



**Cavanaugh Macdonald**  
CONSULTING, LLC

*The experience and dedication you deserve*



Retirement Systems  
of Alabama

**Report on the Actuarial Valuation of the  
Employees' Retirement System of Alabama  
Prepared as of September 30, 2017**





# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

May 31, 2018

Board of Control  
Employees' Retirement System of Alabama  
Montgomery, Alabama

Members of the Board:

In this report are submitted the results of the annual actuarial valuation of the assets and liabilities of the Employees' Retirement System of Alabama, prepared as of September 30, 2017 in accordance with Section 36-27-23(p) of the act governing the operation of the System.

The purpose of this report is to provide a summary of the funded status of the System as of September 30, 2017 and to recommend rates of employer contribution. While not verifying the data at the source, the actuary performed tests for consistency and reasonability.

On the basis of the valuation, it is recommended that the employer make contributions to the System for State employees (members other than State policemen) at the rate of 15.24% of payroll for Tier I members and 14.87% for Tier II members for the fiscal year ending September 30, 2020. It is also recommended that the employer make contributions to the System for State policemen at the rate of 52.29% of payroll for Tier I members and 45.56% for Tier II members for the fiscal year ending September 30, 2020. The contribution rates for local employers for the fiscal year beginning October 1, 2019 will be submitted in a separate report and will include the impact of all assumption changes and employer-elected changes through September 30, 2017.

The promised benefits of the System are included in the actuarially calculated contribution rates which are developed using the Entry Age Normal cost method. Five-year smoothed market value of assets is used for actuarial valuation purposes. Gains and losses are reflected in the unfunded actuarial accrued liability that is being amortized by regular annual contributions as a level percentage of payroll, on the assumption that payroll will increase by 3.00% annually. Since the previous valuation, the System has been amended to provide for a one-time lump sum payment to retired state employee and state police members and beneficiaries in June, 2018 under Act 2018-355. The assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the System and to reasonable expectations of anticipated experience under the System. The assumptions and methods used for funding purposes meet the parameters outlined in the Board's funding policy.

In this report we provide the following information and supporting schedules in the Actuarial and Statistical Sections of the Comprehensive Annual Financial Report (CAFR):

- Summary of Actuarial Assumptions and Methods
- Actuarial Cost Method
- Summary of Plan Provisions as Interpreted for Valuation Purposes
- Schedule of Funding Progress
- Solvency Test
- Schedule of Active Member Valuation Data



We also provide the following schedules for the CAFR in a separate supplemental report:

- Analysis of Actuarial Gains and Losses
- Schedule of Retirants and Beneficiaries Added and Removed from Rolls
- Retired Members by Type of Benefit as of September 30, 2017
- Ten-Year History of Average Monthly Benefit Payments as of September 30

The necessary GASB Statements No. 67 and 68 disclosure information is provided in separate supplemental reports.

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

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

The actuarial computations presented in this report are for purposes of determining the recommended funding amount for the System. Use of these computations for purposes other than meeting these requirements may not be appropriate.

In our opinion the System is operating on an actuarially sound basis. Assuming that contributions to the System are made by the employer from year to year in the future at the rates recommended on the basis of the successive actuarial valuations, the continued sufficiency of the retirement fund to provide the benefits called for under the System may be safely anticipated.

The Table of Contents, which immediately follows, outlines the material contained in the report.

Respectfully submitted,

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

Edward A. Macdonald, ASA, FCA, MAAA  
President

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

Cathy Turcot  
Principal and Managing Director

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

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



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**REPORT ON THE ACTUARIAL VALUATION OF  
THE EMPLOYEES' RETIREMENT SYSTEM OF ALABAMA  
PREPARED AS OF SEPTEMBER 30, 2017**

**SECTION I - SUMMARY OF PRINCIPAL RESULTS**

1. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results for State Employees, State Policemen and Local Employees are summarized below:

**SUMMARY OF PRINCIPAL RESULTS FOR STATE EMPLOYEES**

<b>VALUATION DATE</b>	<b>September 30, 2017</b>	<b>September 30, 2016</b>
Number of active members	28,926	29,101
Annual compensation	\$ 1,271,674,805	\$ 1,265,310,969
Number of retired members and beneficiaries*	23,860	23,614
Annual retirement allowances*	\$ 524,315,915	\$ 513,858,040
Number of deferred vested members	965	942
Estimated deferred annual allowances	\$ 11,741,006	\$ 11,332,390
Assets:		
Actuarial value	\$ 4,759,601,603	\$ 4,598,818,390
Market value	4,910,512,917	4,615,916,406
Unfunded actuarial accrued liability	\$ 2,821,545,296	\$ 2,805,769,277
Funded Ratio based on Actuarial Value of Assets	62.8%	62.1%
<b>CONTRIBUTIONS FOR FISCAL YEAR ENDING</b>	<b>September 30, 2020</b>	<b>September 30, 2019</b>
<b><u>Tier I (first hired prior to January 1, 2013)</u></b>		
Employer contribution rate		
Normal	0.89%	0.78%
Accrued liability	13.47	13.36
Death benefit	0.02	0.02
Administration	0.35	0.35
Subtotal	14.73%	14.51%
Act 2018-355	0.51	N/A
Total	15.24%	14.51%
<b><u>Tier II (first hired on or after January 1, 2013)</u></b>		
Employer contribution rate		
Normal	0.52%	0.41%
Accrued liability	13.47	13.36
Death benefit	0.02	0.02
Administration	0.35	0.35
Subtotal	14.36%	14.14%
Act 2018-355	0.51	N/A
Total	14.87%	14.14%
Blended Amortization period	28.9 years	29.3 years

\*Includes post-DROP members in suspended status who are also active with a second retirement account.



**SUMMARY OF PRINCIPAL RESULTS FOR STATE POLICEMEN**

<b>VALUATION DATE</b>	<b>September 30, 2017</b>	<b>September 30, 2016</b>
Number of active members	622	655
Annual compensation	\$ 40,366,017	\$ 41,213,571
Number of retired members and beneficiaries*	895	893
Annual retirement allowances*	\$ 42,198,295	\$ 41,425,353
Number of deferred vested members	15	13
Estimated deferred annual allowances	\$ 252,435	\$ 214,321
Assets:		
Actuarial value	\$ 333,960,260	\$ 318,102,553
Market value	343,920,208	318,884,908
Unfunded actuarial accrued liability	\$ 273,147,256	\$ 272,554,852
Funded Ratio based on Actuarial Value of Assets	55.0%	53.9%
<b>CONTRIBUTION FOR FISCAL YEAR ENDING</b>	<b>September 30, 2020</b>	<b>September 30, 2019</b>
<b><u>Tier I (first hired prior to January 1, 2013)</u></b>		
Employer contribution rate		
Normal	10.52%	10.27%
Accrued liability	40.71	39.44
Death benefit	0.02	0.02
Administration	<u>0.35</u>	<u>0.35</u>
Subtotal	51.60%	50.08%
Act 2018-355	<u>0.69</u>	N/A
Total	52.29%	50.08%
<b><u>Tier II (first hired on or after January 1, 2013)</u></b>		
Employer contribution rate		
Normal	3.79%	3.62%
Accrued liability	40.71	39.44
Death benefit	0.02	0.02
Administration	<u>0.35</u>	<u>0.35</u>
Subtotal	44.87%	43.43%
Act 2018-355	<u>0.69</u>	N/A
Total	45.56%	43.43%
Blended Amortization Period	28.8 years	29.3 years

\*Includes post-DROP members in suspended status who are also active with a second retirement account.



**SUMMARY OF PRINCIPAL RESULTS FOR LOCAL EMPLOYEES**

<b>VALUATION DATE</b>	<b>September 30, 2017</b>	<b>September 30, 2016</b>
Number of active members	56,109	55,058
Annual compensation	\$ 2,272,659,180	\$ 2,266,366,656
Number of retired members and beneficiaries*	24,021	23,242
Annual retirement allowances*	\$ 474,528,020	\$ 450,027,767
Number of deferred vested members	1,398	1,155
Estimated deferred annual allowances	\$ 16,323,315	\$ 13,193,635
Assets:		
Actuarial value	\$ 6,597,389,643	\$ 6,165,358,692
Market value	6,797,752,477	6,173,636,004
Unfunded actuarial accrued liability	\$ 2,465,190,126	\$ 2,567,404,790
Funded Ratio based on Actuarial Value of Assets	72.8%	70.6%
<b>CONTRIBUTIONS FOR FISCAL YEAR ENDING</b>	<b>September 30, 2020</b>	<b>September 30, 2019</b>
Employer contribution rate		
Normal	Varies	Varies
Accrued liability	Varies	Varies
Death benefit	0.02%	0.02%
Administration	<u>0.35</u>	<u>0.35</u>
Total	Varies	Varies
Amortization period	Varies	Varies

\*Includes post-DROP members in suspended status who are also active with a second retirement account.



## SUMMARY OF PRINCIPAL RESULTS FOR ALL GROUPS

VALUATION DATE	September 30, 2017	September 30, 2016
Number of active members	85,657	84,814
Annual compensation	\$ 3,584,700,002	\$ 3,572,891,196
Number of retired members and beneficiaries*	48,776	47,749
Annual retirement allowances*	\$ 1,041,042,230	\$ 1,005,311,160
Number of deferred vested members	2,378	2,110
Estimated deferred annual allowances	\$ 28,316,756	\$ 24,740,346
Assets:		
Actuarial value	\$ 11,690,951,506	\$ 11,082,279,635
Market value	12,052,185,602	11,108,437,318
Unfunded actuarial accrued liability	\$ 5,559,882,678	\$ 5,645,728,919
Funded Ratio based on Actuarial Value of Assets	67.8%	66.2%

\*Includes post-DROP members in suspended status who are also active with a second retirement account.

2. Comments on the valuation results as of September 30, 2017 are given in Section IV and further discussion of the contribution levels is set out in Section V. The contribution rates for local employers for fiscal year beginning October 1, 2019 will be submitted in a separate report.
3. Schedule B of this report shows the development of the actuarial value of assets. Schedule D outlines the full set of actuarial assumptions and methods used in the current valuation. Since the previous valuation, the total rate of investment return has changed from 7.875% to 7.75% and wage inflation has changed from 3.125% to 3.00%.
4. The Board funding policy is shown in Schedule F.
5. The System was amended to provide for a one-time lump sum payment to be made in June 2018 to each state employee and state police member retired prior to May 1, 2018 and in receipt of a retirement allowance on April 30, 2018 under Act 2018-355. The lump sum is \$1 per month for each year of service attained by the retiree. The cost of the lump sum payment will be paid by the state and state police as an increase in the employer contribution rate for the fiscal year beginning October 1, 2019. In addition, the System was also amended to extend the optional bonus payable under Act 2017-367 for local employers until October 1, 2018.





6. The funded ratio shown in the Summary of Principal Results is the ratio of the actuarial value of assets to the actuarial accrued liability. The funded status would be different based on market value of assets. The funded ratio is an indication of progress in funding the promised benefits. Since the ratio is less than 100%, there is a need for additional contributions towards payment of the unfunded actuarial accrued liability. In addition, this funded ratio does not have any relationship to measuring sufficiency if the plan had to settle its liabilities.

#### **SECTION II – MEMBERSHIP DATA**

1. Data regarding the membership of the System for use as a basis of the valuation were furnished by the Retirement System office. The following table shows the number of active members and their annual compensation as of September 30, 2017 on the basis of which the valuation was prepared.



TABLE 1

THE NUMBER AND ANNUAL COMPENSATION OF  
ACTIVE MEMBERS AS OF SEPTEMBER 30, 2017

GROUP	NUMBER	COMPENSATION
State Employees		
Tier 1	20,552	\$995,921,213
Tier 2	8,003	249,442,730
Post-DROP Members Still in Active Service	<u>371</u>	<u>26,310,862</u>
Total	28,926	1,271,674,805
State Policemen		
Tier 1	612	\$39,789,140
Tier 2	8	413,149
Post-DROP Members Still in Active Service	<u>2</u>	<u>163,728</u>
Total	622	40,366,017
Local Employees		
Tier 1	38,226	\$1,758,757,925
Tier 2	17,715	502,119,308
Post-DROP Members Still in Active Service	<u>168</u>	<u>11,781,947</u>
Total	56,109	2,272,659,180
All Groups		
Tier 1	59,390	\$2,794,468,278
Tier 2	25,726	751,975,187
Post-DROP Members Still in Active Service	<u>541</u>	<u>38,256,537</u>
Total	85,657	3,584,700,002

The table reflects the active membership for whom complete valuation data were submitted. The results of the valuation include contribution balances for an additional 9,545 non-vested inactive members who have contributed in the last 5 years, and 20,111 non-vested inactive members who have not contributed for more than 5 years.



2. The following table shows a six-year history of active member valuation data.

**TABLE 2**  
**SCHEDULE OF ACTIVE MEMBER VALUATION DATA**

**STATE EMPLOYEES**

<b>Valuation Date</b>	<b>Number</b>	<b>Annual Payroll</b>	<b>% Increase in Total Pay*</b>	<b>Annual Average Pay</b>	<b>% Increase in Average Pay**</b>
9/30/2017	28,926	\$1,271,674,805	0.50%	\$43,963	1.11%
9/30/2016	29,101	1,265,310,969	1.08%	43,480	1.55%
9/30/2015	29,235	1,251,768,254	3.49%	42,817	2.58%
9/30/2014	28,977	1,209,550,191	1.14%	41,742	0.77%
9/30/2013	28,873	1,195,934,558	1.37%	41,421	3.74%
9/30/2012	29,548	1,179,824,013	-9.21%	39,929	-4.18%

\* 1.51% annual increase for total pay since 2012.

\*\* 1.94% annual increase for average pay since 2012.

**STATE POLICE**

<b>Valuation Date</b>	<b>Number</b>	<b>Annual Payroll</b>	<b>% Increase in Total Pay*</b>	<b>Annual Average Pay</b>	<b>% Increase in Average Pay**</b>
9/30/2017	622	\$40,366,017	-2.06%	\$64,897	3.14%
9/30/2016	655	41,213,571	-0.26%	62,921	6.75%
9/30/2015	701	41,320,289	1.48%	58,945	3.51%
9/30/2014	715	40,716,289	-1.59%	56,946	2.54%
9/30/2013	745	41,373,139	-6.03%	55,534	-2.00%
9/30/2012	777	44,028,717	-12.44%	56,665	-8.38%

\* -1.72% annual increase for total pay since 2012.

\*\* 2.75% annual increase for average pay since 2012.

**LOCAL EMPLOYEES**

<b>Valuation Date</b>	<b>Number</b>	<b>Annual Payroll</b>	<b>% Increase in Total Pay*</b>	<b>Annual Average Pay</b>	<b>% Increase in Average Pay**</b>
9/30/2017	56,109	\$2,272,659,180	0.28%	\$40,504	-1.60%
9/30/2016	55,058	2,266,366,656	4.53%	41,163	3.71%
9/30/2015	54,627	2,168,066,588	1.46%	39,689	2.15%
9/30/2014	55,002	2,136,920,378	3.22%	38,852	2.13%
9/30/2013	54,417	2,070,203,771	8.90%	38,043	7.76%
9/30/2012	53,844	1,900,938,692	-6.26%	35,305	-6.63%

\* 3.64% annual increase for total pay since 2012.

\*\* 2.79% annual increase for average pay since 2012.



