B&CB SC Budget and Control Board

SOUTH CAROLINA RETIREMENT SYSTEMS

South Carolina Retirement System (SCRS) Annual Actuarial Valuation as of July 1, 2010

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February 24, 2011

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

Members of the Board:

The laws governing the operation of the South Carolina Retirement System provide that actuarial valuations of the assets and liabilities of the System shall be made annually. We have conducted the annual actuarial valuation of the South Carolina Retirement System as of July 1, 2010 and the results of the valuation are contained in the following report.

A funding objective of the System is that contribution rates as a percentage of payroll will remain relatively level over time. As these contribution rates are set by the Board, the valuation is used to determine the sufficiency of the contributions to maintain or improve the measures of the System's funding progress (i.e. *funded ratio, funding period*) and provide for the complete funding of all actuarial liabilities within 30 years.

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

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

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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 System's current assets together with the scheduled contributions are expected to fully fund the System's liabilities within 30 years. In our opinion, SCRS continues to operate on an actuarially sound basis.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

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

Respectfully submitted,

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

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Section I: Board Summary

The table below summarizes the results of the July 1, 2010 actuarial valuation as compared with the prior year. Note that all dollar amounts are shown in thousands.

Table I-1: Comparative Summary of Principal Results

	July 1, 2010	July 1, 2009
Membership		
Number of:		
Active Members	190,239	192,319
TERI Members	5,164	6,633
Retirees and Beneficiaries	106,230	101,381
Inactive Members	156,871	156,999
Total	458,504	457,332
Payroll (excludes ORP & TERI members)	$7,769,820	$7,761,808
Statutory Contribution Rates		
Member	6.50%	6.50%
Employer		
Retirement Contribution	9.68%*	9.24%
Incidental Death Benefit Contribution	**	0.15%
Total Employer Contribution Rate	9.68%*	9.39%
Assets		
Market Value	$19,681,137	$17,724,414
Actuarial Value	$25,400,331	$25,183,062
Return on Market Value	14.6%	(20.8%)
Return on Actuarial Value	3.3%	4.7%
Ratio of Actuarial to Market Value	129.1%	142.1%
Actuarial Information		
Employer Normal Cost %	3.51%**	3.36%
Unfunded Actuarial Liability (UAL)	$13,373,698	$11,967,253
Funded Ratio	65.5%	67.8%
Amortization Period	30 years***	30 years*
Change in Unfunded Actuarial Liability		
Beginning of Year Unfunded Actuarial Liability	$11,967,253	$10,963,741
Interest on Unfunded Actuarial Liability	957,380	877,099
Amortization Payment with Interest	(662,414)	(640,104)
COLA	0	(411,521)
Salary Experience	(344,630)	(25,433)
Other Liability Experience	168,477	349,592
Benefit Changes (Addition of GLI Fund)	74,703	0
Assumption Changes	0	0
Asset Experience	1,212,929	853,879
Total Increase / (Decrease)	$1,406,445	$1,003,512
End of Year Unfunded Actuarial Liability	$13,373,698	$11,967,253

* Reflects 0.145% increase effective July 1, 2011 and 0.145% increase effective July 1, 2012.
** Incidental Death Benefit Contribution Rate included with Retirement Contribution.
*** Pending Board approval of a 0.92% contribution rate increase effective 7/1/2012 or alternatively a 0.48% increase effective July 1, 2012 and a 0.48% increase effective July 1, 2013 to maintain a 30 year period.

Summary of Key Findings

The employer's contribution rate for the System is scheduled to increase by 0.145% to 9.535%, beginning July 1, 2011 and again by 0.145% to 9.68%, beginning July 1, 2012. The employer contribution is used to pay the employer's portion of the normal cost and to amortize the unfunded actuarial accrued liability (UAAL). Beginning July 1, 2010, the Incidental Death Benefit assets, liabilities and contributions are included in this valuation reflecting changes dictated by an amendment to death benefits provided by the plan as a result of the passage of Act 176 of 2010.

