

Component Units of the State of Alabama

# Comprehensive Annual Financial Report

For the Fiscal Year Ended September 30, 2019





# The Retirement Systems of Alabama

COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Year Ended September 30, 2019

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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# Introductory Section

Component Units of the State of Alabama  
Comprehensive Annual Financial Report



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



**Employees**  
State State Police Public Judicial  
Kay Ivey, Chair  
James E. Fibbe, Vice Chair

# THE RETIREMENT SYSTEMS OF ALABAMA

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

March 9, 2020

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

Dear Board Members:

It is with great pleasure that we submit the Comprehensive Annual Financial Report (CAFR) of the Retirement Systems of Alabama (RSA or Systems) for the fiscal year ended September 30, 2019. 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 2019 and 2018. Also, an analysis of significant variances between fiscal years 2019 and 2018 is provided in the MD&A.

**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, 2018, the date of the most recent actuarial valuation, the number of participants in the TRS was 282,553, ERS participants totaled 170,399, and JRF participants totaled 789. The following table compares the funded status as of September 30, 2018 and 2017:

| <b>Funded Status (%)</b> |                  |                  |                                   |
|--------------------------|------------------|------------------|-----------------------------------|
| <b>System</b>            | <b>9/30/2018</b> | <b>9/30/2017</b> | <b>% Increase/<br/>(Decrease)</b> |
| TRS                      | 70.2             | 68.9             | 1.3                               |
| ERS                      | 68.7             | 67.8             | 0.9                               |
| JRF                      | 66.7             | 65.4             | 1.3                               |

The funded status of TRS increased because salary increases were lower than expected and investment earnings were higher than expected, despite the decrease in the rate of return on investments used in the actuarial valuation. The funded status of ERS did not increase significantly because the rate of return on investments used in the actuarial valuations decreased. The actuarial gains from investment earnings were only slightly greater than the losses. The funded status of JRF increased because salary increases were lower than expected, investment earnings were higher than expected, and fewer members retired during the year than expected, despite the decrease in the rate of return on investments used in the actuarial valuations,

**Investment Activity**

Total investments for the RSA decreased in fiscal year 2019, primarily due to decreases in the fair value of investments. Total pension fund investments managed by the RSA decreased from \$38.5 billion at September 30, 2018, to \$38.0 billion at September 30, 2019, a decrease of 1.30%.

|            | <b>Investments, at Fair Value</b> |                  | <b>Interest &amp; Dividend Income</b> |                  |
|------------|-----------------------------------|------------------|---------------------------------------|------------------|
|            | <b>9/30/2019</b>                  | <b>9/30/2018</b> | <b>9/30/2019</b>                      | <b>9/30/2018</b> |
| <b>TRS</b> | \$25.3 billion                    | \$25.6 billion   | \$583.3 million                       | \$650.3 million  |
| <b>ERS</b> | \$12.5 billion                    | \$12.6 billion   | \$291.0 million                       | \$323.2 million  |
| <b>JRF</b> | \$308.1 million                   | \$313.1 million  | \$7.5 million                         | \$7.5 million    |

| <b>Net Change in Fair Value of Investments</b> |                  |                  |
|--|------------------|------------------|
|  | <b>9/30/2019</b> | <b>9/30/2018</b> |
| <b>TRS</b>                                     | \$33.7 million   | \$1.62 billion   |
| <b>ERS</b>                                     | \$30.1 million   | \$775 million    |
| <b>JRF</b>                                     | \$3.5 million    | \$20.0 million   |

Total returns were 2.63%, 2.78%, and 3.82% for TRS, ERS, and JRF, respectively. The fiscal year started off very poorly as global growth concerns hammered equity markets in the December ending quarter. The Federal Reserve (the Fed) raised the Fed Funds target rate in mid-December which sent global equity markets into a tailspin. By the end of the fiscal year, the Fed ended up having two 0.25% rate cuts that helped allay heightened economic slowdown fears. Fixed income investments proved to be the big winner for the year as rates rallied lower and credit spreads remained tight. The RSA continues to maintain a higher than normal cash (short-term investment) balance as the interest rate curve has flattened and equities moved higher throughout the year. With that said, we will continue to invest in a diverse mix of assets and monitor asset class ranges per the guidance given in the respective Investment Policy Statements of each system, with the long-term goal of achieving our actuarial assumed rate of return. Additional information concerning investments, including investment policy statements, is located in the Investment Section of this report. The Schedule of Broker Commissions Paid can be found on the last page of the Investment Section in this report.

#### **Management's Discussion and Analysis**

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

#### **Professional Services**

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

#### **Financial Statement Audit**

Carr, Riggs & Ingram, LLC, Certified Public Accountants, issued an unqualified ("clean") opinion on the RSA's financial statements for the fiscal year ended September 30, 2019. The independent auditors' report is located at the front of the Financial Section of this report.

#### **Highlights and Initiatives**

The RSA's office building located in New York City, 55 Water Street, announced the lease renewal for EmblemHealth. The company is one of the largest non-profit health insurers and has maintained its headquarters in the building since 2003. The transaction is one of the largest leases of the year in Lower Manhattan and will extend their lease for 15 years.

Marriott International named the RSA's Riverview Renaissance Plaza Hotel in Mobile its "2018 Marriott Franchise Hotel of the Year" among Marriott's Distinctive Premium Hotels in North America. This award's honors are based on reviews for guest satisfaction, employee opinions, financial records, market share, and overall property performance. The Grand Hotel Golf Resort & Spa was also honored; USA Today named The Grand Hotel in its Top 5 Historic Hotels as voted on by industry experts as well as a public vote. Lastly, the Renaissance Ross Bridge Golf Resort & Spa was named as one of Golf Magazine's 100 Best Golf Resorts in North America. More than 3,700 golfers reviewed 250 golf resorts across North America for the rankings. This was the first time that Ross Bridge was named to Golf Magazine's listing.

#### **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, 2018. 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.

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The Retirement Systems received the Public Pension Coordinating Council (PPCC) Recognition Award for Funding 2019. 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, 2018**

*Christopher P. Morill*

Executive Director/CEO



Public Pension Coordinating Council

***Recognition Award for Funding  
2019***

Presented to

***The Retirement Systems of Alabama***

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

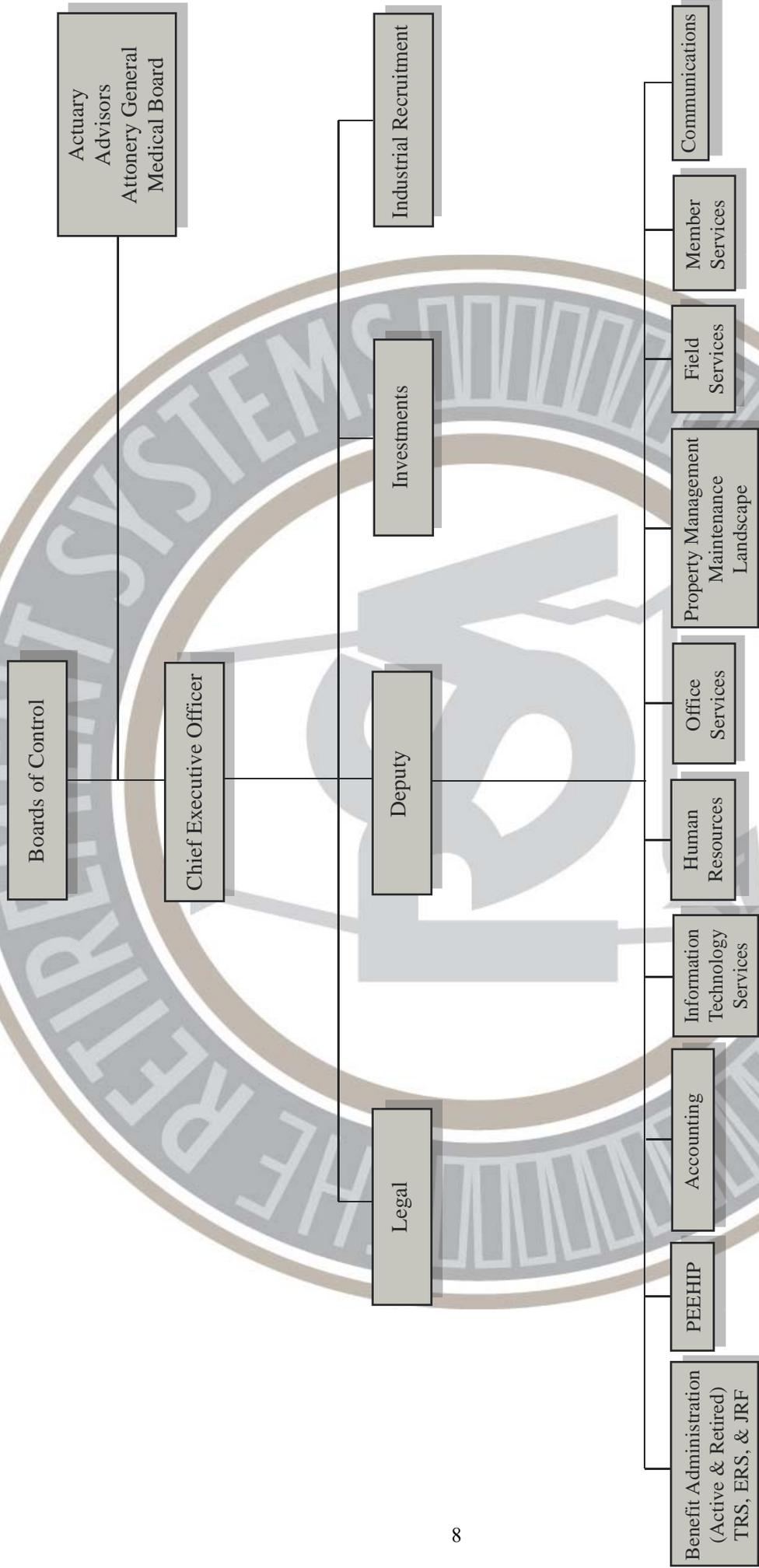
*Presented by the Public Pension Coordinating Council, a confederation of*

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

A handwritten signature in black ink that reads "Alan H. Winkle". The signature is written in a cursive style with a large, stylized initial 'A'.

Alan H. Winkle  
Program Administrator

# Retirement Systems of Alabama



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

**Teachers' Retirement System Board of Control**

**Ex Officio Members**

Honorable John McMillan, Jr., State Treasurer

Mr. Kelly Butler, State Finance Director

Dr. Eric Mackey, State Superintendent of Education

**Elected Members**

Chair, Mr. Luther P. Hallmark, Superintendent Position

Vice Chair, Mr. John R. Whaley, Teacher Position

Ms. Peggy Mobley, Retired Position

Mr. Joseph E. Ward, Retired Position

Ms. Kelli D. Shomaker, Higher Education Position

Dr. Joseph G. Van Matre, Higher Education Position

Dr. Susan Williams Brown, Postsecondary Position

Mr. Richard Brown, Principal Position

Ms. Charlene McCoy, Teacher Position

Ms. Amy C. Crew, Teacher Position

Mrs. Susan Lockridge, Support Personnel Position

Mr. Russell J. Twilley, Support Personnel Position

**Employees' Retirement System Board of Control\*\***

**Ex Officio Members**

Chair, Honorable Kay Ivey, Governor

Mrs. Jackie B. Graham, State Personnel Director

Honorable John McMillan, Jr., State Treasurer

Mr. Kelly Butler, State Finance Director

**Elected Members**

Vice Chair, Mr. James Fibbe, Retired Local Employee Position

Mr. Norris Green, 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. David J. Harer, Active Local Employee Position

**Appointed Members**

Mr. John D. Free

Ms. Tammy Rolling

Lt. David Colston

\*\* 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**

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

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

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

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

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

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

Communications, Michael E. Pegues, M.A.

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

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

**Investment Staff**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Investment Custodian, State Street Bank and Trust Company

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

Attorney General, Honorable Steve Marshall

Chief Examiner, Honorable Rachel Riddle

**Medical Board**

Chair, Glenn Yates, M.D.

Gregory Borg, M.D.

Malcolm Brown, M.D.



# Financial Section

Component Units of the State of Alabama  
Comprehensive Annual Financial Report



## **INDEPENDENT AUDITORS' REPORT**

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

We have audited the accompanying combined financial statements of the Retirement Systems of Alabama (consisting of the Teachers' Retirement System of Alabama, the Employees' Retirement System of Alabama, and the Judicial Retirement Fund (the RSA), a component unit of the State of Alabama), which comprise the combining statement of fiduciary net position as of September 30, 2019 and the related combining statement of changes in fiduciary net position, for the year then ended, and the related notes to the combined financial statements, which collectively comprise the Retirement Systems of Alabama's basic financial statements as listed in the table of contents.

### **Management's Responsibility for the Financial Statements**

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

### **Auditors' Responsibility**

Our responsibility is to express an opinion on these combined financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

### **Opinion**

In our opinion, the combined financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Retirement Systems of Alabama, as of September 30, 2019, 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, 2018, from which such partial information was derived. We have previously audited the Retirement Systems of Alabama's financial statements and we expressed an unmodified opinion on the respective financial statements in our report dated January 15, 2019. In our opinion, the summarized comparative information presented herein as of and for the year ended September 30, 2018, is consistent, in all material respects, with the audited financial statements from which it has been derived.

### *Required Supplementary Information*

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

### *Supplementary and Other Information*

Our audit was conducted for the purpose of forming an opinion on the combined financial statements that collectively comprise the Retirement Systems of Alabama's basic financial statements. The introductory section, investment section, actuarial section, statistical section, schedule of administrative expenses, schedule of investment expenses and schedule of professional/consultant fees (supplementary information) are presented for purposes of additional analysis and are not a required part of the basic financial statements.

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

The introductory, investment, actuarial, and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

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

March 9, 2020  
Montgomery, Alabama

### *Financial Section*

#### Management's Discussion and Analysis

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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 operations for RSA as of and for the fiscal year ended September 30, 2019. 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 RSA and provides a snapshot of the financial position of 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 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 during the fiscal year. The change in fiduciary net position plus the beginning fiduciary net position results in the fiduciary net position at the end of the fiscal year.

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

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

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Management's Discussion and Analysis (Continued)

Comparative Summary Statements

Summary Comparative Combining Statement of Fiduciary Net Position

As of September 30, 2019 and 2018

(Dollar Amounts in Thousands)

|   | 2019                 | 2018                 | Variance            | % Increase/<br>(Decrease) |
|---|----------------------|----------------------|---------------------|---------------------------|
| <b><i>Assets &amp; Deferred Outflows of Resources</i></b>     |                      |                      |                     |                           |
| Cash  | \$ 92,506            | \$ 50,246            | \$ 42,260           | 84.11                     |
| Receivables   | 294,607              | 308,668              | (14,061)            | (4.56)                    |
| Investment Sales Receivable                                   | 11,927               | -                    | 11,927              | 100.00                    |
| Investments, at Fair Value                                    | 38,028,895           | 38,533,116           | (504,221)           | (1.31)                    |
| Invested Securities Lending Collateral                        | 961,787              | 1,605,767            | (643,980)           | (40.10)                   |
| Property and Equipment, Net                                   | 161,424              | 155,615              | 5,809               | 3.73                      |
| Total Assets  | 39,551,146           | 40,653,412           | (1,102,266)         |                           |
| Deferred Outflows of Resources                                | 9,640                | 8,405                | 1,235               | 14.69                     |
| Total Assets & Deferred Outflows<br>of Resources              | 39,560,786           | 40,661,817           | (1,101,031)         | (2.71)                    |
| <b><i>Liabilities &amp; Deferred Inflows of Resources</i></b> |                      |                      |                     |                           |
| Accounts Payable and Other Liabilities                        | 12,609               | 10,718               | 1,891               | 17.64                     |
| Investment Purchases Payable                                  | 13,505               | 2,274                | 11,231              | 493.89                    |
| Net Other Postemployment Benefit Liability                    | 27,175               | 28,678               | (1,503)             | (5.24)                    |
| Net Pension Liability   | 36,026               | 34,247               | 1,779               | 5.19                      |
| Securities Lending Collateral                                 | 961,787              | 1,605,767            | (643,980)           | (40.10)                   |
| Total Liabilities   | 1,051,102            | 1,681,684            | (630,582)           | (37.50)                   |
| Deferred Inflows of Resources                                 | 9,222                | 7,034                | 2,188               | 31.11                     |
| Total Liabilities & Deferred Inflows<br>of Resources          | 1,060,324            | 1,688,718            | (628,394)           | (37.21)                   |
| <b><i>Net Position</i></b>                                    | <b>\$ 38,500,462</b> | <b>\$ 38,973,099</b> | <b>\$ (472,637)</b> | <b>(1.21)</b>             |

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, 2019 and 2018

(Dollar Amounts in Thousands)

|   | 2019                 | 2018                 | Variance            | % Increase/<br>(Decrease) |
|---|----------------------|----------------------|---------------------|---------------------------|
| <b>Additions</b>  |                      |                      |                     |                           |
| Employee Contributions  | \$ 770,840           | \$ 729,101           | \$ 41,739           | 5.72                      |
| Employer Contributions  | 1,354,911            | 1,246,118            | 108,793             | 8.73                      |
| Investment Income   | 946,028              | 3,390,268            | (2,444,240)         | (72.10)                   |
| Transfers Between Systems   | 10,610               | 9,973                | 637                 | 6.39                      |
| Transfer In from the Public Education<br>Employees' Health Insurance Plan | -                    | 24,700               | (24,700)            | (100.00)                  |
| <b>Total Additions</b>  | <b>3,082,389</b>     | <b>5,400,160</b>     | <b>(2,317,771)</b>  | <b>(42.92)</b>            |
| <b>Deductions</b>   |                      |                      |                     |                           |
| Retirement Allowance Payments   | 3,393,573            | 3,334,333            | 59,240              | 1.78                      |
| Return of Contributions, Unit Withdrawals<br>& Death Benefits             | 106,562              | 104,088              | 2,474               | 2.38                      |
| Transfers Between Systems   | 10,610               | 9,973                | 637                 | 6.39                      |
| Administrative Expenses   | 33,874               | 27,499               | 6,375               | 23.18                     |
| Depreciation  | 10,407               | 8,882                | 1,525               | 17.17                     |
| <b>Total Deductions</b>   | <b>3,555,026</b>     | <b>3,484,775</b>     | <b>70,251</b>       | <b>2.02</b>               |
| <b>Net (Decrease)/Increase in Fiduciary Net Position</b>                  | <b>(472,637)</b>     | <b>1,915,385</b>     | <b>(2,388,022)</b>  | <b>(124.68)</b>           |
| Beginning Net Position, as previously reported                            | 38,973,099           | 37,076,506           | 1,896,593           | 5.12                      |
| Adjustment for Application of GASB 75                                     | -                    | (18,792)             | 18,792              | 100.00                    |
| Beginning of Year - as adjusted   | 38,973,099           | 37,057,714           | 1,915,385           | 5.17                      |
| <b>Net Position - End of Year</b>   | <b>\$ 38,500,462</b> | <b>\$ 38,973,099</b> | <b>\$ (472,637)</b> | <b>(1.21)</b>             |

Comparison of Individual Fiduciary Net Position  
As of September 30, 2019 and 2018

(Dollar Amounts in Thousands)

|              | 2019                 | 2018                 | Variance            | % Increase/<br>(Decrease) |
|--------------|----------------------|----------------------|---------------------|---------------------------|
| <b>TRS</b>   | \$ 25,619,448        | \$ 25,935,433        | \$ (315,985)        | (1.22)                    |
| <b>ERS</b>   | 12,568,473           | 12,720,352           | (151,879)           | (1.19)                    |
| <b>JRF</b>   | 312,541              | 317,314              | (4,773)             | (1.50)                    |
| <b>Total</b> | <b>\$ 38,500,462</b> | <b>\$ 38,973,099</b> | <b>\$ (472,637)</b> | <b>(1.21)</b>             |

# RETIREMENT SYSTEMS OF ALABAMA

## Financial Section

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

#### Financial Analysis

- Primarily all cash on hand at September 30, 2019, was held for administrative expenses.
- In the Summary Comparative Combining Statement of Fiduciary Net Position, receivables consist primarily of employee contributions, employer contributions, interest, dividends, real estate, and member transfers between systems at September 30, 2019.
- Investment sales receivable and investment purchases payable occur as a result of trade date accounting. The increase in the receivable and payable for fiscal year 2019 was due to the value of securities traded in the current fiscal year and settling in the following fiscal year being greater than the value of the securities traded but settled in the previous fiscal year.
- The RSA's investment portfolio presented in percentages by investment type:

|                    | <u>TRS</u>     | <u>ERS</u>     | <u>JRF</u>     |
|--------------------|----------------|----------------|----------------|
| <b>Equity</b>      | 67.97%         | 68.41%         | 64.68%         |
| <b>Fixed</b>       | 22.25%         | 21.97%         | 33.95%         |
| <b>Real Estate</b> | 9.78%          | 9.62%          | 1.37%          |
| <b>Total</b>       | <u>100.00%</u> | <u>100.00%</u> | <u>100.00%</u> |

- Employer contributions increased as a result of higher employer contribution rates for fiscal year 2019. The employer contribution rates for fiscal year 2019 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>   | 12.41%        | 11.35%        |
| <b>ERS - State Employees</b>                         | 14.51%        | 14.14%        |
| <b>ERS - State Police</b>                            | 50.08%        | 43.43%        |
| <b>JRF - Groups 1 &amp; 2</b>                        | 41.40%        | -             |
| <b>JRF - Group 3 -<br/>Judges &amp; Clerks' Plan</b> | 34.32%        | -             |
| <b>JRF - District Attorneys' Plan</b>                | 19.77%        | -             |

- During fiscal year 2019, returns on investments of TRS, ERS, and JRF were 2.63%, 2.78%, and 3.82%, respectively. The returns were calculated by State Street Bank.
- During fiscal year 2019, investment income decreased by 72.10% primarily due to a large decrease in the unrealized gains and losses which were offset by an increase in interest and dividend income and realized gains and losses. Net securities lending income decreased by 12.40% for RSA which was primarily driven by an increase in borrower rebates. At September 30, 2019, cash and non-cash loan balances decreased approximately 40% and 13%, respectively, from their balances at September 30, 2018. Non-cash loans continue to be the collateral of choice for brokers due to the regulations imposed by the Frank-Dodd Act. Although non-cash loans are more beneficial to the brokers' balance sheet due to the lower overall demand, these types of loans decreased by approximately 13%.
- Retirement allowance payments increased as a result of those members who retired during fiscal year 2019.

#### **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, 2019, TRS and JRF employers' total pension liability was \$36.7 billion and \$463.5 million, respectively. The plan fiduciary net position of TRS and JRF employers was \$25.6 billion and \$312.5 million, respectively, resulting in a net pension liability of \$11.1 billion and \$150.9 million, respectively. The plan fiduciary net position as a percentage of the total pension liability for TRS and JRF employers was 69.85% and 67.44%, respectively, using GASB Statement No. 67 measurements.

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

#### **Financial Highlights**

- Net position held in trust of \$39 billion at September 30, 2019, was available to meet future benefit payments.
- At September 30, 2018, the date of the most recent actuarial valuation, the funding level (actuarial value of assets as a percentage of actuarial accrued liabilities) was 70.2% for TRS, 68.7% for ERS, and 66.7% for JRF.



RETIREMENT SYSTEMS OF ALABAMA

*Financial Section*

Combining Statement of Fiduciary Net Position  
September 30, 2019 with comparative figures for 2018

(Dollar Amounts in Thousands)

|  | 2019                              |                                    |                                | Total                       |
|--|-----------------------------------|------------------------------------|--------------------------------|-----------------------------|
|  | Teachers'<br>Retirement<br>System | Employees'<br>Retirement<br>System | Judicial<br>Retirement<br>Fund |                             |
| <b>Assets</b>  |                                   |                                    |                                |                             |
| Cash (Note 4)  | \$ 71,531                         | \$ 17,875                          | \$ 3,100                       | \$ 92,506                   |
| <b>Receivables</b>   |                                   |                                    |                                |                             |
| Employee Contributions   | 52,968                            | 14,276                             | 162                            | 67,406                      |
| Employer Contributions   | 90,488                            | 27,711                             | 639                            | 118,838                     |
| Transfers Receivable from Teachers' Retirement System          | -                                 | 235                                | -                              | 235                         |
| Transfers Receivable from Employees' Retirement System         | 111                               | -                                  | 18                             | 129                         |
| Investment Sales Receivable                                    | 7,678                             | 4,249                              | -                              | 11,927                      |
| Real Estate Investment Receivable                              | 764                               | 382                                | -                              | 1,146                       |
| Dividends and Interest   | 71,155                            | 34,359                             | 992                            | 106,506                     |
| Miscellaneous Receivable                                       | 153                               | 194                                | -                              | 347                         |
| Total Receivables  | <u>223,317</u>                    | <u>81,406</u>                      | <u>1,811</u>                   | <u>306,534</u>              |
| <b>Investments, at Fair Value (Note 5)</b>                     |                                   |                                    |                                |                             |
| Domestic Equity  | 13,785,646                        | 6,925,941                          | 156,306                        | 20,867,893                  |
| Domestic Fixed Income  | 3,434,749                         | 1,693,333                          | 78,997                         | 5,207,079                   |
| International Equities   | 3,385,579                         | 1,594,696                          | 42,977                         | 5,023,252                   |
| Real Estate  | 2,470,955                         | 1,198,136                          | 4,227                          | 3,673,318                   |
| Short-Term   | 2,187,771                         | 1,043,998                          | 25,584                         | 3,257,353                   |
| Total Investments  | <u>25,264,700</u>                 | <u>12,456,104</u>                  | <u>308,091</u>                 | <u>38,028,895</u>           |
| Invested Securities Lending Collateral (Note 5)                | 699,940                           | 256,550                            | 5,297                          | 961,787                     |
| <b>Property and Equipment less</b>                             |                                   |                                    |                                |                             |
| Accumulated Depreciation (Note 8)                              | 112,159                           | 49,265                             | -                              | 161,424                     |
| Total Assets   | <u>26,371,647</u>                 | <u>12,861,200</u>                  | <u>318,299</u>                 | <u>39,551,146</u>           |
| Deferred Outflows of Resources - Pensions                      | 5,412                             | 2,247                              | 41                             | 7,700                       |
| Deferred Outflows of Resources - Other Postemployment Benefits | 1,647                             | 290                                | 3                              | 1,940                       |
| Total Assets and Deferred Outflows of Resources                | <u>26,378,706</u>                 | <u>12,863,737</u>                  | <u>318,343</u>                 | <u>39,560,786</u>           |
| <b>Liabilities</b>   |                                   |                                    |                                |                             |
| Accounts Payable and Other Liabilities                         | 7,882                             | 4,295                              | 68                             | 12,245                      |
| Transfers Payable to Teachers' Retirement System               | -                                 | 111                                | -                              | 111                         |
| Transfers Payable to Employees' Retirement System              | 235                               | -                                  | -                              | 235                         |
| Transfers Payable to Judicial Retirement Fund                  | -                                 | 18                                 | -                              | 18                          |
| Investment Purchases Payable                                   | 8,818                             | 4,666                              | 21                             | 13,505                      |
| Net Other Postemployment Benefits Liability (Note 9)           | 16,182                            | 10,902                             | 91                             | 27,175                      |
| Net Pension Liability (Note 10)                                | 20,897                            | 14,845                             | 284                            | 36,026                      |
| Securities Lending Collateral (Note 5)                         | 699,940                           | 256,550                            | 5,297                          | 961,787                     |
| Total Liabilities  | <u>753,954</u>                    | <u>291,387</u>                     | <u>5,761</u>                   | <u>1,051,102</u>            |
| Deferred Inflows of Resources - Pensions                       | 2,271                             | 1,645                              | 24                             | 3,940                       |
| Deferred Inflows of Resources - Other Postemployment Benefits  | 3,033                             | 2,232                              | 17                             | 5,282                       |
| Total Liabilities and Deferred Inflows of Resources            | <u>759,258</u>                    | <u>295,264</u>                     | <u>5,802</u>                   | <u>1,060,324</u>            |
| <b>Net Position Restricted for Pension Benefits (Note 3)</b>   | <b><u>\$ 25,619,448</u></b>       | <b><u>\$ 12,568,473</u></b>        | <b><u>\$ 312,541</u></b>       | <b><u>\$ 38,500,462</u></b> |

See accompanying Notes to the Combined Financial Statements.

|   | 2018                              |                                    |                                | Total                       |
|---|-----------------------------------|------------------------------------|--------------------------------|-----------------------------|
|   | Teachers'<br>Retirement<br>System | Employees'<br>Retirement<br>System | Judicial<br>Retirement<br>Fund |                             |
| <b>Assets</b>   |                                   |                                    |                                |                             |
| Cash  | \$ 34,831                         | \$ 12,547                          | \$ 2,868                       | \$ 50,246                   |
| Receivables   |                                   |                                    |                                |                             |
| Employee Contributions  | 40,209                            | 18,268                             | 176                            | 58,653                      |
| Employer Contributions  | 67,229                            | 32,457                             | 602                            | 100,288                     |
| Real Estate Investment Receivable                               | 815                               | 408                                | -                              | 1,223                       |
| Dividends and Interest  | 81,420                            | 41,407                             | 977                            | 123,804                     |
| Transfer from Public Education Employees' Health Insurance Plan | 24,700                            | -                                  | -                              | 24,700                      |
| Total Receivables   | <u>214,373</u>                    | <u>92,540</u>                      | <u>1,755</u>                   | <u>308,668</u>              |
| Investments, at Fair Value                                      |                                   |                                    |                                |                             |
| Domestic Equity   | 14,407,115                        | 7,277,756                          | 168,449                        | 21,853,320                  |
| Domestic Fixed Income   | 4,044,570                         | 1,997,706                          | 72,713                         | 6,114,989                   |
| International Equities  | 3,417,268                         | 1,602,600                          | 44,473                         | 5,064,341                   |
| Real Estate   | 2,415,071                         | 1,171,372                          | 4,107                          | 3,590,550                   |
| Short-Term  | 1,337,670                         | 548,882                            | 23,364                         | 1,909,916                   |
| Total Investments   | <u>25,621,694</u>                 | <u>12,598,316</u>                  | <u>313,106</u>                 | <u>38,533,116</u>           |
| Invested Securities Lending Collateral                          | 1,052,082                         | 543,229                            | 10,456                         | 1,605,767                   |
| Property and Equipment less                                     |                                   |                                    |                                |                             |
| Accumulated Depreciation  | 107,508                           | 48,107                             | -                              | 155,615                     |
| Total Assets  | <u>27,030,488</u>                 | <u>13,294,739</u>                  | <u>328,185</u>                 | <u>40,653,412</u>           |
| Deferred Outflows of Resources - Pensions                       | 4,567                             | 2,501                              | 48                             | 7,116                       |
| Deferred Outflows of Resources - Other Postemployment Benefits  | 980                               | 306                                | 3                              | 1,289                       |
| Total Assets and Deferred Outflows of Resources                 | <u>27,036,035</u>                 | <u>13,297,546</u>                  | <u>328,236</u>                 | <u>40,661,817</u>           |
| <b>Liabilities</b>  |                                   |                                    |                                |                             |
| Accounts Payable and Other Liabilities                          | 7,093                             | 3,566                              | 59                             | 10,718                      |
| Investment Purchases Payable                                    | 1,475                             | 799                                | -                              | 2,274                       |
| Net Other Postemployment Benefits Liability                     | 16,708                            | 11,871                             | 99                             | 28,678                      |
| Net Pension Liability   | 19,504                            | 14,468                             | 275                            | 34,247                      |
| Securities Lending Collateral                                   | 1,052,082                         | 543,229                            | 10,456                         | 1,605,767                   |
| Total Liabilities   | <u>1,096,862</u>                  | <u>573,933</u>                     | <u>10,889</u>                  | <u>1,681,684</u>            |
| Deferred Inflows of Resources - Pensions                        | 2,106                             | 1,859                              | 23                             | 3,988                       |
| Deferred Inflows of Resources - Other Postemployment Benefits   | 1,634                             | 1,402                              | 10                             | 3,046                       |
| Total Liabilities and Deferred Inflows of Resources             | <u>1,100,602</u>                  | <u>577,194</u>                     | <u>10,922</u>                  | <u>1,688,718</u>            |
| <b>Net Position Restricted for Pension Benefits</b>             | <b><u>\$ 25,935,433</u></b>       | <b><u>\$ 12,720,352</u></b>        | <b><u>\$ 317,314</u></b>       | <b><u>\$ 38,973,099</u></b> |

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Combining Statement of Changes in Fiduciary Net Position

For the Fiscal Year Ended September 30, 2019 with comparative figures for 2018

(Dollar Amounts in Thousands)

|  | <b>2019</b>                                |   |   |                      |
|--|--|---|---|----------------------|
|  | <b>Teachers'<br/>Retirement<br/>System</b> | <b>Employees'<br/>Retirement<br/>System</b> | <b>Judicial<br/>Retirement<br/>Fund</b> | <b>Total</b>         |
| <b>Additions</b>   |  |   |   |                      |
| Contributions  |  |   |   |                      |
| Employee   | \$ 516,675                                 | \$ 250,253                                  | \$ 3,912                                | \$ 770,840           |
| Employer   | 869,336                                    | 467,553                                     | 18,022                                  | 1,354,911            |
| Transfers from Teachers' Retirement System                   | -  | 4,187                                       | -                                       | 4,187                |
| Transfers from Employees' Retirement System                  | 6,234                                      | -   | 189                                     | 6,423                |
| Total Contributions  | <u>1,392,245</u>                           | <u>721,993</u>                              | <u>22,123</u>                           | <u>2,136,361</u>     |
| Investment Income (Note 5)                                   |  |   |   |                      |
| From Investing Activities                                    |  |   |   |                      |
| Net Increase in Fair Value of Investments                    | 33,671                                     | 30,092                                      | 3,476                                   | 67,239               |
| Interest and Dividends                                       | 583,329                                    | 291,011                                     | 7,463                                   | 881,803              |
| Total Investment Income from Investing Activities            | <u>617,000</u>                             | <u>321,103</u>                              | <u>10,939</u>                           | <u>949,042</u>       |
| Less: Investment Expenses, Net                               | 9,205                                      | 3,661                                       | -                                       | 12,866               |
| Net Investment Income from Investing Activities              | <u>607,795</u>                             | <u>317,442</u>                              | <u>10,939</u>                           | <u>936,176</u>       |
| From Securities Lending Activities                           |  |   |   |                      |
| Securities Lending Income                                    | 28,905                                     | 13,884                                      | 327                                     | 43,116               |
| Less Securities Lending Expenses:                            |  |   |   |                      |
| Borrower Rebates   | 19,431                                     | 9,394                                       | 218                                     | 29,043               |
| Management Fees  | 2,842                                      | 1,347                                       | 32                                      | 4,221                |
| Total Securities Lending Expenses                            | <u>22,273</u>                              | <u>10,741</u>                               | <u>250</u>                              | <u>33,264</u>        |
| Net Income from Securities Lending Activities                | <u>6,632</u>                               | <u>3,143</u>                                | <u>77</u>                               | <u>9,852</u>         |
| Total Net Investment Income                                  | <u>614,427</u>                             | <u>320,585</u>                              | <u>11,016</u>                           | <u>946,028</u>       |
| Total Additions  | <u>2,006,672</u>                           | <u>1,042,578</u>                            | <u>33,139</u>                           | <u>3,082,389</u>     |
| <b>Deductions</b>  |  |   |   |                      |
| Retirement Allowance Payments                                | 2,233,514                                  | 1,123,150                                   | 36,909                                  | 3,393,573            |
| Return of Contributions and Death Benefits                   | 56,861                                     | 48,675                                      | 646                                     | 106,182              |
| Unit Withdrawals   | -  | 380   | -                                       | 380                  |
| Transfers to Employees' Retirement System                    | 4,187                                      | -   | -                                       | 4,187                |
| Transfers to Teachers' Retirement System                     | -  | 6,234                                       | -                                       | 6,234                |
| Transfers to Judicial Retirement Fund                        | -  | 189   | -                                       | 189                  |
| Administrative Expenses                                      | 20,583                                     | 12,934                                      | 357                                     | 33,874               |
| Depreciation (Note 8)  | 7,512                                      | 2,895                                       | -                                       | 10,407               |
| Total Deductions   | <u>2,322,657</u>                           | <u>1,194,457</u>                            | <u>37,912</u>                           | <u>3,555,026</u>     |
| <b>Net (Decrease)</b>  | <u>(315,985)</u>                           | <u>(151,879)</u>                            | <u>(4,773)</u>                          | <u>(472,637)</u>     |
| <b>Net Position Restricted for Pension Benefits (Note 3)</b> |  |   |   |                      |
| Beginning of Year  | <u>25,935,433</u>                          | <u>12,720,352</u>                           | <u>317,314</u>                          | <u>38,973,099</u>    |
| End of Year  | <u>\$ 25,619,448</u>                       | <u>\$ 12,568,473</u>                        | <u>\$ 312,541</u>                       | <u>\$ 38,500,462</u> |

See accompanying Notes to the Combined Financial Statements.

|   | 2018                              |                                    |                                |                             |
|---|-----------------------------------|------------------------------------|--------------------------------|-----------------------------|
|   | Teachers'<br>Retirement<br>System | Employees'<br>Retirement<br>System | Judicial<br>Retirement<br>Fund | Total                       |
| <b>Additions</b>                                    |                                   |                                    |                                |                             |
| Contributions                                       |                                   |                                    |                                |                             |
| Employee  | \$ 488,503                        | \$ 236,842                         | \$ 3,756                       | \$ 729,101                  |
| Employer  | 802,598                           | 426,340                            | 17,180                         | 1,246,118                   |
| Transfers from Teachers' Retirement System          | -                                 | 4,899                              | 9                              | 4,908                       |
| Transfers from Employees' Retirement System         | 4,963                             | -                                  | 102                            | 5,065                       |
| Transfers from PEEHIP                               | 24,700                            | -                                  | -                              | 24,700                      |
| Total Contributions                                 | <u>1,320,764</u>                  | <u>668,081</u>                     | <u>21,047</u>                  | <u>2,009,892</u>            |
| Investment Income                                   |                                   |                                    |                                |                             |
| <i>From Investing Activities</i>                    |                                   |                                    |                                |                             |
| Net Increase in Fair Value of Investments           | 1,615,440                         | 775,132                            | 20,071                         | 2,410,643                   |
| Interest and Dividends                              | 650,293                           | 323,182                            | 7,471                          | 980,946                     |
| Total Investment Income from Investing Activities   | <u>2,265,733</u>                  | <u>1,098,314</u>                   | <u>27,542</u>                  | <u>3,391,589</u>            |
| Less: Investment Expenses, Net                      | 9,171                             | 3,395                              | -                              | 12,566                      |
| Net Investment Income from Investing Activities     | <u>2,256,562</u>                  | <u>1,094,919</u>                   | <u>27,542</u>                  | <u>3,379,023</u>            |
| <i>From Securities Lending Activities</i>           |                                   |                                    |                                |                             |
| Securities Lending Income                           | 23,246                            | 10,589                             | 248                            | 34,083                      |
| Less Securities Lending Expenses:                   |                                   |                                    |                                |                             |
| Borrower Rebates                                    | 12,385                            | 5,647                              | 134                            | 18,166                      |
| Management Fees                                     | 3,189                             | 1,449                              | 34                             | 4,672                       |
| Total Securities Lending Expenses                   | <u>15,574</u>                     | <u>7,096</u>                       | <u>168</u>                     | <u>22,838</u>               |
| Net Income from Securities Lending Activities       | <u>7,672</u>                      | <u>3,493</u>                       | <u>80</u>                      | <u>11,245</u>               |
| Total Net Investment Income                         | <u>2,264,234</u>                  | <u>1,098,412</u>                   | <u>27,622</u>                  | <u>3,390,268</u>            |
| Total Additions                                     | <u>3,584,998</u>                  | <u>1,766,493</u>                   | <u>48,669</u>                  | <u>5,400,160</u>            |
| <b>Deductions</b>                                   |                                   |                                    |                                |                             |
| Retirement Allowance Payments                       | 2,204,031                         | 1,096,883                          | 33,419                         | 3,334,333                   |
| Return of Contributions and Death Benefits          | 58,538                            | 45,070                             | 130                            | 103,738                     |
| Unit Withdrawals                                    | -                                 | 350                                | -                              | 350                         |
| Transfers to Employees' Retirement System           | 4,899                             | -                                  | -                              | 4,899                       |
| Transfers to Teachers' Retirement System            | -                                 | 4,963                              | -                              | 4,963                       |
| Transfers to Judicial Retirement Fund               | 9                                 | 102                                | -                              | 111                         |
| Administrative Expenses                             | 15,952                            | 11,219                             | 328                            | 27,499                      |
| Depreciation  | 6,338                             | 2,544                              | -                              | 8,882                       |
| Total Deductions                                    | <u>2,289,767</u>                  | <u>1,161,131</u>                   | <u>33,877</u>                  | <u>3,484,775</u>            |
| <b>Net Increase</b>                                 | <b><u>1,295,231</u></b>           | <b><u>605,362</u></b>              | <b><u>14,792</u></b>           | <b><u>1,915,385</u></b>     |
| <b>Net Position Restricted for Pension Benefits</b> |                                   |                                    |                                |                             |
| Beginning of Year - as previously reported          | 24,651,457                        | 12,122,471                         | 302,578                        | <b>37,076,506</b>           |
| Adjustment for Application of GASB 75               | (11,255)                          | (7,481)                            | (56)                           | <b>(18,792)</b>             |
| Beginning of Year - as adjusted                     | <u>24,640,202</u>                 | <u>12,114,990</u>                  | <u>302,522</u>                 | <b><u>37,057,714</u></b>    |
| End of Year   | <b><u>\$ 25,935,433</u></b>       | <b><u>\$ 12,720,352</u></b>        | <b><u>\$ 317,314</u></b>       | <b><u>\$ 38,973,099</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, 2019

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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 *Code of Alabama 1975, Title 12, Chapter 18, Article 7* (Act 498 of the Legislature of 2015) established the Judges' and Clerks' Plan within the JRF for any Judge or Clerk who was first elected or appointed on or after November 8, 2016, and was not a member of the JRF or the Clerks' and Registers' Supernumerary Fund prior to that date. The *Code of Alabama 1975, Section 12-17-22* (Act 498 of the Legislature of 2015) established the District Attorneys' Plan within the JRF for any District Attorney serving in the capacity of District Attorney on or after November 8, 2016. The responsibility for the general administration and operation of the JRF is vested in the Board of Control of the ERS.