**TOTAL EMPLOYEES**

<b>Valuation Date</b>	<b>Number</b>	<b>Annual Payroll</b>	<b>% Increase in Total Pay*</b>	<b>Annual Average Pay</b>	<b>% Increase in Average Pay**</b>
9/30/2017 <sup>1</sup>	85,657	\$3,584,700,002	0.33%	\$41,849	-0.66%
9/30/2016 <sup>2</sup>	84,814	3,572,891,196	3.23%	42,126	2.92%
9/30/2015 <sup>3</sup>	84,563	3,461,155,131	2.18%	40,930	2.34%
9/30/2014 <sup>4</sup>	84,694	3,387,186,858	2.41%	39,993	1.61%
9/30/2013 <sup>5</sup>	84,035	3,307,511,468	5.85%	39,359	6.02%
9/30/2012 <sup>6</sup>	84,169	3,124,791,422	-7.49%	37,125	-5.88%

\* 2.78% annual increase for total pay since 2012.

\*\*2.42% annual increase for average pay since 2012.

<sup>1</sup>There are no employees currently participating in the DROP program.

<sup>2</sup>There are no employees currently participating in the DROP program.

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> 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.

<sup>6</sup> 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.

3. The following table shows the number and annual retirement allowances payable to retired members and their beneficiaries on the roll of the Retirement System as of the valuation date.



TABLE 3

**THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES  
OF RETIRED MEMBERS AND BENEFICIARIES OF  
DECEASED MEMBERS ON THE ROLL AS OF SEPTEMBER 30, 2017**

TYPE OF RETIREMENT	GROUP			
	STATE EMPLOYEES <sup>1</sup>	STATE POLICEMEN <sup>2</sup>	LOCAL EMPLOYEES <sup>3</sup>	TOTAL
Service:				
Number <sup>4</sup>	19,990	754	19,861	40,605
Annual Allowances <sup>4</sup>	\$ 471,542,080	\$ 38,657,729	\$ 423,940,988	\$ 934,140,797
Disability:				
Number	2,227	38	1,917	4,182
Annual Allowances	\$ 31,065,433	\$ 1,178,416	\$ 26,210,800	\$ 58,454,649
Beneficiaries:				
Number	1,643	103	2,243	3,989
Annual Allowances	\$ 21,708,402	\$ 2,362,150	\$ 24,376,232	\$ 48,446,784
DROP Participants:				
Number	-	-	-	-
Annual Allowances	\$ -	\$ -	\$ -	\$ -
Total:				
Number	23,860	895	24,021	48,776
Annual Allowances	\$ 524,315,915	\$ 42,198,295	\$ 474,528,020	\$ 1,041,042,230

<sup>1</sup> In addition, there are 965 vested inactive members with estimated deferred annual allowances totaling \$11,741,006.

<sup>2</sup> In addition, there are 15 vested inactive members with estimated deferred annual allowances totaling \$252,435.

<sup>3</sup> In addition, there are 1,398 vested inactive members with estimated deferred annual allowances totaling \$16,323,315.

<sup>4</sup> Includes post-DROP members in suspended status who are also active with a second retirement account.

4. Tables in Schedule I show the distribution by age and service of the number and average annual compensation of active members included in the valuation. In addition, tables in Schedule I show the distribution by age and benefit type of the number, annual benefits, and average annual benefits of retired members included in the valuation.



### **SECTION III - ASSETS**

1. The current retirement law provides for the maintenance of five funds for the purpose of recording the fiscal transactions of the System, namely, the Annuity Savings Fund, the Pension Accumulation Fund, the Deferred Retirement Option Plan Fund, the Pre-Retirement Death Benefit Fund, and the Expense Fund.

(a) Annuity Savings Fund

The Annuity Savings Fund is the fund to which are credited all contributions made by members, except those contributions made by members who are participating in DROP, together with regular interest thereon. When a member retires or when a survivor allowance becomes payable or a member enters DROP, the amount of the member's accumulated contributions are transferred from the Annuity Savings Fund to the Pension Accumulation Fund. On September 30, 2017, the market value of assets credited to this Fund amounted to \$2,817,368,153 which represent the contributions of members to this date.

(b) Pension Accumulation Fund

The Pension Accumulation Fund is the fund to which are credited all contributions made by the employers, except those contributions made to the Pre-Retirement Death Benefit Fund which was created October 1, 1983. When a member retires or when a survivor allowance becomes payable, the pension is paid from this fund. The market value of assets credited to this fund amounted to \$9,104,143,783 on September 30, 2017.

(c) DROP Fund

The DROP Fund is the fund to which are credited deferred retirement benefits on behalf of members who elect to participate in the DROP, together with regular interest thereon. In addition, member contributions while participating in the DROP, together with regular interest therein, are credited to the Fund. At the end of the DROP deferral period, the member receives the amount of the deferred retirement benefits and contributions plus interest in the member's DROP account. The DROP is closed to new participants as of June 1, 2011. On September 30, 2017, the market value of assets credited to this Fund amounted to \$130,673,666.

(d) Pre-Retirement Death Benefit Fund

The Pre-Retirement Death Benefit Fund is the fund to which are credited contributions made by the employer for the special pre-retirement death benefit which became effective October 1, 1983. On September 30, 2017, the market value of assets credited to this fund amounted to \$32,361,613. These assets are not included in the valuation and the liabilities associated with these death benefits are not included in the valuation.



(e) Expense Fund

The Expense Fund is the fund from which the expenses of the administration of the Retirement System are paid. Any amounts credited to the accounts of members withdrawing before retirement and not returnable under the provisions of Code Section 36-27-16(c) are credited to the Expense Fund. Additional contributions required to meet the expenses of the Retirement System made by the employer are also credited to this fund. On September 30, 2017, the market value of assets credited to this fund amounted to \$(10,449,420). These assets are not included in the valuation.

2. As of September 30, 2017 the total market value of assets exclusive of the Pre-Retirement Death Benefit Fund and the Expense Fund amounted to \$12,052,185,602 as shown in the following table.

**TABLE 4**  
**MARKET VALUE OF ASSETS BY FUND**  
**AS OF SEPTEMBER 30, 2017**

FUND	MARKET VALUE OF ASSETS
Annuity Savings Fund	\$ 2,817,368,153
Pension Accumulation Fund	9,104,143,783
DROP Fund	<u>130,673,666</u>
Total Market Value of Assets	\$ 12,052,185,602

3. The five-year market related actuarial value of assets as of September 30, 2017 was \$11,690,951,506. The following table shows the actuarial value of assets used for the current valuation allocated among State employees, State policemen and local employees.

**TABLE 5**  
**COMPARISON OF ACTUARIAL VALUE OF ASSETS**  
**AT SEPTEMBER 30, 2017 AND SEPTEMBER 30, 2016**

GROUP	SEPTEMBER 30, 2017 ACTUARIAL VALUE	SEPTEMBER 30, 2016 ACTUARIAL VALUE
State Employees	\$ 4,759,601,603	\$ 4,598,818,390
State Policemen	333,960,260	318,102,553
Local Employees	<u>6,597,389,643</u>	<u>6,165,358,692</u>
Total Assets	\$ 11,690,951,506	\$ 11,082,279,635

4. Schedule C shows the receipts and disbursements of the System for the year preceding the valuation date and a reconciliation of the fund balances at market value.



#### **SECTION IV - COMMENTS ON VALUATION**

1. Schedule A of this report contains the valuation balance sheets which show the present and prospective assets and liabilities of the System as of September 30, 2017. Separate balance sheets are shown for each employee group as well as in total for all groups.
2. The total valuation balance sheet shows that the System has total prospective liabilities of \$19,331,136,551. Of this amount, \$9,567,277,612 is for the prospective benefits payable on account of present retired members, beneficiaries of deceased members, and DROP participants, \$221,116,563 is for the prospective benefits payable on account of present inactive members and \$9,542,742,376 is for the prospective benefits payable on account of present active members. Against these liabilities the System has total actuarial value of assets of \$11,690,951,506 as of September 30, 2017. The difference of \$7,640,185,045 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future. Of this amount, \$1,602,951,204 is the present value of future contributions expected to be made by members to the Annuity Savings Fund, and the balance of \$6,037,233,841 represents the present value of future contributions payable by the employers.
3. The employers' contributions to the System consist of normal contributions and unfunded actuarial accrued liability (UAAL) contributions. The valuation indicates that employer normal contributions at the rate of 0.89% of payroll for Tier I members and 0.52% of payroll for Tier II members are required to provide the benefits of the System for State employees. For State policemen, employer normal contributions at the rate of 10.52% of payroll for Tier I members and 3.79% of payroll for Tier II members are required. For local employees, varying rates of employer normal contributions are required.
4. Prospective employer normal contributions at the above rates have a present value of \$477,351,163. When this amount is subtracted from \$6,037,233,841, which is the present value of the total future contributions to be made by the employers, there remains \$5,559,882,678 as the amount of future UAAL contributions.





5. The funding policy adopted by the Board, as shown in Schedule F, provides that one-fifteenth of the unfunded actuarial accrued liability as of September 30, 2012 (Transitional UAAL) will be amortized as a level percent of payroll over a closed period. The closed period shall be the amortization period for the September 30, 2012 valuation, 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 September 30, 2012 valuation, not to exceed 30 years. Each year the new closed transitional base is calculated by dividing the remaining transitional UAAL at the beginning of the year by a declining value from 15 initially to 1 in the year 2026. After 15 years the entire Transitional UAAL will be closed. In each subsequent valuation all benefit changes, assumption and method changes and experience gains and/or losses that have occurred since the previous valuation will determine a New Incremental UAAL. Each New Incremental UAAL will be amortized over a closed 30-year period from the date it is established.
6. The total UAAL rate payable by the State is 13.47% of payroll for State employees and 40.71% of payroll for State Policemen determined in accordance with the Board's funding policy. The UAAL contribution rate has been calculated on the assumption that the aggregate amount of accrued liability contribution will increase by 3.00% each year. Schedule G of this report shows a projection of the open Transitional UAAL and amortization schedules for all closed bases as of September 30, 2017.
7. The following table shows the components of the total UAAL and the derivation of the accrued liability contribution rate in accordance with the funding policy for State employees and State policemen:



**TABLE 6**  
**TOTAL UAAL AND UAAL CONTRIBUTION RATE**

**STATE EMPLOYEES**

	<b>UAAL</b>	<b>Amortization Period</b>	<b>Amortization Payment</b>
Open Transitional	\$1,610,476,774	30	\$103,177,495
Closed Transitional 9/30/2012	176,939,620	25	12,432,251
Closed Transitional 9/30/2013	177,771,975	26	12,232,322
Closed Transitional 9/30/2014	178,372,152	27	12,035,599
Closed Transitional 9/30/2015	178,756,885	28	11,842,031
Closed Transitional 9/30/2016	178,941,864	29	11,651,569
Closed Transitional 9/30/2017	178,941,864	30	11,464,166
New Incremental 9/30/2013	38,792,304	26	2,669,262
New Incremental 9/30/2014	(41,780,923)	27	(2,819,153)
New Incremental 9/30/2015	56,435,646	28	3,738,668
New Incremental 9/30/2016	111,118,075	29	7,235,310
New Incremental 9/30/2017	<u>(23,220,940)</u>	30	<u>(1,487,683)</u>
Total	\$2,821,545,296		\$184,171,837
Total Amortization Payment Adjusted for Timing			<u>177,301,407</u>
Total Estimated Payroll*			\$1,316,714,410
UAAL Contribution Rate			13.47%

**STATE POLICE**

	<b>UAAL</b>	<b>Amortization Period</b>	<b>Amortization Payment</b>
Open Transitional	\$138,102,059	30	\$8,847,706
Closed Transitional 9/30/2012	15,191,202	25	1,067,375
Closed Transitional 9/30/2013	15,255,231	26	1,049,698
Closed Transitional 9/30/2014	15,299,432	27	1,032,324
Closed Transitional 9/30/2015	15,328,811	28	1,015,481
Closed Transitional 9/30/2016	15,344,673	29	999,149
Closed Transitional 9/30/2017	15,344,673	30	983,078
New Incremental 9/30/2013	171,760	26	11,819
New Incremental 9/30/2014	78,284	27	5,282
New Incremental 9/30/2015	17,438,652	28	1,155,251
New Incremental 9/30/2016	28,801,787	29	1,875,391
New Incremental 9/30/2017	<u>(3,209,308)</u>	30	<u>(205,609)</u>
Total	\$273,147,256		\$17,836,945
Total Amortization Payment Adjusted for Timing			<u>17,171,548</u>
Total Estimated Payroll*			\$42,182,484
UAAL Contribution Rate			40.71%

\* Estimated payroll based on applying the assumed salary scale to current salaries.



8. The Pre-Retirement Death Benefit Program was established October 1, 1983 under Act No. 83-616. The liabilities and assets associated with the pre-retirement death benefit are not included in the annual actuarial valuation of the System; however, the sufficiency of the Fund to provide the promised benefits is reviewed annually. The contribution requirements are determined every five years during our experience investigation. For all employers, an additional contribution of 0.02% of payroll will be required to meet the cost of the pre-retirement death benefit program this year.
9. For all employers, an additional contribution of 0.35% is required to cover the expenses of administering the System.
10. An additional contribution of 0.51% for State employees and 0.69% of payroll for State policemen is required for fiscal year ending September 30, 2020 to fund the one-time lump sum payment provided for in Act 2018-355.
11. In our opinion, the current experience, assumptions and methods adopted by the Board support the funding policy and generally accepted and emerging practice. Assuming that required contributions continue to be made each year, the funding of the System will continue to remain on track.



**SECTION V - CONTRIBUTIONS PAYABLE BY EMPLOYERS**

1. The retirement act provides that the Board of Control shall certify to the chief fiscal officer of each employer the rates of contribution required to be paid by the employer.
2. On the basis of the actuarial valuation prepared as of September 30, 2017 it is recommended that the State make contributions at the following rates for the fiscal year beginning October 1, 2019:

**TABLE 7  
RECOMMENDED CONTRIBUTION RATES**

CONTRIBUTION	PERCENTAGE OF MEMBERS' COMPENSATION FOR FISCAL YEAR ENDING SEPTEMBER 20, 2020			
	STATE EMPLOYEES		STATE POLICEMEN	
	<u>Tier I</u>	<u>Tier II</u>	<u>Tier I</u>	<u>Tier II</u>
Employer Normal Cost	0.89%*	0.52%*	10.52%**	3.79%**
Accrued liability	13.47	13.47	40.71	40.71
Death benefit	0.02	0.02	0.02	0.02
Administration	<u>0.35</u>	<u>0.35</u>	<u>0.35</u>	<u>0.35</u>
Subtotal	14.73%	14.36%	51.60%	44.87%
Act 2018-355	<u>0.51%</u>	<u>0.51%</u>	<u>0.69%</u>	<u>0.69%</u>
Total	15.24%	14.87%	52.29%	45.56%

\*The total Normal Cost rate is 8.51% for Tier I and 6.62% for Tier II. Tier I members contribute 7.50% (8.50% for FLC members) and Tier II members contribute 6.00% (7.00% for FLC members).

\*\*The total Normal Cost rate is 20.52% for Tier I and 13.79% for Tier II. All members as of September 30, 2016, contribute 10.00%.

3. Contribution rates for Local Employers will be submitted in a separate report. The rates for the fiscal year beginning October 1, 2019 were determined as of September 30, 2017, and reflect any elections made pursuant to Act 2011-676 as of September 30, 2017.



## **SECTION VI – ANALYSIS OF FINANCIAL EXPERIENCE**

The calculation of the System's liabilities and actuarial value of assets requires the use of several assumptions concerning the future experience of the System and its members. In each annual actuarial valuation, the experience of the System is compared with what was expected based on the actuarial assumptions. The differences between the actual and expected experience are called actuarial gains or losses depending on whether the difference increases or decreases the UAAL. For State employees, the UAAL increased \$15,776,019; for State policemen, the UAAL increased \$592,404. The most significant item contributing to the increase in the UAAL was the changes in the discount rate from 7.875% to 7.75%. This increase was offset by gains due to investment earnings in excess of expected. Other sources of gains and losses were relatively small and there appear to be no trends developing that would be of concern to the System.

