighters of the TRS are required by statute to contribute 7% of earnable compensation.

Participating employers' contractually required contribution rate for the fiscal year ended September 30, 2018, was 12.24% of annual pay for Tier 1 members and 11.01% of annual pay for Tier 2 members. These required contribution rates are a percent of annual payroll, actuarially determined as an amount that, when combined with member contributions, is expected to finance the costs of benefits earned by members during the year, with an additional amount to finance any unfunded accrued liability. Total TRS employer contributions to the pension plan from the System were \$1,725 for the fiscal year ended September 30, 2018.

At September 30, 2018, in accordance with GASB Statement No. 68, the TRS reported a net pension liability of \$19,504 for its proportionate share of the TRS pension plan's total net pension liability as determined under GASB Statement No. 67 (dollar amount in thousands). The TRS pension plan's total pension liability used to calculate the TRS's net pension liability was determined by an actuarial valuation as of September 30, 2016, and rolled forward to TRS's measurement date of September 30, 2017. The TRS's share of the net pension liability was based on the TRS's share of contributions to the pension plan relative to the total employer contributions of all participating TRS employers. At September 30, 2017, the TRS's proportion was 0.198447%, which was an increase of 0.002957% from its proportion measured as of September 30, 2016.

For the year ended September 30, 2018, the TRS recognized pension expense of \$2,047. At September 30, 2018, the TRS reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources (dollar amounts in thousands):

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected & Actual Experience	\$ -	\$ 836
Changes of Assumptions	1,164	-
Net Difference between Projected & Actual		
Earnings on Pension Plan Investments	-	1,166
Changes in Proportion & Differences between Employer		
Contributions & Proportionate Share of Contributions	1,678	104
Employer Contributions Subsequent to the Measurement Date	1,725	-
Total	\$ 4,567	\$ 2,106

The TRS will recognize \$1,725 of reported deferred outflows of resources related to pensions resulting from contributions subsequent to the measurement date as a reduction of net pension liability in the fiscal year ended September 30, 2019 (dollar amount in thousands). Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows (dollar amounts in thousands):

Fiscal Year Ended	
September 30:	
2019	\$ 507
2020	\$ 565
2021	\$ (88)
2022	\$ (238)
2023	\$ (10)
Thereafter	\$ -

The total pension liability was determined by an actuarial valuation as of September 30, 2016, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.75%
Projected Salary Increases	3.25% - 5.00%
Investment Rate of Return*	7.75%

*Net of pension plan investment expense

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2018

(Dollar Amounts in Thousands)

The actuarial assumptions used in the actuarial valuation as of September 30, 2016, were based on the results of an investigation of the economic and demographic experience for the TRS based upon participant data as of September 30, 2015. This investigation resulted in changes to the actuarial assumptions. The Board of Control accepted and approved these changes in September 2016, which became effective at the beginning of fiscal year 2016.

Mortality rates for TRS were based on the sex distinct RP-2000 White Collar Mortality Table projected to 2020 using scale BB and adjusted 115% for males and 112% for females age 78 and older. The rates of disabled mortality were based on the sex distinct RP-2000 Disabled Mortality Table projected to 2020 using scale BB and adjusted 105% for males and 120% for females.

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

	Target Allocation	Long-Term Expected Rate of Return*
Fixed Income	17.00%	4.40%
U.S. Large Stocks	32.00%	8.00%
U.S. Mid Stocks	9.00%	10.00%
U.S. Small Stocks	4.00%	11.00%
International Developed Market Stocks	12.00%	9.50%
International Emerging Market Stocks	3.00%	11.00%
Alternatives	10.00%	10.10%
Real Estate	10.00%	7.50%
Cash	3.00%	1.50%
Total	<u>100.00%</u>	

*Includes assumed rate of inflation of 2.50%.

The discount rate used to measure the total pension liability was 7.75%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, components of the pension plan's fiduciary net position were 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.

The following table presents the net pension liability of the TRS calculated using the discount rate of 7.75%, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate:

	1% Decrease (6.75%)	Current Discount Rate (7.75%)	1% Increase (8.75%)
TRs's Proportionate Share of Collective Net Pension Liability	\$ 26,903	\$ 19,504	\$ 13,246

Detailed information about the pension plan's fiduciary net position is available in the separately issued RSA Comprehensive Annual Financial Report for the fiscal year ended September 30, 2017. The supporting actuarial information is included in the GASB Statement No. 67 Report for the TRS prepared as of September 30, 2017. The auditor's report dated August 20, 2018, on the total pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense for the sum of all participating entities as of September 30, 2017, along with supporting schedules is also available. The additional financial and actuarial information is available at www.rsa-al.gov.

B. Employees' Retirement System of Alabama

The ERS, an agent multiple-employer public employee retirement plan, was established as of October 1, 1945, pursuant to the *Code of Alabama 1975, Title 36, Chapter 27* (Act 515 of the Legislature of 1945). The purpose of the ERS is to provide retirement allowances and other specified benefits for state employees, State Police, and on an elective basis, to all cities, counties, towns, and quasi-public organizations. RSA employees who participate in the ERS are employees of the ERS and JRF. The responsibility for the general administration and operation of the ERS is vested in its Board of Control. The ERS Board of Control consists of 13 trustees. Note 1 of this report outlines the composition of the ERS Board of Control. The Plan is administered by RSA and the Plan issues a Comprehensive Annual Financial Report each year. It is available at www.rsa-al.gov.

State law establishes retirement benefits as well as death and disability benefits and any ad hoc increase in postretirement benefits for the ERS. Benefits for ERS members vest after 10 years of creditable service. State employees who retire after age 60 (52 for State Police) with 10 years or more of creditable service or with 25 years of service (regardless of age) are entitled to an annual retirement benefit, payable monthly for life. Local employees who retire after age 60 with 10 years or more of creditable service or with 25 or 30 years of service (regardless of age), depending on the particular entity's election, are entitled to an annual retirement benefit, payable monthly for life. Service and disability retirement benefits are based on a guaranteed minimum or a formula method, with the member receiving payment under the method that yields the highest monthly benefit. Under the formula method, members of the ERS (except State Police) are allowed 2.0125% of their average final compensation (highest 3 of the last 10 years) for each year of service. State Police are allowed 2.875% for each year of State Police service in computing the formula method.

Act 377 of the Legislature of 2012 established a new tier of benefits (Tier 2) for members hired on or after January 1, 2013. Tier 2 ERS members are eligible for retirement after age 62 (56 for State Police) with 10 years or more of creditable service and are entitled to an annual retirement benefit, payable monthly for life. Service and disability retirement benefits are based on a guaranteed minimum or a formula method, with the member receiving payment under the method that yields the highest monthly benefit. Under the formula method, Tier 2 members of the ERS (except State Police) are allowed 1.65% of their average final compensation (highest 5 of the last 10 years) for each year of service. State Police are allowed 2.375% for each year of state police service in computing the formula method.

Members are eligible for disability retirement if they have 10 years of credible service, are currently in-service, and determined by the RSA Medical Board to be permanently incapacitated from further performance of duty. Preretirement death benefits are calculated and paid to the beneficiary on the member's age, service credit, employment status, and eligibility for retirement.

As of September 30, 2017, ERS membership included approximately 88,517 active participants. Note 1 of this report contains details about the classifications of participants and the number of participants within each classification.

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2018

(Dollar Amounts in Thousands)

Covered members of the ERS contributed 5% of earnable compensation to the ERS as required by statute until September 30, 2011. From October 1, 2011, to September 30, 2012, covered members of the ERS were required by statute to contribute 7.25% of earnable compensation. Effective October 1, 2012, covered members of the ERS are required by statute to contribute 7.50% of earnable compensation. Certified law enforcement, correctional officers, and firefighters of the ERS contributed 6% of earnable compensation as required by statute until September 30, 2011. From October 1, 2011, to September 30, 2012, certified law enforcement, correctional officers, and firefighters of the ERS were required by statute to contribute 8.25% of earnable compensation. Effective October 1, 2012, certified law enforcement, correctional officers, and firefighters of the ERS are required by statute to contribute 8.50% of earnable compensation. State Police of the ERS contribute 10% of earnable compensation. ERS local participating employers are not required by statute to increase contribution rates for their members. Tier 2 covered members of the ERS contribute 6% of earnable compensation to the ERS as required by statute. Tier 2 certified law enforcement, correctional officers, and firefighters of the ERS are required by statute to contribute 7% of earnable compensation. Tier 2 State Police members of the ERS contribute 10% of earnable compensation. These contributions rates are the same for Tier 2 covered members of ERS local participating employers.

The participating employer contribution rate for the ERS State Regular Employees contractually required contribution rate for the year ended September 30, 2018, was 13.94% of annual pay for Tier 1 members and 13.29% of annual pay for Tier 2 members. These required contribution rates are a percent of annual payroll, actuarially determined as an amount that, when combined with member contributions, is expected to finance the costs of benefits earned by members during the year, with an additional amount to finance any unfunded accrued liability. Total employer contributions to the pension plan from ERS were \$1,059 and from JRF were \$20 for the fiscal year ended September 30, 2018.

At September 30, 2018, in accordance with GASB Statement No. 68, the ERS reported a net pension liability of \$14,468 and the JRF reported a net pension liability of \$275 for their respective proportionate shares of the total net pension liability of the ERS State Regular Employees' retirement plan. The ERS pension plan's total net pension liability was measured as of September 30, 2017, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of September 30, 2016, and rolled forward to the ERS and JRF's measurement date of September 30, 2017. ERS and JRF's proportion of the total net pension liability was based on the employers' shares of contributions to the pension plan relative to the total employer contributions of all participating ERS State Regular employers. At September 30, 2017, ERS's proportion was 0.54997143%, which was a decrease of 0.03857498% from its proportion measured as of September 30, 2016. At September 30, 2017, the JRF's proportion was 0.01044238%, which was a decrease of 0.00009652% from its proportion measured as of September 30, 2016.

For the fiscal year ended September 30, 2018, the ERS recognized pension expense of \$1,468. At September 30, 2018, ERS reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected & Actual Experience	\$ 10	\$ 273
Changes of Assumptions	464	-
Net Difference between Projected & Actual		
Earnings on Pension Plan Investments	-	831
Changes in Proportion & Differences between Employer		
Contributions & Proportionate Share of Contributions	968	755
Employer Contributions Subsequent to the Measurement Date	1,059	-
Total	\$ 2,501	\$ 1,859

The ERS will recognize \$1,059 of reported deferred outflows of resources related to pensions resulting from contributions subsequent to the measurement date as a reduction of net pension liability in the fiscal year ended September 30, 2019 (dollar amount in thousands). Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows (dollar amounts in thousands):

Fiscal Year Ended	
September 30:	
2019	\$ -
2020	\$ 262
2021	\$ 157
2022	\$ (584)
2023	\$ (253)
Thereafter	\$ -

For the fiscal year ended September 30, 2018, the JRF recognized pension expense of \$30 (dollar amount in thousands). At September 30, 2018, the JRF reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources (dollar amounts in thousands):

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected & Actual Experience	\$ -	\$ 5
Changes of Assumptions	9	-
Net Difference between Projected & Actual		
Earnings on Pension Plan Investments	-	16
Changes in Proportion & Differences between Employer		
Contributions & Proportionate Share of Contributions	19	2
Employer Contributions Subsequent to the Measurement Date	20	-
Total	\$ 48	\$ 23

The JRF will recognize \$20 of reported deferred outflows of resources related to pensions resulting from contributions subsequent to the measurement date as a reduction of net pension liability in the fiscal year ended September 30, 2019 (dollar amount in thousands). Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows (dollar amounts in thousands):

Fiscal Year Ended	
September 30:	
2019	\$ -
2020	\$ 14
2021	\$ 4
2022	\$ (8)
2023	\$ (5)
Thereafter	\$ -

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2018

(Dollar Amounts in Thousands)

The total pension liability was determined by an actuarial valuation as of September 30, 2016, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.75%
Projected Salary Increases	3.25% - 5.00%
Investment Rate of Return*	7.75%

*Net of pension plan investment expense

Mortality rates for ERS were based on the sex distinct RP-2000 Blue Collar Mortality Table projected to 2020 using scale BB with an adjustment of 125% for males and 120% for females age 78 and older. The rates of disabled mortality were based on the sex distinct RP-2000 Disabled Retiree Mortality Table projected to 2020 using scale BB with an adjustment of 130% for females.

The actuarial assumptions used in the actuarial valuation as of September 30, 2016, were based on the results of an investigation of the economic and demographic experience for the TRS, ERS, and JRF based upon participant data as of September 30, 2015, completed by the RSA and its actuaries. The purpose of the investigation was to assess the reasonableness of the actuarial assumptions and methods currently used by the RSA. This investigation resulted in changes to the actuarial assumptions. The Boards of Control for each accepted and approved these changes in September 2016, which became effective at the beginning of fiscal year 2016.

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

	Target Allocation	Long-Term Expected Rate of Return*
Fixed Income	17.00%	4.40%
U.S. Large Stocks	32.00%	8.00%
U.S. Mid Stocks	9.00%	10.00%
U.S. Small Stocks	4.00%	11.00%
International Developed Market Stocks	12.00%	9.50%
International Emerging Market Stocks	3.00%	11.00%
Alternatives	10.00%	10.10%
Real Estate	10.00%	7.50%
Cash	3.00%	1.50%
Total	100.00%	

*Includes assumed rate of inflation of 2.50%.

The discount rate used to measure the total pension liability was 7.75%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, components of the pension plan's fiduciary net position were 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.

The following table presents the net pension liability of the ERS and JRF calculated using the discount rate of 7.75%, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate (dollar amounts in thousands):

	1% Decrease	Current	1% Increase
	(6.75%)	Discount Rate	(8.75%)
	(7.75%)		
ERS's Proportionate Share of			
Collective Net Pension Liability	\$ 18,711	\$ 14,468	\$ 10,859
JRF's Proportionate Share of			
Collective Net Pension Liability	\$ 355	\$ 275	\$ 206

Detailed information about the pension plan's fiduciary net position is available in the separately issued RSA Comprehensive Annual Financial Report for the fiscal year ended September 30, 2017. The supporting actuarial information is included in the GASB Statement No. 68 Report for the ERS prepared as of September 30, 2017. The auditor's report dated August 31, 2018, on the Schedule of Changes in Fiduciary Net Position by Employer and accompanying notes is also available. The additional financial and actuarial information is available at www.rsa-al.gov.

11) CHANGE IN ACCOUNTING PRINCIPLE

Fiduciary Net Position as of October 1, 2017, has been restated as follows for the implementation of GASB Statement No. 75 (dollar amounts in thousands):

	TRS	ERS	JRF
Fiduciary Net Position as previously reported at 9/30/2017	\$ 24,651,457	\$ 12,122,471	\$ 302,578
Prior Period Adjustment:			
OPEB Obligation based upon superseded statements	5,719	5,335	47
Beginning Net OPEB Liability	(17,464)	(13,164)	(107)
Deferred Outflows of Resources:			
Employer Contributions made during fiscal year 2018	490	348	3
Total Prior Period Adjustment	(11,255)	(7,481)	(57)
Fiduciary Net Position, as restated, on 10/1/2017	\$ 24,640,202	\$ 12,114,990	\$ 302,521

12) RELATED PARTY TRANSACTIONS

The TRS and ERS jointly own office buildings in Montgomery and Mobile and lease office space to agencies of the State of Alabama. These agencies are obligated to the TRS and ERS to lease space for varying terms through the year 2029. Rental payments and other agreed upon payments (reported as investment income) from leases with state agencies totaled \$33,261,711 (dollar amount not in thousands) during the 2018 fiscal year.

Act 481 of the Legislature of 2018 authorized a one-time transfer from the Public Education Employees' Health Insurance Plan (PEEHIP) for \$24,700,000 (dollar amount not in thousands) to fund a one-time lump-sum bonus payment to retirees of the TRS.

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Notes to the Combined Financial Statements

For the Fiscal Year Ended September 30, 2018

(Dollar Amounts in Thousands)

13) SUBSEQUENT EVENTS

During fiscal year 2018, Raycom Media Corporation, a private debt and equity investment held by the Systems, announced an agreement to merge with Gray Television, Inc. On January 2, 2019, the merger was approved and settled. All resulting income and expenses will be recognized in fiscal year 2019.



RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Required Supplementary Information
For the Fiscal Year Ended September 30, 2018

SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY
& RELATED RATIOS

TRS

For the Fiscal Years Ended September 30

(Dollar Amounts in Thousands)

	2018	2017	2016	2015	2014
Total Pension Liability					
Service Cost*	\$ 637,532	\$ 617,120	\$ 627,938	\$ 660,390	\$ 602,605
Interest	2,584,330	2,532,457	2,488,310	2,421,604	2,352,804
Benefit Changes	-	-	-	-	-
Difference Between Expected & Actual					
Experience	265,644	(261,067)	(290,388)	(70,200)	-
Changes of Assumptions	178,049	-	942,133	-	-
Benefit Payments	(2,208,925)	(2,117,351)	(2,161,570)	(2,080,896)	(1,997,877)
Refunds of Contributions	(58,552)	(53,526)	(57,566)	(55,898)	(56,145)
Net Change in Total Pension Liability	1,398,078	717,633	1,548,857	875,000	901,387
Total Pension Liability - Beginning	34,479,936	33,762,303	32,213,446	31,338,446	30,437,059
Total Pension Liability - Ending (A)	\$ 35,878,014	\$ 34,479,936	\$ 33,762,303	\$ 32,213,446	\$ 31,338,446
Plan Fiduciary Net Position reserved to fund Total Pension Liability					
Contributions - Employer	\$ 802,598	\$ 782,702	\$ 751,909	\$ 737,677	\$ 716,753
Contributions - Member	493,466	489,638	475,980	477,918	480,849
Other	13,445	-	-	172,982	-
Net Investment Income	2,264,234	2,636,098	2,199,396	261,461	2,468,499
Benefit Payments	(2,208,925)	(2,117,351)	(2,161,570)	(2,080,896)	(1,997,877)
Refunds of Contributions	(58,552)	(53,526)	(57,566)	(55,898)	(56,145)
Administrative Expenses	(22,290)	(22,402)	(19,582)	(19,331)	-
Net Change in Plan Fiduciary Net Position	1,283,976	1,715,159	1,188,567	(506,087)	1,612,079
Plan Fiduciary Net Position - Beginning	24,651,457	22,936,298	21,747,731	22,253,818	20,641,739
Plan Fiduciary Net Position - Ending (B)	\$ 25,935,433	\$ 24,651,457	\$ 22,936,298	\$ 21,747,731	\$ 22,253,818
Net Pension Liability - Ending (A - B)	\$ 9,942,581	\$ 9,828,479	\$ 10,826,005	\$ 10,465,715	\$ 9,084,628
Plan Fiduciary Net Position as a					
Percentage of the Total Pension Liability	72.29%	71.50%	67.93%	67.51%	71.01%
Covered Payroll**	\$ 6,899,800	\$ 6,623,929	\$ 6,541,310	\$ 6,541,054	\$ 6,466,923
Net Pension Liability as a Percentage of					
Covered Payroll	144.10%	148.38%	165.50%	160.00%	140.48%

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

*Also called the Entry Age Normal Cost.

**Payroll from the annual actuarial valuation, which was used to calculate the total pension liability, increased with assumed annual payroll growth.

**SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY
& RELATED RATIOS**

ERS

For the Fiscal Years Ended September 30

(Dollar Amounts in Thousands)

	2018	2017	2016	2015	2014
Total Pension Liability					
Service Cost*	\$ 307,064	\$ 325,138	\$ 308,840	\$ 346,440	\$ 298,985
Interest	1,303,322	1,271,712	1,233,415	1,199,079	1,164,853
Benefit Changes	-	-	-	-	-
Difference Between Expected & Actual Experience	(79,478)	(64,111)	101	(35,546)	-
Changes of Assumptions	87,608	-	544,310	-	-
Benefit Payments	(1,102,478)	(1,056,006)	(1,043,293)	(1,023,732)	(948,645)
Refunds of Contributions	(44,890)	(46,374)	(44,660)	(49,865)	(49,767)
Net Change in Total Pension Liability	471,148	430,359	998,713	436,376	465,426
Total Pension Liability - Beginning	17,390,739	16,960,380	15,961,667	15,525,291	15,059,865
Total Pension Liability - Ending (A)	\$ 17,861,887	\$ 17,390,739	\$ 16,960,380	\$ 15,961,667	\$ 15,525,291
Plan Fiduciary Net Position reserved to fund Total Pension Liability					
Contributions - Employer	\$ 426,340	\$ 426,369	\$ 435,243	\$ 411,087	\$ 379,163
Contributions - Member	241,741	233,901	238,017	229,254	226,015
Other	(7,481)	-	-	68,897	-
Net Investment Income	1,098,412	1,402,009	1,052,886	126,335	1,183,377
Benefit Payments	(1,102,478)	(1,056,006)	(1,043,293)	(1,023,732)	(948,645)
Refunds of Contributions	(44,890)	(46,374)	(44,660)	(49,865)	(49,767)
Administrative Expenses	(13,763)	(14,502)	(13,023)	(13,182)	-
Net Change in Plan Fiduciary Net Position	597,881	945,397	625,170	(251,206)	790,143
Plan Fiduciary Net Position - Beginning	12,122,471	11,177,074	10,551,904	10,803,110	10,012,967
Plan Fiduciary Net Position - Ending (B)	\$ 12,720,352	\$ 12,122,471	\$ 11,177,074	\$ 10,551,904	\$ 10,803,110
Net Pension Liability - Ending (A - B)	\$ 5,141,535	\$ 5,268,268	\$ 5,783,306	\$ 5,409,763	\$ 4,722,181
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	71.22%	69.71%	65.90%	66.11%	69.58%
Covered Payroll**	\$ 3,692,241	\$ 3,680,078	\$ 3,592,658	\$ 3,556,282	\$ 3,511,115
Net Pension Liability as a Percentage of Covered Payroll	139.25%	143.16%	160.98%	152.12%	134.49%

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

*Also called the Entry Age Normal Cost.

**Payroll from the annual actuarial valuation, which was used to calculate the total pension liability, increased with assumed annual payroll growth.

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Required Supplementary Information
For the Fiscal Year Ended September 30, 2018

SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY
& RELATED RATIOS

JRF

For the Fiscal Years Ended September 30

(Dollar Amounts in Thousands)

	2018	2017	2016	2015	2014
Total Pension Liability					
Service Cost*	\$ 9,811	\$ 9,815	\$ 9,807	\$ 9,644	\$ 9,481
Interest	34,112	33,668	32,695	32,385	31,521
Benefit Changes	-	-	-	-	-
Difference Between Expected & Actual Experience	(9,134)	(4,399)	(2,487)	(7,391)	-
Changes of Assumptions	3,873	-	17,792	-	-
Benefit Payments	(33,419)	(32,807)	(30,902)	(30,356)	(29,838)
Refunds of Contributions	(130)	(353)	(106)	(147)	(46)
Net Change in Total Pension Liability	5,113	5,924	26,799	4,135	11,118
Total Pension Liability - Beginning	456,927	451,003	424,204	420,069	408,951
Total Pension Liability - Ending (A)	\$ 462,040	\$ 456,927	\$ 451,003	\$ 424,204	\$ 420,069
Plan Fiduciary Net Position reserved to fund Total Pension Liability					
Contributions - Employer	\$ 17,180	\$ 17,373	\$ 17,529	\$ 15,077	\$ 15,250
Contributions - Member	3,867	3,972	3,723	3,683	3,764
Net Investment Income	27,622	32,685	28,322	(856)	31,343
Benefit Payments	(33,419)	(32,807)	(30,902)	(30,356)	(29,838)
Refunds of Contributions	(130)	(353)	(106)	(147)	(46)
Administrative Expenses	(328)	(334)	(398)	(356)	-
Other	(56)	-	-	1,854	-
Net Change in Plan Fiduciary Net Position	14,736	20,536	18,168	(11,101)	20,473
Plan Fiduciary Net Position - Beginning	302,578	282,042	263,874	274,975	254,502
Plan Fiduciary Net Position - Ending (B)	\$ 317,314	\$ 302,578	\$ 282,042	\$ 263,874	\$ 274,975
Net Pension Liability - Ending (A - B)	\$ 144,726	\$ 154,349	\$ 168,961	\$ 160,330	\$ 145,094
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability Covered Payroll**	68.68%	66.22%	62.54%	62.20%	65.46%
Net Pension Liability as a Percentage of Covered Payroll	317.23%	348.31%	383.14%	363.67%	335.28%

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

*Also called the Entry Age Normal Cost.

**Payroll from the annual actuarial valuation, which was used to calculate the total pension liability, increased with assumed annual payroll growth.

SCHEDULES OF EMPLOYER PENSION CONTRIBUTIONS
For the Ten Fiscal Years Ended September 30, 2018
(Dollar Amounts in Thousands)

TEACHERS' RETIREMENT SYSTEM §

Fiscal Year	Actuarially Determined Employer Contributions	Actual Employer Contributions	Annual Contribution Deficiency (Excess)	Covered Payroll*	Actual Contributions as a % of Covered Payroll**
2018	\$ 802,598	\$ 802,598	\$ -	\$ 6,699,482	11.98
2017	782,702	782,702	-	6,633,068	11.80
2016	751,909	751,909	-	6,377,515	11.79
2015	737,677	737,677	-	6,331,991	11.65
2014	716,753	716,753	-	6,331,740	11.32
2013	605,465	605,465	-	6,241,907	9.70
2012	594,771	594,771	-	6,182,651	9.62
2011	755,944	755,944	-	6,232,020	12.13
2010	753,213	753,213	-	6,209,505	12.13
2009	728,822	728,822	-	6,234,577	11.69

JUDICIAL RETIREMENT FUND ¥

Fiscal Year	Actuarially Determined Employer Contributions	Actual Employer Contributions	Annual Contribution Deficiency (Excess)	Covered Payroll*	Actual Contributions as a % of Covered Payroll
2018	\$ 17,180	\$ 17,180	\$ -	\$ 42,853	40.09
2017	17,373	17,373	-	42,738	40.65
2016	17,529	17,529	-	42,775	40.98
2015	15,077	15,077	-	42,784	35.24
2014	15,250	15,250	-	43,275	35.24
2013	13,903	13,903	-	43,366	32.06
2012	10,747	10,747	-	44,136	24.35
2011	10,906	10,906	-	45,066	24.20
2010	10,814	10,814	-	44,686	24.20
2009	10,326	10,326	-	44,798	23.05

§ There are no nonemployer contributing entities in TRS.

*Estimated based on employer contribution rate and/or actual employer contributions.

**Act No. 2012-377 established a new tier of benefits (Tier 2) for members hired on or after January 1, 2013, so this percentage represents a blended rate based on both the Tier 1 and Tier 2 employer contribution rates.

¥ The State of Alabama is a nonemployer contributing entity in JRF. The State pays the employer portion of the Probate Judges' contributions.

SCHEDULE OF INVESTMENT RETURNS
For the Ten Fiscal Years Ended September 30, 2018

Fiscal Year	TRS	ERS	JRF
2018	9.42%	9.29%	9.35%
2017	11.73%	12.80%	11.88%
2016	10.37%	10.19%	10.96%
2015	1.16%	1.15%	-0.37%
2014	12.17%	12.05%	12.55%
2013	14.85%	14.53%	14.05%
2012	18.32%	18.05%	19.17%
2011	2.04%	2.39%	0.89%
2010	8.34%	8.40%	10.66%
2009	-8.20%	-10.16%	0.18%

The following schedules pertain to employees of TRS, ERS, and JRF who participate in the TRS and ERS pension plans.

SCHEDULES OF PROPORTIONATE SHARE OF THE NET PENSION LIABILITY

(Dollar Amounts in Thousands)

TEACHERS' RETIREMENT SYSTEM

Measurement Date	Fiscal Year Ended	Proportion of the Net Pension Liability (%)	Proportionate Share of the Net Pension Liability	Covered Payroll	Proportionate Share of the Net Pension Liability as a Percentage of Covered Payroll	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability
9/30/2017	9/30/2018	0.20	\$ 19,504	\$ 7,235	269.58	71.50
9/30/2016	9/30/2017	0.20	21,164	6,739	314.05	67.93
9/30/2015	9/30/2016	0.18	18,891	6,593	286.53	67.51
9/30/2014	9/30/2015	0.18	16,626	6,283	264.62	71.01

EMPLOYEES' RETIREMENT SYSTEM

Measurement Date	Fiscal Year Ended	Proportion of the Net Pension Liability (%)	Proportionate Share of the Net Pension Liability	Covered Payroll	Proportionate Share of the Net Pension Liability as a Percentage of Covered Payroll	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability
9/30/2017	9/30/2018	0.55	\$ 14,468	\$ 5,113	282.96	65.44
9/30/2016	9/30/2017	0.59	16,850	4,904	343.60	62.07
9/30/2015	9/30/2016	0.52	14,146	4,695	301.30	62.35
9/30/2014	9/30/2015	0.49	11,991	4,526	264.94	65.58

JUDICIAL RETIREMENT FUND

Measurement Date	Fiscal Year Ended	Proportion of the Net Pension Liability (%)	Proportionate Share of the Net Pension Liability	Covered Payroll	Proportionate Share of the Net Pension Liability as a Percentage of Covered Payroll	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability
9/30/2017	9/30/2018	0.01	\$ 275	\$ 152	180.92	65.44
9/30/2016	9/30/2017	0.01	302	144	209.72	62.07
9/30/2015	9/30/2016	0.01	272	136	200.00	62.35
9/30/2014	9/30/2015	0.01	170	89	191.01	65.58

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

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Required Supplementary Information
For the Fiscal Year Ended September 30, 2018

The following schedules pertain to employees of TRS, ERS, and JRF who participate in the TRS and ERS pension plans.

SCHEDULES OF PENSION CONTRIBUTIONS

For the Fiscal Years Ended September 30

(Dollar Amounts in Thousands)

TEACHERS' RETIREMENT SYSTEM

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>
Contractually Required Contribution	\$ 1,725	\$ 1,444	\$ 1,453	\$ 1,271
Contributions in relation to the				
Contractually Required Contribution	<u>(1,725)</u>	<u>(1,444)</u>	<u>(1,453)</u>	<u>(1,271)</u>
Contribution Deficiency/(Excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$ 7,663	\$ 7,235	\$ 6,739	\$ 6,593
Contributions as a Percentage of				
Covered Payroll	22.51%	19.96%	21.56%	19.28%

EMPLOYEES' RETIREMENT SYSTEM

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>
Contractually Required Contribution	\$ 1,059	\$ 1,014	\$ 1,133	\$ 896
Contributions in relation to the				
Contractually Required Contribution	<u>(1,059)</u>	<u>(1,014)</u>	<u>(1,133)</u>	<u>(896)</u>
Contribution Deficiency/(Excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$ 5,197	\$ 5,113	\$ 4,904	\$ 4,695
Contributions as a Percentage of				
Covered Payroll	20.38%	19.83%	23.10%	19.08%

JUDICIAL RETIREMENT FUND

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>
Contractually Required Contribution	\$ 21	\$ 19	\$ 21	\$ 17
Contributions in relation to the				
Contractually Required Contribution	<u>(21)</u>	<u>(19)</u>	<u>(21)</u>	<u>(17)</u>
Contribution Deficiency/(Excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$ 157	\$ 152	\$ 144	\$ 136
Contributions as a Percentage of				
Covered Payroll	13.38%	12.50%	14.58%	12.50%

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

The following schedules pertain to employees of TRS, ERS, and JRF who participate in the State Employees' Health Insurance Plan (SEHIP) which is administered by the State Employees' Insurance Board (SEIB).

SCHEDULES OF PROPORTIONATE SHARE OF THE NET OPEB LIABILITY

(Dollar Amounts in Thousands)

TEACHERS' RETIREMENT SYSTEM

Measurement Date	Fiscal Year Ended	Proportion of the Net OPEB Liability (%)	Proportionate Share of the Net OPEB Liability	Covered Payroll	Proportionate Share of the Net OPEB Liability as a Percentage of Covered Payroll	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability
9/30/2017	9/30/2018	0.53	\$ 16,708	\$ 7,235	230.93	5.05

EMPLOYEES' RETIREMENT SYSTEM

Measurement Date	Fiscal Year Ended	Proportion of the Net OPEB Liability (%)	Proportionate Share of the Net OPEB Liability	Covered Payroll	Proportionate Share of the Net OPEB Liability as a Percentage of Covered Payroll	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability
9/30/2017	9/30/2018	0.38	\$ 11,871	\$ 5,113	232.17	5.05

JUDICIAL RETIREMENT FUND

Measurement Date	Fiscal Year Ended	Proportion of the Net OPEB Liability (%)	Proportionate Share of the Net OPEB Liability	Covered Payroll	Proportionate Share of the Net OPEB Liability as a Percentage of Covered Payroll	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability
9/30/2017	9/30/2018	0.00	\$ 99	\$ 152	65.13	5.05

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

RETIREMENT SYSTEMS OF ALABAMA

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Required Supplementary Information

For the Fiscal Year Ended September 30, 2018

The following schedules pertain to employees of TRS, ERS, and JRF who participate in the State Employees' Health Insurance Plan (SEHIP) which is administered by the State Employees' Insurance Board (SEIB).

SCHEDULES OF OPEB CONTRIBUTIONS

For the Fiscal Years Ended September 30

(Dollar Amounts in Thousands)

TEACHERS' RETIREMENT SYSTEM

	<u>2018</u>
Contractually Required Contribution	\$ 454
Contributions in relation to the Contractually Required Contribution	<u>(454)</u>
Contribution Deficiency/(Excess)	<u>\$ -</u>
Covered Payroll	\$7,663
Contributions as a Percentage of Covered Payroll	5.92%

EMPLOYEES' RETIREMENT SYSTEM

	<u>2018</u>
Contractually Required Contribution	\$ 306
Contributions in relation to the Contractually Required Contribution	<u>(306)</u>
Contribution Deficiency/(Excess)	<u>\$ -</u>
Covered Payroll	\$5,197
Contributions as a Percentage of Covered Payroll	5.89%

JUDICIAL RETIREMENT FUND

	<u>2018</u>
Contractually Required Contribution	\$ 2
Contributions in relation to the Contractually Required Contribution	<u>(2)</u>
Contribution Deficiency/(Excess)	<u>\$ -</u>
Covered Payroll	\$ 157
Contributions as a Percentage of Covered Payroll	1.27%

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

Financial Section

Notes to the Required Supplementary Information
For the Fiscal Year Ended September 30, 2018

1) NET PENSION LIABILITY

A. Schedules of Changes in the Net Pension Liability & Related Ratios

The total pension liabilities presented in these schedules were provided by the Systems' actuarial consultants, Cavanaugh Macdonald Consulting, LLC. The net pension liability is measured as the total pension liability less plan fiduciary net position. The related ratios show plan net position as a percentage of the total pension liability and the net pension liability as a percentage of covered employee payroll.

B. Schedules of Employer Contributions

Contributions were made in accordance with actuarially determined contribution requirements. The employer contribution rate expressed as a percent of payroll is determined annually by reviewing a variety of factors including benefits promised, member contributions, investment earnings, mortality, and withdrawal experience. The employer contribution rates for fiscal year 2018 are in the table below. ERS local participating employer contribution rates differ for each employer.

	<u>Tier 1</u>	<u>Tier 2</u>
TRS	12.24%	11.01%
ERS - State Employees	13.94%	13.29%
ERS - State Police	44.44%	39.29%
JRF - Groups 1 & 2	40.09%	-
JRF - Group 3 - Judges & Clerks	34.32%	-
JRF - District Attorneys	19.77%	-

C. Schedule of Investment Returns

The annual money-weighted rate of return on investments is calculated as the internal rate of return on plan investments, net of plan investment expense. A money-weighted rate of return expresses investment performance, net of plan investment expense, adjusted for the changing amounts actually invested.

D. Actuarial Assumptions

The actuarially determined contribution rates in the schedules of employer contributions are calculated as of September 30, 2015, three years prior to the end of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine the most recent contribution rate reported in that schedule.

	<u>TRS</u>	<u>ERS</u>	<u>JRF</u>
Actuarial Cost Method	Entry Age Normal	Entry Age Normal	Entry Age Normal
Asset Valuation Method	5-year smoothed market	5-year smoothed market	5-year smoothed market
Amortization Method	Level percent closed	Level percent closed	Level percent closed
Remaining Amortization Period	29.5 years	Within 29.6 years - Varies by Employer	24.1 years
Actuarial Assumptions:			
Investment Rate of Return* ‡	8.00%	8.00%	8.00%
Projected Salary Increases ‡	3.50% - 8.25%	3.75% - 7.25%	4.00%
Cost of Living Adjustments	None	None	3.25%†

*Net of pension plan investment expense.

‡ Includes inflation at 3.00%.

