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Retirement Systems
of Alabama

GASB STATEMENT NO. 68 REPORT
FOR THE
TEACHERS' RETIREMENT SYSTEM OF ALABAMA
PREPARED AS OF SEPTEMBER 30, 2016





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

August 1, 2017

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

Ladies and Gentlemen:

Presented in this report is information to assist the Teachers' Retirement System of Alabama (TRS) in meeting the requirements of the Governmental Accounting Standards Board (GASB) Statement No. 68 and to identify the information to be provided by the actuary, Cavanaugh Macdonald Consulting (CMC). The information presented is for the period ending September 30, 2016 (the Measurement Date).

GASB Statement Number 68 established accounting and financial reporting requirements for governmental employers that provide pension benefits to their employees through a trust.

The annual actuarial valuation used as a basis for much of the information presented in this report was performed as of September 30, 2015. The valuation was based upon data provided by the Retirement System staff, for active, inactive and retired members along with pertinent financial information.

The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the System, and on actuarial assumptions that are, individually and in the aggregate, internally consistent and reasonably based on the actual experience of the System. In addition, the calculations were completed in compliance with the laws governing the System and, in our opinion, meet the requirements of GASB 68. Ed Macdonald and Larry Langer are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

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Board of Control
August 1, 2017
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These results are only for financial reporting and may not be appropriate for funding purposes or other types of analysis. Calculations for purposes other than satisfying the requirements of GASB 67 and GASB 68 may produce significantly different results. Future actuarial results may differ significantly from the current results presented in this report due to such factors as changes in plan experience or changes in economic or demographic assumptions.

Sincerely yours,

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

Edward A. Macdonald, ASA, FCA, MAAA
President

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

Cathy Turcot
Principal and Managing Director

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

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

CT/mjn



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**REPORT OF THE ANNUAL GASB STATEMENT NO. 68
REQUIRED INFORMATION FOR THE
EMPLOYERS PARTICIPATING IN THE TEACHERS' RETIREMENT SYSTEM OF ALABAMA**

PREPARED AS OF SEPTEMBER 30, 2016

SECTION I – INTRODUCTION

The Governmental Accounting Standards Board issued Statement No. 68 (GASB 68), *Accounting and Financial Reporting For Pensions* in June 2012. GASB 68's effective date is for an employer's fiscal year beginning after June 15, 2014. The Teachers' Retirement System of Alabama (TRS) is a cost-sharing multiple employer defined benefit pension plan.

This report, prepared as of September 30, 2016 (the Measurement Date), presents information to assist the employers participating in TRS in meeting the requirements of GASB 68 for the fiscal year ending in 2017 (Reporting Date). Much of the material provided in this report is based on the data, assumptions and results of the annual actuarial valuation of TRS as of September 30, 2015 in conjunction with the assumptions from the most recent experience study prepared as of September 30, 2015. The results of the valuation were detailed in a report dated June 22, 2016, and the results of the experience study were detailed in a report dated July 1, 2016.

The NPL shown in the GASB Statement No. 67 Report for the Teachers' Retirement System of Alabama Prepared as of September 30, 2016, and submitted March 1, 2017, is the collective NPL used for purposes of GASB 68. Please refer to that report for the derivation of the collective NPL.

Pension Expense (PE) includes amounts for service cost (the normal cost under the Entry Age Normal actuarial cost method for the year), interest on the Total Pension Liability (TPL), changes in benefit structure, amortization of increases/decreases in liability due to actuarial experience and actuarial assumption changes, and amortization of investment gains/losses. The actuarial experience and assumption change impacts are amortized over the average expected remaining service life of the Plan membership as of the beginning of the membership period, and investment gains/losses are amortized over five years. The development of the collective PE is shown in Section IV.

The unamortized portions of each year's experience, assumption changes and investment gains/losses are used to develop deferred inflows and outflows, which also must be included in the employer's financial statements. The development of the collective deferred inflows and outflows is shown in Section IV.

These collective amounts have been allocated based on actual contributions made to TRS during the measurement period to determine the proportionate share associated with each participating employer.

Schedule A of this report shows the total amount of employer contributions for the years ending September 30, 2015, and September 30, 2016, from each participating employer. Schedule A also shows the proportionate share percentages that have been determined based on these contributions.

Based on these percentages we have determined the proportionate share amounts of the NPL, PE and Deferred Inflows and Outflows for each participating employer. These amounts are shown in Schedule B.

Section II of this report is a summary of the principal results of the collective amounts under GASB 68. Section III provides the results of all the necessary calculations, presented in the order laid out in GASB 68 for note disclosure and Section V shows the Required Supplementary Information (RSI).



SECTION II - SUMMARY OF COLLECTIVE AMOUNTS
(\$ IN THOUSANDS)

	2016	2015
Valuation Date:	September 30, 2015	September 30, 2014
Measurement Date:	September 30, 2016	September 30, 2015
Reporting Date:	September 30, 2017	September 30, 2016
Single Equivalent Interest Rate (SEIR):		
Long-Term Expected Rate of Return	7.75%	8.00%
Municipal Bond Index Rate	2.93%	3.78%
Fiscal Year in which Plan's Fiduciary Net Position is projected to be depleted from future benefit payments for current members	N/A	N/A
Single Equivalent Interest Rate	7.75%	8.00%
Net Pension Liability:		
Total Pension Liability (TPL)	\$ 33,762,303	\$ 32,213,446
Plan Fiduciary Net Position (FNP)	<u>22,936,298</u>	<u>21,747,731</u>
Net Pension Liability (NPL = TPL – FNP)	\$ 10,826,005	\$ 10,465,715
FNP as a percentage of TPL	67.93%	67.51%
Collective Pension Expense (PE):	\$ 1,098,656	\$ 809,123
Deferred Outflows of Resources:	\$ 920,833	\$ 685,199
Deferred Inflows of Resources:	\$ 278,798	\$ 56,700



SECTION III – NOTES TO FINANCIAL STATEMENTS

The material presented herein will follow the order presented in GASB 68. Paragraph numbers are provided for ease of reference. Amounts are shown in aggregate. Please refer to Schedule B of this report for the proportionate share of certain pension amounts as required by GASB 68.

Paragraphs 77 and 78(a)-(e): These paragraphs require information to be disclosed regarding the actuarial assumptions used to measure the TPL. The complete set of actuarial assumptions utilized in developing the TPL are outlined in Schedule E.

The TPL was determined by an actuarial valuation as of September 30, 2015, using the following key actuarial assumptions:

Inflation	2.75 percent
Salary increases, including inflation	3.25 – 5.00 percent
Investment Rate of Return, net of pension plan investment expense, including inflation	7.75 percent

Post-Retirement mortality rates for service retirements and dependent beneficiaries were based on the RP-2000 White Collar Mortality Table projected to 2020 using scale BB and adjusted 115% for all ages for males and 112% for ages 78 and over for females. The rates of disabled mortality were based on the RP-2000 Disabled Mortality Table projected to 2020 using scale BB and adjusted 105% for males and 120% for females.

The actuarial assumptions used in the September 30, 2015 valuation were based on the results of an actuarial experience study for the period October 1, 2010 – September 30, 2015.

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



Asset Class	Target Allocation	Long-Term Expected Rate of Return*
Fixed Income	17.0%	4.4%
US Large Stocks	32.0%	8.0%
US Mid Stocks	9.0%	10.0%
US Small Stocks	4.0%	11.0%
Int'l Developed Mkt Stocks	12.0%	9.5%
Int'l Emerging Mkt Stocks	3.0%	11.0%
Alternatives	10.0%	10.1%
Real Estate	10.0%	7.5%
Cash Equivalents	<u>3.0%</u>	1.5%
Total	<u>100.0%</u>	

*Includes assumed rate of inflation of 2.50%.

Discount rate. The discount rate used to measure the total pension liability was 7.75 percent. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Paragraph 78 (g): This paragraph requires disclosure of the sensitivity of the NPL to changes in the discount rate. The following presents the NPL of the System, calculated using the discount rate of 7.75 percent, as well as what the System's NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.75 percent) or 1-percentage-point higher (8.75 percent) than the current rate (\$ thousands):

	1% Decrease (6.75%)	Current Discount Rate (7.75%)	1% Increase (8.75%)
System's Net Pension Liability	\$14,422,630	\$10,826,005	\$7,781,048

Paragraph 80(a): This paragraph requires disclosure of the employer's proportionate share of the collective NPL and if an employer has a special funding situation the portion of the non-employer contributing entities' proportional share of the collective NPL that is associated with the employer. These amounts are shown in Schedule B.

Paragraph 80(b): This paragraph requires disclosure of the employer's proportion (percentage) of the collective NPL and the changes in proportion since the prior measurement date. These amounts are shown for all entities in Schedule A.



Paragraph 80(c): September 30, 2015, is the actuarial valuation date upon which the TPL is based. An expected TPL is determined as of September 30, 2016, using standard roll forward techniques. The procedure used to determine the TPL as of September 30, 2016, is shown on page 6 of the GASB 67 report for TRS submitted on March 1, 2017.

Paragraph 80(g): Please see Section IV of this report for the development of the collective pension expense. The PE for each employer is shown in Schedule B.

Paragraph 80(h): Since certain expense items are amortized over closed periods each year, the deferred portions of these items must be tracked annually. If the amounts serve to reduce pension expense they are labeled deferred inflows. If they will increase pension expense they are labeled deferred outflows. The amortization of these amounts is accomplished on a level dollar basis, with no interest included in the deferred amounts. Experience gains/losses and the impact of changes in actuarial assumptions, if any, are amortized over the average expected remaining service life of the active and inactive Plan members at the beginning of the fiscal year. Investment gains and losses are amortized over a fixed five year period.

The table below provides a summary of the collective deferred inflows and outflows as of the Measurement Date. The allocation of the collective deferred inflows and outflows is provided in Schedule B.

	Collective Deferred Outflows of Resources (\$ thousands)	Collective Deferred Inflows of Resources (\$ thousands)
Differences between expected and actual experience	\$0	\$278,798
Changes of actuarial assumptions	764,372	0
Net difference between projected and actual earnings on plan investments	<u>156,461</u>	<u>0</u>
Total	<u>\$ 920,833</u>	<u>\$ 278,798</u>

The following tables show the components of the collective deferred outflows of resources and the collective deferred inflows of resources by year.



Collective Deferred Outflows and Inflows for Differences between Expected and Actual Experience (\$ thousands)											
Beginning Balance										Ending Balance	
Year	Initial Balance of Losses / Deferred Outflow	Initial Balance of Gains / Deferred Inflow	Amortization Period	Deferred Outflows (a)	Deferred Inflows (b)	Losses / Deferred Outflows (c)	Gains / Deferred Inflows (d)	Amounts Recognized in Pension Expense / Deferred Outflow (e)	Amounts Recognized in Pension Expense / Deferred Inflow (f)	Deferred Outflows (a) + (c) - (e)	Deferred Inflows (b) + (d) - (f)
2016	\$0	\$290,388	5.3	\$0	\$0	\$0	\$290,388	\$0	\$54,790	\$0	\$235,598
2015	0	70,200	5.2	0	56,700	0	0	0	13,500	0	43,200
2014	0	0	5.3	0	0	0	0	0	0	0	0
Total				<u>\$0</u>	<u>\$56,700</u>	<u>\$0</u>	<u>\$290,388</u>			<u>\$0</u>	<u>\$278,798</u>

Collective Deferred Outflows and Inflows for Differences from Assumption Changes (\$ thousands)											
Beginning Balance										Ending Balance	
Year	Initial Balance of Losses / Deferred Outflow	Initial Balance of Gains / Deferred Inflow	Amortization Period	Deferred Outflows (a)	Deferred Inflows (b)	Losses / Deferred Outflows (c)	Gains / Deferred Inflows (d)	Amounts Recognized in Pension Expense / Deferred Outflow (e)	Amounts Recognized in Pension Expense / Deferred Inflow (f)	Deferred Outflows (a) + (c) - (e)	Deferred Inflows (b) + (d) - (f)
2016	\$942,133	\$0	5.3	\$0	\$0	\$942,133	\$0	\$177,761	\$0	\$764,372	\$0
2015	0	0	5.2	0	0	0	0	0	0	0	0
2014	0	0	5.3	0	0	0	0	0	0	0	0
Total				<u>\$0</u>	<u>\$0</u>	<u>\$942,133</u>	<u>\$0</u>			<u>\$764,372</u>	<u>\$0</u>

