



COMPONENT UNITS OF THE STATE OF ALABAMA  
COMPREHENSIVE ANNUAL  
FINANCIAL REPORT

*For the Fiscal Year Ended September 30, 2016*





# The Retirement Systems of Alabama

COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Year Ended September 30, 2016

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)

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

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Component Units of the State of Alabama  
**Comprehensive Annual Financial Report**

# INTRODUCTORY SECTION



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



**Employees**  
State State Police Public Judicial  
Robert J. Bentley, Chair  
Jacqueline B. Graham, Vice Chair

# THE RETIREMENT SYSTEMS OF ALABAMA

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

March 27, 2017

The Boards of Control  
Teachers' Retirement System of Alabama  
Employees' Retirement System of Alabama  
201 South Union Street  
Montgomery, Alabama 36130

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, 2016. 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 2016 and 2015. Also, an analysis of significant variances between fiscal years 2016 and 2015 is provided in the MD&A.

In fiscal year 2016, the Systems implemented GASB Statement No. 72, *Fair Value Measurement and Application*. The statement addresses accounting and reporting issues related to fair value measurements and requires disclosures be made about fair value measurements, the level of fair value hierarchy, and valuation techniques.

### **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, 2015, the date of the most recent actuarial valuation, the number of participants in the TRS was 270,305, ERS participants totaled 160,135, and JRF participants totaled 770. The following table compares the funded status as of September 30, 2015 and 2014:

<b>Funded Status (%)</b>			
<b>System</b>	<b>9/30/2015</b>	<b>9/30/2014</b>	<b>% Increase/ (Decrease)</b>
TRS	68.3	67.5	0.8
ERS	67.3	66.9	0.4
JRF	62.5	60.9	1.6

The funded status increased during fiscal year 2015 for the third consecutive fiscal year. This increase is consistent with the funding objectives of TRS, ERS, and JRF which is to maintain an increasing funded status that reflects a trend of improved actuarial condition.

### **Investment Activity**

Total investments for the RSA increased in fiscal year 2016, primarily due to increases in the fair value of investments. Total pension fund investments managed by the RSA increased from \$32.2 billion at September 30, 2015, to \$34.0 billion at September 30, 2016, a 5.52% increase.

	<b>Investments, at Fair Value</b>		<b>Interest &amp; Dividend Income</b>	
	<b>9/30/2016</b>	<b>9/30/2015</b>	<b>9/30/2016</b>	<b>9/30/2015</b>
<b>TRS</b>	\$22.6 billion	\$21.5 billion	\$607.8 million	\$640.9 million
<b>ERS</b>	\$11.0 billion	\$10.4 billion	\$297.4 million	\$311.5 million
<b>JRF</b>	\$277.9 million	\$260.6 million	\$6.9 million	\$6.7 million

<b>Net Change in Fair Value of Investments</b>		
	<b>9/30/2016</b>	<b>9/30/2015</b>
<b>TRS</b>	\$1.6 billion	\$(381.4) million
<b>ERS</b>	\$753.8 million	\$(186.2) million
<b>JRF</b>	\$21.3 million	\$(7.7) million

Total returns were 10.41%, 10.22%, and 10.94% for TRS, ERS and JRF, respectively. Equity markets across the globe bounced back nicely, with the best returns coming in emerging market and U.S. equities. Fixed income securities and real estate posted good high single digit returns, despite all the consternation about the Fed and interest rates. The lower for longer interest rate environment will continue to dominate the investment landscape in the near future, which is reflected in the asset allocation of the portfolios. 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 page 108 of the Investment Section.

#### **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 page 10 of this report.

#### **Financial Statement Audit**

Carr, Riggs and Ingram, LLC, Certified Public Accountants, issued an unqualified ("clean") opinion on the RSA's financial statements for the fiscal year ended September 30, 2016. The independent auditors' report is located at the front of the Financial Section of this report.

#### **Highlights and Initiatives**

Market performance during fiscal year 2016 was generally good with equity markets performing well over the most of the year with the exception of two periods of notable underperformance in the second and third fiscal quarters. Unlike fiscal year 2015, equity markets were stable during August and September and closed the fiscal year near their highs. Domestic large-cap, mid-cap and small-cap equities all turned in double-digit positive returns while emerging market and international equities also performed well. Fixed income markets also experienced a solid positive return as interest rates were in a downtrend for most of the fiscal year before reversing and moving a bit higher in September. Returns within this sector were over 6.0% for the fiscal year as lower yields and stable credit spreads led to strong performance. Markets have continued to be reactionary around macroeconomic and global events as they have been the last few years, but we continue to see fundamentals influencing performance as well as company earnings and strong balance sheets.

The RSA's office building in New York City, 55 Water Street, announced important lease renewals during the fiscal year. McGraw Hill Financial renewed its lease for over 900,000 square feet of space. This is a multi-year renewal for the entire 34<sup>th</sup> – 46<sup>th</sup> floors along with a portion of the concourse and 52<sup>nd</sup> floor. McGraw Hill Financial, which owns Standard and Poor's, is the largest tenant in the building. The Teachers' Retirement System of the City of New York also renewed its lease in the building. The fund signed a 20-year lease for 200,000 square feet, adding 40,000 square feet of additional space. Other tenants include Hugo Boss, Emblem Health, and Liberty Mutual.

Montgomery has become the first city in Alabama with an Internet Exchange, known as Montgomery Cyber Connection. According to city, county, and military leaders, this Internet Exchange will connect every person, business, and device to the rest of the world at very high speeds and help attract tech companies and high paying jobs. The Internet Exchange is located in the RSA Data Center in the RSA Dexter Avenue Building. Having the Exchange in our facility has now provided Alabama the bandwidth that businesses are looking for to run their businesses.

Lastly, several of the RSA hotel and restaurant properties were honored with AAA Four Diamond awards during the fiscal year. The Battle House Renaissance Mobile Hotel, Marriott Shoals Hotel, Renaissance Ross Bridge Resort, Renaissance Mobile Riverview Plaza, and Renaissance Montgomery Hotel and Spa, as well as the Grand Steakhouse, The Trellis Room, and the 360 Grille all received this prestigious award. Only 5.4% of hotels and 2.3 % of restaurants get an AAA Four Diamond.

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The staff will continue to purchase and develop investments that will facilitate the mission of the RSA. Our aim is to serve the interests of our members by preserving the excellent benefits and soundness of the Systems while providing these at the least expense to the State of Alabama and all Alabama taxpayers. With the continued cooperative efforts of the Boards of Control, the RSA staff, and the Legislature, this goal will be achieved.

**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, 2015. 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 2016. 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, 2015**

Executive Director/CEO



Public Pension Coordinating Council

***Recognition Award for Funding  
2016***

Presented to

***Retirement Systems of Alabama***

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

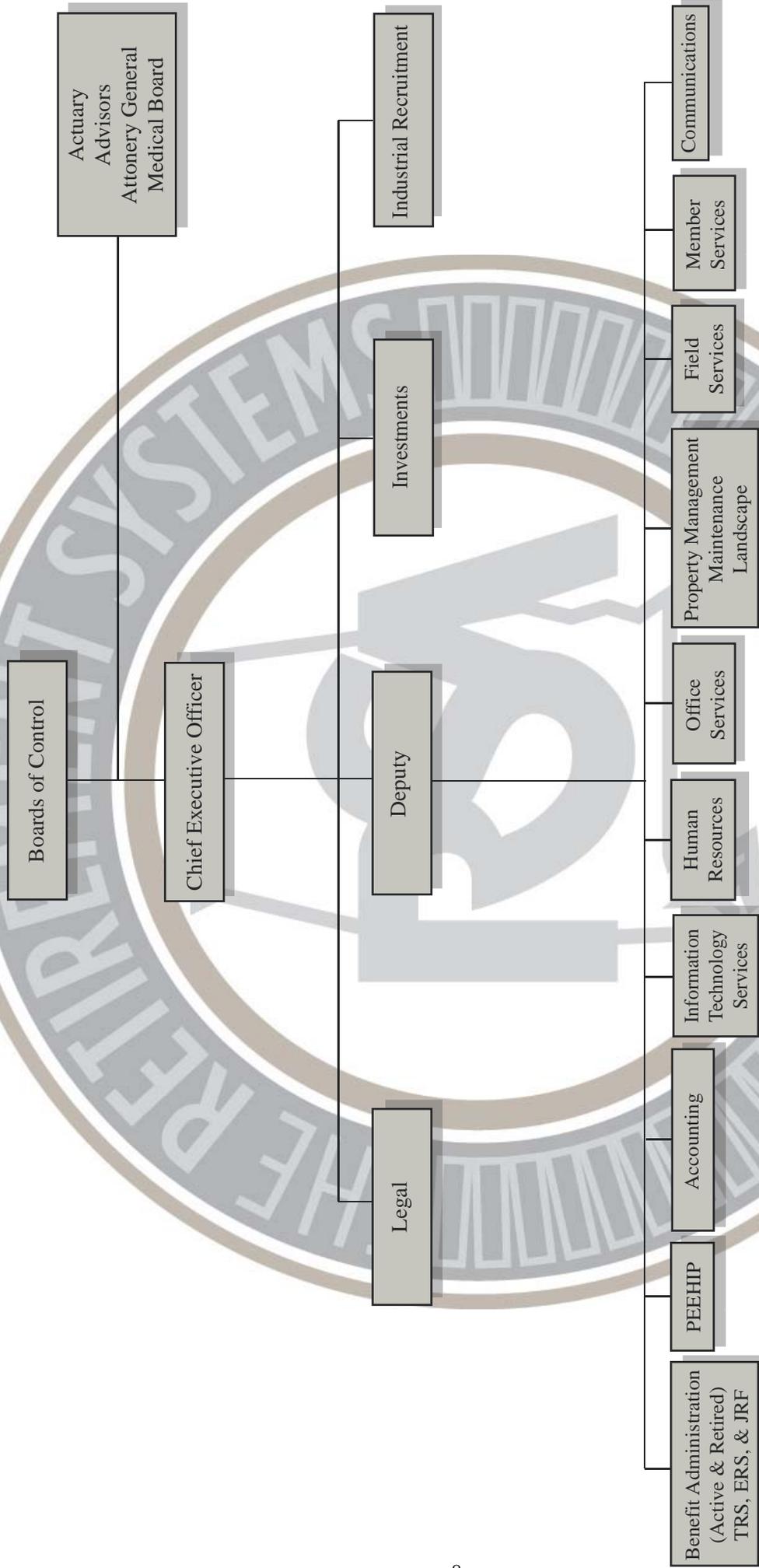
*Presented by the Public Pension Coordinating Council, a confederation of*

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 with a large, stylized 'A' and 'W'.

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**

Mr. Bill Newton, Acting State Finance Director  
Mr. Young Boozer, State Treasurer  
Mr. Michael Sentance, 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  
Dr. Donald L. Large, Jr., 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, Dr. Robert Bentley, Governor  
Mr. Bill Newton, Acting State Finance Director  
Mr. Young Boozer, State Treasurer  
Vice Chair, Mrs. Jackie B. Graham, State Personnel 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. Christopher Blankenship  
Ms. Wendy S. Hester  
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

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**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**

Communications, Michael E. Pegues, M.A.

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

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

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

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

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

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

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

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

**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.

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

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

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

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

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

Equity Analyst/Portfolio Manager, Michael J. McNair, M.B.A., CFA

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

Senior Equity Analyst, Adam Rogers, M.A., CFA

Equity Analyst/Portfolio Manager, Hunter Bronson, M.S., CFA

Equity Analyst, Major Lee, B.S.

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

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

**Advisors**

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

Investment Consultant, Regions Bank N.A., Mr. Brian Sullivan

Investment Custodian, State Street Bank and Trust Company

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

Attorney General, Honorable Luther Strange

Chief Examiner, Mr. Ronald L. Jones

**Medical Board**

Chair, Glenn Yates, M.D.

Gregory Borg, M.D.

Malcolm Brown, M.D.



Component Units of the State of Alabama  
**Comprehensive Annual Financial Report**

# FINANCIAL SECTION



## **INDEPENDENT AUDITORS' REPORT**

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, component units of the State of Alabama), which comprise the statement of fiduciary net position as of September 30, 2016 and the related 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 auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit 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, 2016, 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.

## **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, 2015, from which such partial information was derived.

### *Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that management's discussion and analysis, the schedule of changes in the net pension liability and related ratios, the schedules of employer contributions, the schedule of investment returns, the schedules of proportionate share of net pension liability and schedules of contributions 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.

### *Supplemental 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 supplemental information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the 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.*

March 27, 2017  
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, 2016. 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, 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 Employer Contributions, Schedule of Investment Returns, Schedules of Proportionate Share of the Net Pension Liability, and Schedules of Contributions for TRS, ERS, and JRF. The Schedules of Employer Contributions provides trend data on the annual required employer contributions and the percentage actually contributed.

## Comparative Summary Statements

## Summary Comparative Combining Statement of Fiduciary Net Position

As of September 30, 2016 and 2015

(Amounts in Thousands)

	2016	2015	Variance	% Increase/ (Decrease)
<i>Assets &amp; Deferred Outflows of Resources</i>				
Cash	\$ 65,295	\$ 34,952	\$ 30,343	86.81
Receivables	262,040	256,207	5,833	2.28
Investment Sales Receivable	1,001,543	96,619	904,924	936.59
Investments, at fair value	33,960,484	32,184,795	1,775,689	5.52
Invested Securities Lending Collateral	1,664,521	2,529,387	(864,866)	(34.19)
Property and Equipment, Net	150,859	141,124	9,735	6.90
Deferred Outflows of Resources	6,552	3,894	2,658	68.26
Total Assets & Deferred Outflows of Resources	<u>37,111,294</u>	<u>35,246,978</u>	<u>1,864,316</u>	5.29
<i>Liabilities &amp; Deferred Inflows of Resources</i>				
Accounts Payable and Other Liabilities	12,575	8,286	4,289	51.76
Federal Withholding Payable	22,501	-	22,501	100.00
Investment Purchases Payable	972,334	106,100	866,234	816.43
Other Post-employment Benefit Obligations	10,024	8,821	1,203	13.64
Net Pension Liability	33,309	28,787	4,522	15.71
Securities Lending Collateral	1,664,521	2,529,387	(864,866)	(34.19)
Deferred Inflows of Resources	616	2,088	(1,472)	(70.50)
Total Liabilities & Deferred Inflows of Resources	<u>2,715,880</u>	<u>2,683,469</u>	<u>32,411</u>	1.21
<i>Net Position</i>	<u><u>\$ 34,395,414</u></u>	<u><u>\$ 32,563,509</u></u>	<u><u>\$ 1,831,905</u></u>	5.63

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, 2016 and 2015  
(Amounts in Thousands)**

	<u>2016</u>	<u>2015</u>	<u>Variance</u>	<u>% Increase/ (Decrease)</u>
<b>Additions</b>				
Employee Contributions	\$ 707,829	\$ 703,309	\$ 4,520	0.64
Employer Contributions	1,204,529	1,163,680	40,849	3.51
Investment Income	3,280,756	387,102	2,893,654	747.52
Transfers Between Systems	9,891	7,546	2,345	31.08
Total Additions	<u>5,203,005</u>	<u>2,261,637</u>	<u>2,941,368</u>	130.05
<b>Deductions</b>				
Retirement Allowance Payments	3,225,194	3,124,165	101,029	3.23
Return of Contributions & Death Benefits	103,013	109,184	(6,171)	(5.65)
Transfers Between Systems	9,891	7,546	2,345	31.08
Administrative Expenses	26,272	26,566	(294)	(1.11)
Depreciation	6,730	6,304	426	6.76
Total Deductions	<u>3,371,100</u>	<u>3,273,765</u>	<u>97,335</u>	2.97
<b>Increase/(Decrease) in Fiduciary Net Position</b>	<u>1,831,905</u>	<u>(1,012,128)</u>	<u>2,844,033</u>	281.00
Beginning Net Position, as previously reported	32,563,509	33,602,355	(1,038,846)	(3.09)
Adjustment for Application of GASB 68	-	(26,718)	26,718	(100.00)
Beginning of Year - as adjusted	<u>32,563,509</u>	<u>33,575,637</u>	<u>(1,012,128)</u>	(3.01)
<b>Net Position - End of Year</b>	<u><b>\$ 34,395,414</b></u>	<u><b>\$ 32,563,509</b></u>	<u><b>\$ 1,831,905</b></u>	<b>5.63</b>

**Comparison of Individual Fiduciary Net Position  
As of September 30, 2016 and 2015  
(Amounts in Thousands)**

	<u>2016</u>	<u>2015</u>	<u>Variance</u>	<u>% Increase/ (Decrease)</u>
<b>TRS</b>	\$ 22,936,298	\$ 21,747,731	\$ 1,188,567	5.47
<b>ERS</b>	11,177,074	10,551,904	625,170	5.92
<b>JRF</b>	282,042	263,874	18,168	6.89
<b>Total</b>	<u><b>\$ 34,395,414</b></u>	<u><b>\$ 32,563,509</b></u>	<u><b>\$ 1,831,905</b></u>	<b>5.63</b>

# RETIREMENT SYSTEMS OF ALABAMA

## Financial Section

### Management's Discussion and Analysis (Continued)

#### Financial Analysis

- Primarily all cash on hand at September 30, 2016, was held for administrative expenses.
- In the Summary Comparative Combining Statement of Fiduciary Net Position, receivables consist of employee contributions, employer contributions, interest, dividends, and real estate receivables at September 30, 2016.
- Investment sales receivable and investment purchases payable occur as a result of trade date accounting. The increase in the receivable for fiscal year 2016 was due to the value of securities sold in the current fiscal year and settling in the following fiscal year being larger than the value of the securities sold in the previous fiscal year but settled in the current fiscal year. The increase in the payable for fiscal year 2016 was due to the value of securities purchased in the current fiscal year and settling in the following fiscal year being larger than the value of the securities purchased in the previous fiscal year but settled in the current fiscal year.
- The RSA's investment portfolio presented in percentages by investment type:

	<u>TRS</u>	<u>ERS</u>	<u>JRF</u>
<b>Equity</b>	64.56%	64.39%	66.57%
<b>Fixed</b>	25.14%	25.38%	31.99%
<b>Real Estate</b>	10.30%	10.23%	1.44%
<b>Total</b>	<u><b>100.00%</b></u>	<u><b>100.00%</b></u>	<u><b>100.00%</b></u>

- Employer contributions increased as a result of higher employer contribution rates for fiscal year 2016. The employer contribution rates for fiscal year 2016 are in the table below. ERS local participating employer contribution rates differ for each employer.

	<u>Tier 1</u>	<u>Tier 2</u>
<b>TRS</b>	11.94%	10.84%
<b>ERS - State Employees</b>	14.57%	14.09%
<b>ERS - State Police</b>	42.61%	38.98%
<b>JRF</b>	40.98%	-

- During fiscal year 2016, returns on investments of the TRS, ERS, and JRF were 10.41%, 10.22%, and 10.94%, respectively. The returns were calculated by State Street Bank.
- During fiscal year 2016, net securities lending income increased by 26% for RSA. This was primarily driven by an overall increase in average on-loan balances alongside an increase in non-cash loans. The majority of the increase in average on-loan balances was driven by the U.S. equity and U.S. corporate bond trading desks. Within the equity desks, the energy sector had continued demand year over year driving RSA's earnings. Conversely, the U.S. Government securities and the non-U.S. equity average on-loan balances dropped. The drop in the U.S. Government securities balances was driven by the lack (or delay) of a Fed rate hike during 2016 and higher costs for easy to borrow securities. Cash loan balances decreased from last year while borrower rebates and earnings increased. With cash loans, the borrower posts cash as collateral which is reinvested in a collateral fund that generates earnings. The borrowing broker receives a rebate of those earnings driven off a benchmark rate. Prior to the Fed raising the Fed target rate in December 2015, the range was 0.00% to 0.25%. Since the rate was low, many times borrowers would pay additional monies (negative rebate rates) to reflect the demand of the security. However, in December 2015, the Fed target range was raised to 0.25% to 0.50%. This increase coupled with the market's anticipation of additional increases during 2016, led to a much higher Fed Fund Open. With the higher rate, loans with negative rebate rates moved to positive rebate rates. Earnings for cash loans increased due to the higher yielding collateral pools. The yield for the Quality D fund on September 30, 2016, was 0.86% compared to 0.28% on September 30, 2015. The use of non-cash collateral continues to be favored by brokers. RSA's flexibility for accepting non-cash collateral has led to a significant increase year over year. Non-cash collateral requires the borrower to pay a fee for use of the loaned securities. RSA earnings increased approximately \$3 million and borrower rebates increased approximately \$3.7 million.
- Retirement allowance payments increased due to the addition of members who retired in fiscal year 2016. There were no cost of living adjustments granted for fiscal year 2016.

#### **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, 2016, TRS and JRF employers' total pension liability was \$33.8 billion and \$451.0 million, respectively. The plan fiduciary net position of TRS and JRF employers was \$22.9 billion and \$282.0 million, respectively, resulting in a net pension liability of \$10.8 billion and \$168.9 million, respectively. The plan fiduciary net position as a percentage of the total pension liability for TRS and JRF employers was 67.93% and 62.54%, 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 \$34.4 billion at September 30, 2016, were available to meet future benefit payments.
- The funding level (actuarial value of assets as a percentage of actuarial accrued liabilities) as of the latest actuarial valuations was 68.3% for the TRS, 67.3% for the ERS, and 62.5% for the JRF.



RETIREMENT SYSTEMS OF ALABAMA

*Financial Section*

Combining Statement of Fiduciary Net Position

September 30, 2016 with comparative figures for 2015

(Amounts in Thousands)

	2016			
	Teachers' Retirement System	Employees' Retirement System	Judicial Retirement Fund	Totals
<b>Assets</b>				
Cash (Note 4)	\$ 56,079	\$ 6,823	\$ 2,393	\$ 65,295
<b>Receivables</b>				
Employee Contributions	37,735	19,678	166	57,579
Employer Contributions	61,167	36,276	619	98,062
Investment Sales Receivable	667,019	326,474	8,050	1,001,543
Real Estate Investment Receivable	913	457	-	1,370
Dividends and Interest	70,611	33,153	1,001	104,765
Miscellaneous Receivable	131	133	-	264
Total Receivables	<u>837,576</u>	<u>416,171</u>	<u>9,836</u>	<u>1,263,583</u>
<b>Investments, at Fair Value (Note 5)</b>				
Domestic Equity	11,784,393	5,850,539	146,359	17,781,291
Domestic Fixed Income	4,853,613	2,316,304	74,968	7,244,885
International Equities	2,832,378	1,260,074	38,660	4,131,112
Real Estate	2,331,076	1,129,763	4,009	3,464,848
Short-Term	837,201	487,223	13,924	1,338,348
Total Investments	<u>22,638,661</u>	<u>11,043,903</u>	<u>277,920</u>	<u>33,960,484</u>
Invested Securities Lending Collateral (Note 5)	1,072,246	571,710	20,565	1,664,521
<b>Property and Equipment less</b>				
Accumulated Depreciation (Note 8)	102,722	48,137	-	150,859
Total Assets	<u>24,707,284</u>	<u>12,086,744</u>	<u>310,714</u>	<u>37,104,742</u>
<b>Deferred Outflows of Resources</b>				
	4,002	2,458	92	6,552
Total Assets and Deferred Outflows of Resources	<u>24,711,286</u>	<u>12,089,202</u>	<u>310,806</u>	<u>37,111,294</u>
<b>Liabilities</b>				
Accounts Payable and Other Liabilities	8,374	4,140	61	12,575
Federal Withholding Payable	22,501	-	-	22,501
Investment Purchases Payable	647,585	316,977	7,772	972,334
Other Post-employment Benefits (Note 9)	5,091	4,889	44	10,024
Net Pension Liability	18,891	14,146	272	33,309
Securities Lending Collateral (Note 5)	1,072,246	571,710	20,565	1,664,521
Total Liabilities	<u>1,774,688</u>	<u>911,862</u>	<u>28,714</u>	<u>2,715,264</u>
<b>Deferred Inflows of Resources</b>				
	300	266	50	616
Total Liabilities and Deferred Inflows of Resources	<u>1,774,988</u>	<u>912,128</u>	<u>28,764</u>	<u>2,715,880</u>
<b>Net Position Restricted for Pension Benefits (Note 3)</b>	<b><u>\$ 22,936,298</u></b>	<b><u>\$ 11,177,074</u></b>	<b><u>\$ 282,042</u></b>	<b><u>\$ 34,395,414</u></b>

See accompanying *Notes to the Combined Financial Statements*.

	<b>2015</b>			
	<b>Teachers' Retirement System</b>	<b>Employees' Retirement System</b>	<b>Judicial Retirement Fund</b>	<b>Totals</b>
<b>Assets</b>				
Cash	\$ 28,969	\$ 3,786	\$ 2,197	\$ 34,952
<b>Receivables</b>				
Employee Contributions	38,581	17,745	169	56,495
Employer Contributions	61,317	33,650	532	95,499
Investment Sales Receivable	62,797	33,822	-	96,619
Real Estate Investment Receivable	957	479	-	1,436
Dividends and Interest	68,900	32,630	1,006	102,536
Miscellaneous Receivable	115	126	-	241
Total Receivables	<u>232,667</u>	<u>118,452</u>	<u>1,707</u>	<u>352,826</u>
<b>Investments, at Fair Value</b>				
Domestic Equity	11,102,304	5,405,737	134,526	16,642,567
Domestic Fixed Income	4,888,919	2,340,213	74,039	7,303,171
International Equities	2,688,554	1,194,073	36,551	3,919,178
Real Estate	2,209,180	1,072,930	3,622	3,285,732
Short-Term	595,981	426,257	11,909	1,034,147
Total Investments	<u>21,484,938</u>	<u>10,439,210</u>	<u>260,647</u>	<u>32,184,795</u>
Invested Securities Lending Collateral	1,742,858	754,437	32,092	2,529,387
<b>Property and Equipment less</b>				
Accumulated Depreciation	95,068	46,056	-	141,124
Total Assets	<u>23,584,500</u>	<u>11,361,941</u>	<u>296,643</u>	<u>35,243,084</u>
Deferred Outflows of Resources	2,981	896	17	3,894
Total Assets and Deferred Outflows of Resources	<u>23,587,481</u>	<u>11,362,837</u>	<u>296,660</u>	<u>35,246,978</u>
<b>Liabilities</b>				
Accounts Payable and Other Liabilities	5,302	2,959	25	8,286
Investment Purchases Payable	69,309	36,413	378	106,100
Other Post-employment Benefits	4,408	4,374	39	8,821
Net Pension Liability	16,626	11,991	170	28,787
Securities Lending Collateral	1,742,858	754,437	32,092	2,529,387
Total Liabilities	<u>1,838,503</u>	<u>810,174</u>	<u>32,704</u>	<u>2,681,381</u>
Deferred Inflows of Resources	1,247	759	82	2,088
Total Liabilities and Deferred Inflows of Resources	<u>1,839,750</u>	<u>810,933</u>	<u>32,786</u>	<u>2,683,469</u>
<b>Net Position Restricted for Pension Benefits</b>	<b><u>\$ 21,747,731</u></b>	<b><u>\$ 10,551,904</u></b>	<b><u>\$ 263,874</u></b>	<b><u>\$ 32,563,509</u></b>

RETIREMENT SYSTEMS OF ALABAMA

*Financial Section*

Combining Statement of Changes in Fiduciary Net Position

For the Fiscal Year Ended September 30, 2016 with comparative figures for 2015

(Amounts in Thousands)

	2016			Totals
	Teachers' Retirement System	Employees' Retirement System	Judicial Retirement Fund	
<b>Additions</b>				
Contributions				
Employee	\$ 472,390	\$ 231,794	\$ 3,645	\$ 707,829
Employer	751,902	435,098	17,529	1,204,529
Transfers from Teachers' Retirement System	-	6,223	-	6,223
Transfers from Employees' Retirement System	3,590	-	78	3,668
Total Contributions	<u>1,227,882</u>	<u>673,115</u>	<u>21,252</u>	<u>1,922,249</u>
Investment Income (Note 5)				
<i>From Investing Activities</i>				
Net Increase in Fair Value of Investments	1,589,279	753,836	21,302	2,364,417
Interest and Dividends	607,795	297,369	6,865	912,029
Total Investment Income from Investing Activities	<u>2,197,074</u>	<u>1,051,205</u>	<u>28,167</u>	<u>3,276,446</u>
Less: Investment Expenses, Net	7,731	2,883	-	10,614
Net Investment Income from Investing Activities	<u>2,189,343</u>	<u>1,048,322</u>	<u>28,167</u>	<u>3,265,832</u>
<i>From Securities Lending Activities</i>				
Securities Lending Income	15,930	7,481	258	23,669
Less Securities Lending Expenses:				
Borrower Rebates	2,825	1,356	58	4,239
Management Fees	3,044	1,416	46	4,506
Total Securities Lending Expenses	<u>5,869</u>	<u>2,772</u>	<u>104</u>	<u>8,745</u>
Net Income from Securities Lending Activities	<u>10,061</u>	<u>4,709</u>	<u>154</u>	<u>14,924</u>
Total Net Investment Income	<u>2,199,404</u>	<u>1,053,031</u>	<u>28,321</u>	<u>3,280,756</u>
Total Additions	<u>3,427,286</u>	<u>1,726,146</u>	<u>49,573</u>	<u>5,203,005</u>
<b>Deductions</b>				
Retirement Allowance Payments	2,155,784	1,038,517	30,893	3,225,194
Return of Contributions and Death Benefits	57,130	45,768	115	103,013
Transfers to Employees' Retirement System	6,223	-	-	6,223
Transfers to Teachers' Retirement System	-	3,590	-	3,590
Transfers to Judicial Retirement Fund	-	78	-	78
Administrative Expenses	14,873	11,002	397	26,272
Depreciation (Note 8)	4,709	2,021	-	6,730
Total Deductions	<u>2,238,719</u>	<u>1,100,976</u>	<u>31,405</u>	<u>3,371,100</u>
<b>Net Increase</b>	<b><u>1,188,567</u></b>	<b><u>625,170</u></b>	<b><u>18,168</u></b>	<b><u>1,831,905</u></b>
<b>Net Position Restricted for Pension Benefits (Note 3)</b>				
Beginning of Year	21,747,731	10,551,904	263,874	32,563,509
End of Year	<u>\$ 22,936,298</u>	<u>\$ 11,177,074</u>	<u>\$ 282,042</u>	<u>\$ 34,395,414</u>

See accompanying *Notes to the Combined Financial Statements*.

