SC Budget and Control Board

SOUTH CAROLINA RETIREMENT SYSTEMS

Retirement System for Members of the General Assembly of the State of South Carolina (GARS) Annual Actuarial Valuation as of July 1, 2009

May 10, 2010

State Budget and Control Board
South Carolina Retirement System
P.O. Box 11960
Columbia, SC 29211-1960

Members of the Board:

The laws governing the operation of the Retirement System for Members of the General Assembly of the State of South Carolina (GARS) provide that actuarial valuations of the assets and liabilities of the System shall be made annually. We have conducted the annual actuarial valuation of the Retirement System as of July 1, 2009 and the results of the valuation are contained in the following report. The results of this valuation apply to the fiscal year beginning July 1, 2011 and ending June 30, 2012 (FY 2012).

A funding objective of the System is that required contribution will remain relatively level over time. As these contribution rates are set by the Board, the valuation is used to determine the contribution requirement that is necessary to fund the annual normal cost and fully amortize the unfunded actuarial accrued liability with annual payments over a 25-year period beginning July 1, 2002.

In performing the valuation, we relied on data supplied by the System and performed limited tests on the data for consistency and reasonableness. All benefits provided under the South Carolina Code of Laws are included in the valuation. The normal cost and accrued liability of the System are developed using the entry age normal cost method. Under this method, the normal cost is level percent of payroll necessary to fully fund the expected benefits to be earned over the career of each individual active member. The normal cost is partially funded with active member contributions with the remainder funded by employer contributions.

In determining the System's liabilities, future events, such as investment returns, salary increases, deaths, retirements, etc., are anticipated based upon the set of actuarial assumptions as approved by the Board. The assets of the system for valuation purposes are developed using an asset smoothing technique which spreads the recognition of the unexpected portion market related gains and losses over a period of years with the goal of dampening the impact of market volatility upon valuation results.

An unfunded accrued liability exists in the amount equal to the excess of accrued liability over valuation assets. The amortization period of the System is fixed at 25 years from July 1, 2002. The July 1, 2009 valuation determines the contribution required for the fiscal year beginning July 1, 2011 based upon a 16-year amortization period. The System's current assets together with the scheduled contributions are expected to fully fund the System's liabilities by June 30, 2027. In our opinion, GARS continues to operate on an actuarially sound basis.

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; 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.

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

Respectfully submitted,

John J. Garrett, ASA, FCA, MAAA	Edward A. Macdonald, ASA, FCA, MAAA
Principal and Consulting Actuary	President

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Section I: Board Summary

The table below summarizes the results of the July 1, 2009 actuarial valuation as compared with the prior year. Note that all dollar amounts are shown in thousands.

Table I-1: Comparative Summary of Principal Results

Valuation Date (Applicable to FY)	**July 1, 2009 (FY 2012)**	**July 1, 2008 (FY 2011)**
Membership		
Number of:		
Positions	170	170
Special Contributors	28	21
Retirees and Beneficiaries	353	342
Inactive Members	40	47
Total	591	580
Valuation Payroll (assumes all positions filled)	$3,854	$3,854
Statutorily Required Contribution		
Member (Percent of Compensation)	10.00%	10.00%
Employer (for Applicable FY)	$2,532	$2,414
Assets		
Market Value	$31,505	$44,208
Actuarial Value	$45,891	$47,189
Return on Market Value	(22.2%)	(2.5%)
Return on Actuarial Value	4.3%	7.6%
Ratio of Actuarial to Market Value	145.7%	106.7%
Actuarial Information		
Employer Normal Cost %	7.76%	8.54%
Unfunded Actuarial Accrued Liability (UAAL)	$22,600	$21,933
Funded Ratio	67.0%	68.3%
Amortization Period	16 years	17 years
Change in Unfunded Actuarial Accrued Liability		
Beginning of Year Unfunded Actuarial Accrued Liability	$21,933	$24,089
Interest on Unfunded Actuarial Liability	1,755	1,746
Amortization Payment with Interest	(2,169)	(2,362)
Salary Experience	N/A	N/A
Other Liability Experience	(603)	2,987
Benefit Changes	0	0
Assumption Changes	0	(4,385)
Asset Experience	1,684	(142)
Total Increase / (Decrease)	667	(2,156)
End of Year Unfunded Actuarial Accrued Liability	$22,600	$21,933

Section I: Board Summary

Summary of Key Findings

The annual employer contribution for the System in the fiscal year ending June 30, 2012 (FY 2012) is $2,532,000. This is an increase to the employer contribution requirement of $118,000 from the prior valuation. The funding method for GARS determines the employer contribution required to fund the annual normal cost plus an amount to fully amortize the unfunded actuarial accrued liability (UAAL) by June 30, 2027 (25 years from July 1, 2002).

