

Teachers' Retirement System of Alabama Report of the Actuary on the Annual Valuation Prepared as of September 30, 2007



The experience and dedication you deserve

July 31, 2008

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

Members of the Board:

In this report are submitted the results of the annual valuation of the assets and liabilities of the Teachers' Retirement System of Alabama, prepared as of September 30, 2007 in accordance with Section 367(15) of the act governing the operation of the System.

The purpose of this report is to provide a summary of the funded status of the System as of September 30, 2007, to recommend rates of State contribution and to provide accounting information under Governmental Accounting Standards Board Statements No. 25 and 27 (GASB 25 and 27). While not verifying the data at source, the actuary performed tests for consistency and reasonability. The valuation liabilities include the pay increase granted to active members effective October 1, 2007 under Act 2007-296. On the basis of this valuation, it is recommended that the State make contributions to the Retirement System at the rate of 12.51% of payroll for the fiscal year ending September 30, 2010, based on a 20-year amortization period. The increase in the contribution rate from 12.07% to 12.51% of payroll is primarily due to the impact of Act 2007-296.

The promised benefits of the System are included in the actuarially calculated contribution rates which are developed using the Entry Age Normal cost method. Five-year market related value of assets is used for actuarial valuation purposes. Gains and losses are reflected in the unfunded accrued liability that is being amortized by regular annual contributions as a level percentage of payroll, on the assumption that payroll will increase by 4.50% annually. The assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the Fund and to reasonable expectations of anticipated experience under the Fund and meet the parameters for the disclosures under GASB 25 and 27.

We have prepared the Schedule of Funding Progress and Trend Information shown in the financial section of the Comprehensive Annual Financial Report, and all supporting schedules including the Schedule of Active Member Valuation Data, the Solvency Test and the Analysis of Financial Experience shown in the actuarial section of the Comprehensive Annual Financial Report. All historical information that references a valuation date prior to September 30, 2004 was prepared by the previous actuarial firm.

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



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

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

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

Respectfully submitted,

Edward A. Macdonald, ASA, FCA, MAAA

President

EAM/CT:bdm

Cathy Turcot
Managing Director



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TEACHERS' RETIREMENT SYSTEM OF ALABAMA REPORT OF THE ACTUARY ON THE ANNUAL VALUATION PREPARED AS OF SEPTEMBER 30, 2007

SECTION I - SUMMARY OF PRINCIPAL RESULTS

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

VALUATION DATE	September 30, 2007	September 30, 2006
Active members Number Annual compensation*	141,217 \$ 5,589,726,297	138,613 \$ 5,108,187,755
Retired members and beneficiaries Number Annual allowances*	64,429 \$ 1,314,053,230	61,393 \$ 1,234,407,241
DROP participants Number Annual compensation* Annual allowances	5,071 \$ 308,045,402 151,079,983	5,375 \$ 350,255,378 164,959,410
Assets Actuarial value Market value	\$ 20,650,916,481 21,819,988,550	\$ 19,821,133,268 19,157,765,669
Unfunded accrued liability	\$ 5,320,618,237	\$ 4,123,966,699
CONTRIBUTIONS FOR FISCAL YEAR ENDING	September 30, 2010	September 30, 2009
Employer contribution rate Normal Accrued liability Death benefit Term life Administration Total	6.28% 5.85 0.12 0.05 <u>0.21</u> 12.51%	6.45% 5.24 0.12 0.05 <u>0.21</u> 12.07%
Amortization period	20 years	20 years

^{*}Amounts shown do not include any increase in effect after the valuation date.

- Comments on the valuation results as of September 30, 2007 are given in Section IV and further discussion of the contribution levels is set out in Section V.
- 3. Schedule B shows the development of the actuarial value of assets. Schedule D of this report outlines the full set of actuarial assumptions and methods employed in the current valuation. There have been no changes since the previous valuation.

