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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, 2020





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

February 2, 2021

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, 2020 (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, 2019. 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. Larry Langer and Ed Koebel are members of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



Board of Control
February 2, 2021
Page 2

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 be 'LL' with a long horizontal stroke underneath.

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

A handwritten signature in blue ink that reads 'Cathy Turcot'.

Cathy Turcot
Principal and Managing Director

A handwritten signature in blue ink that reads 'Edward J. Koebel'.

Edward Koebel, EA, FCA, MAAA
Chief Executive Officer



TABLE OF CONTENTS

<u>Section</u>	<u>Item</u>	<u>Page No.</u>
I	Introduction	1
II	Summary of Principal Results	3
III	Notes to Financial Statements	4
IV	Pension Expense	10
V	Required Supplementary Information	13
<u>Schedule</u>		
A	Schedule of Employer Allocations	14
B	Schedule of Pension Amounts by Employer	21
C	Schedule of Discount Rate Sensitivity, Amortization of Deferred Outflows/(Inflows) and Employer Contribution	26
D	Summary of Main Plan Provisions	30
E	Statement of Actuarial Assumptions and Methods	34
F	Funding Policy of the TRS Board of Control	39



**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, 2020

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, 2020 (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 2021 (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, 2019. The results of the valuation were detailed in a report dated June 17, 2020.

The NPL shown in the GASB Statement No. 67 Report for the Teachers' Retirement System of Alabama Prepared as of September 30, 2020, and submitted December 11, 2020, is the collective NPL used for purposes of GASB 68. Please refer to that report for the derivation of the collective NPL.

Among the assumptions needed for the liability calculation is a Single Equivalent Interest Rate (SEIR). To determine the SEIR, the FNP must be projected into the future for as long as there are anticipated benefits payable under the plan's provision applicable to the membership and beneficiaries of the Fund on the Measurement Date. Future contributions were projected to be made in accordance with the Funding Policy adopted by the Board. The funding policy is shown in Schedule F of this report. If the FNP is not projected to be depleted at any point in the future, as the results currently indicate, the long term expected rate of return on plan investments expected to be used to finance the benefit payments may be used as the SEIR.

If, however, at a future measurement date the FNP is projected to be depleted, the SEIR is determined as the single rate that will generate a present value of benefit payments equal to the sum of the present value determined by discounting all projected benefit payments through the date of depletion by the long term expected rate of return, and the present value determined by discounting those benefits after the date of depletion by a 20-year tax-exempt municipal bond (rating AA/Aa or higher) rate. The Municipal Bond Index Rate used, if necessary, for this purpose is the average of the Bond Buyer General Obligation 20-year Municipal Bond Index, the Fidelity General Obligation AA 20-year Municipal Bond Index, and the S&P High Grade 20-year Municipal Bond Index. We have determined that a discount rate of 7.70 percent meets the requirements of GASB 68.

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 measurement 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 year ending September 30, 2020, 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)

	2020	2019
Valuation Date:	September 30, 2019	September 30, 2018
Measurement Date:	September 30, 2020	September 30, 2019
Reporting Date:	September 30, 2021	September 30, 2020
Single Equivalent Interest Rate (SEIR):		
Long-Term Expected Rate of Return	7.70%	7.70%
Municipal Bond Index Rate	2.25%	2.81%
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	7.70%	7.70%
Net Pension Liability:		
Total Pension Liability (TPL)	\$ 38,316,039	\$ 36,676,350
Plan Fiduciary Net Position (FNP)	<u>25,946,389</u>	<u>25,619,448</u>
Net Pension Liability (NPL = TPL – FNP)	\$ 12,369,650	\$ 11,056,902
FNP as a percentage of TPL	67.72%	69.85%
Collective Pension Expense (PE):	\$ 1,252,700	\$ 1,175,061
Deferred Outflows of Resources:	\$ 1,659,500	\$ 889,138
Deferred Inflows of Resources:	\$ 214,530	\$ 366,691



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, 2019, using the following key 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	7.70 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 for the purposes of determining the TPL were based on the results of an actuarial experience study for the period October 1, 2010 – September 30, 2015 and a discount rate of 7.70%, as adopted by the Board of Trustees on December 4, 2018.

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 most recent 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	3.0%	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 7.70 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 7.70 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 (6.70 percent) or 1-percentage-point higher (8.70 percent) than the current rate (\$ thousands):

	1% Decrease (6.70%)	Current Discount Rate (7.70%)	1% Increase (8.70%)
System's Net Pension Liability	\$16,503,709	\$12,369,650	\$8,871,759

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, 2019, is the actuarial valuation date upon which the TPL is based. An expected TPL is determined as of September 30, 2020, using standard roll forward techniques. The procedure used to determine the TPL as of September 30, 2020, is shown on page 7 of the GASB 67 report for TRS submitted on December 11, 2020.

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	\$612,192	\$214,530
Changes of actuarial assumptions	128,657	0
Net difference between projected and actual earnings on plan investments	<u>918,651</u>	<u>0</u>
Total	<u>\$ 1,659,500</u>	<u>\$ 214,530</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)											
Year	Beginning Balance							Ending Balance			
	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)
	2020	\$624,754	\$0	5.0	\$0	\$0	\$624,754	\$0	\$124,951	\$0	\$499,803
2019	0	226,777	5.1	0	182,311	0	0	0	44,466	0	137,845
2018	265,644	0	5.2	163,474	0	0	0	51,085	0	112,389	0
2017	0	261,067	5.2	0	110,452	0	0	0	50,205	0	60,247
2016	0	290,388	5.3	0	71,228	0	0	0	54,790	0	16,438
2015	0	70,200	5.2	0	2,700	0	0	0	2,700	0	0
Total				<u>\$163,474</u>	<u>\$366,691</u>	<u>\$624,754</u>	<u>\$0</u>			<u>\$612,192</u>	<u>\$214,530</u>

Collective Deferred Outflows and Inflows for Differences from Assumption Changes (\$ thousands)											
Year	Beginning Balance							Ending Balance			
	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)
	2020	\$0	\$0	5.0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2019	0	0	5.1	0	0	0	0	0	0	0	0
2018	178,049	0	5.2	109,569	0	0	0	34,240	0	75,329	0
2017	0	0	5.2	0	0	0	0	0	0	0	0
2016	942,133	0	5.3	231,089	0	0	0	177,761	0	53,328	0
Total				<u>\$340,658</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>			<u>\$128,657</u>	<u>\$0</u>

Collective Deferred Outflows and Inflows for Differences in Investment Experience (\$ thousands)											
Year	Beginning Balance							Ending Balance			
	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)
	2020	\$557,390	\$0	5.0	\$0	\$0	\$557,390	\$0	\$111,478	\$0	\$445,912
2019	1,346,780	0	5.0	1,077,424	0	0	0	269,356	0	808,068	0
2018	0	391,210	5.0	0	234,726	0	0	0	78,242	0	156,484
2017	0	894,221	5.0	0	357,689	0	0	0	178,844	0	178,845
2016	0	500,011	5.0	0	100,003	0	0	0	100,003	0	0
Total				<u>\$1,077,424</u>	<u>\$692,418</u>	<u>\$557,390</u>	<u>\$0</u>			<u>\$1,253,980</u>	<u>\$335,329</u>
Net difference between projected and actual earnings on investments										\$918,651	



Summary of Amortization of Deferred Outflows and Inflows of Resources (\$ thousands)										
Amortization Year	Actual and Expected Experience					Assumption Changes				
	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020
2022	(\$16,438)	(\$50,205)	\$51,085	(\$44,466)	\$124,951	\$53,328	\$0	\$34,240	\$0	\$0
2023	0	(10,042)	51,085	(44,466)	124,951	0	0	34,240	0	0
2024	0	0	10,219	(44,466)	124,951	0	0	6,849	0	0
2025	0	0	0	(4,447)	124,950	0	0	0	0	0
2026	0	0	0	0	0	0	0	0	0	0
Thereafter	0	0	0	0	0	0	0	0	0	0
TOTAL	(\$16,438)	(\$60,247)	\$112,389	(\$137,845)	\$499,803	\$53,328	\$0	\$75,329	\$0	\$0

Summary of Amortization of Deferred Outflows and Inflows of Resources (\$ thousands)						
Amortization Year	2016	2017	2018	2019	2020	Total
2022	\$0	(\$178,845)	(\$78,242)	\$269,356	\$111,478	\$276,242
2023	0	0	(78,242)	269,356	111,478	\$458,360
2024	0	0	0	269,356	111,478	\$478,387
2025	0	0	0	0	111,478	\$231,981
2026	0	0	0	0	0	\$0
Thereafter	0	0	0	0	0	\$0
TOTAL	\$0	(\$178,845)	(\$156,484)	\$808,068	\$445,912	\$1,444,970



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	\$ 276,242
Year 2	458,360
Year 3	478,387
Year 4	231,981
Year 5	0
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 7.70% 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, 2020, 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, 2020, 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 5.0 years. The amount to be recognized due to actual versus expected experience for the year is \$124,951,000.

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 \$0.

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	7.70%
b. Beginning of year FNP (BOY)	\$ 25,619,448
c. End of year FNP	25,946,389
d. Expected return on BOY for the plan year (a x b)	1,972,697
e. External Cash Flow	
(i) Employer contributions	862,475
(ii) Member contributions	515,003
(iii) Refunds of contributions	(58,679)
(iv) Benefit Payments	(2,335,705)
(v) Administrative expenses	(31,111)
(vi) Other	<u>0</u>
(vii) Total net external cash flow	(1,048,017)
f. Expected return on net cash flow (a x 0.5 x (e(vii) – e(vi))) + (a x e(vi))	(40,349)
g. Projected earnings for plan year (d + f)	1,932,348
h. Net investment income (c – b – e(vii))	1,374,958
i. Investment earnings (gain)/loss (g – h)	<u>\$ 557,390</u>
j. Amount recognized in Pension Expense (i / 5)	<u>\$ 111,478</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	\$ 677,424
Interest on the TPL and net cash flow	2,731,895
Current-period benefit changes	0
Expensed portion of current-period difference between expected and actual experience in the total pension liability	124,951
Expensed portion of current-period changes of assumptions	0
Member contributions	(515,003)
Projected earnings on plan investments	(1,932,348)
Expensed portion of current-period differences between projected and actual earnings on plan investments	111,478
Administrative expense	31,111
Other	0
Recognition of beginning deferred outflows of resources as pension expense	263,086
Recognition of beginning deferred inflows of resources as pension expense	<u>(239,894)</u>
Collective Pension Expense	<u>\$ 1,252,700</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 (Tier II), are covered under a new benefit structure, as follows:

- (i) A service 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).
- (ii) Upon service or 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 (the 5 highest years in the last 10 years of Creditable Service).
- (iii) Regular members contribute 6% of salary and full-time certified firefighters, police officers and correctional officers contribute 7% of salary.