The following tables show the reconciliation of the UAAL of the System and a breakdown by source of the actuarial gains and losses for State employees and State policemen. These sources include the expected return on assets, salary increases, retirement, withdrawal, disability and mortality.

Since the benefits, assumptions and accrued liability rates vary by location for the Local employees, we do not develop an analysis of financial experience for this group.



**RECONCILIATION OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY  
FOR THE YEAR ENDING SEPTEMBER 30, 2017**

(Dollar amounts in thousands)

	STATE EMPLOYEES	STATE POLICEMEN
(1) UAAL at beginning of year	\$ 2,805,769	\$ 272,555
(2) Total normal cost beginning of the year	95,813	8,245
(3) Actual contributions	266,980	27,353
(4) Interest accrual: [ [(1) + (2)] - ½ [ (3)] ] x .07875	217,987	21,036
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	2,852,589	274,483
(6) Increase from benefit changes	0	0
(7) Changes from revised actuarial assumptions and methods	76,066	6,145
(8) Expected UAAL after changes: (5) + (6) + (7)	2,928,655	280,628
(9) Actual UAAL at end of year	2,821,545	273,147
(10) (Gain)/Loss: (9) - (8)	\$ (107,110)	\$ (7,481)

**DEVELOPMENT OF (GAIN)/LOSS  
FROM INVESTMENT RETURN  
FOR THE YEAR ENDING SEPTEMBER 30, 2017**

(Dollar amounts in thousands)

	STATE EMPLOYEES	STATE POLICEMEN
(1) Actuarial Value of Assets (BOY)	\$ 4,598,818	\$ 318,103
(2) Adjustment for unit transfer	93	0
(3) Net Cash Flow	(283,076)	(14,848)
(4) Expected Return: [ (1) + (2) + ½ [ (3)] ] x .07875	351,018	24,466
(5) Expected Actuarial Value of Assets: [ (1) + (2) + (3) + (4) ]	4,666,853	327,721
(6) Actual Actuarial Value of Assets (EOY)	4,759,602	333,960
(7) (Gain)/Loss: (5) - (6)	\$ (92,749)	\$ (6,239)



**(GAINS)/ LOSSES BY SOURCE  
FOR THE YEAR ENDING September 30, 2017**  
(Dollar amounts in thousands)

Source	<u>STATE EMPLOYEES</u>		<u>STATE POLICEMEN</u>	
	Total	% of Actuarial Accrued Liability	Total	% of Actuarial Accrued Liability
<b>Age and Service Retirements.</b> Generally, earlier retirements cause losses and later retirements cause gains.	\$ (5,384)	(0.07%)	\$ (67)	(0.01%)
<b>Withdrawal.</b> More withdrawals than expected usually cause gains and less withdrawals than expected cause losses.	3,433	0.05%	78	0.01%
<b>Disability Retirements.</b> More disabilities than expected generally cause losses and less disabilities than expected cause gains.	429	0.01%	(251)	(0.04%)
<b>Death-In-Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If claims are more than assumed, there is a loss.	626	0.01%	177	0.03%
<b>Salary Increases.</b> If salaries increase more than expected, there is a loss. If salaries increase less than expected, there is a gain.	(2,484)	(0.03%)	(1,501)	(0.25%)
<b>New Members/Rehires.</b> Any past service causes losses.	12,475	0.17%	803	0.13%
<b>Retiree Mortality.</b> More deaths than expected cause gains, less than expected cause losses.	(10,442)	(0.14%)	(522)	(0.09%)
<b>Investment Return.</b> Investment income greater than expected causes gains while investment income less than expected cause losses.	(92,749)	(1.24%)	(6,239)	(1.04%)
<b>Other.</b> Miscellaneous gains and losses resulting from data corrections, timing of financial transactions, unit transfers, changes in valuation software, etc.	(13,016)	(0.17%)	40	0.01%
<b>Total (Gain)/Loss</b>	\$ (107,110)	(1.41%)	\$ (7,481)	(1.25%)



**SECTION VII - ACCOUNTING INFORMATION**

The information required under Governmental Accounting Standards Board (GASB) Statements No. 67 and 68 is issued in separate reports. The following information is provided for informational purposes only.

1. The following is a distribution of the number of employees by type of membership.

**NUMBER OF ACTIVE AND RETIRED MEMBERS  
AS OF SEPTEMBER 30, 2017**

GROUP	NUMBER			
	State Employees	State Police	Local Employees	Total
Retirees and beneficiaries currently receiving benefits	23,860	895	24,021	48,776
Terminated employees entitled to benefits but not yet receiving benefits	3,348	18	8,557	11,923
Non-vested inactive members who have not contributed for more than 5 years	20,111	0	0	20,111
Active Members	<u>28,926</u>	<u>622</u>	<u>56,109</u>	<u>85,657</u>
Total	76,245	1,535	88,687	166,467





2. The schedule of funding progress is shown below.

**SCHEDULE OF FUNDING PROGRESS**

(Dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Plan Assets (a)	Actuarial Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
<b><u>TOTAL ALL GROUPS</u></b>						
9/30/2012 <sup>2</sup>	\$9,116,551	\$13,884,995	\$4,768,444	65.7%	\$3,252,003	146.6%
9/30/2013	9,546,459	14,536,600	4,990,141	65.7	3,400,596	146.7
9/30/2014	10,134,581	15,138,294	5,003,713	66.9	3,444,341	145.3
9/30/2015	10,589,258	15,723,720	5,134,462	67.3	3,488,017	147.2
9/30/2016 <sup>1</sup>	11,082,280	16,728,009	5,645,729	66.2	3,572,891	158.0
9/30/2017 <sup>1</sup>	11,690,952	17,250,835	5,559,883	67.8	3,584,700	155.1
<b><u>STATE EMPLOYEES</u></b>						
9/30/2012 <sup>2</sup>	\$4,152,167	\$6,636,154	\$2,483,987	62.6%	\$1,267,133	196.0%
9/30/2013	4,248,068	6,808,165	2,560,097	62.4	1,258,862	203.4
9/30/2014	4,388,746	6,949,245	2,560,499	63.2	1,246,901	205.3
9/30/2015	4,504,338	7,159,668	2,655,330	62.9	1,270,556	209.0
9/30/2016 <sup>1</sup>	4,598,818	7,404,587	2,805,769	62.1	1,265,311	221.7
9/30/2017 <sup>1</sup>	4,759,602	7,581,147	2,821,545	62.8	1,271,675	221.9
<b><u>STATE POLICEMEN</u></b>						
9/30/2012 <sup>2</sup>	\$293,604	\$517,355	\$223,751	56.8%	\$45,963	486.8%
9/30/2013	298,624	526,095	227,471	56.8	42,908	530.1
9/30/2014	309,000	540,142	231,142	57.2	42,047	549.7
9/30/2015	313,373	559,795	246,422	56.0	41,861	588.7
9/30/2016 <sup>1</sup>	318,103	590,658	272,555	53.9	41,214	661.3
9/30/2017 <sup>1</sup>	333,960	607,107	273,147	55.0	40,366	676.7
<b><u>LOCAL EMPLOYEES</u></b>						
9/30/2012 <sup>2</sup>	\$4,670,780	\$6,731,485	\$2,060,705	69.4%	\$1,938,906	106.3%
9/30/2013	4,999,767	7,202,340	2,202,573	69.4	2,098,825	104.9
9/30/2014	5,436,835	7,648,907	2,212,072	71.1	2,155,393	102.6
9/30/2015	5,771,547	8,004,257	2,232,710	72.1	2,175,599	102.6
9/30/2016 <sup>1</sup>	6,165,359	8,732,764	2,567,405	70.6	2,266,367	113.3
9/30/2017 <sup>1</sup>	6,597,390	9,062,580	2,465,190	72.8	2,272,659	108.5

<sup>1</sup> Reflects changes in actuarial assumptions and methods.

<sup>2</sup> Reflects changes in actuarial methods.



3. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at September 30, 2017. Additional information as of the latest actuarial valuation follows.

	<b><u>State Employees</u></b>	<b><u>State Policemen</u></b>	<b><u>Local Employees</u></b>
Valuation date	9/30/2017	9/30/2017	9/30/2017
Actuarial cost method	Entry age	Entry age	Entry age
Amortization method	Level percent Closed	Level percent Closed	Level percent Closed
Single equivalent remaining amortization period	28.9 years	28.8 years	Within 30 years - Varies by employer
Asset valuation method	Five-year market related value	Five-year market related value	Five-year market related value
Actuarial assumptions:			
Investment rate of return*	7.75%	7.75%	7.75%
Projected salary increases*	3.25 – 5.00%	4.50%	3.25 – 5.00%
Cost-of-living adjustment	None	None	None
*Includes price inflation at	2.75%	2.75%	2.75%



**SCHEDULE A**

**VALUATION BALANCE SHEET  
SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF  
THE EMPLOYEES' RETIREMENT SYSTEM OF ALABAMA**

**STATE EMPLOYEES**

	<b>SEPTEMBER 30, 2017</b>
<b><u>ASSETS</u></b>	
Actuarial Value of Assets	\$ 4,759,601,603
Present value of future members' contributions to the Annuity Savings Fund	\$ 631,007,420
Present value of future employer contributions to the Pension Accumulation Fund	
Normal contributions	\$ 73,800,480
Unfunded accrued liability contributions	<u>2,821,545,296</u>
Total prospective employer contributions	\$ 2,895,345,776
Total Assets	<u>\$ 8,285,954,799</u>
<b><u>LIABILITIES</u></b>	
Present value of benefits payable on account of retired members and beneficiaries of deceased members now drawing retirement allowances	
Service Retirements	\$ 4,219,446,476
Disability Retirements	262,921,113
Beneficiaries of Deceased Members	163,999,251
DROP Participant Accounts	<u>93,859,884</u>
Total	\$ 4,740,226,724
Inactive Members	\$ 84,219,022
Inactive T-section accounts	\$ 14,272,415
Present value of prospective benefits payable on account of present active members:	
Service retirement allowances	\$ 3,024,632,757
Disability retirement allowances	165,704,541
Death Benefits	20,773,803
Termination Benefits	<u>236,125,537</u>
Total	\$ 3,447,236,638
Total Liabilities	<u>\$ 8,285,954,799</u>



**SCHEDULE A** (Continued)

**VALUATION BALANCE SHEET  
SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF  
THE EMPLOYEES' RETIREMENT SYSTEM OF ALABAMA**

**STATE POLICEMEN**

	<b>SEPTEMBER 30, 2017</b>
<b><u>ASSETS</u></b>	
Actuarial Value of Assets	\$ 333,960,260
Present value of future members' contributions to the Annuity Savings Fund	\$ 27,291,195
Present value of future employer contributions to the Pension Accumulation Fund	
Normal contributions	\$ 29,498,716
Unfunded accrued liability contributions	<u>273,147,256</u>
Total prospective employer contributions	\$ 302,645,972
Total Assets	<u>\$ 663,897,427</u>
<b><u>LIABILITIES</u></b>	
Present value of benefits payable on account of retired members and beneficiaries of deceased members now drawing retirement allowances	
Service Retirements	\$ 364,145,867
Disability Retirements	9,754,871
Beneficiaries of Deceased Members	17,524,648
DROP Participant Accounts	<u>887,389</u>
Total	\$ 392,312,775
Inactive Members	\$ 1,483,570
Present value of prospective benefits payable on account of present active members:	
Service retirement allowances	\$ 261,909,656
Disability retirement allowances	4,386,609
Death Benefits	753,194
Termination Benefits	<u>3,051,623</u>
Total	\$ 270,101,082
Total Liabilities	<u>\$ 663,897,427</u>



**SCHEDULE A** (Continued)

**VALUATION BALANCE SHEET  
SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF  
THE EMPLOYEES' RETIREMENT SYSTEM OF ALABAMA**

**LOCAL EMPLOYEES**

	<b>SEPTEMBER 30, 2017</b>
<b><u>ASSETS</u></b>	
Actuarial Value of Assets	\$ 6,597,389,643
Present value of future members' contributions to the Annuity Savings Fund	\$ 944,652,589
Present value of future employer contributions to the Pension Accumulation Fund	
Normal contributions	\$ 374,051,967
Unfunded accrued liability contributions	<u>2,465,190,126</u>
Total prospective employer contributions	\$ 2,839,242,093
Total Assets	<u>\$ 10,381,284,325</u>
<b><u>LIABILITIES</u></b>	
Present value of benefits payable on account of retired members and beneficiaries of deceased members now drawing retirement allowances	
Service Retirements	\$ 3,972,553,746
Disability Retirements	227,797,640
Beneficiaries of Deceased Members	198,460,334
DROP Participant Accounts	<u>35,926,393</u>
Total	\$ 4,434,738,113
Inactive Members	\$ 121,141,556
Present value of prospective benefits payable on account of present active members:	
Service retirement allowances	\$ 5,118,490,414
Disability retirement allowances	256,151,134
Death Benefits	34,489,852
Termination Benefits	<u>416,273,256</u>
Total	\$ 5,825,404,656
Total Liabilities	<u>\$ 10,381,284,325</u>



**SCHEDULE A** (Continued)

**VALUATION BALANCE SHEET  
SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF  
THE EMPLOYEES' RETIREMENT SYSTEM OF ALABAMA**

**TOTAL - ALL GROUPS**

	<b>SEPTEMBER 30, 2017</b>
<b><u>ASSETS</u></b>	
Actuarial Value of Assets	\$ 11,690,951,506
Present value of future members' contributions to the Annuity Savings Fund	\$ 1,602,951,204
Present value of future employer contributions to the Pension Accumulation Fund	
Normal contributions	\$ 477,351,163
Unfunded accrued liability contributions	<u>5,559,882,678</u>
Total prospective employer contributions	\$ 6,037,233,841
Total Assets	<u>\$ 19,331,136,551</u>
<b><u>LIABILITIES</u></b>	
Present value of benefits payable on account of retired members, beneficiaries of deceased members now drawing retirement allowances, and DROP participants	
Service Retirements	\$ 8,556,146,089
Disability Retirements	500,473,624
Beneficiaries of Deceased Members	379,984,233
DROP Participant Accounts	<u>130,673,666</u>
Total	\$ 9,567,277,612
Inactive Members	\$ 206,844,148
Inactive T-section accounts	\$ 14,272,415
Present value of prospective benefits payable on account of present active members:	
Service retirement allowances	\$ 8,405,032,827
Disability retirement allowances	426,242,284
Death Benefits	56,016,849
Termination Benefits	<u>655,450,416</u>
Total	\$ 9,542,742,376
Total Liabilities	<u>\$ 19,331,136,551</u>



**SCHEDULE A** (continued)

**SOLVENCY TEST**  
(\$1000's)

Valuation Date	Aggregate Accrued Liabilities For			Reported Assets	Portion of Accrued Liabilities Covered by Reported Asset		
	(1) Active Member Contributions	(2) Retirants and Beneficiaries	(3) Active Members (Employer Financed Portion)		(1)	(2)	(3)
9/30/2017 <sup>1</sup>	\$2,817,368	\$9,567,278	\$4,866,189	\$11,690,952	100%	93%	0%
9/30/2016 <sup>1</sup>	2,707,129	9,209,857	4,811,023	11,082,280	100	91	0
9/30/2015	2,591,066	8,666,490	4,466,164	10,589,258	100	92	0
9/30/2014	2,484,050	8,366,277	4,287,967	10,134,581	100	91	0
9/30/2013	2,363,600	8,085,291	4,087,709	9,546,459	100	89	0
9/30/2012 <sup>2</sup>	2,218,478	7,781,431	3,885,086	9,116,551	100	89	0

<sup>1</sup> Reflects changes in actuarial assumptions and methods.