At September 30, 2019, the number of participating units in each system was as follows:

|                        | <u>TRS</u>        | <u>ERS</u>        | <u>JRF</u>       |
|------------------------|-------------------|-------------------|------------------|
| Cities                 | -                 | 297               | -                |
| Counties               | -                 | 65                | 67               |
| Other Public Entities  | -                 | 511               | -                |
| Universities           | 13                | -                 | -                |
| Postsecondary          |                   |                   |                  |
| Institutions           | 25                | -                 | -                |
| City and County        |                   |                   |                  |
| Boards of Education    | 138               | -                 | -                |
| State Agencies & Other | 35                | 1                 | 1                |
| <b>Total</b>           | <b><u>211</u></b> | <b><u>874</u></b> | <b><u>68</u></b> |

At September 30, 2018, 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  | 96,231                | 24,187                | 404               |
| State Police   | -                     | 915                   | -                 |
| Employees of Local Employers   | -                     | 24,959                | -                 |
| Terminated employees entitled to benefits but not yet receiving benefits:  |                       |                       |                   |
| General  | 17,513                | 3,559                 | 14                |
| State Police   | -                     | 19                    | -                 |
| Employees of Local Employers   | -                     | 9,280                 | -                 |
| Non-vested inactive members who have not contributed for more than 5 years | 31,648                | 20,915                | 26                |
| Active Employees:  |                       |                       |                   |
| General  | 137,161               | 29,004                | 345               |
| State Police   | -                     | 660                   | -                 |
| Employees of Local Employers   | -                     | 56,901                | -                 |
| <b>Total</b>   | <b><u>282,553</u></b> | <b><u>170,399</u></b> | <b><u>789</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, 2019

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(Dollar Amounts in Thousands)

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

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

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

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

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

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

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

**2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**A. Basis of Accounting**

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

**B. Investments**

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

**C. Comparative Combining Statements**

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

**D. Interfund Transfers**

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

**E. Use of Estimates**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America 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.

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## **F. Deferred Outflows & Inflows of Resources**

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

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

## **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.

**C. Preretirement Death Benefit**

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

**D. Term Life Insurance**

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

**E. Expense**

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

**F. Deferred Retirement Option Plan (DROP)**

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

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

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## 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, 2019, are as follows (dollar amounts in thousands):

|                                  | <u>TRS</u>                  | <u>ERS</u>                  | <u>JRF</u>               |
|----------------------------------|-----------------------------|-----------------------------|--------------------------|
| Annuity Savings                  | \$ 6,100,489                | \$ 3,038,594                | \$ 40,993                |
| Pension Accumulation             | 19,178,247                  | 9,380,020                   | 268,790                  |
| Deferred Retirement Option Plan  | 165,239                     | 88,037                      | -                        |
| Preretirement Death Benefit      | 55,360                      | 27,624                      | 61                       |
| Term Life Insurance              | 9,164                       | -                           | -                        |
| Plant Fund                       | 112,159                     | 49,265                      | -                        |
| Expense                          | (1,210)                     | (15,067)                    | 2,697                    |
| <b>Net Position at 9/30/2019</b> | <b><u>\$ 25,619,448</u></b> | <b><u>\$ 12,568,473</u></b> | <b><u>\$ 312,541</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, 2019, was held for administrative expenses.

# RETIREMENT SYSTEMS OF ALABAMA

## Financial Section

### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2019

(Dollar Amounts in Thousands)

#### 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. The Boards of Control adopted a revised IPS that was effective on October 1, 2018, as outlined below. Below are the asset allocation guidelines for both Systems.

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

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

The annual money-weighted rates of return for TRS, ERS, and JRF are 2.44%, 2.58%, and 3.58%, 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.

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### 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, 2019, the TRS owned equity securities of New Water Street Corporation which represented approximately 5.17% of the TRS investments.

# RETIREMENT SYSTEMS OF ALABAMA

## Financial Section

### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2019

(Dollar Amounts in Thousands)

The following tables provide information as of September 30, 2019, concerning the fair value of investments, interest rate risk, and foreign currency risk:

| Type of Investment            | TRS<br>Maturity in Years at Fair Value |                     |                   |                     | Total<br>Fair Value         | Cost                        |
|-------------------------------|--|---------------------|-------------------|---------------------|-----------------------------|-----------------------------|
|                               | Less<br>Than 1                         | 1-5                 | 6-10              | More<br>Than 10     |                             |                             |
| <i>Fixed Maturity</i>         |  |                     |                   |                     |                             |                             |
| Domestic                      |  |                     |                   |                     |                             |                             |
| Money Market Funds            | \$ 1,706,067                           | \$ -                | \$ -              | \$ -                | \$ 1,706,067                | \$ 1,706,067                |
| Commercial Paper              | 481,704                                | -                   | -                 | -                   | 481,704                     | 481,704                     |
| U.S. Agency                   | 21,588                                 | 74,465              | 57,702            | 9,184               | 162,939                     | 158,909                     |
| U.S. Government Guaranteed    | 202,273                                | 376,885             | 192,717           | 176,191             | 948,066                     | 918,583                     |
| Corporate Bonds               | 120,208                                | 447,100             | 306,636           | 372,941             | 1,246,885                   | 1,164,325                   |
| Private Placements            | 6,365                                  | 220,882             | 138,087           | 115,001             | 480,335                     | 516,429                     |
| GNMAs                         | 2                                      | 776                 | 2,599             | 116,342             | 119,719                     | 116,071                     |
| CMOs                          | 7                                      | 88                  | 30,136            | 446,574             | 476,805                     | 468,449                     |
| Total Domestic Fixed Maturity | <u>\$ 2,538,214</u>                    | <u>\$ 1,120,196</u> | <u>\$ 727,877</u> | <u>\$ 1,236,233</u> | <u>5,622,520</u>            | <u>5,530,537</u>            |
| <i>Equities</i>               |  |                     |                   |                     |                             |                             |
| Preferred                     |  |                     |                   |                     |                             |                             |
|                               |  |                     |                   |                     | <u>24,113</u>               | <u>24,441</u>               |
| Domestic                      |  |                     |                   |                     |                             |                             |
|                               |  |                     |                   |                     | <u>12,732,653</u>           | <u>7,873,794</u>            |
| Private                       |  |                     |                   |                     |                             |                             |
|                               |  |                     |                   |                     | <u>1,028,880</u>            | <u>825,615</u>              |
| International                 |  |                     |                   |                     |                             |                             |
| Australian Dollar             |  |                     |                   |                     | 188,786                     | 118,109                     |
| Swiss Franc                   |  |                     |                   |                     | 275,034                     | 120,335                     |
| Danish Krone                  |  |                     |                   |                     | 45,161                      | 16,510                      |
| Euro                          |  |                     |                   |                     | 812,023                     | 620,464                     |
| Pound Sterling                |  |                     |                   |                     | 430,106                     | 435,298                     |
| Hong Kong Dollar              |  |                     |                   |                     | 95,092                      | 51,448                      |
| New Israeli Shekel            |  |                     |                   |                     | 10,262                      | 15,353                      |
| Japanese Yen                  |  |                     |                   |                     | 686,813                     | 497,243                     |
| Norwegian Krone               |  |                     |                   |                     | 17,196                      | 12,510                      |
| New Zealand Dollar            |  |                     |                   |                     | 1,946                       | 2,218                       |
| Swedish Krona                 |  |                     |                   |                     | 72,986                      | 43,164                      |
| Singapore Dollar              |  |                     |                   |                     | 33,930                      | 28,324                      |
| US Dollar                     |  |                     |                   |                     | 716,244                     | 708,277                     |
| South African Rand            |  |                     |                   |                     | -                           | 5                           |
| Total International Equities  |  |                     |                   |                     | <u>3,385,579</u>            | <u>2,669,258</u>            |
| Total Equities                |  |                     |                   |                     | <u>17,171,225</u>           | <u>11,393,108</u>           |
| Real Estate                   |  |                     |                   |                     |                             |                             |
|                               |  |                     |                   |                     | <u>2,470,955</u>            | <u>1,862,758</u>            |
| <b>Total Investments</b>      |  |                     |                   |                     | <b><u>\$ 25,264,700</u></b> | <b><u>\$ 18,786,403</u></b> |

| Type of Investment            | ERS                             |            |            |              | Total Fair Value     | Cost                |
|-------------------------------|---------------------------------|------------|------------|--------------|----------------------|---------------------|
|                               | Maturity in Years at Fair Value |            |            |              |                      |                     |
|                               | Less Than 1                     | 1-5        | 6-10       | More Than 10 |                      |                     |
| <i>Fixed Maturity</i>         |                                 |            |            |              |                      |                     |
| Domestic                      |                                 |            |            |              |                      |                     |
| Money Market Funds            | \$ 740,277                      | \$ -       | \$ -       | \$ -         | \$ 740,277           | \$ 740,277          |
| Commercial Paper              | 303,721                         | -          | -          | -            | 303,721              | 303,721             |
| U.S. Agency                   | 13,080                          | 35,400     | 27,666     | 4,398        | 80,544               | 78,612              |
| U.S. Government Guaranteed    | 95,547                          | 191,408    | 94,895     | 83,224       | 465,074              | 450,760             |
| Corporate Bonds               | 57,441                          | 226,983    | 154,522    | 173,506      | 612,452              | 572,879             |
| Private Placements            | 3,135                           | 108,793    | 65,488     | 57,796       | 235,212              | 253,574             |
| GNMAs                         | -                               | 239        | 999        | 56,805       | 58,043               | 56,245              |
| CMOs                          | 3                               | -          | 13,738     | 228,267      | 242,008              | 237,599             |
| Total Domestic Fixed Maturity | \$ 1,213,204                    | \$ 562,823 | \$ 357,308 | \$ 603,996   | 2,737,331            | 2,693,667           |
| <i>Equities</i>               |                                 |            |            |              |                      |                     |
| Preferred                     |                                 |            |            |              | 10,963               | 11,112              |
| Domestic                      |                                 |            |            |              | 6,284,827            | 3,866,359           |
| Private                       |                                 |            |            |              | 630,151              | 521,785             |
| International                 |                                 |            |            |              |                      |                     |
| Australian Dollar             |                                 |            |            |              | 83,026               | 51,952              |
| Swiss Franc                   |                                 |            |            |              | 120,909              | 52,215              |
| Danish Krone                  |                                 |            |            |              | 19,856               | 7,220               |
| Euro                          |                                 |            |            |              | 357,182              | 271,361             |
| Pound Sterling                |                                 |            |            |              | 189,178              | 190,514             |
| Hong Kong Dollar              |                                 |            |            |              | 41,816               | 22,728              |
| New Israeli Shekel            |                                 |            |            |              | 4,514                | 6,753               |
| Japanese Yen                  |                                 |            |            |              | 302,017              | 219,143             |
| Norwegian Krone               |                                 |            |            |              | 7,560                | 5,583               |
| New Zealand Dollar            |                                 |            |            |              | 855                  | 988                 |
| Swedish Krona                 |                                 |            |            |              | 32,105               | 19,089              |
| Singapore Dollar              |                                 |            |            |              | 14,919               | 12,406              |
| US Dollar                     |                                 |            |            |              | 420,759              | 426,317             |
| South African Rand            |                                 |            |            |              | -                    | 2                   |
| Total International Equities  |                                 |            |            |              | 1,594,696            | 1,286,271           |
| Total Equities                |                                 |            |            |              | 8,520,637            | 5,685,527           |
| Real Estate                   |                                 |            |            |              | 1,198,136            | 928,909             |
| <b>Total Investments</b>      |                                 |            |            |              | <b>\$ 12,456,104</b> | <b>\$ 9,308,103</b> |

RETIREMENT SYSTEMS OF ALABAMA

*Financial Section*

Notes to the Combined Financial Statements  
For the Fiscal Year Ended September 30, 2019

(Dollar Amounts in Thousands)

| Type of Investment            | JRF<br>Maturity in Years at Fair Value |           |           |              | Total Fair<br>Value | Cost              |
|-------------------------------|--|-----------|-----------|--------------|---------------------|-------------------|
|                               | Less Than 1                            | 1-5       | 6-10      | More Than 10 |                     |                   |
| <i>Fixed Maturity</i>         |  |           |           |              |                     |                   |
| Domestic                      |  |           |           |              |                     |                   |
| Money Market Funds            | \$ 19,578                              | \$ -      | \$ -      | \$ -         | \$ 19,578           | \$ 19,578         |
| Commercial Paper              | 6,006                                  | -         | -         | -            | 6,006               | 6,006             |
| U.S. Agency                   | 597                                    | 2,317     | 1,333     | 243          | 4,490               | 4,390             |
| U.S. Government Guaranteed    | 4,619                                  | 13,782    | 3,475     | 4,038        | 25,914              | 25,237            |
| Corporate Bonds               | 2,166                                  | 13,336    | 7,381     | 8,782        | 31,665              | 29,715            |
| Private Placements            | -                                      | -         | -         | 1,114        | 1,114               | 1,000             |
| GNMAs                         | -                                      | -         | -         | 2,708        | 2,708               | 2,614             |
| CMOs                          | -                                      | -         | 749       | 12,357       | 13,106              | 12,887            |
| Total Domestic Fixed Maturity | \$ 32,966                              | \$ 29,435 | \$ 12,938 | \$ 29,242    | 104,581             | 101,427           |
| <i>Equities</i>               |  |           |           |              |                     |                   |
| Preferred                     |  |           |           |              | 598                 | 607               |
| Domestic                      |  |           |           |              | 155,632             | 73,980            |
| Private                       |  |           |           |              | 76                  | 71                |
| International                 |  |           |           |              |                     |                   |
| Australian Dollar             |  |           |           |              | 2,479               | 2,133             |
| Swiss Franc                   |  |           |           |              | 3,579               | 2,115             |
| Danish Krone                  |  |           |           |              | 599                 | 297               |
| Euro                          |  |           |           |              | 10,678              | 8,977             |
| Pound Sterling                |  |           |           |              | 5,644               | 6,157             |
| Hong Kong Dollar              |  |           |           |              | 1,267               | 802               |
| New Israeli Shekel            |  |           |           |              | 134                 | 201               |
| Japanese Yen                  |  |           |           |              | 9,114               | 6,961             |
| Norwegian Krone               |  |           |           |              | 226                 | 222               |
| New Zealand Dollar            |  |           |           |              | 26                  | 23                |
| Swedish Krona                 |  |           |           |              | 959                 | 740               |
| Singapore Dollar              |  |           |           |              | 434                 | 394               |
| US Dollar                     |  |           |           |              | 7,838               | 7,456             |
| South African Rand            |  |           |           |              | -                   | -                 |
| Total International Equities  |  |           |           |              | 42,977              | 36,478            |
| Total Equities                |  |           |           |              | 199,283             | 111,136           |
| Real Estate                   |  |           |           |              | 4,227               | 1,067             |
| <b>Total Investments</b>      |  |           |           |              | <b>\$ 308,091</b>   | <b>\$ 213,630</b> |

The following tables provide information as of September 30, 2019, concerning credit risk (dollar amounts in thousands):

| TRS   |                     |                     |  |
|---|---------------------|---------------------|--|
| Moody's Ratings                             | Cost                | Fair Value          | Fair Value as a Percentage of Total Fair Value of Fixed Maturities |
| Aaa   | \$ 175,695          | \$ 182,298          | 3.242  |
| Aa1   | 16,433              | 17,425              | 0.310  |
| Aa2   | 21,592              | 21,878              | 0.389  |
| Aa3   | 16,875              | 17,153              | 0.305  |
| P-1   | 10,008              | 10,008              | 0.178  |
| P-2   | 471,696             | 471,696             | 8.390  |
| A1  | 49,915              | 55,137              | 0.981  |
| A2  | 56,084              | 61,306              | 1.090  |
| A3  | 278,094             | 301,683             | 5.366  |
| Baa1  | 247,529             | 263,191             | 4.681  |
| Baa2  | 298,590             | 320,770             | 5.705  |
| Baa3  | 84,150              | 86,171              | 1.533  |
| Ba1   | 28,657              | 30,588              | 0.544  |
| Ba2   | 10,967              | 11,083              | 0.197  |
| Ba3   | 8,014               | 7,995               | 0.142  |
| B1  | 66,833              | 66,833              | 1.189  |
| NR  | 2,186,302           | 2,152,716           | 38.287   |
| <b>Total Moody's Rated Fixed Maturities</b> | <b>4,027,434</b>    | <b>4,077,931</b>    | <b>72.529</b>  |
| U.S. Agency Mortgage-Backed Securities      | 468,449             | 476,805             | 8.480  |
| U.S. Government Guaranteed                  | 1,034,654           | 1,067,784           | 18.991   |
| <b>Total Fixed Maturities</b>               | <b>\$ 5,530,537</b> | <b>\$ 5,622,520</b> | <b>100.000</b>   |

| Standard & Poor's Ratings                   | Cost                | Fair Value          | Fair Value as a Percentage of Total Fair Value of Fixed Maturities |
|---|---------------------|---------------------|--|
| AAA   | \$ 14,887           | \$ 17,054           | 0.303  |
| AA+   | 175,342             | 180,365             | 3.208  |
| AA-   | 15,431              | 17,717              | 0.315  |
| A-2   | 481,704             | 481,704             | 8.568  |
| A+  | 76,052              | 81,191              | 1.444  |
| A   | 80,939              | 88,177              | 1.568  |
| A-  | 228,187             | 255,494             | 4.544  |
| BBB+  | 328,917             | 342,896             | 6.099  |
| BBB   | 262,053             | 280,504             | 4.989  |
| BBB-  | 93,025              | 97,095              | 1.727  |
| BB+   | 10,967              | 11,083              | 0.197  |
| BB  | 2,126               | 2,055               | 0.037  |
| BB-   | 8,014               | 7,995               | 0.142  |
| B+  | 66,833              | 66,833              | 1.189  |
| D   | 3,064               | 3,056               | 0.054  |
| NR  | 2,179,893           | 2,144,712           | 38.145   |
| <b>Total S&amp;P Rated Fixed Maturities</b> | <b>4,027,434</b>    | <b>4,077,931</b>    | <b>72.529</b>  |
| U.S. Agency Mortgage-Backed Securities      | 468,449             | 476,805             | 8.480  |
| U.S. Government Guaranteed                  | 1,034,654           | 1,067,784           | 18.991   |
| <b>Total Fixed Maturities</b>               | <b>\$ 5,530,537</b> | <b>\$ 5,622,520</b> | <b>100.000</b>   |

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Notes to the Combined Financial Statements  
For the Fiscal Year Ended September 30, 2019

(Dollar Amounts in Thousands)

| Moody's Ratings                             | ERS                 |                     | Fair Value as a<br>Percentage of Total<br>Fair Value of Fixed<br>Maturities |
|---|---------------------|---------------------|---|
|   | Cost                | Fair Value          |   |
| Aaa   | \$ 86,281           | \$ 89,388           | 3.266   |
| Aa1   | 9,041               | 9,559               | 0.349   |
| Aa2   | 10,457              | 10,596              | 0.387   |
| Aa3   | 8,280               | 8,417               | 0.307   |
| P-1   | 8,991               | 8,991               | 0.329   |
| P-2   | 294,729             | 294,729             | 10.767  |
| A1  | 22,608              | 24,970              | 0.912   |
| A2  | 30,194              | 32,646              | 1.193   |
| A3  | 138,173             | 149,299             | 5.454   |
| Baa1  | 116,009             | 123,221             | 4.501   |
| Baa2  | 155,172             | 166,620             | 6.087   |
| Baa3  | 39,930              | 40,865              | 1.493   |
| Ba1   | 12,960              | 13,822              | 0.505   |
| Ba2   | 4,917               | 4,950               | 0.181   |
| Ba3   | 3,582               | 3,566               | 0.130   |
| B1  | 32,918              | 32,917              | 1.203   |
| NR  | 974,821             | 957,650             | 34.985  |
| <b>Total Moody's Rated Fixed Maturities</b> | <b>1,949,063</b>    | <b>1,972,206</b>    | <b>72.049</b>   |
| U.S. Agency Mortgage-Backed Securities      | 237,599             | 242,008             | 8.841   |
| U.S. Government Guaranteed                  | 507,005             | 523,117             | 19.110  |
| <b>Total Fixed Maturities</b>               | <b>\$ 2,693,667</b> | <b>\$ 2,737,331</b> | <b>100.000</b>  |

| Standard & Poor's Ratings                   | ERS                 |                     | Fair Value as a<br>Percentage of Total<br>Fair Value of Fixed<br>Maturities |
|---|---------------------|---------------------|---|
|   | Cost                | Fair Value          |   |
| AAA   | \$ 6,807            | \$ 7,797            | 0.285   |
| AA+   | 87,652              | 90,104              | 3.292   |
| AA-   | 7,092               | 8,128               | 0.297   |
| A-2   | 303,721             | 303,721             | 11.095  |
| A+  | 35,854              | 38,205              | 1.396   |
| A   | 37,258              | 40,529              | 1.481   |
| A-  | 115,997             | 128,939             | 4.710   |
| BBB+  | 160,195             | 166,965             | 6.100   |
| BBB   | 135,828             | 145,120             | 5.301   |
| BBB-  | 42,113              | 44,100              | 1.611   |
| BB+   | 4,917               | 4,950               | 0.181   |
| BB  | 975                 | 942                 | 0.034   |
| BB-   | 3,582               | 3,566               | 0.130   |
| B+  | 32,918              | 32,917              | 1.203   |
| D   | 1,366               | 1,363               | 0.050   |
| NR  | 972,788             | 954,860             | 34.883  |
| <b>Total S&amp;P Rated Fixed Maturities</b> | <b>1,949,063</b>    | <b>1,972,206</b>    | <b>72.049</b>   |
| U.S. Agency Mortgage-Backed Securities      | 237,599             | 242,008             | 8.841   |
| U.S. Government Guaranteed                  | 507,005             | 523,117             | 19.110  |
| <b>Total Fixed Maturities</b>               | <b>\$ 2,693,667</b> | <b>\$ 2,737,331</b> | <b>100.000</b>  |

**JRF**

| <u>Moody's Ratings</u>                      | <u>Cost</u>       | <u>Fair Value</u> | <u>Fair Value as a<br/>Percentage of<br/>Total Fair Value of<br/>Fixed Maturities</u> |
|---|-------------------|-------------------|---|
| Aaa   | \$ 4,868          | \$ 5,041          | 4.820   |
| Aa1   | 508               | 536               | 0.513   |
| Aa2   | 584               | 592               | 0.566   |
| Aa3   | 538               | 546               | 0.522   |
| P-2   | 6,006             | 6,006             | 5.743   |
| A1  | 1,075             | 1,188             | 1.136   |
| A2  | 1,095             | 1,208             | 1.155   |
| A3  | 6,124             | 6,618             | 6.328   |
| Baa1  | 6,483             | 6,861             | 6.560   |
| Baa2  | 8,627             | 9,214             | 8.810   |
| Baa3  | 2,440             | 2,502             | 2.393   |
| Ba1   | 748               | 799               | 0.764   |
| Ba2   | 246               | 247               | 0.237   |
| Ba3   | 179               | 179               | 0.171   |
| NR  | 21,168            | 21,316            | 20.382  |
| <b>Total Moody's Rated Fixed Maturities</b> | <b>60,689</b>     | <b>62,853</b>     | <b>60.100</b>   |
| U.S. Agency Mortgage-Backed Securities      | 12,887            | 13,106            | 12.532  |
| U.S. Government Guaranteed                  | 27,851            | 28,622            | 27.368  |
| <b>Total Fixed Maturities</b>               | <b>\$ 101,427</b> | <b>\$ 104,581</b> | <b>100.000</b>  |

| <u>Standard &amp; Poor's Ratings</u>        | <u>Cost</u>       | <u>Fair Value</u> | <u>Fair Value as a<br/>Percentage of<br/>Total Fair Value of<br/>Fixed Maturities</u> |
|---|-------------------|-------------------|---|
| AAA   | \$ 435            | \$ 499            | 0.477   |
| AA+   | 4,897             | 5,027             | 4.806   |
| AA-   | 388               | 443               | 0.424   |
| A-2   | 6,006             | 6,006             | 5.743   |
| A+  | 1,921             | 2,036             | 1.947   |
| A   | 1,752             | 1,916             | 1.832   |
| A-  | 5,323             | 5,898             | 5.640   |
| BBB+  | 8,618             | 8,973             | 8.580   |
| BBB   | 6,895             | 7,348             | 7.026   |
| BBB-  | 2,837             | 2,948             | 2.819   |
| BB+   | 246               | 247               | 0.237   |
| BB  | 63                | 61                | 0.058   |
| BB-   | 179               | 179               | 0.171   |
| D   | 73                | 72                | 0.069   |
| NR  | 21,056            | 21,200            | 20.271  |
| <b>Total S&amp;P Rated Fixed Maturities</b> | <b>60,689</b>     | <b>62,853</b>     | <b>60.100</b>   |
| U.S. Agency Mortgage-Backed Securities      | 12,887            | 13,106            | 12.532  |
| U.S. Government Guaranteed                  | 27,851            | 28,622            | 27.368  |
| <b>Total Fixed Maturities</b>               | <b>\$ 101,427</b> | <b>\$ 104,581</b> | <b>100.000</b>  |

(Dollar Amounts in Thousands)

**D. Fair Value Measurement**

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

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

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

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

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

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

The following tables provide information as of September 30, 2019, concerning fair value measurement (dollar amounts in thousands):

|                                | 9/30/2019            | TRS<br>Fair Value Measurements Using:           |   |   |
|--------------------------------|----------------------|---|---|---|
|                                |                      | Quoted Prices in<br>Active Markets<br>(Level 1) | Significant Other<br>Observable Inputs<br>(Level 2) | Significant<br>Unobservable<br>Inputs (Level 3) |
| <b>Domestic Fixed Maturity</b> |                      |   |   |   |
| Money Market Funds             | \$ 1,706,067         | \$ -  | \$ 1,706,067  | \$ -  |
| Commercial Paper               | 481,704              | -   | 481,704   | -   |
| U.S. Agency                    | 162,939              | -   | 162,939   | -   |
| U.S. Government Guaranteed     | 948,066              | -   | 948,066   | -   |
| Corporate Bonds                | 1,246,885            | -   | 1,246,885   | -   |
| Private Placements             | 480,335              | -   | -   | 480,335   |
| GNMAs                          | 119,719              | -   | 119,719   | -   |
| CMOs                           | 476,805              | -   | 476,805   | -   |
| Total Domestic Fixed Maturity  | 5,622,520            | -   | 5,142,185   | 480,335   |
| <b>Equities</b>                |                      |   |   |   |
| Preferred                      | 24,113               | 24,113  | -   | -   |
| Domestic                       | 12,732,653           | 11,564,838                                      | 1,167,815   | -   |
| Private                        | 1,028,880            | 67,869  | -   | 961,011   |
| International                  | 3,385,579            | 3,385,579                                       | -   | -   |
| Total Equities                 | 17,171,225           | 15,042,399                                      | 1,167,815   | 961,011   |
| <b>Real Estate</b>             |                      |   |   |   |
| Real Estate                    | 2,470,955            | -   | -   | 2,470,955                                       |
| Total Real Estate              | 2,470,955            | -   | -   | 2,470,955                                       |
| <b>Total Investments</b>       | <b>25,264,700</b>    | <b>15,042,399</b>                               | <b>6,310,000</b>                                    | <b>3,912,301</b>                                |
| Securities Lending Collateral  | 699,940              | -   | 699,940   | -   |
| <b>Total Fair Value</b>        | <b>\$ 25,964,640</b> | <b>\$ 15,042,399</b>                            | <b>\$ 7,009,940</b>                                 | <b>\$ 3,912,301</b>                             |

RETIREMENT SYSTEMS OF ALABAMA

*Financial Section*

Notes to the Combined Financial Statements  
For the Fiscal Year Ended September 30, 2019

(Dollar Amounts in Thousands)

|                                       | 9/30/2019            | ERS<br>Fair Value Measurements Using:           |  |   |
|---------------------------------------|----------------------|---|--|---|
|                                       |                      | Quoted Prices in<br>Active Markets<br>(Level 1) | Significant<br>Other<br>Observable<br>Inputs (Level 2) | Significant<br>Unobservable<br>Inputs (Level 3) |
| <b><i>Domestic Fixed Maturity</i></b> |                      |   |  |   |
| Money Market Funds                    | \$ 740,277           | \$ -  | \$ 740,277   | \$ -  |
| Commercial Paper                      | 303,721              | -   | 303,721  | -   |
| U.S. Agency                           | 80,544               | -   | 80,544   | -   |
| U.S. Government Guaranteed            | 465,074              | -   | 465,074  | -   |
| Corporate Bonds                       | 612,452              | -   | 612,452  | -   |
| Private Placements                    | 235,212              | -   | -  | 235,212   |
| GNMAs                                 | 58,043               | -   | 58,043   | -   |
| CMOs                                  | 242,008              | -   | 242,008  | -   |
| Total Domestic Fixed Maturity         | 2,737,331            | -   | 2,502,119  | 235,212   |
| <b><i>Equities</i></b>                |                      |   |  |   |
| Preferred                             | 10,963               | 10,963  | -  | -   |
| Domestic                              | 6,284,827            | 5,804,555                                       | 480,272  | -   |
| Private                               | 630,151              | 48,439  | -  | 581,712   |
| International                         | 1,594,696            | 1,594,696                                       | -  | -   |
| Total Equities                        | 8,520,637            | 7,458,653                                       | 480,272  | 581,712   |
| <b><i>Real Estate</i></b>             |                      |   |  |   |
| Real Estate                           | 1,198,136            | -   | -  | 1,198,136                                       |
| Total Real Estate                     | 1,198,136            | -   | -  | 1,198,136                                       |
| <b>Total Investments</b>              | <b>12,456,104</b>    | <b>7,458,653</b>                                | <b>2,982,391</b>                                       | <b>2,015,060</b>                                |
| Securities Lending Collateral         | 256,550              | -   | 256,550  | -   |
| <b>Total Fair Value</b>               | <b>\$ 12,712,654</b> | <b>\$ 7,458,653</b>                             | <b>\$ 3,238,941</b>                                    | <b>\$ 2,015,060</b>                             |

|                                       | <b>JRF</b>               |  |  |  |
|---------------------------------------|--------------------------|--|--|--|
|                                       | <b>9/30/2019</b>         | <b>Fair Value Measurements Using:</b>                    |  |  |
|                                       |                          | <b>Quoted Prices in<br/>Active Markets<br/>(Level 1)</b> | <b>Significant Other<br/>Observable Inputs<br/>(Level 2)</b> | <b>Significant<br/>Unobservable<br/>Inputs (Level 3)</b> |
| <b><i>Domestic Fixed Maturity</i></b> |                          |  |  |  |
| Money Market Funds                    | \$ 19,578                | \$ -   | \$ 19,578  | \$ -   |
| Commercial Paper                      | 6,006                    | -  | 6,006  | -  |
| U.S. Agency                           | 4,490                    | -  | 4,490  | -  |
| U.S. Government Guaranteed            | 25,914                   | -  | 25,914   | -  |
| Corporate Bonds                       | 31,665                   | -  | 31,665   | -  |
| Private Placements                    | 1,114                    | -  | -  | 1,114  |
| GNMAs                                 | 2,708                    | -  | 2,708  | -  |
| CMOs                                  | 13,106                   | -  | 13,106   | -  |
| Total Domestic Fixed Maturity         | <u>104,581</u>           | <u>-</u>   | <u>103,467</u>   | <u>1,114</u>   |
| <b><i>Equities</i></b>                |                          |  |  |  |
| Preferred                             | 598                      | 598  | -  | -  |
| Domestic                              | 155,632                  | 145,112  | 10,520   | -  |
| Private                               | 76                       | -  | -  | 76   |
| International                         | 42,977                   | 42,977   | -  | -  |
| Total Equities                        | <u>199,283</u>           | <u>188,687</u>   | <u>10,520</u>  | <u>76</u>  |
| <b><i>Real Estate</i></b>             |                          |  |  |  |
| Real Estate                           | 4,227                    | -  | -  | 4,227  |
| Total Real Estate                     | <u>4,227</u>             | <u>-</u>   | <u>-</u>   | <u>4,227</u>   |
| <b>Total Investments</b>              | <b><u>308,091</u></b>    | <b><u>188,687</u></b>                                    | <b><u>113,987</u></b>  | <b><u>5,417</u></b>                                      |
| Securities Lending Collateral         | 5,297                    | -  | 5,297  | -  |
| <b>Total Fair Value</b>               | <b><u>\$ 313,388</u></b> | <b><u>\$ 188,687</u></b>                                 | <b><u>\$ 119,284</u></b>                                     | <b><u>\$ 5,417</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.

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, 2019, the average term of the loans secured by QDF was 15, 19, and 41 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, 2019, the fair value of the securities on loan was \$3,128,839, \$1,337,749, and \$32,777 for the TRS, ERS, and JRF, respectively. The fair value of the collateral pledged by the borrowers was \$3,307,314, \$1,414,210, and \$34,835 for the TRS, ERS, and JRF, respectively. Since the amounts owed by the TRS, ERS, and JRF exceeded the amounts the borrowers owed to the TRS, ERS, and JRF, there was no credit risk exposure as of September 30, 2019. There were no significant violations of legal or contractual provisions, no borrower or lending agent default losses, and no recoveries of prior period losses during the year.

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

The following table provides information as of September 30, 2019, concerning securities lent (dollar amounts in thousands):

| <b>Securities Lending - Investments Lent &amp; Collateral Received</b> |                           |                           |                        |                           |
|--|---------------------------|---------------------------|------------------------|---------------------------|
| (at Fair Value)  |                           |                           |                        |                           |
| <b>Type of Investment Lent</b>   | <b>TRS</b>                | <b>ERS</b>                | <b>JRF</b>             | <b>Total</b>              |
| <i>For Cash Collateral</i>   |                           |                           |                        |                           |
| Domestic Fixed Maturities  | \$ 197,328                | \$ 77,382                 | \$ 3,839               | \$ 278,549                |
| Domestic Equity  | 471,834                   | 166,741                   | 1,234                  | 639,809                   |
| International Equity - JPY   | 6,782                     | 2,434                     | 22                     | 9,238                     |
| International Equity - USD   | 11,422                    | 5,222                     | 95                     | 16,739                    |
| Total Lent for Cash Collateral   | <u>687,366</u>            | <u>251,779</u>            | <u>5,190</u>           | <u>944,335</u>            |
| <i>For Non-Cash Collateral</i>   |                           |                           |                        |                           |
| Domestic Fixed Maturities  | 665,734                   | 345,600                   | 17,409                 | 1,028,743                 |
| Domestic Equity  | 1,691,394                 | 711,982                   | 8,748                  | 2,412,124                 |
| International Equity   | 84,345                    | 28,388                    | 1,430                  | 114,163                   |
| Total Lent for Non-Cash Collateral                                     | <u>2,441,473</u>          | <u>1,085,970</u>          | <u>27,587</u>          | <u>3,555,030</u>          |
| <b>Total Securities Lent</b>   | <b><u>\$3,128,839</u></b> | <b><u>\$1,337,749</u></b> | <b><u>\$32,777</u></b> | <b><u>\$4,499,365</u></b> |
| <b>Type of Collateral Received</b>                                     |                           |                           |                        |                           |
| <i>Cash Collateral</i>   |                           |                           |                        |                           |
| Invested in State Street Global Securities Lending Trust - JPY         | \$ 7,121                  | \$ 2,556                  | \$ 23                  | \$ 9,700                  |
| Invested in State Street Global Securities Lending Trust - USD         | 692,819                   | 253,994                   | 5,274                  | 952,087                   |
| Total Cash Collateral Denominated in USD                               | <u>699,940</u>            | <u>256,550</u>            | <u>5,297</u>           | <u>961,787</u>            |
| <i>Non-Cash Collateral</i>   |                           |                           |                        |                           |
| Domestic Fixed Securities  |                           |                           |                        |                           |
| CAD  | 8,076                     | -                         | -                      | 8,076                     |
| EUR  | 20,207                    | 3,514                     | 1,515                  | 25,236                    |
| GBP  | 3,436                     | 598                       | 257                    | 4,291                     |
| USD  | 330,073                   | 149,430                   | 8,227                  | 487,730                   |
| Domestic Equity Securities   |                           |                           |                        |                           |
| USD  | 1,837,140                 | 762,237                   | 9,545                  | 2,608,922                 |
| International Fixed Maturities & Equity                                |                           |                           |                        |                           |
| AUD  | 9                         | 3                         | -                      | 12                        |
| DKK  | 2,189                     | 795                       | -                      | 2,984                     |
| EUR  | 14,618                    | 3,036                     | 4,663                  | 22,317                    |
| GBP  | 5,422                     | 2,065                     | 2                      | 7,489                     |
| SEK  | 20,328                    | 7,378                     | -                      | 27,706                    |
| USD  | 365,876                   | 228,604                   | 5,329                  | 599,809                   |
| Total Non-Cash Collateral  | <u>2,607,374</u>          | <u>1,157,660</u>          | <u>29,538</u>          | <u>3,794,572</u>          |
| <b>Total Collateral Received</b>                                       | <b><u>\$3,307,314</u></b> | <b><u>\$1,414,210</u></b> | <b><u>\$34,835</u></b> | <b><u>\$4,756,359</u></b> |

# RETIREMENT SYSTEMS OF ALABAMA

## Financial Section

### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2019

(Dollar Amounts in Thousands)

#### F. Mortgage-backed Securities

As of September 30, 2019, the TRS, ERS, and JRF had investments in mortgage-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, 2019, as reported in the System's Combining Statement of Fiduciary Net Position and Combining Statement of Changes in Fiduciary Net Position:

|                                | Investment Derivative Instruments |                 |                                     |             |             |
|--------------------------------|-----------------------------------|-----------------|-------------------------------------|-------------|-------------|
|                                | Changes in Fair Value             |                 | Fair Value as of September 30, 2019 |             |             |
|                                | Classification                    | Amount          | Classification                      | Amount      | Notional    |
| <b>TRS</b>                     |                                   |                 |                                     |             |             |
| Domestic Options Written       | Investment Income                 | \$ 654          | Domestic Equity                     | \$ -        | \$ -        |
| Domestic Options Purchased     | Investment Income                 | 17,465          | Domestic Equity                     | -           | -           |
| Total Domestic Options         |                                   | 18,119          |                                     | -           | -           |
| International Options Written  | Investment Income                 | -               | International Equity                | -           | -           |
| <b>Grand Total TRS Options</b> |                                   | <u>\$18,119</u> |                                     | <u>\$ -</u> | <u>\$ -</u> |
| <b>ERS</b>                     |                                   |                 |                                     |             |             |
| Domestic Options Written       | Investment Income                 | \$ 320          | Domestic Equity                     | \$ -        | \$ -        |
| Domestic Options Purchased     | Investment Income                 | 8,326           | Domestic Equity                     | -           | -           |
| Total Domestic Options         |                                   | 8,646           |                                     | -           | -           |
| International Options Written  | Investment Income                 | -               | International Equity                | -           | -           |
| <b>Grand Total ERS Options</b> |                                   | <u>\$ 8,646</u> |                                     | <u>\$ -</u> | <u>\$ -</u> |
| <b>JRF</b>                     |                                   |                 |                                     |             |             |
| Domestic Options Written       | Investment Income                 | \$ 1            | Domestic Equity                     | \$ -        | \$ -        |
| Domestic Options Purchased     | Investment Income                 | 291             | Domestic Equity                     | -           | -           |
| Total Domestic Options         |                                   | 292             |                                     | -           | -           |
| International Options Written  | Investment Income                 | -               | International Equity                | -           | -           |
| <b>Grand Total JRF Options</b> |                                   | <u>\$ 292</u>   |                                     | <u>\$ -</u> | <u>\$ -</u> |
| <b>Total</b>                   |                                   |                 |                                     |             |             |
| Domestic Options Written       | Investment Income                 | \$ 975          | Domestic Equity                     | \$ -        | \$ -        |
| Domestic Options Purchased     | Investment Income                 | 26,082          | Domestic Equity                     | -           | -           |
| Total Domestic Options         |                                   | 27,057          |                                     | -           | -           |
| International Options Written  | Investment Income                 | -               | International Equity                | -           | -           |
| <b>Grand Total Options</b>     |                                   | <u>\$27,057</u> |                                     | <u>\$ -</u> | <u>\$ -</u> |

## 6) NET PENSION LIABILITY OF THE PLANS

The components of the net pension liability related to the TRS, ERS, and JRF retirement plans determined in accordance with GASB Statement No. 67, *Financial Reporting for Pension Plans*, as of September 30, 2019, were as follows (dollar amounts in thousands):

|   | <u>TRS</u>                  | <u>ERS</u>                 | <u>JRF</u>               |
|---|-----------------------------|----------------------------|--------------------------|
| Total Pension Liability   | \$ 36,676,350               | \$ 18,353,891              | \$ 463,450               |
| Less: Plan Net Position (see Note 3G)                                       | (25,619,448)                | (12,568,473)               | (312,541)                |
| <b>Net Pension Liability</b>  | <b><u>\$ 11,056,902</u></b> | <b><u>\$ 5,785,418</u></b> | <b><u>\$ 150,909</u></b> |
| <br>  |                             |                            |                          |
| <b>Plan Net Position as a Percentage<br/>of the Total Pension Liability</b> | <b>69.85%</b>               | <b>68.48%</b>              | <b>67.44%</b>            |

The net pension liability is allocated to employers in accordance with GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*. The net pension liability was determined by an actuarial valuation as of September 30, 2018, and rolled forward in accordance with GASB Statement No. 67 to the measurement date of September 30, 2019, using the following actuarial assumptions, applied to all periods included in the measurement:

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

\*Net of pension plan investment expense.

