GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

SOUTH CAROLINA RETIREMENT SYSTEM (SCRS)

ACTUARIAL VALUATION REPORT

AS OF JULY 1, 2012

GRS

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January 11, 2013

Public Employee Benefit Authority
South Carolina Retirement System
P.O. Box 11960
Columbia, SC 29211-1960

Subject: **Actuarial Valuation as of July 1, 2012**

Dear Members of the Board:

This report describes the current actuarial condition of the South Carolina Retirement System (SCRS), determines the calculated employer contribution rate, and analyzes changes in this contribution rate. In addition, the report provides information required by SCRS in connection with Governmental Accounting Standards Board Statement No. 25 (GASB 25), and it gives various summaries of the data. Results of this report should not be used for any other purpose without consultation with the undersigned. Valuations are prepared annually as of July 1, the first day of the plan year for SCRS. This report was prepared at the request of the Public Employee Benefit Authority (Board) and is intended for use by the SCRS staff and those designated or approved by the Board.

FINANCING OBJECTIVES AND FUNDING POLICY

The employer and member contribution rate is determined in accordance with Section 9-1-1085 of the South Carolina Code. As specified by the Code, in the event the scheduled employer and member contribution rate is insufficient to maintain a thirty-year amortization period for financing the unfunded liability of the System, the Board shall increase the employer and member contribution rates in equal amounts, as necessary, to maintain a funding period that does not exceed thirty years. The contribution rate determined by a given actuarial valuation becomes effective twenty-four months after the valuation date. In other words, the contribution rate determined by this July 1, 2012 actuarial valuation will be used by the Board when certifying the employer and member contribution rates for the year beginning July 1, 2014 and ending June 30, 2015.

According to State code, the Board is not permitted to decrease the employer and member contribution rates until the funded ratio of the plan is at least 90%. Also, any decrease in the rates must maintain the 2.90% differential between the employer and member contribution rates.

If new legislation is enacted between the valuation date and the date the contribution rate becomes effective, the Board may adjust the calculated rate before certifying them, in order to reflect this new legislation. Such adjustments are based on information supplied by the actuary.

PROGRESS TOWARD REALIZATION OF FINANCING OBJECTIVES

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. In the absence of benefit improvements, it should increase over time, until it reaches at least 100%.

The funded ratio of the System decreased from 67.4% (after reflecting Act 278) to 64.7%. This decrease was primarily due to the continual recognition of the extraordinary investment loss that occurred in prior years. Absent favorable experience, we expect the funded ratio will continue to decrease for the next several years as those investment losses are fully recognized in the development of the actuarial value of assets.

If the market value of assets had been used in the calculation instead of the actuarial (smoothed) value of assets, the funded ratio for the System would have been 54.6%, compared to 58.9% in the prior year (after reflecting Act 278). The decrease in the funded ratio on a market value basis is due to unfavorable experience in the assets during the last fiscal year. In particular, the investment return for the year was 0.4% on a market value basis.

ASSUMPTIONS AND METHODS

Except for the rates of retirement and disability incidence, the actuarial assumptions used to perform this valuation remain unchanged from the prior valuation, including the use of a 7.50% investment return assumption. The rates of retirement and disability incidence were modified to better model plan experience as a result of the enactment of Act 278. South Carolina State Code requires that an experience analysis that reviews the economic and demographic assumptions be performed every five years. The next experience analysis is scheduled for 2016.

It is our opinion that the recommended assumptions are internally consistent and reasonably reflect the anticipated future experience of the System. The actuarial assumptions and methods used in this report comply with the parameters for disclosure that appear in GASB 25.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can, and almost certainly will, differ as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rate, and funding periods. The actuarial calculations are intended to provide information for rational decision making.

BENEFIT PROVISIONS

The benefit provisions reflected in this valuation include the benefit changes that were enacted as a result of Act 278. The legislation impacted current members as well as those employees who will become members after June 30, 2012. The most significant changes impacting current members include:

- Effective July 1, 2012, the member contribution rate for all employees will increase by 0.50% each subsequent year until an 8.00% contribution rate is attained beginning July 1, 2014. The employer contribution rate will continue at 10.60% of pay for fiscal year 2014 and increase to 10.90% of pay for fiscal year 2015 (i.e. beginning July 1, 2014). In the event these contribution rates are insufficient to maintain a 30-year amortization period, the Board shall increase the member and employer contribution rates by an equal amount (i.e. maintain a 2.90% differential) as necessary to maintain a 30-year funding period. The employer and member contribution rates may not decrease until the plan attains a 90% funded ratio.
- Eligible retirees and surviving annuitants will receive an annual increase in their pension benefit equal to the lesser of 1.00% of their retirement allowance or $500 per annum.
- Effective July 1, 2012, inactive members of the System will no longer accrue future interest on their account balance attributable to their contributions.
- The definition of earnable compensation has been modified such that compensation attributable to overtime earned after December 31, 2012 is not included in the member's compensation for purposes of determining their AFC unless that compensation is for overtime that was mandated by the employer.
- Members who retire after January 2, 2013 and subsequently become employed by a participating employer of the retirement system may earn up to $10,000 annually without affecting their retirement allowance. Retired members who earn in excess of $10,000 will have their retirement allowance suspended for the remainder of the calendar year. However, this earning limitation will not apply to rehired members who attain age 62 by the time of their initial retirement.
- Effective January 2, 2013, the cost of purchasing qualified service credit will be equal to the greater of 16% of pay per year of service or the true actuarial cost. Similarly, the cost of purchasing nonqualified service credit will be equal to the greater of 35% of pay per year of service or the true actuarial cost.
- Effective December 31, 2013, the eligibility for a disability retirement benefit will be based upon the member's entitlement to a Social Security disability benefit. The determination of the disability allowance will also be based on the member's credited service as of the date of retirement and no longer include an actuarial offset for a hypothetical balance of member contributions.

- The Teacher and Employee Retention Incentive Program (TERI) will be phased-out such that no members may participate in the program after June 30, 2018.

Employees who become members after June 30, 2012 (Class Three members) will also be impacted as follows:

- Class Three members will be vested in the employer provided retirement benefit after accruing at least eight (8) years of earned service.
- Class Three members will be eligible to commence a retirement benefit after eight (8) years of earned service and upon either: (i) reaching age 60 or (ii) the combination of the member's age and years of credited service equals or exceeds 90 (i.e. the rule of 90).
- The average final compensation will be determined using a twenty-quarter averaging period (i.e. a five year average).
- Unused sick leave will be excluded in the member's credited service and unused annual leave will be excluded in determining the member's average final compensation for calculating the amount of their pension benefit at retirement.

The changes instituted by Act 278 have been fully reflected in this actuarial valuation. Please refer to Appendix B of this report for a summary of the principle plan provisions.

DATA

Member data for retired, active and inactive members was supplied as of July 1, 2012, by the SCRS staff. The staff also supplied asset information as of July 1, 2012. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data. GRS is not responsible for the accuracy or completeness of the information provided to us by SCRS.

CERTIFICATION

We certify that the information presented herein is accurate and fairly portrays the actuarial position of SCRS as of July 1, 2012.

All of our work conforms with generally accepted actuarial principles and practices, and is in conformity with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of South Carolina Code of Laws and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board.

The undersigned are independent actuaries and consultants. Mr. Newton and Mr. White are Enrolled Actuaries and Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries. Both are experienced in performing valuations for large public retirement systems.

Sincerely,

Gabriel, Roeder, Smith & Co.

Jo Newton

Joseph P. Newton, FSA, MAAA, EA
Senior Consultant

Daniel J White

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Senior Consultant

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SECTION A

EXECUTIVE SUMMARY

Executive Summary

(Dollar amounts expressed in thousands)

	Valuation Date:		
	July 1, 2012	July 1, 2011	
Membership	**Reflecting Act 278**	**Reflecting Act 278**	**Disclosed in Prior Year Report**
• Number of			
- Active Members	185,748	187,611	187,611
- TERI Members	6,785	5,254	5,254
- Retirees and Beneficiaries	115,142	110,296	110,296
- Inactive Members	154,073	158,086	158,086
- Total	461,748	461,247	461,247
• Projected payroll of active members	$7,356,231	$7,687,558	$7,687,558
• Projected payroll for all members, including members in ORP, TERI, and working retirees	$9,086,962	$9,379,634	$9,379,634
Contribution Rates[1]			
• Employer contribution rate	10.90%	10.60%	12.23%
• Member	8.00%	7.50%	6.50%
Assets			
• Market value	$21,536,908	$22,395,029	$22,395,029
• Actuarial value	25,540,749	25,604,823	25,604,823
• Return on market value	0.4%	18.6%	18.6%
• Return on actuarial value	3.5%	4.3%	4.3%
• Ratio of actuarial to market value of assets	118.6%	114.3%	114.3%
• External cash flow %	-4.3%	-4.1%	-4.1%
Actuarial Information			
• Normal cost %	10.05%	9.93%	10.68%
• Actuarial accrued liability (AAL)	$39,457,708	$38,011,610	$40,015,772
• Unfunded actuarial accrued liability (UAAL)	13,916,959	12,406,787	14,410,949
• Funded ratio	64.7%	67.4%	64.0%
• Funding period (years)	29	25	30
Reconciliation of UAAL			
• Beginning of Year UAAL	$12,406,787	$13,373,698	$13,373,698
- Interest on UAAL	930,509	999,625	999,625
- Amortization payment with interest	(583,194)	(618,048)	(618,048)
- Assumption/method changes	0	(45,359)	(45,359)
- Asset experience	1,000,960	802,448	802,448
- COLA	0	154,945	154,945
- Salary experience	(130,469)	(477,773)	(477,773)
- Other liability experience	292,366	221,413	221,413
- Legislative Changes	0	(2,004,162)	0
• End of Year UAAL	$13,916,959	12,406,787	14,410,949

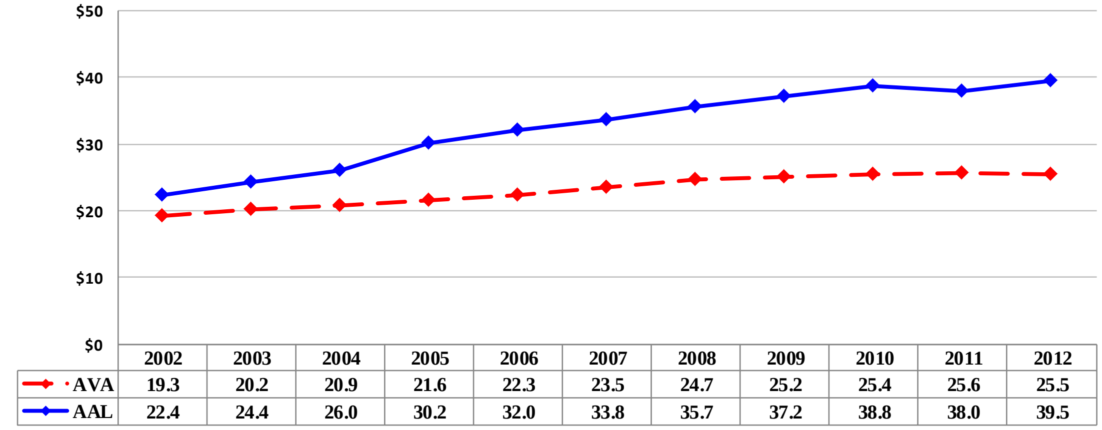
[1] The contribution rates determined by the 2012 valuation are established by Section 9-1-1085 of the South Carolina Code and become effective for the fiscal year beginning July 1, 2014. The employer contribution rates shown above includes the cost for incidental death benefits.

