



## Cavanaugh Macdonald

CONSULTING, LLC

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August 30, 2006

Mr. Norman Turnipseed  
Chief Accountant & Fiscal Officer  
Retirement Systems of Alabama  
Retirement Systems Building  
135 South Union Street  
Montgomery, AL 36104-0001

Dear Mr. Turnipseed:

We are enclosing 5 bound and 1 unbound copy of the "Teachers' Retirement System of Alabama Report of the Actuary on the Annual Valuation Prepared as of September 30, 2005".

Please let us know if you have any questions concerning the report.

Sincerely yours,

Edward A. Macdonald, ASA, FCA, MAAA  
President

EAM:sh

Enclosure

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## Cavanaugh Macdonald

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August 30, 2006

Dr. David G. Bronner  
Chief Executive Officer  
Retirement Systems of Alabama  
Retirement Systems Building  
135 South Union Street  
Montgomery, AL 36104-0001

Dear Dr. Bronner:

We are enclosing 30 bound copies and one unbound copy of the "Teachers' Retirement System of Alabama Report of the Actuary on the Annual Valuation Prepared as of September 30, 2005".

We have determined an employer contribution rate of 11.06% of payroll based on a 20-year liquidation period for the fiscal year ending September 30, 2008.

Please let us know if you have any questions concerning the report.

Sincerely yours,

Edward A. Macdonald, ASA, FCA, MAAA  
President

EAM:sh

Enclosure

**Teachers' Retirement System of Alabama  
Report of the Actuary on the Annual Valuation  
Prepared as of September 30, 2005**





**Cavanaugh Macdonald**  
CONSULTING, LLC  
*The experience and dedication you deserve*

August 30, 2006

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, 2005 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, 2005, to recommend rates of 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 cost-of-living increase granted to retired members and the pay increase granted to active members effective October 1, 2005 under Act 2005-174, and the cost-of-living increase granted to retired members effective October 1, 2006 under Act 2006-310. On the basis of this valuation, it is recommended that the State make contributions to the Retirement System at the rate of 11.06% of payroll for the fiscal year ending September 30, 2008, based on a 20-year funding period. The increase in the contribution rate from 9.36% to 11.06% of payroll is primarily due to a recognition of asset losses and the cost of the amendments.

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.



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

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

Respectfully submitted,

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

Edward A. Macdonald, ASA, FCA, MAAA  
President

EAM:sh



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**TEACHERS' RETIREMENT SYSTEM OF ALABAMA  
REPORT OF THE ACTUARY ON THE ANNUAL VALUATION  
PREPARED AS OF SEPTEMBER 30, 2005**

**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:

<b>VALUATION DATE</b>	<b>September 30, 2005</b>	<b>September 30, 2004</b>
Active members		
Number	135,126	131,814
Annual compensation*	\$ 4,733,415,807	\$ 4,494,548,521
Retired members and beneficiaries		
Number	59,523	56,466
Annual allowances*	\$ 1,068,513,540	\$ 1,006,970,482
DROP participants		
Number	4,839	4,468
Annual compensation*	\$ 291,497,474	\$ 252,128,959
Annual allowances	142,135,581	137,656,216
Assets		
Actuarial value	\$ 19,248,206,549	\$ 18,704,009,108
Market value	18,131,706,069	16,814,597,182
Unfunded accrued liability	\$ 3,779,130,771	\$ 2,182,181,272
<b>CONTRIBUTIONS FOR FISCAL YEAR ENDING</b>	<b>September 30, 2008</b>	<b>September 30, 2007</b>
Employer contribution rate		
Normal	5.76%	5.86%
Accrued liability	4.92	3.12
Death benefit	0.12	0.12
Term life	0.05	0.05
Administration	<u>0.21</u>	<u>0.21</u>
Total	11.06%	9.36%
Liquidation period	20 years	20 years

\* Amounts shown do not include any increase in effect after the valuation date.