† Per year for certain members hired prior to July 30, 1979, and for spousal benefits subject to increase.

Financial Section

Notes to the Required Supplementary Information
For the Fiscal Year Ended September 30, 2018

Changes to Benefit Terms

- TRS and ERS's member contribution rates increased from 5% (6% for certified law enforcement, correctional officers, and firefighters) of earnable compensation to 7.25% (8.25%) of earnable compensation effective October 1, 2011, and to 7.50% (8.50%) of earnable compensation effective October 1, 2012.
- TRS and ERS members hired on or after January 1, 2013, are covered under a new benefit structure.
- JRF's member contribution rate increased from 6% of earnable compensation to 8.25% of earnable compensation on October 1, 2011, and to 8.50% of earnable compensation on October 1, 2012.
- Effective November 8, 2016, any Judge or Clerk first elected or appointed on or after that date and any District Attorney serving as a District Attorney on or after that date are covered members of the JRF under a new benefit structure.

Changes of Assumptions

In December 2018, the Boards of Control adopted new discount rates for TRS, ERS, and JRF. The new discount rates were 7.70% for TRS & ERS and 7.65% for JRF.

In 2016, rates of withdrawal, retirement, disability, and mortality were adjusted to more closely reflect actual experience. In 2016, economic assumptions and the assumed rates of salary increase were adjusted to more closely reflect actual and anticipated experience. In 2016 and later, the expectation of retired life mortality was changed to the RP-2000 White Collar Mortality Table projected to 2020 using scale BB and adjusted 115% for males and 112% for females age 78 and older.

In 2010 and later, the expectation of retired life mortality was changed to the RP-2000 Mortality Tables rather than the 1994 Group Annuity Mortality Table, which was used prior to 2010. In 2010, rates of withdrawal, retirement, disability, and mortality were adjusted to more closely reflect actual experience. In 2010, assumed rates of salary increase were adjusted to more closely reflect actual and anticipated experience.

2) NET OTHER POSTEMPLOYMENT BENEFIT LIABILITY

A. Changes to Benefit Terms

Effective January 1, 2017, Medicare eligible medical and prescription drug benefits are provided through a Medicare Advantage Prescription Drug (MAPD) plan.

B. Changes of Assumptions

In 2016, rates of withdrawal, retirement, disability, and mortality were adjusted to more closely reflect actual experience. In 2016, economic assumptions and the assumed rates of salary increase were adjusted to more closely reflect actual and anticipated experience.

C. Actuarial Assumptions

The actuarially determined contribution rates in the schedule of employer contributions are calculated as of September 30, 2016, two years prior to the end of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine the recent contribution rate reported in that schedule.

Actuarial Cost Method	Projected Unit Credit
Amortization Method	Level Percent of Pay, Open
Remaining Amortization Period	30 years
Asset Valuation Method	Market Value of Assets
Inflation	3.00%
Healthcare Cost Trend Rate	
Pre-Medicare Eligible	7.50%
Medicare Eligible	5.75%
Ultimate Trend Rate	
Pre-Medicare Eligible	5.00%
Medicare Eligible	5.00%
Year of Ultimate Trend Rate	2019
Investment Rate of Return*	5.00%

*Includes inflation at 3.00%

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Schedule of Administrative Expenses

For the Fiscal Year Ended September 30, 2018

(Dollar Amounts in Thousands)

	Teachers' Retirement System	Employees' Retirement System	Judicial Retirement Fund	Totals
Personnel Services:				
Salaries	\$ 7,663	\$ 5,197	\$ 157	\$ 13,017
Employee Fringe Benefits	3,524	2,613	54	6,191
Total Personnel Services	<u>11,187</u>	<u>7,810</u>	<u>211</u>	<u>19,208</u>
Professional Services:				
Actuarial	180	566	69	815
Accounting and Auditing	81	61	17	159
Information Technology	499	221	16	736
Education & Training	10	8	-	18
Mailing Services	133	70	-	203
Legal Services	62	58	-	120
Personnel Services	111	-	-	111
Other Professional Services and Fees	128	35	-	163
Total Professional Services	<u>1,204</u>	<u>1,019</u>	<u>102</u>	<u>2,325</u>
Communications and Travel:				
Telecommunications	126	68	-	194
Postage	1,056	757	-	1,813
Travel	61	60	-	121
Total Communications and Travel	<u>1,243</u>	<u>885</u>	<u>-</u>	<u>2,128</u>
Rentals:				
Office Space	494	329	9	832
Equipment Leasing	7	8	-	15
Total Rentals	<u>501</u>	<u>337</u>	<u>9</u>	<u>847</u>
Miscellaneous:				
Supplies	1,500	905	6	2,411
Maintenance & Equipment	317	263	-	580
Total Miscellaneous	<u>1,817</u>	<u>1,168</u>	<u>6</u>	<u>2,991</u>
Total Administrative Expenses	<u>\$ 15,952</u>	<u>\$ 11,219</u>	<u>\$ 328</u>	<u>\$ 27,499</u>

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Schedule of Investment Expenses

For the Fiscal Year Ended September 30, 2018

(Dollar Amounts in Thousands)

	Teachers' Retirement System	Employees' Retirement System	Judicial Retirement Fund	Totals
<i>Investment Activity</i>				
Investment Management Fees:				
Salaries and Benefits	\$ 7,094	\$ 2,283	\$ -	\$ 9,377
Dues, Subscriptions, and Supplies	1,448	964	-	2,412
Travel	36	12	-	48
Professional Services:				
Legal	1	1	-	2
Investment Advisor	60	30	-	90
Appraisal of Private Placements and Real Estate	538	317	-	855
Investment Activity Expenses before Reimbursement	9,177	3,607	-	12,784
Less: Reimbursement for Investment Management Fees	6	212	-	218
Total Investment Activity Expenses	9,171	3,395	-	12,566
<i>Securities Lending Activity</i>				
Securities Lending Borrower Rebates	12,385	5,647	134	18,166
Securities Lending Management Fees	3,189	1,449	34	4,672
Total Securities Lending Activity Expenses	15,574	7,096	168	22,838
Total Investment Expenses	\$ 24,745	\$ 10,491	\$ 168	\$ 35,404

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Schedule of Professional/Consultant Fees

For the Fiscal Year Ended September 30, 2018

(Dollar Amounts in Thousands)

Professional/Consultant	Nature of Service	Teachers' Retirement System	Employees' Retirement System	Judicial Retirement Fund	Totals
Cavanaugh Macdonald Consulting, LLC	Actuary	\$ 157	\$ 555	\$ 66	\$ 778
The Segal Company	Actuary	23	11	3	37
Carr, Riggs & Ingram, LLC	Auditor	68	36	13	117
A-LIGN	Auditor	13	25	4	42
Balch & Bingham, LLP	Legal	3	2	-	5
Bradley Arant Boulton Cummings, LLP	Legal	33	24	-	57
James Pratt, LLC	Legal	10	23	-	33
Maynard Cooper & Gale	Legal	6	4	-	10
Stephens & Johnson, LLP	Legal	2	1	-	3
Wells Mailing	Mail	88	37	-	125
Alabama Department of Finance	Mail	45	33	-	78
State Personnel Department	Personnel	111	-	-	111
Fine Geddie & Associates, LLC	Consultant	75	-	-	75
Alabama Department of Finance	Comptroller's Accounting Services	50	25	8	83
Alabama Department of Finance	State of Alabama Accounting & Resource System (STAARS)	48	24	8	80
Alabama Department of Finance	Information Technology	19	13	-	32
Auburn University at Montgomery	Information Technology	277	92	-	369
Packet Ninjas	Information Technology	6	4	-	10
GKR Systems, Inc.	Information Technology	50	33	-	83
Various	Other	120	77	-	197
Total Professional/Consultant Fees - Administrative Services		1,204	1,019	102	2,325
Cabaniss, Johnston, Gardner, Dumas & O'Neal, LLP	Legal	1	1	-	2
Regions Bank	Investment Advisor	60	30	-	90
Pearson Realty Services, Inc.	Real Estate Appraiser	213	142	-	355
Houlihan Lokey	Investment Appraiser	325	175	-	500
Total Professional/Consultant Fees - Investment Services		599	348	-	947
Total Professional/Consultant Fees		\$ 1,803	\$ 1,367	\$ 102	\$ 3,272



Investment Section

Component Units of the State of Alabama
Comprehensive Annual Financial Report

RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Report on Investment Activity

For the Fiscal Year Ended September 30, 2018

Dear Members,

I am pleased to present the following report on investment activity for the fiscal year ended September 30, 2018. The report provides investment highlights in general as well as specific information on the Retirement Systems' investment activity for the fiscal year. The custodian calculated rates of return are based on normal industry standards using a time weighted rate of return methodology based upon market values.

As the dust settles on fiscal year 2018, our home country bias proved to be a decent model as U.S. equities substantially outperformed most all international markets. This is not to say that it was smooth sailing, as the market dealt with serious drawdowns early in calendar year 2018 after a big run up in the prior quarter. However, the tailwind of lower corporate taxes, accelerated depreciation for capital expenditures, and increased confidence in both the business and consumer communities drove earnings results much higher than initial estimates. There is obviously much debate on where we are in the economic cycle, as we have seen the Federal Reserve (Fed) increase rates 8 times since the Zero Interest Rate Policy (ZIRP) ended, with the prospect of several more to come in the following quarters.

We have been of the mindset that earnings growth ultimately drives markets, and earnings have been better than most market pundits believed they would be. There have been numerous macro events that caused some consternation, and that is usually the case most every year. We view that as a good thing because it serves to keep sentiment in check. Dominating the list this year has been the trade war with China. It appears that this issue is going to linger longer than most thought, and has definitely caused weakness in export dependent emerging markets. After a small addition to our emerging markets exposure last year, we have been reluctant to add incremental money until there is some clarity on trade, as China dominates the weighting within that universe.

In our normal course of business, we have rebalanced 2.5% out of equities as the relative performance caused the weighting to move towards the upper bound of our target range. The good thing now is that the short end of the yield curve has moved up enough that you do get paid a little to sit in short-term investments and wait for opportunities. Fixed income remains below our target as set by the Boards of Control. Our strategy there is more or less the same as the prior year, with a focus on higher quality corporate credit and an increased weighting in US treasuries.

Within the alternative investments portfolio, Raycom Media announced that they are being acquired by Gray Television. The RSA will be receiving cash, preferred stock, and some Gray common stock from the deal. There are also provisions that allow for continued advertisement exposure for Alabama-based properties for the next ten years, with the terms much the same as they were with Raycom. Real estate returns were below target this year as capitalization rates moved higher in NYC, and we saw incremental capital expenditures on the hotel properties during the renovation process.

As usual, we will continue to closely monitor the portfolio and look for the best risk adjusted investments possible. We will also continue to demand the best execution from all RSA counterparts, and will strive to produce results that strengthen the Retirement Systems of Alabama and its beneficiaries.

RSA Performance Summary

As of September 30, 2018, aggregate defined benefit assets under management totaled \$38.62 billion. During fiscal year 2018, annualized total returns of the TRS, ERS, and JRF were 9.42%, 9.29%, and 9.32% respectively.

Equities

Last year we wrote about the somewhat concerted global earnings rebound. 2018 was more of a U.S. story, as we witnessed a divergence in growth around the world. Corporate tax reform and increased business confidence in the economy drove a strong acceleration in corporate earnings domestically. Looking abroad, macro events in many developed markets and a stronger dollar proved to be headwinds for international stocks.

Within our domestic portfolio there was not much variation in returns across market capitalization. Both large cap and small cap stocks performed well, though the market was rather narrow in large cap with the big technology companies

leading the charge. The only equity asset class with a negative return was emerging markets. As many of these countries are export dependent, the stronger dollar generally puts the brakes on those economies. Also China represents ¼ of that index, and the trade war issues with the Trump administration have weighed heavily on China shares. We were reluctant to add to our underweight position in emerging markets this year with all the obvious headwinds, but do expect to eventually rotate more money there when things settle down.

Considering we are in one of the longer running bull markets of all time, the RSA has continued to put some hedges in place to dampen downside volatility within the equity portfolio. We have tactically rolled out put-spread collars at various strikes and maturities that give 4-5% downside protection. There is a cost associated with these as protection isn't free, but we feel it prudent to have these trades on given our substantial equity market exposure.

For the year, the RSA domestic equity portfolios returned 17.71%, 17.75%, and 17.27% for the TRS, the ERS, and the JRF, respectively. Both developed and emerging international equities performance lagged U.S. equities. Total international equity returns were 2.47% for the TRS, 2.13% for the ERS, and 2.47% for the JRF. The combined total returns for the overall equity portfolios was 14.27%, 14.36%, and 13.91% for the TRS, ERS, and JRF, respectively. Three-, five-, and ten-year annualized global equity returns were 15.46%, 11.51%, and 10.43% for the TRS, 15.46%, 11.55%, and 10.46% for the ERS, and 15.44%, 11.70%, and 10.74% for the JRF, respectively.

Fixed Income

At the beginning of fiscal year 2018, the Fed had just opted not to raise short term interest rates at its late September meeting. However, hawkish rhetoric from policymakers and the upcoming reduction in the Fed's balance sheet were able to lift rates higher in those last few weeks. The Committee's rate expectations remained intact with one additional rate hike expected in 2017 and three more scheduled for the upcoming year.

The month of October was very supportive of risk assets due to better than expected corporate earnings and fairly solid economic data. Investment grade and high yield corporates outperformed their treasury counterparts by approximately 50 basis points (bps). Flows into the high grade sector continued unabated as companies were able to issue record amounts of debt during the month. The European Central Bank (ECB) also began laying out plans to reduce its asset purchases next year as the euro-zone economy grew at its quickest pace in over five years.

The market's expectation of a December rate adjustment was confirmed by the latest minutes from the Federal Open Market Committee (FOMC) meeting. Short term rates continued their march higher, a move that had been unrelenting since the beginning of September. However, the lack of inflation allowed the long end to slide, further flattening the yield curve. As always, the potential of an inverted curve draws investors' interest as one has proceeded all recessions over the last 40 years. Also of note, Jerome Powell was nominated to take the reins from Janet Yellen as the next Fed Chairman.

The Fed did in fact increase the range for the federal funds rate to 1.25-1.50% in December. Spread products benefitted from the risk-on environment provided by the strength in economic activity and labor market conditions. This move was also enhanced by the passing of the tax reform bill in Congress. While January was much appreciated from an equity holder's perspective, the fixed income market struggled quite a bit. Not only did short term rates continue their move higher, but the long end of the curve finally broke out from its stable base. Some concluded it had to do with Chinese officials rethinking its foreign-exchange holdings or it may have simply been the realization of larger fiscal deficits going forward due to the recently passed tax package. Even though agency and mortgage-backed securities posted negative returns for the month, both were able to outpace treasury securities due to their lower duration profile.

Despite a healthy employment picture with wage growth inching closer to 3.0%, volatility abruptly returned to financial markets. The implosion of the short volatility trade in early February sent risk assets reeling and a couple of funds had to be liquidated. Even in the midst of increased volatility, interest rates were able to move higher throughout the month. As expected, both investment grade and high yield debt struggled in this environment. Volatility continued unabated into March. While employment numbers were strong once again, the threat of a trade war began to materialize, highlighted by the resignation of Gary Cohn as Director of the National Economic Council (NEC).

RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Report on Investment Activity

For the Fiscal Year Ended September 30, 2018

Treasury securities returned close to 1.0% during the month, while corporate debt underperformed for the second month in a row.

The Fed upgraded its outlook for the economy at the March meeting and increased the federal funds rate by another 25bps. Trade tensions with China aside, treasury yields rose approximately 25bps on the short end in April with the long end performing marginally better. Agency and mortgage debt minimized their losses during this time, while the investment grade sector was plagued with heavy supply and weak demand. The treasury sector was able to recapture losses experienced from the previous month as political risk in Italy produced a flight to quality within fixed income markets.

Policymakers raised the federal funds rate once again at the June gathering. Just as treasury yields began to recover from the political upheaval in Italy by mid-month, they quickly fell again as trade tensions and emerging market weakness came into focus. Treasury market returns were essentially flat for the month, while high grade corporates underperformed for the fifth consecutive month. Risk assets rebounded meaningfully in July due to strong corporate earnings and healthy economic data. A light issuance calendar helped provide the largest excess return month of the year for the corporate sector.

The fixed income market produced a mixed bag during the month of August. Treasury yields fell across the curve due to weakness in emerging market currencies as corporate spreads widened at the margin. The FOMC took no action in August, continuing a pattern of raising rates at every other meeting since last December. More recently, the path of least resistance for rates has been higher. The Fed has remained domestically focused where economic growth and the labor market remain strong. Fed Chairman Jay Powell and other monetary officials raised short term rates to 2.25% at the upper end at its September meeting. Expectations of another move at the December meeting are highly likely.

Chairman Powell's job will likely become more difficult going forward. The Fed is the only central bank that is currently shrinking its balance sheet. The ECB is tapering bond purchases and hopes to end this process by calendar year-end. However, policymakers in Europe have recently lowered their economic forecast for next year. The Bank of Japan will likely maintain its asset purchase program for the foreseeable future. The question remains how global risk assets will respond to further rate increases. With the rate of return on safe assets rising, at least here at home, the attractiveness of riskier ones should diminish. It will be a delicate balancing act for policymakers after a decade of easy money has supported financial markets in turbulent times.

For the fiscal year, the total annual returns for the public domestic fixed income portfolios were -0.70% for the TRS, -0.74% for the ERS, and -0.69% for the JRF. The five-year annualized returns were 2.72% for the TRS, 2.71% for the ERS, and 2.57% for the JRF. The ten-year annualized returns were 4.88% for the TRS, 4.88% for the ERS, and 4.85% for the JRF.

Sincerely,



Marc Green
Director of Investments

Investment Section

Teachers' Retirement System Investment Policy Statement

For the Fiscal Year Ended September 30, 2018

Purpose

This Investment Policy Statement ("IPS") sets forth the investment policies by which the Teachers' Retirement System's ("TRS") fund's investments will be managed. This IPS is consistent with and complements related Alabama statutes and is intended to be binding upon all persons with authority over the investments of the TRS. Deviation from the IPS is not permitted without explicit written permission, in advance, from the TRS Board of Control ("Board of Control" or "Board"). This IPS was adopted by the Board of Control on December 9, 2015, and is effective March 1, 2016.

Roles and Responsibilities

Board of Control

The Board of Control, as Trustees, shall carry out its functions solely in the interest of the members and benefit recipients and for the exclusive purpose of providing benefits and defraying reasonable expenses incurred in performing such duties. The Trustees shall act in accordance with the provisions of the laws and with the care, skill, prudence and diligence in light of the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.

Specific responsibilities include:

- Approving a statement of investment philosophy that sets forth TRS's beliefs on key investment issues.
- Approving an IPS.
- Ensuring asset allocation strategies are in place to achieve the investment goals and objectives of the TRS.
- Reviewing adherence to the investment philosophy of the TRS.
- Reviewing compliance with, and the continued appropriateness of, the IPS.
- Reviewing the investment performance of the fund, including the performance of all investment classes.
- Elect an investment committee (Ala. Code § 16-25-20(a)(3)).
- Appoint an Investment Advisor (Ala. Code § 16-25-20(a)(4)).

Investment Committee

The Investment Committee will:

- Act as agent for its appointing Board of Control (Ala. Code § 16-25-20(a)(3)).
- Consider all investment recommendations made by the Secretary-Treasurer (Ala. Code § 16-25-20(a)(3)).
- Either approve or disapprove the recommended investments in accordance with policies set by the Board (Ala. Code § 16-25-20(a)(3)).
- Confirm by written authorization of at least two members the approval of all investments, with such authorization to be attached to the invoice for the transaction (Ala. Code § 16-25-20(a)(3)).

Secretary-Treasurer

The Secretary-Treasurer is elected by the Board of Control and serves as the chief executive officer for the TRS. Ala. Code § 16-25-19(i). Specific responsibilities of the Secretary-Treasurer include:

- Recommending to the Board a written IPS and reviewing that statement with the Board at least annually.
- Developing and executing, within the policy parameters approved by the Board, investment strategies for each asset category in which the TRS invests.
- Executing portfolio rebalancing in accordance with the policies of the Board.
- Advising the Board on any other investment matters and making recommendations for Board or committee action when necessary.
- Reporting to the Board all purchases and sales of investments made by him or her at least once semiannually (Ala. Code § 16-25-20(a)(5)).
- Carrying out the investment policies fixed by the Board (Ala. Code § 16-25-20(a)(2)).

Investment Section

Teachers' Retirement System Investment Policy Statement (Continued)

For the Fiscal Year Ended September 30, 2018

- Examining all offers of investments made to the funds (Ala. Code § 16-25-20(a)(2)).
- Initiating inquiries as to available investments for the funds (Ala. Code § 16-25-20(a)(2)).
- Reviewing periodically the investment quality and desirability of retention of investments held (Ala. Code § 16-25-20(a)(2)).
- Making purchases and sales of investments as he or she shall deem to be to the best interests of the fund and in accordance with policies set by the Board, and as the Investment Committee shall approve (Ala. Code § 16-25-20(a)(2)).
- Other such responsibilities as the Board may delegate or the law shall provide.

Custodian

The Custodian holds directly, through its agents, its sub-custodians, or designated clearing systems, assets as designated by the Board. The Custodian is accountable for registration of those designated assets in good delivery form, collection of income generated by those assets, and any corporate action notification. The Custodian is responsible for delivery and receipt of securities of the aforementioned transactions. The Custodian is required to provide online records and reports, performance reporting, accounting reports, and other services included by contract. The Board may opt to designate other duties to the Custodian.

Investment Advisor

The Investment Advisor may be appointed and employed by the Board of Control to act as a consultant to the Secretary-Treasurer in the purchase, sale, and review of the TRS's investments to the extent the Board may designate. The Investment Advisor must be a bank having principal office in the State of Alabama, must have capital, surplus, and undivided profits of not less than \$300 million, and must have an organized investment department. Ala. Code § 16-25-20(a)(4). Specific responsibilities of the Investment Advisor include:

- Assist the Secretary-Treasurer with the development of quarterly strategies for investments.
- Confirm weekly list of investment activities.
- Meet at least quarterly with the Secretary-Treasurer and Board of Control members.

Investment Goals and Objectives

The function of the TRS is to provide present and future retirement or survivor benefits for its members. This objective requires the prudent assumption of investment risk in seeking to maximize long-term investment returns while incorporating the fund's liability requirements. The future investment performance of the fund directly affects its future financial strength. However, the greater the expected return of the strategic asset allocation policy, the higher the risk, and thus the greater the volatility of expected returns. With this greater volatility, the volatility of the surplus (deficit) of the plan may also be greater. The optimal balancing of these return and risk considerations will be considered in the context of the fund's short-term and long-term benefit obligations.

Investment Philosophy

The investment philosophy for the TRS is determined with careful consideration of its primary fund purpose, fiduciary obligations, statutory requirements, actuarial assumptions, funding policy, liquidity needs, income sources, benefit obligations, and other general business conditions. The investment philosophy embraces the following:

- Strategic asset allocation is the most significant factor influencing long-term investment performance and asset volatility. The asset allocation targets, determined by the Board of Control, will be adhered to through a clearly defined rebalancing program.
- In controlling the risk level that is appropriate for the fund, the Board will diversify the assets of the fund among various asset classes as the Board may from time to time adopt as appropriate asset classes with the goal of minimizing large losses. The specific asset classes to be used will be set in conjunction with the strategic asset allocation adopted from time to time by the Board. The Board will diversify investment assets within asset classes to avoid concentrations.
- The fund's liabilities are long term and the investment strategy will therefore be long term in nature. Strategic decisions will prevail in determining asset allocation rather than tactical or short-term market timing decisions.
- The asset allocation policy will be reexamined every three years to ensure its appropriateness to the then prevailing liability considerations.
- Market-related risk and non-market related risk investments will be utilized. Market related risk refers to risk systematic to a market or risk embedded in the strategic asset allocation policy. Non-market risk refers to risk derived from active management or tactical decisions. Market-related risks are expected to produce returns proportional to the level of those risks over long periods of time as a natural feature of reasonably efficient capital markets; non-market related risks may produce additional returns when capitalized upon through skilled active management in the presence of some degree of market inefficiency. As a long-term investor, the TRS will invest across a wide spectrum of market-related risk investments, categorized in asset classes, in a prudent manner consistent with the strategic asset allocation policy referred to above.
- Index funds can be a desirable way of obtaining market-related risk exposure to asset classes.
- Non-market-related risks, also known as active management risk, may be expected to add value over index funds with comparable benchmarks, under appropriate conditions, and can be employed by the fund with controls in place which are appropriate to the particular investment.
- Also TRS recognizes that a stronger Alabama equates to a stronger Teachers' Retirement System and, as such, investments in Alabama businesses are encouraged to the extent the investment return meets the criteria delineated by this policy statement. Any Alabama investment must be forecast to have a return comparable to other like investments in the same asset class.
- Investment returns may be adversely affected by excessive investment related fees. TRS will utilize in-house staff expertise to minimize the cost of investing as appropriate.

Strategic Asset Allocation Policy

The TRS current target asset allocation and ranges are specified below.

Asset Class	Target Allocation	Strategic Range
Domestic Equity	45%	30%-60%
International Equity	15%	10%-25%
Fixed Income	17%	10%-50%
Alternative Investments	10%	0%-20%
Real Estate	10%	0%-15%
Short-term investments	3%	1%-6%
Total	100%	

The strategic asset allocation policy will be periodically reviewed, as described under “Investment Philosophy” and “Roles and Responsibilities.”

Rebalancing Policy

The purpose of the rebalancing policy is to ensure the adherence to the strategic allocation plan. Unexpected changes in market values may, on occasion, cause the actual asset allocation to fall outside of the allowable ranges. This policy applies to all asset classes in which the TRS invests and requires Investment Management Staff (“Staff”) to implement rebalancing trades if, as of any quarter end, the allocation to any asset class is outside the allowable ranges. The Board recognizes, however, the inherent difficulty in managing the allocations to illiquid asset classes.

As such, with respect to TRS’s illiquid asset classes, the Board expects the allocations to these areas to be managed as close as practical to the policy targets. The Board expects Staff to report illiquid asset class allocations that fall outside the prescribed ranges. In addition, the Board expects Staff to provide an implementation recommendation to bring the fund’s allocation to these areas back within the allowable ranges.

Managing the allocations to the marketable asset classes involves a risk reduction tradeoff with increased transaction costs. As such, the Board expects Staff to implement this policy in a manner that seeks to minimize the impact of transaction costs. In particular, the Board expects Staff to use cash contributions and cash needs to move the fund’s asset allocation as close as practical to the policy targets. When markets move such that the fund’s normal cash flows are insufficient to maintain the fund’s actual asset allocation within the permissible ranges as of any quarter end, the Board expects Staff to implement the necessary transactions to bring the fund’s allocation back to within the allowable ranges. Before a rebalancing transaction is implemented, the Board expects Staff to identify those portfolios that are likely to have the lowest cost of trading. Absent any asset class structure considerations, the Board expects these low trading cost portfolios to be utilized more frequently to implement required total fund rebalancing.

Eligible Asset Categories

The Board is responsible for approving asset categories in which the fund will invest. Listed below are the asset categories in which TRS currently invests along with a discussion of market efficiency in each category.

The efficiency of markets is relevant to expected return opportunities. Highly efficient markets provide less opportunity to add value above market returns. Highly inefficient markets provide more opportunity to add return above what is available by the market. This above market return expectation can be referred to as alpha. Market return can be referred to as beta.

Domestic Equities

Investing in the domestic equity market is a way to participate in one of the largest and most diverse economies in the world through ownership of the companies that make up the economy of the United States. Investment theory and history suggest that the domestic equity markets provide long-term price appreciation in an amount that tends to mirror the overall growth in the economy. In addition, stocks have historically provided a return that served as an effective hedge relative to inflation (i.e., the historical return of stocks has been in excess of the rate of inflation).

It is expected that the TRS will have exposure to all segments of the domestic equity market including but not limited to growth and value stocks of large to small capitalization companies. The domestic equity market is considered by many to be one of the most efficient capital markets in the world. The availability of public information regarding the future prospects of individual companies combined with the numerous market participants rendering assessments of the information contribute to this market's efficiency. With this in mind, a large portion of the domestic equity portfolio will be managed through passive index funds. A portion of the portfolio will be utilized to add alpha relative to the benchmarks. While the market is very efficient, neither it nor any other market is perfectly efficient. When appropriate skill is available, it may be possible to successfully use active management techniques to improve upon benchmark returns, with acceptable levels of risk.

International Equities

The international equity markets are an increasingly larger share of the investment opportunity set. In addition, because international company stocks tend to react to local as well as global influences, the fluctuations in the returns of international equity markets are only partially related to the movements in the domestic equity market. Further, capital market theory suggests that we should be fully diversified in a global, not just in a local sense.

Fixed Income

Bonds provide a source of diversification relative to an equity-oriented portfolio. The rate of return volatility (investment risk) of fixed income securities is substantially lower than the volatility of equities. In addition, there are significant differences in the pattern of returns between stock and bond investments. When combined with equity securities, a fixed income allocation can serve to reduce the overall risk of the portfolio without materially sacrificing return potential.

The fixed income asset class is perhaps the most diverse capital market. Securities include government, mortgage-backed and corporate bonds of U.S. and non-U.S. issuers. It also includes bonds issued by high quality as well as low quality companies and countries. The fixed income market may be more efficient than once believed. However, fixed income can experience less efficiency at times and in certain segments such as lower quality bonds. It is expected that the fixed income portfolio will make use of both active and passive investment mandates and will include allocations to all major segments of the fixed income market.

Investment Section

Teachers' Retirement System Investment Policy Statement (Continued)

For the Fiscal Year Ended September 30, 2018

Alternative Investments

The alternative investment asset class can encompass many different and distinct asset categories. These types of investments may exhibit high levels of risk, with a concomitant expectation for high rates of investment returns. Many of these investments may exhibit a high level of correlation with the publicly-traded equity markets.

The alternative investment asset class is considered highly inefficient, as the lack of publicly available company and pricing information suggest active management is critical in this asset class. Examples of such investments are venture capital partnerships, private equity, hedge funds, leveraged buy-out funds, private debt, and direct ownership of individual assets such as oil and gas partnerships. These investments shall only be entered into after significant due diligence.

Real Estate

Real estate investments can serve as a diversifier of a stock and bond portfolio. While the factors that influence real estate returns may also influence the returns of stock and bond portfolios, these factors impact real estate in a different manner than the other asset classes. This suggests that the return patterns of real estate have a lower correlation to other asset classes, providing a diversification benefit when combined with stocks and bonds.

Risk Controls and Procedures

- The fund is to be broadly diversified across and within asset classes to limit the volatility of the total fund investment returns and to limit the impact of large losses on individual investments of the fund.
- Individual portfolios will be managed according to written investment guidelines that are approved by the Staff. These guidelines are intended to ensure that the portfolio meets its objective and operates within acceptable risk parameters.
- A process will be established by which compliance with all elements of the IPS and portfolio guidelines are measured and monitored, with compliance exceptions being reported to the Board.
- The Investment Advisor will work with the Staff to develop a quarterly strategy for investments, which will be disseminated to the Board, as it is prepared each quarter.
- The Investment Committee shall approve all investments made within the IPS. The Investment Committee, in its approval, is considered to be signing for the Board of Control. If any purchase or sale is questioned by two members of the Investment Committee as to whether it is within policy, the Board shall decide if further action is required.
- Each week, the Secretary-Treasurer will send to the Investment Advisor the list of actual activities for written confirmation, which will then be distributed to the Board of Control members upon receipt.
- All investment security purchases will be documented with an individual worksheet setting out the reason for the purchase, rating, market history and other general data relevant to the decision making process.
- An annual survey will be made of all fixed income investments held with emphasis on credit quality. A holding that has been downgraded in rating will be examined as to the reason for the downgrade and a determination should be made as to whether the security should remain in the portfolio.
- The rules of the Securities and Exchange Commission, the general policies of the Board of Control, and the Alabama Ethics Commission shall govern the ethical conduct of employees. The Investment Management Staff will provide the Alabama Ethics Commission with a quarterly report of all purchases and sales of any and all securities for personal accounts occurring within each reported quarter.
- All Alternative Investments will be documented with a comprehensive financial analysis setting out the reasons for the investment and showing the projected return on investment.

Performance Measurement

The investment objective of the TRS total fund is to earn the rate of return of the Total Plan Policy Portfolio. A Policy Portfolio is a passive representation of the specific asset allocation strategy pursued and is the most objective performance evaluation metric. The Total Plan Policy Portfolio weights each individual portfolio and its return versus the actual relative index returns. This process accounts for asset allocation shifts within and between any asset classes.

Total Plan Benchmark

The Total Plan Benchmark is calculated monthly. It is a weighted average of the asset classes and their corresponding benchmarks. The weights are calculated using the beginning market values. The asset class benchmarks are listed in the table below.

Domestic Equity	Custom Benchmark	(see description below)
International Equity	MSCI EAFE Net & Emerging Markets Net	Beginning of month weighted custom benchmark
Domestic Fixed Income	Custom Benchmark	(see description below)
International Fixed Income	WGBI Non-US	Currently, there are no International Fixed Income portfolios in the plan.
Cash	ML 90-Day T-Bill	
Alternative Investments	-If an equity investment, the Russell 3000 plus 3%. -If a debt investment, the Barclay Capital Agency plus 3%.	
Real Estate	CPI+3%	

Domestic Equity Benchmark

The Domestic Equity Benchmark is calculated monthly. It is a weighted average of the domestic equity portfolios and their corresponding benchmarks. The weights are calculated using the beginning markets' values. The portfolio benchmarks are listed in the table below:

Core Fund	S&P 500
S&P 500 Fund	S&P 500
MidCap Active Fund (SSF)	S&P 400 MidCap
S&P MidCap Index	S&P 400 MidCap
S&P SmallCap Index	S&P 600 SmallCap
Policy Fund	S&P 500
Value Fund	S&P 500

RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Teachers' Retirement System Investment Policy Statement (Continued)

For the Fiscal Year Ended September 30, 2018

Fixed Income Benchmark

The Fixed Income Benchmark is calculated monthly. It is a weighted average of the Fixed Income sectors and their corresponding benchmarks. The weights are calculated using the beginning markets' values. The sector benchmarks are listed in the table below:

Agency	Barclay Capital Agency
Asset Backed	Barclay Capital ABS Index
CMO	Barclay Capital MTGE
Corporate	Barclay Capital Corp
Municipal	N/A
Mortgage Pass-Through	Barclay Capital MTGE
Private Placement	N/A
US Treasury	Barclay Capital Treasury
Yankee - Agency	Barclay Capital Agency
Yankee – Other Yankee	Barclay Capital Corp

Investment Section

Employees' Retirement System Investment Policy Statement

For the Fiscal Year Ended September 30, 2018

Purpose

This Investment Policy Statement (IPS) sets forth the investment policies by which the fund's investments will be managed. This IPS is consistent with and complements related Alabama Statutes and is intended to be binding upon all persons with authority over the investments of the Employee Retirement System of Alabama ("ERS"). Deviation from the IPS is not permitted without explicit written permission, in advance, from the ERS Board of Control ("Board of Control" or "Board"). This IPS shall be effective April 1, 2015 and was last revised September 7, 2017.

The Judicial Retirement Fund (JRF) is a defined benefit plan created by and administered in accordance with Ala. Code §§ 12-18-1, et seq.. Section 12-18-2(a) states in its pertinent part as follows:

"The Judicial Retirement Fund shall be administered by the Secretary-Treasurer of the State Employees' Retirement System under the supervision of the Board of Control of the said State Employees' Retirement System and said board of control shall be the trustee of such fund and shall handle such fund in the same manner and pursuant to the same rules and regulations that it handles funds in the State Employees' Retirement System."

Therefore, the Board of Control is the trustee and responsible for handling such funds in the same manner as ERS. This IPS, therefore, will also apply to the JRF.

Roles and Responsibilities

Board of Control

The Board of Control, as Trustees, shall carry out its functions solely in the interest of the members and benefit recipients and for the exclusive purpose of providing benefits and defraying reasonable expenses incurred in performing such duties. The Trustees shall act in accordance with the provisions of the laws and with the care, skill, prudence and diligence in light of the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims by diversifying the investments of the ERS so as to minimize the risk of large losses.

Specific responsibilities include:

- Working with the Investment Management Committee to provide oversight of the investment program of the ERS.
- Approving a statement of investment philosophy that sets forth ERS's beliefs on key investment issues.
- Approving an IPS.
- Ensuring asset allocation strategies are in place to achieve the investment goals and objectives of the ERS.
- Reviewing adherence to the investment philosophy of the ERS.
- Reviewing compliance with, and the continued appropriateness of, the IPS.
- Reviewing the investment performance of the fund, including the performance of all investment classes.
- Elect an investment committee (Ala. Code §§36-27-25(d)).
- Appoint an Investment Advisor (Ala. Code §§36-27-25(e)).

