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PERS
of MISSISSIPPI

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

Prepared as of June 30, 2015





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

October 21, 2015

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 actuarial accrued liability amortization period beginning July 1, 2015. The results may not be applicable for other purposes.

The date of the valuation was June 30, 2015.

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. While not verifying data at the source, the actuary performed tests for consistency and reasonableness. 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 the results 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. We have reviewed the actuarial methods, including the asset valuation method, and continue to believe they are appropriate for the purpose of determining employer contribution levels.

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 21, 2015
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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 'Edward Macdonald'.

Edward A. Macdonald, ASA, FCA, MAAA
President

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

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

A handwritten signature in blue ink, appearing to read 'Jonathan T. Craven'.

Jonathan T. Craven, ASA, EA, FCA, MAAA
Senior Actuary

EAM/EJK/JTC:mjn



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**REPORT ON THE ANNUAL VALUATION OF THE
PUBLIC EMPLOYEES' RETIREMENT SYSTEM OF MISSISSIPPI
PREPARED AS OF JUNE 30, 2015**

SECTION I – SUMMARY OF PRINCIPAL RESULTS

1. This report, prepared as of June 30, 2015, 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 any benefit increases granted to retirees as of July 1, 2015. Based on the funding policy adopted by the Board in 2012, the employer contribution rate is to be set at 15.75% of annual compensation and the amortization period calculated on an open basis.

SUMMARY OF PRINCIPAL RESULTS

VALUATION DATE	June 30, 2015	June 30, 2014
Active members included in valuation		
Number	157,215	161,360
Annual compensation	\$ 5,904,827,181	\$ 5,834,686,655
Retirees		
Number	96,338	93,504
Annual allowances	\$ 2,116,322,652	\$ 1,998,322,954
Assets		
Market related actuarial value	\$ 24,387,161,000	\$ 22,569,940,000
Market value	\$ 24,838,857,000	\$ 24,877,119,000
Unfunded actuarial accrued liability	\$ 15,977,422,522	\$ 14,445,347,760
Funded Ratio	60.4%	61.0%
Fiscal Year End	June 30, 2017	June 30, 2016
Employer contribution rate		
Normal Cost*	2.13%	1.92%
Accrued liability	<u>13.62</u>	<u>13.83</u>
Total	15.75%	15.75%
Anticipated accrued liability payment period	33.9 years	29.2 years
Unfunded actuarial accrued liability based on market value of assets	\$ 15,525,726,522	\$ 12,138,168,760
Funded Ratio	61.5%	67.2%
Payment Period	32.1 years	22.5 years

* Includes load for administrative expenses. See page 10 for more contribution rate detail.



2. The valuation balance sheet showing the results of the valuation is provided in Section III.
3. Comments on the valuation results are given in Section IV, comments on the experience and actuarial gains and losses during the valuation year are provided in Section V and the rates of contribution payable by employers are provided in Section VI.
4. The following changes in actuarial assumptions or methods were made since the last valuation:
 - The withdrawal rates, pre-retirement mortality rates, disability retirement rates and service retirement rates have been revised to more closely reflect the actual experience of the System.
 - The post-retirement mortality tables have been changed.
 - The price inflation assumption has been reduced from 3.50% to 3.00%. As the price inflation assumption is part of our building block approach to determining salary scale, the total salary scale was reduced accordingly at all service intervals.
 - The percentage of deferred vested participants assumed to choose to forfeit their accrued benefit and receive their employee contributions with interest has been changed from 30% to 40%.
 - The real rate of return net of investment expenses has been changed from 4.50% to 4.75%. Due to this change and the change in price inflation, the investment return assumption has been changed from 8.00% to 7.75%.
 - In addition, pension software enhancements allowed for more precise programming of some benefit provisions.
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. The Governmental Accounting Standards Board issued Statement No. 67 (GASB 67) in June 2012. The effective date is for plan years beginning after June 15, 2013, which is the year ending June 30, 2014 for the Retirement System. GASB 67 replaces GASB 25 for plans and a separate GASB 67 report will be prepared for the Board. For continuity and informational purposes, we have included GASB 25 disclosure information in Section VIII.



Public Employees' Retirement System of Mississippi
Comparative Schedule

Valuation Date June 30	Active Members				Retired Lives				Valuation Results (\$ millions)		
	Number	Payroll (\$ millions)	Average Salary	% increase from previous year	Number	Active/ Retired Ratio	Annual Benefits (\$ millions)	Benefits as % of Payroll	Accrued Liability	Valuation Assets	UAAL
2006	158,091	\$ 4,972	\$ 31,450	3.2%	66,757	2.4%	1,117.2	22.5%	24,928	\$ 18,321	\$ 6,607
2007	162,804	5,196	31,917	1.5	70,756	2.3	1,214.4	23.4	26,863	19,792	7,071
2008	165,733	5,545	33,456	4.8	73,540	2.3	1,305.9	23.6	28,535	20,815	7,720
2009	167,122	5,832	34,896	4.3	76,143	2.2	1,395.9	23.9	30,595	20,598	9,997
2010	164,896	5,764	34,953	0.2	79,168	2.1	1,498.7	26.0	31,400	20,143	11,257
2011	161,676	5,685	35,161	0.6	83,115	1.9	1,627.8	28.6	32,654	20,315	12,339
2012	162,311	5,858	36,090	2.6	86,829	1.9	1,752.6	29.9	34,493	19,993	14,500
2013	161,744	5,824	36,005	(0.2)	90,214	1.8	1,874.7	32.2	35,543	20,491	15,052
2014	161,360	5,835	36,159	0.4	93,504	1.7	1,998.3	34.2	37,015	22,570	14,445
2015	157,215	5,905	37,559	3.9	96,338	1.6	2,116.3	35.8	40,364	24,387	15,977



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, 2015 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	113	30,425	\$1,090,118,458	\$35,830	44.6	10.6
State Universities	9	18,151	928,826,800	51,172	43.4	9.6
Public Schools	145	62,762	2,237,050,354	35,643	44.3	10.5
Community/Junior Colleges	15	6,086	286,804,447	47,125	47.0	11.8
Counties	82	13,744	455,989,117	33,177	47.4	9.8
Municipalities	241	16,913	567,478,696	33,553	44.2	10.0
Other Political Subdivisions	263	9,134	338,559,309	37,066	44.0	8.4
Total in PERS	868	157,215	\$5,904,827,181	\$37,559	44.6	10.3

The total number of active members includes 83,583 vested members and 73,632 non-vested members.