Changes of assumptions.

In 2018, the discount rate was changed from 7.75% to 7.70%.

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, 2020
(Dollar Amounts Not in Thousands)

Employer	Employer Code	2020 Annualized Employer Contributions	2020 Employer Allocation Percentage
Accel Academy Charter School	TACL	\$ 143,345	0.016620%
AL School of Cyber Tech & Engineering	TCYB	76,475	0.008867%
Alabama A&M University	TAMI	6,049,057	0.701360%
Alabama Association of School Boards	TAAB	143,656	0.016656%
Alabama Education Association	TAEA	740,890	0.085903%
Alabama Fire College	TAFC	340,194	0.039444%
Alabama High School Athletic Association	TAAA	160,822	0.018647%
Alabama Higher Education Partnership	TAHP	26,650	0.003090%
Alabama Industrial Development Training	TIDT	1,347,926	0.156286%
Alabama Institute for Deaf and Blind	TAID	4,943,237	0.573146%
Alabama Retired State Employees Association	TREA	58,542	0.006788%
Alabama School of Fine Arts	THFA	607,301	0.070414%
Alabama State Employees Association	TASE	98,199	0.011386%
Alabama State University	TMST	5,532,966	0.641522%
Alabama Technology Network	TATN	556,127	0.064480%
Alabama Vocational Association	TAVA	12,118	0.001405%
Alabaster City School System	TALR	4,348,444	0.504182%
Albertville City Board of Education	TALB	3,283,392	0.380694%
Alexander City Board of Education	TALX	2,014,353	0.233555%
Andalusia City Board of Education	TADL	1,006,582	0.116709%
Anniston Board of Education	TANN	1,454,999	0.168700%
Arab City Board of Education	TARB	1,775,216	0.205828%
Athens City Board of Education	TATH	2,947,234	0.341718%
Athens State University	TATC	2,297,407	0.266374%
Attalla City Schools	TATT	1,008,183	0.116894%
Auburn City Board of Education	TAUB	6,184,759	0.717094%
Auburn University	TAPI	57,592,366	6.677570%



SCHEDULE A (continued)

Employer	Employer Code	2020 Annualized Employer Contributions	2020 Employer Allocation Percentage
Autauga County Board of Education	TATG	5,593,728	0.648567%
Baldwin County Board of Education	TBLD	21,703,855	2.516462%
Barbour County Schools	TBAR	604,554	0.070095%
Bessemer Board of Education	TBSM	2,607,807	0.302363%
Bevill State Community College	TWCT	2,098,998	0.243369%
Bibb County Board of Education	TBIB	2,013,981	0.233512%
Birmingham City Schools	TBMH	17,138,184	1.987094%
Bishop State Community College	TMJC	1,555,455	0.180348%
Blount County Board of Education	TBLT	4,919,721	0.570419%
Boaz City Board of Education	TBOZ	1,618,961	0.187711%
Brewton City Board of Education	TBWT	817,232	0.094754%
Bullock County Board of Education	TBLK	985,758	0.114294%
Butler County Board of Education	TBLR	1,904,453	0.220813%
Calhoun Community College	TDEC	3,196,365	0.370604%
Calhoun County Board of Education	TCAL	5,400,832	0.626202%
CAPNA, Inc.	TNCA	1,539,621	0.178512%
Central Alabama Community College	TACC	931,160	0.107964%
Chambers County Board of Education	TCHB	2,422,900	0.280924%
Chattahoochee Valley Community College	TCVS	814,277	0.094412%
Cherokee County Board of Education	TCHK	2,825,645	0.327621%
Chickasaw City School System	TCKW	778,069	0.090214%
Chilton County Board of Education	TCHT	4,743,369	0.549972%
Choctaw County Board of Education	TCHW	864,443	0.100228%
Clarke County Board of Education	TCLK	1,626,584	0.188595%
Clay County Board of Education	TCLY	1,229,621	0.142569%
Cleburne County Board of Education	TCLB	1,708,694	0.198115%
Coastal Alabama Community College	TBMC	3,021,809	0.350365%
Coffee County Board of Education	TCOF	1,390,454	0.161217%
Colbert County Board of Education	TCOL	2,207,569	0.255957%
Community Svc Programs of West Alabama	TCSP	679,285	0.078760%
Conecuh County Board of Education	TCON	1,214,244	0.140786%
Coosa County Board of Education	TCSA	600,281	0.069600%
Council for Leaders in Alabama Schools	TACA	80,410	0.009323%
Covington County Board of Education	TCOV	2,095,101	0.242917%
Crenshaw County Board of Education	TCRW	1,492,324	0.173028%



SCHEDULE A (continued)

Employer	Employer Code	2020 Annualized Employer Contributions	2020 Employer Allocation Percentage
Cullman City Board of Education	TCMN	2,051,153	0.237822%
Cullman County Commission on Education	TCUL	5,963,099	0.691394%
Dale County Board of Education	TDAL	2,050,611	0.237759%
Daleville City Board of Education	TDLV	723,658	0.083905%
Dallas County Board of Education	TDLS	2,356,570	0.273233%
Dauphin Island Sea Lab	TMES	633,439	0.073444%
Decatur Board of Education	TDTR	6,359,217	0.737322%
Dekalb County Board of Education	TDKB	5,902,156	0.684328%
Demopolis City Schools	TDPL	1,403,653	0.162747%
Developing Alabama Youth Foundation	TDAY	64,998	0.007536%
Dothan Board of Education	TDTN	6,017,282	0.697676%
Elba City Board of Education	TELB	462,354	0.053608%
Elmore County Board of Education	TELM	7,069,521	0.819678%
Enterprise Board of Education	TENP	3,993,477	0.463025%
Enterprise Ozark Community College	TEPC	972,406	0.112746%
Escambia County Board of Education	TESC	3,005,540	0.348479%
Etowah County Board of Ed	TETH	5,661,116	0.656380%
Etowah County Community Service Program, Inc.	TECA	17,824	0.002067%
Eufaula City Board of Education	TEFL	1,933,781	0.224213%
Fairfield Board of Education	TFRF	1,109,035	0.128588%
Fayette County Board of Education	TFAY	1,540,571	0.178622%
Florence City Board of Education	TFLO	3,403,638	0.394636%
Fort Payne City Board of Education	TFTP	2,046,591	0.237293%
Franklin County Board of Education	TFRK	2,652,363	0.307529%
Gadsden City Board of Education	TGDS	3,705,263	0.429608%
Gadsden State Community College	TGDC	2,669,998	0.309574%
Geneva City Board of Education	TGCB	894,628	0.103728%
Geneva County Board of Education	TGEN	1,611,251	0.186817%
George Corley Wallace State Community College	TGWS	1,040,872	0.120684%
Greene County Board of Education	TGRN	854,202	0.099041%
Gulf Shores City Board of Education	TGSC	1,420,136	0.164658%
Guntersville City Board of Education	TGUN	1,324,875	0.153613%
H. Councill Trenholm State Technical College	TMGT	1,185,809	0.137489%
Hale County Board of Education	THAL	1,576,722	0.182814%
Haleyville City Board of Education	THAV	1,169,272	0.135572%



SCHEDULE A (continued)

Employer	Employer Code	2020 Annualized Employer Contributions	2020 Employer Allocation Percentage
Hartselle City Board of Education	THCS	2,461,087	0.285352%
Henry County Board of Education	THNY	1,651,816	0.191520%
Homewood City Board of Education	THOM	3,891,697	0.451224%
Hoover City Board of Education	THOV	11,983,926	1.389481%
Houston County Board of Education	THST	3,585,181	0.415685%
Huntsville City Schools	THTS	15,496,748	1.796777%
J. F. Drake State Technical College	THVS	560,757	0.065017%
J. F. Ingram State Technical College	TDRT	883,698	0.102461%
Jackson County Board of Education	TJKS	3,837,365	0.444925%
Jacksonville City Board of Education	TJCS	1,053,834	0.122187%
Jacksonville State University	TJST	7,110,900	0.824476%
Jasper City Board of Education	TJSP	1,917,774	0.222357%
Jefferson County American Federation of Teachers	TJFT	19,128	0.002218%
Jefferson County Board of Education	TJEF	25,079,902	2.907899%
Jefferson State Community College	TJJC	2,955,683	0.342698%
Lamar County Schools	TLAM	1,325,591	0.153696%
Lanett City Schools	TLNT	642,795	0.074529%
Lauderdale County Board of Ed	TLAU	5,536,756	0.641961%
Law Enforcement Academy--Baldwin County	TSWP	18,976	0.002200%
Law Enforcement Academy--Tuscaloosa	TLET	22,239	0.002579%
Lawrence County Board of Education	TLAW	3,226,379	0.374084%
Lawson State College	TLSC	1,874,456	0.217335%
Lee County Board of Education	TLEE	6,534,776	0.757677%
Leeds Board of Education, City of	TLDS	1,361,696	0.157882%
Limestone County Board of Education	TLST	5,390,805	0.625039%
Linden City Board of Education	TLND	377,460	0.043765%
Lowndes County Board of Education	TLDN	1,185,685	0.137475%
Lurleen B. Wallace Community College	TLUR	965,574	0.111954%
Macon County Board of Education	TMAC	1,437,094	0.166624%
Madison City Board of Education	TMDC	7,933,796	0.919887%
Madison County Board of Education	TMAD	12,952,448	1.501777%
Marengo County Board of Education	TMNG	794,940	0.092170%
Marion County Board of Education	TMAR	2,148,168	0.249070%
Marion Military Institute	TMMI	706,955	0.081968%
Marshall County Board of Education	TMSH	3,933,093	0.456024%



SCHEDULE A (continued)