Investment Management Committee

The Investment Management Committee is responsible for overseeing the ERS investment program. Specific responsibilities include recommending to/advising the Board:

- A written statement of investment philosophy for the fund.
- A written IPS.
- Strategies to achieve the investment goals and objectives of the ERS.
- On any other investment matters and make recommendations for Board action when necessary.
- Keeping minutes of Investment Management Committee meetings and ensuring the minutes are made available to Trustees.

RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Employees' Retirement System Investment Policy Statement (Continued)

For the Fiscal Year Ended September 30, 2018

- Monitoring all the investment activities of the Investment Committee, Secretary-Treasurer, Staff, Investment Advisor, and Custodian
- Ensuring the investment reporting policies are designed to provide transparency and aggregate information on target investments regardless of the investment vehicles used.

Investment Committee

The Investment Committee will:

- Act as agent for its appointing Board of Control (Ala. Code §§36-27-25(d)).
- Consider all investment recommendations made by the Secretary-Treasurer (Ala. Code §§36-27-25(d)).
- Either approve or disapprove the recommended investments in accordance with policies set by the Board (Ala. Code §§36-27-25(d)).
- Confirm by written authorization the approval of all investments, with such authorization to be attached to the invoice for the transaction (Ala. Code §§36-27-25(d)).

Secretary-Treasurer

The Secretary –Treasurer is elected by the Board of Control and serves as the chief executive officer for the ERS. Ala. Code §§36-27-23(h). Specific responsibilities of the Secretary-Treasurer include:

- Recommending to the Investment Management Committee a written statement of investment philosophy and review that statement with the committee at least every three years.
- Recommending to the Investment Management Committee a written IPS and review that statement with the committee at least annually.
- Recommending to the Investment Management Committee strategies to achieve the investment goals and objectives of ERS.
- Developing, and executing, within the policy parameters approved by the Board, investment strategies for each asset category in which the ERS invests.
- Executing portfolio rebalancing in accordance with the policies of the Board.
- Advising the Board and the Investment Management Committee on any other investment matters and making recommendations for Board or committee action when necessary.
- Reporting to the Board of Control all purchases and sales of investments made by him or her at least once semiannually (Ala. Code §§36-27-25(c)).
- Carrying out the investment policies fixed by the Board of Control (Ala. Code §§26-27-25(c)).
- Examining all offers of investments made to the funds (Ala. Code §§36-27-25(c)).
- Initiating inquiries as to available investments for the funds (Ala. Code §§36-27-25(c)).
- Reviewing periodically the investment quality and desirability of retention of investments held (Ala. Code §§36-27-25(c)).
- Making purchases and sales of investments as he or she shall deem to be to the best interests of the fund and in accordance with policies set by the Board, and as the Investment Committee shall approve (Ala. Code §§36-27-25(c)).

Custodian

The Custodian holds directly, through its agents, its sub-custodians, or designated clearing systems, assets as designated by the Board. The Custodian is accountable for registration of those designated assets in good delivery form, collection of income generated by those assets, and any corporate action notification. The Custodian is responsible for delivery and receipt of securities of the aforementioned transactions. The Custodian is required to provide online records and reports, performance reporting, accounting reports, and other services included by contract. The Board may opt to designate other duties to the Custodian.

Investment Advisor

The Investment Advisor may be appointed and employed by the Board of Control to act as a consultant to the Secretary-Treasurer in the purchase, sale, and review of the ERS's investments to the extent the Board may designate. The Investment Advisor must be a bank having principal office in the State of Alabama, must have capital, surplus, and undivided profits of not less than \$300 million, and must have an organized investment department. Specific responsibilities of the Investment Advisor include:

- Assist the Secretary-Treasurer with the development of quarterly strategies for investments.
- Confirm weekly list of investment activities.
- Meet at least quarterly with the Secretary-Treasurer and Board of Control members.

Investment Goals and Objectives

The function of the ERS is to provide present and future retirement or survivor benefits for its members. This objective requires the prudent assumption of investment risk in seeking to maximize long-term investment returns while incorporating the fund's liability requirements. The future investment performance of the fund directly affects its future financial strength. However, the greater the expected return of the strategic asset allocation policy, the higher the risk, and thus the greater the volatility of expected returns. With this greater volatility, the volatility of the surplus (deficit) of the plan may also be greater. The optimal balancing of these return and risk considerations will be considered in the context of the fund's short-term and long-term benefit obligations.

Investment Philosophy

The investment philosophy for the ERS is determined with careful consideration of its primary fund purpose, fiduciary obligations, statutory requirements, actuarial assumptions, funding policy, liquidity needs, income sources, benefit obligations and other general business conditions. The investment philosophy embraces the following:

- Strategic asset allocation is the most significant factor influencing long-term investment performance and asset volatility. The asset allocation targets, determined by the Board of Control, will be adhered to through a clearly defined rebalancing program.
- In controlling the risk level that is appropriate for the fund, the Board will diversify the assets of the fund among various asset classes as the Board may from time to time adopt as appropriate asset classes. The specific asset classes to be used will be set in conjunction with the strategic asset allocation adopted from time to time by the Board. The Board will diversify investment assets within asset classes to avoid concentrations.
- The fund's liabilities are long term and the investment strategy will therefore be long term in nature. Strategic decisions will prevail in determining asset allocation rather than tactical or short-term market timing decisions.
- The asset allocation policy will be reexamined every three years to ensure its appropriateness to the then prevailing liability considerations.
- Market-related risk and non-market related risk investments will be utilized. Market related risk refers to risk systematic to a market or risk embedded in the strategic asset allocation policy. Non-market risk refers to risk derived from active management or tactical decisions. Market-related risks are expected to produce returns proportional to the level of those risks over long periods of time as a natural feature of reasonably efficient capital markets; non-market related risks may produce additional returns when capitalized upon through skilled active management in the presence of some degree of market inefficiency. As a long-term investor, the ERS will invest across a wide spectrum of market-related risk investments, categorized in asset classes, in a prudent manner consistent with the strategic asset allocation policy referred to above.
- Index funds can be a desirable way of obtaining market-related risk exposure to asset classes.
- Non-market-related risks, also known as active management risk, may be expected to add value over index funds with comparable benchmarks, under appropriate conditions, and can be employed by the fund with controls in place which are appropriate to the particular investment.

RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Employees' Retirement System Investment Policy Statement (Continued)

For the Fiscal Year Ended September 30, 2018

- Also ERS recognizes that a stronger Alabama equates to a stronger Employee Retirement System, and as such, investments in Alabama businesses are encouraged to the extent the investment return meets the criteria delineated by this policy statement. Any Alabama investment must be forecast to have a return comparable to other investments in the same asset class. The forecast and the accompanying analysis must be presented to the Investment Committee and Investment Management Committee prior to making the investment.

Strategic Asset Allocation Policy

The ERS current target asset allocation and ranges are specified below.

Asset Class	JRF Target Allocation	ERS Target Allocation	Strategic Range
Domestic Equity	55%	45%	30%-60%
International Equity	15%	15%	10%-25%
Fixed Income	22%	17%	10%-40%
Alternative Investments	1%	10%	0%-15%
Real Estate	2%	10%	0%-15%
Short-term investments	5%	3%	0%-7%

The strategic asset allocation policy will be periodically reviewed, as described under “Investment Philosophy” and “Roles and Responsibilities.”

Rebalancing Policy

The purpose of the rebalancing policy is to ensure the adherence to the strategic allocation plan. Unexpected changes in market values may, on occasion, cause the actual asset allocation to fall outside of the allowable ranges. This policy applies to all asset classes in which the ERS invests and requires Investment Management Staff (“Staff”) to implement rebalancing trades if, as of any quarter end, the allocation to any asset class is outside the allowable ranges. The Board recognizes, however, the inherent difficulty in managing the allocations to illiquid asset classes.

As such, with respect to ERS’s investments in illiquid asset classes (alternative investments and real estate), the Board expects the allocations to these areas to be managed as close as practical to the policy targets. As of any quarter-end, the Board expects Staff to report illiquid asset class allocations that fall outside the prescribed ranges. In addition, the Board expects Staff to provide an implementation recommendation to bring the fund’s allocation to these areas back within the allowable ranges. The Staff will provide annually to the Investment Management Committee a schedule for valuations on such assets.

Managing the allocations to the marketable asset classes involves a risk reduction tradeoff with increased transaction costs. As such, the Board expects Staff to implement this policy in a manner that seeks to minimize the impact of transaction costs. In particular, the Board expects Staff to use cash contributions and cash needs to move the fund’s asset allocation as close as practical to the policy targets.

When markets move such that the fund’s normal cash flows are insufficient to maintain the fund’s actual asset allocation within the permissible ranges as of any quarter end, the Board expects Staff to implement the necessary transactions to bring the fund’s allocation back to within the allowable ranges. Before a rebalancing transaction is implemented, the Board expects Staff to identify those portfolios that are likely to have the lowest cost of trading. Absent any asset class structure considerations, the Board expects these low trading cost portfolios to be utilized more frequently to implement required total fund rebalancing.

Eligible Asset Categories

The Board is responsible for approving asset categories in which the fund will invest. Listed below are the asset categories in which ERS currently invests along with a discussion of market efficiency in each category. The efficiency of markets is relevant to expected return opportunities. Highly efficient markets provide less opportunity to add value above market returns. Highly inefficient markets provide more opportunity to add return above what is available by the market. This above market return expectation can be referred to as alpha. Market return can be referred to as beta.

Domestic Equities

Investing in the domestic equity market is a way to participate in one of the largest and most diverse economies in the world through ownership of the companies that make up the economy of the United States. Investment theory and history suggest that the domestic equity markets provide long-term price appreciation in an amount that tends to mirror the overall growth in the economy. In addition, stocks have historically provided a return that served as an effective hedge relative to inflation (i.e., the historical return of stocks has been in excess of the rate of inflation).

It is expected that the ERS will have exposure to all segments of the domestic equity market including but not limited to growth and value stocks of large to small capitalization companies. The domestic equity market is considered by many to be one of the most efficient capital markets in the world. The availability of public information regarding the future prospects of individual companies combined with the numerous market participants rendering assessments of the information contribute to this market's efficiency. With this in mind, a large portion of the domestic equity portfolio will be managed through passive index funds. A portion of the portfolio will be utilized to add alpha relative to the benchmarks. While the market is very efficient, neither it nor any other market is perfectly efficient. When appropriate skill is available, it may be possible to successfully use active management techniques to improve upon benchmark returns, with acceptable levels of risk.

International Equities

The international equity markets are an increasingly larger share of the investment opportunity set. In addition, because international company stocks tend to react to local as well as global influences, the fluctuations in the returns of international equity markets are only partially related to the movements in the domestic equity market. Further, capital market theory suggests that we should be fully diversified in a global, not just in a local sense.

Fixed Income

Bonds provide a source of diversification relative to an equity-oriented portfolio. The rate of return volatility (investment risk) of fixed income securities is substantially lower than the volatility of equities. In addition, there are significant differences in the pattern of returns between stock and bond investments. When combined with equity securities, a fixed income allocation can serve to reduce the overall risk of the portfolio without materially sacrificing return potential.

The fixed income asset class is perhaps the most diverse capital market. Securities include government, mortgage-backed and corporate bonds of U.S. and non-U.S. issuers. It also includes bonds issued by high quality as well as low quality companies and countries. The fixed income market may be more efficient than once believed. However, fixed income can experience less efficiency at times and in certain segments such as lower quality bonds. It is expected that the fixed income portfolio will make use of both active and passive investment mandates and will include allocations to all major segments of the fixed income market.

Alternative Investments

The alternative investment asset class can encompass many different and distinct asset categories. These types of investments exhibit high levels of risk, with an expectation for high rates of investment returns. Many of these investments also exhibit a high level of correlation with the publicly-traded equity markets.

The alternative investment asset class is considered highly inefficient, as the lack of publicly available company and pricing information suggest active management is critical in this asset class. The primary benefit afforded investors in this asset class is the expectation of generating high levels of investment returns, as well as hedging instruments for risk controls.

Investment Section

Employees' Retirement System Investment Policy Statement (Continued)

For the Fiscal Year Ended September 30, 2018

Examples of such investments are venture capital partnerships, private equity, hedge funds, leveraged buy-out funds, private debt, and direct ownership of individual assets such as oil and gas partnerships. These investments shall only be entered into after due diligence and with approval by both the Investment Committee and the Investment Management Committee or by the Board. No final commitment shall be made until all the forgoing is met. Subsequent investments in a previously approved investment do not require additional specific approvals by the Investment Committee and the Investment Management Committee or the Board, unless there has been a material adverse change in the investment.

ERS may not engage an investment manager or invest in a fund, partnership, or other entity if the terms of the engagement or investment do not preclude an investment result that is contrary to the Investment Policy Statement.

ERS may not engage an investment manager or invest in a fund unless the investment-management or subscription agreement includes a representation, warranty, and covenant confirming the absence of any compensation (before, during, or after the agreement) to a solicitor, placement agent, lobbyist, or other intermediary except as fully disclosed in a writing attached to and made a part of the agreement.

Real Estate

Real estate investments can serve as a diversifier of a stock and bond portfolio. While the factors that influence real estate returns may also influence the returns of stock and bond portfolios, these factors impact real estate in a different manner than the other asset classes. This suggests that the return patterns of real estate have a lower correlation to other asset classes, providing a diversification benefit when combined with stocks and bonds.

Risk Controls and Procedures

- The fund is to be broadly diversified across and within asset classes to limit the volatility of the total fund investment returns and to limit the impact of large losses on individual investments of the fund.
- Individual portfolios will be managed according to written investment guidelines that are approved by the Staff. These guidelines are intended to ensure that the portfolio meets its objective and operates within acceptable risk parameters.
- A process will be established by which compliance with all elements of the IPS and portfolio guidelines are measured and monitored, with compliance exceptions being reported to the Investment Management Committee and the Board.
- The Investment Advisor will work with the Staff to develop a quarterly strategy for investments, which will be disseminated to the Board, as it is prepared each quarter.
- The Investment Committee shall approve all investments made within the IPS. The Investment Committee, in its approval, is considered to be signing for the Board of Control. If any purchase or sale is questioned by two members of the Investment Committee as to whether it is within policy, the Board shall decide and no purchase or sale shall take place until all parties are in clear agreement that said action is or is not covered by policy.
- Each week, the Secretary-Treasurer will send to the Investment Advisor the list of actual activities for written confirmation, which will then be distributed to the Board of Control members upon receipt.
- All investment security purchases will be documented with an individual worksheet setting out the reason for the purchase, rating, market history and other general data relevant to the decision making process.
- An annual survey will be made of all fixed income investments held with emphasis on credit quality. A holding that has been downgraded in rating will be examined as to the reason for the downgrade and a determination should be made as to whether the security should remain in the portfolio.
- The rules of the Securities and Exchange Commission, the general policies of the Board of Control, and the Alabama Ethics Commission shall govern the ethical conduct of employees. The Investment Management Staff will provide the Alabama Ethics Commission with a quarterly report of all purchases and sales of any and all securities for personal accounts occurring within each reported quarter.
- All Alternative Investments will be documented with a comprehensive financial analysis setting out the reasons for the investment and showing the projected return on investment.

Performance Measurement

The investment objective of the ERS total fund is to earn the rate of return of the Total Plan Policy Portfolio. A Policy Portfolio is a passive representation of the specific asset allocation strategy pursued and is the most objective performance evaluation metric. The Total Plan Policy Portfolio weights each individual portfolio and its return versus the actual relative index returns. This process accounts for asset allocation shifts within and between any asset classes.

Total Plan Benchmark

The Total Plan Benchmark is calculated monthly. It is a weighted average of the asset classes and their corresponding benchmarks. The weights are calculated using the beginning market values. The asset class benchmarks are listed in the table below:

Domestic Equity	Custom Benchmark	(see description below)
International Equity	MSCI EAFE Net & Emerging Markets Net	
Domestic Fixed Income	Custom Benchmark	(see description below)
International Fixed Income	WGBI Non-US	Currently, there are no International Fixed Income portfolios in the plan.
Cash	ML 90-Day T-Bill	
Alternative Investments	-If an equity investment, the Russell 3000 +3% -If a debt investment, the Barclay Capital Agency plus 3%.	
Real Estate	NCREIF NPI	-Privately held US- based commercial Real Estate properties. -Most commonly used. -Often use NPI + 1-3% to compensate for higher risk and expected returns of funds that use leverage.

Domestic Equity Benchmark

The Domestic Equity Benchmark is calculated monthly. It is a weighted average of the domestic equity portfolios and their corresponding benchmarks. The weights are calculated using the beginning markets' values. The portfolio benchmarks are listed in the table below:

Core Fund	S&P 500
S&P 500 Fund	S&P 500
MidCap Active Fund (SSF)	S&P 400 MidCap
S&P MidCap Index	S&P 400 MidCap
S&P SmallCap Index	S&P 600 SmallCap
SmallCap Active Fund	S&P 600 SmallCap
LargeCap Policy Fund	S&P 500
LargeCap Value Fund	S&P 500

RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Employees' Retirement System Investment Policy Statement (Continued)

For the Fiscal Year Ended September 30, 2018

Fixed Income Benchmark

The Fixed Income Benchmark is calculated monthly. It is a weighted average of the Fixed Income sectors and their corresponding benchmarks. The weights are calculated using the beginning markets' values. The sector benchmarks are listed in the table below:

Agency	Barclay Capital Agency
Asset Backed	Barclay Capital ABS Index
CMO	Barclay Capital MTGE
Corporate	Barclay Capital Corp
Municipal	N/A
Mortgage Pass-Through	Barclay Capital MTGE
Private Placement	N/A
US Treasury	Barclay Capital Treasury
Yankee - Agency	Barclay Capital Agency
Yankee – Other Yankee	Barclay Capital Corp

RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Teachers' Retirement System

Schedule of Investment Performance

U.S. Equity	TIME WEIGHTED RATES OF RETURN - GROSS OF FEE			
	1 Year	3 Years	5 Years	10 Years
TRS Core Fund	19.54%	17.51%	13.96%	11.44%
TRS S&P 500 Fund	17.46%	16.65%	13.61%	11.79%
TRS Mid Cap Index	14.18%	15.70%	11.94%	12.56%
TRS S&P Small Cap Index	19.65%	20.00%	13.87%	13.49%
TRS Midcap Active Fund (Ssf)	16.75%	14.57%	10.48%	12.11%
TRS Large Cap Policy Fund	20.15%	20.10%	n/a	n/a
TRS Large Cap Value Fund	12.96%	13.70%	n/a	n/a
TRS Total Domestic Equity	17.71%	16.88%	13.33%	11.78%
TRS Custom Domestic Equity Index	17.41%	17.21%	13.55%	12.12%
<i>S&P 500</i>	<i>17.91%</i>	<i>17.31%</i>	<i>13.95%</i>	<i>11.97%</i>
<i>S&P Mid Cap 400</i>	<i>14.21%</i>	<i>15.68%</i>	<i>11.91%</i>	<i>12.49%</i>
<i>S&P Smallcap 600</i>	<i>19.08%</i>	<i>19.41%</i>	<i>13.32%</i>	<i>12.86%</i>
International Equity				
TRS Emerging Markets Fund	-1.61%	12.64%	3.84%	n/a
TRS International Equities	3.46%	9.87%	4.97%	5.93%
TRS Total International Equity	2.47%	10.14%	4.85%	5.70%
TRS Custom International Equity Index	2.05%	9.59%	4.35%	n/a
<i>MSCI Eafe (Net)</i>	<i>2.74%</i>	<i>9.23%</i>	<i>4.42%</i>	<i>5.38%</i>
<i>MSCI Emerging Markets</i>	<i>-0.81%</i>	<i>12.36%</i>	<i>3.61%</i>	<i>5.40%</i>
TRS Total Global Equity	14.27%	15.46%	11.51%	10.43%
TRS Custom Global Equity Index	13.96%	15.59%	11.57%	10.55%
Fixed Income				
TRS Domestic Fixed Income	-0.70%	2.11%	2.72%	4.88%
TRS Custom Domestic Fixed Index	-1.21%	1.79%	2.53%	4.64%
<i>Barclays Aggregate Bond</i>	<i>-1.22%</i>	<i>1.31%</i>	<i>2.16%</i>	<i>3.77%</i>
TRS Total Fixed Income	-0.70%	2.11%	2.72%	4.88%
Alternative Investments				
TRS Private Placements	7.94%	-9.47%	-1.06%	2.37%
TRS Preferred And Private Equity	-4.42%	31.67%	22.99%	0.86%
TRS Real Estate	0.93%	4.09%	5.56%	2.84%
TRS Total Alternatives	1.57%	2.60%	5.77%	3.40%
TRS Total Fixed Income Plus Alternatives	0.78%	2.42%	4.57%	3.88%
Cash				
TRS Cash Account	1.70%	0.99%	0.64%	0.48%
TRS Short Term Investments	2.01%	1.29%	0.92%	0.87%
TRS Total Cash	1.91%	1.20%	n/a	n/a
Total Plan				
TRS Total Plan	9.42%	10.53%	8.88%	7.77%
TRS Total Plan Policy	11.12%	11.56%	8.93%	8.39%

Note: Calculations are prepared using the time-weighted rate-of-return methodology based upon market values

RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Employees' Retirement System

Schedule of Investment Performance

	TIME-WEIGHTED RATES OF RETURN - GROSS OF FEE			
	1 Year	3 Years	5 Years	10 Years
U.S. Equity				
ERS Core Fund	19.50%	17.50%	13.96%	11.45%
ERS S&P 500 Fund	17.48%	16.64%	13.59%	11.79%
ERS Mid Cap Index	14.18%	15.69%	11.94%	12.56%
ERS S&P Small Cap Index	19.65%	20.00%	13.87%	13.49%
ERS Midcap Active Fund (Ssf)	16.73%	14.57%	10.47%	12.11%
ERS Large Cap Policy Fund	20.15%	20.10%	n/a	n/a
ERS Large Cap Value Fund	12.96%	13.70%	n/a	n/a
ERS Total Domestic Equity	17.75%	16.84%	13.30%	11.75%
<i>ERS Custom Domestic Equity Index</i>	<i>17.42%</i>	<i>17.19%</i>	<i>13.56%</i>	<i>12.12%</i>
<i>S&P 500</i>	<i>17.91%</i>	<i>17.31%</i>	<i>13.95%</i>	<i>11.97%</i>
<i>S&P Mid Cap 400</i>	<i>14.21%</i>	<i>15.68%</i>	<i>11.91%</i>	<i>12.49%</i>
<i>S&P Smallcap 600</i>	<i>19.08%</i>	<i>19.41%</i>	<i>13.32%</i>	<i>12.86%</i>
International Equity				
ERS Emerging Markets Fund	-1.41%	12.71%	3.88%	n/a
ERS International Equities	3.46%	9.87%	4.97%	5.93%
ERS Total International Equity	2.13%	10.06%	4.78%	5.66%
<i>ERS Custom International Equity Index</i>	<i>1.80%</i>	<i>9.54%</i>	<i>4.31</i>	<i>n/a</i>
<i>MSCI Eafe (Net)</i>	<i>2.74%</i>	<i>9.23%</i>	<i>4.42%</i>	<i>5.38%</i>
<i>MSCI Emerging Markets</i>	<i>-0.81%</i>	<i>12.36%</i>	<i>3.61%</i>	<i>5.40%</i>
ERS Total Global Equity	14.36%	15.46%	11.55%	10.46%
<i>ERS Custom Global Equity Index</i>	<i>14.06%</i>	<i>15.64%</i>	<i>11.66%</i>	<i>10.61%</i>
Fixed Income				
ERS Domestic Fixed Income	-0.74%	2.10%	2.71%	4.88%
<i>ERS Custom Domestic Fixed Index</i>	<i>-1.21%</i>	<i>1.78%</i>	<i>2.52%</i>	<i>4.64%</i>
<i>Barclays Aggregate Bond</i>	<i>-1.22%</i>	<i>1.31%</i>	<i>2.16%</i>	<i>3.77%</i>
ERS Total Fixed Income	-0.74%	2.10%	2.71%	4.88%
Alternative Investments				
ERS Private Placements	7.86%	-9.59%	-1.13%	2.28%
ERS Preferred And Private Equity	-4.19%	35.44%	24.44%	3.87%
ERS Real Estate	0.93%	4.02%	5.50%	2.79%
ERS Total Alternatives	1.20%	4.13%	6.66%	3.46%
ERS Total Fixed Income Plus Alternatives	0.56%	3.48%	5.16%	3.77%
Cash				
ERS Cash Account	1.75%	1.01%	0.65%	0.48%
ERS Short Term Investments	2.02%	1.32%	0.95%	0.88%
ERS Total Cash	1.91%	1.23%	n/a	n/a
Total Plan				
ERS Total Plan	9.29%	10.78%	9.00%	7.58%
<i>ERS Total Plan Policy</i>	<i>11.55%</i>	<i>11.90%</i>	<i>9.46%</i>	<i>8.60%</i>

Note: Calculations are prepared using the time-weighted rate-of-return methodology based upon market values

RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Judicial Retirement Fund

Schedule of Investment Performance

	TIME WEIGHTED RATES OF RETURN - GROSS OF FEE			
	1 Year	3 Years	5 Years	10 Years
U.S. Equity				
JRF S&P 500 Fund	17.58%	16.82%	13.76%	11.90%
JRF Mid Cap Index	14.17%	15.67%	11.94%	12.57%
JRF S&P Small Cap Index	19.65%	20.00%	13.86%	13.49%
JRF Large Cap Policy Fund	20.15%	20.09%	n/a	n/a
JRF Large Cap Value Fund	12.97%	13.70%	n/a	n/a
JRF Total Domestic Equity	17.27%	16.88%	13.59%	12.05%
JRF Custom Domestic Equity Index	17.55%	17.24%	13.71%	12.03%
<i>S&P 500</i>	<i>17.91%</i>	<i>17.31%</i>	<i>13.95%</i>	<i>11.97%</i>
<i>S&P Mid Cap 400</i>	<i>14.21%</i>	<i>15.68%</i>	<i>11.91%</i>	<i>12.49%</i>
<i>S&P Smallcap 600</i>	<i>19.08%</i>	<i>19.41%</i>	<i>13.32%</i>	<i>12.86%</i>
International Equity				
JRF Emerging Markets Fund	-2.18%	12.32%	3.70%	n/a
JRF International Equities	3.42%	9.85%	4.96%	6.02%
JRF Total International Equity	2.47%	10.26%	4.86%	5.87%
JRF Custom International Equity Index	2.20%	9.77%	4.43	n/a
<i>MSCI Eafe (Net)</i>	<i>2.74%</i>	<i>9.23%</i>	<i>4.42%</i>	<i>5.38%</i>
<i>MSCI Emerging Markets</i>	<i>-0.81%</i>	<i>12.36%</i>	<i>3.61%</i>	<i>5.40%</i>
JRF Total Global Equity	13.91%	15.44%	11.70%	10.74%
JRF Custom Global Equity Index	14.06%	15.61%	11.70%	10.56%
Fixed Income				
JRF Domestic Fixed Income	-0.69%	1.86%	2.57%	4.85%
JRF Custom Domestic Fixed Index	-1.24%	1.63%	2.41%	4.52%
<i>Barclays Aggregate Bond</i>	<i>-1.22%</i>	<i>1.31%</i>	<i>2.16%</i>	<i>3.77%</i>
JRF Total Fixed Income	-0.69%	1.86%	2.57%	4.85%
Alternative Investments				
JRF Private Placements	1.15%	-49.57%	-32.44%	-15.17%
JRF Preferred And Private Equity	-8.95%	n/a	n/a	n/a
JRF Real Estate	2.90%	6.93%	8.49%	7.82%
JRF Total Alternatives	2.40%	-1.14%	1.50%	2.94%
JRF Total Fixed Income Plus Alternatives	-0.51%	1.68%	2.53%	4.31%
Cash				
JRF Cash Account	1.72%	1.00%	0.64%	0.48%
JRF Short Term Investments	2.00%	1.30%	0.93%	0.90%
JRF Total Cash	1.84%	1.15%	n/a	n/a
Total Plan				
JRF Total Plan	9.32%	10.72%	8.70%	8.72%
JRF Total Plan Policy	9.39%	10.97%	8.84%	8.67%

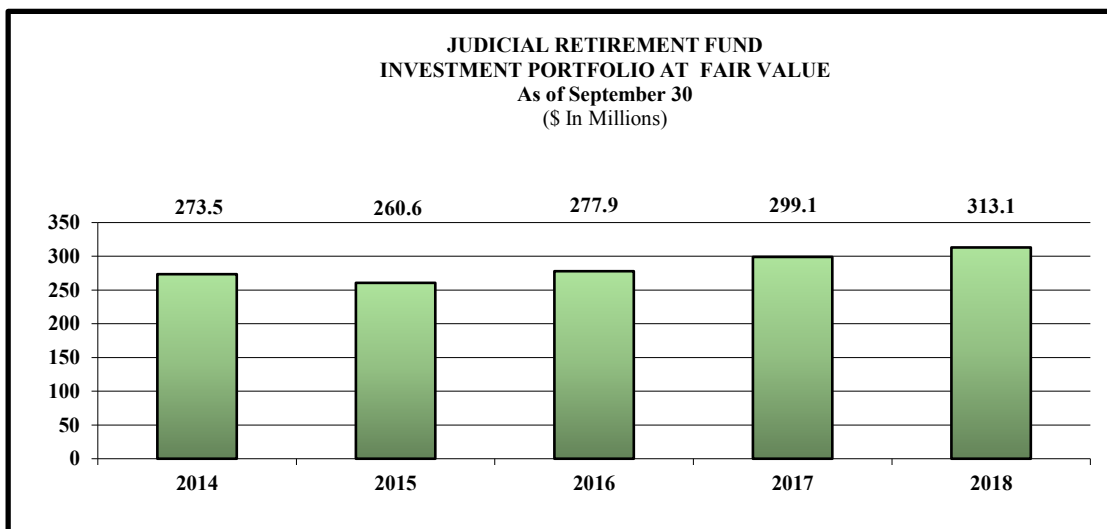
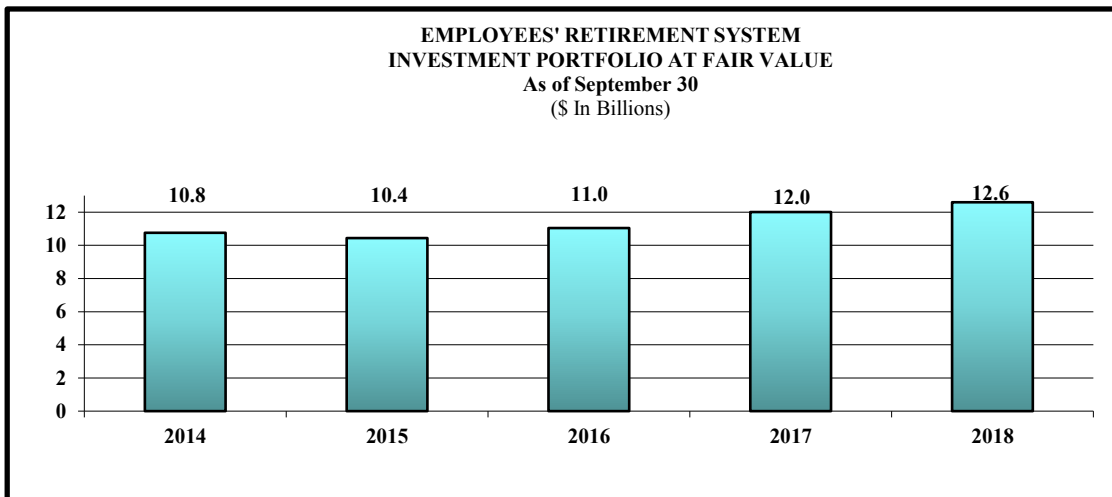
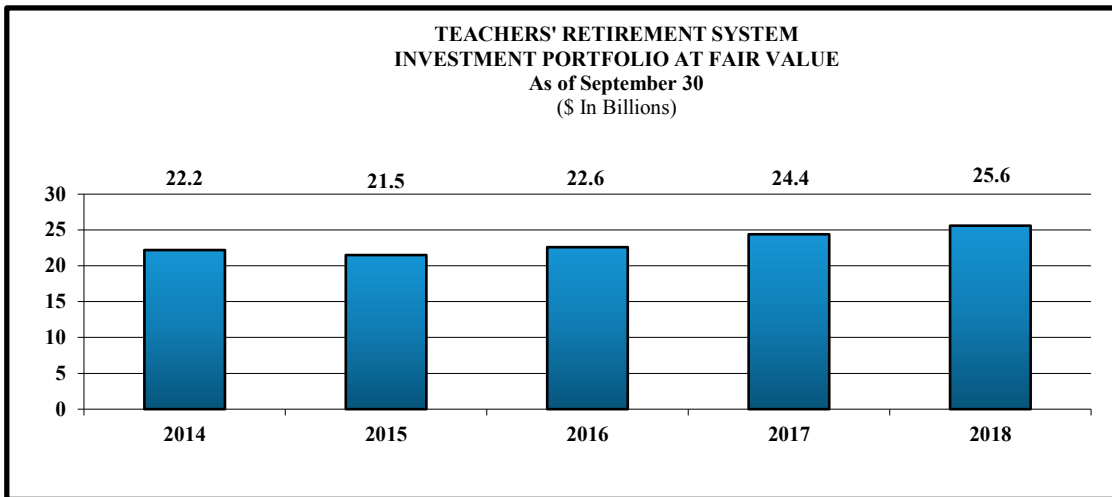
Note: Calculations are prepared using the time-weighted rate-of-return methodology based upon market values

RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Investment Portfolio at Fair Value

Five-Year Comparison

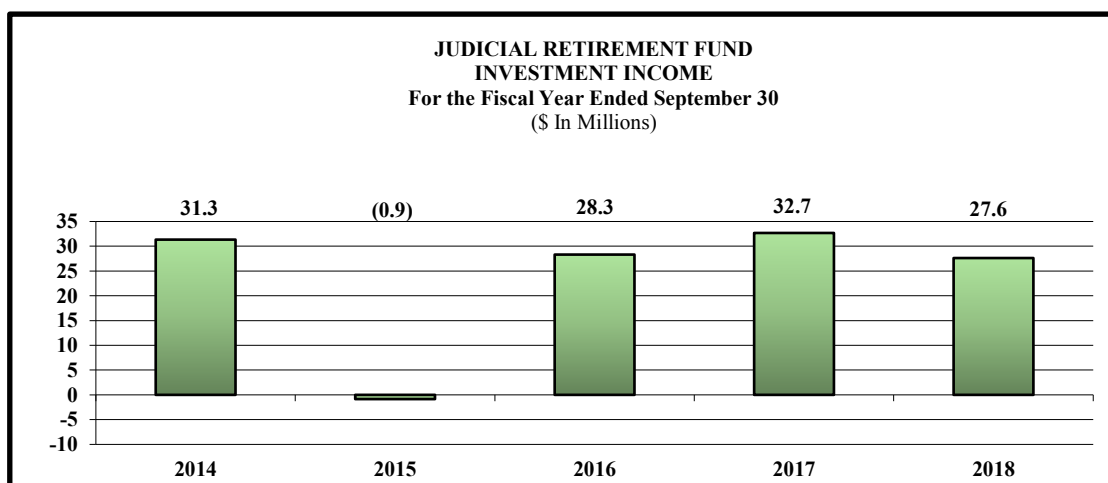
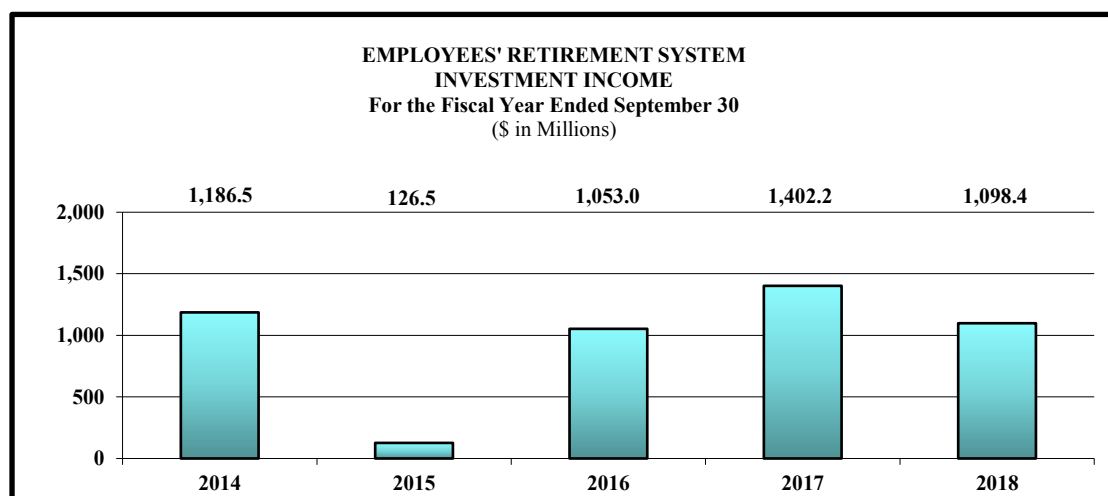
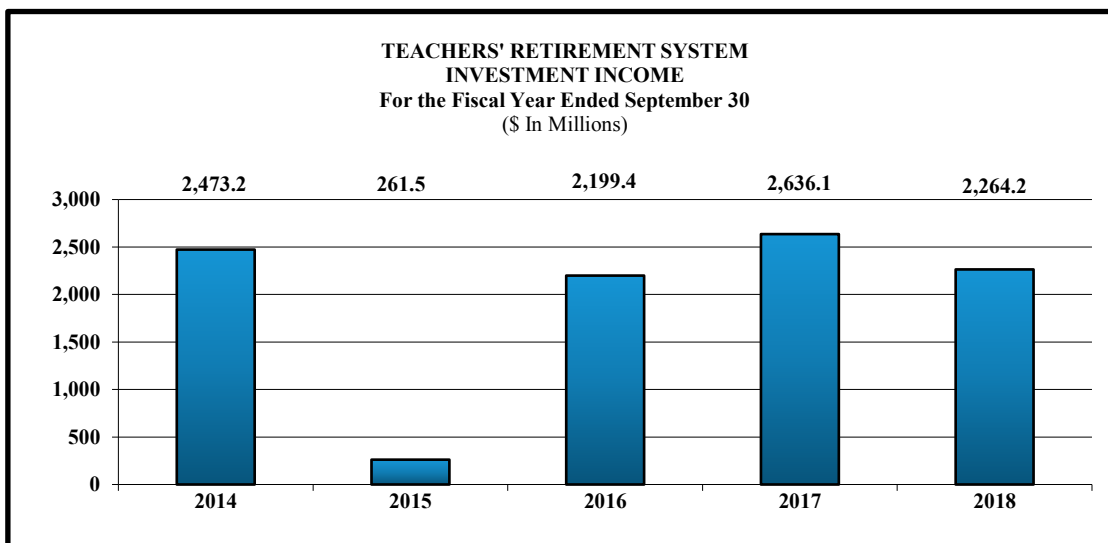


RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Investment Income

Five-Year Comparison

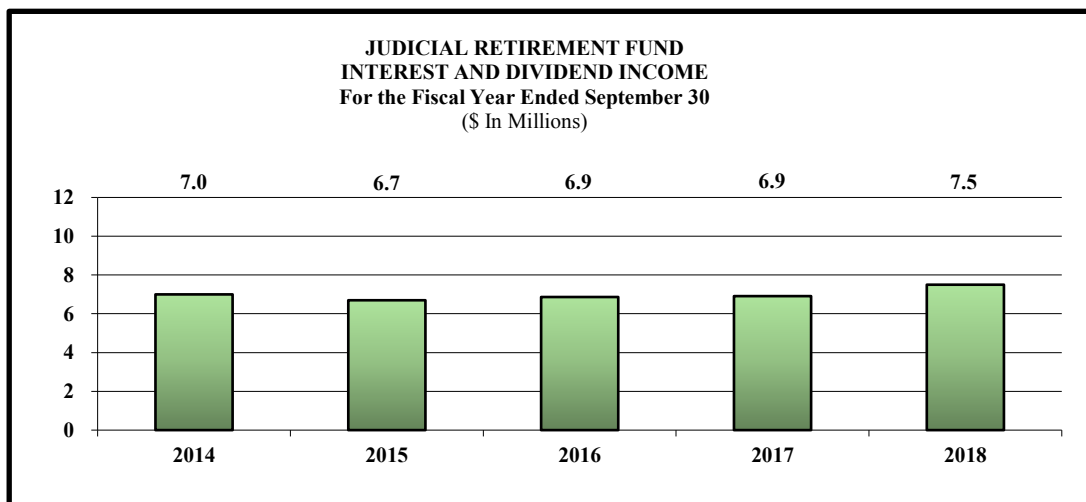
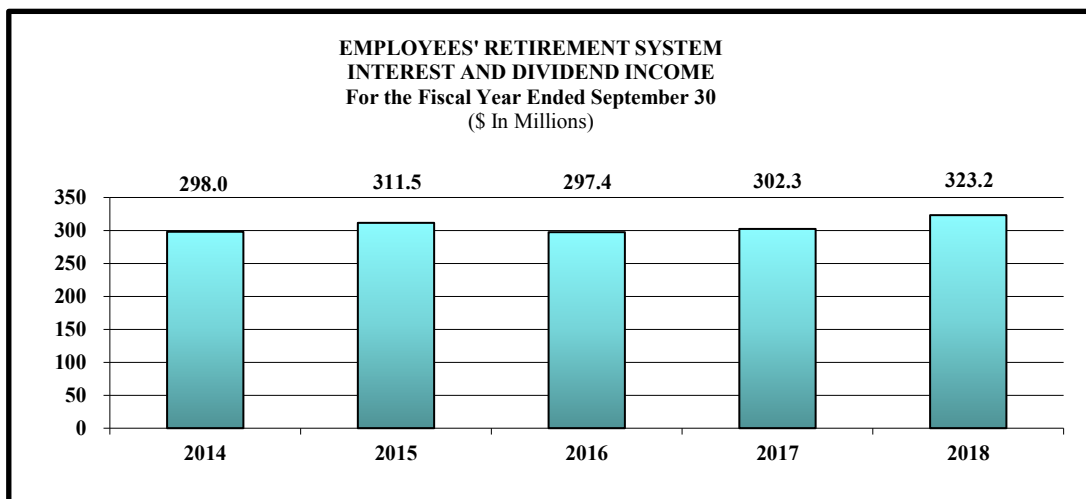
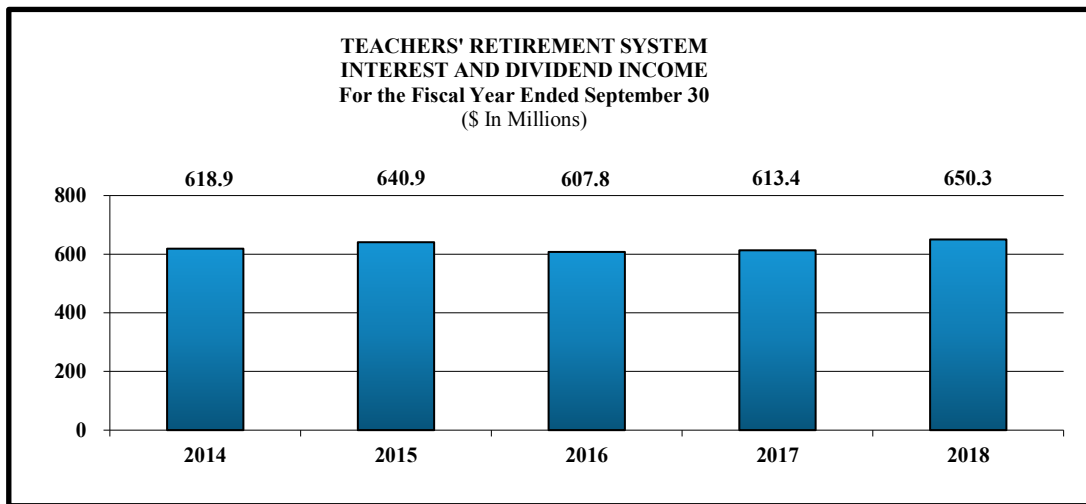


RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Interest and Dividend Income

Five-Year Comparison

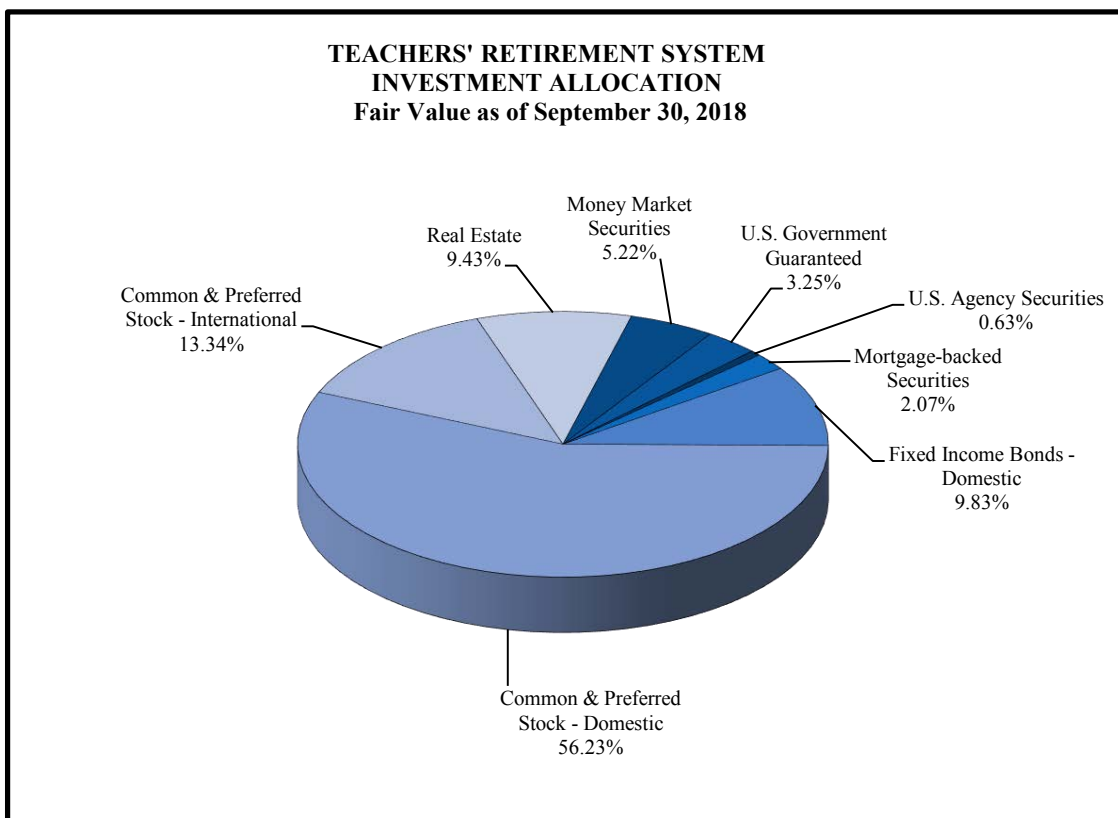


RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Teachers' Retirement System

Investment Allocation and Summary



**TEACHERS' RETIREMENT SYSTEM
INVESTMENT SUMMARY AT FAIR VALUE**

As of September 30, 2018

(\$ In Thousands)

	Fair Value	% of Fair Value
Money Market Securities and Mutual Funds	\$ 1,337,670	5.22
U.S. Government Guaranteed	833,758	3.25
U.S. Agency Securities	160,389	0.63
Mortgage-backed Securities	530,987	2.07
Fixed Income Bonds		
Domestic	2,519,436	9.83
Common and Preferred Stocks		
Domestic	14,407,115	56.23
International	3,417,268	13.34
Real Estate	2,415,071	9.43
Total Investments	\$ 25,621,694	100.00

RETIREMENT SYSTEMS OF ALABAMA*Investment Section*

Teachers' Retirement System

Largest Stock and Bond Holdings

**TEACHERS' RETIREMENT SYSTEM
LARGEST STOCK HOLDINGS****September 30, 2018**

(Amounts In Thousands)

	Shares	Stock	Fair Value
1)	949	Goldman Sachs Small Cap Equity Linked Note	\$ 1,311,526
2)	13	New Water Street Corporation	1,267,927
3)	10,826	Raycom Media Warrants	626,901
4)	10,101	ISHARES MSCI Emerging Markets	433,522
5)	1,695	Apple, Inc.	382,700
6)	2,869	Microsoft Corporation	328,129
7)	156	Amazon.Com, Inc.	313,269
8)	3,527	ISHARES CORE MSCI Emerging Markets	182,652
9)	146	Alphabet, Inc.	176,584
10)	1,477	J. P. Morgan Chase & Co.	166,638

**TEACHERS' RETIREMENT SYSTEM
LARGEST BOND HOLDINGS****September 30, 2018**

(Amounts In Thousands)

	Par	Bonds	Fair Value
1)	1,098,966	Raycom Media, 8%, Due 9/30/2032	\$ 1,098,966
2)	75,311	U.S. Treasury, 2%, Due 12/31/2021	73,223
3)	74,115	U.S. Treasury, 2.25%, Due 11/15/2024	71,045
4)	68,666	U.S. Treasury, 2.75%, Due 2/15/2024	67,946
5)	61,232	U.S. Treasury, 2.125%, Due 8/15/2021	59,965
6)	56,926	U.S. Treasury, 1.375%, Due 1/31/2020	55,926
7)	52,030	U.S. Treasury, 2.25%, Due 2/29/2020	51,676
8)	52,831	U.S. Treasury, 2.5%, Due 5/15/2024	51,543
9)	64,411	SIO2 Medical Products Inc, 8%, Due 12/31/2018	50,250
10)	48,599	U.S. Treasury, 3.375%, Due 11/15/2019	48,960

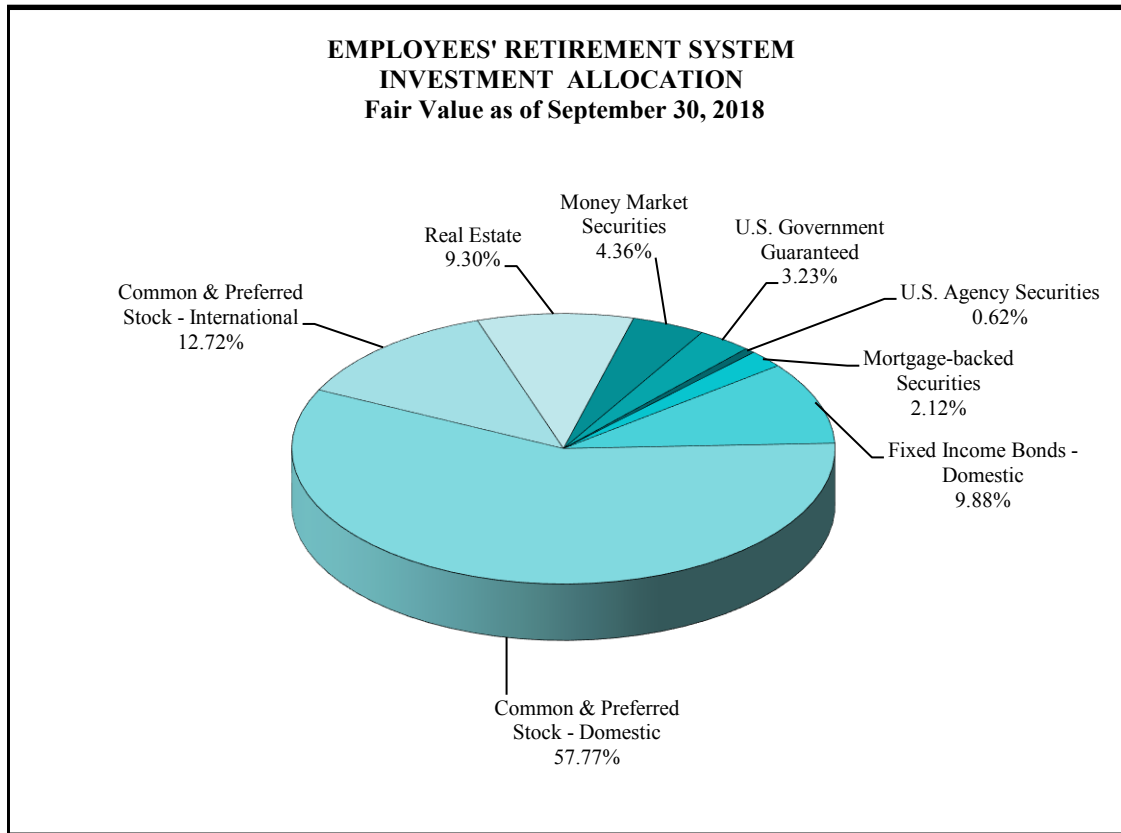
A complete list of portfolio holdings is available upon request.

RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Employees' Retirement System

Investment Allocation and Summary



**EMPLOYEES' RETIREMENT SYSTEM
INVESTMENT SUMMARY AT FAIR VALUE**

As of September 30, 2018

(\$ In Thousands)

	Fair Value	% of Fair Value
Money Market Securities and Mutual Funds	\$ 548,882	4.36
U.S. Government Guaranteed	407,226	3.23
U.S. Agency Securities	78,137	0.62
Mortgage-backed Securities	267,878	2.12
Fixed Income Bonds		
Domestic	1,244,465	9.88
Common and Preferred Stocks		
Domestic	7,277,756	57.77
International	1,602,600	12.72
Real Estate	1,171,372	9.30
Total Investments	\$ 12,598,316	100.00

RETIREMENT SYSTEMS OF ALABAMA*Investment Section*

Employees' Retirement System

Largest Stock and Bond Holdings

**EMPLOYEES' RETIREMENT SYSTEM
LARGEST STOCK HOLDINGS****September 30, 2018**

(Amounts in Thousands)

	Shares	Stock	Fair Value
1)	6	New Water Street Corporation	\$ 582,576
2)	390	Goldman Sachs Small Cap Equity Linked Note	539,380
3)	7,727	Raycom Media Warrants	447,417
4)	4,952	ISHARES MSCI Emerging Markets	212,535
5)	858	Apple, Inc.	193,604
6)	1,450	Microsoft Corporation	165,885
7)	79	Amazon.Com, Inc.	158,810
8)	3,052	ISHARES CORE MSCI Emerging Markets	158,011
9)	76	Alphabet, Inc.	91,145
10)	755	J. P. Morgan Chase & Co.	85,167

**EMPLOYEES' RETIREMENT SYSTEM
LARGEST BOND HOLDINGS****September 30, 2018**

(Amounts In Thousands)

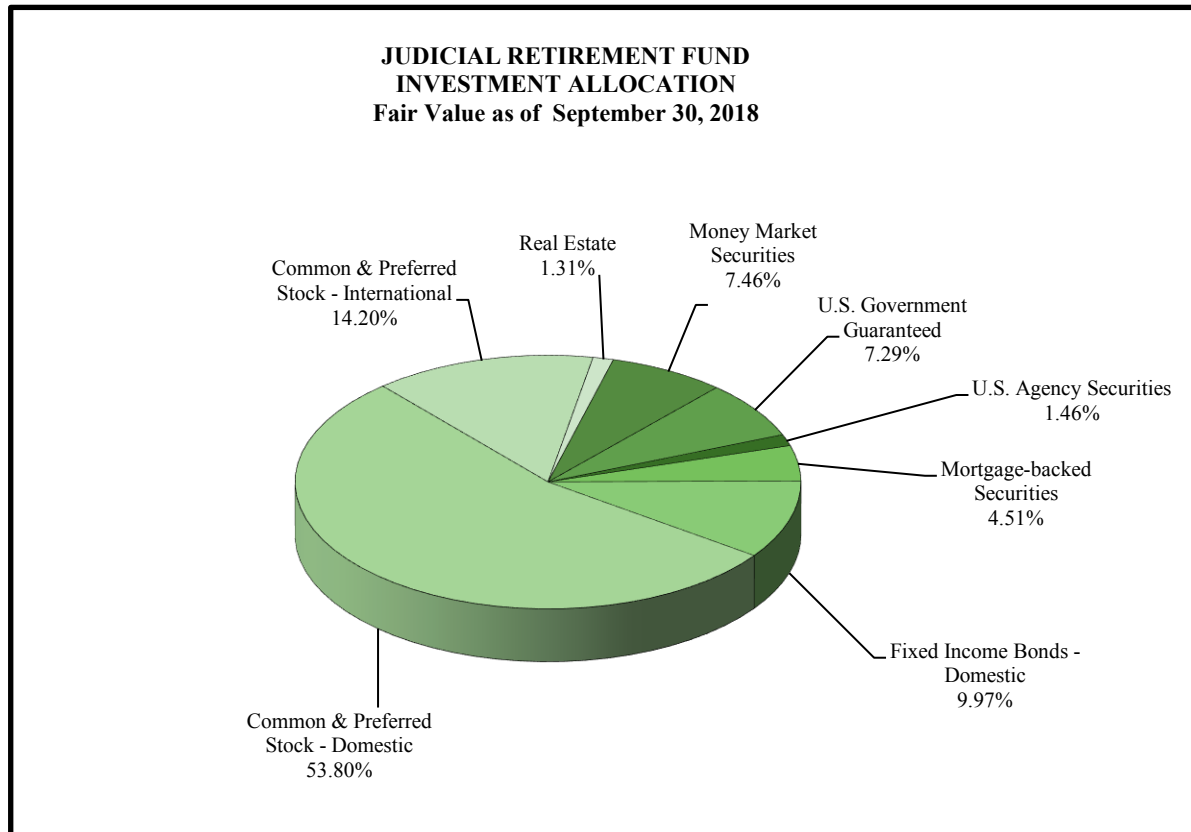
	Par	Bonds	Fair Value
1)	546,315	Raycom Media, 8%, Due 9/30/2032	\$ 546,314
2)	41,044	U.S. Treasury, 2%, Due 12/31/2021	39,906
3)	36,453	U.S. Treasury, 2.25%, Due 11/15/2024	34,943
4)	33,001	U.S. Treasury, 2.125%, Due 8/15/2021	32,318
5)	31,236	U.S. Treasury, 2.75%, Due 2/15/2024	30,909
6)	29,131	U.S. Treasury, 2.5%, Due 5/15/2024	28,421
7)	25,877	U.S. Treasury, 1.375%, Due 1/31/2020	25,422
8)	25,542	U.S. Treasury, 2.25%, Due 2/29/2020	25,368
9)	25,333	American Spirit Media, LLC, 8%, Due 12/31/2032	25,307
10)	31,725	SIO2 Medical Products Inc, 8%, Due 12/31/2018	24,750

A complete list of portfolio holdings is available upon request.

Investment Section

Judicial Retirement Fund

Investment Allocation and Summary



**JUDICIAL RETIREMENT FUND
INVESTMENT SUMMARY AT FAIR VALUE
As of September 30, 2018**

(\$ In Thousands)

	Fair Value	% of Fair Value
Money Market Securities and Mutual Funds	\$ 23,364	7.46
U.S. Government Guaranteed	22,818	7.29
U.S. Agency Securities	4,574	1.46
Mortgage-backed Securities	14,119	4.51
Fixed Income Bonds		
Domestic	31,202	9.97
Common and Preferred Stocks		
Domestic	168,449	53.80
International	44,473	14.20
Real Estate	4,107	1.31
Total Investments	\$ 313,106	100.00

RETIREMENT SYSTEMS OF ALABAMA*Investment Section*

Judicial Retirement Fund

Largest Stock and Bond Holdings

**JUDICIAL RETIREMENT FUND
LARGEST STOCK HOLDINGS****September 30, 2018**

(Amounts in Thousands)

	Shares	Stock	Fair Value
1)	9	Goldman Sachs Small Cap Equity Linked Note	\$ 11,812
2)	160	ISHARES MSCI Emerging Markets	6,885
3)	25	Apple, Inc.	5,622
4)	42	Microsoft Corporation	4,761
5)	2	Amazon.Com, Inc.	4,455
6)	*	New Water Street Corporation	4,107
7)	11	Berkshire Hathaway, Inc.	2,266
8)	13	Facebook, Inc.	2,153
9)	18	J. P. Morgan Chase & Co.	2,059
10)	15	Johnson & Johnson	2,012

* Less than 1,000 shares

**JUDICIAL RETIREMENT FUND
LARGEST BOND HOLDINGS****September 30, 2018**

(Amounts In Thousands)

	Par	Bonds	Fair Value
1)	4,544	U.S. Treasury, 2.125%, Due 8/15/2021	\$ 4,450
2)	3,986	U.S. Treasury, 2.5%, Due 5/15/2024	3,889
3)	2,042	U.S. Treasury, 2.25%, Due 11/15/2024	1,957
4)	1,871	U.S. Treasury, 2.75%, Due 2/15/2024	1,851
5)	1,590	U.S. Treasury, 1.375%, Due 1/31/2020	1,562
6)	1,443	U.S. Treasury, 2.25%, Due 2/29/2020	1,433
7)	1,619	U.S. Treasury, 2.5%, Due 2/15/2045	1,418
8)	1,280	U.S. Treasury, 3.375%, Due 11/15/2019	1,290
9)	1,319	GE Capital Intl Funding Co, 2.342%, Due 11/15/2020	1,289
10)	1,259	U.S. Treasury, 3.5%, Due 5/15/2020	1,273

A complete list of portfolio holdings is available upon request.

RETIREMENT SYSTEMS OF ALABAMA
Investment Section
Broker Commissions Paid
For the Fiscal Year Ended September 30, 2018

	Stock			Fixed Securities Commissions (000's)	Total Commissions (000's)
	Commissions Per Share	# of Shares (000's)	Commissions (000's)		
Bank of America Merrill Lynch	\$ 0.020	18,990	\$ 388	\$ 63	\$ 451
Barclays	0.050	2,071	104	35	139
Bernstein	0.034	9,094	313	-	313
BTIG	0.015	1,094	16	-	16
Citigroup	0.050	5,821	289	123	412
Convergex	0.033	5,682	187	-	187
Cornerstone	0.050	939	47	-	47
Cowen	0.050	822	41	-	41
Credit Suisse	0.050	1,526	76	17	93
Deutsche Bank	-	-	-	3	3
Goldman Sachs	-	231	-	173	173
Harbor Financial	0.050	500	25	-	25
International Strategy and Investment - ISI	0.049	6,548	324	-	324
Issuer Designated	-	-	-	106	106
Jefferies	0.028	3,498	97	-	97
JP Morgan Chase	0.050	3,009	150	130	280
Keybank Capital Markets	0.050	1,181	59	39	98
Morgan Keegan	0.050	400	20	-	20
Morgan Stanley	0.063	17,043	1,072	134	1,206
National Bank of Commerce - NBC Securities	0.050	1,528	76	-	76
Raymond James & Associates	0.050	1,111	56	3	59
Renaissance Macro Securities - Renmac	0.050	4,950	247	-	247
Royal Bank of Canada - RBC	0.039	6,118	236	58	294
Securities Capital	0.050	525	26	-	26
Southwest Securities	0.049	425	21	-	21
Stifel Nicolaus	0.038	11,892	447	35	482
Strategas	0.029	9,270	269	-	269
Suntrust	-	-	-	14	14
Union Bank of Switzerland - UBS	0.050	1,307	65	-	65
Wells Fargo	0.025	16,833	425	125	550
Totals		132,408	\$ 5,076	\$ 1,058	\$ 6,134
Average Commission Per Share of Stock =		\$ 0.0383			

Note: Certain Broker agreements include provisions for commission sharing.





Actuarial Section

Component Units of the State of Alabama
Comprehensive Annual Financial Report



Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

May 8, 2018

Board of Control
Teachers' Retirement System
of Alabama

Dear Board Members:

The basic funding objectives of the Teachers' Retirement System of Alabama (TRS) is to accumulate sufficient assets during a member's employment to fully finance the benefits the member is expected to receive throughout retirement.

TRS maintains a funding policy that was effective September 30, 2012. In order to meet the objectives listed above, the System will strive to meet the following funding objectives:

- To maintain an increasing funded ratio (ratio of system actuarial value of assets to actuarial accrued liabilities) that reflects a trend of improved actuarial condition. The long-term objective is to attain a funded ratio which is consistent with the fiscal health and long-term stability of the System.
- To maintain adequate asset levels to finance the benefits promised to members and monitor the future demands for liquidity.
- To develop a pattern of contribution rates expressed as a percentage of member payroll as measured by valuations prepared in accordance with applicable State laws and the principles of practice prescribed by the Actuarial Standards Board. In no event will the employer contribution rate be negative.
- To provide intergenerational equity for taxpayers with respect to System costs.

To track progress in achieving the funding objectives, the following benchmarks are measured annually as of the valuation date:

- **Funded ratio** – The funded ratio, defined as the actuarial value of assets divided by the actuarial accrued liability, should increase over time, before adjustments for changes in benefits, actuarial, methods, and/or actuarial assumptions.
- **Unfunded Actuarial Accrued Liability (UAAL)**
 - **Transitional UAAL** – The UAAL established as of the initial valuation date for which this funding policy is adopted.
 - **New Incremental UAAL** – Each subsequent valuation will produce a New Incremental UAAL consisting of all benefit changes, assumption and method changes and experience gains and/or losses that have occurred since the previous valuation.
- **UAAL Amortization Period and Contribution Rates**
 - In each valuation 1/15th of the Transitional UAAL will be amortized over a closed period. The closed period shall be the amortization period for the valuation preceding the adoption of the funding policy not to exceed 30 years. The remaining Transitional UAAL each year will be amortized over an open period. The open period shall be the amortization period for the valuation preceding the adoption of the funding policy not to exceed 30 years. After 15 years the entire Transitional UAAL will be closed.
 - Each New Incremental UAAL shall be amortized over a closed 30 year period.
 - Employer Normal Contribution Rate – the contribution rate determined as of the valuation date each year based on the provisions of Alabama Code Section 16-25-21.



In each valuation subsequent to the adoption of this funding policy the required employer contribution rate will be determined by the summation of the employer Normal Contribution Rate, a contribution rate for administrative expenses, a contribution rate for the pre-retirement death benefit fund, a contribution rate for the term life insurance fund, individual amortization rate for each of the New Incremental UAAL bases, the individual amortization rate for each of the 15 closed periods for the Transitional UAAL and the amortization of any remaining open portion of the Transitional UAAL.

In order to measure progress toward this fundamental objective and funding policy, TRS has an annual actuarial valuation performed. The valuation (i) measures present financial position, and (ii) establishes contribution rates that provide for the normal cost and level percent of payroll amortization of unfunded actuarial accrued liability in accordance with the funding policy. The latest completed actuarial valuation was based upon data and assumptions as of September 30, 2017. This valuation indicates that the current employer contribution rates of 12.43% of payroll for Tier I members and 11.34% of payroll for Tier II members, for benefits then in effect, meet the basic financial objective and the goals of the funding policy as listed above. There are 136,941 active members as of September 30, 2017.

The actuarial valuation is based upon financial and participant data which is prepared by the retirement system staff, assumptions regarding future rates of investment return and inflation, and rates of retirement, turnover, death and disability among TRS members and their beneficiaries. The data are reviewed by us for internal and year to year consistency as well as general reasonableness prior to its use in the actuarial valuation. It is also summarized and tabulated for the purpose of analyzing trends. The assumptions were adopted by the Board of Control and were based upon actual experience of TRS during the years October 1, 2010 to September 30, 2015. Assets are valued according to a market related method that recognizes 20% of the difference between market value and expected value each year. The assumptions and methods utilized in this valuation, in our opinion, meet the parameters established by the Actuarial Standards of Practice.

The current benefit structure is outlined in the Actuarial Section. There have been no changes since the previous valuation.

We provided the following information and supporting schedules in the Actuarial and Statistical Sections:

- Summary of Actuarial Assumptions and Methods
- Actuarial Cost Method
- Summary of Plan Provisions as Interpreted for Valuation Purposes
- Schedule of Funding Progress
- Solvency Test
- Analysis of Actuarial Gains and Losses
- Schedule of Active Member Valuation Data
- Schedule of Retirants and Beneficiaries Added and Removed from Rolls
- Retired Members by Type of Benefit as of September 30, 2017
- Ten-Year History of Average Monthly Benefit Payments as of September 30



Board of Control
May 8, 2018
Page 3

Based upon the valuation results and the presumption that future contributions will be made at the necessary level to ensure adequate funding and to meet accounting standards, it is our opinion that the Teachers' Retirement System of Alabama continues in sound condition in accordance with the actuarial principles of level percent of payroll financing.

Sincerely yours,

A handwritten signature in blue ink, appearing to read 'Edward Macdonald'.

Edward A. Macdonald, ASA, FCA, MAAA
President

A handwritten signature in blue ink, appearing to read 'Cathy Turcot'.

Cathy Turcot
Principal and Managing Director

A handwritten signature in blue ink, appearing to read 'Larry Langer'.

Larry Langer, ASA, EA, FCA, MAAA
Principal and Consulting Actuary

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Summary of Actuarial Assumptions and Methods

The assumptions and methods used in the valuation were selected based on the actuarial experience study prepared as of September 30, 2015, submitted to and adopted by the Board on September 13, 2016.

Ultimate Investment Rate of Return: 7.75% per annum, compounded annually, including price inflation at 2.75%.

Salary Increases: Representative values of the assumed annual rates of future salary increases are as follows and include wage inflation at 3.00% per annum:

Years of Service	Annual % Rate
0	5.00
1 - 5	4.00
6 - 10	3.75
11 - 15	3.50
16 & Over	3.25

Separations before Service Retirement: Representative values of the assumed annual rates of death, disability, and withdrawal are as follows:

Age	Male						
	Death*	Annual % Rate of					
		Disability**		Withdrawal***			
		Years of Service		Years of Service			
	0-24	25+	0-4	5-9	10-20	20+	
20	0.02	0.00		25.00			
25	0.03	0.03		14.80	11.00		
30	0.04	0.04		13.80	5.40	3.50	
35	0.07	0.13		13.50	5.40	2.50	0.50
40	0.09	0.17		13.00	5.40	2.25	0.50
45	0.13	0.27	0.20	13.00	5.40	2.25	0.75
50	0.18	0.60	0.20	12.00	5.00	2.50	0.80
55	0.25	0.90	0.20	11.50	5.00	2.50	0.90
60	0.38	0.50	0.50	12.00	4.50	2.50	0.90
65	0.54	0.50	0.50	12.00	6.00		
69	0.63	0.50	0.50	12.00	6.25		

*Rates of pre-retirement mortality are according to the sex distinct RP-2000 Employee Mortality Table Projected with Scale BB to 2020 with an adjustment factor of 90% for males and 60% for females.

**No rates of disability are assumed for members with less than 10 years of service.

***No rates of withdrawal are assumed after eligibility for service retirement.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Teachers' Retirement System

Summary of Actuarial Assumptions and Methods (Continued)

Age	Female						
	Annual % Rate of						
	Death*	Disability**		Withdrawal***			
		Years of Service		Years of Service			
	0-24	25+	0-4	5-9	10-20	20+	
20	0.01	0.10		25.00			
25	0.01	0.03		12.75	9.00		
30	0.01	0.04		13.50	5.80	4.30	
35	0.02	0.10		13.50	5.00	2.60	1.50
40	0.04	0.20		11.50	4.75	2.00	1.50
45	0.06	0.35	0.20	10.75	4.10	2.00	0.50
50	0.09	0.65	0.20	10.75	3.90	2.20	0.75
55	0.14	1.05	0.20	11.00	4.20	2.40	0.80
60	0.19	0.50	0.50	12.00	4.50	2.70	1.00
65	0.27	0.50	0.50	15.00	6.75		
69	0.34	0.50	0.50	15.00	7.25		

*Rates of pre-retirement mortality are according to the sex distinct RP-2000 Employee Mortality Table Projected with Scale BB to 2020 with an adjustment factor of 90% for males and 60% for females.

**No rates of disability are assumed for members with less than 10 years of service

***No rates of withdrawal are assumed after eligibility for service retirement.

Service Retirement:

The assumed annual rates of service retirement for Tier 1 members upon attaining 25 years of service:

Age Group	Annual % Rate	
	Male*	Female **
47 & Under	25.00	28.00
48	25.00	20.00
49	20.00	17.00
50	16.50	13.00
51 - 53	16.00	15.00
54	16.00	17.00
55	16.00	18.00
56 - 57	16.00	19.00
58	16.00	21.00
59	20.00	22.00
60	20.00	30.00
61	20.00	27.50
62	35.00	45.00
63	30.00	35.00
64	23.00	32.00
65	28.00	38.00
66	27.00	40.00
67	22.00	35.00
68	22.00	37.00
69 - 70	22.00	30.00
71 - 74	20.00	30.00
75	100.00	100.00

*For males, retirement rates are increased by 5% in the first year attaining 25 years of service from age 51 through age 60

**For females, retirement rates are increased by 9% in the first year attaining 25 years of service from age 50 to 59.

The assumed annual rates of service retirement for Tier 1 members who are first eligible for unreduced benefits before attaining 25 years of service:

Age	Annual % Rate	
	Male	Female
60	12.50	17.00
61	11.00	13.50
62	25.00	23.50
63	18.50	18.00
64	15.00	17.00
65	28.00	28.00
66	27.00	28.00
67	22.00	23.00
68	22.00	27.00
69	22.00	22.00
70	22.00	26.00
71 to 74	20.00	24.00
75 & Above	100.00	100.00

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Teachers' Retirement System

Summary of Actuarial Assumptions and Methods (Continued)

The assumed annual rates of service retirement for Tier 2 members are as follows:

Age	Annual % Rate			
	Male*		Female**	
	Less than 25 years of service	25 or more years of service	Less than 25 years of service	25 or more years of service
62	50.00	60.00	50.00	70.00
63	18.50	30.00	18.00	35.00
64	15.00	23.00	17.00	32.00
65	28.00	28.00	28.00	38.00
66	27.00	27.00	28.00	40.00
67	22.00	22.00	23.00	35.00
68	22.00	22.00	27.00	37.00
69	22.00	22.00	22.00	30.00
70	22.00	22.00	26.00	30.00
71 to 74	20.00	20.00	24.00	30.00
75 & Above	100.00	100.00	100.00	100.00

*For FLC Tier II members, rates on or after age 60 are the same as those for Tier I, while rates from ages 56 to 59 are equal to 0.20 for service less than 25 years and 0.30 for service greater than or equal to 25 years.