Retired Lives

Type of Benefit Payment	No.	Annual Benefits	Group Averages	
			Benefit	Age
Retirement	79,156	\$1,833,925,816	\$23,169	70.3
Disability	6,352	112,954,032	17,782	61.8
Survivor	10,830	169,442,804	15,646	66.6
Total in PERS	96,338	\$2,116,322,652	\$21,968	69.3



Deferred Vested/Inactive Lives

Type of Member	No.	Deferred Benefits	Outstanding Refunds
Deferred Vested - Benefit Provided	17,046	\$ 107,411,799	N/A
Deferred Vested – Missing Benefit	1,959	N/A	\$ 88,867,412
Inactive	118,021	N/A	182,105,096
Total in PERS	137,026	\$ 107,411,799	\$ 270,972,508

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, 2015 and, for comparison purposes, as of the immediately preceding valuation date of June 30, 2014. 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, 2015	June 30, 2014
ASSETS		
Current actuarial value of assets:		
Annuity Savings Account	\$ 5,379,226,373	\$ 5,277,944,192
Annuity Reserve	4,841,772,660	4,503,913,118
Employers' Accumulation Account	<u>14,166,161,967</u>	<u>12,788,082,690</u>
Total current assets	\$ 24,387,161,000	\$ 22,569,940,000
Future member contributions to Annuity Savings Account	\$ 3,743,507,077	\$ 3,974,506,069
Prospective contributions to Employer's Accumulation Account		
Normal contributions	\$ 790,295,939	\$ 746,323,917
Unfunded actuarial accrued liability contributions	<u>15,977,422,522</u>	<u>14,445,347,760</u>
Total prospective contributions	\$ 16,767,718,461	\$ 15,191,671,677
Total assets	<u>\$ 44,898,386,538</u>	<u>\$ 41,736,117,746</u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 24,012,624,465	\$ 22,033,588,306
Present value of benefits payable on account of active members	19,397,775,674	18,465,110,813
Present value of benefits payable on account of inactive members for service rendered before the valuation date	<u>1,487,986,399</u>	<u>1,237,418,627</u>
Total liabilities	<u>\$ 44,898,386,538</u>	<u>\$ 41,736,117,746</u>



**BREAKDOWN OF TOTAL AND ACCRUED LIABILITIES
AS OF JUNE 30, 2015**

	Total Liability	Accrued Liability
Active Members		
Retirement	\$ 16,235,627,446	\$ 13,666,122,858
Death	145,625,683	96,042,892
Disability	516,235,364	298,313,228
Termination	2,500,287,181	803,493,680
Total	\$ 19,397,775,674	\$ 14,863,972,658
Retirees		
Retirement	\$ 21,294,180,007	\$ 21,294,180,007
Survivor	1,562,763,778	1,562,763,778
Disability	1,155,680,680	1,155,680,680
Total	\$ 24,012,624,465	\$ 24,012,624,465
Deferred Vested Members	1,123,776,208	1,123,776,208
Inactive Members	364,210,191	364,210,191
Total Actuarial Values	\$ 44,898,386,538	\$ 40,364,583,522
Actuarial Value of Assets		24,387,161,000
Unfunded Actuarial Accrued Liability		\$ 15,977,422,522



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, 2015.

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 \$5,379,226,373. The assets credited to the Annuity Reserve were \$4,841,772,660 and the assets credited to the Employer's Accumulation Account totaled \$14,166,161,967. Current actuarial assets as of the valuation date equaled the sum of these three funds, \$24,387,161,000. Future member contributions to the Annuity Savings Account were valued to be \$3,743,507,077. Prospective contributions to the Employer's Accumulation Account were calculated to be \$16,767,718,461 of which \$790,295,939 is attributable to service rendered after the valuation date (normal contributions) and \$15,977,422,522 is attributable to service rendered before the valuation date (unfunded actuarial accrued liability contributions).

Therefore, the balance sheet shows the present value of current and future assets of the System to be \$44,898,386,538 as of June 30, 2015.

Total Liabilities

The present value of benefits payable on account of presently retired members and beneficiaries totaled \$24,012,624,465 as of the valuation date. The present value of future benefit payments on behalf of active members amounted to \$19,397,775,674. In addition, the present value of benefits for inactive members, due to service rendered before the valuation date, was calculated to be \$1,487,986,399.

Therefore, the balance sheet shows the present value for all prospective benefit payments under the System to be \$44,898,386,538 as of June 30, 2015.

Section 25-11-123(a)(1) of State law requires that active members contribute 9.00% 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. Based on the funding policy adopted by the Board in October, 2012, the employer rate is set at 15.75% of annual compensation and the amortization period calculated on an open basis. Therefore, the amortization period for the June 30, 2015 valuation is 33.9 years, compared to 29.2 years for the last valuation.

The primary reason for the increase in the amortization period is the change in actuarial assumptions following an experience study covering the years July 1, 2010 through June 30, 2014. The increase was slightly offset due to the investment gain on an actuarial value basis. See Schedule E for a complete analysis of the Financial Experience.



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, 2015 is shown below.

		<u>\$ millions</u>
(1)	UAAL* as of June 30, 2014	\$ 14,445.3
(2)	Total Normal cost from last valuation	623.7
(3)	Total Employee and Employer Contributions	1,554.4
(4)	Interest accrual: $[(1) + (2)] \times .08 - [(3) \times .04]$	<u>1,143.3</u>
(5)	Expected UAAL before changes: (1) + (2) – (3) + (4)	14,657.9
(6)	Change due to plan amendments	0.0
(7)	Change due to new actuarial assumptions or methods	<u>1,821.2</u>
(8)	Expected UAAL after changes: (5) + (6) + (7)	\$ 16,479.1
(9)	Actual UAAL as of June 30, 2015	\$ 15,977.4
(10)	Gain/(loss): (8) – (9)	\$ 501.7
(11)	Gain/(loss) as percent of actuarial accrued liabilities at start of year (\$37,015.3)	1.4%

*Unfunded actuarial accrued liability.

Valuation Date June 30	Actuarial Gain/(Loss) as a % of Beginning Accrued Liabilities
2010	(3.1)%
2011	(3.4)
2012	(5.7)
2013	(1.2)
2014	2.6
2015	1.4



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 2016/2017 fiscal year and a comparison to the previous valuation results.

Contribution for	2016/2017 Fiscal Year	2015/2016 Fiscal Year
Normal Cost:		
Service retirement benefits	9.29%	9.34%
Disability benefits	0.47	0.43
Survivor benefits	<u>0.11</u>	<u>0.12</u>
Total	9.87%	9.89%
Member Contributions:	9.00%	9.00%
Less future refunds	<u>(1.03)</u>	<u>(0.80)</u>
Available for benefits	7.97%	8.20%
Employer Normal Cost	1.90%	1.69%
Administrative Expense Load	0.23%	0.23%
Unfunded Actuarial Accrued Liabilities (33.9 year level % of payroll amortization*)	13.62%	13.83%
Total Computed Employer Contribution Rate	15.75%	15.75%

*Amortization period a year ago was 29.2 years.



