

**Report on the Annual Valuation of the  
Public Employees' Retirement System  
of Mississippi**

**Prepared as of June 30, 2007**



# Cavanaugh Macdonald

CONSULTING, LLC

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October 19, 2007

Board of Trustees  
Public Employees' Retirement System of Mississippi  
429 Mississippi Street  
Jackson, MS 39201-1005

Ladies and Gentlemen:

Presented in this report are the results of the annual actuarial valuation of the Public Employees' Retirement System of Mississippi. The purpose of the valuation was to measure the System's funding progress and to determine the unfunded accrued liability amortization period beginning July 1, 2007.

The date of the valuation was June 30, 2007.

The valuation was based upon data, furnished by the Executive Director and the PERS staff, concerning active, inactive and retired members along with pertinent financial information. The complete cooperation of the PERS staff in furnishing materials requested is hereby acknowledged with appreciation.

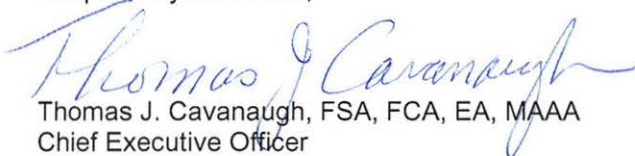
Your attention is directed particularly to the presentation of contribution rates on page 1 and the comments on page 7.


To the best of our knowledge, this report is complete and accurate. The valuation was performed by, and under the supervision of, independent actuaries who are members of the American Academy of Actuaries with experience in performing valuations for public retirement systems.

The valuation was prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board.

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, in the aggregate, internally consistent and reasonably based on the actual experience of the system.

Respectfully submitted,

  
Thomas J. Cavanaugh, FSA, FCA, EA, MAAA  
Chief Executive Officer

  
Edward J. Koebel, FCA, EA, MAAA  
Senior Actuary

TJC/EJK:kc

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**REPORT ON THE ANNUAL VALUATION OF THE  
PUBLIC EMPLOYEES' RETIREMENT SYSTEM OF MISSISSIPPI  
PREPARED AS OF JUNE 30, 2007**

**SECTION I – SUMMARY OF PRINCIPAL RESULTS**

1. This report, prepared as of June 30, 2007, presents the results of the annual actuarial valuation of the System. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized below. The current valuation and reported benefit amounts reflect the benefit increases granted to retirees as of July 1, 2007. We recommend a decrease in the contribution rate from 12.25% to 11.85% of active members' compensation for the 2008/2009 fiscal year in order to keep the anticipated accrued liability payment period within 30 years in accordance with GASB Statements 25 and 27.

**SUMMARY OF PRINCIPAL RESULTS**

VALUATION DATE	June 30, 2007	June 30, 2006
Active members included in valuation		
Number	162,804	158,091
Annual compensation	\$ 5,196,294,899	\$ 4,971,973,661
Retirees		
Number	70,756	66,757
Annual allowances, excluding COLA	\$ 964,537,814	\$ 890,703,980
Assets		
Market related actuarial value	\$ 19,791,564,000	\$ 18,321,063,000
Market value	\$ 21,353,016,000	\$ 18,321,063,000
Unfunded accrued liability	\$ 7,071,072,311	\$ 6,607,400,844
Recommended employer contribution rate		
Normal	4.02%	4.52%
Accrued liability	<u>7.83</u>	<u>7.73</u>
Total	11.85%	12.25%
Anticipated accrued liability payment period	29.3 years	28.7 years



2. The valuation balance sheet showing the results of the valuation is given in Section III.
3. Comments on the valuation results are given in Section IV, comments on the experience and actuarial gains during the valuation year are given in Section V and the rates of contribution payable by employers are given in Section VI. The Board of Trustees had decided to phase in the required increase in employer contributions from the 10.75% of payroll rate effective for the year ending June 30, 2006. The annual increases were set at 0.55% of payroll until the contribution rate is sufficient to reduce the UAL amortization period to below 30 years. The June 30, 2007 results indicate the current 11.85% of payroll rate is sufficient to reduce the UAL amortization period below 30 years. Therefore no additional rate increases are recommended at this time.
4. Since the previous valuation, the assumed rates of withdrawal, retirement and mortality have been revised to reflect the results of the experience investigations for the four-year period ending June 30, 2006.
5. There were no changes in benefit provisions or actuarial methods since the last valuation.
6. Schedule A of this report presents the development of the actuarial value of assets. Schedule B details the actuarial assumptions and methods employed. Schedule C gives a summary of the benefit and contribution provisions of the plan.
7. The table on the following page provides a ten-year history of some pertinent figures.
8. Governmental Accounting Standards Board Statement No. 27 requires employers to expense pension costs at the actuarially required contribution level, which is based on a maximum 30 year accrued liability payment period.
9. All amounts shown prior to the 2004/2005 fiscal year were developed and/or reported by the prior actuarial firm.



Public Employees' Retirement System of Mississippi

Comparative Schedule\*

Valuation Date June 30	Active Members				Retired Lives				Accrued Liability	Valuation Assets	UAAL
	Number	Payroll \$ Millions	Average Salary		Number		Annual Benefits**				
			\$	% Incr.	Retired	Active/ Retired	\$ Millions	% of Payroll			
1998	145,321	\$3,450	\$23,742	5.0%	47,086	3.1%	\$418.0	12.1%	\$13,004	\$11,059	\$1,945
1999	148,611	3,712	24,976	5.2	48,766	3.0	450.8	12.1	15,752	13,017	2,735
2000	151,790	4,091	26,949	7.9	51,080	3.0	527.6	12.9	18,052	14,899	3,153
2001	151,080	4,112	27,219	1.0	53,665	2.8	581.2	14.1	18,495	16,192	2,303
2002	152,148	4,221	27,740	1.9	56,705	2.7	656.5	15.6	20,180	16,823	3,357
2003	154,872	4,432	28,615	3.2	59,447	2.6	715.1	16.1	21,486	16,980	4,506
2004	156,353	4,617	29,531	3.2	62,407	2.5	778.6	16.9	22,847	17,103	5,744
2005	157,101	4,786	30,466	3.2	63,939	2.5	827.8	17.3	23,727	17,181	6,546
2006	158,091	4,972	31,450	3.2	66,757	2.4	890.7	17.9	24,928	18,321	6,607
2007	162,804	5,196	31,917	1.5	70,756	2.3	964.5	18.6	26,863	19,792	7,071

\*All amounts prior to 2005 reported by prior actuarial firm.

\*\*Excluding COLA.



**SECTION II – MEMBERSHIP DATA**

Data regarding the membership of the System for use as a basis for the valuation were furnished by the System's office. The following tables summarize the membership of the system as of June 30, 2007 upon which the valuation was based. Detailed tabulations of the data are given in Schedule D.

**Active Members**

Employers	Number of Employers	Number	Payroll	Group Averages		
				Salary	Age*	Service*
State Agencies	114	33,335	\$ 1,032,165,846	\$30,963	43.6	10.2
State Universities	9	17,191	705,001,341	41,010	43.1	9.4
Public Schools	150	65,535	2,038,470,886	31,105	44.0	10.2
Community/Junior Colleges	15	5,733	231,678,976	40,411	46.1	11.3
Counties	82	14,286	393,851,293	27,569	46.0	8.5
Municipalities	253	18,125	518,245,419	28,593	42.5	8.9
Other Political Subdivisions	208	8,599	276,881,138	32,199	42.7	7.6
<b>Total in PERS</b>	<b>831</b>	<b>162,804</b>	<b>\$ 5,196,294,899</b>	<b>\$31,917</b>	<b>43.8</b>	<b>9.7</b>

The total number of active members includes 108,744 vested members (37,422 State employees and 71,322 employees of other entities), and 54,060 non-vested members (18,837 State and 35,223 others).

**Retired Lives**

Type of Benefit Payment	No.	Annual Benefits**	Group Averages	
			Benefit	Age*
Retirement	57,019	\$ 1,042,092,072	\$18,276	69.6
Disability	4,903	71,007,005	14,482	59.5
Survivor	8,834	101,285,786	11,465	64.3
<b>Total in PERS</b>	<b>70,756</b>	<b>\$1,214,384,863</b>	<b>17,163</b>	<b>68.2</b>

The total retired lives include 25,515 from State employment and 45,241 from other employment.