- 4. Provisions of the System, as summarized in Schedule F, were taken into account in the current valuation. The valuation reflects the pay increase granted to active members effective October 1, 2007 under Act 2007-296.
- 5. Section VI of this report shows the certification that there has been no change in the liquidation period used to determine the accrued liability contribution rate.

SECTION II - MEMBERSHIP

 The following table shows the number of active members and their annual compensation as of September 30, 2007 on the basis of which the valuation was prepared.

TABLE 1

THE NUMBER AND ANNUAL COMPENSATION OF ACTIVE MEMBERS AS OF SEPTEMBER 30, 2007

GROUP	NUMBER	COMPENSATION*
Males	36,795	\$ 1,780,327,545
Females	104,422	3,809,398,752
Total	141,217	\$ 5,589,726,297

^{*}Does not include pay increase granted to active members effective October 1, 2007 under Act 2007-296.

In addition, there are 5,071 members with compensation of \$308,045,402 who are currently participating in the DROP. Employers of the Retirement System contribute on this payroll.

The table reflects the active membership for whom complete valuation data were submitted. The results of the valuation were adjusted to take account of an additional 16,781 inactive members.



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

TABLE 2 SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Valuation <u>Date</u>	Number	Annual <u>Payroll</u>	Annual <u>Average Pay</u>	% Increase in Average Pay
9/30/2007 ¹	141,217	\$ 5,589,726,297	\$ 39,583	7.41%
9/30/2006 ²	138,613	5,108,187,755	36,852	5.20
9/30/2005 ³	135,126	4,733,415,807	35,030	2.73
9/30/20044	131,814	4,494,548,521	34,098	(1.48)
6/30/2003 ⁵	129,617	4,486,058,170	34,610	2.78
6/30/2002 ⁶	128,649	4,332,119,671	33,674	1.74

¹ In addition, there are 5,071 employees with annual compensation of \$308,045,402 who are currently participating in

the DROP program. Employers of the Retirement System contribute on this payroll. ² In addition, there are 5,375 employees with annual compensation of \$350,255,378 who are currently participating in the DROP program. Employers of the Retirement System contribute on this payroll.

In addition, there are 4,839 employees with annual compensation of \$291,497,474 who are currently participating in the DROP program. Employers of the Retirement System contribute on this payroll.

⁴ In addition, there are 4,468 employees with annual compensation of \$252,128,959 who are currently participating in

the DROP program. Employers of the Retirement System contribute on this payroll.

In addition, there are 2,711 employees with annual compensation of \$146,552,344 who are currently participating in

the DROP program. Employers of the Retirement System contribute on this payroll.

6 In addition, there are 973 employees with annual compensation of \$47,063,551 who are currently participating in the DROP program. Employers of the Retirement System contribute on this payroll.

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

TABLE 3 THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF RETIRED MEMBERS AND BENEFICIARIES ON THE ROLL AS OF SEPTEMBER 30, 2007

GROUP	NUMBER	ANNUAL RETIREMENT ALLOWANCES
Service Retirements	57,041	\$ 1,227,594,674
Disability Retirements	4,113	44,924,302
Beneficiaries of Deceased Members	3,275	41,534,254
DROP Participants	<u>5,071</u>	151,079,983
Total	69,500	\$ 1,465,133,213

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4. Schedule G shows the distribution by age and service of the number and average annual compensation of active members included in the valuation.

SECTION III - ASSETS

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

(a) Annuity Savings Fund

The Annuity Savings Fund is the fund to which are credited all contributions made by members together with regular interest thereon. When a member retires or when a survivor allowance becomes payable the amount of the member's accumulated contributions are transferred from the Annuity Savings Fund to the Pension Accumulation Fund. The market value of assets credited to the Annuity Savings Fund on September 30, 2007, which represent the accumulated contributions of active members to that date, including interest, amounted to \$3,038,295,553.