	2015			
	Teachers' Retirement System	Employees' Retirement System	Judicial Retirement Fund	Totals
<b>Additions</b>				
Contributions				
Employee	\$ 473,903	\$ 225,767	\$ 3,639	\$ 703,309
Employer	737,671	410,932	15,077	1,163,680
Transfers from Teachers' Retirement System	-	3,432	-	3,432
Transfers from Employees' Retirement System	4,015	-	44	4,059
Transfers from Judicial Retirement Fund	-	55	-	55
Total Contributions	<u>1,215,589</u>	<u>640,186</u>	<u>18,760</u>	<u>1,874,535</u>
Investment Income				
<i>From Investing Activities</i>				
Net Decrease in Fair Value of Investments	(381,400)	(186,154)	(7,695)	(575,249)
Interest and Dividends	640,910	311,516	6,698	959,124
Total Investment Income from Investing Activities	<u>259,510</u>	<u>125,362</u>	<u>(997)</u>	<u>383,875</u>
Less: Investment Expenses, Net	6,407	2,771	-	9,178
Net Investment Income from Investing Activities	<u>253,103</u>	<u>122,591</u>	<u>(997)</u>	<u>374,697</u>
<i>From Securities Lending Activities</i>				
Securities Lending Income	11,512	5,353	195	17,060
Less Securities Lending Expenses:				
Borrower Rebates	365	164	7	536
Management Fees	2,782	1,290	47	4,119
Total Securities Lending Expenses	<u>3,147</u>	<u>1,454</u>	<u>54</u>	<u>4,655</u>
Net Income from Securities Lending Activities	<u>8,365</u>	<u>3,899</u>	<u>141</u>	<u>12,405</u>
Total Net Investment Income	<u>261,468</u>	<u>126,490</u>	<u>(856)</u>	<u>387,102</u>
Total Additions	<u>1,477,057</u>	<u>766,676</u>	<u>17,904</u>	<u>2,261,637</u>
<b>Deductions</b>				
Retirement Allowance Payments	2,075,302	1,018,515	30,348	3,124,165
Return of Contributions and Death Benefits	58,060	51,024	100	109,184
Transfers to Employees' Retirement System	3,432	-	55	3,487
Transfers to Teachers' Retirement System	-	4,015	-	4,015
Transfers to Judicial Retirement Fund	-	44	-	44
Administrative Expenses	15,074	11,136	356	26,566
Depreciation	4,258	2,046	-	6,304
Total Deductions	<u>2,156,126</u>	<u>1,086,780</u>	<u>30,859</u>	<u>3,273,765</u>
<b>Net Decrease</b>	<b>(679,069)</b>	<b>(320,104)</b>	<b>(12,955)</b>	<b>(1,012,128)</b>
<b>Net Position Restricted for Pension Benefits</b>				
Beginning of Year - as previously reported	22,441,307	10,883,952	277,096	<b>33,602,355</b>
Adjustment for Application of GASB 68	(14,507)	(11,944)	(267)	<b>(26,718)</b>
Beginning of Year - as adjusted	<u>22,426,800</u>	<u>10,872,008</u>	<u>276,829</u>	<u>33,575,637</u>
<b>End of Year</b>	<b><u>\$ 21,747,731</u></b>	<b><u>\$ 10,551,904</u></b>	<b><u>\$ 263,874</u></b>	<b><u>\$ 32,563,509</u></b>

# RETIREMENT SYSTEMS OF ALABAMA

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## *Financial Section*

### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2016

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(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 responsibility for the general administration and operation of the JRF is vested in the Board of Control of the ERS.

At September 30, 2016, the number of participating units in each system was as follows:

	<u>TRS</u>	<u>ERS</u>	<u>JRF</u>
Cities	-	294	-
Counties	-	65	67
Other Public Entities	-	515	-
Universities	13	-	-
Postsecondary			
Institutions	27	-	-
City and County			
Boards of Education	138	-	-
State Agencies & Other	31	1	1
<b>Totals</b>	<b><u>209</u></b>	<b><u>875</u></b>	<b><u>68</u></b>

At September 30, 2015, 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	88,633	22,983	384
State Police	-	887	-
Employees of Local Employers	-	22,248	-
Deferred Retirement Option Plan (DROP)	699	396	-
Terminated employees entitled to benefits but not yet receiving benefits:			
General	15,916	2,861	48
State Police	-	13	-
Employees of Local Employers	-	6,767	-
Non-vested inactive members who have not contributed for more than 5 years	29,071	19,417	-
Active Employees:			
General	135,986	29,235	338
State Police	-	701	-
Employees of Local Employers	-	54,627	-
<b>Totals</b>	<b><u>270,305</u></b>	<b><u>160,135</u></b>	<b><u>770</u></b>

## RETIREMENT SYSTEMS OF ALABAMA

### *Financial Section*

#### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2016

(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.

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.

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## **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.

### **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 the employer's net pension liability are reported as deferred outflows of resources until the next measurement date.

In addition to liabilities, the Combining Statement of Fiduciary Net Position will sometimes report 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 earnings on pension plan investments identified during the measurement period are deferred and amortized as a component of pension expense in future periods.

**G. New Accounting Pronouncements**

GASB Statement No. 72, *Fair Value Measurement and Application*, became effective for financial statements for periods beginning after June 15, 2015, and was implemented by the Systems for the fiscal year ended September 30, 2016. The statement addresses accounting and reporting issues related to fair value measurements and requires disclosures be made about fair value measurements, the level of fair value hierarchy, and valuation techniques.

**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.

**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.

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### **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 and ERS 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 or ERS 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. There is no PRDB available for JRF members. 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.

# RETIREMENT SYSTEMS OF ALABAMA

## Financial Section

### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2016

(Dollar Amounts in Thousands)

#### 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, 2016, are as follows:

	<u>TRS</u>	<u>ERS</u>	<u>JRF</u>
Annuity Savings	\$ 5,197,469	\$ 2,707,129	\$ 45,900
Pension Accumulation	17,254,054	8,232,589	234,071
Deferred Retirement Option Plan	307,431	168,719	-
Pre-retirement Death Benefit	51,057	32,145	-
Term Life Insurance	13,738	-	-
Plant Fund	102,722	48,137	-
Expense	9,827	(11,645)	2,071
<b>Net Position at 9/30/2016</b>	<b><u>\$ 22,936,298</u></b>	<b><u>\$ 11,177,074</u></b>	<b><u>\$ 282,042</u></b>

#### 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, 2016, was held for administrative expenses.

## 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. During the reporting period, the Teachers' Retirement System Board of Control adopted a revised IPS that was effective on March 1, 2016. Below are the asset allocation guidelines and related effective dates for both Systems. All asset allocation percentages are based on fair market value, unless otherwise noted.

Investment Allocation Guidelines for October 1, 2015, through February 29, 2016:

Asset Class	TRS	ERS		JRF	
		Target Allocation	Strategic Range	Target Allocation	Strategic Range
Domestic Equity	65%	45%	30-60%	55%	30-60%
International Equity	25%	15%	10-25%	15%	10-25%
Fixed Income		17%	10-50%	22%	10-50%
<i>Domestic Fixed Income</i>	50%				
<i>International Fixed Income</i>	10%				
Alternative Investments	10%*	10%	0-15%	1%	0-15%
Real Estate	15%*	10%	0-15%	2%	0-15%
Short-Term Investments	20%	3%	0-5%	5%	0-5%

\*Asset allocation percentages based on book value of assets.

Investment Allocation Guidelines for March 1, 2016, through September 30, 2016:

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%	10-50%	22%	10-50%
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%	0-5%	5%	0-5%

**B. Money-Weighted Rate of Return**

The annual money-weighted rates of return for TRS, ERS, and JRF are 10.37%, 10.19%, and 10.96%, 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, 2016, the TRS and ERS owned debt and equity securities of Raycom Media Corporation which represented approximately 8.10% of the TRS investments and 8.83% of the ERS investments. Additionally, TRS and ERS owned debt and equity securities of New Water Street Corporation which represented 5.47% of the TRS investments and 5.15% of the ERS investments.

The following tables provide information as of September 30, 2016, concerning the fair value of investments, interest rate risk, and foreign currency risk:

<b>INVESTMENTS</b>						
<b>TRS</b>						
<b>Maturity in Years at Fair Value</b>						
<b>Type of Investment</b>	<b>Less Than 1</b>	<b>1-5</b>	<b>6-10</b>	<b>More Than 10</b>	<b>Total Fair Value</b>	<b>Cost</b>
<i>Fixed Maturity</i>						
Domestic						
Money Market Funds	\$ 436,884	\$ -	\$ -	\$ -	\$ 436,884	\$ 436,884
Commercial Paper	400,317	-	-	-	400,317	400,317
U.S. Agency	22,427	85,074	58,211	-	165,712	161,824
U.S. Govt Guaranteed	59,234	274,739	244,681	102,020	680,674	652,379
Corporate Bonds	169,897	388,951	309,428	346,774	1,215,050	1,142,460
Private Placements	2,708	204,567	-	2,142,630	2,349,905	2,043,679
GNMAs	4	187	6,758	27,873	34,822	34,064
CMOs	-	10,704	7,704	389,042	407,450	398,346
Total Domestic Fixed Maturity	<u>\$ 1,091,471</u>	<u>\$ 964,222</u>	<u>\$ 626,782</u>	<u>\$ 3,008,339</u>	<u>5,690,814</u>	<u>5,269,953</u>
<i>Equities</i>						
Preferred					25,729	24,441
Domestic					<u>11,327,701</u>	<u>7,524,414</u>
Private					<u>430,963</u>	<u>448,853</u>
International						
Emerging Markets					381,267	384,087
United Kingdom - Pound Sterling					466,237	458,171
Japan - Yen					599,478	491,468
France - Euro					226,600	192,396
Germany - Euro					218,553	157,955
Switzerland - Franc					237,130	126,947
Netherlands - Euro					82,029	62,799
Italy - Euro					44,581	74,222
Ireland - Euro					10,098	7,097
Spain - Euro					64,688	83,554
Australia - Dollar					174,123	119,676
Singapore - Dollar					32,326	30,549
Belgium - Euro					37,728	27,074
Finland - Euro					23,993	25,146
Hong Kong - Dollar					87,460	51,455
Sweden - Krona					70,772	43,109
Denmark - Krone					36,606	14,092
Israel - Shekel					14,741	15,353
Norway - Krone					15,450	12,510
Austria - Euro					5,898	5,938
New Zealand - Dollar					2,620	2,218
Total International Equities					<u>2,832,378</u>	<u>2,385,816</u>
Total Equities					<u>14,616,771</u>	<u>10,383,524</u>
Real Estate					<u>2,331,076</u>	<u>1,768,720</u>
<b>Total Investments</b>					<u><b>\$ 22,638,661</b></u>	<u><b>\$ 17,422,197</b></u>

RETIREMENT SYSTEMS OF ALABAMA

*Financial Section*

Notes to the Combined Financial Statements  
For the Fiscal Year Ended September 30, 2016

(Dollar Amounts in Thousands)

<b>INVESTMENTS</b>						
<b>ERS</b>						
<b>Maturity in Years at Fair Value</b>						
<b>Type of Investment</b>	<b>Less Than 1</b>	<b>1-5</b>	<b>6-10</b>	<b>More Than 10</b>	<b>Total Fair Value</b>	<b>Cost</b>
<i>Fixed Maturity</i>						
Domestic						
Money Market Funds	\$ 186,781	\$ -	\$ -	\$ -	\$ 186,781	\$ 186,781
Commercial Paper	300,442	-	-	-	300,442	300,442
U.S. Agency	10,163	38,312	26,516	-	74,991	73,199
U.S. Govt Guaranteed	26,942	130,457	117,026	46,625	321,050	307,616
Corporate Bonds	77,587	176,717	139,599	157,428	551,331	518,616
Private Placements	1,334	100,757	-	1,066,109	1,168,200	1,017,873
GNMAs	5	52	2,345	12,713	15,115	14,765
CMOs	-	4,735	3,504	177,378	185,617	181,489
Total Domestic Fixed Maturity	<u>\$ 603,254</u>	<u>\$ 451,030</u>	<u>\$ 288,990</u>	<u>\$ 1,460,253</u>	<u>2,803,527</u>	<u>2,600,781</u>
<i>Equities</i>						
Preferred						
					11,698	11,112
Domestic						
					<u>5,562,397</u>	<u>3,686,427</u>
Private						
					<u>276,444</u>	<u>265,843</u>
International						
Emerging Markets					182,078	183,423
United Kingdom - Pound Sterling					205,068	200,591
Japan - Yen					263,631	216,612
France - Euro					102,150	85,586
Germany - Euro					96,127	69,291
Switzerland - Franc					104,253	55,135
Netherlands - Euro					33,600	26,032
Italy - Euro					19,607	32,446
Ireland - Euro					4,462	3,138
Spain - Euro					28,456	36,079
Australia - Dollar					76,583	52,648
Singapore - Dollar					14,205	13,386
Belgium - Euro					16,596	11,853
Finland - Euro					10,553	11,193
Hong Kong - Dollar					38,458	22,731
Sweden - Krona					31,131	19,065
Denmark - Krone					16,094	6,157
Israel - Shekel					6,484	6,753
Norway - Krone					6,792	5,583
Austria - Euro					2,594	2,658
New Zealand - Dollar					1,152	988
Total International Equities					<u>1,260,074</u>	<u>1,061,348</u>
Total Equities					<u>7,110,613</u>	<u>5,024,730</u>
Real Estate					<u>1,129,763</u>	<u>881,821</u>
<b>Total Investments</b>					<u><b>\$ 11,043,903</b></u>	<u><b>\$ 8,507,332</b></u>

<b>INVESTMENTS</b>						
<b>JRF</b>						
<b>Maturity in Years at Fair Value</b>						
<b>Type of Investment</b>	<b>Less</b>			<b>More</b>	<b>Total</b>	
	<b>Than 1</b>	<b>1-5</b>	<b>6-10</b>	<b>Than 10</b>	<b>Fair Value</b>	<b>Cost</b>
<i>Fixed Maturity</i>						
Domestic						
Money Market Funds	\$ 7,427	\$ -	\$ -	\$ -	\$ 7,427	\$ 7,427
Commercial Paper	6,497	-	-	-	6,497	6,497
U.S. Agency	2,126	1,656	1,614	-	5,396	5,264
U.S. Govt Guaranteed	1,617	11,757	9,537	3,013	25,924	25,005
Corporate Bonds	4,736	10,070	8,179	7,847	30,832	29,160
Private Placements	-	-	-	1,232	1,232	2,020
GNMAs	-	-	-	641	641	632
CMOs	-	239	172	10,532	10,943	10,708
Total Domestic Fixed Maturity	<u>\$ 22,403</u>	<u>\$ 23,722</u>	<u>\$ 19,502</u>	<u>\$ 23,265</u>	<u>88,892</u>	<u>86,713</u>
<i>Equities</i>						
Preferred						
					<u>639</u>	<u>607</u>
Domestic						
					<u>145,720</u>	<u>80,174</u>
International						
Emerging Markets					6,382	6,455
Hong Kong - Dollar					1,166	802
Japan - Yen					7,955	6,883
Australia - Dollar					2,287	2,158
Singapore - Dollar					411	424
Germany - Euro					2,871	2,331
Belgium - Euro					495	347
Switzerland - Franc					3,089	2,238
Netherlands - Euro					1,004	851
Sweden - Krona					930	739
Spain - Euro					850	1,206
United Kingdom - Pound Sterling					6,129	6,494
France - Euro					3,049	2,992
Italy - Euro					589	923
Israel - Shekel					193	201
Finland - Euro					316	328
Denmark - Krone					488	265
Ireland - Euro					141	101
Norway - Krone					203	222
Austria - Euro					78	91
New Zealand - Dollar					34	23
Total International Equities					<u>38,660</u>	<u>36,074</u>
Total Equities					<u>185,019</u>	<u>116,855</u>
Real Estate					<u>4,009</u>	<u>1,067</u>
<b>Total Investments</b>					<u><b>\$ 277,920</b></u>	<u><b>\$ 204,635</b></u>

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Notes to the Combined Financial Statements  
For the Fiscal Year Ended September 30, 2016

(Dollar Amounts in Thousands)

The following tables provide information as of September 30, 2016, concerning credit risk:

RATINGS OF FIXED MATURITIES

TRS

Moody's Ratings	Cost	Fair Value	Fair Value as a
			Percent of Total Fixed Maturity Fair Value
± Aaa	\$ 1,257,104	\$ 1,300,409	22.851
Aa1	19,334	20,370	0.358
Aa2	9,155	10,816	0.190
Aa3	31,890	36,991	0.650
P-2	400,317	400,317	7.034
A1	105,615	110,750	1.946
A2	49,556	48,168	0.846
A3	166,189	185,292	3.256
Baa1	259,243	275,594	4.843
Baa2	199,725	213,863	3.758
Baa3	138,779	144,431	2.538
Ba1	63,163	65,709	1.155
Ba2	34,547	36,189	0.636
B1	21,352	20,433	0.359
B2	7,778	6,426	0.113
B3	7,090	7,645	0.134
‡ Not Rated	2,499,116	2,807,411	49.333
<b>Total Fixed Maturity</b>	<b>\$ 5,269,953</b>	<b>\$ 5,690,814</b>	<b>100.000</b>

Standard & Poor's Ratings	Cost	Fair Value	Fair Value as a
			Percent of Total Fixed Maturity Fair Value
AAA	\$ 14,887	\$ 15,810	0.280
± AA+	1,253,156	1,296,319	22.779
AA	9,155	10,816	0.190
AA-	117,105	127,450	2.240
A-2	400,317	400,317	7.034
A+	16,493	18,545	0.326
A	122,796	128,222	2.253
A-	151,581	168,577	2.962
BBB+	249,574	265,397	4.664
BBB	253,072	264,124	4.641
BBB-	135,053	141,657	2.489
BB+	12,677	13,970	0.245
BB	8,564	8,617	0.151
BB-	25,329	23,447	0.412
B-	7,090	7,645	0.134
‡ Not Rated	2,493,104	2,799,901	49.200
<b>Total Fixed Maturity</b>	<b>\$ 5,269,953</b>	<b>\$ 5,690,814</b>	<b>100.000</b>

± Includes securities guaranteed by the U.S. Gov't.

‡ Primarily consists of private placements.

**RATINGS OF FIXED MATURITIES  
ERS**

<u>Moody's Ratings</u>	<u>Cost</u>	<u>Fair Value</u>	<u>Fair Value as a Percent of Total Fixed Maturity Fair Value</u>
± Aaa	\$ 582,058	\$ 602,311	21.484
Aa1	8,516	9,007	0.321
Aa2	4,142	4,900	0.175
Aa3	14,528	16,863	0.601
P-2	300,441	300,441	10.717
A1	48,018	50,355	1.796
A2	22,323	21,680	0.773
A3	75,956	84,368	3.009
Baa1	117,454	124,859	4.454
Baa2	90,482	96,919	3.457
Baa3	62,540	65,066	2.321
Ba1	28,772	29,932	1.068
Ba2	15,654	16,390	0.585
B1	9,599	9,149	0.326
B2	3,499	2,878	0.103
B3	3,226	3,479	0.124
‡ Not Rated	1,213,573	1,364,930	48.686
<b>Total Fixed Maturity</b>	<b>\$ 2,600,781</b>	<b>\$ 2,803,527</b>	<b>100.000</b>

<u>Standard &amp; Poor's Ratings</u>	<u>Cost</u>	<u>Fair Value</u>	<u>Fair Value as a Percent of Total Fixed Maturity Fair Value</u>
AAA	\$ 6,807	\$ 7,228	0.258
± AA+	580,134	600,316	21.413
AA	4,142	4,900	0.175
AA-	53,365	58,092	2.072
A-2	300,441	300,441	10.717
A+	7,408	8,334	0.297
A	55,252	57,668	2.057
A-	68,714	76,364	2.724
BBB+	114,577	121,667	4.340
BBB	114,376	119,393	4.259
BBB-	61,123	64,095	2.286
BB+	5,777	6,367	0.227
BB	3,864	3,877	0.138
BB-	11,379	10,495	0.374
B-	3,226	3,479	0.124
‡ Not Rated	1,210,196	1,360,811	48.539
<b>Total Fixed Maturity</b>	<b>\$ 2,600,781</b>	<b>\$ 2,803,527</b>	<b>100.000</b>

± Includes securities guaranteed by the U.S. Gov't.

‡ Primarily consists of private placements.

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Notes to the Combined Financial Statements  
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(Dollar Amounts in Thousands)

RATINGS OF FIXED MATURITIES

JRF

Moody's Ratings	Cost	Fair Value	Fair Value as a Percent of Total Fixed Maturity Fair Value
± Aaa	\$ 40,374	\$ 41,648	46.852
Aa1	2,021	2,102	2.365
Aa2	199	235	0.264
Aa3	472	527	0.593
P-2	6,497	6,497	7.309
A1	3,470	3,628	4.081
A2	941	935	1.052
A3	4,377	4,769	5.365
Baa1	6,652	7,086	7.971
Baa2	4,639	4,933	5.549
Baa3	4,162	4,321	4.861
Ba1	1,603	1,672	1.881
Ba2	758	799	0.899
B1	490	468	0.526
B2	178	146	0.164
B3	176	190	0.214
‡ Not Rated	9,704	8,936	10.054
<b>Total Fixed Maturity</b>	<b>\$ 86,713</b>	<b>\$ 88,892</b>	<b>100.000</b>

Standard & Poor's Ratings	Cost	Fair Value	Fair Value as a Percent of Total Fixed Maturity Fair Value
AAA	\$ 436	\$ 463	0.521
± AA+	40,201	41,467	46.649
AA	199	235	0.264
AA-	3,496	3,717	4.181
A-2	6,497	6,497	7.309
A+	373	419	0.471
A	2,667	2,818	3.170
A-	3,529	3,842	4.322
BBB+	6,710	7,121	8.011
BBB	6,507	6,766	7.611
BBB-	3,579	3,743	4.211
BB+	299	330	0.371
BB	120	121	0.136
BB-	581	536	0.603
B-	176	190	0.214
‡ Not Rated	11,343	10,627	11.956
<b>Total Fixed Maturity</b>	<b>\$ 86,713</b>	<b>\$ 88,892</b>	<b>100.000</b>

± Includes securities guaranteed by the U.S. Gov't.

‡ Primarily consists of private placements.

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#### **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 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.

RETIREMENT SYSTEMS OF ALABAMA

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Notes to the Combined Financial Statements  
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(Dollar Amounts in Thousands)

The following tables provide information as of September 30, 2016, concerning fair value measurement:

	TRS			
	9/30/2016	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	\$ 436,884	\$ -	\$ 436,884	\$ -
Commercial Paper	400,317	-	400,317	-
U.S. Agency	165,712	-	165,712	-
U.S. Government Guaranteed	680,674	-	680,674	-
Corporate Bonds	1,215,050	-	1,215,050	-
Private Placements	2,349,905	-	-	2,349,905
GNMAs	34,822	-	34,822	-
CMOs	407,450	-	407,450	-
Total Domestic Fixed Maturity	<u>5,690,814</u>	<u>-</u>	<u>3,340,909</u>	<u>2,349,905</u>
<i>Equities</i>				
Preferred	25,729	25,729	-	-
Domestic	11,327,701	9,875,987	949,214	502,500
Private	430,963	-	-	430,963
International	2,832,378	2,832,378	-	-
Total Equities	<u>14,616,771</u>	<u>12,734,094</u>	<u>949,214</u>	<u>933,463</u>
Real Estate	2,331,076	-	-	2,331,076
<b>Total Investments</b>	<b><u>22,638,661</u></b>	<b><u>12,734,094</u></b>	<b><u>4,290,123</u></b>	<b><u>5,614,444</u></b>
Securities Lending Collateral	1,072,246	-	1,072,246	-
<b>Total Fair Value</b>	<b><u>\$ 23,710,907</u></b>	<b><u>\$ 12,734,094</u></b>	<b><u>\$ 5,362,369</u></b>	<b><u>\$ 5,614,444</u></b>

## ERS

## Fair Value Measurements Using

	9/30/2016	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	\$ 186,781	\$ -	\$ 186,781	\$ -
Commercial Paper	300,442	-	300,442	-
U.S. Agency	74,991	-	74,991	-
U.S. Government Guaranteed	321,050	-	321,050	-
Corporate Bonds	551,331	-	551,331	-
Private Placements	1,168,200	-	-	1,168,200
GNMAs	15,115	-	15,115	-
CMOs	185,617	-	185,617	-
Total Domestic Fixed Maturity	<u>2,803,527</u>	<u>-</u>	<u>1,635,327</u>	<u>1,168,200</u>
<i>Equities</i>				
Preferred	11,698	11,698	-	-
Domestic	5,562,397	4,932,091	390,306	240,000
Private	276,444	-	-	276,444
International	1,260,074	1,260,074	-	-
Total Equities	<u>7,110,613</u>	<u>6,203,863</u>	<u>390,306</u>	<u>516,444</u>
Real Estate	1,129,763	-	-	1,129,763
<b>Total Investments</b>	<b>11,043,903</b>	<b>6,203,863</b>	<b>2,025,633</b>	<b>2,814,407</b>
Securities Lending Collateral	571,710	-	571,710	-
<b>Total Fair Value</b>	<b><u>\$ 11,615,613</u></b>	<b><u>\$ 6,203,863</u></b>	<b><u>\$ 2,597,343</u></b>	<b><u>\$ 2,814,407</u></b>

RETIREMENT SYSTEMS OF ALABAMA

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(Dollar Amounts in Thousands)

	<b>JRF</b>			
	9/30/2016	<b>Fair Value Measurements Using</b>		
		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	\$ 7,427	\$ -	\$ 7,427	\$ -
Commercial Paper	6,497	-	6,497	-
U.S. Agency	5,396	-	5,396	-
U.S. Government Guaranteed	25,924	-	25,924	-
Corporate Bonds	30,832	-	30,832	-
Private Placements	1,232	-	-	1,232
GNMAs	641	-	641	-
CMOs	10,943	-	10,943	-
Total Domestic Fixed Maturity	<u>88,892</u>	<u>-</u>	<u>87,660</u>	<u>1,232</u>
<i>Equities</i>				
Preferred	639	639	-	-
Domestic	145,720	129,677	8,543	7,500
International	38,660	38,660	-	-
Total Equities	<u>185,019</u>	<u>168,976</u>	<u>8,543</u>	<u>7,500</u>
Real Estate	4,009	-	-	4,009
<b>Total Investments</b>	<b><u>277,920</u></b>	<b><u>168,976</u></b>	<b><u>96,203</u></b>	<b><u>12,741</u></b>
Securities Lending Collateral	20,565	-	20,565	-
<b>Total Fair Value</b>	<b><u>\$ 298,485</u></b>	<b><u>\$ 168,976</u></b>	<b><u>\$ 116,768</u></b>	<b><u>\$ 12,741</u></b>

**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.

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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, 2016, the average term of the loans secured by QDF was 14, 13, and 17 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, 2016, the fair value of the securities on loan was \$3,483,197, \$1,741,046, and \$56,464 for the TRS, ERS, and JRF, respectively (dollar amounts in thousands). The fair value of the collateral pledged by the borrowers was \$3,691,120, \$1,845,640, and \$58,825 for the TRS, ERS, and JRF, respectively (dollar amounts in thousands). 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, 2016. 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.

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(Dollar Amounts in Thousands)

The following table provides information as of September 30, 2016, concerning securities lent:

**SECURITIES LENDING - INVESTMENTS LENT AND COLLATERAL RECEIVED**  
(at Fair Value in Thousands)

<u>Type of Investment Lent</u>	<u>TRS</u>	<u>ERS</u>	<u>JRF</u>	<u>Totals</u>
<i>For Cash Collateral</i>				
Domestic Fixed Maturities	\$ 160,190	\$ 81,569	\$ 4,914	\$ 246,673
Domestic Equity	820,932	451,288	15,114	1,287,334
International Equity	71,914	28,931	180	101,025
Total Lent for Cash Collateral	1,053,036	561,788	20,208	1,635,032
<i>For Non-Cash Collateral</i>				
Domestic Fixed Maturities	586,156	268,533	21,083	875,772
Domestic Equity	1,598,145	769,140	11,617	2,378,902
International Equity	245,860	141,585	3,556	391,001
Total Lent for Non-Cash Collateral	2,430,161	1,179,258	36,256	3,645,675
<b>Total Securities Lent</b>	<b>\$ 3,483,197</b>	<b>\$ 1,741,046</b>	<b>\$ 56,464</b>	<b>\$ 5,280,707</b>
<u>Type of Collateral Received</u>				
<i>Cash Collateral - Invested in State Street</i>				
<i>Quality D Fund</i>	\$ 1,072,246	\$ 571,710	\$ 20,565	\$ 1,664,521
<i>Non-Cash Collateral</i>				
Domestic Fixed Securities				
Canadian Dollar	30,403	6,816	92	37,311
U.S. Dollar	400,569	247,999	8,110	656,678
Domestic Equity Securities				
Canadian Dollar	54,186	18,415	-	72,601
EURO	170	-	1	171
U.S. Dollar	1,707,561	809,275	12,800	2,529,636
International Fixed Maturities & Equity				
EURO	44,061	21,012	517	65,590
GBP	28,572	12,004	262	40,838
U.S. Dollar	353,352	158,409	16,478	528,239
Total Non-Cash Collateral	2,618,874	1,273,930	38,260	3,931,064
<b>Total Collateral Received</b>	<b>\$ 3,691,120</b>	<b>\$ 1,845,640</b>	<b>\$ 58,825</b>	<b>\$ 5,595,585</b>

**F. Mortgage-backed Securities**

As of September 30, 2016, 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, 2016, as reported in the System's Combining Statement of Fiduciary Net Position and Combining Statement of Changes in Fiduciary Net Position (dollar amounts in thousands):

<b>INVESTMENT DERIVATIVE INSTRUMENTS</b>					
<b>Changes in Fair Value</b>			<b>Fair Value as of September 30, 2016</b>		
	<b>Classification</b>	<b>Amount</b>	<b>Classification</b>	<b>Amount</b>	<b>Notional</b>
<b>TRS</b>					
Domestic Options Written	Investment Income	\$ 12,691	Domestic Equity	\$ (25,094)	\$ (1,806,187)
Domestic Options Purchased	Investment Income	(13,739)	Domestic Equity	23,983	886,411
Total Domestic Options		(1,048)		(1,111)	(919,776)
International Options Written	Investment Income	(161)	International Equity	-	-
<b>Total TRS Options</b>		<b>\$ (1,209)</b>		<b>\$ (1,111)</b>	<b>\$ (919,776)</b>
<b>ERS</b>					
Domestic Options Written	Investment Income	\$ 6,061	Domestic Equity	\$ (11,990)	\$ (863,327)
Domestic Options Purchased	Investment Income	(6,562)	Domestic Equity	11,454	423,361
Total Domestic Options		(501)		(536)	(439,966)
International Options Written	Investment Income	(77)	International Equity	-	-
<b>Total ERS Options</b>		<b>\$ (578)</b>		<b>\$ (536)</b>	<b>\$ (439,966)</b>
<b>JRF</b>					
Domestic Options Written	Investment Income	\$ 190	Domestic Equity	\$ (373)	\$ (26,791)
Domestic Options Purchased	Investment Income	(205)	Domestic Equity	358	13,231
Total Domestic Options		(15)		(15)	(13,560)
International Options Written	Investment Income	(2)	International Equity	-	-
<b>Total JRF Options</b>		<b>\$ (17)</b>		<b>\$ (15)</b>	<b>\$ (13,560)</b>
<b>Total</b>					
Domestic Options Written	Investment Income	\$ 18,942	Domestic Equity	\$ (37,457)	\$ (2,696,305)
Domestic Options Purchased	Investment Income	(20,506)	Domestic Equity	35,795	1,323,003
Total Domestic Options		(1,564)		(1,662)	(1,373,302)
International Options Written	Investment Income	(240)	International Equity	-	-
<b>Grand Total Options</b>		<b>\$ (1,804)</b>		<b>\$ (1,662)</b>	<b>\$ (1,373,302)</b>

RETIREMENT SYSTEMS OF ALABAMA

*Financial Section*

Notes to the Combined Financial Statements  
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**6) NET PENSION LIABILITY**

The components of the net pension liability related to the retirement plans determined in accordance with GASB Statement No. 67, *Financial Reporting for Pension Plans*, as of September 30, 2016, were as follows:

	<u>TRS</u>	<u>ERS</u>	<u>JRF</u>
Total Pension Liability	\$ 33,762,303	\$ 16,960,380	\$ 451,003
Less: Plan Net Position (see Note 3G)	(22,936,298)	(11,177,074)	(282,042)
<b>Net Pension Liability</b>	<b><u>\$ 10,826,005</u></b>	<b><u>\$ 5,783,306</u></b>	<b><u>\$ 168,961</u></b>

**Plan Net Position as a Percentage  
of the Total Pension Liability**

**67.93%          65.90%          62.54%**

The total pension liability was determined by an actuarial valuation as of September 30, 2015, using the following actuarial assumptions which reflect the experience studies adopted in September 2016, 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*	7.75%	7.75%	7.75%

\*Net of pension plan investment expense.