This valuation also includes 123,130 inactive members (37,474 State and 85,656 others; 17,288 vested and 105,842 non-vested.)

\*Years

\*\*Including COLA



### **SECTION III – VALUATION BALANCE SHEET**

The following valuation balance sheet shows the assets and liabilities of the retirement system as of the current valuation date of June 30, 2007 and, for comparison purposes, as of the immediately preceding valuation date of June 30, 2006. The items shown in the balance sheet are present values actuarially determined as of the relevant valuation date. The development of the actuarial value of assets is presented in Schedule A.





**VALUATION BALANCE SHEET  
SHOWING THE ASSETS AND LIABILITIES OF THE  
PUBLIC EMPLOYEES' RETIREMENT SYSTEM OF MISSISSIPPI**

	JUNE 30, 2007	JUNE 30, 2006
<b>ASSETS</b>		
Current actuarial value of assets:		
Annuity Savings Account	\$ 3,788,781,468	\$ 3,955,066,236
Annuity Reserve	2,461,396,699	2,207,983,922
Employers' Accumulation Account	<u>13,541,385,833</u>	<u>12,158,012,842</u>
Total current assets	\$ 19,791,564,000	\$ 18,321,063,000
 Future member contributions to Annuity Savings Account	 \$ 3,025,410,555	 \$ 3,038,397,888
 Prospective contributions to Employer's Accumulation Account		
Normal contributions	\$ 1,678,267,798	\$ 1,894,283,925
Unfunded accrued liability contributions	<u>7,071,072,311</u>	<u>6,607,400,844</u>
 Total prospective contributions	 <u>\$ 8,749,340,109</u>	 <u>\$ 8,501,684,769</u>
Total assets	<u>\$ 31,566,314,664</u>	<u>\$ 29,861,145,657</u>
<b>LIABILITIES</b>		
 Present value of benefits payable on account of present retired members and beneficiaries	 \$ 13,342,530,700	 \$ 12,228,329,991
 Present value of benefits payable on account of active members	 17,417,023,450	 16,900,315,306
 Present value of benefits payable on account of inactive members for service rendered before the valuation date	 <u>806,760,514</u>	 <u>732,500,360</u>
Total liabilities	<u>\$ 31,566,314,664</u>	<u>\$ 29,861,145,657</u>



#### **SECTION IV – COMMENTS ON VALUATION**

The valuation balance sheet gives the following information with respect to the funds of the System as of June 30, 2007.

##### **Total Assets**

The Annuity Savings Account is the fund to which are credited contributions made by members together with interest thereon. When a member retires, the amount of his accumulated contributions is transferred from the Annuity Savings Account to the Annuity Reserve. The Employer's Accumulation Account is the fund to which are credited employer contributions and investment income, and from which are paid all employer-provided benefits under the plan. The assets credited to the Annuity Savings Account as of the valuation date, which represent the accumulated contributions of members to that date, amounted to \$3,788,781,468. The assets credited to the Annuity Reserve were \$2,461,396,699 and the assets credited to the Employer's Accumulation Account totaled \$13,541,385,833. Current actuarial assets as of the valuation date equaled the sum of these three funds, \$19,791,564,000. Future member contributions to the Annuity Savings Account were valued to be \$3,025,410,555. Prospective contributions to the Employer's Accumulation Account were calculated to be \$8,749,340,109, of which \$1,678,267,798 is attributable to service rendered after the valuation date (normal contributions) and \$7,071,072,311 is attributable to service rendered before the valuation date (unfunded accrued liability contributions).

Therefore, the balance sheet shows the present value of current and future assets of the System to be \$31,566,314,664 as of June 30, 2007.

##### **Total Liabilities**

The present value of benefits payable on account of presently retired members and beneficiaries totaled \$13,342,530,700 as of the valuation date. The present value of future benefit payments on behalf of active members amounted to \$17,417,023,450. In addition, the present value of benefits for inactive members, due to service rendered before the valuation date, was calculated to be \$806,760,514.

Therefore, the balance sheet shows the present value for all prospective benefit payments under the System to be \$31,566,314,664 as of June 30, 2007.

Section 25-11-123(a)(1) of State law requires that active members contribute 7.25% of annual compensation to the System.

Section 25-11-123(c) requires that the State contribute a certain percentage of the annual compensation of members to cover the normal contributions and a certain percentage to cover the accrued liability contributions of the System. These individual contribution percentages are established in accordance with an actuarial valuation. We recommend the sum of these normal and accrued liability contributions decrease from 12.25% to 11.85% of the annual compensation of all members. The amortization period of the unfunded accrued liability of the System is therefore calculated on an open-ended basis.



**SECTION V – DERIVATION OF EXPERIENCE GAINS AND LOSSES**

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common. Detail on the derivation of the experience gain/(loss) for the year ended June 30, 2007 is shown below.

		<u>\$ millions</u>
(1)	UAAL* as of June 30, 2006	\$ 6,607.4
(2)	Normal cost from last valuation	224.7
(3)	Actual employer contributions	610.9
(4)	Interest accrual: $(1) \times .080 + [(2) - (3)] \times .0392$	513.5
(5)	Expected UAAL before changes: $(1) + (2) - (3) + (4)$	6,734.7
(6)	Change due to plan amendments	0.0
(7)	Change due to new actuarial assumptions or methods	523.8
(8)	Expected UAAL after changes: $(5) + (6) + (7)$	7,258.5
(9)	Actual UAAL as of June 30, 2007	7,071.1
(10)	Gain/(loss): $(8) - (9)$	\$ 187.4
(11)	Gain/(loss) as percent of actuarial accrued liabilities at start of year (\$24,928.5)	0.8%

\*Unfunded actuarial accrued liability.

Valuation Date June 30	Actuarial Gain/(Loss) as a % of Beginning Accrued Liabilities
2002	(3.3)%
2003	(6.1)
2004	(5.4)
2005	(3.0)
2006	(1.7)
2007	0.8



**SECTION VI – REQUIRED CONTRIBUTION RATES**

The valuation balance sheet gives the basis for determining the percentage rates for contributions to be made by employers to the Retirement System. The following table shows the rates of contribution payable by employers as determined from the present valuation for the 2008/2009 fiscal year.

Contribution for	Contributions Expressed as Percents of Payroll
Normal Cost:	
Service retirement benefits	10.00%
Disability benefits	0.44
Survivor benefits	<u>0.11</u>
Total	10.55%
Member Contributions:	7.25%
Less future refunds	<u>(.72)</u>
Available for benefits	6.53%
Employer Normal Cost	4.02%
Unfunded Actuarial Accrued Liabilities (29.3 year level % of payroll amortization*)	7.83
<b>Total Computed Employer Contribution Rate</b>	<b>11.85%</b>

\*Amortization period a year ago was 28.7 years.

The components of the change in the computed unfunded accrued liability amortization period from 28.7 years to 29.3 years are as follows:

Previous Reported Period	28.7 years
Change due to:	
Normal amortization	(1.0)
Actuarial experience	(0.2)
Assumption changes	2.4
Plan amendments	0.0
Method Change	0.0
UAL contribution experience	(0.6)
<b>Computed Period</b>	<b>29.3 years</b>





## **SECTION VII – CASH FLOW PROJECTION**

Regular actuarial valuations measure the Retirement System's present financial position and contributions adequacy by calculating and financing the liabilities created by the present benefit program. This process involves discounting to present values the future benefit payments on behalf of present active and retired members and their survivors. However, valuations do not produce information regarding future changes in the makeup of the covered group or the amounts of benefits to be paid or investment income to be received – actuarial projections do.

Whereas valuations provide a snapshot of the retirement system as of a given date, projections provide a moving picture. Projected active and retired groups are developed from year to year by the application of assumptions regarding pre-retirement withdrawal from service, retirements, deaths, disabilities, and the addition of new members. Projected information regarding the retired life group leads to assumed future benefit payout. Combining future benefit payments with assumed contributions and expected investment earnings produces the net cash flow of the System each year, and thus end of year asset levels.