The employer normal cost contribution as a percent of valuation payroll decreased from 8.54% to 7.76%. Due primarily to investment losses, the unfunded actuarial accrued liability increased from $21.9 million to $22.6 million. This has resulted in an increase to the amortization payment required from $2.085 million for FY 2011 to $2.233 million for FY 2012. We note the following key findings:

- The UAL grew by $1.755 million due to interest and decreased by $2.169 million due to the amortization payment.

- The System experienced an actuarial loss on plan assets of $1.684 million as a result of investment return on the actuarial value of assets being less than the assumed rate. Table III-3 provides the calculation of the investment loss for this year.

- The System experienced a net actuarial gain $0.603 million on plan liabilities due to non-investment related experience. Table IV-4 provides the reconciliation of the UAAL.

Section II of the report provides summarized information on the membership data used in the valuation. Section III of the report covers the System's assets and Section IV of the report covers the System's liabilities. The results of the valuation are provided in Section V of the report and the accounting information is in Section VI. The appendices provide additional information on: A) the System members; B) the actuarial assumptions and methods; and C) the summary of plan provisions. It is important to note that all information contained in this report for periods prior to July 1, 2009 were produced by a prior actuarial consulting firm.

Section II: Membership Data

Data regarding the membership of the System for use in the valuation were furnished by the Retirement Systems. The following table summarizes the membership data as of July 1, 2009 and is compared with that reported for the prior year.

Table II-1: Summary of Membership Data

	July 1, 2009	July 1, 2008
Active Members		
Total Number of Positions	170	170
Total Annual Compensation	$3,854	$3,854
Number of Special Contributors	28	21
Total Annual Compensation	$631	$470
Retirees and Beneficiaries		
Number of Service Retirements	274	267
Total Annual Benefit Payments	$5,322	$5,135
Number of Disability Retirements	1	1
Total Annual Benefit Payments	$15	$15
Number of Beneficiaries	78	74
Total Annual Benefit Payments	$1,188	$1,136
Inactive Members		
Number of Non-vested Inactive Members	22	36
Number of Vested Inactive Members	18	11

All dollar amounts are in thousands.

Section III: System Assets

The following tables provide information on the System's assets and cash flow.

Table III-1: Market Value Reconciliation and Cash Flow	July 1, 2009	July 1, 2008
1. Beginning of Year Market Value of Assets	$44,208	$48,546
Income		
2. Employer Contributions	$2,495	$2,440
3. Member Contributions	706	712
Total Contributions	$3,201	$3,152
4. Investment Income (net of expenses)	($9,444)	($1,173)
Disbursements		
5. Benefit Payments	$6,463	$6,311
6. Transfers	($3)	$6
7. Net Change in Market Value of Assets (2 + 3 + 4 - 5 - 6)	($12,703)	($4,338)
8. End of Year Market Value of Assets (1 + 7)	$31,505	$44,208
Approximate Rate of Return on Market Value of Assets	(22.2%)	(2.5%)
Net Cash Flow (Contributions less Disbursements)	($3,259)	($3,165)
Cash Flow as a % of Average Market Value	(8.6%)	(6.8%)

All dollar amounts are in thousands.

A mature System such as GARS is expected to exhibit negative net cash flow as the number of members receiving benefit payments becomes a larger portion of total membership. The investment loss on market value is primarily attributable for the increase in this measure from last year. The negative net cash flow of GARS is significantly larger than typical mature plans and may require future increases in contributions as a greater portion of the annual investment returns are used to pay benefits. We will continue to monitor the cash flow requirement of the System.