There were no ad hoc postemployment benefit changes, including ad hoc COLAs, during fiscal year 2016.

The actuarial assumptions used in the actuarial valuation as of September 30, 2015, 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 following actuarial assumptions:

	<u>TRS &amp; ERS</u>		<u>JRF</u>
	<u>Fiscal Year</u>	<u>Fiscal Year</u>	<u>Fiscal Year</u>
	<u>Ending</u>	<u>Ending</u>	<u>Ending</u>
	<u>9/30/2016</u>	<u>9/30/2017</u>	<u>9/30/2016</u>
Price Inflation	3.00% to 2.875%	2.875% to 2.75%	3.00% to 2.75%
Real Rate of Investment Return	No change	No change	No change
Total Rate of Investment Return	8.00% to 7.875%	7.875% to 7.75%	8.00% to 7.75%
Real Rate of Wage Inflation	No change	No change	No change
Wage Inflation	3.25% to 3.125%	3.125% to 3.00%	3.25% to 3.00%
Payroll Growth	3.25% to 3.125%	3.125% to 3.00%	3.25% to 3.00%

The Boards of Control for each accepted and approved these changes in September 2016, which became effective at the beginning of fiscal year 2016.

Mortality rates for TRS and JRF were based on the 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 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 RP-2000 Combined Mortality Table for Males or Females, as appropriate, with adjustments for mortality improvements based on Scale AA projected to 2015 and set forward three years for males and one year for females.

The total pension liability related to the cost-sharing retirement plans is based on the actuarial valuation as of September 30, 2015. The expected total pension liability is determined as of September 30, 2016, using standard roll-forward techniques as shown in the following table (dollar amounts in thousands):

	<b>TRS</b>		
	<b>Expected</b>	<b>Actual Before Experience Study</b>	<b>Actual After Experience Study</b>
Total Pension Liability as of 9/30/2015 (a)	\$ 32,213,446	\$ 31,944,568	\$ 32,905,924
Entry Age Normal Cost* for 10/1/2015 - 9/30/2016 (b)	\$ 627,938	\$ 627,938	\$ 611,297
Actual Benefit Payments for 10/1/2015 - 9/30/2016 (c)	\$ 2,219,136	\$ 2,219,136	\$ 2,219,136
Total Pension Liability as of 9/30/2016**	\$ 33,110,558	\$ 32,820,170	\$ 33,762,303
Difference between Expected & Actual Experience (Gain)/Loss		\$ (290,388)	
Difference due to Change in Assumptions (Gain)/Loss			\$ 942,133
	<b>ERS</b>		
	<b>Expected</b>	<b>Actual Before Experience Study</b>	<b>Actual After Experience Study</b>
Total Pension Liability as of 9/30/2015 (a)	\$ 15,961,667	\$ 15,961,760	\$ 16,509,182
Entry Age Normal Cost* for 10/1/2015 - 9/30/2016 (b)	\$ 308,840	\$ 308,840	\$ 301,848
Actual Benefit Payments for 10/1/2015 - 9/30/2016 (c)	\$ 1,087,953	\$ 1,087,953	\$ 1,087,953
Total Pension Liability as of 9/30/2016**	\$ 16,415,969	\$ 16,416,070	\$ 16,960,380
Difference between Expected & Actual Experience (Gain)/Loss		\$ 101	
Difference due to Change in Assumptions (Gain)/Loss			\$ 544,310
	<b>JRF</b>		
	<b>Expected</b>	<b>Actual Before Experience Study</b>	<b>Actual After Experience Study</b>
Total Pension Liability as of 9/30/2015 (a)	\$ 424,204	\$ 421,901	\$ 439,364
Entry Age Normal Cost* for 10/1/2015 - 9/30/2016 (b)	\$ 9,807	\$ 9,807	\$ 9,798
Actual Benefit Payments for 10/1/2015 - 9/30/2016 (c)	\$ 31,008	\$ 31,008	\$ 31,008
Total Pension Liability as of 9/30/2016**	\$ 435,698	\$ 433,211	\$ 451,003
Difference between Expected & Actual Experience (Gain)/Loss		\$ (2,487)	
Difference due to Change in Assumptions (Gain)/Loss			\$ 17,792

\*Also called the Service Cost.

\*\*Expected and Actual Before Experience Study: (a\*1.08) + b - (c\*1.04)

\*\*Actual After Experience Study: (a\*1.0775) + b - (c\*1.03875)

# RETIREMENT SYSTEMS OF ALABAMA

## Financial Section

### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2016

(Dollar Amounts in Thousands)

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%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>			

\*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, 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:

	1% Decrease (6.75%)	Current Discount Rate (7.75%)	1% Increase (8.75%)
<b>TRS</b>	\$ 14,422,630	\$ 10,826,005	\$ 7,781,048
<b>ERS</b>	\$ 7,592,738	\$ 5,783,306	\$ 4,249,908
<b>JRF</b>	\$ 209,099	\$ 168,961	\$ 134,210

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## 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 2016 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, 2016 (dollar amounts in thousands):

	<u>TRS</u>	<u>ERS</u>
Land	\$ 5,085	\$ 2,535
Building and Improvements	107,896	53,948
Furniture and Equipment	6,576	2,138
Intangible Assets in Progress	16,975	5,625
Total Property and Equipment	136,532	64,246
Less: Accumulated Depreciation	<u>(33,810)</u>	<u>(16,109)</u>
<b>Net Property and Equipment</b>	<b><u>\$102,722</u></b>	<b><u>\$ 48,137</u></b>

Intangible assets in progress represents the cost of software and professional services related to RSA's new pension administration system. RSA entered into a contract with Deloitte Consulting LLP for an initial term of 3 years beginning October 24<sup>th</sup>, 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*.

# RETIREMENT SYSTEMS OF ALABAMA

## *Financial Section*

### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2016

(Dollar Amounts in Thousands)

#### **9) OTHER POST-EMPLOYMENT BENEFITS**

In addition to the pension benefits described in Note 1, the TRS, ERS, and JRF (as agencies of the State of Alabama) participate in the State Employees' Health Insurance Plan (SEHIP) administered by the State Employees' Health Insurance Board (Board). The State Employees' Insurance Fund (SEIF) was established in 1965 pursuant to the *Code of Alabama 1975, Title 36, Chapter 29* (Act 833 of the Legislature of 1965) to provide health insurance benefits for employees and retired employees of the State of Alabama. In addition, the *Code of Alabama 1975, Section 36-36-1* established the Alabama Retired State Employees' Health Care Trust (Trust) for the purpose of accumulating assets to fund retiree benefits. The Trust is a single-employer plan. The Trust issues financial statements that may be obtained by writing to:

State Employees' Insurance Board  
P.O. Box 304900  
Montgomery, AL 36130

The *Code of Alabama 1975, Section 36-29-7* authorizes the employer contributions to the plan. Each year, the Legislature sets the appropriation in the annual appropriation bill required to be paid by employers on behalf of each active member. A portion of the premium is used to assist in funding retiree benefits. The fiscal year 2016 rate set by the State Employees' Insurance Board was \$850 per active member per month (dollar amount not in thousands).

The *Code of Alabama 1975, Section 36-29-19.7* authorizes the retiree contributions to the plan. The required monthly contribution rates for fiscal year 2016 were as follows (the following dollar amounts are not in thousands):

#### *Retired Member Rates*

- Individual Coverage: Non-Medicare Eligible Retired Member – \$336
- Family Coverage: Non-Medicare Eligible Retired Member without Spouse & Non-Medicare Eligible Dependents(s) – \$598
- Family Coverage: Non-Medicare Eligible Retired Member with Spouse & Non-Medicare Eligible Dependents(s) – \$733
- Family Coverage: Non-Medicare Eligible Retired Member without Spouse & Medicare Eligible Dependent(s) – \$467
- Family Coverage: Non-Medicare Eligible Retired Member with Spouse & Medicare Eligible Dependent(s) – \$577
- Individual Coverage: Medicare Eligible Retired Member – \$75
- Family Coverage: Medicare Eligible Retired Member without Spouse & Non-Medicare Eligible Dependents(s) – \$337
- Family Coverage: Medicare Eligible Retired Member with Spouse & Non-Medicare Eligible Dependents(s) – \$472
- Family Coverage: Medicare Eligible Retired Member without Spouse & Medicare Eligible Dependent(s) – \$196
- Family Coverage: Medicare Eligible Retired Member with Spouse & Medicare Eligible Dependent(s) – \$306
- For employees that retire other than for disability, for each year under 25 years of service, the retiree pays two percent of the employer premium and for each year over 25 years of service, the retiree premium is reduced by two percent of the employer premium.

#### *Surviving Spouse Rates*

- Non-Medicare Eligible Surviving Spouse – \$477
- Non-Medicare Eligible Surviving Spouse & Non-Medicare Eligible Dependent(s) – \$734
- Non-Medicare Eligible Surviving Spouse & Medicare Eligible Dependent(s) – \$643
- Medicare Eligible Surviving Spouse – \$271
- Medicare Eligible Surviving Spouse & Non-Medicare Eligible Dependent(s) – \$528
- Medicare Eligible Surviving Spouse & Medicare Eligible Dependent(s) – \$437

These rates do not reflect any discounts, waivers, and retiree sliding scale adjustments.

RSA employees participate in the SEHIP, which is a single employer health insurance plan for the State of Alabama. As a component unit, RSA employees participating in the SEHIP are valued with all other State of Alabama employees, and therefore, report under the requirements of a cost-sharing unit. The following table details the annual required contributions and the percentage contributed. These amounts are calculated before the final Total Group Health Insurance Expense for all state agencies is known and are subject to change (dollar amounts in thousands):

	<b>Fiscal</b>	<b>Annual</b>	
	<b>Year</b>	<b>Required</b>	<b>Percentage</b>
	<b>Ended</b>	<b>Contributions</b>	<b>Contributed</b>
<b>TRS</b>	2016	\$ 1,109	38.44%
	2015	\$ 1,108	36.74%
	2014	\$ 996	38.20%
<b>ERS</b>	2016	\$ 836	38.44%
	2015	\$ 906	36.74%
	2014	\$ 904	38.20%
<b>JRF</b>	2016	\$ 7	38.44%
	2015	\$ 7	36.74%
	2014	\$ 5	38.20%

## 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 issues a Comprehensive Annual Financial Report each year. It is available at [www.rsa-al.gov](http://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.

# RETIREMENT SYSTEMS OF ALABAMA

## Financial Section

### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2016

(Dollar Amounts in Thousands)

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, 2016, was 11.94% of annual pay for Tier 1 members and 10.84% 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 \$1,453 for the fiscal year ended September 30, 2016.

At September 30, 2016, the TRS reported a liability of \$18,891 for its proportionate share of the collective net pension liability. The collective net pension liability was measured as of September 30, 2015, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of September 30, 2014. The System's proportion of the collective 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, 2015, the TRS's proportion was 0.180507%, which was a decrease of 0.002499% from its proportion measured as of September 30, 2014.

For the year ended September 30, 2016, the TRS recognized pension expense of \$1,608. At September 30, 2016, the TRS reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	<b>Deferred Outflows of Resources</b>	<b>Deferred Inflows of Resources</b>
Differences between Expected and Actual Experience	\$ -	\$ 102
Changes of Assumptions	-	-
Net Difference between Projected and Actual Earnings on Pension Plan Investments	1,237	-
Changes in Proportion and Differences between Employer Contributions and Proportionate Share of Contributions	1,312	198
Employer Contributions Subsequent to the Measurement Date	1,453	-
<b>Total</b>	<b>\$ 4,002</b>	<b>\$ 300</b>

The TRS will recognize \$1,453 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, 2017 (dollar amounts 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):

<b>Fiscal Year Ended</b>	
<b>September 30:</b>	
2017	\$ 559
2018	\$ 559
2019	\$ 559
2020	\$ 586
2021	\$ (14)
Thereafter	\$ -

The total pension liability was determined by an actuarial valuation as of September 30, 2014, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.00%
Projected Salary Increases	3.50% - 8.25%
Investment Rate of Return*	8.00%

\*Net of pension plan investment expense

The actuarial assumptions used in the actuarial valuation as of September 30, 2014, 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, 2010. The Board of Control accepted and approved these changes on January 27, 2012, which became effective at the beginning of fiscal year 2012.

Mortality rates for TRS were based on the RP-2000 Combined Mortality Table for Males or Females, as appropriate, with adjustments for mortality improvements based on Scale AA projected to 2015 and set back one year 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:

	<b>Target</b>	<b>Long-Term</b>
	<b>Allocation</b>	<b>Expected Rate</b>
		<b>of Return*</b>
Fixed Income	25.00%	5.00%
U.S. Large Stocks	34.00%	9.00%
U.S. Mid Stocks	8.00%	12.00%
U.S. Small Stocks	3.00%	15.00%
International Developed Market Stocks	15.00%	11.00%
International Emerging Market Stocks	3.00%	16.00%
Real Estate	10.00%	7.50%
Cash	2.00%	1.50%
<b>Total</b>	<b><u>100.00%</u></b>	

\*Includes assumed rate of inflation of 2.50%.

# RETIREMENT SYSTEMS OF ALABAMA

## Financial Section

### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2016

(Dollar Amounts in Thousands)

The discount rate used to measure the total pension liability was 8%. 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 the 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 pan 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 TRS's proportionate share of the net pension liability calculated using the discount rate of 8%, as well as what its proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower (7%) or 1-percentage-point higher (9%) than the current rate:

	<b>1% Decrease (7%)</b>	<b>Current Discount Rate (8%)</b>	<b>1% Increase (9%)</b>
TRS's Proportionate Share of Collective Net Pension Liability	\$ 24,992	\$ 18,891	\$ 13,717

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, 2015. The supporting actuarial information is included in the GASB Statement No. 67 Report for the TRS prepared as of September 30, 2015. The auditor's report dated October 17, 2016, 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, 2015, along with supporting schedules is also available. The additional financial and actuarial information is available at [www.rsa-al.gov](http://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 issues a Comprehensive Annual Financial Report each year. It is available at [www.rsa-al.gov](http://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.

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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, 2015, ERS membership included approximately 84,393 participants. Note 1 of this report contains details about the classifications of participants and the number of participants within each classification.

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, 2016, was 14.57% of annual pay for Tier 1 members and 14.09% 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 \$1,133 and from JRF were \$21 for the fiscal year ended September 30, 2016 (dollar amounts in thousands).

At September 30, 2016, the ERS reported a liability of \$14,146 and the JRF reported a liability of \$272 for their respective proportionate shares of the collective net pension liability of the ERS State Regular Employees' retirement plan (dollar amounts in thousands). The collective net pension liability was measured as of September 30, 2015, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of September 30, 2014. ERS and JRF's proportion of the collective 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, 2015, ERS's proportion was 0.51802510%, which was an increase of 0.03098005% from its proportion measured as of September 30, 2014. At September 30, 2015, the JRF's proportion was 0.00995726%, which was an increase of 0.00307141% from its proportion measured as of September 30, 2014.

# RETIREMENT SYSTEMS OF ALABAMA

## Financial Section

### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2016

(Dollar Amounts in Thousands)

For the fiscal year ended September 30, 2016, the ERS recognized pension expense of \$989. At September 30, 2016, ERS reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	<b>Deferred Outflows of Resources</b>	<b>Deferred Inflows of Resources</b>
Differences between Expected and Actual Experience	\$ 749	\$ -
Changes of Assumptions	-	-
Net Difference between Projected and Actual Earnings on Pension Plan Investments	-	225
Changes in Proportion and Differences between Employer Contributions and Proportionate Share of Contributions	576	41
Employer Contributions Subsequent to the Measurement Date	1,133	-
<b>Total</b>	<b>\$ 2,458</b>	<b>\$ 266</b>

The ERS will recognize \$1,133 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, 2017. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

<b>Fiscal Year Ended September 30:</b>	
2017	\$ 258
2018	\$ 265
2019	\$ 211
2020	\$ 325
2021	\$ -
Thereafter	\$ -

For the fiscal year ended September 30, 2016, the JRF recognized pension expense of \$15. At September 30, 2016, the JRF reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	<b>Deferred Outflows of Resources</b>	<b>Deferred Inflows of Resources</b>
Differences between Expected and Actual Experience	\$ 14	\$ -
Changes of Assumptions	-	-
Net Difference between Projected and Actual Earnings on Pension Plan Investments	-	4
Changes in Proportion and Differences between Employer Contributions and Proportionate Share of Contributions	57	46
Employer Contributions Subsequent to the Measurement Date	21	-
<b>Total</b>	<b>\$ 92</b>	<b>\$ 50</b>

The JRF will recognize \$92 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, 2017 (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):

<b>Fiscal Year Ended</b>	
<b>September 30:</b>	
2017	\$ -
2018	\$ 2
2019	\$ 13
2020	\$ 6
2021	\$ -
Thereafter	\$ -

The total pension liability was determined by an actuarial valuation as of September 30, 2014, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.00%
Projected Salary Increases	3.75% - 7.25%
Investment Rate of Return*	8.00%

\*Net of pension plan investment expense

Mortality rates for ERS were based on the RP-2000 Combined Mortality Table Projected with Scale AA to 2015 set forward three years for males and one year for females. The rates of mortality for the period after disability retirement are according to the sex distinct RP-2000 Disability Mortality Table.

The actuarial assumptions used in the actuarial valuation as of September 30, 2014, were based on the results of an investigation of the economic and demographic experience for the ERS based upon participant data as of September 30, 2010. The Board of Control accepted and approved these changes on January 27, 2012, which became effective at the beginning of fiscal year 2012.

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:

	<b>Target</b>	<b>Long-Term</b>
	<b>Allocation</b>	<b>Expected Rate</b>
		<b>of Return*</b>
Fixed Income	25.00%	5.00%
U.S. Large Stocks	34.00%	9.00%
U.S. Mid Stocks	8.00%	12.00%
U.S. Small Stocks	3.00%	15.00%
International Developed Market Stocks	15.00%	11.00%
International Emerging Market Stocks	3.00%	16.00%
Real Estate	10.00%	7.50%
Cash	2.00%	1.50%
<b>Total</b>	<b>100.00%</b>	

\*Includes assumed rate of inflation of 2.50%.

# RETIREMENT SYSTEMS OF ALABAMA

## *Financial Section*

### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2016

(Dollar Amounts in Thousands)

The discount rate used to measure the total pension liability was the long-term rate of return, 8%. 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 the employer contributions will be made in accordance with the funding policy adopted by the ERS Board of Control. 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 pan 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 proportionate share of the net pension liability calculated using the discount rate of 8%, as well as what the ERS and JRF's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower (7%) or 1-percentage-point higher (9%) than the current rate:

	<b>1% Decrease</b>	<b>Current</b>	<b>1% Increase</b>
	<b>(7%)</b>	<b>Discount Rate</b>	<b>(9%)</b>
		<b>(8%)</b>	
ERS's Proportionate Share of			
Collective Net Pension Liability	\$ 17,793	\$ 14,146	\$ 11,034
JRF's Proportionate Share of			
Collective Net Pension Liability	\$ 342	\$ 272	\$ 212

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, 2015. The supporting actuarial information is included in the GASB Statement No. 68 Report for the ERS prepared as of September 30, 2015. The auditor's report dated October 17, 2016, 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](http://www.rsa-al.gov).

#### **11) 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 \$31,961,287 (dollar amount not in thousands) during the 2016 fiscal year.

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## 12) FUTURE ACCOUNTING PRONOUNCEMENTS

GASB issued Statement No. 82, *Pension Issues – an amendment of GASB Statements No. 67, No. 68, and No. 73*, in March 2016 and is effective for reporting periods beginning after June 15, 2016. GASB Statement No. 82 addresses issues regarding the presentation of payroll-related measures in required supplementary information, the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and the classification of payments made by employers to satisfy employee (plan member) contribution requirements. This Statement requires the presentation of covered payroll, defined as the payroll on which contributions to a pension plan are based, and ratios that use that measure. Before the issuance of GASB Statement No. 82, GASB Statements No. 67 and No. 68 required presentation of covered-employee payroll, which is the payroll of all employees that are provided with pensions through the pension plan, and ratios that use that measure. This Statement also establishes that a deviation from the guidance in an Actuarial Standard of Practice is not considered to be in conformity with the requirements of GASB Statements No. 67, No. 68, or No. 73 for the selection of assumptions used in determining the total pension liability and related measures. This Statement also classifies payments made by an employer to satisfy plan member contribution requirements as plan member contributions for purposes of GASB Statement No. 67 and as employee contributions for purposes of GASB Statement No. 68.

The Systems will be subject to the provisions of GASB Statement No. 82 beginning with the fiscal year ending September 30, 2017.

GASB issued Statement No. 85, *Omnibus 2017*, in March 2017 and is effective for reporting periods beginning after June 15, 2017. GASB Statement No. 85 addresses a variety of issues including issues related to blending component units, goodwill, fair value measurement and application, and post-employment benefits (pensions and other post-employment benefits) identified during implementation and application of certain GASB Statements.

The Systems will be subject to the provisions of GASB Statement No. 85 beginning with the fiscal year ending September 30, 2018.

RETIREMENT SYSTEMS OF ALABAMA

*Financial Section*

Required Supplementary Information  
For the Fiscal Year Ended September 30, 2016

(Dollar Amounts in Thousands)

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

**TRS**

**For the Fiscal Years Ended September 30**

<b>Total Pension Liability</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Service Cost*	\$ 627,938	\$ 660,390	\$ 602,605
Interest	2,488,310	2,421,604	2,352,804
Benefit Changes	-	-	-
Difference Between Expected & Actual			
Experience	(290,388)	(70,200)	-
Changes of Assumptions	942,133	-	-
Benefit Payments	(2,161,570)	(2,080,896)	(1,997,877)
Refunds of Contributions	(57,566)	(55,898)	(56,145)
<b>Net Change in Total Pension Liability</b>	<b>1,548,857</b>	<b>875,000</b>	<b>901,387</b>
<b>Total Pension Liability - Beginning</b>	<b>32,213,446</b>	<b>31,338,446</b>	<b>30,437,059</b>
<b>Total Pension Liability - Ending (A)</b>	<b>\$ 33,762,303</b>	<b>\$ 32,213,446</b>	<b>\$ 31,338,446</b>
<b>Plan Fiduciary Net Position reserved to fund Total Pension Liability</b>			
Contributions - Employer	\$ 751,909	\$ 737,677	\$ 716,753
Contributions - Member	475,980	477,918	480,849
Other	-	172,982	-
Net Investment Income	2,199,396	261,461	2,468,499
Benefit Payments	(2,161,570)	(2,080,896)	(1,997,877)
Refunds of Contributions	(57,566)	(55,898)	(56,145)
Administrative Expenses	(19,582)	(19,331)	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>1,188,567</b>	<b>(506,087)</b>	<b>1,612,079</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>21,747,731</b>	<b>22,253,818</b>	<b>20,641,739</b>
<b>Plan Fiduciary Net Position - Ending (B)</b>	<b>\$ 22,936,298</b>	<b>\$ 21,747,731</b>	<b>\$ 22,253,818</b>
<b>Net Pension Liability - Ending (A - B)</b>	<b>\$ 10,826,005</b>	<b>\$ 10,465,715</b>	<b>\$ 9,084,628</b>
<b>Plan Fiduciary Net Position as a Percentage</b>			
<b>of the Total Pension Liability</b>	<b>67.93%</b>	<b>67.51%</b>	<b>71.01%</b>
<b>Covered Employee Payroll</b>	<b>\$ 6,541,310</b>	<b>\$ 6,541,054</b>	<b>\$ 6,466,923</b>
<b>Net Pension Liability as a Percentage of</b>			
<b>Covered Employee Payroll</b>	<b>165.50%</b>	<b>160.00%</b>	<b>140.48%</b>

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.

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

**ERS**

**For the Fiscal Years Ended September 30**

<b>Total Pension Liability</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Service Cost*	\$ 308,840	\$ 346,440	\$ 298,985
Interest	1,233,415	1,199,079	1,164,853
Benefit Changes	-	-	-
Difference Between Expected & Actual			
Experience	101	(35,546)	-
Changes of Assumptions	544,310	-	-
Benefit Payments	(1,043,293)	(1,023,732)	(948,645)
Refunds of Contributions	(44,660)	(49,865)	(49,767)
<b>Net Change in Total Pension Liability</b>	<b>998,713</b>	<b>436,376</b>	<b>465,426</b>
<b>Total Pension Liability - Beginning</b>	<b>15,961,667</b>	<b>15,525,291</b>	<b>15,059,865</b>
<b>Total Pension Liability - Ending (A)</b>	<b>\$ 16,960,380</b>	<b>\$ 15,961,667</b>	<b>\$ 15,525,291</b>

**Plan Fiduciary Net Position reserved to fund Total Pension Liability**

Contributions - Employer	\$ 435,243	\$ 411,087	\$ 379,163
Contributions - Member	238,017	229,254	226,015
Other	-	68,897	-
Net Investment Income	1,052,886	126,335	1,183,377
Benefit Payments	(1,043,293)	(1,023,732)	(948,645)
Refunds of Contributions	(44,660)	(49,865)	(49,767)
Administrative Expenses	(13,023)	(13,182)	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>625,170</b>	<b>(251,206)</b>	<b>790,143</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>10,551,904</b>	<b>10,803,110</b>	<b>10,012,967</b>
<b>Plan Fiduciary Net Position - Ending (B)</b>	<b>\$ 11,177,074</b>	<b>\$ 10,551,904</b>	<b>\$ 10,803,110</b>

<b>Net Pension Liability - Ending (A - B)</b>	<b>\$ 5,783,306</b>	<b>\$ 5,409,763</b>	<b>\$ 4,722,181</b>
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**Plan Fiduciary Net Position as a Percentage**

<b>of the Total Pension Liability</b>	<b>65.90%</b>	<b>66.11%</b>	<b>69.58%</b>
<b>Covered Employee Payroll</b>	<b>\$ 3,592,658</b>	<b>\$ 3,556,282</b>	<b>\$ 3,511,115</b>
<b>Net Pension Liability as a Percentage of</b>			
<b>Covered Employee Payroll</b>	<b>160.98%</b>	<b>152.12%</b>	<b>134.49%</b>

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.

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Required Supplementary Information  
For the Fiscal Year Ended September 30, 2016

(Dollar Amounts in Thousands)

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

JRF

For the Fiscal Years Ended September 30

	2016	2015	2014
<b>Total Pension Liability</b>			
Service Cost*	\$ 9,807	\$ 9,644	\$ 9,481
Interest	32,695	32,385	31,521
Benefit Changes	-	-	-
Difference Between Expected & Actual			
Experience	(2,487)	(7,391)	-
Changes of Assumptions	17,792	-	-
Benefit Payments	(30,902)	(30,356)	(29,838)
Refunds of Contributions	(106)	(147)	(46)
<b>Net Change in Total Pension Liability</b>	<b>26,799</b>	<b>4,135</b>	<b>11,118</b>
<b>Total Pension Liability - Beginning</b>	<b>424,204</b>	<b>420,069</b>	<b>408,951</b>
<b>Total Pension Liability - Ending (A)</b>	<b>\$ 451,003</b>	<b>\$ 424,204</b>	<b>\$ 420,069</b>
<b>Plan Fiduciary Net Position reserved to fund Total Pension Liability</b>			
Contributions - Employer	\$ 17,529	\$ 15,077	\$ 15,250
Contributions - Member	3,723	3,683	3,764
Net Investment Income	28,322	(856)	31,343
Benefit Payments	(30,902)	(30,356)	(29,838)
Refunds of Contributions	(106)	(147)	(46)
Administrative Expenses	(398)	(356)	-
Other	-	1,854	-
<b>Net Change in Plan Fiduciary Net Position</b>	<b>18,168</b>	<b>(11,101)</b>	<b>20,473</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>263,874</b>	<b>274,975</b>	<b>254,502</b>
<b>Plan Fiduciary Net Position - Ending (B)</b>	<b>\$ 282,042</b>	<b>\$ 263,874</b>	<b>\$ 274,975</b>
<b>Net Pension Liability - Ending (A - B)</b>	<b>\$ 168,961</b>	<b>\$ 160,330</b>	<b>\$ 145,094</b>
<b>Plan Fiduciary Net Position as a Percentage of the Total Pension Liability</b>	<b>62.54%</b>	<b>62.20%</b>	<b>65.46%</b>
<b>Covered Employee Payroll</b>	<b>\$ 44,099</b>	<b>\$ 44,087</b>	<b>\$ 43,275</b>
<b>Net Pension Liability as a Percentage of Covered Employee Payroll</b>	<b>383.14%</b>	<b>363.67%</b>	<b>335.28%</b>

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.

**SCHEDULES OF EMPLOYER CONTRIBUTIONS**  
**For the Ten Fiscal Years Ended September 30, 2016**

**TEACHERS' RETIREMENT SYSTEM §**

<b>Fiscal Year</b>	<b>Actuarially Determined Employer Contributions</b>	<b>Actual Employer Contributions</b>	<b>Annual Contribution Deficiency (Excess)</b>	<b>Covered Employee Payroll*</b>	<b>Actual Contributions as a % of Covered Employee Payroll**</b>
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
2008	706,491	706,491	-	6,213,641	11.37
2007	519,247	519,247	-	5,782,261	8.98

**JUDICIAL RETIREMENT FUND ¥**

<b>Fiscal Year</b>	<b>Actuarially Determined Employer Contributions</b>	<b>Actual Employer Contributions</b>	<b>Annual Contribution Deficiency (Excess)</b>	<b>Covered Employee Payroll*</b>	<b>Actual Contributions as a % of Covered Employee Payroll</b>
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
2008	9,880	9,880	-	42,863	23.05
2007	9,307	9,307	-	41,364	22.50

§ There are no nonemployer contributing entities in TRS.

\*Estimated based on employer contribution rate.

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

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

# RETIREMENT SYSTEMS OF ALABAMA

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## *Financial Section*

### Required Supplementary Information

For the Fiscal Year Ended September 30, 2016

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(Dollar Amounts in Thousands)

#### **SCHEDULE OF INVESTMENT RETURNS** **For the Ten Fiscal Years Ended September 30, 2016**

<b>Fiscal Year</b>	<b>TRS</b>	<b>ERS</b>	<b>JRF</b>
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%
2008	-15.31%	-15.18%	-14.61%
2007	17.46%	17.90%	14.31%

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**

**TEACHERS' RETIREMENT SYSTEM**

<b>Measurement Date</b>	<b>Fiscal Year Ended</b>	<b>Proportion of the Net Pension Liability</b>	<b>Proportionate Share of the Net Pension Liability</b>	<b>Covered Employee Payroll</b>	<b>Proportionate Share of the Net Pension Liability as a Percentage of Covered Employee Payroll</b>	<b>Plan Fiduciary Net Position as a Percentage of the Total Pension Liability</b>
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**

<b>Measurement Date</b>	<b>Fiscal Year Ended</b>	<b>Proportion of the Net Pension Liability</b>	<b>Proportionate Share of the Net Pension Liability</b>	<b>Covered Employee Payroll</b>	<b>Proportionate Share of the Net Pension Liability as a Percentage of Covered Employee Payroll</b>	<b>Plan Fiduciary Net Position as a Percentage of the Total Pension Liability</b>
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**

<b>Measurement Date</b>	<b>Fiscal Year Ended</b>	<b>Proportion of the Net Pension Liability</b>	<b>Proportionate Share of the Net Pension Liability</b>	<b>Covered Employee Payroll</b>	<b>Proportionate Share of the Net Pension Liability as a Percentage of Covered Employee Payroll</b>	<b>Plan Fiduciary Net Position as a Percentage of the Total Pension Liability</b>
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, 2016

(Dollar Amounts in Thousands)

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

#### SCHEDULES OF CONTRIBUTIONS For the Fiscal Years Ended September 30

##### TEACHERS' RETIREMENT SYSTEM

	<u>2016</u>	<u>2015</u>
Contractually Required Contribution	\$ 1,453	\$ 1,271
Contributions in relation to the		
Contractually Required Contribution	<u>(1,453)</u>	<u>(1,271)</u>
Contribution Deficiency/(Excess)	<u>\$ -</u>	<u>\$ -</u>
Covered Employee Payroll	\$ 6,739	\$ 6,593
Contributions as a Percentage of		
Covered Employee Payroll	21.56%	19.28%

##### EMPLOYEES' RETIREMENT SYSTEM

	<u>2016</u>	<u>2015</u>
Contractually Required Contribution	\$ 1,133	\$ 896
Contributions in relation to the		
Contractually Required Contribution	<u>(1,133)</u>	<u>(896)</u>
Contribution Deficiency/(Excess)	<u>\$ -</u>	<u>\$ -</u>
Covered Employee Payroll	\$ 4,904	\$ 4,695
Contributions as a Percentage of		
Covered Employee Payroll	23.10%	19.08%

##### JUDICIAL RETIREMENT FUND

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

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, 2016

**1) 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.

**2) 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 2016 are in the table below. ERS local participating employer contribution rates differ for each employer.