Projections are used for many purposes. Among them are (i) developing cash flow patterns for investment policy and asset mix consideration, (ii) exploring the effect of alternative assumptions about future experience, (iii) analyzing the impact on system funding progress of changes in the workforce, and (iv) examining the potential effect of changes in benefits on system financial activity.

Projection results are useful in demonstrating changing relationships among key elements affecting system financial activity. For example: how benefits payable and system assets will grow in future decades. Projections are not predictions of specific future events and do not provide numeric precision in absolute terms. For instance, cash flow projected to occur 10 years in the future will not be exact (except by coincidence), but understanding the changed relationship between future benefit payout and future investment income can be very useful.



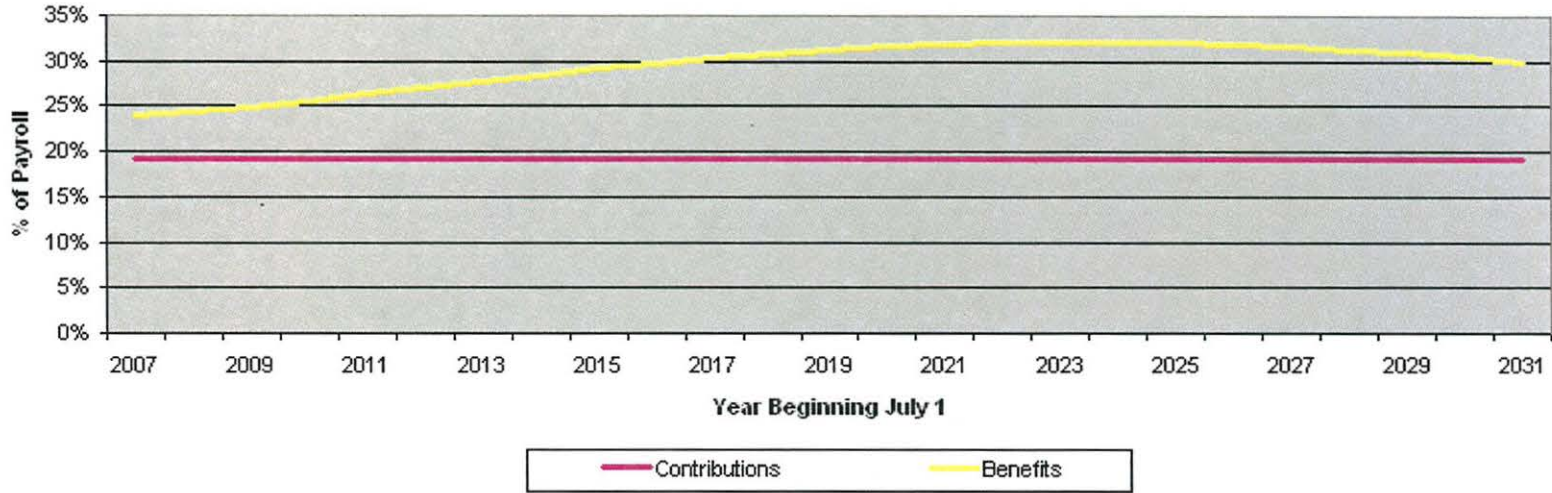
# Public Employees' Retirement System of Mississippi

## Twenty-five Year Cash Flow Projection

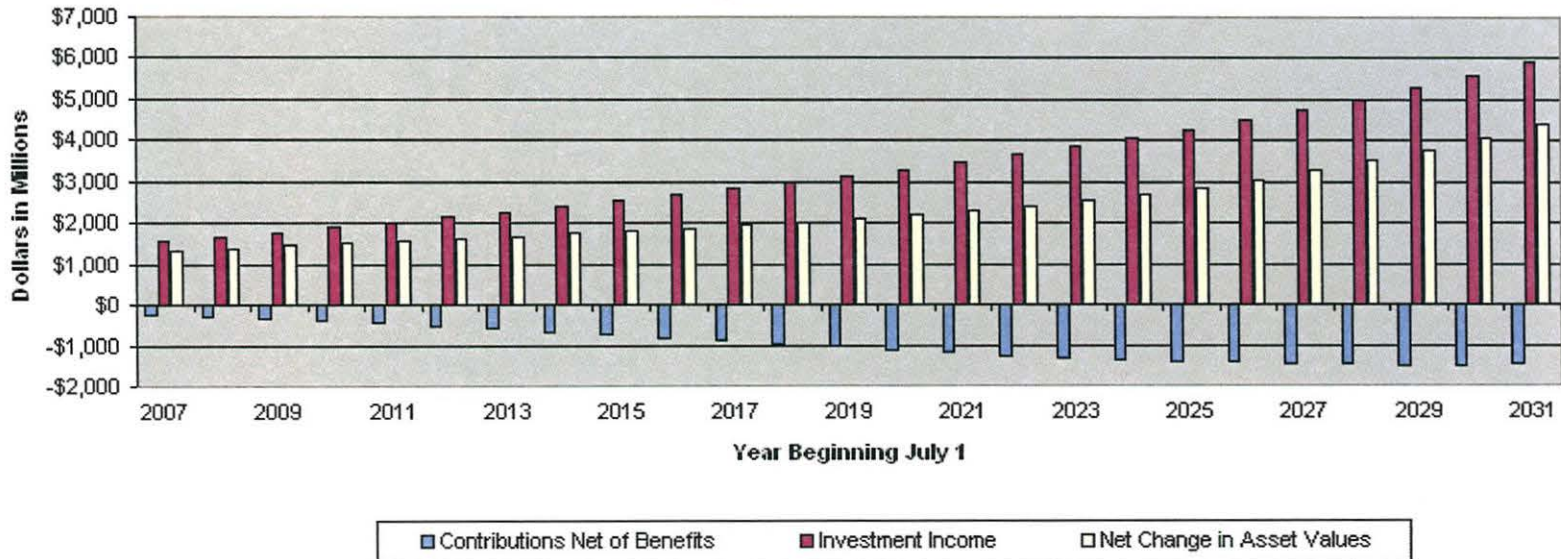
Year Beginning <u>July 1</u>	Valuation <u>Payroll</u>	Asset Balance <u>July 1</u>	<u>Contributions</u>	Projected Benefit <u>Payments</u>	Expected Investment <u>Return</u>	<u>Cash Flow</u>	Asset Balance <u>June 30</u>	Year Ending <u>June 30</u>
2007	5,300,220,797	19,791,564,000	1,012,342,172	1,266,192,361	1,573,171,112	1,319,320,923	21,110,884,923	2008
2008	5,512,229,629	21,110,884,923	1,052,835,859	1,342,435,668	1,677,286,802	1,387,686,993	22,498,571,916	2009
2009	5,732,718,814	22,498,571,916	1,094,949,293	1,429,826,697	1,786,490,657	1,451,613,253	23,950,185,169	2010
2010	5,962,027,567	23,950,185,169	1,138,747,265	1,524,642,753	1,900,578,994	1,514,683,506	25,464,868,675	2011
2011	6,200,508,670	25,464,868,675	1,184,297,156	1,633,081,608	2,019,238,116	1,570,453,664	27,035,322,339	2012
2012	6,448,529,017	27,035,322,339	1,231,669,042	1,744,706,136	2,142,304,303	1,629,267,209	28,664,589,548	2013
2013	6,706,470,178	28,664,589,548	1,280,935,804	1,863,672,377	2,269,857,701	1,687,121,128	30,351,710,676	2014
2014	6,974,728,985	30,351,710,676	1,332,173,236	1,987,633,910	2,401,918,427	1,746,457,753	32,098,168,429	2015
2015	7,253,718,144	32,098,168,429	1,385,460,166	2,116,390,189	2,538,616,273	1,807,686,250	33,905,854,680	2016
2016	7,543,866,870	33,905,854,680	1,440,878,572	2,248,245,973	2,680,173,678	1,872,806,277	35,778,660,957	2017
2017	7,845,621,545	35,778,660,957	1,498,513,715	2,382,775,002	2,826,922,425	1,942,661,138	37,721,322,095	2018
2018	8,159,446,407	37,721,322,095	1,558,454,264	2,519,635,262	2,979,258,528	2,018,077,530	39,739,399,625	2019
2019	8,485,824,263	39,739,399,625	1,620,792,434	2,656,618,053	3,137,718,945	2,101,893,326	41,841,292,951	2020
2020	8,825,257,234	41,841,292,951	1,685,624,132	2,793,771,539	3,302,977,540	2,194,830,133	44,036,123,084	2021
2021	9,178,267,523	44,036,123,084	1,753,049,097	2,930,799,292	3,475,779,839	2,298,029,644	46,334,152,728	2022
2022	9,545,398,224	46,334,152,728	1,823,171,061	3,066,649,264	3,656,993,090	2,413,514,887	48,747,667,615	2023
2023	9,927,214,153	48,747,667,615	1,896,097,903	3,198,978,494	3,847,698,186	2,544,817,595	51,292,485,210	2024
2024	10,324,302,719	51,292,485,210	1,971,941,819	3,328,202,729	4,049,148,380	2,692,887,470	53,985,372,680	2025
2025	10,737,274,828	53,985,372,680	2,050,819,492	3,451,129,977	4,262,817,395	2,862,506,910	56,847,879,590	2026
2026	11,166,765,821	56,847,879,590	2,132,852,272	3,567,975,594	4,490,425,434	3,055,302,112	59,903,181,702	2027
2027	11,613,436,454	59,903,181,702	2,218,166,363	3,679,898,668	4,733,785,244	3,272,052,939	63,175,234,641	2028
2028	12,077,973,912	63,175,234,641	2,306,893,017	3,787,154,010	4,994,808,332	3,514,547,339	66,689,781,980	2029
2029	12,561,092,868	66,689,781,980	2,399,168,738	3,889,428,339	5,275,572,174	3,785,312,573	70,475,094,553	2030
2030	13,063,536,583	70,475,094,553	2,495,135,487	3,985,133,507	5,578,407,643	4,088,409,623	74,563,504,177	2031
2031	13,586,078,046	74,563,504,177	2,594,940,907	4,072,986,516	5,905,958,510	4,427,912,901	78,991,417,078	2032