Employer	Employer Code	2020 Annualized Employer Contributions	2020 Employer Allocation Percentage
Midfield City Board of Education	TMID	782,798	0.090762%
Mobile School Commissioners	TMOB	36,141,031	4.190387%
Monroe County Board of Education	TMON	2,309,626	0.267791%
Montgomery City and County Board of Education	TMTG	18,548,597	2.150625%
Morgan County Board of Education	TMOR	5,227,804	0.606140%
Mountain Brook City Board of Education	TMTB	4,448,071	0.515733%
Muscle Shoals City Schools	TMSC	1,956,115	0.226803%
Northeast Alabama Community College	TNEC	1,182,647	0.137122%
Northwest Shoals Community College	TNWC	1,650,223	0.191336%
Oneonta City Board of Education	TONE	912,103	0.105754%
Opelika City Board of Education	TOPK	3,339,463	0.387195%
Opp City Board of Education	TOPP	920,902	0.106774%
Organized Community Action Program Inc	TOCA	434,530	0.050382%
Oxford City Schools	TOXF	2,926,496	0.339314%
Ozark City Board of Education	TOZK	1,414,046	0.163952%
Pelham City Board of Education	TPLS	2,227,411	0.258258%
Pell City School System	TPEL	2,555,103	0.296252%
Perry County Board of Education	TPRY	919,813	0.106648%
Phenix City Board of Education	TPHC	4,543,017	0.526742%
Pickens County Board of Education	TPKS	1,711,149	0.198400%
Piedmont City Schools	TPMT	783,466	0.090839%
Pike County Board of Education	TPIK	1,538,938	0.178433%
Pike Road City Schools	TPRB	1,164,638	0.135034%
Randolph County Board of Education	TRAN	1,543,011	0.178905%
Reid State Technical College	TEVN	430,112	0.049870%
Roanoke City Schools	TROK	847,754	0.098293%
Russell County Board of Education	TRUS	2,374,609	0.275325%
Russellville City Board of Education	TRSV	1,787,181	0.207215%
Saraland Board of Education	TSAR	1,881,542	0.218156%
Satsuma City Schools	TSTM	866,399	0.100455%
School Superintendents of Alabama	TSAL	61,357	0.007114%
Scottsboro Board of Education	TSCO	1,628,311	0.188795%
Selma Public Schools	TSMA	2,044,509	0.237051%
Sheffield City Board of Education	TSHF	851,256	0.098699%
Shelby County Board of Education	TSBY	15,248,854	1.768035%



SCHEDULE A (continued)

Employer	Employer Code	2020 Annualized Employer Contributions	2020 Employer Allocation Percentage
Shelton State Community College	TTVS	2,308,772	0.267692%
Snead State Community College	TSJC	938,498	0.108815%
Southern Union State Community College	TSUC	1,785,030	0.206966%
Special Programming for Achievement Network	TBSC	287,593	0.033345%
St. Clair County Board of Education	TSTC	5,359,260	0.621382%
State of Alabama--Commission on Higher Education	TCHE	295,918	0.034310%
State of Alabama--Department of Rehab Services	TDRS	5,178,117	0.600379%
State of Alabama--Department of Post-Secondary Ed	TPSE	1,223,597	0.141870%
State of Alabama--Department of Youth Services	TDYS	2,302,876	0.267008%
State of Alabama--High School of Math & Science	THMS	395,357	0.045840%
State of Alabama--PEEHIP	TPHP	317,130	0.036772%
State of Alabama--State Board of Education	TSBE	6,120,560	0.709651%
State of Alabama--Teachers Retirement System	TTRS	2,005,538	0.232533%
Sumter County Board of Education	TSUM	959,054	0.111198%
Sylacauga City Board of Education	TSYL	1,393,318	0.161549%
Talladega City Board of Education	TTAL	1,412,067	0.163723%
Talladega County Board of Education	TTDG	4,965,648	0.575744%
Tallapoosa County Board of Education	TTPS	1,919,401	0.222546%
Tallassee City Board of Education	TTAS	1,142,559	0.132474%
Tarrant Board of Education	TTAR	898,134	0.104135%
Thomasville City Schools	TTOM	791,849	0.091811%
Troy City Board of Education	TTRY	1,223,363	0.141843%
Troy University	TTST	11,100,020	1.286996%
Trussville City Board of Education	TTCB	3,484,753	0.404041%
Tuscaloosa City Schools	TTUS	8,516,461	0.987445%
Tuscaloosa County Schools	TTLS	11,964,536	1.387233%
Tuscumbia City Board of Education	TTSC	1,016,167	0.117820%
University Chancellor's Office	TUCO	1,529,237	0.177308%
University Charter School	TUWC	214,653	0.024888%
University of Alabama	TUVA	51,566,266	5.978872%
University of Alabama--Birmingham	TUMC	98,542,871	11.425593%
University of Alabama--Huntsville	TUAH	13,422,997	1.556335%
University of Montevallo	TALC	3,558,637	0.412608%
University of North Alabama	TFST	6,097,899	0.707023%
University of South Alabama	TUSA	22,004,578	2.551330%



SCHEDULE A (continued)

Employer	Employer Code	2020 Annualized Employer Contributions	2020 Employer Allocation Percentage
University of West Alabama	TLVC	3,098,516	0.359259%
Vestavia Hills Board of Education	TVES	6,209,409	0.719952%
Walker County Board of Education	TWLK	4,816,956	0.558504%
Wallace Community College--Dothan	TGWD	2,210,545	0.256303%
Wallace State College--Hanceville	TCUT	2,210,619	0.256311%
Washington County Board of Education	TWSH	1,737,869	0.201498%
Wilcox County Board of Education	TWIL	1,126,404	0.130601%
Winfield City Board of Education	TWFD	870,428	0.100922%
Winston Education Board	TWIN	1,758,698	0.203913%
Woodlawn Comm Charter School (i3 Academy)	TWDL	<u>107,387</u>	<u>0.012451%</u>
Total		\$ <u>862,474,870</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, 2021 with Net Pension Liability as of September 30, 2020
(Dollar Amounts in Thousands)**

Employer	Employer Code	2020 Net Pension Liability	Deferred Outflows of Resources				Deferred Inflows of Resources				Pension Expense			
			Differences Between Expected and Actual Experience	Investment Earnings on Plan	Change of Assumptions	Net Difference Between Projected and Actual Contributions and Proportionate Share 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	Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Total Employer Pension Expense	
Accel Academy Charter School	TACL	\$ 2,056	\$ 102	\$ 153	\$ 21	\$ 571	\$ 847	\$ 36	\$ -	\$ 61	\$ 97	\$ 208	\$ 309	\$ 517
AL School of Cyber Tech & Engineering	TCYB	1,097	54	81	11	667	813	19	-	-	19	112	179	291
Alabama A&M University	TAMI	86,756	4,294	6,443	902	11,836	1,505	1,860	-	1,860	3,365	8,786	(366)	8,420
Alabama Association of School Boards	TAAB	2,060	102	153	21	29	305	36	-	34	70	209	12	221
Alabama Education Association	TAEA	10,626	526	789	111	190	1,616	184	-	446	630	1,076	(347)	729
Alabama Fire College	T AFC	4,879	241	362	51	353	1,007	85	-	239	324	495	35	530
Alabama High School Athletic Association	TAAA	2,307	114	171	24	102	411	40	-	30	70	235	43	278
Alabama Higher Education Partnership	TAHP	382	19	28	4	3	54	7	-	19	26	39	(9)	30
Alabama Industrial Development Training	TIDT	19,332	957	1,436	201	1,201	3,795	335	-	456	791	1,958	243	2,201
Alabama Institute for Deaf and Blind	TAID	70,896	3,509	5,265	737	1,209	10,720	1,230	-	41	1,271	7,180	529	7,709
Alabama Retired State Employees Association	TREA	840	42	62	9	28	141	15	-	15	30	85	4	89
Alabama School of Fine Arts	THFA	8,710	431	647	91	398	1,567	151	-	62	213	881	146	1,027
Alabama State Employees Association	TASE	1,408	70	105	15	26	216	24	-	119	143	140	(60)	80
Alabama State University	TMST	79,354	3,927	5,893	825	29	10,674	1,376	-	3,196	4,572	8,038	(2,642)	5,396
Alabama Technology Network	TATN	7,976	395	592	83	280	1,350	138	-	528	666	808	(170)	638
Alabama Vocational Association	TAVA	174	9	13	2	53	77	3	-	-	3	17	14	31
Alabaster City School System	TALR	62,366	3,087	4,632	649	1,609	9,977	1,082	-	1,326	2,408	6,315	602	6,917
Albertville City Board of Education	TALB	47,091	2,331	3,497	490	2,377	8,695	817	-	880	1,697	4,769	786	5,555
Alexander City Board of Education	TALX	28,890	1,430	2,146	300	362	4,238	501	-	581	1,082	2,926	(19)	2,907
Andalusia City Board of Education	TADL	14,436	714	1,072	150	486	2,422	250	-	1,053	1,303	1,463	(148)	1,315
Anniston Board of Education	TANN	20,868	1,033	1,550	217	3,464	6,264	362	-	4,266	4,628	2,113	(418)	1,695
Arab City Board of Education	TARB	25,460	1,260	1,891	265	1,210	4,626	442	-	546	988	2,578	102	2,680
Athens City Board of Education	TATH	42,269	2,092	3,139	440	2,149	7,820	733	-	607	1,340	4,280	906	5,186
Athens State University	TATC	32,950	1,631	2,447	343	1,753	6,174	571	-	630	1,201	3,335	433	3,768
Attalla City Schools	TATT	14,459	716	1,074	150	448	2,388	251	-	1,679	1,930	1,463	(336)	1,127
Auburn City Board of Education	TAUB	88,702	4,390	6,588	923	4,546	16,447	1,538	-	20	1,558	8,982	1,786	10,768
Auburn University	TAPI	825,992	40,880	61,344	8,591	35,746	146,561	14,325	-	4,884	19,209	83,649	14,934	98,583
Autauga County Board of Education	TATG	80,225	3,970	5,958	834	2,324	13,086	1,391	-	1,749	3,140	8,126	52	8,178
Baldwin County Board of Education	TBLD	311,278	15,406	23,118	3,238	9,483	51,245	5,399	-	-	5,399	31,523	3,992	35,515
Barbour County Schools	TBAR	8,671	429	644	90	44	1,207	150	-	435	585	879	(205)	674
Bessemer Board of Education	TBSM	37,401	1,851	2,778	389	876	5,894	649	-	1,531	2,180	3,787	(346)	3,441
Bevill State Community College	TWCT	30,104	1,490	2,236	313	768	4,807	522	-	1,877	2,399	3,049	(263)	2,786
Bibb County Board of Education	TBIB	28,885	1,430	2,145	300	515	4,390	501	-	2,616	3,117	2,926	(520)	2,406
Birmingham City Schools	TBMH	245,797	12,165	18,254	2,557	6,444	39,420	4,263	-	11,033	15,296	24,893	(1,445)	23,448
Bishop State Community College	TMJC	22,308	1,104	1,657	232	854	3,847	387	-	2,150	2,537	2,259	(941)	1,318
Blount County Board of Education	TBLT	70,559	3,492	5,240	734	1,850	11,316	1,224	-	1,430	2,654	7,146	(119)	7,027
Boaz City Board of Education	TBOZ	23,219	1,149	1,724	242	1,217	4,332	403	-	850	1,253	2,352	263	2,615
Brewton City Board of Education	TBWT	11,721	580	870	122	572	2,144	203	-	254	457	1,187	76	1,263