<sup>2</sup> Reflects changes in actuarial methods.



**SCHEDULE B**

**DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS  
AS OF SEPTEMBER 30, 2017**

**STATE EMPLOYEES**

(1)	Actuarial Value of Assets on September 30, 2016	
a.	Actuarial Value on September 30, 2016	\$ 4,598,818,390
b.	Adjustment	<u>93,119</u>
c.	Adjusted Actuarial Value on September 30, 2016	\$ 4,598,911,509
(2)	Market Value of Assets on September 30, 2017	\$ 4,910,512,917
(3)	Market Value of Assets on September 30, 2016	
a.	Market Value on September 30, 2016	\$ 4,615,916,406
b.	Adjustment	<u>55,107</u>
c.	Adjusted Market Value on September 30, 2016	\$ 4,615,971,513
(4)	Cash Flow	
a.	Contributions	\$ 266,980,242
b.	Benefit Payments and DROP Disbursements	(532,389,877)
c.	Refunds to Members	(14,693,968)
d.	Transfers to Expense Fund - Interest Forfeitures	(3,440,298)
e.	Transfers to/from Police/Locals	468,324
f.	Investment Expenses	<u>(8,117,601)</u>
g.	Net	\$ (291,193,178)
(5)	Investment Income	
a.	Market total: (2) – (3)c – (4)g	\$ 585,734,581
b.	Assumed Rate	7.875%
c.	Amount for Immediate Recognition [(3)c x (5)b] + [(4)a +(4)b +(4)c + (4)d + (4)e] * (5)b * 0.5) - (4)f	\$ 360,479,257
d.	Amount for Phased-in Recognition (5)a – (5)c	\$ 225,255,325
(6)	Phased-In Recognition of Investment Income	
a.	Current Year: 0.20*(5)d	\$ 45,051,065
b.	First Prior Year	19,570,629
c.	Second Prior Year	(62,123,682)
d.	Third Prior Year	35,810,925
e.	Fourth Prior Year	<u>53,095,078</u>
f.	Total Recognized Investment Gain	\$ 91,404,015
(7)	Actuarial Value of Assets on September 30, 2017: (1)c + (4)g + (5)c + (6)f	\$ 4,759,601,603





**SCHEDULE B** (Continued)

**DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS  
AS OF SEPTEMBER 30, 2017**

**STATE POLICEMEN**

(1)	Actuarial Value of Assets on September 30, 2016	
a.	Actuarial Value on September 30, 2016	\$ 318,102,553
b.	Adjustment	
c.	Adjusted Actuarial Value on September 30, 2016	\$ 318,102,553
(2)	Market Value of Assets on September 30, 2017	\$ 343,920,208
(3)	Market Value of Assets on September 30, 2016	
a.	Market Value on September 30, 2016	\$ 318,884,908
b.	Adjustment	
c.	Adjusted Market Value on September 30, 2016	\$ 318,884,908
(4)	Cash Flow	
a.	Contributions	\$ 27,352,741
b.	Benefit Payments and DROP Disbursements	(42,344,563)
c.	Refunds to Members	(109,395)
d.	Transfers to/from State/Local	253,318
e.	Net	\$ (14,847,899)
(5)	Investment Income	
a.	Market total: (2) – (3)c – (4)e	\$ 39,883,199
b.	Assumed Rate	7.875%
c.	Amount of Immediate Recognition [(3)c x (5)b] + [(4)e * (5)b * 0.5]	\$ 24,527,550
d.	Amount for Phased-in Recognition (5)a – (5)c	\$ 15,355,649
(6)	Phased-In Recognition of Investment Income	
a.	Current Year: 0.20*(5)d	\$ 3,071,130
b.	First Prior Year	1,308,785
c.	Second Prior Year	(4,336,923)
d.	Third Prior Year	2,426,923
e.	Fourth Prior Year	3,708,141
f.	Total Recognized Investment Gain	\$ 6,178,056
(7)	Actuarial Value of Assets on September 30, 2017: (1)c + (4)e + (5)c + (6)f	\$ 333,960,260



**SCHEDULE B** (Continued)

**DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS  
AS OF SEPTEMBER 30, 2017**

**LOCAL EMPLOYEES**

(1)	Actuarial Value of Assets on September 30, 2016	
	a. Actuarial Value on September 30, 2016	\$ 6,165,358,692
	b. Adjustment	<u>(93,119)</u>
	c. Adjusted Actuarial Value on September 30, 2016	\$ 6,165,265,573
(2)	Market Value of Assets on September 30, 2017	\$ 6,797,752,477
(3)	Market Value of Assets on September 30, 2016	
	a. Market Value on September 30, 2016	\$ 6,173,636,004
	b. Adjustment	<u>(55,107)</u>
	c. Adjusted Market Value on September 30, 2016	\$ 6,173,580,897
(4)	Cash Flow	
	a. Contributions	\$ 352,575,619
	b. Benefit Payments and DROP Disbursements	(476,634,084)
	c. Refunds to Members	(31,570,989)
	d. Transfers to/from State/Police	<u>(721,642)</u>
	e. Net	\$ (156,351,096)
(5)	Investment Income	
	a. Market total: (2) – (3)c – (4)e	\$ 780,522,676
	b. Assumed Rate	7.875%
	c. Amount of Immediate Recognition [(3)c x (5)b] + [(4)e * (5)b * 0.5]	\$ 480,013,171
	d. Adjustment for Employer Lump Sums	\$ (5,394)
	e. Adjusted Amount for Immediate Recognition (5)c + (5)d	\$ 480,007,777
	f. Amount for Phased-In Recognition (5)a – (5)e	\$ 300,514,899
(6)	Phased-In Recognition of Investment Income	
	a. Current Year: 0.20*(5)f	\$ 60,102,979
	b. First Prior Year	24,717,514
	c. Second Prior Year	(77,600,198)
	d. Third Prior Year	41,423,892
	e. Fourth Prior Year	59,823,202
	f. Total Recognized Investment Gain	<u>\$ 108,467,389</u>
(7)	Actuarial Value of Assets on September 30, 2017: (1)c + (4)e + (5)e + (6)f	\$ 6,597,389,643



**SCHEDULE B** (Continued)

**SEPTEMBER 30, 2017**  
**DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS**

**TOTAL - ALL GROUPS**

(1)	Actuarial Value of Assets on September 30, 2016	\$ 11,082,279,635
(2)	Market Value of Assets on September 30, 2017	\$ 12,052,185,602
(3)	Market Value of Assets on September 30, 2016	\$ 11,108,437,318
(4)	Cash Flow	
	a. Contributions	\$ 646,908,602
	b. Benefit Payments and DROP Disbursements	(1,051,368,524)
	c. Refunds to Members	(46,374,352)
	d. Transfer to Expense Fund – Interest Forfeitures	(3,440,298)
	e. Investment Expenses	(8,117,601)
	f. Net	\$ (462,392,173)
(5)	Investment Income	
	a. Market total: (2) – (3) – (4)f	\$ 1,406,140,457
	b. Assumed Rate	7.875%
	c. Amount for Immediate Recognition [(3) x (5)b] + [(4)a + (4)b + (4)c + (4)d] * (5)b * 0.5 - (4)e	\$ 865,019,978
	d. Adjusted for Employer Lump Sums	\$ (5,394)
	e. Adjusted Amount for Immediate Recognition (5)c + (5)d	\$ 865,014,584
	f. Amount for Phased-In Recognition (5)a – (5)e	\$ 541,125,873
(6)	Phased-In Recognition of Investment Income	
	a. Current Year: 0.20*(5)f	\$ 108,225,175
	b. First Prior Year	45,596,928
	c. Second Prior Year	(144,060,803)
	d. Third Prior Year	79,661,740
	e. Fourth Prior Year	116,626,421
	f. Total Recognized Investment Gain	\$ 206,049,460
(7)	Actuarial Value of Assets on September 30, 2017: (1) + (4)f + (5)e + (6)f	\$ 11,690,951,506



**SCHEDULE B** (Continued)

**SEPTEMBER 30, 2017**  
**DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS**

<u>Date</u>	<u>Investment Gain/(Loss)</u>	<u>Amount Recognized</u>	<u>Remaining Balance as of 9/30/2017</u>
9/30/2013	\$ 583,132,725	\$ 116,626,421	\$ 0
9/30/2014	398,308,701	79,661,740	79,661,740
9/30/2015	(720,304,016)	(144,060,803)	(288,121,607)
9/30/2016	227,984,639	45,596,928	136,790,783
9/30/2017	541,125,873	108,225,175	432,900,697



**SCHEDULE C**

**SUMMARY OF RECEIPTS AND DISBURSEMENTS  
FOR THE YEAR ENDING SEPTEMBER 30, 2017**

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**Receipts for the Period**

Contributions:		
Members	\$ 233,901,390	
Employers	<u>413,007,212</u>	
Total		\$ 646,908,602
Investment Income*		<u>1,405,468,699</u>
TOTAL		\$ 2,052,377,301

**Disbursements for the Period**

Benefit Payments		\$ (1,008,247,615)
Refunds to Members		(46,374,352)
DROP Distributions		(43,120,909)
Miscellaneous:		
Transfers to Plant Fund	\$ 0	
Transfers to Expense Fund-Interest Forfeitures	(3,440,298)	
Transfers to Expense Fund-Investment Expenses	(3,305,300)	
Transfers to Pre-retirement Death Benefit Fund	<u>(4,140,543)</u>	
TOTAL		<u>(10,886,141)</u>
TOTAL		\$(1,108,629,017)

**Excess of Receipts Over Disbursements** \$ 943,748,284

**Reconciliation of Asset Balances**

Market Value of Assets as of September 30, 2016	\$ 11,108,437,318
Excess of Receipts Over Disbursements	<u>943,748,284</u>
Market Value of Assets as of September 30, 2017	<u>\$ 12,052,185,602</u>

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\*Net of \$4,812,301 in investment expenses.



## **SCHEDULE D**

### **OUTLINE 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.

INVESTMENT RATE OF RETURN: 7.75% per annum, compounded annually, including price inflation at 2.75%.

SALARY INCREASES: Representative values of the assumed annual rates of future salary increases are as follows:

#### **STATE AND LOCAL EMPLOYEES**

<b>Service</b>	<b>Annual Rate*</b>
0	5.000 %
1-5	4.000
6-10	3.750
11-15	3.500
16 & Over	3.250

*\*Includes wage inflation at 3.00% per annum.*

#### **STATE POLICEMEN**

4.50% per year for all years of service, including wage inflation at 3.00% per annum.



**SEPARATIONS FROM ACTIVE SERVICE- STATE AND LOCAL EMPLOYEES**

TERMINATION: Representative values of the assumed annual rates of withdrawal are shown in the following tables:

**REGULAR MEMBERS**

Annual Rate of Withdrawal\*  
Years of Service

Age	0-4		5-9		10-20		20+	
	Male	Female	Male	Female	Male	Female	Male	Female
20	24.00%	33.00%	9.00%	12.00%	5.00%	6.50%	1.50%	1.50%
25	19.50	23.00	8.50	11.00	5.00	6.50	1.50	1.50
30	17.50	20.00	7.00	8.25	4.00	5.25	1.50	1.50
35	16.00	18.00	6.50	7.50	3.25	5.25	1.50	1.50
40	15.50	17.00	5.50	7.25	3.00	3.50	1.50	1.50
45	13.50	15.50	5.00	6.50	2.75	3.50	1.50	1.50
50	13.00	14.50	5.00	6.25	2.50	3.50	1.50	1.50
55	11.50	14.00	5.00	5.50	2.50	3.50	1.50	1.50
60	11.50	15.00	5.50	6.00	2.50	3.50	1.50	1.50
65	15.50	16.00	7.50	8.50	2.75	3.50	1.50	1.50
69	15.50	16.00	7.50	8.50	2.75	3.50	1.50	1.50

*There are no withdrawal decrements after eligibility for service retirement.*

**CERTIFIED FIREFIGHTERS, POLICE OFFICERS, OR CORRECTIONAL OFFICERS (FLC MEMBERS)**

Annual Rate of Withdrawal\*  
Years of Service

Age	0-4	5-9	10-20	20+
20	17.00%	6.50%	3.25%	1.25%
25	14.50	6.50	3.25	1.25
30	13.50	6.00	3.25	1.25
35	13.50	5.50	3.25	1.25
40	13.00	5.00	2.50	1.25
45	12.50	4.50	2.25	1.25
50	11.00	4.50	2.25	1.25
55	10.00	4.50	2.00	1.25
60	12.00	5.50	2.00	1.25
65	17.00	6.00	2.00	1.25
69	17.00	6.00	2.00	1.25

*There are no withdrawal decrements after eligibility for service retirement.*

\* For local employers with fewer than 25 employees the rates are multiplied by 50%.



SERVICE RETIREMENT: The assumed annual rates of service retirement are as follows:

**REGULAR MEMBERS**

Age	Annual Rate <sup>1</sup>			
	TIER I <sup>2</sup>		TIER II	
	<u>1<sup>ST</sup> Eligible</u>	<u>Subsequent</u>	<u>1<sup>ST</sup> Eligible</u>	<u>Subsequent</u>
50 & Under	18.00%	11.50%		
51 to 56	20.00	11.50		
57	25.00	11.50		
58 to 59	25.00	15.00		
60	13.00	17.00		
61	13.00	13.00		
62	25.00	25.00	50.00%	
63	25.00	20.00	25.00	20.00%
64	25.00	20.00	25.00	20.00
65	35.00	25.00	35.00	25.00
66	35.00	30.00	35.00	30.00
67	35.00	25.00	35.00	25.00
68	35.00	21.00	35.00	21.00
69 to 74	35.00	21.00	35.00	20.00
75 & Above	100.00	100.00	100.00	100.00

<sup>1</sup>For local employers with fewer than 25 employees we assume that all members retire upon first eligibility for a service retirement benefit.

<sup>2</sup>25% are assumed to retire at age 60 with 25 years of service and 17% are assumed to retire at age 60 with 26 or more years of service.

**FLC MEMBERS**

Age	Annual Rate <sup>1</sup>			
	TIER I <sup>2</sup>		TIER II	
	<u>1<sup>ST</sup> Eligible</u>	<u>Subsequent</u>	<u>1<sup>ST</sup> Eligible</u>	<u>Subsequent</u>
50 & Under	40.00%	25.00%		
51 to 55	40.00	20.00		
56	40.00	20.00	15.00%	15.00%
57 to 59	40.00	17.00	15.00	15.00
60	15.00	15.00	15.00	15.00
61	40.00	18.00	15.00	15.00
62	40.00	28.00	40.00	28.00
63	40.00	28.00	40.00	28.00
64	40.00	21.00	40.00	21.00
65	40.00	25.00	40.00	25.00
66	40.00	40.00	40.00	40.00
67 to 74	40.00	30.00	40.00	30.00
75 & Above	100.00	100.00	100.00	100.00

<sup>1</sup>For local employers with fewer than 25 employees we assume that all members retire upon first eligibility for a service retirement benefit.

<sup>2</sup>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.