Collective Deferred Outflows and Inflows for Differences in Investment Experience (\$ thousands)											
Beginning Balance										Ending Balance	
Year	Initial Balance of Losses / Deferred Outflow	Initial Balance of Gains / Deferred Inflow	Amortization Period	Deferred Outflows (a)	Deferred Inflows (b)	Losses / Deferred Outflows (c)	Gains / Deferred Inflows (d)	Amounts Recognized in Pension Expense / Deferred Outflow (e)	Amounts Recognized in Pension Expense / Deferred Inflow (f)	Deferred Outflows (a) + (c) - (e)	Deferred Inflows (b) + (d) - (f)
2016	\$0	\$500,011	5.0	\$0	\$0	\$0	\$500,011	\$0	\$100,002	\$0	\$400,009
2015	1,495,062	0	5.0	1,196,050	0	0	0	299,012	0	897,038	0
2014	0	851,417	5.0	0	510,851	0	0	0	170,283	0	340,568
Total				<u>\$1,196,050</u>	<u>\$510,851</u>	<u>\$0</u>	<u>\$500,011</u>			<u>\$897,038</u>	<u>\$740,577</u>
Net difference between projected and actual earnings on investments										\$156,461	



Summary of Amortization of Deferred Outflows and Inflows of Resources (\$ thousands)										
Amortization Year	Actual and Expected Experience			Assumption Changes			Investment Gains/Losses			Total
	2014	2015	2016	2014	2015	2016	2014	2015	2016	
2018	\$0	(\$13,500)	(\$54,790)	\$0	\$0	\$177,761	(\$170,283)	\$299,012	(\$100,002)	\$138,198
2019	0	(13,500)	(\$54,790)	0	0	177,761	(170,285)	299,012	(100,002)	138,196
2020	0	(13,500)	(\$54,790)	0	0	177,761	0	299,014	(100,002)	308,483
2021	0	(2,700)	(54,790)	0	0	177,761	0	0	(100,003)	20,268
2022	0	0	(16,438)	0	0	53,328	0	0	0	36,890
Thereafter	0	0	0	0	0	0	0	0	0	0
TOTAL	\$0	(\$43,200)	(\$235,598)	\$0	\$0	\$764,372	(\$340,568)	\$897,038	(\$400,009)	\$642,035



Paragraph 80(i): Collective amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows (\$ thousands):

Deferred Amounts to be Recognized in Fiscal Years Following the Reporting Date:	
Year 1	\$ 138,198
Year 2	138,196
Year 3	308,483
Year 4	20,268
Year 5	36,890
Thereafter	0

Paragraph 80(j): There are no non-employer contributions recognized for the support provided by non-employer contributing entities in TRS.



SECTION IV – PENSION EXPENSE

As noted earlier, the collective Pension Expense (PE) consists of a number of different items. GASB 68 refers to the first as Service Cost which is the Normal Cost using the Entry Age Normal actuarial funding method. The second item is interest on the beginning Total Pension Liability (TPL) and the cash flow during the year at the 8.00% rate of return in effect as of the previous measurement date.

The next three items refer to any changes that occurred in the TPL due to:

- benefit changes, or
- actual versus expected experience, or
- changes in actuarial assumptions.

Benefit changes, which are reflected immediately in PE, can be positive, if there is a benefit improvement for existing Plan members, or negative if there is a benefit reduction. For the year ended September 30, 2016, there were no benefit changes to be recognized.

The next item to be recognized is the portion of current year changes in TPL due to actual versus expected Plan experience for the year. The portion to recognize in the current year is determined by spreading the total change over the average expected remaining service life of the entire Plan membership determined at the beginning of the year. The average expected remaining service life of active members is the average number of years the active members are expected to remain active. For the year ended September 30, 2016, this number of years for the active members is 10.5. The average expected remaining service life of the inactive members is zero. Therefore, the number of years to use for the amortization is the weighted average for all active and inactive members, or 5.3 years. The amount to be recognized due to actual versus expected experience for the year is \$(54,790,000).

The last item under changes in TPL are changes in actuarial assumptions since the last measurement date. Recognition of the change in TPL due to changes in actuarial assumptions, is also spread over the average expected remaining service life of the plan membership. The amount to be recognized due to changes in assumptions for the year is \$177,761,000.

Member contributions for the year and projected earnings on the Fiduciary Net Position (FNP), determined at the discount rate used to calculate the liabilities, are subtracted from the amount determined thus far. One-fifth of current period differences between projected and actual investment earnings on the FNP are recognized in the pension expense. The projected earnings on the FNP, the current difference between projected and actual investment earnings on the FNP, and the amount recognized due to this difference are calculated as shown in the following table.



Investment Earnings (Gain)/Loss Determined as of the Measurement Date (\$ thousands)	
a. Expected asset return rate	8.00%
b. Beginning of year FNP (BOY)	\$ 21,747,731
c. End of year FNP	22,936,298
d. Expected return on BOY for the plan year (a x b)	1,739,818
External Cash Flow	
Employer contributions	751,902
Member contributions	475,980
Refunds of contributions	(57,566)
Benefit Payments	(2,161,570)
Administrative expenses	(19,582)
Other	<u>7</u>
e. Total net external cash flow	(1,010,829)
f. Expected return on net cash flow (a x .5 x e)	(40,433)
g. Projected earnings for plan year (d + f)	1,699,385
h. Net investment income (c – b – e)	2,199,396
i. Investment earnings (gain)/loss (g – h)	<u>\$ (500,011)</u>
j. Amount recognized in Pension Expense (i / 5)	<u>\$ (100,002)</u>

The current year portions of previously determined experience, assumption and earnings amounts, recognized as deferred outflows and inflows (see Section V) are included also. Deferred outflows are added to the PE while deferred inflows are subtracted from the PE. Finally, administrative expenses and other miscellaneous items are included.



The calculation of the Collective Pension Expense determined as of the measurement date is shown in the following table:

Collective Pension Expense Determined as of the Measurement Date (\$ thousands)	
Service Cost at end of year	\$ 627,938
Interest on the TPL and net cash flow	2,488,310
Current-period benefit changes	0
Expensed portion of current-period difference between expected and actual experience in the total pension liability	(54,790)
Expensed portion of current-period changes of assumptions	177,761
Member contributions	(475,980)
Projected earnings on plan investments	(1,699,385)
Expensed portion of current-period differences between projected and actual earnings on plan investments	(100,002)
Administrative expense	19,582
Other	(7)
Recognition of beginning deferred outflows of resources as pension expense	128,729
Recognition of beginning deferred inflows of resources as pension expense	<u>(13,500)</u>
Collective Pension Expense	<u>\$ 1,098,656</u>



SECTION V – REQUIRED SUPPLEMENTARY INFORMATION

Paragraphs 81(a)-(b): CMC was not required to supply this information.

Paragraph 82:

Changes of benefit terms. The member contribution rates were increased from 5.00% (6.00% for certified law enforcement, correctional officers, and firefighters) of earnable compensation to 7.25% (8.25%) of earnable compensation effective October 1, 2011, and to 7.50% (8.50%) of earnable compensation effective October 1, 2012. Members hired on or after January 1, 2013, are covered under a new benefit structure.

Changes of assumptions.

In 2016, rates of retirement, disability, withdrawal and mortality were adjusted to more closely reflect actual experience. In 2016, economic assumptions and the assumed rates of salary increase were adjusted to more closely reflect actual and anticipated experience. In 2016 the expectation of retired life mortality as changed to the RP-2000 White Collar Mortality Table projected to 2020 using scale BB and adjusted 115% for all ages for males and 112% for ages 78 and over for females. The rates of disabled mortality were based on the RP-2000 Disabled Mortality Table projected to 2020 using scale BB and adjusted 105% for males and 120% for females.

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



SCHEDULE A
Teachers' Retirement System of Alabama
Schedule of Employer Allocations
For the Fiscal Year Ended September 30, 2016
(Dollar Amounts Not in Thousands)

Employer	Employer Code	2016 Employer Contributions	2016 Employer Allocation Percentage
Alabama A&M University	TAMI	\$ 5,422,931	0.721348%
Alabama Association of School Boards	TAAB	125,705	0.016721%
Alabama Education Association	TAEA	704,691	0.093737%
Alabama Fire College	T AFC	274,176	0.036470%
Alabama High School Athletic Association	TAAA	132,710	0.017653%
Alabama Higher Education Partnership	TAHP	28,653	0.003811%
Alabama Industrial Development Training	TIDT	1,133,942	0.150835%
Alabama Institute for Deaf and Blind	TAID	4,094,173	0.544599%
Alabama Retired State Employees Association	TREA	50,229	0.006681%
Alabama School of Fine Arts	THFA	499,103	0.066390%
Alabama Southern Community College	TMOC	837,195	0.111362%
Alabama State Employees Association	TASE	112,578	0.014975%
Alabama State University	TMST	5,354,299	0.712219%
Alabama Technology Network	TATN	528,241	0.070266%
Alabama Vocational Association	TAVA	5,711	0.000760%
Alabaster City School System	TALR	3,631,810	0.483097%
Albertville City Board of Education	TALB	2,648,242	0.352264%
Alexander City Board of Education	TALX	1,786,319	0.237613%
Andalusia City Board of Education	TADL	920,308	0.122418%
Anniston Board of Education	TANN	1,375,435	0.182958%
Arab City Board of Education	TARB	1,516,469	0.201718%
Athens City Board of Education	TATH	2,372,816	0.315628%
Athens State University	TATC	1,880,899	0.250194%
Attalla City Schools	TATT	1,007,017	0.133952%
Auburn City Board of Education	TAUB	4,878,487	0.648927%
Auburn University	TAPI	46,204,334	6.146014%
Autauga County Board of Education	TATG	4,929,391	0.655698%



SCHEDULE A (continued)

Employer	Employer Code	2016 Employer Contributions	2016 Employer Allocation Percentage
Baldwin County Board of Education	TBLD	17,737,588	2.359421%
Barbour County Schools	TBAR	564,250	0.075055%
Bessemer Board of Education	TBSM	2,331,874	0.310182%
Bevill State Community College	TWCT	1,907,046	0.253672%
Bibb County Board of Education	TBIB	1,957,452	0.260377%
Birmingham City Schools	TBMH	15,173,083	2.018295%
Bishop State Community College	TMJC	1,548,275	0.205949%
Blount County Board of Education	TBLT	4,293,551	0.571120%
Boaz City Board of Education	TBOZ	1,332,725	0.177277%
Brewton City Board of Education	TBWT	686,252	0.091284%
Bullock County Board of Education	TBLK	932,732	0.124070%
Butler County Board of Education	TBLR	1,859,673	0.247370%
Calhoun Community College	TDEC	2,582,839	0.343564%
Calhoun County Board of Education	TCAL	5,345,554	0.711056%
CAPNA, Inc.	TNCA	1,347,483	0.179240%
Central Alabama Community College	TACC	892,442	0.118711%
Chambers County Board of Education	TCHB	2,199,455	0.292567%
Chattahoochee Valley Community College	TCVS	640,220	0.085161%
Cherokee County Board of Education	TCHK	2,413,084	0.320984%
Chickasaw City School System	TCKW	542,019	0.072098%
Chilton County Board of Education	TCHT	3,977,458	0.529074%
Choctaw County Board of Education	TCHW	930,581	0.123784%
Clarke County Board of Education	TCLK	1,712,366	0.227776%
Clay County Board of Education	TCLY	1,108,644	0.147470%
Cleburne County Board of Education	TCLB	1,550,159	0.206199%
Coffee County Board of Education	TCOF	1,127,748	0.150011%
Colbert County Board of Education	TCOL	1,881,938	0.250332%
Community Svc Programs of West Alabama	TCSP	578,288	0.076923%
Conecuh County Board of Education	TCON	1,082,513	0.143994%
Coosa County Board of Education	TCSA	632,485	0.084132%
Council for Leaders in Alabama Schools	TACA	64,973	0.008643%
Covington County Board of Education	TCOV	1,827,042	0.243030%
Crenshaw County Board of Education	TCRW	1,304,322	0.173498%
Cullman City Board of Education	TCMN	1,811,043	0.240902%



SCHEDULE A (continued)