Development of Actuarial Value of Assets

The Actuarial Value of Assets represents a "smoothed" value developed with the purpose to dampen the impact of market volatility on the assets used in determining valuation results. The Actuarial Value of Assets has been calculated by spreading the recognition of excess investment income over ten years (five years for income prior to July 1, 2007). The amount of excess investment income in each year is the difference between expected and actual market value investment income. Table III-2 provides the calculation of the amount of the current year market value excess investment income to be phased-in as well as the total amount of deferred excess investment income from the current and prior years calculated in the development of the actuarial value of assets.

Table III-2: Development of Actuarial Value of Assets

Calculation of Current Year Excess Investment Income	
1. Market Value of Assets at Beginning of Year	$44,208
2. Total Net Cash Flow During the Year (Table III-1 Net Cash Flow)	(3,259)
3. Market Value of Assets at End of Year	31,505
4. Actual Investment Income During the Year Based on Market Value	(9,444)
5. Expected Earnings for the Year	
a. Market Value of Assets, Beginning of Year (1 x 8.00%)	3,537
b. Net Cash Flow (2 x 8.00% x .5)	(130)
c. Total (a + b)	3,407
6. Current Year Excess Investment Income (4 – 5)	($12,851)
Calculation of Total Amount of Deferred Excess Investment Income	
7. Amounts of Excess Investment Income from Current and Prior Years	

Valuation Year	Excess Investment Income	Percent Deferred	Amount Deferred
2009	($12,851)	90%	($11,566)
2008	(4,578)	80%	(3,662)
2007	2,715	40%	1,086
2006	(1,220)	20%	(244)
Total Amount of Deferred Excess Investment Income			($14,386)

8. Actuarial Value of Assets as of July 1, 2009 (3 - 7)	$45,891
Approximate Rate of Return on Actuarial Value of Assets	4.3%

All dollar amounts are in thousands.

The actuarial valuation assumes the investment income on the assets of the System is 8.00% annually. This assumption is based upon the reasonable long-term expected return on the assets. In each year, the System will experience actuarial gains and losses due to the actual investment return of the assets. Table III-3 provides the calculation of the gain or loss due to the investment experience on the actuarial value of assets.

Table III-3: Calculation of Actuarial Investment Gain/(Loss)

1. Actuarial Value of Assets at Beginning of Year	$47,189
2. Total Net Cash Flow (Table III-2(2))	(3,259)
3. Expected Return on Actuarial Value of Assets (1 x 8.00% + 2 x .5 x 8.00%)	3,645
4. Expected Actuarial Value of Assets at End of Year (1 + 2 + 3)	47,575
5. Actual Actuarial Value of Assets at End of Year (Table III-2(8))	45,891
6. Actuarial Gain/(Loss) Due to Investment Experience (5 - 4)	($1,684)

All dollar amounts are in thousands.

As recommended in the latest experience study (covering the 5 year period ending June 30, 2007), the Board moved to adopt an increase to the asset smoothing period from 5 to 10 years for gains and losses experienced after June 30, 2007. The change to a longer asset smoothing period had the purpose of adjusting for the additional expected volatility of returns due to less restrictive asset allocation and the expansion of allowable asset classes in which the system can now invest. Maintaining a restriction on the asset smoothing method, such as the corridor, is contrary to the implementation of an extended smoothing period.

Section IV: System Liabilities

The present value of benefits is the value as of the valuation date of all future benefits expected to be paid to current members of the System. Table IV-1 presents the present value of benefits by category as of the valuation date.

Table IV-1: Present Value of Benefits	
Active Members	
Service Retirement	$14,720
Disability Retirement	592
Survivors' Benefits	372
Total for Active Members	$15,684
Inactive Members	
Non-Vested (Refund only)	$168
Vested	2,252
Total for Inactive Members	$2,420
Retirees and Beneficiaries	
Service Retirements	$46,647
Disability Retirements	98
Beneficiaries	7,841
Total for Retirees and Beneficiaries	$54,586
Total Present Value of Benefits	$72,690

All dollar amounts are in thousands.