There were no ad hoc postemployment benefit changes, including ad hoc COLAs, during fiscal year 2019.

The actuarial assumptions used in the actuarial valuation as of September 30, 2018, were based on the results of an investigation of the economic and demographic experience for the TRS, ERS, and JRF based upon participant data as of September 30, 2015, completed by the RSA and its actuaries. The purpose of the investigation was to assess the reasonableness of the actuarial assumptions and methods currently used by the RSA. This investigation resulted in changes to the actuarial assumptions. The Boards of Control for each accepted and approved these changes in September 2016 which became effective at the beginning of fiscal year 2016.

The assumed investment rates of return used to prepare the actuarial valuations as of September 30, 2018, were 7.70% for TRS & ERS and 7.65 for JRF. The Boards of Control accepted and approved these new assumed investment rates of return in December 2018 which became effective September 30, 2018. The new assumed investment rates of return were used to measure the total pension liability as of September 30, 2019.

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

# RETIREMENT SYSTEMS OF ALABAMA

## Financial Section

### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2019

(Dollar Amounts in Thousands)

The total pension liability related to the cost-sharing retirement plans is based on the actuarial valuation as of September 30, 2018. The expected total pension liability is determined as of September 30, 2019, using standard roll-forward techniques as shown in the following table:

|  | <b>TRS</b>      |               |
|--|-----------------|---------------|
|  | <b>Expected</b> | <b>Actual</b> |
| Total Pension Liability as of 9/30/2018 (a)  | \$ 35,878,014   | \$ 35,667,450 |
| Entry Age Normal Cost* for 10/1/2018 - 9/30/2019 (b)                               | \$ 645,409      | \$ 645,409    |
| Actual Benefit Payments (including refunds) for 10/1/2018 - 9/30/2019 (c)          | \$ 2,294,562    | \$ 2,294,562  |
| Total Pension Liability as of 9/30/2019 [(a) x (1.0770)] + (b) - [(c) x (1.0385)]  | \$ 36,903,127   | \$ 36,676,350 |
| Difference between Expected & Actual Experience (Gain)/Loss                        |                 | \$ (226,777)  |
|  | <b>ERS</b>      |               |
|  | <b>Expected</b> | <b>Actual</b> |
| Total Pension Liability as of 9/30/2018 (a)  | \$ 17,861,887   | \$ 17,884,917 |
| Entry Age Normal Cost* for 10/1/2018 - 9/30/2019 (b)                               | \$ 315,841      | \$ 315,841    |
| Actual Benefit Payments (including refunds) for 10/1/2018 - 9/30/2019 (c)          | \$ 1,178,628    | \$ 1,178,628  |
| Total Pension Liability as of 9/30/2019 [(a) x (1.0770)] + (b) - [(c) x (1.0385)]  | \$ 18,329,088   | \$ 18,353,891 |
| Difference between Expected & Actual Experience (Gain)/Loss                        |                 | \$ 24,803     |
|  | <b>JRF</b>      |               |
|  | <b>Expected</b> | <b>Actual</b> |
| Total Pension Liability as of 9/30/2018 (a)  | \$ 462,040      | \$ 457,843    |
| Entry Age Normal Cost* for 10/1/2018 - 9/30/2019 (b)                               | \$ 9,574        | \$ 9,574      |
| Actual Benefit Payments (including refunds) for 10/1/2018 - 9/30/2019 (c)          | \$ 37,555       | \$ 37,555     |
| Total Pension Liability as of 9/30/2019 [(a) x (1.0765)] + (b) - [(c) x (1.03825)] | \$ 467,969      | \$ 463,451    |
| Difference between Expected & Actual Experience (Gain)/Loss                        |                 | \$ (4,518)    |

\*Also called the Service Cost.

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%         | 25.00%         | 4.40%                              | 4.40%  | 5.00%  |
| U.S. Large Stocks                     | 32.00%            | 32.00%         | 34.00%         | 8.00%                              | 8.00%  | 9.00%  |
| U.S. Mid Stocks                       | 9.00%             | 9.00%          | 8.00%          | 10.00%                             | 10.00% | 12.00% |
| U.S. Small Stocks                     | 4.00%             | 4.00%          | 3.00%          | 11.00%                             | 11.00% | 15.00% |
| International Developed Market Stocks | 12.00%            | 12.00%         | 15.00%         | 9.50%                              | 9.50%  | 11.00% |
| International Emerging Market Stocks  | 3.00%             | 3.00%          | 3.00%          | 11.00%                             | 11.00% | 16.00% |
| Alternatives                          | 10.00%            | 10.00%         | 0.00%          | 10.10%                             | 10.10% | 0.00%  |
| Real Estate                           | 10.00%            | 10.00%         | 10.00%         | 7.50%                              | 7.50%  | 7.50%  |
| Cash                                  | 3.00%             | 3.00%          | 2.00%          | 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 7.70% for TRS and ERS and 7.65% for JRF. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, components of the pension plan's fiduciary net position were projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

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

|            | Current                |                          |                        |
|------------|------------------------|--------------------------|------------------------|
|            | 1% Decrease<br>(6.70%) | Discount Rate<br>(7.70%) | 1% Increase<br>(8.70%) |
| <b>TRS</b> | \$ 15,010,404          | \$ 11,056,902            | \$ 7,711,324           |
| <b>ERS</b> | \$ 7,758,372           | \$ 5,785,418             | \$ 4,112,608           |

|            | Current                |                          |                        |
|------------|------------------------|--------------------------|------------------------|
|            | 1% Decrease<br>(6.65%) | Discount Rate<br>(7.65%) | 1% Increase<br>(8.65%) |
| <b>JRF</b> | \$ 192,969             | \$ 150,909               | \$ 114,437             |

# RETIREMENT SYSTEMS OF ALABAMA

## Financial Section

### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2019

(Dollar Amounts in Thousands)

#### 7) CONTRIBUTIONS REQUIRED AND MADE

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

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

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

The 2019 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, 2019:

|                                   | <u>TRS</u>               | <u>ERS</u>              |
|-----------------------------------|--------------------------|-------------------------|
| Land                              | \$ 5,085                 | \$ 2,535                |
| Building and Improvements         | 107,896                  | 53,948                  |
| Software                          | 42,889                   | 14,264                  |
| Furniture and Equipment           | 8,816                    | 2,152                   |
| Intangible Assets in Progress     | -                        | -                       |
| Total Property and Equipment      | <u>164,686</u>           | <u>72,899</u>           |
| Less: Accumulated Depreciation    | <u>(52,527)</u>          | <u>(23,634)</u>         |
| <b>Net Property and Equipment</b> | <b><u>\$ 112,159</u></b> | <b><u>\$ 49,265</u></b> |

Software represents the capitalizable of software and professional services related to RSA's pension administration system. RSA entered into a contract with Deloitte Consulting, LLP, for an initial term of 3 years beginning October 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*.

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## 9) POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS FOR RSA EMPLOYEES

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

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

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

At September 30, 2018, the membership covered by the benefit terms consisted of:

|                  |                      |
|------------------|----------------------|
| Active Members   | 32,031               |
| Inactive Members | <u>23,761</u>        |
| <b>Total</b>     | <b><u>55,792</u></b> |

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

At September 30, 2019, the TRS reported a liability of \$16,182 (dollar amount in thousands) for its proportionate share of the net OPEB liability. The net OPEB liability was measured as of September 30, 2018, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of September 30, 2017. The TRS's proportion of the net OPEB liability was based on a projection of the TRS's long-term share of contributions to the OPEB plan relative to the projected contributions of all participating employers, actuarially determined. At September 30, 2018, the TRS's proportion was 0.556916%, which was an increase of 0.028726% from its proportion measured as of September 30, 2017.

## RETIREMENT SYSTEMS OF ALABAMA

### Financial Section

#### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2019

(Dollar Amounts in Thousands)

For the year ended September 30, 2019, the TRS recognized OPEB expense of \$1,943. At September 30, 2019, the TRS reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

|   | <b>Deferred<br/>Outflows of<br/>Resources</b> | <b>Deferred<br/>Inflows of<br/>Resources</b> |
|---|---|--|
| Differences between Expected & Actual Experience          | \$ -  | \$ 243                                       |
| Changes of Assumptions                                    | -   | 2,754  |
| Net Difference between Projected & Actual                 |   |  |
| Earnings on OPEB Plan Investments                         | -   | 36   |
| Changes in Proportion & Differences between Employer      |   |  |
| Contributions & Proportionate Share of Contributions      | 1,219   | -  |
| Employer Contributions Subsequent to the Measurement Date | 428   | -  |
| <b>Total</b>  | <b>\$ 1,647</b>                               | <b>\$ 3,033</b>                              |

The TRS will recognize \$428 of reported deferred outflows of resources related to OPEB resulting from contributions subsequent to the measurement date as a reduction of net OPEB liability in the fiscal year ended September 30, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

| <b>Fiscal Year Ended<br/>September 30:</b> |          |
|--|----------|
| 2020                                       | \$ (477) |
| 2021                                       | \$ (477) |
| 2022                                       | \$ (477) |
| 2023                                       | \$ (302) |
| 2024                                       | \$ (82)  |
| Thereafter                                 | \$ -     |

At September 30, 2019, the ERS reported a liability of \$10,902 for its proportionate share of the net OPEB liability. The net OPEB liability was measured as of September 30, 2018, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of September 30, 2017. The ERS's proportion of the net OPEB liability was based on a projection of the ERS's long-term share of contributions to the OPEB plan relative to the projected contributions of all participating employers, actuarially determined. At September 30, 2018, the ERS's proportion was 0.375195%, which was a decrease of 0.000082% from its proportion measured as of September 30, 2017.

For the year ended September 30, 2019, the ERS recognized OPEB expense of \$1,025. At September 30, 2019, the ERS reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

|   | <b>Deferred<br/>Outflows of<br/>Resources</b> | <b>Deferred<br/>Inflows of<br/>Resources</b> |
|---|---|--|
| Differences between Expected & Actual Experience          | \$ -  | \$ 164                                       |
| Changes of Assumptions                                    | -   | 1,855  |
| Net Difference between Projected & Actual                 |   |  |
| Earnings on OPEB Plan Investments                         | -   | 25   |
| Changes in Proportion & Differences between Employer      |   |  |
| Contributions & Proportionate Share of Contributions      | -   | 188  |
| Employer Contributions Subsequent to the Measurement Date | 290   | -  |
| <b>Total</b>  | <b>\$ 290</b>                                 | <b>\$ 2,232</b>                              |

The ERS will recognize \$290 of reported deferred outflows of resources related to OPEB resulting from contributions subsequent to the measurement date as a reduction of net OPEB liability in the fiscal year ended September 30, 2020 (dollar amount in thousands). Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows (dollar amounts in thousands):

| <b>Fiscal Year Ended</b> |          |
|--------------------------|----------|
| <b>September 30:</b>     |          |
| 2020                     | \$ (582) |
| 2021                     | \$ (582) |
| 2022                     | \$ (582) |
| 2023                     | \$ (378) |
| 2024                     | \$ (106) |
| Thereafter               | \$ -     |

At September 30, 2019, the JRF reported a liability of \$91 for its proportionate share of the net OPEB liability (dollar amount in thousands). The net OPEB liability was measured as of September 30, 2018, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of September 30, 2017. The JRF's proportion of the net OPEB liability was based on a projection of the JRF's long-term share of contributions to the OPEB plan relative to the projected contributions of all participating employers, actuarially determined. At September 30, 2018, the JRF's proportion was 0.003148%, which was an increase of 0.000007% from its proportion measured as of September 30, 2017.

For the year ended September 30, 2019, the JRF recognized OPEB expense of \$11 (dollar amount in thousands). At September 30, 2019, the JRF reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources (dollar amounts in thousands):

|   | <b>Deferred<br/>Outflows of<br/>Resources</b> | <b>Deferred<br/>Inflows of<br/>Resources</b> |
|---|---|--|
| Differences between Expected & Actual Experience          | \$ -  | \$ 1   |
| Changes of Assumptions                                    | -   | 16   |
| Net Difference between Projected & Actual                 |   |  |
| Earnings on OPEB Plan Investments                         | -   | -  |
| Changes in Proportion & Differences between Employer      |   |  |
| Contributions & Proportionate Share of Contributions      | 1   | -  |
| Employer Contributions Subsequent to the Measurement Date | <u>2</u>                                      | <u>-</u>                                     |
| <b>Total</b>  | <b><u>\$ 3</u></b>                            | <b><u>\$ 17</u></b>                          |

The JRF will recognize \$2 of reported deferred outflows of resources related to OPEB resulting from contributions subsequent to the measurement date as a reduction of net OPEB liability in the fiscal year ended September 30, 2020 (dollar amount in thousands). Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows (dollar amounts in thousands):

| <b>Fiscal Year Ended</b> |        |
|--------------------------|--------|
| <b>September 30:</b>     |        |
| 2020                     | \$ (4) |
| 2021                     | \$ (4) |
| 2022                     | \$ (4) |
| 2023                     | \$ (3) |
| 2024                     | \$ (1) |
| Thereafter               | \$ -   |

## RETIREMENT SYSTEMS OF ALABAMA

### *Financial Section*

#### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2019

(Dollar Amounts in Thousands)

The total OPEB liability was determined by an actuarial valuation as of September 30, 2017, using the following actuarial assumptions, applied to all periods included in the measurement:

|  |   |
|--|---|
| <b>Inflation</b>   | 2.75%   |
| <b>Salary Increases*</b>   | 5.00-3.25% for State and Local Employees<br>4.50% for State Police<br>3.50-3.25% for Judges |
| <b>Long-Term Investment Rate of Return**</b>                     | 7.50%   |
| <b>Municipal Bond Index Rate at Measurement Date</b>             | 4.18%   |
| <b>Municipal Bond Index Rate at Prior Measurement Date</b>       | 3.57%   |
| <b>Projected Year for Fiduciary Net Position to be Depleted</b>  | 2024  |
| <b>Single Equivalent Interest Rate at Measurement Date</b>       | 4.50%   |
| <b>Single Equivalent Interest Rate at Prior Measurement Date</b> | 3.60%   |
| <b>Healthcare Cost Trend Rate</b>                                |   |
| Pre-Medicare Eligible  | 7.00%   |
| Medicare Eligible  | 5.50%   |
| Ultimate Trend Rate  |   |
| Pre-Medicare Eligible  | 4.75%   |
| Medicare Eligible  | 4.75%   |
| Year of Ultimate Trend Rate                                      | 2026 for Pre-Medicare Eligible<br>2024 for Medicare Eligible                                |

\*Includes 3.00% wage inflation.

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

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

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

The remaining actuarial assumptions (e.g., initial per capita costs, health care cost trends, rate of plan participation, rates of plan election, etc.) used in the September 30, 2017 valuation were based on a review of recent plan experience done concurrently with the September 30, 2017 valuation.

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

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

\*Includes assumed rate of inflation of 2.50%.

The discount rate (also known as the Single Equivalent Interest Rate (SEIR), as described by GASB 74) used to measure the total OPEB liability was 4.25% at September 30, 2018. The discount rate used to measure the total OPEB liability at the prior measurement date was 3.60%. The projection of cash flows used to determine the discount rate assumed that plan contributions will be made based on the average of the last five years of current contribution rates, indexed with inflation. The discount rate determination will use a municipal bond rate to the extent the trust is projected to run out of money before all benefits are paid. The rate used, if necessary, for this purpose is the monthly average of the Bond Buyers General Obligation 20-year Municipal Bond Index Rate (formerly published monthly by the Board of Governors of the Federal Reserve System). Projected future benefit payments for all current plan members were projected through 2116.

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

|            | <b>1% Decrease<br/>(6.00% decreasing<br/>to 3.75% for<br/>Pre-Medicare and<br/>4.50% decreasing<br/>to 3.75% Medicare<br/>Eligible)</b> | <b>Current Healthcare<br/>Trend Rate<br/>(7.00% decreasing<br/>to 4.75% for<br/>Pre-Medicare and<br/>5.50% decreasing<br/>to 4.75% for<br/>Medicare Eligible)</b> | <b>1% Increase<br/>(8.00% decreasing<br/>to 5.75% for<br/>Pre-Medicare and<br/>6.50% decreasing<br/>to 5.75% for<br/>Medicare Eligible)</b> |
|------------|---|---|---|
| <b>TRS</b> | \$ 13,589   | \$ 16,182   | \$ 19,489   |
| <b>ERS</b> | \$ 9,155  | \$ 10,902   | \$ 13,130   |
| <b>JRF</b> | \$ 77   | \$ 91   | \$ 110  |

# RETIREMENT SYSTEMS OF ALABAMA

## Financial Section

### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2019

(Dollar Amounts in Thousands)

The following table presents the proportionate share of the net OPEB liability for TRS, ERS, and JRF calculated using the discount rate of 4.25%, as well as what the net OPEB liability would be if calculated using one percentage point lower or one percentage point higher than the current rate:

|            | <b>1% Decrease</b> | <b>Current</b>       | <b>1% Increase</b> |
|------------|--------------------|----------------------|--------------------|
|            | <b>(3.25%)</b>     | <b>Discount Rate</b> | <b>(5.25%)</b>     |
|            |                    | <b>(4.25%)</b>       |                    |
| <b>TRS</b> | \$ 19,028          | \$ 16,182            | \$ 13,895          |
| <b>ERS</b> | \$ 12,814          | \$ 10,902            | \$ 9,361           |
| <b>JRF</b> | \$ 108             | \$ 91                | \$ 79              |

#### 10) PENSION PLAN FOR RSA EMPLOYEES

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

##### A. Teachers' Retirement System of Alabama

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

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, 2019, was 12.41% of annual pay for Tier 1 members and 11.35% 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 \$1,883 for the fiscal year ended September 30, 2019 (dollar amounts in thousands).

At September 30, 2019, in accordance with GASB Statement No. 68, the TRS reported a net pension liability of \$20,897 for its proportionate share of the TRS pension plan's total net pension liability as determined under GASB Statement No. 67 (dollar amount in thousands). The TRS pension plan's total pension liability used to calculate the TRS's net pension liability was determined by an actuarial valuation as of September 30, 2017 and rolled forward to TRS's measurement date of September 30, 2018. The TRS's share of the net pension liability was based on the TRS's share of contributions to the pension plan relative to the total employer contributions of all participating TRS employers. At September 30, 2018, the TRS's proportion was 0.2101819%, which was an increase of 0.011734% from its proportion measured as of September 30, 2017.

For the year ended September 30, 2019, the TRS recognized pension expense of \$2,411 (dollar amounts in thousands). At September 30, 2019, the TRS reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources (dollar amounts in thousands):

|   | <b>Deferred<br/>Outflows of<br/>Resources</b> | <b>Deferred<br/>Inflows of<br/>Resources</b> |
|---|---|--|
| Differences between Expected & Actual Experience          | \$ 451  | \$ 637                                       |
| Changes of Assumptions                                    | 1,162   | -  |
| Net Difference between Projected & Actual                 |   |  |
| Earnings on Pension Plan Investments                      | -   | 1,577  |
| Changes in Proportion & Differences between Employer      |   |  |
| Contributions & Proportionate Share of Contributions      | 1,916   | 57   |
| Employer Contributions Subsequent to the Measurement Date | 1,883   | -  |
| <b>Total</b>  | <b><u>\$ 5,412</u></b>                        | <b><u>\$ 2,271</u></b>                       |

The TRS will recognize \$1,883 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, 2020 (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<br/>September 30:</b> |         |
|--|---------|
| 2020                                       | \$ 821  |
| 2021                                       | \$ 134  |
| 2022                                       | \$ (14) |
| 2023                                       | \$ 237  |
| 2024                                       | \$ 80   |
| Thereafter                                 | \$ -    |

## RETIREMENT SYSTEMS OF ALABAMA

### Financial Section

#### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2019

(Dollar Amounts in Thousands)

The total pension liability was determined by an actuarial valuation as of September 30, 2017, using the following actuarial assumptions, applied to all periods included in the measurement:

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

\*Net of pension plan investment expense

The actuarial assumptions used in the actuarial valuation as of September 30, 2017, were based on the results of an investigation of the economic and demographic experience for the TRS based upon participant data as of September 30, 2015. This investigation resulted in changes to the actuarial assumptions. The Board of Control accepted and approved these changes in September 2016, which became effective at the beginning of fiscal year 2016.

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

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

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

\*Includes assumed rate of inflation of 2.50%.

The discount rate used to measure the total pension liability was 7.70%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, components of the pension plan's fiduciary net position were projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

The following table presents the net pension liability of the TRS calculated using the discount rate of 7.70%, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate (dollar amounts in thousands):

|  | <b>1%<br/>Decrease<br/>(6.70%)</b> | <b>Current<br/>Discount<br/>Rate<br/>(7.70%)</b> | <b>1%<br/>Increase<br/>(8.70%)</b> |
|--|------------------------------------|--|------------------------------------|
| TRS's Proportionate Share<br>of Collective Net Pension Liability | \$ 29,089                          | \$ 20,897  | \$ 13,968                          |

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, 2018. The supporting actuarial information is included in the GASB Statement No. 67 Report for the TRS prepared as of September 30, 2018. The auditor's report dated August 16, 2019, 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, 2018, 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 the Plan 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.

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.

## RETIREMENT SYSTEMS OF ALABAMA

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### *Financial Section*

#### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2019

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(Dollar Amounts in Thousands)

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, 2018, ERS membership included approximately 90,999 active 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, 2019, was 14.51% of annual pay for Tier 1 members and 14.14% 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 \$1,209 and from JRF were \$23 for the fiscal year ended September 30, 2019.

At September 30, 2019, in accordance with GASB Statement No. 68, the ERS reported a net pension liability of \$14,845 and the JRF reported a net pension liability of \$284 for their respective proportionate shares of the total net pension liability of the ERS State Regular Employees' retirement plan. The ERS pension plan's total net pension liability was measured as of September 30, 2018, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of September 30, 2017 and rolled forward to the ERS and JRF's measurement date of September 30, 2018. ERS and JRF's proportion of the total net pension liability was based on the employers' shares of contributions to the pension plan relative to the total employer contributions of all participating ERS State Regular employers. At September 30, 2018, ERS's proportion was 0.567403%, which was an increase of 0.017431% from its proportion measured as of September 30, 2017. At September 30, 2018, the JRF's proportion was 0.010863%, which was an increase of 0.000421% from its proportion measured as of September 30, 2017.

For the fiscal year ended September 30, 2019, the ERS recognized pension expense of \$1,471 (dollar amounts in thousands). At September 30, 2019, ERS reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources (dollar amounts in thousands):

|   | <b>Deferred<br/>Outflows of<br/>Resources</b> | <b>Deferred<br/>Inflows of<br/>Resources</b> |
|---|---|--|
| Differences between Expected & Actual Experience          | \$ 4  | \$ 208                                       |
| Changes of Assumptions                                    | 341   | -  |
| Net Difference between Projected & Actual                 |   |  |
| Earnings on Pension Plan Investments                      | -   | 972  |
| Changes in Proportion & Differences between Employer      |   |  |
| Contributions & Proportionate Share of Contributions      | 693   | 465  |
| Employer Contributions Subsequent to the Measurement Date | 1,209   | -  |
| <b>Total</b>  | <b>\$ 2,247</b>                               | <b>\$ 1,645</b>                              |

The ERS will recognize \$1,209 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, 2020 (dollar amount in thousands). Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows (dollar amounts in thousands):

**Fiscal Year Ended  
September 30:**

|            |          |
|------------|----------|
| 2020       | \$ -     |
| 2021       | \$ 246   |
| 2022       | \$ (511) |
| 2023       | \$ (259) |
| 2024       | \$ (82)  |
| Thereafter | \$ -     |

For the fiscal year ended September 30, 2019, the JRF recognized pension expense of \$41 (dollar amount in thousands). At September 30, 2019, the JRF reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources (dollar amounts in thousands):

|   | <b>Deferred<br/>Outflows of<br/>Resources</b> | <b>Deferred<br/>Inflows of<br/>Resources</b> |
|---|---|--|
| Differences between Expected & Actual Experience          | \$ -  | \$ 4   |
| Changes of Assumptions                                    | 7   | -  |
| Net Difference between Projected & Actual                 |   |  |
| Earnings on Pension Plan Investments                      | -   | 19   |
| Changes in Proportion & Differences between Employer      |   |  |
| Contributions & Proportionate Share of Contributions      | 11  | 1  |
| Employer Contributions Subsequent to the Measurement Date | 23  | -  |
| <b>Total</b>  | <b>\$ 41</b>                                  | <b>\$ 24</b>                                 |

# RETIREMENT SYSTEMS OF ALABAMA

## Financial Section

### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2019

(Dollar Amounts in Thousands)

The JRF will recognize \$23 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, 2020. 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</b> |        |
|--------------------------|--------|
| <b>September 30:</b>     |        |
| 2020                     | \$ -   |
| 2021                     | \$ 6   |
| 2022                     | \$ (6) |
| 2023                     | \$ (5) |
| 2024                     | \$ (2) |
| Thereafter               | \$ -   |

The total pension liability was determined by an actuarial valuation as of September 30, 2017, using the following actuarial assumptions, applied to all periods included in the measurement:

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

\*Net of pension plan investment expense

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

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

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

\*Includes assumed rate of inflation of 2.75%.

The discount rate used to measure the total pension liability was 7.70%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, components of the pension plan's fiduciary net position were projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

The following table presents the net pension liability of the ERS and JRF calculated using the discount rate of 7.70%, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate (dollar amounts in thousands):

|                                  | <b>1% Decrease<br/>(6.70%)</b> | <b>Current<br/>Discount Rate<br/>(7.70%)</b> | <b>1% Increase<br/>(8.70%)</b> |
|----------------------------------|--------------------------------|--|--------------------------------|
| ERS's Proportionate Share of     |                                |  |                                |
| Collective Net Pension Liability | \$ 19,300                      | \$ 14,485                                    | \$ 11,053                      |
| JRF's Proportionate Share of     |                                |  |                                |
| Collective Net Pension Liability | \$ 370                         | \$ 284                                       | \$ 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, 2018. The supporting actuarial information is included in the GASB Statement No. 68 Report for the ERS prepared as of September 30, 2018. The auditor's report dated September 17, 2019, 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).

## RETIREMENT SYSTEMS OF ALABAMA

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### *Financial Section*

### Notes to the Combined Financial Statements For the Fiscal Year Ended September 30, 2019

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(Dollar Amounts in Thousands)

#### **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 \$34,467,871 (dollar amount not in thousands) during the 2019 fiscal year.



RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Required Supplementary Information  
For the Fiscal Year Ended September 30, 2019

SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY  
& RELATED RATIOS

TRS

For the Fiscal Years Ended September 30

(Dollar Amounts in Thousands)

|   | 2019                 | 2018                 | 2017                 | 2016                 | 2015                 | 2014                 |
|---|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| <b>Total Pension Liability</b>  |                      |                      |                      |                      |                      |                      |
| Service Cost*   | \$ 645,409           | \$ 637,532           | \$ 617,120           | \$ 627,938           | \$ 660,390           | \$ 602,605           |
| Interest  | 2,674,266            | 2,584,330            | 2,532,457            | 2,488,310            | 2,421,604            | 2,352,804            |
| Benefit Changes   | -                    | -                    | -                    | -                    | -                    | -                    |
| Difference Between Expected & Actual Experience                                   | (226,777)            | 265,644              | (261,067)            | (290,388)            | (70,200)             | -                    |
| Changes of Assumptions  | -                    | 178,049              | -                    | 942,133              | -                    | -                    |
| Benefit Payments  | (2,238,966)          | (2,208,925)          | (2,117,351)          | (2,161,570)          | (2,080,896)          | (1,997,877)          |
| Refunds of Contributions  | (55,596)             | (58,552)             | (53,526)             | (57,566)             | (55,898)             | (56,145)             |
| <b>Net Change in Total Pension Liability</b>                                      | <b>798,336</b>       | <b>1,398,078</b>     | <b>717,633</b>       | <b>1,548,857</b>     | <b>875,000</b>       | <b>901,387</b>       |
| <b>Total Pension Liability - Beginning</b>  | <b>35,878,014</b>    | <b>34,479,936</b>    | <b>33,762,303</b>    | <b>32,213,446</b>    | <b>31,338,446</b>    | <b>30,437,059</b>    |
| <b>Total Pension Liability - Ending (A)</b>                                       | <b>\$ 36,676,350</b> | <b>\$ 35,878,014</b> | <b>\$ 34,479,936</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  | \$ 869,336           | \$ 802,598           | \$ 782,702           | \$ 751,909           | \$ 737,677           | \$ 716,753           |
| Contributions - Member  | 522,909              | 493,466              | 489,638              | 475,980              | 477,918              | 480,849              |
| Other   | -                    | 13,445               | -                    | -                    | 172,982              | -                    |
| Net Investment Income   | 614,427              | 2,264,234            | 2,636,098            | 2,199,396            | 261,461              | 2,468,499            |
| Benefit Payments  | (2,238,966)          | (2,208,925)          | (2,117,351)          | (2,161,570)          | (2,080,896)          | (1,997,877)          |
| Refunds of Contributions  | (55,596)             | (58,552)             | (53,526)             | (57,566)             | (55,898)             | (56,145)             |
| Administrative Expenses   | (28,095)             | (22,290)             | (22,402)             | (19,582)             | (19,331)             | -                    |
| <b>Net Change in Plan Fiduciary Net Position</b>                                  | <b>(315,985)</b>     | <b>1,283,976</b>     | <b>1,715,159</b>     | <b>1,188,567</b>     | <b>(506,087)</b>     | <b>1,612,079</b>     |
| <b>Plan Fiduciary Net Position - Beginning</b>                                    | <b>25,935,433</b>    | <b>24,651,457</b>    | <b>22,936,298</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>\$ 25,619,448</b> | <b>\$ 25,935,433</b> | <b>\$ 24,651,457</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>\$ 11,056,902</b> | <b>\$ 9,942,581</b>  | <b>\$ 9,828,479</b>  | <b>\$ 10,826,005</b> | <b>\$ 10,465,715</b> | <b>\$ 9,084,628</b>  |
| <b>Plan Fiduciary Net Position as a Percentage of the Total Pension Liability</b> | <b>69.85%</b>        | <b>72.29%</b>        | <b>71.50%</b>        | <b>67.93%</b>        | <b>67.51%</b>        | <b>71.01%</b>        |
| <b>Covered Payroll**</b>  | <b>\$ 6,959,168</b>  | <b>\$ 6,899,800</b>  | <b>\$ 6,623,929</b>  | <b>\$ 6,541,310</b>  | <b>\$ 6,541,054</b>  | <b>\$ 6,466,923</b>  |
| <b>Net Pension Liability as a Percentage of Covered Payroll</b>                   | <b>158.88%</b>       | <b>144.10%</b>       | <b>148.38%</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.

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

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

**ERS**

**For the Fiscal Years Ended September 30**

(Dollar Amounts in Thousands)

|   | <b>2019</b>          | <b>2018</b>          | <b>2017</b>          | <b>2016</b>          | <b>2015</b>          | <b>2014</b>          |
|---|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| <b>Total Pension Liability</b>  |                      |                      |                      |                      |                      |                      |
| Service Cost*   | \$ 315,841           | \$ 307,064           | \$ 325,138           | \$ 308,840           | \$ 346,440           | \$ 298,985           |
| Interest  | 1,329,988            | 1,303,322            | 1,271,712            | 1,233,415            | 1,199,079            | 1,164,853            |
| Benefit Changes   | -                    | -                    | -                    | -                    | -                    | -                    |
| Difference Between Expected & Actual<br>Experience                                    | 24,803               | (79,478)             | (64,111)             | 101                  | (35,546)             | -                    |
| Changes of Assumptions  | -                    | 87,608               | -                    | 544,310              | -                    | -                    |
| Benefit Payments  | (1,123,150)          | (1,102,478)          | (1,056,006)          | (1,043,293)          | (1,023,732)          | (948,645)            |
| Refunds of Contributions  | (55,478)             | (44,890)             | (46,374)             | (44,660)             | (49,865)             | (49,767)             |
| <b>Net Change in Total Pension Liability</b>  | <b>492,004</b>       | <b>471,148</b>       | <b>430,359</b>       | <b>998,713</b>       | <b>436,376</b>       | <b>465,426</b>       |
| <b>Total Pension Liability - Beginning</b>  | <b>17,861,887</b>    | <b>17,390,739</b>    | <b>16,960,380</b>    | <b>15,961,667</b>    | <b>15,525,291</b>    | <b>15,059,865</b>    |
| <b>Total Pension Liability - Ending (A)</b>   | <b>\$ 18,353,891</b> | <b>\$ 17,861,887</b> | <b>\$ 17,390,739</b> | <b>\$ 16,960,380</b> | <b>\$ 15,961,667</b> | <b>\$ 15,525,291</b> |
| <b>Plan Fiduciary Net Position reserved to fund Total Pension Liability</b>           |                      |                      |                      |                      |                      |                      |
| Contributions - Employer  | \$ 467,553           | \$ 426,340           | \$ 426,369           | \$ 435,243           | \$ 411,087           | \$ 379,163           |
| Contributions - Member  | 254,440              | 241,741              | 233,901              | 238,017              | 229,254              | 226,015              |
| Other   | -                    | (7,481)              | -                    | -                    | 68,897               | -                    |
| Net Investment Income   | 320,585              | 1,098,412            | 1,402,009            | 1,052,886            | 126,335              | 1,183,377            |
| Benefit Payments  | (1,123,150)          | (1,102,478)          | (1,056,006)          | (1,043,293)          | (1,023,732)          | (948,645)            |
| Refunds of Contributions  | (55,478)             | (44,890)             | (46,374)             | (44,660)             | (49,865)             | (49,767)             |
| Administrative Expenses   | (15,829)             | (13,763)             | (14,502)             | (13,023)             | (13,182)             | -                    |
| <b>Net Change in Plan Fiduciary Net Position</b>                                      | <b>(151,879)</b>     | <b>597,881</b>       | <b>945,397</b>       | <b>625,170</b>       | <b>(251,206)</b>     | <b>790,143</b>       |
| <b>Plan Fiduciary Net Position - Beginning</b>  | <b>12,720,352</b>    | <b>12,122,471</b>    | <b>11,177,074</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>\$ 12,568,473</b> | <b>\$ 12,720,352</b> | <b>\$ 12,122,471</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>\$ 5,785,418</b>  | <b>\$ 5,141,535</b>  | <b>\$ 5,268,268</b>  | <b>\$ 5,783,306</b>  | <b>\$ 5,409,763</b>  | <b>\$ 4,722,181</b>  |
| <b>Plan Fiduciary Net Position as a<br/>Percentage of the Total Pension Liability</b> | <b>68.48%</b>        | <b>71.22%</b>        | <b>69.71%</b>        | <b>65.90%</b>        | <b>66.11%</b>        | <b>69.58%</b>        |
| <b>Covered Payroll**</b>  | <b>\$ 3,789,556</b>  | <b>\$ 3,692,241</b>  | <b>\$ 3,680,078</b>  | <b>\$ 3,592,658</b>  | <b>\$ 3,556,282</b>  | <b>\$ 3,511,115</b>  |
| <b>Net Pension Liability as a Percentage of<br/>Covered Payroll</b>                   | <b>152.67%</b>       | <b>139.25%</b>       | <b>143.16%</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.

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

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Required Supplementary Information  
For the Fiscal Year Ended September 30, 2019

SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY  
& RELATED RATIOS

JRF

For the Fiscal Years Ended September 30

(Dollar Amounts in Thousands)

|   | 2019              | 2018              | 2017              | 2016              | 2015              | 2014              |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Total Pension Liability</b>  |                   |                   |                   |                   |                   |                   |
| Service Cost*   | \$ 9,574          | \$ 9,811          | \$ 9,815          | \$ 9,807          | \$ 9,644          | \$ 9,481          |
| Interest  | 33,910            | 34,112            | 33,668            | 32,695            | 32,385            | 31,521            |
| Benefit Changes   | -                 | -                 | -                 | -                 | -                 | -                 |
| Difference Between Expected & Actual Experience                                   | (4,518)           | (9,134)           | (4,399)           | (2,487)           | (7,391)           | -                 |
| Changes of Assumptions  | -                 | 3,873             | -                 | 17,792            | -                 | -                 |
| Benefit Payments  | (36,909)          | (33,419)          | (32,807)          | (30,902)          | (30,356)          | (29,838)          |
| Refunds of Contributions  | (646)             | (130)             | (353)             | (106)             | (147)             | (46)              |
| <b>Net Change in Total Pension Liability</b>                                      | <b>1,411</b>      | <b>5,113</b>      | <b>5,924</b>      | <b>26,799</b>     | <b>4,135</b>      | <b>11,118</b>     |
| <b>Total Pension Liability - Beginning</b>  | <b>462,040</b>    | <b>456,927</b>    | <b>451,003</b>    | <b>424,204</b>    | <b>420,069</b>    | <b>408,951</b>    |
| <b>Total Pension Liability - Ending (A)</b>                                       | <b>\$ 463,451</b> | <b>\$ 462,040</b> | <b>\$ 456,927</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  | \$ 18,022         | \$ 17,180         | \$ 17,373         | \$ 17,529         | \$ 15,077         | \$ 15,250         |
| Contributions - Member  | 4,101             | 3,867             | 3,972             | 3,723             | 3,683             | 3,764             |
| Net Investment Income   | 11,016            | 27,622            | 32,685            | 28,322            | (856)             | 31,343            |
| Benefit Payments  | (36,909)          | (33,419)          | (32,807)          | (30,902)          | (30,356)          | (29,838)          |
| Refunds of Contributions  | (646)             | (130)             | (353)             | (106)             | (147)             | (46)              |
| Administrative Expenses   | (357)             | (328)             | (334)             | (398)             | (356)             | -                 |
| Other   | -                 | (56)              | -                 | -                 | 1,854             | -                 |
| <b>Net Change in Plan Fiduciary Net Position</b>                                  | <b>(4,773)</b>    | <b>14,736</b>     | <b>20,536</b>     | <b>18,168</b>     | <b>(11,101)</b>   | <b>20,473</b>     |
| <b>Plan Fiduciary Net Position - Beginning</b>                                    | <b>317,314</b>    | <b>302,578</b>    | <b>282,042</b>    | <b>263,874</b>    | <b>274,975</b>    | <b>254,502</b>    |
| <b>Plan Fiduciary Net Position - Ending (B)</b>                                   | <b>\$ 312,541</b> | <b>\$ 317,314</b> | <b>\$ 302,578</b> | <b>\$ 282,042</b> | <b>\$ 263,874</b> | <b>\$ 274,975</b> |
| <b>Net Pension Liability - Ending (A - B)</b>                                     | <b>\$ 150,910</b> | <b>\$ 144,726</b> | <b>\$ 154,349</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>67.44%</b>     | <b>68.68%</b>     | <b>66.22%</b>     | <b>62.54%</b>     | <b>62.20%</b>     | <b>65.46%</b>     |
| <b>Covered Payroll**</b>  | <b>\$ 45,134</b>  | <b>\$ 45,622</b>  | <b>\$ 44,314</b>  | <b>\$ 44,099</b>  | <b>\$ 44,087</b>  | <b>\$ 43,275</b>  |
| <b>Net Pension Liability as a Percentage of Covered Payroll</b>                   | <b>334.36%</b>    | <b>317.23%</b>    | <b>348.31%</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.

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

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

**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 Payroll*</b> | <b>Actual Contributions as a % of Covered Payroll**</b> |
|--------------------|--|--------------------------------------|--|-------------------------|---|
| 2019               | \$ 869,336   | \$ 869,336                           | \$ -   | \$ 7,160,923            | 12.14   |
| 2018               | 802,598  | 802,598                              | -  | 6,699,482               | 11.98   |
| 2017               | 782,702  | 782,702                              | -  | 6,633,068               | 11.80   |
| 2016               | 751,909  | 751,909                              | -  | 6,377,515               | 11.79   |
| 2015               | 737,677  | 737,677                              | -  | 6,331,991               | 11.65   |
| 2014               | 716,753  | 716,753                              | -  | 6,331,740               | 11.32   |
| 2013               | 605,465  | 605,465                              | -  | 6,241,907               | 9.70  |
| 2012               | 594,771  | 594,771                              | -  | 6,182,651               | 9.62  |
| 2011               | 755,944  | 755,944                              | -  | 6,232,020               | 12.13   |
| 2010               | 753,213  | 753,213                              | -  | 6,209,505               | 12.13   |

**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 Payroll*</b> | <b>Actual Contributions as a % of Covered Payroll</b> |
|--------------------|--|--------------------------------------|--|-------------------------|---|
| 2019               | \$ 18,022  | \$ 18,022                            | \$ -   | \$ 43,530               | 41.40   |
| 2018               | 17,180   | 17,180                               | -  | 42,853                  | 40.09   |
| 2017               | 17,373   | 17,373                               | -  | 42,738                  | 40.65   |
| 2016               | 17,529   | 17,529                               | -  | 42,775                  | 40.98   |
| 2015               | 15,077   | 15,077                               | -  | 42,784                  | 35.24   |
| 2014               | 15,250   | 15,250                               | -  | 43,275                  | 35.24   |
| 2013               | 13,903   | 13,903                               | -  | 43,366                  | 32.06   |
| 2012               | 10,747   | 10,747                               | -  | 44,136                  | 24.35   |
| 2011               | 10,906   | 10,906                               | -  | 45,066                  | 24.20   |
| 2010               | 10,814   | 10,814                               | -  | 44,686                  | 24.20   |

§ There are no nonemployer contributing entities in TRS.