## Public Employees' Retirement System of Mississippi 25 Year Cash Flow Projection Based on Valuation Assumptions

**Projected Contributions and Benefits Expressed  
as Percents of Active Member Payroll**



**Net Change in Asset Values**





**SECTION VIII – SUPPLEMENTAL DISCLOSURE INFORMATION**

1. Statement Nos. 25 and 27 of the Governmental Accounting Standards Board (GASB) set forth certain items of 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 PARTICIPANTS  
AS OF JUNE 30, 2007**

<b>GROUP</b>	<b>NUMBER</b>
Retired participants and beneficiaries currently receiving benefits	70,756
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	123,130
Active Participants	<u>162,804</u>
Total	356,690



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

**SCHEDULE OF FUNDING PROGRESS**  
**(\$ Thousands)**

Plan Year Ended	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL) Entry Age	(3) Percent Funded (1)/(2)	(4) Unfunded AAL (2) – (1)	(5) Annual Covered Payroll	(6) Unfunded AAL as a Percentage of Covered Payroll (4)/(5)
06/30/98*	\$11,058,602	\$13,004,063	85.0%	\$1,945,461	\$3,450,176	56.4%
06/30/99*#	13,016,632	15,751,361	82.6	2,734,729	3,711,680	73.7
06/30/00*	14,899,074	18,052,096	82.5	3,153,022	4,090,596	77.1
06/30/01*#	16,191,631	18,494,207	87.5	2,302,576	4,112,238	56.0
06/30/02*	16,823,185	20,180,347	83.4	3,357,162	4,220,539	79.5
06/30/03#	16,979,457	21,485,838	79.0	4,506,381	4,431,600	101.7
06/30/04*	17,103,285	22,847,260	74.9	5,743,975	4,617,273	124.4
06/30/05#	17,180,705	23,727,098	72.4	6,546,393	4,786,280	136.8
06/30/06	18,321,063	24,928,464	73.5	6,607,401	4,971,974	132.9
06/30/07#	19,791,564	26,862,636	73.7	7,071,072	5,196,295	136.1

\* After change in benefit provisions.

# After change in actuarial assumptions.

Note: All amounts prior to June 30, 2005 reported by prior actuarial firm.



3. The annual required contribution (ARC) of the employer as a percentage of payroll, determined in accordance with the parameters of GASB 25/27, is shown below. The accrued liability rate is based on amortization of the unfunded actuarial accrued liability of \$7,071,072,311 over a 29.3 year period from the valuation date.

<b>Annual Required Contribution (ARC)</b>		
<b>Valuation Date June 30</b>	<b>2007</b>	<b>2006</b>
For Fiscal Year	2008/2009	2007/2008
UAL Payment Period (years)	29.3	28.7
Annual Required Contribution % of Payroll	11.85%	12.25%

4. Additional information as of June 30, 2007 follows.

Valuation date	6/30/07
Actuarial cost method	Entry age
Amortization method	Level percent open
Remaining amortization period	29.3 years
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return*	8.00%
Projected salary increases <sup>#</sup>	5.0% – 15.0%
*Includes price inflation at	3.75%
<sup>#</sup> Includes wage inflation at	4.00%
Cost of living adjustments	3.00%





Schedule of Employer Contributions

Fiscal Year Ending June 30	Valuation date June 30	Annual Required Contribution	Percentage Contributed
1999	1997	\$336,392,111	100%
2000	1998	361,888,770	100
2001	1999	398,833,149	100
2002	2000	400,943,179	100
2003	2001	411,502,537	100
2004	2002	432,080,954	100
2005	2003	482,966,753	100
2006	2004	514,525,143	100
2007	2005	621,496,708	90
2008	2006	636,546,125	

Solvency Tests  
(\$ in Thousands)

Date	Actuarial Accrued Liabilities for			Net Assets Available for Benefits	Portions of Accrued Liabilities Covered by Assets		
	(1) Accumulated Employee Contributions Including Allocated Investment Earnings	(2) Retirees and Beneficiaries Currently Receiving Benefits	(3) Active and Inactive Members Employer Financed Portion		(1)	(2)	(3)
6/30/98	\$2,429,136	\$4,938,112	\$5,636,815	\$11,058,602	100%	100%	65.5%
6/30/99	2,694,659	6,215,709	6,840,993	13,016,632	100	100	60.0
6/30/00	2,992,726	7,227,395	7,831,975	14,899,074	100	100	59.7
6/30/01	3,061,697	7,856,268	7,576,242	16,191,631	100	100	69.6
6/30/02	3,221,756	8,913,895	8,044,696	16,823,185	100	100	58.3
6/30/03	3,400,765	9,758,473	8,326,600	16,979,457	100	100	45.9
6/30/04	3,571,428	10,657,920	8,617,912	17,103,285	100	100	33.3
6/30/05	3,819,498	11,260,642	8,646,958	17,180,705	100	100	24.3
6/30/06	3,955,066	12,228,330	8,745,068	18,321,063	100	100	24.4
6/30/07	3,788,781	13,342,531	9,731,324	19,791,564	100	100	27.3



Schedule of Active Member Valuation Data

Valuation Date	Number of Employers	Active Members			
		Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
1998	767	145,321	\$3,450,175,500	\$23,742	5.0%
1999	845	148,611	3,711,679,688	24,976	5.2
2000	847	151,790	4,090,596,398	26,949	7.9
2001	863	151,080	4,112,237,738	27,219	1.0
2002	866	152,148	4,220,538,845	27,740	1.9
2003	871	154,872	4,431,599,526	28,615	3.2
2004	880	156,353	4,617,272,973	29,531	3.2
2005	861	157,101	4,786,280,398	30,466	3.2
2006	861	158,091	4,971,973,661	31,450	3.2
2007	831	162,804	5,196,294,899	31,917	1.5