An actuarial cost method allocates each individual's present value of benefits to past and future years of service. The actuarial accrued liability includes the portion of the active member present value of benefits allocated to past service as well as the entire present value of benefits for retirees, beneficiaries and inactive members. Table IV-2 presents the actuarial accrued liability as of the valuation date for active members.

Table IV-2: Actuarial Accrued Liability	
Active Members	
Service Retirement	$11,010
Disability Retirement	254
Survivors' Benefits	221
Total for Active Members	$11,485
Total for Inactive Members (Table IV-1)	2,420
Total for Retirees and Beneficiaries (Table IV-1)	54,586
Total Actuarial Accrued Liability	$68,491

All dollar amounts are in thousands.

The funded ratio of the System is the ratio of the actuarial value of assets (Table III-2) divided by the actuarial accrued liability (Table IV-2) as of the valuation date. As of July 1, 2009, the funded ratio of the System is 67.0% as compared to the ratio in prior valuation of 68.3%. The decline in the funded ratio is primarily attributable to the investment experience during the year. The ratio is a commonly used measure of the funding progress of a System and can be useful in reviewing the historical trend of a System's funding progress. Such a review should also consider the impact to this measure over the historical period due to changes to plan benefits, changes to the actuarial assumptions and methods, and significant impact that investment experience can have on the ratio over short-term periods. We caution that no single "point in time" measure can provide a universal basis for comparing one System to another.

Under the valuation funding method, an unfunded actuarial accrued liability (UAAL) exists to the extent that the actuarial accrued liability exceeds the actuarial value of assets as presented in Section III. The calculation of the UAAL as of the valuation date is shown in Table IV-3.

Table IV-3: Unfunded Actuarial Accrued Liability (UAAL)	
1. Total Actuarial Accrued Liability (Table IV-2)	$68,491
2. Actuarial Value of Assets (Table III-2(8))	45,891
Unfunded Actuarial Accrued Liability (UAAL) (1 – 2)	$22,600

All dollar amounts are in thousands.

Although the terminology used to describe the excess of the System's actuarial accrued liability over the System's actuarial value of assets is call the "unfunded" actuarial accrued liability, the annual contribution calculated in the valuation includes an annual amortization payment required to fully amortize the UAAL by June 30, 2027.

The calculation of the System's actuarial assets and liabilities require the use of several assumptions concerning the future experience of the System and its members. In each annual valuation, the latest year of actual experience is compared to that expected by the prior valuation. The differences are actuarial gains and losses which decrease or increase the UAAL. Table IV-4 provides for the reconciliation of the UAAL and shows the primary sources of this year's gains and losses due to actuarial experience.

Table IV-4: Reconciliation of the UAAL

1. Beginning of Year UAAL	$21,933
2. Expected Amortization Payment	(2,085)
3. Expected Interest (1 x 8.00% + 2 x 8.00% x .5)	1,671
4. Expected End of Year UAAL (1 + 2 + 3)	$21,519
5. Actuarial Experience (Gain)/Loss	
Liability Experience	(603)
Asset Experience	1,684
Total Actuarial (Gain)/Loss	$1,081
6. End of Year UAAL (4 + 5)	$22,600

All dollar amounts are in thousands.

Section V: Actuarial Valuation Results

The employer contribution amount established by the Board funds the employers' portion of the normal cost and amortizes the UAAL over a period not to exceed 25 years from July 1, 2002. The actuarial valuation is used to determine the contribution amount meet these funding requirements.

Section IV of this report presented the System's actuarial accrued liability as the portion of the present value of benefits allocated to past years of service. The portion of the active members' present value of benefits allocated to future years of service is funded through annual normal cost contributions comprised of both active member and employer contributions. The System's annual normal cost rate is calculated as a percent of covered payroll which is expected to remain level over all future years of service. The portion of the total normal cost rate in excess of the active member contribution rate is the employer normal cost rate. The normal cost rate developed as of the valuation date is presented in Table V-1.