(b) Pension Accumulation Fund

The Pension Accumulation Fund is the fund to which are credited all contributions made by the employer, except those contributions made to the Pre-Retirement Death Benefit Fund which was created October 1, 1983. When a member retires or when a survivor allowance becomes payable, the pension is paid from this fund. In addition, the amount of the member's accumulated contributions is transferred from the Annuity Savings Fund to the Pension Accumulation Fund and the annuity is paid from this fund. On September 30, 2007 the market value of assets credited to this fund amounted to \$18,247,298,403.

(c) DROP Fund

The DROP Fund is the fund to which are credited deferred retirement benefits on behalf of members who elect to participate in the DROP, together with regular interest thereon. In addition, member contributions while participating in the DROP, together with regular interest therein, are credited to the Fund. At the end of the DROP deferral period, the member receives the amount of the deferred retirement benefits and contributions plus interest in the member's DROP account. On September 30, 2007, the market value of assets credited to this Fund amounted to \$534,394,594.

(d) Pre-Retirement Death Benefit Fund

The Pre-Retirement Death Benefit Fund is the fund to which are credited contributions made by the employer for the special pre-retirement death benefit which became effective October 1, 1983. On September 30, 2007, the market value of assets credited to this fund amounted to \$18,734,828.

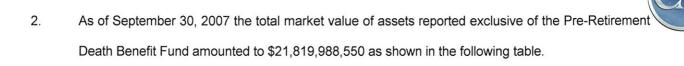


TABLE 4

MARKET VALUE OF ASSETS BY FUND
AS OF SEPTEMBER 30, 2007

FUND	MARKET VALUE OF ASSETS		
Annuity Savings Fund Pension Accumulation Fund DROP Fund	\$ 3,038,295,553 18,247,298,403 534,394,594		
Total Market Value of Assets	\$ 21,819,988,550		

- The five-year market related actuarial value of assets as of September 30, 2007 was \$20,650,916,481. Schedule B shows the development of the actuarial value of assets as of September 30, 2007
- 4. Schedule C shows the receipts and disbursements of the System for the year preceding the valuation date and a reconciliation of the fund balances at market value.

SECTION IV - COMMENTS ON VALUATION

- Schedule A of this report contains the valuation balance sheet which shows the present and prospective assets and liabilities of the System as of September 30, 2007.
- 2. The valuation balance sheet shows that the System has total prospective liabilities of \$32,002,976,741. Of this amount, \$14,048,525,282 is for the prospective benefits payable on account of present retired members, beneficiaries of deceased members, and DROP participants, and \$17,954,451,459 is for the prospective benefits payable on account of present active and inactive members. Against these liabilities, the System has total present actuarial value of assets, exclusive of the Pre-Retirement Death Benefit Fund, of \$20,650,916,481 as of September 30, 2007. The difference of \$11,352,060,260 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future. Of this amount, \$2,674,289,348 is the present value of future contributions expected to be made by members to the Annuity Savings Fund, and the balance of \$8,677,770,912 represents the present value of future contributions payable by the employer.

- 3. The employer's regular contributions to the System consist of normal contributions and accrued liability contributions. The valuation indicates that employer normal contributions at the rate of 6.28% of payroll are required to provide the benefits of the System for the average new member.
- 4. Prospective normal contributions at the rate of 6.28% have a present value of \$3,357,152,675. When this amount is subtracted from \$8,677,770,912 which is the present value of the total future contributions to be made by the employer, there remains \$5,320,618,237 as the amount of future accrued liability contributions. Accrued liability contributions of 5.85% of payroll are to be made toward amortizing the unfunded accrued liability. Annual accrued liability contributions at the rate of 5.85% of payroll will amortize the unfunded accrued liability within approximately 20 years from the valuation date on the assumption that the aggregate amount of accrued liability contribution will increase by 4.50% each year.
- 5. A contribution of 0.12% is required to meet the cost of the pre-retirement death benefit program this year. A contribution of 0.05% is required to meet the cost of group term-life insurance premiums.
- 6. An additional contribution of 0.21% of payroll is required to cover the expenses of administering the System.