**For FLC Tier II members, rates on or after age 60 are the same as those for Tier I, while rates from ages 56 to 59 are equal to 0.20 for service less than 25 years and 0.40 for service greater than or equal to 25 years.

Deaths after Retirement: Rates of mortality for the period after service retirement are according to the RP-2000 White Collar Mortality Table Projected to 2020 using scale BB and adjusted 115% for all ages for males and 112% for ages 78 and over for females. The rates of disabled mortality were based on the RP-2000 Disabled Mortality Table projected to 2020 using scale BB and adjusted 105% for males and 120% for females. Representative values of assumed mortality are as follows:

Age	Annual % Rate of Death After			
	Service Retirement		Disability Retirement	
	Male	Female	Male	Female
55	0.36	0.23	3.50	1.79
60	0.56	0.38	3.84	2.14
65	0.99	0.68	4.14	2.64
70	1.64	1.19	4.86	6.55
75	2.86	2.02	6.37	4.92
80	5.05	3.79	8.45	6.82
85	8.89	6.52	10.99	9.45
90	16.43	11.32	15.44	13.47

Spousal Benefits: For those eligible for spousal benefits, it is assumed that 75% will elect the lump sum death benefit payable from the death benefit fund and 25% will elect the spousal benefit payable from the pension accumulation fund and included in the liabilities of the System.

Benefits Payable upon Separation from Service: For active members who separate from service prior to eligibility for a service retirement allowance, the liability is assumed to be the greater of the value of the refund of contributions or the value of the deferred annuity.

Unused Sick Leave: 3% load on service retirement liabilities for Tier 1 active members. No load for Tier 2 active members.

Percentage Married: 100% of active members are assumed to be married with the husband 3 years older than the wife.

Valuation Method: Individual entry age normal method. Actuarial gains and losses are reflected in the unfunded actuarial accrued liability.

Assets Method: Actuarial value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected value. In order to reduce short-term volatility in valuation results and because the market value and actuarial value of assets were close in value, the actuarial value of assets was set equal to the market value on September 30, 2013. 5-year smoothing commenced again beginning September 30, 2013.

Liability for Current Inactive Members: Member Contribution Balance is multiplied by a factor of 2.0 for vested members with incomplete data and 1.0 for other inactive members.

Liability for Post-DROP Active Members: Members are assumed to retire immediately and receive their accrued benefit.

COLA: No future ad hoc cost of living adjustments (COLAs) are assumed.

Future Service Credit: One year of creditable service per year of employment.

Actuarial Cost Method

1. The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future interest earnings rate (currently 7.75%). The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to retired members and beneficiaries to obtain the present value of all expected benefits payable to the present group of members and beneficiaries.
2. The employer contributions required to support the benefits of the System are determined following a level funding approach and consist of a normal contribution and an accrued liability contribution.
3. The normal contribution is determined using the "individual entry age normal" method. Under this method, a calculation is made to determine the uniform and constant percentage rate of employer contributions which, if applied to the compensation of each new member during the entire period of the member's anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on the member's behalf.
4. The unfunded accrued liability contributions are determined by subtracting the current assets held by the System and the present value of prospective employer normal contributions and member contributions from the present value of expected benefits to be paid from the System.

Summary of Plan Provisions as Interpreted for Valuation Purposes

The Teachers' Retirement System of Alabama (TRS) was established on September 15, 1939, and became effective September 30, 1941. The valuation took into account amendments to the System effective through the valuation date. The following summary describes the main benefit and contribution provisions of the System as interpreted for the valuation.

Definitions

Average Final Compensation – The average compensation of a Tier 1 member is calculated using compensation for the 3 highest years in the last 10 years of creditable service. The average compensation of a Tier 2 member is calculated using compensation for the 5 highest years in the last 10 years of creditable service.

Membership Service – all service rendered while a member of the System and for which contributions are made.

Creditable Service – the sum of membership service, prior service, and any other service established as creditable in accordance with the provisions of the retirement law.

Annuity – payments for life derived from the accumulated contributions of a member.

Pension – payments for life derived from the accumulated contributions of an employer.

Retirement Allowance – the sum of the annuity and pension payments.

Benefits

Service Retirement Allowance

Condition for Allowance Tier 1 - The service retirement allowance is payable upon the request of a member who has completed 25 years of creditable service or who has attained age 60 and completed at least 10 years of creditable service.

Tier 2 - The service retirement allowance is payable upon the request of a member who has completed at least 10 years of creditable service and who has attained age 62 (age 56 with 10 years of creditable service for certified law enforcement, correctional officers, and firefighters).

Amount of Allowance Tier 1 - Upon service retirement, a member receives a retirement allowance equal to 2.0125% of the member's average final compensation multiplied by the number of years of creditable service. At retirement, a member receives one additional year of creditable service in determining the retirement allowance for each five years of service as certified law enforcement, correctional officer, or firefighter.

Tier 2 - Upon service retirement, a member receives a retirement allowance equal to 1.65% of their average final compensation multiplied by the number of years of creditable service. The benefit is capped at 80% of the member's average final compensation.

Tier 1 & 2 - Members may elect to receive a reduced retirement allowance in order to provide an allowance to a designated beneficiary after the member's death (see "Special Privileges at Retirement").

Disability Retirement Allowance

Condition for Allowance A disability retirement allowance may be granted to a member who has completed at least 10 years of creditable service and becomes permanently incapacitated for duty before reaching eligibility for a service retirement.

Amount of Allowance Tier 1 - Upon disability retirement, a member receives a retirement allowance equal to 2.0125% of the member's average final compensation multiplied by the number of years of creditable service. At retirement, a member receives one additional year of creditable service in determining the retirement allowance for each five years of service as certified law enforcement, correctional officer, or firefighter.

Tier 2 - Upon disability retirement, a member receives a retirement allowance equal to 1.65% of the member's average final compensation multiplied by the number of years of creditable service. The benefit is capped at 80% of the member's average final compensation.

Tier 1 & 2 - Members may elect to receive a reduced retirement allowance in order to provide an allowance to a designated beneficiary after the member's death (see "Special Privileges at Retirement").

Benefits Payable upon Separation of Service

A member who withdraws from service is entitled to receive his or her contributions with allowable interest. A member who has completed 10 years of creditable service may, after separation from service, continue membership in the System and file for service retirement after reaching age 60 for Tier 1 members and age 62 for Tier 2 members.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Teachers' Retirement System

Summary of Plan Provisions (Continued)

Benefits Payable upon Death in Active Service

In the event of the death of a member eligible for service retirement, the designated beneficiary may elect (1) to exercise Option 3 as defined under "Special Privileges at Retirement" or (2) to receive a return of member contributions and total earned interest plus a death benefit payable from the Pre-retirement Death Benefit Fund equal to the salary on which retirement contributions were made for the previous scholastic year (July 1-June 30).*

In the event of the death of a member with more than one year of service who is not eligible to retire, the designated beneficiary shall receive the return of member contributions and total earned interest. Also, the designated beneficiary shall receive an additional death benefit payable from the Pre-retirement Death Benefit Fund equal to the salary on which retirement contributions were made for the previous scholastic year (July 1-June 30).*

In the event of a job-related death of a member with less than one year of service, the designated beneficiary shall receive the return of member contributions and total earned interest plus a death benefit payable from the Pre-retirement Death Benefit Fund equal to the annual earnable compensation of the member at the time of death.*

In the event of the death of a member which is not job-related and who has less than one year of service, the designated beneficiary shall receive the return of member contributions and total earned interest plus a matching death benefit, which is limited to a maximum of \$5,000.

*However, if the death occurred more than 180 calendar days after the member's last day in pay status, or if the deceased member had applied for a refund of member contributions or terminated employment, the lump sum will be the same as if the member had less than one year of service and the death was not job-related.

Special Privileges at Retirement

In lieu of the full retirement allowance, a member may, at retirement, elect to receive a reduced retirement allowance equal in value to the full allowance, with the provision that:

Option 1 - If the member dies before the annuity payments equal the present value of the annuity at the date of retirement, the balance is paid to a designated beneficiary or to the member's estate, or

Option 2 - After the member's death, the member's allowance is continued throughout the life of the designated beneficiary, or

Option 3 - After the member's death, one-half of the member's allowance is continued throughout the life of the designated beneficiary, or

Option 4 - Some other benefit is paid either to the member or to such other person as the member shall designate provided such benefit, together with the reduced retirement allowance, is of equivalent actuarial value to the member's retirement allowance and is approved by the Board of Control.

Deferred Retirement Option Plan (DROP)

Prior to March 25, 2011, a member could elect to participate in the Deferred Retirement Option Plan (DROP) upon completion of at least 25 years of creditable service (excluding sick leave) and attainment of at least 55 years of age. Under the DROP, the member deferred receipt of a retirement allowance and continued employment for a period of three to five years. At the end of the period, the member withdrew from active service and received the retirement benefit calculated at the time of enrollment in the DROP, and also received a payment for the deferred retirement benefits and employee contributions while participating in the DROP and interest earned on DROP deposits. The effect of Act 2011-27 was that no new participants were allowed to enter the DROP with an effective participation date after June 1, 2011.

Term Life Insurance

Upon the death of a contributing member, a term life insurance benefit of \$15,000 is paid (pro-rated for part-time members).

Member Contributions

Tier 1 - Prior to October 1, 2011, covered members contributed 5% of earnable compensation. From October 1, 2011, to September 30, 2012, covered members contributed 7.25% of earnable compensation. Beginning October 1, 2012, covered members contribute 7.50% of earnable compensation. Prior to October 1, 2011, certified law enforcement, correctional officers, and firefighters contributed 6% of earnable compensation. From October 1, 2011, to September 30, 2012, certified law enforcement, correctional officers, and firefighters contributed 8.25% of earnable compensation. Beginning October 1, 2012, certified law enforcement, correctional officers, and firefighters contribute 8.50% of earnable compensation. DROP participants continue to contribute during the DROP period but receive a refund of these contributions and regular interest upon retirement.

Tier 2 – Covered members contribute 6% of earnable compensation. Certified law enforcement, correctional officers, and firefighters contribute 7% of earnable compensation.

Tier 1 & 2 - If positive investment performance results in a decrease in the total contribution rate paid by employers and employees participating in the System, the Retirement Systems of Alabama shall first reduce the employee contribution rate. “Regular Interest” is 4% which is the rate adopted by the Board and applied to the balance in each member’s account every year; however, if a member receives a refund of contributions, the interest rate applied to the refund is lower than the 4% regular rate (Based on the *Code of Alabama 1975, Section 16-25-20(b)*).

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Teachers' Retirement System

Supporting Schedules

Supporting Schedules

The following table reflects a six-year history of active member valuation data:

SCHEDULE OF ACTIVE MEMBER VALUATION DATA

(Dollar Amounts Not in Thousands)

<u>Valuation Date</u>	<u>Number</u>	<u>Annual Payroll</u>	<u>Annual Average Pay</u>	<u>% Increase/ (Decrease) in Average Pay</u>
9/30/2017 A	136,941	\$ 6,698,834,819	\$ 48,918	4.00
9/30/2016 A	136,731	6,430,999,445	47,034	1.56
9/30/2015 B	135,986	6,297,938,621	46,313	0.77
9/30/2014 C	135,230	6,214,949,700	45,958	1.48
9/30/2013 D	133,919	6,065,042,345	45,289	2.06
9/30/2012 E	133,791	5,936,831,043	44,374	3.74

A - There are no employees currently participating in the DROP program.

B - In addition, there are 699 employees with annual compensation of \$52,847,343 who are currently in the DROP program. Employers of the Retirement System contribute on this payroll.

C - In addition, there are 1,748 employees with annual compensation of \$120,210,805 who are currently in the DROP program. Employers of the Retirement System contribute on this payroll.

D - In addition, there are 3,029 employees with annual compensation of \$198,322,151 who are currently in the DROP program. Employers of the Retirement System contribute on this payroll.

E - In addition, there are 4,436 employees with annual compensation of \$285,484,977 who are currently in the DROP program. Employers of the Retirement System contribute on this payroll.

The following table presents a six-year history of funding progress:

SCHEDULE OF FUNDING PROGRESS

(Dollar Amounts in Thousands)

<u>Valuation Date</u>	<u>Actuarial Value of Assets (A)</u>	<u>Actuarial Liability (AAL) (B)</u>	<u>Unfunded AAL (UAAL) (B-A)</u>	<u>% Funded (A/B)</u>	<u>Covered Payroll (C)</u>	<u>UAAL as a % of Covered Payroll ((B-A)/C)</u>
9/30/2017***	\$ 23,887,077	\$ 34,688,078	\$ 10,801,001	68.9	\$ 6,698,835	161.20
9/30/2016*	22,645,512	33,143,834	10,498,322	68.3	6,430,999	163.20
9/30/2015	21,740,280	31,844,843	10,104,563	68.3	6,350,786	159.11
9/30/2014	20,809,871	30,837,829	10,027,958	67.5	6,335,161	158.29
9/30/2013	19,629,816	29,665,843	10,036,027	66.2	6,263,364	160.23
9/30/2012**	18,786,008	28,251,367	9,465,359	66.5	6,222,316	152.12

*Reflects changes in actuarial assumptions and methods.

**Reflects changes in methods.

***Reflects changes in actuarial assumptions.

The following table presents a six-year history of a solvency test:

SOLVENCY TEST
(Dollar Amounts in Thousands)

Valuation Date	Aggregate Accrued Liabilities For			Reported Assets	% of Accrued Liabilities Covered by Reported Assets		
	(1) Active Member Contributions	(2) Retirants and Beneficiaries	(3) Active Members (Employer Financed Portion)		(1)	(2)	(3)
9/30/2017 #	\$ 5,504,125	\$ 19,886,016	\$ 9,297,937	\$ 23,887,077	100.00	92.00	0.00
9/30/2016 **	5,197,469	19,257,160	8,689,205	22,645,512	100.00	91.00	0.00
9/30/2015	4,894,145	18,621,250	8,329,448	21,740,280	100.00	90.00	0.00
9/30/2014	4,589,021	18,104,369	8,144,439	20,809,871	100.00	90.00	0.00
9/30/2013	4,261,269	17,666,932	7,737,642	19,629,816	100.00	87.00	0.00
9/30/2012 &	3,921,179	17,085,972	7,244,216	18,786,008	100.00	87.00	0.00

Reflects changes in actuarial assumptions.

** Reflects changes in actuarial assumptions and methods.

& Reflects change in methods.

The following table presents a six-year history of retirants and beneficiaries:

SCHEDULE OF RETIRANTS AND BENEFICIARIES ADDED AND REMOVED FROM ROLLS

Fiscal Year Ended	Retirees Added §*		Retirees Removed		Retirees - Year-end*		% Increase/ (Decrease) in Annual Allowances	Average Annual Allowance
	Number	Annual Allowances (000s)	Number	Annual Allowances (000s)	Number	Annual Allowances (000s)		
2017	4,352	\$ 101,946	1,741	\$ 38,835	92,967	\$ 1,821,047	3.59	\$ 19,588
2016	4,583	102,365	1,590	35,115	90,356	1,757,936	3.98	19,456
2015	4,951	117,295	1,565	34,127	87,363	1,690,686	5.17	19,352
2014	4,820	113,117	1,396	30,044	83,977	1,607,518	5.45	19,142
2013	4,627	104,280	1,369	29,107	80,553	1,524,445	5.19	18,925
2012	5,043	111,252	1,132	18,234	77,295	1,449,272	6.86	18,750

§ Includes retirees completing DROP participation and entering regular retirement.

*Does not include active DROP participants.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Teachers' Retirement System

Supporting Schedules (Continued)

The following table provides an analysis of actuarial gains and losses:

ANALYSIS OF ACTUARIAL GAINS AND LOSSES

(Dollar Amounts in Thousands)

	<u>Amount</u>
Unfunded Actuarial Liability as of September 30, 2016	\$ 10,498,322
Normal Cost for 2017 Plan Year	88,583
Contributions Received During the Year	(758,780)
Interest to Year End	<u>803,842</u>
Expected Unfunded Actuarial Liability as of September 30, 2017	<u>10,631,967</u>
Actuarial (Gains)/Losses During the Year	
From Investments	(412,731)
From Actuarial Liabilities	<u>581,765</u>
Total Actuarial (Gains)/Losses During the Year	<u>169,034</u>
Actual Unfunded Actuarial Liability as of September 30, 2017	<u><u>\$ 10,801,001</u></u>





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

May 31, 2018

Board of Control
Employees' Retirement System
of Alabama

Dear Board Members:

The basic funding objectives of the Employees' Retirement System of Alabama (ERS) is to accumulate sufficient assets during a member's employment to fully finance the benefits the member is expected to receive throughout retirement.

ERS maintains a funding policy that was effective September 30, 2012. In order to meet the objectives listed above, the System will strive to meet the following funding objectives:

- To maintain an increasing funded ratio (ratio of system actuarial value of assets to actuarial accrued liabilities) that reflects a trend of improved actuarial condition. The long-term objective is to attain a funded ratio which is consistent with the fiscal health and long-term stability of the System.
- To maintain adequate asset levels to finance the benefits promised to members and monitor the future demands for liquidity.
- To develop a pattern of contribution rates expressed as a percentage of member payroll as measured by valuations prepared in accordance with applicable State laws and the principles of practice prescribed by the Actuarial Standards Board. In no event will the employer contribution rate be negative.
- To provide intergenerational equity for taxpayers with respect to System costs.

To track progress in achieving the funding objectives, the following benchmarks are measured annually as of the valuation date:

- **Funded ratio** – The funded ratio, defined as the actuarial value of assets divided by the actuarial accrued liability, should increase over time, before adjustments for changes in benefits, actuarial, methods, and/or actuarial assumptions.
- **Unfunded Actuarial Accrued Liability (UAAL)**
 - **Transitional UAAL** – The UAAL established as of the initial valuation date for which this funding policy is adopted.
 - **New Incremental UAAL** – Each subsequent valuation will produce a New Incremental UAAL consisting of all benefit changes, assumption and method changes and experience gains and/or losses that have occurred since the previous valuation.
- **UAAL Amortization Period and Contribution Rates**
 - For those employers with a funded percentage less than 100% in the valuation prior to the adoption of the funding policy: In each valuation 1/15th of the Transitional UAAL will be amortized over a closed period. The closed period shall be the amortization period for the valuation preceding the adoption of the funding policy not to exceed 30 years. The remaining Transitional UAAL each year will be amortized over an open period. The open period shall be the amortization period for the valuation preceding the adoption of the funding policy not to exceed 30 years. After 15 years the entire Transitional UAAL will be closed.



- For those employers with a funded percentage 100% or greater in the valuation prior to the adoption of the funding policy: In each valuation 1/15th of the Transitional UAAL will be amortized over a 30 year closed period. The remaining Transitional UAAL each year will be amortized over a 30 year open period. After 15 years the entire Transitional UAAL will be closed.
- Each New Incremental UAAL shall be amortized over a closed 30 year period.
- Employer Normal Contribution Rate – the contribution rate determined as of the valuation date each year based on the provisions of Alabama Code Section 36-27-24.
- In each valuation subsequent to the adoption of this funding policy the required employer contribution rate will be determined by the summation of the employer Normal Contribution Rate, a contribution rate for administrative expenses, a contribution rate for the pre-retirement death benefit fund, the individual amortization rate for each of the New Incremental UAAL bases, the individual amortization rate for each of the 15 closed periods for the Transitional UAAL and the amortization of any remaining open portion of the Transitional UAAL. If the resulting contribution rate will not support the cash flow and projected benefit payment needs of a particular unit or employer then the RSA staff may approve a more aggressive funding policy for these units or employers.

In order to measure progress toward this fundamental objective and funding policy, ERS has an annual actuarial valuation performed. The valuation (i) measures present financial position, and (ii) establishes contribution rates that provide for the normal cost and level percent of payroll amortization of unfunded actuarial accrued liability in accordance with the funding policy. The latest completed actuarial valuation was based upon data and assumptions as of September 30, 2017. This valuation indicates that the current employer contribution rates for State employees (other than State policemen) of 15.24% of payroll for Tier I members and 14.87% of payroll for Tier II members and employer contribution rates for State policemen of 52.29% of payroll for Tier I members and 45.56% of payroll for Tier II members, for benefits then in effect, meet the basic financial objective and the goals of the funding policy as listed above. In addition, there are varying employer contribution rates for each participating Local employer actuarially determined in accordance with the funding policy. There are 85,657 total active members as of September 30, 2017.

The actuarial valuation is based upon financial and participant data which is prepared by the retirement system staff, assumptions regarding future rates of investment return and inflation, and rates of retirement, turnover, death and disability among ERS members and their beneficiaries. The data are reviewed by us for internal and year to year consistency as well as general reasonableness prior to its use in the actuarial valuation. It is also summarized and tabulated for the purpose of analyzing trends. The assumptions were adopted by the Board of Control and were based upon actual experience of ERS during the years October 1, 2010 to September 30, 2015. Assets are valued according to a market related method that recognizes 20% of the difference between market value and expected value each year. The assumptions and methods utilized in this valuation, in our opinion, meet the parameters established by the Actuarial Standards of Practice.

The current benefit structure is outlined in the Actuarial Section. There have been no changes since the previous valuation.

We provided most of the information used in the supporting schedules in the Actuarial and Statistical Sections, as well as the Schedules of Funding Progress and the employer contributions shown in the Schedules of Employer Contributions in the Financial Section.



We provided the following information and supporting schedules in the Actuarial and Statistical Sections:

- Summary of Actuarial Assumptions and Methods
- Actuarial Cost Method
- Summary of Plan Provisions as Interpreted for Valuation Purposes
- Schedule of Funding Progress
- Solvency Test
- Analysis of Actuarial Gains and Losses
- Schedule of Active Member Valuation Data
- Schedule of Retirants and Beneficiaries Added and Removed from Rolls
- Retired Members by Type of Benefit as of September 30, 2017
- Ten-Year History of Average Monthly Benefit Payments as of September 30

Based upon the valuation results and the presumption that future contributions will be made at the necessary level to ensure adequate funding and to meet accounting standards, it is our opinion that the Employees' Retirement System of Alabama continues in sound condition in accordance with the actuarial principles of level percent of payroll financing.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Edward Macdonald', is positioned above the printed name.

Edward A. Macdonald, ASA, FCA, MAAA
President

A handwritten signature in blue ink, appearing to read 'Cathy Turcot', is positioned above the printed name.

Cathy Turcot
Principal and Managing Director

A handwritten signature in blue ink, appearing to read 'Larry Langer', is positioned above the printed name.

Larry Langer, ASA, EA, FCA, MAAA
Principal and Consulting Actuary

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Employees' Retirement System

Summary of Actuarial Assumptions and Methods

Summary of Actuarial Assumptions and Methods

The assumptions and methods used in the valuation were selected based on the actuarial experience study prepared as of September 30, 2015, submitted to and adopted by the Board on September 29, 2016.

Ultimate Investment Rate of Return: 7.75% per annum, compounded annually, including price inflation at 2.75%.

Salary Increases: Representative values of the assumed annual rates of future salary increases for State and Local Employees are as follows:

Years of Service	Annual % Rate*
0	5.00
1 - 5	4.00
6 - 10	3.75
11 - 15	3.50
16 & Over	3.25

*Includes wage inflation at 3.00% per annum.

The assumed annual rate of future salary increases for State Police is 4.50% per year for all years of service.

Separations before Service Retirement: Representative values of the assumed annual rates of death, disability, and withdrawal are shown in the following tables.

State and Local Employees - Male							
Annual % Rate of							
Age	Death*	Disability		Withdrawal			
		Years of Service		Years of Service			
		0-24	25+	0-4	5-9	10-20	20+
20	0.02	0.06		24.00	9.00	5.00	1.50
25	0.03	0.09		19.50	8.50	5.00	1.50
30	0.03	0.12		17.50	7.00	4.00	1.50
35	0.05	0.15		16.00	6.50	3.25	1.50
40	0.07	0.41		15.50	5.50	3.00	1.50
45	0.10	0.63	0.25	13.50	5.00	2.75	1.50
50	0.14	1.15	0.25	13.00	5.00	2.50	1.50
55	0.20	1.53	0.25	11.50	5.00	2.50	1.50
60	0.30	0.50	0.25	11.50	5.50	2.50	1.50
65	0.42	0.50	0.25	15.50	7.50	2.75	1.50
69	0.49			15.50	7.50	2.75	1.50

*Rates of pre-retirement mortality are according to the sex distinct RP-2000 Combined Mortality Table Projected with Scale BB to 2020 set forward three years for males and set forward one year for females with an adjustment factor of 0.70 for males and 0.50 for females.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Employees' Retirement System

Summary of Actuarial Assumptions and Methods (Continued)

State and Local Employees - Female							
Annual % Rate of							
Age	Death*	Disability		Withdrawal			
		Years of Service		Years of Service			
		0-24	25+	0-4	5-9	10-20	20+
20	0.01	0.05		33.00	12.00	6.50	1.50
25	0.01	0.07		23.00	11.00	6.50	1.50
30	0.01	0.10		20.00	8.25	5.25	1.50
35	0.02	0.19		18.00	7.50	5.25	1.50
40	0.03	0.37		17.00	7.25	3.50	1.50
45	0.05	0.56	0.25	15.50	6.50	3.50	1.50
50	0.08	0.90	0.25	14.50	6.25	3.50	1.50
55	0.11	1.40	0.25	14.00	5.50	3.50	1.50
60	0.16	1.00	0.25	15.00	6.00	3.50	1.50
65	0.23	1.00	0.25	16.00	8.50	3.50	1.50
69	0.29			16.00	8.50	3.50	1.50

*Rates of pre-retirement mortality are according to the sex distinct RP-2000 Combined Mortality Table Projected with Scale BB to 2020 set forward three years for males and set forward one year for females with an adjustment factor of 0.70 for males and 0.50 for females.

State Police					
Annual % Rate of					
Age	Death*		Disability	Withdrawal	
	Years of Service			Years of Service	
	Male	Female		0 - 4	5+
20	0.02	0.01	0.08	2.00	2.00
25	0.03	0.01	0.10	2.00	2.00
30	0.03	0.01	0.14	2.00	2.00
35	0.05	0.02	0.22	2.00	1.00
40	0.07	0.03	0.34	2.00	1.00
45	0.10	0.05	0.46	5.00	1.00
50	0.14	0.08	0.60		
55	0.20	0.11			
60	0.30	0.16			
62	0.35	0.18			
65	0.42	0.23			

*Rates of pre-retirement mortality are according to the sex distinct RP-2000 Combined Mortality Table Projected with Scale BB to 2020 set forward three years for males and set forward one year for females with an adjustment factor of 0.70 for males and 0.50 for females.

Service Retirement: The assumed annual rates of service retirement for Tier 1 and Tier 2 members are as follows:

Tier 1 State and Local Employees
Annual % Rate of Service Retirement*

<u>Age</u>	<u>1st Eligible</u>	<u>Subsequent</u>
50 & Under	18.00	11.50
51 to 55	20.00	11.50
56	25.00	11.50
57 to 59	25.00	15.00
60	13.00	17.00
61	13.00	13.00
62	25.00	25.00
63	25.00	20.00
64	25.00	20.00
65	35.00	25.00
66	35.00	30.00
67 to 74	35.00	21.00
75 & Above	100.00	100.00

*40% are assumed to retire at age 60 with 25 years of service and 20% are assumed to retire at age 60 with 26 or more years of service.

Tier 2 State and Local Employees
Annual % Rate of Service Retirement

<u>Age</u>	<u>1st Eligible</u>	<u>Subsequent</u>
62	50.00	
63	25.00	20.00
64	25.00	20.00
65	35.00	25.00
66	35.00	30.00
67	35.00	25.00
68	35.00	21.00
69 to 74	35.00	20.00
75 & Above	100.00	100.00

State Police
Annual % Rate of Service Retirement

<u>Age</u>	<u>Years of Service</u>		
	<u>10 - 19</u>	<u>20 - 24</u>	<u>25+</u>
40			40.00
45			40.00
50			40.00
55	5.00	35.00	35.00
60	25.00	25.00	25.00
62	25.00	25.00	25.00
65	100.00	100.00	100.00

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Employees' Retirement System

Summary of Actuarial Assumption and Methods (Continued)

Death after Retirement: The rates of mortality for the period after service retirement are according to the sex distinct RP-2000 Blue Collar Mortality Table Projected with Scale BB to 2020 with an adjustment of 125% at all ages for males and 120% for females at ages on and after age 78. The rates of mortality for the period after disability retirement are according to the sex distinct RP-2000 Disabled Mortality Table Projected with Scale BB to 2020 with an adjustment of 130% at all ages for females.

Death in Active Service Benefit: For those members eligible for service retirement who die in active service, it is assumed that 75% of beneficiaries will elect the lump sum death benefit and 25% will elect the Option 3 allowance.

Benefits Payable upon Separation from Service: For active members who separate from service prior to eligibility for a service retirement allowance, the liability is assumed to be the greater of the value of the refund of contributions or the value of the deferred annuity.

Unused Sick Leave: 2.25% load on service retirement liabilities for Tier 1 active members. No load for Tier 2 active members.

Percent Married: 100% of active members are assumed to be married with the husband 3 years older than the wife.

Actuarial Method: Individual entry age normal method. Actuarial gains and losses are reflected in the unfunded actuarial accrued liability.

Asset Method: Actuarial value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected value of assets, based on the assumed valuation rate of return. Each year, 20% of the difference between market value and expected actuarial value is recognized. In order to reduce short-term volatility in valuation results and because the market value and actuarial value of assets were close in value, the actuarial value of assets was set equal to the market value on September 30, 2012. 5-year smoothing commenced again beginning September 30, 2013.

Liability for Current Inactive Members: Member Contribution Balance is multiplied by a factor of 3.0 for vested local employees with incomplete data and by a factor of 1.0 for all non-vested inactive members.

Liability for Post-DROP Active Members: Members are assumed to retire immediately and receive their accrued benefit.

COLA: No future ad hoc cost of living adjustments (COLAs) are assumed.

Future Service Credit: One year of creditable service per year of employment.

Actuarial Cost Method

1. The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future interest earnings rate (currently 7.75%). The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to retired members and beneficiaries to obtain the present value of all expected benefits payable to the present group of members and beneficiaries.
2. The employer contributions required to support the benefits of the System are determined following a level funding approach and consist of a normal contribution and an accrued liability contribution.
3. The normal contribution is determined using the "individual entry age normal" method. Under this method, a calculation is made to determine the uniform and constant percentage rate of employer contributions which, if applied to the compensation of each new member during the entire period of the member's anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on the member's behalf.
4. The unfunded accrued liability contributions are determined by subtracting the current assets held by the System and the present value of prospective employer normal contributions and member contributions from the present value of expected benefits to be paid from the System. The accrued liability contribution amortizes the balance of the unfunded accrued liability over a period of years from the valuation date.

Summary of Plan Provisions as Interpreted for Valuation Purposes

The Employees' Retirement System of Alabama (ERS) was established on October 1, 1945. The valuation took into account amendments to the System effective through the valuation date. The following summary describes the main benefit and contribution provisions of the System as interpreted for the valuation.

Definitions

Average Final Compensation – The average compensation of a Tier 1 member is calculated using compensation for the 3 highest years in the last 10 years of creditable service. The average compensation of a Tier 2 member is calculated using compensation for the 5 highest years in the last 10 years of creditable service.

Membership Service – all service rendered while a member of the System and for which contributions were made.

Creditable Service – the sum of membership service, prior service, and any other previous service established as creditable in accordance with the provisions of the retirement law.

Annuity – payments for life derived from the accumulated contributions of a member.

Pension – payments for life derived from the accumulated contributions of an employer.

Retirement Allowance – the sum of the annuity and pension payments.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Employees' Retirement System

Summary of Plan Provisions (Continued)

Benefits – Members Classified as Other Than State Police

Service Retirement Allowance

Condition for Allowance

Tier 1 - The service retirement allowance is payable upon the request of a member who has completed 25 years of creditable service or who has attained age 60 and completed at least 10 years of creditable service.

Tier 2 - The service retirement allowance is payable upon the request of a member who has completed at least 10 years of creditable service and who has attained age 62 or age 56 for certified law enforcement, correctional officers, and firefighters.

Amount of Allowance

Tier 1 - Upon service retirement, a member receives a retirement allowance equal to 2.0125% of the member's average final compensation multiplied by the number of years of creditable service. At retirement, a member receives one additional year of creditable service in determining the retirement allowance for each five years of service as a certified law enforcement, correctional officer, or firefighter.

Tier 2 - Upon service retirement, a member receives a retirement allowance equal to 1.65% of their average final compensation multiplied by the number of years of creditable service. The benefit is capped at 80% of the member's average final compensation.

Tier 1 & 2 - Members may elect to receive a reduced retirement allowance in order to provide an allowance to a designated beneficiary after the member's death (see "Special Privileges at Retirement – All Members").

Disability Retirement Allowance

Condition for Allowance

A disability retirement allowance may be granted to a member who has completed at least 10 years of creditable service and becomes permanently incapacitated for duty before reaching eligibility for service retirement.

Amount of Allowance

Tier 1 - Upon disability retirement, a member receives a retirement allowance equal to 2.0125% of the member's average final compensation multiplied by the number of years of creditable service. At retirement, a member receives one additional year of creditable service in determining the retirement allowance for each five years of service as a certified law enforcement, correctional officer, or firefighter.

Tier 2 - Upon disability retirement, a member receives a retirement allowance equal to 1.65% of the member's average final compensation multiplied by the number of years of creditable service. The benefit is capped at 80% of the member's average final compensation.

Tier 1 & 2 - Members may elect to receive a reduced retirement allowance in order to provide an allowance to a designated beneficiary after the member's death (see "Special Privileges at Retirement – All Members").

Benefits Payable upon
Separation of Service

A member who withdraws from service is entitled to receive his or her contributions with allowable interest. A member who has completed at least 10 years of creditable service may, after separation from service, continue membership in the System and file for service retirement after reaching age 60 for Tier 1 members or age 62 for Tier 2 members.

Benefits Payable upon
Death in Active Service

In the event of the death of a member eligible for service retirement, the designated beneficiary may elect: (1) to exercise Option 3 as defined under “Special Privileges at Retirement – All Members” or (2) to receive a return of member contributions and total earned interest plus a death benefit payable from the Pre-retirement Death Benefit Fund equal to the salary on which retirement contributions were made for the previous fiscal year (October 1 – September 30).*

In the event of the death of a member with more than one year of service who is not eligible to retire, the designated beneficiary shall receive the return of member contributions and total earned interest. Also, the designated beneficiary shall receive an additional death benefit payable from the Pre-retirement Death Benefit Fund equal to the salary on which retirement contributions were made for the previous fiscal year (October 1 – September 30).*

In the event of a job-related death of a member at any age with less than one year of service, the designated beneficiary shall receive the return of member contributions and total earned interest plus a death benefit payable from the Pre-retirement Death Benefit Fund equal to the annual earnable compensation of the member at the time of death.*

In the event of the death of a member which is not job-related who has less than one year of service, the designated beneficiary shall receive the return of member contributions and total earned interest plus a matching death benefit, which is limited to a maximum of \$5,000.

*However, if the death occurred more than 180 calendar days after the member’s last day in pay status or if the deceased member had applied for a refund of member contributions or terminated employment, the lump sum will be the same as if the member had less than one year of service and the death was not job-related.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Employees' Retirement System

Summary of Plan Provisions (Continued)

Deferred Retirement Option Plan (DROP)

Prior to March 25, 2011, a member could elect to participate in the Deferred Retirement Option Plan (DROP) upon completion of at least 25 years of creditable service (excluding sick leave) and attainment of at least 55 years of age. Under the DROP, the member deferred receipt of a retirement allowance and continued employment for a period of three to five years. At the end of the period, the member withdrew from active service and received the retirement benefit calculated at the time of enrollment in the DROP, and also received a payment for the deferred retirement benefits and employee contributions while participating in the DROP and interest earned on DROP deposits. The effect of Act 2011-27 was that no new participants were allowed to enter the DROP with an effective participation date after June 1, 2011.