Table V-1: Normal Cost Rate	
Normal Cost Rate of Active Members by Expected Benefit Type	
Service Retirement	15.97%
Disability Retirement	1.19%
Survivors' Benefits	0.60%
Total Normal Cost Rate for Active Members	17.76%
Less: Active Member Contribution Rate	10.00%
Employer's Normal Cost Rate	7.76%

The employer annual required contribution is the dollar amount necessary to fund the annual normal cost of the System and fully amortize the UAAL by June 30, 2027. The amount calculated is expected to remain constant over the remaining amortization period and is provided in Table V-2.

Table V-2: Calculation of Employer Required Contribution

Normal Cost Component	
1. Employer's Normal Cost Rate (Table V-1)	7.76%
2. Total Valuation Payroll	$3,854
3. Employer Normal Cost Contribution for FY 2012 (1 x 2)	299
UAAL Amortization Component	
4. UAAL at Valuation Date (Table IV-4)	$22,600
5. Expected UAAL at July 1, 2011	$21,345
6. Remaining Amortization Period at July 1, 2011	16 Years
7. Required Amortization Payment FY 2012	$2,233
Total Employer Required Contribution for FY 2012 (3 + 7)	$2,532

All dollar amounts are in thousands.

Section VI: Accounting Statement Information

The Tables provided in this Section present disclosure information necessary to comply with GASB requirements and are relevant for the annual financial reporting of the System.

Table VI-1: GASB Statement No. 25 Schedule of Funding Progress

Actuarial Valuation as of July 1	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Actuarial Assets as a % of Actuarial Liabilities	Unfunded AAL (UAAL)	Annual Active Member Payroll	UAAL as a % of Active Member Payroll
2009	$45,891	$68,491	67.0%	$22,600	$3,854	586.4%
2008	47,189	69,122	68.3%	21,933	3,854	569.1%
2007	46,925	71,014	66.1%	24,089	3,854	625.0%
2006	46,075	69,734	66.1%	23,659	3,854	613.9%
2005	46,316	69,161	67.0%	22,845	3,853	592.9%
2004	45,087	68,332	66.0%	23,245	3,839	605.5%
2003	44,682	66,619	67.1%	21,937	3,844	570.8%
2002	43,841	73,046	60.0%	29,205	4,515	646.9%
2001	42,788	68,291	62.7%	25,503	4,761	535.6%
2000	40,730	63,947	63.7%	23,217	4,858	477.9%

All dollar amounts are in thousands.

Table VI-2: Solvency Test

	Actuarial Accrued Liability for:						
Actuarial Valuation as of July 1	Active Member Contributions	Retirants & Beneficiaries	Employer Funded Portion of Active Members	Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets		
	(1)	(2)	(3)		(1)	(2)	(3)
2009	$6,822	$54,586	$7,083	$45,891	100%	71.6%	0.0%
2008	7,265	53,240	8,617	$47,189	100%	75.0%	0.0%
2007	7,735	54,115	9,164	$46,925	100%	72.4%	0.0%
2006	8,094	51,870	9,770	$46,075	100%	73.2%	0.0%
2005	8,024	51,353	9,784	$46,316	100%	74.6%	0.0%
2004	8,485	48,126	11,721	$45,087	100%	76.1%	0.0%
2003	8,324	46,781	11,515	$44,682	100%	77.7%	0.0%

2002	9,470	47,485	16,091	$43,841	100%	72.4%	0.0%
2001	9,329	45,013	13,949	$42,788	100%	74.3%	0.0%
2000	9,220	39,409	15,318	$40,730	100%	80.0%	0.0%

All dollar amounts are in thousands.

Table VI-3: Active Member and Payroll Information

Actuarial Valuation as of July 1	Number of Employers	Number of Active Members	Annual Payroll ($000's)	Annual Average Pay	Percentage Increase in Average Pay
2009	2	170	$3,854	$22,671	0.0%
2008	2	170	3,854	22,671	0.0%
2007	2	170	3,854	22,671	0.0%
2006	2	170	3,854	22,671	0.0%
2005	2	170	3,853	22,668	0.4%
2004	2	170	3,839	22,582	(0.1%)
2003	2	170	3,844	22,612	0.2%
2002	2	200	4,515	22,573	(0.9%)
2001	2	209	4,761	22,781	(0.1%)
2000	2	213	4,858	22,808	0.3%