	<u>Tier 1</u>	<u>Tier 2</u>
<b>TRS</b>	11.94%	10.84%
<b>ERS - State Employees</b>	14.57%	14.09%
<b>ERS - State Police</b>	42.61%	38.98%
<b>JRF</b>	40.98%	-

**3) 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.

**4) ACTUARIAL ASSUMPTIONS**

The actuarially determined contribution rates in the schedules of employer contributions are calculated as of September 30, 2013, 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	29.9 years	Within 29.9 years - Varies by Employer	26.5 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, 2016

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*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.

*Changes to Assumptions*

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.

RETIREMENT SYSTEMS OF ALABAMA

*Financial Section*

Schedule of Administrative Expenses

For the Fiscal Year Ended September 30, 2016

(Amounts in Thousands)

	<b>Teachers' Retirement System</b>	<b>Employees' Retirement System</b>	<b>Judicial Retirement Fund</b>	<b>Totals</b>
<b>Personnel Services:</b>				
Salaries	\$ 6,739	\$ 4,904	\$ 144	\$ 11,787
Employee Fringe Benefits	2,952	2,261	38	5,251
Total Personnel Services	<u>9,691</u>	<u>7,165</u>	<u>182</u>	<u>17,038</u>
<b>Professional Services:</b>				
Actuarial	432	1,210	155	1,797
Accounting and Auditing	65	45	12	122
Information Technology	722	298	28	1,048
Education & Training	20	12	1	33
Mailing Services	139	75	-	214
Legal Services	233	262	-	495
Personnel Services	82	-	-	82
Other Professional Services and Fees	107	20	9	136
Total Professional Services	<u>1,800</u>	<u>1,922</u>	<u>205</u>	<u>3,927</u>
<b>Communications and Travel:</b>				
Telecommunications	90	49	-	139
Postage	1,275	794	-	2,069
Travel	75	42	4	121
Total Communications and Travel	<u>1,440</u>	<u>885</u>	<u>4</u>	<u>2,329</u>
<b>Rentals:</b>				
Office Space	92	58	5	155
Equipment Leasing	10	10	-	20
Total Rentals	<u>102</u>	<u>68</u>	<u>5</u>	<u>175</u>
<b>Miscellaneous:</b>				
Supplies	1,435	755	1	2,191
Maintenance	305	153	-	458
Equipment	100	54	-	154
Total Miscellaneous	<u>1,840</u>	<u>962</u>	<u>1</u>	<u>2,803</u>
<b>Total Administrative Expenses</b>	<b><u>\$ 14,873</u></b>	<b><u>\$ 11,002</u></b>	<b><u>\$ 397</u></b>	<b><u>\$ 26,272</u></b>

RETIREMENT SYSTEMS OF ALABAMA

*Financial Section*

Schedule of Investment Expenses

For the Fiscal Year Ended September 30, 2016

(Amounts in Thousands)

	<b>Teachers' Retirement System</b>	<b>Employees' Retirement System</b>	<b>Judicial Retirement Fund</b>	<b>Totals</b>
<b>Investment Activity</b>				
<b>Investment Management Fees:</b>				
Salaries and Benefits	\$ 6,487	\$ 2,217	\$ -	\$ 8,704
Dues, Subscriptions and Supplies	688	453	-	1,141
Travel	29	12	-	41
<b>Professional Services:</b>				
Investment Advisor	60	30	-	90
Appraisal of Private Placements and Real Estate	474	316	-	790
<b>Investment Activity Expenses before Reimbursement</b>	<u>7,738</u>	<u>3,028</u>	<u>-</u>	<u>10,766</u>
Less: Reimbursement for Investment Management Fees	7	145	-	152
<b>Total Investment Activity Expenses</b>	<u>7,731</u>	<u>2,883</u>	<u>-</u>	<u>10,614</u>
<b>Securities Lending Activity</b>				
Securities Lending Borrower Rebates	2,825	1,356	58	4,239
Securities Lending Management Fees	3,044	1,416	46	4,506
Total Securities Lending Activity Expenses	<u>5,869</u>	<u>2,772</u>	<u>104</u>	<u>8,745</u>
<b>Total Investment Expenses</b>	<u><u>\$ 13,600</u></u>	<u><u>\$ 5,655</u></u>	<u><u>\$ 104</u></u>	<u><u>\$ 19,359</u></u>

RETIREMENT SYSTEMS OF ALABAMA

*Financial Section*

Schedule of Professional/Consultant Fees  
 For the Fiscal Year Ended September 30, 2016  
 (Amounts in Thousands)

<b>Professional/Consultant</b>	<b>Nature of Service</b>	<b>Teachers' Retirement System</b>	<b>Employees' Retirement System</b>	<b>Judicial Retirement Fund</b>	<b>Totals</b>
Cavanaugh Macdonald Consulting, LLC	Actuary	\$ 314	\$ 1,151	\$ 135	\$ 1,600
Segal Consulting	Actuary	66	33	11	110
Cheiron, Inc.	Actuary	52	26	9	87
Carr, Riggs & Ingram, LLC	Auditor	52	26	9	87
A-lign	Auditor	13	19	3	35
Balch & Bingham LLP	Legal	19	120	-	139
Burr & Forman LLP	Legal	139	92	-	231
Bradley Arant Boulton Cummings LLP	Legal	36	24	-	60
Morgan, Lewis, & Bockius LLP	Legal	25	17	-	42
Wells Mailing	Mail	89	42	-	131
Alabama Department of Finance	Mail	50	33	-	83
State Personnel Department	Personnel	82	-	-	82
Fine Geddie & Associates, LLC	Consultant	75	-	-	75
Alabama Department of Finance	Comptroller's Accounting Services	37	27	9	73
Alabama Department of Finance	Information Technology	29	17	-	46
Alabama Department of Finance	State of Alabama Accounting & Resource System (STAARS)	168	84	28	280
Auburn Montgomery	Information Technology	448	150	-	598
Packet Ninjas	Information Technology	24	16	-	40
Various	Other	82	45	1	128
<b>Total Professional/Consultant Fees - Administrative Services</b>		<b>1,800</b>	<b>1,922</b>	<b>205</b>	<b>3,927</b>
Regions Bank	Investment Advisor	60	30	-	90
Pearson Realty Services, Inc.	Real Estate Appraiser	198	132	-	330
Houlihan Lokey	Investment Appraiser	276	184	-	460
<b>Total Professional/Consultant Fees - Investment Services</b>		<b>534</b>	<b>346</b>	<b>-</b>	<b>880</b>
<b>Total Professional/Consultant Fees</b>		<b>\$ 2,334</b>	<b>\$ 2,268</b>	<b>\$ 205</b>	<b>\$ 4,807</b>





Component Units of the State of Alabama  
**Comprehensive Annual Financial Report**

# INVESTMENT SECTION



# RETIREMENT SYSTEMS OF ALABAMA

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## *Investment Section*

### Report on Investment Activity

For the Fiscal Year Ended September 30, 2016

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Dear Members,

I am pleased to present the following report on investment activity for the fiscal year ended September 30, 2016. 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.

The past year was not much different than what we have seen the past several years. The press was obsessed with the prospects of a Federal Reserve (Fed) rate hike that has yet to materialize. The economy continues to flutter along at a slow clip, and the market has had dramatic but short-lived reactions to the various macro events that transpired. Earnings growth has been anemic and, to the dismay of all the bears, the multiple on the market has moved up a couple of points! As of this writing, we have seen Washington turned upside down, where we now have one party controlling the executive and legislative branches. Maybe the market has sniffed out that, at least in the short term, growth prospects should improve given the platform laid out by the President-Elect. With nearly a quarter of a trillion dollars pulled out of stock mutual funds and Exchange Traded Funds (ETFs) over the past two years, there are a lot of nervous investors sitting on the sidelines. If the rate rise we have seen post-election continues, it will be interesting to see how investors react when bond funds start posting negative returns.

We continue to overweight domestic equities over international and have very small exposure to emerging market stocks. We have been waiting for an opportunity to add to emerging markets, though the prospect of a potentially stronger dollar and higher rates gives us pause before getting too aggressive. Fed watching was a painful drill this year. After expectations of a slow but steady hiking process, we are at the end of the calendar year and the Fed has yet to hike short-term rates. The markets were obviously caught off guard following the general election, so it will be interesting to see if the Federal Open Market Committee (FOMC) changes course as well. We are still underweight fixed income relative to our strategic range. We continue to maintain an overweight in investment-grade corporate credit, and an underweight in U.S. treasuries, but longer duration in treasuries relative to benchmark. As rates have remained low, the new issue market has continued to be very strong in corporate credit, and continued fund flows into bonds have been there to digest these new bond issues. Since the election, we have seen a precipitous rise in rates as investors have positioned for the possibility of stronger growth and a pickup in inflation. We will be looking for opportunities to add to our fixed income portfolio as rates move higher.

Other parts of the portfolio had another good year with real estate up over 7%. RSA's New York City building, 55 Water Street, continues to benefit from improving market conditions in downtown Manhattan. The building re-signed its largest tenant, S&P Global, to another long-term lease. Aside from capital appreciation prospects for the building, it generates good cash flow back to the RSA, which is much needed in the current low-yield environment. We also have a bit more cash than usual. Given the changing mix of actives to retirees, we need to have available cash in the event of a market drawdown. The last thing we want is to be forced to sell assets in a distressed market environment. This will cause a small drag on total returns because short-term yields are paltry, but we can sleep better at night. As always, we will continue to demand the best execution from all RSA counterparts and will strive to produce results that strengthen the RSA and its beneficiaries.

### **RSA Performance Summary**

As of September 30, 2016, aggregate defined benefit assets under management totaled \$34.1 billion. During fiscal year 2016, annualized total returns of the TRS, ERS, and JRF were 10.41%, 10.22%, and 10.94%, respectively.

### **Equities**

Looking at equity returns at the end of the year would give you the sense that all is well in the capital markets. As we all know, it was a very bumpy ride to get to where we are. The economy continues to expand in fits and starts and at a slower run rate than the longer term trend line would suggest. Earnings expectations were continuously reigned in as companies struggled with the slower growth trajectory that has lingered post the "Great Recession." After a market multiple decline late last fiscal year following the Chinese Yuan devaluation, price-to-earnings multiples expanded roughly 2 points over the course of the current fiscal year accounting for a large part of domestic equity market returns.

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Stock picking in this environment has been an arduous task. When it seemed that the run for the go-go growth stocks was over early in the calendar year, they were able to mount a sizable come back. And when it seemed that the energy patch was pretty much left for dead, the lowest quality companies in the sector that didn't go out of business were the best performers. Having a value bias in this market has been quite trying. There has been a fair amount of merger and acquisition activity as companies are looking for growth by whatever means necessary. Companies have also continued to use share buybacks as a tool to propel earnings growth and their shares higher.

Investor sentiment is still fairly dour, which has been a theme for several years. Looking at fund flows, the exodus from stocks has continued unabated. As of this writing, investors have withdrawn nearly \$150 billion from equity mutual funds and ETF's over the past year! The continuous barrage of macro events has kept investors on edge since the close brush with economic death in 2008 and 2009. This year, we dealt with the prospect of a big China slowdown, then Brexit, and finally great consternation around the national election cycle. It is a certainty that we will have new worries to deal with this year, but at least investors have been well conditioned from recent events.

With that said, the RSA has continued to put some hedges in place to dampen downside volatility in equity markets. We have systematically rolled out put-spread collars at various strikes and maturities that give 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 15.13%, 14.98%, and 15.56% for the TRS, ERS, and JRF, respectively. Developed international equity returns were moderate compared to domestic equity returns, while emerging markets nicely outperformed both. Total international equity returns were 8.93% for the TRS, 9.03% for the ERS, and 9.22% for the JRF. The combined total returns for the overall equity portfolios were 13.88%, 13.85%, and 14.19% for the TRS, ERS, and JRF, respectively. Three-, five-, and ten-year annualized global equity returns were 8.45%, 14.14%, and 6.23% for the TRS, 8.51%, 14.16%, and 6.27% for the ERS, and 8.87%, 14.58%, and 6.59% for the JRF, respectively.

### **Fixed Income**

At the beginning of fiscal year 2016, risk assets were in retreat as the FOMC had recently pushed out its initial rate hike once again citing its concerns about global weakness. Policymakers also stated that these developments were likely to put further downward pressure on inflation in the near term. Treasury securities performed well in this environment while investment-grade and high-yield spreads expanded to their widest levels since the summer of 2012. Risk appetite returned during the month of October as weak economic data provided cover for the continued accommodative policies of global central banks. The European Central Bank (ECB) also relayed that it would extend its purchases of securities until a sustained increase in the inflation outlook was achieved. Within credit, higher beta sectors outperformed treasury returns by over 300 basis points (bps) during this time.

This phenomenon proved to be short-lived as hawkish FOMC statements and a stronger than expected jobs report resulted in a short-term increase in interest rates. While treasury securities were able to recover some of their losses during the latter part of November, the stage was clearly being set for the Fed to slowly move on from the ultralow interest rate policy of the last several years. By the end of the month, the probability of an interest rate move at the December meeting had risen to 75%. Spread product returns were a mixed bag during this period as agency spreads surged higher from a historically low starting point, while cash flow-producing sectors like telecom and cable tightened. The trend in energy and materials was quite the opposite, as spreads trended higher as oil prices were unable to find a bottom.

The Fed did in fact pull the trigger and raise rates by 25bps in December, its first increase in nearly 10 years. At the time, Fed Chair Janet Yellen and other FOMC members forecast that an additional four interest rate moves were possible in the coming year. This notion was quickly dismissed by investors as further declines in commodity prices reminded them of the fragile state of the global economy. Market conditions improved somewhat by the end of January as the ECB backstop was reinforced and the Bank of Japan (BOJ) lowered rates into negative territory. Risk assets performed poorly with high yield debt beholden to the troubles within the energy and mining sectors. Investment grade credit was somehow able to post a slightly positive return as the large drop in treasury yields helped offset spread widening. Despite the significant volatility experienced during January, corporations were able to print approximately \$125bn of new supply as the hunt for yield in a low rate environment continued.

*Investment Section*

Report on Investment Activity (Continued)

For the Fiscal Year Ended September 30, 2016

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Credit markets and risk assets began to stabilize in mid-February as it became evident that oil had bottomed and accommodative policies employed by global central banks would continue for the foreseeable future. The dividend cuts and reduction in capital expenditures taken by the energy-related and mining names soothed credit investors' liquidity fears. These actions, coupled with the inclusion of corporate debt into the ECB's asset-purchase program, resulted in a reduction of credit risk across the globe. Investment grade corporate spreads tightened approximately 40bps across the curve during March providing the asset class with its strongest relative performance since 2011. High-yield debt fared even better, and this rally in corporate credit continued into April leaving high grade spread levels 70bps off the wides of mid-February. Primary market activity surged in May with approximately \$175bn of investment-grade supply as issuers exited the earnings blackout period. This funneled through to high-yield companies as well with smaller names regaining access to the new issue market.

One of the underlying themes of the fiscal year has been global central banks' attempt to boost growth and inflation by purchasing financial assets, intervening in currency markets, and setting negative interest rates. The effect of these policies during the spring and early summer was a substantial increase in the value and the elimination of yield in global fixed income assets. At one point, there was north of \$8 trillion in sovereign debt-carrying negative yields. The lack of growth and pricing power, particularly in Europe and Japan, put a lid on any upward momentum in rates. Safe-haven assets received another boost during this period as volatility picked up around Britain's exit from the European Union (EU). At home, softer than expected growth in the first quarter, coupled with a disastrous May employment report squashed the potential for a June rate hike. As expected, the FOMC left short-term interest rates unchanged and forecasted that the federal funds rate longer term will likely be materially lower.

While the Brexit referendum provided significant volatility in late June, a positive tone for risk assets returned the following month. A better than expected jobs number and a more confident economic outlook provided by the Fed in its July meeting, moved capital flows back into corporate debt. High-beta sectors outperformed as investors continued to reach for yield down the quality spectrum. Over the next several weeks, risk assets slowly moved higher and the case for an increase in the federal funds rate began to strengthen once again.

Unsurprisingly, the last month of the fiscal year experienced heightened volatility created by global monetary policymakers. In early September, traders were caught off guard by the lack of discussion surrounding the extension of the ECB's asset-purchase plan. This omission during a period of tepid growth led to a multi-day selloff in government-related assets. Furthering the move was speculation that fiscal stimulus will ultimately be needed as the monetary decision-makers were running short of options. The BOJ quickly extinguished that fire by targeting a zero-returning 10yr Japanese Government Bond (JGB). The FOMC also lowered its projections for future interest rate increases meaningfully at its September meeting. Fixed income returns were relatively muted despite the various actions of global central banks. Quality and safety were the key factors in determining performance in the previous fiscal year. Investors' never-ending quest for yield and their reliance on policymakers to add risk during turbulent times paid huge dividends this year.

For the fiscal year, the total annual returns for the public domestic fixed income portfolios were 6.13% for the TRS, 6.10% for the ERS, and 5.73% for the JRF. The five-year annualized returns were 3.93% for the TRS, 3.92% for the ERS, and 3.76% for the JRF. The ten-year annualized returns were 5.60% for the TRS, 5.60% for the ERS, and 5.53% for the JRF.

Sincerely,



Marc Green  
Director of Investments

The following Investment Policies and Procedures were effective for the Teachers' Retirement System through February 28, 2016. On December 9, 2015, the Teachers' Retirement System Board of Control adopted a new Investment Policy Statement (IPS) that became effective on March 1, 2016. The new Teachers' Retirement System IPS can be located immediately following these previously effective Investment Policies and Procedures. The Employees' Retirement System IPS immediately following the current Teachers' Retirement System IPS was effective for the entire fiscal year ending 2016.

#### **I. Board Objectives**

The Board of Control, as Trustees of the Teachers' Retirement System (System), have full power, through the 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." Other funds currently and hereafter under the management of the System will be governed by this Investment Policy Statement within the System's limitations and/or by other applicable legislated restrictions.

It is the objective of the Board that funds be invested in such a manner as to maximize the total return of the System within prudent risk parameters. Also, the System recognizes that a stronger Alabama equates to a stronger Retirement System, and as such, investments in Alabama businesses are encouraged to the extent the investment meets the criteria delineated by this policy statement.

The long term investment performance expectations of the System are to achieve a return on marketable securities in excess of the actuarial investment assumption and to exceed the rate of inflation (as measured by the CPI) by 3% through investments in a broadly diversified portfolio. The performance evaluation of the System will be submitted to the Board on a semi-annual basis.

#### **II. Asset Allocation**

The most important aspect 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. Accordingly, the asset allocation decisions will be predicated on the following factors:

1. The actuarial projected liability stream of benefits and their cost,
2. The perception of the prospective risks and returns of eligible asset classes, and
3. Judgments regarding future economic and financial conditions.

The maximum permissible allocation of assets in the System to each eligible asset class is expressed below:

##### **A. Domestic Fixed Income**

The domestic fixed income portfolio of the System may consist of any rated or non-rated debt security including, but not limited to, the following: U.S. Treasury issues, agency issues, mortgage-backed securities, corporate bonds, and privately placed debt securities. This area of investments may not exceed 50% of the market value of the aggregate portfolio of the System.

##### **B. International Fixed Income**

The international fixed income asset class may be used to provide diversification for the System and may consist of U.S. dollar denominated or foreign currency denominated fixed income

obligations of sovereign countries with a rating of at least A by one of the principal rating agencies at the time of purchase or acquisition, except that up to 2 percent of the market value of the System's total portfolio may be invested in the obligations of sovereign countries with a rating of BBB or BAA by one of such agencies at the time of purchase. The System may hedge against the possible adverse effects of currency fluctuations on the System's portfolio of international fixed income obligations when it is considered appropriate. The market value of this asset may not exceed 10% of the market value of the System's total portfolio.

C. Domestic Equity

The domestic equity portfolio of the System may consist of both actively and passively managed equity securities. Also, covered call options may be utilized in order to add incremental value to the System's equity portfolio and may be written and repurchased as market conditions warrant. The asset class may not exceed 65% of the market value of the System's aggregate portfolio.

D. International Equity

The international equity asset class may be used to provide diversification for the System and may consist of both actively and passively managed international equity securities. In order to be eligible for purchase by the System, an international equity security must be issued by a company incorporated in a country whose debt securities are eligible for investment under Section B above, and the market value of the aggregate outstanding equity of the issuing company must be at least \$100 million. Furthermore, the System may not purchase or hold more than 5 percent of any class of the outstanding stock of a company. The System may hedge against the possible adverse effects of currency fluctuations on the System's portfolio of international equity securities when it is considered appropriate. The aggregate market value of international equities may not exceed 25% of the aggregate market value of the System's total portfolio.

E. Real Estate

The real estate portfolio of the System may consist of office, retail, industrial, commercial, and residential housing projects. The suggested range may not exceed 15% of the book value of the System's aggregate portfolio.

F. Alternative Investments

Alternative investments may consist of, but are not limited to, mezzanine financing, LBO's, venture capital, limited partnerships, futures, commodities, and derivative investments. The asset class may not exceed 10% of the book value of the System's aggregate portfolio.

G. Short-term Investments

Short-term investments may consist of money allocated to commercial paper, rated at least A-2 and/or P-2, repurchase agreements, short-term U.S. Treasury securities and other money market investments. The primary objective of short-term investments is to provide highly liquid, low risk methods of return on funds, which have not been committed to the other aforementioned asset classes. The asset class may not exceed 20% of the market value of the System's aggregate portfolio.

Asset allocation is a dynamic process and, as such, the allocation decision should be revisited as market conditions change. In order to recognize this dynamism, the allocation targets within the recommended ranges of each asset class for the prospective quarter should be included in the quarterly strategy report.

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### III. Procedures

1. 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.
2. The Investment Committee of the System shall approve all investments made within the prescribed investment policy. These Investment Committees, in their approval, are considered to be signing for the respective Board of Control. If any purchase or sale is questioned by a member of the Investment Committee as to whether it is within given Board 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.
3. Each week the Secretary-Treasurer of the System will send to the investment advisor the list of actual activities for written confirmation, which will then be forwarded to the System's Board of Control members upon receipt.
4. The staff members of the investment advisor will meet at least quarterly with members of the RSA staff and interested Board of Control members to cover subjects of mutual interest.
5. 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 pertinent to the decision making process.
6. 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.
7. The rules of the Securities Exchange Commission, the general policies of the Board of Control, and the Alabama Ethics Commission shall govern the ethical conduct of employees. The RSA 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. The staff will abide by the Alabama Ethics Commission Advisory Opinion No. 673.

*Investment Section*

Teachers' Retirement System Investment Policy Statement

Adopted December 9, 2015, and Effective March 1, 2016

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**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)).

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- 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.

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## 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%
<b>Total</b>	<b>100%</b>	

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.

## *Investment Section*

### Teachers' Retirement System Investment Policy Statement (Continued)

Adopted December 9, 2015, and Effective March 1, 2016

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#### **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.

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### *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.

*Investment Section*

Teachers' Retirement System Investment Policy Statement (Continued)

Adopted December 9, 2015, and Effective March 1, 2016

**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.

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

<b>Core Fund</b>	<b>S&amp;P 500</b>
<b>S&amp;P 500 Fund</b>	S&P 500
<b>MidCap Active Fund (SSF)</b>	S&P 400 MidCap
<b>S&amp;P MidCap Index</b>	S&P 400 MidCap
<b>S&amp;P SmallCap Index</b>	S&P 600 SmallCap
<b>Policy Fund</b>	S&P 500
<b>Value Fund</b>	S&P 500

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***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:

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

## *Investment Section*

### Employees' Retirement System Investment Policy Statement

For the Fiscal Year Ended September 30, 2016

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#### **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.

The Judicial Retirement Fund 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.

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- 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 Section*

### Employees' Retirement System Investment Policy Statement (Continued)

For the Fiscal Year Ended September 30, 2016

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#### ***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.

- 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%-50%
Alternative Investments	1%	10%	0%-15%
Real Estate	2%	10%	0%-15%
Short-term investments	5%	3%	0%-5%

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.

## *Investment Section*

### Employees' Retirement System Investment Policy Statement (Continued)

For the Fiscal Year Ended September 30, 2016

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#### **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.

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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.

# RETIREMENT SYSTEMS OF ALABAMA

## Investment Section

### Employees' Retirement System Investment Policy Statement (Continued)

For the Fiscal Year Ended September 30, 2016

#### 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:

<b>Domestic Equity</b>	<b>Custom Benchmark</b>	<b>(see description below)</b>
<b>International Equity</b>	MSCI E AFE Net	
<b>Domestic Fixed Income</b>	Custom Benchmark	(see description below)
<b>International Fixed Income</b>	WGBI Non-US	Currently, there are no International Fixed Income portfolios in the plan.
<b>Cash</b>	ML 90-Day T-Bill	
<b>Alternative Investments</b>	-If an equity investment, the Russell 3000 +3% -If a debt investment, the Barclay Capital Agency plus 3%.	
<b>Real Estate</b>	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:

<b>Core Fund</b>	<b>S&amp;P 500</b>
<b>S&amp;P 500 Fund</b>	S&P 500
<b>MidCap Active Fund (SSF)</b>	S&P 400 MidCap
<b>S&amp;P MidCap Index</b>	S&P 400 MidCap
<b>S&amp;P SmallCap Index</b>	S&P 600 SmallCap
<b>SmallCap Active Fund</b>	S&P 600 SmallCap

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***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:

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

RETIREMENT SYSTEMS OF ALABAMA

*Investment Section*

Teachers' Retirement System

Schedule of Investment Performance

	TIME WEIGHTED RATES OF RETURN - GROSS OF FEE			
	1 Year	3 Years	5 Years	10 Years
<b><u>U.S. Equity</u></b>				
TRS Core Fund	14.75%	10.77%	15.14%	6.65%
TRS S&P 500 Fund	15.24%	11.18%	16.32%	7.27%
TRS Mid Cap Index	15.32%	9.39%	16.51%	9.19%
TRS S&P Small Cap Index	18.67%	9.55%	18.51%	9.25%
TRS Midcap Active Fund (Ssf)	10.20%	6.45%	14.28%	8.02%
TRS Large Cap Policy Fund	19.69%	n/a	n/a	n/a
TRS Large Cap Value Fund	13.56%	n/a	n/a	n/a
<b>TRS Total Domestic Equity</b>	<b>15.13%</b>	<b>10.47%</b>	<b>16.00%</b>	<b>7.35%</b>
<b>TRS Custom Domestic Equity Index</b>	<b>15.63%</b>	<b>10.68%</b>	<b>16.53%</b>	<b>7.62%</b>
<i>S&amp;P 500</i>	<i>15.43%</i>	<i>11.16%</i>	<i>16.37%</i>	<i>7.24%</i>
<i>S&amp;P Mid Cap 400</i>	<i>15.33%</i>	<i>9.35%</i>	<i>16.50%</i>	<i>9.11%</i>
<i>S&amp;P Smallcap 600</i>	<i>18.12%</i>	<i>9.04%</i>	<i>17.86%</i>	<i>8.71%</i>
<b><u>International Equity</u></b>				
TRS Emerging Markets Fund	18.30%	-0.02%	4.29%	n/a
TRS International Equities	7.56%	1.11%	7.97%	2.39%
<b>TRS Total International Equity</b>	<b>8.93%</b>	<b>1.09%</b>	<b>7.62%</b>	<b>2.42%</b>
<b>TRS Custom International Equity Index</b>	<b>7.85%</b>	<b>0.46%</b>	<b>n/a</b>	<b>n/a</b>
<i>MSCI Eafe (Net)</i>	<i>6.52%</i>	<i>0.48%</i>	<i>7.39%</i>	<i>1.82%</i>
<i>MSCI Emerging Markets</i>	<i>16.78%</i>	<i>-0.56%</i>	<i>3.03%</i>	<i>3.94%</i>
<b>TRS Total Global Equity</b>	<b>13.88%</b>	<b>8.45%</b>	<b>14.14%</b>	<b>6.23%</b>
<b>TRS Custom Global Equity Index</b>	<b>14.05%</b>	<b>8.48%</b>	<b>14.37%</b>	<b>6.23%</b>
<b><u>Fixed Income</u></b>				
TRS Domestic Fixed Income	6.13%	4.46%	3.93%	5.60%
<b>TRS Custom Domestic Fixed Index</b>	<b>6.07%</b>	<b>4.44%</b>	<b>3.64%</b>	<b>5.17%</b>
<i>Barclays Aggregate Bond</i>	<i>5.19%</i>	<i>4.03%</i>	<i>3.08%</i>	<i>4.79%</i>
TRS Private Placements	4.12%	9.99%	12.96%	8.20%
<b>TRS Total Fixed Income</b>	<b>5.16%</b>	<b>7.06%</b>	<b>7.97%</b>	<b>6.71%</b>
<b><u>Alternative Investments</u></b>				
TRS Preferred And Private Equity	-6.24%	4.94%	14.77%	-7.94%
TRS Real Estate	7.49%	7.70%	5.58%	3.20%
<b>TRS Total Alternatives</b>	<b>5.21%</b>	<b>6.79%</b>	<b>6.18%</b>	<b>0.71%</b>
<b>TRS Total Fixed Income Plus Alternatives</b>	<b>5.21%</b>	<b>6.98%</b>	<b>7.33%</b>	<b>4.79%</b>
<b><u>Cash</u></b>				
TRS Cash Account	0.42%	0.21%	0.19%	1.16%
TRS Short Term Investments	0.74%	0.49%	0.46%	1.53%
<b>TRS Total Cash</b>	<b>0.64%</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>
<b><u>Total Plan</u></b>				
<b>TRS Total Plan</b>	<b>10.41%</b>	<b>7.75%</b>	<b>11.21%</b>	<b>5.56%</b>
<b>TRS Total Plan Policy</b>	<b>10.71%</b>	<b>6.94%</b>	<b>10.49%</b>	<b>5.43%</b>