SECTION V - CONTRIBUTIONS PAYABLE BY EMPLOYER

- The retirement law provides that the employer contributions are to be paid from the same source from which employees' salaries are paid.
- 2. On the basis of the actuarial valuation prepared as of September 30, 2007 it is recommended that the employer make contributions at the following rates beginning October 1, 2009:



TABLE 5

EMPLOYER CONTRIBUTION RATES AS A PERCENTAGE OF MEMBERS' COMPENSATION

EMPLOYER CONTRIBUTION	FISCAL YEAR ENDING SEPTEMBER 30, 2010
Normal	6.28%
Accrued Liability	5.85
Death Benefit	0.12
Term-Life	0.05
Administration	<u>0.21</u>
Total	12.51%

3. Contributions at the above rates of payroll are also recommended for payment by the Alabama High School Athletic Association. The following table shows the rates to be paid by special units of the System in addition to the rates shown above and the fiscal year through which these additional rates are required to be paid.

TABLE 6
ADDITIONAL RATES REQUIRED FOR SPECIAL UNITS OF THE SYSTEM

UNIT	ADDITIONAL EMPLOYER RATE	THROUGH FISCAL YEAR ENDING SEPTEMBER 30
Etowah County Community Services Program	13.50%	2008
Jefferson County American Federation of Teachers	4.15	2009
Alabama State Employees Association	2.66	2015
Developing Alabama Youth Foundation	2.74	2017
Alabama Congress of Parents and Teachers	2.15	2020
Central Alabama Opportunities Industrialization Center	5.07	2020

SECTION VI – ANNUAL ACTUARIAL CERTIFICATION



The following is the annual actuarial certification to the Teachers' Retirement System of Alabama required by Act 2000-732.

 We hereby certify that there has been no change since the previous valuation in the liquidation period of 20 years used to determine the accrued liability contribution rate of 5.85% as part of the total rate of 12.51% to be paid by employers to the Teachers' Retirement System of Alabama.

Signed

Edward A. Macdonald, ASA, FCA, MAAA

President

SECTION VII - ANALYSIS OF FINANCIAL EXPERIENCE

The following table shows the estimated gain or loss from various factors that resulted in an increase of \$1,196,651,538 in the unfunded accrued liability from \$4,123,966,699 to \$5,320,618,237 during the year ending September 30, 2007.

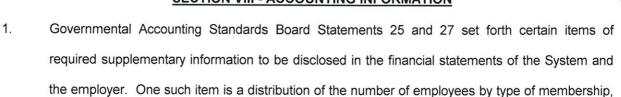
ANALYSIS OF FINANCIAL EXPERIENCE

(in millions of dollars)

ITEM	AMOUNT OF INCREASE/ (DECREASE)	
Interest (8.00%) added to previous unfunded accrued liability Accrued liability contribution	\$ 329.9 (173.1)	
Experience: Valuation asset growth Pensioners' mortality Turnover and retirements New entrants Salary increases* Method changes Amendments Assumption changes Miscellaneous changes Total	20.9 44.1 136.7 35.8 824.6 0.0 0.0 (22.2) \$ 1,196.7	

^{*}Includes impact of salary increase effective October 1, 2007 granted under Act 2007-296.





NUMBER OF ACTIVE AND RETIRED MEMBERS AS OF SEPTEMBER 30, 2007

GROUP	NUMBER
Retirees and beneficiaries currently receiving benefits	64,429
DROP participants	5,071
Terminated employees entitled to benefits but not yet receiving benefits	16,781
Active members	<u>141,217</u>
Total	227,498

2. Another such item is the schedule of funding progress as shown below.

SCHEDULE OF FUNDING PROGRESS

(Dollar amounts in thousands)