Table VI-4: Schedule of Retirants Added to and Removed from Rolls

	Added to Rolls		Removed from Rolls		Roll End of Year			
Year Ended July 1	Number	Annual Allowances ($000's)	Number	Annual Allowances ($000's)	Number	Annual Allowances ($000's)	% Increase in Annual Allowances	Average Annual Allowances
2009	26	$505	15	$266	353	$6,52 5	3.8%	$18,484
2008	19	337	10	134	342	6,286	3.3%	18,380
2007	18	321	2	13	333	6,083	5.3%	18,267
2006	13	238	8	179	317	5,775	1.0%	18,218
2005	22	486	7	125	312	5,716	6.8%	18,321
2004	12	185	9	119	297	5,353	1.2%	18,023
2003	40	839	12	226	294	5,287	13.1%	17,983
2002	24	453	9	160	266	4,674	6.7%	17,571
2001	27	609	11	204	251	4,381	10.2%	17,454
2000	8	118	7	110	235	3,976	0.2%	16,919

Table VI-5: Retired Members and Beneficiaries as of July 1, 2009		
Group	**Number**	**Annual Retirement Allowances**
Service Retirements		
Employees:		
Male	241	$4,716,972
Female	33	605,257
Total	274	$5,322,229
Disability Retirements		
Employees:		
Male	1	$15,432
Female	0	0
Total	1	$15,432
Beneficiaries of Deceased Retired and Active Members		
Male	8	$81,308
Female	70	1,106,502
Total	78	$1,187,810
Grand Total	**353**	**$6,525,471**

Appendix A: Additional Membership Data

Table A-1: Schedule of Active Participant Data as of July 1, 2009

AGE	Years of Service								
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up	Total
Under 25	1								1
Avg. Pay	22,400								22,400
25 to 29	1								1
Avg. Pay	22,400								22,400
30 to 34	5	2							7
Avg. Pay	22,400	22,400							22,400
35 to 39	7	5	2	1					15
Avg. Pay	22,400	22,400	22,400	22,400					22,400
40 to 44	9	5	4	1					19
Avg. Pay	22,400	22,400	22,400	22,400					22,400
45 to 49	4	7	5	1	2				19
Avg. Pay	22,400	22,400	22,400	22,400	27,400				22,926
50 to 54	6	5	2	6	1	1			21
Avg. Pay	22,400	22,400	22,400	24,233	22,400	22,400			22,924
55 to 59	9	6	4	4	2	1			26
Avg. Pay	22,400	22,400	22,400	22,400	22,400	22,400			22,400
60 to 64	3	5	2	2	4	1			17
Avg. Pay	22,400	22,400	22,400	22,400	22,400	33,400			23,047
65 & up	3	5	3	3	1	1			16
Avg. Pay	22,400	22,400	22,400	22,400	22,400	22,400			22,400
Total	48	40	22	18	10	4			142
Avg. Pay	22,400	22,400	22,400	23,011	23,400	25,150			22,625

Table A-2: Comparative Summary of Active Data

	Prior Year	Current Year
Average Age	52.40 years	51.37 years
Average Service	10.40 years	9.05 years
Average Pay	$ 22,660	$ 22,625
Percent Female	9.5%	12.0%

Note: Average Pay is based on actual annualized earnings and member counts based on filled positions.

Table A-3: Number of Annual Retirement Allowances Of Benefit Recipients as of July 1, 2009		
Payee Type	**Number**	**Annual Retirement Allowances**
Service Retirement		
Maximum	139	$2,586,519
100% J & S	54	1,138,764
100% Pop-up	37	717,149
50% J & S	26	518,063
50% Pop-up	18	361,734
Total	274	$5,322,229
Disability Retirement		
Maximum	1	$15,432
Beneficiaries of Deceased Retired Members and Active Members		
Total	78	$1,187,810
Grand Total	353	$6,525,471

Appendix A: Additional Membership Data

Table A-4: Distribution of Participants Receiving Benefits as of July 1, 2009

NUMBER OF RETIRED MEMBERS AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	2	$ 32,503	$ 16,252
50 – 54	5	122,543	24,509
55 – 59	22	500,172	22,735
60 – 64	46	965,910	20,998
65 – 69	45	941,266	20,917
70 – 74	50	892,147	17,843
75 – 79	40	561,166	14,029
80 & Over	64	1,306,522	20,414
Total	274	$ 5,322,229	$ 19,424