Employer	Employer Code	2016 Employer Contributions	2016 Employer Allocation Percentage
Cullman County Commission on Education	TCUL	5,590,395	0.743624%
Dale County Board of Education	TDAL	1,661,272	0.220979%
Daleville City Board of Education	TDLV	629,458	0.083729%
Dallas County Board of Education	TDLS	2,151,672	0.286211%
Dauphin Island Sea Lab	TMES	515,377	0.068555%
Decatur Board of Education	TDTR	5,694,432	0.757463%
Dekalb County Board of Education	TDKB	5,018,566	0.667560%
Demopolis City Schools	TDPL	1,241,865	0.165190%
Developing Alabama Youth Foundation	TDAY	59,125	0.007865%
Dothan Board of Education	TDTN	5,420,654	0.721045%
Elba City Board of Education	TELB	434,047	0.057736%
Elmore County Board of Education	TELM	5,824,965	0.774826%
Enterprise Board of Education	TENP	3,679,325	0.489417%
Enterprise Ozark Community College	TEPC	850,211	0.113093%
Escambia County Board of Education	TESC	2,709,339	0.360391%
Etowah County Board of Ed	TETH	4,878,585	0.648940%
Etowah County Community Service Program, Inc.	TECA	16,612	0.002210%
Eufaula City Board of Education	TEFL	1,629,534	0.216758%
Fairfield Board of Education	TFRF	1,086,355	0.144505%
Faulkner State Community College	TBMC	1,332,670	0.177269%
Fayette County Board of Education	TFAY	1,345,511	0.178977%
Florence City Board of Education	TFLO	2,923,149	0.388832%
Fort Payne City Board of Education	TFTP	1,690,588	0.224879%
Franklin County Board of Education	TFRK	2,058,412	0.273806%
Gadsden City Board of Education	TGDS	3,273,900	0.435488%
Gadsden State Community College	TGDC	2,566,388	0.341376%
Gardendale Board of Education	TGBE	48,695	0.006477%
Geneva City Board of Education	TGCB	756,923	0.100684%
Geneva County Board of Education	TGEN	1,481,797	0.197106%
George Corley Wallace State Community College	TGWS	945,413	0.125757%
Greene County Board of Education	TGRN	807,909	0.107466%
Guntersville City Board of Education	TGUN	1,191,920	0.158547%
H. Councill Trenholm State Technical College	TMGT	874,568	0.116333%
Hale County Board of Education	THAL	1,527,117	0.203134%



SCHEDULE A (continued)

Employer	Employer Code	2016 Employer Contributions	2016 Employer Allocation Percentage
Haleyville City Board of Education	THAV	996,461	0.132547%
Hartselle City Board of Education	THCS	1,860,627	0.247497%
Henry County Board of Education	THNY	1,400,694	0.186318%
Homewood City Board of Education	THOM	3,036,309	0.403884%
Hoover City Board of Education	THOV	10,017,345	1.332488%
Houston County Board of Education	THST	3,366,326	0.447782%
Huntsville City Schools	THTS	13,743,443	1.828127%
J. F. Drake State Technical College	THVS	552,121	0.073442%
J. F. Ingram State Technical College	TDRT	887,838	0.118099%
Jackson County Board of Education	TJKS	3,520,750	0.468324%
Jacksonville City Board of Education	TJCS	867,226	0.115357%
Jacksonville State University	TJST	5,623,524	0.748031%
Jasper City Board of Education	TJSP	1,718,697	0.228618%
Jeff Davis Community College	TBRC	543,590	0.072307%
Jefferson County American Federation of Teachers	TJFT	19,904	0.002648%
Jefferson County Board of Education	TJEF	21,591,403	2.872048%
Jefferson State Community College	TJJC	2,474,471	0.329150%
Lamar County Schools	TLAM	1,290,377	0.171644%
Lanett City Schools	TLNT	554,950	0.073818%
Lauderdale County Board of Ed	TLAU	4,655,395	0.619252%
Law Enforcement Academy--Baldwin County	TSWP	15,763	0.002097%
Law Enforcement Academy--Tuscaloosa	TLET	12,148	0.001616%
Lawrence County Board of Education	TLAW	2,838,808	0.377613%
Lawson State College	TLSC	1,607,423	0.213816%
Lee County Board of Education	TL EE	5,846,136	0.777642%
Leeds Board of Education, City of	TLDS	1,058,894	0.140852%
Limestone County Board of Education	TLST	5,301,351	0.705176%
Linden City Board of Education	TLND	334,800	0.044534%
Lowndes County Board of Education	TLDN	1,238,812	0.164784%
Lurleen B. Wallace Community College	TLUR	877,437	0.116715%
Macon County Board of Education	TMAC	1,371,099	0.182381%
Madison City Board of Education	TMDC	5,843,735	0.777323%
Madison County Board of Education	TMAD	11,373,672	1.512904%
Marengo County Board of Education	TMNG	704,083	0.093656%



SCHEDULE A (continued)

Employer	Employer Code	2016 Employer Contributions	2016 Employer Allocation Percentage
Marion County Board of Education	TMAR	1,908,301	0.253839%
Marion Military Institute	TMMI	603,803	0.080317%
Marshall County Board of Education	TMSH	3,310,665	0.440378%
Midfield City Board of Education	TMID	674,902	0.089774%
Mobile School Commissioners	TMOB	32,602,805	4.336764%
Monroe County Board of Education	TMON	2,047,540	0.272360%
Montgomery City and County Board of Education	TMTG	17,519,729	2.330442%
Morgan County Board of Education	TMOR	4,622,477	0.614873%
Mountain Brook City Board of Education	TMTB	3,769,762	0.501447%
Muscle Shoals City Schools	TMSC	1,767,842	0.235155%
Northeast Alabama Community College	TNEC	982,150	0.130644%
Northwest Shoals Community College	TNWC	1,435,762	0.190982%
Oneonta City Board of Education	TONE	752,566	0.100105%
Opelika City Board of Education	TOPK	2,834,098	0.376986%
Opp City Board of Education	TOPP	759,224	0.100991%
Organized Community Action Program Inc	TOCA	441,193	0.058687%
Oxford City Schools	TOXF	2,526,987	0.336135%
Ozark City Board of Education	TOZK	1,292,092	0.171872%
Pelham City Board of Education	TPLS	1,846,033	0.245556%
Pell City School System	TPEL	2,242,109	0.298241%
Perry County Board of Education	TPRY	926,844	0.123287%
Phenix City Board of Education	TPHC	3,759,797	0.500121%
Pickens County Board of Education	TPKS	1,571,991	0.209103%
Piedmont City Schools	TPMT	699,801	0.093086%
Pike County Board of Education	TPIK	1,399,613	0.186174%
Pike Road City Schools	TPRB	404,085	0.053751%
Randolph County Board of Education	TRAN	1,337,374	0.177895%
Reid State Technical College	TEVN	388,583	0.051689%
Roanoke City Schools	TROK	806,266	0.107248%
Russell County Board of Education	TRUS	1,998,518	0.265839%
Russellville City Board of Education	TRSV	1,560,366	0.207557%
Saraland Board of Education	TSAR	1,413,528	0.188025%
Satsuma City Schools	TSTM	652,681	0.086818%
School Superintendents of Alabama	TSAL	51,747	0.006883%



SCHEDULE A (continued)

Employer	Employer Code	2016 Employer Contributions	2016 Employer Allocation Percentage
Scottsboro Board of Education	TSCO	1,608,565	0.213968%
Selma Public Schools	TSMA	2,152,631	0.286339%
Sheffield City Board of Education	TSHF	777,902	0.103475%
Shelby County Board of Education	TSBY	12,520,936	1.665511%
Shelton State Community College	TTVS	2,005,719	0.266797%
Snead State Community College	TSJC	773,179	0.102847%
Southern Union State Community College	TSUC	1,407,926	0.187280%
Special Programming for Achievement Network	TBSC	249,165	0.033143%
St. Clair County Board of Education	TSTC	4,803,847	0.638999%
State of Alabama--Commission on Higher Education	TCHE	251,714	0.033483%
State of Alabama--Department of Rehab Services	TDRS	4,336,882	0.576884%
State of Alabama--Department of Post-Secondary Ed	TPSE	587,046	0.078088%
State of Alabama--Department of Youth Services	TDYS	2,024,531	0.269299%
State of Alabama--High School of Math & Science	THMS	299,922	0.039895%
State of Alabama--PEEHIP	TPHP	239,578	0.031868%
State of Alabama--State Board of Education	TSBE	5,627,601	0.748573%
State of Alabama--Teachers Retirement System	TTRS	1,469,651	0.195490%
Sumter County Board of Education	TSUM	1,125,237	0.149677%
Sylacauga City Board of Education	TSYL	1,377,500	0.183232%
Talladega City Board of Education	TTAL	1,306,649	0.173808%
Talladega County Board of Education	TTDG	4,412,545	0.586948%
Tallapoosa County Board of Education	TTPS	1,611,749	0.214392%
Tallassee City Board of Education	TTAS	1,054,801	0.140308%
Tarrant Board of Education	TTAR	750,485	0.099828%
Thomasville City Schools	TTOM	825,625	0.109823%
Troy City Board of Education	TTRY	1,200,684	0.159713%
Troy University	TTST	10,788,242	1.435032%
Trussville City Board of Education	TTCB	2,709,223	0.360376%
Tuscaloosa City Schools	TTUS	6,855,178	0.911863%
Tuscaloosa County Schools	TTLS	9,750,064	1.296935%
Tuscumbia City Board of Education	TTSC	878,792	0.116895%
University Chancellor's Office	TUCO	1,273,703	0.169426%
University of Alabama	TUVA	43,289,955	5.758349%
University of Alabama--Birmingham	TUMC	89,190,580	11.863961%



SCHEDULE A (continued)

Employer	Employer Code	2016 Employer Contributions	2016 Employer Allocation Percentage
University of Alabama--Huntsville	TUAH	11,467,106	1.525333%
University of Montevallo	TALC	3,106,535	0.413225%
University of North Alabama	TFST	4,753,469	0.632297%
University of South Alabama	TUSA	23,365,600	3.108048%
University of West Alabama	TLVC	2,668,223	0.354922%
Vestavia Hills Board of Education	TVES	4,901,856	0.652036%
Walker County Board of Education	TWLK	4,656,538	0.619404%
Wallace Community College--Dothan	TGWD	1,922,407	0.255715%
Wallace State College--Hanceville	TCUT	1,968,768	0.261882%
Washington County Board of Education	TWSH	1,652,010	0.219747%
Wilcox County Board of Education	TWIL	1,147,502	0.152639%
Winfield City Board of Education	TWFD	739,956	0.098428%
Winston Education Board	TWIN	<u>1,582,854</u>	<u>0.210548%</u>
	Total	\$ <u>751,777,241</u>	<u>100.000000%</u>



SCHEDULE B

**Teachers' Retirement System of Alabama
Schedule of Pension Amounts by Employer**

**As of and for the Fiscal Year Ended September 30, 2017 with Net Pension Liability as of September 30, 2016
(Dollar Amounts in Thousands)**