Schedule of Retirants Added to and Removed From Rolls  
Last Ten Fiscal Years

Item	Fiscal Year Ended June 30									
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Beginning of Year	45,389	47,086	48,766	51,080	53,665	56,705	59,447	62,407	63,939	66,757
Added	4,935	3,811	4,313	4,584	5,138	4,857	5,174	4,610	5,360	6,218
Removed	(3,238)	(2,131)	(1,999)	(1,999)	(2,098)	(2,115)	(2,214)	(3,078)	(2,542)	(2,219)
End of Year	47,086	48,766	51,080	53,665	56,705	59,447	62,407	63,939	66,757	70,756

Schedule of Benefit Payments Added to and Removed From Rolls  
Last Seven Fiscal Years  
(excluding COLA's)

Year Ending	2001	2002	2003	2004	2005	2006	2007
	Annual Allowances	Annual Allowances	Annual Allowances	Annual Allowances	Annual Allowances	Annual Allowances	Annual Allowances
Beginning of Year	\$527,606,362	\$581,199,527	\$656,547,390	\$715,099,701	\$778,636,196	\$827,783,952	890,703,890
Added	63,371,629	73,692,536	76,047,174	82,912,445	74,999,488	84,374,497	95,337,869
Removed	(14,989,384)	(14,603,554)	(17,494,863)	(19,375,950)	(25,851,732)	(21,454,469)	(21,503,945)
Benefit increase due to plan amendments	5,210,920	16,258,881	0	0	0	0	0
End of Year	\$581,199,527	\$656,547,390	\$715,099,701	\$778,636,196	\$827,783,952	\$890,703,980	964,537,814

Schedule of Average Benefit Payments

	Years of Credited Service								
	0-4	5-9	10-15	16-20	21-24	25	26-29	30	31+
July 1, 2006 to June 30, 2007									
Average Monthly Benefit	\$411.52	\$369.97	\$536.43	\$817.54	\$1,113.79	\$1,671.02	\$1,761.30	\$2,127.34	\$2,615.87
Average Final Salary	\$22,554	\$24,146	\$27,269	\$30,518	\$34,644	\$42,366	\$43,541	\$47,398	\$51,466
Number of Active Retirants	340	986	827	747	684	381	917	251	1,085
July 1, 2005 to June 30, 2006									
Average Monthly Benefit	\$489.98	\$331.00	\$492.09	\$765.75	\$1,137.28	\$1,574.92	\$1,729.20	\$1,942.37	\$2,380.21
Average Final Salary	\$21,672	\$22,459	\$25,293	\$29,138	\$33,142	\$38,998	\$41,558	\$43,360	\$46,793
Number of Active Retirants	121	671	692	632	627	358	973	217	1,069
July 1, 2004 to June 30, 2005									
Average Monthly Benefit	\$478.93	\$354.32	\$556.04	\$872.26	\$1,239.41	\$1,569.12	\$1,683.54	\$1,878.27	\$2,382.38
Average Final Salary	\$22,862	\$22,656	\$24,775	\$29,619	\$34,563	\$38,437	\$40,090	\$41,687	\$46,505
Number of Active Retirants	108	543	666	516	421	296	853	223	984
July 1, 2003 to June 30, 2004									
Average Monthly Benefit	\$380.68	\$354.90	\$584.96	\$821.55	\$1,068.15	\$1,605.52	\$1,709.53	\$1,871.84	\$2,437.30
Average Final Salary	\$21,732	\$23,875	\$26,052	\$29,035	\$30,841	\$38,021	\$40,186	\$41,374	\$47,014
Number of Active Retirants	202	651	738	535	368	496	862	274	1,048
July 1, 2002 to June 30, 2003									
Average Monthly Benefit	\$429.80	\$355.18	\$526.23	\$787.32	\$1,052.00	\$1,502.35	\$1,657.46	\$1,739.17	\$2,328.86
Average Final Salary	\$21,698	\$21,817	\$25,046	\$26,377	\$28,859	\$36,308	\$38,977	\$38,459	\$44,883
Number of Active Retirants	157	535	732	507	327	459	868	236	1,036



Schedule of Average Benefit Payments

	Years of Credited Service								
	0-4	5-9	10-15	16-20	21-24	25	26-29	30	31+
July 1, 2001 to June 30, 2002									
Average Monthly Benefit	\$330.83	\$302.81	\$494.46	\$732.10	\$1,038.00	\$1,500.85	\$1,551.53	\$1,727.10	\$2,147.68
Average Final Salary	\$15,636.02	\$18,981.36	\$22,673.74	\$26,147.48	\$28,478.52	\$35,590.72	\$36,779.37	\$38,801.37	\$42,420.90
Number of Active Retirants	234	653	743	507	402	402	854	244	1,099
July 1, 2000 to June 30, 2001									
Average Monthly Benefit	\$284.55	\$313.67	\$471.15	\$731.04	\$1,021.25	\$1,324.77	\$1,529.02	\$1,678.21	\$2,131.09
Average Final Salary	\$18,106.96	\$19,826.99	\$21,900.01	\$24,909.59	\$27,921.48	\$32,936.78	\$36,109.70	\$37,849.60	\$42,328.57
Number of Active Retirants	117	418	623	456	354	391	833	287	1,105
July 1, 1999 to June 30, 2000									
Average Monthly Benefit	\$328.36	\$298.90	\$447.08	\$628.27	\$941.69	\$1,305.57	\$1,520.20	\$1,782.05	\$2,260.55
Average Final Salary	\$17,799.97	\$19,194.75	\$21,858.76	\$23,446.92	\$27,264.95	\$32,353.55	\$34,785.50	\$37,243.95	\$40,862.32
Number of Active Retirants	144	491	571	519	515	394	692	207	780
July 1, 1998 to June 30, 1999									
Average Monthly Benefit	\$350.32	\$267.35	\$367.49	\$563.22	\$841.77	\$1,132.79	\$1,340.86	\$1,589.15	\$1,931.45
Average Final Salary	\$18,069.26	\$17,659.55	\$19,206.43	\$22,245.67	\$25,409.55	\$29,741.26	\$32,505.83	\$35,165.18	\$37,379.73
Number of Active Retirants	115	390	525	437	433	398	634	176	703
July 1, 1997 to June 30, 1998									
Average Monthly Benefit	\$235.10	\$183.77	\$327.10	\$506.57	\$706.94	\$1,111.47	\$1,235.96	\$1,536.50	\$1,781.71
Average Final Salary	\$13,682.41	\$14,290.79	\$19,007.24	\$21,348.27	\$22,732.91	\$28,831.14	29,926.39	\$33,296.67	\$34,090.97
Number of Active Retirants	52	537	583	535	542	392	1,009	219	1,066



**SCHEDULE A**

Development of Actuarial Value of Assets  
(\$ in thousands)

Valuation Date June 30:	2006	2007
A. Actuarial Value Beginning of Year	\$17,180,705	\$18,321,063
B. Market Value End of Year	18,321,063	21,353,016
C. Market Value Beginning of Year	16,890,535	18,321,063
D. Cash Flow		
D1. Contributions	933,443	1,003,156
D2. Other Revenue	0	0
D3. Benefit Payments	(1,271,574)	(1,364,028)
D4. Administrative Expenses	(9,194)	(9,846)
D5. Investment Expenses	<u>(31,449)</u>	<u>(35,727)</u>
D6. Net	(378,774)	(406,445)
E. Investment Income		
E1. Market Total: B.-C.-D6.	1,809,302	3,438,398
E2. Assumed Rate	8.00%	8.00%
E3. Amount for Immediate Recognition	1,392,012	1,486,583
E4. Amount for Phased-In Recognition	417,290	1,951,815
F. Phased-In Recognition of Investment Income		
F1. Current Year: 0.20*E4.	83,458	390,363
F2. First Prior Year	30,485	0
F3. Second Prior Year	131,313	0
F4. Third Prior Year	(176,809)	0
F5. Fourth Prior Year	<u>(452,430)</u>	<u>0</u>
F6. Total Recognized Investment Gain	(383,983)	390,363
G. Actuarial Value End of Year:		
A.+D6.+E3.+F6.	\$17,809,960	\$19,791,564
H. Final Actuarial Value of Assets:*	\$18,321,063	\$19,791,564

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.

