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PERS
of MISSISSIPPI

**Report on the Annual Valuation of the
Mississippi Highway Safety Patrol
Retirement System**

Prepared as of June 30, 2010





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

October 22, 2010

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 Mississippi Highway Safety Patrol Retirement System. 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, 2010.

The date of the valuation was June 30, 2010.

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 8.

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 undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

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

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

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Board of Trustees
October 22, 2010
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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,

A handwritten signature in blue ink, appearing to read 'Thomas J. Cavanaugh'.

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

A handwritten signature in blue ink, appearing to read 'Edward J. Koebel'.

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

TJC/EJK:kc



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**REPORT ON THE ANNUAL VALUATION OF THE
MISSISSIPPI HIGHWAY SAFETY PATROL RETIREMENT SYSTEM
PREPARED AS OF JUNE 30, 2010**

SECTION I – SUMMARY OF PRINCIPAL RESULTS

1. This report, prepared as of June 30, 2010, 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 reflects any benefit increases granted to retirees as of July 1, 2010 and any amendments to the System effective through July 1, 2010. We recommend an increase in the contribution rate from 30.30% to 35.21% of active members' compensation for the 2011/2012 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, 2010	June 30, 2009
Active members included in valuation		
Number	542	570
Annual compensation	\$ 26,353,400	\$ 26,389,909
Retirees		
Number	696	692
Annual allowances	\$ 22,899,688	\$ 21,994,109
Assets		
Market related actuarial value	\$ 281,088,000	\$ 292,322,000
Market value	\$ 232,873,000	\$ 214,374,000
Unfunded accrued liability	\$ 130,188,703	\$ 102,308,335
Recommended employer contribution rate		
Normal	16.89%	16.87%
Accrued liability	<u>18.32%</u>	<u>13.43%</u>
Total	35.21%	30.30%
Anticipated accrued liability payment period	30.0 years	29.3 years
Unfunded accrued liability based on market value of assets	\$ 178,403,703	\$ 180,256,335
Payment Period	Infinite	Infinite



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, the derivation of the experience gains and losses during the valuation year are given in Section V and the rates of contribution payable by employers are given in Section VI.
4. There were no changes to the actuarial assumptions since the last valuation.
5. There were no changes to the benefit provisions or actuarial methods since the last valuation.
6. Due to Senate Bill No. 2659 enacted in 2004, additional contributions are being made to the System. The estimate used for last year was \$3,100,000 annually. The actual additional contribution for 2010 is \$3,985,000. However, since the last three years of additional contributions have not been consistent, we have averaged the last three year's contributions and the 2010 valuation results reflect an anticipated amount of \$3,400,000 annually in the future. The employers are required to contribute 35.21% of payroll. The funding period of the UAL of 30.0 years shown on the previous page reflects the additional contributions from Senate Bill No. 2659. Without this additional contribution, the funding period would have been infinite.
7. Schedule A of this report presents the development of the actuarial value of assets. Schedule B of this report outlines the full set of actuarial assumptions and methods employed. Schedule C gives a summary of the benefit and contribution provisions of the System.
8. The table on the following page provides a ten-year history of some pertinent figures.
9. The valuation results are developed based upon the current employer contribution rate of 35.21% of payroll. 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.
10. All amounts shown prior to the 2004/2005 fiscal year were developed and/or reported by the prior actuarial firm.



Mississippi Highway Safety Patrol Retirement System
Comparative Schedule*

Valuation Date June 30	Active Members				Retired Lives				Valuation Results (\$ thousands)		
	Number	Payroll (\$ thousands)	Average Salary	% increase from previous year	Number	Active/ Retired Ratio	Annual Benefits** (\$ thousands)	Benefits as % of Payroll	Accrued Liability	Valuation Assets	UAAL
2001	599	\$21,972	\$36,681	(2.8)%	573	1.0	\$10,733.7	48.9%	\$250,621	\$259,713	\$ (9,092)
2002	559	20,339	36,385	(0.8)	595	0.9	11,486.9	56.5	285,548	263,255	22,293
2003	543	21,052	38,770	6.6	599	0.9	11,592.8	55.1	302,134	259,746	42,388
2004	559	22,683	40,579	4.7	605	0.9	12,111.9	53.4	316,570	256,481	60,089
2005	540	22,343	41,376	2.0	621	0.9	17,189.8	76.9	335,117	253,477	81,640
2006	564	24,499	43,438	5.0	625	0.9	17,821.8	72.7	350,638	265,637	85,001
2007	591	27,037	45,748	5.3	638	0.9	18,722.6	69.2	371,233	284,626	86,607
2008	626	29,597	47,280	3.3	651	1.0	19,798.7	66.9	381,578	298,630	82,948
2009	570	26,390	46,298	(2.1)	692	0.8	21,994.1	83.3	394,630	292,322	102,308
2010	542	26,353	48,623	5.0	696	0.8	22,899.7	86.9	411,277	281,088	130,189

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

** Excluding COLA for years prior to 2005.



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, 2010 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	1	542	\$26,353,400	\$48,623	40.8	13.0

*Years

Of the 542 active members, 387 are vested and 155 are non-vested.

Retired Lives

Type of Benefit Payment	No.	Annual Benefits	Group Averages	
			Benefit	Age*
Retirement	489	\$19,162,036	\$39,186	64.3
Disability	18	399,571	22,198	64.6
Survivor	189	3,338,081	17,662	71.9
Total in PERS	696	\$22,899,688	\$32,902	66.4

*Years

This valuation also includes 53 inactive members (15 vested and 38 non-vested).