Employer	Employer Code	2016 Net Pension Liability	Deferred Outflows of Resources				Deferred Inflows of Resources				Pension Expense			
			Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Change of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Change of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Total Deferred Inflows of Resources	Proportionate Share of Plan Pension Expense	Proportionate and Proportionate Share of Contributions	Total Employer Pension Expense
Alabama A&M University	TAMI	\$ 78,093	\$ -	\$ 1,129	\$ 5,514	\$ 286	\$ 6,929	\$ 2,011	\$ -	\$ 293	\$ 2,304	\$ 7,925	\$ (36)	\$ 7,889
Alabama Association of School Boards	TAAB	1,810	-	26	128	149	303	47	-	-	47	185	45	230
Alabama Education Association	TAEA	10,148	-	147	716	209	1,072	261	-	1,056	1,317	1,030	(177)	853
Alabama Fire College	TAFC	3,948	-	57	279	-	336	102	-	204	306	400	(65)	335
Alabama High School Athletic Association	TAAA	1,911	-	28	135	186	349	49	-	-	49	193	56	249
Alabama Higher Education Partnership	TAHP	413	-	6	29	25	60	11	-	9	20	43	1	44
Alabama Industrial Development Training	TIDT	16,329	-	236	1,153	773	2,162	421	-	-	421	1,657	226	1,883
Alabama Institute for Deaf and Blind	TAID	58,958	-	852	4,163	619	5,634	1,518	-	210	1,728	5,983	193	6,176
Alabama Retired State Employees Association	TREA	723	-	10	51	42	103	19	-	7	26	74	10	84
Alabama School of Fine Arts	THFA	7,187	-	104	507	385	996	185	-	-	185	729	101	830
Alabama Southern Community College	TMOC	12,056	-	174	851	86	1,111	310	-	168	478	1,223	(20)	1,203
Alabama State Employees Association	TASE	1,621	-	23	114	57	194	42	-	-	42	167	14	181
Alabama State University	TMST	77,105	-	1,114	5,444	1,198	7,756	1,986	-	7,049	9,035	7,825	(1,306)	6,519
Alabama Technology Network	TATN	7,607	-	110	537	-	647	196	-	571	767	771	(186)	585
Alabama Vocational Association	TAVA	82	-	1	6	6	13	2	-	3	5	8	-	8
Alabaster City School System	TALR	52,300	-	756	3,693	2,153	6,602	1,347	-	3,596	4,943	5,307	(923)	4,384
Albertville City Board of Education	TALB	38,136	-	551	2,693	2,294	5,538	982	-	-	982	3,870	749	4,619
Alexander City Board of Education	TALX	25,724	-	372	1,816	330	2,518	662	-	5	667	2,610	89	2,699
Andalusia City Board of Education	TADL	13,253	-	192	936	52	1,180	341	-	170	511	1,344	(26)	1,318
Anniston Board of Education	TANN	19,807	-	286	1,398	197	1,881	510	-	529	1,039	2,011	(53)	1,958
Arab City Board of Education	TARB	21,838	-	316	1,542	813	2,671	562	-	91	653	2,216	277	2,493
Athens City Board of Education	TATH	34,170	-	494	2,413	2,150	5,057	880	-	-	880	3,467	587	4,054
Athens State University	TATC	27,086	-	391	1,912	460	2,763	698	-	682	1,380	2,749	(165)	2,584
Attalla City Schools	TATT	14,502	-	210	1,024	338	1,572	373	-	-	373	1,471	124	1,595
Auburn City Board of Education	TAUB	70,253	-	1,015	4,960	3,610	9,585	1,809	-	-	1,809	7,129	1,154	8,283
Auburn University	TAPI	665,367	-	9,616	46,978	30,381	86,975	17,135	-	-	17,135	67,523	8,774	76,297
Autauga County Board of Education	TATG	70,986	-	1,026	5,012	756	6,794	1,828	-	117	1,945	7,204	145	7,349
Baldwin County Board of Education	TBLD	255,431	-	3,692	18,035	11,713	33,440	6,578	-	-	6,578	25,921	4,007	29,928
Barbour County Schools	TBAR	8,125	-	117	574	-	691	209	-	798	1,007	823	(233)	590
Bessemer Board of Education	TBSM	33,580	-	485	2,371	-	2,856	865	-	1,158	2,023	3,407	(332)	3,075
Bevill State Community College	TWCT	27,463	-	397	1,939	-	2,336	707	-	785	1,492	2,786	(268)	2,518
Bibb County Board of Education	TBIB	28,188	-	407	1,990	471	2,868	726	-	239	965	2,861	37	2,898
Birmingham City Schools	TBMH	218,500	-	3,158	15,427	293	18,878	5,627	-	5,760	11,387	22,174	(1,782)	20,392
Bishop State Community College	TMJC	22,296	-	322	1,574	-	1,896	574	-	2,448	3,022	2,263	(663)	1,600
Blount County Board of Education	TBLT	61,829	-	894	4,365	99	5,358	1,592	-	565	2,157	6,273	(93)	6,180
Boaz City Board of Education	TBOZ	19,192	-	277	1,355	360	1,992	494	-	-	494	1,948	97	2,045
Brewton City Board of Education	TBWT	9,882	-	143	698	17	858	254	-	147	401	1,001	(50)	951
Bullock County Board of Education	TBLK	13,432	-	194	948	-	1,142	346	-	396	742	1,364	(106)	1,258
Butler County Board of Education	TBLR	26,780	-	387	1,891	441	2,719	690	-	806	1,496	2,718	(126)	2,592



SCHEDULE B (continued)

Employer	Employer Code	2016 Net Pension Liability	Deferred Outflows of Resources					Deferred Inflows of Resources				Pension Expense		
			Differences Between Expected and Actual Experience	Investment Earnings on Pension Plan	Change of Assumptions	Net Difference Between Projected and Actual Contributions and Proportionate Share of	Changes in Proportion and Differences Between Employer Contributions and Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Change of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of	Total Deferred Inflows of Resources	Proportionate Share of Plan Pension Expense	Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Total Employer Pension Expense	Proportionate Share of Plan Pension Expense
Calhoun Community College	TDEC	37,194	-	538	2,626	1,357	4,521	958	-	183	1,141	3,774	291	4,065
Calhoun County Board of Education	TCAL	76,979	-	1,113	5,435	1,019	7,567	1,982	-	166	2,148	7,811	223	8,034
CAPNA, Inc.	TNCA	19,405	-	280	1,370	3,415	5,065	500	-	-	500	1,970	1,270	3,240
Central Alabama Community College	TACC	12,852	-	186	907	204	1,297	331	-	830	1,161	1,305	(216)	1,089
Chambers County Board of Education	TCHB	31,673	-	458	2,236	388	3,082	816	-	200	1,016	3,215	78	3,293
Chattahoochee Valley Community College	TCVS	9,220	-	133	651	21	805	237	-	82	319	936	(20)	916
Cherokee County Board of Education	TCHK	34,750	-	502	2,454	318	3,274	895	-	94	989	3,526	50	3,576
Chickasaw City School System	TCKW	7,805	-	113	551	1,061	1,725	201	-	-	201	791	322	1,113
Chilton County Board of Education	TCHT	57,278	-	828	4,044	355	5,227	1,475	-	-	1,475	5,813	95	5,908
Choctaw County Board of Education	TCHW	13,401	-	194	946	-	1,140	345	-	447	792	1,360	(146)	1,214
Clarke County Board of Education	TCLK	24,659	-	356	1,741	-	2,097	635	-	1,488	2,123	2,504	(416)	2,088
Clay County Board of Education	TCLY	15,965	-	231	1,127	87	1,445	411	-	323	734	1,619	(39)	1,580
Cleburne County Board of Education	TCLB	22,323	-	323	1,576	487	2,386	575	-	166	741	2,265	159	2,424
Coffee County Board of Education	TCOF	16,240	-	235	1,147	716	2,098	418	-	-	418	1,647	203	1,850
Colbert County Board of Education	TCOL	27,101	-	392	1,913	-	2,305	698	-	553	1,251	2,750	(181)	2,569
Community Svc Programs of West Alabama	TCSP	8,328	-	120	588	-	708	214	-	465	679	844	(161)	683
Conecuh County Board of Education	TCON	15,589	-	225	1,101	-	1,326	401	-	740	1,141	1,582	(203)	1,379
Coosa County Board of Education	TCSA	9,108	-	132	643	-	775	235	-	776	1,011	924	(256)	668
Council for Leaders in Alabama Schools	TACA	936	-	14	66	20	100	24	-	2	26	94	5	99
Covington County Board of Education	TCOV	26,310	-	380	1,858	352	2,590	678	-	8	686	2,669	90	2,759
Crenshaw County Board of Education	TCRW	18,783	-	271	1,326	445	2,042	484	-	67	551	1,908	79	1,987
Cullman City Board of Education	TCMN	26,080	-	377	1,841	337	2,555	672	-	117	789	2,647	93	2,740
Cullman County Commission on Education	TCUL	80,505	-	1,163	5,684	1,009	7,856	2,073	-	447	2,520	8,170	273	8,443
Dale County Board of Education	TDAL	23,923	-	346	1,689	272	2,307	616	-	-	616	2,428	105	2,533
Daleville City Board of Education	TDLV	9,064	-	131	640	36	807	233	-	557	790	920	(127)	793
Dallas County Board of Education	TDLS	30,985	-	448	2,188	-	2,636	798	-	1,311	2,109	3,144	(375)	2,769
Dauphin Island Sea Lab	TMES	7,422	-	107	524	428	1,059	191	-	187	378	753	53	806
Decatur Board of Education	TDTR	82,003	-	1,185	5,790	-	6,975	2,112	-	2,091	4,203	8,322	(668)	7,654
Dekalb County Board of Education	TDKB	72,270	-	1,044	5,103	1,233	7,380	1,861	-	-	1,861	7,333	394	7,727
Demopolis City Schools	TDPL	17,883	-	258	1,263	126	1,647	461	-	103	564	1,815	28	1,843
Developing Alabama Youth Foundation	TDAY	851	-	12	60	91	163	22	-	28	50	87	32	119
Dothan Board of Education	TDTN	78,060	-	1,128	5,511	1,508	8,147	2,010	-	370	2,380	7,922	453	8,375
Elba City Board of Education	TELB	6,250	-	90	441	-	531	161	-	288	449	635	(97)	538
Elmore County Board of Education	TELM	83,883	-	1,212	5,923	287	7,422	2,160	-	282	2,442	8,513	20	8,533
Enterprise Board of Education	TENP	52,984	-	766	3,741	735	5,242	1,364	-	170	1,534	5,376	254	5,630
Enterprise Ozark Community College	TEPC	12,243	-	177	864	-	1,041	315	-	2,606	2,921	1,242	(849)	393
Escambia County Board of Education	TESC	39,016	-	564	2,755	-	3,319	1,005	-	291	1,296	3,960	(82)	3,878
Etowah County Board of Ed	TETH	70,254	-	1,015	4,960	28	6,003	1,809	-	613	2,422	7,130	(154)	6,976
Etowah County Community Service Program, Inc.	TECA	239	-	3	17	2	22	6	-	68	74	25	(23)	2
Eufaula City Board of Education	TEFL	23,466	-	339	1,657	347	2,343	604	-	143	747	2,381	59	2,440
Fairfield Board of Education	TFRF	15,644	-	226	1,105	275	1,606	403	-	77	480	1,588	58	1,646
Faulkner State Community College	TBMC	19,191	-	277	1,355	222	1,854	494	-	60	554	1,948	45	1,993
Fayette County Board of Education	TFAY	19,376	-	280	1,368	61	1,709	499	-	930	1,429	1,967	(220)	1,747
Florence City Board of Education	TFLO	42,095	-	608	2,972	444	4,024	1,084	-	416	1,500	4,273	(57)	4,216
Fort Payne City Board of Education	TFTP	24,345	-	352	1,719	698	2,769	627	-	-	627	2,470	206	2,676
Franklin County Board of Education	TFRK	29,642	-	428	2,093	781	3,302	763	-	-	763	3,008	244	3,252
Gadsden City Board of Education	TGDS	47,146	-	681	3,329	752	4,762	1,214	-	-	1,214	4,784	255	5,039



SCHEDULE B (continued)