SCHEDULE B (continued)

Employer	Employer Code	2020 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
Bullock County Board of Education	TBLK	14,138	700	1,050	147	223	2,120	245	-	630	875	1,432	(264)	1,168
Butler County Board of Education	TBLR	27,314	1,352	2,029	284	466	4,131	474	-	1,566	2,040	2,765	(595)	2,170
Calhoun Community College	TDEC	45,842	2,269	3,405	477	2,471	8,622	795	-	404	1,199	4,641	764	5,405
Calhoun County Board of Education	TCAL	77,459	3,834	5,753	806	1,426	11,819	1,343	-	8,036	9,379	7,843	(1,669)	6,174
CAPNA, Inc.	TNCA	22,081	1,093	1,640	230	277	3,240	383	-	498	881	2,235	126	2,361
Central Alabama Community College	TACC	13,355	661	992	139	19	1,811	232	-	684	916	1,353	(295)	1,058
Chambers County Board of Education	TCHB	34,749	1,720	2,581	361	444	5,106	603	-	897	1,500	3,520	(208)	3,312
Chattahoochee Valley Community College	TCVS	11,678	578	867	121	787	2,353	203	-	76	279	1,183	187	1,370
Cherokee County Board of Education	TCHK	40,526	2,006	3,010	422	1,195	6,633	703	-	1,211	1,914	4,104	181	4,285
Chickasaw City School System	TCKW	11,159	552	829	116	979	2,476	194	-	-	194	1,130	521	1,651
Chilton County Board of Education	TCHT	68,030	3,367	5,052	708	2,574	11,701	1,180	-	1,115	2,295	6,889	501	7,390
Choctaw County Board of Education	TCHW	12,398	614	921	129	21	1,685	215	-	1,583	1,798	1,254	(529)	725
Clarke County Board of Education	TCLK	23,329	1,155	1,733	243	39	3,170	405	-	2,660	3,065	2,362	(1,018)	1,344
Clay County Board of Education	TCLY	17,635	873	1,310	183	570	2,936	306	-	664	970	1,786	(164)	1,622
Cleburne County Board of Education	TCLB	24,506	1,213	1,820	255	641	3,929	425	-	995	1,420	2,483	(199)	2,284
Coastal Alabama Community College	TBMC	43,339	2,145	3,219	451	710	6,525	752	-	1,494	2,246	4,388	(222)	4,166
Coffee County Board of Education	TCOF	19,942	987	1,481	207	1,010	3,685	346	-	214	560	2,019	337	2,356
Colbert County Board of Education	TCOL	31,661	1,567	2,351	329	737	4,984	549	-	703	1,252	3,207	55	3,262
Community Svc Programs of West Alabama	TCSP	9,742	482	724	101	528	1,835	169	-	155	324	986	(1)	985
Conecuh County Board of Education	TCON	17,415	862	1,293	181	152	2,488	302	-	602	904	1,764	(191)	1,573
Coosa County Board of Education	TCSA	8,609	426	639	90	49	1,204	149	-	1,005	1,154	871	(377)	494
Council for Leaders in Alabama Schools	TACA	1,153	57	86	12	101	256	20	-	33	53	116	18	134
Covington County Board of Education	TCOV	30,048	1,487	2,232	313	841	4,873	521	-	583	1,104	3,042	61	3,103
Crenshaw County Board of Education	TCRW	21,403	1,059	1,590	223	838	3,710	371	-	698	1,069	2,166	99	2,265
Cullman City Board of Education	TCMN	29,418	1,456	2,185	306	1,124	5,071	510	-	1,897	2,407	2,979	(101)	2,878
Cullman County Commission on Education	TCUL	85,523	4,233	6,351	890	3,033	14,507	1,483	-	8,329	9,812	8,660	(1,214)	7,446
Dale County Board of Education	TDAL	29,410	1,456	2,184	306	923	4,869	510	-	162	672	2,978	340	3,318
Daleville City Board of Education	TDLV	10,379	514	771	108	377	1,770	180	-	165	345	1,051	(92)	959
Dallas County Board of Education	TDLS	33,798	1,673	2,510	352	982	5,517	586	-	1,325	1,911	3,422	(441)	2,981
Dauphin Island Sea Lab	TMES	9,085	450	675	94	300	1,519	158	-	150	308	920	172	1,092
Decatur Board of Education	TDTR	91,204	4,514	6,773	949	3,920	16,156	1,582	-	7,166	8,748	9,236	(653)	8,583
Dekalb County Board of Education	TDKB	84,649	4,189	6,287	880	2,364	13,720	1,468	-	1,943	3,411	8,574	441	9,015
Demopolis City Schools	TDPL	20,131	996	1,495	209	443	3,143	349	-	526	875	2,039	(67)	1,972
Developing Alabama Youth Foundation	TDAY	932	46	69	10	17	142	16	-	27	43	94	(13)	81
Dothan Board of Education	TDTN	86,300	4,271	6,409	898	1,663	13,241	1,497	-	2,257	3,754	8,740	(471)	8,269
Elba City Board of Education	TELB	6,631	328	492	69	172	1,061	115	-	270	385	672	(106)	566
Elmore County Board of Education	TELM	101,391	5,018	7,530	1,055	3,940	17,543	1,758	-	665	2,423	10,267	935	11,202
Enterprise Board of Education	TENP	57,275	2,835	4,254	596	2,109	9,794	993	-	5,762	6,755	5,799	(628)	5,171
Enterprise Ozark Community College	TEPC	13,946	690	1,036	145	338	2,209	242	-	442	684	1,412	(224)	1,188
Escambia County Board of Education	TESC	43,106	2,133	3,201	448	552	6,334	748	-	1,700	2,448	4,367	(297)	4,070
Etowah County Board of Ed	TETH	81,192	4,018	6,030	844	2,032	12,924	1,408	-	1,855	3,263	8,223	37	8,260
Etowah County Community Service Program, Inc.	TECA	256	13	19	3	6	41	4	-	8	12	24	(5)	19
Eufaula City Board of Education	TEFL	27,734	1,373	2,060	288	997	4,718	481	-	291	772	2,809	205	3,014
Fairfield Board of Education	TFRF	15,906	787	1,181	165	12	2,145	276	-	849	1,125	1,611	(309)	1,302
Fayette County Board of Education	TFAY	22,095	1,094	1,641	230	681	3,646	383	-	890	1,273	2,237	(168)	2,069
Florence City Board of Education	TFLO	48,815	2,416	3,625	508	1,871	8,420	847	-	726	1,573	4,944	203	5,147
Fort Payne City Board of Education	TFTP	29,352	1,453	2,180	305	1,285	5,223	509	-	151	660	2,973	360	3,333
Franklin County Board of Education	TFRK	38,040	1,883	2,825	396	2,243	7,347	660	-	33	693	3,851	784	4,635



SCHEDULE B (continued)