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
<b><u>U.S. Equity</u></b>				
ERS Core Fund	14.76%	10.78%	15.17%	6.71%
ERS S&P 500 Fund	15.17%	11.13%	16.30%	7.25%
ERS Mid Cap Index	15.32%	9.39%	16.52%	9.20%
ERS S&P Small Cap Index	18.67%	9.55%	18.51%	9.25%
ERS Midcap Active Fund (Ssf)	10.23%	6.45%	14.27%	8.04%
ERS Large Cap Policy Fund	19.69%	n/a	n/a	n/a
ERS Large Cap Value Fund	13.56%	n/a	n/a	n/a
<b>ERS Total Domestic Equity</b>	<b>14.98%</b>	<b>10.41%</b>	<b>15.91%</b>	<b>7.32%</b>
<b>ERS Custom Domestic Equity Index</b>	<b>15.58%</b>	<b>10.69%</b>	<b>16.52%</b>	<b>7.62%</b>
<i>S&amp;P 500</i>	<i>15.43%</i>	<i>11.16%</i>	<i>16.37%</i>	<i>7.24%</i>
<i>S&amp;P Mid Cap 400</i>	<i>15.33%</i>	<i>9.35%</i>	<i>16.50%</i>	<i>9.11%</i>
<i>S&amp;P Smallcap 600</i>	<i>18.12%</i>	<i>9.04%</i>	<i>17.86%</i>	<i>8.71%</i>
<b><u>International Equity</u></b>				
ERS Emerging Markets Fund	18.30%	-0.02%	4.29%	n/a
ERS International Equities	7.56%	1.11%	7.97%	2.39%
<b>ERS Total International Equity</b>	<b>9.03%</b>	<b>1.09%</b>	<b>7.59%</b>	<b>2.43%</b>
<b>ERS Custom International Equity Index</b>	<b>7.94%</b>	<b>0.46%</b>	<b>n/a</b>	<b>n/a</b>
<i>MSCI Eafe (Net)</i>	<i>6.52%</i>	<i>0.48%</i>	<i>7.39%</i>	<i>1.82%</i>
<i>MSCI Emerging Markets</i>	<i>16.78%</i>	<i>-0.56%</i>	<i>3.03%</i>	<i>3.94%</i>
<b>ERS Total Global Equity</b>	<b>13.85%</b>	<b>8.51%</b>	<b>14.16%</b>	<b>6.27%</b>
<b>ERS Custom Global Equity Index</b>	<b>14.13%</b>	<b>8.60%</b>	<b>14.47%</b>	<b>6.30%</b>
<b><u>Fixed Income</u></b>				
ERS Domestic Fixed Income	6.10%	4.46%	3.92%	5.60%
<b>ERS Custom Domestic Fixed Index</b>	<b>6.05%</b>	<b>4.44%</b>	<b>3.65%</b>	<b>5.17%</b>
<i>Barclays Aggregate Bond</i>	<i>5.19%</i>	<i>4.03%</i>	<i>3.08%</i>	<i>4.79%</i>
ERS Private Placements	4.13%	10.00%	12.93%	8.19%
<b>ERS Total Fixed Income</b>	<b>5.11%</b>	<b>7.15%</b>	<b>8.09%</b>	<b>6.74%</b>
<b><u>Alternative Investments</u></b>				
ERS Preferred And Private Equity	-4.11%	4.82%	13.47%	-4.97%
ERS Real Estate	7.29%	7.60%	5.56%	3.16%
<b>ERS Total Alternatives</b>	<b>4.92%</b>	<b>6.29%</b>	<b>6.04%</b>	<b>0.10%</b>
<b>ERS Total Fixed Income Plus Alternatives</b>	<b>5.07%</b>	<b>6.84%</b>	<b>7.29%</b>	<b>4.41%</b>
<b><u>Cash</u></b>				
ERS Cash Account	0.42%	0.21%	0.19%	1.18%
ERS Short Term Investments	0.79%	0.53%	0.48%	1.53%
<b>ERS Total Cash</b>	<b>0.70%</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>
<b><u>Total Plan</u></b>				
<b>ERS Total Plan</b>	<b>10.22%</b>	<b>7.65%</b>	<b>11.03%</b>	<b>5.34%</b>
<b>ERS Total Plan Policy</b>	<b>11.24%</b>	<b>7.65%</b>	<b>10.85%</b>	<b>5.59%</b>

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
<b><u>U.S. Equity</u></b>				
JRF S&P 500 Fund	15.28%	11.27%	16.42%	7.35%
JRF Mid Cap Index	15.27%	9.38%	16.53%	9.17%
JRF S&P Small Cap Index	18.67%	9.55%	18.51%	9.24%
JRF Large Cap Policy Fund	19.69%	n/a	n/a	n/a
JRF Large Cap Value Fund	13.55%	n/a	n/a	n/a
<b>JRF Total Domestic Equity</b>	<b>15.56%</b>	<b>11.02%</b>	<b>16.52%</b>	<b>7.60%</b>
<b>JRF Custom Domestic Equity Index</b>	<b>15.58%</b>	<b>10.88%</b>	<b>16.44%</b>	<b>7.44%</b>
<i>S&amp;P 500</i>	<i>15.43%</i>	<i>11.16%</i>	<i>16.37%</i>	<i>7.24%</i>
<i>S&amp;P Mid Cap 400</i>	<i>15.33%</i>	<i>9.35%</i>	<i>16.50%</i>	<i>9.11%</i>
<i>S&amp;P Smallcap 600</i>	<i>18.12%</i>	<i>9.04%</i>	<i>17.86%</i>	<i>8.71%</i>
<b><u>International Equity</u></b>				
JRF Emerging Markets Fund	18.13%	-0.01%	4.30%	n/a
JRF International Equities	7.57%	1.12%	7.99%	n/a
<b>JRF Total International Equity</b>	<b>9.22%</b>	<b>1.09%</b>	<b>7.56%</b>	<b>n/a</b>
<b>JRF Custom International Equity Index</b>	<b>8.14%</b>	<b>0.51%</b>	<b>n/a</b>	<b>n/a</b>
<i>MSCI Eafe (Net)</i>	<i>6.52%</i>	<i>0.48%</i>	<i>7.39%</i>	<i>1.82%</i>
<i>MSCI Emerging Markets</i>	<i>16.78%</i>	<i>-0.56%</i>	<i>3.03%</i>	<i>3.94%</i>
<b>JRF Total Global Equity</b>	<b>14.19%</b>	<b>8.87%</b>	<b>14.58%</b>	<b>6.59%</b>
<b>JRF Custom Global Equity Index</b>	<b>13.96%</b>	<b>8.64%</b>	<b>14.36%</b>	<b>n/a</b>
<b><u>Fixed Income</u></b>				
JRF Domestic Fixed Income	5.73%	4.32%	3.76%	5.53%
<b>JRF Custom Domestic Fixed Index</b>	<b>5.82%</b>	<b>4.34%</b>	<b>3.53%</b>	<b>5.06%</b>
<i>Barclays Aggregate Bond</i>	<i>5.19%</i>	<i>4.03%</i>	<i>3.08%</i>	<i>4.79%</i>
JRF Private Placements	11.54%	6.96%	8.25%	5.25%
<b>JRF Total Fixed Income</b>	<b>5.82%</b>	<b>4.33%</b>	<b>3.85%</b>	<b>5.20%</b>
<b><u>Alternative Investments</u></b>				
JRF Real Estate	13.27%	11.66%	8.14%	8.13%
<b>JRF Total Alternatives</b>	<b>13.27%</b>	<b>8.52%</b>	<b>5.48%</b>	<b>4.80%</b>
<b>JRF Total Fixed Income Plus Alternatives</b>	<b>6.18%</b>	<b>4.61%</b>	<b>3.96%</b>	<b>5.09%</b>
<b><u>Cash</u></b>				
JRF Cash Account	0.42%	0.21%	0.19%	1.09%
JRF Short Term Investments	0.78%	0.51%	0.49%	1.55%
<b>JRF Total Cash</b>	<b>0.62%</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>
<b><u>Total Plan</u></b>				
<b>JRF Total Plan</b>	<b>10.94%</b>	<b>7.46%</b>	<b>10.99%</b>	<b>6.28%</b>
<b>JRF Total Plan Policy</b>	<b>10.90%</b>	<b>7.42%</b>	<b>11.08%</b>	<b>5.89%</b>

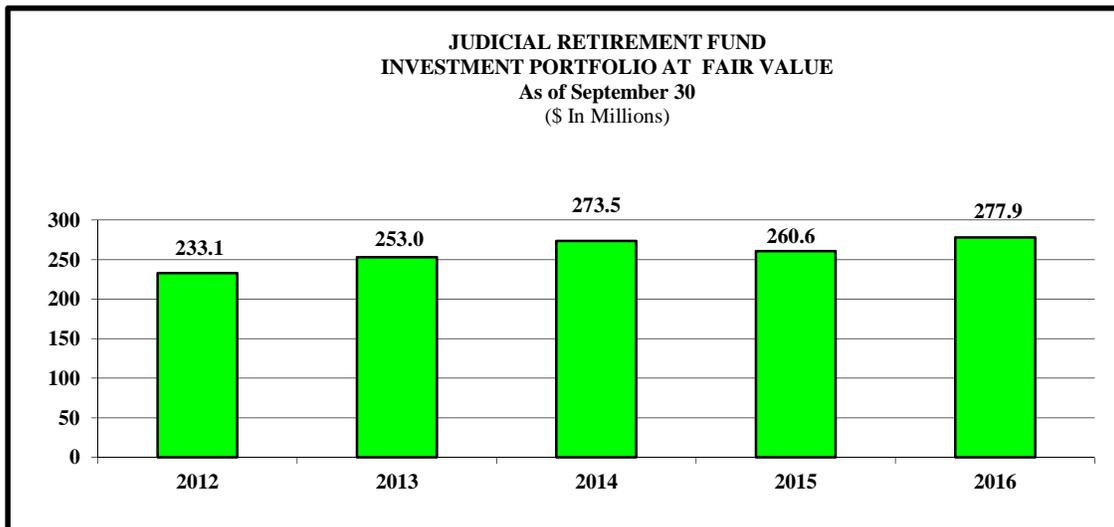
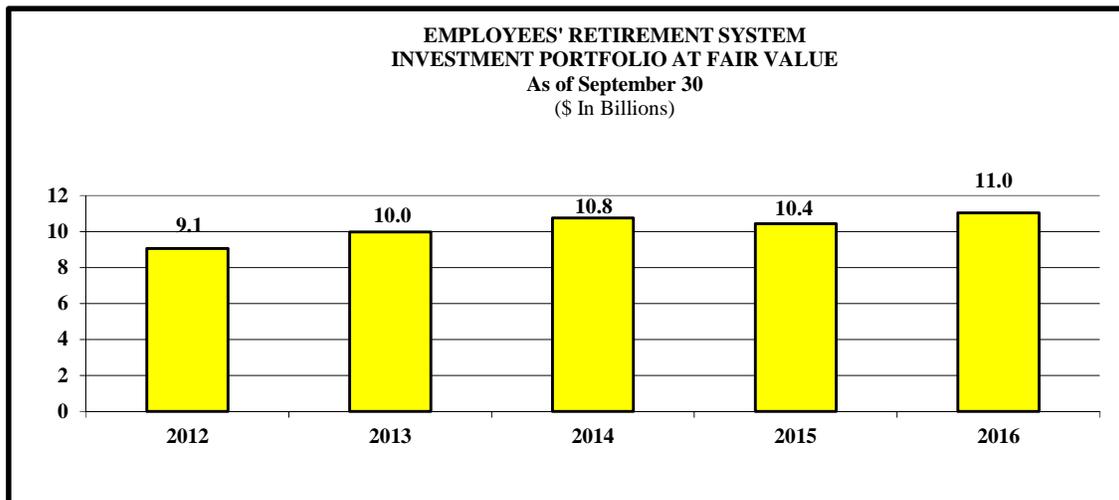
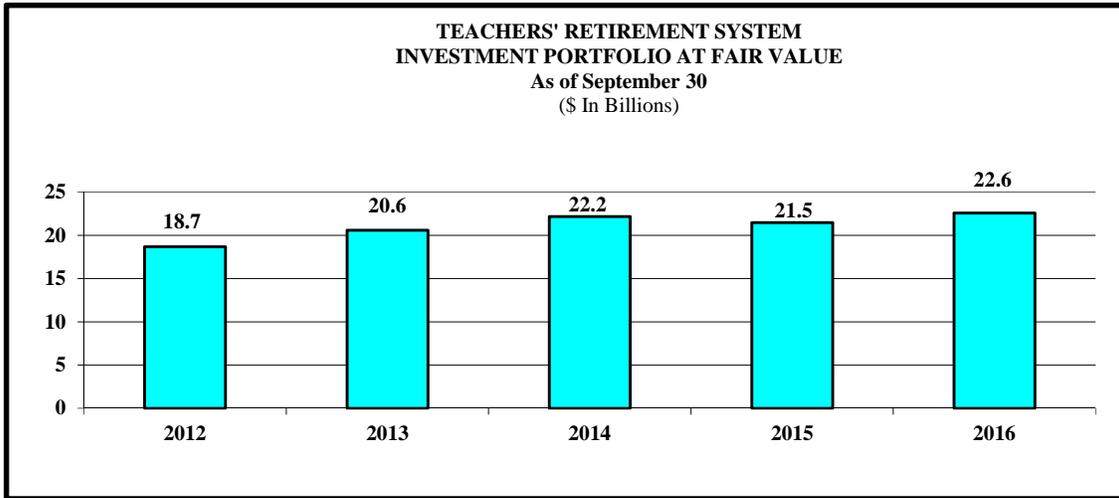
Note: Calculations are prepared using the time-weighted rate-of-return methodology based upon market values

RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Investment Portfolio at Fair Value

Five-Year Comparison

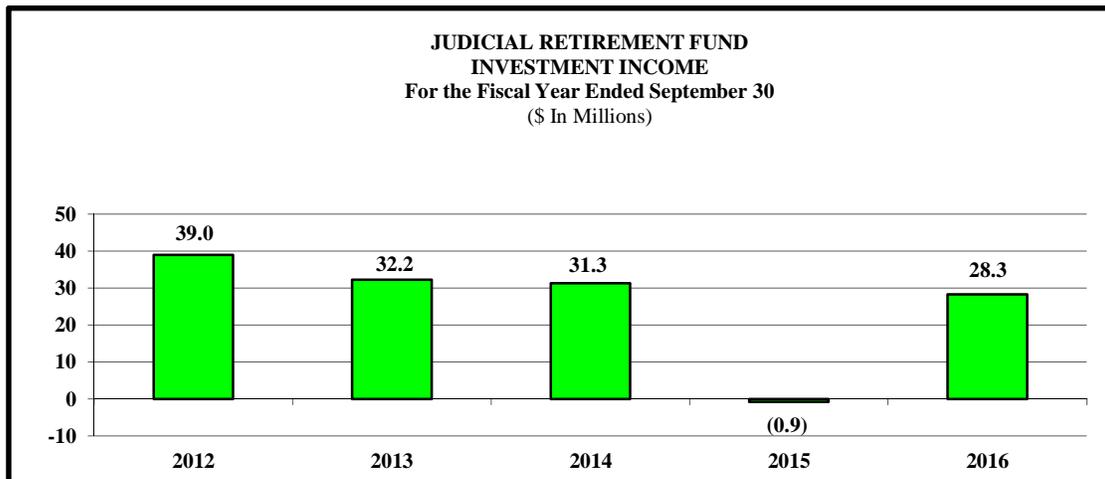
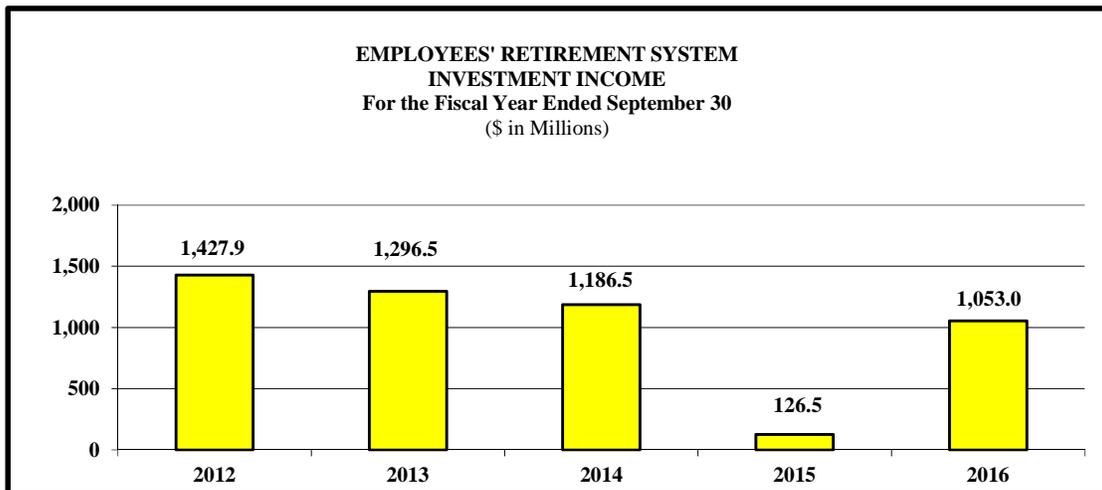
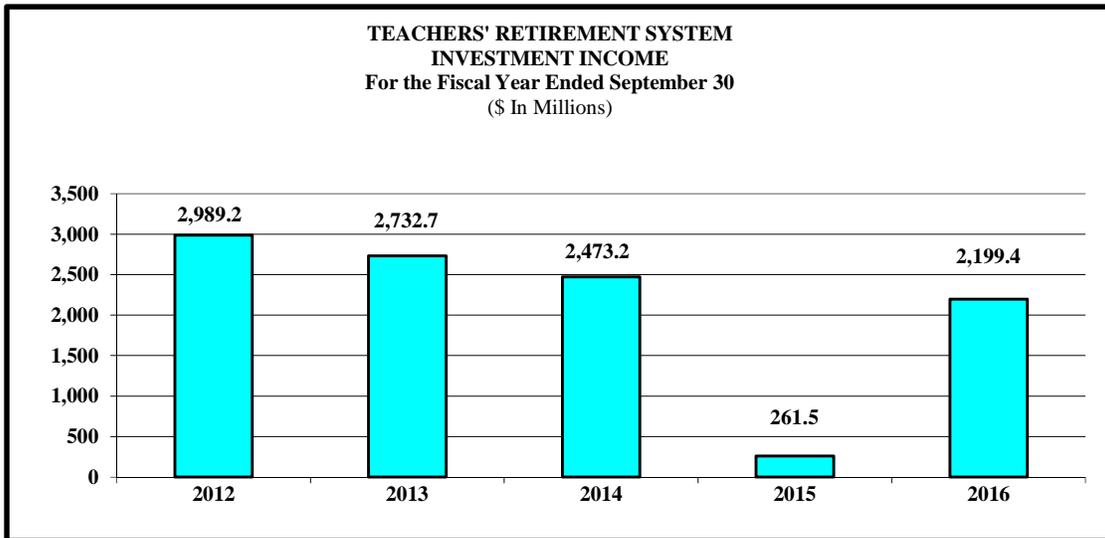


RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Investment Income

Five-Year Comparison

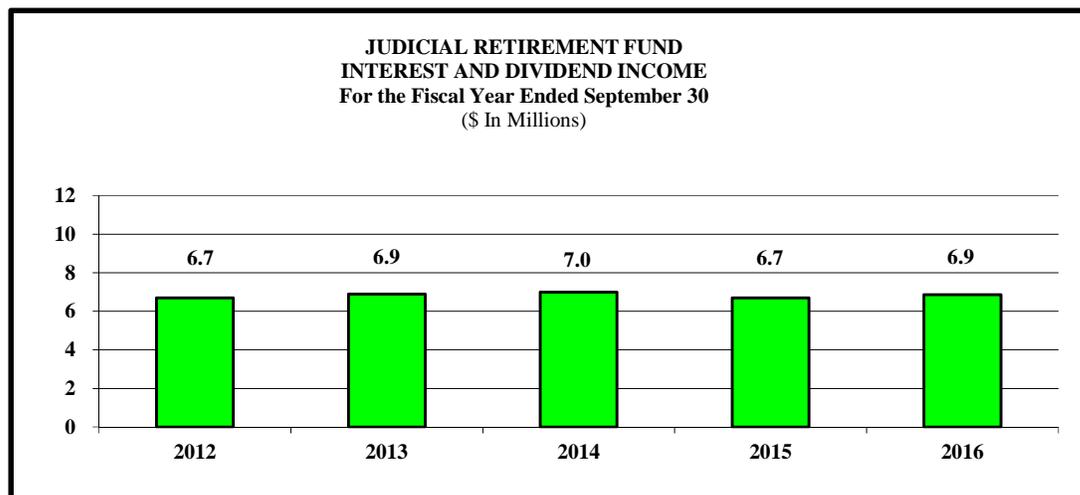
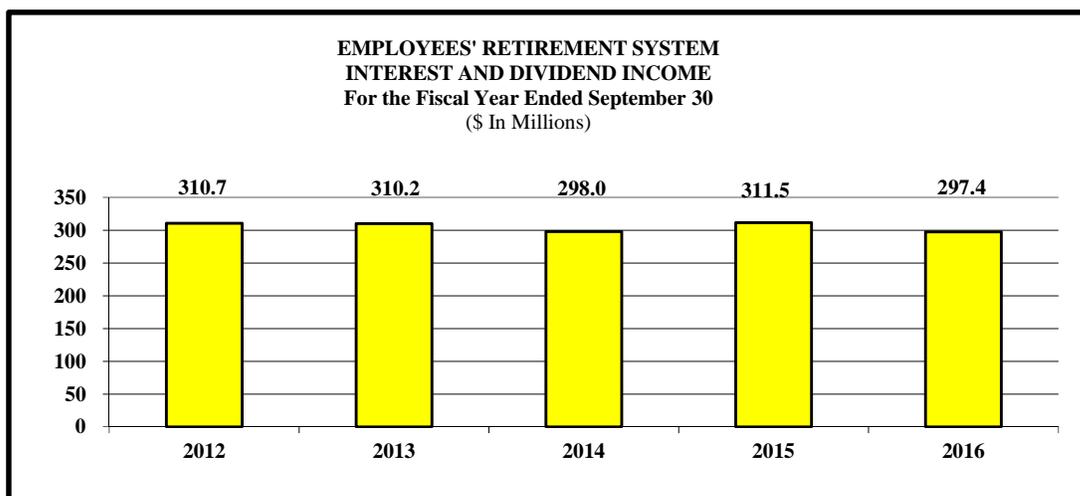
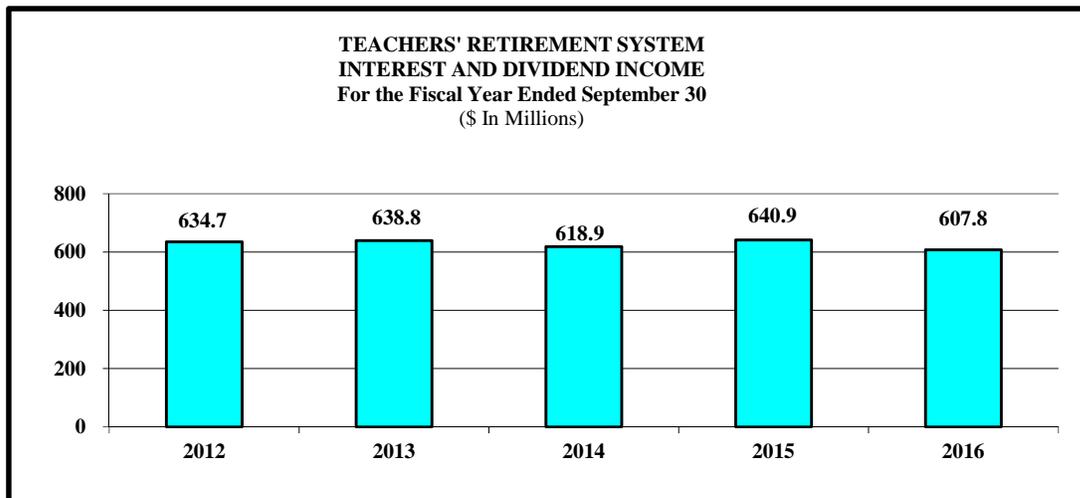


# RETIREMENT SYSTEMS OF ALABAMA

## Investment Section

### Interest and Dividend Income

#### Five-Year Comparison

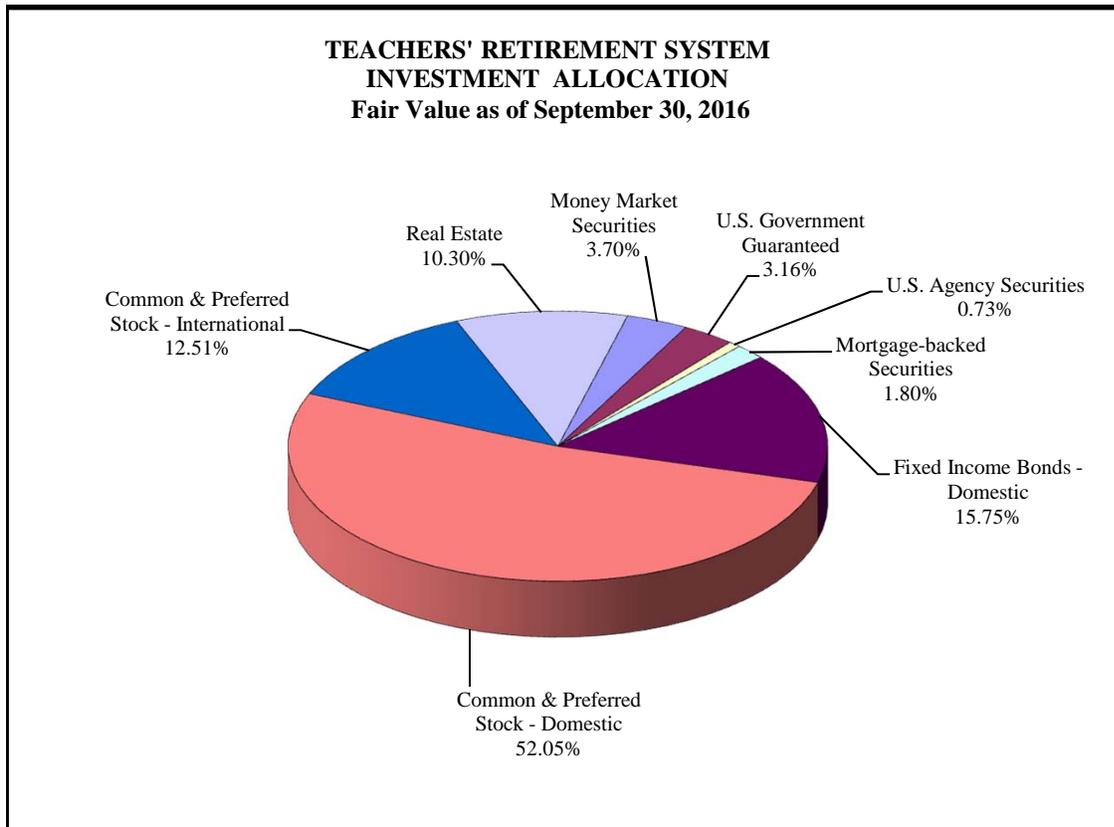


**RETIREMENT SYSTEMS OF ALABAMA**

*Investment Section*

Teachers' Retirement System

Investment Allocation and Summary



**TEACHERS' RETIREMENT SYSTEM  
INVESTMENT SUMMARY AT FAIR VALUE  
As of September 30, 2016**

(\$ In Thousands)

	<b>Fair Value</b>	<b>% of Fair Value</b>
Money Market Securities and Mutual Funds	\$ 837,201	3.70
U.S. Government Guaranteed	715,494	3.16
U.S. Agency Securities	165,712	0.73
Mortgage-backed Securities	407,451	1.80
Fixed Income Bonds		
Domestic	3,564,956	15.75
Common and Preferred Stocks		
Domestic	11,784,393	52.05
International	2,832,378	12.51
Real Estate	2,331,076	10.30
<b>Total Investments</b>	<b>\$ 22,638,661</b>	<b>100.00</b>

## RETIREMENT SYSTEMS OF ALABAMA

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### Investment Section

### Teachers' Retirement System

### Largest Stock and Bond Holdings

---

#### TEACHERS' RETIREMENT SYSTEM LARGEST STOCK HOLDINGS

September 30, 2016

(Amounts In Thousands)

	<u>Shares</u>	<u>Stock</u>	<u>Fair Value</u>
1)	13	New Water Street Corporation	\$ 1,237,807
2)	988	Goldman Sachs Small Cap Equity Linked Note	950,248
3)	502,500	Toronto Dominion Bank S & P 500 Index Equity Linked Senior Note	502,500
4)	10,181	ISHARES MSCI Emerging Markets	381,267
5)	1,546	Apple, Inc.	174,736
6)	2,235	Microsoft Corporation	128,751
7)	87	Raycom Preferred 10% Non-Cumulative	125,287
8)	1,189	Exxon Mobil Corporation	103,815
9)	113	Amazon.Com Inc.	94,506
10)	785	Johnson & Johnson	92,705

#### TEACHERS' RETIREMENT SYSTEM LARGEST BOND HOLDINGS

September 30, 2016

(Amounts In Thousands)

	<u>Par</u>	<u>Bonds</u>	<u>Fair Value</u>
1)	1,188,259	Raycom Media, 8%, Due 9/30/2032	\$ 1,709,913
2)	579,733	Community News, 8%, Due 12/31/2032	353,414
3)	57,261	SIO2 Medical Products Inc., 8%, Due 12/31/2018	77,050
4)	68,666	U.S. Treasury, 2.75%, Due 2/15/2024	74,931
5)	63,840	U.S. Treasury, 2.25%, Due 11/15/2024	67,397
6)	61,232	U.S. Treasury, 2.125%, Due 8/15/2021	63,955
7)	58,364	U.S. Treasury, 3.125%, Due 4/30/2017	59,234
8)	56,926	U.S. Treasury, 1.375%, Due 1/31/2020	57,678
9)	52,831	U.S. Treasury, 2.5%, Due 5/15/2024	56,768
10)	62,711	American Spirit Media, LLC, 8%, Due 12/31/2032	56,479

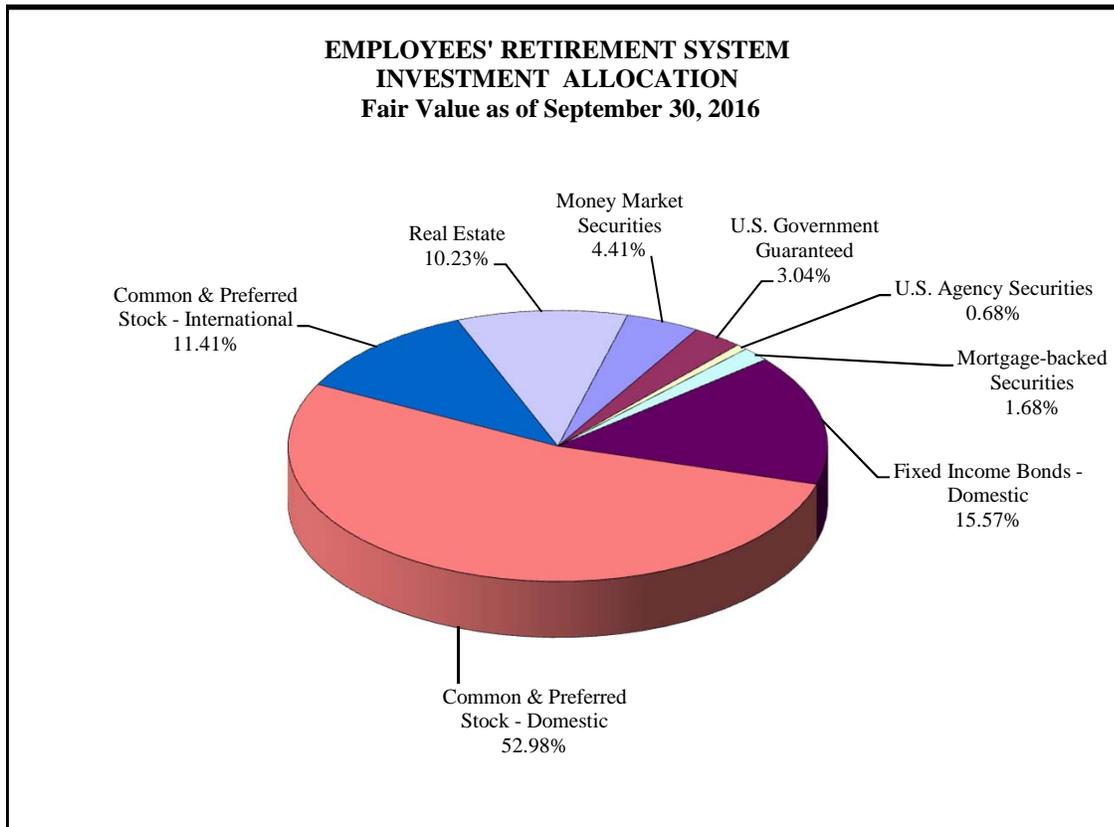
A complete list of portfolio holdings is available upon request.