DEATH AND DISABILITY: Representative values of the assumed annual rates of death and disability are as follows:

**STATE EMPLOYEES**

Age	Death		Annual Rate of Disability				
			Tier I			Tier II	
	Male	Female	Service < 25		Service >=25	Male	Female
			Male	Female			
20	0.023%	0.009%	0.060%	0.052%		0.060%	0.052%
25	0.025	0.010	0.090	0.074		0.090	0.074
30	0.029	0.012	0.117	0.100		0.117	0.100
35	0.051	0.022	0.151	0.187		0.151	0.187
40	0.071	0.033	0.405	0.372		0.405	0.372
45	0.099	0.053	0.630	0.559	0.250%	0.630	0.559
50	0.141	0.079	1.155	0.898	0.250	1.155	0.898
55	0.200	0.114	1.530	1.400	0.250	1.530	1.400
60	0.297	0.161	0.500	1.000	0.250	2.000	1.000
65	0.416	0.229	0.500	1.000	0.250	0.500	1.000
69	0.492	0.286					

**LOCAL EMPLOYEES**

Age	Death		Annual Rate of Disability				
			Tier I			Tier II	
	Male	Female	Service < 25		Service >=25	Male	Female
			Male	Female			
20	0.023%	0.009%	0.040%	0.040%		0.040%	0.040%
25	0.025	0.010	0.060	0.057		0.060	0.057
30	0.029	0.012	0.078	0.077		0.078	0.077
35	0.051	0.022	0.101	0.144		0.101	0.144
40	0.071	0.033	0.270	0.286		0.270	0.286
45	0.099	0.053	0.500	0.430	0.250%	0.500	0.430
50	0.141	0.079	0.900	0.691	0.250	0.900	0.691
55	0.200	0.114	1.400	1.000	0.250	1.400	1.000
60	0.297	0.161	0.500	0.250	0.250	2.000	1.000
65	0.416	0.229	0.500	0.250	0.250	0.500	0.250
69	0.492	0.286					



**STATE POLICEMEN**

Annual Rate of								
<u>Death</u>			<u>Disability</u>	<u>Withdrawal Service</u>		<u>Retirement</u>		
<u>Age</u>	<u>Male</u>	<u>Female</u>		<u>0-4</u>	<u>5+</u>	<u>10-19</u>	<u>20-24</u>	<u>25+</u>
20	0.023%	0.009%	0.080%	2.00%	2.00%			
25	0.025	0.010	0.100	2.00	2.00			
30	0.029	0.012	0.140	2.00	2.00			
35	0.051	0.022	0.220	2.00	1.00			
40	0.071	0.033	0.340	2.00	1.00			40.00%
45	0.099	0.053	0.460	5.00	1.00			40.00
50	0.141	0.079	0.600					40.00
55	0.200	0.114				5.00%	35.00%	35.00
60	0.297	0.161				25.00	25.00	25.00
62	0.346	0.183				25.00	25.00	25.00
65	0.416	0.229				100.00	100.00	100.00

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 Retiree Mortality Table Projected with Scale BB to 2020 with an adjustment of 130% at all ages for females. Representative values of assumed mortality are as follows:

<u>Age</u>	<u>Service Retirement</u>		<u>Disability Retirement</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
55	0.4939%	0.2528%	3.3375%	1.9456%
60	0.8983	0.4048	3.6532	2.3221
65	1.5257	0.8167	3.9411	2.8618
70	2.4722	1.4637	4.6257	3.8430
75	3.9850	2.4262	6.0659	5.3334
80	6.5180	4.6142	8.0841	7.3840
85	10.6322	7.8329	10.4664	10.2321
90	18.2107	13.1471	14.7009	14.5932

DEATH IN ACTIVE SERVICE BENEFIT: For those 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 and the value of the deferred annuity.

UNUSED SICK LEAVE: 2.25% load on service retirement liabilities for active members (No load for Tier II members).



**PERCENT MARRIED:** 100% of employees are assumed to be married, with the wife 3 years younger than the husband.

**ACTUARIAL METHOD:** Individual entry age normal cost 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. The amount recognized each year is 20% of the difference between market value and expected market 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, 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.



## **SCHEDULE E**

### **ACTUARIAL COST METHOD**

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



## SCHEDULE F

### **FUNDING POLICY OF THE ERS BOARD OF CONTROL**

The purpose of the funding policy is to state the overall funding objectives for the Employees' Retirement System of Alabama (System), the benchmarks that will be used to measure progress in achieving those goals, and the methods and assumptions that will be employed to develop the benchmarks.

The Board's funding policy applies to all plans administered by the Board of Control. The funding policy reflects the Board's long-term strategy for stability in funding of the plans.

#### **I. Funding Objectives**

The goal in requiring employer and member contributions to the System is to accumulate sufficient assets during a member's employment to fully finance the benefits the member is expected to receive throughout retirement. In meeting this objective, 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 or as a dollar amount for employers with no active members 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.

#### **II. Benchmarks**

To track progress in achieving the previously outlined funding objectives, the following benchmarks will be measured annually as of the valuation date. The valuation date is the date that the annual actuarial valuation of the System's assets and liabilities is prepared. This date is currently September 30<sup>th</sup> each year with due recognition that a single year's results may not be indicative of long-term trends:

- **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. An open amortization period is one for which the amortization period is recalculated on a yearly basis and the ending date of the amortization



period is a variable with each recalculation. A closed amortization period is one which is calculated over a fixed period and at the end of that period, the amount is fully amortized.

• **Unfunded Actuarial Accrued Liability (UAAL)**

- **Transitional UAAL** - The UAAL established as of the initial valuation date for which this funding policy is adopted shall be known as the Transitional UAAL (applicable only to employers participating in the System as of the adoption date of the funding policy).
- **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 All Employers**

- 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.

**•UAAL Amortization Period for Employers joining the System after the Implementation of this Funding Policy**

- For Employers joining the System after the implementation of this Funding Policy, the employer contribution rate shall be computed as the sum of the employer Normal Contribution rate, a contribution rate for administrative expenses, a contribution rate for the pre-retirement death benefit fund and the initial UAAL contribution rate. The initial UAAL contribution rate shall be determined by amortizing the initial UAAL over a closed period equal to the expected future working lifetime of the active membership. This initial amortization period shall not be less than 10 years nor greater than 30 years.
- In subsequent years the UAAL and employer contribution rate shall be determined in accordance with the rules of the Funding Policy described in the previous section.

**•Special Consideration**--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.

**III.Methods and Assumptions**

The actuarial funding method used to develop the benchmarks will be the Entry Age Normal (EAN) actuarial cost method. The actuarial methods and assumptions used will be those last adopted by the Board based upon the advice and recommendation of the actuary. The actuary shall conduct an investigation into the system's experience at least every five years and utilize the results of the investigation to form the basis for those recommendations.

**IV.Funding Policy Progress**

The Board will periodically have projections of funded status performed to assess the current and expected future progress towards the overall funding goals of the System.



**SCHEDULE G**

**PROJECTED UAAL AND TOTAL UAAL PAYMENT AS OF SEPTEMBER 30, 2017**

**STATE EMPLOYEES**

<b>Valuation Date</b>	<b>Projected UAAL</b>	<b>Annual Amortization Payment*</b>
9/30/2017	\$2,821,545,296	\$184,171,837
9/30/2018	2,856,043,220	187,987,709
9/30/2019	2,889,398,861	192,087,569
9/30/2020	2,921,239,703	196,484,794
9/30/2021	2,951,150,986	201,193,273
9/30/2022	2,978,671,914	206,227,409
9/30/2023	3,003,291,578	211,602,133
9/30/2024	3,024,444,542	217,332,942
9/30/2025	3,041,506,053	223,435,899
9/30/2026	3,053,786,873	229,927,660
9/30/2027	3,060,527,695	236,825,492
9/30/2028	3,060,893,100	243,930,251
9/30/2029	3,054,182,064	251,248,162
9/30/2030	3,039,633,012	258,785,604
9/30/2031	3,016,418,966	266,549,175
9/30/2032	2,983,642,261	274,545,652
9/30/2033	2,940,328,885	282,782,019
9/30/2034	2,885,422,355	291,265,482
9/30/2035	2,817,777,105	300,003,444
9/30/2036	2,736,151,386	309,003,548
9/30/2037	2,639,199,570	318,273,655
9/30/2038	2,525,463,882	327,821,863
9/30/2039	2,393,365,470	337,656,519
9/30/2040	2,241,194,775	347,786,215
9/30/2041	2,067,101,155	358,219,803
9/30/2042	1,869,081,692	342,936,023
9/30/2043	1,670,999,500	321,087,480
9/30/2044	1,479,414,481	310,247,716
9/30/2045	1,283,821,388	283,907,630
9/30/2046	1,099,409,914	247,916,693
9/30/2047	936,697,489	231,138,650
9/30/2048	778,152,895	209,872,458
9/30/2049	628,587,286	187,589,451
9/30/2050	489,713,349	164,254,034
9/30/2051	363,412,100	139,829,475
9/30/2052	251,747,063	114,277,874
9/30/2053	156,979,586	87,560,124
9/30/2054	81,585,380	59,635,872
9/30/2055	28,272,375	30,463,484
9/30/2056	(0)	0

\*Includes amortization of bases that will be closed subsequent to September 30, 2017.





**SCHEDULE G** (Continued)

**PROJECTED UAAL AND TOTAL UAAL PAYMENT AS OF SEPTEMBER 30, 2017**

**STATE POLICEMEN**

<b>Valuation Date</b>	<b>Projected UAAL</b>	<b>Annual Amortization Payment*</b>
9/30/2017	\$273,147,256	\$17,836,945
9/30/2018	276,479,221	18,225,478
9/30/2019	279,680,883	18,640,203
9/30/2020	282,715,948	19,082,323
9/30/2021	285,544,111	19,553,084
9/30/2022	288,120,694	20,053,782
9/30/2023	290,396,267	20,585,757
9/30/2024	292,316,221	21,150,398
9/30/2025	293,820,329	21,749,149
9/30/2026	294,842,256	22,383,503
9/30/2027	295,309,028	23,055,007
9/30/2028	295,140,471	23,746,658
9/30/2029	294,267,199	24,459,058
9/30/2030	292,613,849	25,192,829
9/30/2031	290,098,594	25,948,613
9/30/2032	286,632,621	26,727,073
9/30/2033	282,119,577	27,528,884
9/30/2034	276,454,960	28,354,751
9/30/2035	269,525,469	29,205,394
9/30/2036	261,208,298	30,081,555
9/30/2037	251,370,387	30,984,002
9/30/2038	239,867,590	31,913,522
9/30/2039	226,543,805	32,870,928
9/30/2040	211,230,022	33,857,056
9/30/2041	193,743,293	34,872,767
9/30/2042	173,885,631	33,684,105
9/30/2043	153,677,662	32,405,371
9/30/2044	133,182,310	31,072,709
9/30/2045	112,431,230	27,038,412
9/30/2046	94,106,238	21,075,523
9/30/2047	80,323,948	19,820,667
9/30/2048	66,728,387	17,997,042
9/30/2049	53,902,795	16,086,224
9/30/2050	41,994,037	14,085,158
9/30/2051	31,163,417	11,990,697
9/30/2052	21,587,885	9,799,589
9/30/2053	13,461,358	7,508,481
9/30/2054	6,996,133	5,113,912
9/30/2055	2,424,421	2,612,313
9/30/2056	0	0

\*Includes amortization of bases that will be closed subsequent to September 30, 2017.



**SCHEDULE G** (Continued)

**PROJECTION OF TRANSITIONAL UAAL  
AND AMORTIZATION OF BASES  
PROJECTION OF THE OPEN TRANSITIONAL UAAL**

**STATE EMPLOYEES**

<b>Valuation Date</b>	<b>Transitional UAAL Beginning of Year (1)</b>	<b>Years (2)</b>	<b>Transitional Closed (3)=(1)/(2)</b>	<b>Transitional Remaining Open (4)=(1)-(3)</b>	<b>7.75% Interest (5)=(4) x .0775*</b>	<b>Amortization Payment (6)</b>	<b>Transitional Open UAAL End of Year (7)=(4)+(5)-(6)</b>
9/30/2012	\$2,483,987,366	15	\$165,599,158	\$2,318,388,208	\$185,471,057	\$148,697,195	\$2,355,162,070
9/30/2013	2,355,162,070	14	168,225,862	2,186,936,208	174,954,897	140,266,104	2,221,625,001
9/30/2014	2,221,625,001	13	170,894,231	2,050,730,770	164,058,462	131,530,135	2,083,259,097
9/30/2015	2,083,259,097	12	173,604,925	1,909,654,172	152,772,334	122,481,739	1,939,944,767
9/30/2016	1,939,944,767	11	176,358,615	1,763,586,152	138,882,409	113,049,923	1,789,418,638
9/30/2017	1,789,418,638	10	178,941,864	1,610,476,774	124,811,950	103,177,495	1,632,111,229
9/30/2018	1,632,111,229	9	181,345,692	1,450,765,537	112,434,329	92,945,367	1,470,254,499
9/30/2019	1,470,254,499	8	183,781,812	1,286,472,687	99,701,633	82,419,710	1,303,754,610
9/30/2020	1,303,754,610	7	186,250,659	1,117,503,951	86,606,556	71,594,487	1,132,516,021
9/30/2021	1,132,516,021	6	188,752,670	943,763,350	73,141,660	60,463,547	956,441,463
9/30/2022	956,441,463	5	191,288,293	765,153,170	59,299,371	49,020,631	775,431,910
9/30/2023	775,431,910	4	193,857,978	581,573,933	45,071,980	37,259,365	589,386,548
9/30/2024	589,386,548	3	196,462,183	392,924,365	30,451,638	25,173,261	398,202,743
9/30/2025	398,202,743	2	199,101,371	199,101,371	15,430,356	12,755,714	201,776,015
9/30/2026	201,776,015	1	201,776,015	0	0	0	0

**STATE POLICEMEN**

<b>Valuation Date</b>	<b>Transitional UAAL Beginning of Year (1)</b>	<b>Years (2)</b>	<b>Transitional Closed (3)=(1)/(2)</b>	<b>Transitional Remaining Open (4)=(1)-(3)</b>	<b>7.75% Interest (5)=(4) x .0775*</b>	<b>Amortization Payment (6)</b>	<b>Transitional Open UAAL End of Year (7)=(4)+(5)-(6)</b>
9/30/2012	\$223,751,421	15	\$14,916,761	\$208,834,660	\$16,706,773	\$13,394,275	\$212,147,158
9/30/2013	212,147,158	14	15,153,368	196,993,790	15,759,503	12,634,823	200,118,470
9/30/2014	200,118,470	13	15,393,728	184,724,742	14,777,979	16,408,625	183,094,096
9/30/2015	183,094,096	12	15,257,841	167,836,255	13,426,900	14,908,464	166,354,691
9/30/2016	166,354,691	11	15,123,154	151,231,537	11,909,484	9,694,289	153,446,732
9/30/2017	153,446,732	10	15,344,673	138,102,059	10,702,910	8,847,706	139,957,264
9/30/2018	139,957,264	9	15,550,807	124,406,457	9,641,500	7,970,277	126,077,679
9/30/2019	126,077,679	8	15,759,710	110,317,969	8,549,643	7,067,678	111,799,934
9/30/2020	111,799,934	7	15,971,419	95,828,515	7,426,710	6,139,391	97,115,834
9/30/2021	97,115,834	6	16,185,972	80,929,862	6,272,064	5,184,887	82,017,039
9/30/2022	82,017,039	5	16,403,408	65,613,631	5,085,056	4,203,631	66,495,056
9/30/2023	66,495,056	4	16,623,764	49,871,292	3,865,025	3,195,076	50,541,241
9/30/2024	50,541,241	3	16,847,080	33,694,161	2,611,297	2,158,665	34,146,793
9/30/2025	34,146,793	2	17,073,397	17,073,397	1,323,188	1,093,832	17,302,753
9/30/2026	17,302,753	1	17,302,753	0	0	0	0

\*8.00% prior to September 30, 2016 and 7.875% for September 30, 2016.