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, 2010 and, for comparison purposes, as of the immediately preceding valuation date of June 30, 2009. 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
MISSISSIPPI HIGHWAY SAFETY PATROL RETIREMENT SYSTEM**

	JUNE 30, 2010	JUNE 30, 2009
ASSETS		
Current actuarial value of assets:		
Annuity Savings Account	\$ 20,658,202	\$ 20,136,030
Annuity Reserve	27,279,694	25,997,516
Employers' Accumulation Account	<u>233,150,104</u>	<u>246,188,454</u>
Total current assets	\$ 281,088,000	\$ 292,322,000
Future member contributions to Annuity Savings Account	\$ 17,768,069	\$ 18,440,215
Prospective contributions to Employer's Accumulation Account		
Normal contributions	\$ 41,393,473	\$ 42,908,473
Unfunded accrued liability contributions	<u>130,188,703</u>	<u>102,308,335</u>
Total prospective contributions	\$ 171,582,176	\$ 145,216,808
Total Assets	<u>\$ 470,438,245</u>	<u>\$ 455,979,023</u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 284,105,810	\$ 273,774,296
Present value of benefits payable on account of active members	185,276,072	181,322,236
Present value of benefits payable on account of inactive members for service rendered before the valuation date	<u>\$ 1,056,363</u>	<u>\$ 882,491</u>
Total liabilities	<u>\$ 470,438,245</u>	<u>\$ 455,979,023</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, 2010.

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 or her 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 \$20,658,202. The assets credited to the Annuity Reserve were \$27,279,694 and the assets credited to the Employer's Accumulation Account totaled \$233,150,104. Current actuarial assets as of the valuation date equaled the sum of these three funds, \$281,088,000. Future member contributions to the Annuity Savings Account were valued to be \$17,768,069. Prospective contributions to the Employer's Accumulation Account were calculated to be \$171,582,176, of which \$41,393,473 is attributable to service rendered after the valuation date (normal contributions) and \$130,188,703 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 \$470,438,245 as of June 30, 2010.

Total Liabilities

The present value of benefits payable on account of presently retired members and beneficiaries totaled \$284,105,810 as of the valuation date. The present value of future benefit payments on behalf of active members amounted to \$185,276,072. In addition, the present value of benefits for inactive members, due to service rendered before the valuation date, was calculated to be \$1,056,363.

Therefore, the balance sheet shows the present value for all prospective benefit payments under the System to be \$470,438,245 as of June 30, 2010.

Section 25-13-7 of State law requires that active members contribute the current rate of 7.25% of annual compensation to the System.

Section 25-13-29 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 increase to 35.21% of the annual compensation of all members, which is in addition to the contributions



anticipated as a result of Senate Bill No. 2659 enacted in 2004. 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, 2010 is shown below.

	<u>\$ Thousands</u>
(1) UAAL* as of June 30, 2009	\$ 102,308.3
(2) Normal cost from last valuation	4,452.0
(3) Actual employer contributions	12,598.0
(4) Interest accrual: (1) x .080 + [(2) – (3)] x .0392]	7,865.3
(5) Expected UAAL before changes: (1) + (2) – (3) + (4)	102,027.6
(6) Change due to plan amendments	0.0
(7) Change due to actuarial assumptions or methods	0.0
(8) Expected UAAL after changes: (5) + (6) + (7)	102,027.6
(9) Actual UAAL as of June 30, 2010	130,188.7
(10) Gain/(loss): (8) – (9)	\$ (28,161.1)
(11) Gain/(loss) as percent of actuarial accrued liabilities at start of year (\$394,630.3)	(7.1)%

*Unfunded actuarial accrued liability.

Valuation Date June 30	Actuarial Gain/(Loss) as a % of Beginning Accrued Liabilities
2005	(5.3)%
2006	(2.9)
2007	(0.3)
2008	0.7
2009	(4.3)
2010	(7.1)



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 2011/2012 fiscal year.

Contribution for	Contributions Expressed as Percents of Payroll
Normal Cost:	
Service retirement benefits	22.18%
Disability benefits	0.87
Survivor benefits	<u>0.55</u>
Total	23.60%
Member Contributions:	7.25%
Less future refunds	<u>(0.54)</u>
Available for benefits	6.71%
Employer Normal Cost	16.89%
Unfunded Actuarial Accrued Liabilities (30.0 year level % of payroll amortization*)	18.32
Total Computed Employer Contribution Rate	35.21%

*Amortization period a year ago was 29.3 years. Both periods reflect additional contributions from Senate Bill No. 2659 enacted in 2004. An estimated additional \$3,400,000 (12.9% of payroll) employer contribution is being made to the System due to SB 2659 in order to keep the amortization period below 30 years.

The components of the change in the computed unfunded accrued liability amortization period from 29.3 years to 30.0 years are as follows:

Previous Reported Period	29.3 years
Change due to:	
Normal amortization	(1.0)
Actuarial experience	1.1
Assumption changes	0.0
Plan amendments	0.0
Method changes	0.0
UAL contribution experience	0.6
Computed Period	30.0 years



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.