Actuarial Valuation <u>Date</u>	Actuarial Value of Assets (<u>a</u>)	Actuarial Accrued Liability (AAL) Entry Age	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
6/30/2002	\$17,904,881	\$18,374,174	\$ 469,293	97.4%	\$4,379,183	10.7%
6/30/2003	18,110,470	19,357,735	1,247,265	93.6	4,632,611	26.9
9/30/2004	18,704,009	20,886,190	2,182,181	89.6	4,846,677	45.0
9/30/2005	19,248,207	23,027,338	3,779,131	83.6	5,326,408*	71.0
9/30/2006	19,821,133	23,945,100	4,123,967	82.8	5,458,443	75.6
9/30/2007	20,650,916	25,971,534	5,320,618	79.5	6,310,616**	84.3

^{*}Includes pay increase granted under Act 2005-174.

as follows:

^{**}Includes pay increase granted under Act 2007-296.

 The information presented in the required supplementary schedules was determined as part of the actuarial valuation at September 30, 2007. Additional information as of the latest actuarial valuation follows.

Valuation date	09/30/2007	
Actuarial cost method	Entry Age Normal	
Amortization method	Level percent open	
Remaining amortization period	20 years	
Asset valuation method	Five-year market related value	
Actuarial assumptions:		
Investment rate of return*	8.00%	
Projected salary increases*	5.00 - 7.75%	
Cost-of-living adjustments	None	
*Includes inflation at	4.50%	

TREND INFORMATION (\$ in 1,000's)

Period <u>Ending</u>	Annual Pension Cost (APC)	Percentage Of APC <u>Contributed</u>	Net Pension Obligation (NPO)
September 30, 2005	\$329,194	100%	\$0
September 30, 2006	413,975	100	0
September 30, 2007	519,247	100	0



SCHEDULE A

VALUATION BALANCE SHEET SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF THE TEACHERS' RETIREMENT SYSTEM OF ALABAMA AS OF SEPTEMBER 30, 2007

	September 30, 2007	September 30, 2006
	Coptember 50, 2007	ocptember 60, 2000
AS	SETS	
Actuarial Value of Present Assets	\$ 20,650,916,481	\$ 19,821,133,268
Present value of future members' contributions to the Annuity Savings Fund	\$ 2,674,289,348	\$ 2,297,792,876
Present value of future employer contributions to the Pension Accumulation Fund		
Normal contributions Unfunded accrued liability contributions	\$ 3,357,152,675 5,320,618,237	\$ 2,962,630,322 4,123,966,699
Total prospective employer contributions	\$ 8,677,770,912	\$ 7,086,597,021
Total Assets	<u>\$ 32,002,976,741</u>	\$ 29,205,523,165
LIAB	BILITIES :	
Present value of benefits payable on account of retired members, beneficiaries of deceased members now drawing retirement allowances, and DROP participants	\$ 14,048,525,282	\$ 13,408,294,457
Present value of prospective benefits payable on account of present active and inactive members: Service retirement allowances Disability retirement allowances Survivor allowances Refunds of members' contributions	\$ 16,850,707,815 540,042,391 149,878,426 413,822,827	\$ 14,824,486,911 473,818,464 130,049,517 368,873,816
Total	\$ 17,954,451,459	\$ 15,797,228,708
Total Liabilities	\$ 32,002,976,741	<u>\$ 29,205,523,165</u>



SCHEDULE A (continued)

SOLVENCY TEST (\$1000's)

	Aggre	Aggregate Accrued Liabilities For			Portion of Accrued Liabilities Covered by Reported Asset			
Valuation Date	(1) Active Member Contributions	(2) Retirants and Beneficiaries	(3) Active Members (Employer Financed Portion)	Reported Assets	(1)	(2)	(3)	
9/30/2007	\$3,038,296	\$14,048,525	\$8,884,713	\$20.650.916	100%	100%	40.1%	
9/30/2006 ²	2,943,588	13,408,294	7,593,218	19,821,133	100	100	45.7	
9/30/2005 ³	2,856,983	12,998,138	7,172,217	19,248,207	100	100	47.3	
9/30/20044	2,779,858	11,491,556	6,614,776	18,704,009	100	100	67.0	
6/30/2003_	2,750,536	9,548,773	7,058,426	18,110,470	100	100	82.3	
6/30/2002 ⁵	2,690,967	8,526,609	7,156,598	17,904,881	100	100	93.4	