EXECUTIVE SUMMARY (CONTINUED)

The unfunded actuarial accrued liability increased by $1.5 billion since the prior year's valuation (after reflecting Act 278) to $13.9 billion. The single largest source of this increase is the result of continual recognition of deferred investment losses in the actuarial value of assets (i.e. $1.0 billion was recognized in the July 1, 2012 valuation). There is still $4.0 billion in deferred investment losses as of the valuation date. Absent favorable investment experience, those deferred losses will be reflected in the actuarial value of assets over the next few years.

Below is a chart with the historical actuarial value of assets and actuarial accrued liability for SCRS.

Chart 1. - History of Actuarial Assets vs. Actuarial Accrued Liability
(Dollars in Billions)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
AVA	19.3	20.2	20.9	21.6	22.3	23.5	24.7	25.2	25.4	25.6	25.5
AAL	22.4	24.4	26.0	30.2	32.0	33.8	35.7	37.2	38.8	38.0	39.5

Based on the current funding policy, we expect the unfunded actuarial liability for the System to increase for many years and the funded ratio (on an actuarial value of asset basis) to decline for the next four or five years before it gradually improves.

The employer and member contribution rates for fiscal year 2015 are specified in 9-1-1085 of the South Carolina Code. As existing deferred investment losses become recognized in the actuarial value of assets in future years, we anticipate that the scheduled contribution rates will no longer be sufficient to maintain a 30-year amortization period for funding the unfunded actuarial accrued liability. As a result, absent legislative changes or significantly favorable, we expect that the employer and member contributions rate will increase during the next several years as those deferred investment losses become recognized in the actuarial value of assets.

SECTION B

DISCUSSION

DISCUSSION

The results of the July 1, 2012 actuarial valuation of the South Carolina Retirement System are presented in this report. The primary purposes of the valuation report are to depict the current financial condition of the System, determine the annual required contribution, and analyze changes in the System's financial condition. In addition, the report provides information required by SCRS in connection with Governmental Accounting Standards Board Statement No. 25 (GASB 25), and it provides various summaries of the data.

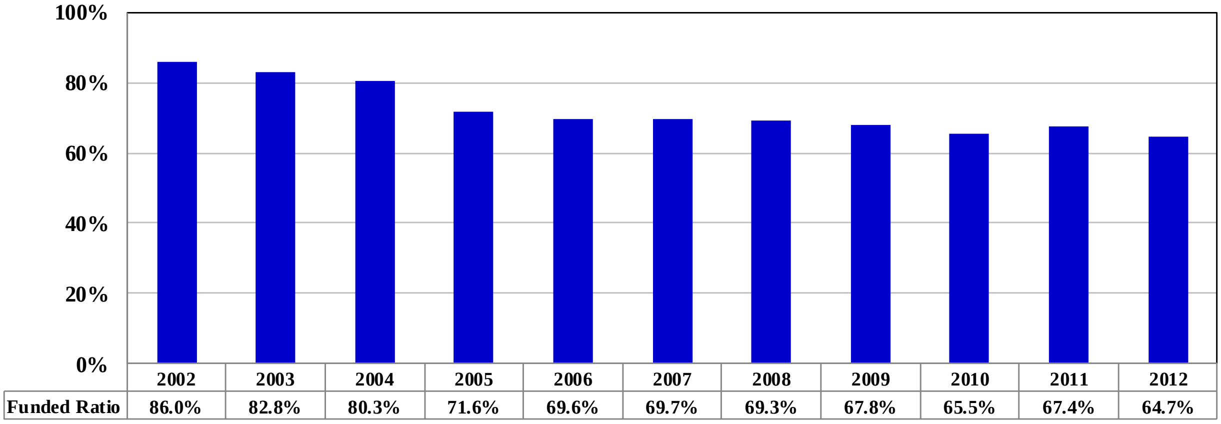
This section discusses the determination of the current funding requirements and the System's funded status, as well as changes in financial condition of the retirement system.

All of the actuarial and financial tables referenced by the other sections of this Report appear in Section C. Section D provides member data and statistical information. Appendices A and B provide summaries of the principle actuarial assumptions and methods and plan provisions. Finally, Appendix C provides a glossary of technical terms that are used throughout this report.

Funding Progress

The funded ratio decreased from 67.4% (after reflecting Act 278) to 64.7% since the prior valuation. The decrease in the funded status over the last 10 years has generally been due to a combination of: (i) the actual investment experience being less than the System's expected investment return assumption and (ii) increases in the actuarial accrued liability due to the enactment of ad hoc cost of living adjustments to retirees during several of these years. Table 10, Schedule of Funding Progress, in the following section of the report provides additional detail regarding the funding progress of the Retirement System.

Chart 2. - Funded Ratio
Actuarial Assets as a percentage of Actuarial Accrued Liability



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Funded Ratio	86.0%	82.8%	80.3%	71.6%	69.6%	69.7%	69.3%	67.8%	65.5%	67.4%	64.7%

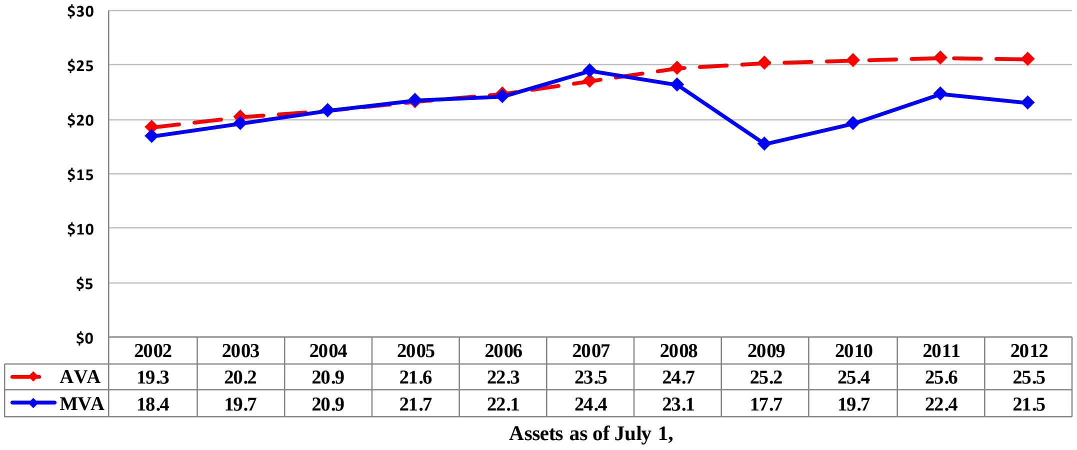
Asset Gains/ (Losses)

The actuarial value of assets ("AVA") is based on a smoothed market value of assets, using a systematic approach to phase-in actual investment return in excess of (or less than) the expected investment income. This is appropriate because it dampens the short-term volatility inherent in investment markets. The expected investment income is determined using the assumed annual investment return rate and the actuarial value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. The actuarial value of assets decreased from $25.6 billion to $25.5 billion since the prior valuation. Table 8 in the following section of the report provides the development of the actuarial value of assets.

The rate of return on the mean market value of assets for fiscal year 2012 was 0.4%; which is below the 7.50% expected annual return. The return on an actuarial (smoothed) asset value was 3.5%. This difference in the estimated return on market value and actuarial value illustrates the smoothing effect of the asset valuation method.

The market value of assets is less than the actuarial value of assets, which signifies that the retirement system is in a position of deferred losses. Therefore, unless the System experiences investment returns in excess of the assumed rate of return, the future recognition of these deferred losses is expected to increase the unfunded actuarial accrued liability and decrease the System's funded ratio over the next few years.

Chart 3. - History of Actuarial Value and Market Value of Assets
(Dollars in Billions)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
AVA	19.3	20.2	20.9	21.6	22.3	23.5	24.7	25.2	25.4	25.6	25.5
MVA	18.4	19.7	20.9	21.7	22.1	24.4	23.1	17.7	19.7	22.4	21.5

Assets as of July 1,

Tables 6 and 7 in the following section of this report provide asset information that was included in the annual financial statements of the System. Also, Table 9 shows the estimated yield on a market value basis and on the actuarial asset valuation method.

Actuarial Gains/ (Losses) and the Funding Period

The annual actuarial valuation is a snapshot analysis of the benefit liabilities, assets and funded position of the System as of the first day of the plan year. In any one fiscal year, the experience can be better or worse from that which is assumed or expected. The actuarial assumptions do not necessarily attempt to model what the experience will be for any one given fiscal year, but instead try to model the overall experience over many years. Therefore, as long as the actual experience of the retirement system is reasonably close to the current assumptions, the long-term funding requirements of the System will remain relatively consistent.

The System experienced a net liability loss of $0.2 billion, which is a 0.4% loss when compared to a total actuarial accrued liability ("AAL") of $39.5 billion. This net loss was primarily related to more members retiring than expected during fiscal year 2012 (i.e. 8,121 actual retirements versus 4,384 expected). This was also 2,679 more retirements than occurred in the prior year. We believe the increase in the number of retirements is attributable to an increased utilization of the TERI and return-to-work provisions before they became altered by the pension reform bill enacted by the 2012 legislation session.

The unfunded actuarial accrued liability (UAAL) has increased from $12.4 billion in 2011 (after reflecting Act 278) to $13.9 billion in 2012. The table below shows the source of the gains and losses and the impact of those gains and losses on the UAAL.

Reconciliation of UAAL
(Dollars in thousands)

• Beginning of Year UAAL	$12,406,787
- Interest on UAAL	930,509
- Amortization payment with interest	(583,194)
- Assumption/method changes	0
- Asset Experience	1,000,960
- COLA	0
- Salary Experience	(130,469)
- Other Liability Experience	292,366
- Legislative Changes	0
• End of Year UAAL	$13,916,959

The following table provides an additional reconciliation of the plan's experience, showing the change in the funding period from 2011 to 2012.

Change in Funding Period (Years)

• Prior Year	25.2
- Expected Experience	(1.0)
- Legislative Changes	0.0
- Assumption and method changes	0.0
- Scheduled increase in the employer and member contribution rate	(2.8)
- Asset Experience	3.0
- Demographic Experience	4.8
- Total Change	4.0
• Current Year Valuation	29.2

The liability experience had a smaller impact on the change in the unfunded liability than the asset experience. On the other hand, the liability experience has a larger influence on the change in funding period than the asset experience. This occurred because the contribution rate, which is defined as a percentage of payroll, is calculated based on the anticipation there would be a 3.50% increase in the total payroll of the system. However, the actual payroll decreased by 4.3% from fiscal year 2011 to 2012. As a result, the contribution rate, as a percentage of pay, must increase in order to maintain the necessary dollar amount of monies to finance the unfunded liability. The effect is magnified because SCRS has a large unfunded liability as a percentage of the covered payroll.