Mississippi Highway Safety Patrol Retirement System

Twenty-five Year Cash Flow Projection

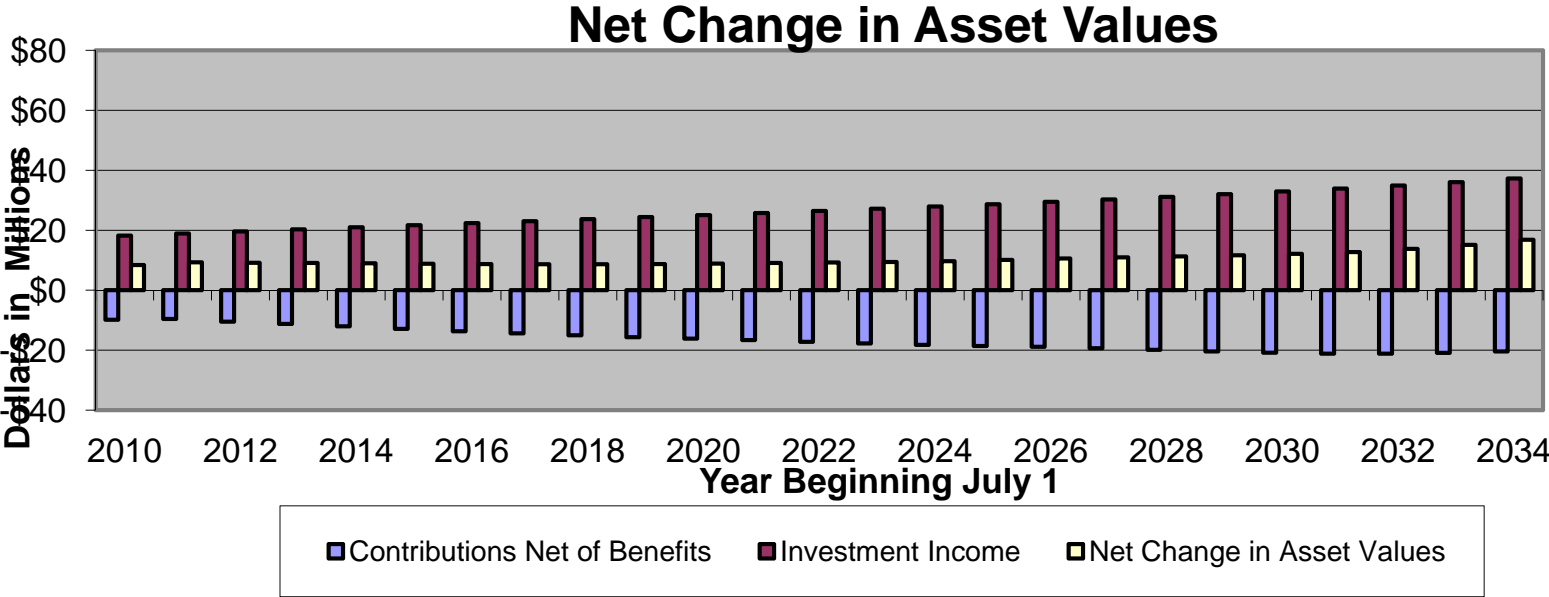
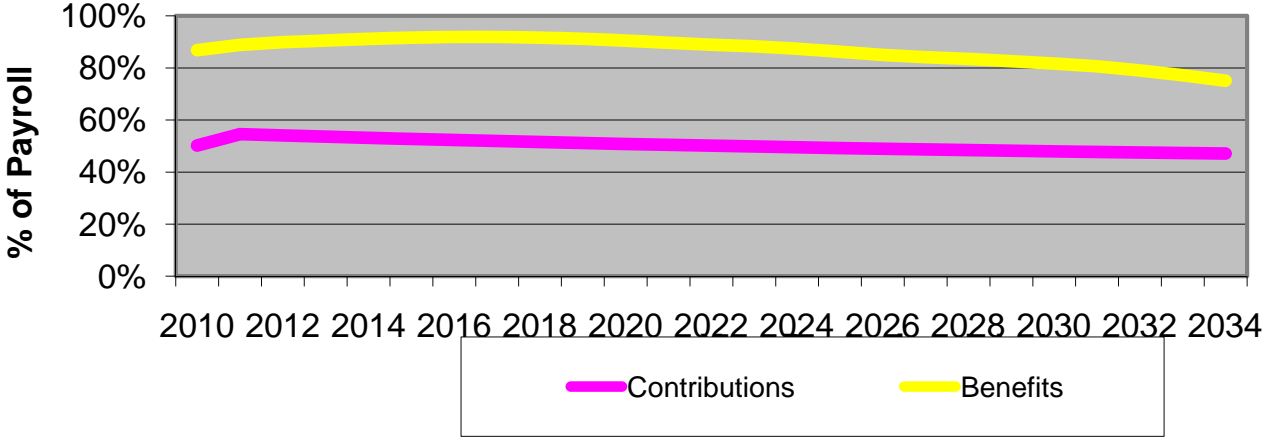


Year	Valuation Payroll	Market Value of Assets Balance July 1	Contributions	Projected Benefit Payments	Expected Investment Return	Cash Flow	Market Value of Assets Balance June 30
2010	\$26,880,468	\$232,873,000	\$13,493,616	\$23,339,197	\$18,236,017	\$8,390,435	\$241,263,435
2011	28,022,888	241,263,435	15,298,518	24,902,444	18,916,918	9,312,992	250,576,428
2012	29,213,861	250,576,428	15,804,205	26,268,986	19,627,523	9,162,742	259,739,170
2013	30,455,450	259,739,170	16,331,384	27,562,683	20,329,882	9,098,583	268,837,753
2014	31,749,807	268,837,753	16,880,968	28,931,520	21,024,998	8,974,446	277,812,199
2015	33,099,174	277,812,199	17,453,909	30,327,463	21,710,034	8,836,480	286,648,679
2016	34,505,889	286,648,679	18,051,200	31,723,300	22,385,010	8,712,911	295,361,590
2017	35,972,389	295,361,590	18,673,876	33,071,365	23,053,028	8,655,539	304,017,129
2018	37,501,216	304,017,129	19,323,016	34,369,192	23,719,523	8,673,348	312,690,476
2019	39,095,018	312,690,476	19,999,745	35,660,186	24,388,820	8,728,379	321,418,855
2020	40,756,556	321,418,855	20,705,234	36,862,790	25,067,206	8,909,650	330,328,505
2021	42,488,710	330,328,505	21,440,706	38,090,459	25,760,290	9,110,538	339,439,043
2022	44,294,480	339,439,043	22,207,436	39,392,065	26,467,738	9,283,109	348,722,152
2023	46,176,995	348,722,152	23,006,752	40,775,331	27,187,029	9,418,450	358,140,602
2024	48,139,517	358,140,602	23,840,039	42,076,518	27,921,789	9,685,310	367,825,912
2025	50,185,446	367,825,912	24,708,740	43,287,441	28,682,925	10,104,224	377,930,136
2026	52,318,327	377,930,136	25,614,362	44,484,588	29,479,602	10,609,376	388,539,512
2027	54,541,856	388,539,512	26,558,472	45,896,510	30,309,639	10,971,601	399,511,113
2028	56,859,885	399,511,113	27,542,707	47,447,518	31,164,697	11,259,886	410,770,999
2029	59,276,430	410,770,999	28,568,772	48,958,136	32,046,105	11,656,742	422,427,741
2030	61,795,678	422,427,741	29,638,445	50,461,442	32,961,299	12,138,302	434,566,043
2031	64,421,994	434,566,043	30,753,579	51,928,732	33,918,277	12,743,124	447,309,167
2032	67,159,929	447,309,167	31,916,106	53,074,256	34,938,407	13,780,257	461,089,424
2033	70,014,226	461,089,424	33,128,040	54,036,217	36,050,827	15,142,650	476,232,075
2034	72,989,831	476,232,075	34,391,482	54,826,228	37,281,176	16,846,430	493,078,505