The components of the change in the computed unfunded actuarial accrued liability amortization period from 29.2 years to 33.9 years are as follows:

Previously Reported Period	29.2 years
Change due to:	
Normal amortization	(1.0)
Actuarial experience	(0.8)
Assumption/Method changes	6.7
Plan amendments	0.0
Contribution experience	(0.2)
Computed Period	33.9 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.

The following projections assume an 7.75% investment return and salary increases of 3.75% each year in the future. Due to the funding policy, all future contribution rates are assumed to remain at 15.75% of payroll.

Public Employees' Retirement System of Mississippi
Twenty-five Year Cash Flow Projection



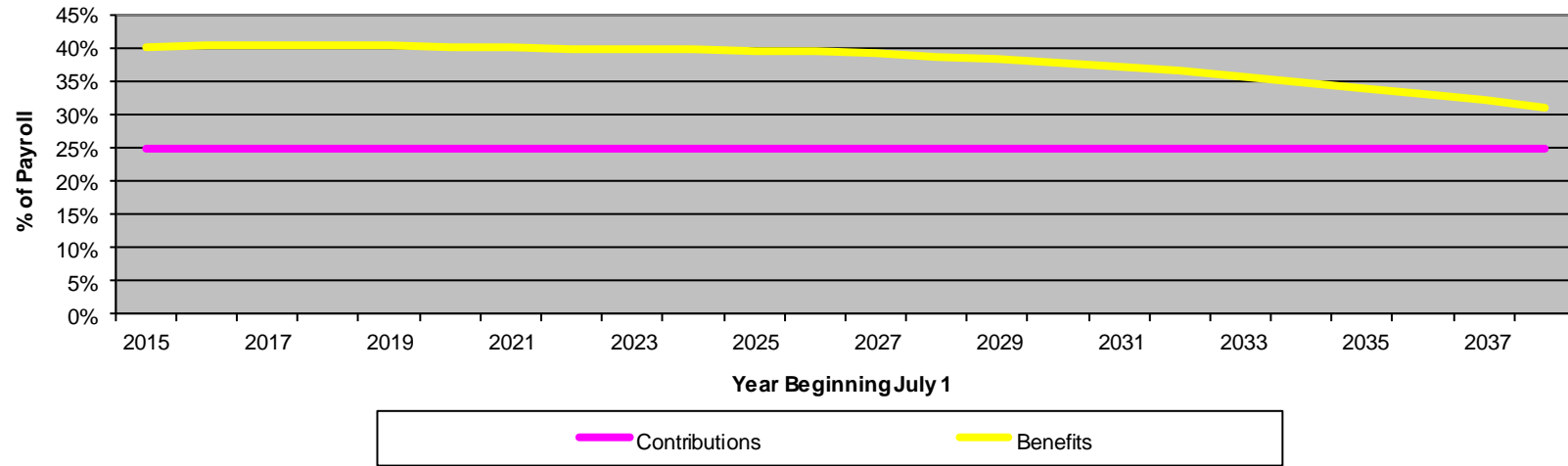
Year Beginning July 1	Valuation Payroll	Market Value of Assets Balance July 1	Contributions	Projected Benefit Payments*	Expected Investment Return	Cash Flow	Market Value of Assets Balance June 30	Year Ending June 30
2015	6,254,239,869	24,838,857,000	1,547,924,368	2,509,895,676	1,888,430,559	926,459,251	25,765,316,251	2016
2016	6,488,773,864	25,765,316,251	1,605,971,531	2,612,764,060	1,958,526,736	951,734,206	26,717,050,458	2017
2017	6,732,102,884	26,717,050,458	1,666,195,464	2,724,813,843	2,030,315,356	971,696,977	27,688,747,435	2018
2018	6,984,556,742	27,688,747,435	1,728,677,794	2,823,364,148	2,104,250,316	1,009,563,962	28,698,311,397	2019
2019	7,246,477,620	28,698,311,397	1,793,503,211	2,920,191,877	2,181,274,572	1,054,585,906	29,752,897,303	2020
2020	7,518,220,531	29,752,897,303	1,860,759,581	3,010,409,025	2,262,131,851	1,112,482,406	30,865,379,709	2021
2021	7,800,153,801	30,865,379,709	1,930,538,066	3,114,441,670	2,347,046,655	1,163,143,052	32,028,522,761	2022
2022	8,092,659,569	32,028,522,761	2,002,933,243	3,215,484,993	2,436,100,839	1,223,549,089	33,252,071,850	2023
2023	8,396,134,303	33,252,071,850	2,078,043,240	3,337,774,647	2,529,131,794	1,269,400,387	34,521,472,237	2024
2024	8,710,989,339	34,521,472,237	2,155,969,861	3,459,249,960	2,625,854,299	1,322,574,200	35,844,046,437	2025
2025	9,037,651,439	35,844,046,437	2,236,818,731	3,576,198,217	2,726,981,049	1,387,601,563	37,231,648,001	2026
2026	9,376,563,368	37,231,648,001	2,320,699,434	3,689,547,186	2,833,399,581	1,464,551,829	38,696,199,830	2027
2027	9,728,184,494	38,696,199,830	2,407,725,662	3,797,791,650	2,946,095,483	1,556,029,495	40,252,229,325	2028
2028	10,092,991,413	40,252,229,325	2,498,015,375	3,900,581,947	3,066,212,409	1,663,645,837	41,915,875,162	2029
2029	10,471,478,591	41,915,875,162	2,591,690,951	3,998,779,979	3,194,972,986	1,787,883,958	43,703,759,120	2030
2030	10,864,159,038	43,703,759,120	2,688,879,362	4,091,432,690	3,333,706,472	1,931,153,144	45,634,912,264	2031
2031	11,271,565,002	45,634,912,264	2,789,712,338	4,176,857,138	3,483,956,780	2,096,811,980	47,731,724,245	2032
2032	11,694,248,690	47,731,724,245	2,894,326,551	4,255,141,678	3,647,460,947	2,286,645,820	50,018,370,064	2033
2033	12,132,783,016	50,018,370,064	3,002,863,796	4,325,359,727	3,826,133,161	2,503,637,230	52,522,007,294	2034
2034	12,587,762,379	52,522,007,294	3,115,471,189	4,386,501,743	4,022,122,119	2,751,091,565	55,273,098,859	2035
2035	13,059,803,468	55,273,098,859	3,232,301,358	4,437,578,678	4,237,832,112	3,032,554,792	58,305,653,650	2036
2036	13,549,546,098	58,305,653,650	3,353,512,659	4,477,971,096	4,475,928,405	3,351,469,968	61,657,123,619	2037
2037	14,057,654,077	61,657,123,619	3,479,269,384	4,505,419,971	4,739,405,678	3,713,255,091	65,370,378,710	2038
2038	14,584,816,105	65,370,378,710	3,609,741,986	4,516,446,528	5,031,725,119	4,125,020,577	69,495,399,288	2039
2039	15,131,746,709	69,495,399,288	3,745,107,310	4,512,181,528	5,356,723,933	4,589,649,715	74,085,049,003	2040

* Includes expected administrative expenses.