Employer	Employer Code	2020 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 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
Gadsden City Board of Education	TGDS	53,141	2,630	3,947	553	1,085	8,215	922	-	1,206	2,128	5,382	(53)	5,329
Gadsden State Community College	TGDC	38,293	1,895	2,844	398	155	5,292	664	-	1,832	2,496	3,879	(920)	2,959
Geneva City Board of Education	TGCB	12,831	635	953	133	544	2,265	223	-	281	504	1,301	124	1,425
Geneva County Board of Education	TGEN	23,109	1,144	1,716	240	793	3,893	401	-	2,157	2,558	2,341	(222)	2,119
George Corley Wallace State Community College	TGWS	14,928	739	1,109	155	355	2,358	259	-	608	867	1,511	(208)	1,303
Greene County Board of Education	TGRN	12,251	606	910	127	14	1,657	212	-	605	817	1,241	(159)	1,082
Gulf Shores City Board of Education	TGSC	20,368	1,008	1,513	212	13,253	15,986	353	-	-	353	2,062	3,440	5,502
Guntersville City Board of Education	TGUN	19,001	940	1,411	198	643	3,192	330	-	595	925	1,925	(82)	1,843
H. Councill Trenholm State Technical College	TMGH	17,007	842	1,263	177	1,104	3,386	295	-	63	358	1,722	198	1,920
Hale County Board of Education	THAL	22,613	1,119	1,679	235	546	3,579	392	-	1,435	1,827	2,290	(559)	1,731
Haleyville City Board of Education	THAV	16,770	830	1,245	174	615	2,864	291	-	381	672	1,699	60	1,759
Hartselle City Board of Education	THCS	35,297	1,747	2,621	367	3,019	7,754	612	-	91	703	3,575	742	4,317
Henry County Board of Education	THNY	23,690	1,172	1,759	246	1,039	4,216	411	-	410	821	2,401	86	2,487
Homewood City Board of Education	THOM	55,815	2,762	4,145	581	2,772	10,260	968	-	629	1,597	5,653	654	6,307
Hoover City Board of Education	THOV	171,874	8,506	12,764	1,788	7,924	30,982	2,981	-	4,431	7,412	17,406	1,247	18,653
Houston County Board of Education	THST	51,419	2,545	3,819	535	1,478	8,377	892	-	4,712	5,604	5,207	(643)	4,564
Huntsville City Schools	THTS	222,255	11,000	16,506	2,312	5,710	35,528	3,855	-	9,764	13,619	22,508	(1,100)	21,408
J. F. Drake State Technical College	THVS	8,042	398	597	84	566	1,645	139	-	686	825	814	(237)	577
J. F. Ingram State Technical College	TDRT	12,674	627	941	132	175	1,875	220	-	711	931	1,284	(371)	913
Jackson County Board of Education	TJKS	55,036	2,724	4,087	572	892	8,275	954	-	2,790	3,744	5,574	(567)	5,007
Jacksonville City Board of Education	TJCS	15,114	748	1,122	157	575	2,602	262	-	299	561	1,531	104	1,635
Jacksonville State University	TJST	101,985	5,047	7,574	1,061	6,136	19,818	1,769	-	673	2,442	10,329	1,809	12,138
Jasper City Board of Education	TJSP	27,505	1,361	2,043	286	562	4,252	477	-	658	1,135	2,786	(248)	2,538
Jefferson County American Federation of Teachers	TJFT	274	14	20	3	15	52	5	-	62	67	28	(25)	3
Jefferson County Board of Education	TJEF	359,697	17,802	26,713	3,741	10,000	58,256	6,238	-	5,501	11,739	36,427	74	36,501
Jefferson State Community College	TJJC	42,391	2,098	3,148	441	1,722	7,409	735	-	548	1,283	4,293	353	4,646
Lamar County Schools	TLAM	19,012	941	1,412	198	362	2,913	330	-	1,943	2,273	1,926	(395)	1,531
Lanett City Schools	TLNT	9,219	456	685	96	152	1,389	160	-	36	196	934	50	984
Lauderdale County Board of Ed	TLAU	79,408	3,930	5,897	826	2,529	13,182	1,377	-	1,727	3,104	8,042	364	8,406
Law Enforcement Academy--Baldwin County	TSWP	272	13	20	3	107	143	5	-	59	64	29	8	37
Law Enforcement Academy--Tuscaloosa	TLET	319	16	24	3	66	109	6	-	1	7	33	19	52
Lawrence County Board of Education	TLAW	46,273	2,290	3,437	481	1,531	7,739	803	-	1,204	2,007	4,686	(311)	4,375
Lawson State College	TLSC	26,884	1,331	1,997	280	539	4,147	466	-	313	779	2,720	179	2,899
Lee County Board of Education	TL EE	93,722	4,638	6,960	975	2,847	15,420	1,625	-	3,235	4,860	9,492	(336)	9,156
Leeds Board of Education, City of	TLDS	19,529	967	1,450	203	854	3,474	339	-	226	565	1,978	367	2,345
Limestone County Board of Education	TLST	77,315	3,826	5,742	804	1,133	11,505	1,341	-	7,672	9,013	7,830	(1,516)	6,314
Linden City Board of Education	TLND	5,414	268	402	56	121	847	94	-	88	182	549	30	579
Lowndes County Board of Education	TLDN	17,005	842	1,263	177	309	2,591	295	-	2,042	2,337	1,722	(853)	869
Lurleen B. Wallace Community College	TLUR	13,848	685	1,028	144	66	1,923	240	-	540	780	1,402	(189)	1,213
Macon County Board of Education	TMAC	20,611	1,020	1,531	214	294	3,059	357	-	1,242	1,599	2,088	(622)	1,466
Madison City Board of Education	TMDC	113,787	5,631	8,451	1,183	8,839	24,104	1,973	-	-	1,973	11,524	3,463	14,987
Madison County Board of Education	TMAD	185,765	9,194	13,796	1,932	4,920	29,842	3,222	-	6,449	9,671	18,813	(264)	18,549
Marengo County Board of Education	TMNG	11,401	564	847	119	445	1,975	198	-	314	512	1,155	(80)	1,075
Marion County Board of Education	TMAR	30,809	1,525	2,288	320	951	5,084	534	-	1,062	1,596	3,121	(138)	2,983
Marion Military Institute	TMMI	10,139	502	753	105	262	1,622	176	-	259	435	1,027	88	1,115
Marshall County Board of Education	TMSH	56,409	2,792	4,189	587	1,871	9,439	978	-	854	1,832	5,713	201	5,914
Midfield City Board of Education	TMID	11,227	556	834	117	897	2,404	195	-	803	998	1,137	(19)	1,118
Mobile School Commissioners	TMOB	518,336	25,653	38,495	5,391	8,143	77,682	8,990	-	18,741	27,731	52,493	(4,552)	47,941



SCHEDULE B (continued)

Employer	Employer Code	2020 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
Monroe County Board of Education	TMON	33,125	1,639	2,460	345	966	5,410	574	-	917	1,491	3,355	(156)	3,199
Montgomery City and County Board of Education	TMTG	266,025	13,166	19,757	2,767	1,668	37,358	4,614	-	16,420	21,034	26,942	(4,028)	22,914
Morgan County Board of Education	TMOR	74,977	3,711	5,568	780	1,116	11,175	1,300	-	1,418	2,718	7,592	(294)	7,298
Mountain Brook City Board of Education	TMTB	63,794	3,157	4,738	664	4,356	12,915	1,106	-	2,809	3,915	6,460	266	6,726
Muscle Shoals City Schools	TMSC	28,055	1,388	2,084	292	972	4,736	487	-	2,719	3,206	2,842	(173)	2,669
Northeast Alabama Community College	TNEC	16,962	839	1,260	176	833	3,108	294	-	259	553	1,719	157	1,876
Northwest Shoals Community College	TNWC	23,668	1,171	1,758	246	1,126	4,301	410	-	658	1,068	2,396	(142)	2,254
Oneonta City Board of Education	TONE	13,081	647	972	136	544	2,299	227	-	152	379	1,324	113	1,437
Opelika City Board of Education	TOPK	47,895	2,370	3,557	498	1,341	7,766	831	-	1,246	2,077	4,851	278	5,129
Opp City Board of Education	TOPP	13,208	654	981	137	554	2,326	229	-	174	403	1,337	123	1,460
Organized Community Action Program Inc	TOCA	6,232	308	463	65	-	836	108	-	387	495	631	(149)	482
Oxford City Schools	TOXF	41,972	2,077	3,117	437	1,620	7,251	728	-	1,326	2,054	4,250	101	4,351
Ozark City Board of Education	TOZK	20,280	1,004	1,506	211	619	3,340	352	-	695	1,047	2,054	(294)	1,760
Pelham City Board of Education	TPLS	31,946	1,581	2,372	332	1,031	5,316	554	-	136	690	3,236	249	3,485
Pell City School System	TPEL	36,645	1,814	2,722	381	1,460	6,377	636	-	1,178	1,814	3,711	(131)	3,580
Perry County Board of Education	TPRY	13,192	653	980	137	27	1,797	229	-	916	1,145	1,336	(530)	806
Phenix City Board of Education	TPHC	65,156	3,225	4,839	678	2,261	11,003	1,130	-	1,108	2,238	6,597	296	6,893
Pickens County Board of Education	TPKS	24,541	1,215	1,823	255	395	3,688	426	-	1,353	1,779	2,484	(247)	2,237
Piedmont City Schools	TPMT	11,236	556	834	117	382	1,889	195	-	377	572	1,138	(24)	1,114
Pike County Board of Education	TPIK	22,072	1,092	1,639	230	1,067	4,028	383	-	1,920	2,303	2,237	(140)	2,097
Pike Road City Schools	TPRB	16,703	827	1,240	174	4,606	6,847	290	-	-	290	1,692	1,892	3,584
Randolph County Board of Education	TRAN	22,130	1,095	1,644	230	886	3,855	384	-	619	1,003	2,242	139	2,381
Reid State Technical College	TEVN	6,169	305	458	64	273	1,100	107	-	189	296	625	(216)	409
Roanoke City Schools	TROK	12,159	602	903	126	317	1,948	211	-	1,135	1,346	1,233	(180)	1,053
Russell County Board of Education	TRUS	34,057	1,686	2,529	354	1,375	5,944	591	-	468	1,059	3,450	278	3,728
Russellville City Board of Education	TRSV	25,632	1,269	1,904	267	845	4,285	445	-	778	1,223	2,594	68	2,662
Saraland Board of Education	TSAR	26,985	1,336	2,004	281	1,525	5,146	468	-	101	569	2,733	732	3,465
Satsuma City Schools	TSTM	12,426	615	923	129	984	2,651	216	-	143	359	1,259	287	1,546
School Superintendents of Alabama	TSAL	880	44	65	9	70	188	15	-	54	69	88	46	134
Scottsboro Board of Education	TSCO	23,353	1,156	1,734	243	241	3,374	405	-	2,183	2,588	2,365	(643)	1,722
Selma Public Schools	TSMA	29,322	1,451	2,178	305	158	4,092	509	-	2,942	3,451	2,971	(1,183)	1,788
Sheffield City Board of Education	TSHF	12,209	604	907	127	420	2,058	212	-	454	666	1,237	(98)	1,139
Shelby County Board of Education	TSBY	218,700	10,824	16,242	2,275	8,259	37,600	3,793	-	3,996	7,789	22,148	726	22,874
Shelton State Community College	TTVS	33,113	1,639	2,459	344	870	5,312	574	-	425	999	3,354	(98)	3,256
Snead State Community College	TSJC	13,460	666	1,000	140	552	2,358	233	-	127	360	1,362	168	1,530
Southern Union State Community College	TSUC	25,601	1,267	1,901	266	1,240	4,674	444	-	52	496	2,593	224	2,817
Special Programming for Achievement Network	TBSC	4,125	204	306	43	153	706	72	-	127	199	419	-	419
St. Clair County Board of Education	TSTC	76,863	3,804	5,708	799	3,192	13,503	1,333	-	6,222	7,555	7,784	(321)	7,463
State of Alabama--Commission on Higher Education	TCHE	4,244	210	315	44	229	798	74	-	133	207	430	40	470
State of Alabama--Department of Rehab Services	TDRS	74,265	3,675	5,515	772	2,703	12,665	1,288	-	577	1,865	7,522	299	7,821
State of Alabama--Department of Post-Secondary Ed	TPSE	17,549	869	1,303	183	3,858	6,213	304	-	-	304	1,777	1,468	3,245
State of Alabama--Department of Youth Services	TDYS	33,028	1,635	2,453	344	1,407	5,839	573	-	982	1,555	3,344	(264)	3,080
State of Alabama--High School of Math & Science	THMS	5,670	281	421	59	398	1,159	98	-	-	98	574	137	711
State of Alabama--PEEHIP	TPHP	4,549	225	338	47	301	911	79	-	5	84	461	130	591
State of Alabama--State Board of Education	TSBE	87,781	4,344	6,519	913	3,669	15,445	1,522	-	2,821	4,343	8,891	(709)	8,182
State of Alabama--Teachers Retirement System	TTRS	28,764	1,424	2,136	299	2,345	6,204	499	-	-	499	2,914	1,020	3,934
Sumter County Board of Education	TSUM	13,755	681	1,022	143	18	1,864	239	-	2,371	2,610	1,393	(751)	642
Sylacauga City Board of Education	TSYL	19,983	989	1,484	208	387	3,068	347	-	2,202	2,549	2,024	(579)	1,445