Mississippi Highway Safety Patrol Retirement System
Twenty-five Year Cash Flow Projection Based on Valuation Assumptions

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





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, 2010**

GROUP	NUMBER
Retired participants and beneficiaries currently receiving benefits	696
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	53
Active Participants	<u>542</u>
Total	1,291



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)
06/30/2001#	\$259,713	\$250,621	103.6%	\$ (9,092)	\$21,972	(41.4)%
06/30/2002*	263,255	285,548	92.2	22,293	20,339	109.6
06/30/2003#	259,746	302,134	86.0	42,388	21,052	201.3
06/30/2004	256,481	316,570	81.0	60,089	22,683	264.9
06/30/2005#	253,477	335,117	75.6	81,640	22,343	365.4
06/30/2006	265,637	350,638	75.8	85,001	24,499	347.0
06/30/2007#	284,626	371,233	76.7	86,607	27,037	320.3
06/30/2008*	298,630	381,578	78.3	82,948	29,597	280.3
06/30/2009#	292,322	394,630	74.1	102,308	26,390	387.7
06/30/2010	281,088	411,277	68.3	130,189	26,353	494.0

* After change in benefit provisions.

After change in actuarial assumptions.



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 \$130,188,703 over a 30.0 year period (reflecting the impact of S.B. 2659) from the valuation date.

Annual Required Contribution (ARC)		
Valuation Date June 30	2010	2009
For Fiscal Year	2011/2012	2010/2011
UAL Payment Period (years)	30.0	29.3
Annual Required Contribution % of Payroll	35.21%	30.30%

4. Additional information as of June 30, 2010 follows.

Valuation date	6/30/2010
Actuarial cost method	Entry age
Amortization method	Level percent open
Remaining amortization period	30.0 years
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return*	8.00%
Projected salary increases [#]	5.00% – 10.52%
Cost-of-living adjustments	3.00%
*Includes price inflation at	3.50%
[#] Includes wage inflation at	4.25%



Schedule of Employer Contributions

Fiscal Year Ending June 30	Valuation date June 30	Annual Required Contribution	Percentage Contributed
2002	2000	\$3,451,781	100.0%
2003	2001	5,320,696	100.0
2004	2002	5,928,227	100.0
2005	2003	9,087,647 ¹	100.0
2006	2004	8,691,766 ²	100.0
2007	2005	10,023,287 ³	100.0
2008	2006	10,492,230 ⁴	100.0
2009	2007	11,668,004 ⁵	100.0
2010	2008	11,096,142 ⁶	100.0
2011	2009	11,385,080 ⁷	

¹ An estimated additional contribution of \$2,700,000 (11.9% of payroll) was made to the System due to SB 2659

² An estimated additional contribution of \$2,400,000 (10.7% of payroll) was made to the System due to SB 2659

³ An estimated additional contribution of \$2,600,000 (10.6% of payroll) was made to the System due to SB 2659

⁴ An estimated additional contribution of \$2,300,000 (8.5% of payroll) was made to the System due to SB 2659

⁵ An estimated additional contribution of \$2,700,000 (9.1% of payroll) was made to the System due to SB 2659

⁶ An estimated additional contribution of \$3,100,000 (11.7% of payroll) was made to the System due to SB 2659

⁷ An estimated additional contribution of \$3,400,000 (12.9% of payroll) was made to the System due to SB 2659



Solvency Tests
(\$ in Thousands)

Valuation Date	Actuarial Accrued Liabilities for				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	Net Assets Available for Benefits	(1)	(2)	(3)
6/30/2000	\$15,393	\$155,783	\$80,761	\$244,331	100%	100.0%	90.6%
6/30/2001	16,080	152,528	82,013	259,713	100	100.0	111.1
6/30/2002	16,226	186,501	82,821	263,255	100	100.0	73.1
6/30/2003	17,604	192,662	91,868	259,746	100	100.0	53.9
6/30/2004	18,352	201,573	96,645	256,481	100	100.0	37.8
6/30/2005	18,972	214,844	101,301	253,477	100	100.0	19.4
6/30/2006	19,906	222,281	108,451	265,637	100	100.0	21.6
6/30/2007	20,870	231,771	118,592	284,626	100	100.0	27.0
6/30/2008	21,371	242,265	117,942	298,630	100	100.0	29.7
6/30/2009	20,136	273,774	100,720	292,322	100	99.4	0.0
6/30/2010	20,658	284,106	106,513	281,088	100	91.7	0.0