**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2012\***

<b>STATE EMPLOYEES</b>			<b>STATE POLICE</b>		
<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2012</b>	<b>Annual Amortization Payment</b>	<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2012</b>	<b>Annual Amortization Payment</b>
9/30/2012	\$165,599,158	\$10,621,228	9/30/2012	\$14,916,761	\$956,734
9/30/2013	168,225,862	10,966,418	9/30/2013	15,153,368	987,828
9/30/2014	170,717,514	11,322,827	9/30/2014	15,377,809	1,391,521
9/30/2015	173,052,088	11,690,819	9/30/2015	15,216,513	1,391,521
9/30/2016	175,205,436	12,063,244	9/30/2016	15,042,313	1,035,693
9/30/2017	176,939,620	12,432,251	9/30/2017	15,191,202	1,067,375
9/30/2018	178,220,190	12,805,219	9/30/2018	15,301,145	1,099,396
9/30/2019	179,227,036	13,189,376	9/30/2019	15,387,588	1,132,378
9/30/2020	179,927,755	13,585,057	9/30/2020	15,447,748	1,166,349
9/30/2021	180,287,099	13,992,609	9/30/2021	15,478,599	1,201,339
9/30/2022	180,266,740	14,412,387	9/30/2022	15,476,851	1,237,379
9/30/2023	179,825,025	14,844,758	9/30/2023	15,438,928	1,274,501
9/30/2024	178,916,706	15,290,101	9/30/2024	15,360,944	1,312,736
9/30/2025	177,492,650	15,748,804	9/30/2025	15,238,681	1,352,118
9/30/2026	175,499,526	16,221,268	9/30/2026	15,067,561	1,392,682
9/30/2027	172,879,471	16,707,906	9/30/2027	14,842,615	1,434,462
9/30/2028	169,569,724	17,209,143	9/30/2028	14,558,456	1,477,496
9/30/2029	165,502,235	17,725,418	9/30/2029	14,209,240	1,521,821
9/30/2030	160,603,240	18,257,180	9/30/2030	13,788,635	1,567,475
9/30/2031	154,792,811	18,804,896	9/30/2031	13,289,779	1,614,499
9/30/2032	147,984,358	19,369,043	9/30/2032	12,705,238	1,662,935
9/30/2033	140,084,103	19,950,114	9/30/2033	12,026,959	1,712,822
9/30/2034	130,990,507	20,548,617	9/30/2034	11,246,226	1,764,207
9/30/2035	120,593,654	21,165,076	9/30/2035	10,353,602	1,817,134
9/30/2036	108,774,586	21,800,028	9/30/2036	9,338,872	1,871,647
9/30/2037	95,404,588	22,454,029	9/30/2037	8,190,988	1,927,797
9/30/2038	80,344,415	23,127,649	9/30/2038	6,897,993	1,985,631
9/30/2039	63,443,458	23,821,479	9/30/2039	5,446,956	2,045,200
9/30/2040	44,538,847	24,536,123	9/30/2040	3,823,895	2,106,556
9/30/2041	23,454,485	25,272,208	9/30/2041	2,013,691	2,169,752
9/30/2042	0	0	9/30/2042	0	0

\*Amortization method is level dollar for 9/30/2014 and 9/30/2015. Amortization method is level percent of payroll for other years. Reflects change in interest rate and payroll growth assumption beginning with September 30, 2016 valuation.



**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2013\***

**STATE EMPLOYEES**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2013</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2013</b>	<b>Annual Amortization Payment</b>
9/30/2013	\$168,225,862	\$10,789,700	\$36,709,210	\$2,354,462
9/30/2014	170,894,231	11,140,366	37,291,485	2,430,982
9/30/2015	173,425,404	11,502,427	37,843,822	2,509,989
9/30/2016	175,797,009	11,869,048	38,361,339	2,589,990
9/30/2017	177,771,975	12,232,322	38,792,304	2,669,262
9/30/2018	179,316,981	12,599,291	39,129,445	2,749,340
9/30/2019	180,614,756	12,977,270	39,412,637	2,831,820
9/30/2020	181,635,130	13,366,588	39,635,297	2,916,774
9/30/2021	182,345,264	13,767,586	39,790,258	3,004,278
9/30/2022	182,709,436	14,180,613	39,869,725	3,094,406
9/30/2023	182,688,805	14,606,032	39,865,223	3,187,238
9/30/2024	182,241,155	15,044,213	39,767,540	3,282,855
9/30/2025	181,320,631	15,495,539	39,566,669	3,381,341
9/30/2026	179,877,441	15,960,405	39,251,745	3,482,781
9/30/2027	177,857,538	16,439,217	38,810,974	3,587,265
9/30/2028	175,202,280	16,932,394	38,231,560	3,694,882
9/30/2029	171,848,063	17,440,365	37,499,624	3,805,729
9/30/2030	167,725,923	17,963,576	36,600,116	3,919,901
9/30/2031	162,761,106	18,502,484	35,516,724	4,037,498
9/30/2032	156,872,608	19,057,558	34,231,772	4,158,623
9/30/2033	149,972,677	19,629,285	32,726,111	4,283,381
9/30/2034	141,966,274	20,218,164	30,979,004	4,411,883
9/30/2035	132,750,496	20,824,709	28,967,993	4,544,239
9/30/2036	122,213,951	21,449,450	26,668,774	4,680,566
9/30/2037	110,236,082	22,092,933	24,055,038	4,820,984
9/30/2038	96,686,445	22,755,721	21,098,319	4,965,613
9/30/2039	81,423,924	23,438,393	17,767,826	5,114,581
9/30/2040	64,295,885	24,141,545	14,030,252	5,268,019
9/30/2041	45,137,271	24,865,791	9,849,577	5,426,060
9/30/2042	23,769,619	25,611,764	5,186,859	5,588,841
9/30/2043	0	0	(0)	0

\*Reflects change in interest rate and payroll growth assumption beginning with September 30, 2016 valuation



**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2013\***

**STATE POLICE**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2013</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2013</b>	<b>Annual Amortization Payment</b>
9/30/2013	\$15,153,368	\$971,909	\$170,613	\$10,943
9/30/2014	15,393,728	1,379,563	173,319	15,533
9/30/2015	15,245,663	1,379,563	171,652	15,533
9/30/2016	15,085,753	1,018,524	169,852	11,468
9/30/2017	15,255,231	1,049,698	171,760	11,819
9/30/2018	15,387,814	1,081,189	173,253	12,173
9/30/2019	15,499,180	1,113,625	174,507	12,538
9/30/2020	15,586,742	1,147,033	175,492	12,915
9/30/2021	15,647,681	1,181,444	176,179	13,302
9/30/2022	15,678,932	1,216,888	176,530	13,701
9/30/2023	15,677,162	1,253,394	176,510	14,112
9/30/2024	15,638,747	1,290,996	176,078	14,535
9/30/2025	15,559,754	1,329,726	175,189	14,971
9/30/2026	15,435,909	1,369,618	173,794	15,421
9/30/2027	15,262,574	1,410,706	171,843	15,883
9/30/2028	15,034,717	1,453,028	169,277	16,360
9/30/2029	14,746,880	1,496,618	166,036	16,851
9/30/2030	14,393,145	1,541,517	162,054	17,356
9/30/2031	13,967,097	1,587,762	157,257	17,877
9/30/2032	13,461,784	1,635,395	151,567	18,413
9/30/2033	12,869,677	1,684,457	144,901	18,965
9/30/2034	12,182,620	1,734,991	137,165	19,534
9/30/2035	11,391,782	1,787,041	128,261	20,120
9/30/2036	10,487,604	1,840,652	118,081	20,724
9/30/2037	9,459,742	1,895,871	106,508	21,346
9/30/2038	8,297,000	1,952,748	93,417	21,986
9/30/2039	6,987,270	2,011,330	78,670	22,646
9/30/2040	5,517,454	2,071,670	62,121	23,325
9/30/2041	3,873,386	2,133,820	43,611	24,025
9/30/2042	2,039,754	2,197,835	22,966	24,746
9/30/2043	0	0	0	0

\*Amortization method is level dollar for 9/30/2014 and 9/30/2015. Amortization method is level percent of payroll for other years. Reflects change in interest rate and payroll growth assumption beginning with September 30, 2016 valuation.



**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2014\***

**STATE EMPLOYEES**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2014</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2014</b>	<b>Annual Amortization Payment</b>
9/30/2014	\$170,894,231	\$10,960,845	(\$40,029,335)	(\$2,567,409)
9/30/2015	173,604,925	11,317,072	(40,664,273)	(2,650,849)
9/30/2016	176,176,247	11,677,974	(41,266,566)	(2,735,385)
9/30/2017	178,372,152	12,035,599	(41,780,923)	(2,819,153)
9/30/2018	180,160,395	12,396,666	(42,199,791)	(2,903,728)
9/30/2019	181,726,160	12,768,567	(42,566,547)	(2,990,840)
9/30/2020	183,041,370	13,151,623	(42,874,614)	(3,080,565)
9/30/2021	184,075,453	13,546,172	(43,116,832)	(3,172,982)
9/30/2022	184,795,129	13,952,557	(43,285,404)	(3,268,171)
9/30/2023	185,164,195	14,371,134	(43,371,852)	(3,366,216)
9/30/2024	185,143,286	14,802,268	(43,366,955)	(3,467,203)
9/30/2025	184,689,622	15,246,336	(43,260,691)	(3,571,219)
9/30/2026	183,756,732	15,703,726	(43,042,175)	(3,678,355)
9/30/2027	182,294,153	16,174,838	(42,699,589)	(3,788,706)
9/30/2028	180,247,112	16,660,083	(42,220,101)	(3,902,367)
9/30/2029	177,556,180	17,159,886	(41,589,792)	(4,019,438)
9/30/2030	174,156,898	17,674,682	(40,793,563)	(4,140,021)
9/30/2031	169,979,375	18,204,923	(39,815,043)	(4,264,222)
9/30/2032	164,947,854	18,751,071	(38,636,487)	(4,392,149)
9/30/2033	158,980,241	19,313,603	(37,238,666)	(4,523,913)
9/30/2034	151,987,607	19,893,011	(35,600,749)	(4,659,630)
9/30/2035	143,873,636	20,489,801	(33,700,177)	(4,799,419)
9/30/2036	134,534,041	21,104,495	(31,512,522)	(4,943,402)
9/30/2037	123,855,935	21,737,630	(29,011,340)	(5,091,704)
9/30/2038	111,717,140	22,389,759	(26,168,015)	(5,244,455)
9/30/2039	97,985,459	23,061,452	(22,951,581)	(5,401,789)
9/30/2040	82,517,880	23,753,295	(19,328,540)	(5,563,843)
9/30/2041	65,159,721	24,465,894	(15,262,659)	(5,730,758)
9/30/2042	45,743,705	25,199,871	(10,714,757)	(5,902,681)
9/30/2043	24,088,971	25,955,866	(5,642,470)	(6,079,761)
9/30/2044	0	0	0	0

\*Reflects change in interest rate and payroll growth assumption beginning with September 30, 2016 valuation



**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2014\***

**STATE POLICE**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2014</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2014</b>	<b>Annual Amortization Payment</b>
9/30/2014	\$15,393,728	\$1,367,385	\$78,767	\$6,997
9/30/2015	15,257,841	1,367,385	78,072	6,997
9/30/2016	15,111,083	1,001,649	77,321	5,125
9/30/2017	15,299,432	1,032,324	78,284	5,282
9/30/2018	15,452,814	1,063,294	79,069	5,441
9/30/2019	15,587,113	1,095,192	79,757	5,604
9/30/2020	15,699,922	1,128,048	80,334	5,772
9/30/2021	15,788,618	1,161,890	80,788	5,945
9/30/2022	15,850,347	1,196,746	81,103	6,124
9/30/2023	15,882,002	1,232,649	81,265	6,307
9/30/2024	15,880,209	1,269,628	81,256	6,496
9/30/2025	15,841,297	1,307,717	81,057	6,691
9/30/2026	15,761,281	1,346,948	80,648	6,892
9/30/2027	15,635,831	1,387,357	80,006	7,099
9/30/2028	15,460,252	1,428,978	79,107	7,312
9/30/2029	15,229,443	1,471,847	77,926	7,531
9/30/2030	14,937,878	1,516,002	76,434	7,757
9/30/2031	14,579,562	1,561,482	74,601	7,990
9/30/2032	14,147,995	1,608,327	72,393	8,230
9/30/2033	13,636,138	1,656,577	69,774	8,476
9/30/2034	13,036,362	1,706,274	66,705	8,731
9/30/2035	12,340,406	1,757,462	63,144	8,993
9/30/2036	11,539,326	1,810,186	59,045	9,262
9/30/2037	10,623,437	1,864,492	54,358	9,540
9/30/2038	9,582,262	1,920,426	49,031	9,826
9/30/2039	8,404,461	1,978,039	43,004	10,121
9/30/2040	7,077,768	2,037,380	36,216	10,425
9/30/2041	5,588,914	2,098,502	28,597	10,738
9/30/2042	3,923,554	2,161,457	20,076	11,060
9/30/2043	2,066,172	2,226,300	10,572	11,392
9/30/2044	0	0	0	0

\*Amortization method is level dollar for 9/30/2014 and 9/30/2015. Amortization method is level percent of payroll for other years. Reflects change in interest rate and payroll growth assumption beginning with September 30, 2016 valuation.





**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2015\***

**STATE EMPLOYEES**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2015</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2015</b>	<b>Annual Amortization Payment</b>
9/30/2015	\$173,604,925	\$11,134,704	\$54,809,112	\$3,515,357
9/30/2016	176,358,615	11,489,972	55,678,484	3,627,519
9/30/2017	178,756,885	11,842,031	56,435,646	3,738,668
9/30/2018	180,768,512	12,197,292	57,070,741	3,850,828
9/30/2019	182,580,780	12,563,211	57,642,895	3,966,353
9/30/2020	184,167,579	12,940,107	58,143,867	4,085,344
9/30/2021	185,500,460	13,328,310	58,564,672	4,207,904
9/30/2022	186,548,435	13,728,160	58,895,530	4,334,141
9/30/2023	187,277,779	14,140,005	59,125,793	4,464,165
9/30/2024	187,651,802	14,564,205	59,243,877	4,598,090
9/30/2025	187,630,611	15,001,131	59,237,187	4,736,033
9/30/2026	187,170,853	15,451,165	59,092,036	4,878,114
9/30/2027	186,225,429	15,914,700	58,793,555	5,024,458
9/30/2028	184,743,200	16,392,140	58,325,598	5,175,191
9/30/2029	182,668,658	16,883,905	57,670,640	5,330,447
9/30/2030	179,941,574	17,390,422	56,809,668	5,490,360
9/30/2031	176,496,623	17,912,134	55,722,057	5,655,071
9/30/2032	172,262,978	18,449,499	54,385,446	5,824,723
9/30/2033	167,163,860	19,002,983	52,775,595	5,999,465
9/30/2034	161,116,076	19,573,073	50,866,238	6,179,449
9/30/2035	154,029,499	20,160,265	48,628,923	6,364,833
9/30/2036	145,806,520	20,765,073	46,032,831	6,555,778
9/30/2037	136,341,452	21,388,025	43,044,598	6,752,451
9/30/2038	125,519,889	22,029,666	39,628,103	6,955,024
9/30/2039	113,218,015	22,690,556	35,744,257	7,163,675
9/30/2040	99,301,855	23,371,273	31,350,762	7,378,585
9/30/2041	83,626,476	24,072,411	26,401,861	7,599,943
9/30/2042	66,035,117	24,794,584	20,848,062	7,827,942
9/30/2043	46,358,254	25,538,421	14,635,845	8,062,779
9/30/2044	24,412,598	26,304,574	7,707,344	8,304,663
9/30/2045	0	0	0	0