2. Comments on the valuation results as of September 30, 2005 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 cost-of-living increase granted to retired members and the pay increase granted to active members effective October 1, 2005 under Act 2005-174, and the cost-of-living increase granted to retired members effective October 1, 2006 under Act 2006-310.
5. Section VI of this report shows the certification required from the actuary under Act 2000-732 for the increase in the contribution rate due to a retirees' cost-of-living increase or an increase in retirement benefits, and certification that there has been no change in the liquidation period used to determine the accrued liability contribution rate.

## SECTION II - MEMBERSHIP

1. The following table shows the number of active members and their annual compensation as of September 30, 2005 on the basis of which the valuation was prepared.

**TABLE 1**

**THE NUMBER AND ANNUAL COMPENSATION OF  
ACTIVE MEMBERS AS OF SEPTEMBER 30, 2005**

GROUP	NUMBER	COMPENSATION*
Men	35,312	\$ 1,531,622,148
Women	<u>99,814</u>	<u>3,201,793,659</u>
Total	135,126	\$ 4,733,415,807

\*Does not include pay increase granted to active members effective October 1, 2005.

In addition, there are 4,839 members with compensation of \$291,497,474 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 14,520 inactive members and members for whom incomplete data were submitted.





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

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

<u>Valuation Date</u>	<u>Number</u>	<u>Annual Payroll</u>	<u>Annual Average Pay</u>	<u>% Increase in Average Pay</u>
9/30/2005 <sup>1</sup>	135,126	\$ 4,733,415,807	\$ 35,030	2.73%
9/30/2004 <sup>2</sup>	131,814	4,494,548,521	34,098	(1.48)
6/30/2003 <sup>3</sup>	129,617	4,486,058,170	34,610	2.78
6/30/2002 <sup>4</sup>	128,649	4,332,119,671	33,674	1.74
6/30/2001	130,066	4,305,080,140	33,099	3.96
6/30/2000	129,777	4,131,903,775	31,838	3.03

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> 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.

<sup>4</sup> 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, 2005**

<b>GROUP</b>	<b>NUMBER</b>	<b>ANNUAL RETIREMENT ALLOWANCES</b>
Service Retirements	52,717	\$ 998,433,063
Disability Retirements	3,796	37,626,599
Beneficiaries of Deceased Members	3,010	32,453,878
DROP Participants	4,839	142,135,581
<b>Total</b>	<b>64,362</b>	<b>\$ 1,210,649,121</b>

Does not include COLAs granted after the valuation date.



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

1. 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, 2005, which represent the accumulated contributions of active members to that date, including interest, amounted to \$2,856,983,278.

- (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, 2005 the market value of assets credited to this fund amounted to \$14,922,690,957.

- (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, 2005, the market value of assets credited to this Fund amounted to \$352,031,834.

- (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, 2005, the market value of assets credited to this fund amounted to \$12,753,273.



- As of September 30, 2005 the total market value of assets reported exclusive of the Pre-Retirement Death Benefit Fund amounted to \$18,131,706,069 as shown in the following table.

**TABLE 4**  
**MARKET VALUE OF ASSETS BY FUND**  
**AS OF SEPTEMBER 30, 2005**

FUND	MARKET VALUE OF ASSETS
Annuity Savings Fund	\$ 2,856,983,278
Pension Accumulation Fund	14,922,690,957
DROP Fund	<u>352,031,834</u>
Total Market Value of Assets	\$ 18,131,706,069