Schedule of Active Member Valuation Data

Valuation Date	Number of Employers	Active Members			
		Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
2001	1	599	\$21,971,870	\$36,681	(2.8)%
2002	1	559	20,339,053	36,385	(0.8)
2003	1	543	21,051,942	38,770	6.6
2004	1	559	22,683,404	40,579	4.7
2005	1	540	22,342,918	41,376	2.0
2006	1	564	24,499,296	43,438	5.0
2007	1	591	27,037,063	45,748	5.3
2008	1	626	29,597,374	47,280	3.3
2009	1	570	26,389,909	46,298	(2.1)
2010	1	542	26,353,400	48,623	5.0

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

Item	Fiscal Year Ended June 30									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Beginning of Year	552	573	595	599	605	621	625	638	651	692
Added	35	33	20	27	33	32	29	42	62	22
Removed	(14)	(11)	(16)	(21)	(17)	(28)	(16)	(29)	(21)	(18)
End of Year	573	595	599	605	621	625	638	651	692	696



Schedule of Benefit Payments Added To and Removed From Rolls
Last Seven Fiscal Years

Year Ending	2004	2005	2006	2007	2008	2009	2010
Beginning of Year	\$11,592,770	\$12,111,862	\$17,189,826	\$17,821,809	\$18,722,555	\$19,798,655	\$21,994,109
Added	768,760	578,336	849,210	826,877	1,341,416	2,263,514	806,092
Removed	(249,668)	(106,467)	(650,466)	(390,154)	(739,677)	(556,046)	(450,658)
Benefit increase due to annual COLA	N/A	4,606,095	433,239	464,023	474,361	487,986	550,146
Benefit increase due to plan amendments	0	0	0	0	0	0	0
End of Year	\$12,111,862	\$17,189,826	\$17,821,809	\$18,722,555	\$19,798,655	\$21,994,109	\$22,899,689



Schedule of Average Benefit Payments

	Years of Credited Service								
	0-4	5-9	10-14	15-19	20-24	25	26-29	30	31+
July 1, 2009 to June 30, 2010									
Average Monthly Benefit				\$1,405.04		\$3,155.49	\$3,024.51	\$3,461.46	\$2,973.70
Average Final Salary				\$37,962.84		\$59,219.21	\$47,430.92	\$30,160.22	\$41,004.34
Number of Active Retirants				4		2	5	2	9
July 1, 2008 to June 30, 2009									
Average Monthly Benefit		\$466.11		\$438.86	\$1,580.07	\$3,177.63	\$3,143.57	\$4,604.35	\$3,055.97
Average Final Salary		\$33,559.84		\$16,844.95	\$38,404.11	\$61,298.36	\$59,583.98	\$75,125.92	\$52,752.04
Number of Active Retirants		3		1	7	13	21	7	10
July 1, 2007 to June 30, 2008									
Average Monthly Benefit		\$346.95	\$1,157.63	\$407.81	\$1,778.14	\$3,442.30	\$2,411.10	\$4,364.71	\$3,034.57
Average Final Salary		\$13,030.50	\$46,554.36	\$12,949.33	\$48,156.36	\$64,164.63	\$45,198.00	\$73,561.75	\$54,588.25
Number of Active Retirants		1	1	3	9	2	9	5	12
July 1, 2006 to June 30, 2007									
Average Monthly Benefit			\$213.25		\$2,107.95	\$2,246.68	\$2,536.45	\$1,044.36	\$2,257.21
Average Final Salary			\$4,971.00		\$42,893.86	\$48,745.57	\$47,312.51	\$29,283.33	\$40,152.62
Number of Active Retirants			1		7	3	13	1	4
July 1, 2005 to June 30, 2006									
Average Monthly Benefit	\$129.75		\$193.87	\$831.37	\$2,364.17	\$1,547.62	\$2,080.44	\$1,802.57	\$2,447.36
Average Final Salary	\$5,260.50		\$5,119.56	\$21,650.66	\$53,948.96	\$35,031.14	\$42,378.93	\$39,574.31	\$45,797.02
Number of Active Retirants	1		1	2	6	4	10	2	6



Schedule of Average Benefit Payments

	Years of Credited Service								
	0-4	5-9	10-14	15-19	20-24	25	26-29	30	31+
July 1, 2004 to June 30, 2005									
Average Monthly Benefit	\$1,150.68			\$138.07	\$1,558.09	\$2,117.73	\$1,585.17	\$1,410.24	\$2,819.25
Average Final Salary	\$27,616.23			\$6,627.65	\$37,085.48	\$43,821.52	\$36,481.94	\$29,669.04	\$48,744.72
Number of Active Retirants	1			1	6	5	10	3	7
July 1, 2003 to June 30, 2004									
Average Monthly Benefit	\$741.50		\$2,739.00	\$617.17	\$1,299.97	\$2,015.18	\$2,092.61	\$4,405.08	\$3,775.60
Average Final Salary	\$21,819.03		\$65,736.29	\$17,233.42	\$30,458.56	\$44,300.15	\$46,563.44	\$83,468.52	\$58,207.95
Number of Active Retirants	1		1	1	5	5	6	1	7
July 1, 2002 to June 30, 2003									
Average Monthly Benefit					\$1,783.71	\$1,603.56	\$499.87	\$841.74	\$2,538.95
Average Final Salary					\$39,252.31	\$37,178.29	\$14,087.92	\$22,852.75	\$42,139.22
Number of Active Retirants					2	9	4	3	2
July 1, 2001 to June 30, 2002									
Average Monthly Benefit	\$305.40	\$1,353.73	\$504.09	\$1,409.29	\$2,266.14	\$1,810.71	\$2,116.50	\$2,615.83	\$2,983.76
Average Final Salary	\$10,794.00	\$30,933.15	\$31,451.30	\$33,405.42	\$46,851.75	\$41,283.04	\$43,196.63	\$49,718.71	\$46,625.64
Number of Active Retirants		1	2	1	4	1	6	5	12
July 1, 2000 to June 30, 2001									
Average Monthly Benefit	\$1,061.99		\$197.92		\$1,445.71	\$1,910.68	\$1,660.35	\$3,019.26	\$2,915.11
Average Final Salary	\$29,017.96		\$33,037.59		\$30,822.37	\$39,117.01	\$35,617.17	\$50,504.81	\$50,462.39
Number of Active Retirants	1		5		6	6	7	2	8