Absent favorable investment experience, we expect that the funding period to increase in future years as deferred investment losses become fully recognized in the actuarial value of assets and calculation of the contribution rate.

GASB No. 25 and No. 27 Disclosures

Accounting requirements for SCRS are provided by the Governmental Accounting Standards Board Statements No. 25 (“GASB 25”) and No. 27 (“GASB 27”). Table 10 shows a historical summary of the funded ratios and other information for the System. Table 11 shows other information needed in connection with the required disclosures under GASB 25. GASB 27 governs reporting by the employers of government-sponsored retirement plans.

GASB 25 requires that plans calculate an Annual Required Contribution (“ARC”), and, if actual contributions received are less than the ARC, this must be disclosed. The ARC is calculated in accordance with certain parameters. In particular, it includes a payment to amortize the UAAL. This amortization payment must be computed using a funding period no greater than thirty (30) years. For this disclosure, SCRS treats the Board-established contribution rate as the ARC, as long as this produces a funding period that does not exceed 30 years.

Actuarial Assumptions and Methods

In determining costs and liabilities, actuaries use assumptions about the future, such as rates of salary increase, probabilities of retirement, termination, death and disability, and an annual investment return assumption. Except for the rates of disability incidence and retirement, the actuarial assumptions and methods used to determine the results of the 2012 actuarial valuation are the same as those used for the prior year's valuation. The disability and retirement rates were updated to more appropriately reflect the anticipated plan experience as a result of the enactment of Act 278.

Appendix A includes a summary of the actuarial assumptions and methods used in this valuation.

It is our opinion that the assumptions are internally consistent, reasonable, and reflect anticipated future experience of the System. The actuarial assumptions and methods used in this report comply with the parameters for disclosure that appear in GASB 25.

Benefit Provisions

Appendix B of this report includes a summary of the benefit provisions for SCRS. Act 278 became law in June 2012, which resulted in substantial changes to several benefit provisions in SCRS. Below is a summary of the retirement provisions for Class Two members, members hired prior to July 1, 2012, and Class Three members, member hired after June 30, 2012.

Summary of Retirement Provisions for:

Class Two Members (members hired prior to July 1, 2012)

- Average Final Compensation (AFC) is based on the highest 12 consecutive quarters of compensation. The determination of a member's AFC also includes up to 45 days of unused annual leave paid at termination. Monthly benefits are based on one-twelfth of this amount.
- The retirement benefit amount is equal to the 1.82% of the member's AFC times the member's credited service (years). Credited service may include up to 90 days of unused sick leave.
- Members are eligible to commence their retirement benefit after they have (i) 28 years of credited service or (ii) attained age 65 with 5 years of earned service.
- At each July 1 after their first full year of retirement, annuitants will receive an automatic cost of living adjustment equal to the lesser of 1.00% of their retirement benefit or $500 per annum.

Class Three Members (members hired after to June 30, 2012)

- Average Final Compensation (AFC) is based on the highest twenty (20) consecutive quarters of compensation. The determination of a member's AFC also will not include unused annual leave paid at termination. Monthly benefits are based on one-twelfth of this amount;
- The retirement benefit is equal to 1.82% of the member's AFC times the member's credited service (years). Credited service will not include unused sick leave.
- Members are eligible to commence a retirement benefit after they have (i) attained age 60 with eight years of earned service or (ii) the combination of the member's age and years of credited service equals or exceeds 90 (i.e. the rule of 90).
- At each July 1 after their first full year of retirement, annuitants will receive an automatic cost of living adjustment equal to the lesser of 1.00% of their retirement benefit or $500 per annum.

SECTION C

ACTUARIAL TABLES

ACTUARIAL TABLES

Summary of Cost Items

(Dollar amounts expressed in thousands)

			July 1, 2012	July 1, 2011	
			Reflecting Act 278	Reflecting Act 278	Disclosed in Prior Year Report
			(1)	(2)	(3)
1.	Projected payroll of active members[1]		$ 7,356,231	$7,687,558	$7,687,558
2.	Present value of future pay		$ 59,977,144	$ 63,758,111	$ 54,544,085
3.	Normal cost rate				
	a.	Total normal cost rate	10.05%	9.93%	10.68%
	b.	Less: member contribution rate	-8.00%	-7.50%	-6.50%
	c.	Employer normal cost rate	2.05%	2.43%	4.18%
4.	Actuarial accrued liability for active members				
	a.	Present value of future benefits	$ 19,751,278	$ 20,142,861	$ 21,765,547
	b.	Less: present value of future normal costs	(5,880,298)	(6,138,251)	(5,756,775)
	c.	Actuarial accrued liability	$ 13,870,980	$ 14,004,610	$ 16,008,772
5.	Total actuarial accrued liability for:				
	a.	Retirees and beneficiaries	$ 24,732,406	$ 23,160,658	$ 23,160,658
	b.	Inactive members	854,322	846,342	846,342
	c.	Active members (Item 4c)	13,870,980	14,004,610	16,008,772
	d.	Total	$ 39,457,708	$ 38,011,610	$ 40,015,772
6.	Actuarial value of assets		$ 25,540,749	$ 25,604,823	$ 25,604,823
7.	Unfunded actuarial accrued liability (UAAL) (Item 5d - Item 6)		$ 13,916,959	$ 12,406,787	$ 14,410,949
8.	GASB No. 25 Annual Required Contribution Rate				
	a.	Employer normal cost rate	2.05%	2.43%	4.18%
	b.	Employer contribution rate available to amortize the UAAL	8.85%	8.17%	6.42%
	c.	Total employer contribution rate	10.90%	10.60%	10.60%
9.	Funding period based on the required employer contribution rate (years)		29	25	51
10.	Applicable statutorily required contribution rates[2]				
	a.	Employer contribution rate	10.90%	10.60%	Not Applicable
	b.	Member contribution rate	8.00%	7.50%	Not Applicable

[1] The projected payroll does not include payroll for members in ORP, TERI, and who are working retirees.

[2] The applicable employer and member contribution rates are determined in accordance with Section 9-1-1085 of the South Carolina Code. The contribution rates determined by the July 1, 2012 valuation become effective for the fiscal year beginning July 1, 2014. The contribution rate includes the cost of incidental death benefits.

Actuarial Present Value of Future Benefits

(Dollar amounts expressed in thousands)

		July 1, 2012	July 1, 2011	
		Reflecting Act 278 (1)	Reflecting Act 278 (2)	Disclosed in Prior Year Report (3)
1.	Active members			
	a. Service retirement	$ 16,696,027	$ 16,857,249	$ 18,527,626
	b. Deferred termination benefits and refunds	1,133,420	1,163,662	1,133,656
	c. Survivor benefits	685,374	754,345	523,482
	d. Disability benefits	1,236,458	1,367,605	1,580,783
	e. Total	$ 19,751,279	$ 20,142,861	$ 21,765,547
2.	Retired members			
	a. Service retirement	$ 22,102,446	$ 20,645,566	$ 20,645,566
	b. Disability retirement	1,620,766	1,550,283	1,550,283
	c. Beneficiaries	866,754	828,468	828,468
	d. Incidental death benefits	142,440	136,341	136,341
	e. Total	$ 24,732,406	$ 23,160,658	$ 23,160,658
3.	Inactive members			
	a. Vested terminations	$ 661,531	$ 648,938	$ 648,938
	b. Nonvested terminations	192,790	197,404	197,404
	c. Total	$ 854,321	$ 846,342	$ 846,342
4.	Total actuarial present value of future benefits	$ 45,338,006	$ 44,149,861	$ 45,772,547

Analysis of Normal Cost

		July 1, 2012	July 1, 2011	
		Reflecting Act 278	Reflecting Act 278	Disclosed in Prior Year Report
		(1)	(2)	(3)
1.	Total normal cost rate			
	a. Service retirement	6.69%	6.53%	7.25%
	b. Deferred termination benefits and refunds	2.24%	2.23%	1.99%
	c. Survivor benefits	0.41%	0.43%	0.35%
	d. Disability benefits	0.71%	0.74%	1.09%
	e. Total	10.05%	9.93%	10.68%
2.	Less: member contribution rate	8.00%	7.50%	6.50%
3.	Net employer normal cost rate	2.05%	2.43%	4.18%

Note: The normal cost includes the cost for incidental death benefits.

Results of July 1, 2012 Valuation

(Dollar amounts expressed in thousands)

				July 1, 2012 (1)
1.	Actuarial Present Value of Future Benefits			
	a.	Present retired members and beneficiaries	$	24,732,406
	b.	Present active and inactive members		20,605,600
	c.	Total actuarial present value	$	45,338,006
2.	Present Value of Future Normal Contributions			
	a.	Employee	$	4,798,172
	b.	Employer		1,082,126
	c.	Total future normal contributions	$	5,880,298
3.	Actuarial Liability		$	39,457,708
4.	Current Actuarial Value of Assets		$	25,540,749
5.	Unfunded Actuarial Liability		$	13,916,959
6.	UAAL Amortization Rates based on an employer contribution rate of 10.90%			
	a.	Active members		8.85%
	b.	TERI members (including employee contributions)		18.90%
	c.	ORP members		5.90%
	d.	Re-employed members (including employee contributions)		18.90%
7.	Unfunded Actuarial Liability Liquidation Period			29 years

Note: The employer contribution rate includes the cost for incidental death benefits.

Actuarial Balance Sheet

(Dollar amounts expressed in thousands)

	July 1, 2012 (1)	July 1, 2011 (2)
1. Assets		
a. Current assets (actuarial value)		
i. Employee annuity savings fund	$ 6,459,192	$ 6,472,646
ii. Employer annuity accumulation fund	19,081,557	19,132,177
iii. Total current assets	$ 25,540,749	$ 25,604,823
b. Present value of future member contributions	$ 4,798,172	$ 4,590,908
c. Present value of future employer contributions		
i. Normal contributions	$ 1,082,126	$ 1,547,343
ii. Accrued liability contributions	13,916,959	12,406,787
iii. Total future employer contributions	$ 14,999,085	$ 13,954,130
d. Total assets	$ 45,338,006	$ 44,149,861
2. Liabilities		
a. Employee annuity savings fund		
i. Past member contributions	$ 6,459,192	$ 6,472,646
ii. Present value of future member contributions	4,798,172	4,590,908
iii. Total contributions to employee annuity savings fund	$ 11,257,364	$ 11,063,554
b. Employer annuity accumulation fund		
i. Benefits currently in payment (including TERI)	$ 24,732,406	$ 23,160,658
ii. Benefits to be provided to other members	9,348,236	9,925,649
iii. Total benefits payable from employer annuity accumulation fund	$ 34,080,642	$ 33,086,307
c. Total liabilities	$ 45,338,006	$ 44,149,861

Note: Results as of July 1, 2011 and July 1, 2012 reflect the enactment of Act 278.