SCHEDULE B (continued)

Employer	Employer Code	2020 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
Talladega City Board of Education	TTAL	20,252	1,002	1,504	211	608	3,325	351	-	856	1,207	2,051	20	2,071
Talladega County Board of Education	TTDG	71,218	3,525	5,289	741	1,731	11,286	1,235	-	1,665	2,900	7,213	(165)	7,048
Tallapoosa County Board of Education	TTPS	27,528	1,362	2,044	286	906	4,598	477	-	395	872	2,788	(23)	2,765
Tallassee City Board of Education	TTAS	16,387	811	1,217	170	380	2,578	284	-	653	937	1,660	(158)	1,502
Tarrant Board of Education	TTAR	12,881	638	957	134	442	2,171	223	-	209	432	1,303	98	1,401
Thomasville City Schools	TTOM	11,357	562	843	118	14	1,537	197	-	1,202	1,399	1,151	(368)	783
Troy City Board of Education	TTRY	17,545	868	1,303	182	102	2,455	304	-	1,408	1,712	1,777	(414)	1,363
Troy University	TTST	159,197	7,879	11,823	1,656	1,486	22,844	2,761	-	7,679	10,440	16,122	(3,283)	12,839
Trussville City Board of Education	TTCB	49,978	2,474	3,712	520	2,875	9,581	867	-	591	1,458	5,060	1,077	6,137
Tuscaloosa City Schools	TTUS	122,143	6,045	9,071	1,270	4,567	20,953	2,118	-	896	3,014	12,369	1,775	14,144
Tuscaloosa County Schools	TTLS	171,596	8,493	12,744	1,785	6,903	29,925	2,976	-	3,780	6,756	17,377	2,052	19,429
Tuscumbia City Board of Education	TTSC	14,574	721	1,082	152	801	2,756	253	-	1,087	1,340	1,477	(9)	1,468
University Chancellor's Office	TUCO	21,932	1,085	1,629	228	1,541	4,483	380	-	259	639	2,221	520	2,741
University Charter School	TUWC	3,079	152	229	32	1,403	1,816	53	-	145	198	312	474	786
University of Alabama	TUVA	739,566	36,602	54,925	7,692	22,805	122,024	12,826	-	8,544	21,370	74,897	10,813	85,710
University of Alabama--Birmingham	TUMC	1,413,306	69,940	104,961	14,700	13,900	203,501	24,506	-	34,812	59,318	143,121	(10,596)	132,525
University of Alabama--Huntsville	TUAH	192,513	9,528	14,297	2,002	8,974	34,801	3,339	-	4,311	7,650	19,497	298	19,795
University of Montevallo	TALC	51,038	2,526	3,790	531	298	7,145	885	-	377	1,262	5,169	350	5,519
University of North Alabama	TFST	87,456	4,328	6,495	910	4,715	16,448	1,517	-	41	1,558	8,856	1,464	10,320
University of South Alabama	TUSA	315,584	15,619	23,438	3,282	-	42,339	5,473	-	30,825	36,298	31,962	(13,117)	18,845
University of West Alabama	TLVC	44,439	2,199	3,300	462	867	6,828	771	-	691	1,462	4,502	253	4,755
Vestavia Hills Board of Education	TVES	89,056	4,407	6,614	926	4,469	16,416	1,545	-	1,489	3,034	9,020	1,449	10,469
Walker County Board of Education	TWLK	69,085	3,419	5,131	719	2,260	11,529	1,198	-	7,919	9,117	6,996	(1,349)	5,647
Wallace Community College--Dothan	TGWD	31,704	1,569	2,355	330	962	5,216	550	-	712	1,262	3,211	56	3,267
Wallace State College--Hanceville	TCUT	31,705	1,569	2,355	330	652	4,906	550	-	863	1,413	3,211	(62)	3,149
Washington County Board of Education	TWSH	24,925	1,234	1,851	259	950	4,294	432	-	1,515	1,947	2,525	(469)	2,056
Wilcox County Board of Education	TWIL	16,155	800	1,200	168	296	2,464	280	-	1,889	2,169	1,635	(536)	1,099
Winfield City Board of Education	TWFD	12,484	618	927	130	444	2,119	217	-	238	455	1,264	91	1,355
Winston Education Board	TWIN	25,223	1,248	1,873	262	1,018	4,401	437	-	921	1,358	2,555	(270)	2,285
Woodlawn Comm Charter School (i3 Academy)	TWDL	1,540	76	114	16	949	1,155	27	-	-	27	156	253	409
Total for All Entities		\$ 12,369,650	\$ 612,192	\$ 918,651	\$ 128,657	\$ 382,782	\$ 2,042,282	\$ 214,530	\$ -	\$ 382,782	\$ 597,312	\$ 1,252,700	\$ -	\$ 1,252,700



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, 2021
 (Dollar Amounts in Thousands)**

Employer	Employer Code	NPL @ Minus 1% (6.70%)	NPL @ Plus 1% (8.70%)	Projected Deferred Outflows/(Inflows) To Be Recognized in Pension Expense for the Fiscal Year Ended September 30						2020 Actual Employer Contributions
				2022	2023	2024	2025	2026	Thereafter	
Accel Academy Charter School	TACL	\$ 2,743	\$ 1,474	\$ 355	\$ 182	\$ 153	\$ 60	\$ 0	\$ 0	\$ 143
AL School of Cyber Tech & Engineering	TCYB	1,463	787	203	220	221	150	0	0	76
Alabama A&M University	TAMI	115,750	62,223	1,534	2,821	2,903	1,213	0	0	6,049
Alabama Association of School Boards	TAAB	2,749	1,478	49	76	73	37	0	0	144
Alabama Education Association	TAEA	14,177	7,621	29	326	391	240	0	0	741
Alabama Fire College	TAFC	6,510	3,499	160	168	205	150	0	0	340
Alabama High School Athletic Association	TAAA	3,077	1,654	80	105	98	58	0	0	161
Alabama Higher Education Partnership	TAHP	510	274	(5)	12	13	8	0	0	27
Alabama Industrial Development Training	TIDT	25,793	13,865	590	841	931	642	0	0	1,348
Alabama Institute for Deaf and Blind	TAID	94,590	50,848	2,135	2,976	2,993	1,345	0	0	4,943
Alabama Retired State Employees Association	TREA	1,120	602	20	41	34	16	0	0	59
Alabama School of Fine Arts	THFA	11,621	6,247	297	422	401	234	0	0	607
Alabama State Employees Association	TASE	1,879	1,010	(36)	20	53	36	0	0	98
Alabama State University	TMST	105,875	56,914	42	2,165	2,461	1,434	0	0	5,533
Alabama Technology Network	TATN	10,642	5,721	52	223	220	189	0	0	556
Alabama Vocational Association	TAVA	232	125	21	21	22	10	0	0	12
Alabaster City School System	TALR	83,209	44,730	1,823	2,361	2,458	927	0	0	4,348
Albertville City Board of Education	TALB	62,829	33,774	1,674	2,089	1,975	1,260	0	0	3,283
Alexander City Board of Education	TALX	38,545	20,720	582	961	1,013	600	0	0	2,014
Andalusia City Board of Education	TADL	19,261	10,354	193	427	460	39	0	0	1,007
Anniston Board of Education	TANN	27,842	14,967	125	520	1,134	(143)	0	0	1,455
Arab City Board of Education	TARB	33,969	18,261	659	1,099	1,134	746	0	0	1,775
Athens City Board of Education	TATH	56,396	30,316	1,581	1,916	1,835	1,148	0	0	2,947
Athens State University	TATC	43,962	23,632	1,106	1,428	1,456	983	0	0	2,297
Attalla City Schools	TATT	19,292	10,371	(30)	227	332	(71)	0	0	1,008
Auburn City Board of Education	TAUB	118,347	63,619	3,476	4,524	4,358	2,531	0	0	6,185
Auburn University	TAPI	1,102,047	592,418	30,258	38,895	36,945	21,254	0	0	57,592
Autauga County Board of Education	TATG	107,038	57,539	1,733	2,935	3,247	2,031	0	0	5,594
Baldwin County Board of Education	TBLD	415,310	223,254	10,274	14,324	14,045	7,203	0	0	21,704
Barbour County Schools	TBAR	11,568	6,219	65	231	253	73	0	0	605
Bessemer Board of Education	TBSM	49,901	26,825	620	1,289	1,397	408	0	0	2,608
Bevill State Community College	TWCT	40,165	21,591	452	599	759	598	0	0	2,099
Bibb County Board of Education	TBIB	38,538	20,717	85	542	676	(30)	0	0	2,014
Birmingham City Schools	TBMH	327,944	176,290	4,533	8,245	8,986	2,360	0	0	17,138
Bishop State Community College	TMJC	29,764	16,000	(140)	689	689	72	0	0	1,555
Blount County Board of Education	TBLT	94,140	50,606	1,549	2,635	2,745	1,733	0	0	4,920
Boaz City Board of Education	TBOZ	30,979	16,653	739	1,040	1,043	257	0	0	1,619
Brewton City Board of Education	TBWT	15,638	8,406	340	488	512	347	0	0	817
Bullock County Board of Education	TBLK	18,863	10,140	106	357	476	306	0	0	986
Butler County Board of Education	TBLR	36,442	19,590	61	638	798	594	0	0	1,904
Calhoun Community College	TDEC	61,163	32,879	1,640	2,127	2,247	1,409	0	0	3,196
Calhoun County Board of Education	TCAL	103,347	55,555	(31)	1,193	1,584	(306)	0	0	5,401
CAPNA, Inc.	TNCA	29,461	15,837	490	771	798	300	0	0	1,540
Central Alabama Community College	TACC	17,818	9,578	52	266	380	197	0	0	931
Chambers County Board of Education	TCHB	46,363	24,923	559	1,080	1,227	740	0	0	2,423
Chattahoochee Valley Community College	TCVS	15,581	8,376	449	662	607	356	0	0	814
Cherokee County Board of Education	TCHK	54,070	29,066	1,040	1,591	1,595	493	0	0	2,826
Chickasaw City School System	TCKW	14,889	8,004	657	697	649	279	0	0	778
Chilton County Board of Education	TCHT	90,766	48,792	1,974	2,747	2,881	1,804	0	0	4,743
Choctaw County Board of Education	TCHW	16,541	8,892	(220)	19	156	(68)	0	0	864