\* Actuarial value of assets was set equal to market value on June 30, 2006. Smoothing commenced in 2007 with an additional constraint that actuarial value of assets cannot be less than 80% nor more than 120% of market value.



Asset Summary  
June 30, 2007  
(\$ in Thousands)

	<u>Market Value</u>	<u>Book Value</u>	<u>Actuarial Value</u>
1. Assets at June 30, 2006	\$18,321,063	\$15,055,325	\$18,321,063
2. Contributions and Misc. Revenue	1,003,156	1,003,156	1,003,156
3. Investment Increment	3,402,671	1,542,183	1,841,219
4. Benefit Payments	(1,364,028)	(1,364,028)	(1,364,028)
5. Administrative Expenses	(9,846)	(9,846)	(9,846)
6. Assets at June 30, 2007 (1) + (2) + (3) + (4) + (5)	\$21,353,016	16,226,790	\$19,791,564
7. Investment Increment/Mean Assets*	18.76%	10.37%	10.15%

\*Based on the approximation formula:  $I/[.5 \times (A + B - I)]$ , where

- I = Investment increment
- A = Beginning of year asset value
- B = End of year asset value



**SCHEDULE B**

**STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS**

INTEREST RATE: 8.00% per annum, compounded annually (net after investment expenses).

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed rates of separation from active service are as follows:

<u>Age</u>	<u>Annual Rates of</u>					
	<u>Withdrawal and Vesting*</u>		<u>Death**</u>		<u>Disability**</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
20	20.0%	20.0%	.01%	.00%	.01%	.01%
25	15.5	15.0	.01	.00	.02	.01
30	11.0	11.0	.02	.01	.02	.02
35	9.5	9.0	.02	.01	.05	.03
40	7.0	6.5	.03	.01	.11	.08
45	6.0	5.5	.05	.02	.18	.13
50	6.0	5.5	.07	.03	.30	.21
55	6.0	5.5	.09	.04	.48	.33
60	6.0	5.5	.18	.07	.35	.25
65	6.0	5.5	.29	.13		
70	6.0	5.5	.49	.22		
74	6.0	5.5	.72	.38		

<u>Age</u>	<u>Service Retirements</u>			
	<u>Male</u>		<u>Female</u>	
	<u>Under 25 Years of Service</u>	<u>25 Years of Service and Over</u>	<u>Under 25 Years of Service</u>	<u>25 Years of Service and Over</u>
45		12.0%		8.5%
50		12.0		8.5
55		15.0		13.5
60	14.0%	15.0	14.0%	17.0
62	14.0	23.0	14.0	21.0
65	18.0	23.0	20.0	24.0
70	18.0	23.0	20.0	24.0
75	100.0	100.0	100.0	100.0

\* For all ages, rates of 41% for 1<sup>st</sup> year of employment and 19% for 2<sup>nd</sup> year.

\*\* 94% are presumed to be non-duty related, and 6% are assumed to be duty related.

It is assumed that a member will be granted three-quarters year of service credit for unused leave at termination of employment.



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

Annual Rates of			
Base			
<u>Service</u>	<u>Merit &amp; Seniority</u>	<u>Base (Economy)</u>	<u>Increase Next Year</u>
5	1.50%	4.00%	5.50%
10	1.00	4.00	5.00
15	1.25	4.00	5.25
20	1.25	4.00	5.25
25	1.25	4.00	5.25
30	2.50	4.00	6.50
35	3.00	4.00	7.00

PAYROLL GROWTH: 4.00% per annum, compounded annually.

PRICE INFLATION: 3.75% per annum, compounded annually.

DEATH AFTER RETIREMENT: The mortality table, for post-retirement mortality, used in evaluating allowances to be paid is the 1983 Group Annuity Mortality Table, set forward one year for women. Special tables are used for the period after disability retirement. This assumption is used to measure the probabilities of each benefit payment being made after retirement.

MARRIAGE ASSUMPTION: 85% married with the husband three years older than his wife.

UNUSED SICK LEAVE: 0.75 years at retirement.

VALUATION METHOD: Entry age normal cost method. Entry age is established on an individual basis.





ASSET VALUATION METHOD: Actuarial value, as developed in Schedule A. 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. Actuarial value of assets were set equal to the market value on June 30, 2006. Smoothing commenced in 2007 with an additional constraint that actuarial value of assets cannot be less than 80% nor more than 120% of market value.



**SCHEDULE C**

**SUMMARY OF MAIN BENEFIT AND CONTRIBUTION PROVISIONS**

The following summary presents the main benefit and contribution provisions of the System in effect June 30, 2007, as interpreted in preparing the actuarial valuation. As used in the summary, "average compensation" means the average annual covered earnings of an employee during the four highest years of service. "Covered earnings" means gross salary not in excess of the maximum amount on which contributions were required. "Fiscal year" means a year commencing on July 1 and ending June 30. The maximum covered earnings for employers and employees over the years are as follows:

**EMPLOYER AND EMPLOYEE RATES OF CONTRIBUTION  
AND MAXIMUM COVERED EARNINGS**

Date From	To	Employer Rate	Maximum Covered Earnings	Employee Rate	Maximum Covered Earnings
2/1/53	6/30/58	2.50%	\$6,000	4.00%	\$4,800*
7/1/58	6/30/60	2.50	9,000	4.00	7,800*
7/1/60	6/30/66	2.50	15,000	4.00	13,800*
7/1/66	6/30/68	3.00	15,000	4.50	13,800*
7/1/68	3/31/71	4.50	15,000	4.50	15,000
4/1/71	6/30/73	4.50	35,000	4.50	35,000
7/1/73	6/30/76	5.85	35,000	5.00	35,000
7/1/76	6/30/77	7.00	35,000	5.00	35,000
7/1/77	6/30/78	7.50	35,000	5.50	35,000
7/1/78	6/30/80	8.00	35,000	5.50	35,000
7/1/80	6/30/81	8.00	53,000	5.50	53,000
7/1/81	12/31/83	8.75	53,000	6.00	53,000
1/1/84	6/30/88	8.75	63,000	6.00	63,000
7/1/88	6/30/89	8.75	75,600	6.00	75,600
7/1/89	12/31/89	8.75	75,600	6.50	75,600
1/1/90	6/30/91	9.75	75,600	6.50	75,600
7/1/91	6/30/92	9.75	75,600	7.25	75,600
7/1/92	6/30/02	9.75	125,000	7.25	125,000
7/1/02	6/30/05	9.75	150,000	7.25	150,000
7/1/05	6/30/06	10.75	150,000	7.25	150,000
7/1/06	6/30/07	11.30	150,000	7.25	150,000
7/1/07		11.85	150,000	7.25	150,000

\*From February 1, 1953 through June 30, 1968 the first \$100 in monthly earnings or \$1,200 in annual earnings were not covered earnings for the employee.



## BENEFITS

### Superannuation Retirement

#### Condition for Retirement

- (a) A retirement allowance is paid upon the request of any member who retires and has attained age 60 and completed at least four years of creditable service, or has completed at least 25 years of creditable service.
- (b) Any member who withdraws from service prior to his attainment of age 60 and who has completed at least four years of creditable service is entitled to receive, in lieu of a refund of his accumulated contributions, a retirement allowance commencing at age 60.
- (c) Upon the death of a member who has completed at least four years of creditable service, a benefit is payable, in lieu of a refund of the member's accumulated contributions, to his spouse, if said spouse has been married to the member for not less than one year.

#### Amount of Allowance

The annual retirement allowance payable to a member who retires under condition (a) above is equal to:

1. A member's annuity which is the actuarial equivalent of the member's accumulated contributions at the time of his retirement, plus
2. An employer's annuity which, together with the member's annuity, is equal to 2% of his average compensation for each of the first 25 years of creditable service plus 2-1/2% for each year of creditable service over 25 years.

The minimum allowance is \$120 for each year of creditable service.