- The five-year market related actuarial value of assets as of September 30, 2005 was \$19,248,206,549. Schedule B shows the development of the actuarial value of assets as of September 30, 2005
- 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, 2005.
- The valuation balance sheet shows that the System has total prospective liabilities of \$28,012,460,377. Of this amount, \$12,998,138,145 is for the prospective benefits payable on account of present retired members, beneficiaries of deceased members, and DROP participants, and \$15,014,322,232 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 \$19,248,206,549 as of September 30, 2005. The difference of \$8,764,253,828 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, \$2,317,142,173 is the present value of future contributions expected to be made by members to the Annuity Savings Fund, and the balance of \$6,447,111,655 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 5.76% of payroll are required to provide the benefits of the System for the average new member.
4. Prospective normal contributions at the rate of 5.76% have a present value of \$2,667,980,884. When this amount is subtracted from \$6,447,111,655 which is the present value of the total future contributions to be made by the employer, there remains \$3,779,130,771 as the amount of future accrued liability contributions. Accrued liability contributions of 4.92% of payroll are to be made toward liquidating the unfunded accrued liability, which includes payment for the cost-of-living benefit increases granted under Act 2005-714 and Act 2006-310. Annual accrued liability contributions at the rate of 4.92% of payroll will liquidate 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**

1. 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, 2005 it is recommended that the employer make contributions at the following rates beginning October 1, 2007:





**TABLE 5**  
**EMPLOYER CONTRIBUTION RATES**  
**AS A PERCENTAGE OF MEMBERS' COMPENSATION**

<u>EMPLOYER CONTRIBUTION</u>	<u>REQUIRED FISCAL YEAR 07/08</u>
Normal	5.76%
Accrued Liability	4.92
Death Benefit	0.12
Term-Life	0.05
Administration	<u>0.21</u>
Total	11.06%

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
Community Services of West Alabama	9.71%	2007
Organized Community Action Program – Troy	8.70	2007
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.

1. We hereby certify that the increase in the contribution rate due to the cost-of-living increase granted to retirees effective October 1, 2006 under Act 2005-310 is 0.99% of payroll.
2. 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 4.92% as part of the total rate of 11.06% 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 \$1,596,949,499 in the unfunded accrued liability from \$2,182,181,272 to \$3,779,130,771 during the year ending September 30, 2005.

### ANALYSIS OF FINANCIAL EXPERIENCE (in millions of dollars)

ITEM	AMOUNT OF INCREASE/ (DECREASE)
Interest (8.00%) added to previous unfunded accrued liability	\$ 174.6
Accrued liability contribution	(54.6)
Experience:	
Valuation asset growth	397.2
Pensioners' mortality	4.4
Turnover and retirements	50.7
New entrants	47.1
Salary increases*	255.9
Method changes	0.0
Amendments	721.6
Assumption changes	<u>0.0</u>
Total	\$ 1,596.9

\*Includes impact of salary increase effective October 1, 2005 granted under Act 2005-174.



**SECTION VIII - ACCOUNTING INFORMATION**

1. Governmental Accounting Standards Board Statements 25 and 27 set forth certain items of required supplementary information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED MEMBERS  
AS OF SEPTEMBER 30, 2005**

GROUP	NUMBER
Retirees and beneficiaries currently receiving benefits	59,523
DROP participants	4,839
Terminated employees entitled to benefits but not yet receiving benefits	14,520
Active members	<u>135,126</u>
Total	214,008

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

**SCHEDULE OF FUNDING PROGRESS**  
(Dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
6/30/2000	\$16,703,929	\$16,291,462	\$(412,467)	102.5%	\$4,131,904	(10.0)%
6/30/2001	17,475,298	17,238,616	(236,682)	101.4	4,305,080	(5.5)
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

\* Includes pay increase granted under Act 2004-174.





3. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at September 30, 2005. Additional information as of the latest actuarial valuation follows.