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

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

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

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

| <b>Fiscal Year</b> | <b>TRS</b> | <b>ERS</b> | <b>JRF</b> |
|--------------------|------------|------------|------------|
| 2019               | 2.44%      | 2.58%      | 3.58%      |
| 2018               | 9.42%      | 9.29%      | 9.35%      |
| 2017               | 11.73%     | 12.80%     | 11.88%     |
| 2016               | 10.37%     | 10.19%     | 10.96%     |
| 2015               | 1.16%      | 1.15%      | -0.37%     |
| 2014               | 12.17%     | 12.05%     | 12.55%     |
| 2013               | 14.85%     | 14.53%     | 14.05%     |
| 2012               | 18.32%     | 18.05%     | 19.17%     |
| 2011               | 2.04%      | 2.39%      | 0.89%      |
| 2010               | 8.34%      | 8.40%      | 10.66%     |

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

**SCHEDULES OF PROPORTIONATE SHARE OF THE NET PENSION LIABILITY**

(Dollar Amounts in Thousands)

**TEACHERS' RETIREMENT SYSTEM**

| <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 Payroll</b> | <b>Proportionate Share of the Net Pension Liability as a Percentage of Covered Payroll</b> | <b>Plan Fiduciary Net Position as a Percentage of the Total Pension Liability</b> |
|-------------------------|--------------------------|--|---|------------------------|--|---|
| 9/30/2018               | 9/30/2019                | 0.21   | \$ 20,897   | \$ 7,663               | 272.70   | 72.29   |
| 9/30/2017               | 9/30/2018                | 0.20   | 19,504  | 7,235                  | 269.58   | 71.50   |
| 9/30/2016               | 9/30/2017                | 0.20   | 21,164  | 6,739                  | 314.05   | 67.93   |
| 9/30/2015               | 9/30/2016                | 0.18   | 18,891  | 6,593                  | 286.53   | 67.51   |
| 9/30/2014               | 9/30/2015                | 0.18   | 16,626  | 6,283                  | 264.62   | 71.01   |

**EMPLOYEES' RETIREMENT SYSTEM**

| <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 Payroll</b> | <b>Proportionate Share of the Net Pension Liability as a Percentage of Covered Payroll</b> | <b>Plan Fiduciary Net Position as a Percentage of the Total Pension Liability</b> |
|-------------------------|--------------------------|--|---|------------------------|--|---|
| 9/30/2018               | 9/30/2019                | 0.57   | \$ 14,845   | \$ 5,197               | 285.65   | 66.20   |
| 9/30/2017               | 9/30/2018                | 0.55   | 14,468  | 5,113                  | 282.96   | 65.44   |
| 9/30/2016               | 9/30/2017                | 0.59   | 16,850  | 4,904                  | 343.60   | 62.07   |
| 9/30/2015               | 9/30/2016                | 0.52   | 14,146  | 4,695                  | 301.30   | 62.35   |
| 9/30/2014               | 9/30/2015                | 0.49   | 11,991  | 4,526                  | 264.94   | 65.58   |

**JUDICIAL RETIREMENT FUND**

| <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 Payroll</b> | <b>Proportionate Share of the Net Pension Liability as a Percentage of Covered Payroll</b> | <b>Plan Fiduciary Net Position as a Percentage of the Total Pension Liability</b> |
|-------------------------|--------------------------|--|---|------------------------|--|---|
| 9/30/2018               | 9/30/2019                | 0.01   | \$ 284  | \$ 157                 | 180.89   | 66.20   |
| 9/30/2017               | 9/30/2018                | 0.01   | 275   | 152                    | 180.92   | 65.44   |
| 9/30/2016               | 9/30/2017                | 0.01   | 302   | 144                    | 209.72   | 62.07   |
| 9/30/2015               | 9/30/2016                | 0.01   | 272   | 136                    | 200.00   | 62.35   |
| 9/30/2014               | 9/30/2015                | 0.01   | 170   | 89                     | 191.01   | 65.58   |

**RETIREMENT SYSTEMS OF ALABAMA***Financial Section***Required Supplementary Information  
For the Fiscal Year Ended September 30, 2019**

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

**SCHEDULES OF PENSION CONTRIBUTIONS****For the Fiscal Years Ended September 30**

(Dollar Amounts in Thousands)

**TEACHERS' RETIREMENT SYSTEM**

|                                     | <u>2019</u>    | <u>2018</u>    | <u>2017</u>    | <u>2016</u>    | <u>2015</u>    |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Contractually Required Contribution | \$ 1,883       | \$ 1,725       | \$ 1,444       | \$ 1,453       | \$ 1,271       |
| Contributions in relation to the    |                |                |                |                |                |
| Contractually Required Contribution | <u>(1,883)</u> | <u>(1,725)</u> | <u>(1,444)</u> | <u>(1,453)</u> | <u>(1,271)</u> |
| Contribution Deficiency/(Excess)    | <u>\$ -</u>    |
| <br>                                |                |                |                |                |                |
| Covered Payroll                     | \$ 8,748       | \$ 7,663       | \$ 7,235       | \$ 6,739       | \$ 6,593       |
| <br>                                |                |                |                |                |                |
| Contributions as a Percentage of    |                |                |                |                |                |
| Covered Payroll                     | 21.52%         | 22.51%         | 19.96%         | 21.56%         | 19.28%         |

**EMPLOYEES' RETIREMENT SYSTEM**

|                                     | <u>2019</u>    | <u>2018</u>    | <u>2017</u>    | <u>2016</u>    | <u>2015</u>  |
|-------------------------------------|----------------|----------------|----------------|----------------|--------------|
| Contractually Required Contribution | \$ 1,209       | \$ 1,059       | \$ 1,014       | \$ 1,133       | \$ 896       |
| Contributions in relation to the    |                |                |                |                |              |
| Contractually Required Contribution | <u>(1,209)</u> | <u>(1,059)</u> | <u>(1,014)</u> | <u>(1,133)</u> | <u>(896)</u> |
| Contribution Deficiency/(Excess)    | <u>\$ -</u>    | <u>\$ -</u>    | <u>\$ -</u>    | <u>\$ -</u>    | <u>\$ -</u>  |
| <br>                                |                |                |                |                |              |
| Covered Payroll                     | \$ 5,848       | \$ 5,197       | \$ 5,113       | \$ 4,904       | \$ 4,695     |
| <br>                                |                |                |                |                |              |
| Contributions as a Percentage of    |                |                |                |                |              |
| Covered Payroll                     | 20.67%         | 20.38%         | 19.83%         | 23.10%         | 19.08%       |

**JUDICIAL RETIREMENT FUND**

|                                     | <u>2019</u> | <u>2018</u> | <u>2017</u> | <u>2016</u> | <u>2015</u> |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|
| Contractually Required Contribution | \$ 23       | \$ 21       | \$ 19       | \$ 21       | \$ 17       |
| Contributions in relation to the    |             |             |             |             |             |
| Contractually Required Contribution | <u>(23)</u> | <u>(21)</u> | <u>(19)</u> | <u>(21)</u> | <u>(17)</u> |
| Contribution Deficiency/(Excess)    | <u>\$ -</u> |
| <br>                                |             |             |             |             |             |
| Covered Payroll                     | \$ 176      | \$ 157      | \$ 152      | \$ 144      | \$ 136      |
| <br>                                |             |             |             |             |             |
| Contributions as a Percentage of    |             |             |             |             |             |
| Covered Payroll                     | 13.07%      | 13.38%      | 12.50%      | 14.58%      | 12.50%      |

Schedule is intended to show information for 10 years.

Additional years will be displayed as they become available.

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

**SCHEDULES OF PROPORTIONATE SHARE OF THE NET OPEB LIABILITY**

(Dollar Amounts in Thousands)

**TEACHERS' RETIREMENT SYSTEM**

| <b>Measurement Date</b> | <b>Fiscal Year Ended</b> | <b>Proportion of the Net OPEB Liability (%)</b> | <b>Proportionate Share of the Net OPEB Liability</b> | <b>Covered Payroll</b> | <b>Proportionate Share of the Net OPEB Liability as a Percentage of Covered Payroll</b> | <b>Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability</b> |
|-------------------------|--------------------------|---|--|------------------------|---|--|
| 9/30/2018               | 9/30/2019                | 0.57  | \$ 16,182  | \$ 7,663               | 211.17  | 5.96   |
| 9/30/2017               | 9/30/2018                | 0.53  | 16,708   | 7,235                  | 230.93  | 5.05   |

**EMPLOYEES' RETIREMENT SYSTEM**

| <b>Measurement Date</b> | <b>Fiscal Year Ended</b> | <b>Proportion of the Net OPEB Liability (%)</b> | <b>Proportionate Share of the Net OPEB Liability</b> | <b>Covered Payroll</b> | <b>Proportionate Share of the Net OPEB Liability as a Percentage of Covered Payroll</b> | <b>Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability</b> |
|-------------------------|--------------------------|---|--|------------------------|---|--|
| 9/30/2018               | 9/30/2019                | 0.38  | \$ 10,902  | \$ 5,197               | 209.77  | 5.96   |
| 9/30/2017               | 9/30/2018                | 0.38  | 11,871   | 5,113                  | 232.17  | 5.05   |

**JUDICIAL RETIREMENT FUND**

| <b>Measurement Date</b> | <b>Fiscal Year Ended</b> | <b>Proportion of the Net OPEB Liability (%)</b> | <b>Proportionate Share of the Net OPEB Liability</b> | <b>Covered Payroll</b> | <b>Proportionate Share of the Net OPEB Liability as a Percentage of Covered Payroll</b> | <b>Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability</b> |
|-------------------------|--------------------------|---|--|------------------------|---|--|
| 9/30/2018               | 9/30/2019                | 0.00  | \$ 91  | \$ 157                 | 57.96   | 5.96   |
| 9/30/2017               | 9/30/2018                | 0.00  | 99   | 152                    | 65.13   | 5.05   |

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

# RETIREMENT SYSTEMS OF ALABAMA

## Financial Section

### Required Supplementary Information

For the Fiscal Year Ended September 30, 2019

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

#### SCHEDULES OF OPEB CONTRIBUTIONS

For the Fiscal Years Ended September 30

(Dollar Amounts in Thousands)

##### TEACHERS' RETIREMENT SYSTEM

|                                     | <u>2019</u>  | <u>2018</u>  |
|-------------------------------------|--------------|--------------|
| Contractually Required Contribution | \$ 428       | \$ 454       |
| Contributions in relation to the    |              |              |
| Contractually Required Contribution | <u>(428)</u> | <u>(454)</u> |
| Contribution Deficiency/(Excess)    | <u>\$ -</u>  | <u>\$ -</u>  |
| <br>                                |              |              |
| Covered Payroll                     | \$8,748      | \$7,663      |
| <br>                                |              |              |
| Contributions as a Percentage of    |              |              |
| Covered Payroll                     | 4.89%        | 5.92%        |

##### EMPLOYEES' RETIREMENT SYSTEM

|                                     | <u>2019</u>  | <u>2018</u>  |
|-------------------------------------|--------------|--------------|
| Contractually Required Contribution | \$ 290       | \$ 306       |
| Contributions in relation to the    |              |              |
| Contractually Required Contribution | <u>(290)</u> | <u>(306)</u> |
| Contribution Deficiency/(Excess)    | <u>\$ -</u>  | <u>\$ -</u>  |
| <br>                                |              |              |
| Covered Payroll                     | \$5,848      | \$5,197      |
| <br>                                |              |              |
| Contributions as a Percentage of    |              |              |
| Covered Payroll                     | 4.96%        | 5.89%        |

##### JUDICIAL RETIREMENT FUND

|                                     | <u>2019</u> | <u>2018</u> |
|-------------------------------------|-------------|-------------|
| Contractually Required Contribution | \$ 2        | \$ 2        |
| Contributions in relation to the    |             |             |
| Contractually Required Contribution | <u>(2)</u>  | <u>(2)</u>  |
| Contribution Deficiency/(Excess)    | <u>\$ -</u> | <u>\$ -</u> |
| <br>                                |             |             |
| Covered Payroll                     | \$ 176      | \$ 157      |
| <br>                                |             |             |
| Contributions as a Percentage of    |             |             |
| Covered Payroll                     | 1.14%       | 1.27%       |

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

*Financial Section*

Notes to the Required Supplementary Information  
For the Fiscal Year Ended September 30, 2019

**1) NET PENSION LIABILITY**

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

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

**B. Schedules of Employer Contributions**

Contributions were made in accordance with actuarially determined contribution requirements. The employer contribution rate expressed as a percent of payroll is determined annually by reviewing a variety of factors including benefits promised, member contributions, investment earnings, mortality, and withdrawal experience. The employer contribution rates for fiscal year 2019 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>                                 | 12.41%        | 11.35%        |
| <b>ERS - State Employees</b>               | 14.51%        | 14.14%        |
| <b>ERS - State Police</b>                  | 50.08%        | 43.43%        |
| <b>JRF - Groups 1 &amp; 2</b>              | 41.41%        | -             |
| <b>JRF - Group 3 - Judges &amp; Clerks</b> | 34.32%        | -             |
| <b>JRF - District Attorneys</b>            | 19.77%        | -             |

**C. Schedule of Investment Returns**

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

**D. Actuarial Assumptions**

The actuarially determined contribution rates in the schedules of employer contributions are calculated as of September 30, 2016, 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<br>smoothed market | 5-year<br>smoothed market                 | 5-year<br>smoothed market |
| Amortization Method           | Level percent closed      | Level percent closed                      | Level percent closed      |
| Remaining Amortization Period | 29.2 years                | Within 29.3 years -<br>Varies by Employer | 23.3 years                |
| Actuarial Assumptions:        |                           |   |                           |
| Investment Rate of Return* ‡  | 7.875%                    | 7.875%                                    | 7.75%                     |
| Projected Salary Increases ‡  | 3.375% - 5.125%           | 3.375% - 5.125%                           | 3.25% - 3.50%             |
| Cost of Living Adjustments    | None                      | None                                      | 3.00% †                   |

\*Net of pension plan investment expense.

‡ Includes inflation at 2.875% for TRS & ERS and 2.75% for JRF.

† 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, 2019

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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.
- Effective November 8, 2016, any Judge or Clerk first elected or appointed on or after that date and any District Attorney serving as a District Attorney on or after that date are covered members of the JRF under a new benefit structure.

*Changes of Assumptions*

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

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

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

**2) NET OTHER POSTEMPLOYMENT BENEFIT LIABILITY**

**A. Changes to Benefit Terms**

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

**B. Changes of Assumptions**

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

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### C. Actuarial Assumptions

The actuarially determined contribution rates in the schedule of employer contributions are calculated as of September 30, 2017, two years prior to the end of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine the recent contribution rate reported in that schedule.

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>Actuarial Cost Method</b>         | Projected Unit Credit      |
| <b>Amortization Method</b>           | Level Percent of Pay, Open |
| <b>Remaining Amortization Period</b> | 30 years                   |
| <b>Asset Valuation Method</b>        | Market Value of Assets     |
| <b>Inflation</b>                     | 2.750%                     |
| <b>Healthcare Cost Trend Rate</b>    |                            |
| <b>Pre-Medicare Eligible</b>         | 7.00%                      |
| <b>Medicare Eligible</b>             | 5.50%                      |
| <b>Ultimate Trend Rate</b>           |                            |
| <b>Pre-Medicare Eligible</b>         | 4.75% in 2026              |
| <b>Medicare Eligible</b>             | 4.75% in 2024              |
| <b>Investment Rate of Return*</b>    | 5.00%                      |

\*Includes inflation at 2.75%

RETIREMENT SYSTEMS OF ALABAMA

*Financial Section*

Schedule of Administrative Expenses

For the Fiscal Year Ended September 30, 2019

(Dollar Amounts in Thousands)

|                                      | <b>Teachers'<br/>Retirement<br/>System</b> | <b>Employees'<br/>Retirement<br/>System</b> | <b>Judicial<br/>Retirement<br/>Fund</b> | <b>Totals</b>           |
|--------------------------------------|--|---|---|-------------------------|
| <b>Personnel Services:</b>           |  |   |   |                         |
| Salaries                             | \$ 8,748                                   | \$ 5,848                                    | \$ 176                                  | \$ 14,772               |
| Employee Fringe Benefits             | 3,859                                      | 2,400                                       | 63                                      | 6,322                   |
| Total Personnel Services             | <u>12,607</u>                              | <u>8,248</u>                                | <u>239</u>                              | <u>21,094</u>           |
| <b>Professional Services:</b>        |  |   |   |                         |
| Actuarial                            | 141  | 587   | 65                                      | 793                     |
| Accounting and Auditing              | 106  | 70  | 21                                      | 197                     |
| Information Technology               | 2,254                                      | 903   | 8                                       | 3,165                   |
| Education & Training                 | 19   | 8   | 1                                       | 28                      |
| Mailing Services                     | 137  | 70  | -                                       | 207                     |
| Legal Services                       | 184  | 119   | -                                       | 303                     |
| Personnel Services                   | 121  | -   | -                                       | 121                     |
| Other Professional Services and Fees | 183  | 67  | -                                       | 250                     |
| Total Professional Services          | <u>3,145</u>                               | <u>1,824</u>                                | <u>95</u>                               | <u>5,064</u>            |
| <b>Communications and Travel:</b>    |  |   |   |                         |
| Telecommunications                   | 156  | 80  | -                                       | 236                     |
| Postage                              | 1,018                                      | 668   | -                                       | 1,686                   |
| Travel                               | 90   | 46  | 2                                       | 138                     |
| Total Communications and Travel      | <u>1,264</u>                               | <u>794</u>                                  | <u>2</u>                                | <u>2,060</u>            |
| <b>Rentals:</b>                      |  |   |   |                         |
| Office Space                         | 981  | 653   | 16                                      | 1,650                   |
| Equipment Leasing                    | 9  | 4   | -                                       | 13                      |
| Total Rentals                        | <u>990</u>                                 | <u>657</u>                                  | <u>16</u>                               | <u>1,663</u>            |
| <b>Miscellaneous:</b>                |  |   |   |                         |
| Supplies                             | 1,898                                      | 1,120                                       | 5                                       | 3,023                   |
| Maintenance & Equipment              | 679  | 291   | -                                       | 970                     |
| Total Miscellaneous                  | <u>2,577</u>                               | <u>1,411</u>                                | <u>5</u>                                | <u>3,993</u>            |
| <b>Total Administrative Expenses</b> | <b><u>\$ 20,583</u></b>                    | <b><u>\$ 12,934</u></b>                     | <b><u>\$ 357</u></b>                    | <b><u>\$ 33,874</u></b> |

RETIREMENT SYSTEMS OF ALABAMA

*Financial Section*

Schedule of Investment Expenses

For the Fiscal Year Ended September 30, 2019

(Dollar Amounts in Thousands)

|  | <b>Teachers'<br/>Retirement<br/>System</b> | <b>Employees'<br/>Retirement<br/>System</b> | <b>Judicial<br/>Retirement<br/>Fund</b> | <b>Totals</b>    |
|--|--|---|---|------------------|
| <b><i>Investment Activity</i></b>                        |  |   |   |                  |
| <b>Investment Management Fees:</b>                       |  |   |   |                  |
| Salaries and Benefits                                    | \$ 7,250                                   | \$ 2,616                                    | \$ -                                    | \$ 9,866         |
| Dues, Subscriptions, and Supplies                        | 1,386                                      | 919   | -                                       | 2,305            |
| Travel   | 26   | 15  | -                                       | 41               |
| <b>Professional Services:</b>                            |  |   |   |                  |
| Legal  | 2  | 1   | -                                       | 3                |
| Investment Advisor                                       | 60   | 30  | -                                       | 90               |
| Appraisal of Private Placements and Real Estate          | 489  | 292   | -                                       | 781              |
| <b>Investment Activity Expenses before Reimbursement</b> | <b>9,213</b>                               | <b>3,873</b>                                | <b>-</b>                                | <b>13,086</b>    |
| Less: Reimbursement for Investment Management Fees       | 8  | 212   | -                                       | 220              |
| <b>Total Investment Activity Expenses</b>                | <b>9,205</b>                               | <b>3,661</b>                                | <b>-</b>                                | <b>12,866</b>    |
| <b><i>Securities Lending Activity</i></b>                |  |   |   |                  |
| Securities Lending Borrower Rebates                      | 19,431                                     | 9,394                                       | 218                                     | 29,043           |
| Securities Lending Management Fees                       | 2,842                                      | 1,347                                       | 32                                      | 4,221            |
| Total Securities Lending Activity Expenses               | 22,273                                     | 10,741                                      | 250                                     | 33,264           |
| <b>Total Investment Expenses</b>                         | <b>\$ 31,478</b>                           | <b>\$ 14,402</b>                            | <b>\$ 250</b>                           | <b>\$ 46,130</b> |

RETIREMENT SYSTEMS OF ALABAMA

Financial Section

Schedule of Professional/Consultant Fees

For the Fiscal Year Ended September 30, 2019

(Dollar Amounts in Thousands)

| Professional/Consultant   | Nature of Service      | Teachers'<br>Retirement<br>System | Employees'<br>Retirement<br>System | Judicial<br>Retirement<br>Fund | Totals          |
|---|------------------------|-----------------------------------|------------------------------------|--------------------------------|-----------------|
| Cavanaugh Macdonald Consulting, LLC                                 | Actuary                | \$ 141                            | \$ 587                             | \$ 65                          | \$ 793          |
| Carr, Riggs & Ingram, LLC   | Auditor                | 84                                | 44                                 | 18                             | 146             |
| The Eric Ryan Corporation   | Auditor                | 13                                | 9                                  | -                              | 22              |
| A-LIGN  | Auditor                | 9                                 | 17                                 | 3                              | 29              |
| Balch & Bingham, LLP  | Legal                  | 116                               | 74                                 | -                              | 190             |
| Bradley Arant Boulton Cummings, LLP                                 | Legal                  | 36                                | 24                                 | -                              | 60              |
| Jackson Walker, LLP   | Legal                  | 13                                | 8                                  | -                              | 21              |
| Morgan, Lewis, & Blockius LLP                                       | Legal                  | 15                                | 10                                 | -                              | 25              |
| Ice Miller LLP  | Legal                  | 2                                 | 2                                  | -                              | 4               |
| Reed Smith LLP  | Legal                  | 2                                 | 1                                  | -                              | 3               |
| Wells Mailing   | Mail                   | 91                                | 39                                 | -                              | 130             |
| Alabama Department of Finance                                       | Mail                   | 46                                | 31                                 | -                              | 77              |
| State Personnel Department  | Personnel              | 121                               | -                                  | -                              | 121             |
| Fine Geddie & Associates, LLC                                       | Consultant             | 75                                | -                                  | -                              | 75              |
| Alabama Department of Finance                                       | Information Technology | 128                               | 77                                 | 8                              | 213             |
| Auburn University at Montgomery                                     | Information Technology | 306                               | 102                                | -                              | 408             |
| Deloitte Consulting, LLP  | Information Technology | 1,714                             | 662                                | -                              | 2,376           |
| GKR Systems, Inc.   | Information Technology | 29                                | 10                                 | -                              | 39              |
| Stamp Idea Group  | Information Technology | 64                                | 43                                 | -                              | 107             |
| Packet Ninjas   | Information Technology | 13                                | 9                                  | -                              | 22              |
| Various   | Other                  | 127                               | 75                                 | 1                              | 203             |
| <b>Total Professional/Consultant Fees - Administrative Services</b> |                        | <b>3,145</b>                      | <b>1,824</b>                       | <b>95</b>                      | <b>5,064</b>    |
| Cabaniss, Johnston, Gardner, Dumas & O'Neal, LLP                    | Legal                  | 2                                 | 1                                  | -                              | 3               |
| Regions Bank  | Investment Advisor     | 60                                | 30                                 | -                              | 90              |
| Pearson Realty Services, Inc.                                       | Real Estate Appraiser  | 222                               | 148                                | -                              | 370             |
| Houlihan Lokey  | Investment Appraiser   | 267                               | 144                                | -                              | 411             |
| <b>Total Professional/Consultant Fees - Investment Services</b>     |                        | <b>551</b>                        | <b>323</b>                         | <b>-</b>                       | <b>874</b>      |
| <b>Total Professional/Consultant Fees</b>                           |                        | <b>\$ 3,696</b>                   | <b>\$ 2,147</b>                    | <b>\$ 95</b>                   | <b>\$ 5,938</b> |



# Investment Section

Component Units of the State of Alabama  
Comprehensive Annual Financial Report



## RETIREMENT SYSTEMS OF ALABAMA

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### *Investment Section*

#### Report on Investment Activity

For the Fiscal Year Ended September 30, 2019

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Dear Members,

I am pleased to present the following report on investment activity for the fiscal year ended September 30, 2019. The report provides investment highlights in general as well as specific information on the Retirement Systems' investment activity for the fiscal year. The custodian calculated rates of return are based on normal industry standards using a time weighted rate of return methodology based upon market values.

Much like 2018, fiscal year 2019 was a period of heightened volatility across most asset classes. U.S. large capitalization equities again outperformed both developed and emerging international equities, while further down the market cap spectrum both midcap and smallcap stocks had negative returns for the year. Stock markets across the globe had a horrific December quarter as recession fears mounted. The Federal Reserve (Fed) hiked Fed Funds rates four times throughout the year, with the last hike occurring in December. Inverted yield curves, negative interest rates abroad, rapid economic slowing, and the U.S./China tariff battle weighed heavily on stocks. The volatility on the downside was increased as various quant and commodity trading advisor funds piled out of stocks and into safe government securities. Algorithmic trading is an unpredictable animal that exacerbates drawdowns and short covering rallies. We need to get used to it.

We generally look to earnings growth as the ultimate driver of stock prices. Valuations are very useful at extreme ends of the spectrum, however the market has been trading relatively close to the long term average for several years. In hindsight, the churn we experienced throughout the fiscal year had much to do with a resetting of growth expectations. There have been two prior mini-earnings recessions over the past ten years, and the market had much the same reaction. Looking forward, we are concerned about operating margins at companies as we are starting to see signs of wage inflation. The upside is that consumer spending is the biggest component of Gross Domestic Product (GDP) growth, and more dollars in their pockets could possibly reaccelerate corporate topline growth.

With equities at the higher end of our target range, we have continued paring back our exposure to stocks through selling of the S&P 500 index fund. We also continue to use collars to manage our downside risk. We did add some exposure in fixed income, although we remain below target in that asset class. On the flipside, we have a much higher cash weighting than normal, and view this as somewhat of a barbell approach to our equity exposure. We have quite a bit of dry powder on the sideline and are looking for opportunities to deploy that cash when we feel the risk/reward is favorable.

Within the alternative investments portfolio, the Raycom Media/Gray TV merger closed January 2, 2019. We received cash, preferred stock, and Gray common stock in the deal. Our small exposure to private equity performed well this year, and we did some co-invests on a couple of deals alongside the fund investment. Real estate returns improved versus the prior year as several capital expenditure projects were completed. 55 Water Street, RSA's biggest real estate investment, closed several tenant deals even as the Manhattan office market softened.

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

### **RSA Performance Summary**

As of September 30, 2019, aggregate defined benefit assets under management totaled \$38.13 billion. During fiscal year 2019, annualized total returns of the TRS, ERS, and JRF were 2.63%, 2.78%, and 3.82% respectively.

### **Equities**

Equities had a tumultuous grind throughout fiscal year 2019. As we wrote about above, macro headwinds weighed on economic growth. At the beginning of the year bottoms up analyst estimates for 2019 were approximately \$175. It looks like the final number is going to be closer to \$163, an approximate 7% shortfall versus initial expectations.

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That type of an earnings reset is hard to overcome, evidenced by the small returns generated in stocks for the year. Breadth was very narrow, led by the large cap growth stocks. This is very typical as investors are willing to pay up for growth when growth is scarce. Retrospectively this makes sense, as central banks started tightening monetary policy both by raising short term rates and reversing course on the quantitative easing era post the Great Recession. More recently we have seen breadth improve, with somewhat of a rotation into value and cyclical names. As mentioned previously, the RSA opportunistically sold stocks as our weighting had drifted toward the high end of the target range. We also used zero cost collars to mitigate some of the downside risk if the market broke lower, but those collars expired at fiscal year-end with no value. Barring an exogenous shock of some sort, bad policy decisions, or a surprising election outcome, we feel that the market is fairly valued at this point. It is late in the cycle and we are obviously paying close attention to all the aforementioned issues.

For the year, the RSA domestic equity portfolios returned 1.71%, 1.94%, and 2.48% for the TRS, ERS, and JRF, respectively. Both developed and emerging international equities performance lagged U.S. equities. Total international equity returns were -0.60% for the TRS, -0.74% for the ERS, and -0.56% for the JRF. The combined total returns for the overall equity portfolios were 1.23%, 1.40%, and 1.83% for the TRS, ERS, and JRF, respectively. Three-, five-, and ten-year annualized global equity returns were 11.01%, 8.82%, and 11.05% for the TRS, 11.09%, 8.86%, and 11.10% for the ERS, and 11.12%, 8.92%, and 11.52% for the JRF, respectively.

### **Fixed Income**

As monetary policymakers raised short term interest rates at its September 2018 meeting, we questioned how global risk assets would respond to further rate increases. We found the answer to that question fairly soon in the new fiscal year.

The first quarter revealed a continuation of slowing economic data abroad and heightened volatility. Credit spreads experienced material widening and treasury yields fell precipitously through year end. The Fed pushed another rate hike through in December against the market's wishes on the back of a solid employment picture. Chairman Jay Powell would quickly change course however, as it became apparent that patience was needed to calm financial markets. Losses in the riskiest parts of the credit market were quickly restored.

As yields in Europe collapsed further due to the lowering of growth and inflation expectations, the Fed was forced to throw in the towel on additional rate adjustments and balance sheet reduction. The ensuing rate decline in the long end of the curve led to a brief inversion, historically an indicator of recession in the future. Credit proved to be pretty resilient during this time and benefited from its longer duration profile. Breakdown in trade negotiations with China in the spring provided another hit to risk assets.

In the following months, policymakers conveyed that they would act as needed to sustain the economic expansion, and ultimately delivered a 25 basis point (bp) rate cut at the end of July. Unfortunately, the market was disappointed as the move was described as a "mid-cycle adjustment" rather than the start of a more aggressive approach. This coupled with increasing trade tensions caused a third round of instability during the fiscal year. Risk-free assets were further emboldened by protests in several countries, additional tariffs on Chinese imports, and the political firestorm here at home.

The Federal Open Market Committee (FOMC) delivered another rate cut at the end of the fiscal year to help alleviate recession fears priced into the market. Global policymakers appear to be on the same page as they are providing as much ammunition as possible to combat anemic growth. It remains to be seen whether any actions will be taken on the fiscal side. Duration has been the key ingredient in producing solid returns within fixed income this year. The RSA has opportunistically added higher quality assets in the long end of the curve in order to provide a better balance of yield and safety at this stage in the cycle.

For the fiscal year, the total annual returns for the public domestic fixed income portfolios were 9.51% for the TRS,

RETIREMENT SYSTEMS OF ALABAMA

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*Investment Section*

Report on Investment Activity

For the Fiscal Year Ended September 30, 2019

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9.49% for the ERS, and 9.23% for the JRF. The five-year annualized returns were 3.72% for the TRS, 3.71% for the ERS, and 3.55% for the JRF. The ten-year annualized returns were 4.45% for the TRS, 4.44% for the ERS, and 4.40% for the JRF.

Sincerely,



Marc Green  
Director of Investments

## *Investment Section*

### Teachers' Retirement System Investment Policy Statement

For the Fiscal Year Ended September 30, 2019

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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)).

## RETIREMENT SYSTEMS OF ALABAMA

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### *Investment Section*

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

For the Fiscal Year Ended September 30, 2019

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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.

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## Investment Philosophy

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

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

**Strategic Asset Allocation Policy**

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

| <b>Asset Class</b>      | <b>Target Allocation</b> | <b>Strategic Range</b> |
|-------------------------|--------------------------|------------------------|
| Domestic Equity         | 45%                      | 30%-60%                |
| International Equity    | 15%                      | 10%-25%                |
| Fixed Income            | 15%                      | 10%-50%                |
| Alternative Investments | 10%                      | 0%-20%                 |
| Real Estate             | 10%                      | 0%-15%                 |
| Short-term investments  | 5%                       | 1%-10%                 |
| <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.

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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.

### ***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.

#### ***Short-term Investments***

Short-term investments are an integral part of a public pension portfolio, primarily as a tool of principal preservation and as a provider of liquidity. Eligible securities within this asset class include but are not limited to, U.S. treasury bills, notes and bonds with maturities of one year or less, corporate debt obligations (primarily commercial paper), short-dated agency and mortgage backed debt with government backed principal and interest payments, various types of bank paper including time deposits, repurchase agreements as well as money market funds. Also included is any money held in the STIF (short-term investment fund) accounts at the custody bank of the RSA, State Street Corporation.

#### ***Real Estate***

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

#### **Risk Controls and Procedures**

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

## Performance Measurement

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

### *Total Plan Benchmark*

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

|                                   |   |  |
|-----------------------------------|---|--|
| <b>Domestic Equity</b>            | Custom Benchmark  | (see description below)  |
| <b>International Equity</b>       | MSCI EAFE Net & Emerging Markets Net  | Beginning of month weighted custom benchmark                               |
| <b>Domestic Fixed Income</b>      | <b>Custom Benchmark</b>   | <b>(see description below)</b>   |
| <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%.<br><br>-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            |

## RETIREMENT SYSTEMS OF ALABAMA

### *Investment Section*

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

For the Fiscal Year Ended September 30, 2019

#### ***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      |

Employees' Retirement System Investment Policy Statement  
For the Fiscal Year Ended September 30, 2019

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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 Section*

Employees' Retirement System Investment Policy Statement (Continued)  
For the Fiscal Year Ended September 30, 2019

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***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 ensure the minutes are made available to Trustees.
- 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)).

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### ***Custodian***

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

### ***Investment Advisor***

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

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

### **Investment Goals and Objectives**

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

### **Investment Philosophy**

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

- Strategic asset allocation is the most significant factor influencing long-term investment performance and asset volatility. The asset allocation targets, determined by the Board of Control, will be adhered to through a clearly defined rebalancing program.
- In controlling the risk level that is appropriate for the fund, the Board will diversify the assets of the fund among various asset classes as the Board may from time to time adopt as appropriate asset classes. The specific asset classes to be used will be set in conjunction with the strategic asset allocation adopted from time to time by the Board. The Board will diversify investment assets within asset classes to avoid concentrations.
- The fund's liabilities are long term and the investment strategy will therefore be long term in nature. Strategic decisions will prevail in determining asset allocation rather than tactical or short-term market timing decisions.
- The asset allocation policy will be reexamined every three years to ensure its appropriateness to the then prevailing liability considerations.

- Market-related risk and non-market related risk investments will be utilized. Market related risk refers to risk systematic to a market or risk embedded in the strategic asset allocation policy. Non-market risk refers to risk derived from active management or tactical decisions. Market-related risks are expected to produce returns proportional to the level of those risks over long periods of time as a natural feature of reasonably efficient capital markets; non- market related risks may produce additional returns when capitalized upon through skilled active management in the presence of some degree of market inefficiency. As a long-term investor, the ERS will invest across a wide spectrum of market-related risk investments, categorized in asset classes, in a prudent manner consistent with the strategic asset allocation policy referred to above.
- Index funds can be a desirable way of obtaining market-related risk exposure to asset classes.
- Non-market-related risks, also known as active management risk, may be expected to add value over index funds with comparable benchmarks, under appropriate conditions, and can be employed by the fund with controls in place which are appropriate to the particular investment.
- 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.

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

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

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## **Rebalancing Policy**

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

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

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

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

## **Eligible Asset Categories**

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

### *Domestic Equities*

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

It is expected that the ERS will have exposure to all segments of the domestic equity market including but not limited to growth and value stocks of large to small capitalization companies. The domestic equity market is considered by many to be one of the most efficient capital markets in the world. The availability of public information regarding the future prospects of individual companies combined with the numerous market participants rendering assessments of the information contribute to this market’s efficiency. With this in mind, a large portion of the domestic equity portfolio will be managed through passive index funds. A portion of the portfolio will be utilized

to add alpha relative to the benchmarks. While the market is very efficient, neither it nor any other market is perfectly efficient. When appropriate skill is available, it may be possible to successfully use active management techniques to improve upon benchmark returns, with acceptable levels of risk.

***International Equities***

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

***Fixed Income***

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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.

***Short-term Investments***

Short-term investments are an integral part of a public pension portfolio, primarily as a tool of principal preservation and as a provider of liquidity. Eligible securities within this asset class include but are not limited to, U.S. treasury bills, notes and bonds with maturities of one year or less, corporate debt obligations (primarily commercial paper), short-dated agency and mortgage backed debt with government backed principal and interest payments, various types of bank paper including time deposits, repurchase agreements as well as money market funds. Also included is any money held in the STIF (short-term investment fund) account at the custody bank of the RSA, State Street Corporation.

***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.

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.

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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.