Reflects pay increase payable under Act 2007-296.
Reflects changes in actuarial assumptions.
Reflects pay increase payable under Act 2005-174 and additional allowance payable under Act 2006-310.
Reflects additional allowance payable under Act 2005-174.
Reflects effect of amendments to the System and additional allowance payable under Act 2002-393. Beginning 6/30/2002, Item (1) and Item (2) include DROP Participants.



SCHEDULE B

DEVELOPMENT OF SEPTEMBER 30, 2007 ACTUARIAL VALUE OF ASSETS

(1)	Actuarial Value of Assets on September 30, 2006	\$	19,821,133,268
(2)	Market Value of Assets on September 30, 2007		21,819,988,550
(3)	Market Value of Assets on September 30, 2006		19,157,765,669
(4)	Net Cash Flow During the Fiscal Year a. Contributions b. Benefit Payments c. Administrative Expenses d. Investment Expenses e. Net Cash Flow: (a b c d.)	_	824,332,772 1,478,251,239 1,760,475 1,769,615 (657,448,557)
(5)	Actual Investment Return ((2) - (3) - (4)e.)		3,319,671,438
(6)	Assumed Rate of Return on Assets		8.00%
(7)	Expected Investment Return ((3) * (6)) + (((4)a (4)b(4)c.) * .5 * (6)) + (4)d.		1,508,163,711
(8)	Investment Gain/(Loss) for the Fiscal Year ((5) - (7))		1,811,507,727
(9)	Phased-In Recognition of Investment Gain/(Loss) a. Current Fiscal Year: (.2 * (8)) b. Prior Fiscal Year c. Second Prior Fiscal Year d. Third Prior Fiscal Year e. Fourth Prior Fiscal Year f. Total Recognized Investment Gain/(Loss) for Fiscal Year Actuarial Value of Assets on September 30, 2007	_	362,301,545 13,979,879 75,139,616 (472,352,981) 0 (20,931,941)
	((1) + (4)e. + (7) + (9)f.)	\$	20,650,916,481



SCHEDULE C

SUMMARY OF RECEIPTS AND DISBURSEMENTS FOR THE PERIOD ENDING SEPTEMBER 30, 2007

Receipts for the Period		
Contributions: Members Employer	\$ 305,085,899 519,246,873	
Total		\$ 824,332,772
Investment Income		3,317,901,823
TOTAL		\$ 4,142,234,595
Disbursements for the Period		
Benefit Payments Refunds to Members DROP Distributions Miscellaneous: Transfers to Plant Fund Transfers to Expense Fund	\$46,827,687 1,760,475	\$ 1,264,455,148 32,168,400 133,468,068
Transfers to Pre-Retirement Death Benefit Fund	<u>1,331,936</u>	
Total		49,920,098
TOTAL		\$ 1,480,011,714
Excess of Receipts over Disbursements		\$ 2,662,222,881
Reconciliation of Asset Balances		
Market Value of Assets as of September 30, 2006		\$ 19,157,765,669
Excess of Receipts over Disbursements		2,662,222,881
Market Value of Assets as of September 30, 2007		\$ 21,819,988,550
Rate of Return on Market Value of Assets		17.62%



SCHEDULE D

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions and methods used in the valuation were selected based on the actuarial experience study prepared as of September 30, 2005, submitted to and adopted by the Board on May 21, 2007.

INVESTMENT RATE OF RETURN: 8% per annum, compounded annually.