Valuation date	9/30/2005
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)

<u>Period Ending</u>	<u>Annual Pension Cost (APC)</u>	<u>Percentage Of APC Contributed</u>	<u>Net Pension Obligation (NPO)</u>
June 30, 2003	\$225,651	100%	\$0
September 30, 2004	348,773	100	0
September 30, 2005	329,194	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, 2005**

	September 30, 2005	September 30, 2004
<b><u>ASSETS</u></b>		
Actuarial Value of Present Assets	\$ 19,248,206,549	\$ 18,704,009,108
Present value of future members' contributions to the Annuity Savings Fund	\$ 2,317,142,173	\$ 2,071,250,481
Present value of future employer contributions to the Pension Accumulation Fund		
Normal contributions	\$ 2,667,980,884	\$ 2,426,329,931
Unfunded accrued liability contributions	<u>3,779,130,771</u>	<u>2,182,181,272</u>
Total prospective employer contributions	\$ 6,447,111,655	\$ 4,608,511,203
Total Assets	<u>\$ 28,012,460,377</u>	<u>\$ 25,383,770,792</u>
<b><u>LIABILITIES</u></b>		
Present value of benefits payable on account of retired members, beneficiaries of deceased members now drawing retirement allowances, and DROP participants	\$ 12,998,138,145	\$ 11,491,556,257
Present value of prospective benefits payable on account of present active and inactive members:		
Service retirement allowances	\$ 14,024,427,074	\$ 12,988,741,995
Disability retirement allowances	494,403,924	450,632,917
Survivor allowances	120,828,899	111,271,551
Refunds of members' contributions	<u>374,662,335</u>	<u>341,568,072</u>
Total	\$ 15,014,322,232	\$ 13,892,214,535
Total Liabilities	<u>\$ 28,012,460,377</u>	<u>\$ 25,383,770,792</u>



**SCHEDULE A (continued)**

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

Valuation Date	Aggregate Accrued Liabilities For			Reported Assets	Portion of Accrued Liabilities Covered by Reported Asset		
	(1) Active Member Contributions	(2) Retirants and Beneficiaries	(3) Active Members (Employer Financed Portion)		(1)	(2)	(3)
9/30/2005 <sup>1</sup>	\$2,856,983	\$12,998,138	\$7,172,217	\$19,248,207	100%	100%	47.3%
9/30/2004 <sup>2</sup>	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 <sup>3</sup>	2,690,967	8,526,609	7,156,598	17,904,881	100	100	93.4
6/30/2001 <sup>4</sup>	2,607,236	7,471,415	7,159,965	17,475,298	100	100	103.3
6/30/2000	2,405,186	7,075,177	6,811,099	16,703,929	100	100	106.1

<sup>1</sup> Reflects pay increase payable under Act 2005-174 and additional allowance payable under Act 2006-310.

<sup>2</sup> Reflects additional allowance payable under Act 2005-174.

<sup>3</sup> 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.

<sup>4</sup> Reflects changes in actuarial assumptions.



**SCHEDULE B**

**DEVELOPMENT OF SEPTEMBER 30, 2005 ACTUARIAL VALUE OF ASSETS**

(1)	Actuarial Value of Assets on September 30, 2004	\$ 18,704,009,108
(2)	Market Value of Assets on September 30, 2005	18,131,706,069
(3)	Market Value of Assets on September 30, 2004	16,814,597,182
(4)	Net Cash Flow During the Fiscal Year	
	a. Contributions	592,049,853
	b. Benefit Payments	1,123,547,822
	c. Administrative Expenses	2,069,264
	d. Investment Expenses	1,619,721
	e. Net Cash Flow (a. - b. - c. - d.)	<u>(535,186,954)</u>
(5)	Actual Investment Return (2) - (3) - (4)e.	1,852,295,841
(6)	Assumed Rate of Return on Assets	8.00%
(7)	Expected Investment Return [(1) * (6)] + [(4)a. - (4)b. - (4)c.] * .5 * (6) + (4)d.	1,476,597,760
(8)	Investment Gain/(Loss) for the Fiscal Year (5) - (7)	375,698,081
(9)	Phased-In Recognition of Investment Gain/(Loss)	
	a. Current Fiscal Year 0.2 * (8)	75,139,616
	b. Prior Fiscal Year	(472,352,981)
	c. Second Prior Fiscal Year	0
	d. Third Prior Fiscal Year	0
	e. Fourth Prior Fiscal Year	0
	f. Total Recognized Investment Gain/(Loss) for Fiscal Year	<u>(397,213,365)</u>
(10)	Actuarial Value of Assets on September 30, 2005 (1) + (4)e. + (7) + (9)f.	\$ 19,248,206,549
(11)	Rate of Return on Actuarial Value of Assets	5.85%