The annual retirement allowance payable to the spouse of a member who dies under condition (c) above is equal to the greater of (i) the allowance that would have been payable had the member retired and elected Option 2, reduced by 3% per year for each year the member lacked in qualifying for unreduced retirement benefits, or (ii) a benefit equal to the greater of 20% of average compensation or \$50 per month.

In addition, a benefit is payable to dependent children until age 19 (23 if a full time student). The benefit is equal to the greater of 10% of average compensation or \$50 per month for each dependent child up to 3.



## Disability Retirement

### Condition for Retirement

A retirement allowance is paid to a member who is totally and permanently disabled, as determined by the Board of Trustees, and has accumulated four or more years of creditable service.

### Amount of Allowance

For those who were active members prior to July 1, 1992 and did not elect the benefit structure outlined below, the annual disability retirement allowance payable is equal to a superannuation retirement allowance if the member has attained age 60, otherwise it is equal to a superannuation retirement allowance calculated as follows:

1. A member's annuity equal to the actuarial equivalent of his accumulated contributions at the time of retirement, plus
2. An employer's annuity equal to the amount that would have been payable had the member continued in service to age 60.

For those who become active members after June 30, 1992 and for those who were active members prior to July 1, 1992 who so elected, the following benefits are payable:

1. A temporary allowance equal to the greater of (a) 40% of average compensation plus 10% for each dependent child up to a maximum of 2, or (b) the member's accrued allowance. This temporary allowance is paid for a period of time based on the member's age at disability, as follows:

<u>Age at Disability</u>	<u>Duration</u>
60 and earlier	to age 65
61	to age 66
62	to age 66
63	to age 67
64	to age 67
65	to age 68
66	to age 68
67	to age 69
68	to age 70
69 and later	one year

The minimum allowance is \$120 per year of creditable service.





2. A deferred allowance commencing when the temporary allowance ceases equal to the greater of (a) the allowance the member would have received based on service to the termination age of the temporary allowance, but not more than 40% of average compensation, or (b) the member's accrued allowance.

The minimum allowance is \$120 per year of creditable service.

Effective July 1, 2004, a temporary benefit can be paid out of a member's accumulated contribution balance while the member is awaiting a determination for eligibility for disability benefits. Future disability payments, if any, would be offset by advanced payments made from the member's accumulated contributions.

### **Accidental Disability Retirement**

Condition for Retirement

A retirement allowance is paid to a member who is totally and permanently disabled in the line of performance of duty.

Amount of Allowance

The annual accidental disability retirement allowance is equal to the allowance payable on disability retirement but not less than 50% of average compensation. There is no minimum benefit.

### **Accidental Death Benefit**

Condition for Benefit

A retirement allowance is paid to a spouse and/or dependent children upon the death of an active member in the line of performance of duty.

Amount of Allowance

The annual retirement allowance is equal to 50% of average compensation payable to the spouse and 25% of average compensation payable to one dependent child or 50% to two or more children until age 19 (23 if a full time student). There is no minimum benefit.

### **Return of Contributions**

Upon the withdrawal of a member without a retirement benefit, his contributions are returned to him, together with accumulated regular interest thereon.

Upon the death of a member before retirement, his contributions, together with the full accumulated regular interest thereon, are paid to his designated beneficiary, if any, otherwise, to his estate provided no other survivor benefits are payable.





## **Normal Form of Benefit**

The normal form of benefit is an allowance payable during the life of the member with the provision that upon his death the excess of his total contributions at the time of retirement over the total retirement annuity paid to him will be paid to his designated beneficiary.

## **Optional Benefits**

A member upon retirement may elect to receive his allowance in one of the following forms which are computed to be actuarially equivalent to the applicable retirement allowance.

Option 1. Reduced allowance with the provision that if the pensioner dies before he receives the value of the member's annuity as it was at the time of retirement, the balance shall be paid to his beneficiary or estate.

Option 2. Upon his death, his reduced retirement allowance shall be continued throughout the life of, and paid to, his beneficiary.

Option 3. Upon his death, 50% of his reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary and the other 50% of his reduced retirement allowance to some other designated beneficiary.

Option 4A. Upon his death, 50% of his reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary.

Option 4B. A reduced retirement allowance shall be continued throughout the life of the pensioner, but with the further guarantee of payment to the pensioner, his beneficiary or his estate for a specified number of years certain.

Option 4C. A member may elect any option with the added provision that the member shall receive, so far as possible, the same total amount annually (considering both PERS and Social Security benefits) before and after the earliest age at which the member becomes eligible for a Social Security benefit. This option was only available to those who retired prior to July 1, 2004.

If a member elects either Option 2 or Option 4A there is an added provision that in the event the designated beneficiary predeceases the member, the retirement allowance payable to the member after the designated beneficiary's death shall be equal to the retirement allowance which would have been payable had the member not elected the option.



A member who has at least 28 years of creditable service or is at least age 63 with 4 years of service can select a partial lump-sum option at retirement. Under this option, the retiree has the option of taking a partial lump-sum distribution equal to either 12, 24, or 36 times the base maximum monthly benefit. With each lump-sum amount, the base maximum monthly benefit will be actuarially reduced. A member selecting the partial lump-sum option may also select any of the regular options except Option 1, the prorated single-life annuity, and Option 4-C, the Social Security leveling provision. The benefit is then calculated using the new reduced maximum benefit as a starting point in applying the appropriate option factors for the reduction.

### **Post-Retirement Adjustments In Allowances**

The allowances of retired members are adjusted annually by an amount equal to (a) 3% of the annual retirement allowance for each full fiscal year of retirement prior to the year in which the member reaches age 55, plus (b) 3% compounded for each year thereafter beginning with the fiscal year in which the member turns age 55; provided, however, that the annual adjustment will not be less than 4% of the annual retirement allowance for each full fiscal year in retirement through 6/30/98.

A prorated portion of the annual adjustment will be paid to the member, beneficiary, or estate of any member or beneficiary who is receiving the annual adjustment in a lump sum, but whose benefits are terminated between July 1 and December 1.



**SCHEDULE D**

**DETAILED TABULATIONS OF THE DATA**

Retirants & Beneficiaries as of June 30, 2007  
Tabulated by Year of Retirement

Year of Retirement	No.	Total Annual Benefits*	Average Monthly Benefit
2007	2,389	\$43,269,443	\$1,509
2006	4,712	80,525,466	1,424
2005	4,468	72,923,943	1,360
2004	4,612	78,814,642	1,424
2003	4,165	67,657,455	1,354
2002	4,295	69,408,764	1,347
2001	4,266	65,661,699	1,283
2000	3,684	59,234,745	1,340
1999	2,945	43,731,701	1,237
1998	2,969	42,906,104	1,204
1997	2,885	38,158,947	1,102
1996	3,120	43,184,946	1,153
1995	2,493	31,094,533	1,039
1994	2,358	27,654,968	977
1993	2,301	25,865,780	937
1992	2,743	34,378,084	1,044
1991	2,225	25,245,260	946
1990	1,828	19,622,435	895
1989	1,515	13,941,412	767
1988	1,259	11,042,344	731
1987	1,046	8,655,522	690
1986	1,994	19,799,607	827
1985	977	8,276,776	706
1984	909	7,013,945	643
1983	694	4,779,661	574
1982	617	4,223,069	570
1981	653	4,105,909	524
1980	520	3,201,464	513
1979	335	2,000,004	498
1978	342	1,760,267	429
1977	281	1,450,665	430
1976	301	1,403,601	389
1975	203	882,960	362
1974	192	822,205	357
1973	127	515,198	338
1972 & Prior	333	1,324,290	331
<b>Totals</b>	<b>70,756</b>	<b>\$964,537,814</b>	<b>\$1,136</b>

\*Excluding COLA.