SALARY INCREASES: Representative values of the assumed annual rates of future salary increases are as follows and include inflation at 4.50% per annum:

<u>Age</u>	Annual Rate
20	7.25%
25	7.25
30	7.75
35	7.00
40	6.50
45	6.25
50	6.00
55	5.50
60	5.00
65	5.00

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

_			Annual Rate	of		
<u>Age</u>	<u>Death</u>	<u>Disability</u>		Withdra	awal	
				Years of S	Service	
		Male	<u>0-4</u>	<u>5-9</u>	10-20	<u>20+</u>
20 25 30 35 40 45 50 55 60 65	0.05% 0.07 0.08 0.09 0.11 0.16 0.26 0.44 0.80 1.45 2.17	0.05% 0.06 0.07 0.13 0.20 0.21 0.64 1.20	30.00% 16.50 15.00 15.00 14.50 14.50 12.00 11.50 10.00 10.00	12.00% 5.50 5.50 5.50 5.25 4.50 4.00 4.00 6.00 6.00	5.50% 3.00 3.00 3.00 3.00 2.25	1.25% 1.00 1.00 1.00
		<u>Female</u>				
20 25 30 35 40 45 50 55 60 65	0.03% 0.03 0.04 0.05 0.08 0.10 0.16 0.26 0.51 0.97 1.37	0.10% 0.10 0.10 0.15 0.16 0.37 0.70 1.10	30.00% 14.50 14.50 13.50 12.00 11.50 11.00 10.50 11.00 14.00	8.00% 6.00 6.00 4.50 3.75 3.75 4.50 6.00 6.00	4.00% 3.50 2.50 2.50 2.50 2.50	1.50% 0.75 0.75 0.75



SERVICE RETIREMENT: Representative values of the assumed annual rates of service retirement are as follows:

For members first eligible for unreduced benefits upon attaining 25 years of service but before age 65, rates are as follows:

	Annua	al Rate*
<u>Age</u>	<u>Male</u>	<u>Female</u>
45	30.0%	30.0%
50	15.0	16.0
55	48.0	53.0
60	40.0	49.0
62	50.0	55.0

^{*}Retirement rates are increased by 7% in year when member first becomes eligible for unreduced service retirement on or after age 50 but before age 60.

For members first eligible for unreduced benefits before attaining 25 years of service and all members age 65 and over, the rates are as follows:

	Annua	l Rate
<u>Age</u>	<u>Male</u>	<u>Female</u>
60	13.0%	22.0%
62	30.0	30.0
65	34.0	35.0
67	26.0	27.0
69	25.0	26.0
70	25.0	26.0
72	26.0	25.0
75	100.0	100.0

DEATHS AFTER RETIREMENT: Rates of mortality for the period after service retirement are according to the 1994 Group Annuity Mortality Table set forward one year for females. Special tables are used for the period after disability retirement. Representative values of the assumed annual rates of death after service and disability retirement are as follows:



Annual Rate of Death after

	Service Re	Disability	Retirement	
<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
40	0.11%	0.08%	3.32%	2.60%
45	0.16	0.10	3.49	2.43
50	0.26	0.16	3.76	2.50
55	0.44	0.26	4.20	2.67
60	0.80	0.51	4.88	2.95
65	1.45	0.97	5.95	3.39
70	2.37	1.50	7.63	4.08
75	3.72	2.53	10.22	5.16
80	6.20	4.40	14.17	6.85
85	9.72	7.53	20.09	9.47
90	15.29	12.88	28.67	13.46

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

VALUATION METHOD: Entry age normal cost method. Actuarial gains and losses are reflected in the unfunded actuarial accrued liability.

ASSETS: Actuarial value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected value.