Employer	Employer Code	2016 Net Pension Liability	Deferred Outflows of Resources					Deferred Inflows of Resources				Pension Expense		
			Differences Between Expected and Actual Experience	Investment Earnings on Pension Plan	Change of Assumptions	Net Difference Between Projected and Actual Contributions and Proportionate Share of	Changes in Differences Between Employer Contributions and Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Change of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of	Total Deferred Inflows of Resources	Proportionate Share of Plan Pension Expense	Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of	Total Employer Pension Expense
Gadsden State Community College	TGDC	36,957	-	534	2,609	-	3,143	952	-	2,676	3,628	3,751	(842)	2,909
Gardendale Board of Education	TGBE	701	-	10	50	265	325	18	-	15	33	70	112	182
Geneva City Board of Education	TGCB	10,900	-	158	770	339	1,267	281	-	-	281	1,106	95	1,201
Geneva County Board of Education	TGEN	21,339	-	308	1,507	577	2,392	550	-	17	567	2,167	212	2,379
George Corley Wallace State Community College	TGWS	13,614	-	197	961	129	1,287	351	-	842	1,193	1,383	(179)	1,204
Greene County Board of Education	TGRN	11,634	-	168	821	127	1,116	300	-	400	700	1,181	(110)	1,071
Guntersville City Board of Education	TGUN	17,164	-	248	1,212	284	1,744	442	-	31	473	1,741	89	1,830
H. Council Trenholm State Technical College	TMGT	12,594	-	182	889	-	1,071	324	-	1,577	1,901	1,278	(459)	819
Hale County Board of Education	THAL	21,991	-	318	1,553	9	1,880	566	-	760	1,326	2,231	(179)	2,052
Haleyville City Board of Education	THAV	14,350	-	207	1,013	15	1,235	370	-	64	434	1,458	(16)	1,442
Hartselle City Board of Education	THCS	26,794	-	387	1,892	350	2,629	690	-	196	886	2,720	101	2,821
Henry County Board of Education	THNY	20,171	-	292	1,424	21	1,737	519	-	189	708	2,047	(42)	2,005
Homewood City Board of Education	THOM	43,724	-	632	3,087	302	4,021	1,126	-	1,742	2,868	4,437	(331)	4,106
Hoover City Board of Education	THOV	144,255	-	2,085	10,185	1,432	13,702	3,715	-	299	4,014	14,639	391	15,030
Houston County Board of Education	THST	48,477	-	701	3,423	590	4,714	1,248	-	-	1,248	4,919	192	5,111
Huntsville City Schools	THTS	197,913	-	2,860	13,974	-	16,834	5,097	-	2,761	7,858	20,084	(788)	19,296
J. F. Drake State Technical College	THVS	7,951	-	115	561	178	854	205	-	374	579	807	(21)	786
J. F. Ingram State Technical College	TDRT	12,785	-	185	903	287	1,375	329	-	702	1,031	1,296	(83)	1,213
Jackson County Board of Education	TJKS	50,701	-	733	3,580	53	4,366	1,306	-	435	1,741	5,145	(89)	5,056
Jacksonville City Board of Education	TJCS	12,489	-	180	882	88	1,150	322	-	138	460	1,268	1	1,269
Jacksonville State University	TJST	80,982	-	1,170	5,718	1,161	8,049	2,085	-	11	2,096	8,218	283	8,501
Jasper City Board of Education	TJSP	24,750	-	358	1,747	97	2,202	637	-	674	1,311	2,511	(143)	2,368
Jeff Davis Community College	TBRC	7,828	-	113	553	-	666	202	-	545	747	795	(211)	584
Jefferson County American Federation of Teachers	TJFT	287	-	4	20	28	52	7	-	61	68	29	(1)	28
Jefferson County Board of Education	TJEF	310,928	-	4,494	21,953	616	27,063	8,007	-	3,420	11,427	31,554	(597)	30,957
Jefferson State Community College	TJJC	35,634	-	515	2,516	277	3,308	918	-	256	1,174	3,616	(47)	3,569
Lamar County Schools	TLAM	18,582	-	269	1,312	116	1,697	479	-	63	542	1,886	27	1,913
Lanett City Schools	TLNT	7,992	-	115	564	360	1,039	206	-	-	206	812	119	931
Lauderdale County Board of Ed	TLAU	67,040	-	969	4,733	255	5,957	1,726	-	333	2,059	6,803	18	6,821
Law Enforcement Academy--Baldwin County	TSWP	227	-	3	16	85	104	6	-	15	21	24	26	50
Law Enforcement Academy--Tuscaloosa	TLET	175	-	3	12	-	15	5	-	99	104	18	(40)	(22)
Lawrence County Board of Education	TLAW	40,880	-	591	2,886	96	3,573	1,053	-	1,748	2,801	4,148	(433)	3,715
Lawson State College	TLSC	23,148	-	335	1,634	448	2,417	596	-	617	1,213	2,350	(164)	2,186
Lee County Board of Education	TL EE	84,187	-	1,217	5,944	2,091	9,252	2,168	-	198	2,366	8,542	710	9,252
Leeds Board of Education, City of	TLDS	15,249	-	220	1,077	642	1,939	393	-	-	393	1,548	237	1,785
Limestone County Board of Education	TLST	76,342	-	1,103	5,390	2,869	9,362	1,966	-	-	1,966	7,747	957	8,704
Linden City Board of Education	TLND	4,821	-	70	340	223	633	124	-	50	174	489	41	530
Lowndes County Board of Education	TLDN	17,840	-	258	1,260	-	1,518	459	-	1,987	2,446	1,810	(608)	1,202
Lurleen B. Wallace Community College	TLUR	12,636	-	183	892	142	1,217	325	-	557	882	1,283	(110)	1,173
Macon County Board of Education	TMAC	19,745	-	285	1,394	-	1,679	508	-	1,664	2,172	2,005	(446)	1,559
Madison City Board of Education	TMDC	84,153	-	1,216	5,942	3,999	11,157	2,167	-	-	2,167	8,540	1,129	9,669
Madison County Board of Education	TMAD	163,787	-	2,367	11,564	309	14,240	4,218	-	7	4,225	16,621	98	16,719
Marengo County Board of Education	TMNG	10,139	-	147	716	-	863	261	-	1,076	1,337	1,028	(383)	645
Marion County Board of Education	TMAR	27,481	-	397	1,940	10	2,347	708	-	525	1,233	2,790	(180)	2,610
Marion Military Institute	TMMI	8,695	-	126	614	603	1,343	224	-	-	224	881	191	1,072
Marshall County Board of Education	TMSH	47,675	-	689	3,366	-	4,055	1,228	-	840	2,068	4,837	(245)	4,592
Midfield City Board of Education	TMID	9,719	-	140	686	-	826	250	-	316	566	987	(106)	881



SCHEDULE B (continued)

Employer	Employer Code	2016 Net Pension Liability	Deferred Outflows of Resources					Deferred Inflows of Resources				Pension Expense		
			Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan	Change of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Change of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Plan Pension Expense	Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense
Mobile School Commissioners	TMOB	469,498	-	6,785	33,149	-	39,934	12,091	-	8,130	20,221	47,647	(2,156)	45,491
Monroe County Board of Education	TMON	29,486	-	426	2,082	5	2,513	759	-	486	1,245	2,993	(143)	2,850
Montgomery City and County Board of Education	TMTG	252,293	-	3,646	17,813	1,102	22,561	6,497	-	1,922	8,419	25,603	(216)	25,387
Morgan County Board of Education	TMOR	66,566	-	962	4,700	485	6,147	1,714	-	632	2,346	6,754	38	6,792
Mountain Brook City Board of Education	TMTB	54,287	-	785	3,833	761	5,379	1,398	-	267	1,665	5,509	198	5,707
Muscle Shoals City Schools	TMSC	25,458	-	368	1,797	708	2,873	656	-	-	656	2,584	253	2,837
Northeast Alabama Community College	TNEC	14,144	-	204	999	246	1,449	364	-	174	538	1,435	25	1,460
Northwest Shoals Community College	TNWC	20,676	-	299	1,460	39	1,798	532	-	958	1,490	2,098	(232)	1,866
Oneonta City Board of Education	TONE	10,837	-	157	765	52	974	279	-	77	356	1,099	(11)	1,088
Opelika City Board of Education	TOPK	40,812	-	590	2,882	452	3,924	1,051	-	29	1,080	4,141	99	4,240
Opp City Board of Education	TOPP	10,933	-	158	772	94	1,024	282	-	-	282	1,110	38	1,148
Organized Community Action Program Inc	TOCA	6,353	-	92	449	368	909	164	-	6	170	644	122	766
Oxford City Schools	TOXF	36,390	-	526	2,569	274	3,369	937	-	-	937	3,692	92	3,784
Ozark City Board of Education	TOZK	18,607	-	269	1,314	135	1,718	479	-	1,106	1,585	1,888	(251)	1,637
Pelham City Board of Education	TPLS	26,584	-	384	1,877	9,809	12,070	685	-	69	754	2,699	4,243	6,942
Pell City School System	TPEL	32,288	-	467	2,280	68	2,815	831	-	533	1,364	3,276	(103)	3,173
Perry County Board of Education	TPRY	13,347	-	193	942	-	1,135	344	-	1,406	1,750	1,355	(405)	950
Phenix City Board of Education	TPHC	54,143	-	782	3,823	1,071	5,676	1,394	-	1,131	2,525	5,494	125	5,619
Pickens County Board of Education	TPKS	22,637	-	327	1,598	-	1,925	583	-	551	1,134	2,297	(214)	2,083
Piedmont City Schools	TPMT	10,077	-	146	712	361	1,219	260	-	-	260	1,022	129	1,151
Pike County Board of Education	TPIK	20,155	-	291	1,423	149	1,863	519	-	52	571	2,046	13	2,059
Pike Road City Schools	TPRB	5,819	-	84	411	3,098	3,593	150	-	-	150	591	951	1,542
Randolph County Board of Education	TRAN	19,259	-	278	1,360	532	2,170	496	-	117	613	1,955	78	2,033
Reid State Technical College	TEVN	5,596	-	81	395	92	568	144	-	996	1,140	568	(214)	354
Roanoke City Schools	TROK	11,611	-	168	820	137	1,125	299	-	-	299	1,178	48	1,226
Russell County Board of Education	TRUS	28,780	-	416	2,032	855	3,303	741	-	-	741	2,921	283	3,204
Russellville City Board of Education	TRSV	22,470	-	325	1,587	665	2,577	579	-	-	579	2,280	213	2,493
Saraland Board of Education	TSAR	20,356	-	294	1,437	1,843	3,574	524	-	-	524	2,066	650	2,716
Satsuma City Schools	TSTM	9,399	-	136	664	349	1,149	242	-	86	328	954	115	1,069
School Superintendents of Alabama	TSAL	745	-	11	53	233	297	19	-	-	19	75	61	136
Scottsboro Board of Education	TSCO	23,164	-	335	1,636	282	2,253	597	-	557	1,154	2,351	(33)	2,318
Selma Public Schools	TSMA	30,999	-	448	2,189	728	3,365	798	-	1,097	1,895	3,146	(48)	3,098
Sheffield City Board of Education	TSHF	11,202	-	162	791	107	1,060	288	-	113	401	1,136	-	1,136
Shelby County Board of Education	TSBY	180,308	-	2,606	12,731	-	15,337	4,643	-	27,362	32,005	18,298	(10,116)	8,182
Shelton State Community College	TTVS	28,883	-	417	2,039	-	2,456	744	-	789	1,533	2,932	(232)	2,700
Snead State Community College	TSJC	11,134	-	161	786	236	1,183	287	-	9	296	1,130	55	1,185
Southern Union State Community College	TSUC	20,275	-	293	1,432	4	1,729	522	-	962	1,484	2,057	(262)	1,795
Special Programming for Achievement Network	TBSC	3,588	-	52	253	113	418	92	-	134	226	363	(14)	349
St. Clair County Board of Education	TSTC	69,178	-	1,000	4,884	1,348	7,232	1,782	-	-	1,782	7,021	477	7,498
State of Alabama--Commission on Higher Education	TCHE	3,625	-	52	256	262	570	93	-	4	97	368	92	460
State of Alabama--Department of Rehab Services	TDRS	62,453	-	903	4,410	1,830	7,143	1,608	-	2,226	3,834	6,337	130	6,467
State of Alabama--Department of Post-Secondary Ed	TPSE	8,454	-	122	597	952	1,671	218	-	336	554	859	98	957
State of Alabama--Department of Youth Services	TDYS	29,154	-	421	2,058	-	2,479	751	-	3,015	3,766	2,959	(968)	1,991
State of Alabama--High School of Math & Science	THMS	4,319	-	62	305	325	692	111	-	172	283	438	65	503
State of Alabama--PEEHIP	TPHP	3,450	-	50	244	329	623	89	-	-	89	350	100	450
State of Alabama--State Board of Education	TSBE	81,040	-	1,171	5,722	3,327	10,220	2,087	-	1,313	3,400	8,224	969	9,193
State of Alabama--Teachers Retirement System	TTRS	21,164	-	306	1,494	2,111	3,911	545	-	151	696	2,148	629	2,777



SCHEDULE B (continued)