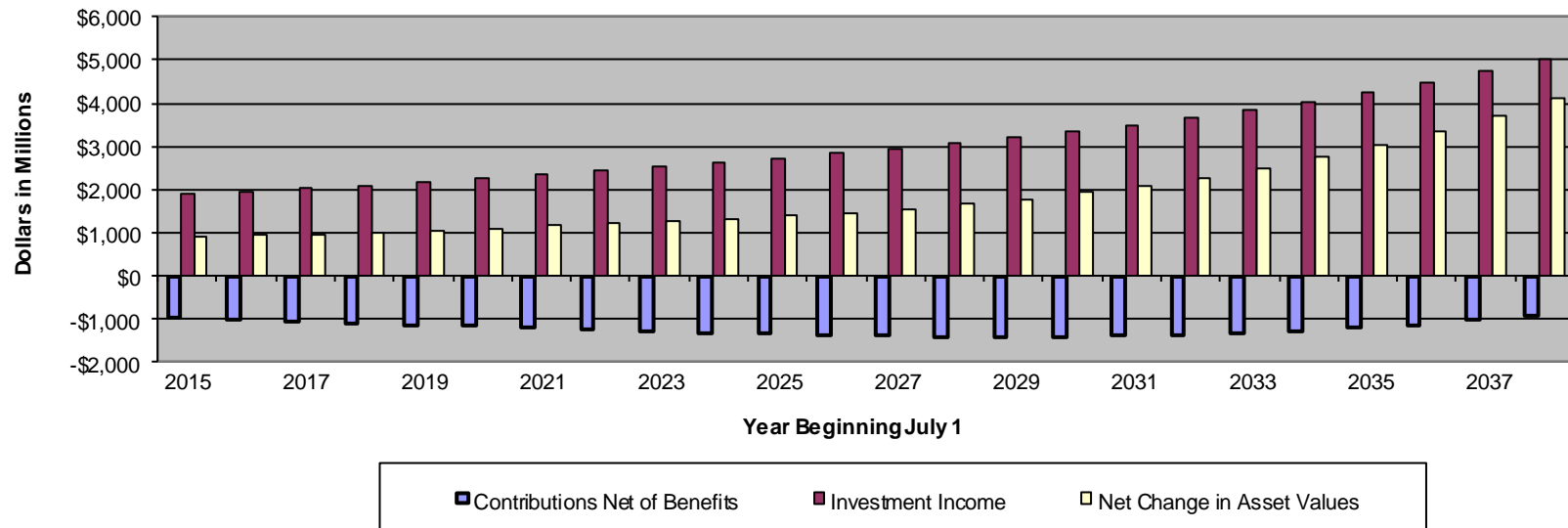


Public Employees' Retirement System of Mississippi 25 Year Cash Flow Projection Based on Valuation Assumptions

Projected Contributions and Benefits Expressed as Percents of Active Member Payroll



Net Change in Asset Values





SECTION VIII – SUPPLEMENTAL DISCLOSURE INFORMATION

1. Governmental Accounting Standards Board (GASB) Statements No. 67 and 68 replaced Statement No. 25 and 27 for plan years beginning after June 15, 2013. The information required under the new GASB Statements will be issued in separate reports. The following supplemental disclosure information is provided for informational purposes only. 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, 2015**

GROUP	NUMBER
Retired participants and beneficiaries currently receiving benefits	96,338
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	137,026
Active Participants	<u>157,215</u>
Total	390,579



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)
06/30/06	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
06/30/08*	20,814,720	28,534,694	72.9	7,719,974	5,544,705	139.2
06/30/09*#	20,597,581	30,594,546	67.3	9,996,965	5,831,864	171.4
06/30/10*	20,143,426	31,399,988	64.2	11,256,562	5,763,556	195.3
06/30/11#	20,315,165	32,654,465	62.2	12,339,300	5,684,624	217.1
06/30/12	19,992,797	34,492,873	58.0	14,500,076	5,857,789	247.5
06/30/13#	20,490,555	35,542,848	57.7	15,052,293	5,823,578	258.5
06/30/14	22,569,940	37,015,288	61.0	14,445,348	5,834,687	247.6
06/30/15#	24,387,161	40,364,584	60.4	15,977,423	5,904,827	270.6

* 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 \$15,977,422,522 over a 30.0 year period from the valuation date.

Annual Required Contribution (ARC)		
Valuation Date June 30	2015	2014
For Fiscal Year	2016/2017	2015/2016
Employer contribution rate		
Normal Cost*	2.13%	1.92%
Accrued liability	<u>14.52</u>	<u>13.83</u>
Total	16.65%	15.75%
Anticipated accrued liability payment period	30.0 years	29.2 years

*Estimated budgeted administrative expenses are included in the normal cost rate.



4. Additional information as of June 30, 2015 as follows.

Valuation date	6/30/2015
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*	7.75%
Projected salary increases#	3.75% – 19.0%
*Includes price inflation at	3.00%
#Includes wage inflation at	3.75%
Cost of living adjustments	3.00%

Schedule of Employer Contributions

Fiscal Year Ending June 30	Valuation date June 30	Annual Required Contribution	Percentage Contributed
2007	2005	\$ 621,496,708	90%
2008	2006	636,546,125	97
2009	2007	657,047,535	100
2010	2008	699,823,624	100
2011	2009	687,015,898	100
2012	2010	735,021,911	100
2013	2011	835,320,765	100
2014	2012	921,872,394	100
2015	2013	950,470,456	100
2016	2014	930,010,281	



Solvency Tests
(\$ in Thousands)

Actuarial Accrued Liabilities for							
Valuation Date	(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	Portions of Accrued Liabilities Covered by Assets		
					(1)	(2)	(3)
6/30/06	\$3,955,066	\$12,228,330	\$8,745,068	\$18,321,063	100.0%	100.0%	24.4%
6/30/07	3,788,781	13,342,531	9,731,324	19,791,564	100.0	100.0	27.3
6/30/08	3,991,804	14,306,528	10,236,362	20,814,720	100.0	100.0	24.6
6/30/09	4,235,466	15,665,712	10,693,368	20,597,581	100.0	100.0	6.5
6/30/10	4,266,621	16,763,455	10,369,912	20,143,426	100.0	94.7	0.0
6/30/11	4,356,556	18,001,718	10,296,191	20,315,165	100.0	88.7	0.0
6/30/12	4,463,252	19,547,367	10,482,254	19,992,797	100.0	79.4	0.0
6/30/13	5,053,888	20,789,551	9,699,409	20,490,555	100.0	74.3	0.0
6/30/14	5,277,944	22,033,588	9,703,756	22,569,940	100.0	78.5	0.0
6/30/15	5,379,226	24,012,624	10,972,734	24,387,161	100.0	79.2	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
2006	861	158,091	\$4,971,973,661	\$31,450	3.2%
2007	861	162,804	5,196,294,899	31,917	1.5
2008	863	165,733	5,544,704,937	33,456	4.8
2009	866	167,122	5,831,863,534	34,896	4.3
2010	868	164,896	5,763,556,195	34,953	0.2
2011	872	161,676	5,684,624,214	35,161	0.6
2012	870	162,311	5,857,789,376	36,090	2.6
2013	873	161,744	5,823,577,978	36,005	(0.2)
2014	871	161,360	5,834,686,655	36,159	0.4
2015	868	157,215	5,904,827,181	37,559	3.9