SCHEDULE E



ACTUARIAL COST METHOD

- 1. The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future (currently 8%), of each member's expected benefit payable at retirement or death is determined, based on his age, service, sex and compensation. The calculations take into account the probability of a member's death or termination of employment prior to becoming eligible for a benefit, as well as the probability of his terminating with a service, disability or survivor's benefit. Future salary increases are also anticipated. The present value of the expected benefits payable on account of the active members is added to the present value of the expected future payments to retired members and beneficiaries to obtain the present value of all expected benefits payable from the System on account of the present group of members and beneficiaries.
- 2. The employer contributions required to support the benefits of the System are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.
- 3. The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of the average new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.
- 4. The unfunded accrued liability contributions are determined by subtracting the present value of prospective employer normal contributions and member contributions together with the current assets held from the present value of expected benefits to be paid from the System.

SCHEDULE F



SUMMARY OF MAIN PLAN PROVISIONS AS INTERPRETED FOR 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. 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 the 3 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

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.

Amount of Allowance

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

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

Amount of Allowance

Benefits Payable on Separation from Service

Benefits Payable upon Death in Active Service 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.

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.

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).

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.

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).*

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 preretirement 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)

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 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.

Member Contributions

Regular members contribute 5% of salary. Certified police officers and firefighters contribute 6% of salary. DROP participants continue to contribute during the DROP period, but receive a refund of these contributions and interest upon retirement.



SCHEDULE G

SCHEDULE OF ACTIVE PARTICIPANT DATA AS OF SEPTEMBER 30, 2007

Attained					Complete	ed Years o	f Service				
Age											
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	≥ 40	Total
11-1-05	0.547										
Under 25	2,547	2,296	24								4,867
Avg. Pay	29,007	29,988	21,423								29,433
25 to 29	2,519	8,932	2,148	11							13,610
Avg. Pay	33,334	33,530	39,366	26,001							34,409
30 to 34	1,947	5,797	6,465	1,637	5						15,851
Avg. Pay	33,090	33,661	41,943	45,253	39,998						38,168
35 to 39	2,089	E C04	5 407	F 200	4 470						40.700
Avg. Pay	31,581	5,681 32,893	5,107	5,390	1,479	23					19,769
Avg. Fay	31,361	32,093	40,511	46,886	47,838	41,901					39,666
40 to 44	1,416	4,681	4,515	3,675	3,855	1,270	37				19,449
Avg. Pay	29,823	30,831	37,132	43,361	49,258	49,353	43,519				39,474
45 to 49	1,092	3,938	4,413	3,974	3,559	3,189	1,250	31			21,446
Avg. Pay	28,941	30,776	35,970	39,965	46,468	51,273	51,150	43,110			40,311
50 to 54	004	2.405	2.500	0.074	0.004	0.044	0.504	4.45.4	40		04.004
50 to 54 Avg. Pay	881 32,215	3,105 32,286	3,582 36,400	3,671 40,018	3,921	3,011	2,584	1,154	12		21,921
Avg. Fay	32,213	32,200	30,400	40,016	45,427	49,550	55,310	56,865	47,247		42,988
55 to 59	584	2,150	2,300	2,590	2,953	2,738	678	392	63	1	14,449
Avg. Pay	34,773	33,853	36,352	38,642	43,765	47,723	54,718	60,323	66,163	80,966	41,642
60 to 64	576	1,098	1,321	1,153	1,289	1,085	328	123	50	18	7,041
Avg. Pay	58,681	30,898	34,384	40,674	46,232	48,724	49,426	65,365	77,673	67,038	42,870
65 to 60	204	225	105	200	222	200					0.05-
65 to 69	204	335	485	293	292	232	77	55	15	17	2,005
Avg. Pay	71,341	26,002	31,519	40,544	47,188	53,255	42,195	45,313	77,640	92,820	42,418
70 & up	55	127	200	163	100	86	33	25	8	12	809
Avg. Pay	58,027	21,551	22,911	27,593	36,920	43,584	36,453	34,771	50,698	76,951	31,953
				-							
Total	13,910	38,140	30,560	22,557	17,453	11,634	4,987	1,780	148	48	141,217
Avg. Pay	33,236	32,361	38,246	42,360	46,447	49,508	53,385	57,307	68,845	78,937	39,583