**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, 2016**

(\$ In Thousands)

	<b>Fair Value</b>	<b>% of Fair Value</b>
Money Market Securities and Mutual Funds	\$ 487,223	4.41
U.S. Government Guaranteed	336,165	3.04
U.S. Agency Securities	74,990	0.68
Mortgage-backed Securities	185,617	1.68
Fixed Income Bonds		
Domestic	1,719,532	15.57
Common and Preferred Stocks		
Domestic	5,850,539	52.98
International	1,260,074	11.41
Real Estate	1,129,763	10.23
<b>Total Investments</b>	<b>\$ 11,043,903</b>	<b>100.00</b>

## RETIREMENT SYSTEMS OF ALABAMA

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### *Investment Section*

### Employees' Retirement System Largest Stock and Bond Holdings

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#### EMPLOYEES' RETIREMENT SYSTEM LARGEST STOCK HOLDINGS

September 30, 2016

(Amounts in Thousands)

	<u>Shares</u>	<u>Stock</u>	<u>Fair Value</u>
1)	6	New Water Street Corporation	\$ 568,736
2)	406	Goldman Sachs Small Cap Equity Linked Note	390,800
3)	240,000	Toronto Dominion Bank S & P 500 Index Equity Linked Senior Note	240,000
4)	4,862	ISHARES MSCI Emerging Markets	182,078
5)	87	Raycom Preferred 10% Non-Cumulative	125,287
6)	998	Apple, Inc.	112,872
7)	1,791	Microsoft Corporation	103,155
8)	894	Exxon Mobil Corporation	78,056
9)	91	Amazon.Com Inc.	76,137
10)	560	Johnson & Johnson	66,207

#### EMPLOYEES' RETIREMENT SYSTEM LARGEST BOND HOLDINGS

September 30, 2016

(Amounts In Thousands)

	<u>Par</u>	<u>Bonds</u>	<u>Fair Value</u>
1)	590,346	Raycom Media, 8%, Due 9/30/2032	\$ 849,512
2)	292,095	Community News, 8%, Due 12/31/2032	178,066
3)	28,203	SIO2 Medical Products Inc., 8%, Due 12/31/2018	37,950
4)	33,001	U.S. Treasury, 2.125%, Due 8/15/2021	34,469
5)	31,236	U.S. Treasury, 2.75%, Due 2/15/2024	34,086
6)	29,131	U.S. Treasury, 2.5%, Due 5/15/2024	31,302
7)	29,268	U.S. Treasury, 2.25%, Due 11/15/2024	30,899
8)	32,646	American Spirit Media, LLC, 8%, Due 12/31/2032	29,402
9)	26,546	U.S. Treasury, 3.125%, Due 4/30/2017	26,942
10)	25,877	U.S. Treasury, 1.375%, Due 1/31/2020	26,219

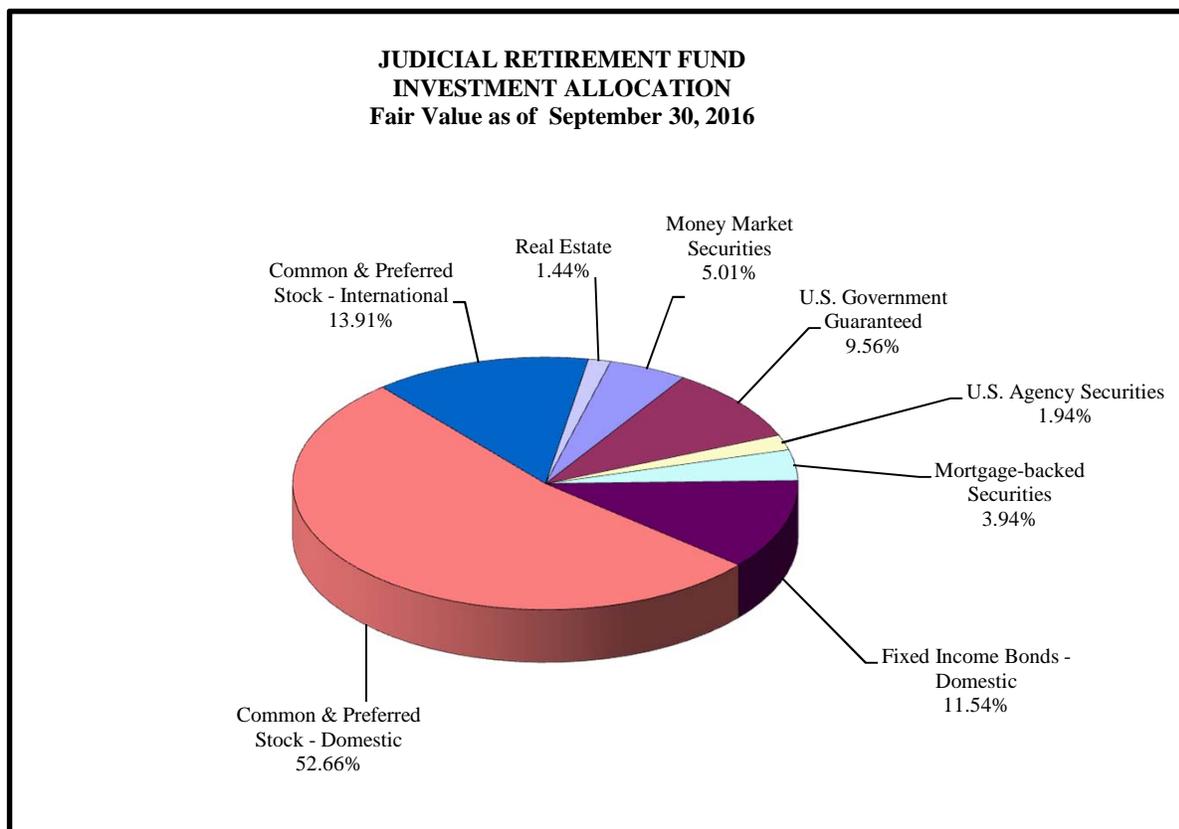
A complete list of portfolio holdings is available upon request.

**RETIREMENT SYSTEMS OF ALABAMA**

*Investment Section*

Judicial Retirement Fund

Investment Allocation and Summary



**JUDICIAL RETIREMENT FUND  
INVESTMENT SUMMARY AT FAIR VALUE  
As of September 30, 2016**

(\$ In Thousands)

	<u>Fair Value</u>	<u>% of Fair Value</u>
Money Market Securities and Mutual Funds	\$ 13,924	5.01
U.S. Government Guaranteed	26,564	9.56
U.S. Agency Securities	5,396	1.94
Mortgage-backed Securities	10,943	3.94
Fixed Income Bonds		
Domestic	32,064	11.54
Common and Preferred Stocks		
Domestic	146,359	52.66
International	38,660	13.91
Real Estate	4,009	1.44
<b>Total Investments</b>	<b>\$ 277,920</b>	<b>100.00</b>

## RETIREMENT SYSTEMS OF ALABAMA

### Investment Section

### Judicial Retirement Fund

### Largest Stock and Bond Holdings

#### JUDICIAL RETIREMENT FUND LARGEST STOCK HOLDINGS

September 30, 2016

(Amounts in Thousands)

	<u>Shares</u>	<u>Stock</u>	<u>Fair Value</u>
1)	9	Goldman Sachs Small Cap Equity Linked Note	\$ 8,559
2)	7,500	Toronto Dominion Bank S & P 500 Index Equity Linked Senior Note	7,500
3)	170	ISHARES MSCI Emerging Markets	6,382
4)	*	New Water Street Corporation	4,009
5)	31	Apple, Inc.	3,544
6)	45	Microsoft Corporation	2,611
7)	24	Exxon Mobil Corporation	2,105
8)	2	Amazon.Com Inc.	1,965
9)	16	Johnson & Johnson	1,884
10)	14	Facebook Inc.	1,779

\* Less than 1,000 shares

#### JUDICIAL RETIREMENT FUND LARGEST BOND HOLDINGS

September 30, 2016

(Amounts In Thousands)

	<u>Par</u>	<u>Bonds</u>	<u>Fair Value</u>
1)	4,544	U.S. Treasury, 2.125%, Due 8/15/2021	\$ 4,746
2)	3,986	U.S. Treasury, 2.5%, Due 5/15/2024	4,283
3)	2,499	U.S. Treasury, 3.75%, Due 11/15/2018	2,654
4)	1,871	U.S. Treasury, 2.75%, Due 2/15/2024	2,042
5)	1,863	U.S. Treasury, 2.25%, Due 11/15/2024	1,967
6)	1,727	Farmer Mac Gtd, 5.125%, Due 4/19/2017	1,769
7)	1,619	U.S. Treasury, 2.5%, Due 2/15/2045	1,675
8)	1,593	U.S. Treasury, 3.125%, Due 4/30/2017	1,617
9)	1,590	U.S. Treasury, 1.375%, Due 1/31/2020	1,611
10)	1,280	U.S. Treasury, 3.375%, Due 11/15/2019	1,376

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, 2016

	Stock		Fixed Securities		Total Commissions (000's)
	Commissions Per Share	# of Shares (000's)	Commissions (000's)	Commissions (000's)	
Bank of America Merrill Lynch	\$ 0.0149	18,208	\$ 271	\$ 133	\$ 404
Barclays	0.0459	7,015	322	46	368
Bernstein	0.0252	11,913	300	-	300
BTIG	0.0203	3,002	61	-	61
Cantor Fitzgerald	-	-	-	2	2
Citigroup	0.0324	14,319	464	124	588
Convergex	0.0436	7,623	332	-	332
Cornerstone	0.0502	1,276	64	-	64
Cowen	0.0475	1,496	71	-	71
Credit Suisse	0.0498	723	36	9	45
CRT Capital Group	0.0506	810	41	-	41
Deutsche Bank	0.0499	6,134	306	30	336
Goldman Sachs	0.0019	21,215	40	102	142
Harbor Financial	0.0500	400	20	-	20
Howard Weil	0.0501	978	49	-	49
Iberia	0.0500	140	7	-	7
International Strategy and Investment -ISI	0.0471	9,466	446	-	446
Issuer Designated	-	-	-	245	245
Jefferies	0.0215	6,141	132	-	132
JP Morgan Chase	0.0500	1,499	75	131	206
Keybank Capital Markets	0.0501	1,138	57	19	76
Leerink Swann	0.0509	511	26	-	26
Morgan Keegan	0.0493	406	20	-	20
Morgan Stanley	0.0243	28,267	686	105	791
National Bank of Commerce - NBC Securities	0.0500	1,700	85	-	85
Raymond James	0.0499	1,023	51	5	56
Renaissance Macro Securities - Renmac	0.0502	2,033	102	-	102
Royal Bank of Canada - RBC	0.0501	5,472	274	-	274
Sandler O'Neill	0.0457	1,095	50	-	50
Securities Capital	0.0494	425	21	-	21
Southwest Securities	0.0507	375	19	-	19
Stifel Nicolaus	0.0482	11,905	574	25	599
Strategas	0.0341	10,526	359	-	359
Suntrust	-	-	-	53	53
Union Bank of Switzerland - UBS	0.0505	970	49	-	49
Wells Fargo	0.0284	17,247	490	130	620
<b>Totals</b>		<b>195,451</b>	<b>\$ 5,900</b>	<b>\$ 1,159</b>	<b>\$ 7,059</b>
<b>Average Commission Per Share of Stock =</b>		<b>\$ 0.0302</b>			

Note: Certain Broker agreements include provisions for commission sharing.



Component Units of the State of Alabama  
**Comprehensive Annual Financial Report**

# ACTUARIAL SECTION





# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

June 24, 2016

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 1/15<sup>th</sup> 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.

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144

Phone (678) 388-1700 • Fax (678) 388-1730

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- 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, 2015. This valuation indicates that the current employer contribution rates of 12.24% of payroll for Tier I members and 11.01% 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 135,986 active members as of September 30, 2015.

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, 2005 to September 30, 2010. 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, 2015
- Ten-Year History of Average Monthly Benefit Payments as of September 30



Board of Control  
June 24, 2016  
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.**

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Edward Macdonald', with a stylized, cursive script.

Edward A. Macdonald, ASA, FCA, MAAA  
President

A handwritten signature in blue ink, appearing to read 'John Garrett', with a stylized, cursive script.

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

S:\Alabama Teachers\2017 Correspondence\TRS CAFR letter\_09302016.docx

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Teachers' 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, 2010, submitted to and adopted by the Board on January 27, 2012.

**Ultimate Investment Rate of Return:** 8% per annum, compounded annually, including price inflation at 3%.

**Salary Increases:** Representative values of the assumed annual rates of future salary increases are as follows and include wage inflation at 3.25% per annum:

<u>Years of Service</u>	<u>Annual % Rate</u>
0	8.25
1	6.50
2	5.75
3	5.50
4	5.25
5	5.00
6	5.00
7	4.75
8 to 13	4.50
14 to 18	4.00
19 & Over	3.50

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

<u>Age</u>	<u>Male</u>						
	<u>Death*</u>	<u>Annual % Rate of</u>					
		<u>Disability</u>		<u>Withdrawal</u>			
		<u>Years of Service</u>		<u>Years of Service</u>			
		<u>0-24</u>	<u>25+</u>	<u>0-4</u>	<u>5-9</u>	<u>10-20</u>	<u>20+</u>
20	0.02	0.04		30.00			
25	0.02	0.05		15.68	10.00		
30	0.03	0.05		14.25	5.40	5.00	
35	0.05	0.10		14.25	5.40	3.00	
40	0.07	0.18		14.00	5.40	2.50	1.00
45	0.09	0.31	0.10	14.00	5.00	2.50	1.00
50	0.12	0.51	0.10	12.50	4.50	2.50	1.00
55	0.20	0.96	0.10	12.00	4.00	2.50	1.00
60	0.40	0.50	0.10	12.00	4.00		
65	0.77			12.00	6.00		
69	1.20			12.00	6.00		

\*Rates of pre-retirement mortality are according to the sex distinct RP-2000 Combined Mortality Table Projected with Scale AA to 2015 set back one year for females with an adjustment factor of 0.75 for males and 0.50 for females.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Teachers' Retirement System

Summary of Actuarial Assumptions and Methods (Continued)

Age	Female						
	Death*	Annual % Rate of					
		Disability		Withdrawal			
		Years of Service		Years of Service			
		0-24	25+	0-4	5-9	10-20	20+
20	0.01	0.10		28.50			
25	0.01	0.10		14.00	8.00		
30	0.01	0.10		14.00	5.80	4.00	
35	0.02	0.15		14.00	5.00	3.00	
40	0.03	0.16		12.00	4.50	2.10	1.10
45	0.04	0.33	0.15	11.50	3.75	2.10	0.75
50	0.06	0.63	0.15	11.00	3.75	2.10	0.75
55	0.11	0.99	0.15	11.00	3.75	2.50	0.75
60	0.21	0.25	0.25	12.00	4.50		
65	0.40			14.00	6.00		
69	0.62			14.00	6.00		

\*Rates of pre-retirement mortality are according to the sex distinct RP-2000 Combined Mortality Table Projected with Scale AA to 2015 set back one year for females with an adjustment factor of 0.75 for males and 0.50 for females.

**Service Retirement:**

The assumed annual rates of service retirement for Tier 1 members who are first eligible for unreduced benefits upon attaining 25 years of service but before age 65 are as follows:

Age Group	Annual % Rate	
	Male*	Female **
47 & Under	20.00	25.00
48	20.00	17.00
49	20.00	16.00
50 to 52	15.00	16.00
53 to 54	14.00	16.00
55 to 59	15.00	20.00
60	15.00	15.00
61	20.00	25.00
62	35.00	35.00
63	30.00	25.00
64	25.00	30.00

\*Retirement rates are increased by 7% in the year first eligible for unreduced retirement from age 50 through age 54 and by 10% from age 55 through age 60.

\*\*Retirement rates are increased by 7% in the year first eligible for unreduced retirement from age 50 through age 54 and by 20% from age 55 through age 60.

The assumed annual rates of service retirement for Tier 1 members who are first eligible for unreduced benefits before attaining 25 years of service and all members age 65 and over are as follows:

Age	Annual % Rate	
	Male	Female
60	13.00	20.00
61	12.00	15.00
62	28.00	25.00
63	20.00	20.00
64	15.00	18.00
65	30.00	30.00
66	28.00	30.00
67	20.00	25.00
68	20.00	28.00
69	20.00	22.00
70	20.00	25.00
71 to 74	20.00	22.00
75 & Above	100.00	100.00

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	65.00
63	20.00	30.00	20.00	25.00
64	15.00	25.00	18.00	30.00
65	30.00	30.00	30.00	30.00
66	28.00	28.00	30.00	30.00
67	20.00	20.00	25.00	25.00
68	20.00	20.00	28.00	28.00
69	20.00	20.00	22.00	22.00
70	20.00	20.00	25.00	25.00
71 to 74	20.00	20.00	22.00	22.00
75 & Above	100.00	100.00	100.00	100.00

# RETIREMENT SYSTEMS OF ALABAMA

## Actuarial Section

### Teachers' Retirement System

#### Summary of Actuarial Assumptions and Methods (Continued)

**Deaths after Retirement:** Rates of mortality for the period after service retirement are according to the sex distinct RP-2000 Combined Mortality Table Projected with Scale AA to 2015 set back one year for females. Rates of mortality for the period after disability retirement are according to the RP-2000 Disabled Mortality Table with an adjustment factor of 0.85 for males. Representative values of the assumed annual rates of death after retirement are as follows:

Age	Annual % Rate of Death After			
	Service Retirement		Disability Retirement	
	Male	Female	Male	Female
35	0.07	0.04	1.92	0.75
40	0.10	0.05	1.92	0.75
45	0.12	0.08	1.92	0.75
50	0.16	0.12	2.46	1.15
55	0.27	0.21	3.01	1.65
60	0.53	0.41	3.57	2.18
65	1.03	0.80	4.26	2.80
70	1.77	1.38	5.32	3.76
75	3.06	2.26	6.98	5.22
80	5.54	3.74	9.30	7.23
85	9.97	6.35	12.04	10.02
90	17.27	11.39	15.59	14.00
95	25.96	17.74	22.74	19.45

**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. Assumed refunds are reduced by 10% to account for interest accumulation adjustments which are less than the "regular" 4% rate adopted by the Board.

**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. 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. 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 2.0.

**Valuation Interest Rate Smoothing:** The valuation liabilities are calculated using a smoothed interest rate method. The interest rate assumed during the look forward period (currently 25 years from the valuation date) is the investment rate of return expected to be earned during the look forward period based on the actual rate of return earned during the look back period (currently 5 years) such that the average assumed rate of return over the combined 30 year period is equivalent to the assumed ultimate investment rate of return (currently 8%). The interest rate after the 25 year look forward period is the ultimate investment rate of return of 8%.

**Corridor Limit on Interest Smoothing:** The smoothed interest rate used during the 25 year look forward period is limited to a corridor of 0.50% around the ultimate investment rate of return. In addition, the limited smoothed interest rate may not increase by more than 1/8% percent each year.

### **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 8%). 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.

# RETIREMENT SYSTEMS OF ALABAMA

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## *Actuarial Section*

### Teachers' Retirement System

#### Summary of Plan Provisions (Continued)

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#### **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.

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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.

## RETIREMENT SYSTEMS OF ALABAMA

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### *Actuarial Section*

#### Teachers' Retirement System

#### Summary of Plan Provisions (Continued)

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##### 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)

<b>Valuation Date</b>		<b>Number</b>	<b>Annual Payroll</b>	<b>Annual Average Pay</b>	<b>% Increase/ (Decrease) in Average Pay</b>
9/30/2015	A	135,986	\$ 6,297,938,621	\$ 46,313	0.77
9/30/2014	B	135,230	6,214,949,700	45,958	1.48
9/30/2013	C	133,919	6,065,042,345	45,289	2.06
9/30/2012	D	133,791	5,936,831,043	44,374	3.74
9/30/2011	E	135,768	5,807,655,862	42,776	(0.12)
9/30/2010	F	136,290	5,836,902,762	42,827	(0.01)

A - 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.

B - 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.

C - 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.

D - 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.

E - In addition, there are 5,625 employees with annual compensation of \$351,906,404 who are currently in the DROP program. Employers of the Retirement System contribute on this payroll.

F - In addition, there are 5,737 employees with annual compensation of \$346,301,313 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)

<b>Valuation Date</b>	<b>Actuarial Value of Assets (A)</b>	<b>Actuarial Liability (AAL) (B)</b>	<b>Unfunded AAL (UAAL) (B-A)</b>	<b>% Funded (A/B)</b>	<b>Covered Payroll (C)</b>	<b>UAAL as a % of Covered Payroll ((B-A)/C)</b>
9/30/2015	\$ 21,740,280	\$ 31,844,843	\$ 10,104,563	68.3	\$ 6,350,786	159.1
9/30/2014	20,809,871	30,837,829	10,027,958	67.5	6,335,161	158.3
9/30/2013	19,629,816	29,665,843	10,036,027	66.2	6,263,364	160.2
9/30/2012**	18,786,008	28,251,367	9,465,359	66.5	6,222,316	152.1
9/30/2011*	19,430,135	28,776,316	9,346,181	67.5	6,159,562	151.7
9/30/2010	20,132,779	28,299,523	8,166,744	71.1	6,183,204	132.1

\*\*Reflects changes in methods.

\*Reflects changes in assumptions.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Teachers' Retirement System

Supporting Schedules (Continued)

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

<b>SOLVENCY TEST</b>					<b>% of Accrued Liabilities Covered by Reported Assets</b>		
(Dollar Amounts in Thousands)							
<b>Valuation Date</b>	<b>Aggregate Accrued Liabilities For</b>			<b>Reported Assets</b>			
	<b>(1) Active Member Contributions</b>	<b>(2) Retirants and Beneficiaries</b>	<b>(3) Active Members (Employer Financed Portion)</b>		<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
9/30/2015	\$ 4,894,145	\$ 18,621,250	\$ 8,329,448	\$ 21,740,280	100	90	0.0
9/30/2014	4,589,021	18,104,369	8,144,439	20,809,871	100	90	0.0
9/30/2013	4,261,269	17,666,932	7,737,642	19,629,816	100	87	0.0
9/30/2012 &	3,921,179	17,085,972	7,244,216	18,786,008	100	87	0.0
9/30/2011 #	3,620,301	17,245,088	7,910,927	19,430,135	100	92	0.0
9/30/2010	3,498,959	16,083,293	8,717,271	20,132,779	100	100	6.3

& Reflects change in methods.

# Reflects changes in actuarial assumptions.

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

**SCHEDULE OF RETIRANTS AND BENEFICIARIES ADDED AND REMOVED FROM ROLLS**

<b>Fiscal Year Ended</b>	<b>Retirees Added §*</b>		<b>Retirees Removed</b>		<b>Retirees - Year-end*</b>		<b>% Increase/ (Decrease) in Annual Allowances</b>	<b>Average Annual Allowance</b>
	<b>Number</b>	<b>Annual Allowances (000s)</b>	<b>Number</b>	<b>Annual Allowances (000s)</b>	<b>Number</b>	<b>Annual Allowances (000s)</b>		
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
2011	4,088	87,692	1,212	25,189	73,384	1,356,254	4.83	18,482
2010	3,447	71,293	1,104	22,736	70,508	1,293,751	3.90	18,349

§ Includes retirees completing DROP participation and entering regular retirement.

\*Does not include active DROP participants.

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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, 2014	\$ 10,027,958
Normal Cost for 2015 Plan Year	86,226
Contributions Received During the Year	(714,885)
Interest to Year End	795,175
Expected Unfunded Actuarial Liability as of September 30, 2015	<u>10,194,475</u>
Actuarial (Gains)/Losses During the Year	
From Investments	(212,903)
From Actuarial Liabilities	122,991
Total Actuarial (Gains)/Losses During the Year	<u>(89,912)</u>
<b>Actual Unfunded Actuarial Liability as of September 30, 2015</b>	<b><u>\$ 10,104,563</u></b>



# Cavanaugh Macdonald

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June 24, 2016

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 1/15<sup>th</sup> 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.

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- For those employers with a funded percentage 100% or greater in the valuation prior to the adoption of the funding policy: In each valuation 1/15<sup>th</sup> 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, 2015. This valuation indicates that the current employer contribution rates for State employees (other than State policemen) of 13.94% of payroll for Tier I members and 13.29% of payroll for Tier II members and employer contribution rates for State policemen of 62.48% if payroll for Tier I members and 57.33% 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 84,563 total active members as of September 30, 2015.

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, 2005 to September 30, 2010. 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, 2015
- 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', written in a cursive style.

Edward A. Macdonald, ASA, FCA, MAAA  
President

A handwritten signature in blue ink, appearing to read 'John Garrett', written in a cursive style.

John Garrett, ASA, 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, 2010, submitted to and adopted by the Board on January 27, 2012.

**Ultimate Investment Rate of Return:** 8% per annum, compounded annually, including price inflation at 3%.

**Salary Increases:** Representative values of the assumed annual rates of future salary increases for State and Local Employees are as follows and include inflation at 3.25% per annum:

Years of Service	Annual % Rate
0	7.25
1	6.00
2	5.50
3	5.25
4	5.25
5	5.25
6	5.00
7	5.00
8 to 12	4.75
13 to 15	4.50
16	4.00
17 & Over	3.75

The assumed annual rate of future salary increases for State Police is 5% 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	0.03	0.04		28.00			
25	0.03	0.06		19.50	10.00		
30	0.05	0.08		17.50	7.00	5.00	
35	0.08	0.10		16.00	6.00	4.75	
40	0.10	0.27		15.50	4.50	3.50	2.50
45	0.14	0.42	0.25	14.00	4.00	3.00	2.25
50	0.20	0.77	0.25	13.00	4.00	2.75	2.00
55	0.36	1.53	0.25	12.00	3.75	2.75	2.00
60	0.71	2.50	0.25	12.00	4.25		
65	1.30			16.00	7.00		
69	1.99			17.00	7.00		

\*Rates of pre-retirement mortality are according to the sex distinct RP-2000 Combined Mortality Table Projected with Scale AA to 2015 set forward three years for males and set forward one year for females with an adjustment factor of 0.90 for males and 0.70 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	0.04		34.00			
25	0.01	0.06		24.00	12.00		
30	0.02	0.08		20.00	8.25	6.50	
35	0.03	0.14		18.00	7.25	6.00	
40	0.04	0.29		16.00	6.00	4.00	3.00
45	0.07	0.43	0.25	14.75	5.25	3.75	2.50
50	0.10	0.69	0.25	14.00	4.50	3.50	2.50
55	0.19	1.24	0.25	14.00	4.00	3.00	2.50
60	0.38	0.25	0.25	14.00	4.00		
65	0.71			14.00	8.50		
69	1.09			14.00	8.50		

\*Rates of pre-retirement mortality are according to the sex distinct RP-2000 Combined Mortality Table Projected with Scale AA to 2015 set forward three years for males and set forward one year for females with an adjustment factor of 0.90 for males and 0.70 for females.

State Police				
Annual % Rate of				
Age	Death*		Disability	Withdrawal**
	Male	Female		
20	0.03	0.01	0.08	3.00
25	0.03	0.01	0.10	3.00
30	0.05	0.02	0.14	2.50
35	0.08	0.03	0.22	1.75
40	0.10	0.04	0.34	1.75
45	0.14	0.07	0.46	1.75
50	0.20	0.10	0.60	
55	0.36	0.19		
60	0.71	0.38		
62	0.91	0.50		
65	1.30	0.71		

\*Rates of pre-retirement mortality are according to the sex distinct RP-2000 Combined Mortality Table Projected with Scale AA to 2015 set forward three years for males and set forward one year for females with an adjustment factor of 0.90 for males and 0.70 for females.

\*\*A rate of 4% is assumed during the first four years of employment.

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

<b>Tier 1 State and Local Employees</b>				
<b>Annual % Rate of Service Retirement</b>				
<b>Age</b>	<b>Under age 65 with 25 or more years of service</b>		<b>Under age 65 with less than 25 years of service &amp; All over age 65</b>	
	<b>Male*</b>	<b>Female**</b>	<b>Male</b>	<b>Female</b>
47 & Under	16.00	13.00		
48 to 51	11.00	11.00		
52 to 54	10.00	10.00		
55 to 59	16.00	16.00		
60	16.00	25.00	12.00	16.00
61	20.00	16.00	11.00	13.00
62	42.00	32.00	28.00	26.00
63	35.00	28.00	23.00	20.00
64	30.00	25.00	18.00	15.00
65			30.00	28.00
66			30.00	28.00
67			25.00	23.00
68 to 74			23.00	23.00
75 & Above			100.00	100.00

\*Retirement rates are increased by 10% in the year a member attains 25 years of service at or before age 60.

\*\*Retirement rates are increased by 7% in the year a member attains 25 years of service at or before age 60.

<b>Tier 2 State and Local Employees</b>				
<b>Annual % Rate of Service Retirement</b>				
<b>Age</b>	<b>Less than 25 years of service</b>		<b>25 or more years of service</b>	
	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>
62	40.00	45.00	55.00	60.00
63	23.00	20.00	35.00	28.00
64	18.00	15.00	30.00	25.00
65	30.00	28.00	30.00	28.00
66	30.00	28.00	30.00	28.00
67	25.00	23.00	25.00	23.00
68 to 74	23.00	23.00	23.00	23.00
75 & Above	100.00	100.00	100.00	100.00

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Employees' Retirement System

Summary of Actuarial Assumptions and Methods (Continued)

<b>Tier 1 State Police</b>			
<b>Annual % Rate of Service Retirement</b>			
<b>Age</b>	<b>Under age 60 with less than 20 years of service &amp; All over age 60</b>	<b>Under age 60 with between 20 and 24 years of service</b>	<b>Under Age 60 with 25 or more years of service</b>
< 52			25.00
52	10.00	25.00	25.00
53	10.00	25.00	25.00
54	10.00	25.00	25.00
55	10.00	15.00	25.00
56	10.00	15.00	25.00
57	10.00	15.00	25.00
58	10.00	15.00	25.00
59	10.00	15.00	25.00
60	40.00		
62	40.00		
65	100.00		

<b>Tier 2 State Police</b>			
<b>Annual % Rate of Service Retirement</b>			
<b>Age</b>	<b>Under age 60 with less than 20 years of service &amp; All over age 60</b>	<b>Under age 60 with between 20 and 24 years of service</b>	<b>Under Age 60 with 25 or more years of service</b>
56	40.00	60.00	75.00
57	10.00	15.00	25.00
58	10.00	15.00	25.00
59	10.00	15.00	25.00
60	40.00		
62	40.00		
65	100.00		

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**Death after Retirement:** The rates of mortality for the period after service retirement are according to the sex distinct RP-2000 Combined Mortality Table Projected with Scale AA to 2015 set forward three years for males and two years for females. The rates of mortality for the period after disability retirement are according to the sex distinct RP-2000 Disabled Mortality Table. In our opinion, the projection of the RP-2000 mortality rates with Scale AA continues to provide a sufficient margin in the assumed rates of mortality to all for additional improvement in mortality experience.