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

Item	Fiscal Year Ended June 30									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Beginning of Year	63,939	66,757	70,756	73,540	76,143	79,168	83,115	86,829	90,214	93,504
Added	5,360	6,218	5,335	4,965	5,747	6,566	6,569	6,276	6,159	5,907
Removed	(2,542)	(2,219)	(2,551)	(2,362)	(2,722)	(2,619)	(2,855)	(2,891)	(2,869)	(3,073)
End of Year	66,757	70,756	73,540	76,143	79,168	83,115	86,829	90,214	93,504	96,338



**Schedule of Annual Benefit Payments Added to and Removed From Rolls
Last Seven Fiscal Years**

Year Ending	2009	2010	2011	2012	2013	2014	2015
Beginning of Year	\$1,305,908,320	\$1,395,939,879	\$1,498,662,976	\$1,627,813,430	\$1,752,606,759	\$1,874,720,385	\$1,998,322,954
Added	87,403,913	103,950,841	127,035,815	125,378,708	120,592,399	120,190,296	117,113,206
Removed	(33,633,667)	(40,358,965)	(39,518,227)	(45,787,704)	(47,237,330)	(48,955,768)	(55,158,128)
Benefit increase due to annual COLA	36,261,313	39,131,221	41,632,866	45,202,325	48,758,557	52,368,041	56,044,620
Benefit increase due to plan amendments	0	0	0	0	0	0	0
End of Year	\$1,395,939,879	\$1,498,662,976	\$1,627,813,430	\$1,752,606,759	\$1,874,720,385	\$1,998,322,954	\$2,116,322,652



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, 2014 to June 30, 2015									
Average Monthly Benefit	\$395.98	\$466.12	\$688.17	\$977.30	\$1,346.27	\$1,833.91	\$1,989.13	\$2,217.36	\$2,898.93
Average Final Salary	\$26,731	\$30,165	\$33,585	\$37,938	\$40,770	\$46,461	\$48,614	\$50,908	\$57,019
Number of Active Retirants	67	532	898	774	693	494	1,072	230	1,147
July 1, 2013 to June 30, 2014									
Average Monthly Benefit	\$582.94	\$448.56	\$712.04	\$998.80	\$1,383.89	\$1,871.16	\$1,992.51	\$2,283.20	\$2,954.14
Average Final Salary	\$31,286	\$31,009	\$35,356	\$37,962	\$40,947	\$47,490	\$48,732	\$51,456	\$57,022
Number of Active Retirants	94	657	945	815	663	505	1,146	232	1,102
July 1, 2012 to June 30, 2013									
Average Monthly Benefit	\$430.24	\$443.74	\$694.71	\$963.61	\$1,421.74	\$1,924.91	\$2,016.94	\$2,187.80	\$2,931.36
Average Final Salary	\$28,954	\$30,707	\$34,404	\$36,876	\$41,550	\$47,768	\$48,862	\$49,470	\$56,341
Number of Active Retirants	115	800	901	740	758	496	1,121	224	1,121
July 1, 2011 to June 30, 2012									
Average Monthly Benefit	\$503.45	\$425.55	\$655.76	\$984.40	\$1,325.25	\$1,823.47	\$1,956.67	\$2,283.30	\$2,938.26
Average Final Salary	\$27,325	\$29,424	\$32,872	\$37,561	\$40,246	\$46,050	\$47,965	\$51,720	\$56,263
Number of Active Retirants	146	861	867	779	736	501	1,138	260	1,281
July 1, 2010 to June 30, 2011									
Average Monthly Benefit	\$490.21	\$444.82	\$637.24	\$974.84	\$1,347.49	\$1,791.74	\$1,996.32	\$2,176.08	\$2,910.64
Average Final Salary	\$26,297	\$29,798	\$31,063	\$36,095	\$39,613	\$45,296	\$48,620	\$49,084	\$55,608
Number of Active Retirants	247	837	808	741	743	456	1,050	245	1,439



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	\$320.17	\$386.23	\$620.46	\$905.46	\$1,239.55	\$1,717.84	\$1,897.84	\$2,174.78	\$2,833.34
Average Final Salary	\$23,675	\$27,192	\$30,890	\$33,781	\$37,426	\$43,924	\$46,537	\$49,426	\$54,049
Number of Active Retirants	220	765	773	641	627	428	867	237	1,189
July 1, 2008 to June 30, 2009									
Average Monthly Benefit	\$395.82	\$373.84	\$581.94	\$874.55	\$1,314.05	\$1,672.61	\$1,865.25	\$2,115.68	\$2,821.82
Average Final Salary	\$26,414	\$26,280	\$29,481	\$32,707	\$37,865	\$42,352	\$45,058	\$47,003	\$53,867
Number of Active Retirants	192	703	669	572	535	378	732	223	961
July 1, 2007 to June 30, 2008									
Average Monthly Benefit	\$400.20	\$382.62	\$586.58	\$900.09	\$1,221.01	\$1,738.22	\$1,844.70	\$2,070.82	\$2,726.23
Average Final Salary	\$25,527	\$25,618	\$28,649	\$33,139	\$36,537	\$44,534	\$45,142	\$48,053	\$53,245
Number of Active Retirants	201	690	703	614	586	386	855	226	1,074
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