Member Contributions

Tier 1 - Prior to October 1, 2011, covered members contributed 5% of earnable compensation. From October 1, 2011, to September 30, 2012, covered members contributed 7.25% of earnable compensation. Beginning October 1, 2012, covered members contribute 7.50% of earnable compensation. Certified law enforcement, correctional officers, and firefighters contributed 6% of earnable compensation until September 30, 2011. From October 1, 2011, to September 30, 2012, certified law enforcement, correctional officers, and firefighters contributed 8.25% of earnable compensation. Beginning October 1, 2012, certified law enforcement, correctional officers, and firefighters contribute 8.50% of earnable compensation. DROP participants continue to contribute during the DROP period but receive a refund of these contributions and regular interest upon retirement.

Tier 2 – Covered members contribute 6% of earnable compensation. Certified law enforcement, correctional officers, and firefighters contribute 7% of earnable compensation.

Tier 1 & 2 - If positive investment performance results in a decrease in the total contribution rate paid by employers and employees participating in the System, the Retirement Systems of Alabama shall first reduce the employee contribution rate. "Regular Interest" is 4% which is the rate adopted by the Board and applied to the balance in each member's account every year; however, if a member receives a refund of contributions, the interest rate applied to the refund is lower than the 4% regular rate (Based on the *Code of Alabama 1975, Section 36-27-25(g)*).

Benefits – Members Classified as State Police

Service Retirement Allowance

Condition of Allowance Tier 1 - A retirement allowance is payable upon the request of a member who has completed 25 years of creditable service or who has attained age 52 and completed at least 10 years of creditable service.

Tier 2 - A retirement allowance is payable upon the request of any member who has attained age 56 and completed at least 10 years of creditable service.

Amount of Allowance Tier 1 - Upon service retirement, a member receives a retirement allowance equal to 2.875% of the member's average final compensation multiplied by the number of years of creditable service.

A member who has attained 20 or more years of creditable service and retires prior to age 60 is eligible to receive a “bonus service credit” up to 4 years as follows:

- Age 56 or older – bonus service of 4 years reduced by 1 month for each month over the age of 56.
- Age 52 to 56 – bonus service of 4 years.
- Age 52 or less (disability retirement only) – bonus service of 4 years.
- Age 52 or less with 25 or more years of service – bonus service of 4 years.

Tier 2 - Upon service retirement, a member receives a retirement allowance equal to 2.375% of the member’s average final compensation multiplied by the number of years of creditable service. The benefit is capped at 80% of the member’s average final compensation.

Disability Retirement Allowance

Condition for Allowance A disability retirement allowance may be granted to a member who has completed at least 10 years of creditable service and who becomes permanently incapacitated for the further performance of duty before reaching the minimum age for service retirement or who becomes disabled as a result of employment in the line of duty without regard to years of creditable service.

Amount of Allowance Tier 1 - Upon disability retirement, a member receives a retirement allowance equal to 2.875% of the member's average final compensation multiplied by the number of years of creditable service.

Tier 2 - Upon disability retirement, a member receives a retirement allowance equal to 2.375% of the member’s average final compensation multiplied by the number of years of creditable service.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Employees' Retirement System

Summary of Plan Provisions (Continued)

Benefits Payable upon Separation from Service

A member who withdraws from service is entitled to receive a return of member contributions with allowable interest. A member who has completed at least 10 years of creditable service may, after separation from service, continue in the membership of the System and file for service retirement after reaching age 52 for Tier 1 members or age 56 for Tier 2 members.

Benefits Payable upon Death in Active Service

In the event of the death of a member who is eligible for service retirement, the designated beneficiary may elect: (1) to exercise Option 3 as defined below under "Special Privileges at Retirement – All Members" or (2) to receive a return of member contributions and total earned interest plus a death benefit payable from the Pre-retirement Death Benefit Fund equal to the salary on which the member made retirement contributions for the previous fiscal year (October 1 – September 30).*

In the event of the death of a member with more than one year of service who is not eligible to retire, the designated beneficiary shall receive the return of member contributions and total earned interest. Also, the designated beneficiary shall receive an additional death benefit payable from the Pre-retirement Death Benefit Fund equal to the salary on which the member made retirement contributions for the previous fiscal year (October 1 – September 30).*

In the event of a job-related death of a member at any age with less than one year of service, the designated beneficiary shall receive the return of member contributions and total earned interest plus a death benefit payable from the Pre-retirement Death Benefit Fund equal to the annual earnable compensation of the member at the time of death.*

In the event of the death of a member which is not job-related and who has less than one year of service, the designated beneficiary shall receive the return of member contributions and total earned interest plus a matching death benefit which is limited to a maximum of \$5,000.

*However, if the death occurred more than 180 calendar days after the member's last day in pay status, or if the deceased member had applied for a refund of member contributions or terminated employment, the lump sum will be the same as if the member had less than one year of service and the death was not job-related.

Deferred Retirement Option Plan
(DROP)

Prior to March 25, 2011, a member could elect to participate in the Deferred Retirement Option Plan (DROP) upon completion of at least 25 years of creditable service (excluding sick leave) and attainment of at least 52 years of age. Under the DROP, the member deferred receipt of a retirement allowance and continued employment for a period of three to five years. At the end of the period, the member withdrew from active service and received the retirement benefit calculated at the time of enrollment in the DROP, and also received a payment for the deferred retirement benefits and employee contributions while participating in the DROP and interest earned on DROP deposits. The effect of Act 2011-27 was that no new participants were allowed to enter the DROP with an effective participation date after June 1, 2011.

Member Contributions

Each member contributes 10% of earnable compensation. DROP participants continue to contribute during the DROP period but receive a refund of these contributions and regular interest upon retirement.

Special Privileges at Retirement – All Members

In lieu of the full retirement allowance, a member may, at retirement, elect to receive a reduced retirement allowance equal in value to the full retirement allowance, with the provision that:

- Option 1: If the member dies before the annuity payments equal or exceed the present value of the member's annuity at the date of retirement, the balance is paid to the designated beneficiary or to the member's estate, or
- Option 2: After the member's death, the member's retirement allowance is continued throughout the life of the designated beneficiary, or
- Option 3: After the member's death, one-half of the member's retirement allowance is continued throughout the life of the designated beneficiary, or
- Option 4: Some other benefit is paid either to the member or the designated beneficiary, provided such benefit, together with the reduced retirement allowance, is of equivalent actuarial value to the member's retirement allowance and is approved by the Board of Control.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Employees' Retirement System

Supporting Schedules

Supporting Schedules

The following schedule provides a six-year history on active member valuation data:

SCHEDULE OF ACTIVE MEMBER VALUATION DATA

(Dollar Amounts Not in Thousands)

<u>Valuation Date</u>	<u>Number</u>	<u>Annual Payroll</u>	<u>Annual Average Pay</u>	<u>% Increase/ (Decrease) in Average Pay</u>
9/30/2017	A 85,657	\$ 3,584,700,002	\$ 41,849	(0.66)
9/30/2016	A 84,814	3,572,891,196	42,129	2.93
9/30/2015	B 84,563	3,461,155,131	40,930	2.34
9/30/2014	C 84,694	3,387,186,858	39,993	1.61
9/30/2013	D 84,035	3,307,511,468	39,359	6.02
9/30/2012	E 84,169	3,124,791,422	37,125	(5.88)

A - There are no employees currently participating in the DROP program.

B - In addition, there are 396 members with compensation of \$26,861,749 who are currently participating in the DROP. Employers of the Retirement System contribute on this payroll.

C - In addition, there are 891 members with compensation of \$57,153,873 who are currently participating in the DROP. Employers of the Retirement System contribute on this payroll.

D - In addition, there are 1,514 members with compensation of \$93,084,090 who are currently participating in the DROP. Employers of the Retirement System contribute on this payroll.

E - In addition, there are 2,121 members with compensation of \$127,211,439 who are currently participating in the DROP. Employers of the Retirement System contribute on this payroll.

The following table presents a six-year history of funding progress:

SCHEDULE OF FUNDING PROGRESS

(Dollar Amounts in Thousands)

<u>Valuation Date</u>	<u>Actuarial Value of Assets (A)</u>	<u>Actuarial Accrued Liability (AAL) (B)</u>	<u>Unfunded AAL (UAAL) (B-A)</u>	<u>Percentage Funded (A/B)</u>	<u>Covered Payroll (C)</u>	<u>UAAL as a % of Covered Payroll ((B-A)/C)</u>
9/30/2017	\$ 11,690,952	\$ 17,250,835	\$ 5,559,883	67.8	\$ 3,584,700	155.1
9/30/2016	11,082,280	16,728,009	5,645,729	66.2	3,572,891	158.0
9/30/2015	10,589,258	15,723,720	5,134,462	67.3	3,488,017	147.2
9/30/2014	10,134,581	15,138,294	5,003,713	66.9	3,444,341	145.3
9/30/2013	9,546,459	14,536,600	4,990,141	65.7	3,400,596	146.7
9/30/2012	9,116,551	13,884,995	4,768,444	65.7	3,252,003	146.6

The following table provides a six-year history of solvency tests:

SOLVENCY TEST									
(Dollar Amounts in Thousands)									
		<u>Aggregate Accrued Liabilities For</u>				<u>% of Accrued Liabilities Covered by Reported Assets</u>			
		(1)	(2)	(3)					
		Active Members (Employer Financed Portion)							
Valuation Date		Active Member Contributions	Retirants and Beneficiaries	Reported Assets	(1)	(2)	(3)		
9/30/2017	#	\$ 2,817,368	\$ 9,567,278	\$ 4,866,189	\$ 11,690,952	100	93	0.0	
9/30/2016	#	2,707,129	9,209,857	4,811,023	11,082,280	100	91	0.0	
9/30/2015		2,591,066	8,666,490	4,466,164	10,589,258	100	92	0.0	
9/30/2014		2,484,050	8,366,277	4,287,967	10,134,581	100	91	0.0	
9/30/2013		2,363,600	8,085,291	4,087,709	9,546,459	100	89	0.0	
9/30/2012	&	2,218,478	7,781,431	3,885,086	9,116,551	100	89	0.0	

Reflects changes in actuarial assumptions.

& Reflects changes in methods.

The following table presents a six-year history of data concerning retirants and beneficiaries:

SCHEDULE OF RETIRANTS AND BENEFICIARIES ADDED AND REMOVED FROM ROLLS								
		<u>Retirees Added §*</u>	<u>Retirees Removed</u>		<u>Retirees - Year-end*</u>			
Fiscal Year Ended	Number	Annual Allowances (000s)	Number	Annual Allowances (000s)	Number	Annual Allowances (000s)	% Increase/ (Decrease) in Annual Allowances	Average Annual Allowance
2017	2,449	\$ 58,678	1,114	\$ 22,433	48,289	\$ 886,819	4.26	\$ 18,365
2016	2,655	61,579	1,083	22,434	46,954	850,574	4.82	18,115
2015	2,698	63,043	1,028	21,337	45,382	811,429	5.42	17,880
2014	2,617	59,959	1,012	20,185	43,712	769,723	5.45	17,609
2013	2,628	59,930	972	19,036	42,107	729,949	5.93	17,336
2012	2,846	64,800	977	18,759	40,451	689,055	7.16	17,034

§ Includes retirees completing DROP participation and entering regular retirement.

*Does not include active DROP participants.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Employees' Retirement System

Supporting Schedules (Continued)

The following table provides an analysis of actuarial gains and losses:

ANALYSIS OF ACTUARIAL GAINS AND LOSSES

(Dollar Amounts in Thousands)

	<u>Amount</u>
Unfunded Actuarial Liability as of September 30, 2016	\$ 5,645,729
Normal Cost for 2017 Plan Year	52,762
Contributions Received During the Year	(413,007)
Interest to Year End	423,494
Expected Unfunded Actuarial Liability as of September 30, 2017	<u>5,708,978</u>
Actuarial (Gains)/Losses During the Year	
From Investments	(208,104)
From Actuarial Liabilities	50,009
Total Actuarial (Gains)/Losses During the Year	<u>(158,095)</u>
Actual Unfunded Actuarial Liability as of September 30, 2017	<u><u>\$ 5,550,883</u></u>





Cavanaugh Macdonald

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June 4, 2018

Board of Control
Employees' Retirement System of
Alabama for the Administration of
the Judicial Retirement Fund

Dear Board Members:

The basic funding objectives of the Judicial Retirement Fund of Alabama (JRF) is to accumulate sufficient assets during a member's employment to fully finance the benefits the member is expected to receive throughout retirement.

JRF maintains a funding policy that was effective September 30, 2012. In order to meet the objectives listed above, the Fund will strive to meet the following funding objectives:

- To maintain an increasing funded ratio (ratio of fund actuarial value of assets to actuarial accrued liabilities) that reflects a trend of improved actuarial condition. The long-term objective is to attain a funded ratio which is consistent with the fiscal health and long-term stability of the Fund.
- To maintain adequate asset levels to finance the benefits promised to members and monitor the future demands for liquidity.
- To develop a pattern of contribution rates expressed as a percentage of member payroll as measured by valuations prepared in accordance with applicable State laws and the principles of practice prescribed by the Actuarial Standards Board. In no event will the employer contribution rate be negative.
- To provide intergenerational equity for taxpayers with respect to Fund costs.

To track progress in achieving the funding objectives, the following benchmarks are measured annually as of the valuation date:

- **Funded ratio** – The funded ratio, defined as the actuarial value of assets divided by the actuarial accrued liability, should increase over time, before adjustments for changes in benefits, actuarial, methods, and/or actuarial assumptions.
- **Unfunded Actuarial Accrued Liability (UAAL)**
 - **Transitional UAAL** – The UAAL established as of the initial valuation date for which this funding policy is adopted.
 - **New Incremental UAAL** – Each subsequent valuation will produce a New Incremental UAAL consisting of all benefit changes, assumption and method changes and experience gains and/or losses that have occurred since the previous valuation.
- **UAAL Amortization Period and Contribution Rates**
 - The Transitional UAAL will be amortized over a closed period. The closed period shall be the amortization period for the valuation preceding the adoption of the funding policy not to exceed 30 years.
 - Each New Incremental UAAL shall be amortized over a closed 30 year period.
 - Employer Normal Contribution Rate – the contribution rate determined as of the valuation date each year based on the provisions of Alabama Code Sections 36-27-24 and 12-18-2.



- In each valuation subsequent to the adoption of this funding policy the required employer contribution rate will be determined by the summation of the employer Normal Contribution Rate, a contribution rate for administrative expenses, the individual amortization rate for each of the New Incremental UAAL bases and the amortization rate for the Transitional UAAL.

In order to measure progress toward this fundamental objective and funding policy, JRF has an annual actuarial valuation performed. The valuation (i) measures present financial position, and (ii) establishes contribution rates that provide for the normal cost and level percent of payroll amortization of unfunded actuarial accrued liability in accordance with the funding policy. The latest completed actuarial valuation was based upon data and assumptions as of September 30, 2017. This valuation indicates for benefits then in effect that the current employer contribution rates for the Judicial Retirement Fund (other than District Attorneys' Plan) of 40.40% of payroll for Tier I members and 35.05% of payroll for Tier II members, and employer contribution rates for District Attorneys' of 19.77% of payroll, meet the basic financial objective and the goals of the funding policy as listed above. There are 351 active members as of September 30, 2017.

The actuarial valuation is based upon financial and participant data which is prepared by the retirement Fund staff, assumptions regarding future rates of investment return and inflation, and rates of retirement, turnover, death and disability among JRF members and their beneficiaries. The data is reviewed by us for internal and year to year consistency as well as general reasonableness prior to its use in the actuarial valuation. It is also summarized and tabulated for the purpose of analyzing trends. The assumptions were adopted by the Board of Control and were based upon actual experience of JRF during the years October 1, 2010 to September 30, 2015. Assets are valued according to a market related method that recognizes 20% of the difference between market value and expected value each year. The assumptions and methods utilized in this valuation, in our opinion, meet the parameters established by the Actuarial Standards of Practice.

The current benefit structure is outlined in the Actuarial Section. Act 2015-498 amended the provisions of the Fund to create two plans within the Fund for new members elected or appointed on or after November 8, 2016. The Judges' and Clerks' plan covers justices, judges and circuit clerks who are not members of the Judicial Retirement Fund or The Clerks' and Registers' Supernumerary Fund. The District Attorneys' Plan covers any District Attorney first elected or appointed on or after November 8, 2016.

We provided the following information and supporting schedules in the Actuarial and Statistical Sections:

- Summary of Actuarial Assumptions and Methods
- Actuarial Cost Method
- Summary of Plan Provisions as Interpreted for Valuation Purposes
- Schedule of Funding Progress
- Solvency Test
- Analysis of Actuarial Gains and Losses
- Schedule of Active Member Valuation Data
- Schedule of Retirants and Beneficiaries Added and Removed from Rolls
- Retired Members by Type of Benefit as of September 30, 2017
- Ten-Year History of Average Monthly Benefit Payments as of September 30



Based upon the valuation results and the presumption that future contributions will be made at the necessary level to ensure adequate funding and to meet accounting standards, it is our opinion that the Judicial Retirement Fund of Alabama continues in sound condition in accordance with the actuarial principles of level percent of payroll financing.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Edward Macdonald'.

Edward A. Macdonald, ASA, FCA, MAAA
President

A handwritten signature in blue ink, appearing to read 'Cathy Turcot'.

Cathy Turcot
Principal and Managing Director

A handwritten signature in blue ink, appearing to read 'Larry Langer'.

Larry Langer, ASA, EA, FCA, MAAA
Principal and Consulting Actuary

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Judicial Retirement Fund

Summary of Actuarial Assumptions and Methods

Summary of Actuarial Assumptions and Methods

The assumptions and methods used in the valuation are based on the actuarial experience study prepared as of September 30, 2015, submitted to and adopted by the Board on September 29, 2016.

Ultimate Investment Rate of Return: 7.75% per annum, compounded annually, including inflation at 2.75%.

Salary Increases: 3.5% per annum for all ages with service less than 14 years, and 3.25% per annum for all ages with service of 14 years or more, compounded annually, including wage inflation at 3.00%.

Separations before Retirement: Representative values of the assumed annual rates of withdrawal, death, and disability are as follows:

Age	Annual % Rate of			
	Withdrawal	Death*		Disability**
		Male	Female	
30	2.50	0.04	0.01	0.02
35	2.50	0.07	0.03	0.04
40	2.50	0.09	0.04	0.07
45	2.50	0.13	0.06	0.11
50	2.50	0.18	0.09	0.16
55	2.50	0.26	0.14	0.25
60	2.50	0.38	0.19	0.40
64	2.50	0.51	0.26	0.57

*Rates of pre-retirement mortality are according to the sex distinct RP-2000 Employee Mortality Table Projected with Scale BB to 2020 with an adjustment factor of 90% for males and 60% for females.

**Disability rates turn off at retirement eligibility.

Rates of Retirement:

Tier I (Groups 1 and 2): Between the ages of 55 and 59, 25% of members are assumed to retire in the first year of eligibility and 10% in each year thereafter. Between the ages of 60 and 69, 30% of members are assumed to retire in the year when first eligible and 15% in each year thereafter. 30% of the remaining members are assumed to retire each year between age 70 and 74, and all remaining members are assumed to retire at age 75.

Tier II (Group 3) and District Attorney's Plan:

Age	Judges with Up to 18 Years of Service	Judges with at least 18 years of service	Clerks & District Attorneys
62 - 69	10%	15%*	10%**
70 - 74	30%	30%	30%
75	100%	100%	100%

*An additional 15% are assumed to retire at 18 years of service.

**An additional 20% are assumed to retire when first eligible for retirement and at 27 years of service.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Judicial Retirement Fund

Summary of Actuarial Assumptions and Methods

Deaths after Retirement: Rates of mortality for the period after service retirement are according to the RP-2000 White Collar Mortality Table with projection scale BB to 2020 and adjusted 115% for males and 112% for females older than age 78. The sex distinct RP-2000 Disabled Mortality Table adjusted 105% for males and 120% for females. Representative values of assumed mortality rates are as follows:

Age	Annual % Rate of Death After			
	Service Retirement		Disability Retirement	
	Male	Female	Male	Female
55	0.36	0.23	3.50	1.79
60	0.56	0.38	3.84	2.14
65	0.99	0.68	4.14	2.64
70	1.64	1.19	4.86	3.55
75	2.86	2.02	6.37	4.92
80	5.05	3.79	8.49	6.82
85	8.89	6.53	10.99	9.45
90	16.43	11.32	15.44	13.47

Percent Married: 85% of active members are assumed to be married with the husband 4 years older than the wife.

Actuarial Method: Individual entry age normal method. Actuarial gains and losses are reflected in the unfunded actuarial accrued liability.

Assets: Actuarial value. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected value of assets, based on the assumed valuation rate of return. Each year, 20% of the difference between market value and expected actuarial value is recognized. In order to reduce short-term volatility in valuation results and because market value and actuarial value of assets were close in value, the actuarial value of assets was set equal to the market value on September 30, 2012. 5-year smoothing commenced again beginning September 30, 2013.

Liability for Current Inactive Non-Vested members: Members Contribution Balance is multiplied by a factor of 1.0.

Post Retirement Increases: Allowances of retired members and spouses who receive benefits based on the salaries prescribed by law for the position are assumed to increase by 3.00% per year. The members' actual salaries at retirement are assumed to be equal to the salary prescribed by law for their position.

Benefits Payable upon Separation from Service: Active members who terminated from service prior to becoming eligible for a benefit are assumed to receive a refund of contributions with interest assumed to be 4% per year.

Actuarial Cost Method

1. The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future, of each member's expected benefit payable at retirement or death is determined, based on age, service, sex and compensation. The calculations take into account the probability of a member's death or termination of employment prior to becoming eligible for a benefit, as well as the probability of his terminating with a service, disability or survivor's benefit. Future salary increases are also anticipated. The present value of the expected benefits payable on account the active members is added to the present value of expected future payments to retired members and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of members and beneficiaries.
2. The employer contributions required to support the benefits of the Fund are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.
3. The normal contribution is determined using the "individual entry age normal" method. Under this method, a calculation is made to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.
4. The unfunded accrued liability contributions are determined by subtracting the present value of prospective employer normal contributions and member contributions together with the current assets held from the present value of expected benefits to be paid from the Fund.

Summary of Plan Provisions as Interpreted for Valuation Purposes

The Judicial Retirement Fund (JRF) was established as of September 18, 1973. The valuation took into account amendments to the JRF effective through the valuation date. The following summary describes the main benefit and contribution provisions of the JRF as interpreted for the valuation.

Membership

Any justice of the Supreme Court of Alabama, judge of the Alabama Court of Civil Appeals, judge of the Alabama Court of Criminal Appeals, judge of a Circuit Court, or officeholder of any newly created judicial office receiving compensation from the State Treasury became a member of the JRF if the member was holding office on the date that it was established and elected to come under its provisions. Any such justice or judge elected or appointed to office after September 18, 1973, or any district or probate judge elected or appointed to office after October 10, 1975, or October 1, 1976, respectively, automatically becomes a member by virtue of their position. Certain other district and probate judges as well as certain former county court judges, district attorneys, or assistant district attorneys serving as circuit judges and certain supernumerary judges and justices may also elect to become a member. Any circuit clerk or district attorney elected or appointed on or after November 8, 2016 automatically becomes a member. Certain other district and probate judges as well as certain former county court judges, district attorneys or assistant district attorneys service as circuit judges and certain supernumerary judges and justices could also elect to become members.

Creditable Service

Creditable service is service as a member plus certain periods of previous service creditable in accordance with the provisions of the Act.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Judicial Retirement Fund

Summary of Plan Provisions (Continued)

Benefits

Service Retirement Benefit

Condition of Benefit

Tier 1 (Groups 1 and 2):

A service retirement benefit is payable upon request of a member who has:

- Completed 12 years of creditable service and attained age 65, or
- Completed 15 years of creditable service and whose age plus service equals or exceeds 77, or
- Completed at least 18 years of creditable service or three full terms as a judge or justice, or
- Completed 10 years of creditable service and attained age 70.

However, a judge who became a member on or after July 30, 1979, or who is a district or probate judge must meet the following age and service requirement combinations in order to be eligible to retire:

- Completed 12 years of creditable service and attained age 65, or
- Completed at least 15 years of creditable service and attained age 60, and whose age plus service equals or exceeds 77, or
- Completed 10 years of creditable service and attained age 70, or
- Completed 25 years of creditable service or 24 years of creditable service provided the member purchases one year of service prior to retirement, regardless of age.

Tier 2 (Group 3) and District Attorneys:

- Completed 10 years of service and attained age 62.

Amount of Benefit

Tier 1 (Groups 1 and 2):

The service retirement benefit for a member is equal to:

- (a) For circuit or appellate judges who were members prior to July 30, 1979, 75% of the salary prescribed by law for the position from which the member retires.
- (b) For circuit and appellate judges who assumed office on or after July 30, 1979, 75% of the member's salary at the time of separation from service.
- (c) For district judges, 75% of the position's salary immediately prior to retirement.
- (d) For probate judges, 75% of the member's salary at the time of separation from service.

Tier 2 (Group 3) and District Attorneys:

The service retirement benefit for a member is equal to:

For a member who is judge with years of service less than 18 years, 4% of average final compensation multiplied by years of credited service; for a member who is a judge with 18 or more years of service, 75% of average final compensation, not to exceed 75% of average final compensation.

For a member who is clerk or district attorney, 3% of average final compensation multiplied by years of credited service, not to exceed 80% of average final compensation.

Disability Retirement Benefit

Condition of Benefit

A disability retirement benefit is payable to a member who becomes permanently, physically or mentally, unable to carry out his duties on a full-time basis, provided the member has completed five or more years of creditable service.

Amount of Benefit

Tier 1 (Groups 1 and 2):

The disability retirement benefit for a member other than a district or probate judge who was a member prior to July 30, 1979, is equal to 25% of the salary prescribed by law for the position from which the member retires on disability plus 10% of such salary for each year of creditable service in excess of five years. The disability retirement benefit is subject to a minimum of 30% and a maximum of 75% of such salary.

The disability retirement benefit for a judge who became a member on or after July 30, 1979, or who is a district or probate judge is equal to 25% of his salary immediately prior to retirement plus 10% of such salary for each year of creditable service in excess of five years. The disability retirement benefit is subject to a minimum of 30% and a maximum of 75% of such salary.

Tier 2 (Group 3):

For a member who is judge with years of service less than 18 years, 4% of average final compensation multiplied by years of creditable service; for a member who is a judge with 18 or more years, 75% of average final compensation, not to exceed 75% of average final compensation.

For a member who is a clerk or district attorney, 3% of average final compensation multiplied by years of credited service, not to exceed 80% of average final compensation.

Spousal Benefit

Tier 1 (Groups 1 and 2):

Condition of Benefit

Upon the death of an active, inactive or retired member with at least 5 years of creditable service, a death benefit is payable to the member's spouse.

Amount of Benefit

The death benefit payable to the spouse of a judge other than a district or probate judge consists of a yearly benefit equivalent to 3% of the salary prescribed by law for the position of the former member for each year of creditable service, not to exceed 30% of such salary.

The death benefit payable to the spouse of a district judge consists of a yearly benefit equal to 3% of the position's salary prescribed by law at the time of death for each year of creditable service, not to exceed 30% of such salary.

The death benefit for the spouse of a probate judge is a yearly benefit equal to the greater of \$480 for each year of creditable service to a maximum of 10 years, or 3% of the member's salary at the time of separation from service for each year of creditable service, not to exceed 30% of such salary.

The benefit is payable for the spouse's life or until his or her remarriage.

Death in Active Service Benefit

Tier 2 (Group 3) and District Attorneys:

Amount of Benefit

In the event of the death of a member who is eligible for service retirement, the designated beneficiary may elect: (1) to exercise option 3 as defined below "Special Privileges at Retirement – All Employees" or (2) to receive a return of member contributions and total interest earned plus a death benefit payable from the per-retirement death benefit fund equal to the salary on which the member made retirement contributions for the previous fiscal year (October 1 – September 30).

In the event of the death of a member who is not eligible for retirement, the designated beneficiary shall receive the accumulated contributions not to exceed \$5,000 or the accumulated contributions of the member plus an additional death benefit payable from the per-retirement death benefit payable from the pre-retirement death benefit fund equal to the salary on which their retirement contributions were made for the previous fiscal year. (October 1 – September 30).

Benefit Payable upon Separation from Service

If a member terminates service and elects not to withdraw his or her contributions and accrued interest from the JRF, the member is eligible to receive any of the benefits for which the member has sufficient creditable service upon reaching an eligible retirement age.

A member terminating service prior to reaching eligibility for retirement benefits may elect to receive a return of contributions and accrued interest. "Regular Interest" is 4% which is the rate adopted by the Board and applied to the balance in each member's account every year; however, if a member receives a refund of contributions, the interest rate applied to the refund is lower than the 4% regular rate (Based on the *Code of Alabama 1975, Section 36-27-25(g)*).

Member Contributions

Tier 1 (Groups 1 and 2):

Prior to October 1, 2011, each member contributed 6.0% of salary.

Beginning October 1, 2011, each member contributed 8.25% of salary.

Beginning October 1, 2012, each member contributed 8.5% of salary.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Judicial Retirement Fund

Summary of Plan Provisions (Continued)

Tier 2 (Group 3):

Each Tier 2 member and District Attorney member contributes 8.5% of salary.

If a positive investment performance results in a decrease in the total contribution rate paid by employers and employees participating in the System, the Retirement Systems of Alabama shall first reduce the employee contribution rate.

By State

The State makes contributions, which in addition to the members' contributions, are sufficient to provide the retirement allowances described.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Judicial Retirement Fund

Supporting Schedules

Supporting Schedules

The following schedule presents six years of active member valuation data:

SCHEDULE OF ACTIVE MEMBER VALUATION DATA

(Dollar Amounts Not in Thousands)

<u>Valuation Date</u>	<u>Number</u>	<u>Annual Payroll*</u>	<u>Annual Average Pay</u>	<u>% Increase/ (Decrease) in Average Pay</u>
9/30/2017	351	\$ 44,291,914	\$ 126,188	(1.45)
9/30/2016	336	43,022,891	128,044	1.08
9/30/2015	338	42,814,343	126,670	0.27
9/30/2014	338	42,698,909	126,328	1.94
9/30/2013	338	41,887,006	123,926	(1.61)
9/30/2012	337	42,446,426	125,954	0.58

*Does not include any salary increase effective after the valuation date.

The following table presents a six-year history of funding progress:

SCHEDULE OF FUNDING PROGRESS

(Dollar Amounts in Thousands)

<u>Valuation Date</u>	<u>Actuarial Value of Assets (A)</u>	<u>Actuarial Accrued Liability (AAL) (B)</u>	<u>Unfunded AAL (UAAL) (B-A)</u>	<u>Percentage Funded (A/B)</u>	<u>Covered Payroll (C)</u>	<u>UAAL as a % of Covered Payroll ((B-A)/C)</u>
9/30/2017	\$ 293,090	\$ 448,446	\$ 155,356	65.4	\$ 44,292	350.8
9/30/2016*	279,807	446,920	167,113	62.6	43,023	388.4
9/30/2015	267,414	427,591	160,177	62.5	42,814	374.1
9/30/2014	257,452	422,863	165,411	60.9	42,699	387.4
9/30/2013	243,316	414,200	170,884	58.7	41,887	408.0
9/30/2012**	234,300	380,470	146,170	61.6	42,446	344.4

*Reflects changes in actuarial assumptions and methods.

**Reflects changes in methods.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Judicial Retirement Fund

Supporting Schedules (Continued)

The following schedule presents six years of solvency tests:

SOLVENCY TEST
(Dollar Amounts in Thousands)

Valuation Date	Aggregate Accrued Liabilities For			Reported Assets	% of Accrued Liabilities Covered by Reported Assets		
	(1) Active Member Contributions	(2) Retirants and Beneficiaries	(3) Active Members (Employer Financed Portion)		(1)	(2)	(3)
9/30/2017 *	\$ 44,792	\$ 296,231	\$ 107,422	\$ 293,090	100	84	0.0
9/30/2016 *	45,900	280,836	120,185	279,807	100	83	0.0
9/30/2015	42,745	272,624	112,222	267,414	100	82	0.0
9/30/2014	40,981	268,439	113,443	257,452	100	81	0.0
9/30/2013	37,366	270,430	106,404	243,315	100	76	0.0
9/30/2012 **	38,341	237,197	104,932	234,300	100	83	0.0

*Reflects a change in actuarial assumptions and methods.

**Reflects a change in methods.

The following schedule presents six years of retirant and beneficiary data:

SCHEDULE OF RETIRANTS AND BENEFICIARIES ADDED AND REMOVED FROM ROLLS

Fiscal Year Ended	Retirees Added		Retirees Removed		Retirees - Year-end		% Increase/ (Decrease) in Annual Allowances	Average Annual Allowance
	Number	Annual Allowances (000s)	Number	Annual Allowances (000s)	Number	Annual Allowances (000s)		
2017	27	\$ 1,895	6	\$ 490	405	\$ 31,191	4.72	\$ 77,015
2016	11	970	11	889	384	29,786	0.27	77,568
2015	16	1,500	6	479	384	29,705	3.56	77,357
2014	9	918	10	798	374	28,684	0.42	76,695
2013	33	3,144	4	315	375	28,564	10.99	76,171
2012	6	569	3	236	346	25,735	1.31	74,379

The following table provides an analysis of actuarial gains and losses:

ANALYSIS OF ACTUARIAL GAINS AND LOSSES
(Dollar Amounts in Thousands)

	<u>Amount</u>
Unfunded Actuarial Liability as of September 30, 2016	\$ 167,113
Normal Cost for 2017 Plan Year	5,280
Contributions Received During the Year	(16,826)
Interest to Year End	<u>12,709</u>
Expected Unfunded Actuarial Liability as of September 30, 2017	<u>168,276</u>
Actuarial (Gains)Losses During the Year	
From Investments	(4,468)
From Actuarial Liabilities	<u>(8,451)</u>
Total Actuarial (Gains)/Losses During the Year	<u>(12,919)</u>
Actual Unfunded Actuarial Liability as of September 30, 2017	<u><u>\$ 155,357</u></u>



Statistical Section

Component Units of the State of Alabama Comprehensive Annual Financial Report

The Statistical Section of the comprehensive annual financial report presents detailed information as a context for understanding what the information in the financial statements, note disclosures, and required supplementary information says about the Retirement Systems' overall financial health.

Financial Trends

These schedules contain trend information to help the reader understand how the Retirement Systems' financial performance has changed over time.

Additions by Source – Ten-Year History – page 165

Deductions by Type – Ten-Year History – page 166

Benefits by Type – Ten-Year History – page 167

Ten-Year History of Additions, Reductions, and Changes in Net Position – page 168

Retirees and Beneficiaries

These schedules provide information concerning the retirees and beneficiaries receiving benefits.

Retired Members by Type of Benefit – page 174

Ten-Year History of Average Monthly Benefit Payments – page 177

Participating Units

These schedules provide information concerning units participating in the Employees' Retirement System.