*Investment Section*

Employees' Retirement System Investment Policy Statement (Continued)

For the Fiscal Year Ended September 30, 2019

**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 EAFE Net & Emerging Markets 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  |
| <b>Cash</b>                       | ML 90-Day T-Bill   |   |
| <b>Alternative Investments</b>    | -If an equity investment, the Russell 3000 +3%<br><br>-If a debt investment, the Barclay Capital Agency plus 3%. |   |
| <b>Real Estate</b>                | NCREIF NPI   | -Privately held US-based commercial Real Estate properties.<br><br>-Most commonly used.<br><br>-Often use NPI + 1-3% to compensate for higher risk and expected returns of funds that use leverage. |

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***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   |
| <b>LargeCap Policy Fund</b>     | S&P 500            |
| <b>LargeCap Value Fund</b>      | S&P 500            |

***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

| U.S. Equity                                     | TIME WEIGHTED RATES OF RETURN - GROSS OF FEE |               |               |               |
|---|--|---------------|---------------|---------------|
|   | 1 Year                                       | 3 Years       | 5 Years       | 10 Years      |
| TRS Core Fund                                   | 3.00%  | 13.36%        | 10.46%        | 12.45%        |
| TRS S&P 500 Fund                                | 4.31%  | 12.84%        | 10.51%        | 13.08%        |
| TRS Mid Cap Index                               | -2.39%                                       | 9.44%         | 8.95%         | 12.63%        |
| TRS S&P Small Cap Index                         | -8.91%                                       | 9.87%         | 10.41%        | 13.60%        |
| TRS Midcap Active Fund (Ssf)                    | 0.22%  | 11.00%        | 8.70%         | 12.38%        |
| TRS Large Cap Policy Fund                       | -2.25%                                       | 12.26%        | n/a           | n/a           |
| <b>TRS Total Domestic Equity</b>                | <b>1.71%</b>                                 | <b>12.15%</b> | <b>10.17%</b> | <b>12.78%</b> |
| <i>TRS Custom Domestic Equity Index</i>         | <i>1.76%</i>                                 | <i>12.32%</i> | <i>10.39%</i> | <i>13.08%</i> |
| <i>S&amp;P 500</i>                              | <i>4.25%</i>                                 | <i>13.39%</i> | <i>10.84%</i> | <i>13.24%</i> |
| <i>S&amp;P Mid Cap 400</i>                      | <i>-2.49%</i>                                | <i>9.38%</i>  | <i>8.88%</i>  | <i>12.56%</i> |
| <i>S&amp;P Smallcap 600</i>                     | <i>-9.34%</i>                                | <i>9.33%</i>  | <i>9.89%</i>  | <i>13.02%</i> |
| <b>International Equity</b>                     |  |               |               |               |
| TRS Emerging Markets Fund                       | -2.46%                                       | 5.62%         | 2.40%         | n/a           |
| TRS International Equities                      | -0.17%                                       | 7.18%         | 3.94%         | 5.54%         |
| <b>TRS Total International Equity</b>           | <b>-0.60%</b>                                | <b>6.83%</b>  | <b>3.73%</b>  | <b>5.21%</b>  |
| <i>TRS Custom International Equity Index</i>    | <i>-1.54%</i>                                | <i>6.31%</i>  | <i>3.17%</i>  | <i>n/a</i>    |
| <i>MSCI Eafe (Net)</i>                          | <i>-1.34%</i>                                | <i>6.48%</i>  | <i>3.27%</i>  | <i>4.90%</i>  |
| <i>MSCI Emerging Markets</i>                    | <i>-2.02%</i>                                | <i>5.97%</i>  | <i>2.33%</i>  | <i>3.37%</i>  |
| <b>TRS Total Global Equity</b>                  | <b>1.23%</b>                                 | <b>11.01%</b> | <b>8.82%</b>  | <b>11.05%</b> |
| <i>TRS Custom Global Equity Index</i>           | <i>1.07%</i>                                 | <i>11.03%</i> | <i>8.87%</i>  | <i>11.14%</i> |
| <b>Fixed Income</b>                             |  |               |               |               |
| TRS Domestic Fixed Income                       | 9.51%  | 3.19%         | 3.72%         | 4.45%         |
| <b>TRS Custom Domestic Fixed Index</b>          | <b>10.84%</b>                                | <b>3.30%</b>  | <b>3.71%</b>  | <b>4.22%</b>  |
| <i>Barclays Aggregate Bond</i>                  | <i>10.30%</i>                                | <i>2.92%</i>  | <i>3.38%</i>  | <i>3.75%</i>  |
| <b>TRS Total Fixed Income</b>                   | <b>9.51%</b>                                 | <b>3.19%</b>  | <b>3.72%</b>  | <b>4.45%</b>  |
| <b>Alternative Investments</b>                  |  |               |               |               |
| TRS Private Placements                          | 1.37%  | -10.27%       | -3.28%        | 5.83%         |
| TRS Preferred And Private Equity                | 4.46%  | 36.50%        | 20.08%        | 16.98%        |
| TRS Real Estate                                 | 2.73%  | 2.53%         | 4.42%         | 3.48%         |
| <b>TRS Total Alternatives</b>                   | <b>3.29%</b>                                 | <b>2.12%</b>  | <b>4.10%</b>  | <b>6.98%</b>  |
| <b>TRS Total Fixed Income Plus Alternatives</b> | <b>5.86%</b>                                 | <b>2.63%</b>  | <b>4.07%</b>  | <b>5.83%</b>  |
| <b>Cash</b>                                     |  |               |               |               |
| TRS Cash Account                                | 2.46%  | 1.67%         | 1.11%         | 0.64%         |
| TRS Short Term Investments                      | 2.70%  | 1.94%         | 1.40%         | 0.88%         |
| <b>TRS Total Cash</b>                           | <b>2.57%</b>                                 | <b>1.84%</b>  | <b>1.31%</b>  | <b>n/a</b>    |
| <b>Total Plan</b>                               |  |               |               |               |
| <b>TRS Total Plan</b>                           | <b>2.63%</b>                                 | <b>7.87%</b>  | <b>6.96%</b>  | <b>8.95%</b>  |
| <i>TRS Total Plan Policy</i>                    | <i>2.60%</i>                                 | <i>8.76%</i>  | <i>7.27%</i>  | <i>8.59%</i>  |

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

| U.S. Equity                                     | TIME-WEIGHTED RATES OF RETURN - GROSS OF FEE |               |               |               |
|---|--|---------------|---------------|---------------|
|   | 1 Year                                       | 3 Years       | 5 Years       | 10 Years      |
| ERS Core Fund                                   | 3.03%  | 13.35%        | 10.46%        | 12.46%        |
| ERS S&P 500 Fund                                | 4.31%  | 12.86%        | 10.50%        | 13.07%        |
| ERS Mid Cap Index                               | -2.39%                                       | 9.44%         | 8.94%         | 12.63%        |
| ERS S&P Small Cap Index                         | -8.91%                                       | 9.87%         | 10.41%        | 13.60%        |
| ERS Midcap Active Fund (Ssf)                    | 0.22%  | 10.99%        | 8.70%         | 12.37%        |
| ERS Large Cap Policy Fund                       | -2.26%                                       | 12.25%        | n/a           | n/a           |
| <b>ERS Total Domestic Equity</b>                | <b>1.94%</b>                                 | <b>12.24%</b> | <b>10.17%</b> | <b>12.76%</b> |
| <i>ERS Custom Domestic Equity Index</i>         | <i>2.03%</i>                                 | <i>12.41%</i> | <i>10.43%</i> | <i>13.11%</i> |
| <i>S&amp;P 500</i>                              | <i>4.25%</i>                                 | <i>13.39%</i> | <i>10.84%</i> | <i>13.24%</i> |
| <i>S&amp;P Mid Cap 400</i>                      | <i>-2.49%</i>                                | <i>9.38%</i>  | <i>8.88%</i>  | <i>12.56%</i> |
| <i>S&amp;P Smallcap 600</i>                     | <i>-9.34%</i>                                | <i>9.33%</i>  | <i>9.89%</i>  | <i>13.02%</i> |
| <b>International Equity</b>                     |  |               |               |               |
| ERS Emerging Markets Fund                       | -2.50%                                       | 5.68%         | 2.43%         | n/a           |
| ERS International Equities                      | -0.17%                                       | 7.17%         | 3.93%         | 5.55%         |
| <b>ERS Total International Equity</b>           | <b>-0.74%</b>                                | <b>6.68%</b>  | <b>3.64%</b>  | <b>5.15%</b>  |
| <i>ERS Custom International Equity Index</i>    | <i>-1.58%</i>                                | <i>6.22%</i>  | <i>3.11%</i>  | <i>n/a</i>    |
| <i>MSCI Eafe (Net)</i>                          | <i>-1.34%</i>                                | <i>6.48%</i>  | <i>3.27%</i>  | <i>4.90%</i>  |
| <i>MSCI Emerging Markets</i>                    | <i>-2.02%</i>                                | <i>5.97%</i>  | <i>2.33%</i>  | <i>3.37%</i>  |
| <b>ERS Total Global Equity</b>                  | <b>1.40%</b>                                 | <b>11.09%</b> | <b>8.86%</b>  | <b>11.10%</b> |
| <i>ERS Custom Global Equity Index</i>           | <i>1.30%</i>                                 | <i>11.14%</i> | <i>8.96%</i>  | <i>11.25%</i> |
| <b>Fixed Income</b>                             |  |               |               |               |
| ERS Domestic Fixed Income                       | 9.49%  | 3.17%         | 3.71%         | 4.44%         |
| <b>ERS Custom Domestic Fixed Index</b>          | <b>10.82%</b>                                | <b>3.29%</b>  | <b>3.70%</b>  | <b>4.22%</b>  |
| <i>Barclays Aggregate Bond</i>                  | <i>10.30%</i>                                | <i>2.92%</i>  | <i>3.38%</i>  | <i>3.75%</i>  |
| <b>ERS Total Fixed Income</b>                   | <b>9.49%</b>                                 | <b>3.17%</b>  | <b>3.71%</b>  | <b>4.44%</b>  |
| <b>Alternative Investments</b>                  |  |               |               |               |
| ERS Private Placements                          | 1.35%  | -10.40%       | -3.36%        | 5.83%         |
| ERS Preferred And Private Equity                | 4.29%  | 39.28%        | 21.59%        | 18.95%        |
| ERS Real Estate                                 | 2.73%  | 2.52%         | 4.39%         | 3.43%         |
| <b>ERS Total Alternatives</b>                   | <b>3.32%</b>                                 | <b>3.70%</b>  | <b>4.98%</b>  | <b>7.62%</b>  |
| <b>ERS Total Fixed Income Plus Alternatives</b> | <b>5.78%</b>                                 | <b>3.71%</b>  | <b>4.69%</b>  | <b>6.18%</b>  |
| <b>Cash</b>                                     |  |               |               |               |
| ERS Cash Account                                | 2.46%  | 1.69%         | 1.12%         | 0.64%         |
| ERS Short Term Investments                      | 2.72%  | 1.96%         | 1.43%         | 0.89%         |
| <b>ERS Total Cash</b>                           | <b>2.58%</b>                                 | <b>1.85%</b>  | <b>1.34%</b>  | <b>n/a</b>    |
| <b>Total Plan</b>                               |  |               |               |               |
| <b>ERS Total Plan</b>                           | <b>2.78%</b>                                 | <b>8.23%</b>  | <b>7.14%</b>  | <b>9.02%</b>  |
| <i>ERS Total Plan Policy</i>                    | <i>2.93%</i>                                 | <i>9.04%</i>  | <i>7.85%</i>  | <i>8.84%</i>  |

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

RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Judicial Retirement Fund

Schedule of Investment Performance

|   | TIME WEIGHTED RATES OF RETURN - GROSS OF FEE |               |               |               |
|---|--|---------------|---------------|---------------|
|   | 1 Year                                       | 3 Years       | 5 Years       | 10 Years      |
| <b>U.S. Equity</b>                              |  |               |               |               |
| JRF S&P 500 Fund                                | 4.28%  | 12.97%        | 10.61%        | 13.14%        |
| JRF Mid Cap Index                               | -2.41%                                       | 9.43%         | 8.93%         | 12.64%        |
| JRF S&P Small Cap Index                         | -8.91%                                       | 9.87%         | 10.41%        | 13.60%        |
| JRF Large Cap Policy Fund                       | -2.35%                                       | 12.22%        | n/a           | n/a           |
| <b>JRF Total Domestic Equity</b>                | <b>2.48%</b>                                 | <b>12.29%</b> | <b>10.35%</b> | <b>13.07%</b> |
| <b>JRF Custom Domestic Equity Index</b>         | <b>2.48%</b>                                 | <b>12.63%</b> | <b>10.51%</b> | <b>13.09%</b> |
| <i>S&amp;P 500</i>                              | 4.25%  | 13.39%        | 10.84%        | 13.24%        |
| <i>S&amp;P Mid Cap 400</i>                      | -2.49%                                       | 9.38%         | 8.88%         | 12.56%        |
| <i>S&amp;P Smallcap 600</i>                     | -9.34%                                       | 9.33%         | 9.89%         | 13.02%        |
| <b>International Equity</b>                     |  |               |               |               |
| JRF Emerging Markets Fund                       | -2.42%                                       | 5.39%         | 2.27%         | n/a           |
| JRF International Equities                      | -0.16%                                       | 7.15%         | 3.92%         | 5.62%         |
| <b>JRF Total International Equity</b>           | <b>-0.56%</b>                                | <b>6.86%</b>  | <b>3.75%</b>  | <b>5.29%</b>  |
| <b>JRF Custom International Equity Index</b>    | <b>-1.48%</b>                                | <b>6.42%</b>  | <b>3.25%</b>  | <b>n/a</b>    |
| <i>MSCI Eafe (Net)</i>                          | -1.34%                                       | 6.48%         | 3.27%         | 4.90%         |
| <i>MSCI Emerging Markets</i>                    | -2.02%                                       | 5.97%         | 2.33%         | 3.37%         |
| <b>JRF Total Global Equity</b>                  | <b>1.83%</b>                                 | <b>11.12%</b> | <b>8.92%</b>  | <b>11.52%</b> |
| <b>JRF Custom Global Equity Index</b>           | <b>1.63%</b>                                 | <b>11.28%</b> | <b>8.94%</b>  | <b>11.37%</b> |
| <b>Fixed Income</b>                             |  |               |               |               |
| JRF Domestic Fixed Income                       | 9.23%  | 2.97%         | 3.55%         | 4.40%         |
| <b>JRF Custom Domestic Fixed Index</b>          | <b>10.81%</b>                                | <b>3.20%</b>  | <b>3.60%</b>  | <b>4.13%</b>  |
| <i>Barclays Aggregate Bond</i>                  | 10.30%                                       | 2.92%         | 3.38%         | 3.75%         |
| <b>JRF Total Fixed Income</b>                   | <b>9.23%</b>                                 | <b>2.97%</b>  | <b>3.55%</b>  | <b>4.40%</b>  |
| <b>Alternative Investments</b>                  |  |               |               |               |
| JRF Private Placements                          | 17.59%                                       | -48.67%       | -31.83%       | -14.37%       |
| JRF Preferred And Private Equity                | 3.61%  | n/a           | n/a           | n/a           |
| JRF Real Estate                                 | 3.48%  | 3.76%         | 6.46%         | 8.26%         |
| <b>JRF Total Alternatives</b>                   | <b>6.00%</b>                                 | <b>-3.20%</b> | <b>1.53%</b>  | <b>3.21%</b>  |
| <b>JRF Total Fixed Income Plus Alternatives</b> | <b>9.02%</b>                                 | <b>2.57%</b>  | <b>3.43%</b>  | <b>4.18%</b>  |
| <b>Cash</b>                                     |  |               |               |               |
| JRF Cash Account                                | 2.44%  | 1.68%         | 1.11%         | 0.64%         |
| JRF Short Term Investments                      | 2.55%  | 1.89%         | 1.38%         | 0.89%         |
| <b>JRF Total Cash</b>                           | <b>2.53%</b>                                 | <b>1.79%</b>  | <b>1.27%</b>  | <b>n/a</b>    |
| <b>Total Plan</b>                               |  |               |               |               |
| <b>JRF Total Plan</b>                           | <b>3.82%</b>                                 | <b>8.29%</b>  | <b>6.98%</b>  | <b>9.05%</b>  |
| <b>JRF Total Plan Policy</b>                    | <b>4.07%</b>                                 | <b>8.64%</b>  | <b>7.19%</b>  | <b>9.07%</b>  |

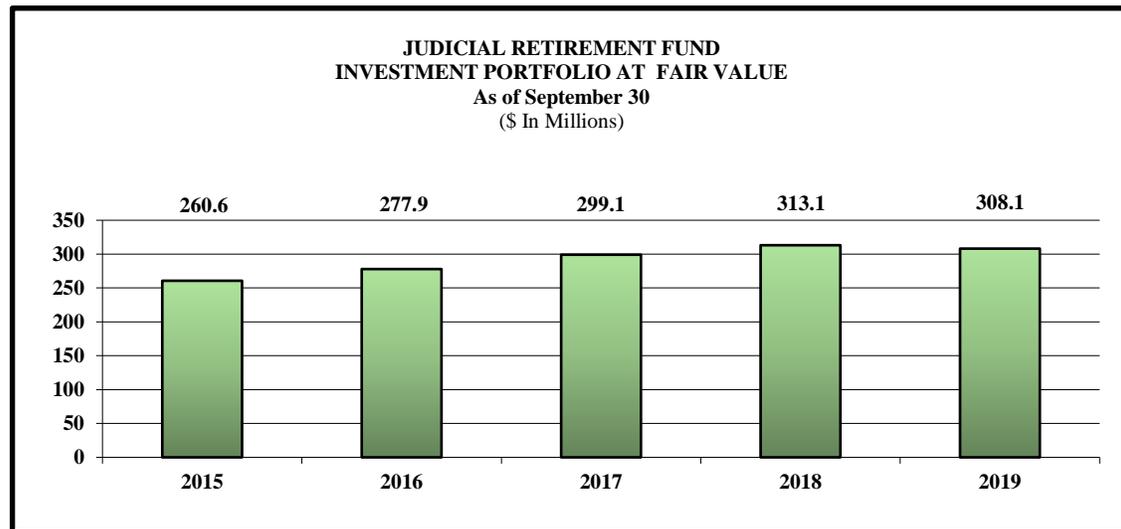
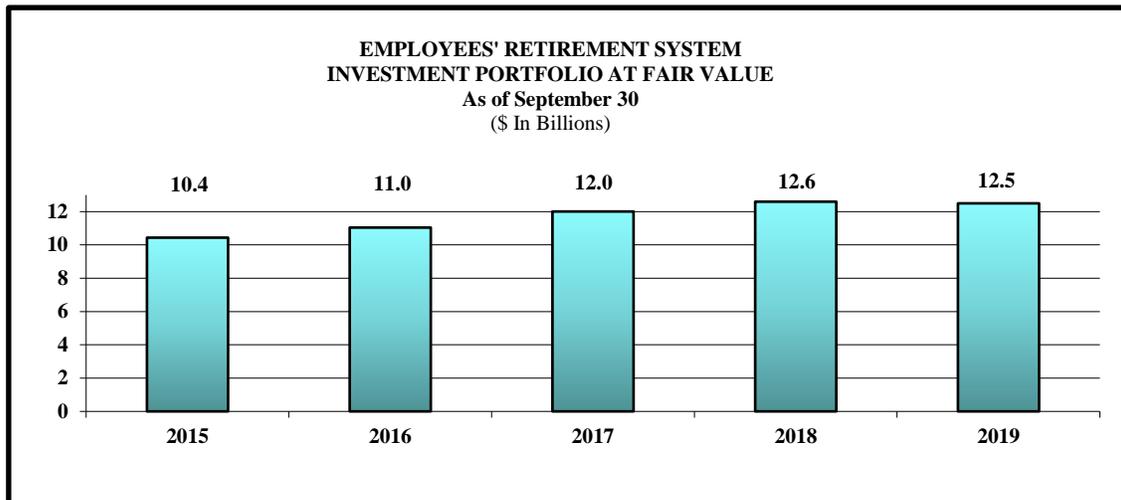
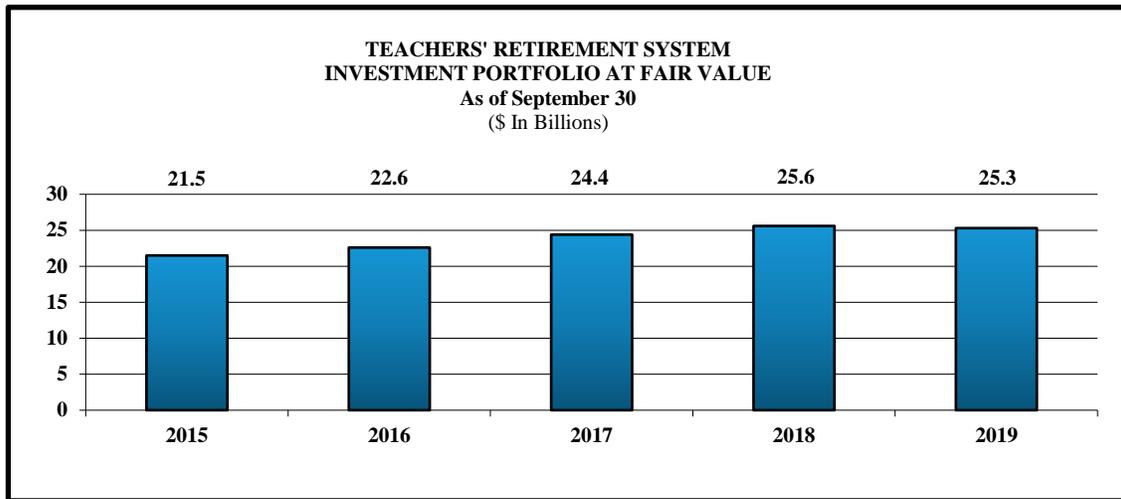
Note: Calculations are prepared using the time-weighted rate-of-return methodology based upon market values.

# RETIREMENT SYSTEMS OF ALABAMA

## Investment Section

### Investment Portfolio at Fair Value

#### Five-Year Comparison

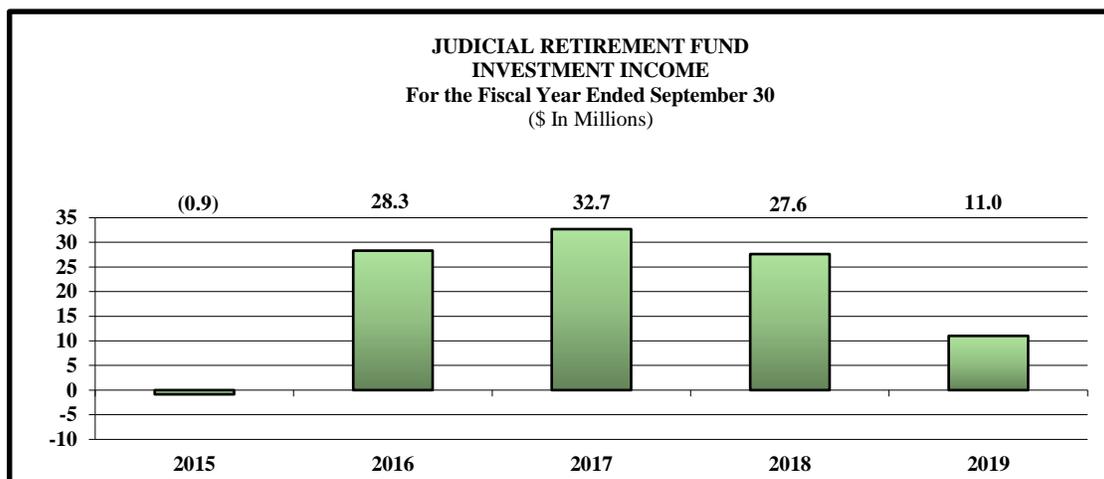
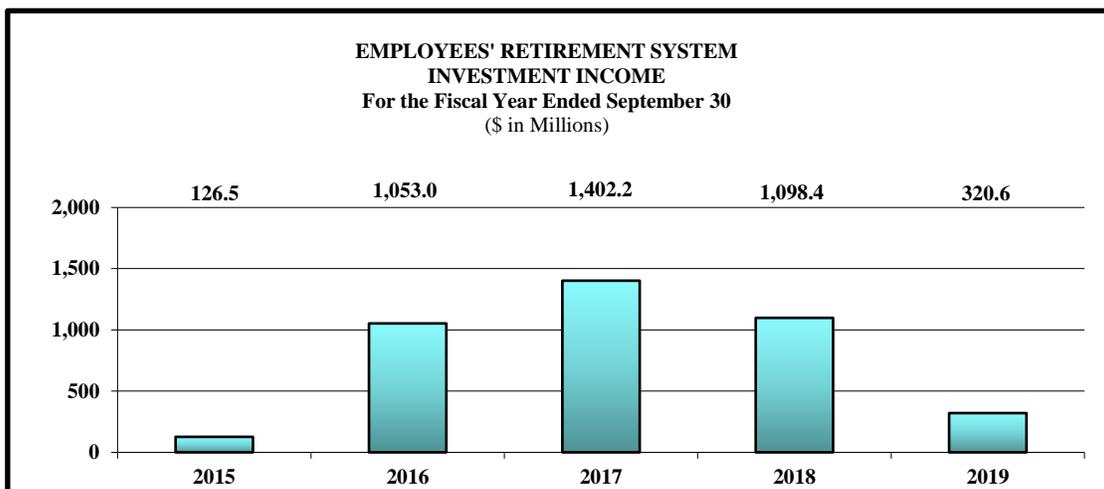
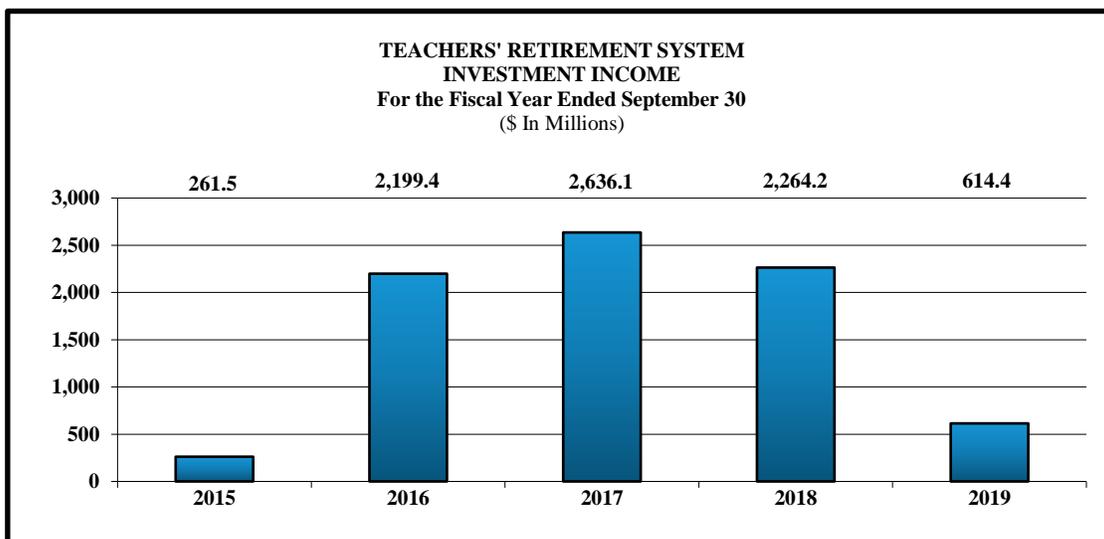


# RETIREMENT SYSTEMS OF ALABAMA

## Investment Section

### Investment Income

#### Five-Year Comparison

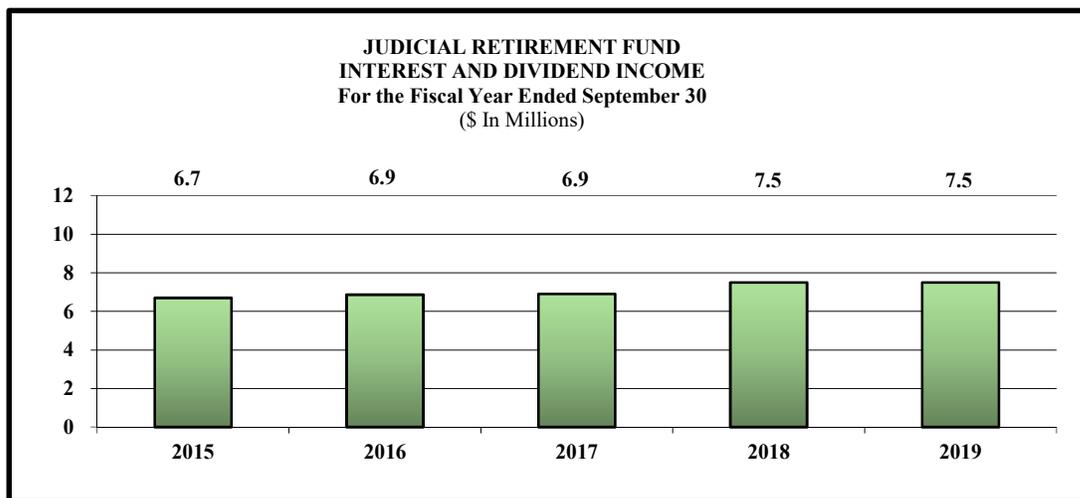
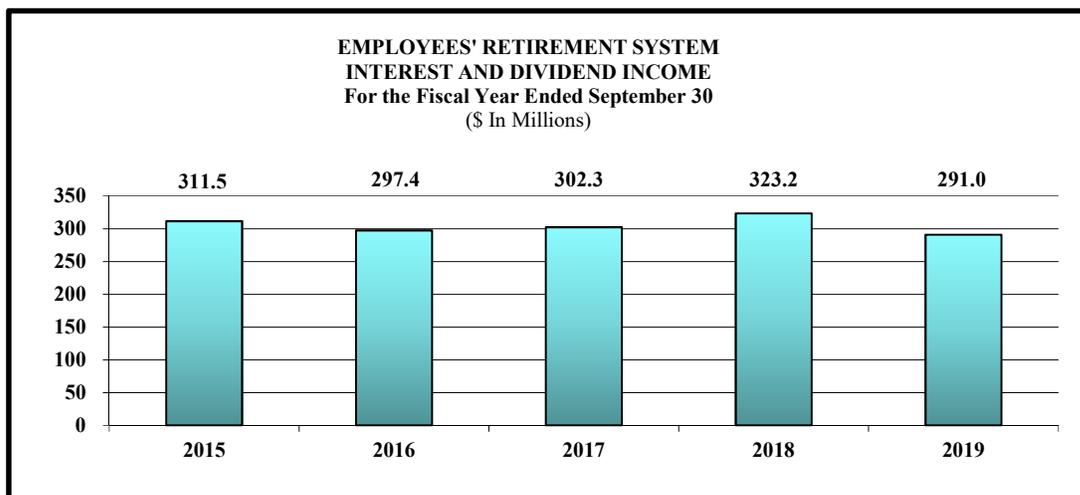
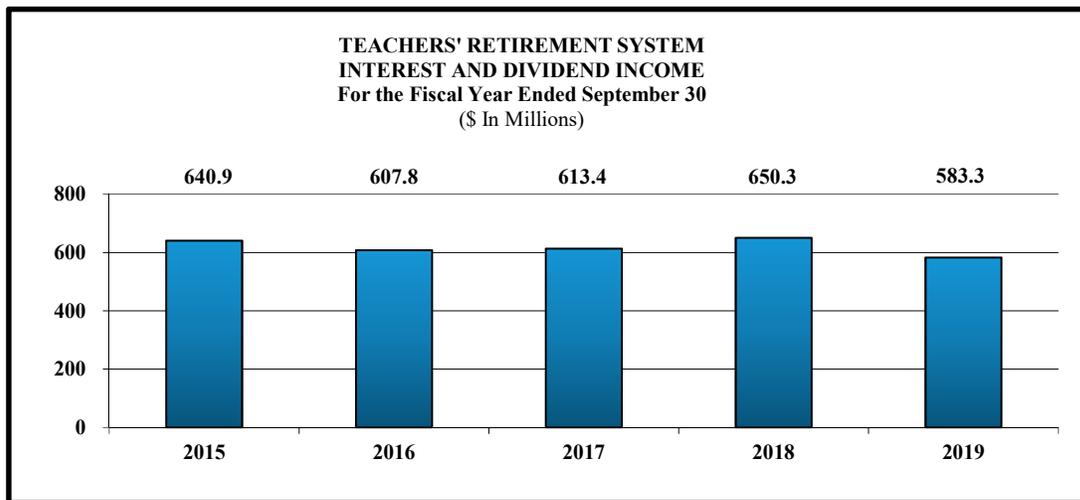


# RETIREMENT SYSTEMS OF ALABAMA

## Investment Section

### Interest and Dividend Income

#### Five-Year Comparison

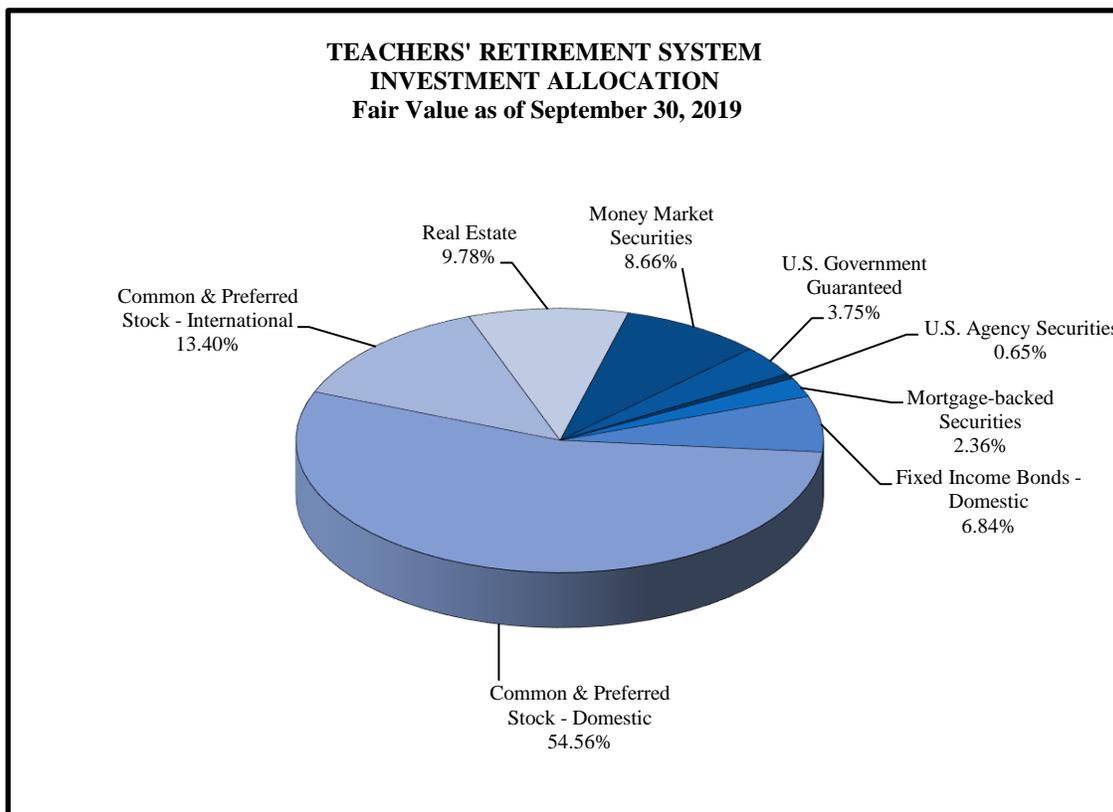


RETIREMENT SYSTEMS OF ALABAMA

Investment Section

Teachers' Retirement System

Investment Allocation and Summary



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

As of September 30, 2019

(\$ In Thousands)

|  | <b>Fair<br/>Value</b> | <b>%<br/>of Fair<br/>Value</b> |
|--|-----------------------|--------------------------------|
| Money Market Securities and Mutual Funds | \$ 2,187,771          | 8.66                           |
| U.S. Government Guaranteed               | 948,066               | 3.75                           |
| U.S. Agency Securities                   | 162,940               | 0.65                           |
| Mortgage-backed Securities               | 596,523               | 2.36                           |
| Fixed Income Bonds                       |                       |                                |
| Domestic                                 | 1,727,220             | 6.84                           |
| Common and Preferred Stocks              |                       |                                |
| Domestic                                 | 13,785,646            | 54.56                          |
| International                            | 3,385,579             | 13.40                          |
| Real Estate                              | 2,470,955             | 9.78                           |
| <b>Total Investments</b>                 | <b>\$ 25,264,700</b>  | <b>100.00</b>                  |

**RETIREMENT SYSTEMS OF ALABAMA***Investment Section*

## Teachers' Retirement System

## Largest Stock and Bond Holdings

**TEACHERS' RETIREMENT SYSTEM  
LARGEST STOCK HOLDINGS****September 30, 2019**

(Amounts In Thousands)

|     | <b>Shares</b> | <b>Stock</b>                                | <b>Fair Value</b> |
|-----|---------------|---|-------------------|
| 1)  | 13            | New Water Street Corporation                | \$ 1,304,946      |
| 2)  | 932           | Morgan Stanley Small Cap Equity Linked Note | 1,167,815         |
| 3)  | 13,042        | ISHARES MSCI Emerging Markets               | 533,006           |
| 4)  | 379           | Gray Media Preferred                        | 404,929           |
| 5)  | 2,652         | Microsoft Corporation                       | 368,713           |
| 6)  | 1,544         | Apple, Inc.                                 | 345,893           |
| 7)  | 155           | Amazon.Com, Inc.                            | 268,835           |
| 8)  | 3,527         | ISHARES CORE MSCI Emerging Markets          | 172,916           |
| 9)  | 1,387         | J. P. Morgan Chase & Co.                    | 163,231           |
| 10) | 131           | Alphabet, Inc.                              | 159,434           |

**TEACHERS' RETIREMENT SYSTEM  
LARGEST BOND HOLDINGS****September 30, 2019**

(Amounts In Thousands)

|     | <b>Par</b> | <b>Bonds</b>                                      | <b>Fair Value</b> |
|-----|------------|---|-------------------|
| 1)  | 77,232     | U.S. Treasury, 2.25%, Due 2/29/2020               | \$ 77,335         |
| 2)  | 74,115     | U.S. Treasury, 2.25%, Due 11/15/2024              | 76,553            |
| 3)  | 75,311     | U.S. Treasury, 2%, Due 12/31/2021                 | 75,929            |
| 4)  | 66,330     | Charter Communications, Inc, 5.55%, Due 7/15/2035 | 73,865            |
| 5)  | 68,666     | U.S. Treasury, 2.75%, Due 2/15/2024               | 72,078            |
| 6)  | 67,441     | U.S. Treasury, 3.5%, Due 5/15/2020                | 68,118            |
| 7)  | 66,833     | Whatabrands, LLC, Variable, Due 7/31/2026         | 66,833            |
| 8)  | 61,232     | U.S. Treasury, 2.125%, Due 8/15/2021              | 61,727            |
| 9)  | 59,993     | U.S. Treasury, 2.25%, Due 8/15/2046               | 61,521            |
| 10) | 51,331     | U.S. Treasury, 3%, Due 5/15/2042                  | 60,025            |

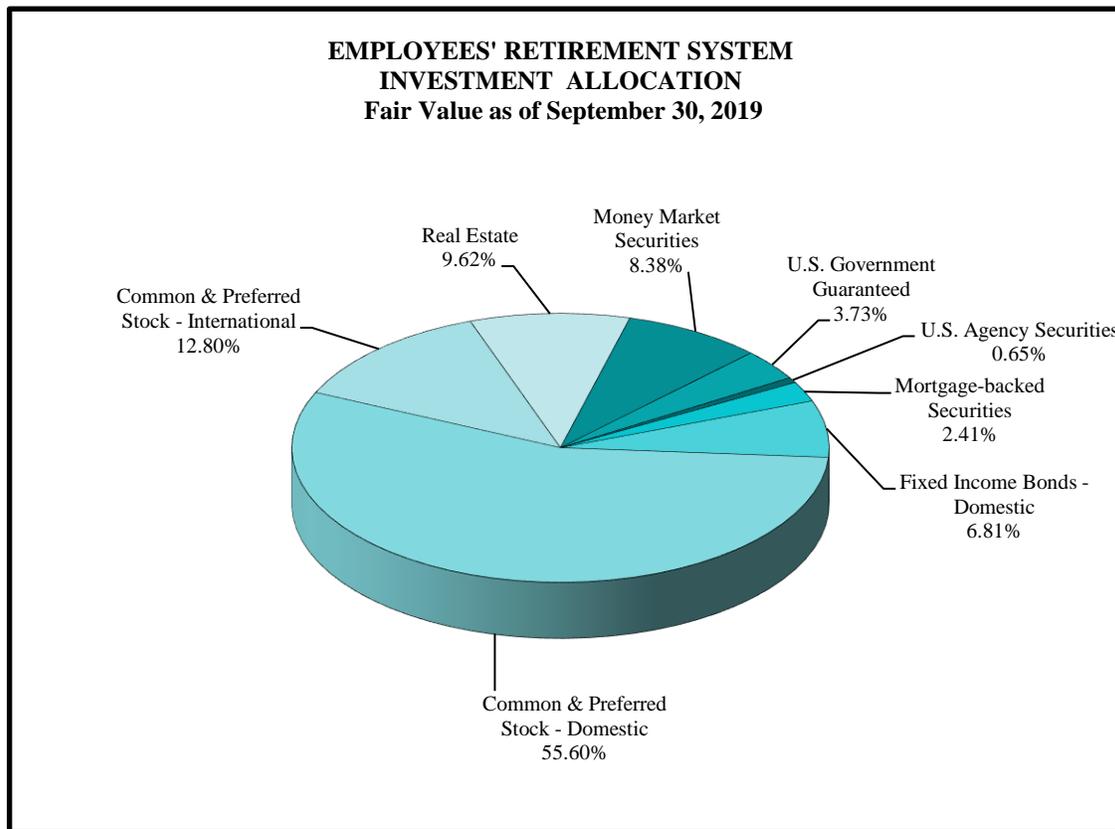
A complete list of portfolio holdings is available upon request.

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, 2019**

(\$ In Thousands)

|  | <b>Fair Value</b>    | <b>% of Fair Value</b> |
|--|----------------------|------------------------|
| Money Market Securities and Mutual Funds | \$ 1,043,998         | 8.38                   |
| U.S. Government Guaranteed               | 465,074              | 3.73                   |
| U.S. Agency Securities                   | 80,544               | 0.65                   |
| Mortgage-backed Securities               | 300,051              | 2.41                   |
| Fixed Income Bonds                       |                      |                        |
| Domestic                                 | 847,664              | 6.81                   |
| Common and Preferred Stocks              |                      |                        |
| Domestic                                 | 6,925,941            | 55.60                  |
| International                            | 1,594,696            | 12.80                  |
| Real Estate                              | 1,198,136            | 9.62                   |
| <b>Total Investments</b>                 | <b>\$ 12,456,104</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, 2019

(Amounts in Thousands)

|     | <u>Shares</u> | <u>Stock</u>                                | <u>Fair Value</u> |
|-----|---------------|---|-------------------|
| 1)  | 6             | New Water Street Corporation                | \$ 599,585        |
| 2)  | 383           | Morgan Stanley Small Cap Equity Linked Note | 480,272           |
| 3)  | 271           | Gray Media Preferred                        | 288,996           |
| 4)  | 6,524         | ISHARES MSCI Emerging Markets               | 266,631           |
| 5)  | 1,338         | Microsoft Corporation                       | 186,020           |
| 6)  | 783           | Apple, Inc.                                 | 175,301           |
| 7)  | 3,052         | ISHARES CORE MSCI Emerging Markets          | 149,589           |
| 8)  | 79            | Amazon.Com, Inc.                            | 136,425           |
| 9)  | 710           | J. P. Morgan Chase & Co.                    | 83,567            |
| 10) | 67            | Alphabet, Inc.                              | 82,098            |

### EMPLOYEES' RETIREMENT SYSTEM LARGEST BOND HOLDINGS

September 30, 2019

(Amounts In Thousands)

|     | <u>Par</u> | <u>Bonds</u>                                      | <u>Fair Value</u> |
|-----|------------|---|-------------------|
| 1)  | 41,044     | U.S. Treasury, 2%, Due 12/31/2021                 | \$ 41,381         |
| 2)  | 37,961     | U.S. Treasury, 2.25%, Due 2/29/2020               | 38,011            |
| 3)  | 36,453     | U.S. Treasury, 2.25%, Due 11/15/2024              | 37,652            |
| 4)  | 32,670     | Charter Communications, Inc, 5.55%, Due 7/15/2035 | 36,381            |
| 5)  | 33,001     | U.S. Treasury, 2.125%, Due 8/15/2021              | 33,268            |
| 6)  | 32,918     | Whatabrands, LLC, Variable, Due 7/31/2026         | 32,918            |
| 7)  | 31,236     | U.S. Treasury, 2.75%, Due 2/15/2024               | 32,788            |
| 8)  | 31,392     | U.S. Treasury, 3.5%, Due 5/15/2020                | 31,707            |
| 9)  | 29,131     | U.S. Treasury, 2.5%, Due 5/15/2024                | 30,335            |
| 10) | 28,805     | U.S. Treasury, 2.25%, Due 8/15/2046               | 29,539            |

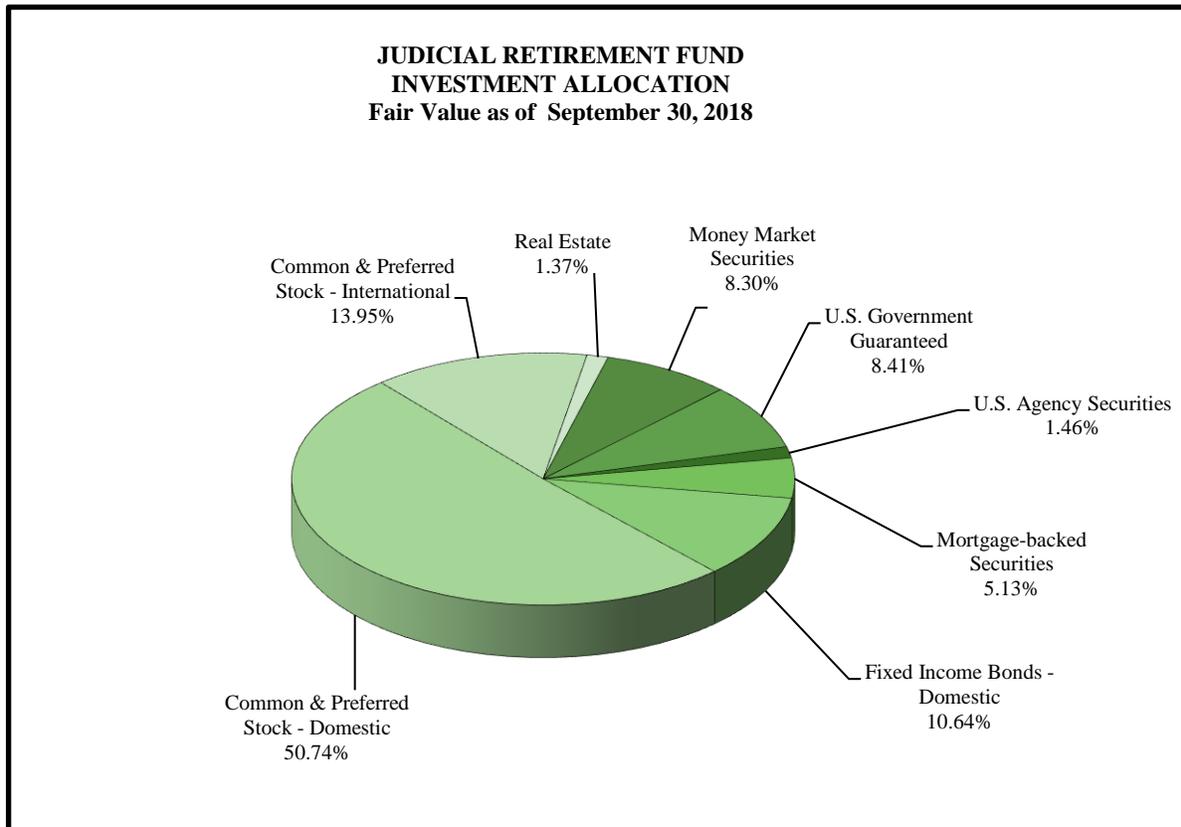
A complete list of portfolio holdings is available upon request.