Employer	Employer Code	2016 Net Pension Liability	Deferred Outflows of Resources					Deferred Inflows of Resources				Pension Expense		
			Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Investment Plan	Change of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Change of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Plan Pension Expense	Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense
Sumter County Board of Education	TSUM	16,204	-	234	1,144	234	1,612	417	-	747	1,164	1,644	(228)	1,416
Sylacauga City Board of Education	TSYL	19,837	-	287	1,401	236	1,924	511	-	567	1,078	2,014	(51)	1,963
Talladega City Board of Education	TTAL	18,816	-	272	1,329	1,301	2,902	485	-	1,483	1,968	1,909	(172)	1,737
Talladega County Board of Education	TTDG	63,543	-	918	4,486	157	5,561	1,636	-	66	1,702	6,449	7	6,456
Tallapoosa County Board of Education	TTPS	23,210	-	335	1,639	139	2,113	598	-	1,080	1,678	2,355	(217)	2,138
Tallassee City Board of Education	TTAS	15,190	-	220	1,072	266	1,558	391	-	65	456	1,541	83	1,624
Tarrant Board of Education	TTAR	10,807	-	156	763	221	1,140	278	-	148	426	1,096	4	1,100
Thomasville City Schools	TTOM	11,889	-	172	839	40	1,051	306	-	11	317	1,207	15	1,222
Troy City Board of Education	TTRY	17,291	-	250	1,221	-	1,471	445	-	785	1,230	1,754	(267)	1,487
Troy University	TTST	155,356	-	2,245	10,969	536	13,750	4,001	-	2,710	6,711	15,766	(688)	15,078
Trussville City Board of Education	TTCB	39,014	-	564	2,755	1,277	4,596	1,005	-	-	1,005	3,959	369	4,328
Tuscaloosa City Schools	TTUS	98,718	-	1,427	6,970	1,983	10,380	2,542	-	1,088	3,630	10,017	244	10,261
Tuscaloosa County Schools	TTLS	140,406	-	2,029	9,913	3,813	15,755	3,616	-	-	3,616	14,251	1,286	15,537
Tuscumbia City Board of Education	TTSC	12,655	-	183	894	156	1,233	326	-	97	423	1,284	30	1,314
University Chancellor's Office	TUCO	18,342	-	265	1,295	1,952	3,512	472	-	193	665	1,861	423	2,284
University of Alabama	TUVA	623,398	-	9,010	44,015	46,316	99,341	16,054	-	-	16,054	63,263	13,501	76,764
University of Alabama--Birmingham	TUMC	1,284,396	-	18,564	90,683	-	109,247	33,080	-	36,975	70,055	130,362	(13,227)	117,135
University of Alabama--Huntsville	TUAH	165,132	-	2,387	11,659	3,397	17,443	4,253	-	5,219	9,472	16,758	(109)	16,649
University of Montevallo	TALC	44,736	-	647	3,159	2,779	6,585	1,152	-	-	1,152	4,539	827	5,366
University of North Alabama	TFST	68,452	-	989	4,833	1,636	7,458	1,763	-	613	2,376	6,946	414	7,360
University of South Alabama	TUSA	336,477	-	4,863	23,757	-	28,620	8,665	-	21,485	30,150	34,146	(7,095)	27,051
University of West Alabama	TLVC	38,424	-	555	2,713	1,838	5,106	990	-	-	990	3,901	652	4,553
Vestavia Hills Board of Education	TVES	70,589	-	1,020	4,984	1,656	7,660	1,818	-	-	1,818	7,164	598	7,762
Walker County Board of Education	TWLK	67,057	-	969	4,735	63	5,767	1,727	-	855	2,582	6,805	(259)	6,546
Wallace Community College--Dothan	TGWD	27,684	-	400	1,955	680	3,035	713	-	-	713	2,810	229	3,039
Wallace State College--Hanceville	TCUT	28,351	-	410	2,002	242	2,654	730	-	64	794	2,876	35	2,911
Washington County Board of Education	TWSH	23,790	-	344	1,680	-	2,024	613	-	1,210	1,823	2,414	(388)	2,026
Wilcox County Board of Education	TWIL	16,525	-	239	1,167	-	1,406	426	-	557	983	1,677	(154)	1,523
Winfield City Board of Education	TWFD	10,656	-	154	752	274	1,180	274	-	-	274	1,081	86	1,167
Winston Education Board	TWIN	22,794	-	329	1,609	154	2,092	587	-	749	1,336	2,315	(118)	2,197
Total for All Entities		\$ 10,825,991	\$ -	\$ 156,461	\$ 764,372	\$ 207,622	\$ 1,128,455	\$ 278,798	\$ -	\$ 207,622	\$ 486,420	\$ 1,098,656	\$ -	\$ 1,098,656



SCHEDULE C

**Teachers' Retirement System of Alabama
 Schedule of Discount Rate Sensitivity, Amortization of Deferred Outflows/(Inflows) and Employer Contribution
 As of and for the Fiscal Year Ending September 30, 2017
 (Dollar Amounts in Thousands)**

Employer	Employer Code	NPL @ Minus 1% (6.75%)	NPL @ Plus 1% (8.75%)	Projected Deferred Outflows/(Inflows) To Be Recognized in Pension Expense for the Fiscal Year Ended September 30						2016 Actual Employer Contributions
				2018	2019	2020	2021	2022	Thereafter	
Alabama A&M University	TAMI	\$ 104,037	\$ 56,128	\$ 961	\$ 961	\$ 2,217	\$ 201	\$ 285	\$ -	\$ 5,423
Alabama Association of School Boards	TAAB	2,412	1,301	68	68	94	17	9	-	126
Alabama Education Association	TAEA	13,519	7,294	(47)	(47)	45	(175)	(21)	-	705
Alabama Fire College	TAFC	5,260	2,838	(15)	(15)	73	(18)	5	-	274
Alabama High School Athletic Association	TAAA	2,546	1,374	80	80	97	27	16	-	133
Alabama Higher Education Partnership	TAHP	550	297	6	6	19	7	2	-	29
Alabama Industrial Development Training	TIDT	21,754	11,737	434	434	635	149	89	-	1,134
Alabama Institute for Deaf and Blind	TAID	78,545	42,376	946	946	1,754	73	187	-	4,094
Alabama Retired State Employees Association	TREA	964	520	19	19	32	3	4	-	50
Alabama School of Fine Arts	THFA	9,575	5,166	193	193	309	74	42	-	499
Alabama Southern Community College	TMOC	16,061	8,665	134	134	335	(2)	32	-	837
Alabama State Employees Association	TASE	2,160	1,165	35	35	61	13	8	-	113
Alabama State University	TMST	102,721	55,418	(322)	(322)	529	(1,097)	(67)	-	5,354
Alabama Technology Network	TATN	10,134	5,467	(89)	(89)	86	(42)	14	-	528
Alabama Vocational Association	TAVA	110	59	1	1	2	1	3	-	6
Alabaster City School System	TALR	69,675	37,590	(255)	(255)	1,663	299	207	-	3,632
Albertville City Board of Education	TALB	50,806	27,410	1,236	1,236	1,635	277	172	-	2,648
Alexander City Board of Education	TALX	34,270	18,489	417	417	802	109	106	-	1,786
Andalusia City Board of Education	TADL	17,656	9,525	143	143	335	4	44	-	920
Anniston Board of Education	TANN	26,387	14,236	200	200	489	(77)	30	-	1,375
Arab City Board of Education	TARB	29,093	15,696	556	556	792	46	68	-	1,516
Athens City Board of Education	TATH	45,522	24,559	1,023	1,023	1,473	437	221	-	2,373
Athens State University	TATC	36,085	19,468	181	181	753	146	122	-	1,881
Attalla City Schools	TATT	19,319	10,423	309	309	484	45	52	-	1,007
Auburn City Board of Education	TAUB	93,592	50,493	2,051	2,051	2,821	519	334	-	4,878
Auburn University	TAPI	886,417	478,224	17,268	17,268	26,666	5,369	3,269	-	46,204
Autauga County Board of Education	TATG	94,569	51,020	1,051	1,051	2,159	295	293	-	4,929
Baldwin County Board of Education	TBLD	340,291	183,588	7,268	7,268	10,037	1,283	1,006	-	17,738
Barbour County Schools	TBAR	10,825	5,840	(129)	(129)	28	(87)	1	-	564
Bessemer Board of Education	TBSM	44,736	24,135	97	97	684	(113)	68	-	2,332
Bevill State Community College	TWCT	36,586	19,738	83	83	599	(3)	82	-	1,907
Bibb County Board of Education	TBIB	37,553	20,260	397	397	913	97	99	-	1,957
Birmingham City Schools	TBMH	291,091	157,045	1,007	1,007	5,245	(297)	529	-	15,173
Bishop State Community College	TMJC	29,703	16,025	(378)	(378)	46	(376)	(40)	-	1,548
Blount County Board of Education	TBLT	82,371	44,439	696	696	1,642	(10)	177	-	4,294
Boaz City Board of Education	TBOZ	25,568	13,794	342	342	626	101	87	-	1,333
Brewton City Board of Education	TBWT	13,166	7,103	76	76	252	18	35	-	686
Bullock County Board of Education	TBLK	17,894	9,654	65	65	291	(48)	27	-	933
Butler County Board of Education	TBLR	35,677	19,248	216	216	752	(24)	63	-	1,860
Calhoun Community College	TDEC	49,551	26,733	766	766	1,408	266	174	-	2,583
Calhoun County Board of Education	TCAL	102,553	55,328	1,206	1,206	2,466	257	284	-	5,346
CAPNA, Inc.	TNCA	25,851	13,947	1,518	1,518	1,259	185	85	-	1,347
Central Alabama Community College	TACC	17,121	9,237	(52)	(52)	281	(55)	14	-	892
Chambers County Board of Education	TCHB	42,196	22,765	482	482	906	78	118	-	2,199
Chattahoochee Valley Community College	TCVS	12,282	6,626	98	98	253	11	26	-	640
Cherokee County Board of Education	TCHK	46,294	24,976	494	494	1,030	130	137	-	2,413
Chickasaw City School System	TCKW	10,398	5,610	422	422	436	173	71	-	542
Chilton County Board of Education	TCHT	76,306	41,168	826	826	1,725	166	209	-	3,977
Choctaw County Board of Education	TCHW	17,853	9,632	25	25	285	(20)	33	-	931
Clarke County Board of Education	TCLK	32,851	17,723	(101)	(101)	310	(167)	33	-	1,712



SCHEDULE C (continued)