SCHEDULE C

**SUMMARY OF RECEIPTS AND DISBURSEMENTS  
FOR THE PERIOD ENDING SEPTEMBER 30, 2005**

<u>Receipts for the Period</u>		
Contributions:		
Members	\$ 262,856,154	
Employer	<u>329,193,699</u>	
Total		\$ 592,049,853
Investment Income		<u>1,850,676,120</u>
TOTAL		\$ 2,442,725,973
<u>Disbursements for the Period</u>		
Benefit Payments		\$ 1,038,136,822
Refunds to Members		30,211,510
DROP Distributions		54,723,804
Miscellaneous:		
Transfers to Expense Fund	\$ 2,069,264	
Transfers to Pre-Retirement Death Benefit Fund	<u>475,686</u>	
Total		<u>2,544,950</u>
TOTAL		\$ 1,125,617,086
<u>Excess of Receipts over Disbursements</u>		\$ 1,317,108,887
<u>Reconciliation of Asset Balances</u>		
Market Value of Assets as of September 30, 2004		\$ 16,814,597,182
Excess of Receipts over Disbursements		<u>1,317,108,887</u>
Market Value of Assets as of September 30, 2005		<u>\$ 18,131,706,069</u>
Rate of Return on Market Value of Assets		11.18%



SCHEDULE D

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions and methods used in the valuation were selected by the prior actuarial firm based on the actuarial experience study prepared as of June 30, 2000, submitted on November 14, 2001, and adopted by the Board in January 2002.

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>	<u>Annual Rate</u>
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:

<u>Age</u>	<u>Annual Rate of</u>		
	<u>Death</u>	<u>Disability</u>	<u>Withdrawal*</u>
		<u>Male</u>	
20	0.05%	0.05%	23.83%
25	0.06	0.06	11.59
30	0.08	0.07	7.86
35	0.08	0.12	6.08
40	0.09	0.14	4.78
45	0.14	0.24	3.75
50	0.21	0.61	2.82
55	0.36	1.35	1.85
60	0.63	2.50	1.41
65	1.15		
69	1.80		



<u>Age</u>	<u>Annual Rate of</u>		
	<u>Death</u>	<u>Disability</u> <u>Female</u>	<u>Withdrawal*</u>
20	0.03%	0.07%	23.83%
25	0.03	0.07	11.14
30	0.03	0.07	7.96
35	0.04	0.10	6.08
40	0.06	0.16	4.35
45	0.09	0.32	3.71
50	0.12	0.65	2.57
55	0.19	0.95	2.07
60	0.34	1.89	1.95
65	0.67		
69	1.08		

\*Withdrawal rates are higher during first three years of service.

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

For members first eligible for unreduced benefits before age 50 or after age 60, rates are as follows:

<u>Age</u>	<u>Annual Rate</u>	
	<u>Male</u> <sup>1</sup>	<u>Female</u> <sup>2</sup>
45	7.0%	4.0%
50	12.0	8.0
55	45.0	45.0
60	15.0	20.0
62	35.0	25.0
65	40.0	30.0
70	100.0	100.0

<sup>1</sup> Retirement rates are increased by 10% in year when member first becomes eligible for unreduced service retirement.

<sup>2</sup> Retirement rates are increased by 20% in year when member first becomes eligible for unreduced service retirement.