\*Reflects change in interest rate and payroll growth assumption beginning with September 30, 2016 valuation





**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2015\***

**STATE POLICE**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2015</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2015</b>	<b>Annual Amortization Payment</b>
9/30/2015	\$15,257,841	\$1,355,315	\$17,357,914	\$1,541,859
9/30/2016	15,123,154	985,291	17,204,688	1,120,906
9/30/2017	15,328,811	1,015,481	17,438,652	1,155,251
9/30/2018	15,501,312	1,045,946	17,634,896	1,189,908
9/30/2019	15,656,719	1,077,324	17,811,692	1,225,606
9/30/2020	15,792,790	1,109,644	17,966,493	1,262,374
9/30/2021	15,907,088	1,142,933	18,096,522	1,300,245
9/30/2022	15,996,954	1,177,221	18,198,757	1,339,252
9/30/2023	16,059,497	1,212,538	18,269,909	1,379,430
9/30/2024	16,091,570	1,248,914	18,306,396	1,420,813
9/30/2025	16,089,753	1,286,381	18,304,329	1,463,437
9/30/2026	16,050,328	1,324,973	18,259,478	1,507,340
9/30/2027	15,969,256	1,364,722	18,167,247	1,552,561
9/30/2028	15,842,151	1,405,663	18,022,648	1,599,137
9/30/2029	15,664,254	1,447,833	17,820,265	1,647,112
9/30/2030	15,430,401	1,491,268	17,554,224	1,696,525
9/30/2031	15,134,988	1,536,006	17,218,152	1,747,421
9/30/2032	14,771,944	1,582,087	16,805,138	1,799,843
9/30/2033	14,334,683	1,629,549	16,307,693	1,853,839
9/30/2034	13,816,071	1,678,436	15,717,700	1,909,454
9/30/2035	13,208,381	1,728,789	15,026,368	1,966,737
9/30/2036	12,503,242	1,780,652	14,224,174	2,025,739
9/30/2037	11,691,591	1,834,072	13,300,809	2,086,512
9/30/2038	10,763,617	1,889,094	12,245,109	2,149,107
9/30/2039	9,708,703	1,945,767	11,044,998	2,213,580
9/30/2040	8,515,361	2,004,140	9,687,406	2,279,988
9/30/2041	7,171,161	2,064,264	8,158,192	2,348,387
9/30/2042	5,662,662	2,126,192	6,442,064	2,418,839
9/30/2043	3,975,326	2,189,978	4,522,486	2,491,404
9/30/2044	2,093,436	2,255,677	2,381,574	2,566,146
9/30/2045	0	0	0	0

\*Amortization method is level dollar for 9/30/2015. Amortization method is level percent of payroll for other years. Reflects change in interest rate and payroll growth assumption beginning with September 30, 2016 valuation.



**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2016**

**STATE EMPLOYEES**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2016</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2016</b>	<b>Annual Amortization Payment</b>
9/30/2016	\$176,358,615	\$11,304,992	\$109,513,946	\$7,020,096
9/30/2017	178,941,864	11,651,569	111,118,075	7,235,310
9/30/2018	181,158,289	12,001,116	112,494,413	7,452,369
9/30/2019	183,196,941	12,361,149	113,760,361	7,675,941
9/30/2020	185,033,555	12,731,984	114,900,848	7,906,219
9/30/2021	186,641,671	13,113,943	115,899,445	8,143,405
9/30/2022	187,992,458	13,507,362	116,738,247	8,387,707
9/30/2023	189,054,511	13,912,583	117,397,754	8,639,339
9/30/2024	189,793,653	14,329,960	117,856,741	8,898,519
9/30/2025	190,172,701	14,759,859	118,092,120	9,165,474
9/30/2026	190,151,226	15,202,655	118,078,785	9,440,439
9/30/2027	189,685,291	15,658,734	117,789,452	9,723,652
9/30/2028	188,727,167	16,128,496	117,194,482	10,015,361
9/30/2029	187,225,027	16,612,351	116,261,694	10,315,822
9/30/2030	185,122,615	17,110,722	114,956,153	10,625,297
9/30/2031	182,358,896	17,624,044	113,239,958	10,944,056
9/30/2032	178,867,666	18,152,765	111,071,999	11,272,378
9/30/2033	174,577,145	18,697,348	108,407,701	11,610,549
9/30/2034	169,409,526	19,258,268	105,198,748	11,958,865
9/30/2035	163,280,496	19,836,016	101,392,786	12,317,631
9/30/2036	156,098,719	20,431,097	96,933,096	12,687,160
9/30/2037	147,765,273	21,044,030	91,758,251	13,067,775
9/30/2038	138,173,051	21,675,350	85,801,741	13,459,808
9/30/2039	127,206,113	22,325,611	78,991,568	13,863,603
9/30/2040	114,738,975	22,995,379	71,249,811	14,279,511
9/30/2041	100,635,867	23,685,241	62,492,161	14,707,896
9/30/2042	84,749,906	24,395,798	52,627,407	15,149,133
9/30/2043	66,922,225	25,127,672	41,556,898	15,603,607
9/30/2044	46,981,026	25,881,502	29,173,951	16,071,715
9/30/2045	24,740,553	26,657,946	15,363,217	16,553,866
9/30/2046	0	0	0	0



**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2016**

**STATE POLICE**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2016</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2016</b>	<b>Annual Amortization Payment</b>
9/30/2016	\$15,123,154	\$969,429	\$28,385,997	\$1,819,608
9/30/2017	15,344,673	999,149	28,801,787	1,875,391
9/30/2018	15,534,737	1,029,123	29,158,534	1,931,653
9/30/2019	15,709,556	1,059,997	29,486,667	1,989,603
9/30/2020	15,867,050	1,091,797	29,782,281	2,049,291
9/30/2021	16,004,949	1,124,551	30,041,118	2,110,769
9/30/2022	16,120,782	1,158,287	30,258,535	2,174,092
9/30/2023	16,211,856	1,193,036	30,429,479	2,239,315
9/30/2024	16,275,239	1,228,827	30,548,448	2,306,495
9/30/2025	16,307,743	1,265,692	30,609,458	2,375,690
9/30/2026	16,305,902	1,303,662	30,606,002	2,446,960
9/30/2027	16,265,947	1,342,772	30,531,007	2,520,369
9/30/2028	16,183,785	1,383,055	30,376,791	2,595,980
9/30/2029	16,054,973	1,424,547	30,135,012	2,673,859
9/30/2030	15,874,687	1,467,283	29,796,616	2,754,075
9/30/2031	15,637,691	1,511,302	29,351,779	2,836,698
9/30/2032	15,338,311	1,556,641	28,789,844	2,921,798
9/30/2033	14,970,389	1,603,340	28,099,258	3,009,452
9/30/2034	14,527,253	1,651,440	27,267,499	3,099,736
9/30/2035	14,001,675	1,700,984	26,280,994	3,192,728
9/30/2036	13,385,821	1,752,013	25,125,043	3,288,510
9/30/2037	12,671,209	1,804,574	23,783,724	3,387,165
9/30/2038	11,848,655	1,858,711	22,239,797	3,488,780
9/30/2039	10,908,214	1,914,472	20,474,601	3,593,444
9/30/2040	9,839,129	1,971,906	18,467,939	3,701,247
9/30/2041	8,629,755	2,031,063	16,197,958	3,812,284
9/30/2042	7,267,498	2,091,995	13,641,015	3,926,653
9/30/2043	5,738,734	2,154,755	10,771,541	4,044,452
9/30/2044	4,028,730	2,219,398	7,561,883	4,165,786
9/30/2045	2,121,559	2,285,980	3,982,143	4,290,760
9/30/2046	0	0	0	0



**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2017**

**STATE EMPLOYEES**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2017</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2016</b>	<b>Annual Amortization Payment</b>
9/30/2017	\$178,941,864	\$11,464,166	(\$23,220,938)	(\$1,487,683)
9/30/2018	181,345,692	11,808,091	(23,532,878)	(1,532,313)
9/30/2019	183,591,892	12,162,334	(23,824,363)	(1,578,282)
9/30/2020	185,657,930	12,527,204	(24,092,469)	(1,625,631)
9/30/2021	187,519,216	12,903,020	(24,334,004)	(1,674,400)
9/30/2022	189,148,935	13,290,111	(24,545,489)	(1,724,632)
9/30/2023	190,517,866	13,688,814	(24,723,133)	(1,776,371)
9/30/2024	191,594,187	14,099,478	(24,862,805)	(1,829,662)
9/30/2025	192,343,258	14,522,463	(24,960,010)	(1,884,552)
9/30/2026	192,727,398	14,958,136	(25,009,859)	(1,941,088)
9/30/2027	192,705,635	15,406,881	(25,007,035)	(1,999,321)
9/30/2028	192,233,441	15,869,087	(24,945,759)	(2,059,301)
9/30/2029	191,262,446	16,345,160	(24,819,754)	(2,121,079)
9/30/2030	189,740,125	16,835,514	(24,622,206)	(2,184,712)
9/30/2031	187,609,471	17,340,580	(24,345,715)	(2,250,253)
9/30/2032	184,808,625	17,860,797	(23,982,255)	(2,317,761)
9/30/2033	181,270,496	18,396,621	(23,523,119)	(2,387,294)
9/30/2034	176,922,339	18,948,520	(22,958,867)	(2,458,912)
9/30/2035	171,685,300	19,516,975	(22,279,267)	(2,532,680)
9/30/2036	165,473,936	20,102,485	(21,473,230)	(2,608,660)
9/30/2037	158,195,681	20,705,559	(20,528,746)	(2,686,920)
9/30/2038	149,750,287	21,326,726	(19,432,803)	(2,767,528)
9/30/2039	140,029,209	21,966,528	(18,171,318)	(2,850,554)
9/30/2040	128,914,944	22,625,523	(16,729,041)	(2,936,070)
9/30/2041	116,280,329	23,304,289	(15,089,471)	(3,024,152)
9/30/2042	101,987,766	24,003,418	(13,234,754)	(3,114,877)
9/30/2043	85,888,400	24,723,521	(11,145,570)	(3,208,323)
9/30/2044	67,821,230	25,465,226	(8,801,029)	(3,304,573)
9/30/2045	47,612,149	26,229,183	(6,178,535)	(3,403,710)
9/30/2046	25,072,908	27,016,058	(3,253,662)	(3,505,821)
9/30/2047	0	0	0	0



**SCHEDULE G** (Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED  
ON SEPTEMBER 30, 2017**

**STATE POLICE**

<b>Valuation Date</b>	<b>Balance of Transitional Closed 9/30/2017</b>	<b>Annual Amortization Payment</b>	<b>Balance of New Incremental UAAL 9/30/2017</b>	<b>Annual Amortization Payment</b>
9/30/2017	\$15,344,673	\$983,078	(\$3,209,308)	(\$205,609)
9/30/2018	15,550,807	1,012,571	(3,252,422)	(211,777)
9/30/2019	15,743,424	1,042,948	(3,292,708)	(218,131)
9/30/2020	15,920,591	1,074,236	(3,329,762)	(224,675)
9/30/2021	16,080,201	1,106,463	(3,363,144)	(231,415)
9/30/2022	16,219,953	1,139,657	(3,392,373)	(238,357)
9/30/2023	16,337,342	1,173,847	(3,416,925)	(245,508)
9/30/2024	16,429,639	1,209,062	(3,436,229)	(252,873)
9/30/2025	16,493,873	1,245,334	(3,449,663)	(260,459)
9/30/2026	16,526,814	1,282,694	(3,456,553)	(268,273)
9/30/2027	16,524,948	1,321,175	(3,456,162)	(276,321)
9/30/2028	16,484,456	1,360,810	(3,447,694)	(284,611)
9/30/2029	16,401,191	1,401,635	(3,430,279)	(293,149)
9/30/2030	16,270,649	1,443,684	(3,402,976)	(301,944)
9/30/2031	16,087,940	1,486,994	(3,364,763)	(311,002)
9/30/2032	15,847,761	1,531,604	(3,314,530)	(320,332)
9/30/2033	15,544,359	1,577,552	(3,251,074)	(329,942)
9/30/2034	15,171,494	1,624,879	(3,173,090)	(339,840)
9/30/2035	14,722,406	1,673,625	(3,079,164)	(350,036)
9/30/2036	14,189,768	1,723,834	(2,967,764)	(360,537)
9/30/2037	13,565,641	1,775,549	(2,837,229)	(371,353)
9/30/2038	12,841,429	1,828,815	(2,685,761)	(382,493)
9/30/2039	12,007,824	1,883,680	(2,511,414)	(393,968)
9/30/2040	11,054,751	1,940,190	(2,312,081)	(405,787)
9/30/2041	9,971,304	1,998,396	(2,085,480)	(417,961)
9/30/2042	8,745,684	2,058,348	(1,829,144)	(430,500)
9/30/2043	7,365,126	2,120,098	(1,540,403)	(443,415)
9/30/2044	5,815,825	2,183,701	(1,216,369)	(456,717)
9/30/2045	4,082,850	2,249,212	(853,921)	(470,419)
9/30/2046	2,150,059	2,316,689	(449,681)	(484,531)
9/30/2047	0	0	0	0



## **SCHEDULE H**

### **SUMMARY OF MAIN SYSTEM PROVISIONS AS INTERPRETED FOR VALUATION PURPOSES**

The Employees' Retirement System of Alabama was established on October 1, 1945. The valuation took into account amendments to the System effective through the valuation date. There is a new tier (Tier II) of benefits for all members initially joining the System on and after January 1, 2013. Act 2013-67 provides that State policemen hired on or after January 1, 2015 will no longer be eligible for benefits under the code section covering State policemen, but instead will be covered under the provisions pertaining to State employees who are law enforcement officers. The following summary describes the main benefit and contribution provisions of the System as interpreted for the valuation.

#### 1 – DEFINITIONS

Average Final Compensation – the average compensation of a member for:

- Tier 1 - the 3 highest years in the last 10 years of creditable service
- Tier 2 - the 5 highest years in the last 10 years of creditable service

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

#### 2 - BENEFITS

##### MEMBERS CLASSIFIED OTHER THAN STATE POLICEMEN

Service Retirement Allowance

Condition for Allowance

Tier I

A retirement allowance is payable upon the request of any member who has completed 25 years of creditable service,



(except for employees of local employers who did not elect 25-year retirement), or who has attained age 60 and completed at least 10 years of creditable service.

Tier II A retirement allowance is payable upon the request of any member who has attained age 62 and completed at least 10 years of creditable service (age 56 with 10 years of creditable service for a full-time certified firefighter, police officer or correctional officer).

#### Amount of Allowance

Tier I 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 his 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 full-time certified firefighter, police officer or correctional officer.

Tier II Upon service 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.

#### Disability Retirement Allowance

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

#### Amount of Allowance

Tier I Upon retirement for disability, a member receives a retirement allowance equal to 2.0125% of the member's average final compensation multiplied by the number of years of his 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 full-time certified firefighter, police officer or correctional officer.

Tier II 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.



Benefits Payable on  
Separation from Service

Any member who withdraws from service is entitled to receive a return of member contributions with allowable interest. A member who has completed 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 60 (age 62 for Tier II 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 below under “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 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 for retirement, the designated beneficiary shall receive a return of member contributions and total interest earned. Also, the designated beneficiary shall receive an additional 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).\*

In the event of a job-related death of a member at any age with less than 1 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 death occurs.\*

In the event of a non job-related death of a member with less than 1 year of service, the beneficiary shall receive the return of member contributions and total interest earned 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 had applied for a refund of contributions or terminated employment, the lump sum will be the same as if the member had less than one year of service and the death was not job-related.