NUMBER OF DISABLED RETIREES AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	0	$ 0	$ 0
50 – 54	0	0	0
55 – 59	0	0	0
60 – 64	0	0	0
65 – 69	0	0	0
70 – 74	1	15,432	15,432
75 – 79	0	0	0
80 & Over	0	0	0
Total	1	$ 15,432	$ 15,432

NUMBER OF BENEFICIARIES AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	4	$ 23,726	$ 5,932
50 – 54	3	38,499	12,833
55 – 59	5	41,277	8,255
60 – 64	3	29,935	9,978
65 – 69	4	55,765	13,941
70 – 74	7	94,894	13,556
75 – 79	13	172,085	13,237
80 & Over	39	731,629	18,760
Total	78	$ 1,187,810	$ 15,228

Appendix B: Actuarial Assumptions and Methods

Investment Rate of Return

Assumed annual rate of 8.00% net of investment and administrative expenses composed of a 3.00% inflation component and a 5.00% real rate of return component.

Rates of Annual Salary Increase

No Increases in salaries are assumed.

Active Member Decrement Rates

a. Table below provides a summary of the assumed rates of mortality while actively employed, and disability. No withdrawal from active membership is assumed.

Annual Rates of Decrements				
Age	**Pre-Retirement Mortality**		**Disability**	
	Male	Female	Male	Female
25	0.04%	0.01%	0.06%	0.05%
30	0.04%	0.02%	0.12%	0.07%
35	0.08%	0.03%	0.17%	0.15%
40	0.11%	0.05%	0.29%	0.19%
45	0.15%	0.07%	0.40%	0.27%
50	0.21%	0.11%	0.58%	0.46%
55	0.30%	0.16%	0.92%	0.74%
60	0.49%	0.26%	1.15%	1.12%
64	0.70%	0.35%	1.44%	1.56%

b. Unreduced Service Retirement – Regular active members are assumed to retire based upon the age-related rates in the table below. In addition to the tabular rates, members with 30 year of service are assumed to commence benefit payments immediately. Special contributors are assumed to retire at age 60.

Assumed Rates of Retirement	
Age	Assumed Rate
60 & under	40%
61	7%
62	7%
63	7%
64	7%
65	15%
66	15%
67	15%
68	15%
69	15%
70 & older	100%

Post-Retirement Mortality

Assumed rate of mortality for healthy retirees and beneficiaries is the UP-94 Mortality Table rates with female rates set back one year. A separate table of mortality rates is used for disabled retirees. The following are sample rates for retirees and beneficiaries:

Post-Retirement Mortality Assumption				
	Healthy		Disabled	
Age	Male	Female	Male	Female
50	0.28%	0.14%	3.06%	2.31%
55	0.48%	0.22%	3.86%	2.66%
60	0.86%	0.42%	4.82%	2.98%
65	1.56%	0.82%	5.42%	3.33%
70	2.55%	1.37%	5.91%	3.70%
75	4.00%	2.19%	6.74%	4.43%
80	6.67%	3.80%	9.02%	6.71%
85	10.46%	6.56%	13.45%	10.15%

Marriage Assumption

100% of all active members are assumed to be married, with female spouses being 4 years younger than males.

Asset Valuation Method

The actuarial value of assets is equal to the market value of assets less a ten-year phase in of the excess (shortfall) between expected market investment return and actual net investment income (excess returns and shortfalls determined prior to July 1, 2008 remain with a five-year phase in).

Appendix B: Actuarial Assumptions and Methods

Actuarial Cost Method

The contribution rate is set by statute for both employees and employers. The funding period is determined, as described below, using the Entry Age Normal actuarial cost method. The Entry Age Normal actuarial cost method allocates the plan's actuarial present value of future benefits to various periods based upon service. The portion of the present value of future benefits allocated to years of service prior to the valuation date is the actuarial accrued liability, and the portion allocated to years following the valuation date is the present value of future normal costs. The normal cost is determined for each active member as the level percent of payroll necessary to fully fund the expected benefits to be earned over the career of each individual active member. The normal cost is partially funded with active member contributions with the remainder funded by employer contributions.