**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. 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 2.5 for State Employees and 3.0 for Local Employees and State Police.

**Valuation Interest Rate Smoothing:** The valuation liabilities are calculated using a smoothed interest rate method. The interest rate assumed during the look forward period (currently 25 years from the valuation date) is the investment rate of return expected to be earned during the look forward period based on the actual rate of return earned during the look back period (currently 5 years) such that the average assumed rate of return over the combined 30 year period is equivalent to the assumed ultimate investment rate of return (currently 8%). The interest rate after the 25 year look forward period is the ultimate investment rate of return of 8%.

**Corridor Limit on Interest Smoothing:** The smoothed interest rate used during the 25 year look forward period is limited to a corridor of 0.50% around the ultimate investment rate of return. In addition, the limited smoothed interest rate may not increase or decrease by more than 1/8% each year.

### **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 8%). 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.

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## Benefits – Members Classified as Other Than State Police

### Service Retirement Allowance

Condition for Allowance	<p>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.</p> <p>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.</p>
Amount of Allowance	<p>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.</p> <p>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.</p> <p>Tier 1 &amp; 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").</p>

### Disability Retirement Allowance

Condition for Allowance	<p>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.</p>
Amount of Allowance	<p>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.</p> <p>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.</p> <p>Tier 1 &amp; 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").</p>

## RETIREMENT SYSTEMS OF ALABAMA

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### *Actuarial Section*

#### Employees' Retirement System

#### Summary of Plan Provisions (Continued)

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##### 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.

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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)*).

# RETIREMENT SYSTEMS OF ALABAMA

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## *Actuarial Section*

### Employees' Retirement System

#### Summary of Plan Provisions (Continued)

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#### **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.

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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.

## RETIREMENT SYSTEMS OF ALABAMA

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### *Actuarial Section*

#### Employees' Retirement System

#### Summary of Plan Provisions (Continued)

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##### 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>
9/30/2015	A 84,563	\$ 3,461,155,131	\$ 40,930	2.34
9/30/2014	B 84,694	3,387,186,858	39,993	1.61
9/30/2013	C 84,035	3,307,511,468	39,359	6.02
9/30/2012	D 84,169	3,124,791,422	37,125	(5.88)
9/30/2011	E 85,633	3,377,717,419	39,444	(1.00)
9/30/2010	F 86,967	3,464,913,031	39,842	0.38

A - 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.

B - 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.

C - 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.

D - 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.

E - In addition, there are 2,708 members with compensation of \$162,963,178 who are currently participating in the DROP. Employers of the Retirement System contribute on this payroll.

F - In addition, there are 2,593 members with compensation of \$154,756,911 who are currently

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>
9/30/2015	\$ 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
9/30/2011	9,456,158	14,366,796	4,910,638	65.8	3,540,681	138.7
9/30/2010	9,739,331	14,284,119	4,544,788	68.2	3,619,670	125.6
9/30/2009	9,928,104	13,756,176	3,828,072	72.2	3,620,243	105.7

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Employees' Retirement System  
Supporting Schedules (Continued)

The following table provides a six-year history 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)	(2)	(3)		(1)	(2)	(3)
	Active Member Contributions	Retirants and Beneficiaries	Active Members (Employer Financed Portion)				
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
9/30/2011 #	2,112,356	7,722,942	4,531,498	9,456,158	100	95	0.0
9/30/2010	2,050,051	7,130,938	4,535,113	9,739,331	100	100	12.3

& Reflects changes in methods.

# Reflects changes in actuarial assumptions.

The following table presents a six-year history of data concerning 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)		
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
2011	2,444	53,577	921	17,228	38,582	643,014	5.99	16,666
2010	2,030	42,920	958	17,571	37,059	606,665	4.36	16,370

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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, 2014	\$ 5,003,713
Normal Cost for 2015 Plan Year	59,790
Contributions Received During the Year	(398,769)
Interest to Year End	<u>401,290</u>
Expected Unfunded Actuarial Liability as of September 30, 2015	<u>5,066,024</u>
Actuarial (Gains)/Losses During the Year	
From Investments	(80,905)
From Actuarial Liabilities	<u>149,343</u>
Total Actuarial (Gains)/Losses During the Year	<u>68,438</u>
<b>Actual Unfunded Actuarial Liability as of September 30, 2015</b>	<b><u><u>\$ 5,134,462</u></u></b>



# Cavanaugh Macdonald

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June 24, 2016

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.

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Board of Control  
June 24, 2016  
Page 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, 2015. This valuation indicates that the current employer contribution rate of 40.09% of payroll, for benefits then in effect, meet the basic financial objective and the goals of the funding policy as listed above. There are 338 active members as of September 30, 2015.

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, 2005 to September 30, 2010. 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 were 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, 2015
- 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,

Edward A. Macdonald, ASA, FCA, MAAA  
President

John Garrett, ASA, 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, 2010, submitted to and adopted by the Board on January 27, 2012.

**Ultimate Investment Rate of Return:** 8% per annum, compounded annually, including inflation at 3%.

**Salary Increases:** 4% per annum, compounded annually, including wage inflation at 3.25%.

**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	0.03	0.02	0.04
35	2.50	0.05	0.03	0.08
40	2.50	0.07	0.04	0.14
45	2.50	0.09	0.07	0.22
50	2.50	0.12	0.10	0.33
55	2.50	0.20	0.19	0.50
60	2.50	0.40	0.38	0.79
64	2.50	0.69	0.63	1.14

\*Rates of pre-retirement mortality are according to the sex distinct RP-2000 Combined Mortality Table Projected with Scale AA to 2015 set forward one year for females with an adjustment factor of 0.75 for males and 0.70 for females.

\*\*Disability rates turn off at retirement eligibility.

**Rates of Retirement:** Before age 70, 30% of members are assumed to retire in the first year of eligibility and 10% in each year thereafter. Of the remaining members, 50% are assumed to retire each year between ages 70 and 74, and all remaining members are assumed to retire at age 75.

**Deaths after Retirement:** Rates of mortality for the period after service retirement are according to the RP-2000 Mortality Table with projection scale AA to 2015 set forward one year for females. The RP-2000 Disabled Mortality Table adjusted for males by a factor of 0.85 is used for the period after disability retirement. Representative values of assumed mortality are as follows:

Age	Annual % Rate of Death After			
	Service Retirement		Disability Retirement	
	Male	Female	Male	Female
55	0.27	0.27	3.01	1.65
60	0.53	0.54	3.57	2.18
65	1.03	1.02	4.27	2.80
70	1.77	1.72	5.32	3.76
75	3.06	2.75	6.98	5.22
80	5.54	4.57	9.30	7.23
85	9.97	7.89	12.04	10.02
90	17.27	13.82	15.59	14.01

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**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 Members:** Member Contribution Balance is multiplied by a factor of 3.0.

**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 3.25% per year. The members' actual salaries at retirement are assumed to be equal to the salary prescribed by law for their position.

For district judges, a factor of 1.5 is applied to the liability for prospective spousal benefits to account for salary increases expected to occur between the member's retirement and death.

**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.

**Valuation Interest Rate Smoothing:** The valuation liabilities are calculated using a smoothed interest rate method. The interest rate assumed during the look forward period (currently 25 years from the valuation date) is the investment rate of return expected to be earned during the look forward period based on the actual rate of return earned during the look back period (currently 5 years) such that the average assumed rate of return over the combined 30 year period is equivalent to the assumed ultimate investment rate of return (currently 8%). The interest rate after the 25 year look forward period is the ultimate investment rate of return of 8%.

**Corridor Limit on Interest Smoothing:** The smoothed interest rate used during the 25 year look forward period is limited to a corridor of 0.50% around the ultimate investment rate of return. In addition, the smoothed interest rate may not increase or decrease by more than 1/8% each 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.

#### **Creditable Service**

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

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## Benefits

### Service Retirement Benefit

#### Condition of Benefit

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.

#### Amount of Benefit

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.

## RETIREMENT SYSTEMS OF ALABAMA

### *Actuarial Section*

#### Judicial Retirement Fund

#### Summary of Plan Provisions (Continued)

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##### 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** 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.

##### Spousal Benefit

**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.

##### 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)*).

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Member Contributions

Prior to October 1, 2011, each member contributed 6% of earnable compensation. From October 1, 2011, to September 30, 2012, each member will contribute 8.25% of earnable compensation. Beginning October 1, 2012, each member contributes 8.50% of earnable compensation.

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.

State Contributions

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>
9/30/2015	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
9/30/2011	334	41,826,338	125,229	(1.70)
9/30/2010	338	43,060,614	127,398	0.78

\*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>
9/30/2015	\$ 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
9/30/2011	235,870	393,635	157,765	59.9	41,826	377.2
9/30/2010	246,197	358,459	112,262	68.7	43,061	260.7

\*Reflects changes in methods

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)	(2)	(3)		(1)	(2)	(3)
	Active Member Contributions	Retirants and Beneficiaries	Active Members (Employer Financed Portion)				
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
9/30/2011	32,898	250,731	110,006	235,870	100	81	0.0
9/30/2010	33,950	218,969	105,540	246,197	100	97	0.0

\*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)		
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
2011	28	2,939	10	786	343	25,402	9.26	74,058
2010	15	1,446	11	838	325	23,249	2.69	71,535

RETIREMENT SYSTEMS OF ALABAMA

*Actuarial Section*

Judicial Retirement Fund

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, 2014	\$ 165,412
Normal Cost for 2015 Plan Year	5,676
Contributions Received During the Year	(14,667)
Interest to Year End	<u>12,658</u>
Expected Unfunded Actuarial Liability as of September 30, 2015	<u>169,079</u>
Actuarial (Gains)Losses During the Year	
From Investments	(2,687)
From Actuarial Liabilities	<u>(6,215)</u>
Total Actuarial (Gains)/Losses During the Year	<u>(8,902)</u>
<b>Actual Unfunded Actuarial Liability as of September 30, 2015</b>	<b><u><u>\$ 160,177</u></u></b>



Component Units of the State of Alabama  
**Comprehensive Annual Financial Report**

# STATISTICAL SECTION



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 155

Deductions by Type – Ten-Year History – page 156

Benefits by Type – Ten-Year History – page 157

Ten-Year History of Additions, Reductions, and Changes in Net Position – page 158

#### **Retirees and Beneficiaries**

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

Retired Members by Type of Benefit – page 164

Ten-Year History of Average Monthly Benefit Payments – page 167

#### **Participating Units**

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

Local Participating Employers – page 170

Largest Employers – Ten-Year History – page 180

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Additions by Source

Ten-Year History

(Amounts in Thousands)

TEACHERS' RETIREMENT SYSTEM  
ADDITIONS BY SOURCE

Fiscal Year	Member Contributions \$	Employer Contributions			Investment Income	Total
		Amount	Employer Rate (%)			
			Tier 1	Tier 2 ©		
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)
2008	327,004	729,995	11.75	-	(3,336,697)	(2,279,698)
2007	305,086	540,847	9.36	-	3,312,796	4,158,729

EMPLOYEES' RETIREMENT SYSTEM  
ADDITIONS BY SOURCE

Fiscal Year	Member Contributions \$	Amount	Employer Contributions				Local	Investment Income	Total
			Employer Rate (%)						
			State						
			Tier 1		Tier 2 ©				
		Regular	Law	Regular	Law				
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)
2008	191,654	329,339	10.26	30.42	-	-	*	(1,574,094)	(1,053,101)
2007	184,140	277,254	7.78	24.12	-	-	*	1,596,592	2,057,986

JUDICIAL RETIREMENT FUND  
ADDITIONS BY SOURCE

Fiscal Year	Member Contributions \$	Employer Contributions		Investment Income	Total
		Amount	Employer Rate (%)		
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
2008	2,707	9,880	23.05	(38,322)	(25,735)
2007	2,636	9,307	22.50	34,581	46,524

§ 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.

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Deductions by Type

Ten-Year History

(Amounts in Thousands)

**TEACHERS' RETIREMENT SYSTEM  
DEDUCTIONS BY TYPE**

<b>Fiscal Year</b>	<b>Benefit Payments</b>	<b>Contribution Refunds &amp; Death Benefits</b>	<b>Service Transfers</b>	<b>Administrative Expenses</b>	<b>Depreciation</b>	<b>Total</b>
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
2008	1,486,871	37,317	1,683	12,216	578	1,538,665
2007	1,397,808	37,474	2,406	9,614	480	1,447,782

**EMPLOYEES' RETIREMENT SYSTEM  
DEDUCTIONS BY TYPE**

<b>Fiscal Year</b>	<b>Benefit Payments</b>	<b>Contribution Refunds &amp; Death Benefits</b>	<b>Unit Withdrawals &amp; Service Transfers</b>	<b>Administrative Expenses</b>	<b>Depreciation</b>	<b>Total</b>
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
2008	655,467	31,387	3,355	9,892	311	700,412
2007	615,661	31,829	3,034	7,813	298	658,635

**JUDICIAL RETIREMENT FUND  
DEDUCTIONS BY TYPE**

<b>Fiscal Year</b>	<b>Benefit Payments</b>	<b>Contribution Refunds &amp; Death Benefits</b>	<b>Service Transfers</b>	<b>Administrative Expenses</b>	<b>Depreciation</b>	<b>Total</b>
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
2008	22,587	83	186	526	-	23,382
2007	21,356	183	-	474	-	22,013

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
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
2008	1,395,060	44,628	47,183	12,007	25,310
2007	1,313,092	40,432	44,284	11,695	25,779

**EMPLOYEES' RETIREMENT SYSTEM**

**BENEFITS BY TYPE**

Fiscal Year	Age & Service Benefits		Disability Benefits	Death Benefits & Refunds	
	Retirants	Survivors		Death	Resignation
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
2008	584,391	30,827	40,249	9,188	22,199
2007	548,425	28,595	38,641	7,779	24,050

**JUDICIAL RETIREMENT FUND**

**BENEFITS BY TYPE**

Fiscal Year	Age & Service Benefits		Disability Benefits	Death Benefits & Refunds	
	Retirants	Survivors		Death	Resignation
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
2008	18,807	3,387	393	-	83
2007	17,918	3,093	345	-	183

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Teachers' Retirement System

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

(Amounts in Thousands)

	2016	2015	2014	2013	2012
<b>Additions</b>					
Contributions					
Employee	\$ 472,390	\$ 473,903	\$ 477,300	\$ 474,241	\$ 456,518
Employer	751,902	737,671	739,547	627,892	618,306
Transfers from Employees' Retirement System	3,590	4,015	3,549	3,345	2,016
Transfers from Judicial Retirement Fund	-	-	-	-	-
Total Contributions	<u>1,227,882</u>	<u>1,215,589</u>	<u>1,220,396</u>	<u>1,105,478</u>	<u>1,076,840</u>
Investment Income					
From Investing Activities					
Net Increase/(Decrease) in Fair Value of Investments	1,589,279	(381,400)	1,853,288	2,090,646	2,349,955
Interest and Dividends	607,795	640,910	618,861	638,766	634,695
Total Investment Income from Investing Activities	2,197,074	259,510	2,472,149	2,729,412	2,984,650
Less: Investment Expenses, Net	7,731	6,407	5,732	5,712	5,260
Net Investment Income from Investing Activities	<u>2,189,343</u>	<u>253,103</u>	<u>2,466,417</u>	<u>2,723,700</u>	<u>2,979,390</u>
From Securities Lending Activities					
Securities Lending Income	15,930	11,512	9,629	12,753	13,670
Less Securities Lending Expenses:					
Borrower Rebates	2,825	365	65	401	433
Management Fees	3,044	2,782	2,829	3,346	3,465
Total Securities Lending Expenses	<u>5,869</u>	<u>3,147</u>	<u>2,894</u>	<u>3,747</u>	<u>3,898</u>
Net Income from Securities Lending Activities	<u>10,061</u>	<u>8,365</u>	<u>6,735</u>	<u>9,006</u>	<u>9,772</u>
Total Net Investment Income	<u>2,199,404</u>	<u>261,468</u>	<u>2,473,152</u>	<u>2,732,706</u>	<u>2,989,162</u>
Total Additions	<u>3,427,286</u>	<u>1,477,057</u>	<u>3,693,548</u>	<u>3,838,184</u>	<u>4,066,002</u>
<b>Deductions</b>					
Retirement Allowance Payments	2,155,784	2,075,302	1,997,595	1,893,321	1,800,805
Return of Contributions and Death Benefits	57,130	58,060	54,699	55,891	49,453
Transfers to Employees' Retirement System	6,223	3,432	2,880	1,823	1,937
Transfers to Judicial Retirement Fund	-	-	-	-	-
Administrative Expenses	14,873	15,074	13,103	12,591	11,555
Depreciation	4,709	4,258	4,336	4,312	4,344
Total Deductions	<u>2,238,719</u>	<u>2,156,126</u>	<u>2,072,613</u>	<u>1,967,938</u>	<u>1,868,094</u>
<b>Net Increase/(Decrease)</b>	<u>1,188,567</u>	<u>(679,069)</u>	<u>1,620,935</u>	<u>1,870,246</u>	<u>2,197,908</u>
<b>Net Position Restricted for Pension Benefits</b>					
Beginning of Year - as previously reported	21,747,731	22,441,307	20,820,372	18,950,126	16,752,218
Adjustment for Application of GASB 68	-	(14,507)	-	-	-
Beginning of Year - as adjusted	<u>21,747,731</u>	<u>22,426,800</u>	<u>20,820,372</u>	<u>18,950,126</u>	<u>16,752,218</u>
<b>End of Year</b>	<u><b>\$ 22,936,298</b></u>	<u><b>\$ 21,747,731</b></u>	<u><b>\$ 22,441,307</b></u>	<u><b>\$ 20,820,372</b></u>	<u><b>\$ 18,950,126</b></u>

	2011	2010	2009	2008	2007
<b>Additions</b>					
Contributions					
Employee	\$ 321,137	\$ 319,770	\$ 321,100	\$ 323,822	\$ 302,272
Employer	779,644	776,421	753,518	729,995	540,847
Transfers from Employees' Retirement System	2,059	-	2,606	3,182	2,814
Transfers from Judicial Retirement Fund	-	1,633	-	-	-
Total Contributions	<u>1,102,840</u>	<u>1,097,824</u>	<u>1,077,224</u>	<u>1,056,999</u>	<u>845,933</u>
Investment Income					
From Investing Activities					
Net Increase/(Decrease) in Fair Value of Investments	(278,407)	886,997	(2,083,048)	(4,057,823)	2,589,858
Interest and Dividends	624,546	559,941	580,656	705,555	719,910
Total Investment Income from Investing Activities	<u>346,139</u>	<u>1,446,938</u>	<u>(1,502,392)</u>	<u>(3,352,268)</u>	<u>3,309,768</u>
Less: Investment Expenses, Net	5,305	5,415	5,419	5,990	5,105
Net Investment Income from Investing Activities	<u>340,834</u>	<u>1,441,523</u>	<u>(1,507,811)</u>	<u>(3,358,258)</u>	<u>3,304,663</u>
From Securities Lending Activities					
Securities Lending Income	15,643	12,519	33,782	83,588	136,869
Less Securities Lending Expenses:					
Borrower Rebates	1,261	2,820	6,685	57,695	126,966
Management Fees	3,251	2,910	4,412	4,332	1,770
Total Securities Lending Expenses	<u>4,512</u>	<u>5,730</u>	<u>11,097</u>	<u>62,027</u>	<u>128,736</u>
Net Income from Securities Lending Activities	<u>11,131</u>	<u>6,789</u>	<u>22,685</u>	<u>21,561</u>	<u>8,133</u>
Total Net Investment Income	<u>351,965</u>	<u>1,448,312</u>	<u>(1,485,126)</u>	<u>(3,336,697)</u>	<u>3,312,796</u>
Total Additions	<u>1,454,805</u>	<u>2,546,136</u>	<u>(407,902)</u>	<u>(2,279,698)</u>	<u>4,158,729</u>
<b>Deductions</b>					
Retirement Allowance Payments	1,673,881	1,567,790	1,512,260	1,486,871	1,397,808
Return of Contributions and Death Benefits	49,304	43,628	42,337	37,317	37,474
Transfers to Employees' Retirement System	2,012	1,790	1,767	1,683	2,406
Transfers to Judicial Retirement Fund	-	-	-	-	-
Administrative Expenses	10,820	11,979	11,005	12,216	9,614
Depreciation	4,243	4,264	4,128	578	480
Total Deductions	<u>1,740,260</u>	<u>1,629,451</u>	<u>1,571,497</u>	<u>1,538,665</u>	<u>1,447,782</u>
<b>Net Increase/(Decrease)</b>	<u>(285,455)</u>	<u>916,685</u>	<u>(1,979,399)</u>	<u>(3,818,363)</u>	<u>2,710,947</u>
<b>Net Position Restricted for Pension Benefits</b>					
Beginning of Year - as previously reported	17,037,673	16,120,988	18,100,387	21,918,750	19,207,803
Adjustment for Application of GASB 68	-	-	-	-	-
Beginning of Year - as adjusted	<u>17,037,673</u>	<u>16,120,988</u>	<u>18,100,387</u>	<u>21,918,750</u>	<u>19,207,803</u>
<b>End of Year</b>	<u><b>\$ 16,752,218</b></u>	<u><b>\$ 17,037,673</b></u>	<u><b>\$ 16,120,988</b></u>	<u><b>\$ 18,100,387</b></u>	<u><b>\$ 21,918,750</b></u>

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Employees' Retirement System

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

(Amounts in Thousands)

	2016	2015	2014	2013	2012
<b>Additions</b>					
Contributions					
Employee	\$ 231,794	\$ 225,767	\$ 223,135	\$ 221,823	\$ 214,933
Employer	435,098	410,932	391,181	338,819	317,520
Transfers from Teachers' Retirement System	6,223	3,432	2,880	1,823	1,937
Transfers from Judicial Retirement Fund	-	55	1	-	-
Total Contributions	<u>673,115</u>	<u>640,186</u>	<u>617,197</u>	<u>562,465</u>	<u>534,390</u>
Investment Income					
From Investing Activities					
Net Increase/(Decrease) in Fair Value of Investments	753,836	(186,154)	888,303	984,714	1,114,737
Interest and Dividends	297,369	311,516	298,049	310,220	310,748
Total Investment Income from Investing Activities	1,051,205	125,362	1,186,352	1,294,934	1,425,485
Less: Investment Expenses, Net	2,883	2,771	2,766	2,549	2,256
Net Investment Income from Investing Activities	<u>1,048,322</u>	<u>122,591</u>	<u>1,183,586</u>	<u>1,292,385</u>	<u>1,423,229</u>
From Securities Lending Activities					
Securities Lending Income	7,481	5,353	4,199	5,780	6,445
Less Securities Lending Expenses:					
Borrower Rebates	1,356	164	21	186	174
Management Fees	1,416	1,290	1,235	1,519	1,642
Total Securities Lending Expenses	<u>2,772</u>	<u>1,454</u>	<u>1,256</u>	<u>1,705</u>	<u>1,816</u>
Net Income from Securities Lending Activities	<u>4,709</u>	<u>3,899</u>	<u>2,943</u>	<u>4,075</u>	<u>4,629</u>
Total Net Investment Income	<u>1,053,031</u>	<u>126,490</u>	<u>1,186,529</u>	<u>1,296,460</u>	<u>1,427,858</u>
Total Additions	<u>1,726,146</u>	<u>766,676</u>	<u>1,803,726</u>	<u>1,858,925</u>	<u>1,962,248</u>
<b>Deductions</b>					
Retirement Allowance Payments	1,038,517	1,018,515	948,478	895,475	848,464
Return of Contributions and Death Benefits	45,768	51,024	47,937	44,837	40,746
Unit Withdrawals	-	-	-	-	-
Transfers to Teachers' Retirement System	3,590	4,015	3,549	3,345	2,016
Transfers to Judicial Retirement Fund	78	44	83	242	164
Administrative Expenses	11,002	11,136	9,612	9,767	10,616
Depreciation	2,021	2,046	2,055	2,015	1,981
Total Deductions	<u>1,100,976</u>	<u>1,086,780</u>	<u>1,011,714</u>	<u>955,681</u>	<u>903,987</u>
<b>Net Increase/(Decrease)</b>	<b>625,170</b>	<b>(320,104)</b>	<b>792,012</b>	<b>903,244</b>	<b>1,058,261</b>
<b>Net Position Restricted for Pension Benefits</b>					
Beginning of Year - as previously reported	10,551,904	10,883,952	10,091,940	9,188,696	8,130,435
Adjustment for Application of GASB 68	-	(11,944)	-	-	-
Beginning of Year - as adjusted	<u>10,551,904</u>	<u>10,872,008</u>	<u>10,091,940</u>	<u>9,188,696</u>	<u>8,130,435</u>
<b>End of Year</b>	<b><u>\$ 11,177,074</u></b>	<b><u>\$ 10,551,904</u></b>	<b><u>\$ 10,883,952</u></b>	<b><u>\$ 10,091,940</u></b>	<b><u>\$ 9,188,696</u></b>

	2011	2010	2009	2008	2007
<b>Additions</b>					
Contributions					
Employee	\$ 193,697	\$ 194,968	\$ 208,446	\$ 189,785	\$ 181,734
Employer	394,998	377,898	451,139	329,339	277,254
Transfers from Teachers' Retirement System	2,012	1,790	1,767	1,683	2,406
Transfers from Judicial Retirement Fund	-	-	68	186	-
Total Contributions	<u>590,707</u>	<u>574,656</u>	<u>661,420</u>	<u>520,993</u>	<u>461,394</u>
Investment Income					
<i>From Investing Activities</i>					
Net Increase/(Decrease) in Fair Value of Investments	(112,758)	427,365	(1,180,523)	(1,919,746)	1,249,495
Interest and Dividends	<u>307,152</u>	<u>268,667</u>	<u>285,022</u>	<u>339,578</u>	<u>347,272</u>
Total Investment Income from Investing Activities	194,394	696,032	(895,501)	(1,580,168)	1,596,767
Less: Investment Expenses, Net	<u>2,308</u>	<u>2,398</u>	<u>2,651</u>	<u>3,747</u>	<u>3,725</u>
Net Investment Income from Investing Activities	<u>192,086</u>	<u>693,634</u>	<u>(898,152)</u>	<u>(1,583,915)</u>	<u>1,593,042</u>
<i>From Securities Lending Activities</i>					
Securities Lending Income	6,891	5,619	15,335	38,458	58,925
Less Securities Lending Expenses:					
Borrower Rebates	517	1,271	3,070	26,649	54,648
Management Fees	<u>1,521</u>	<u>1,305</u>	<u>1,994</u>	<u>1,988</u>	<u>727</u>
Total Securities Lending Expenses	<u>2,038</u>	<u>2,576</u>	<u>5,064</u>	<u>28,637</u>	<u>55,375</u>
Net Income from Securities Lending Activities	<u>4,853</u>	<u>3,043</u>	<u>10,271</u>	<u>9,821</u>	<u>3,550</u>
Total Net Investment Income	<u>196,939</u>	<u>696,677</u>	<u>(887,881)</u>	<u>(1,574,094)</u>	<u>1,596,592</u>
Total Additions	<u>787,646</u>	<u>1,271,333</u>	<u>(226,461)</u>	<u>(1,053,101)</u>	<u>2,057,986</u>
<b>Deductions</b>					
Retirement Allowance Payments	782,957	725,660	695,430	655,467	615,661
Return of Contributions and Death Benefits	36,798	33,868	32,640	31,387	31,829
Unit Withdrawals	-	-	14	-	-
Transfers to Teachers' Retirement System	2,059	1,633	2,606	3,182	2,814
Transfers to Judicial Retirement Fund	98	-	98	173	220
Administrative Expenses	10,002	10,334	9,413	9,892	7,813
Depreciation	<u>2,029</u>	<u>2,111</u>	<u>2,038</u>	<u>311</u>	<u>298</u>
Total Deductions	<u>833,943</u>	<u>773,606</u>	<u>742,239</u>	<u>700,412</u>	<u>658,635</u>
Net Increase/(Decrease)	(46,297)	497,727	(968,700)	(1,753,513)	1,399,351
<b>Net Position Restricted for Pension Benefits</b>					
Beginning of Year - as previously reported	8,176,732	7,679,005	8,647,705	10,401,218	9,001,867
Adjustment for Application of GASB 68	-	-	-	-	-
Beginning of Year - as adjusted	<u>8,176,732</u>	<u>7,679,005</u>	<u>8,647,705</u>	<u>10,401,218</u>	<u>9,001,867</u>
End of Year	<u>\$ 8,130,435</u>	<u>\$ 8,176,732</u>	<u>\$ 7,679,005</u>	<u>\$ 8,647,705</u>	<u>\$ 10,401,218</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>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>
<b>Additions</b>					
Contributions					
Employee	\$ 3,645	\$ 3,639	\$ 3,681	\$ 3,677	\$ 3,517
Employer	17,529	15,077	15,790	13,903	10,747
Transfers from Teachers' Retirement System	-	-	-	-	-
Transfers from Employees' Retirement System	78	44	83	242	164
Total Contributions	<u>21,252</u>	<u>18,760</u>	<u>19,554</u>	<u>17,822</u>	<u>14,428</u>
Investment Income					
<i>From Investing Activities</i>					
Net Increase/(Decrease) in Fair Value of Investments	21,302	(7,695)	24,197	25,207	32,112
Interest and Dividends	6,865	6,698	7,030	6,912	6,748
Total Investment Income from Investing Activities	28,167	(997)	31,227	32,119	38,860
Less: Investment Expenses, Net	-	-	-	-	-
Net Investment Income from Investing Activities	<u>28,167</u>	<u>(997)</u>	<u>31,227</u>	<u>32,119</u>	<u>38,860</u>
<i>From Securities Lending Activities</i>					
Securities Lending Income	258	195	167	184	215
Less Securities Lending Expenses:					
Borrower Rebates	58	7	1	10	12
Management Fees	46	47	49	48	52
Total Securities Lending Expenses	<u>104</u>	<u>54</u>	<u>50</u>	<u>58</u>	<u>64</u>
Net Income from Securities Lending Activities	<u>154</u>	<u>141</u>	<u>117</u>	<u>126</u>	<u>151</u>
Total Investment Income	<u>28,321</u>	<u>(856)</u>	<u>31,344</u>	<u>32,245</u>	<u>39,011</u>
Total Additions	<u>49,573</u>	<u>17,904</u>	<u>50,898</u>	<u>50,067</u>	<u>53,439</u>
<b>Deductions</b>					
Retirement Allowance Payments	30,893	30,348	29,826	29,112	27,183
Return of Contributions and Death Benefits	115	100	54	196	253
Transfers to Employees' Retirement System	-	55	1	-	-
Transfers to Teachers' Retirement System	-	-	-	-	-
Administrative Expenses	397	356	281	280	257
Total Deductions	<u>31,405</u>	<u>30,859</u>	<u>30,162</u>	<u>29,588</u>	<u>27,693</u>
<b>Net Increase/(Decrease)</b>	18,168	(12,955)	20,736	20,479	25,746
<b>Net Position Restricted for Pension Benefits</b>					
Beginning of Year - as previously reported	263,874	277,096	256,360	235,881	210,135
Adjustment for Application of GASB 68	-	(267)	-	-	-
Beginning of Year - as adjusted	<u>263,874</u>	<u>276,829</u>	<u>256,360</u>	<u>235,881</u>	<u>210,135</u>
<b>End of Year</b>	<b><u>\$ 282,042</u></b>	<b><u>\$ 263,874</u></b>	<b><u>\$ 277,096</u></b>	<b><u>\$ 256,360</u></b>	<b><u>\$ 235,881</u></b>