Employer	Employer Code	NPL @ Minus 1% (6.75%)	NPL @ Plus 1% (8.75%)	Projected Deferred Outflows/(Inflows) To Be Recognized in Pension Expense for the Fiscal Year Ended September 30						2016 Actual Employer Contributions
				2018	2019	2020	2021	2022	Thereafter	
Clay County Board of Education	TCLY	21,269	11,475	165	165	394	(44)	31	-	1,109
Cleburne County Board of Education	TCLB	29,739	16,044	444	444	682	9	66	-	1,550
Coffee County Board of Education	TCOF	21,636	11,672	410	410	645	134	81	-	1,128
Colbert County Board of Education	TCOL	36,104	19,478	165	165	635	3	86	-	1,882
Community Svc Programs of West Alabama	TCSP	11,094	5,985	(55)	(55)	146	(26)	19	-	578
Conecuh County Board of Education	TCON	20,768	11,204	(4)	(4)	264	(93)	22	-	1,083
Coosa County Board of Education	TCSA	12,134	6,546	(140)	(140)	92	(61)	13	-	632
Council for Leaders in Alabama Schools	TACA	1,247	673	17	17	30	6	4	-	65
Covington County Board of Education	TCOV	35,051	18,910	426	426	844	103	105	-	1,827
Crenshaw County Board of Education	TCRW	25,023	13,500	319	319	620	137	96	-	1,304
Cullman City Board of Education	TCMN	34,744	18,745	426	426	802	33	79	-	1,811
Cullman County Commission on Education	TCUL	107,250	57,862	1,301	1,301	2,413	79	242	-	5,590
Dale County Board of Education	TDAL	31,871	17,194	410	410	735	53	83	-	1,661
Daleville City Board of Education	TDLV	12,076	6,515	(11)	(11)	122	(84)	1	-	629
Dallas County Board of Education	TDLS	41,279	22,270	21	21	571	(138)	52	-	2,152
Dauphin Island Sea Lab	TMES	9,887	5,334	148	148	246	90	49	-	515
Decatur Board of Education	TDTR	109,246	58,939	379	379	1,764	(8)	258	-	5,694
Dekalb County Board of Education	TDKB	96,280	51,943	1,317	1,317	2,347	262	276	-	5,019
Demopolis City Schools	TDPL	23,825	12,854	256	256	506	11	54	-	1,242
Developing Alabama Youth Foundation	TDAY	1,134	612	43	43	31	(6)	2	-	59
Dothan Board of Education	TDTN	103,994	56,105	1,449	1,449	2,509	119	241	-	5,421
Elba City Board of Education	TELB	8,327	4,492	(17)	(17)	117	(15)	14	-	434
Elmore County Board of Education	TELM	111,750	60,290	1,091	1,091	2,346	158	294	-	5,825
Enterprise Board of Education	TENP	70,587	38,022	930	930	1,604	72	172	-	3,679
Enterprise Ozark Community College	TEPC	16,311	8,800	(693)	(693)	1,604	(196)	0	-	850
Escambia County Board of Education	TESC	51,978	28,042	416	416	1,035	33	123	-	2,709
Etowah County Board of Ed	TETH	93,594	50,494	743	743	1,840	38	217	-	4,879
Etowah County Community Service Program, Inc.	TECA	319	172	(20)	(20)	(12)	(3)	3	-	17
Eufaula City Board of Education	TEFL	31,262	16,866	359	359	692	88	98	-	1,630
Fairfield Board of Education	TFRF	20,841	11,244	258	258	519	40	51	-	1,086
Faulkner State Community College	TBMC	25,567	13,793	290	290	573	69	78	-	1,333
Fayette County Board of Education	TFAY	25,813	13,926	27	27	315	(116)	27	-	1,346
Florence City Board of Education	TFLO	56,080	30,255	480	480	1,266	140	158	-	2,923
Fort Payne City Board of Education	TFTP	32,433	17,498	517	517	856	142	110	-	1,691
Franklin County Board of Education	TFRK	39,490	21,305	622	622	1,026	145	124	-	2,058
Gadsden City Board of Education	TGDS	62,809	33,886	857	857	1,496	157	181	-	3,274
Gadsden State Community College	TGDC	49,235	26,563	(370)	(370)	417	(220)	58	-	2,566
Gardendale Board of Education	TGBE	934	504	121	121	50	0	0	-	49
Geneva City Board of Education	TGCB	14,521	7,834	234	234	381	79	58	-	757
Geneva County Board of Education	TGEN	28,428	15,337	484	484	733	52	72	-	1,482
George Corley Wallace State Community College	TGWS	18,137	9,785	(5)	(5)	167	(86)	23	-	945
Greene County Board of Education	TGRN	15,499	8,362	39	39	255	35	48	-	808
Guntersville City Board of Education	TGUN	22,867	12,337	308	308	560	39	56	-	1,192
H. Council Trenholm State Technical College	TMGH	16,778	9,052	(298)	(298)	(8)	(205)	(21)	-	875
Hale County Board of Education	THAL	29,297	15,806	102	102	442	(120)	28	-	1,527
Haleyville City Board of Education	THAV	19,117	10,314	167	167	401	22	44	-	996
Hartselle City Board of Education	THCS	35,696	19,258	443	443	771	6	80	-	1,861
Henry County Board of Education	THNY	26,872	14,497	215	215	530	6	63	-	1,401
Homewood City Board of Education	THOM	58,251	31,426	227	227	821	(199)	77	-	3,036
Hoover City Board of Education	THOV	192,180	103,682	2,232	2,232	4,276	409	539	-	10,017
Houston County Board of Education	THST	64,582	34,842	811	811	1,518	147	179	-	3,366
Huntsville City Schools	THTS	263,664	142,247	1,738	1,738	4,928	(10)	582	-	13,743
J. F. Drake State Technical College	THVS	10,592	5,715	80	80	178	(64)	1	-	552
J. F. Ingram State Technical College	TDRT	17,033	9,189	80	80	193	(42)	33	-	888
Jackson County Board of Education	TJKS	67,545	36,441	558	558	1,337	21	151	-	3,521
Jacksonville City Board of Education	TJCS	16,638	8,976	160	160	343	(6)	33	-	867
Jacksonville State University	TJST	107,886	58,205	1,317	1,317	2,595	384	340	-	5,624
Jasper City Board of Education	TJSP	32,973	17,789	173	173	588	(85)	42	-	1,719
Jeff Davis Community College	TBRC	10,429	5,626	(111)	(111)	125	(6)	22	-	544
Jefferson County American Federation of Teachers	TJFT	382	206	3	3	(4)	(15)	(3)	-	20



SCHEDULE C (continued)

Employer	Employer Code	NPL @ Minus 1% (6.75%)	NPL @ Plus 1% (8.75%)	Projected Deferred Outflows/(Inflows) To Be Recognized in Pension Expense for the Fiscal Year Ended September 30						2016 Actual Employer Contributions
				2018	2019	2020	2021	2022	Thereafter	
Jefferson County Board of Education	TJEF	414,225	223,475	3,372	3,372	8,248	(176)	820	-	21,591
Jefferson State Community College	TJJC	47,472	25,611	408	408	1,048	129	141	-	2,474
Lamar County Schools	TLAM	24,756	13,356	264	264	543	23	61	-	1,290
Lanett City Schools	TLNT	10,646	5,744	221	221	309	49	33	-	555
Lauderdale County Board of Ed	TLAU	89,312	48,184	874	874	1,891	56	203	-	4,655
Law Enforcement Academy--Baldwin County	TSWP	302	163	29	29	18	5	2	-	16
Law Enforcement Academy--Tuscaloosa	TLET	233	126	(38)	(38)	(12)	(1)	0	-	12
Lawrence County Board of Education	TLAW	54,462	29,382	89	89	702	(185)	77	-	2,839
Lawson State College	TLSC	30,838	16,637	131	131	682	148	112	-	1,607
Lee County Board of Education	TLEE	112,156	60,509	1,785	1,785	2,855	189	272	-	5,846
Leeds Board of Education, City of	TLDS	20,315	10,960	432	432	563	63	56	-	1,059
Limestone County Board of Education	TLST	101,705	54,870	1,932	1,932	2,944	316	272	-	5,301
Linden City Board of Education	TLND	6,423	3,465	103	103	168	53	32	-	335
Lowndes County Board of Education	TLDN	23,766	12,822	(380)	(380)	119	(260)	(27)	-	1,239
Lurleen B. Wallace Community College	TLUR	16,833	9,082	51	51	286	(67)	14	-	877
Macon County Board of Education	TMAC	26,304	14,191	(194)	(194)	191	(272)	(24)	-	1,371
Madison City Board of Education	TMDC	112,110	60,484	2,203	2,203	3,397	747	440	-	5,844
Madison County Board of Education	TMAD	218,201	117,720	2,189	2,189	4,756	323	558	-	11,374
Marengo County Board of Education	TMNG	13,508	7,287	(254)	(254)	40	(37)	31	-	704
Marion County Board of Education	TMAR	36,610	19,751	171	171	695	0	77	-	1,908
Marion Military Institute	TMMI	11,584	6,250	302	302	405	71	39	-	604
Marshall County Board of Education	TMSH	63,514	34,266	364	364	1,166	(36)	129	-	3,311
Midfield City Board of Education	TMID	12,948	6,985	18	18	220	(18)	22	-	675
Mobile School Commissioners	TMOB	625,475	337,446	3,837	3,837	11,473	(612)	1,178	-	32,603
Monroe County Board of Education	TMON	39,281	21,192	233	233	745	(23)	80	-	2,048
Montgomery City and County Board of Education	TMTG	336,111	181,333	3,005	3,005	7,147	223	762	-	17,520
Morgan County Board of Education	TMOR	88,681	47,844	888	888	1,850	(7)	182	-	4,622
Mountain Brook City Board of Education	TMTB	72,322	39,018	891	891	1,690	76	166	-	3,770
Muscle Shoals City Schools	TMSC	33,916	18,298	578	578	888	83	90	-	1,768
Northeast Alabama Community College	TNEC	18,842	10,165	206	206	396	45	58	-	982
Northwest Shoals Community College	TNWC	27,545	14,860	32	32	342	(126)	28	-	1,436
Oneonta City Board of Education	TONE	14,438	7,789	127	127	312	15	37	-	753
Opelika City Board of Education	TOPK	54,371	29,333	620	620	1,269	167	168	-	2,834
Opp City Board of Education	TOPP	14,566	7,858	178	178	326	23	37	-	759
Organized Community Action Program Inc	TOCA	8,464	4,566	203	203	284	29	20	-	441
Oxford City Schools	TOXF	48,480	26,155	557	557	1,090	95	133	-	2,527
Ozark City Board of Education	TOZK	24,788	13,373	(13)	(13)	240	(110)	29	-	1,292
Pelham City Board of Education	TPLS	35,416	19,107	4,582	4,582	2,017	43	92	-	1,846
Pell City School System	TPEL	43,014	23,206	309	309	798	(49)	84	-	2,242
Perry County Board of Education	TPRY	17,781	9,593	(235)	(235)	35	(173)	(7)	-	927
Phenix City Board of Education	TPHC	72,131	38,915	816	816	1,537	(124)	106	-	3,760
Pickens County Board of Education	TPKS	30,158	16,270	75	75	540	25	76	-	1,572
Piedmont City Schools	TPMT	13,425	7,243	258	258	372	35	36	-	700
Pike County Board of Education	TPIK	26,851	14,486	270	270	601	73	78	-	1,400
Pike Road City Schools	TPRB	7,752	4,182	1,025	1,025	1,082	264	47	-	404
Randolph County Board of Education	TRAN	25,657	13,842	324	324	660	150	99	-	1,337
Reid State Technical College	TEVN	7,455	4,022	(143)	(143)	(80)	(175)	(31)	-	389
Roanoke City Schools	TROK	15,468	8,345	196	196	359	34	41	-	806
Russell County Board of Education	TRUS	38,341	20,685	650	650	1,021	126	115	-	1,999
Russellville City Board of Education	TRSV	29,935	16,150	500	500	794	109	95	-	1,560
Saraland Board of Education	TSAR	27,118	14,630	910	910	960	172	98	-	1,414
Satsuma City Schools	TSTM	12,521	6,755	235	235	291	25	35	-	653
School Superintendents of Alabama	TSAL	993	536	71	71	80	43	13	-	52
Scottsboro Board of Education	TSCO	30,860	16,649	263	263	608	(73)	38	-	1,609
Selma Public Schools	TSMA	41,298	22,280	348	348	867	(127)	34	-	2,153
Sheffield City Board of Education	TSHF	14,924	8,051	143	143	329	12	32	-	778
Shelby County Board of Education	TSBY	240,210	129,594	(7,814)	(7,814)	(527)	(933)	420	-	12,521
Shelton State Community College	TTVS	38,479	20,760	137	137	661	(72)	60	-	2,006
Snead State Community College	TSJC	14,833	8,003	197	197	375	65	53	-	773
Southern Union State Community College	TSUC	27,011	14,572	(3)	(3)	375	(141)	17	-	1,408



SCHEDULE C (continued)