The employer normal cost rate increased by 0.15% from 3.36% to 3.51% of covered payroll. Of this increase, 0.10% is attributable to the inclusion of the Incidental Death Benefit program and the remaining 0.05% increase is attributable to the experience of the active members. The net contribution towards the UAAL is 6.17% of covered payroll beginning July 1, 2012 (9.68% total contribution rate less 3.51% normal cost rate). The unfunded actuarial liability increased from $11.97 billion to $13.37 billion. The resulting amortization period increased to 37.6 years. In order to satisfy the required 30-year amortization period as of July 1, 2010, the employer contribution rate effective the fiscal year beginning July 1, 2012 would need to increase by 0.92% of covered payroll to 10.60%. As an equivalent alternative and as presented in Table V-4, the employer contribution rate increase can be implemented in two steps of 0.48% of covered payroll increases effective beginning July 1, 2012 and July 1, 2013. The following table summarizes these alternatives:

	Employer Contribution Rates for Fiscal Year beginning:		
	7/1/2011	7/1/2012	7/1/2013
Current Scheduled Employer Contribution Rates (July 1, 2009 valuation)	9.535%	9.68%	9.68%
Alternative Rate Increases (July 1, 2010 valuation)			
1. One-step Annual Employer Contribution Rate Increase	9.535%	10.60%	10.60%
2. Two-step Annual Employer Contribution Rate Increases	9.535%	10.16%	10.64%

We note the following key findings:

- The UAAL grew by $957 million due to interest and decreased by $662 million due to the amortization payment. This results in a 1 year decrease to the amortization period.
- The System experienced an actuarial loss on plan assets of $1,213 million as a result of investment return on the actuarial value of assets being less than the assumed rate. The loss increased the amortization period by 6.6 years. Table III-3 provides the calculation of the investment loss for this year.

- The System experienced a net actuarial gain $102 million on plan liabilities due to non-investment related experience. Table IV-4 provides the reconciliation of the UAAL which is summarized as follows:

    1. The System experienced a $345 million gain due to salary experience which reduced the funding period by 1.7 years.

    2. Partially offsetting these gains were losses primarily attributable to the System turnover experience. The losses increased plan liabilities by $168 million and increased the funding period by 0.8 years.

    3. The July 1, 2010 valuation reflects the inclusion of the assets and liabilities of the Incidental Death Benefit program. The impact of this was to increase the UAL by $75 million, but due to inclusion of the additional 0.15% of payroll contributions, this did not impact the funding period.

    4. Other factors, such as lower than expected active member payroll resulted in a 2.9 year increase in the amortization period. These factors had a minor direct impact on the UAAL.

As noted above, active member salaries increased less than expected over the latest plan year. Based upon the expectation that rates of salary increases will continue to be dampened over the next few years, we have prepared alternative results for the Board's consideration under the following assumption:

> The expected rates of salary increase for members with 8 or more years of service are reduced by 2% for the fiscal year ending June 30, 2011 and by 1% for the fiscal year ending June 30, 2012.

The valuation under this alternative assumption results in an increase in the employer contribution rate of 0.69% of covered payroll beginning July 1, 2012, 0.23% of covered payroll less than the 0.92% increase required above. Under the two-step alternative, the employer contribution rate increases would be 0.36% of covered payroll effective beginning July 1, 2012 and July 1, 2013. The table below provides the impact of the alternate salary increase assumption on the employer contribution rate increases.

	Employer Contribution Rates for Fiscal Year beginning:		
	7/1/2011	7/1/2012	7/1/2013
Current Scheduled Employer Contribution Rates (July 1, 2009 valuation)	9.535%	9.68%	9.68%
Alternative Rate Increases (July 1, 2010 valuation)			
1. One-step Annual Employer Contribution Rate Increase	9.535%	10.37%	10.37%
2. Two-step Annual Employer Contribution Rate Increases	9.535%	10.04%	10.40%

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

Section II: Membership Data

Data regarding the membership of the System for use in the valuation were furnished by the Retirement Systems. The following table summarizes the membership data as of July 1, 2010 and is compared with that reported for the prior year.

Table II-1: Summary of Membership Data

	July 1, 2010	July 1, 2009
Active Members		
Number of State Employees	53,142	54,347
Total Annual Compensation	$2,367,943	$2,396,568
Number of Public School Employees	83,935	85,491
Total Annual Compensation	$3,372,435	$3,378,595
Number of Other Agency Employees	53,162	52,481
Total Annual Compensation	$2,029,442	$1,986,645
Total Number of Active Members	190,239	192,319
Total Annual Compensation	$7,769,820	$7,761,808
Number of Active TERI Participants	5,164	6,633
Total Annual Compensation	$312,884	$390,542
Number of Rehired Retired Members	15,383	14,281
Total Annual Compensation	$571,286	$542,433
Number of ORP Members	20,981	21,207
Total Annual Compensation	$987,727	$974,487
Retirees and Beneficiaries		
Number of Service Retirements[1]	91,743	88,830
Total Annual Benefit Payments	$1,842,703	$1,745,582
Number of Disability Retirements	11,906	11,567
Total Annual Benefit Payments	$153,889	$145,524
Number of Beneficiaries	7,745	7,617
Total Annual Benefit Payments	$84,783	$81,601
Inactive Members[2]		
Number of Non-vested Inactive Members	139,035	139,133
Number of Vested Inactive Members	17,836	17,866

All dollar amounts are in thousands.