	2011	2010	2009	2008	2007
<b>Additions</b>					
Contributions					
Employee	\$ 2,556	\$ 2,566	\$ 2,603	\$ 2,534	\$ 2,416
Employer	10,906	10,814	10,326	9,880	9,307
Transfers from Teachers' Retirement System	-	-	-	-	-
Transfers from Employees' Retirement System	98	-	98	173	220
Total Contributions	<u>13,560</u>	<u>13,380</u>	<u>13,027</u>	<u>12,587</u>	<u>11,943</u>
Investment Income					
From Investing Activities					
Net Increase/(Decrease) in Fair Value of Investments	(4,961)	15,287	(6,612)	(46,910)	25,988
Interest and Dividends	6,853	6,551	7,026	8,206	8,500
Total Investment Income from Investing Activities	<u>1,892</u>	<u>21,838</u>	<u>414</u>	<u>(38,704)</u>	<u>34,488</u>
Less: Investment Expenses, Net	-	-	11	8	2
Net Investment Income from Investing Activities	<u>1,892</u>	<u>21,838</u>	<u>403</u>	<u>(38,712)</u>	<u>34,486</u>
From Securities Lending Activities					
Securities Lending Income	201	169	543	1,765	1,945
Less Securities Lending Expenses:					
Borrower Rebates	22	45	119	1,298	1,832
Management Fees	49	37	69	77	18
Total Securities Lending Expenses	<u>71</u>	<u>82</u>	<u>188</u>	<u>1,375</u>	<u>1,850</u>
Net Income from Securities Lending Activities	<u>130</u>	<u>87</u>	<u>355</u>	<u>390</u>	<u>95</u>
Total Investment Income	<u>2,022</u>	<u>21,925</u>	<u>758</u>	<u>(38,322)</u>	<u>34,581</u>
Total Additions	<u>15,582</u>	<u>35,305</u>	<u>13,785</u>	<u>(25,735)</u>	<u>46,524</u>
<b>Deductions</b>					
Retirement Allowance Payments	26,379	24,526	23,821	22,587	21,356
Return of Contributions and Death Benefits	34	235	145	83	183
Transfers to Employees' Retirement System	-	-	68	186	-
Transfers to Teachers' Retirement System	-	-	-	-	-
Administrative Expenses	276	317	552	526	474
Total Deductions	<u>26,689</u>	<u>25,078</u>	<u>24,586</u>	<u>23,382</u>	<u>22,013</u>
<b>Net Increase/(Decrease)</b>	<u>(11,107)</u>	<u>10,227</u>	<u>(10,801)</u>	<u>(49,117)</u>	<u>24,511</u>
<b>Net Position Restricted for Pension Benefits</b>					
Beginning of Year - as previously reported	221,242	211,015	221,816	270,933	246,422
Adjustment for Application of GASB 68	-	-	-	-	-
Beginning of Year - as adjusted	<u>221,242</u>	<u>211,015</u>	<u>221,816</u>	<u>270,933</u>	<u>246,422</u>
End of Year	<u>\$ 210,135</u>	<u>\$ 221,242</u>	<u>\$ 211,015</u>	<u>\$ 221,816</u>	<u>\$ 270,933</u>

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Teachers' Retirement System

Retired Members by Type of Benefit as of September 30, 2015

Amount of Monthly Benefit	Number of Retirants	Type of Retirement <sup>1</sup>			Option Selected <sup>2</sup>				
		A	B	C	Maximum	Opt-1	Opt-2	Opt-3	Opt-4
\$ 1 - 250	1,395	869	382	144	279	321	425	369	1
251 - 500	8,706	6,381	847	1,478	2,600	3,512	1,527	1,063	4
501 - 750	8,490	6,782	647	1,061	2,288	3,575	1,593	1,029	5
751 - 1,000	7,100	5,796	552	752	1,781	2,971	1,339	1,004	5
1,001 - 1,250	6,059	5,006	439	614	1,298	2,477	1,353	928	3
1,251 - 1,500	5,640	4,752	383	505	1,162	2,192	1,435	850	1
1,501 - 1,750	6,930	6,251	288	391	1,260	3,009	1,736	922	3
1,751 - 2,000	8,774	8,276	231	267	1,559	4,122	1,866	1,223	4
2,001 - 2,250	8,603	8,291	174	138	1,334	4,203	1,912	1,151	3
2,251 - 2,500	6,870	6,668	131	71	1,086	3,430	1,481	869	4
2,501 - 2,750	4,941	4,803	94	44	750	2,394	1,140	657	-
2,751 - 3,000	3,583	3,480	79	24	542	1,654	857	528	2
3,001 - 3,250	2,694	2,614	69	11	378	1,220	704	388	4
3,251 - 3,500	1,985	1,924	55	6	284	852	543	305	1
3,501 - 3,750	1,554	1,508	40	6	220	657	457	217	3
3,751 - 4,000	1,213	1,180	29	4	175	537	314	182	5
4,001 - 4,250	1,047	1,022	24	1	153	459	272	161	2
4,251 - 4,500	754	730	22	2	98	313	215	125	3
4,501 - 4,750	564	549	15	-	72	224	163	104	1
4,751 - 5,000	465	456	9	-	63	187	144	69	2
Over 5,000	1,965	1,908	53	4	243	657	681	369	15
<b>Totals <sup>3</sup></b>	<b>89,332</b>	<b>79,246</b>	<b>4,563</b>	<b>5,523</b>	<b>17,625</b>	<b>38,966</b>	<b>20,157</b>	<b>12,513</b>	<b>71</b>

<sup>1</sup> Type of Retirement

A - Service  
 B - Survivor benefit  
 C - Disability

<sup>2</sup> Option

Maximum - Life Annuity  
 Opt-1 - Cash Refund  
 Opt-2 - 100% Joint Survivorship  
 Opt-3 - 50% Joint Survivorship  
 Opt-4 - Other

<sup>3</sup> This includes 699 DROP

participants as of September 30, 2015.

# RETIREMENT SYSTEMS OF ALABAMA

## Statistical Section

### Employees' Retirement System

#### Retired Members by Type of Benefit as of September 30, 2015

Amount of Monthly Benefit	Number of Retirants	Type of Retirement <sup>1</sup>			Option Selected <sup>2</sup>				
		A	B	C	Maximum	Opt-1	Opt-2	Opt-3	Opt-4
\$ 1 - 250	366	156	191	19	69	38	70	179	10
251 - 500	3,688	2,335	961	392	965	941	836	886	60
501 - 750	4,997	3,435	743	819	1,579	1,582	883	853	100
751 - 1,000	4,663	3,269	532	862	1,480	1,587	730	775	91
1,001 - 1,250	5,118	4,032	400	686	1,259	1,954	948	841	116
1,251 - 1,500	4,509	3,766	297	446	1,039	1,815	893	674	88
1,501 - 1,750	4,219	3,700	205	314	908	1,688	842	709	72
1,751 - 2,000	3,804	3,491	113	200	773	1,596	674	695	66
2,001 - 2,250	3,146	2,941	70	135	630	1,239	644	583	50
2,251 - 2,500	2,562	2,396	73	93	509	1,052	523	437	41
2,501 - 2,750	2,091	1,983	43	65	378	873	445	361	34
2,751 - 3,000	1,613	1,542	38	33	296	661	322	307	27
3,001 - 3,250	1,368	1,317	33	18	246	592	259	253	18
3,251 - 3,500	946	916	15	15	165	409	184	171	17
3,501 - 3,750	767	754	7	6	148	340	132	134	13
3,751 - 4,000	532	520	6	6	99	241	81	102	9
4,001 - 4,250	444	440	3	1	67	205	81	81	10
4,251 - 4,500	344	333	6	5	60	147	73	60	4
4,501 - 4,750	269	264	5	-	50	111	52	53	3
4,751 - 5,000	228	223	3	2	48	89	37	48	6
Over 5,000	840	830	7	3	165	351	132	182	10
<b>Totals <sup>3</sup></b>	<b>46,514</b>	<b>38,643</b>	<b>3,751</b>	<b>4,120</b>	<b>10,933</b>	<b>17,511</b>	<b>8,841</b>	<b>8,384</b>	<b>845</b>

#### <sup>1</sup> Type of Retirement

A - Service  
B - Survivor benefit  
C - Disability

#### <sup>2</sup> Option

Maximum - Life Annuity  
Opt-1 - Cash Refund  
Opt-2 - 100% Joint Survivorship  
Opt-3 - 50% Joint Survivorship  
Opt-4 - Other

<sup>3</sup> Includes 396 DROP participants as of September 30, 2015.

Does not include 37 pensioners entitled to deferred benefits, but not currently in receipt.

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Judicial Retirement Fund

Retired Members by Type of Benefit as of September 30, 2015

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	5	-	4	1	5	-
1,001 - 1,250	4	-	4	-	4	-
1,251 - 1,500	10	-	10	-	10	-
1,501 - 1,750	8	1	7	-	7	1
1,751 - 2,000	6	-	6	-	6	-
2,001 - 2,250	2	-	2	-	2	-
2,251 - 2,500	1	-	1	-	1	-
2,501 - 2,750	1	-	1	-	1	-
2,751 - 3,000	5	1	3	1	5	-
3,001 - 3,250	5	3	2	-	3	2
3,251 - 3,500	17	4	13	-	13	4
3,501 - 3,750	43	1	42	-	43	-
3,751 - 4,000	1	1	-	-	1	-
4,001 - 4,250	6	6	-	-	2	4
4,251 - 4,500	7	6	1	-	4	3
4,501 - 4,750	11	7	3	1	5	6
4,751 - 5,000	13	7	6	-	6	7
Over 5,000	236	232	-	4	42	194
<b>Totals</b>	<b>384</b>	<b>269</b>	<b>108</b>	<b>7</b>	<b>163</b>	<b>221</b>

† 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
<b>2015</b>					
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
<b>2014</b>					
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
<b>2013</b>					
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
<b>2012</b>					
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
<b>2011</b>					
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
<b>2010</b>					
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
<b>2009</b>					
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
<b>2008</b>					
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
<b>2007</b>					
Average monthly benefit	\$ 650	\$ 1,044	\$ 1,490	\$ 2,001	\$ 2,791
Average final average salary	\$ 32,988	\$ 37,638	\$ 42,325	\$ 47,239	\$ 53,602
Number of active retirants	589	533	407	1,539	798
<b>2006</b>					
Average monthly benefit	\$ 634	\$ 982	\$ 1,349	\$ 1,917	\$ 2,839
Average final average salary	\$ 31,362	\$ 34,986	\$ 38,264	\$ 45,351	\$ 54,489
Number of active retirants	498	372	339	1,763	860

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
<b>2015</b>					
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
<b>2014</b>					
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
<b>2013</b>					
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
<b>2012</b>					
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
<b>2011</b>					
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
<b>2010</b>					
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
<b>2009</b>					
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
<b>2008</b>					
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
<b>2007</b>					
Average monthly benefit	\$ 1,331	\$ 1,288	\$ 1,592	\$ 1,975	\$ 2,650
Average final average salary	\$ 40,544	\$ 41,247	\$ 43,439	\$ 46,209	\$ 51,484
Number of active retirants	601	318	230	761	334
<b>2006</b>					
Average monthly benefit	\$ 1,285	\$ 1,095	\$ 1,558	\$ 1,779	\$ 2,543
Average final average salary	\$ 39,200	\$ 36,950	\$ 41,455	\$ 43,714	\$ 48,532
Number of active retirants	508	281	204	878	349

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+
<b>2015</b>					
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 retirees	4	2	3	2	4
<b>2014</b>					
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 retirees	2	3	2	1	-
<b>2013</b>					
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 retirees	5	10	3	5	9
<b>2012</b>					
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 retirees	1	1	1	3	-
<b>2011</b>					
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 retirees	7	9	5	8	2
<b>2010</b>					
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 retirees	3	2	3	2	-
<b>2009</b>					
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 retirees	6	2	5	5	1
<b>2008</b>					
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 retirees	3	2	1	4	-
<b>2007</b>					
Average monthly benefit	\$ 6,761	\$ 8,167	\$ 7,786	\$ 6,486	\$ 7,507
Average final average salary	\$ 108,168	\$ 130,679	\$ 124,576	\$ 103,776	\$ 120,112
Number of active retirees	5	9	6	6	11
<b>2006</b>					
Average monthly benefit	\$ 7,824	\$ 8,223	\$ 7,642	\$ -	\$ -
Average final average salary	\$ 125,190	\$ 131,568	\$ 122,272	\$ -	\$ -
Number of active retirees	2	1	5	-	-

## RETIREMENT SYSTEMS OF ALABAMA

### *Statistical Section*

#### Employees' Retirement System

#### Local Participating Employers

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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

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Boston Housing Authority	Centre, City of
Brantley Housing Authority	Centreville, City of
Brent Housing Authority	Chambers County Commission
Brent, City of	Chambers County Development Authority
Brewton Housing Authority	Chambers County Emergency Management Communications District
Brewton, City of	Chambers County Library Board
Bridgeport Housing Authority	Chatom, City of
Bridgeport Utilities Board	Cheaha Regional Library
Bridgeport, City of	Chelsea, City of
Brilliant, Town of	Cherokee County Commission
Brookwood, Town of	Cherokee County Water & Sewer Authority
Brundidge, City of	Cherokee, Town of
Buhl-Elrod-Holman Water Authority	Chickasaw Housing Authority
Bullock County Commission	Chickasaw Utilities Board
Butler County Commission	Chickasaw, Town of
Butler County Emergency Communication District	Childersburg Water Works, Sewer & Gas Board
Butler, City of	Childersburg, City of
Cahaba Center for Mental Health & Mental Retardation	Chilton County Commission
Cahaba Valley Fire & Emergency Medical Rescue District	Chilton County Soil & Water Conservation District
Calera, City of	Chilton Water Authority
Calhoun County 9-1-1 District	Chilton/Clanton Public Library
Calhoun County Commission	Chilton-Shelby Mental Health Center
Calhoun County Community Punishment & Corrections Authority	Choctaw County Emergency Communications District
Calhoun County Economic Development Council	Citizenship Trust American Village
Calhoun County Water & Fire Protection Authority	Clanton Housing Authority
Calhoun-Cleburne Mental Health Board	Clanton Water Works & Sewer Board
Camden, City of	Clanton, City of
Camp Hill, City of	Clarke County Commission
Carbon Hill Utilities Board	Clarke County Industrial Development Board
Carbon Hill, City of	Clarke County Soil & Water Conservation District
Carl Elliott Regional Library	Clarke-Mobile Counties Gas District
Carroll's Creek Water Authority	Clay County Commission
Carrollton, Town of	Clay County E911
Castleberry, Town of	Clay County Water Authority
Cedar Bluff Utilities Board & Solid Waste Authority	Clayton Housing Authority
Cedar Bluff, Town of	Clayton Water Works & Sewer Board
Center Point Fire District	Clayton, City of
Center Point, City of	Cleburne County Commission
Central Alabama Aging Consortium	Cleveland, Town of
Central Alabama Regional Planning & Development Commission	Coaling Water Authority
Central Alabama Youth Services	Coaling, Town of
Central Elmore Water & Sewer Authority	Coffee County Commission
Central Talladega County Water District	Coffee County Water Authority
Centre Water Works & Sewer Board	Coffeetown, Town of
	Coker Water Authority
	Colbert County Commission
	Colbert County Emergency Management Communications District

## RETIREMENT SYSTEMS OF ALABAMA

### *Statistical Section*

#### Employees' Retirement System

#### Local Participating Employers

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Colbert County Tourism & Convention Bureau	Dale County Water Authority
Collinsville Water Works & Sewer Board	Daleville Housing Authority
Collinsville, City of	Daleville, City of
Columbia, Town of	Dallas County Commission
Columbiana Housing Authority	Dallas County Water & Sewer Authority
Columbiana Water Works Board	Daphne Utilities Board
Columbiana, Town of	Daphne, City of
Concord Fire District	Dauphin Island Park & Beach Board
Conecuh County Commission	Dauphin Island Water & Sewer Authority
Conecuh County E911	Dauphin Island, Town of
Conecuh County Soil & Water Conservation District	Decatur Utilities
Cook Springs Water Authority	Decatur, City of
Cooperative District for Northeast Alabama Gas	DeKalb County Commission
Coosa County Commission	DeKalb County Economic Development Authority
Coosa County Emergency Communication Management Board	DeKalb County Emergency Communications District
Coosa Valley Youth Services	DeKalb County Hospital Association
Coosada, Town of	DeKalb County Mental Retardation Board
Cordova Water & Gas Board	DeKalb County Soil & Water Conservation District
Cordova, City of	DeKalb-Cherokee Counties Gas District
Cottonwood Housing Authority	DeKalb-Jackson Water Supply District Board
Cottonwood, City of	Demopolis Housing Authority
Courtland, Town of	Demopolis Water Works & Sewer Board
Covington County Commission	Demopolis, City of
Covington County E911 Board	Dora Waterworks & Gas Board
Covington County Water Authority	Dora, City of
Cowarts, Town of	Dothan, City of
Crenshaw County Commission	Dothan-Houston County Intellectual Disabilities Board
Crenshaw County Emergency Communications District	Double Springs Water Works Board
Creola, City of	Double Springs, Town of
Crossville, Town of	Douglas Water Authority
Cuba, Town of	Douglas, Town of
Cullman Area Mental Health Authority	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 County Soil & Water Conservation District	East Brewton Water Works & Sewer Board
Cullman Power Board	East Brewton, City of
Cullman, City of	East Central Alabama Gas District
Cullman-Jefferson Counties Gas District	East Central Baldwin County Water & Fire Protection Authority
Cumberland Mountain Water Authority	East Lauderdale County Water & Fire Protection Authority
Curry Water Authority	Eclectic, Town of
CWM Water Authority	Elba Water & Electric Board
Dadeville Housing Authority	Elba, City of
Dadeville Water Supply & Gas Board	
Dadeville, City of	
Dadeville, Waterworks and Sewer Board of	
Dale County Commission	

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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 Medical Clinic Board  
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  
Greenville, City of  
Grove Hill, City of

## RETIREMENT SYSTEMS OF ALABAMA

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### *Statistical Section*

#### Employees' Retirement System

#### Local Participating Employers

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Guin Housing Authority	Houston County Commission
Guin Water Works & Sewer Board	Houston County Soil Conservation District
Guin, City of	Houston County Water Authority
Gulf Shores Utilities Board	Houston-Love Memorial Library
Gulf Shores, City of	Hueytown, City of
Guntersville Electric Board	Huguley Water, Sewer & Fire Protection Authority
Guntersville Housing Authority	Huntsville & Madison County Railroad Authority
Guntersville Water Works & Sewer Board	Huntsville Electric Utilities System
Guntersville, City of	Huntsville Gas Utilities System
Gurley, Town of	Huntsville Solid Waste Disposal Authority
Hackleburg Housing Authority	Huntsville Waterworks Utilities System
Hackleburg Water Board	Huntsville, City of
Hackleburg, Town of	Huntsville/Madison County Convention & Visitors Bureau
Hackneyville Water & Fire Protection Authority	Huntsville-Madison County Airport Authority
Hale County Commission	Huntsville-Madison County Marina & Port Authority
Hale County Emergency Medical Service	Huntsville-Madison County Mental Health Center Board
Hale County Soil & Water Conservation District	Indian Pines Recreational Authority
Haleyville, City of	International Motorsports Hall of Fame
Hamilton Housing Authority	Irondale, City of
Hamilton, City of	J. Paul Jones Hospital
Hanceville Water Works & Sewer Board	Jackson County Commission
Hanceville, City of	Jackson County Economic Development Authority
Harpersville, Town of	Jackson County Emergency Management Communications District
Hartford, City of	Jackson County Soil & Water Conservation District
Hartselle Utilities Board	Jackson County Water Authority
Hartselle, City of	Jackson, City of
Hartselle, Housing Authority of the City of	Jackson's Gap Water Authority
Harvest-Monrovia Water, Sewer & Fire Protection Authority	Jackson's Gap, Town of
Hayden, Town of	Jacksonville Housing Authority
Hayneville, City of	Jacksonville Water Works, Gas & Sewer Board
Headland Housing Authority	Jacksonville, City of
Headland, City of	Jasper Waterworks & Sewer Board
Heflin Water Works & Sewer Board	Jasper, City of
Heflin, City of	Jefferson County Department of Health
Helena Utilities Board	Jefferson County Housing Authority
Helena, City of	Jefferson-Blount-St. Clair Mental Health Authority
Henry County Commission	Jemison, Town of
Henry County Soil & Water Conservation District	Joppa, Hulaco & Ryan Water Authority
Henry County Water Authority	Kennedy, City of
Highland Water Authority	Killen, City of
Hillsboro, Town of	Kinsey, Town of
Historic Blakeley Authority	LaFayette, City of
Hodges, Town of	Lamar County Commission
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	

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Lamar County Communications District  
Lamar County Gas District  
Lamar County Water & Fire Protection Authority  
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

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### *Statistical Section*

#### Employees' Retirement System

#### Local Participating Employers

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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

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Pickens County Water Authority	Russellville Electric Board
Piedmont Housing Authority	Russellville Gas Board
Piedmont, City of	Russellville Housing Authority
Pike County Commission	Russellville Water & Sewer Board
Pike County Communications District	Russellville, City of
Pike County Soil & Water Conservation District	Rutledge, Town of
Pike County Water Authority	Samson, City of
Pike Road, Town of	Saraland Water Service
Pine Bluff Water Authority	Saraland, City of
Pine Hill, Town of	Sardis City Water Board
Pine Level Water Authority	Sardis, City of
Pinson, City of	Satsuma Water Works Board
Pisgah, Town of	Satsuma, City of
Pleasant Grove, City of	Scottsboro Electric Power Board
Prattville Housing Authority	Scottsboro Housing Authority
Prattville Water Works Board	Scottsboro Public Library
Prattville, City of	Scottsboro Public Park & Recreation Board
Priceville, Town of	Scottsboro Waterworks, Sewer & Gas Board
Prichard Housing Authority	Scottsboro, City of
Quint-Mar Water Authority	Section Waterworks Board
Ragland Water Works Board	Section, Town of
Ragland, Town of	Selma Housing Authority
Rainbow City Utilities Board	Selma Water & Sewer Board
Rainbow City, City of	Selma, City of
Rainsville, City of	Sheffield Utilities Board
Randolph County Commission	Sheffield, City of
Randolph County E911	Shelby County Commission
Red Bay Housing Authority	Shelby County Community Corrections
Red Bay Water Works & Gas Board	Shelby County Economic & Industrial
Red Bay, City of	Development Authority
Reform Housing Authority	Shelby County Emergency Management
Reform, City of	Communications District
Regional Housing Authority of Lawrence, Cullman & Morgan Counties	Shelby County Soil Conservation District
Rehobeth, City of	Shoals Committee on Programs & Employment
Remlap-Pine Mountain Water Authority	for the Mentally Retarded
Repton, Town of	Shoals Economic Development Authority
Riverbend Center for Mental Health	Shoals Solid Waste Disposal Authority
Riverside, Town of	Shorter, Town of
Roanoke Utility Board	Silas, Town of
Roanoke, City of	Silverhill, Town of
Robertsdale, City of	Skyline, Town of
Rockford Utilities Board	Slocomb Waterworks & Sewer Board
Rocky Ridge Fire District	Slocomb, Town of
Rogersville Water Works & Sewer Board	Smiths Station, City of
Rogersville, Town of	Smiths Water & Sewer Authority
Russell County Commission	Snead, Town of
Russell County Emergency Communications District	Somerville, Town of
Russell County Soil & Water Conservation District	South Alabama Gas District
Russell County Water Authority	South Alabama Regional Planning Commission
	South Central Alabama Development Commission
	South Central Alabama Mental Health Board

## RETIREMENT SYSTEMS OF ALABAMA

### *Statistical Section*

#### Employees' Retirement System

#### Local Participating Employers

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South Central Alabama Regional Housing Authority	Talladega County Emergency Management Communications District
South Crenshaw County Water Authority	Talladega County Soil & Water Conservation District
South Marengo County Water & Fire Protection Authority	Talladega Water & Sewer Board
Southeast Alabama Regional Planning & Development Commission	Talladega, City of
Southeast Alabama Solid Waste Disposal Authority	Tallapoosa County Commission
Southeast Alabama Youth Services	Tallassee, City of
Southern Alabama Regional Council on Aging	Tarrant Alabama Housing Authority
Southside Water Works & Sewer Board	Tarrant Electric System
Southside, City of	Tarrant, City of
Southwest Alabama Water Authority	Taylor, Town of
Spanish Fort Fire Rescue Department	Tennessee Valley Exhibit Commission
Spanish Fort, City of	Thomaston, Town of
SpectraCare Health Systems	Thomasville, City of
Springville, Town of	Thorsby, Town of
St. Clair County Commission	Top of Alabama Regional Council of Governments
St. Clair County Community Punishment & Corrections Authority	Town Creek, Town of
St. Clair County Industrial Development Board	Triana, City of
St. Clair County Soil & Water Conservation District	TriCounty Agency for Intellectual Disabilities
St. Clair Regional Library	Trinity, Town of
St. Florian, Town of	Troy, City of
Star-Mindingall Water & Fire Protection Authority	Trussville Utilities Board
Steele, Town of	Trussville, City of
Stevenson Housing Authority	Turnerville Water & Fire Protection District
Stevenson Utilities Board	Tuscaloosa County Commission
Stevenson, City of	Tuscaloosa County Community Punishment and Corrections Authority
Stewartville Water Authority	Tuscaloosa County Industrial Development Authority
Sulligent Housing Authority	Tuscaloosa County Office of Public Defender
Sulligent, City of	Tuscaloosa County Park & Recreation Authority
Sumiton Housing Authority	Tuscaloosa County Parking & Transit Authority
Sumiton Water Works Board	Tuscaloosa County Soil & Water Conservation District
Sumiton, City of	Tuscaloosa County Special Tax Board
Summerdale, Town of	Tuscaloosa Housing Authority
Sumter County Commission	Tuscaloosa Public Library
Sumter County Industrial Development Authority	Tuscaloosa, City of
Sumter County Soil & Water Conservation District	Tuscumbia, City of
Sumter County Water Authority	Tuskegee Utilities Board
Sylacauga Parks & Recreation Board	Tuskegee, City of
Sylacauga Utilities Board	Union Grove Utilities Board
Sylacauga, City of	Union Springs Utilities Board
Sylvan Springs, Town of	Union Springs, City of
Sylvania, Town of	Uniontown Housing Authority
Talladega County Commission	Uniontown Utilities Board
	Uniontown, Town of
	USS Alabama Battleship Commission
	Valley Grande, City of

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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  
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

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
<b>1) Employer</b>	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
<b># of Active Members</b>	30,109	30,297	30,659	31,795	33,885	35,200	35,147	35,767	35,566	34,429
<b>% of Total Active Members</b>	35.43%	35.40%	35.84%	36.85%	38.36%	39.24%	39.10%	39.53%	40.03%	39.63%
<b>2) Employer</b>	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
<b># of Active Members</b>	2,207	2,243	2,209	2,192	2,195	2,175	2,227	2,293	2,185	2,188
<b>% of Total Active Members</b>	2.60%	2.62%	2.58%	2.54%	2.48%	2.43%	2.47%	2.53%	2.46%	2.52%
<b>3) Employer</b>	Mobile County	Mobile County	Mobile County	Mobile County	Mobile County	Mobile County	Mobile County	Mobile County	Mobile County	Mobile County
<b># of Active Members</b>	1,587	1,578	1,625	1,657	1,672	1,678	1,699	1,664	1,614	1,589
<b>% of Total Active Members</b>	1.87%	1.84%	1.90%	1.92%	1.89%	1.87%	1.89%	1.84%	1.82%	1.83%
<b>4) Employer</b>	Mobile, City of	AttaPointe Health*	Mobile, City of	Mobile, City of						
<b># of Active Members</b>	1,250	1,341	1,282	1,254	1,310	1,335	1,421	1,337	1,288	1,278
<b>% of Total Active Members</b>	1.47%	1.57%	1.50%	1.45%	1.48%	1.49%	1.58%	1.48%	1.45%	1.47%
<b>5) Employer</b>	Madison County	Mobile, City of	AttaPointe Health*	Madison County	Madison County					
<b># of Active Members</b>	1,152	1,254	1,236	1,154	1,162	1,133	1,060	1,102	1,068	1,073
<b>% of Total Active Members</b>	1.36%	1.47%	1.44%	1.34%	1.32%	1.27%	1.18%	1.22%	1.20%	1.24%
<b>6) Employer</b>	Dothan, City of	Madison County	Madison County	Helen Keller Hospital	Dothan, City of	Helen Keller Hospital	Helen Keller Hospital	Helen Keller Hospital	Dothan, City of	Dothan, City of
<b># of Active Members</b>	995	1,152	1,174	1,002	957	984	1,034	1,023	962	955
<b>% of Total Active Members</b>	1.17%	1.35%	1.37%	1.16%	1.08%	1.10%	1.15%	1.13%	1.08%	1.10%
<b>7) Employer</b>	AttaPointe Health*	Dothan, City of	Dothan, City of	Dothan, City of	Helen Keller Hospital	Dothan, City of	Dothan, City of	Dothan, City of	Helen Keller Hospital	Helen Keller Hospital
<b># of Active Members</b>	792	996	985	966	956	961	970	972	893	817
<b>% of Total Active Members</b>	0.93%	1.16%	1.15%	1.12%	1.08%	1.07%	1.08%	1.07%	1.01%	0.94%
<b>8) Employer</b>	Tuscaloosa, City of	Tuscaloosa, City of	Tuscaloosa, City of	AttaPointe Health*	Montgomery County	Montgomery County	Montgomery County	Tuscaloosa, City of	Tuscaloosa, City of	Tuscaloosa, City of
<b># of Active Members</b>	777	790	775	911	794	848	806	710	710	695
<b>% of Total Active Members</b>	0.91%	0.92%	0.91%	1.06%	0.90%	0.95%	0.90%	0.78%	0.80%	0.80%
<b>9) Employer</b>	Montgomery County	Montgomery County	Montgomery County	Montgomery County	AttaPointe Health*	Tuscaloosa, City of	Tuscaloosa, City of	AttaPointe Health*	Hoover, City of	Hoover, City of
<b># of Active Members</b>	766	769	767	771	762	745	732	674	636	633
<b>% of Total Active Members</b>	0.90%	0.90%	0.90%	0.89%	0.86%	0.83%	0.81%	0.74%	0.72%	0.73%
<b>10) Employer</b>	Auburn, City of	Hoover, City of	Helen Keller Hospital	Tuscaloosa, City of	Tuscaloosa, City of	AttaPointe Health*	AttaPointe Health*	Baldwin County	Greater Mobile-Washington Co. Mental Health Board	Greater Mobile-Washington Co. Mental Health Board
<b># of Active Members</b>	706	678	729	763	757	668	685	655	631	704
<b>% of Total Active Members</b>	0.83%	0.79%	0.85%	0.88%	0.86%	0.75%	0.76%	0.72%	0.71%	0.81%
<b>Total # of Active Members</b>	84,985	85,585	85,549	86,290	88,341	89,560	90,018	90,472	88,549	86,874

\* Formerly Greater Mobile-Washington Co. Mental Health Board

Source: Retirement Systems of Alabama records





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