System Net Assets

Assets at Market or Fair Value

(Dollar amounts expressed in thousands)

Item	July 1, 2012	July 1, 2011
(1)	(2)	(3)
1. Cash and cash equivalents (operating cash)	$ 1,832,037	$ 2,571,401
2. Receivables	832,794	872,711
3. Investments		
a. Short-term securities	$ 0	$ 10,113
b. Domestic fixed income	3,362,727	3,309,873
c. Global fixed income	1,313,272	2,780,555
d. Domestic equities	1,612,140	1,808,944
e. Global equities	1,503,156	1,075,869
f. Alternative investments	12,516,005	11,713,707
g. Total investments	$ 20,307,300	$ 20,699,061
4. Securities lending cash collateral invested	$ 159,112	$ 198,711
5. Prepaid administrative expenses	598	924
6. Capital assets, net of accumulated depreciation	2,688	2,795
7. Total assets	$ 23,134,529	$ 24,345,603
8. Liabilities		
a. Due to other systems	$ 507	$ 458
b. Accounts payable	784,847	1,161,046
c. Investment fees payable	8,212	16,059
d. Obligations under securities lending	159,112	198,711
e. Deferred retirement benefits	385,716	363,373
f. Due to employee insurance program	42,469	41,389
g. Benefit payable	2,910	3,743
h. Other liabilities	213,848	165,795
i. Total liabilities	$ 1,597,621	$ 1,950,574
9. Total market value of assets available for benefits (Item 7 - Item 8.i.)	$ 21,536,908	$ 22,395,029
10. Asset allocation (investments)		
a. Net invested cash	5.7%	7.6%
b. Domestic fixed income	15.6%	14.8%
c. Global fixed income	6.1%	12.4%
d. Domestic equities	7.5%	8.1%
e. Global equities	7.0%	4.8%
f. Alternative investments	58.1%	52.3%
g. Total investments	100.0%	100.0%

Reconciliation of System Net Assets

(Dollar amounts expressed in thousands)

	Year Ending July 1, 2012 (1)	Year Ending July 1, 2011 (2)
1. Value of assets at beginning of year	$ 22,395,029	$ 19,681,137
2. Revenue for the year		
a. Contributions		
i. Member contributions	$ 586,818	$ 562,170
ii. Employer contributions	825,385	809,175
iii. Total	$ 1,412,203	$ 1,371,345
b. Income		
i. Interest, dividends, and other income	$ 211,910	$ 212,677
ii. Investment expenses	(47,713)	(61,618)
iii. Net	$ 164,197	$ 151,059
c. Net realized and unrealized gains (losses)	(54,890)	3,447,010
d. Total revenue	$ 1,521,510	$ 4,969,414
3. Expenditures for the year		
a. Disbursements		
i. Refunds	$ 83,134	$ 84,591
ii. Regular annuity benefits[1]	2,255,786	2,133,199
iii. Other benefit payments	19,028	17,317
iv. Transfers to other systems	2,184	1,862
v. Total	$ 2,360,132	$ 2,236,969
b. Administrative expenses and depreciation	19,499	18,553
c. Total expenditures	$ 2,379,631	$ 2,255,522
4. Increase in net assets (Item 2. - Item 3.)	$ (858,121)	$ 2,713,892
5. Value of assets at end of year (Item 1. + Item 4.)	$ 21,536,908	$ 22,395,029
6. Net external cash flow		
a. Dollar amount	$ (947,929)	$ (865,624)
b. Percentage of market value	-4.3%	-4.1%

[1] Amount includes the monthly benefits deferred in TERI and recoreded as an expense for the year.

Development of Actuarial Value of Assets

(Dollar amounts expressed in thousands)

			July 1, 2012 (1)
1.	Actuarial value of assets at the prior valuation date	$	25,604,823
2.	Market value of assets at the prior valuation date	$	22,395,029
3.	Net external cash flow during the year		
	a. Contributions	$	1,412,203
	b. Disbursements		(2,360,132)
	c. Subtotal	$	(947,929)
4.	Expected net investment income at 7.50% earned on		
	a. Actuarial value of assets at the prior valuation date	$	1,920,362
	b. Contributions		52,958
	c. Disbursements		(88,505)
	d. Subtotal	$	1,884,815
5.	Expected actuarial value of assets, end of year (Item 1. + Item 3.c. + Item 4.d.)	$	26,541,709
6.	Market value of assets as of the current valuation date	$	21,536,908
7.	Difference between expected actuarial assets and market value of assets (Item 6. - Item 5.)	$	(5,004,801)
8.	Excess/(shortfall) recognized (20% of Item 7.)	$	(1,000,960)
9.	Actuarial value of plan assets, end of year (Item 5. + Item 8.)	$	25,540,749
10.	Asset gain (loss) for year (Item 9. - Item 5.)	$	(1,000,960)
11.	Asset gain (loss) as % of the actuarial value of assets		(3.92%)
12.	Ratio of AVA to MVA		118.6%

Estimation of Yields

(Dollar amounts expressed in thousands)

		Year Ending	
		July 1, 2012 (1)	July 1, 2011 (2)
1.	Market value yield		
	a. Beginning of year market assets	$ 22,395,029	$ 19,681,137
	b. Contributions to fund during the year	1,412,203	1,371,345
	c. Disbursements	(2,360,132)	(2,236,969)
	d. Investment income (net of investment and administrative expenses)	89,808	3,579,516
	e. End of year market assets	$ 21,536,908	$ 22,395,029
	f. Estimated dollar weighted market value yield	0.4%	18.6%
2.	Actuarial value yield		
	a. Beginning of year actuarial assets	$ 25,604,823	$ 25,400,331
	b. Contributions to fund during the year	1,412,203	1,371,345
	c. Disbursements	(2,360,132)	(2,236,969)
	d. Investment income (net of investment and administrative expenses)	883,855	1,070,116
	e. End of year actuarial assets	$ 25,540,749	$ 25,604,823
	f. Estimated actuarial value yield	3.5%	4.3%

Schedule of Funding Progress

(Dollar amounts expressed in thousands)

July 1, (1)	Actuarial Value of Assets (AVA) (2)	Actuarial Accrued Liability (AAL) (3)	Unfunded Actuarial Accrued Liability (UAAL) (3) - (2) (4)	Funded Ratio (2)/(3) (5)	Annual Covered Payroll[1] (6)	UAAL as % of Payroll (4)/(6) (7)
2001	$ 18,486,773	$ 21,162,147	$ 2,675,374	87.4%	$ 6,017,537	44.5%
2002	19,298,174	22,446,574	3,148,400	86.0%	6,147,712	51.2%
2003	20,197,936	24,398,931	4,200,995	82.8%	6,240,768	67.3%
2004	20,862,659	25,977,852	5,115,193	80.3%	6,180,599	82.8%
2005	21,625,510	30,217,471	8,591,961	71.6%	6,356,489	135.2%
2006	22,293,446	32,018,519	9,725,073	69.6%	6,733,379	144.4%
2007	23,541,438	33,766,678	10,225,240	69.7%	7,093,181	144.2%
2008	24,699,678	35,663,419	10,963,741	69.3%	7,559,172	145.0%
2009	25,183,062	37,150,315	11,967,253	67.8%	7,761,808	154.2%
2010	25,400,331	38,774,029	13,373,698	65.5%	7,769,820	172.1%
2011	25,604,823	38,011,610	12,406,787	67.4%	7,687,558	161.4%
2012	25,540,749	39,457,708	13,916,959	64.7%	7,356,231	189.2%

[1] Covered payroll does not include payroll attributable to members in ORP, TERI, or working retirees.

The valuation results for 2011 reflect Act 278.

Notes to Required Supplementary Information
(as required by GASB #25)

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation date:	July 1, 2012
Actuarial cost method:	Entry Age Normal
Amortization method:	Level percentage of payroll
Amortization period for GASB 25 ARC:	29-year open period[1]
Asset valuation method:	5-year smoothed market
Actuarial assumptions:	
Investment rate of return[2]	7.50%
Projected salary increases[2]	3.50% to 12.50% (varies by service)
Inflation	2.75%
Cost-of-living adjustments	1.00%

[1] The employer and member contribution rates are determined in accordance with Section 9-1-1085 of the South Carolina Code.

[2] Includes inflation at 2.75%

Solvency Test

(Dollar amounts expressed in thousands)

	Actuarial Accrued Liability				Portion of Aggregate Accrued Liabilities Covered by Assets		
July 1,	Active Member Contributions	Retirants & Beneficiaries	Active & Inactive Members (Employer Financed)	Valuation Assets	Active	Retirants	ER Financed
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2001	$ 4,339,747	$ 10,367,913	$ 6,454,487	$ 18,486,773	100.0%	100.0%	58.6%
2002	4,512,402	11,600,395	6,333,777	19,298,174	100.0%	100.0%	50.3%
2003	4,627,360	13,240,368	6,531,203	20,197,936	100.0%	100.0%	35.7%
2004	4,750,077	14,184,765	7,043,010	20,862,659	100.0%	100.0%	27.4%
2005	4,915,423	16,891,954	8,410,094	21,625,510	100.0%	98.9%	0.0%
2006	5,229,175	17,800,254	8,989,090	22,293,446	100.0%	95.9%	0.0%
2007	5,464,756	19,084,672	9,217,250	23,541,438	100.0%	94.7%	0.0%
2008	5,708,022	20,624,862	9,329,937	24,699,678	100.0%	92.1%	0.0%
2009	5,980,022	21,381,561	9,788,732	25,183,062	100.0%	89.8%	0.0%
2010	6,222,854	22,585,243	9,965,932	25,400,331	100.0%	84.9%	0.0%
2011	6,472,646	23,160,658	8,378,306	25,604,823	100.0%	82.6%	0.0%
2012	6,459,192	24,732,406	8,266,110	25,540,749	100.0%	77.2%	0.0%

The valuation results for 2011 reflect Act 278.