SCHEDULE C (continued)

Employer	Employer Code	NPL @ Minus 1% (6.70%)	NPL @ Plus 1% (8.70%)	Projected Deferred Outflows/(Inflows) To Be Recognized in Pension Expense for the Fiscal Year Ended September 30						2020 Actual Employer Contributions
				2022	2023	2024	2025	2026	Thereafter	
Clarke County Board of Education	TCLK	31,125	16,732	(334)	178	351	(90)	0	0	1,627
Clay County Board of Education	TCLY	23,529	12,648	281	582	649	454	0	0	1,230
Cleburne County Board of Education	TCLB	32,696	17,576	371	864	970	304	0	0	1,709
Coastal Alabama Community College	TBMC	57,823	31,084	758	1,244	1,384	893	0	0	3,022
Coffee County Board of Education	TCOF	26,607	14,303	702	943	914	566	0	0	1,390
Colbert County Board of Education	TCOL	42,242	22,708	804	1,234	1,255	439	0	0	2,208
Community Svc Programs of West Alabama	TCSP	12,998	6,987	249	499	534	229	0	0	679
Conecuh County Board of Education	TCON	23,235	12,490	288	534	517	245	0	0	1,214
Coosa County Board of Education	TCSA	11,487	6,175	(125)	65	139	(29)	0	0	600
Council for Leaders in Alabama Schools	TACA	1,539	827	41	57	71	34	0	0	80
Covington County Board of Education	TCOV	40,090	21,551	695	1,124	1,195	755	0	0	2,095
Crenshaw County Board of Education	TCRW	28,556	15,351	508	745	815	573	0	0	1,492
Cullman City Board of Education	TCMN	39,249	21,099	563	981	1,005	115	0	0	2,051
Cullman County Commission on Education	TCUL	114,106	61,339	737	2,031	2,250	(323)	0	0	5,963
Dale County Board of Education	TDAL	39,239	21,093	990	1,332	1,339	536	0	0	2,051
Daleville City Board of Education	TDLV	13,847	7,444	211	460	475	279	0	0	724
Dallas County Board of Education	TDLS	45,094	24,241	457	1,047	1,245	857	0	0	2,357
Dauphin Island Sea Lab	TMES	12,121	6,516	323	371	331	186	0	0	633
Decatur Board of Education	TDTR	121,685	65,413	1,526	2,871	2,964	47	0	0	6,359
Dekalb County Board of Education	TDKB	112,940	60,712	2,234	3,340	3,516	1,219	0	0	5,902
Demopolis City Schools	TDPL	26,859	14,439	398	714	710	446	0	0	1,404
Developing Alabama Youth Foundation	TDAY	1,244	669	15	31	31	22	0	0	65
Dothan Board of Education	TDTN	115,142	61,896	1,457	2,916	3,141	1,973	0	0	6,017
Elba City Board of Education	TELB	8,847	4,756	64	172	274	166	0	0	462
Elmore County Board of Education	TELM	135,277	72,720	3,206	4,616	4,582	2,716	0	0	7,070
Enterprise Board of Education	TENP	76,416	41,078	668	1,246	1,366	(241)	0	0	3,993
Enterprise Ozark Community College	TEPC	18,607	10,003	264	411	542	308	0	0	972
Escambia County Board of Education	TESC	57,512	30,916	696	1,328	1,436	426	0	0	3,006
Etowah County Board of Ed	TETH	108,327	58,232	1,923	3,204	3,367	1,167	0	0	5,661
Etowah County Community Service Program, Inc.	TECA	341	183	6	9	9	5	0	0	18
Eufaula City Board of Education	TEFL	37,003	19,892	799	1,170	1,228	749	0	0	1,934
Fairfield Board of Education	TFRF	21,222	11,408	33	339	473	175	0	0	1,109
Fayette County Board of Education	TFAY	29,479	15,847	437	822	872	242	0	0	1,541
Florence City Board of Education	TFLO	65,130	35,011	1,246	2,061	2,180	1,360	0	0	3,404
Fort Payne City Board of Education	TFTP	39,162	21,052	948	1,357	1,401	857	0	0	2,047
Franklin County Board of Education	TFRK	50,754	27,283	1,566	1,935	1,952	1,201	0	0	2,652
Gadsden City Board of Education	TGDS	70,901	38,114	1,085	1,992	2,178	832	0	0	3,705
Gadsden State Community College	TGDC	51,091	27,465	157	867	1,062	710	0	0	2,670
Geneva City Board of Education	TGCB	17,119	9,202	372	525	524	340	0	0	895
Geneva County Board of Education	TGEN	30,832	16,574	281	578	562	(86)	0	0	1,611
George Corley Wallace State Community College	TGWS	19,917	10,707	213	435	499	344	0	0	1,041
Greene County Board of Education	TGRN	16,345	8,787	113	279	320	128	0	0	854
Gulf Shores City Board of Education	TGSC	27,175	14,608	3,895	4,195	4,186	3,357	0	0	1,420
Guntersville City Board of Education	TGUN	25,352	13,628	332	703	744	488	0	0	1,325
H. Council Trenholm State Technical College	TMGT	22,691	12,198	744	964	860	460	0	0	1,186
Hale County Board of Education	THAL	30,171	16,219	60	521	650	521	0	0	1,577
Haleyville City Board of Education	THAV	22,374	12,028	436	673	661	422	0	0	1,169
Hartselle City Board of Education	THCS	47,094	25,316	1,562	2,145	2,115	1,229	0	0	2,461
Henry County Board of Education	THNY	31,608	16,991	640	1,007	1,060	688	0	0	1,652
Homewood City Board of Education	THOM	74,469	40,032	2,109	2,862	2,722	970	0	0	3,892
Hoover City Board of Education	THOV	229,316	123,271	4,992	7,918	8,138	2,522	0	0	11,984
Houston County Board of Education	THST	68,603	36,879	462	1,168	1,285	(142)	0	0	3,585
Huntsville City Schools	THTS	296,535	159,406	4,151	7,255	8,162	2,341	0	0	15,497
J. F. Drake State Technical College	THVS	10,730	5,768	(4)	205	334	285	0	0	561
J. F. Ingram State Technical College	TDRT	16,910	9,090	(34)	224	474	280	0	0	884
Jackson County Board of Education	TJKS	73,429	39,473	714	1,536	1,793	488	0	0	3,837
Jacksonville City Board of Education	TJCS	20,165	10,840	460	687	672	222	0	0	1,054
Jacksonville State University	TJST	136,069	73,146	3,920	5,408	5,021	3,027	0	0	7,111
Jasper City Board of Education	TJSP	36,697	19,727	454	954	1,066	643	0	0	1,918
Jefferson County American Federation of Teachers	TJFT	366	197	(6)	1	(4)	(6)	0	0	19
Jefferson County Board of Education	TJEF	479,911	257,982	8,624	14,141	14,693	9,059	0	0	25,080



SCHEDULE C (continued)