An unfunded accrued liability exists in the amount equal to the excess of accrued liability over valuation assets. The amortization period of the System is the amount required annually to fully amortize the remaining unfunded accrued liability by June 30, 2027.

Future Cost-of-living Increases

None assumed.

Administrative and Investment Expenses

The investment return assumption represents the expected return net of all administrative and investment expenses.

Payroll Growth Rate

None Assumed.

Changes from Prior Valuation

None.

Appendix C: Summary of Plan Provisions

This summary of plan provisions is based on our understanding of the benefits as described by the South Carolina Code of Laws, summary plan descriptions and the South Carolina Retirement Systems. It is intended to only describe the essential features of the plan. All eligibility requirements and benefit amounts shall be determined in strict accordance with the law.

Effective Date

July 1, 1966

Eligibility Requirements

All members of the General Assembly in the State of South Carolina are required to participate upon taking office. A member with eight or more years of creditable service who is no longer a member of the General Assembly may remain a member of the plan by continuing to make the member contributions.

Creditable Service

Creditable service means service during which contributions have been made. This is counted in years, months, and days.

There are a number of different types of services that may be purchased by an employee under special rules, such as military service.

Earnable Compensation

The total of 40 times the daily rate of remuneration and compensation ($10,400), plus $12,000. Certain line-item additional compensation for specified offices is also included.

Service Requirement

Eligibility - Attainment of age 60, or completion of 30 years of creditable service. Members may begin receiving their retirement benefit while remaining in service at age 70 or after accruing 30 years of service.

Benefit - 4.82% of earnable compensation times creditable service.

Disability Retirement

Eligibility - Disability prior to the attainment of age 60 or completion of 35 years of creditable service, but with at least 5 years of creditable service. Service requirement is waived if job related.

Benefit - The greater of (a) or (b):

(a) The service retirement benefit based upon creditable service and earnable compensation at the time of disability,

(b) 50% of the service retirement benefit based upon projected creditable service to the earlier of age 60 or completion of 35 years of creditable service and earnable compensation at time of disability.

Appendix C: Summary of Plan Provisions

Death Benefits

a) Less than 15 years of creditable service or under age 60

Refund of employee contributions with interest.

b) 15 years or more of creditable service and attained age 60

Same as above, but the members beneficiary may elect instead to receive a life annuity computed as a service retirement benefit as if the member had retired on his date of death and based upon earnable compensation at that time, with payments to commence on day following date of death under Option 1.

Group Life Insurance Benefit

A lump-sum payment equal to earnable compensation at time of death payable to the beneficiary upon the death of an active member with at least one year of creditable service. The service requirement will be waived for deaths resulting from actual performance of duties.

Employee Contributions

10% of compensation as a member of the General Assembly.

Vested Benefit Upon Termination

Eligibility - 100% vesting upon completion of 8 years of creditable service.

Benefit - Accrued service retirement benefit as of date of termination at normal retirement age.

Termination Benefit

Eligibility - Elect return of accumulated employee contributions.

Benefit - Return of employee contributions plus interest.

Special Contributors

Terminating members have the option of continuing to accrue benefit under the system by paying into the system the member contribution rate. Such participants can continue to contribute until the earlier of 22 years of benefit accrual service or age 60.

Normal Form of Retirement Income

Monthly life annuity with guaranteed return of employee contributions plus interest.

Appendix C: Summary of Plan Provisions

Optional Forms of Retirement Income

Option 1 - Monthly life annuity with 100% of reduced benefit continued to beneficiary upon death.

Option 1(a) - Same as Option 1 with revert to maximum option if beneficiary predeceases retiree.

Option 2 - Monthly life annuity with 50% of reduced benefit continued to beneficiary upon death,

Option 2(a) - Same as Option 2 with revert to maximum option if beneficiary predeceases retiree.

Cost of Living Adjustment

For a retired member and his/her spouse, the adjustment reflects the increase in the current salary of the position from which the member retired. The General Assembly has not increased the active salary rate since 1995.

Changes from Prior Valuation

None