SECTION D

MEMBERSHIP DATA

MEMBERSHIP TABLES

Summary of Membership Data

		July 1, 2012 (1)	July 1, 2011 (2)
1.	Active members		
a.	Males	57,209	57,593
b.	Females	128,539	130,018
c.	Total members	185,748	187,611
d.	Total annualized prior year pay	$ 7,031,748,709	$ 7,348,994,413
e.	Average pay	$ 37,856	$ 39,171
f.	Average age	45.3	45.5
g.	Average service	10.4	10.5
h.	Member contributions with interest	$ 5,681,226,665	$ 5,724,837,949
i.	Average contributions with interest	$ 30,586	$ 30,514
2.	Vested inactive members		
a.	Number	18,234	19,775
b.	Total annual deferred benefits	$ 110,708,433	$ 113,553,247
c.	Average annual deferred benefit	$ 6,072	$ 5,742
3.	Nonvested inactive members		
a.	Number	135,839	138,311
b.	Member contributions with interest	$ 192,790,075	$ 197,403,844
c.	Average contributions with interest	$ 1,419	$ 1,427
4.	Service retirees		
a.	Number	100,685	94,838
b.	Total annual benefits	$ 2,084,693,740	$ 1,936,478,546
c.	Average annual benefit	$ 20,705	$ 20,419
d.	Average age at the valuation date	68.9	68.9
5.	Disabled retirees		
a.	Number	12,941	12,492
b.	Total annual benefits	$ 192,594,690	$ 142,029,844
c.	Average annual benefit	$ 14,883	$ 11,370
d.	Average age at the valuation date	62.2	61.9
6.	Beneficiaries		
a.	Number	8,301	8,042
b.	Total annual benefits	$ 94,514,806	$ 89,867,788
c.	Average annual benefit	$ 11,386	$ 11,175
d.	Average age at the valuation date	67.4	67.3

Summary of Contributing Membership Data

(Dollar amounts expressed in thousands)

		June 30, 2012 (1)		June 30, 2011 (2)
1. Active Members				
a. Number of state employees		50,318		51,723
Total annual compensation	$	2,092,882	$	2,232,313
b. Number of public school employees		82,329		83,075
Total annual compensation	$	3,053,114	$	3,153,646
c. Number of other agency employees		53,101		52,813
Total annual compensation	$	1,885,753	$	1,963,036
Total number of active members		185,748		187,611
Total annual compensation	$	7,031,749	$	7,348,995
2. TERI Paricipants				
a. Number of state employees		2,368		1,726
Total annual compensation	$	134,871	$	91,874
b. Number of public school employees		3,650		2,925
Total annual compensation	$	202,277	$	152,428
c. Number of other agency employees		767		603
Total annual compensation	$	40,727	$	27,269
Number of active TERI partipants		6,785		5,254
Total annual compensation	$	377,875	$	271,571
3. Rehired Retired Participants				
a. Number of state employees		4,898		3,995
Total annual compensation	$	154,623	$	138,265
b. Number of public school employees		8,866		8,041
Total annual compensation	$	241,616	$	246,019
c. Number of other agency employees		3,403		2,184
Total annual compensation	$	103,554	$	81,395
Number of rehired retired members		17,167		14,220
Total annual compensation	$	499,793	$	465,679
4. ORP Participants				
a. Number of state employees		13,488		11,560
Total annual compensation	$	721,905	$	656,124
b. Number of public school employees		6,134		7,596
Total annual compensation	$	248,057	$	287,524
Number of ORP members		19,622		19,156
Total annual compensation	$	969,962	$	943,648
5. All Groups Combined				
a. Number of state employees		71,072		69,004
Total annual compensation	$	3,104,281	$	3,118,576
b. Number of public school employees		100,979		101,637
Total annual compensation	$	3,745,064	$	3,839,617
c. Number of other agency employees		57,271		55,600
Total annual compensation	$	2,030,034	$	2,071,700
Total number members		229,322		226,241
Total annual compensation	$	8,879,379	$	9,029,893

Note: Total compensation is the annualized pay for the prior year.

Summary of Historical Active Membership

		Active Members		Covered Payroll[1]		Average Annual Pay			
July 1, (1)	Number of Employers (2)	Number (3)	Percent Increase /(Decrease) (4)	Amount in Thousands (5)	Percent Increase /(Decrease) (6)	Amount (7)	Percent Increase /(Decrease) (8)	Average Age (9)	Average Service (10)
2001	739	191,494	2.7%	$ 6,017,537	2.3%	$ 31,424	5.15%	N/A	N/A
2002	746	189,166	-1.2%	6,147,712	2.2%	32,499	3.42%	44	10
2003	763	185,538	-1.9%	6,240,768	1.5%	33,636	3.50%	44	10
2004	763	181,827	-2.0%	6,180,599	-1.0%	33,992	1.06%	44	10
2005	768	181,022	-0.4%	6,356,489	2.8%	35,114	3.30%	44	10
2006	763	184,282	1.8%	6,733,379	5.9%	36,538	4.06%	45	10
2007	777	187,968	2.0%	7,093,181	5.3%	37,736	3.28%	45	10
2008	776	192,820	2.6%	7,559,172	6.6%	39,203	3.89%	45	10
2009	781	192,319	-0.3%	7,761,808	2.7%	40,359	2.95%	45	10
2010	800	190,239	-1.1%	7,769,820	-4.7%	40,842	1.20%	45	10
2011	803	187,611	-1.4%	7,687,558	-1.1%	40,976	0.33%	45	11
2012	806	185,748	-1.0%	7,356,231	-4.3%	39,603	-3.35%	45	10

[1] Covered payroll does not include payroll attributable to members in ORP, TERI, or working retirees.

Distribution of Active Members by Age and by Years of Service

	Years of Credited Service												
Attained Age	0 Count & Avg. Comp.	1 Count & Avg. Comp.	2 Count & Avg. Comp.	3 Count & Avg. Comp.	4 Count & Avg. Comp.	5-9 Count & Avg. Comp.	10-14 Count & Avg. Comp.	15-19 Count & Avg. Comp.	20-24 Count & Avg. Comp.	25-29 Count & Avg. Comp.	30-34 Count & Avg. Comp.	35 & Over Count & Avg. Comp.	Total Count & Avg. Comp.
Under 20	230	15	3	0	0	0	0	0	0	0	0	0	248
	$5,548	$10,562	$9,525	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,899
20-24	2,272	1,646	623	281	172	94	0	0	0	0	0	0	5,088
	$11,184	$25,239	$26,045	$22,993	$25,295	$25,349	$0	$0	$0	$0	$0	$0	$18,941
25-29	2,619	2,661	2,207	2,016	2,224	3,541	35	0	0	0	0	0	15,303
	$14,291	$28,918	$31,923	$32,359	$33,257	$34,962	$30,345	$0	$0	$0	$0	$0	$29,334
30-34	1,869	1,654	1,344	1,400	1,914	8,021	2,220	30	0	0	0	0	18,452
	$15,318	$30,954	$35,073	$35,791	$34,241	$38,595	$42,646	$39,089	$0	$0	$0	$0	$35,120
35-39	1,633	1,473	1,109	1,175	1,519	5,729	6,410	1,726	22	0	0	0	20,796
	$14,521	$31,410	$33,227	$36,285	$35,192	$38,187	$46,075	$49,302	$33,622	$0	$0	$0	$38,607
40-44	1,728	1,549	1,224	1,186	1,503	5,752	5,576	5,584	1,741	62	0	0	25,905
	$15,049	$29,225	$32,558	$35,649	$34,166	$37,316	$43,782	$51,546	$52,163	$40,775	$0	$0	$40,328
45-49	1,434	1,328	1,064	1,089	1,408	5,281	5,021	3,862	4,587	1,776	26	0	26,876
	$13,900	$28,479	$33,531	$34,075	$33,618	$35,618	$40,650	$46,227	$53,221	$54,008	$42,960	$0	$40,548
50-54	1,240	1,152	952	974	1,254	4,969	5,049	3,884	3,800	3,722	552	11	27,559
	$14,827	$30,129	$30,262	$34,663	$33,512	$35,040	$38,637	$43,318	$49,452	$55,741	$57,899	$66,868	$40,757
55-59	1,013	917	847	816	1,129	4,318	4,595	3,941	3,508	2,377	791	133	24,385
	$14,843	$29,331	$30,783	$32,327	$33,244	$35,640	$38,823	$42,799	$46,892	$53,441	$59,879	$59,056	$40,173
60-64	552	520	493	539	714	3,017	2,839	2,330	2,064	1,279	318	169	14,834
	$13,771	$26,106	$30,702	$30,686	$31,165	$36,102	$39,671	$43,984	$45,370	$52,330	$65,507	$65,034	$39,877
65 & Over	367	307	231	296	412	1,724	1,212	734	475	333	123	88	6,302
	$7,810	$17,302	$19,981	$24,422	$24,714	$29,353	$33,025	$43,094	$44,191	$53,278	$64,633	$70,687	$32,588
Total	14,957	13,222	10,097	9,772	12,249	42,446	32,957	22,091	16,197	9,549	1,810	401	185,748
	$13,792	$28,717	$31,778	$33,538	$33,308	$36,394	$41,431	$46,338	$49,560	$54,206	$60,344	$64,342	$37,856

Schedule of Annuitants by Type of Benefit

Type of Benefit/ Form of Payment (1)	Number (2)		Annual Benefits Amount (3)		Average Monthly Benefit (4)
Service :					
Maximum & QDRO	68,093	$	1,310,286,071	$	1,604
100% J&S	14,593		327,330,434		1,869
50% J&S	10,320		279,088,672		2,254
10 Years C&L	624		12,050,298		1,609
Level Income	7,055		155,938,265		1,842
Subtotal:	100,685	$	2,084,693,740		1,725
Disability:					
Maximum	10,669	$	144,246,029	$	1,127
100% J&S	1,280		13,522,098		880
50% J&S	821		13,049,182		1,325
10 Years C&L	171		2,161,921		1,054
Subtotal:	12,941	$	172,979,230		1,114
Beneficiaries:	8,301	$	94,514,797	$	949
Total:	121,927	$	2,352,187,767	$	1,608

Distribution of Annuitants by Monthly Benefit

Monthly Benefit Amount (1)	Number of Annuitants (2)	Female (3)	Male (4)	Average Service (5)
Under $200	7,168	4,790	2,378	7.22
$ 200 - 399	11,540	8,293	3,247	11.13
400 - 599	10,964	7,808	3,156	14.24
600 - 799	9,258	6,701	2,557	17.16
800 - 999	8,030	5,756	2,274	19.61
1,000 - 1,199	7,325	5,242	2,083	22.01
1,200 - 1,399	6,753	4,863	1,890	23.77
1,400 - 1,599	6,401	4,543	1,858	25.17
1,600 - 1,799	6,053	4,279	1,774	26.58
1,800 - 1,999	5,951	4,173	1,778	27.50
2,000 - 2,199	6,532	4,799	1,733	28.12
2,200 - 2,399	6,725	4,973	1,752	28.50
2,400 - 2,599	6,828	5,097	1,731	28.74
2,600 - 2,799	5,267	3,746	1,521	29.26
2,800 - 2,999	3,784	2,502	1,282	29.50
3,000 - 3,199	2,785	1,613	1,172	29.85
3,200 - 3,399	2,010	1,076	934	29.99
3,400 - 3,599	1,620	838	782	30.20
3,600 - 3,799	1,312	620	692	30.33
3,800 - 3,999	1,109	469	640	30.44
4,000 & Over	4,512	1,363	3,149	31.44
Total	121,927	83,544	38,383	22.19

Schedule of Retirants Added to And Removed from Rolls

(Dollar amounts except average allowance expressed in thousands)

	Added to Rolls		Removed from Rolls		Rolls End of the Year		% Increase in Annual Benefit	Average Annual Benefit
Year Ended	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2001	12,523	$ 284,739	2,474	$ 23,735	74,054	$ 1,085,634	31.7%	$ 14,660
2002	7,344	140,077	2,334	24,531	79,064	1,201,180	10.6%	15,193
2003	7,866	163,867	2,510	27,662	84,420	1,337,385	11.3%	15,842
2004	7,319	151,477	2,132	22,656	89,607	1,466,206	9.6%	16,363
2005	7,203	167,748	2,143	23,537	94,667	1,610,417	9.8%	17,011
2006	4,621	118,271	2,083	24,099	97,205	1,704,589	5.8%	17,536
2007	5,944	130,286	2,252	28,455	100,897	1,806,420	6.0%	17,904
2008	6,021	132,856	2,396	30,178	104,522	1,909,098	5.7%	18,265
2009	6,190	101,813	2,698	36,834	108,014	1,974,077	3.4%	18,276
2010	6,596	151,348	3,216	44,049	111,394	2,081,376	5.4%	18,685
2011	6,336	141,242	2,358	31,382	115,372	2,191,236	5.3%	18,993
2012	9,523	205,050	2,968	44,099	121,927	2,352,188	7.3%	19,292

Includes Teacher and Employee Retention Incentive (TERI) participants.