Employer	Employer Code	NPL @ Minus 1% (6.70%)	NPL @ Plus 1% (8.70%)	Projected Deferred Outflows/(Inflows) To Be Recognized in Pension Expense for the Fiscal Year Ended September 30						2020 Actual Employer Contributions
				2022	2023	2024	2025	2026	Thereafter	
Jefferson State Community College	TJJC	56,558	30,403	1,258	1,794	1,896	1,178	0	0	2,956
Lamar County Schools	TLAM	25,366	13,636	39	333	373	(105)	0	0	1,326
Lanett City Schools	TLNT	12,300	6,612	229	376	388	198	0	0	643
Lauderdale County Board of Ed	TLAU	105,947	56,953	2,182	3,404	3,355	1,137	0	0	5,537
Law Enforcement Academy--Baldwin County	TSWP	363	195	10	13	24	32	0	0	19
Law Enforcement Academy--Tuscaloosa	TLET	426	229	26	33	29	14	0	0	22
Lawrence County Board of Education	TLAW	61,738	33,188	923	1,702	1,885	1,222	0	0	3,226
Lawson State College	TLSC	35,868	19,281	707	1,021	1,044	596	0	0	1,874
Lee County Board of Education	TLER	125,045	67,219	1,712	3,088	3,385	2,375	0	0	6,535
Leeds Board of Education, City of	TLDS	26,056	14,007	775	926	879	329	0	0	1,362
Limestone County Board of Education	TLST	103,155	55,452	51	1,252	1,512	(323)	0	0	5,391
Linden City Board of Education	TLND	7,223	3,883	123	208	212	122	0	0	377
Lowndes County Board of Education	TLDN	22,688	12,196	(269)	220	356	(53)	0	0	1,186
Lurleen B. Wallace Community College	TLUR	18,477	9,932	181	371	383	208	0	0	966
Macon County Board of Education	TMAC	27,499	14,782	56	444	533	427	0	0	1,437
Madison City Board of Education	TMDC	151,815	81,610	5,568	6,912	6,823	2,828	0	0	7,934
Madison County Board of Education	TMAD	247,849	133,234	3,868	6,720	7,322	2,261	0	0	12,952
Marengo County Board of Education	TMNG	15,211	8,177	226	427	490	320	0	0	795
Marion County Board of Education	TMAR	41,106	22,097	585	1,010	1,120	773	0	0	2,148
Marion Military Institute	TMMI	13,528	7,272	268	342	356	221	0	0	707
Marshall County Board of Education	TMSH	75,261	40,457	1,553	2,371	2,303	1,380	0	0	3,933
Midfield City Board of Education	TMD	14,979	8,052	257	458	577	114	0	0	783
Mobile School Commissioners	TMOB	691,569	371,761	8,094	16,512	18,845	6,500	0	0	36,141
Monroe County Board of Education	TMON	44,195	23,758	639	1,167	1,274	839	0	0	2,310
Montgomery City and County Board of Education	TMTG	354,933	190,798	2,065	6,062	6,931	1,266	0	0	18,549
Morgan County Board of Education	TMOR	100,036	53,775	1,468	2,575	2,780	1,634	0	0	5,228
Mountain Brook City Board of Education	MTB	85,115	45,755	1,698	2,657	3,498	1,147	0	0	4,448
Muscle Shoals City Schools	TMSC	37,431	20,121	423	646	595	(134)	0	0	1,956
Northeast Alabama Community College	TNEC	22,630	12,165	527	747	772	509	0	0	1,183
Northwest Shoals Community College	TNWC	31,578	16,975	509	947	1,064	713	0	0	1,650
Oneonta City Board of Education	TONE	17,453	9,382	409	594	572	345	0	0	912
Opelika City Board of Education	TOPK	63,902	34,351	1,285	1,865	1,916	623	0	0	3,339
Opp City Board of Education	TOPP	17,622	9,473	416	587	570	350	0	0	921
Organized Community Action Program Inc	TOCA	8,315	4,470	(29)	87	190	93	0	0	435
Oxford City Schools	TOXF	55,999	30,103	1,021	1,565	1,540	1,071	0	0	2,926
Ozark City Board of Education	TOZK	27,058	14,545	270	726	781	516	0	0	1,414
Pelham City Board of Education	TPLS	42,622	22,912	968	1,521	1,516	621	0	0	2,227
Pell City School System	TPEL	48,893	26,283	768	1,332	1,441	1,022	0	0	2,555
Perry County Board of Education	TPRY	17,601	9,462	(90)	234	276	232	0	0	920
Phenix City Board of Education	TPHC	86,932	46,731	1,897	2,830	2,965	1,073	0	0	4,543
Pickens County Board of Education	TPKS	32,743	17,602	317	709	736	147	0	0	1,711
Piedmont City Schools	TPMT	14,992	8,059	213	390	421	293	0	0	783
Pike County Board of Education	TPIK	29,448	15,830	327	634	744	20	0	0	1,539
Pike Road City Schools	TPRB	22,286	11,980	2,039	2,008	1,656	854	0	0	1,165
Randolph County Board of Education	TRAN	29,526	15,872	553	883	854	562	0	0	1,543
Reid State Technical College	TEVN	8,230	4,424	55	280	296	173	0	0	430
Roanoke City Schools	TROK	16,222	8,720	81	268	293	(40)	0	0	848
Russell County Board of Education	TRUS	45,439	24,426	983	1,459	1,499	944	0	0	2,375
Russellville City Board of Education	TRSV	34,198	18,384	591	873	957	641	0	0	1,787
Saraland Board of Education	TSAR	36,004	19,354	1,230	1,477	1,361	509	0	0	1,882
Satsuma City Schools	TSTM	16,579	8,912	560	708	627	397	0	0	866
School Superintendents of Alabama	TSAL	1,174	631	34	36	25	24	0	0	61
Scottsboro Board of Education	TSCO	31,158	16,749	(46)	416	472	(56)	0	0	1,628
Selma Public Schools	TSMA	39,122	21,031	(415)	267	673	116	0	0	2,045
Sheffield City Board of Education	TSHF	16,289	8,756	177	422	471	322	0	0	851
Shelby County Board of Education	TSBY	291,791	156,856	6,687	9,864	9,877	3,383	0	0	15,249
Shelton State Community College	TTVS	44,179	23,749	730	1,390	1,407	786	0	0	2,309
Snead State Community College	TSJC	17,959	9,654	440	591	600	367	0	0	938
Southern Union State Community College	TSUC	34,157	18,362	923	1,292	1,251	712	0	0	1,785
Special Programming for Achievement Network	TBSC	5,503	2,958	94	157	153	103	0	0	288
St. Clair County Board of Education	TSTC	102,551	55,128	1,316	2,297	2,354	(19)	0	0	5,359



SCHEDULE C (continued)

Employer	Employer Code	NPL @ Minus 1% (6.70%)	NPL @ Plus 1% (8.70%)	Projected Deferred Outflows/(Inflows) To Be Recognized in Pension Expense for the Fiscal Year Ended September 30						2020 Actual Employer Contributions
				2022	2023	2024	2025	2026	Thereafter	
State of Alabama--Commission on Higher Education	TCHE	5,662	3,044	123	172	173	123	0	0	296
State of Alabama--Department of Rehab Services	TDRS	99,085	53,264	2,131	3,345	3,360	1,964	0	0	5,178
State of Alabama--Department of Post-Secondary Ed	TPSE	23,414	12,566	1,733	1,742	1,590	844	0	0	1,224
State of Alabama--Department of Youth Services	TDYS	44,066	23,688	678	1,271	1,387	948	0	0	2,303
State of Alabama--High School of Math & Science	THMS	7,565	4,067	257	318	312	174	0	0	395
State of Alabama--PEEHIP	TPHP	6,069	3,262	207	271	237	112	0	0	317
State of Alabama--State Board of Education	TSBE	117,119	62,959	1,278	3,239	4,045	2,540	0	0	6,121
State of Alabama--Teachers Retirement System	TTRS	38,377	20,630	1,479	1,771	1,618	837	0	0	2,006
Sumter County Board of Education	TSUM	18,352	9,865	(457)	(201)	5	(93)	0	0	959
Sylacauga City Board of Education	TSYL	26,662	14,332	(52)	333	371	(133)	0	0	1,393
Talladega City Board of Education	TTAL	27,020	14,525	351	532	747	488	0	0	1,412
Talladega County Board of Education	TTDG	95,019	51,079	1,402	2,548	2,716	1,720	0	0	4,966
Tallapoosa County Board of Education	TTPS	36,728	19,744	732	1,132	1,157	705	0	0	1,919
Tallassee City Board of Education	TTAS	21,863	11,753	210	482	565	384	0	0	1,143
Tarrant Board of Education	TTAR	17,186	9,239	372	577	579	211	0	0	898
Thomasville City Schools	TTOM	15,152	8,145	(117)	61	196	(2)	0	0	792
Troy City Board of Education	TTRY	23,409	12,584	18	307	394	24	0	0	1,223
Troy University	TTST	212,402	114,179	494	4,585	4,709	2,616	0	0	11,100
Trussville City Board of Education	TTCB	66,682	35,846	2,052	2,474	2,242	1,355	0	0	3,485
Tuscaloosa City Schools	TTUS	162,965	87,604	4,349	5,459	5,194	2,937	0	0	8,516
Tuscaloosa County Schools	TTLS	228,945	123,072	5,640	7,653	7,435	2,441	0	0	11,965
Tuscumbia City Board of Education	TTSC	19,445	10,453	325	542	527	22	0	0	1,016
University Chancellor's Office	TUCO	29,262	15,730	759	1,161	1,192	732	0	0	1,529
University Charter School	TUWC	4,107	2,208	543	588	291	196	0	0	215
University of Alabama	TUVA	986,736	530,431	22,581	31,998	29,635	16,440	0	0	51,566
University of Alabama--Birmingham	TUMC	1,885,650	1,013,650	22,645	44,521	48,037	28,980	0	0	98,543
University of Alabama--Huntsville	TUAH	256,853	138,074	4,981	8,255	8,378	5,537	0	0	13,423
University of Montevallo	TALC	68,096	36,606	1,215	1,798	1,901	969	0	0	3,559
University of North Alabama	TFST	116,685	62,725	3,439	4,594	4,417	2,440	0	0	6,098
University of South Alabama	TUSA	421,064	226,348	(4,574)	1,911	5,529	3,175	0	0	22,005
University of West Alabama	TLVC	59,291	31,873	1,128	1,624	1,651	963	0	0	3,099
Vestavia Hills Board of Education	TVES	118,819	63,872	3,350	4,446	4,189	1,397	0	0	6,209
Walker County Board of Education	TWLK	92,174	49,549	232	1,351	1,407	(578)	0	0	4,817
Wallace Community College--Dothan	TGWD	42,300	22,739	732	1,180	1,233	809	0	0	2,211
Wallace State College--Hanceville	TCUT	42,301	22,739	616	1,006	1,158	713	0	0	2,211
Washington County Board of Education	TWSH	33,255	17,876	181	603	880	683	0	0	1,738
Wilcox County Board of Education	TWIL	21,554	11,587	(116)	188	308	(85)	0	0	1,126
Winfield City Board of Education	TWFD	16,656	8,954	341	487	514	322	0	0	870
Winston Education Board	TWIN	33,653	18,091	405	917	1,015	706	0	0	1,759
Woodlawn Comm Charter School (i3 Academy)	TWDL	2,055	1,105	287	310	313	218	0	0	107
Total for All Entities		\$ 16,503,709	\$ 8,871,759	\$ 276,242	\$ 458,360	\$ 478,387	\$ 231,981	\$ 0	\$ 0	\$ 862,476



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: 7.70% per annum, compounded annually, including price inflation at 2.75%.

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

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 Years of Service	Tier II	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
40	0.0914	0.1700		0.1700	13.00	5.40	2.25
45	0.1278	0.2700	0.2000%	0.2700	13.00	5.40	2.25
50	0.1812	0.6000	0.2000	0.6000	12.00	5.00	2.50
55	0.2567	0.9000	0.2000	0.9000	11.50	5.00	2.50
60	0.3815	0.5000	0.5000	1.3000	12.00	4.50	2.50
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
40	0.0399	0.2000		0.2000	11.50	4.75	2.00
45	0.0635	0.3500	0.2000%	0.3500	10.75	4.10	2.00
50	0.0947	0.6500	0.2000	0.6500	10.75	3.90	2.20
55	0.1371	1.0500	0.2000	1.0500	11.00	4.20	2.40
60	0.1929	0.5000	0.5000	1.4000	12.00	4.50	2.70
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 F

FUNDING POLICY OF THE TEACHERS' RETIREMENT SYSTEM BOARD OF CONTROL EFFECTIVE 9/30/2019

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. For that reason, it is critical that this funding policy remain unchanged until its objectives are met.

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.



SCHEDULE F (continued)

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.
 - Incremental UAAL resulting from plan changes that grant benefit improvements shall be amortized over a period not to exceed 15 years.
 - Employer Normal Contribution Rate – the contribution rate determined as of the valuation date each year based on the provisions of Alabama Code Section 16-25-21.
 - In each valuation subsequent to the adoption of this funding policy the required employer contribution rate will be determined by the summation of the employer Normal Contribution Rate, a contribution rate for administrative expenses, a contribution rate for the pre-retirement death benefit fund, a contribution rate for the term life insurance fund, the individual amortization rate for each of the New



SCHEDULE F (continued)

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 including the Interest Smoothing methodology. 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 which shall include the Interest Smoothing Methodology.

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.