Employer	Employer Code	NPL @ Minus 1% (6.75%)	NPL @ Plus 1% (8.75%)	Projected Deferred Outflows/(Inflows) To Be Recognized in Pension Expense for the Fiscal Year Ended September 30						2016 Actual Employer Contributions
				2018	2019	2020	2021	2022	Thereafter	
Special Programming for Achievement Network	TBSC	4,780	2,579	32	32	115	3	10	-	249
St. Clair County Board of Education	TSTC	92,160	49,721	1,360	1,360	2,221	242	267	-	4,804
State of Alabama--Commission on Higher Education	TCHE	4,829	2,605	138	138	147	28	22	-	252
State of Alabama--Department of Rehab Services	TDRS	83,202	44,888	927	927	1,352	(84)	187	-	4,337
State of Alabama--Department of Post-Secondary Ed	TPSE	11,262	6,076	206	206	438	191	76	-	587
State of Alabama--Department of Youth Services	TDYS	38,840	20,954	(596)	(596)	24	(183)	64	-	2,025
State of Alabama--High School of Math & Science	THMS	5,754	3,104	120	120	125	22	22	-	300
State of Alabama--PEEHIP	TPHP	4,596	2,480	144	144	190	37	19	-	240
State of Alabama--State Board of Education	TSBE	107,964	58,247	2,004	2,003	2,364	149	300	-	5,628
State of Alabama--Teachers Retirement System	TTRS	28,195	15,211	899	899	952	308	157	-	1,470
Sumter County Board of Education	TSUM	21,587	11,646	(21)	(21)	356	61	73	-	1,125
Sylacauga City Board of Education	TSYL	26,427	14,257	202	202	495	(83)	30	-	1,378
Talladega City Board of Education	TTAL	25,068	13,524	68	68	391	249	158	-	1,417
Talladega County Board of Education	TTDG	84,653	45,671	818	818	1,838	156	229	-	4,413
Tallapoosa County Board of Education	TTPS	30,921	16,682	79	79	400	(150)	27	-	1,612
Tallassee City Board of Education	TTAS	20,236	10,917	277	277	480	21	47	-	1,055
Tarrant Board of Education	TTAR	14,398	7,768	142	142	359	34	37	-	750
Thomasville City Schools	TTOM	15,839	8,545	167	167	341	22	37	-	826
Troy City Board of Education	TTRY	23,035	12,427	(46)	(46)	286	(10)	57	-	1,201
Troy University	TTST	206,969	111,661	1,295	1,295	4,077	(44)	416	-	10,788
Trussville City Board of Education	TTCB	51,976	28,041	867	867	1,406	266	185	-	2,709
Tuscaloosa City Schools	TTUS	131,515	70,952	1,504	1,504	2,872	436	434	-	6,855
Tuscaloosa County Schools	TTLS	187,052	100,915	3,078	3,078	4,870	571	542	-	9,750
Tuscumbia City Board of Education	TTSC	16,859	9,096	192	192	379	10	37	-	879
University Chancellor's Office	TUCO	24,436	13,183	657	657	1,005	375	153	-	1,274
University of Alabama	TUVA	830,505	448,060	21,459	21,459	29,160	7,500	3,709	-	43,290
University of Alabama--Birmingham	TUMC	1,711,101	923,144	3,166	3,165	28,382	409	4,070	-	89,187
University of Alabama--Huntsville	TUAH	219,993	118,687	1,999	1,999	3,565	(115)	523	-	11,467
University of Montevallo	TALC	59,598	32,153	1,398	1,398	1,949	447	241	-	3,107
University of North Alabama	TFST	91,194	49,199	1,288	1,288	2,250	65	191	-	4,753
University of South Alabama	TUSA	448,262	241,839	(2,800)	(2,800)	4,652	(1,296)	714	-	23,366
University of West Alabama	TLVC	51,189	27,617	1,142	1,142	1,418	236	178	-	2,668
Vestavia Hills Board of Education	TVES	94,041	50,735	1,499	1,499	2,323	250	271	-	4,902
Walker County Board of Education	TWLK	89,334	48,196	597	597	1,669	91	231	-	4,657
Wallace Community College--Dothan	TGWD	36,881	19,897	582	582	973	87	98	-	1,922
Wallace State College--Hanceville	TCUT	37,770	20,377	397	397	860	96	110	-	1,969
Washington County Board of Education	TWSH	31,693	17,099	(84)	(84)	387	(73)	55	-	1,652
Wilcox County Board of Education	TWIL	22,015	11,877	57	57	321	(48)	36	-	1,148
Winfield City Board of Education	TWFD	14,196	7,659	222	222	361	57	44	-	740
Winston Education Board	TWIN	30,367	16,383	173	173	485	(110)	35	-	1,583
Total for All Employers		\$ 14,422,630	\$ 7,781,048	\$ 138,198	\$ 138,196	\$ 308,483	\$ 20,268	\$ 36,890	\$ -	\$ 751,888



SCHEDULE D

SUMMARY OF MAIN PLAN PROVISIONS AS INTERPRETED FOR ACCOUNTING AND REPORTING VALUATION PURPOSES

The Teachers' Retirement System of Alabama was established on September 15, 1939, and went into effect September 30, 1941. The valuation took into account amendments to the System 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. 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 I – the 3 highest years in the last 10 years of Creditable Service

Tier II – 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 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 employer contributions.

Retirement Allowance – the sum of the annuity and pension.

2 - BENEFITS

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 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 creditable service. At retirement, a member receives one additional year of creditable service in



SCHEDULE D (continued)

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.

Both The member may elect to receive a reduced retirement allowance in order to provide an allowance to a designated beneficiary after the member's death (see "Special Privileges at Retirement" below).

Disability Retirement Allowance

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

Amount of Allowance

Tier I On 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 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.

Both The member may elect to receive a reduced retirement allowance in order to provide an allowance to a designated beneficiary after the member's death (see "Special Privileges at Retirement" below).

Benefits Payable on Separation from Service

Any member who withdraws from service is entitled to receive his or her contributions with allowable interest. A member who has completed 10 years of creditable service may, after separation from service, continue 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 defined below under "Special Privileges at Retirement" or (2) to receive a return of member contributions and total earned interest plus a death benefit payable from the pre-retirement death benefit fund equal to the salary on which the member made retirement contributions for the previous scholastic year (July 1-June 30).*



SCHEDULE D (continued)

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

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

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

*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.

Special Privileges at Retirement

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 annuity payments have equaled the present value of the annuity at the date of retirement, the balance is paid to a designated beneficiary or to his estate, or

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

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

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

Deferred Retirement Option Plan (DROP)

Prior to March 25, 2011, 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 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



SCHEDULE D (continued)

this period, the member will withdraw from active service and receive the retirement benefit calculated 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.

Term Life Insurance

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

Member Contributions

Tier I

Prior to October 1, 2011, regular members contributed 5.0% of salary and 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 police officers, firefighters and correctional officers.

Beginning October 1, 2012, the contribution rates were increased to 7.50% for regular members and 8.50% for police officers, firefighters and correctional officers.

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 16-25-14-(g)(1)).



SCHEDULE E

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

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

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

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



SCHEDULE E (continued)

SEPARATIONS BEFORE SERVICE RETIREMENT: Representative values of the assumed annual rates of death, disability, and withdrawal are as follows:

Age	Annual Rate of							
	Death*	Disability**		Withdrawal***				
		Tier I	Tier II					
		Years of Service		Years of Service				
	10-24	25+	10+	0-4	5-9	10-19	20+	
Male								
20	0.0293%	0.0008%		0.0008%	25.00%			
25	0.0319	0.0250		0.0250	14.80	11.00%		
30	0.0376	0.0425		0.0425	13.80	5.40	3.50%	
35	0.0655	0.1300		0.1300	13.50	5.40	2.50	0.50%
40	0.0914	0.1700		0.1700	13.00	5.40	2.25	0.50
45	0.1278	0.2700	0.2000%	0.2700	13.00	5.40	2.25	0.75
50	0.1812	0.6000	0.2000	0.6000	12.00	5.00	2.50	0.80
55	0.2567	0.9000	0.2000	0.9000	11.50	5.00	2.50	0.90
60	0.3815	0.5000	0.5000	1.3000	12.00	4.50	2.50	0.90
65	0.5353	0.5000	0.5000	0.5000	12.00	6.00		
69	0.6326	0.5000	0.5000	0.5000	12.00	6.25		
Female								
20	0.0108%	0.0100%		0.0100%	25.00%			
25	0.0117	0.0275		0.0275	12.75	9.00%		
30	0.0149	0.0425		0.0425	13.50	5.80	4.30%	
35	0.0268	0.1000		0.1000	13.50	5.00	2.60	1.50%
40	0.0399	0.2000		0.2000	11.50	4.75	2.00	1.50
45	0.0635	0.3500	0.2000%	0.3500	10.75	4.10	2.00	0.50
50	0.0947	0.6500	0.2000	0.6500	10.75	3.90	2.20	0.75
55	0.1371	1.0500	0.2000	1.0500	11.00	4.20	2.40	0.80
60	0.1929	0.5000	0.5000	1.4000	12.00	4.50	2.70	1.00
65	0.2743	0.5000	0.5000	0.5000	15.00	6.75		
69	0.3435	0.5000	0.5000	0.5000	15.00	7.25		

*Rates of pre-retirement mortality are according to the sex distinct RP-2000 Employee Mortality Table (with the sex distinct RP-2000 Combined Mortality Table used for ages over 70) projected with Scale BB to 2020 with an adjustment factor of 90% for males and 60% for females.

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

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



SCHEDULE E (continued)

SERVICE RETIREMENT:

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

For members upon attaining 25 years of service, rates are as follows:

<u>Age Group</u>	<u>Annual Rate</u>	
	<u>Male*</u>	<u>Female**</u>
47 & Under	25.0%	28.0%
48	25.0	20.0
49	20.0	17.0
50	16.5	13.0
51 to 53	16.0	15.0
54	16.0	17.0
55	16.0	18.0
56-57	16.0	19.0
58	16.0	21.0
59	20.0	22.0
60	20.0	30.0
61	20.0	27.5
62	35.0	45.0
63	30.0	35.0
64	23.0	32.0
65	28.0	38.0
66	27.0	40.0
67	22.0	35.0
68	22.0	37.0
69 to 70	22.0	30.0
71-74	20.0	30.0
75	100.0	100.0

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

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



SCHEDULE E (continued)

For members first eligible for unreduced benefits before attaining 25 years of service, the rates are as follows:

<u>Age Group</u>	<u>Annual Rate</u>	
	<u>Male</u>	<u>Female</u>
60	12.5%	17.0%
61	11.0	13.5
62	25.0	23.5
63	18.5	18.0
64	15.0	17.0
65	28.0	28.0
66	27.0	28.0
67	22.0	23.0
68	22.0	27.0
69	22.0	22.0
70	22.0	26.0
71 to 74	20.0	24.0
75 & Above	100.0	100.0

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

<u>Age Group</u>	<u>Annual Rate</u>			
	<u>Male*</u>		<u>Female**</u>	
	<u>Less than 25 years of service</u>	<u>25 or more years of service</u>	<u>Less than 25 years of service</u>	<u>25 or more years of service</u>
62	50.0%	60.0%	50.0%	70.0%
63	18.5	30.0	18.0	35.0
64	15.0	23.0	17.0	32.0
65	28.0	28.0	28.0	38.0
66	27.0	27.0	28.0	40.0
67	22.0	22.0	23.0	35.0
68	22.0	22.0	27.0	37.0
69	22.0	22.0	22.0	30.0
70	22.0	22.0	26.0	30.0
71 to 74	20.0	20.0	24.0	30.0
75 & above	100.0	100.0	100.0	100.0

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

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



SCHEDULE E (continued)

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

<u>Age</u>	<u>Service Retirement</u>		<u>Disability Retirement</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
55	0.3575%	0.2339%	3.5044%	1.7959%
60	0.5579	0.3825	3.8359	2.1434
65	0.9991	0.6795	4.1382	2.6417
70	1.6384	1.1928	4.8570	3.5474
75	2.8589	2.0200	6.3692	4.9231
80	5.0501	3.7900	8.4883	6.8160
85	8.8966	6.5271	10.9897	9.4450
90	16.4327	11.3249	15.4359	13.4706

SPOUSE’S BENEFIT: For those eligible for spouse’s benefits, it is assumed that 75% will elect the lump sum death benefit payable from the death benefit fund and 25% will elect the spouse’s benefit payable from the pension accumulation fund.

BENEFITS PAYABLE UPON SEPARATION FROM SERVICE: For active members who separate from service prior to eligibility for a service retirement allowance, the liability is assumed to be the greater of the value of the refund of contributions or the value of the deferred annuity.

UNUSED SICK LEAVE: 3% load on service retirement liabilities for active members. (No load for Tier II members)

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

VALUATION METHOD: Individual entry age normal cost method.

ASSET METHOD: Market Value

LIABILITY FOR CURRENT INACTIVE MEMBERS: Member Contribution Balance is multiplied by a factor of 2.0. for vested members with incomplete data and 1.0 for other inactive members.

LIABILITY FOR POST-DROP ACTIVE MEMBERS: Members are assumed to retire immediately and receive their accrued benefit.

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

FUTURE SERVICE CREDIT: One year of creditable service per year of employment.



SCHEDULE E

FUNDING POLICY OF THE TEACHERS' RETIREMENT SYSTEM BOARD OF CONTROL

The purpose of the funding policy is to state the overall funding objectives for the Teachers' 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 funding policy reflects the Board's long-term strategy for stability in funding of the plan.

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 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 30th 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**
 - In each valuation 1/15th of the Transitional UAAL will be amortized over a closed period. The closed period shall be the amortization period for the valuation preceding the adoption of the funding policy not to exceed 30 years. The remaining Transitional UAAL each year will be amortized over an open period. The open period shall be the amortization period for the valuation preceding the adoption of the funding policy not to exceed 30 years. After 15 years the entire Transitional UAAL will be closed.
 - Each New Incremental UAAL shall be amortized over a closed 30 year period.
 - Employer Normal Contribution Rate – the contribution rate determined as of the valuation date each year based on the provisions of Alabama Code Section 16-25-21.



SCHEDULE E (continued)

- In each valuation subsequent to the adoption of this funding policy the required employer contribution rate will be determined by the summation of the employer Normal Contribution Rate, a contribution rate for administrative expenses, a contribution rate for the pre-retirement death benefit fund, a contribution rate for the term life insurance fund, 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.
- **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, a contribution rate for the term life insurance 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.

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.