1. Number of Service Retirements includes Active TERI participants and Rehired Retirees.
2. Non-vested inactive members are those with less than 5 years of service and only entitled to a refund.

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

Table III-1: Market Value Reconciliation and Cash Flow

	July 1, 2010	July 1, 2009
1. Beginning of Year Market Value of Assets	$17,817,479*	$23,124,394
Income		
2. Employer Contributions	$819,480	$815,225
3. Member Contributions	561,261	564,872
Total Contributions	$1,380,741	$1,380,097
4. Investment Income (net of expenses)	$2,594,486	($4,748,038)
Disbursements		
5. Benefit Payments	$2,110,153	$2,030,328
6. Transfers	$1,416	$1,711
7. Net Change in Market Value of Assets (2 + 3 + 4 - 5 - 6)	$1,863,658	($5,399,980)
8. End of Year Market Value of Assets (1 + 7)	$19,681,137	$17,724,414
Approximate Rate of Return on Market Value of Assets	14.9%	(20.8%)
Net Cash Flow (Contributions less Disbursements)	($730,828)	($651,942)
Cash Flow as a % of Average Market Value	(3.9%)	(3.2%)

All dollar amounts are in thousands.

* Adjusted to include Incidental Death Benefit Assets

A mature System such as SCRS is expected to exhibit negative net cash flow as the number of members receiving benefit payments becomes a larger portion of total membership. In periods with a significant change in the market value of assets, the cash flow as a percent of market value will likewise fluctuate.

Development of Actuarial Value of Assets

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

Table III-2: Development of Actuarial Value of Assets

Calculation of Current Year Excess Investment Income	
1. Market Value of Assets at Beginning of Year*	$17,817,479
2. Value of TERI Accounts at Beginning of Year	430,805
3. TERI Net Cash Flow During the Year	(108,455)
4. Total Net Cash Flow During the Year (3 + Table III-1 Net Cash Flow)	(839,283)
5. Market Value of Assets at End of Year	19,681,137
6. Value of TERI Accounts at End of Year	322,350
7. Actual Investment Income During the Year Based on Market Value	2,594,486
8. Expected Earnings for the Year	
a. Market Value of Assets, Beginning of Year [(1 + 2) x 8.00%]	1,459,863
b. Net Cash Flow (4 x 8.00% x .5)	(33,571)
c. Total (a + b)	1,426,292
9. Current Year Excess Investment Income (7 – 8c)	$1,168,194
Calculation of Total Amount of Deferred Excess Investment Income	
10. Amounts of Excess Investment Income from Current and Prior Years	

Valuation Year	Excess Investment Income*	Percent Deferred	Amount Deferred*
2010	$1,168,194	90%	$1,051,375
2009	(6,646,070)	80%	(5,316,856)
2008	(2,459,444)	70%	(1,721,611)
2007	1,339,490	20%	267,898
Total Amount of Deferred Excess Investment Income			($5,719,194)

11. Actuarial Value of Assets as of July 1, 2010 (5 - 10)	$25,400,331
Approximate Rate of Return on Actuarial Value of Assets	3.3%

All dollar amounts are in thousands.

* Adjusted to include Incidental Death Benefit Assets

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

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

1. Actuarial Value of Assets at Beginning of Year*	$25,317,773
2. Value of TERI Accounts Beginning of Year	430,805
3. Total Net Cash Flow (Table III-2(4))	(839,283)
4. Expected Return on Actuarial Value of Assets [(1 + 2) x 8.00% + 3 x 8.00% x .5]	2,026,315
5. Value of TERI Accounts End of Year	322,350
6. Expected Actuarial Value of Assets at End of Year (1 + 2 + 3 + 4 - 5)	$26,613,260
7. Actual Actuarial Value of Assets at End of Year (Table III-2(11))	$25,400,331
8. Actuarial Gain/(Loss) Due to Investment Experience (7 - 6)	($1,212,929)

All dollar amounts are in thousands.

* Adjusted to include Incidental Death Benefit Assets

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

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

Table IV-1: Present Value of Benefits

Active Members	
Service Retirement	$17,679,370
Disability Retirement	1,393,803
Survivors' Benefits	305,892
Termination	1,458,780
Incidental Death Benefits	148,464
Total for Active Members	$20,986,309
Inactive Members	
Non-Vested (Refund only)	$187,784
Vested (includes Incidental Death)	606,597
Total for Inactive Members	$794,381
Retirees and Beneficiaries	
Service Retirements	$20,167,246
Disability Retirements	1,505,445
Beneficiaries	803,177
Incidental Death Benefits	109,375
Total for Retirees and Beneficiaries	$22,585,243
Total Present Value of Benefits	$44,365,933

All dollar amounts are in thousands.