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, 2019  
(\$ In Thousands)**

|  | <b>Fair Value</b> | <b>% of Fair Value</b> |
|--|-------------------|------------------------|
| Money Market Securities and Mutual Funds | \$ 25,584         | 8.30                   |
| U.S. Government Guaranteed               | 25,914            | 8.41                   |
| U.S. Agency Securities                   | 4,490             | 1.46                   |
| Mortgage-backed Securities               | 15,814            | 5.13                   |
| Fixed Income Bonds                       |                   |                        |
| Domestic                                 | 32,779            | 10.64                  |
| Common and Preferred Stocks              |                   |                        |
| Domestic                                 | 156,306           | 50.74                  |
| International                            | 42,977            | 13.95                  |
| Real Estate                              | 4,227             | 1.37                   |
| <b>Total Investments</b>                 | <b>\$ 308,091</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, 2019**

(Amounts in Thousands)

|     | <b>Shares</b> | <b>Stock</b>                                | <b>Fair Value</b> |
|-----|---------------|---|-------------------|
| 1)  | 8             | Morgan Stanley Small Cap Equity Linked Note | \$ 10,520         |
| 2)  | 172           | ISHARES MSCI Emerging Markets               | 7,026             |
| 3)  | 38            | Microsoft Corporation                       | 5,297             |
| 4)  | 21            | Apple, Inc.                                 | 4,748             |
| 5)  | *             | New Water Street Corporation                | 4,227             |
| 6)  | 2             | Amazon.Com, Inc.                            | 3,599             |
| 7)  | 12            | Facebook, Inc.                              | 2,138             |
| 8)  | 10            | Berkshire Hathaway, Inc.                    | 2,035             |
| 9)  | 16            | J. P. Morgan Chase & Co.                    | 1,878             |
| 10) | 2             | Alphabet, Inc.                              | 1,838             |

\* Less than 1,000 shares

**JUDICIAL RETIREMENT FUND  
LARGEST BOND HOLDINGS****September 30, 2019**

(Amounts In Thousands)

|     | <b>Par</b> | <b>Bonds</b>                                       | <b>Fair Value</b> |
|-----|------------|--|-------------------|
| 1)  | 4,544      | U.S. Treasury, 2.125%, Due 8/15/2021               | \$ 4,581          |
| 2)  | 3,986      | U.S. Treasury, 2.5%, Due 5/15/2024                 | 4,151             |
| 3)  | 2,042      | U.S. Treasury, 2.25%, Due 11/15/2024               | 2,109             |
| 4)  | 1,871      | U.S. Treasury, 2.75%, Due 2/15/2024                | 1,964             |
| 5)  | 1,758      | U.S. Treasury, 2.25%, Due 2/29/2020                | 1,760             |
| 6)  | 1,619      | U.S. Treasury, 2.5%, Due 2/15/2045                 | 1,742             |
| 7)  | 1,590      | U.S. Treasury, 1.375%, Due 1/31/2020               | 1,587             |
| 8)  | 1,340      | U.S. Treasury, 3%, Due 5/15/2042                   | 1,567             |
| 9)  | 1,319      | GE Capital Intl Funding Co, 2.342%, Due 11/15/2020 | 1,316             |
| 10) | 1,259      | U.S. Treasury, 3.5%, Due 5/15/2020                 | 1,272             |

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, 2019

|   | Stock                    |                        | Commissions<br>(000's) | Fixed<br>Securities<br>Commissions<br>(000's) | Total<br>Commissions<br>(000's) |
|---|--------------------------|------------------------|------------------------|---|---------------------------------|
|   | Commissions<br>Per Share | # of Shares<br>(000's) |                        |   |                                 |
| Bank of America Merrill Lynch               | 0.029                    | 8,511                  | 247                    | 98  | 345                             |
| Barclays                                    | 0.050                    | 2,661                  | 133                    | 61  | 194                             |
| Bernstein                                   | 0.023                    | 14,947                 | 338                    | -   | 338                             |
| Citigroup                                   | 0.049                    | 5,153                  | 253                    | 127   | 380                             |
| Convergex                                   | 0.034                    | 6,061                  | 207                    | -   | 207                             |
| Cornerstone                                 | 0.050                    | 1,276                  | 64                     | -   | 64                              |
| Cowen                                       | 0.040                    | 2,119                  | 85                     | -   | 85                              |
| Credit Suisse                               | 0.050                    | 1,496                  | 75                     | 55  | 130                             |
| Deutsche Bank                               | -                        | -                      | -                      | 28  | 28                              |
| Goldman Sachs                               | 0.030                    | 2,172                  | 65                     | 196   | 261                             |
| Harbor Financial                            | 0.051                    | 550                    | 28                     | -   | 28                              |
| International Strategy and Investment - ISI | 0.049                    | 7,906                  | 384                    | -   | 384                             |
| Issuer Designated                           | -                        | -                      | -                      | 401   | 401                             |
| Jefferies                                   | 0.045                    | 1,665                  | 75                     | -   | 75                              |
| JP Morgan Chase                             | 0.050                    | 3,273                  | 164                    | 155   | 319                             |
| Keybanc Capital Markets                     | 0.050                    | 801                    | 40                     | 88  | 128                             |
| Leerink Swann                               | 0.050                    | 921                    | 46                     | -   | 46                              |
| Morgan Stanley                              | 0.043                    | 24,945                 | 1,074                  | 199   | 1,273                           |
| National Bank of Commerce - NBC Securities  | 0.050                    | 1,428                  | 71                     | -   | 71                              |
| Raymond James & Associates                  | 0.050                    | 1,100                  | 55                     | 1   | 56                              |
| Renaissance Macro Securities - Renmac       | 0.050                    | 3,608                  | 180                    | -   | 180                             |
| Royal Bank of Canada - RBC                  | 0.049                    | 6,512                  | 321                    | 59  | 380                             |
| Securities Capital                          | 0.051                    | 450                    | 23                     | -   | 23                              |
| Southwest Securities                        | 0.051                    | 550                    | 28                     | -   | 28                              |
| Stifel Nicolaus                             | 0.050                    | 7,679                  | 384                    | 21  | 405                             |
| Strategas                                   | 0.024                    | 10,136                 | 241                    | -   | 241                             |
| Suntrust                                    | -                        | -                      | -                      | 22  | 22                              |
| Union Bank of Switzerland - UBS             | 0.050                    | 1,200                  | 60                     | -   | 60                              |
| Wells Fargo                                 | 0.030                    | 11,473                 | 344                    | 124   | 468                             |
| <b>Totals</b>                               |                          | <b>128,593</b>         | <b>\$ 4,985</b>        | <b>\$ 1,635</b>                               | <b>\$ 6,620</b>                 |

**Average Commission Per Share of Stock = \$ 0.0388**

Note: Certain Broker agreements include provisions for commission sharing.



# Actuarial Section

Component Units of the State of Alabama  
Comprehensive Annual Financial Report





# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

April 25, 2019

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.



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, 2018. This valuation indicates that the current employer contribution rates of 12.36% of payroll for Tier I members and 11.22% 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 137,161 active members as of September 30, 2018.

The actuarial valuation is based upon financial and participant data which is prepared by the retirement system staff, assumptions regarding future rates of investment return and inflation, and rates of retirement, turnover, death and disability among TRS members and their beneficiaries. The data are reviewed by us for internal and year to year consistency as well as general reasonableness prior to its use in the actuarial valuation. It is also summarized and tabulated for the purpose of analyzing trends. The assumptions were adopted by the Board of Control and were based upon actual experience of TRS during the years October 1, 2010 to September 30, 2015. Since the previous valuation, the assumed rate of investment return has been changed from 7.75% to 7.70%. 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, 2018
- Ten-Year History of Average Monthly Benefit Payments as of September 30



Board of Control  
April 25, 2019  
Page 3

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

Sincerely yours,

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

Edward A. Macdonald, ASA, FCA, MAAA  
President

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

Cathy Turcot  
Principal and Managing Director

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

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

S:\2019\AL TRS\Correspondence\TRS CAFR letter\_2019.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, 2015, submitted to and adopted by the Board on September 13, 2016. The discount rate of 7.70% was subsequently adopted by the Board on December 4, 2018.

**Ultimate Investment Rate of Return:** 7.70% per annum, compounded annually, including price inflation at 2.75%.

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

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

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

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

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

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

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

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Teachers' Retirement System

Summary of Actuarial Assumptions and Methods (Continued)

| Age | Female |                  |      |                  |       |      |      |
|-----|--------|------------------|------|------------------|-------|------|------|
|     | 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             |      | 25.00            |       |      |      |
| 25  | 0.01   | 0.03             |      | 12.75            | 9.00  |      |      |
| 30  | 0.01   | 0.04             |      | 13.50            | 5.80  | 4.30 |      |
| 35  | 0.02   | 0.10             |      | 13.50            | 5.00  | 2.60 | 1.50 |
| 40  | 0.04   | 0.20             |      | 11.50            | 4.75  | 2.00 | 1.50 |
| 45  | 0.06   | 0.35             | 0.20 | 10.75            | 4.10  | 2.00 | 0.50 |
| 50  | 0.09   | 0.65             | 0.20 | 10.75            | 3.90  | 2.20 | 0.75 |
| 55  | 0.14   | 1.05             | 0.20 | 11.00            | 4.20  | 2.40 | 0.80 |
| 60  | 0.19   | 0.50             | 0.50 | 12.00            | 4.50  | 2.70 | 1.00 |
| 65  | 0.27   | 0.50             | 0.50 | 15.00            | 6.75  |      |      |
| 69  | 0.34   | 0.50             | 0.50 | 15.00            | 7.25  |      |      |

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

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

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

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**Service Retirement:**

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

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

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

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

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

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

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Teachers' Retirement System

Summary of Actuarial Assumptions and Methods (Continued)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

### **Actuarial Cost Method**

1. The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future interest earnings rate (currently 7.70%). 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.

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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.

## RETIREMENT SYSTEMS OF ALABAMA

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### *Actuarial Section*

#### Teachers' Retirement System

#### Summary of Plan Provisions (Continued)

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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.

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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 ten-year history of active member valuation data:

SCHEDULE OF ACTIVE MEMBER VALUATION DATA

(Dollar Amounts Not in Thousands)

| <u>Valuation Date</u> |   | <u>Number</u> | <u>Annual Payroll</u> | <u>Annual Average Pay</u> | <u>% Increase/ (Decrease) in Average Pay</u> |
|-----------------------|---|---------------|-----------------------|---------------------------|--|
| 9/30/2018             | A | 137,161       | \$ 6,756,474,151      | \$ 49,259                 | 0.70   |
| 9/30/2017             | A | 136,941       | 6,698,834,819         | 48,918                    | 4.00   |
| 9/30/2016             | A | 136,731       | 6,430,999,445         | 47,034                    | 1.56   |
| 9/30/2015             | B | 135,986       | 6,297,938,621         | 46,313                    | 0.77   |
| 9/30/2014             | C | 135,230       | 6,214,949,700         | 45,958                    | 1.48   |
| 9/30/2013             | D | 133,919       | 6,065,042,345         | 45,289                    | 2.06   |
| 9/30/2012             | E | 133,791       | 5,936,831,043         | 44,374                    | 3.74   |
| 9/30/2011             | F | 135,768       | 5,807,655,862         | 42,776                    | (0.12)                                       |
| 9/30/2010             | G | 136,290       | 5,836,902,762         | 42,827                    | (0.01)                                       |
| 9/30/2009             | H | 137,935       | 5,908,098,156         | 42,832                    | 1.55   |

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

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

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

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

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

F - 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.

G - 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.

H - In addition, there are 5,340 employees with annual compensation of \$328,823,442 who are currently in the DROP program. Employers of the Retirement System contribute on this payroll.

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

**SCHEDULE OF FUNDING PROGRESS**

(Dollar Amounts in Thousands)

| Valuation Date |     | Actuarial           | Actuarial                   | Unfunded         | %            | Covered      | UAAL as a %                  |
|----------------|-----|---------------------|-----------------------------|------------------|--------------|--------------|------------------------------|
|                |     | Value of Assets (A) | Accrued Liability (AAL) (B) | AAL (UAAL) (B-A) | Funded (A/B) | Payroll (C)  | of Covered Payroll ((B-A)/C) |
| 9/30/2018      | *** | \$ 25,006,419       | \$ 35,628,398               | \$ 10,621,979    | 70.2         | \$ 6,756,474 | 157.2                        |
| 9/30/2017      | *** | 23,887,077          | 34,688,078                  | 10,801,001       | 68.9         | 6,698,835    | 161.2                        |
| 9/30/2016      | *   | 22,645,512          | 33,143,834                  | 10,498,322       | 68.3         | 6,430,999    | 163.2                        |
| 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                        |
| 9/30/2009      |     | 20,582,348          | 27,537,400                  | 6,955,052        | 74.7         | 6,236,922    | 111.5                        |

\*Reflects changes in actuarial assumptions and methods.

\*\*Reflects changes in methods.

\*\*\*Reflects changes in actuarial assumptions.

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

**SOLVENCY TEST**

(Dollar Amounts in Thousands)

| Valuation Date |     | Aggregate Accrued Liabilities For |                                 |  | Reported Assets | % of Accrued Liabilities Covered by Reported Assets |        |       |
|----------------|-----|-----------------------------------|---------------------------------|--|-----------------|---|--------|-------|
|                |     | (1) Active Member Contributions   | (2) Retirants and Beneficiaries | (3) Active Members (Employer Financed Portion) |                 | (1)   | (2)    | (3)   |
| 9/30/2018      | *   | \$ 5,788,187                      | \$ 20,511,811                   | \$ 9,328,400                                   | \$ 25,006,419   | 100.00  | 94.00  | 0.00  |
| 9/30/2017      | *   | 5,504,125                         | 19,886,016                      | 9,297,937                                      | 23,887,077      | 100.00  | 92.00  | 0.00  |
| 9/30/2016      | **  | 5,197,469                         | 19,257,160                      | 8,689,205                                      | 22,645,512      | 100.00  | 91.00  | 0.00  |
| 9/30/2015      |     | 4,894,145                         | 18,621,250                      | 8,329,448                                      | 21,740,280      | 100.00  | 90.00  | 0.00  |
| 9/30/2014      |     | 4,589,021                         | 18,104,369                      | 8,144,439                                      | 20,809,871      | 100.00  | 90.00  | 0.00  |
| 9/30/2013      |     | 4,261,269                         | 17,666,932                      | 7,737,642                                      | 19,629,816      | 100.00  | 87.00  | 0.00  |
| 9/30/2012      | *** | 3,921,179                         | 17,085,972                      | 7,244,216                                      | 18,786,008      | 100.00  | 87.00  | 0.00  |
| 9/30/2011      | *   | 3,620,301                         | 17,245,088                      | 7,910,927                                      | 19,430,135      | 100.00  | 92.00  | 0.00  |
| 9/30/2010      |     | 3,498,959                         | 16,083,293                      | 8,717,271                                      | 20,132,779      | 100.00  | 100.00 | 6.30  |
| 9/30/2009      |     | 3,233,664                         | 15,328,508                      | 8,975,228                                      | 20,582,348      | 100.00  | 100.00 | 22.50 |

\*Reflects changes in actuarial assumptions.

\*\* Reflects changes in actuarial assumptions and methods.

\*\*\*Reflects changes in methods.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Teachers' Retirement System

Supporting Schedules (Continued)

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

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

| Fiscal Year Ended | Retirees Added §* |                          | Retirees Removed |                          | Retirees - Year-end* |                          | % Increase/ (Decrease) in Annual Allowances | Average Annual Allowance |
|-------------------|-------------------|--------------------------|------------------|--------------------------|----------------------|--------------------------|---|--------------------------|
|                   | Number            | Annual Allowances (000s) | Number           | Annual Allowances (000s) | Number               | Annual Allowances (000s) |   |                          |
| 2018              | 4,457             | \$ 109,294               | 1,868            | \$ 42,615                | 95,556               | \$ 1,887,726             | 3.66  | \$ 19,755                |
| 2017              | 4,352             | 101,946                  | 1,741            | 38,835                   | 92,967               | 1,821,047                | 3.59  | 19,588                   |
| 2016              | 4,583             | 102,365                  | 1,590            | 35,115                   | 90,356               | 1,757,936                | 3.98  | 19,456                   |
| 2015              | 4,951             | 117,295                  | 1,565            | 34,127                   | 87,363               | 1,690,686                | 5.17  | 19,352                   |
| 2014              | 4,820             | 113,117                  | 1,396            | 30,044                   | 83,977               | 1,607,518                | 5.45  | 19,142                   |
| 2013              | 4,627             | 104,280                  | 1,369            | 29,107                   | 80,553               | 1,524,445                | 5.19  | 18,925                   |
| 2012              | 5,043             | 111,252                  | 1,132            | 18,234                   | 77,295               | 1,449,272                | 6.86  | 18,750                   |
| 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                   |
| 2009              | 3,188             | 63,583                   | 1,180            | 24,121                   | 68,165               | 1,245,194                | 3.27  | 18,267                   |

§ Includes retirees completing DROP participation and entering regular retirement.

\*Does not include active DROP participants.

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, 2017               | \$ 10,801,001                      |
| Normal Cost for 2018 Plan Year                                      | 108,163                            |
| Contributions Received During the Year                              | (803,146)                          |
| Interest to Year End  | 814,338                            |
| Expected Unfunded Actuarial Liability as of September 30, 2018      | <u>10,920,356</u>                  |
| Actuarial (Gains)/Losses During the Year                            |                                    |
| From Investments  | (275,913)                          |
| From Actuarial Liabilities  | (22,464)                           |
| Total Actuarial (Gains)/Losses During the Year                      | <u>(298,377)</u>                   |
| <b>Actual Unfunded Actuarial Liability as of September 30, 2018</b> | <b><u><u>\$ 10,621,979</u></u></b> |





# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

June 7, 2019

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.



- 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, 2018.

This valuation indicates that the current employer contribution rates for State employees (other than State policemen) of 14.64% of payroll for Tier I members and 14.24% of payroll for Tier II members and employer contribution rates for State policemen of 51.75% of payroll for Tier I members and 42.89% 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 86,565 total active members as of September 30, 2018.

The actuarial valuation is based upon financial and participant data which is prepared by the retirement system staff, assumptions regarding future rates of investment return and inflation, and rates of retirement, turnover, death and disability among ERS members and their beneficiaries. The data are reviewed by us for internal and year to year consistency as well as general reasonableness prior to its use in the actuarial valuation. It is also summarized and tabulated for the purpose of analyzing trends. The assumptions were adopted by the Board of Control and were based upon actual experience of ERS during the years October 1, 2010 to September 30, 2015. Since the previous valuation, the assumed rate of investment return has been changed from 7.75% to 7.70%. 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. The valuation reflects the provisions of Act 2017-360, which revised the definition of “state policemen” to include any employee hired by the Alabama State Law Enforcement Agency after January 1, 2015, who is certified by the Alabama Peace Officers’ Standards and Training Commission and performs law enforcement duties. These members pay the same employee contribution rate and receive the same benefits as certified law enforcement officers (FLC) of other state agencies and local employers.

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, 2018
- Ten-Year History of Average Monthly Benefit Payments as of September 30

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

Respectfully submitted,

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

Edward A. Macdonald, ASA, FCA, MAAA  
President

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

Cathy Turcot  
Principal and Managing Director

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

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

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Employees' Retirement System

Summary of Actuarial Assumptions and Methods

**Summary of Actuarial Assumptions and Methods**

The assumptions and methods used in the valuation were selected based on the actuarial experience study prepared as of September 30, 2015, submitted to and adopted by the Board on September 29, 2016. The discount rate was subsequently adopted by the Board on December 19, 2018.

**Ultimate Investment Rate of Return:** 7.70% per annum, compounded annually, including price inflation at 2.75%.

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

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

\*Includes wage inflation at 3.00% per annum.

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

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

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

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

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Employees' Retirement System

Summary of Actuarial Assumptions and Methods (Continued)

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

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

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

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

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

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

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

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

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

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

**State Police**  
**Annual % Rate of Service Retirement**

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

## RETIREMENT SYSTEMS OF ALABAMA

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### *Actuarial Section*

#### Employees' Retirement System

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

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

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

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

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

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

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

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

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

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

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

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

### **Actuarial Cost Method**

1. The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future interest earnings rate (currently 7.70%). The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to retired members and beneficiaries to obtain the present value of all expected benefits payable to the present group of members and beneficiaries.
2. The employer contributions required to support the benefits of the System are determined following a level funding approach and consist of a normal contribution and an accrued liability contribution.
3. The normal contribution is determined using the "individual entry age normal" method. Under this method, a calculation is made to determine the uniform and constant percentage rate of employer contributions which, if applied to the compensation of each new member during the entire period of the member's anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on the member's behalf.
4. The unfunded accrued liability contributions are determined by subtracting the current assets held by the System and the present value of prospective employer normal contributions and member contributions from the present value of expected benefits to be paid from the System. The accrued liability contribution amortizes the balance of the unfunded accrued liability over a period of years from the valuation date.

### **Summary of Plan Provisions as Interpreted for Valuation Purposes**

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

#### **Definitions**

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

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

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

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

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

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

## RETIREMENT SYSTEMS OF ALABAMA

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### *Actuarial Section*

#### Employees' Retirement System

#### Summary of Plan Provisions (Continued)

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### **Benefits – Members Classified as Other Than State Police**

#### Service Retirement Allowance

##### Condition for Allowance

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

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

##### Amount of Allowance

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

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

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

#### Disability Retirement Allowance

##### Condition for Allowance

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

##### Amount of Allowance

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

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

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

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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.

## RETIRMENT 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 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)*).

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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.

## 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 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.

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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 ten-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> |
|-----------------------|---------------|-----------------------|---------------------------|--|
| 9/30/2018             | A 86,565      | \$ 3,679,181,111      | \$ 42,505                 | 1.56   |
| 9/30/2017             | A 85,657      | 3,584,700,002         | 41,849                    | (0.66)                                       |
| 9/30/2016             | A 84,814      | 3,572,891,196         | 42,129                    | 2.93   |
| 9/30/2015             | B 84,563      | 3,461,155,131         | 40,930                    | 2.34   |
| 9/30/2014             | C 84,694      | 3,387,186,858         | 39,993                    | 1.61   |
| 9/30/2013             | D 84,035      | 3,307,511,468         | 39,359                    | 6.02   |
| 9/30/2012             | E 84,169      | 3,124,791,422         | 37,125                    | (5.88)                                       |
| 9/30/2011             | F 85,633      | 3,377,717,419         | 39,444                    | (1.00)                                       |
| 9/30/2010             | G 86,967      | 3,464,913,031         | 39,842                    | 0.38   |
| 9/30/2009             | H 87,647      | 3,478,635,402         | 39,689                    | 3.65   |

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

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

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

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

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

F - 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.

G - In addition, there are 2,593 members with compensation of \$154,756,911 who are currently participating in the DROP. Employers of the Retirement System contribute on this payroll.

H - In addition, there are 2,371 members with compensation of \$141,607,707 who are currently participating in the DROP. Employers of the Retirement System contribute on this payroll.

The following table presents a ten-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 Accrued Liability (AAL) (B)</b> | <b>Unfunded AAL (UAAL) (B-A)</b> | <b>Percentage Funded (A/B)</b> | <b>Covered Payroll (C)</b> | <b>UAAL as a % of Covered Payroll ((B-A)/C)</b> |
|-----------------------|--------------------------------------|--|----------------------------------|--------------------------------|----------------------------|---|
| 9/30/2018             | \$ 12,240,597                        | \$ 17,829,735                                | \$ 5,589,138                     | 68.7                           | \$ 3,679,181               | 151.9   |
| 9/30/2017             | 11,690,952                           | 17,250,835                                   | 5,559,883                        | 67.8                           | 3,584,700                  | 155.1   |
| 9/30/2016             | 11,082,280                           | 16,728,009                                   | 5,645,729                        | 66.2                           | 3,572,891                  | 158.0   |
| 9/30/2015             | 10,589,258                           | 15,723,720                                   | 5,134,462                        | 67.3                           | 3,488,017                  | 147.2   |
| 9/30/2014             | 10,134,581                           | 15,138,294                                   | 5,003,713                        | 66.9                           | 3,444,341                  | 145.3   |
| 9/30/2013             | 9,546,459                            | 14,536,600                                   | 4,990,141                        | 65.7                           | 3,400,596                  | 146.7   |
| 9/30/2012             | 9,116,551                            | 13,884,995                                   | 4,768,444                        | 65.7                           | 3,252,003                  | 146.6   |
| 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   |

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

**SOLVENCY TEST**

(Dollar Amounts in Thousands)

| <b>Valuation Date</b> | <b>Aggregate Accrued Liabilities For</b> |                                    |   | <b>Reported Assets</b> | <b>% of Accrued Liabilities Covered by Reported Assets</b> |            |            |
|-----------------------|--|------------------------------------|---|------------------------|--|------------|------------|
|                       | <b>(1)</b>                               | <b>(2)</b>                         | <b>(3)</b>  |                        | <b>(1)</b>   | <b>(2)</b> | <b>(3)</b> |
|                       | <b>Active Member Contributions</b>       | <b>Retirants and Beneficiaries</b> | <b>Active Members (Employer Financed Portion)</b> |                        |  |            |            |
| 9/30/2018 A           | \$ 2,922,432                             | \$ 9,944,503                       | \$ 4,962,800                                      | \$12,240,597           | 100  | 94         | 0.0        |
| 9/30/2017 A           | 2,817,368                                | 9,567,278                          | 4,866,189   | 11,690,952             | 100  | 93         | 0.0        |
| 9/30/2016 A           | 2,707,129                                | 9,209,857                          | 4,811,023   | 11,082,280             | 100  | 91         | 0.0        |
| 9/30/2015             | 2,591,066                                | 8,666,490                          | 4,466,164   | 10,589,258             | 100  | 92         | 0.0        |
| 9/30/2014             | 2,484,050                                | 8,366,277                          | 4,287,967   | 10,134,581             | 100  | 91         | 0.0        |
| 9/30/2013             | 2,363,600                                | 8,085,291                          | 4,087,709   | 9,546,459              | 100  | 89         | 0.0        |
| 9/30/2012 B           | 2,218,478                                | 7,781,431                          | 3,885,086   | 9,116,551              | 100  | 89         | 0.0        |
| 9/30/2011 C           | 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       |
| 9/30/2009             | 1,973,511                                | 6,707,240                          | 5,075,425   | 9,928,104              | 100  | 100        | 24.6       |

A - Reflects changes in actuarial assumptions and methods.

B - Reflects changes in actuarial methods.

C - Reflects changes in actuarial assumptions.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Employees' Retirement System

Supporting Schedules (Continued)

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

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

| Fiscal<br>Year<br>Ended | Retirees Added §* |                                | Retirees Removed |                                | Retirees - Year-end* |                                | % Increase/<br>(Decrease) in<br>Annual<br>Allowances | Average<br>Annual<br>Allowance |
|-------------------------|-------------------|--------------------------------|------------------|--------------------------------|----------------------|--------------------------------|--|--------------------------------|
|                         | Number            | Annual<br>Allowances<br>(000s) | Number           | Annual<br>Allowances<br>(000s) | Number               | Annual<br>Allowances<br>(000s) |  |                                |
| 9/30/2018               | 2,571             | \$ 64,020                      | 1,147            | \$ 24,894                      | 49,713               | \$ 925,945                     | 4.41   | \$ 18,626                      |
| 9/30/2017               | 2,449             | 58,678                         | 1,114            | 22,433                         | 48,289               | 886,819                        | 4.26   | 18,365                         |
| 9/30/2016               | 2,655             | 61,579                         | 1,083            | 22,434                         | 46,954               | 850,574                        | 4.82   | 18,115                         |
| 9/30/2015               | 2,698             | 63,043                         | 1,028            | 21,337                         | 45,382               | 811,429                        | 5.42   | 17,880                         |
| 9/30/2014               | 2,617             | 59,959                         | 1,012            | 20,185                         | 43,712               | 769,723                        | 5.45   | 17,609                         |
| 9/30/2013               | 2,628             | 59,930                         | 972              | 19,036                         | 42,107               | 729,949                        | 5.93   | 17,336                         |
| 9/30/2012               | 2,846             | 64,800                         | 977              | 18,759                         | 40,451               | 689,055                        | 7.16   | 17,034                         |
| 9/30/2011               | 2,444             | 53,577                         | 921              | 17,228                         | 38,582               | 643,014                        | 5.99   | 16,666                         |
| 9/30/2010               | 2,030             | 42,920                         | 958              | 17,571                         | 37,059               | 606,665                        | 4.36   | 16,370                         |
| 9/30/2009               | 1,942             | 40,480                         | 619              | 11,148                         | 35,987               | 581,316                        | 5.31   | 16,153                         |

§ Includes retirees completing DROP participation and entering regular retirement.

\*Does not include active DROP participants.

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, 2017               | \$ 5,559,883               |
| Normal Cost for 2018 Plan Year                                      | 48,140                     |
| Contributions Received During the Year                              | (412,834)                  |
| Interest to Year End  | 418,624                    |
| Expected Unfunded Actuarial Liability as of September 30, 2018      | <u>5,613,813</u>           |
| Actuarial (Gains)/Losses During the Year                            |                            |
| From Investments  | (153,448)                  |
| From Actuarial Liabilities  | 128,773                    |
| Total Actuarial (Gains)/Losses During the Year                      | <u>(24,675)</u>            |
| <b>Actual Unfunded Actuarial Liability as of September 30, 2018</b> | <b><u>\$ 5,589,138</u></b> |





# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

June 7, 2019

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.



Board of Control  
June 7, 2019  
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, 2018. This valuation indicates for benefits then in effect that the current employer contribution rates for the Judicial Retirement Fund (other than District Attorneys' Plan) of 40.80% of payroll for Tier I members and 35.61% of payroll for Tier II members, and employer contribution rates for District Attorneys' of 19.77% of payroll, meet the basic financial objective and the goals of the funding policy as listed above. There are 345 active members as of September 30, 2018.

The actuarial valuation is based upon financial and participant data which is prepared by the retirement Fund staff, assumptions regarding future rates of investment return and inflation, and rates of retirement, turnover, death and disability among JRF members and their beneficiaries. The data is reviewed by us for internal and year to year consistency as well as general reasonableness prior to its use in the actuarial valuation. It is also summarized and tabulated for the purpose of analyzing trends. The assumptions were adopted by the Board of Control and were based upon actual experience of JRF during the years October 1, 2010 to September 30, 2015. Since the previous valuation, the assumed rate of investment return has been changed from 7.75% as of September 30, 2017 to 7.65% as of September 30, 2018. 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. The Judges' and Clerks' plan covers justices, judges and circuit clerks who are not members of the Judicial Retirement Fund or The Clerks' and Registers' Supernumerary Fund. The District Attorneys' Plan covers any District Attorney first elected or appointed on or after November 8, 2016.

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

- Summary of Actuarial Assumptions and Methods
- Actuarial Cost Method
- Summary of Plan Provisions as Interpreted for Valuation Purposes
- Schedule of Funding Progress
- Solvency Test
- Analysis of Actuarial Gains and Losses
- Schedule of Active Member Valuation Data
- Schedule of Retirants and Beneficiaries Added and Removed from Rolls
- Retired Members by Type of Benefit as of September 30, 2018
- Ten-Year History of Average Monthly Benefit Payments as of September 30



Board of Control  
June 7, 2019  
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 Judicial Retirement Fund of Alabama continues in sound condition in accordance with the actuarial principles of level percent of payroll financing.**

Respectfully submitted,

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

Edward A. Macdonald, ASA, FCA, MAAA  
President

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

Cathy Turcot  
Principal and Managing Director

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

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

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**Summary of Actuarial Assumptions and Methods**

The assumptions and methods used in the valuation are based on the actuarial experience study prepared as of September 30, 2015, submitted to and adopted by the Board on September 29, 2016. The discount rate of 7.65% was subsequently adopted by the Board on December 19, 2018.

**Ultimate Investment Rate of Return:** 7.65% per annum, compounded annually, including inflation at 2.75%.

**Salary Increases:** 3.50% per annum for all ages with service less than 14 years, and 3.25% per annum for all ages with service of 14 years or more, compounded annually, including wage inflation at 3.00%.

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

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

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

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

**Rates of Retirement:**

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

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

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

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

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

## RETIREMENT SYSTEMS OF ALABAMA

### Actuarial Section

#### Judicial Retirement Fund

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

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

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

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

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

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

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

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

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

### **Actuarial Cost Method**

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

### **Summary of Plan Provisions as Interpreted for Valuation Purposes**

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

#### **Membership**

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

#### **Average Final Compensation**

The average compensation of of a member for the highest years in the last 10 years of creditable service.

#### **Creditable Service**

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

# RETIREMENT SYSTEMS OF ALABAMA

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## *Actuarial Section*

### Judicial Retirement Fund

#### Summary of Plan Provisions (Continued)

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#### **Benefits**

##### **Service Retirement Benefit**

###### Condition of Benefit

###### Tier 1 (Groups 1 and 2):

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

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

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

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

###### Tier 2 (Group 3) and District Attorneys:

A service retirement benefit is payable upon request of a member who has completed 10 years of service and attained age 62.

###### Amount of Benefit

###### Tier 1 (Groups 1 and 2):

The service retirement benefit for a member is equal to:

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

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Tier 2 (Group 3) and District Attorneys:

The service retirement benefit for a member is equal to:

- (a) For a member who is judge with years of service less than 18 years, 4% of average final compensation multiplied by years of creditable service; for a member who is a judge with 18 or more years of service, 75% of average final compensation, not to exceed 75% of average final compensation.
- (b) For a member who is clerk or district attorney, 3% of average final compensation multiplied by years of creditable service, not to exceed 80% of average final compensation.

**Disability Retirement Benefit**

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

Amount of Benefit

Tier 1 (Groups 1 and 2):

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

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

Tier 2 (Group 3) and District Attorneys:

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

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

**Spousal Benefit**

Tier 1 (Groups 1 and 2):

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

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

## RETIREMENT SYSTEMS OF ALABAMA

### Actuarial Section

#### Judicial Retirement Fund

#### Summary of Plan Provisions (Continued)

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

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

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

#### Death in Active Service Benefit

Tier 2 (Group 3) and District Attorneys:

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

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

#### Benefit Payable upon Separation from Service

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

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

#### Member Contributions

Tier 1 (Groups 1 and 2):

- Prior to October 1, 2011, each member contributed 6.0% of salary.
- Beginning October 1, 2011, each member contributed 8.25% of salary.
- Beginning October 1, 2012, each member contributed 8.5% of salary.

Tier 2 (Group 3) and District Attorneys:

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

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

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

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Judicial Retirement Fund

Supporting Schedules

**Supporting Schedules**

The following schedule presents a ten-year history of active member valuation data:

**SCHEDULE OF ACTIVE MEMBER VALUATION DATA**

(Dollar Amounts Not in Thousands)

| <u>Valuation Date</u> | <u>Number</u> | <u>Annual Payroll*</u> | <u>Annual Average Pay**</u> | <u>% Increase/ (Decrease) in Average Pay</u> |
|-----------------------|---------------|------------------------|-----------------------------|--|
| 9/30/2018             | 345           | \$ 43,819,340          | \$ 127,013                  | 0.65   |
| 9/30/2017             | 351           | 44,291,914             | 126,188                     | (1.45)                                       |
| 9/30/2016             | 336           | 43,022,891             | 128,044                     | 1.08   |
| 9/30/2015             | 338           | 42,814,343             | 126,670                     | 0.27   |
| 9/30/2014             | 338           | 42,698,909             | 126,328                     | 1.94   |
| 9/30/2013             | 338           | 41,887,006             | 123,926                     | (1.61)                                       |
| 9/30/2012             | 337           | 42,446,426             | 125,954                     | 0.58   |
| 9/30/2011             | 334           | 41,826,338             | 125,229                     | (1.70)                                       |
| 9/30/2010             | 338           | 43,060,614             | 127,398                     | 0.78   |
| 9/30/2009             | 342           | 43,234,239             | 126,416                     | 3.18   |

\*0.9% increase for total pay since 2013.

\*\*0.5% increase for average pay since 2013.

The following table presents a ten-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> |
|-----------------------|--------------------------------------|--|----------------------------------|--------------------------------|----------------------------|---|
| 9/30/2018 *           | \$ 305,397                           | \$ 457,834                                   | \$ 152,437                       | 66.7                           | \$43,819                   | 347.9   |
| 9/30/2017 **          | 293,090                              | 448,446                                      | 155,356                          | 65.4                           | 44,292                     | 350.8   |
| 9/30/2016 *           | 279,807                              | 446,920                                      | 167,113                          | 62.6                           | 43,023                     | 388.4   |
| 9/30/2015             | 267,414                              | 427,591                                      | 160,177                          | 62.5                           | 42,814                     | 374.1   |
| 9/30/2014             | 257,452                              | 422,863                                      | 165,411                          | 60.9                           | 42,699                     | 387.4   |
| 9/30/2013             | 243,316                              | 414,200                                      | 170,884                          | 58.7                           | 41,887                     | 408.0   |
| 9/30/2012 ***         | 234,300                              | 380,470                                      | 146,170                          | 61.6                           | 42,446                     | 344.4   |
| 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   |
| 9/30/2009             | 252,646                              | 340,978                                      | 88,332                           | 74.1                           | 43,234                     | 204.3   |

\*Reflects changes in actuarial assumptions and methods.

\*\*Reflects changes in benefit structure beginning November 8, 2016.

\*\*\*Reflects changes in actuarial methods.

\*\*\*\*Reflects changes in actuarial assumptions.

RETIREMENT SYSTEMS OF ALABAMA

Actuarial Section

Judicial Retirement Fund

Supporting Schedules (Continued)

The following schedule presents a ten- 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)  | Active Members (Employer Financed Portion) |                 | (1)   | (2) | (3) |
|                | Active Member Contributions       | Retirants and Beneficiaries | Active Members (Employer Financed Portion) |  |                 |   |     |     |
| 9/30/2018 *    | \$ 48,609                         | \$ 296,550                  | \$ 112,675                                 | \$ 305,397                                 | 100             | 87  | 0.0 |     |
| 9/30/2017      | 44,792                            | 296,231                     | 107,422                                    | 293,090                                    | 100             | 84  | 0.0 |     |
| 9/30/2016 *    | 45,900                            | 280,836                     | 120,185                                    | 279,807                                    | 100             | 83  | 0.0 |     |
| 9/30/2015      | 42,745                            | 272,624                     | 112,222                                    | 267,414                                    | 100             | 82  | 0.0 |     |
| 9/30/2014      | 40,981                            | 268,439                     | 113,443                                    | 257,452                                    | 100             | 81  | 0.0 |     |
| 9/30/2013      | 37,366                            | 270,430                     | 106,404                                    | 243,315                                    | 100             | 76  | 0.0 |     |
| 9/30/2012 **   | 38,341                            | 237,197                     | 104,932                                    | 234,300                                    | 100             | 83  | 0.0 |     |
| 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 |     |
| 9/30/2009      | 32,533                            | 215,730                     | 92,715                                     | 252,646                                    | 100             | 100   | 4.7 |     |

\*Reflects a change in actuarial assumptions and methods.

\*\*Reflects changes in actuarial methods.

\*\*\*Reflects changes in actuarial assumptions.