SCHEDULE A
Development of Actuarial Value of Assets
(\$ thousands)

Valuation Date June 30:	2009	2010	2011	2012	2013	2014
A. Actuarial Value Beginning of Year	\$298,630	\$292,322				
B. Market Value End of Year	214,374	232,873				
C. Market Value Beginning of Year	276,154	214,374				
D. Cash Flow						
D1. Contributions	11,232	10,656				
D2. Other Revenue	3,208	3,985				
D3. Benefit Payments	(23,170)	(25,912)				
D4. Administrative Expenses	(181)	(172)				
D5. Investment Expenses	<u>(369)</u>	<u>(462)</u>				
D6. Net	(9,280)	(11,905)				
E. Investment Income						
E1. Market Total: B.-C.-D6.	(52,500)	30,404				
E2. Assumed Rate	8.00%	8.00%				
E3. Amount for Immediate Recognition	22,105	17,154				
E4. Amount for Phased-In Recognition	(74,605)	13,250				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	(14,921)	2,650				
F2. First Prior Year	(9,843)	(14,921)	2,650			
F3. Second Prior Year	5,631	(9,843)	(14,921)	2,650		
F4. Third Prior Year	0	5,631	(9,843)	(14,921)	2,650	
F5. Fourth Prior Year	<u>0</u>	<u>0</u>	<u>5,631</u>	<u>(9,843)</u>	<u>(14,921)</u>	<u>2,650</u>
F6. Total Recognized Investment Gain	(19,133)	(16,483)	(16,483)	(22,114)	(12,271)	2,650
G. Actuarial Value End of Year:						
A.+D6.+E3.+F6.	\$292,322	\$281,088				
H. Difference Between Market & Actuarial Values	\$(77,948)	\$(48,215)	\$(31,732)	\$(9,618)	\$2,653	\$3

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.



Asset Summary June 30, 2010 (\$ in Thousands)			
	Market Value	Book Value	Actuarial Value
1. Assets at June 30, 2009	\$214,374	\$222,760	\$292,322
2. Contributions and Misc. Revenue	14,641	14,641	14,641
3. Investment Increment	29,942	13,366	209
4. Benefit Payments	(25,912)	(25,912)	(25,912)
5. Administrative Expenses	(172)	(172)	(172)
6. Assets at June 30, 2010 (1) + (2) + (3) + (4) + (5)	\$232,873	\$224,683	\$281,088
7. Investment Increment/Mean Assets*	14.4%	6.2%	0.1%

*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 annual rates of separation from active service are as follows:

Age	Withdrawal and Vesting*	Disability			Service	Service Retirement*
		Death	Non-Duty	Duty		
25	5.5%	.03%	.09%	.01%	5	5%
30	4.0	.04	.12	.02	10	5%
35	2.5	.05	.16	.04	15	5%
40	1.0	.07	.20	.07	20	10%
45	0.5	.11	.30	.06	25	15%
50	0.1	.16	.50	.05	30	25%
55		.21	.91	.02	35	25%

* The annual rate of service retirement is 100% at age 60.

It is assumed that a member will be granted 1¾ years of service credit for unused leave at termination of employment. In addition, it is assumed that, on average, ¼ year of service credit for peace-time military service will be granted to each member.

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

Age	Merit & Seniority	Annual Rates of	
		Base (Economy)	Increase Next Year
25	2.57%	4.25%	6.82%
30	1.75	4.25	6.00
35	1.75	4.25	6.00
40	1.75	4.25	6.00
45	1.25	4.25	5.50
50	0.75	4.25	5.00
55	0.75	4.25	5.00



PAYROLL GROWTH: 4.25% per annum, compounded annually.

PRICE INFLATION: 3.50% per annum, compounded annually.

DEATH AFTER RETIREMENT: The mortality table, for post-retirement mortality, used in evaluating allowances to be paid was the 1994 Group Annuity Mortality Table. Special tables were 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: 100% married with the husband three years older than his wife.

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 market 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 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, 2009, 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 consecutive years of service producing the highest such average. “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**

Fiscal Date From	Fiscal Date To	Employer Rate	Maximum Covered Earnings*	Employee Rate	Maximum Covered Earnings*
7/1/1958	6/30/1968	13.33%		5.00%	
7/1/1968	6/30/1971	15.33		5.00	
7/1/1971	6/30/1973	18.59		5.00	
7/1/1973	6/30/1975	20.77		5.00	
7/1/1975	6/30/1978	24.65		5.00	
7/1/1978	6/30/1980	26.16		6.00	
7/1/1980	6/30/1989	26.16		6.50	
7/1/1989	6/30/1990	27.97		6.50	
7/1/1990	6/30/2003	26.16		6.50	
7/1/2003	6/30/2006	28.16		6.50	
7/1/2006	6/30/2008	30.30		6.50	
7/1/2008		30.30		7.25	

*Maximum covered earnings equal wages paid, not to exceed wages paid to the Commissioner of the Department of Public Safety.