Local Participating Employers – page 180

Largest Employers – Ten-Year History – page 190

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Additions by Source

Ten-Year History

(Amounts in Thousands)

TEACHERS' RETIREMENT SYSTEM
ADDITIONS BY SOURCE

Fiscal Year	Employer Contributions					Investment Income	Transfer In From PEEHIP	Total
	Member Contributions \$	Amount	Employer Rate (%)					
			Tier 1	Tier 2 ©				
2018	\$ 493,466	\$ 802,598	12.24	11.01	\$ 2,264,234	\$ 24,700	\$ 3,584,998	
2017	489,638	782,695	12.01	10.82	2,636,105	-	3,908,438	
2016	475,980	751,902	11.94	10.84	2,199,404	-	3,427,286	
2015	477,918	737,671	11.71	11.05	261,468	-	1,477,057	
2014	480,849	739,547	11.71	11.08	2,473,152	-	3,693,548	
2013	477,586	627,892	10.08	9.44	2,732,706	-	3,838,184	
2012	458,534	618,306	10.00	-	2,989,162	-	4,066,002	
2011	323,196	779,644	12.51	-	351,965	-	1,454,805	
2010	321,403	776,421	12.51	-	1,448,312	-	2,546,136	
2009	323,706	753,518	12.07	-	(1,485,126)	-	(407,902)	

EMPLOYEES' RETIREMENT SYSTEM
ADDITIONS BY SOURCE

Fiscal Year	Employer Contributions								
	Member Contributions \$	Amount	Employer Rate (%)				Local	Investment Income	Total
			State		Tier 2 ©				
			Regular	Law	Regular	Law			
2018	\$ 241,741	\$ 426,340	13.94	44.44	13.29	39.29	*	\$ 1,098,412	\$1,766,493
2017	233,901	426,215	13.89	57.25	13.25	53.55	*	1,402,163	2,062,279
2016	238,017	435,098	14.57	42.61	14.09	38.98	*	1,053,031	1,726,146
2015	229,254	410,932	13.45	38.37	13.31	32.45	*	126,490	766,676
2014	226,016	391,181	12.02	35.81	11.96	29.52	*	1,186,529	1,803,726
2013	223,646	338,819	10.12	31.61	10.04	25.32	*	1,296,460	1,858,925
2012	216,870	317,520	9.42	29.92	-	-	*	1,427,858	1,962,248
2011	195,709	394,998	11.94	30.57	-	-	*	196,939	787,646
2010	196,758	377,898	11.94	30.57	-	-	*	696,677	1,271,333
2009	210,281	451,139	11.88	30.99	-	-	*	(887,881)	(226,461)

JUDICIAL RETIREMENT FUND
ADDITIONS BY SOURCE

Fiscal Year	Employer Contributions						Investment Income	Total
	Member Contributions \$	Amount	Employer Rate (%)					
			Groups 1 & 2	Group 3 - Judges & Clerks**	District Attorneys***			
2018	\$ 3,867	\$ 17,180	40.09	34.32	19.77	\$ 27,622	\$ 48,669	
2017	3,972	17,373	40.65	-	-	32,685	54,030	
2016	3,723	17,529	40.98	-	-	28,321	49,573	
2015	3,683	15,077	35.24	-	-	(856)	17,904	
2014	3,764	15,790	35.24	-	-	31,344	50,898	
2013	3,919	13,903	32.06	-	-	32,245	50,067	
2012	3,681	10,747	24.35	-	-	39,011	53,439	
2011	2,654	10,906	24.20	-	-	2,022	15,582	
2010	2,566	10,814	24.20	-	-	21,925	35,305	
2009	2,701	10,326	23.23	-	-	758	13,785	

§ Includes transfers from other systems.

* Local agency rates differ for each participating agency.

© A new tier of benefits was established for members hired on or after January 1, 2013, which included different contribution rates for the members and their employers.

**A new plan was created within the JRF for Judges and Clerks who were first elected or appointed on or after November 8, 2016, and were not a member of the JRF or the Clerks' and Registers' Supernumerary Fund.

***A new plan was created within the JRF for District Attorneys who were serving in the capacity of District Attorney on or after November 8, 2016.

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Deductions by Type

Ten-Year History

(Amounts in Thousands)

**TEACHERS' RETIREMENT SYSTEM
DEDUCTIONS BY TYPE**

Fiscal Year	Benefit Payments	Contribution Refunds & Death Benefits	Service Transfers	Administrative Expenses	Depreciation	Total
2018	\$ 2,204,031	\$ 58,538	\$ 4,908	\$ 15,952	\$ 6,338	\$ 2,289,767
2017	2,111,830	55,634	3,413	16,390	6,012	2,193,279
2016	2,155,784	57,130	6,223	14,873	4,709	2,238,719
2015	2,075,302	58,060	3,432	15,074	4,258	2,156,126
2014	1,997,595	54,699	2,880	13,103	4,336	2,072,613
2013	1,893,321	55,891	1,823	12,591	4,312	1,967,938
2012	1,800,805	49,453	1,937	11,555	4,344	1,868,094
2011	1,673,881	49,304	2,012	10,820	4,243	1,740,260
2010	1,567,790	43,628	1,790	11,979	4,264	1,629,451
2009	1,512,260	42,337	1,767	11,005	4,128	1,571,497

**EMPLOYEES' RETIREMENT SYSTEM
DEDUCTIONS BY TYPE**

Fiscal Year	Benefit Payments	Contribution Refunds & Death Benefits	Unit Withdrawals & Service Transfers	Administrative Expenses	Depreciation	Total
2018	\$ 1,096,883	\$ 45,070	\$ 5,415	\$ 11,219	\$ 2,544	\$ 1,161,131
2017	1,050,340	48,683	3,357	11,982	2,520	1,116,882
2016	1,038,517	45,768	3,668	11,002	2,021	1,100,976
2015	1,018,515	51,024	4,059	11,136	2,046	1,086,780
2014	948,478	47,937	3,632	9,612	2,055	1,011,714
2013	895,475	44,837	3,587	9,767	2,015	955,681
2012	848,464	40,746	2,180	10,616	1,981	903,987
2011	782,957	36,798	2,157	10,002	2,029	833,943
2010	725,660	33,868	1,633	10,334	2,111	773,606
2009	695,430	32,640	2,718	9,413	2,038	742,239

**JUDICIAL RETIREMENT FUND
DEDUCTIONS BY TYPE**

Fiscal Year	Benefit Payments	Contribution Refunds & Death Benefits	Service Transfers	Administrative Expenses	Depreciation	Total
2018	\$ 33,419	\$ 130	\$ -	\$ 328	\$ -	\$ 33,877
2017	32,807	353	-	334	-	33,494
2016	30,893	115	-	397	-	31,405
2015	30,348	100	55	356	-	30,859
2014	29,826	54	1	281	-	30,162
2013	29,112	196	-	280	-	29,588
2012	27,183	253	-	257	-	27,693
2011	26,379	34	-	276	-	26,689
2010	24,526	235	-	317	-	25,078
2009	23,821	145	68	552	-	24,586

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Benefits by Type

Ten-Year History

(Amounts in Thousands)

TEACHERS' RETIREMENT SYSTEM

BENEFITS BY TYPE

Fiscal Year	Age & Service Benefits		Disability Benefits	Death Benefits & Refunds	
	Retirants	Survivors		Death	Resignation
2018	\$ 2,053,906	\$ 82,406	\$ 67,719	\$ 12,827	\$ 45,711
2017	1,971,017	75,812	65,001	13,142	42,492
2016	2,021,973	70,959	62,852	14,578	42,552
2015	1,947,983	66,636	60,683	14,095	43,965
2014	1,876,615	62,674	58,306	11,225	43,474
2013	1,778,541	58,669	56,111	11,684	44,207
2012	1,692,169	55,109	53,527	11,269	38,184
2011	1,571,682	51,873	50,326	13,174	36,130
2010	1,469,928	49,287	48,576	13,032	30,596
2009	1,419,727	46,085	46,448	12,293	30,044

EMPLOYEES' RETIREMENT SYSTEM

BENEFITS BY TYPE

Fiscal Year	Age & Service Benefits		Disability Benefits	Death Benefits & Refunds	
	Retirants	Survivors		Death	Resignation
2018	\$ 987,527	\$ 49,220	\$ 60,136	\$ 10,843	\$ 34,577
2017	946,203	45,810	58,327	9,197	39,486
2016	937,752	43,376	57,389	8,842	36,926
2015	919,657	42,308	56,550	9,800	41,224
2014	855,857	39,488	53,133	9,687	38,250
2013	806,846	37,730	50,899	7,889	36,948
2012	763,881	36,161	48,422	8,969	31,777
2011	703,128	34,538	45,291	7,806	28,992
2010	649,532	33,009	43,119	8,994	24,874
2009	621,519	32,167	41,744	9,032	23,608

JUDICIAL RETIREMENT FUND

BENEFITS BY TYPE

Fiscal Year	Age & Service Benefits		Disability Benefits	Death Benefits & Refunds	
	Retirants	Survivors		Death	Resignation
2018	\$ 28,983	\$ 3,913	\$ 523	\$ 44	\$ 86
2017	28,370	3,956	481	19	334
2016	26,556	3,850	487	10	105
2015	26,082	3,839	427	8	92
2014	25,796	3,703	327	-	54
2013	25,022	3,715	375	-	196
2012	23,307	3,501	375	-	253
2011	22,773	3,231	375	-	34
2010	20,763	3,388	375	-	235
2009	19,856	3,589	376	-	145

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Teachers' Retirement System

Ten-Year History of Additions, Reductions, and Changes in Net Position

(Amounts in Thousands)

	2018	2017	2016	2015	2014
Additions					
Contributions					
Employee	\$ 488,503	\$ 486,542	\$ 472,390	\$ 473,903	\$ 477,300
Employer	802,598	782,695	751,902	737,671	739,547
Transfers from Employees' Retirement System	4,963	3,096	3,590	4,015	3,549
Transfers from Judicial Retirement Fund	-	-	-	-	-
Transfers from PEEHIP	24,700	-	-	-	-
Total Contributions	<u>1,320,764</u>	<u>1,272,333</u>	<u>1,227,882</u>	<u>1,215,589</u>	<u>1,220,396</u>
Investment Income					
From Investing Activities					
Net Increase/(Decrease) in Fair Value of Investments	1,615,440	2,021,774	1,589,279	(381,400)	1,853,288
Interest and Dividends	650,293	613,353	607,795	640,910	618,861
Total Investment Income from Investing Activities	2,265,733	2,635,127	2,197,074	259,510	2,472,149
Less: Investment Expenses, Net	9,171	8,685	7,731	6,407	5,732
Net Investment Income from Investing Activities	<u>2,256,562</u>	<u>2,626,442</u>	<u>2,189,343</u>	<u>253,103</u>	<u>2,466,417</u>
From Securities Lending Activities					
Securities Lending Income	23,246	20,125	15,930	11,512	9,629
Less Securities Lending Expenses:					
Borrower Rebates	12,385	7,350	2,825	365	65
Management Fees	3,189	3,112	3,044	2,782	2,829
Total Securities Lending Expenses	<u>15,574</u>	<u>10,462</u>	<u>5,869</u>	<u>3,147</u>	<u>2,894</u>
Net Income from Securities Lending Activities	<u>7,672</u>	<u>9,663</u>	<u>10,061</u>	<u>8,365</u>	<u>6,735</u>
Total Net Investment Income	<u>2,264,234</u>	<u>2,636,105</u>	<u>2,199,404</u>	<u>261,468</u>	<u>2,473,152</u>
Total Additions	<u>3,584,998</u>	<u>3,908,438</u>	<u>3,427,286</u>	<u>1,477,057</u>	<u>3,693,548</u>
Deductions					
Retirement Allowance Payments	2,204,031	2,111,830	2,155,784	2,075,302	1,997,595
Return of Contributions and Death Benefits	58,538	55,634	57,130	58,060	54,699
Transfers to Employees' Retirement System	4,899	3,413	6,223	3,432	2,880
Transfers to Judicial Retirement Fund	9	-	-	-	-
Administrative Expenses	15,952	16,390	14,873	15,074	13,103
Depreciation	6,338	6,012	4,709	4,258	4,336
Total Deductions	<u>2,289,767</u>	<u>2,193,279</u>	<u>2,238,719</u>	<u>2,156,126</u>	<u>2,072,613</u>
Net Increase/(Decrease)	<u>1,295,231</u>	<u>1,715,159</u>	<u>1,188,567</u>	<u>(679,069)</u>	<u>1,620,935</u>
Net Position Restricted for Pension Benefits					
Beginning of Year - as previously reported	24,651,457	22,936,298	21,747,731	22,441,307	20,820,372
Adjustment for Application of GASB 68	-	-	-	(14,507)	-
Adjustment for Application of GASB 75	(11,255)	-	-	-	-
Beginning of Year - as adjusted	<u>24,640,202</u>	<u>22,936,298</u>	<u>21,747,731</u>	<u>22,426,800</u>	<u>20,820,372</u>
End of Year	<u>\$ 25,935,433</u>	<u>\$ 24,651,457</u>	<u>\$ 22,936,298</u>	<u>\$ 21,747,731</u>	<u>\$ 22,441,307</u>

	2013	2012	2011	2010	2009
Additions					
Contributions					
Employee	\$ 474,241	\$ 456,518	\$ 321,137	\$ 319,770	\$ 321,100
Employer	627,892	618,306	779,644	776,421	753,518
Transfers from Employees' Retirement System	3,345	2,016	2,059	-	2,606
Transfers from Judicial Retirement Fund	-	-	-	1,633	-
Total Contributions	<u>1,105,478</u>	<u>1,076,840</u>	<u>1,102,840</u>	<u>1,097,824</u>	<u>1,077,224</u>
Investment Income					
<i>From Investing Activities</i>					
Net Increase/(Decrease) in Fair Value of Investments	2,090,646	2,349,955	(278,407)	886,997	(2,083,048)
Interest and Dividends	638,766	634,695	624,546	559,941	580,656
Total Investment Income from Investing Activities	2,729,412	2,984,650	346,139	1,446,938	(1,502,392)
Less: Investment Expenses, Net	5,712	5,260	5,305	5,415	5,419
Net Investment Income from Investing Activities	<u>2,723,700</u>	<u>2,979,390</u>	<u>340,834</u>	<u>1,441,523</u>	<u>(1,507,811)</u>
<i>From Securities Lending Activities</i>					
Securities Lending Income	12,753	13,670	15,643	12,519	33,782
Less Securities Lending Expenses:					
Borrower Rebates	401	433	1,261	2,820	6,685
Management Fees	3,346	3,465	3,251	2,910	4,412
Total Securities Lending Expenses	<u>3,747</u>	<u>3,898</u>	<u>4,512</u>	<u>5,730</u>	<u>11,097</u>
Net Income from Securities Lending Activities	9,006	9,772	11,131	6,789	22,685
Total Net Investment Income	<u>2,732,706</u>	<u>2,989,162</u>	<u>351,965</u>	<u>1,448,312</u>	<u>(1,485,126)</u>
Total Additions	<u>3,838,184</u>	<u>4,066,002</u>	<u>1,454,805</u>	<u>2,546,136</u>	<u>(407,902)</u>
Deductions					
Retirement Allowance Payments	1,893,321	1,800,805	1,673,881	1,567,790	1,512,260
Return of Contributions and Death Benefits	55,891	49,453	49,304	43,628	42,337
Transfers to Employees' Retirement System	1,823	1,937	2,012	1,790	1,767
Transfers to Judicial Retirement Fund	-	-	-	-	-
Administrative Expenses	12,591	11,555	10,820	11,979	11,005
Depreciation	4,312	4,344	4,243	4,264	4,128
Total Deductions	<u>1,967,938</u>	<u>1,868,094</u>	<u>1,740,260</u>	<u>1,629,451</u>	<u>1,571,497</u>
Net Increase/(Decrease)	<u>1,870,246</u>	<u>2,197,908</u>	<u>(285,455)</u>	<u>916,685</u>	<u>(1,979,399)</u>
Net Position Restricted for Pension Benefits					
Beginning of Year - as previously reported	18,950,126	16,752,218	17,037,673	16,120,988	18,100,387
Adjustment for Application of GASB 68	-	-	-	-	-
Adjustment for Application of GASB 75	-	-	-	-	-
Beginning of Year - as adjusted	<u>18,950,126</u>	<u>16,752,218</u>	<u>17,037,673</u>	<u>16,120,988</u>	<u>18,100,387</u>
End of Year	<u>\$ 20,820,372</u>	<u>\$ 18,950,126</u>	<u>\$ 16,752,218</u>	<u>\$ 17,037,673</u>	<u>\$ 16,120,988</u>

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Employees' Retirement System

Ten-Year History of Additions, Reductions, and Changes in Net Position

(Amounts in Thousands)

	2018	2017	2016	2015	2014
Additions					
Contributions					
Employee	\$ 236,842	\$ 230,488	\$ 231,794	\$ 225,767	\$ 223,135
Employer	426,340	426,215	435,098	410,932	391,181
Transfers from Teachers' Retirement System	4,899	3,413	6,223	3,432	2,880
Transfers from Judicial Retirement Fund	-	-	-	55	1
Total Contributions	668,081	660,116	673,115	640,186	617,197
Investment Income					
<i>From Investing Activities</i>					
Net Increase/(Decrease) in Fair Value of Investments	775,132	1,098,859	753,836	(186,154)	888,303
Interest and Dividends	323,182	302,295	297,369	311,516	298,049
Total Investment Income from Investing Activities	1,098,314	1,401,154	1,051,205	125,362	1,186,352
Less: Investment Expenses, Net	3,395	3,305	2,883	2,771	2,766
Net Investment Income from Investing Activities	1,094,919	1,397,849	1,048,322	122,591	1,183,586
<i>From Securities Lending Activities</i>					
Securities Lending Income	10,589	9,127	7,481	5,353	4,199
Less Securities Lending Expenses:					
Borrower Rebates	5,647	3,424	1,356	164	21
Management Fees	1,449	1,389	1,416	1,290	1,235
Total Securities Lending Expenses	7,096	4,813	2,772	1,454	1,256
Net Income from Securities Lending Activities	3,493	4,314	4,709	3,899	2,943
Total Net Investment Income	1,098,412	1,402,163	1,053,031	126,490	1,186,529
Total Additions	1,766,493	2,062,279	1,726,146	766,676	1,803,726
Deductions					
Retirement Allowance Payments	1,096,883	1,050,340	1,038,517	1,018,515	948,478
Return of Contributions and Death Benefits	45,070	47,683	45,768	51,024	47,937
Unit Withdrawals	350	1,000	-	-	-
Transfers to Teachers' Retirement System	4,963	3,096	3,590	4,015	3,549
Transfers to Judicial Retirement Fund	102	261	78	44	83
Administrative Expenses	11,219	11,982	11,002	11,136	9,612
Depreciation	2,544	2,520	2,021	2,046	2,055
Total Deductions	1,161,131	1,116,882	1,100,976	1,086,780	1,011,714
Net Increase/(Decrease)	605,362	945,397	625,170	(320,104)	792,012
Net Position Restricted for Pension Benefits					
Beginning of Year - as previously reported	12,122,471	11,177,074	10,551,904	10,883,952	10,091,940
Adjustment for Application of GASB 68	-	-	-	(11,944)	-
Adjustment for Application of GASB 75	(7,481)	-	-	-	-
Beginning of Year - as adjusted	12,114,990	11,177,074	10,551,904	10,872,008	10,091,940
End of Year	\$ 12,720,352	\$ 12,122,471	\$ 11,177,074	\$ 10,551,904	\$ 10,883,952

	2013	2012	2011	2010	2009
Additions					
Contributions					
Employee	\$ 221,823	\$ 214,933	\$ 193,697	\$ 194,968	\$ 208,446
Employer	338,819	317,520	394,998	377,898	451,139
Transfers from Teachers' Retirement System	1,823	1,937	2,012	1,790	1,767
Transfers from Judicial Retirement Fund	-	-	-	-	68
Total Contributions	<u>562,465</u>	<u>534,390</u>	<u>590,707</u>	<u>574,656</u>	<u>661,420</u>
Investment Income					
<i>From Investing Activities</i>					
Net Increase/(Decrease) in Fair Value of Investments	984,714	1,114,737	(112,758)	427,365	(1,180,523)
Interest and Dividends	310,220	310,748	307,152	268,667	285,022
Total Investment Income from Investing Activities	<u>1,294,934</u>	<u>1,425,485</u>	<u>194,394</u>	<u>696,032</u>	<u>(895,501)</u>
Less: Investment Expenses, Net	2,549	2,256	2,308	2,398	2,651
Net Investment Income from Investing Activities	<u>1,292,385</u>	<u>1,423,229</u>	<u>192,086</u>	<u>693,634</u>	<u>(898,152)</u>
<i>From Securities Lending Activities</i>					
Securities Lending Income	5,780	6,445	6,891	5,619	15,335
Less Securities Lending Expenses:					
Borrower Rebates	186	174	517	1,271	3,070
Management Fees	1,519	1,642	1,521	1,305	1,994
Total Securities Lending Expenses	<u>1,705</u>	<u>1,816</u>	<u>2,038</u>	<u>2,576</u>	<u>5,064</u>
Net Income from Securities Lending Activities	<u>4,075</u>	<u>4,629</u>	<u>4,853</u>	<u>3,043</u>	<u>10,271</u>
Total Net Investment Income	<u>1,296,460</u>	<u>1,427,858</u>	<u>196,939</u>	<u>696,677</u>	<u>(887,881)</u>
Total Additions	<u>1,858,925</u>	<u>1,962,248</u>	<u>787,646</u>	<u>1,271,333</u>	<u>(226,461)</u>
Deductions					
Retirement Allowance Payments	895,475	848,464	782,957	725,660	695,430
Return of Contributions and Death Benefits	44,837	40,746	36,798	33,868	32,640
Unit Withdrawals	-	-	-	-	14
Transfers to Teachers' Retirement System	3,345	2,016	2,059	1,633	2,606
Transfers to Judicial Retirement Fund	242	164	98	-	98
Administrative Expenses	9,767	10,616	10,002	10,334	9,413
Depreciation	2,015	1,981	2,029	2,111	2,038
Total Deductions	<u>955,681</u>	<u>903,987</u>	<u>833,943</u>	<u>773,606</u>	<u>742,239</u>
Net Increase/(Decrease)	<u>903,244</u>	<u>1,058,261</u>	<u>(46,297)</u>	<u>497,727</u>	<u>(968,700)</u>
Net Position Restricted for Pension Benefits					
Beginning of Year - as previously reported	9,188,696	8,130,435	8,176,732	7,679,005	8,647,705
Adjustment for Application of GASB 68	-	-	-	-	-
Adjustment for Application of GASB 75	-	-	-	-	-
Beginning of Year - as adjusted	<u>9,188,696</u>	<u>8,130,435</u>	<u>8,176,732</u>	<u>7,679,005</u>	<u>8,647,705</u>
End of Year	<u>\$ 10,091,940</u>	<u>\$ 9,188,696</u>	<u>\$ 8,130,435</u>	<u>\$ 8,176,732</u>	<u>\$ 7,679,005</u>

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Judicial Retirement Fund

Ten-Year History of Additions, Reductions, and Changes in Net Position

(Amounts in Thousands)

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Additions					
Contributions					
Employee	\$ 3,756	\$ 3,711	\$ 3,645	\$ 3,639	\$ 3,681
Employer	17,180	17,373	17,529	15,077	15,790
Transfers from Teachers' Retirement System	9	-	-	-	-
Transfers from Employees' Retirement System	102	261	78	44	83
Total Contributions	<u>21,047</u>	<u>21,345</u>	<u>21,252</u>	<u>18,760</u>	<u>19,554</u>
Investment Income					
From Investing Activities					
Net Increase/(Decrease) in Fair Value of Investments	20,071	25,639	21,302	(7,695)	24,197
Interest and Dividends	7,471	6,910	6,865	6,698	7,030
Total Investment Income from Investing Activities	<u>27,542</u>	<u>32,549</u>	<u>28,167</u>	<u>(997)</u>	<u>31,227</u>
Less: Investment Expenses, Net	-	-	-	-	-
Net Investment Income from Investing Activities	<u>27,542</u>	<u>32,549</u>	<u>28,167</u>	<u>(997)</u>	<u>31,227</u>
From Securities Lending Activities					
Securities Lending Income	248	270	258	195	167
Less Securities Lending Expenses:					
Borrower Rebates	134	90	58	7	1
Management Fees	34	44	46	47	49
Total Securities Lending Expenses	<u>168</u>	<u>134</u>	<u>104</u>	<u>54</u>	<u>50</u>
Net Income from Securities Lending Activities	<u>80</u>	<u>136</u>	<u>154</u>	<u>141</u>	<u>117</u>
Total Investment Income	<u>27,622</u>	<u>32,685</u>	<u>28,321</u>	<u>(856)</u>	<u>31,344</u>
Total Additions	<u>48,669</u>	<u>54,030</u>	<u>49,573</u>	<u>17,904</u>	<u>50,898</u>
Deductions					
Retirement Allowance Payments	33,419	32,807	30,893	30,348	29,826
Return of Contributions and Death Benefits	130	353	115	100	54
Transfers to Employees' Retirement System	-	-	-	55	1
Transfers to Teachers' Retirement System	-	-	-	-	-
Administrative Expenses	328	334	397	356	281
Total Deductions	<u>33,877</u>	<u>33,494</u>	<u>31,405</u>	<u>30,859</u>	<u>30,162</u>
Net Increase/(Decrease)	<u>14,792</u>	<u>20,536</u>	<u>18,168</u>	<u>(12,955)</u>	<u>20,736</u>
Net Position Restricted for Pension Benefits					
Beginning of Year - as previously reported	302,578	282,042	263,874	277,096	256,360
Adjustment for Application of GASB 68	-	-	-	(267)	-
Adjustment for Application of GASB 75	(56)	-	-	-	-
Beginning of Year - as adjusted	<u>302,522</u>	<u>282,042</u>	<u>263,874</u>	<u>276,829</u>	<u>256,360</u>
End of Year	<u>\$ 317,314</u>	<u>\$ 302,578</u>	<u>\$ 282,042</u>	<u>\$ 263,874</u>	<u>\$ 277,096</u>

	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>
Additions					
Contributions					
Employee	\$ 3,677	\$ 3,517	\$ 2,556	\$ 2,566	\$ 2,603
Employer	13,903	10,747	10,906	10,814	10,326
Transfers from Teachers' Retirement System	-	-	-	-	-
Transfers from Employees' Retirement System	242	164	98	-	98
Total Contributions	<u>17,822</u>	<u>14,428</u>	<u>13,560</u>	<u>13,380</u>	<u>13,027</u>
Investment Income					
<i>From Investing Activities</i>					
Net Increase/(Decrease) in Fair Value of Investments	25,207	32,112	(4,961)	15,287	(6,612)
Interest and Dividends	6,912	6,748	6,853	6,551	7,026
Total Investment Income from Investing Activities	<u>32,119</u>	<u>38,860</u>	<u>1,892</u>	<u>21,838</u>	<u>414</u>
Less: Investment Expenses, Net	-	-	-	-	11
Net Investment Income from Investing Activities	<u>32,119</u>	<u>38,860</u>	<u>1,892</u>	<u>21,838</u>	<u>403</u>
<i>From Securities Lending Activities</i>					
Securities Lending Income	184	215	201	169	543
Less Securities Lending Expenses:					
Borrower Rebates	10	12	22	45	119
Management Fees	48	52	49	37	69
Total Securities Lending Expenses	<u>58</u>	<u>64</u>	<u>71</u>	<u>82</u>	<u>188</u>
Net Income from Securities Lending Activities	<u>126</u>	<u>151</u>	<u>130</u>	<u>87</u>	<u>355</u>
Total Investment Income	<u>32,245</u>	<u>39,011</u>	<u>2,022</u>	<u>21,925</u>	<u>758</u>
Total Additions	<u>50,067</u>	<u>53,439</u>	<u>15,582</u>	<u>35,305</u>	<u>13,785</u>
Deductions					
Retirement Allowance Payments	29,112	27,183	26,379	24,526	23,821
Return of Contributions and Death Benefits	196	253	34	235	145
Transfers to Employees' Retirement System	-	-	-	-	68
Transfers to Teachers' Retirement System	-	-	-	-	-
Administrative Expenses	280	257	276	317	552
Total Deductions	<u>29,588</u>	<u>27,693</u>	<u>26,689</u>	<u>25,078</u>	<u>24,586</u>
Net Increase/(Decrease)	20,479	25,746	(11,107)	10,227	(10,801)
Net Position Restricted for Pension Benefits					
Beginning of Year - as previously reported	235,881	210,135	221,242	211,015	221,816
Adjustment for Application of GASB 68	-	-	-	-	-
Adjustment for Application of GASB 75	-	-	-	-	-
Beginning of Year - as adjusted	<u>235,881</u>	<u>210,135</u>	<u>221,242</u>	<u>211,015</u>	<u>221,816</u>
End of Year	<u>\$ 256,360</u>	<u>\$ 235,881</u>	<u>\$ 210,135</u>	<u>\$ 221,242</u>	<u>\$ 211,015</u>

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Teachers' Retirement System

Retired Members by Type of Benefit as of September 30, 2017

Amount of Monthly Benefit	Number of Retirants	Type of Retirement ¹			Option Selected ²					
		A	B	C	Maximum	Opt-1	Opt-2	Opt-3	Opt-4	
\$ 1 - 250	1,443	880	412	151	275	329	441	398	-	
251 - 500	8,853	6,490	875	1,488	2,591	3,465	1,697	1,096	4	
501 - 750	8,876	7,067	699	1,110	2,319	3,648	1,794	1,110	5	
751 - 1,000	7,546	6,153	601	792	1,852	3,082	1,520	1,086	6	
1,001 - 1,250	6,426	5,295	495	636	1,317	2,532	1,569	1,005	3	
1,251 - 1,500	5,880	4,919	435	526	1,164	2,212	1,595	908	1	
1,501 - 1,750	7,061	6,319	328	414	1,268	2,960	1,878	952	3	
1,751 - 2,000	8,951	8,407	256	288	1,570	4,077	2,034	1,267	3	
2,001 - 2,250	8,981	8,628	197	156	1,385	4,186	2,200	1,207	3	
2,251 - 2,500	7,257	7,021	156	80	1,130	3,499	1,705	919	4	
2,501 - 2,750	5,316	5,155	111	50	797	2,499	1,322	698	-	
2,751 - 3,000	3,908	3,786	93	29	585	1,729	1,020	572	2	
3,001 - 3,250	2,916	2,817	83	16	386	1,267	824	435	4	
3,251 - 3,500	2,161	2,080	72	9	302	902	639	317	1	
3,501 - 3,750	1,684	1,630	49	5	230	698	522	231	3	
3,751 - 4,000	1,313	1,273	35	5	189	550	372	197	5	
4,001 - 4,250	1,107	1,074	32	1	161	473	291	180	2	
4,251 - 4,500	819	790	27	2	102	324	255	135	3	
4,501 - 4,750	610	597	13	-	82	234	187	106	1	
4,751 - 5,000	513	504	9	-	67	197	171	76	2	
Over	5,000	2,229	2,153	72	4	268	714	819	413	15
Totals	93,850	83,038	5,050	5,762	18,040	39,577	22,855	13,308	70	

¹ Type of Retirement

- A - Service
- B - Survivor Benefit
- C - Disability

² Option

- Maximum - Life Annuity
- Opt-1 - Cash Refund
- Opt-2 - 100% Joint Survivorship
- Opt-3 - 50% Joint Survivorship
- Opt-4 - Other

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Employees' Retirement System

Retired Members by Type of Benefit as of September 30, 2017

	Amount of Monthly Benefit	Number of Retirants	Type of Retirement ¹			Option Selected ²				
			A	B	C	Maximum	Opt-1	Opt-2	Opt-3	Opt-4
\$	1 - 250	347	144	192	11	56	32	67	181	11
	251 - 500	3,668	2,343	954	371	968	917	862	861	60
	501 - 750	5,056	3,491	772	793	1,531	1,576	995	860	94
	751 - 1,000	4,756	3,360	542	854	1,451	1,603	806	814	82
	1,001 - 1,250	5,232	4,086	434	712	1,271	1,958	1,031	868	104
	1,251 - 1,500	4,707	3,903	330	474	1,060	1,841	995	730	81
	1,501 - 1,750	4,390	3,827	234	329	929	1,727	922	742	70
	1,751 - 2,000	3,977	3,622	137	218	783	1,661	778	705	50
	2,001 - 2,250	3,349	3,121	92	136	656	1,264	771	613	45
	2,251 - 2,500	2,798	2,615	78	105	531	1,123	622	479	43
	2,501 - 2,750	2,233	2,099	56	78	401	899	513	392	28
	2,751 - 3,000	1,775	1,690	49	36	312	697	401	335	30
	3,001 - 3,250	1,502	1,441	39	22	259	633	325	268	17
	3,251 - 3,500	1,060	1,020	26	14	178	440	232	190	20
	3,501 - 3,750	853	833	12	8	152	351	180	157	13
	3,751 - 4,000	622	606	9	7	109	268	122	111	12
	4,001 - 4,250	513	506	5	2	69	220	114	98	12
	4,251 - 4,500	373	361	7	5	65	151	85	69	3
	4,501 - 4,750	302	295	7	-	53	122	71	52	4
	4,751 - 5,000	257	250	4	3	50	91	58	54	4
	Over 5,000	1,006	992	10	4	181	399	199	214	13
	Totals	48,776	40,605	3,989	4,182	11,065	17,973	10,149	8,793	796

¹ Type of Retirement

- A - Service
- B - Survivor Benefit
- C - Disability

² Option

- Maximum - Life Annuity
- Opt-1 - Cash Refund
- Opt-2 - 100% Joint Survivorship
- Opt-3 - 50% Joint Survivorship
- Opt-4 - Other

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Judicial Retirement Fund

Retired Members by Type of Benefit as of September 30, 2017

Amount of Monthly Benefit	Number of Retirants	Type of Retirement †			Option	
		A	B	C	Maximum	Joint Survivorship
\$ 1 - 250	-	-	-	-	-	-
251 - 500	1	-	1	-	1	-
501 - 750	2	-	2	-	2	-
751 - 1,000	4	-	4	-	4	-
1,001 - 1,250	4	-	4	-	4	-
1,251 - 1,500	10	-	10	-	10	-
1,501 - 1,750	7	1	6	-	6	1
1,751 - 2,000	6	-	6	-	6	-
2,001 - 2,250	3	-	3	-	3	-
2,251 - 2,500	1	-	1	-	1	-
2,501 - 2,750	2	-	2	-	2	-
2,751 - 3,000	5	-	4	1	5	-
3,001 - 3,250	4	2	2	-	2	2
3,251 - 3,500	17	5	12	-	12	5
3,501 - 3,750	44	1	43	-	44	-
3,751 - 4,000	2	1	1	-	2	-
4,001 - 4,250	3	3	-	-	1	2
4,251 - 4,500	6	5	1	-	3	3
4,501 - 4,750	12	8	3	1	5	7
4,751 - 5,000	14	6	8	-	8	6
Over 5,000	256	252	-	4	47	209
Totals	403	284	113	6	168	235

† Type of Retirement

A - Service

B - Survivor Benefit

C - Disability

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Teachers' Retirement System

Ten-Year History of Average Monthly Benefit Payments as of September 30

	Years Credited Service				
	10-14	15-19	20-24	25-29	30 & over
2017					
Average monthly benefit	\$ 831	\$ 1,299	\$ 1,866	\$ 2,466	\$ 3,315
Average final average salary	\$ 42,451	\$ 46,698	\$ 51,545	\$ 57,495	\$ 63,269
Number of active retirants	952	631	744	1,396	605
2016					
Average monthly benefit	\$ 790	\$ 1,276	\$ 1,679	\$ 2,448	\$ 3,558
Average final average salary	\$ 41,166	\$ 46,315	\$ 47,377	\$ 57,439	\$ 66,923
Number of active retirants	950	646	626	1,456	502
2015					
Average monthly benefit	\$ 822	\$ 1,189	\$ 1,731	\$ 2,340	\$ 3,350
Average final average salary	\$ 42,410	\$ 42,982	\$ 49,065	\$ 54,854	\$ 63,017
Number of active retirants	934	667	650	1,476	529
2014					
Average monthly benefit	\$ 790	\$ 1,273	\$ 1,675	\$ 2,374	\$ 3,236
Average final average salary	\$ 40,969	\$ 46,200	\$ 47,036	\$ 56,099	\$ 60,273
Number of active retirants	855	656	633	1,397	364
2013					
Average monthly benefit	\$ 810	\$ 1,201	\$ 1,653	\$ 2,325	\$ 3,204
Average final average salary	\$ 41,846	\$ 43,291	\$ 46,143	\$ 55,080	\$ 59,738
Number of active retirants	879	676	600	1,216	278
2012					
Average monthly benefit	\$ 733	\$ 1,151	\$ 1,644	\$ 2,288	\$ 2,896
Average final average salary	\$ 37,417	\$ 41,518	\$ 46,432	\$ 53,707	\$ 54,443
Number of active retirants	951	643	638	1,411	493
2011					
Average monthly benefit	\$ 721	\$ 1,230	\$ 1,660	\$ 2,448	\$ 3,362
Average final average salary	\$ 36,580	\$ 43,817	\$ 47,340	\$ 58,430	\$ 64,558
Number of active retirants	797	595	632	1,674	732
2010					
Average monthly benefit	\$ 691	\$ 1,140	\$ 1,596	\$ 2,309	\$ 3,206
Average final average salary	\$ 36,194	\$ 41,368	\$ 45,033	\$ 55,481	\$ 61,883
Number of active retirants	721	499	520	1,701	847
2009					
Average monthly benefit	\$ 693	\$ 1,099	\$ 1,533	\$ 2,229	\$ 3,089
Average final average salary	\$ 35,464	\$ 39,601	\$ 43,549	\$ 53,066	\$ 59,139
Number of active retirants	632	476	432	1,726	770
2008					
Average monthly benefit	\$ 687	\$ 1,063	\$ 1,463	\$ 2,124	\$ 3,010
Average final average salary	\$ 34,769	\$ 38,493	\$ 41,345	\$ 50,504	\$ 57,764
Number of active retirants	699	504	443	1,538	843