The following schedule presents ten 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) |   |                          |
| 2018              | 11             | \$ 733                   | 13               | \$ 1,071                 | 403                 | \$ 30,853                | (1.08)                                      | \$ 76,558                |
| 2017              | 27             | 1,895                    | 6                | 490                      | 405                 | 31,191                   | 4.72  | 77,015                   |
| 2016              | 11             | 970                      | 11               | 889                      | 384                 | 29,786                   | 0.27  | 77,568                   |
| 2015              | 16             | 1,500                    | 6                | 479                      | 384                 | 29,705                   | 3.56  | 77,357                   |
| 2014              | 9              | 918                      | 10               | 798                      | 374                 | 28,684                   | 0.42  | 76,695                   |
| 2013              | 33             | 3,144                    | 4                | 315                      | 375                 | 28,564                   | 10.99                                       | 76,171                   |
| 2012              | 6              | 569                      | 3                | 236                      | 346                 | 25,735                   | 1.31  | 74,379                   |
| 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                   |
| 2009              | 19             | 1,877                    | 10               | 748                      | 321                 | 22,641                   | 5.25  | 70,533                   |

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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, 2017               | \$ 155,356                      |
| Normal Cost for 2018 Plan Year                                      | 5,366                           |
| Contributions Received During the Year                              | (16,612)                        |
| Interest to Year End  | <u>11,812</u>                   |
| Expected Unfunded Actuarial Liability as of September 30, 2018      | <u>155,922</u>                  |
| <br>  |                                 |
| Actuarial (Gains)Losses During the Year                             |                                 |
| From Investments  | (3,187)                         |
| From Actuarial Liabilities  | <u>(299)</u>                    |
| Total Actuarial (Gains)/Losses During the Year                      | <u>(3,486)</u>                  |
| <b>Actual Unfunded Actuarial Liability as of September 30, 2018</b> | <b><u><u>\$ 152,436</u></u></b> |





# Statistical Section

Component Units of the State of Alabama  
Comprehensive Annual Financial Report



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

#### **Financial Trends**

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

Additions by Source – Ten-Year History – page 165

Deductions by Type – Ten-Year History – page 166

Benefits by Type – Ten-Year History – page 167

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

#### **Retirees and Beneficiaries**

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

Retired Members by Type of Benefit – page 174

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

#### **Participating Units**

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

Local Participating Employers – page 180

Largest Employers – Ten-Year History – page 189

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Additions by Source

Ten-Year History

(Amounts in Thousands)

**TEACHERS' RETIREMENT SYSTEM  
ADDITIONS BY SOURCE**

| Fiscal Year | Employer Contributions     |            |                   |          |            | Investment<br>Income | Transfer In<br>From<br>PEEHIP | Total |
|-------------|----------------------------|------------|-------------------|----------|------------|----------------------|-------------------------------|-------|
|             | Member<br>Contributions \$ | Amount     | Employer Rate (%) |          |            |                      |                               |       |
|             |                            |            | Tier 1            | Tier 2 © |            |                      |                               |       |
| 2019        | \$ 522,909                 | \$ 869,336 | 12.41             | 11.35    | \$ 614,427 | \$ -                 | \$ 2,006,672                  |       |
| 2018        | 493,466                    | 802,598    | 12.24             | 11.01    | 2,264,234  | 24,700               | 3,584,998                     |       |
| 2017        | 489,638                    | 782,695    | 12.01             | 10.82    | 2,636,105  | -                    | 3,908,438                     |       |
| 2016        | 475,980                    | 751,902    | 11.94             | 10.84    | 2,199,404  | -                    | 3,427,286                     |       |
| 2015        | 477,918                    | 737,671    | 11.71             | 11.05    | 261,468    | -                    | 1,477,057                     |       |
| 2014        | 480,849                    | 739,547    | 11.71             | 11.08    | 2,473,152  | -                    | 3,693,548                     |       |
| 2013        | 477,586                    | 627,892    | 10.08             | 9.44     | 2,732,706  | -                    | 3,838,184                     |       |
| 2012        | 458,534                    | 618,306    | 10.00             | -        | 2,989,162  | -                    | 4,066,002                     |       |
| 2011        | 323,196                    | 779,644    | 12.51             | -        | 351,965    | -                    | 1,454,805                     |       |
| 2010        | 321,403                    | 776,421    | 12.51             | -        | 1,448,312  | -                    | 2,546,136                     |       |

**EMPLOYEES' RETIREMENT SYSTEM  
ADDITIONS BY SOURCE**

| Fiscal Year | Employer Contributions     |            |                   |       |         |       |          |            |             |                      |       |
|-------------|----------------------------|------------|-------------------|-------|---------|-------|----------|------------|-------------|----------------------|-------|
|             | Member<br>Contributions \$ | Amount     | Employer Rate (%) |       |         |       |          |            | Local       | Investment<br>Income | Total |
|             |                            |            | State             |       | Tier 1  |       | Tier 2 © |            |             |                      |       |
|             |                            |            | Regular           | Law   | Regular | Law   | Regular  | Law        |             |                      |       |
| 2019        | \$ 254,440                 | \$ 467,553 | 14.51             | 50.08 | 14.14   | 43.43 | *        | \$ 320,585 | \$1,042,578 |                      |       |
| 2018        | 241,741                    | 426,340    | 13.94             | 44.44 | 13.29   | 39.29 | *        | 1,098,412  | 1,766,493   |                      |       |
| 2017        | 233,901                    | 426,215    | 13.89             | 57.25 | 13.25   | 53.55 | *        | 1,402,163  | 2,062,279   |                      |       |
| 2016        | 238,017                    | 435,098    | 14.57             | 42.61 | 14.09   | 38.98 | *        | 1,053,031  | 1,726,146   |                      |       |
| 2015        | 229,254                    | 410,932    | 13.45             | 38.37 | 13.31   | 32.45 | *        | 126,490    | 766,676     |                      |       |
| 2014        | 226,016                    | 391,181    | 12.02             | 35.81 | 11.96   | 29.52 | *        | 1,186,529  | 1,803,726   |                      |       |
| 2013        | 223,646                    | 338,819    | 10.12             | 31.61 | 10.04   | 25.32 | *        | 1,296,460  | 1,858,925   |                      |       |
| 2012        | 216,870                    | 317,520    | 9.42              | 29.92 | -       | -     | *        | 1,427,858  | 1,962,248   |                      |       |
| 2011        | 195,709                    | 394,998    | 11.94             | 30.57 | -       | -     | *        | 196,939    | 787,646     |                      |       |
| 2010        | 196,758                    | 377,898    | 11.94             | 30.57 | -       | -     | *        | 696,677    | 1,271,333   |                      |       |

**JUDICIAL RETIREMENT FUND  
ADDITIONS BY SOURCE**

| Fiscal Year | Employer Contributions     |           |                   |                                   |                          |           | Investment<br>Income | Total |
|-------------|----------------------------|-----------|-------------------|-----------------------------------|--------------------------|-----------|----------------------|-------|
|             | Member<br>Contributions \$ | Amount    | Employer Rate (%) |                                   |                          |           |                      |       |
|             |                            |           | Groups 1 & 2      | Group 3 -<br>Judges &<br>Clerks** | District<br>Attorneys*** |           |                      |       |
| 2019        | \$ 4,101                   | \$ 18,022 | 41.40             | 34.32                             | 19.77                    | \$ 11,016 | \$ 33,139            |       |
| 2018        | 3,867                      | 17,180    | 40.09             | 34.32                             | 19.77                    | 27,622    | 48,669               |       |
| 2017        | 3,972                      | 17,373    | 40.65             | -                                 | -                        | 32,685    | 54,030               |       |
| 2016        | 3,723                      | 17,529    | 40.98             | -                                 | -                        | 28,321    | 49,573               |       |
| 2015        | 3,683                      | 15,077    | 35.24             | -                                 | -                        | (856)     | 17,904               |       |
| 2014        | 3,764                      | 15,790    | 35.24             | -                                 | -                        | 31,344    | 50,898               |       |
| 2013        | 3,919                      | 13,903    | 32.06             | -                                 | -                        | 32,245    | 50,067               |       |
| 2012        | 3,681                      | 10,747    | 24.35             | -                                 | -                        | 39,011    | 53,439               |       |
| 2011        | 2,654                      | 10,906    | 24.20             | -                                 | -                        | 2,022     | 15,582               |       |
| 2010        | 2,566                      | 10,814    | 24.20             | -                                 | -                        | 21,925    | 35,305               |       |

§ Includes transfers from other systems.

\* Local agency rates differ for each participating agency.

© A new tier of benefits was established for members hired on or after January 1, 2013, which included different contribution rates for the members and their employers.

\*\* A new plan was created within the JRF for Judges and Clerks who were first elected or appointed on or after November 8, 2016, and were not a member of the JRF or the Clerks' and Registers' Supernumerary Fund.

\*\*\* A new plan was created within the JRF for District Attorneys who were serving in the capacity of District Attorney on or after November 8, 2016.

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Deductions by Type

Ten-Year History

(Amounts in Thousands)

**TEACHERS' RETIREMENT SYSTEM  
DEDUCTIONS BY TYPE**

| <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> |
|--------------------|-------------------------|--|--------------------------|--------------------------------|---------------------|--------------|
| 2019               | \$ 2,233,514            | \$ 56,861  | \$ 4,187                 | \$ 20,583                      | \$ 7,512            | \$ 2,322,657 |
| 2018               | 2,204,031               | 58,538   | 4,908                    | 15,952                         | 6,338               | 2,289,767    |
| 2017               | 2,111,830               | 55,634   | 3,413                    | 16,390                         | 6,012               | 2,193,279    |
| 2016               | 2,155,784               | 57,130   | 6,223                    | 14,873                         | 4,709               | 2,238,719    |
| 2015               | 2,075,302               | 58,060   | 3,432                    | 15,074                         | 4,258               | 2,156,126    |
| 2014               | 1,997,595               | 54,699   | 2,880                    | 13,103                         | 4,336               | 2,072,613    |
| 2013               | 1,893,321               | 55,891   | 1,823                    | 12,591                         | 4,312               | 1,967,938    |
| 2012               | 1,800,805               | 49,453   | 1,937                    | 11,555                         | 4,344               | 1,868,094    |
| 2011               | 1,673,881               | 49,304   | 2,012                    | 10,820                         | 4,243               | 1,740,260    |
| 2010               | 1,567,790               | 43,628   | 1,790                    | 11,979                         | 4,264               | 1,629,451    |

**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> |
|--------------------|-------------------------|--|---|--------------------------------|---------------------|--------------|
| 2019               | \$ 1,123,150            | \$ 48,675  | \$ 6,803  | \$ 12,934                      | \$ 2,895            | \$ 1,194,457 |
| 2018               | 1,096,883               | 45,070   | 5,415   | 11,219                         | 2,544               | 1,161,131    |
| 2017               | 1,050,340               | 48,683   | 3,357   | 11,982                         | 2,520               | 1,116,882    |
| 2016               | 1,038,517               | 45,768   | 3,668   | 11,002                         | 2,021               | 1,100,976    |
| 2015               | 1,018,515               | 51,024   | 4,059   | 11,136                         | 2,046               | 1,086,780    |
| 2014               | 948,478                 | 47,937   | 3,632   | 9,612                          | 2,055               | 1,011,714    |
| 2013               | 895,475                 | 44,837   | 3,587   | 9,767                          | 2,015               | 955,681      |
| 2012               | 848,464                 | 40,746   | 2,180   | 10,616                         | 1,981               | 903,987      |
| 2011               | 782,957                 | 36,798   | 2,157   | 10,002                         | 2,029               | 833,943      |
| 2010               | 725,660                 | 33,868   | 1,633   | 10,334                         | 2,111               | 773,606      |

**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> |
|--------------------|-------------------------|--|--------------------------|--------------------------------|---------------------|--------------|
| 2019               | \$ 36,909               | \$ 646   | \$ -                     | \$ 357                         | \$ -                | \$ 37,912    |
| 2018               | 33,419                  | 130  | -                        | 328                            | -                   | 33,877       |
| 2017               | 32,807                  | 353  | -                        | 334                            | -                   | 33,494       |
| 2016               | 30,893                  | 115  | -                        | 397                            | -                   | 31,405       |
| 2015               | 30,348                  | 100  | 55                       | 356                            | -                   | 30,859       |
| 2014               | 29,826                  | 54   | 1                        | 281                            | -                   | 30,162       |
| 2013               | 29,112                  | 196  | -                        | 280                            | -                   | 29,588       |
| 2012               | 27,183                  | 253  | -                        | 257                            | -                   | 27,693       |
| 2011               | 26,379                  | 34   | -                        | 276                            | -                   | 26,689       |
| 2010               | 24,526                  | 235  | -                        | 317                            | -                   | 25,078       |

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Benefits by Type

Ten-Year History

(Amounts in Thousands)

**TEACHERS' RETIREMENT SYSTEM**

**BENEFITS BY TYPE**

| Fiscal<br>Year | Age & Service Benefits |           | Disability<br>Benefits | Death Benefits & Refunds |             |
|----------------|------------------------|-----------|------------------------|--------------------------|-------------|
|                | Retirants              | Survivors |                        | Death                    | Resignation |
| 2019           | \$ 2,079,529           | \$ 85,566 | \$ 68,419              | \$ 14,333                | \$ 42,528   |
| 2018           | 2,053,906              | 82,406    | 67,719                 | 12,827                   | 45,711      |
| 2017           | 1,971,017              | 75,812    | 65,001                 | 13,142                   | 42,492      |
| 2016           | 2,021,973              | 70,959    | 62,852                 | 14,578                   | 42,552      |
| 2015           | 1,947,983              | 66,636    | 60,683                 | 14,095                   | 43,965      |
| 2014           | 1,876,615              | 62,674    | 58,306                 | 11,225                   | 43,474      |
| 2013           | 1,778,541              | 58,669    | 56,111                 | 11,684                   | 44,207      |
| 2012           | 1,692,169              | 55,109    | 53,527                 | 11,269                   | 38,184      |
| 2011           | 1,571,682              | 51,873    | 50,326                 | 13,174                   | 36,130      |
| 2010           | 1,469,928              | 49,287    | 48,576                 | 13,032                   | 30,596      |

**EMPLOYEES' RETIREMENT SYSTEM**

**BENEFITS BY TYPE**

| Fiscal<br>Year | Age & Service Benefits |           | Disability<br>Benefits | Death Benefits & Refunds |             |
|----------------|------------------------|-----------|------------------------|--------------------------|-------------|
|                | Retirants              | Survivors |                        | Death                    | Resignation |
| 2019           | \$ 1,010,482           | \$ 52,028 | \$ 60,640              | \$ 9,979                 | \$ 38,696   |
| 2018           | 987,527                | 49,220    | 60,136                 | 10,843                   | 34,577      |
| 2017           | 946,203                | 45,810    | 58,327                 | 9,197                    | 39,486      |
| 2016           | 937,752                | 43,376    | 57,389                 | 8,842                    | 36,926      |
| 2015           | 919,657                | 42,308    | 56,550                 | 9,800                    | 41,224      |
| 2014           | 855,857                | 39,488    | 53,133                 | 9,687                    | 38,250      |
| 2013           | 806,846                | 37,730    | 50,899                 | 7,889                    | 36,948      |
| 2012           | 763,881                | 36,161    | 48,422                 | 8,969                    | 31,777      |
| 2011           | 703,128                | 34,538    | 45,291                 | 7,806                    | 28,992      |
| 2010           | 649,532                | 33,009    | 43,119                 | 8,994                    | 24,874      |

**JUDICIAL RETIREMENT FUND**

**BENEFITS BY TYPE**

| Fiscal<br>Year | Age & Service Benefits |           | Disability<br>Benefits | Death Benefits & Refunds |             |
|----------------|------------------------|-----------|------------------------|--------------------------|-------------|
|                | Retirants              | Survivors |                        | Death                    | Resignation |
| 2019           | \$ 32,288              | \$ 4,055  | \$ 566                 | \$ -                     | \$ 646      |
| 2018           | 28,983                 | 3,913     | 523                    | 44                       | 86          |
| 2017           | 28,370                 | 3,956     | 481                    | 19                       | 334         |
| 2016           | 26,556                 | 3,850     | 487                    | 10                       | 105         |
| 2015           | 26,082                 | 3,839     | 427                    | 8                        | 92          |
| 2014           | 25,796                 | 3,703     | 327                    | -                        | 54          |
| 2013           | 25,022                 | 3,715     | 375                    | -                        | 196         |
| 2012           | 23,307                 | 3,501     | 375                    | -                        | 253         |
| 2011           | 22,773                 | 3,231     | 375                    | -                        | 34          |
| 2010           | 20,763                 | 3,388     | 375                    | -                        | 235         |

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Teachers' Retirement System

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

(Amounts in Thousands)

|  | 2019                        | 2018                        | 2017                        | 2016                        | 2015                        |
|--|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| <b>Additions</b>                                     |                             |                             |                             |                             |                             |
| Contributions  |                             |                             |                             |                             |                             |
| Employee   | \$ 516,675                  | \$ 488,503                  | \$ 486,542                  | \$ 472,390                  | \$ 473,903                  |
| Employer   | 869,336                     | 802,598                     | 782,695                     | 751,902                     | 737,671                     |
| Transfers from Employees' Retirement System          | 6,234                       | 4,963                       | 3,096                       | 3,590                       | 4,015                       |
| Transfers from Judicial Retirement Fund              | -                           | -                           | -                           | -                           | -                           |
| Transfers from PEEHIP                                | -                           | 24,700                      | -                           | -                           | -                           |
| Total Contributions                                  | <u>1,392,245</u>            | <u>1,320,764</u>            | <u>1,272,333</u>            | <u>1,227,882</u>            | <u>1,215,589</u>            |
| Investment Income                                    |                             |                             |                             |                             |                             |
| From Investing Activities                            |                             |                             |                             |                             |                             |
| Net Increase/(Decrease) in Fair Value of Investments | 33,671                      | 1,615,440                   | 2,021,774                   | 1,589,279                   | (381,400)                   |
| Interest and Dividends                               | 583,329                     | 650,293                     | 613,353                     | 607,795                     | 640,910                     |
| Total Investment Income from Investing Activities    | 617,000                     | 2,265,733                   | 2,635,127                   | 2,197,074                   | 259,510                     |
| Less: Investment Expenses, Net                       | 9,205                       | 9,171                       | 8,685                       | 7,731                       | 6,407                       |
| Net Investment Income from Investing Activities      | <u>607,795</u>              | <u>2,256,562</u>            | <u>2,626,442</u>            | <u>2,189,343</u>            | <u>253,103</u>              |
| From Securities Lending Activities                   |                             |                             |                             |                             |                             |
| Securities Lending Income                            | 28,905                      | 23,246                      | 20,125                      | 15,930                      | 11,512                      |
| Less Securities Lending Expenses:                    |                             |                             |                             |                             |                             |
| Borrower Rebates                                     | 19,431                      | 12,385                      | 7,350                       | 2,825                       | 365                         |
| Management Fees                                      | 2,842                       | 3,189                       | 3,112                       | 3,044                       | 2,782                       |
| Total Securities Lending Expenses                    | <u>22,273</u>               | <u>15,574</u>               | <u>10,462</u>               | <u>5,869</u>                | <u>3,147</u>                |
| Net Income from Securities Lending Activities        | <u>6,632</u>                | <u>7,672</u>                | <u>9,663</u>                | <u>10,061</u>               | <u>8,365</u>                |
| Total Net Investment Income                          | <u>614,427</u>              | <u>2,264,234</u>            | <u>2,636,105</u>            | <u>2,199,404</u>            | <u>261,468</u>              |
| Total Additions                                      | <u>2,006,672</u>            | <u>3,584,998</u>            | <u>3,908,438</u>            | <u>3,427,286</u>            | <u>1,477,057</u>            |
| <b>Deductions</b>                                    |                             |                             |                             |                             |                             |
| Retirement Allowance Payments                        | 2,233,514                   | 2,204,031                   | 2,111,830                   | 2,155,784                   | 2,075,302                   |
| Return of Contributions and Death Benefits           | 56,861                      | 58,538                      | 55,634                      | 57,130                      | 58,060                      |
| Transfers to Employees' Retirement System            | 4,187                       | 4,899                       | 3,413                       | 6,223                       | 3,432                       |
| Transfers to Judicial Retirement Fund                | -                           | 9                           | -                           | -                           | -                           |
| Administrative Expenses                              | 20,583                      | 15,952                      | 16,390                      | 14,873                      | 15,074                      |
| Depreciation   | 7,512                       | 6,338                       | 6,012                       | 4,709                       | 4,258                       |
| Total Deductions                                     | <u>2,322,657</u>            | <u>2,289,767</u>            | <u>2,193,279</u>            | <u>2,238,719</u>            | <u>2,156,126</u>            |
| <b>Net Increase/(Decrease)</b>                       | <u>(315,985)</u>            | <u>1,295,231</u>            | <u>1,715,159</u>            | <u>1,188,567</u>            | <u>(679,069)</u>            |
| <b>Net Position Restricted for Pension Benefits</b>  |                             |                             |                             |                             |                             |
| Beginning of Year - as previously reported           | 25,935,433                  | 24,651,457                  | 22,936,298                  | 21,747,731                  | 22,441,307                  |
| Adjustment for Application of GASB 68                | -                           | -                           | -                           | -                           | (14,507)                    |
| Adjustment for Application of GASB 75                | -                           | (11,255)                    | -                           | -                           | -                           |
| Beginning of Year - as adjusted                      | <u>25,935,433</u>           | <u>24,640,202</u>           | <u>22,936,298</u>           | <u>21,747,731</u>           | <u>22,426,800</u>           |
| <b>End of Year</b>                                   | <u><b>\$ 25,619,448</b></u> | <u><b>\$ 25,935,433</b></u> | <u><b>\$ 24,651,457</b></u> | <u><b>\$ 22,936,298</b></u> | <u><b>\$ 21,747,731</b></u> |

|  | 2014                        | 2013                        | 2012                        | 2011                        | 2010                        |
|--|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| <b>Additions</b>                                     |                             |                             |                             |                             |                             |
| Contributions  |                             |                             |                             |                             |                             |
| Employee   | \$ 477,300                  | \$ 474,241                  | \$ 456,518                  | \$ 321,137                  | \$ 319,770                  |
| Employer   | 739,547                     | 627,892                     | 618,306                     | 779,644                     | 776,421                     |
| Transfers from Employees' Retirement System          | 3,549                       | 3,345                       | 2,016                       | 2,059                       | -                           |
| Transfers from Judicial Retirement Fund              | -                           | -                           | -                           | -                           | 1,633                       |
| Transfers from PEEHIP                                | -                           | -                           | -                           | -                           | -                           |
| Total Contributions                                  | <u>1,220,396</u>            | <u>1,105,478</u>            | <u>1,076,840</u>            | <u>1,102,840</u>            | <u>1,097,824</u>            |
| Investment Income                                    |                             |                             |                             |                             |                             |
| From Investing Activities                            |                             |                             |                             |                             |                             |
| Net Increase/(Decrease) in Fair Value of Investments | 1,853,288                   | 2,090,646                   | 2,349,955                   | (278,407)                   | 886,997                     |
| Interest and Dividends                               | 618,861                     | 638,766                     | 634,695                     | 624,546                     | 559,941                     |
| Total Investment Income from Investing Activities    | <u>2,472,149</u>            | <u>2,729,412</u>            | <u>2,984,650</u>            | <u>346,139</u>              | <u>1,446,938</u>            |
| Less: Investment Expenses, Net                       | <u>5,732</u>                | <u>5,712</u>                | <u>5,260</u>                | <u>5,305</u>                | <u>5,415</u>                |
| Net Investment Income from Investing Activities      | <u>2,466,417</u>            | <u>2,723,700</u>            | <u>2,979,390</u>            | <u>340,834</u>              | <u>1,441,523</u>            |
| From Securities Lending Activities                   |                             |                             |                             |                             |                             |
| Securities Lending Income                            | 9,629                       | 12,753                      | 13,670                      | 15,643                      | 12,519                      |
| Less Securities Lending Expenses:                    |                             |                             |                             |                             |                             |
| Borrower Rebates                                     | 65                          | 401                         | 433                         | 1,261                       | 2,820                       |
| Management Fees                                      | <u>2,829</u>                | <u>3,346</u>                | <u>3,465</u>                | <u>3,251</u>                | <u>2,910</u>                |
| Total Securities Lending Expenses                    | <u>2,894</u>                | <u>3,747</u>                | <u>3,898</u>                | <u>4,512</u>                | <u>5,730</u>                |
| Net Income from Securities Lending Activities        | <u>6,735</u>                | <u>9,006</u>                | <u>9,772</u>                | <u>11,131</u>               | <u>6,789</u>                |
| Total Net Investment Income                          | <u>2,473,152</u>            | <u>2,732,706</u>            | <u>2,989,162</u>            | <u>351,965</u>              | <u>1,448,312</u>            |
| Total Additions                                      | <u>3,693,548</u>            | <u>3,838,184</u>            | <u>4,066,002</u>            | <u>1,454,805</u>            | <u>2,546,136</u>            |
| <b>Deductions</b>                                    |                             |                             |                             |                             |                             |
| Retirement Allowance Payments                        | 1,997,595                   | 1,893,321                   | 1,800,805                   | 1,673,881                   | 1,567,790                   |
| Return of Contributions and Death Benefits           | 54,699                      | 55,891                      | 49,453                      | 49,304                      | 43,628                      |
| Transfers to Employees' Retirement System            | 2,880                       | 1,823                       | 1,937                       | 2,012                       | 1,790                       |
| Transfers to Judicial Retirement Fund                | -                           | -                           | -                           | -                           | -                           |
| Administrative Expenses                              | 13,103                      | 12,591                      | 11,555                      | 10,820                      | 11,979                      |
| Depreciation   | <u>4,336</u>                | <u>4,312</u>                | <u>4,344</u>                | <u>4,243</u>                | <u>4,264</u>                |
| Total Deductions                                     | <u>2,072,613</u>            | <u>1,967,938</u>            | <u>1,868,094</u>            | <u>1,740,260</u>            | <u>1,629,451</u>            |
| <b>Net Increase/(Decrease)</b>                       | <u>1,620,935</u>            | <u>1,870,246</u>            | <u>2,197,908</u>            | <u>(285,455)</u>            | <u>916,685</u>              |
| <b>Net Position Restricted for Pension Benefits</b>  |                             |                             |                             |                             |                             |
| Beginning of Year - as previously reported           | 20,820,372                  | 18,950,126                  | 16,752,218                  | 17,037,673                  | 16,120,988                  |
| Adjustment for Application of GASB 68                | -                           | -                           | -                           | -                           | -                           |
| Adjustment for Application of GASB 75                | -                           | -                           | -                           | -                           | -                           |
| Beginning of Year - as adjusted                      | <u>20,820,372</u>           | <u>18,950,126</u>           | <u>16,752,218</u>           | <u>17,037,673</u>           | <u>16,120,988</u>           |
| <b>End of Year</b>                                   | <u><b>\$ 22,441,307</b></u> | <u><b>\$ 20,820,372</b></u> | <u><b>\$ 18,950,126</b></u> | <u><b>\$ 16,752,218</b></u> | <u><b>\$ 17,037,673</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)

|  | 2019                 | 2018                 | 2017                 | 2016                 | 2015                 |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|
| <b>Additions</b>                                     |                      |                      |                      |                      |                      |
| Contributions  |                      |                      |                      |                      |                      |
| Employee   | \$ 250,253           | \$ 236,842           | \$ 230,488           | \$ 231,794           | \$ 225,767           |
| Employer   | 467,553              | 426,340              | 426,215              | 435,098              | 410,932              |
| Transfers from Teachers' Retirement System           | 4,187                | 4,899                | 3,413                | 6,223                | 3,432                |
| Transfers from Judicial Retirement Fund              | -                    | -                    | -                    | -                    | 55                   |
| Total Contributions                                  | 721,993              | 668,081              | 660,116              | 673,115              | 640,186              |
| Investment Income                                    |                      |                      |                      |                      |                      |
| <i>From Investing Activities</i>                     |                      |                      |                      |                      |                      |
| Net Increase/(Decrease) in Fair Value of Investments | 30,092               | 775,132              | 1,098,859            | 753,836              | (186,154)            |
| Interest and Dividends                               | 291,011              | 323,182              | 302,295              | 297,369              | 311,516              |
| Total Investment Income from Investing Activities    | 321,103              | 1,098,314            | 1,401,154            | 1,051,205            | 125,362              |
| Less: Investment Expenses, Net                       | 3,661                | 3,395                | 3,305                | 2,883                | 2,771                |
| Net Investment Income from Investing Activities      | 317,442              | 1,094,919            | 1,397,849            | 1,048,322            | 122,591              |
| <i>From Securities Lending Activities</i>            |                      |                      |                      |                      |                      |
| Securities Lending Income                            | 13,884               | 10,589               | 9,127                | 7,481                | 5,353                |
| Less Securities Lending Expenses:                    |                      |                      |                      |                      |                      |
| Borrower Rebates                                     | 9,394                | 5,647                | 3,424                | 1,356                | 164                  |
| Management Fees                                      | 1,347                | 1,449                | 1,389                | 1,416                | 1,290                |
| Total Securities Lending Expenses                    | 10,741               | 7,096                | 4,813                | 2,772                | 1,454                |
| Net Income from Securities Lending Activities        | 3,143                | 3,493                | 4,314                | 4,709                | 3,899                |
| Total Net Investment Income                          | 320,585              | 1,098,412            | 1,402,163            | 1,053,031            | 126,490              |
| Total Additions                                      | 1,042,578            | 1,766,493            | 2,062,279            | 1,726,146            | 766,676              |
| <b>Deductions</b>                                    |                      |                      |                      |                      |                      |
| Retirement Allowance Payments                        | 1,123,150            | 1,096,883            | 1,050,340            | 1,038,517            | 1,018,515            |
| Return of Contributions and Death Benefits           | 48,675               | 45,070               | 47,683               | 45,768               | 51,024               |
| Unit Withdrawals                                     | 380                  | 350                  | 1,000                | -                    | -                    |
| Transfers to Teachers' Retirement System             | 6,234                | 4,963                | 3,096                | 3,590                | 4,015                |
| Transfers to Judicial Retirement Fund                | 189                  | 102                  | 261                  | 78                   | 44                   |
| Administrative Expenses                              | 12,934               | 11,219               | 11,982               | 11,002               | 11,136               |
| Depreciation   | 2,895                | 2,544                | 2,520                | 2,021                | 2,046                |
| Total Deductions                                     | 1,194,457            | 1,161,131            | 1,116,882            | 1,100,976            | 1,086,780            |
| <b>Net Increase/(Decrease)</b>                       | <b>(151,879)</b>     | <b>605,362</b>       | <b>945,397</b>       | <b>625,170</b>       | <b>(320,104)</b>     |
| <b>Net Position Restricted for Pension Benefits</b>  |                      |                      |                      |                      |                      |
| Beginning of Year - as previously reported           | 12,720,352           | 12,122,471           | 11,177,074           | 10,551,904           | 10,883,952           |
| Adjustment for Application of GASB 68                | -                    | -                    | -                    | -                    | (11,944)             |
| Adjustment for Application of GASB 75                | -                    | (7,481)              | -                    | -                    | -                    |
| Beginning of Year - as adjusted                      | 12,720,352           | 12,114,990           | 11,177,074           | 10,551,904           | 10,872,008           |
| <b>End of Year</b>                                   | <b>\$ 12,568,473</b> | <b>\$ 12,720,352</b> | <b>\$ 12,122,471</b> | <b>\$ 11,177,074</b> | <b>\$ 10,551,904</b> |

|  | 2014                        | 2013                        | 2012                       | 2011                       | 2010                       |
|--|-----------------------------|-----------------------------|----------------------------|----------------------------|----------------------------|
| <b>Additions</b>                                     |                             |                             |                            |                            |                            |
| Contributions  |                             |                             |                            |                            |                            |
| Employee   | \$ 223,135                  | \$ 221,823                  | \$ 214,933                 | \$ 193,697                 | \$ 194,968                 |
| Employer   | 391,181                     | 338,819                     | 317,520                    | 394,998                    | 377,898                    |
| Transfers from Teachers' Retirement System           | 2,880                       | 1,823                       | 1,937                      | 2,012                      | 1,790                      |
| Transfers from Judicial Retirement Fund              | 1                           | -                           | -                          | -                          | -                          |
| Total Contributions                                  | <u>617,197</u>              | <u>562,465</u>              | <u>534,390</u>             | <u>590,707</u>             | <u>574,656</u>             |
| Investment Income                                    |                             |                             |                            |                            |                            |
| <i>From Investing Activities</i>                     |                             |                             |                            |                            |                            |
| Net Increase/(Decrease) in Fair Value of Investments | 888,303                     | 984,714                     | 1,114,737                  | (112,758)                  | 427,365                    |
| Interest and Dividends                               | 298,049                     | 310,220                     | 310,748                    | 307,152                    | 268,667                    |
| Total Investment Income from Investing Activities    | 1,186,352                   | 1,294,934                   | 1,425,485                  | 194,394                    | 696,032                    |
| Less: Investment Expenses, Net                       | 2,766                       | 2,549                       | 2,256                      | 2,308                      | 2,398                      |
| Net Investment Income from Investing Activities      | <u>1,183,586</u>            | <u>1,292,385</u>            | <u>1,423,229</u>           | <u>192,086</u>             | <u>693,634</u>             |
| <i>From Securities Lending Activities</i>            |                             |                             |                            |                            |                            |
| Securities Lending Income                            | 4,199                       | 5,780                       | 6,445                      | 6,891                      | 5,619                      |
| Less Securities Lending Expenses:                    |                             |                             |                            |                            |                            |
| Borrower Rebates                                     | 21                          | 186                         | 174                        | 517                        | 1,271                      |
| Management Fees                                      | 1,235                       | 1,519                       | 1,642                      | 1,521                      | 1,305                      |
| Total Securities Lending Expenses                    | <u>1,256</u>                | <u>1,705</u>                | <u>1,816</u>               | <u>2,038</u>               | <u>2,576</u>               |
| Net Income from Securities Lending Activities        | <u>2,943</u>                | <u>4,075</u>                | <u>4,629</u>               | <u>4,853</u>               | <u>3,043</u>               |
| Total Net Investment Income                          | <u>1,186,529</u>            | <u>1,296,460</u>            | <u>1,427,858</u>           | <u>196,939</u>             | <u>696,677</u>             |
| Total Additions                                      | <u>1,803,726</u>            | <u>1,858,925</u>            | <u>1,962,248</u>           | <u>787,646</u>             | <u>1,271,333</u>           |
| <b>Deductions</b>                                    |                             |                             |                            |                            |                            |
| Retirement Allowance Payments                        | 948,478                     | 895,475                     | 848,464                    | 782,957                    | 725,660                    |
| Return of Contributions and Death Benefits           | 47,937                      | 44,837                      | 40,746                     | 36,798                     | 33,868                     |
| Unit Withdrawals                                     | -                           | -                           | -                          | -                          | -                          |
| Transfers to Teachers' Retirement System             | 3,549                       | 3,345                       | 2,016                      | 2,059                      | 1,633                      |
| Transfers to Judicial Retirement Fund                | 83                          | 242                         | 164                        | 98                         | -                          |
| Administrative Expenses                              | 9,612                       | 9,767                       | 10,616                     | 10,002                     | 10,334                     |
| Depreciation   | 2,055                       | 2,015                       | 1,981                      | 2,029                      | 2,111                      |
| Total Deductions                                     | <u>1,011,714</u>            | <u>955,681</u>              | <u>903,987</u>             | <u>833,943</u>             | <u>773,606</u>             |
| <b>Net Increase/(Decrease)</b>                       | <u>792,012</u>              | <u>903,244</u>              | <u>1,058,261</u>           | <u>(46,297)</u>            | <u>497,727</u>             |
| <b>Net Position Restricted for Pension Benefits</b>  |                             |                             |                            |                            |                            |
| Beginning of Year - as previously reported           | 10,091,940                  | 9,188,696                   | 8,130,435                  | 8,176,732                  | 7,679,005                  |
| Adjustment for Application of GASB 68                | -                           | -                           | -                          | -                          | -                          |
| Adjustment for Application of GASB 75                | -                           | -                           | -                          | -                          | -                          |
| Beginning of Year - as adjusted                      | <u>10,091,940</u>           | <u>9,188,696</u>            | <u>8,130,435</u>           | <u>8,176,732</u>           | <u>7,679,005</u>           |
| <b>End of Year</b>                                   | <u><b>\$ 10,883,952</b></u> | <u><b>\$ 10,091,940</b></u> | <u><b>\$ 9,188,696</b></u> | <u><b>\$ 8,130,435</b></u> | <u><b>\$ 8,176,732</b></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>2019</u>       | <u>2018</u>       | <u>2017</u>       | <u>2016</u>       | <u>2015</u>       |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Additions</b>                                     |                   |                   |                   |                   |                   |
| Contributions  |                   |                   |                   |                   |                   |
| Employee   | \$ 3,912          | \$ 3,756          | \$ 3,711          | \$ 3,645          | \$ 3,639          |
| Employer   | 18,022            | 17,180            | 17,373            | 17,529            | 15,077            |
| Transfers from Teachers' Retirement System           | -                 | 9                 | -                 | -                 | -                 |
| Transfers from Employees' Retirement System          | 189               | 102               | 261               | 78                | 44                |
| Total Contributions                                  | <u>22,123</u>     | <u>21,047</u>     | <u>21,345</u>     | <u>21,252</u>     | <u>18,760</u>     |
| Investment Income                                    |                   |                   |                   |                   |                   |
| From Investing Activities                            |                   |                   |                   |                   |                   |
| Net Increase/(Decrease) in Fair Value of Investments | 3,476             | 20,071            | 25,639            | 21,302            | (7,695)           |
| Interest and Dividends                               | 7,463             | 7,471             | 6,910             | 6,865             | 6,698             |
| Total Investment Income from Investing Activities    | <u>10,939</u>     | <u>27,542</u>     | <u>32,549</u>     | <u>28,167</u>     | <u>(997)</u>      |
| Less: Investment Expenses, Net                       | -                 | -                 | -                 | -                 | -                 |
| Net Investment Income from Investing Activities      | <u>10,939</u>     | <u>27,542</u>     | <u>32,549</u>     | <u>28,167</u>     | <u>(997)</u>      |
| From Securities Lending Activities                   |                   |                   |                   |                   |                   |
| Securities Lending Income                            | 327               | 248               | 270               | 258               | 195               |
| Less Securities Lending Expenses:                    |                   |                   |                   |                   |                   |
| Borrower Rebates                                     | 218               | 134               | 90                | 58                | 7                 |
| Management Fees                                      | 32                | 34                | 44                | 46                | 47                |
| Total Securities Lending Expenses                    | <u>250</u>        | <u>168</u>        | <u>134</u>        | <u>104</u>        | <u>54</u>         |
| Net Income from Securities Lending Activities        | <u>77</u>         | <u>80</u>         | <u>136</u>        | <u>154</u>        | <u>141</u>        |
| Total Investment Income                              | <u>11,016</u>     | <u>27,622</u>     | <u>32,685</u>     | <u>28,321</u>     | <u>(856)</u>      |
| Total Additions                                      | <u>33,139</u>     | <u>48,669</u>     | <u>54,030</u>     | <u>49,573</u>     | <u>17,904</u>     |
| <b>Deductions</b>                                    |                   |                   |                   |                   |                   |
| Retirement Allowance Payments                        | 36,909            | 33,419            | 32,807            | 30,893            | 30,348            |
| Return of Contributions and Death Benefits           | 646               | 130               | 353               | 115               | 100               |
| Transfers to Employees' Retirement System            | -                 | -                 | -                 | -                 | 55                |
| Transfers to Teachers' Retirement System             | -                 | -                 | -                 | -                 | -                 |
| Administrative Expenses                              | 357               | 328               | 334               | 397               | 356               |
| Total Deductions                                     | <u>37,912</u>     | <u>33,877</u>     | <u>33,494</u>     | <u>31,405</u>     | <u>30,859</u>     |
| <b>Net Increase/(Decrease)</b>                       | <u>(4,773)</u>    | <u>14,792</u>     | <u>20,536</u>     | <u>18,168</u>     | <u>(12,955)</u>   |
| <b>Net Position Restricted for Pension Benefits</b>  |                   |                   |                   |                   |                   |
| Beginning of Year - as previously reported           | 317,314           | 302,578           | 282,042           | 263,874           | 277,096           |
| Adjustment for Application of GASB 68                | -                 | -                 | -                 | -                 | (267)             |
| Adjustment for Application of GASB 75                | -                 | (56)              | -                 | -                 | -                 |
| Beginning of Year - as adjusted                      | <u>317,314</u>    | <u>302,522</u>    | <u>282,042</u>    | <u>263,874</u>    | <u>276,829</u>    |
| <b>End of Year</b>                                   | <u>\$ 312,541</u> | <u>\$ 317,314</u> | <u>\$ 302,578</u> | <u>\$ 282,042</u> | <u>\$ 263,874</u> |

|  | <u>2014</u>       | <u>2013</u>       | <u>2012</u>       | <u>2011</u>       | <u>2010</u>       |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Additions</b>                                     |                   |                   |                   |                   |                   |
| Contributions  |                   |                   |                   |                   |                   |
| Employee   | \$ 3,681          | \$ 3,677          | \$ 3,517          | \$ 2,556          | \$ 2,566          |
| Employer   | 15,790            | 13,903            | 10,747            | 10,906            | 10,814            |
| Transfers from Teachers' Retirement System           | -                 | -                 | -                 | -                 | -                 |
| Transfers from Employees' Retirement System          | 83                | 242               | 164               | 98                | -                 |
| Total Contributions                                  | <u>19,554</u>     | <u>17,822</u>     | <u>14,428</u>     | <u>13,560</u>     | <u>13,380</u>     |
| Investment Income                                    |                   |                   |                   |                   |                   |
| From Investing Activities                            |                   |                   |                   |                   |                   |
| Net Increase/(Decrease) in Fair Value of Investments | 24,197            | 25,207            | 32,112            | (4,961)           | 15,287            |
| Interest and Dividends                               | 7,030             | 6,912             | 6,748             | 6,853             | 6,551             |
| Total Investment Income from Investing Activities    | <u>31,227</u>     | <u>32,119</u>     | <u>38,860</u>     | <u>1,892</u>      | <u>21,838</u>     |
| Less: Investment Expenses, Net                       | -                 | -                 | -                 | -                 | -                 |
| Net Investment Income from Investing Activities      | <u>31,227</u>     | <u>32,119</u>     | <u>38,860</u>     | <u>1,892</u>      | <u>21,838</u>     |
| From Securities Lending Activities                   |                   |                   |                   |                   |                   |
| Securities Lending Income                            | 167               | 184               | 215               | 201               | 169               |
| Less Securities Lending Expenses:                    |                   |                   |                   |                   |                   |
| Borrower Rebates                                     | 1                 | 10                | 12                | 22                | 45                |
| Management Fees                                      | 49                | 48                | 52                | 49                | 37                |
| Total Securities Lending Expenses                    | <u>50</u>         | <u>58</u>         | <u>64</u>         | <u>71</u>         | <u>82</u>         |
| Net Income from Securities Lending Activities        | <u>117</u>        | <u>126</u>        | <u>151</u>        | <u>130</u>        | <u>87</u>         |
| Total Investment Income                              | <u>31,344</u>     | <u>32,245</u>     | <u>39,011</u>     | <u>2,022</u>      | <u>21,925</u>     |
| Total Additions                                      | <u>50,898</u>     | <u>50,067</u>     | <u>53,439</u>     | <u>15,582</u>     | <u>35,305</u>     |
| <b>Deductions</b>                                    |                   |                   |                   |                   |                   |
| Retirement Allowance Payments                        | 29,826            | 29,112            | 27,183            | 26,379            | 24,526            |
| Return of Contributions and Death Benefits           | 54                | 196               | 253               | 34                | 235               |
| Transfers to Employees' Retirement System            | 1                 | -                 | -                 | -                 | -                 |
| Transfers to Teachers' Retirement System             | -                 | -                 | -                 | -                 | -                 |
| Administrative Expenses                              | 281               | 280               | 257               | 276               | 317               |
| Total Deductions                                     | <u>30,162</u>     | <u>29,588</u>     | <u>27,693</u>     | <u>26,689</u>     | <u>25,078</u>     |
| <b>Net Increase/(Decrease)</b>                       | <u>20,736</u>     | <u>20,479</u>     | <u>25,746</u>     | <u>(11,107)</u>   | <u>10,227</u>     |
| <b>Net Position Restricted for Pension Benefits</b>  |                   |                   |                   |                   |                   |
| Beginning of Year - as previously reported           | 256,360           | 235,881           | 210,135           | 221,242           | 211,015           |
| Adjustment for Application of GASB 68                | -                 | -                 | -                 | -                 | -                 |
| Adjustment for Application of GASB 75                | -                 | -                 | -                 | -                 | -                 |
| Beginning of Year - as adjusted                      | <u>256,360</u>    | <u>235,881</u>    | <u>210,135</u>    | <u>221,242</u>    | <u>211,015</u>    |
| <b>End of Year</b>                                   | <u>\$ 277,096</u> | <u>\$ 256,360</u> | <u>\$ 235,881</u> | <u>\$ 210,135</u> | <u>\$ 221,242</u> |