SCHEDULE A

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

Valuation Date June 30:	2014	2015	2016	2017	2018	2019
A. Actuarial Value Beginning of Year	\$20,490,555	\$22,569,940				
B. Market Value End of Year	24,877,119	24,838,857				
C. Market Value Beginning of Year	21,686,911	24,877,119				
D. Cash Flow						
D1. Contributions	1,519,202	1,554,387				
D2. Other Revenue	0	0				
D3. Benefit Payments	(2,221,375)	(2,338,596)				
D4. Administrative Expenses	(12,837)	(13,523)				
D5. Investment Expenses	<u>(81,720)</u>	<u>(87,089)</u>				
D6. Net	(796,730)	(884,821)				
E. Investment Income						
E1. Market Total: B.-C.-D6.	3,986,938	846,559				
E2. Assumed Rate	8.00%	8.00%				
E3. Amount for Immediate Recognition	1,788,072	2,045,349				
E4. Amount for Phased-In Recognition	2,198,866	(1,198,790)				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	439,773	(239,758)				
F2. First Prior Year	201,569	439,773	(239,758)			
F3. Second Prior Year	(311,731)	201,569	439,773	(239,758)		
F4. Third Prior Year	566,840	(311,731)	201,569	439,773	(239,758)	
F5. Fourth Prior Year	<u>191,592</u>	<u>566,840</u>	<u>(311,731)</u>	<u>201,569</u>	<u>439,773</u>	<u>(239,758)</u>
F6. Total Recognized Investment Gain	1,088,043	656,693	89,853	401,584	200,015	(239,758)
G. Actuarial Value End of Year:						
A.+D6.+E3.+F6.	\$22,569,940	\$24,387,161				
H. Difference Between Market & Actuarial Values	\$(2,307,179)	\$(451,696)	\$(361,843)	\$39,741	\$239,758	\$0

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, 2015 (\$ in Thousands)			
	Market Value	Book Value	Actuarial Value
1. Assets at June 30, 2014	\$24,877,119	\$19,428,940	\$22,569,940
2. Contributions and Misc. Revenue	1,554,387	1,554,387	1,554,387
3. Investment Increment	846,559	2,001,293	2,702,042
4. Benefit Payments	(2,338,596)	(2,338,596)	(2,338,596)
5. Expenses	(100,612)	(100,612)	(100,612)
6. Assets at June 30, 2015 (1) + (2) + (3) + (4) + (5)	\$24,838,857	\$20,545,412	\$24,387,161
7. Investment Increment/Mean Assets*	3.46%	10.54%	12.21%

*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: 7.75% per annum, compounded annually (net of investment expense only).

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

Age	Annual Rates of					
	Withdrawal and Vesting*		Death**		Disability**	
	Male	Female	Male	Female	Male	Female
20	23.00%	28.00%	0.0159%	0.0054%	0.012%	0.011%
25	16.00	16.50	0.0346	0.0058	0.017	0.014
30	10.00	10.50	0.0318	0.0073	0.020	0.018
35	7.50	8.00	0.0337	0.0096	0.044	0.022
40	6.25	6.50	0.0390	0.0132	0.120	0.090
45	5.75	5.50	0.0513	0.0220	0.240	0.160
50	5.75	5.50	0.1859	0.0369	0.320	0.230
55	5.75	5.50	0.1466	0.0557	0.520	0.400
60	5.75	5.50	0.2391	0.0805	0.520	0.400
65	5.75	5.50	0.4076	0.1214	0.200	0.150
70	5.75	5.50	0.6921	0.2043	0.200	0.150
74	5.75	5.50	1.0147	0.3098	0.200	0.150

Age	Annual Rates of Service Retirements			
	Male		Female	
	Under 25 Years of Service***	25 Years of Service and Over***	Under 25 Years of Service***	25 Years of Service and Over***
45		19.0%		16.0%
50		14.0		12.0
55		18.0		18.0
60	10.0%	20.0	12.5%	22.0
62	20.0	33.0	18.0	36.0
65	23.0	30.0	27.5	42.0
70	19.0	25.0	23.0	23.0
75	100.0	100.0	100.0	100.0

* For all ages, rates of 32% for 1st year of employment and 23% for 2nd year.

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

*** For Tier 4 members, 30 years of service.



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

Service	Merit & Seniority	Annual Rates of Base (Economy)	Increase Next Year
0	15.25%	3.75%	19.00%
1	5.25	3.75	9.00
2	2.75	3.75	6.50
3	1.75	3.75	5.50
4	1.25	3.75	5.00
5-7	0.75	3.75	4.50
8-27	0.25	3.75	4.00
28 and Over	0.00	3.75	3.75

PAYROLL GROWTH: 3.75% per annum, compounded annually.

ADMINISTRATIVE EXPENSES: 0.23% of payroll.

TIMING OF DECREMENTS AND PAY INCREASES: Middle of Year.

DEATH AFTER RETIREMENT: The mortality table, for post-retirement mortality, used in evaluating allowances to be paid is the RP-2014 Healthy Annuitant Blue Collar Table projected with Scale BB to 2016 with males rates set forward one year. The RP-2014 Disabled Retiree Table set forward 5 years for males and 4 years for females was used for the period after disability retirement. This assumption is used to measure the probabilities of each benefit payment being made after retirement. Mortality improvement is anticipated under this assumption as recent mortality experience shows actual deaths 9.3% greater than expected under the selected table for non-disability mortality and 6.3% greater than expected under the selected table for disability mortality.

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

UNUSED SICK LEAVE: 0.50 years at retirement.

MILITARY SERVICE: 0.25 years at retirement.

DEFERRED VESTEDS: 40% of vested participants will forfeit their accrued benefit and receive their employee contributions with interest.



VALUATION METHOD: The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement, disability or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future interest earnings rate (currently 7.75%). The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to current benefit recipients to obtain the present value of all expected benefits payable to the present group of members and survivors.

The employer contributions required to support the benefits of PERS are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.

The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made for pension benefits to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of the average new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.

The unfunded actuarial accrued liability is determined by subtracting the current assets and the present value of prospective employer normal contributions and member contributions from the present value of expected benefits to be paid from the PERS. The accrued liability contribution amortizes the balance of the unfunded actuarial accrued liability over a period of years from the valuation date.

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 July 1, 2015, as interpreted in preparing the actuarial valuation.

DEFINITIONS

Average Compensation	Average annual covered earnings of an employee during the four highest years of service.
Covered Earnings	Gross salary not in excess of the maximum amount on which contributions were required.
Fiscal Year	Year commencing on July 1 and ending June 30.
Credited Service	Service while a contributing member plus additional service as described below.
Unused Sick and Vacation Leave	Service credit is provided at no charge to members for unused sick and vacation time that has accrued at the time of retirement.
Additional Service	Additional service credit may be granted for service prior to February 1, 1953, active duty military service, out-of-state service, professional leave and non-covered and retroactive service



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
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	6/30/08	11.85	150,000	7.25	150,000
7/1/08	6/30/09	11.85	230,000	7.25	230,000
7/1/09	6/30/10	12.00	245,000	7.25	245,000
7/1/10	6/30/11	12.00	245,000	9.00	245,000
7/1/11	12/31/11	12.00	245,000	9.00	245,000
1/1/12	6/30/12	12.93	245,000	9.00	245,000
7/1/12	6/30/13	14.26	250,000	9.00	250,000
7/1/13	6/30/14	15.75	255,000	9.00	255,000
7/1/14	6/30/15	15.75	260,000	9.00	260,000
7/1/15	6/30/16	15.75	265,000	9.00	265,000

*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 eight years* of membership service. A retirement allowance may also be paid upon the completion of 25 years of creditable service for members hired prior to July 1, 2011 or upon the completion of 30 years of creditable service for members hired on or after July 1, 2011.
- (b) Any member who withdraws from service prior to his or her attainment of age 60 and who has completed at least eight years* of membership service is entitled to receive, in lieu of a refund of his or her accumulated contributions, a retirement allowance commencing at age 60.