For members first eligible for unreduced benefits on or after age 50 but before age 60, no withdrawal or retirement is assumed to occur for the five years prior to DROP eligibility and 45% are assumed to retire in the first year eligible for DROP participation. The rates, thereafter, are as follows:

<u>Age</u>	<u>Annual Rate</u>	
	<u>Male</u>	<u>Female</u>
58	15.0%	15.0%
60	15.0	20.0
62	35.0	25.0
65	40.0	30.0
70	100.0	100.0

DEATHS AFTER RETIREMENT: Rates of mortality for the period after service retirement are according to the 1982 George B. Buck Men Teachers Mortality Study Table set back one year for males and the UP94 Mortality Table set back 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:

<u>Age</u>	<u>Annual Rate of Death after</u>			
	<u>Service Retirement</u>		<u>Disability Retirement</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
40	0.1%	0.1%	3.3%	2.6%
50	0.3	0.1	3.8	2.5
55	0.5	0.2	4.2	2.7
60	0.8	0.4	4.9	3.0
65	1.5	0.8	6.0	3.4
70	2.6	1.4	7.6	4.1
75	3.9	2.2	10.2	5.2
80	5.9	3.8	14.2	6.8
85	9.2	6.6	20.1	9.5
90	14.3	11.2	28.7	13.5
95	20.5	18.4	40.4	19.4

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 actuarial 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 actuarial 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

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

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).

#### 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.

#### 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).\*

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)

A member may elect to participate in the Deferred Retirement Option Plan (DROP) upon completion of at least 25 years of creditable service 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 would withdraw from active service and receive the retirement benefit based on his or her years of service credit at the time of enrollment in the DROP, and also receive a payment for the deferred retirement benefits including interest.

#### 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, 2005**

Attained Age	Completed Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	≥ 40	
Under 25	2,379	2,438	27								4,844
Avg. Pay	25,667	26,241	22,642								25,939
25 to 29	2,280	8,137	2,414	20							12,851
Avg. Pay	25,802	30,013	34,912	27,479							30,182
30 to 34	1,723	5,443	6,848	1,692	23						15,729
Avg. Pay	24,883	30,115	36,807	39,725	34,690						33,496
35 to 39	1,525	4,799	4,945	4,799	1,505	39					17,612
Avg. Pay	24,579	29,565	35,163	40,800	41,905	34,422					34,832
40 to 44	1,291	4,613	4,902	3,551	3,749	1,325	53				19,484
Avg. Pay	24,600	28,193	32,282	37,961	42,260	42,078	36,103				34,436
45 to 49	1,062	3,769	4,587	3,967	3,727	3,372	1,781	28			22,293
Avg. Pay	23,208	28,870	31,703	37,185	41,632	44,929	45,747	43,036			36,592
50 to 54	840	2,789	3,480	3,532	3,760	2,858	2,861	1,163	3		21,286
Avg. Pay	27,197	30,844	31,615	35,963	40,330	44,970	47,891	52,286	50,540		38,713
55 to 59	503	1,832	2,189	2,350	2,919	2,486	824	395	67	1	13,566
Avg. Pay	24,914	31,035	31,632	35,064	38,682	42,929	47,950	58,272	61,368	34,372	37,398
60 to 64	189	837	1,109	882	950	851	361	94	45	16	5,334
Avg. Pay	23,790	27,840	30,586	38,879	41,298	42,223	39,582	59,420	76,303	65,127	36,656
65 to 69	52	294	371	241	211	166	89	45	19	16	1,504
Avg. Pay	15,122	21,802	25,914	36,966	40,582	44,158	35,783	62,500	64,022	65,379	33,160
70 & up	27	86	175	116	91	52	38	17	8	13	623
Avg. Pay	9,076	21,666	19,023	21,400	34,355	37,111	28,338	35,648	48,237	82,024	25,860
Total	11,871	35,037	31,047	21,150	16,935	11,149	6,007	1,742	142	46	135,126
Avg. Pay	25,066	29,321	33,517	37,872	40,917	43,863	46,357	53,981	65,488	69,321	35,030