Effective July 1, 2004, additional contributions will be made to the System as a result of the enactment of Senate Bill No. 2659. The additional contributions are estimated to be \$3,400,000 annually based on current experience.



BENEFITS

Superannuation Retirement

Condition for Retirement

- (a) A retirement allowance is payable to any member who retires and has attained age 55 and completed at least five years of membership service, or has attained age 45 and completed at least 20 years of creditable service, or has completed 25 years of creditable service regardless of age.

Any member who has attained age 60 shall be retired forthwith. Effective January 1, 2000, the Commissioner of Public Safety is authorized to allow a member who has attained age 60 to continue in active service. Such continued service may be authorized annually until the member attains age 65.

- (b) Any member who withdraws from service prior to his or her attainment of age 55 but after having completed five or more years of creditable service is entitled to receive, in lieu of a refund of his or her accumulated contributions, a retirement allowance commencing at age 55.

Amount of Allowance

The annual retirement allowance payable to a retired member is equal to:

1. A member's annuity which is the actuarial equivalent of the member's accumulated contributions at the time of his or her retirement, plus
2. An employer's annuity which, together with the member's annuity, is equal to 2-1/2% of his or her average compensation for each year of membership service, plus
3. A prior service annuity equal to 2-1/2% of average compensation for each year of prior service.

The aggregate amounts of (2) and (3) above shall not exceed 100% of average compensation, regardless of service, for retirements on or after January 1, 2000; 85% for retirements prior to January 1, 2000.

The minimum allowance for both service and disability retirement based on the following table for each year of creditable service, reduced if necessary as indicated below.



Service	Monthly Benefit
Less than 10 years	\$250
10-15 years	\$300
15 or more years	\$500

The annual retirement allowance payable to a member who retires under condition (a) above prior to age 55 is computed in accordance with the above formula except that the employer's annuity and prior service annuity are reduced 3% for each year of age below age 55, or 3% for each year of service below 25 years of creditable service, whichever is less.

Disability Retirement

Condition for Retirement

A retirement allowance is payable to any member who is not eligible for a service retirement benefit but who becomes totally and permanently disabled, either physically or mentally, regardless of creditable service, if the disability is due to causes in the performance of duty. If the disability is not in the performance of duty, the member must have completed at least 5 years of membership service to be eligible for retirement.

Amount of Allowance

The annual disability retirement allowance payable is equal to the greater of 50% of his or her average salary for the 2 years immediately preceding retirement, or a retirement allowance as calculated under the provisions for superannuation retirement.

Death Prior to Retirement

Upon the death of a highway patrolman who is eligible for service retirement, family benefits are payable equal to those which would have been payable had he been retired on his or her date of death.

Upon the death of a highway patrolman either in the line of duty or as a result of an accident occurring in the line of duty, the following benefits are payable:

- a) benefit to the spouse equal to one-half the member's average compensation.
- b) a benefit to a dependent child payable to age 19 (23 if a full-time student) equal to one-fourth of the member's average compensation for one child or one-half for two or more children.

Death After Retirement

Upon the death of a highway patrolman who has retired for service or disability and who has not elected any other optional form of benefit, his widow or her widower is eligible for a benefit equal to 50% of his or her retirement allowance and each child (but not more than 2) who has not attained age 19 (23 if a full-time student) is eligible for a benefit equal to 25% of his or her retirement allowance. The benefit to the widow is



payable for life and to children until they attain age 19 (23 if a full-time student) or for life if they are totally and permanently disabled.

Refund of Contributions

Upon a member's termination of employment for any reason before retirement, his or her accumulated contributions, together with regular interest thereon, are refunded. Upon the death of a member who is not eligible for any other death benefit, his or her accumulated contributions, together with regular interest thereon, are paid to his or her beneficiary.

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 or her death 50% of his or her benefit is payable to the spouse for the spouse's lifetime, and 25% of his or her benefit is payable to each dependent child (maximum of 2 children) under age 19 (23 if a full-time student).

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 or her beneficiary.

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

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

Option 4A. Upon his or her death, 50% of his or her 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 or his or her beneficiary 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 HSPRS 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.

A member who elects either Option 2 or Option 4A has the 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 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 this 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 60, plus (b) 3% compounded for each year thereafter beginning with the fiscal year in which the member turns age 60.

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.

Those members who retired on or before July 1, 1999 received an ad hoc benefit increase in the amount of \$3.50 per month per each full fiscal year of retirement through June 30, 1999 plus \$1.00 per month for each year of credited service. The benefits were increased on July 1, 1999.



CONTRIBUTIONS

Members contribute 7-1/4 percent of compensation and the employer contributes that additional amount necessary to fund the benefits outlined above on a full actuarial reserve funding basis.