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 or her retirement, plus
2. For a member hired prior to July 1, 2011, an employer's annuity which, together with the member's annuity, is equal to 2% of his or her 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.
3. For a member hired on or after July 1, 2011, an employer's annuity which, together with the member's annuity, is equal to 2% of his or her average compensation for each of the first 30 years of creditable service plus 2-1/2% for each year of creditable service over 30 years. There will be an actuarial reduction for each year of creditable service below 30 or for each year of age below age 65, whichever is less.

For members hired prior to July 1, 2011, the minimum allowance is \$120 for each year of creditable service.

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 eight or more years* of membership service.

* four years for those who entered the system before July 1, 2007



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 or her 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

For members hired prior to July 1, 2011, 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.

For members hired prior to July 1, 2011, 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.

Ordinary Death Benefit

Condition for Benefit

Upon the death of a member who has completed at least eight years* of membership service, a benefit is payable, in lieu of a refund of the member's accumulated contributions, to his or her spouse, if said spouse has been married to the member for not less than one year.

*four years for those who entered the system before July 1, 2007.

Amount of Allowance

The annual retirement allowance payable to the lawful spouse of a vested member who dies is equal to the greater of (i) the allowance that would have been payable had the member retired and elected Option 2, reduced by an actuarially determined factor based on the number of years the member lacked in qualifying for unreduced retirement benefits, or (ii) a lifetime benefit equal to 20% of the deceased member's average compensation, but not less than \$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.

Return of Contributions

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

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

Interest is currently credited to the member's account at 3.5% per annum.



Normal Form of Benefit

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

Optional Benefits

A member upon retirement may elect to receive his or her 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 4. Upon his or her death, 75% of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a 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 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.

A member who elects Option 2, Option 4, or Option 4A at retirement may revert to the normal form of benefit if the designated beneficiary predeceases the retired member or if the retired member divorces the designated beneficiary. A member who elects the normal form of benefit or Option 1 at retirement may select Option 2, Option 4, or Option 4A to provide beneficiary protection to a new spouse if married after retirement.



A member hired prior to July 1, 2011 and who has at least 28 years of creditable service* or a member hired on or after July 1, 2011 who has at least 33 years of creditable 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 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.

* or at least age 63 with four years of membership service for those who entered the system before July 1, 2007.

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*.

*Age 60 for members hired on or after July 1, 2011

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, 2015
Tabulated by Year of Retirement**

Year of Retirement	No.	Total Annual Benefits, excluding COLA	COLA	Total Annual Benefits	Average Monthly Total Benefit
2015	2,299	\$45,924,906	\$5,290	\$45,930,196	\$1,665
2014	5,724	115,212,350	279,190	115,491,540	1,681
2013	5,891	115,310,324	3,381,064	118,691,388	1,679
2012	5,540	110,696,199	6,726,835	117,423,034	1,766
2011	5,500	106,724,125	9,659,070	116,383,195	1,763
2010	5,548	110,275,972	13,658,609	123,934,581	1,862
2009	4,415	78,807,245	12,228,231	91,035,476	1,718
2008	4,560	85,871,674	16,357,514	102,229,188	1,868
2007	4,156	75,126,805	16,785,241	91,912,046	1,843
2006	4,298	74,719,375	19,363,069	94,082,444	1,824
2005	4,028	67,692,134	20,012,154	87,704,288	1,814
2004	4,091	71,199,789	23,830,501	95,030,290	1,936
2003	3,681	60,849,305	22,631,551	83,480,856	1,890
2002	3,773	62,182,349	25,694,792	87,877,141	1,941
2001	3,696	58,544,641	26,733,097	85,277,738	1,923
2000	3,144	51,545,539	25,824,512	77,370,051	2,051
1999	2,486	37,494,766	20,500,097	57,994,863	1,944
1998	2,489	37,304,355	22,053,137	59,357,492	1,987
1997	2,399	32,576,769	20,874,615	53,451,384	1,857
1996	2,551	36,368,153	25,161,324	61,529,477	2,010
1995	1,975	25,661,400	18,998,883	44,660,283	1,884
1994	1,797	22,329,450	17,559,434	39,888,884	1,850
1993	1,722	20,291,461	17,053,674	37,345,135	1,807
1992	2,051	26,796,494	24,017,989	50,814,483	2,065
1991	1,569	19,012,926	18,090,681	37,103,607	1,971
1990	1,216	14,034,139	14,266,781	28,300,920	1,939
1989	931	8,991,700	9,640,130	18,631,830	1,668
1988	716	6,648,304	7,583,054	14,231,358	1,656
1987	631	5,520,207	6,557,429	12,077,636	1,595
1986	1,083	11,306,345	14,713,089	26,019,434	2,002
1985	446	3,988,642	5,289,287	9,277,929	1,734
1984	402	3,237,632	4,464,814	7,702,446	1,597
1983	279	1,978,974	2,870,706	4,849,680	1,449
1982	244	1,669,068	2,555,507	4,224,575	1,443
1981	232	1,464,268	2,328,753	3,793,021	1,362
1980 & Prior	775	3,869,490	7,345,273	11,214,763	1,206
Totals	96,338	\$1,611,227,275	\$505,095,377	\$2,116,322,652	\$1,831



Schedule of Retired Members by Type of Benefit

Benefits Payable June 30, 2015

Amount of Monthly Benefit**	Number of Rets.	Ret. Type 1*	Ret. Type 2*	Ret. Type 3*
\$1-\$100	2,276	1,791	10	475
101-200	5,245	3,974	100	1,171
201-300	5,465	3,966	249	1,250
301-400	5,186	3,724	348	1,114
401-500	4,875	3,522	383	970
501-600	4,348	3,162	421	765
601-700	3,978	2,893	429	656
701-800	3,784	2,794	460	530
801-900	3,742	2,842	436	464
901-1,000	3,594	2,758	403	433
Over 1,000	53,845	47,730	3,113	3,002
Totals	96,338	79,156	6,352	10,830