APPENDIX A

ACTUARIAL ASSUMPTIONS AND METHODS

Summary of Actuarial Methods and Assumptions

The following presents a summary of the actuarial assumptions and methods used in the valuation of the South Carolina Retirement System.

Investment Rate of Return

Assumed annual rate of 7.50% net of investment and administrative expenses composed of a 2.75% inflation component and a 4.75% real rate of return, net of investment and administration expenses.

Rates of Annual Salary Increase

Rates of annual salary increase are assumed to vary for the first 19 years of service due to expected merit and promotional increases which differs by employee group. Beginning with the 20th year of service, the assumed annual rate of increase is 3.50% for both groups and for all future years of service.

The 3.50% rate of increase is composed of a 2.75% inflation component and a 0.75% real rate of wage increase (productivity) component.

Active Male & Female Salary Increase Rate

Years of Service	General Employees		Teachers	
	Annual Promotional/Longevity Rates of Increase	**Total Annual Rate of Increase Including 3.50% Wage Inflation**	**Annual Promotional/Longevity Rates of Increase**	**Total Annual Rate of Increase Including 3.50% Wage Inflation**
0	2.50%	6.00%	4.00%	7.50%
1	2.50%	6.00%	9.00%	12.50%
2	2.00%	5.50%	3.00%	6.50%
3	1.50%	5.00%	2.75%	6.25%
4	1.25%	4.75%	2.50%	6.00%
5	1.00%	4.50%	2.25%	5.75%
6	0.75%	4.25%	2.00%	5.50%
7	0.50%	4.00%	1.75%	5.25%
8	0.50%	4.00%	1.75%	5.25%
9	0.25%	3.75%	1.50%	5.00%
10	0.25%	3.75%	1.50%	5.00%
11	0.25%	3.75%	1.50%	5.00%
12	0.25%	3.75%	1.25%	4.75%
13	0.25%	3.75%	1.00%	4.50%
14	0.25%	3.75%	1.00%	4.50%
15	0.00%	3.50%	1.00%	4.50%
16	0.00%	3.50%	0.75%	4.25%
17	0.00%	3.50%	0.50%	4.00%
18	0.00%	3.50%	0.25%	3.75%
19	0.00%	3.50%	0.25%	3.75%
20+	0.00%	3.50%	0.00%	3.50%

Active Member Decrement Rates

a. Assumed rate of Service Retirement or TERI entry are shown in the following tables. The first table is for members who attain age 65 before attaining 28 years of service. The second table is based on service and is for members who attain 28 years of service before age 65.

Annual Age Based Retirement Rates									
Members	**Class Two**								**Class Three**
Age	**General Employees**				**Teachers**				
	Reduced		**Normal***		**Reduced**		**Normal***		**Rule of 90**
	Male	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	
55	4%	4%	0%	0%	2%	2%	0%	0%	20%
56	4%	4%	0%	0%	2%	2%	0%	0%	20%
57	4%	4%	0%	0%	2%	2%	0%	0%	20%
58	4%	4%	0%	0%	2%	2%	0%	0%	20%
59	4%	4%	0%	0%	2%	2%	0%	0%	20%
60	5%	7%	0%	0%	5%	6%	0%	0%	20%
61	5%	7%	0%	0%	6%	6%	0%	0%	20%
62	14%	13%	0%	0%	12%	11%	0%	0%	20%
63	10%	13%	0%	0%	12%	10%	0%	0%	20%
64	10%	13%	0%	0%	9%	10%	0%	0%	20%
65	0%	0%	20%	22%	0%	0%	20%	25%	20%
66	0%	0%	20%	22%	0%	0%	20%	25%	20%
67	0%	0%	17%	19%	0%	0%	20%	20%	20%
68	0%	0%	17%	19%	0%	0%	20%	20%	20%
69	0%	0%	17%	19%	0%	0%	20%	20%	20%
70	0%	0%	17%	19%	0%	0%	20%	20%	20%
71	0%	0%	17%	19%	0%	0%	20%	20%	20%
72	0%	0%	17%	19%	0%	0%	20%	20%	20%
73	0%	0%	17%	19%	0%	0%	20%	20%	20%
74	0%	0%	17%	19%	0%	0%	20%	20%	20%
75	0%	0%	100%	100%	0%	0%	100%	100%	100%

* Retirement rate 50% at the later of age 62 or when they are first eligible for a normal retirement benefit, the first age the member is eligible to concurrently commence benefits and continue employment.

Annual Service Based Retirement Rates*				
Class Two Members				
Years of Service	General Employees		Teachers	
	Male	Female	Male	Female
28	15%	18%	7%	8%
29	10%	10%	8%	9%
30	10%	10%	8%	9%
31	10%	10%	9%	10%
32	10%	10%	10%	11%
33	18%	20%	11%	12%
34	18%	20%	12%	18%
35	18%	20%	13%	18%
36	20%	20%	14%	18%
37	20%	20%	18%	18%
38	20%	20%	17%	19%
39	20%	20%	17%	20%
40	100%	100%	100%	100%
41	100%	100%	100%	100%
42	100%	100%	100%	100%
43	100%	100%	100%	100%
44	100%	100%	100%	100%
45	100%	100%	100%	100%
46	100%	100%	100%	100%
47	100%	100%	100%	100%
48	100%	100%	100%	100%

* Retirement rate 50% at the later of age 62 or when they are first eligible for a normal retirement benefit, the first age the member is eligible to concurrently commence benefits and continue employment.

b. Assumed rates of disability are shown in the following table.

Disability Rates				
Age	General Employees		Teachers	
	Males	Females	Males	Females
25	0.0504%	0.0464%	0.0419%	0.0458%
30	0.1008%	0.0650%	0.0629%	0.0616%
35	0.1512%	0.1299%	0.0838%	0.0616%
40	0.2520%	0.1670%	0.1572%	0.1074%
45	0.3528%	0.2413%	0.2620%	0.2200%
50	0.5040%	0.4083%	0.4192%	0.3520%
55	0.8064%	0.6496%	0.6812%	0.5720%
60	1.0080%	0.9930%	1.0480%	0.8800%
64	1.2600%	1.3827%	1.3100%	1.1000%

c. Active Member Mortality

Rates of active member mortality are based upon a client specific table with applicable multipliers to match the experience.

Active Mortality Rates (Multiplier Applied)				
Age	**General Employees**		**Teachers**	
	Males	**Females**	**Males**	**Females**
25	0.0414%	0.0166%	0.0432%	0.0145%
30	0.0488%	0.0211%	0.0511%	0.0185%
35	0.0850%	0.0380%	0.0889%	0.0333%
40	0.1187%	0.0565%	0.1241%	0.0494%
45	0.1659%	0.0899%	0.1734%	0.0787%
50	0.2352%	0.1341%	0.2459%	0.1173%
55	0.3332%	0.2021%	0.3483%	0.1768%
60	0.5366%	0.3145%	0.5610%	0.2752%
64	0.7731%	0.4343%	0.8082%	0.3800%
Multiplier	110%	80%	115%	70%

d. Rates of Withdrawal

Rate of withdrawal for active members prior to eligibility for retirement are for each employee group and differ by gender and service. Sample rates are shown in the tables below.

Withdrawal Rates - Male General Employees															
Age	**Years of Service**														
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
25	0.329	0.247	0.190	0.155	0.134	0.117	0.096	0.078	0.065	0.059	0.066	0.000	0.000	0.000	0.000
30	0.294	0.221	0.173	0.142	0.124	0.109	0.095	0.082	0.070	0.060	0.053	0.047	0.044	0.042	0.039
35	0.268	0.200	0.155	0.129	0.112	0.101	0.092	0.082	0.072	0.059	0.042	0.047	0.044	0.042	0.039
40	0.246	0.180	0.138	0.114	0.100	0.092	0.086	0.079	0.069	0.055	0.033	0.042	0.042	0.042	0.039
45	0.226	0.164	0.123	0.100	0.088	0.082	0.078	0.073	0.064	0.049	0.027	0.039	0.036	0.034	0.032
50	0.208	0.150	0.111	0.089	0.077	0.072	0.068	0.063	0.055	0.042	0.022	0.029	0.029	0.029	0.029
55	0.194	0.141	0.104	0.081	0.069	0.060	0.054	0.049	0.042	0.033	0.021	0.020	0.020	0.020	0.020
60	0.183	0.135	0.100	0.077	0.063	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Age	**Years of Service (Continued)**													
	15	16	17	18	19	20	21	22	23	24	25	26	27	28+
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	0.036	0.034	0.032	0.029	0.027	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.036	0.034	0.032	0.029	0.027	0.025	0.023	0.022	0.020	0.018	0.017	0.000	0.000	0.000
45	0.029	0.029	0.029	0.029	0.027	0.025	0.023	0.022	0.020	0.018	0.017	0.016	0.014	0.000
50	0.029	0.027	0.025	0.023	0.022	0.020	0.020	0.020	0.020	0.018	0.017	0.016	0.014	0.000
55	0.020	0.020	0.020	0.020	0.020	0.020	0.018	0.017	0.016	0.014	0.000	0.000	0.000	0.000
60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Withdrawal Rates - Female General Employees

Age	Years of Service														
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
25	0.298	0.246	0.206	0.177	0.156	0.138	0.125	0.116	0.109	0.103	0.094	0.000	0.000	0.000	0.000
30	0.271	0.224	0.186	0.159	0.140	0.125	0.115	0.106	0.097	0.085	0.069	0.052	0.049	0.045	0.042
35	0.251	0.202	0.166	0.141	0.124	0.113	0.104	0.096	0.086	0.071	0.051	0.052	0.049	0.045	0.042
40	0.233	0.180	0.145	0.123	0.110	0.101	0.093	0.085	0.075	0.059	0.037	0.045	0.045	0.045	0.042
45	0.217	0.162	0.127	0.108	0.097	0.089	0.082	0.075	0.064	0.049	0.028	0.042	0.039	0.036	0.033
50	0.204	0.149	0.115	0.097	0.086	0.079	0.071	0.064	0.054	0.041	0.023	0.030	0.030	0.030	0.030
55	0.195	0.143	0.109	0.089	0.078	0.069	0.061	0.053	0.044	0.035	0.024	0.020	0.020	0.020	0.020
60	0.187	0.141	0.108	0.085	0.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Age	Years of Service (Continued)														
	15	16	17	18	19	20	21	22	23	24	25	26	27	28+	
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
30	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
35	0.039	0.036	0.033	0.030	0.028	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
40	0.039	0.036	0.033	0.030	0.028	0.025	0.023	0.022	0.020	0.018	0.017	0.000	0.000	0.000	
45	0.030	0.030	0.030	0.030	0.028	0.025	0.023	0.022	0.020	0.018	0.017	0.016	0.015	0.000	
50	0.030	0.028	0.025	0.023	0.022	0.020	0.020	0.020	0.020	0.018	0.017	0.016	0.015	0.000	
55	0.020	0.020	0.020	0.020	0.020	0.020	0.018	0.017	0.016	0.015	0.000	0.000	0.000	0.000	
60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