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Teachers' Retirement System

Retired Members by Type of Benefit as of September 30, 2018

| Amount of<br>Monthly Benefit | Number of<br>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                   | 1,442                  | 878                             | 419          | 145          | 268                          | 319           | 458           | 397           | -         |
| 251 - 500                    | 8,906                  | 6,555                           | 880          | 1,471        | 2,576                        | 3,435         | 1,777         | 1,115         | 3         |
| 501 - 750                    | 9,047                  | 7,198                           | 716          | 1,133        | 2,348                        | 3,666         | 1,880         | 1,148         | 5         |
| 751 - 1,000                  | 7,795                  | 6,361                           | 624          | 810          | 1,887                        | 3,142         | 1,632         | 1,128         | 6         |
| 1,001 - 1,250                | 6,613                  | 5,447                           | 512          | 654          | 1,339                        | 2,551         | 1,679         | 1,041         | 3         |
| 1,251 - 1,500                | 6,023                  | 5,032                           | 451          | 540          | 1,181                        | 2,233         | 1,682         | 926           | 1         |
| 1,501 - 1,750                | 7,131                  | 6,359                           | 337          | 435          | 1,266                        | 2,930         | 1,959         | 972           | 4         |
| 1,751 - 2,000                | 8,991                  | 8,450                           | 254          | 287          | 1,562                        | 4,042         | 2,104         | 1,280         | 3         |
| 2,001 - 2,250                | 9,171                  | 8,795                           | 210          | 166          | 1,396                        | 4,187         | 2,346         | 1,239         | 3         |
| 2,251 - 2,500                | 7,504                  | 7,254                           | 166          | 84           | 1,155                        | 3,543         | 1,848         | 955           | 3         |
| 2,501 - 2,750                | 5,471                  | 5,299                           | 119          | 53           | 807                          | 2,530         | 1,406         | 728           | -         |
| 2,751 - 3,000                | 4,075                  | 3,945                           | 96           | 34           | 611                          | 1,757         | 1,104         | 601           | 2         |
| 3,001 - 3,250                | 3,045                  | 2,942                           | 83           | 20           | 401                          | 1,299         | 889           | 452           | 4         |
| 3,251 - 3,500                | 2,292                  | 2,198                           | 83           | 11           | 313                          | 941           | 701           | 336           | 1         |
| 3,501 - 3,750                | 1,762                  | 1,707                           | 51           | 4            | 232                          | 706           | 567           | 254           | 3         |
| 3,751 - 4,000                | 1,364                  | 1,325                           | 34           | 5            | 197                          | 554           | 401           | 208           | 4         |
| 4,001 - 4,250                | 1,149                  | 1,117                           | 31           | 1            | 161                          | 482           | 324           | 180           | 2         |
| 4,251 - 4,500                | 847                    | 817                             | 28           | 2            | 106                          | 329           | 276           | 133           | 3         |
| 4,501 - 4,750                | 636                    | 621                             | 15           | -            | 86                           | 235           | 204           | 110           | 1         |
| 4,751 - 5,000                | 545                    | 532                             | 12           | 1            | 71                           | 207           | 182           | 83            | 2         |
| Over 5,000                   | 2,422                  | 2,340                           | 78           | 4            | 289                          | 762           | 918           | 439           | 14        |
| <b>Totals</b>                | <b>96,231</b>          | <b>85,172</b>                   | <b>5,199</b> | <b>5,860</b> | <b>18,252</b>                | <b>39,850</b> | <b>24,337</b> | <b>13,725</b> | <b>67</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

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Employees' Retirement System

Retired Members by Type of Benefit as of September 30, 2018

|    | Amount of<br>Monthly Benefit | Number of<br>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                      | 339                    | 134                             | 195          | 10           | 49                           | 29            | 68            | 185          | 9          |
|    | 251 - 500                    | 3,630                  | 2,332                           | 929          | 369          | 938                          | 907           | 893           | 842          | 50         |
|    | 501 - 750                    | 5,093                  | 3,523                           | 780          | 790          | 1,537                        | 1,574         | 1,034         | 867          | 81         |
|    | 751 - 1,000                  | 4,837                  | 3,413                           | 566          | 858          | 1,459                        | 1,620         | 853           | 823          | 82         |
|    | 1,001 - 1,250                | 5,308                  | 4,132                           | 464          | 712          | 1,270                        | 1,953         | 1,108         | 879          | 98         |
|    | 1,251 - 1,500                | 4,758                  | 3,921                           | 354          | 483          | 1,068                        | 1,836         | 1,043         | 736          | 75         |
|    | 1,501 - 1,750                | 4,491                  | 3,896                           | 260          | 335          | 942                          | 1,749         | 973           | 762          | 65         |
|    | 1,751 - 2,000                | 4,068                  | 3,696                           | 151          | 221          | 794                          | 1,677         | 826           | 725          | 45         |
|    | 2,001 - 2,250                | 3,456                  | 3,215                           | 103          | 138          | 663                          | 1,294         | 825           | 627          | 47         |
|    | 2,251 - 2,500                | 2,927                  | 2,727                           | 87           | 113          | 555                          | 1,147         | 679           | 508          | 38         |
|    | 2,501 - 2,750                | 2,334                  | 2,192                           | 61           | 81           | 411                          | 931           | 556           | 402          | 34         |
|    | 2,751 - 3,000                | 1,840                  | 1,747                           | 51           | 42           | 316                          | 723           | 434           | 344          | 23         |
|    | 3,001 - 3,250                | 1,591                  | 1,525                           | 43           | 23           | 267                          | 662           | 364           | 279          | 19         |
|    | 3,251 - 3,500                | 1,115                  | 1,074                           | 27           | 14           | 187                          | 451           | 254           | 206          | 17         |
|    | 3,501 - 3,750                | 900                    | 874                             | 16           | 10           | 154                          | 374           | 195           | 162          | 15         |
|    | 3,751 - 4,000                | 676                    | 658                             | 10           | 8            | 116                          | 292           | 141           | 116          | 11         |
|    | 4,001 - 4,250                | 564                    | 553                             | 9            | 2            | 75                           | 240           | 128           | 109          | 12         |
|    | 4,251 - 4,500                | 424                    | 408                             | 9            | 7            | 71                           | 163           | 105           | 80           | 5          |
|    | 4,501 - 4,750                | 324                    | 314                             | 10           | -            | 54                           | 130           | 80            | 56           | 4          |
|    | 4,751 - 5,000                | 277                    | 267                             | 7            | 3            | 51                           | 96            | 69            | 57           | 4          |
|    | Over 5,000                   | 1,108                  | 1,083                           | 20           | 5            | 187                          | 422           | 245           | 239          | 15         |
|    | <b>Totals</b>                | <b>50,060</b>          | <b>41,684</b>                   | <b>4,152</b> | <b>4,224</b> | <b>11,164</b>                | <b>18,270</b> | <b>10,873</b> | <b>9,004</b> | <b>749</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

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Judicial Retirement Fund

Retired Members by Type of Benefit as of September 30, 2018

| Amount of<br>Monthly Benefit | Number of<br>Retirants | Type of Retirement † |            |          | Option     |                       |
|------------------------------|------------------------|----------------------|------------|----------|------------|-----------------------|
|                              |                        | A                    | B          | C        | Maximum    | Joint<br>Survivorship |
| \$ 1 - 250                   | -                      | -                    | -          | -        | -          | -                     |
| 251 - 500                    | 2                      | -                    | 2          | -        | 2          | -                     |
| 501 - 750                    | 1                      | -                    | 1          | -        | 1          | -                     |
| 751 - 1,000                  | 4                      | -                    | 4          | -        | 4          | -                     |
| 1,001 - 1,250                | 4                      | -                    | 3          | 1        | 3          | 1                     |
| 1,251 - 1,500                | 12                     | -                    | 12         | -        | 12         | -                     |
| 1,501 - 1,750                | 7                      | 1                    | 6          | -        | 6          | 1                     |
| 1,751 - 2,000                | 4                      | -                    | 4          | -        | 4          | -                     |
| 2,001 - 2,250                | 3                      | -                    | 3          | -        | 3          | -                     |
| 2,251 - 2,500                | 1                      | -                    | 1          | -        | 1          | -                     |
| 2,501 - 2,750                | 1                      | -                    | 1          | -        | 1          | -                     |
| 2,751 - 3,000                | 4                      | -                    | 4          | -        | 4          | -                     |
| 3,001 - 3,250                | 6                      | 2                    | 1          | 3        | 2          | 4                     |
| 3,251 - 3,500                | 15                     | 5                    | 10         | -        | 10         | 5                     |
| 3,501 - 3,750                | 23                     | 1                    | 22         | -        | 22         | 1                     |
| 3,751 - 4,000                | 29                     | 2                    | 27         | -        | 29         | -                     |
| 4,001 - 4,250                | 2                      | 2                    | -          | -        | -          | 2                     |
| 4,251 - 4,500                | 6                      | 5                    | 1          | -        | 3          | 3                     |
| 4,501 - 4,750                | 8                      | 5                    | 2          | 1        | 3          | 5                     |
| 4,751 - 5,000                | 10                     | 6                    | 4          | -        | 4          | 6                     |
| Over 5,000                   | 262                    | 253                  | 5          | 4        | 52         | 210                   |
| <b>Totals</b>                | <b>404</b>             | <b>282</b>           | <b>113</b> | <b>9</b> | <b>166</b> | <b>238</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>2018</b>                  |                        |           |           |           |           |
| Average monthly benefit      | \$ 854                 | \$ 1,291  | \$ 1,785  | \$ 2,490  | \$ 3,635  |
| Average final average salary | \$ 44,361              | \$ 46,765 | \$ 50,942 | \$ 58,748 | \$ 68,533 |
| Number of active retirants   | 917                    | 714       | 623       | 1,460     | 726       |
| <b>2017</b>                  |                        |           |           |           |           |
| Average monthly benefit      | \$ 831                 | \$ 1,299  | \$ 1,866  | \$ 2,466  | \$ 3,315  |
| Average final average salary | \$ 42,451              | \$ 46,698 | \$ 51,545 | \$ 57,495 | \$ 63,269 |
| Number of active retirants   | 952                    | 631       | 744       | 1,396     | 605       |
| <b>2016</b>                  |                        |           |           |           |           |
| Average monthly benefit      | \$ 790                 | \$ 1,276  | \$ 1,679  | \$ 2,448  | \$ 3,558  |
| Average final average salary | \$ 41,166              | \$ 46,315 | \$ 47,377 | \$ 57,439 | \$ 66,923 |
| Number of active retirants   | 950                    | 646       | 626       | 1,456     | 502       |
| <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       |

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>2018</b>                  |                        |           |           |           |           |
| Average monthly benefit      | \$ 779                 | \$ 1,189  | \$ 1,848  | \$ 2,510  | \$ 3,641  |
| Average final average salary | \$ 41,733              | \$ 43,797 | \$ 51,794 | \$ 57,665 | \$ 68,460 |
| Number of active retirants   | 508                    | 403       | 325       | 808       | 486       |
| <b>2017</b>                  |                        |           |           |           |           |
| Average monthly benefit      | \$ 777                 | \$ 1,219  | \$ 1,851  | \$ 2,480  | \$ 3,529  |
| Average final average salary | \$ 40,630              | \$ 43,568 | \$ 52,468 | \$ 57,172 | \$ 65,786 |
| Number of active retirants   | 559                    | 354       | 329       | 701       | 464       |
| <b>2016</b>                  |                        |           |           |           |           |
| Average monthly benefit      | \$ 756                 | \$ 1,212  | \$ 1,655  | \$ 2,349  | \$ 3,341  |
| Average final average salary | \$ 39,679              | \$ 44,655 | \$ 47,798 | \$ 54,386 | \$ 61,838 |
| Number of active retirants   | 516                    | 340       | 357       | 852       | 425       |
| <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       |

**RETIREMENT SYSTEMS OF ALABAMA**

*Statistical Section*

Judicial Retirement Fund

Ten-Year History of Average Monthly Benefit Payments as of September 30

|                              | <b>Years of Credited Service</b> |              |              |              |            |
|------------------------------|----------------------------------|--------------|--------------|--------------|------------|
|                              | <b>10-14</b>                     | <b>15-19</b> | <b>20-24</b> | <b>25-29</b> | <b>30+</b> |
| <b>2018</b>                  |                                  |              |              |              |            |
| Average monthly benefit      | \$ 2,713                         | \$ 9,115     | \$ 9,200     | \$ 9,371     | \$ -       |
| Average final average salary | \$ 43,414                        | \$ 145,838   | \$ 147,199   | \$ 149,936   | \$ -       |
| Number of active retirants   | 4                                | 5            | 1            | 1            | -          |
| <b>2017</b>                  |                                  |              |              |              |            |
| Average monthly benefit      | \$ 8,409                         | \$ 8,519     | \$ 9,345     | \$ 8,453     | \$ 9,262   |
| Average final average salary | \$ 134,539                       | \$ 136,297   | \$ 149,518   | \$ 135,243   | \$ 148,185 |
| Number of active retirants   | 8                                | 8            | 3            | 4            | 4          |
| <b>2016</b>                  |                                  |              |              |              |            |
| Average monthly benefit      | \$ 6,928                         | \$ 8,952     | \$ 9,293     | \$ 8,204     | \$ -       |
| Average final average salary | \$ 110,854                       | \$ 143,234   | \$ 148,686   | \$ 131,271   | \$ -       |
| Number of active retirants   | 2                                | 3            | 1            | 4            | -          |
| <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 retirants   | 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 retirants   | 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 retirants   | 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 retirants   | 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 retirants   | 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 retirants   | 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 retirants   | 6                                | 2            | 5            | 5            | 1          |

# RETIREMENT SYSTEMS OF ALABAMA

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## *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  
Birmingham Racing Commission  
Birmingham Regional Planning Commission  
Birmingham Fire District  
Black Warrior Solid Waste Disposal Authority  
Blount County Commission  
Blount County Communications District  
Blount County Industrial Development Board  
Blount County Water Authority  
Blountsville Utility Board  
Blountsville, Town of  
Boaz Board of Water & Sewer Commissioners  
Boaz, City of  
Boldo Water & Fire Protection Authority  
Boston Housing Authority  
Brantley Housing Authority  
Brent Housing Authority  
Brent, City of  
Brewton Housing Authority  
Brewton, City of  
Bridgeport Housing Authority  
Bridgeport Utilities Board  
Bridgeport, City of  
Brilliant, Town of  
Brookwood, Town of  
Brundidge, City of  
Buhl-Elrod-Holman Water Authority

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Bullock County Commission  
Butler County Commission  
Butler County Emergency Communication  
District  
Butler, City of  
Cahaba Center for Mental Health & Mental  
Retardation  
Cahaba Valley Fire & Emergency Medical  
Rescue District  
Calera, City of  
Calhoun County 9-1-1 District  
Calhoun County Commission  
Calhoun County Community Punishment &  
Corrections Authority  
Calhoun County Economic Development  
Council  
Calhoun County Water & Fire Protection  
Authority  
Calhoun-Cleburne Mental Health Board  
Camden, City of  
Camp Hill, City of  
Carbon Hill Utilities Board  
Carbon Hill, City of  
Carl Elliott Regional Library  
Carroll's Creek Water Authority  
Carrollton, Town of  
Castleberry, Town of  
Cedar Bluff Utilities Board & Solid Waste  
Authority  
Cedar Bluff, Town of  
Center Point Fire District  
Center Point, City of  
Central Alabama Aging Consortium  
Central Alabama Regional Planning &  
Development Commission  
Central Alabama Youth Services  
Central Elmore Water & Sewer Authority  
Central Talladega County Water District  
Centre Water Works & Sewer Board  
Centre, City of  
Centreville, City of  
Chambers County Commission  
Chambers County Development Authority  
Chambers County Emergency Management  
Communications District  
Chambers County Library Board  
Chatom, City of  
Chelsea, City of  
Cherokee County Commission  
Cherokee County Water & Sewer Authority  
Cherokee, Town of  
Chickasaw Housing Authority  
Chickasaw Utilities Board  
Chickasaw, Town of  
Childersburg Water Works, Sewer & Gas Board  
Childersburg, City of  
Chilton County Commission

Chilton County Soil & Water Conservation  
District  
Chilton Water Authority  
Chilton/Clanton Public Library  
Chilton-Shelby Mental Health Center  
Choctaw County Emergency Communications  
District  
Citizenship Trust American Village  
Clanton Housing Authority  
Clanton Water Works & Sewer Board  
Clanton, City of  
Clarke County Commission  
Clarke County Industrial Development Board  
Clarke County Soil & Water Conservation  
District  
Clarke-Mobile Counties Gas District  
Clay County Commission  
Clay County E911  
Clay County Water Authority  
Clayton Housing Authority  
Clayton Water Works & Sewer Board  
Clayton, City of  
Cleburne County Commission  
Cleveland, Town of  
Coaling Water Authority  
Coaling, Town of  
Coffee County Commission  
Coffee County Water Authority  
Coffeeville, Town of  
Coker Water Authority  
Colbert County Commission  
Colbert County Emergency Management  
Communications District  
Colbert County Tourism & Convention Bureau  
Collinsville Water Works & Sewer Board  
Collinsville, City of  
Columbia, Town of  
Columbiana Housing Authority  
Columbiana Water Works Board  
Columbiana, Town of  
Concord Fire District  
Conecuh County Commission  
Conecuh County E911  
Conecuh County Soil & Water Conservation  
District  
Cook Springs Water Authority  
Cooperative District for Northeast Alabama Gas  
Coosa County Commission  
Coosa County Emergency Communication  
Management Board  
Coosa Valley Youth Services  
Coosada, Town of  
Cordova Water & Gas Board  
Cordova, City of  
Cottonwood Housing Authority  
Cottonwood, City of  
Courtland, Town of

# RETIREMENT SYSTEMS OF ALABAMA

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## *Statistical Section*

### Employees' Retirement System

#### Local Participating Employers

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Covington County Commission  
Covington County E911 Board  
Covington County Water Authority  
Cowarts, Town of  
Crenshaw County Commission  
Crenshaw County Emergency Communications District  
Creola, City of  
Crossville, Town of  
Cuba, Town of  
Cullman County Center for the Developmentally Disabled  
Cullman County Commission  
Cullman County E-911  
Cullman Power Board  
Cullman, City of  
Cullman-Jefferson Counties Gas District  
Cumberland Mountain Water Authority  
Curry Water Authority  
CWM Water Authority  
Dadeville Housing Authority  
Dadeville Water Supply & Gas Board  
Dadeville, City of  
Dadeville, Waterworks and Sewer Board of  
Dale County Commission  
Dale County Water Authority  
Daleville Housing Authority  
Daleville, City of  
Dallas County Commission  
Dallas County Water & Sewer Authority  
Daphne Utilities Board  
Daphne, City of  
Dauphin Island Park & Beach Board  
Dauphin Island Water & Sewer Authority  
Dauphin Island, Town of  
Decatur Utilities  
Decatur, City of  
DeKalb County Commission  
DeKalb County Economic Development Authority  
DeKalb County Emergency Communications District  
DeKalb County Hospital Association  
DeKalb County Mental Retardation Board  
DeKalb County Soil & Water Conservation District  
DeKalb-Cherokee Counties Gas District  
DeKalb-Jackson Water Supply District Board  
Demopolis Housing Authority  
Demopolis Water Works & Sewer Board  
Demopolis, City of  
Dora Waterworks & Gas Board  
Dora, City of  
Dothan, City of  
Dothan-Houston County Intellectual Disabilities Board  
Dothan-Houston County Communications District  
Double Springs Water Works Board  
Double Springs, Town of  
Douglas Water Authority  
Douglas, Town of  
Dutton, Town of  
East Alabama Mental Health-Mental Retardation Board  
East Alabama Regional Planning & Development Commission  
East Alabama Water, Sewer & Fire Protection District  
East Brewton Water Works & Sewer Board  
East Brewton, City of  
East Central Alabama Gas District  
East Central Baldwin County Water & Fire Protection Authority  
East Lauderdale County Water & Fire Protection Authority  
Eclectic, Town of  
Elba Water & Electric Board  
Elba, City of  
Elberta, City of  
Electric Cities of Alabama  
Elmore County Commission  
Elmore County Emergency Communications District  
Elmore Water & Sewer Authority  
Enterprise Housing Authority  
Enterprise Water Works Board  
Enterprise, City of  
Ernest F. Ladd Memorial Stadium  
Escambia County Commission  
Escambia County Cooperative Library System  
Escambia County Emergency Communications District  
Etowah County Commission  
Etowah County Communications District  
Etowah County Community Corrections  
Etowah County Tourism Board  
Etowah Solid Waste Disposal Authority  
Eufaula Housing Authority  
Eufaula Water Works & Sewer Board  
Eufaula, City of  
Eutaw, City of  
Evergreen Housing Authority  
Evergreen, City of  
Excel, Town of  
Fairfield, City of  
Fairhope Public Library  
Fairhope, City of  
Falkville, Town of  
Fayette County Commission  
Fayette County E911 District  
Fayette County Water Authority  
Fayette Gas Board  
Fayette Housing Authority  
Fayette Water Works Board  
Fayette, City of

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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  
 Gilberttown Utilities Board  
 Gilberttown, 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  
 Guin Housing Authority  
 Guin Water Works & Sewer Board  
 Guin, City of  
 Gulf Shores Utilities Board  
 Gulf Shores, City of  
 Guntersville Electric Board  
 Guntersville Housing Authority  
 Guntersville Water Works & Sewer Board  
 Guntersville, City of  
 Gurley, Town of  
 Hackleburg Housing Authority  
 Hackleburg Water Board  
 Hackleburg, Town of  
 Hackneyville Water & Fire Protection Authority  
 Hale County Commission  
 Hale County Emergency Medical Service  
 Hale County Soil & Water Conservation District  
 Haleyville, City of  
 Hamilton Housing Authority  
 Hamilton, City of  
 Hammondville, Town of  
 Hanceville Water Works & Sewer Board  
 Hanceville, City of  
 Harpersville, Town of  
 Hartford, City of  
 Hartselle Utilities Board  
 Hartselle, City of  
 Hartselle, Housing Authority of the City of  
 Harvest-Monrovia Water, Sewer & Fire Protection Authority  
 Hayden, Town of  
 Hayneville, City of  
 Headland Housing Authority  
 Headland, City of  
 Heflin Water Works & Sewer Board  
 Heflin, City of  
 Helena Utilities Board  
 Helena, City of  
 Henry County Commission  
 Henry County Water Authority  
 Highland Water Authority  
 Hillsboro, Town of  
 Historic Blakeley Authority  
 Hodges, Town of  
 Hokes Bluff Water Board  
 Hokes Bluff, Town of

# RETIREMENT SYSTEMS OF ALABAMA

## *Statistical Section*

### Employees' Retirement System

#### Local Participating Employers

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Holly Pond, Town of  
Hollywood, Town of  
Homewood, City of  
Hoover, City of  
Horseshoe Bend Regional Library  
Houston County Commission  
Houston County Soil Conservation District  
Houston County Water Authority  
Houston-Love Memorial Library  
Hueytown, City of  
Huguley Water, Sewer & Fire Protection Authority  
Huntsville Electric Utilities System  
Huntsville Gas Utilities System  
Huntsville Solid Waste Disposal Authority  
Huntsville Waterworks Utilities System  
Huntsville, City of  
Huntsville/Madison County Convention & Visitors Bureau  
Huntsville-Madison County Airport Authority  
Huntsville-Madison County Marina & Port Authority  
Huntsville-Madison County Mental Health Center Board  
Indian Pines Recreational Authority  
International Motorsports Hall of Fame  
Irondale, City of  
J. Paul Jones Hospital  
Jackson County Commission  
Jackson County Economic Development Authority  
Jackson County Emergency Management Communications District  
Jackson County Soil & Water Conservation District  
Jackson County Water Authority  
Jackson, City of  
Jackson's Gap Water Authority  
Jackson's Gap, Town of  
Jacksonville Housing Authority  
Jacksonville Water Works, Gas & Sewer Board  
Jacksonville, City of  
Jasper Waterworks & Sewer Board  
Jasper, City of  
Jefferson County Department of Health  
Jefferson County Housing Authority  
Jefferson-Blount-St. Clair Mental Health Authority  
Jemison, Town of  
Joppa, Hulaco & Ryan Water Authority  
Kennedy, City of  
Killen, City of  
Kinsey, Town of  
LaFayette, City of  
Lamar County Commission  
Lamar County Communications District  
Lamar County Gas District  
Lanett, City of  
Lauderdale County Commission  
Lauderdale County Community Corrections Authority  
Lauderdale County Regional Library System  
Lawrence County Commission  
Lee County Commission  
Leeds Housing Authority  
Leeds Water Works Board  
Leeds, City of  
Lee-Russell Council of Governments  
Leesburg, Town of  
Leighton Water & Sewer Board  
Leighton, Town of  
Level Plains, Town of  
Limestone County Commission  
Limestone County Water & Sewer Authority  
Lincoln, City of  
Linden, City of  
Lineville Housing Authority  
Lineville Waterworks & Sewer Board  
Lineville, City of  
Littleville, Town of  
Livingston Housing Authority  
Livingston, City of  
Loachapoka Water Authority  
Locust Fork, Town of  
Lowndes County Commission  
Loxley, City of  
Luverne Housing Authority  
Luverne, City of  
Lynn, Town of  
Macon County Commission  
Macon County Racing Commission  
Madison County 310 Board  
Madison County Commission  
Madison County Communications District  
Madison Water & Wastewater Board  
Madison, City of  
Magnolia Springs, Town of  
Malvern, Town of  
Maplesville Waterworks & Gas Board  
Maplesville, City of  
Marengo County Commission  
Marengo County Economic & Industrial Development Authority  
Marengo County Emergency Communications District  
Marengo Nursing Home  
Margaret, Town of  
Marion County Commission  
Marion County Emergency Communications District  
Marion County Public Water Authority  
Marion Housing Authority  
Marion, City of  
Marshall County Commission  
Marshall County Community Punishment & Corrections Authority

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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, 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  
 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

# RETIREMENT SYSTEMS OF ALABAMA

## *Statistical Section*

### Employees' Retirement System

#### Local Participating Employers

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Orange Beach, Town of  
Owassa/Brownville Water Authority  
Owens Cross Roads, City of  
Oxford Emergency Medical Services  
Oxford, City of  
Ozark Utilities Board  
Ozark, City of  
Ozark-Dale County E911  
Parrish Water Works & Sewer Board  
Parrish, Town of  
Pelham, City of  
Pell City Housing Authority  
Pell City, City of  
Pennington Utilities Board  
Pennington, City of  
Perdido Bay Water, Sewer and Fire Protection District  
Perry County Capital Improvement Cooperative District  
Perry County Commission  
Perry County E911  
Perry County Water Authority  
Phenix City Utilities  
Phenix City, City of  
Phil Campbell Housing Authority  
Phil Campbell Water Works & Sewer Board  
Phil Campbell, Town of  
Pickens County Commission  
Pickens County Cooperative Library  
Pickens County E911 Board  
Pickens County Water Authority  
Piedmont Housing Authority  
Piedmont, City of  
Pike County Commission  
Pike County Communications District  
Pike County Soil & Water Conservation District  
Pike County Water Authority  
Pike Road, Town of  
Pike Road Volunteer Fire Protection Authority  
Pine Bluff Water Authority  
Pine Hill, Town of  
Pine Level Water Authority  
Pinson, City of  
Pisgah, Town of  
Pleasant Grove, City of  
Prattville Housing Authority  
Prattville Water Works Board  
Prattville, City of  
Priceville, Town of  
Prichard Housing Authority  
Quint-Mar Water Authority  
Ragland Water Works Board  
Ragland, Town of  
Rainbow City Utilities Board  
Rainbow City, City of  
Rainsville, City of  
Randolph County Commission  
Randolph County E911  
Red Bay Housing Authority  
Red Bay Water Works & Gas Board  
Red Bay, City of  
Reform Housing Authority  
Reform, City of  
Regional Housing Authority of Lawrence, Cullman & Morgan Counties  
Rehobeth, City of  
Remlap-Pine Mountain Water Authority  
Repton, Town of  
Riverbend Center for Mental Health  
Riverside, Town of  
Roanoke Utility Board  
Roanoke, City of  
Robertsdale, City of  
Rockford Utilities Board  
Rocky Ridge Fire District  
Rogersville Water Works & Sewer Board  
Rogersville, Town of  
Russell County Commission  
Russell County Emergency Communications District  
Russell County Soil & Water Conservation District  
Russell County Water Authority  
Russellville Electric Board  
Russellville Gas Board  
Russellville Housing Authority  
Russellville Water & Sewer Board  
Russellville, City of  
Rutledge, Town of  
Samson, City of  
Saraland Water Service  
Saraland, City of  
Sardis City Water Board  
Sardis, City of  
Satsuma Water Works Board  
Satsuma, City of  
Scottsboro Electric Power Board  
Scottsboro Housing Authority  
Scottsboro Public Library  
Scottsboro Public Park & Recreation Board  
Scottsboro Waterworks, Sewer & Gas Board  
Scottsboro, City of  
Section Waterworks Board  
Section, Town of  
Selma Housing Authority  
Selma Water & Sewer Board  
Selma, City of  
Sheffield Utilities Board  
Sheffield, City of  
Shelby County Commission  
Shelby County Community Corrections  
Shelby County Emergency Management Communications District  
Shelby County Soil Conservation District  
Shoals Committee on Programs & Employment for the Mentally Retarded

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Shoals Economic Development Authority  
Shoals Solid Waste Disposal Authority  
Shorter, Town of  
Silas, Town of  
Silverhill, Town of  
Skyline, Town of  
Slocomb Waterworks & Sewer Board  
Slocomb, Town of  
Smiths Station, City of  
Smiths Water & Sewer Authority  
Snead, Town of  
Somerville, Town of  
South Alabama Gas District  
South Alabama Regional Planning Commission  
South Central Alabama Development Commission  
South Central Alabama Mental Health Board  
South Central Alabama Regional Housing Authority  
South Crenshaw County Water Authority  
South Marengo County Water & Fire Protection Authority  
Southeast Alabama Regional Planning & Development Commission  
Southeast Alabama Solid Waste Disposal Authority  
Southeast Alabama Youth Services  
Southern Alabama Regional Council on Aging  
Southside Water Works & Sewer Board  
Southside, City of  
Southwest Alabama Water Authority  
Spanish Fort Fire Rescue Department  
Spanish Fort, City of  
SpectraCare Health Systems  
Springville, Town of  
St. Clair County Commission  
St. Clair County Community Punishment & Corrections Authority  
St. Clair County Industrial Development Board  
St. Clair County Soil & Water Conservation District  
St. Florian, Town of  
Star-Mindingall Water & Fire Protection Authority  
Steele, Town of  
Stevenson Housing Authority  
Stevenson Utilities Board  
Stevenson, City of  
Stewartville Water Authority  
Sulligent Housing Authority  
Sulligent, City of  
Sumiton Housing Authority  
Sumiton Water Works Board  
Sumiton, City of  
Summerdale, Town of  
Sumter County Commission

Sumter County Industrial Development Authority  
Sumter County Soil & Water Conservation District  
Sumter County Water Authority  
Sylacauga Parks & Recreation Board  
Sylacauga Utilities Board  
Sylacauga, City of  
Sylvan Springs, Town of  
Sylvania, Town of  
Talladega County Commission  
Talladega County Emergency Management Communications District  
Talladega County Soil & Water Conservation District  
Talladega, City of  
Tallapoosa County Commission  
Tallasse, City of  
Tarrant Alabama Housing Authority  
Tarrant Electric System  
Tarrant, City of  
Taylor, Town of  
Tennessee Valley Exhibit Commission  
Thomaston, Town of  
Thomasville, City of  
Thorsby, Town of  
Top of Alabama Regional Council of Governments  
Top Trails Public Park Authority of the Cities of Lincoln and Talladega  
Town Creek, Town of  
Triana, City of  
TriCounty Agency for Intellectual Disabilities  
Trinity, Town of  
Troy Housing Authority  
Troy, City of  
Trussville Utilities Board  
Trussville, City of  
Turnerville Water & Fire Protection District  
Tuscaloosa County Commission  
Tuscaloosa County Community Punishment & Corrections Authority  
Tuscaloosa County 911  
Tuscaloosa County Industrial Development Authority  
Tuscaloosa County Office of Public Defender  
Tuscaloosa County Park & Recreation Authority  
Tuscaloosa County Parking & Transit Authority  
Tuscaloosa County Soil & Water Conservation District  
Tuscaloosa County Special Tax Board  
Tuscaloosa Housing Authority  
Tuscaloosa Public Library  
Tuscaloosa, City of  
Tuscumbia, City of  
Tuskegee Utilities Board

# RETIREMENT SYSTEMS OF ALABAMA

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## *Statistical Section*

### Employees' Retirement System

#### Local Participating Employers

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Tuskegee, City of  
Union Grove Utilities Board  
Union Springs Utilities Board  
Union Springs, City of  
Uniontown Housing Authority  
Uniontown Utilities Board  
Uniontown, Town of  
USS Alabama Battleship Commission  
Valley Grande, City of  
Valley Head Water Works Board  
Valley Head, City of  
Valley Housing Authority  
Valley, City of  
Vance, Town of  
Vernon Housing Authority  
Vernon, City of  
Vestavia Hills, City of  
Vincent, City of  
Vincent, The Water Works Board of the City of  
Von Braun Civic Center  
Wadley, Town of  
Walker County Commission  
Walker County E9-1-1 District  
Walker County Housing Authority  
Walker County Soil & Water Conservation  
District  
Wall Street Water Authority  
Walnut Hill Water Authority  
Warrior River Water Authority  
Warrior, City of  
Washington County Commission  
Washington County E911 Communication  
District  
Washington County Soil & Water Conservation  
District  
Wattsville Water Authority  
Weaver, City of  
Webb, Town of  
Wedowee Water, Sewer & Gas Board  
Wedowee, City of  
West Alabama Regional Commission  
West Autauga Water Authority  
West Escambia Utilities  
West Etowah County Water Authority  
West Jefferson, Town of  
West Lauderdale County Water & Fire  
Protection Authority  
West Morgan–East Lawrence Water & Sewer  
Authority  
Wetumpka Water Works & Sewer Board  
Wetumpka, City of  
Wilcox County Commission  
Wilcox County Emergency Communications  
District  
Wilcox County Gas District  
Wilsonville, Town of  
Wilton, Town of  
Winfield Water Works & Sewer Board  
Winfield, City of  
Winston County Commission  
Winston County E9-1-1 Communications  
District  
Woodland, Town of  
Woodstock, Town of  
York Housing Authority  
York, City of

RETIREMENT SYSTEMS OF ALABAMA

Statistical Section

Employees' Retirement System  
Ten-Year History of Largest Employers

|                           | 2018                | 2017                | 2016                | 2015                | 2014                | 2013                  | 2012                  | 2011                  | 2010                  | 2009                  |
|---------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1) Employer               | State of Alabama      | State of Alabama      | State of Alabama      | State of Alabama      | State of Alabama      |
| # of Active Members       | 29,664              | 29,548              | 29,756              | 30,109              | 30,297              | 30,659                | 31,795                | 33,885                | 35,147                | 35,200                |
| % of Total Active Members | 34.27%              | 34.50%              | 35.08%              | 35.43%              | 35.40%              | 35.84%                | 36.85%                | 38.36%                | 39.24%                | 39.10%                |
| 2) Employer               | Huntsville, City of   | Huntsville, City of   | Huntsville, City of   | Huntsville, City of   | Huntsville, City of   |
| # of Active Members       | 2,562               | 2,296               | 2,258               | 2,207               | 2,243               | 2,209                 | 2,192                 | 2,195                 | 2,175                 | 2,227                 |
| % of Total Active Members | 2.73%               | 2.68%               | 2.66%               | 2.60%               | 2.62%               | 2.58%                 | 2.54%                 | 2.48%                 | 2.43%                 | 2.47%                 |
| 3) Employer               | Mobile County         | Mobile County         | Mobile County         | Mobile County         | Mobile County         |
| # of Active Members       | 1,596               | 1,610               | 1,604               | 1,587               | 1,578               | 1,625                 | 1,657                 | 1,672                 | 1,678                 | 1,699                 |
| % of Total Active Members | 1.84%               | 1.88%               | 1.89%               | 1.87%               | 1.84%               | 1.90%                 | 1.92%                 | 1.89%                 | 1.87%                 | 1.89%                 |
| 4) Employer               | Mobile, City of     | Mobile, City of     | Mobile, City of     | Mobile, City of     | AltaPointe Health*  | Mobile, City of       |
| # of Active Members       | 1,104               | 1,150               | 1,195               | 1,250               | 1,341               | 1,282                 | 1,254                 | 1,310                 | 1,335                 | 1,421                 |
| % of Total Active Members | 1.28%               | 1.34%               | 1.41%               | 1.47%               | 1.57%               | 1.50%                 | 1.45%                 | 1.48%                 | 1.49%                 | 1.58%                 |
| 5) Employer               | Madison County      | Madison County      | Madison County      | Madison County      | Mobile, City of     | AltaPointe Health*    | Madison County        | Madison County        | Madison County        | Madison County        |
| # of Active Members       | 1,083               | 1,107               | 1,145               | 1,152               | 1,254               | 1,236                 | 1,154                 | 1,162                 | 1,133                 | 1,060                 |
| % of Total Active Members | 1.25%               | 1.29%               | 1.35%               | 1.36%               | 1.47%               | 1.44%                 | 1.34%                 | 1.32%                 | 1.27%                 | 1.18%                 |
| 6) Employer               | Dothan, City of     | Dothan, City of     | Dothan, City of     | Dothan, City of     | Madison County      | Madison County        | Helen Keller Hospital | Dothan, City of       | Helen Keller Hospital | Helen Keller Hospital |
| # of Active Members       | 1,032               | 1,018               | 999                 | 995                 | 1,152               | 1,174                 | 1,002                 | 957                   | 984                   | 1,034                 |
| % of Total Active Members | 1.19%               | 1.19%               | 1.18%               | 1.17%               | 1.35%               | 1.37%                 | 1.16%                 | 1.08%                 | 1.10%                 | 1.15%                 |
| 7) Employer               | Auburn, City of     | Montgomery County   | Montgomery County   | AltaPointe Health*  | Dothan, City of     | Dothan, City of       | Dothan, City of       | Helen Keller Hospital | Dothan, City of       | Dothan, City of       |
| # of Active Members       | 828                 | 801                 | 807                 | 792                 | 996                 | 985                   | 966                   | 956                   | 961                   | 970                   |
| % of Total Active Members | 0.96%               | 0.94%               | 0.95%               | 0.93%               | 1.16%               | 1.15%                 | 1.12%                 | 1.08%                 | 1.07%                 | 1.08%                 |
| 8) Employer               | Tuscaloosa, City of | Auburn, City of     | Tuscaloosa, City of | Tuscaloosa, City of | Tuscaloosa, City of | Tuscaloosa, City of   | AltaPointe Health*    | Montgomery County     | Montgomery County     | Montgomery County     |
| # of Active Members       | 759                 | 786                 | 774                 | 777                 | 790                 | 775                   | 911                   | 794                   | 848                   | 806                   |
| % of Total Active Members | 0.88%               | 0.92%               | 0.91%               | 0.91%               | 0.92%               | 0.91%                 | 1.06%                 | 0.90%                 | 0.95%                 | 0.90%                 |
| 9) Employer               | Montgomery County   | Tuscaloosa, City of | Auburn, City of     | Montgomery County   | Montgomery County   | Montgomery County     | Montgomery County     | AltaPointe Health*    | Tuscaloosa, City of   | Tuscaloosa, City of   |
| # of Active Members       | 757                 | 783                 | 752                 | 766                 | 769                 | 767                   | 771                   | 762                   | 745                   | 732                   |
| % of Total Active Members | 0.87%               | 0.91%               | 0.89%               | 0.90%               | 0.90%               | 0.90%                 | 0.89%                 | 0.86%                 | 0.83%                 | 0.81%                 |
| 10) Employer              | Hoover, City of     | Hoover, City of     | Hoover, City of     | Auburn, City of     | Hoover, City of     | Helen Keller Hospital | Tuscaloosa, City of   | Tuscaloosa, City of   | AltaPointe Health*    | AltaPointe Health*    |
| # of Active Members       | 689                 | 706                 | 704                 | 706                 | 678                 | 729                   | 763                   | 757                   | 668                   | 685                   |
| % of Total Active Members | 0.80%               | 0.82%               | 0.83%               | 0.83%               | 0.79%               | 0.85%                 | 0.88%                 | 0.86%                 | 0.75%                 | 0.76%                 |
| Total # of Active Members | 86,565              | 85,657              | 84,814              | 84,985              | 85,585              | 85,549                | 86,290                | 88,341                | 89,560                | 90,018                |

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

Source: Retirement Systems of Alabama records





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