*Type of Retirement

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

**Reflects reduced benefit



Schedule of Retired Members by Option

Benefits Payable June 30, 2015

Amount of Monthly Benefit**	Number of Rets.	Life	Option 1	Option 2	Option 3	Option 4	Option 4A	Option 4B	Option 4C*	Option 5	PLSO 1 Year*	PLSO 2 Years*	PLSO 3 Years*
\$1-\$100	2,276	1,685	72	289	10	4	31	180	5	5	52	40	403
101-200	5,245	3,867	188	640	32	16	83	390	22	29	111	95	520
201-300	5,465	4,122	186	603	25	26	98	371	37	34	123	100	478
301-400	5,186	3,795	200	621	26	13	123	386	52	22	113	118	410
401-500	4,875	3,551	171	621	21	31	154	312	72	14	128	98	363
501-600	4,348	3,132	138	561	27	18	127	325	97	20	145	98	369
601-700	3,978	2,869	142	496	25	17	145	268	151	16	124	97	287
701-800	3,784	2,647	147	501	19	19	182	237	164	32	126	96	299
801-900	3,742	2,512	153	524	21	28	206	274	205	24	134	90	345
901-1,000	3,594	2,437	118	510	23	34	184	247	215	41	131	69	342
Over 1,000	53,845	32,771	1,717	9,116	351	641	4,689	4,315	1,768	245	2,819	2,423	10,119
Totals	96,338	63,388	3,232	14,482	580	847	6,022	7,305	2,788	482	4,006	3,324	13,935

Option Selected

- Life - Return of Contributions
- Opt. 1 - Return of Member's Annuity
- Opt. 2 - 100% Survivorship
- Opt. 3 - 50%/50% Dual Survivorship
- Opt. 4 - 75% Survivorship
- Opt. 4A - 50% Survivorship
- Opt. 4B - Years Certain & Life
- Opt. 4C - Social Security Leveling *
- Opt. 5 - Pop-Up
- PLSO - Partial Lump Sum Option*

*Included in other options

** Reflects reduced benefit



Public Employees' Retirement System of Mississippi

**Retirant and Beneficiary Information June 30, 2015
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					593	\$2,565,317	593	\$2,565,317
20 – 24					172	1,004,478	172	1,004,478
25 – 29			1	\$12,016	75	703,915	76	715,931
30 – 34			19	262,726	126	1,232,213	145	1,494,939
35 – 39			69	997,460	157	1,688,202	226	2,685,662
40 – 44	14	354,936	209	3,542,619	239	2,338,363	462	6,235,918
45 – 49	538	13,029,581	394	8,084,875	343	3,853,844	1,275	24,968,300
50 – 54	2,419	65,588,454	769	15,011,873	488	5,643,764	3,676	86,244,091
55 – 59	5,752	168,639,513	1,192	23,105,741	800	11,195,238	7,744	202,940,492
60 – 64	14,171	350,109,483	1,412	25,208,438	995	15,544,162	16,578	390,862,083
65 – 69	19,584	450,869,180	1,131	19,024,345	1,257	21,623,410	21,972	491,516,935
70 – 74	14,515	325,477,331	601	10,141,654	1,323	22,642,570	16,439	358,261,555
75 – 79	9,953	213,096,099	343	4,830,410	1,404	26,052,002	11,700	243,978,511
80 – 84	6,424	133,715,028	147	1,923,793	1,346	25,354,587	7,917	160,993,408
85 – 89	3,862	78,041,320	40	531,828	968	17,694,924	4,870	96,268,072
90 – 94	1,473	27,571,022	21	223,063	430	8,385,726	1,924	36,179,811
95	147	2,368,278	3	31,916	44	857,925	194	3,258,119
96	76	1,319,277			25	446,250	101	1,765,527
97	66	1,131,711			18	227,908	84	1,359,619
98	59	982,292	1	21,275	7	74,868	67	1,078,435
99	43	607,198			7	110,627	50	717,825
100 & Over	60	1,025,113			13	202,511	73	1,227,624
Totals	79,156	\$1,833,925,816	6,352	\$112,954,032	10,830	\$169,442,804	96,338	\$2,116,322,652

Average Age: 69.3 years
Average Age at Retirement: 59.2 years
Average Age at Death: 80.4 years
Average Years Since Retirement: 11.2 years



Public Employees' Retirement System of Mississippi

**Total Active Members as of June 30, 2015
Tabulated by Attained Ages and Years of Service**

Attained	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	228	6						234	\$3,318,796
20 – 24	6,396	64						6,460	153,050,960
25 – 29	12,339	2,764	47					15,150	468,842,256
30 – 34	8,342	7,392	2,470	55				18,259	641,726,082
35 – 39	6,787	5,048	5,600	1,892	47			19,374	746,608,151
40 – 44	5,791	4,536	4,204	4,566	1,758	52		20,907	839,587,305
45 – 49	4,919	3,868	3,543	3,367	3,609	1,249	25	20,580	821,086,402
50 – 54	4,379	3,506	3,451	3,343	2,890	2,442	771	20,782	816,418,551
55 – 59	3,440	3,189	2,991	2,916	2,659	1,996	1,435	18,626	735,038,708
60	504	522	521	478	427	351	291	3,094	123,557,826
61	470	475	466	430	346	280	270	2,737	111,535,040
62	386	400	366	338	315	237	217	2,259	92,729,736
63	290	349	310	283	239	175	178	1,824	75,043,617
64	236	326	258	227	191	138	135	1,511	61,206,777
65	178	244	207	131	139	107	114	1,120	47,094,672
66	159	171	132	123	102	67	65	819	32,854,088
67	130	152	133	95	78	60	78	726	30,553,311
68	125	135	122	98	51	45	78	654	27,353,939
69	76	71	64	58	40	32	36	377	14,049,091
70 & Over	303	331	339	254	160	132	203	1,722	63,171,873
Totals	55,478	33,549	25,224	18,654	13,051	7,363	3,896	157,215	\$5,904,827,181

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

Age: 44.6 years
 Service: 10.3 years
 Entry Age: 34 years
 Annual Pay: \$37,559



SCHEDULE E

**MISSISSIPPI PERS
ANALYSIS OF FINANCIAL EXPERIENCE**

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

Type of Activity	\$ Gain (or Loss) For Year Ending 6/30/15	\$ Gain (or Loss) For Year Ending 6/30/14
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	\$ 14.6	\$ (98.5)
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	(17.2)	(24.5)
Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(3.2)	(5.7)
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	(65.6)	(99.3)
Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	2.6	251.8
New Members. Additional unfunded accrued liability will produce a loss.	(34.9)	(31.0)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	841.3	1,183.8
Death After Retirement. If retirants live longer than assumed, there is a loss. If not as long, a gain.	(18.9)	(35.8)
Other. Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, etc.	<u>(217.0)</u>	<u>(227.8)</u>
Gain (or Loss) During Year From Financial Experience	\$ 501.7	\$ 913.0
Non-Recurring Items. Adjustments for plan amendments, software changes, assumption changes, or method changes.	<u>(1,821.2)</u>	<u>0.0</u>
Composite Gain (or Loss) During Year	\$ (1,319.5)	\$ 913.0



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.

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.

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.