Schedule of Retired Members by Type of Benefit

Benefits Payable June 30, 2007

Amount of Monthly Benefit**	Number of Rets.	Ret. Type 1*	Ret. Type 2*	Ret. Type 3*	Life	Option 1	Option 2	Option 3	Option 4A	Option 4B	Option 4C	Option 5	PLSO 1 Year	PLSO 2 Years	PLSO 3 Years
\$1-\$100	2,327	1,852	15	460	1,646	70	329	7	28	233	6	14	36	30	323
101-200	5,781	4,271	138	1,372	4,144	257	676	17	83	512	23	92	74	43	293
201-300	5,629	3,971	311	1,347	4,182	231	560	6	108	460	39	82	64	39	207
301-400	4,661	3,208	375	1,078	3,354	220	501	19	101	402	61	64	51	49	175
401-500	4,153	2,967	401	785	2,949	204	496	7	135	296	66	66	54	42	158
501-600	3,460	2,476	392	592	2,363	170	452	15	112	292	88	56	64	45	144
601-700	3,111	2,275	366	470	2,129	152	404	8	133	228	130	57	55	39	117
701-800	2,942	2,189	351	402	1,956	175	379	7	151	187	158	87	40	35	110
801-900	2,779	2,128	301	350	1,780	161	408	6	158	214	171	52	46	39	162
901-1,000	2,646	2,077	289	280	1,704	123	402	13	135	189	171	80	51	27	151
Over 1,000	33,267	29,605	1,964	1,698	19,879	1,485	5,736	144	3,030	2,506	2,275	487	1,005	884	4,651
Totals	70,756	57,019	4,903	8,834	46,086	3,248	10,343	249	4,174	5,519	3,188	1,137	1,540	1,272	6,491

\*Type of Retirement

- 1 – Retirement for Age & Service
- 2 – Disability Retirement
- 3 – Survivor Payment

Option Selected

- Life - Return of Contributions
- Opt. 1 - Return of Member's Annuity
- Opt. 2 - 100% Survivorship
- Opt. 3 - 50%/50% Dual Survivorship
- Opt. 4A - 50% Survivorship
- Opt. 4B - Years Certain & Life
- Opt. 4C - Social Security Leveling\*\*\*
- Opt. 5 - Pop-Up
- PLSO - Partial Lump Sum Option\*\*\*  
(Reflects reduced benefit)

\*\*Excluding COLA

\*\*\*Included in other options





Public Employees' Retirement System of Mississippi

Retirant and Beneficiary Information June 30, 2007  
Tabulated by Attained Ages

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits*	No.	Annual Benefits*	No.	Annual Benefits*	No.	Annual Benefit*
Under 20					661	\$2,009,198	661	\$2,009,198
20 - 24					171	757,248	171	757,248
25 - 29			6	\$64,899	66	443,179	72	508,078
30 - 34			36	356,037	80	599,292	116	955,329
35 - 39			85	1,195,647	161	1,181,696	246	2,377,343
40 - 44	30	\$517,664	204	3,190,377	193	1,203,808	427	4,911,849
45 - 49	637	12,693,336	477	7,409,770	351	2,419,487	1,465	22,522,593
50 - 54	2,655	58,222,654	764	11,533,822	471	4,299,340	3,890	74,055,816
55 - 59	5,949	138,629,993	1,044	13,971,739	664	6,431,492	7,657	159,033,224
60 - 64	10,641	191,881,466	1,011	11,702,580	884	8,813,879	12,536	212,397,925
65 - 69	11,426	167,374,444	567	4,972,986	897	8,536,017	12,890	180,883,447
70 - 74	9,137	114,630,970	371	2,463,447	1,083	9,801,491	10,591	126,895,908
75 - 79	7,497	81,380,058	195	1,110,146	1,189	9,546,741	8,881	92,036,945
80 - 84	4,972	43,795,281	83	383,146	996	7,561,770	6,051	51,740,197
85 - 89	2,681	19,964,283	42	150,509	655	4,054,522	3,378	24,169,314
90 - 94	1,083	6,353,386	17	64,514	252	1,143,329	1,352	7,561,229
95	96	450,590	1	1,815	22	87,644	119	540,049
96	51	226,740			12	43,441	63	270,181
97	58	264,929			10	33,743	68	298,672
98	43	217,221			5	31,653	48	248,874
99	21	129,619			2	3,882	23	133,501
100 & Over	42	189,254			9	41,640	51	230,894
Totals	57,019	\$836,921,888	4,903	\$58,571,434	8,834	\$69,044,492	70,756	\$964,537,814

Average Age: 68.2 years.

\*Excluding COLA





Public Employees' Retirement System of Mississippi

Total Active Members as of June 30, 2007  
 Tabulated by Attained Ages and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	No.	Valuation Payroll
Under 20	475							475	\$5,430,190
20 - 24	7,254	100						7,354	145,560,769
25 - 29	13,253	3,354	65					16,672	450,649,069
30 - 34	9,354	6,818	2,032	43				18,247	539,059,538
35 - 39	8,418	5,606	5,026	1,912	71			21,033	654,142,734
40 - 44	6,795	4,890	3,900	3,761	1,829	67		21,242	670,574,578
45 - 49	6,017	4,830	3,946	3,542	3,564	1,674	55	23,628	786,205,674
50 - 54	5,116	4,044	3,042	3,420	2,910	2,685	1,184	22,801	814,417,881
55 - 59	3,765	3,072	2,766	2,712	2,516	1,613	1,822	18,266	675,149,906
60	605	503	455	442	425	267	351	3,048	113,008,675
61	394	363	296	273	251	152	219	1,948	69,775,560
62	345	292	248	217	178	130	179	1,589	57,232,195
63	229	246	213	177	152	109	121	1,247	46,425,822
64	222	243	160	176	137	91	124	1,153	40,498,029
65	170	169	117	107	86	55	76	780	27,337,820
66	143	125	93	87	61	40	51	600	19,580,753
67	108	101	90	69	48	36	50	502	15,216,950
68	103	86	58	62	27	24	55	415	13,189,256
69	90	89	68	48	26	18	38	377	11,876,557
70 & Over	288	307	243	199	159	84	147	1,427	40,962,943
Totals	63,144	35,238	23,218	17,247	12,440	7,045	4,472	162,804	\$5,196,294,899

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 43.8 years  
 Service: 9.7 years  
 Annual Pay: \$31,917



**SCHEDULE E**

**MISSISSIPPI PERS  
ANALYSIS OF FINANCIAL EXPERIENCE**

**Gains & Losses in Accrued Liabilities  
Resulting from Difference Between  
Assumed Experience & Actual Experience  
(\$ Millions)**

<b>Type of Activity</b>	<b>\$ Gain (or Loss) For Year Ending 6/30/07</b>	<b>\$ Gain (or Loss) For Year Ending 6/30/06</b>
<b>Age &amp; Service Retirements.</b> If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (16.2)	\$ (37.8)
<b>Disability Retirements.</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	12.3	11.2
<b>Death-in Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	0.5	0.0
<b>Withdrawal From Employment.</b> If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	(93.5)	(77.2)
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	228.1	215.6
<b>New Members.</b> Additional unfunded accrued liability will produce a loss.	(94.8)	(151.4)
<b>Investment Income.</b> If there is a greater investment income than assumed, there is a gain. If less income, a loss.	390.4	(384.0)
<b>Death After Retirement.</b> If retirants live longer than assumed, there is a loss. If not as long, a gain.	(51.3)	51.5
<b>Other.</b> Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>(188.1)</u>	<u>(32.0)</u>
<b>Gain (or Loss) During Year From Financial Experience</b>	\$ 187.4	\$ (404.1)
<b>Non-Recurring Items.</b> Adjustments for plan amendments, assumption changes, or method changes.	<u>(523.8)</u>	<u>511.1</u>
<b>Composite Gain (or Loss) During Year</b>	<u>\$ (336.4)</u>	<u>\$ 107.0</u>



## SCHEDULE F GLOSSARY

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability".

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method".

Actuarial Equivalent. A series of payments is called an actuarial equivalent of another series of payments if the two series have the same actuarial present value.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Experience Gain (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost". Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Plan Termination Liability. The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for future service and salary. The termination liability will generally be less than the liabilities computed on a "going concern" basis and is not normally determined in a routine actuarial valuation.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability".

Valuation Assets. The value of current plan assets recognized for valuation purposes. Generally based on book value plus a portion of unrealized appreciation or depreciation.