Withdrawal Rates - Male Teachers

Age	Years of Service														
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
25	0.296	0.203	0.138	0.097	0.072	0.058	0.051	0.051	0.052	0.054	0.056	0.000	0.000	0.000	0.000
30	0.272	0.192	0.136	0.099	0.078	0.066	0.061	0.058	0.054	0.048	0.039	0.027	0.026	0.025	0.025
35	0.253	0.182	0.132	0.099	0.081	0.071	0.066	0.061	0.054	0.043	0.027	0.027	0.026	0.025	0.025
40	0.237	0.173	0.127	0.098	0.082	0.073	0.068	0.062	0.053	0.039	0.020	0.025	0.025	0.025	0.025
45	0.224	0.165	0.123	0.096	0.081	0.073	0.067	0.060	0.050	0.036	0.017	0.025	0.024	0.023	0.023
50	0.214	0.159	0.119	0.094	0.079	0.070	0.063	0.055	0.046	0.034	0.017	0.022	0.022	0.022	0.022
55	0.206	0.155	0.117	0.091	0.074	0.065	0.056	0.048	0.040	0.032	0.022	0.017	0.017	0.017	0.017
60	0.200	0.152	0.114	0.087	0.067	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Age	Years of Service (Continued)														
	15	16	17	18	19	20	21	22	23	24	25	26	27	28+	
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
30	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
35	0.024	0.023	0.023	0.022	0.021	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
40	0.024	0.023	0.023	0.022	0.021	0.020	0.019	0.018	0.017	0.015	0.014	0.000	0.000	0.000	
45	0.022	0.022	0.022	0.022	0.021	0.020	0.019	0.018	0.017	0.015	0.014	0.012	0.009	0.000	
50	0.022	0.021	0.020	0.019	0.018	0.017	0.017	0.017	0.017	0.015	0.014	0.012	0.009	0.000	
55	0.017	0.017	0.017	0.017	0.017	0.017	0.015	0.014	0.012	0.009	0.000	0.000	0.000	0.000	
60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

Withdrawal Rates - Female Teachers															
Age	**Years of Service**														
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
25	0.230	0.161	0.121	0.101	0.089	0.084	0.083	0.080	0.073	0.066	0.060	0.000	0.000	0.000	0.000
30	0.227	0.166	0.126	0.101	0.088	0.080	0.075	0.070	0.062	0.053	0.043	0.032	0.030	0.028	0.026
35	0.217	0.160	0.121	0.097	0.083	0.075	0.068	0.062	0.054	0.043	0.030	0.032	0.030	0.028	0.026
40	0.204	0.148	0.111	0.088	0.076	0.068	0.062	0.055	0.048	0.037	0.021	0.028	0.028	0.028	0.026
45	0.193	0.136	0.100	0.080	0.068	0.062	0.056	0.050	0.044	0.033	0.016	0.026	0.024	0.023	0.021
50	0.187	0.130	0.094	0.074	0.063	0.057	0.052	0.048	0.042	0.032	0.015	0.020	0.020	0.020	0.020
55	0.188	0.131	0.094	0.073	0.063	0.054	0.051	0.047	0.042	0.033	0.019	0.013	0.013	0.013	0.013
60	0.195	0.138	0.099	0.076	0.066	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Age	**Years of Service (Continued)**														
	15	16	17	18	19	20	21	22	23	24	25	26	27	28+	
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
30	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
35	0.024	0.023	0.021	0.020	0.018	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
40	0.024	0.023	0.021	0.020	0.018	0.017	0.015	0.014	0.013	0.011	0.010	0.000	0.000	0.000	
45	0.020	0.020	0.020	0.020	0.018	0.017	0.015	0.014	0.013	0.011	0.010	0.009	0.008	0.000	
50	0.020	0.018	0.017	0.015	0.014	0.013	0.013	0.013	0.013	0.011	0.010	0.009	0.008	0.000	
55	0.013	0.013	0.013	0.013	0.013	0.013	0.011	0.010	0.009	0.008	0.000	0.000	0.000	0.000	
60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

Post Retirement Mortality

a. Healthy retirees and beneficiaries – The valuation assumes fully generational mortality. The base mortality table used is the RP-2000 Mortality Table (Public School District Employees utilize the White Collar adjustment), adjusted by multipliers documented in the table below. Future mortality improvements are assumed each year using Scale AA. The following are sample rates:

Nondisabled Annuitant Mortality Rates Before Projection (Multiplier Applied)				
Age	**General Employees**		**Teachers**	
	Males	**Females**	**Males**	**Females**
50	0.2138%	0.1508%	0.2176%	0.1510%
55	0.3624%	0.2445%	0.3632%	0.2457%
60	0.6747%	0.4550%	0.6141%	0.4443%
65	1.2737%	0.8735%	1.2167%	0.8218%
70	2.2206%	1.5068%	2.1203%	1.4426%
75	3.7834%	2.5295%	3.6997%	2.4431%
80	6.4368%	4.1291%	6.5353%	4.0926%
85	11.0757%	6.9701%	11.5132%	7.0483%
90	18.3408%	11.8514%	19.6100%	11.9843%
Multiplier	100%	90%	110%	95%

The following table provides the life expectancy for individuals retiring in future years based on the assumption with full generational projection:

Life Expectancy for an Age 65 Retiree in Years				
Employee Type	**Year of Retirement**			
	2015	**2020**	**2025**	**2030**
General Employee – Male	19.6	20.0	20.4	20.7
General Employee – Female	22.3	22.5	22.7	22.9
Teacher – Male	19.5	19.9	20.3	20.6
Teacher - Female	22.4	22.6	22.8	22.9

b. A separate table of mortality rates is used for disabled retirees based on the RP-2000 Disabled Retiree Mortality Table. The following are sample rates:

Disabled Annuitant Mortality Rates (Multiplier Applied)				
Age	**General Employees**		**Teachers**	
	Males	**Females**	**Males**	**Females**
50	2.4629%	1.2689%	2.1731%	1.2689%
55	3.0126%	1.8198%	2.6581%	1.8198%
60	3.5736%	2.4023%	3.1531%	2.4023%
65	4.2648%	3.0829%	3.7631%	3.0829%
70	5.3196%	4.1398%	4.6937%	4.1398%
75	6.9757%	5.7453%	6.1550%	5.7453%
80	9.2966%	7.9543%	8.2029%	7.9543%
85	12.0363%	11.0223%	10.6202%	11.0223%
90	15.5897%	15.4054%	13.7556%	15.4054%
Multiplier	85%	110%	75%	110%

Asset Valuation Method

The actuarial value of assets is based on the market value of assets with five-year smoothing applied. This is accomplished by recognizing each year 20% of the difference between the market value of assets and the expected actuarial value of assets, based upon the assumed valuation rate of return.

Expected earnings are determined using the assumed investment rate of return and the beginning of year actuarial value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses.

Actuarial Cost Method

The Entry Age Normal actuarial cost method allocates the System'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 number of years required to fully amortize the unfunded accrued liability with the expected amount of employer contributions in excess of the employers' portion of the normal cost.

The calculation of the amortization period takes into account scheduled increases to contribution rates applicable to future years and payroll growth. Also, the calculation of the amortization period reflects additional contributions the System receives with respect to post July 1, 2005 TERI participants, ORP participants and return to work retirees. These contributions are assumed to grow at the same payroll growth rate as for active SCRS employees. It is assumed that amortization payments are made monthly at the end of the month.

Unused Annual Leave

To account for the effect of unused annual leave in Annual Final Compensation (AFC) of Class Two members, the AFC for Class Two members is increased 2.14% at their date of retirement.

Unused Sick Leave

To account for the effect of unused sick leave on credited service for Class Two members, the service of active Class Two members who retire is increased 3 months.

Future Post-Retirement Benefit Adjustments

Benefits are assumed to increase by the lesser of 1.00% annually or $500 beginning on the July 1st following the receipt of 12 monthly benefit payments. The $500 limit in the annual increase is not indexed to escalate in future years.

Payroll Growth Rate

The total annual payroll of active members (also applies to TERI, ORP and rehired retiree participants) is assumed to increase at an annual rate of 3.50%. This rate represents the underlying expected annual rate of wage inflation and does not anticipate increases in the number of members.

Other Assumptions

1. Valuation payroll (used for determining the amortization contribution rate): Prior fiscal year payroll projected forward one year using the overall payroll growth rate. This was determined separately for TERI, and return to work employees by dividing the actual member contributions received during the prior fiscal year by the member contribution rate in effect for that year, and then projecting forward at 3.50%.

2. Individual salaries used to project benefits: Actual salaries from the past fiscal year are used to determine the final average salary as of the valuation date. For future salaries, the salary from the last fiscal year is projected forward with one year's salary scale.

3. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported salaries represent amounts paid to members during the year ended on the valuation date.

4. Percent married: 100% of male and 100% of female employees are assumed to be married.

5. Age difference: Males are assumed to be three years older than their spouses.

6. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an immediate life annuity.

7. Inactive Population: All non-vested members are assumed to take an immediate refund. Members with a vested benefit are assumed to elect a refund or a deferred benefit commencing at age 65, whichever is more valuable at the valuation date.

8. There will be no recoveries once disabled.

10. Decrement timing: Decrements of all types are assumed to occur mid-year.

11. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

12. Decrement relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.

13. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.

14. Benefit Service: All members are assumed to accrue one year of eligibility service each year.

15. All calculations were performed without regard to the compensation limit in IRC Section 401(a)(17) and the benefit limit under IRC Section 415.

Participant Data

Participant data was supplied in electronic text files. There were separate files for (i) active and inactive members, and (ii) members and beneficiaries receiving benefits.

The data for active members included birth date, gender, service with the current city and total vesting service, salary, and employee contribution account balances. For retired members and beneficiaries, the data included date of birth, gender, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and form of payment code.

Salary supplied for the current year was based on the annualized earnings for the year preceding the valuation date.

Assumptions were made to correct for missing, bad, or inconsistent data. These had no material impact on the results presented.

APPENDIX B

BENEFIT PROVISIONS

SUMMARY OF BENEFIT PROVISIONS FOR SOUTH CAROLINA RETIREMENT SYSTEM
(SCRS)

Effective Date: July 1, 1945.