## Deferred Retirement Option Plan (DROP)

A member may elect to participate in the Deferred Retirement Option Plan (DROP) upon completion of at least 25 years of service (at least 30 years for employers that did not elect 25 year retirement) of creditable service (excluding sick leave) and attainment of at least 55 years of age. Under the DROP, the member may defer receipt of a retirement allowance and continue employment for a period not to exceed five years, nor to be less than three years. At the end of this period, the member may withdraw from active service and receive the retirement benefit based on his or her years of service credit at the time of enrollment in the DROP, and also receive a payment for the deferred retirement benefits, employee contributions while participating in the DROP, and interest earned on DROP deposits.

The effect of Act 2011-27 is that no new participants will be allowed to enter DROP with an effective participation date after June 1, 2011.

## Member Contributions

### Tier I

Prior to October 1, 2011, regular members contributed 5.0% of salary. Full-time certified police officers, firefighters and correctional officers contributed 6.0% of salary. DROP participants continue to contribute during the DROP period, but receive a refund of these contributions and regular interest upon retirement.

Beginning October 1, 2011, the contribution rates were increased to 7.25% for regular members and 8.25% for full-time certified police officers, firefighters and correctional officers, for all State employees and for local employees whose employers elect to do so.

Beginning October 1, 2012, the contribution rates were increased to 7.50% for regular members and 8.50% for full-time certified police officers, firefighters and correctional officers, for all State employees and for local employees whose employers elect to do so.

### Tier II

Regular members contribute 6% of salary and full-time certified firefighters, police officers and correctional officers contribute 7% of salary.

### Both

If positive investment performance results in a decrease in the total contribution rate paid by employers and employees participating in the System, the Retirement System 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 Section 36-27-16.3(c)(1)).

#### MEMBERS CLASSIFIED AS STATE POLICEMEN

##### Service Retirement Allowance

###### Condition for Allowance

- |         |   |
|---------|---|
| Tier I  | A retirement allowance is payable upon the request of any 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 II | 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 I  | <p>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 his creditable service.</p> <p>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:</p> <ul style="list-style-type: none"><li>- Age 56 or older – bonus service of 4 years reduced by 1 month for each month over the age of 56.</li><li>- Age 52 to 56 – bonus service of 4 years.</li><li>- Age 52 or less (disability retirement only) – bonus service of 4 years.</li><li>- Age 52 or less with 25 or more years of service – bonus service of 4 years.</li></ul> |
| Tier II | 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 his 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 10 or more years of creditable service or who becomes disabled as a result of his employment in line of duty without regard to his years of creditable service, and who becomes permanently incapacitated, mentally or physically, for the further performance of duty before reaching the minimum age for service retirement.

### Amount of Allowance

#### Tier I

Upon retirement for disability, a member receives a retirement allowance equal to 2.875% of the member's average final compensation multiplied by the number of years of his creditable service.

#### Tier II

Upon retirement for disability, a member receives a retirement allowance equal to 2.375% of the member's average final compensation multiplied by the number of years of his creditable service. The benefit is capped at 80% of the member's average final compensation.

### Benefits Payable on Separation from Service

Any member who withdraws from service is entitled to receive a return of member contributions with allowable interest. A member who has completed 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 (age 56 for Tier II 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 Employees" or (2) to receive a return of member contributions and total interest earned 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 for retirement, the designated beneficiary shall receive a return of member contributions and total interest earned. Also, the designated beneficiary shall receive an additional 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).\*

In the event of a job-related death of a member at any age with less than 1 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 death occurs.\*

In the event of a non job-related death of a member with less than 1 year of service, the beneficiary shall receive the return of member contributions and total interest earned 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 had applied for a refund of contributions or terminated employment, the lump sum will be the same as if the member had less than one year of service and the death was not job-related.

#### Deferred Retirement Option Plan (DROP)

A member may 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 may defer receipt of a retirement allowance and continue employment for a period not to exceed five years, nor to be less than three years. At the end of this period, the member may withdraw from active service and receive the retirement benefit based on his or her years of service credit at the time of enrollment in the DROP, and also receive a payment for the deferred retirement benefits, employee contributions while participating in the DROP, and interest earned on DROP deposits.

The effect of Act 2011-27 is that no new participants will be allowed to enter DROP with an effective participation date after June 1, 2011.

#### Member Contributions

Each member contributes 10% of salary. DROP participants continue to contribute during the DROP period, but receive a refund of these contributions with interest upon retirement.



### 3 - SPECIAL PRIVILEGES AT RETIREMENT – ALL MEMBERS

In lieu of the full retirement allowance, any 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 or exceed the present value of the member's annuity at the date of retirement, the balance is paid to a designated beneficiary or to the 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 the designated beneficiary provided such benefit, together with the reduced retirement allowance, is of equivalent actuarial value to his retirement allowance and is approved by the Board of Control.



**SCHEDULE I**

**SCHEDULE OF MEMBERSHIP DATA  
AS OF SEPTEMBER 30, 2017**

**ACTIVE STATE EMPLOYEES**

Attained Age	Completed Years of Service										Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up		
<b>Under 25</b>	498	350										848
Avg. Pay	\$21,049	\$29,379										\$24,487
<b>25 to 29</b>	712	1,586	235	6								2,539
Avg. Pay	\$24,452	\$33,417	\$39,681	\$37,111								\$31,491
<b>30 to 34</b>	463	1,250	879	351	7							2,950
Avg. Pay	\$27,222	\$34,295	\$42,332	\$40,774	\$40,372							\$36,365
<b>35 to 39</b>	351	907	735	1,177	270	3						3,443
Avg. Pay	\$26,135	\$34,350	\$42,373	\$46,304	\$46,587	\$59,708						\$40,293
<b>40 to 44</b>	260	751	534	968	840	155	3					3,511
Avg. Pay	\$26,580	\$35,168	\$43,240	\$47,482	\$52,000	\$51,528	\$50,780					\$43,917
<b>45 to 49</b>	249	693	503	763	787	713	206	5				3,919
Avg. Pay	\$27,276	\$35,495	\$42,661	\$46,492	\$52,317	\$59,690	\$57,254	\$50,438				\$46,976
<b>50 to 54</b>	202	590	472	682	592	674	694	160				4,066
Avg. Pay	\$27,358	\$35,570	\$42,075	\$44,356	\$49,766	\$58,133	\$61,159	\$64,412				\$48,700
<b>55 to 59</b>	178	464	422	598	509	492	632	437	106	2		3,840
Avg. Pay	\$29,513	\$35,003	\$41,601	\$44,083	\$48,877	\$53,826	\$60,380	\$67,985	\$62,147	\$78,482		\$49,840
<b>60 to 64</b>	66	424	275	423	388	305	369	169	109	23		2,551
Avg. Pay	\$33,723	\$49,406	\$42,411	\$43,342	\$47,160	\$52,921	\$58,308	\$67,370	\$66,884	\$57,089		\$50,613
<b>65 to 69</b>	25	174	187	151	134	100	111	28	9	3		922
Avg. Pay	\$21,422	\$51,150	\$54,381	\$47,443	\$52,685	\$52,823	\$60,441	\$59,984	\$60,234	\$56,318		\$52,289
<b>70 &amp; up</b>	11	48	69	57	56	34	41	13	5	3		337
Avg. Pay	\$30,940	\$49,783	\$74,777	\$59,445	\$51,062	\$57,584	\$63,802	\$51,903	\$75,883	\$53,185		\$59,124
<b>Total</b>	3,015	7,237	4,311	5,176	3,583	2,476	2,056	812	229	31		28,926
Avg. Pay	\$25,623	\$35,620	\$43,292	\$45,589	\$50,313	\$56,450	\$60,015	\$66,512	\$64,626	\$58,017		\$43,963

Average Age:45.47      Average Service:11.28



**SCHEDULE I** (Continued)

**SCHEDULE OF MEMBERSHIP DATA  
AS OF SEPTEMBER 30, 2017**

**ACTIVE STATE POLICE**

Attained Age	Completed Years of Service										Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up		
<b>Under 25</b> Avg. Pay												
<b>25 to 29</b> Avg. Pay												
<b>30 to 34</b> Avg. Pay		4 \$51,398	25 \$52,646	21 \$55,457								50 \$53,727
<b>35 to 39</b> Avg. Pay		4 \$49,317	17 \$54,296	64 \$56,891	26 \$58,909							111 \$56,694
<b>40 to 44</b> Avg. Pay		2 \$53,918	10 \$57,924	42 \$58,687	44 \$63,110	53 \$71,723						151 \$64,437
<b>45 to 49</b> Avg. Pay		1 \$51,500	7 \$54,234	33 \$57,799	41 \$63,624	83 \$75,021	7 \$86,931					172 \$68,502
<b>50 to 54</b> Avg. Pay		1 \$58,563	7 \$59,414	15 \$61,886	13 \$64,893	44 \$76,073	8 \$81,819	3 \$83,942				91 \$71,428
<b>55 to 59</b> Avg. Pay		1 \$83,611	4 \$65,629	9 \$58,839	3 \$62,831	7 \$75,690	3 \$83,263	2 \$80,125	2 \$93,180			31 \$70,658
<b>60 to 64</b> Avg. Pay		3 \$71,129	2 \$61,396	3 \$73,393	1 \$82,676	2 \$73,317	1 \$107,856					12 \$74,460
<b>65 to 69</b> Avg. Pay			1 \$55,662				2 \$75,175					3 \$68,670
<b>70 &amp; up</b> Avg. Pay						1 \$84,443						1 \$84,443
<b>Total</b> Avg. Pay		16 \$57,360	73 \$55,547	187 \$58,053	128 \$62,749	190 \$74,401	21 \$84,336	5 \$82,415	2 \$93,180			622 \$64,897

Average Age:44.55      Average Service: 16.36



**SCHEDULE I** (Continued)

**SCHEDULE OF MEMBERSHIP DATA  
AS OF SEPTEMBER 30, 2017**

**ACTIVE LOCAL EMPLOYEES**

Attained Age	Completed Years of Service										Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up		
<b>Under 25</b>	1,719	1,486	27									3,232
Avg. Pay	\$18,150	\$28,014	\$35,352									\$22,829
<b>25 to 29</b>	1,430	3,126	1,015	30								5,601
Avg. Pay	\$21,823	\$31,569	\$39,101	\$42,874								\$30,506
<b>30 to 34</b>	1,024	2,361	1,854	992	19							6,250
Avg. Pay	\$21,820	\$33,094	\$41,778	\$46,803	\$57,818							\$36,074
<b>35 to 39</b>	807	1,767	1,441	1,670	704	14						6,402
Avg. Pay	\$22,879	\$33,852	\$41,746	\$48,345	\$52,262	\$54,516						\$40,101
<b>40 to 44</b>	611	1,404	1,190	1,406	1,379	592	13					6,595
Avg. Pay	\$23,733	\$33,538	\$41,642	\$47,335	\$53,675	\$58,361	\$68,922					\$43,542
<b>45 to 49</b>	535	1,481	1,217	1,336	1,410	1,391	395	11				7,776
Avg. Pay	\$23,007	\$34,179	\$39,414	\$46,726	\$52,346	\$59,615	\$62,596	\$62,117				\$45,713
<b>50 to 54</b>	431	1,204	1,111	1,119	1,184	1,094	690	233	9			7,075
Avg. Pay	\$24,004	\$33,235	\$38,629	\$42,585	\$48,621	\$55,849	\$63,761	\$66,744	\$67,861			\$45,195
<b>55 to 59</b>	293	996	921	1,117	1,079	875	592	341	157	7		6,378
Avg. Pay	\$24,558	\$32,383	\$37,680	\$43,026	\$47,361	\$52,469	\$60,183	\$71,252	\$66,392	\$59,739		\$45,468
<b>60 to 64</b>	169	705	689	748	705	589	383	215	130	39		4,372
Avg. Pay	\$23,088	\$37,581	\$36,212	\$41,168	\$45,073	\$49,822	\$57,190	\$61,557	\$65,474	\$70,977		\$44,300
<b>65 to 69</b>	86	249	331	269	265	176	131	42	18	13		1,580
Avg. Pay	\$19,303	\$33,520	\$39,226	\$42,491	\$46,349	\$54,348	\$59,688	\$61,387	\$62,567	\$65,405		\$43,444
<b>70 &amp; up</b>	47	175	166	154	128	84	53	23	8	10		848
Avg. Pay	\$15,570	\$25,733	\$34,298	\$36,112	\$42,810	\$48,120	\$52,402	\$58,256	\$58,877	\$53,302		\$36,713
<b>Total</b>	7,152	14,954	9,962	8,841	6,873	4,814	2,257	865	322	69		56,109
Avg. Pay	\$21,513	\$32,606	\$39,854	\$45,349	\$50,040	\$55,712	\$61,030	\$66,687	\$65,662	\$66,225		\$40,504

Average Age: 44.05      Average Service: 9.90





**SCHEDULE I** (Continued)

**SCHEDULE OF MEMBERSHIP DATA  
AS OF SEPTEMBER 30, 2017**

**NUMBER OF SERVICE RETIREMENTS  
AND THEIR BENEFITS BY AGE**

<b>Age</b>	<b>Number of Members</b>	<b>Total Annual Benefits</b>	<b>Average Annual Benefits</b>
Under 50	299	\$ 9,855,430	\$ 32,961
50 – 54	1439	47,645,867	33,110
55 – 59	3122	99,808,819	31,970
60 – 64	7343	192,101,360	26,161
65 – 69	9743	223,346,461	22,924
70 – 74	7739	162,613,968	21,012
75 – 79	5106	100,499,316	19,683
80 – 84	3260	59,029,286	18,107
85 – 89	1741	28,047,669	16,110
90 – 94	650	9,256,200	14,240
95 & Over	163	1,936,422	11,880
<b>Total</b>	<b>40,605</b>	<b>\$ 934,140,798</b>	<b>\$ 23,006</b>

Average Age:69.43

\*Includes post-DROP members in suspended status who are also active with a second retirement account.

**NUMBER OF BENEFICIARIES  
AND THEIR BENEFITS BY AGE**

<b>Age</b>	<b>Number of Members</b>	<b>Total Annual Benefits</b>	<b>Average Annual Benefits</b>
Under 50	185	\$ 1,980,565	\$ 10,706
50 – 54	109	1,388,267	12,736
55 – 59	206	2,992,033	14,524
60 – 64	337	4,724,339	14,019
65 – 69	498	6,787,998	13,631
70 – 74	606	7,812,773	12,892
75 – 79	659	8,197,496	12,439
80 – 84	614	7,047,801	11,479
85 – 89	465	4,655,485	10,012
90 – 94	241	2,327,959	9,660
95 & Over	69	532,068	7,711
<b>Total</b>	<b>3,989</b>	<b>\$ 48,446,784</b>	<b>\$ 12,145</b>

Average Age: 73.43



**SCHEDULE I** (Continued)  
**SCHEDULE OF MEMBERSHIP DATA**  
**AS OF SEPTEMBER 30, 2017**  
**NUMBER OF DISABLED RETIREES**  
**AND THEIR BENEFITS BY AGE**

<b>Age</b>	<b>Number of Members</b>	<b>Total Annual Benefits</b>	<b>Average Annual Benefits</b>
Under 50	375	\$ 5,480,650	\$ 14,615
50 – 54	469	7,740,805	16,505
55 – 59	748	11,274,337	15,073
60 – 64	933	12,980,162	13,912
65 – 69	769	10,603,696	13,789
70 – 74	503	5,935,074	11,799
75 – 79	221	2,543,013	11,507
80 – 84	110	1,308,006	11,891
85 – 89	41	429,952	10,487
90 – 94	10	134,348	13,435
95 & Over	3	24,605	8,202
Total	4,182	\$ 58,454,648	\$ 13,978

Average Age:62.26