**SCHEDULE D
DETAILED TABULATIONS OF THE DATA**

Retirants & Beneficiaries as of June 30, 2010
Tabulated by Year of Retirement

Year of Retirement	No.	Total Annual Benefits, excluding COLA	COLA	Total Annual Benefits	Average Monthly Total Benefit
2010	12	\$454,581	\$0	\$454,581	\$3,157
2009	51	2,196,742	0	2,196,742	3,589
2008	20	790,917	20,363	811,280	3,380
2007	16	631,679	38,196	669,875	3,489
2006	21	720,355	58,317	778,672	3,090
2005	16	511,047	59,734	570,781	2,973
2004	27	934,644	144,208	1,078,852	3,330
2003	11	308,676	53,845	362,521	2,746
2002	25	753,800	163,739	917,539	3,058
2001	22	657,500	157,352	814,852	3,087
2000	17	494,613	132,427	627,040	3,074
1999	15	412,529	126,856	539,385	2,997
1998	20	578,139	194,744	772,883	3,220
1997	28	779,430	285,040	1,064,470	3,168
1996	33	925,349	378,703	1,304,052	3,293
1995	24	583,510	255,922	839,432	2,915
1994	11	277,041	134,283	411,324	3,116
1993	15	319,385	157,495	476,880	2,649
1992	14	312,067	166,240	478,307	2,847
1991	4	71,467	43,932	115,399	2,404
1990	14	218,728	140,718	359,446	2,140
1989	5	72,493	49,828	122,321	2,039
1988	6	98,282	71,856	170,138	2,363
1987	2	27,988	20,352	48,340	2,014
1986	126	2,334,591	1,824,423	4,159,014	2,751
1985	5	70,549	64,356	134,905	2,248
1984	15	235,212	222,303	457,515	2,542
1983	7	93,824	93,881	187,705	2,235
1982	14	164,891	180,104	344,995	2,054
1981	12	108,600	118,328	226,928	1,576
1980	19	179,904	225,209	405,113	1,777
1979	11	93,503	112,454	205,957	1,560
1978	8	54,147	62,422	116,569	1,214
1977	5	36,658	47,746	84,404	1,407
1976	6	41,222	60,676	101,898	1,415
1975	13	64,473	94,206	158,679	1,017
1974 & Prior	26	118,824	212,070	330,894	1,061
TOTAL	696	\$16,727,360	\$6,172,328	\$22,899,688	\$2,742



Schedule of Retired Members by Type of Benefit

Benefits Payable June 30, 2010

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	1			1	1										
101 – 200	4			4	4										
201 – 300	9			9	9										
301 – 400	32	1		31	31		1								
401 – 500	16		3	13	13				3						
501 – 600	18	2		16	16				2						
601 – 700	17	2	1	14	14				3						
701 – 800	23	5	1	17	17		1		5		1				
801 – 900	24	1	1	22	22				2						
901 – 1,000	21	2	1	18	18				3						
Over 1,000	531	476	11	44	54	1	47	2	415	12	10		25	13	77
Totals	696	489	18	189	199	1	49	2	433	12	11	0	25	13	77

*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** (Reflects reduced monthly benefit)

**Included in other options



Mississippi Highway Safety Patrol Retirement System

Retirant and Beneficiary Information June 30, 2010
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 Benefits
Under 20					8	\$47,508	8	\$47,508
20 – 24					2	12,609	2	12,609
25 – 29					1	18,506	1	18,506
30 – 34								
35 – 39					2	34,737	2	34,737
40 – 44			1	\$37,798	2	26,319	3	64,117
45 – 49	13	\$456,061	2	45,677	1	50,869	16	552,607
50 – 54	72	2,766,947	1	26,198	2	38,459	75	2,831,604
55 – 59	88	3,356,563	1	16,506	4	78,106	93	3,451,175
60 – 64	115	4,634,428	4	110,329	16	319,052	135	5,063,809
65 – 69	81	3,225,014	2	41,372	27	564,780	110	3,831,166
70 – 74	53	2,045,011	2	34,835	27	564,634	82	2,644,480
75 – 79	30	1,171,050	4	70,403	31	531,626	65	1,773,079
80 – 84	22	933,122	1	16,453	30	479,832	53	1,429,407
85 – 89	15	573,840			26	431,038	41	1,004,878
90 – 94					9	124,204	9	124,204
95								
96								
97								
98					1	15,802	1	15,802
99								
100 & Over								
Totals	489	\$19,162,036	18	\$399,571	189	\$3,338,081	696	\$22,899,688

Average Age: 66.4 years
Average Age at Retirement: 49.7 years



Mississippi Highway Safety Patrol Retirement System

Total Active Member Data as of June 30, 2010
 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									
20 – 24	9							9	\$348,872
25 – 29	52	3						55	2,176,641
30 – 34	51	28	7					86	3,458,217
35 – 39	31	26	50	7				114	4,975,788
40 – 44	9	20	25	39	4			97	4,568,491
45 – 49	2	4	13	16	45	4		84	4,585,939
50 – 54		1	4	3	25	36	6	75	4,806,481
55 – 59	1				9	5	7	22	1,432,971
60 – 64									
65 – 69									
70 – 74									
75 – 79									
80 – 84									
85 – 89									
90 – 94									
95									
96									
97									
98									
99									
100 & Over									
Totals	155	82	99	65	83	45	13	542	\$26,353,400

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

Age: 40.8 years
 Service: 13.0 years
 Annual Pay: \$48,623



SCHEDULE E

**MISSISSIPPI HSPRS
ANALYSIS OF FINANCIAL EXPERIENCE**

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

Type of Activity	\$ Gain (or Loss) For Year Ending 6/30/2010	\$ Gain (or Loss) For Year Ending 6/30/2009
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	\$ 422.4	\$ 1,457.7
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	(50.9)	94.4
Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	21.5	(4.7)
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	396.7	(505.6)
Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	(1,607.7)	7,243.9
New Members. Additional unfunded accrued liability will produce a loss.	0.0	0.0
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(23,181.1)	(21,300.0)
Death After Retirement. If retirants live longer than assumed, there is a loss. If not as long, a gain.	(1,541.8)	(865.0)
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>(2,620.2)</u>	<u>(2,383.7)</u>
Gain (or Loss) During Year From Financial Experience	\$ (28,161.1)	\$ (16,263.0)
Non-Recurring Items. Adjustments for plan amendments, assumption changes, or method changes.	<u>0.0</u>	<u>(4,123.4)</u>
Composite Gain (or Loss) During Year	\$ <u>(28,161.1)</u>	\$ <u>(20,386.4)</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 on 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.

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.