Administration: The South Carolina Retirement System, organizationally aligned as a Division of the State Budget and Control Board, is responsible for the general administrative operations and day to day management of the Plan.

Type of Plan: This is a qualified governmental defined benefit retirement plan. Under GASB 25, it is considered to be a cost-sharing multiple-employer plan.

Eligibility: This System covers all permanent full-time or part-time employees of a covered employer (i.e. public school, state employer, city, county, and other local public governmental entity), unless specifically exempted by Statute or participate in the State Optional Retirement Program (ORP).

Employee Contributions: Members will contribute 7.00%, 7.50% of earnable compensation for FY 2013 and 2014 respectively. The member contribution rate for FY 2015 and thereafter is 8.00%. Furthermore, in the event that these contribution rates are insufficient to maintain a 30-year amortization period, the Board shall increase the employer and member contribution rates by an equal amount (i.e. maintain at least a 2.90% differential between the employer and member rates) as necessary to maintain a 30-year funding period. The employer and member contribution rates may not decrease until the plan attains a 90% funded ratio. These contributions are "picked-up" under Section 414(h) of the Internal Revenue Code. Contributions are credited with interest at the rate of 4.0% per annum while the member is actively employed.

Average Final Compensation (AFC): The monthly average of the member's highest 12 consecutive quarters of earnable compensation (highest 20 consecutive quarters for Class Three members, members who are hired after June 30, 2012). Earnable compensation is the compensation that would be payable to a member if the member worked a full, normal working time, which includes gross salary, sick pay, and deferrals. Compensation due to overtime earned after December 31, 2012 will not be included unless that compensation is for time that is mandated by the employer.

The calculation of the AFC for Class One and Class Two members also includes up to 45 days pay for unused annual leave paid at termination. Members joining the System after January 1, 1996, have their compensation limited in accordance with IRC Section 401(a)(17) for determining benefits.

***Service Retirement (Unreduced)**:*

a. Eligibility: Class Two members may retire with an unreduced benefit at age 65 with five years of earned service or after 28 years of creditable service, if earlier. Class Three members may retire with an unreduced benefit at age 65 with eight years of earned service or after the satisfying the rule of 90 (i.e. age plus credited service equals or exceeds 90).

b. Monthly Benefit: 1.82% times the member's AFC times their years of creditable service.

c. Payment Forms: Maximum retirement allowance (Option A) and survivor allowances under Options B and C.

Service Retirement (Reduced):

a. Eligibility: Class Two members may retire with a reduced benefit upon attaining: (1) age 55 with 25 years of creditable service (minimum of 5 years of earned service), or (2) age 60 with five years of earned service. Class Three members may retire with a reduced benefit upon attaining age 60 with eight years of earned service.

b. Reduction: A Class Two member's benefit will be reduced by either an age or service based reduction factor described below, whichever results in the most favorable benefit. A Class Three member's benefit will be reduced by the age based reduction factor described below.

   Age Based: Members retiring after age 60 will have their benefit reduced at the rate of 5% per year for each year of their retirement age precedes age 65.

   Service Based: 4% per year for each year of creditable service that is less than 28.

c. Payment Forms: Maximum retirement allowance (Option A) and survivor allowances under Options B and C.

Disability Retirement:

a. Eligibility: The eligibility for a disability retirement will be based upon the member's entitlement for Social Security disability benefits.

b. Monthly Benefit: The net monthly disability benefit payable is equal to the member's benefit based on their credited service and AFC at the time of their disability.

c. Payment Form: Maximum retirement allowance (Option A) and survivor allowances under Options B and C.

d. Death while Disabled: A disabled member is treated as a retired member for purposes of determining a death benefit.

***Vesting and Refunds*:**

a. Eligibility: All members who are not vested are eligible for a refund when they terminate service. Class Two members are vested after five (5) years of earned service. Class Three members are vested after eight (8) years of earned service. Vested members may also elect to receive a refund in lieu of the deferred termination benefit described below.

b. Amount: The refund benefit is the accumulated value of the member's contributions plus interest credited by the fund while they were actively employed. Members do not earn interest on their employee contribution account balance while they are inactive.

***Deferred Termination Benefit*:**

a. Eligibility: Member must be vested (i.e. 5 years of earned service for Class Two members and 8 years of earned service for Class Three members) and must elect to leave his/her contributions on deposit.

b. Monthly Benefit: Same as the unreduced or reduced service retirement benefit, based on service and AFC at termination, and commencing once the member is eligible.

c. Payment Form: Maximum retirement allowance (Option A).

d. Death Benefit: The beneficiary of an inactive member who dies is entitled to receive the amount of the member’s accumulated contributions (with interest). If the member met service eligibility requirement at their time of death, the beneficiary is eligible for a monthly survivor annuity benefit.

***Death while an Active Contributing Member*:**

a. In General: A refund of the member's accumulated contributions (with interest) is paid to the beneficiary of a deceased member.

b. Beneficiary Annuity: If the deceased member (i) attained 5 or more years of earned service and (ii) had attained the age of 60 or had accumulated 15 or more years of creditable service, may elect to receive, in lieu of the accumulated contributions, a monthly benefit for life of the beneficiary determined under “Option B” described under the Optional Forms of Benefit. For purposes of the benefit calculation, a member under the age of 60 with less than 28 years of creditable service is assumed to be 60 years of age and no age reduction applies.

***Optional Forms of Benefit*:** The Systems permit members to elect from three forms of benefit at retirement. In each case the benefit amount is adjusted to be actuarially equivalent to the "Option A" form. The optional forms are:

a. Option A (Maximum Retirement Allowance): A life annuity. Upon the member’s death, any remaining member contributions will be paid to the member’s designated beneficiary.

b. Option B (100% Joint & Survivor with Pop-up): A reduced annuity payable as long as either the member or his/her spouse is living. In the event the member's designated beneficiary predeceases the member, then the member shall receive a retirement allowance equal to the maximum retirement allowance (Option A), plus any applicable cost of living increases that would have been granted.

c. Option C (50% Joint & Survivor with Pop-up): A reduced annuity payable during the member's life, and continues after the member's death at 50% of the rate paid to the member for the life of the member's designated beneficiary. In the event the member's designated beneficiary predeceases the member, then the member shall receive a retirement allowance equal to the maximum retirement allowance (Option A), plus any applicable cost of living increases that would have been granted.

***Incidental Death Benefit*:**

a. Active Employees: The beneficiary (or estate) of an active employee of an employer participating in the Preretirement Death Benefit Program who completes at least one full year of membership service, will receive a death benefit equal to the member's annual earnable compensation at the time of death.

The one-year membership requirement is waived for members whose death is a result of an injury arising out of and in the course of performing his duties.

For purposes of incidental death benefits, active employees include those members who are receiving a retirement allowance and are actively reemployed with a participating employer.

b. Post Employment: The beneficiary (or estate) of a retiree, both current and future retiree, of an employer participating in the Preretirement Death Benefit Program will receive a one-time payment upon the retiree's death. The amount of the one-time payment is based on the retiree's years of credited service at retirement.

Years of Service Credit	Death Benefit
10 or more, but less than 20	$2,000
20 or more, but less than 28	$4,000
28 or more	$6,000

Postretirement Benefit Increases: Benefits paid to retired members or surviving spouses are increased annually in an amount equal to the lesser of 1.00% of the pension benefit or $500. The $500 limit in the annual increase is not indexed to escalate in future years.

A member electing a reduced early retirement is ineligible to receive a COLA until the second July 1 after the earlier of:

(1) the member attains age 60, or

(2) the member would have 28 years of creditable service had he not retired.

***Teacher and Employee Retention Incentive Program (TERI)*:**

a. Eligibility: Active member eligible for a service retirement benefit.

b. Benefits: A member electing to participate in the program agrees to continue employment for a period not to exceed five years. During this period, the member's service retirement benefit is placed in the system's trust fund on behalf of the member. No interest is paid on the member's deferred monthly benefit during the program period. Upon termination of the program, the member must receive the balance in the account.

c. Other Adjustments: After June 30, 2005, the System shall recalculate the member's final compensation to reflect compensation increases earned after participating in the program. The AFC shall also include up to 45 days of unused annual leave.

d. Death while in TERI: If a member dies during the program period, the member's designated beneficiary will receive a distribution of the balance of benefits accumulated in the member's TERI account.

e. No members may participate in TERI after June 30, 2018.

APPENDIX C

GLOSSARY

GLOSSARY

Actuarial Accrued Liability (AAL): That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Plan Benefits which is not provided for by future Normal Costs. It is equal to the Actuarial Present Value of Future Plan Benefits minus the actuarial present value of future Normal Costs.

Actuarial Assumptions: Assumptions as to future experience under the Fund. These include assumptions about the occurrence of future events affecting costs or liabilities, such as:

- mortality, withdrawal, disablement, and retirement;
- future increases in salary;
- future rates of investment earnings and future investment and administrative expenses;
- characteristics of members not specified in the data, such as marital status;
- characteristics of future members;
- future elections made by members; and
- other relevant items.

Actuarial Cost Method or ***Funding Method:*** A procedure for allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability. These items are used to determine the ARC.

Actuarial Gain or ***Actuarial 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. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the Fund's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.

Actuarially Equivalent: Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.

Actuarial Present Value (APV): The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.)

b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and

c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Plan Benefits: The Actuarial Present Value of those benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members either entitled to a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would be provide sufficient assets to pay all projected benefits and expenses when due.

Actuarial Valuation: The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB 25, such as the funded ratio and the ARC.

Actuarial Value of Assets or ***Valuation Assets:*** The value of the Fund’s assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly actuaries use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ARC.

Actuarially Determined: Values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

Amortization Method: A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.

Amortization Payment: That portion of the pension plan contribution or ARC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Annual Required Contribution (ARC): The employer’s periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under GASB 25. The ARC consists of the Employer Normal Cost and the Amortization Payment.

Closed Amortization Period: A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.

Decrements: Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.

Defined Benefit Plan: A retirement plan that is not a Defined Contribution Plan. Typically a defined benefit plan is one in which benefits are defined by a formula applied to the member's compensation and/or years of service.

Defined Contribution Plan: A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, and the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.

Employer Normal Cost: The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.

Experience Study: A periodic review and analysis of the actual experience of the Fund which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.

Funded Ratio: The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA, although GASB 25 reporting requires the use of the AVA.

Funding Period or ***Amortization Period:*** The term "Funding Period" is used it two ways. In the first sense, it is the period used in calculating the Amortization Payment as a component of the ARC. This funding period is chosen by the Board of Trustees. In the second sense, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on the statutory employer contribution rate, and assuming no future actuarial gains or losses.

GASB: Governmental Accounting Standards Board.

GASB 25 and ***GASB 27***: Governmental Accounting Standards Board Statements No. 25 and No. 27. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 27 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 25 sets the rules for the systems themselves.

Normal Cost: That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded

Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability or retirement.

Open Amortization Period: An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.

Unfunded Actuarial Accrued Liability: The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.

Valuation Date or Actuarial Valuation Date: The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date.