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Employees' Retirement System

Ten-Year History of Average Monthly Benefit Payments as of September 30

	Years Credited Service				
	10-14	15-19	20-24	25-29	30 & over
2017					
Average monthly benefit	\$ 777	\$ 1,219	\$ 1,851	\$ 2,480	\$ 3,529
Average final average salary	\$ 40,630	\$ 43,568	\$ 52,468	\$ 57,172	\$ 65,786
Number of active retirants	559	354	329	701	464
2016					
Average monthly benefit	\$ 756	\$ 1,212	\$ 1,655	\$ 2,349	\$ 3,341
Average final average salary	\$ 39,679	\$ 44,655	\$ 47,798	\$ 54,386	\$ 61,838
Number of active retirants	516	340	357	852	425
2015					
Average monthly benefit	\$ 714	\$ 1,182	\$ 1,726	\$ 2,398	\$ 3,379
Average final average salary	\$ 38,049	\$ 43,986	\$ 48,618	\$ 55,372	\$ 62,969
Number of active retirants	548	384	334	808	364
2014					
Average monthly benefit	\$ 737	\$ 1,144	\$ 1,676	\$ 2,326	\$ 3,258
Average final average salary	\$ 38,296	\$ 42,040	\$ 48,423	\$ 54,092	\$ 60,078
Number of active retirants	532	319	316	725	337
2013					
Average monthly benefit	\$ 718	\$ 1,257	\$ 1,738	\$ 2,392	\$ 3,236
Average final average salary	\$ 37,933	\$ 46,357	\$ 49,200	\$ 54,929	\$ 59,595
Number of active retirants	537	385	321	661	337
2012					
Average monthly benefit	\$ 723	\$ 1,214	\$ 1,856	\$ 2,475	\$ 3,170
Average final average salary	\$ 38,160	\$ 43,479	\$ 49,415	\$ 54,904	\$ 58,675
Number of active retirants	566	370	486	757	283
2011					
Average monthly benefit	\$ 728	\$ 1,230	\$ 1,871	\$ 2,423	\$ 3,207
Average final average salary	\$ 38,584	\$ 43,878	\$ 49,583	\$ 55,598	\$ 59,990
Number of active retirants	529	341	434	975	459
2010					
Average monthly benefit	\$ 667	\$ 1,144	\$ 1,819	\$ 2,386	\$ 3,054
Average final average salary	\$ 35,383	\$ 41,444	\$ 48,399	\$ 55,257	\$ 57,575
Number of active retirants	399	316	366	954	420
2009					
Average monthly benefit	\$ 1,399	\$ 1,449	\$ 1,661	\$ 2,064	\$ 2,764
Average final average salary	\$ 40,605	\$ 39,986	\$ 37,807	\$ 47,298	\$ 46,613
Number of active retirants	700	436	345	772	428
2008					
Average monthly benefit	\$ 1,443	\$ 1,389	\$ 1,765	\$ 1,982	\$ 2,767
Average final average salary	\$ 43,159	\$ 42,731	\$ 44,673	\$ 47,099	\$ 53,152
Number of active retirants	566	346	262	670	322

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Judicial Retirement Fund

Ten-Year History of Average Monthly Benefit Payments as of September 30

	Years of Credited Service				
	10-14	15-19	20-24	25-29	30+
2017					
Average monthly benefit	\$ 8,409	\$ 8,519	\$ 9,345	\$ 8,453	\$ 9,262
Average final average salary	\$ 134,539	\$ 136,297	\$ 149,518	\$ 135,243	\$ 148,185
Number of active retirants	8	8	3	4	4
2016					
Average monthly benefit	\$ 6,928	\$ 8,952	\$ 9,293	\$ 8,204	\$ -
Average final average salary	\$ 110,854	\$ 143,234	\$ 148,686	\$ 131,271	\$ -
Number of active retirants	2	3	1	4	-
2015					
Average monthly benefit	\$ 8,692	\$ 9,043	\$ 9,319	\$ 9,332	\$ 8,202
Average final average salary	\$ 139,065	\$ 144,688	\$ 149,102	\$ 149,311	\$ 131,231
Number of active retirants	4	2	3	2	4
2014					
Average monthly benefit	\$ 8,528	\$ 9,158	\$ 9,051	\$ 9,371	\$ -
Average final average salary	\$ 136,441	\$ 146,529	\$ 144,812	\$ 149,936	\$ -
Number of active retirants	2	3	2	1	-
2013					
Average monthly benefit	\$ 7,458	\$ 8,297	\$ 9,128	\$ 9,216	\$ 7,224
Average final average salary	\$ 119,322	\$ 132,747	\$ 146,050	\$ 147,448	\$ 115,578
Number of active retirants	5	10	3	5	9
2012					
Average monthly benefit	\$ 6,993	\$ 9,184	\$ 9,371	\$ 7,230	\$ -
Average final average salary	\$ 111,884	\$ 146,937	\$ 149,936	\$ 115,676	\$ -
Number of active retirants	1	1	1	3	-
2011					
Average monthly benefit	\$ 7,940	\$ 8,658	\$ 8,381	\$ 9,170	\$ 10,897
Average final average salary	\$ 127,032	\$ 138,522	\$ 134,096	\$ 146,720	\$ 174,352
Number of active retirants	7	9	5	8	2
2010					
Average monthly benefit	\$ 6,796	\$ 8,819	\$ 9,319	\$ 7,147	\$ -
Average final average salary	\$ 108,736	\$ 141,102	\$ 149,104	\$ 114,352	\$ -
Number of active retirants	3	2	3	2	-
2009					
Average monthly benefit	\$ 7,247	\$ 7,899	\$ 8,020	\$ 9,899	\$ 10,750
Average final average salary	\$ 115,950	\$ 126,376	\$ 128,320	\$ 158,384	\$ 172,000
Number of active retirants	6	2	5	5	1
2008					
Average monthly benefit	\$ 7,189	\$ 5,741	\$ 9,054	\$ 8,993	\$ -
Average final average salary	\$ 115,028	\$ 91,863	\$ 144,864	\$ 143,888	\$ -
Number of active retirants	3	2	1	4	-

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Employees' Retirement System

Local Participating Employers

Abbeville Water Works & Sewer Board
Abbeville, City of
Adamsville, City of
Addison, Town of
Alabama Cooperative Extension System
Alabama Elk River Development Agency
Alabama Historic Ironworks Commission
Alabama League of Municipalities
Alabama Municipal Electric Authority
Alabama Rural Water Association
Alabama Space Science Exhibit Commission
Alabama Sports Hall of Fame
Alabama Tombigbee Regional Commission
Alabaster Water Board
Alabaster, City of
Albertville Housing Authority
Albertville Municipal Utilities Board
Albertville, City of
Alexander City Housing Authority
Alexander City, City of
Aliceville Housing Authority
Aliceville, City of
AltaPointe Health Systems
Altoona, Town of
Andalusia Housing Authority
Andalusia Utilities Board
Andalusia, City of
Anniston & Calhoun County Public Library
Anniston Housing Authority
Anniston Water Works & Sewer Board
Anniston, City of
Arab Housing Authority
Arab Sewer Board
Arab Water Works Board
Arab, Town of
Argo, Town of
Arley, Town of
Ashford Housing Authority
Ashland Housing Authority
Ashland Water Works & Sewer Board
Ashland, City of
Ashville, Town of
Association of County Commissioners of
Alabama
Athens Utilities
Athens, City of
Athens-Limestone County Emergency
Management Communications District
Athens-Limestone Public Library
Atmore Housing Authority
Atmore, City of
Attalla Housing Authority
Attalla Water Works Board
Attalla, City of
Auburn Housing Authority
Auburn Water Works Board
Auburn, City of
Autauga County Commission
Autauga County Emergency Management
Communication District
Autauga County Water Authority
Autauga-Prattville Public Library
B. B. Comer Memorial Library
Bakerhill Water Authority
Bakerhill, Town of
Baldwin County Commission
Baldwin County Emergency Communication
District
Baldwin County Sheriff's Office
Baldwin County Soil & Water Conservation
District
Barbour County Commission
Bay Minette Housing Authority
Bay Minette, City of
Bayou La Batre Utilities Board
Bayou La Batre, City of
Bear Creek Development Authority
Bear Creek Water Works Board
Bear Creek, Town of
Beatrice, Town of
Beauregard Water Authority
Berry, Town of
Bessemer, City of
Beulah Utilities District
Bibb County Commission
Bibb County Emergency Management
Communication District
Big Wills Water Authority
Billingsley, Town of
Birmingham Racing Commission
Birmingham Regional Planning Commission
Birminghamport Fire District
Black Warrior Solid Waste Disposal Authority
Blount County Commission
Blount County Communications District
Blount County Industrial Development Board
Blount County Water Authority
Blountsville Utility Board
Blountsville, Town of
Boaz Board of Water & Sewer Commissioners
Boaz, City of
Boldo Water & Fire Protection Authority

Boston Housing Authority
Brantley Housing Authority
Brent Housing Authority
Brent, City of
Brewton Housing Authority
Brewton, City of
Bridgeport Housing Authority
Bridgeport Utilities Board
Bridgeport, City of
Brilliant, Town of
Brookwood, Town of
Brundidge, City of
Buhl-Elrod-Holman Water Authority
Bullock County Commission
Butler County Commission
Butler County Emergency Communication
District
Butler, City of
Cahaba Center for Mental Health & Mental
Retardation
Cahaba Valley Fire & Emergency Medical
Rescue District
Calera, City of
Calhoun County 9-1-1 District
Calhoun County Commission
Calhoun County Community Punishment &
Corrections Authority
Calhoun County Economic Development
Council
Calhoun County Water & Fire Protection
Authority
Calhoun-Cleburne Mental Health Board
Camden, City of
Camp Hill, City of
Carbon Hill Utilities Board
Carbon Hill, City of
Carl Elliott Regional Library
Carroll's Creek Water Authority
Carrollton, Town of
Castleberry, Town of
Cedar Bluff Utilities Board & Solid Waste
Authority
Cedar Bluff, Town of
Center Point Fire District
Center Point, City of
Central Alabama Aging Consortium
Central Alabama Regional Planning &
Development Commission
Central Alabama Youth Services
Central Elmore Water & Sewer Authority
Central Talladega County Water District

Centre Water Works & Sewer Board
Centre, City of
Centreville, City of
Chambers County Commission
Chambers County Development Authority
Chambers County Emergency Management
Communications District
Chambers County Library Board
Chatom, City of
Chelsea, City of
Cherokee County Commission
Cherokee County Water & Sewer Authority
Cherokee, Town of
Chickasaw Housing Authority
Chickasaw Utilities Board
Chickasaw, Town of
Childersburg Water Works, Sewer & Gas Board
Childersburg, City of
Chilton County Commission
Chilton County Soil & Water Conservation
District
Chilton Water Authority
Chilton/Clanton Public Library
Chilton-Shelby Mental Health Center
Choctaw County Emergency Communications
District
Citizenship Trust American Village
Clanton Housing Authority
Clanton Water Works & Sewer Board
Clanton, City of
Clarke County Commission
Clarke County Industrial Development Board
Clarke County Soil & Water Conservation
District
Clarke-Mobile Counties Gas District
Clay County Commission
Clay County E911
Clay County Water Authority
Clayton Housing Authority
Clayton Water Works & Sewer Board
Clayton, City of
Cleburne County Commission
Cleveland, Town of
Coaling Water Authority
Coaling, Town of
Coffee County Commission
Coffee County Water Authority
Coffeeville, Town of
Coker Water Authority
Colbert County Commission

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Employees' Retirement System

Local Participating Employers

Colbert County Emergency Management Communications District	Daleville Housing Authority
Colbert County Tourism & Convention Bureau	Daleville, City of
Collinsville Water Works & Sewer Board	Dallas County Commission
Collinsville, City of	Dallas County Water & Sewer Authority
Columbia, Town of	Daphne Utilities Board
Columbiana Housing Authority	Daphne, City of
Columbiana Water Works Board	Dauphin Island Park & Beach Board
Columbiana, Town of	Dauphin Island Water & Sewer Authority
Concord Fire District	Dauphin Island, Town of
Conecuh County Commission	Decatur Utilities
Conecuh County E911	Decatur, City of
Conecuh County Soil & Water Conservation District	DeKalb County Commission
Cook Springs Water Authority	DeKalb County Economic Development Authority
Cooperative District for Northeast Alabama Gas	DeKalb County Emergency Communications District
Coosa County Commission	DeKalb County Hospital Association
Coosa County Emergency Communication Management Board	DeKalb County Mental Retardation Board
Coosa Valley Youth Services	DeKalb County Soil & Water Conservation District
Coosada, Town of	DeKalb-Cherokee Counties Gas District
Cordova Water & Gas Board	DeKalb-Jackson Water Supply District Board
Cordova, City of	Demopolis Housing Authority
Cottonwood Housing Authority	Demopolis Water Works & Sewer Board
Cottonwood, City of	Demopolis, City of
Courtland, Town of	Dora Waterworks & Gas Board
Covington County Commission	Dora, City of
Covington County E911 Board	Dothan, City of
Covington County Water Authority	Dothan-Houston County Intellectual Disabilities Board
Cowarts, Town of	Dothan-Houston County Communications District
Crenshaw County Commission	Double Springs Water Works Board
Crenshaw County Emergency Communications District	Double Springs, Town of
Creola, City of	Douglas Water Authority
Crossville, Town of	Douglas, Town of
Cuba, Town of	Dutton, Town of
Cullman County Center for the Developmentally Disabled	East Alabama Mental Health-Mental Retardation Board
Cullman County Commission	East Alabama Regional Planning & Development Commission
Cullman County E-911	East Alabama Water, Sewer & Fire Protection District
Cullman Power Board	East Brewton Water Works & Sewer Board
Cullman, City of	East Brewton, City of
Cullman-Jefferson Counties Gas District	East Central Alabama Gas District
Cumberland Mountain Water Authority	East Central Baldwin County Water & Fire Protection Authority
Curry Water Authority	East Lauderdale County Water & Fire Protection Authority
CWM Water Authority	Eclectic, Town of
Dadeville Housing Authority	Elba Water & Electric Board
Dadeville Water Supply & Gas Board	
Dadeville, City of	
Dadeville, Waterworks and Sewer Board of	
Dale County Commission	
Dale County Water Authority	

Elba, City of
Elberta, City of
Electric Cities of Alabama
Elmore County Commission
Elmore County Emergency Communications
District
Elmore Water & Sewer Authority
Enterprise Housing Authority
Enterprise Water Works Board
Enterprise, City of
Ernest F. Ladd Memorial Stadium
Escambia County Commission
Escambia County Cooperative Library System
Escambia County Emergency Communications
District
Etowah County Commission
Etowah County Communications District
Etowah County Community Corrections
Etowah County Tourism Board
Etowah Solid Waste Disposal Authority
Eufaula Housing Authority
Eufaula Water Works & Sewer Board
Eufaula, City of
Eutaw, City of
Evergreen Housing Authority
Evergreen, City of
Excel, Town of
Fairfield, City of
Fairhope Public Library
Fairhope, City of
Falkville, Town of
Fayette County Commission
Fayette County E911 District
Fayette County Water Authority
Fayette Gas Board
Fayette Housing Authority
Fayette Water Works Board
Fayette, City of
Fayetteville Water Authority
Five Star Water Supply District
Flomaton, Town of
Florence Housing Authority
Florence Lauderdale Port Authority
Florence/Lauderdale Tourism Board
Foley Utilities Board
Foley, City of
Forestdale Fire District
Fort Deposit Water Works & Sewer Board
Fort Deposit, Town of
Fort Payne Housing Authority
Fort Payne Improvement Authority

Fort Payne Water Works Board
Fort Payne, City of
Fosters-Ralph Water Authority
Franklin County Commission
Franklin County Soil & Water Conservation
District
Franklin County Water Service Authority
Frisco City, Town of
Fultondale Gas Board
Fultondale, Town of
Fyffe, Town of
Gadsden Water Works & Sewer Board
Gadsden, City of
Gantt, Town of
Garden Town, Town of
Gardendale, City of
Geneva County Commission
Geneva County E911
Geneva Water Works & Sewer Board
Geneva, City of
Georgiana Housing Authority
Georgiana, City of
Geraldine, Town of
Gilbertown Utilities Board
Gilbertown, Town of
Glencoe Water & Sewer Board
Glencoe, City of
Good Hope, City of
Goodwater, City of
Gordo, City of
Governmental Utility Services Corporation of
Moody
Governmental Utility Services Corporation of
the City of Bessemer
Grant, Town of
Graysville Public Library
Graysville, City of
Greater Etowah Mental Retardation 310 Board
Greene County Ambulance Service
Greene County Commission
Greene County E911 Communication District
Greene County Hospital & Nursing Home
Greene County Housing Authority
Greene County Industrial Development
Authority
Greene County Racing Commission
Greenhill Water & Fire Protection Authority
Greensboro Housing Authority
Greensboro, City of
Greenville Housing Authority
Greenville Water Works & Sewer Board

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Employees' Retirement System

Local Participating Employers

Greenville, City of
Grove Hill, City of
Guin Housing Authority
Guin Water Works & Sewer Board
Guin, City of
Gulf Shores Utilities Board
Gulf Shores, City of
Guntersville Electric Board
Guntersville Housing Authority
Guntersville Water Works & Sewer Board
Guntersville, City of
Gurley, Town of
Hackleburg Housing Authority
Hackleburg Water Board
Hackleburg, Town of
Hackneyville Water & Fire Protection Authority
Hale County Commission
Hale County Emergency Medical Service
Hale County Soil & Water Conservation District
Haleyville, City of
Hamilton Housing Authority
Hamilton, City of
Hanceville Water Works & Sewer Board
Hanceville, City of
Harpersville, Town of
Hartford, City of
Hartselle Utilities Board
Hartselle, City of
Hartselle, Housing Authority of the City of
Harvest-Monrovia Water, Sewer & Fire Protection Authority
Hayden, Town of
Hayneville, City of
Headland Housing Authority
Headland, City of
Heflin Water Works & Sewer Board
Heflin, City of
Helena Utilities Board
Helena, City of
Henry County Commission
Henry County Soil & Water Conservation District
Henry County Water Authority
Highland Water Authority
Hillsboro, Town of
Historic Blakeley Authority
Hodges, Town of
Hokes Bluff Water Board
Hokes Bluff, Town of
Holly Pond, Town of
Hollywood, Town of
Homewood, City of
Hoover, City of
Horseshoe Bend Regional Library
Houston County Commission
Houston County Soil Conservation District
Houston County Water Authority
Houston-Love Memorial Library
Hueytown, City of
Huguley Water, Sewer & Fire Protection Authority
Huntsville Electric Utilities System
Huntsville Gas Utilities System
Huntsville Solid Waste Disposal Authority
Huntsville Waterworks Utilities System
Huntsville, City of
Huntsville/Madison County Convention & Visitors Bureau
Huntsville-Madison County Airport Authority
Huntsville-Madison County Marina & Port Authority
Huntsville-Madison County Mental Health Center Board
Indian Pines Recreational Authority
International Motorsports Hall of Fame
Irondale, City of
J. Paul Jones Hospital
Jackson County Commission
Jackson County Economic Development Authority
Jackson County Emergency Management Communications District
Jackson County Soil & Water Conservation District
Jackson County Water Authority
Jackson, City of
Jackson's Gap Water Authority
Jackson's Gap, Town of
Jacksonville Housing Authority
Jacksonville Water Works, Gas & Sewer Board
Jacksonville, City of
Jasper Waterworks & Sewer Board
Jasper, City of
Jefferson County Department of Health
Jefferson County Housing Authority
Jefferson-Blount-St. Clair Mental Health Authority
Jemison, Town of
Joppa, Hulaco & Ryan Water Authority
Kennedy, City of
Killen, City of
Kinsey, Town of
LaFayette, City of
Lamar County Commission

Lamar County Communications District
Lamar County Gas District
Lanett, City of
Lauderdale County Commission
Lauderdale County Community Corrections Authority
Lauderdale County Regional Library System
Lawrence County Commission
Lee County Commission
Leeds Housing Authority
Leeds Water Works Board
Leeds, City of
Lee-Russell Council of Governments
Leesburg, Town of
Leighton Water & Sewer Board
Leighton, Town of
Level Plains, Town of
Limestone County Commission
Limestone County Water & Sewer Authority
Lincoln, City of
Linden, City of
Lineville Housing Authority
Lineville Waterworks & Sewer Board
Lineville, City of
Littleville, Town of
Livingston Housing Authority
Livingston, City of
Loachapoka Water Authority
Locust Fork, Town of
Lowndes County Commission
Loxley, City of
Luverne Housing Authority
Luverne, City of
Lynn, Town of
Macon County Commission
Macon County Racing Commission
Madison County 310 Board
Madison County Commission
Madison County Communications District
Madison Water & Wastewater Board
Madison, City of
Magnolia Springs, Town of
Malvern, Town of
Maplesville Waterworks & Gas Board
Maplesville, City of
Marengo County Commission
Marengo County Economic & Industrial Development Authority
Marengo County Emergency Communications District
Marengo Nursing Home

Margaret, Town of
Marion County Commission
Marion County Emergency Communications District
Marion County Public Water Authority
Marion Housing Authority
Marion, City of
Marshall County Commission
Marshall County Community Punishment & Corrections Authority
Marshall County Emergency Telephone Services
Marshall County Gas District
Marshall County Soil & Water Conservation District
Marshall-Jackson Mental Retardation Authority
McAdory Area Fire District
McIntosh, Town of
Mental Health Board of Bibb, Pickens & Tuscaloosa County
Mental Health Center of North Central Alabama
Mental Retardation/Developmental Disabilities Board
Mentone Water Works Board
Mentone, Town of
Middle Alabama Area Agency on Aging
Midfield Library Board
Midfield, City of
Midway, Town of
Mildred B. Harrison Library
Millbrook, City of
Millport Housing Authority
Millport, Town of
Mobile Airport Authority
Mobile Area Water & Sewer System
Mobile County Commission
Mobile County Communications District
Mobile County Emergency Management Agency
Mobile County Health Department
Mobile County Housing Authority
Mobile County Law Enforcement & Firefighters' Pension Fund
Mobile County Personnel Board
Mobile County Racing Commission
Mobile County Water, Sewer & Fire Protection Authority
Mobile Public Library
Mobile, City of
Monroe County Commission
Monroeville Housing Authority

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Employees' Retirement System

Local Participating Employers

Monroeville Water Works Board
Monroeville, City of
Montevallo Water Works & Sewer Board
Montevallo, City of
Montgomery Area Mental Health Authority
Montgomery County Commission
Montgomery County Soil & Water Conservation District
Montgomery Water Works & Sanitary Sewer Board
Moody, City of
Morgan County Commission
Morgan County Emergency Management Communication District
Morgan County Soil & Water Conservation District
Moulton Housing Authority
Moulton, City of
Moundville, City of
Mountain Brook Library Board
Mountain Brook Park & Recreation Board
Mountain Brook, City of
Mt. Vernon, Town of
Munford Water Authority
Munford, Town of
Muscle Shoals Electric Board
Muscle Shoals Utilities Board
Muscle Shoals, City of
Myrtlewood, Town of
Nauvoo, Town of
Nectar, Town of
New Hope, Town of
New London Water, Sewer & Fire Protection Authority
New Site, Town of
North Alabama Gas District
North Baldwin Utilities
North Central Alabama Mental Retardation Authority
North Central Alabama Regional Council of Governments
North Dallas County Water Authority
North Marshall Utilities Board
North Shelby County Fire & Emergency Medical District
North Shelby Library
Northeast Alabama MR/DD Authority
Northeast Alabama Water, Sewer & Fire Protection District
Northeast Morgan County Water & Sewer Authority
Northport Housing Authority
Northport, City of
Northwest Alabama Council of Local Governments
Northwest Alabama Mental Health Center
Northwest Alabama Regional Airport
Notasulga, Town of
Oak Grove, Town of
Oakman Water Works Board
Oakman, Town of
Odenville Utilities Board
Odenville, Town of
Ohatchee, Town of
Oneonta Housing Authority
Oneonta Utilities Board
Oneonta, City of
Opelika Housing Authority
Opelika Utilities Board
Opelika, City of
Opp Utilities Board
Opp, City of
Orange Beach Water, Sewer & Fire Protection Authority
Orange Beach, Town of
Owassa/Brownville Water Authority
Owens Cross Roads, City of
Oxford Emergency Medical Services
Oxford, City of
Ozark Utilities Board
Ozark, City of
Ozark-Dale County E911
Parrish Water Works & Sewer Board
Parrish, Town of
Pelham, City of
Pell City Housing Authority
Pell City, City of
Pennington Utilities Board
Pennington, City of
Perdido Bay Water, Sewer and Fire Protection District
Perry County Capital Improvement Cooperative District
Perry County Commission
Perry County E911
Perry County Water Authority
Phenix City Utilities
Phenix City, City of
Phil Campbell Housing Authority
Phil Campbell Water Works & Sewer Board
Phil Campbell, Town of
Pickens County Commission
Pickens County Cooperative Library
Pickens County E911 Board

Pickens County Water Authority
Piedmont Housing Authority
Piedmont, City of
Pike County Commission
Pike County Communications District
Pike County Soil & Water Conservation District
Pike County Water Authority
Pike Road, Town of
Pike Road Volunteer Fire Protection Authority
Pine Bluff Water Authority
Pine Hill, Town of
Pine Level Water Authority
Pinson, City of
Pisgah, Town of
Pleasant Grove, City of
Prattville Housing Authority
Prattville Water Works Board
Prattville, City of
Priceville, Town of
Prichard Housing Authority
Quint-Mar Water Authority
Ragland Water Works Board
Ragland, Town of
Rainbow City Utilities Board
Rainbow City, City of
Rainsville, City of
Randolph County Commission
Randolph County E911
Red Bay Housing Authority
Red Bay Water Works & Gas Board
Red Bay, City of
Reform Housing Authority
Reform, City of
Regional Housing Authority of Lawrence,
Cullman & Morgan Counties
Rehobeth, City of
Remlap-Pine Mountain Water Authority
Repton, Town of
Riverbend Center for Mental Health
Riverside, Town of
Roanoke Utility Board
Roanoke, City of
Robertsdale, City of
Rockford Utilities Board
Rocky Ridge Fire District
Rogersville Water Works & Sewer Board
Rogersville, Town of
Russell County Commission
Russell County Emergency Communications
District

Russell County Soil & Water Conservation
District
Russell County Water Authority
Russellville Electric Board
Russellville Gas Board
Russellville Housing Authority
Russellville Water & Sewer Board
Russellville, City of
Rutledge, Town of
Samson, City of
Saraland Water Service
Saraland, City of
Sardis City Water Board
Sardis, City of
Satsuma Water Works Board
Satsuma, City of
Scottsboro Electric Power Board
Scottsboro Housing Authority
Scottsboro Public Library
Scottsboro Public Park & Recreation Board
Scottsboro Waterworks, Sewer & Gas Board
Scottsboro, City of
Section Waterworks Board
Section, Town of
Selma Housing Authority
Selma Water & Sewer Board
Selma, City of
Sheffield Utilities Board
Sheffield, City of
Shelby County Commission
Shelby County Community Corrections
Shelby County Emergency Management
Communications District
Shelby County Soil Conservation District
Shoals Committee on Programs & Employment
for the Mentally Retarded
Shoals Economic Development Authority
Shoals Solid Waste Disposal Authority
Shorter, Town of
Silas, Town of
Silverhill, Town of
Skyline, Town of
Slocomb Waterworks & Sewer Board
Slocomb, Town of
Smiths Station, City of
Smiths Water & Sewer Authority
Snead, Town of
Somerville, Town of
South Alabama Gas District
South Alabama Regional Planning Commission

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Employees' Retirement System

Local Participating Employers

South Central Alabama Development Commission
South Central Alabama Mental Health Board
South Central Alabama Regional Housing Authority
South Crenshaw County Water Authority
South Marengo County Water & Fire Protection Authority
Southeast Alabama Regional Planning & Development Commission
Southeast Alabama Solid Waste Disposal Authority
Southeast Alabama Youth Services
Southern Alabama Regional Council on Aging
Southside Water Works & Sewer Board
Southside, City of
Southwest Alabama Water Authority
Spanish Fort Fire Rescue Department
Spanish Fort, City of
SpectraCare Health Systems
Springville, Town of
St. Clair County Commission
St. Clair County Community Punishment & Corrections Authority
St. Clair County Industrial Development Board
St. Clair County Soil & Water Conservation District
St. Florian, Town of
Star-Mindingall Water & Fire Protection Authority
Steele, Town of
Stevenson Housing Authority
Stevenson Utilities Board
Stevenson, City of
Stewartville Water Authority
Sulligent Housing Authority
Sulligent, City of
Sumiton Housing Authority
Sumiton Water Works Board
Sumiton, City of
Summerdale, Town of
Sumter County Commission
Sumter County Industrial Development Authority
Sumter County Soil & Water Conservation District
Sumter County Water Authority
Sylacauga Parks & Recreation Board
Sylacauga Utilities Board
Sylacauga, City of
Sylvan Springs, Town of
Sylvania, Town of
Talladega County Commission
Talladega County Emergency Management Communications District
Talladega County Soil & Water Conservation District
Talladega, City of
Tallapoosa County Commission
Tallassee, City of
Tarrant Alabama Housing Authority
Tarrant Electric System
Tarrant, City of
Taylor, Town of
Tennessee Valley Exhibit Commission
Thomaston, Town of
Thomasville, City of
Thorsby, Town of
Top of Alabama Regional Council of Governments
Top Trails Public Park Authority of the Cities of Lincoln and Talladega
Town Creek, Town of
Triana, City of
TriCounty Agency for Intellectual Disabilities
Trinity, Town of
Troy, City of
Trussville Utilities Board
Trussville, City of
Turnerville Water & Fire Protection District
Tuscaloosa County Commission
Tuscaloosa County Community Punishment and Corrections Authority
Tuscaloosa County 911
Tuscaloosa County Industrial Development Authority
Tuscaloosa County Office of Public Defender
Tuscaloosa County Park & Recreation Authority
Tuscaloosa County Parking & Transit Authority
Tuscaloosa County Soil & Water Conservation District
Tuscaloosa County Special Tax Board
Tuscaloosa Housing Authority
Tuscaloosa Public Library
Tuscaloosa, City of
Tuscumbia, City of
Tuskegee Utilities Board
Tuskegee, City of
Union Grove Utilities Board
Union Springs Utilities Board
Union Springs, City of
Uniontown Housing Authority
Uniontown Utilities Board
Uniontown, Town of

USS Alabama Battleship Commission
Valley Grande, City of
Valley Head Water Works Board
Valley Head, City of
Valley Housing Authority
Valley, City of
Vance, Town of
Vernon Housing Authority
Vernon, City of
Vestavia Hills, City of
Vincent, City of
Von Braun Civic Center
Wadley, Town of
Walker County Commission
Walker County E9-1-1 District
Walker County Housing Authority
Walker County Soil & Water Conservation
District
Wall Street Water Authority
Walnut Hill Water Authority
Warrior River Water Authority
Warrior, City of
Washington County Commission
Washington County E911 Communication
District
Washington County Soil & Water Conservation
District
Wattsville Water Authority
Weaver, City of
Webb, Town of
Wedowee Water, Sewer & Gas Board
Wedowee, City of
West Alabama Regional Commission
West Autauga Water Authority
West Escambia Utilities
West Etowah County Water Authority
West Jefferson, Town of
West Lauderdale County Water & Fire
Protection Authority
West Morgan–East Lawrence Water & Sewer
Authority
Wetumpka Water Works & Sewer Board
Wetumpka, City of
Wilcox County Commission
Wilcox County Emergency Communications
District
Wilcox County Gas District
Wilsonville, Town of
Wilton, Town of
Winfield Water Works & Sewer Board
Winfield, City of

Winston County Commission
Winston County E9-1-1 Communications
District
Woodland, Town of
Woodstock, Town of
York Housing Authority
York, City of

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Employees' Retirement System

Ten-Year History of Largest Employers

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
1) Employer	State of Alabama	State of Alabama	State of Alabama	State of Alabama	State of Alabama	State of Alabama	State of Alabama	State of Alabama	State of Alabama	State of Alabama
# of Active Members	29,548	29,756	30,109	30,297	30,659	30,659	31,795	33,885	35,147	35,200
% of Total Active Members	34.50%	35.08%	35.43%	35.40%	35.84%	35.84%	36.85%	38.36%	39.24%	39.10%
2) Employer	Huntsville, City of	Huntsville, City of	Huntsville, City of	Huntsville, City of	Huntsville, City of	Huntsville, City of	Huntsville, City of	Huntsville, City of	Huntsville, City of	Huntsville, City of
# of Active Members	2,296	2,258	2,207	2,243	2,209	2,209	2,192	2,195	2,175	2,227
% of Total Active Members	2.68%	2.66%	2.60%	2.62%	2.58%	2.58%	2.54%	2.48%	2.43%	2.47%
3) Employer	Mobile County	Mobile County	Mobile County	Mobile County	Mobile County	Mobile County	Mobile County	Mobile County	Mobile County	Mobile County
# of Active Members	1,610	1,604	1,587	1,578	1,625	1,625	1,657	1,672	1,678	1,699
% of Total Active Members	1.88%	1.89%	1.87%	1.84%	1.90%	1.90%	1.92%	1.89%	1.87%	1.89%
4) Employer	Mobile, City of	Mobile, City of	Mobile, City of	AtlaPointe Health*	Mobile, City of	Mobile, City of	Mobile, City of	Mobile, City of	Mobile, City of	Mobile, City of
# of Active Members	1,150	1,195	1,250	1,341	1,282	1,282	1,254	1,310	1,335	1,421
% of Total Active Members	1.34%	1.41%	1.47%	1.57%	1.50%	1.50%	1.45%	1.48%	1.49%	1.58%
5) Employer	Madison County	Madison County	Madison County	Mobile, City of	AtlaPointe Health*	Madison County	Madison County	Madison County	Madison County	Madison County
# of Active Members	1,107	1,145	1,152	1,254	1,236	1,236	1,154	1,162	1,133	1,060
% of Total Active Members	1.29%	1.35%	1.36%	1.47%	1.44%	1.44%	1.34%	1.32%	1.27%	1.18%
6) Employer	Dothan, City of	Dothan, City of	Dothan, City of	Madison County	Madison County	Helen Keller Hospital	Dothan, City of	Helen Keller Hospital	Helen Keller Hospital	Helen Keller Hospital
# of Active Members	1,018	999	995	1,152	1,174	1,174	1,002	957	984	1,034
% of Total Active Members	1.19%	1.18%	1.17%	1.35%	1.37%	1.37%	1.16%	1.08%	1.10%	1.15%
7) Employer	Montgomery County	Montgomery County	AtlaPointe Health*	Dothan, City of	Dothan, City of	Dothan, City of	Helen Keller Hospital	Dothan, City of	Dothan, City of	Dothan, City of
# of Active Members	801	807	792	996	985	985	966	956	961	970
% of Total Active Members	0.94%	0.95%	0.93%	1.16%	1.15%	1.15%	1.12%	1.08%	1.07%	1.08%
8) Employer	Auburn, City of	Tuscaloosa, City of	Tuscaloosa, City of	Tuscaloosa, City of	Tuscaloosa, City of	AtlaPointe Health*	Montgomery County	Montgomery County	Montgomery County	Tuscaloosa, City of
# of Active Members	786	774	777	790	775	775	911	794	848	806
% of Total Active Members	0.92%	0.91%	0.91%	0.92%	0.91%	0.91%	1.06%	0.90%	0.95%	0.90%
9) Employer	Tuscaloosa, City of	Auburn, City of	Montgomery County	Montgomery County	Montgomery County	Montgomery County	AtlaPointe Health*	Tuscaloosa, City of	Tuscaloosa, City of	AtlaPointe Health*
# of Active Members	783	752	766	769	767	767	771	762	745	732
% of Total Active Members	0.91%	0.89%	0.90%	0.90%	0.90%	0.90%	0.89%	0.86%	0.83%	0.81%
10) Employer	Hoover, City of	Hoover, City of	Auburn, City of	Hoover, City of	Helen Keller Hospital	Tuscaloosa, City of	Tuscaloosa, City of	AtlaPointe Health*	AtlaPointe Health*	Baldwin County
# of Active Members	706	704	706	678	729	729	763	668	668	655
% of Total Active Members	0.82%	0.83%	0.83%	0.79%	0.85%	0.85%	0.88%	0.75%	0.75%	0.76%
Total # of Active Members	85,657	84,814	84,985	85,585	85,549	85,549	86,290	88,341	89,560	90,018

* Formerly Greater Mobile-Washington Co. Mental Health Board

Source: Retirement Systems of Alabama records





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