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

Table IV-2: Actuarial Accrued Liability	
Active Members	
Service Retirement	$14,099,824
Disability Retirement	881,868
Survivors' Benefits	218,224
Termination	98,205
Incidental Death Benefits	96,284
Total for Active Members	$15,394,405
Total for Inactive Members (Table IV-1)	794,381
Total for Retirees and Beneficiaries (Table IV-1)	$22,585,243
Total Actuarial Accrued Liability	$38,774,029

All dollar amounts are in thousands.

The funded ratio of the System is the ratio of the actuarial value of assets (Table III-2) divided by the actuarial accrued liability (Table IV-2) as of the valuation date. As of July 1, 2010, the funded ratio of the System is 65.5% as compared to the ratio in prior valuation of 67.8%. The decline in the funded ratio is primarily attributable to the investment experience during the year. The ratio is a commonly used measure of the funding progress of a System and can be useful in reviewing the historical trend of a System's funding progress. Such a review should also consider the impact to this measure over the historical period due to changes to plan benefits, changes to the actuarial assumptions and methods, and significant impact that investment experience can have on the ratio over short-term periods. We caution that no single "point in time" measure can provide a universal basis for comparing one System to another.

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

Table IV-3: Unfunded Actuarial Accrued Liability (UAAL)	
1. Total Actuarial Accrued Liability (Table IV-2)	$38,774,029
2. Actuarial Value of Assets (Table III-2(11))	$25,400,331
Unfunded Actuarial Accrued Liability (UAAL) (1 – 2)	$13,373,698

All dollar amounts are in thousands.

Although the terminology used to describe the excess of the System's actuarial accrued liability over the System's actuarial value of assets is call the "unfunded" actuarial accrued liability, there is a dedicated source of funding for this liability. The scheduled contributions are expected to completely fund the System's liabilities (pay off the UAAL) within 30 years.

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

Table IV-4: Reconciliation of the UAAL

1. Beginning of Year UAAL	$11,967,253
2. Expected Amortization Payment	(636,937)
3. Expected Interest (1 x 8.00% + 2 x 8.00% x .5)	931,903
4. Expected End of Year UAAL (1 + 2 + 3)	$12,262,219
5. Actuarial Experience (Gain)/Loss	
Salary Experience	(344,630)
COLA	0
Turnover and Other Liability Experience	168,477
Addition of Incidental Death Benefit	74,703
Asset Experience	1,212,929
Total Actuarial (Gain)/Loss	$1,111,479
6. End of Year UAAL (4 + 5)	$13,373,698

All dollar amounts are in thousands.

The employer contribution rate established by the Board funds the employers' portion of the normal cost and amortizes the UAAL over a period not to exceed 30 years. The primary result of the actuarial valuation is to test the sufficiency of the employer contribution rate to meet these funding requirements.

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

Table V-1: Normal Cost Rate

Normal Cost Rate of Active Members by Expected Benefit Type	
Service Retirement	6.49%
Disability Retirement	0.89%
Survivors' Benefits	0.16%
Termination	2.37%
Incidental Death Benefits	0.10%
Total Normal Cost Rate for Active Members	10.01%
Less: Active Member Contribution Rate	6.50%
Employer's Normal Cost Rate	3.51%

The established employer contribution rate as of July 1, 2010 is 9.39% of active member payroll (9.535% effective July 1, 2011, and 9.68% effective July 1, 2012) and includes the 0.15% contribution rate required for funding the Incidental Death Benefit program. Beginning July 1, 2010, the Incidental Death Benefit program assets, liabilities, and contributions are included in this valuation. The employer contribution rate is available to fund the annual normal cost and amortize the UAAL as a level percent of payroll. In addition, there are other, less significant sources of UAAL amortization funding based upon the payroll of Teacher and Employee Retirement Incentive (TERI) participants, Optional Retirement Plan (ORP) participants and retirees reemployed in positions covered by the System. The contribution rates of these groups, along with the rate of active member payroll which is available to amortize the UAAL, is shown in Table V-2.

Table V-2: UAAL Amortization Rate

Calculation of Amortization Rate on Active Member Payroll*	**% of Payroll**
Statutory Employer Contribution Rate	9.68%
Less: Employer Normal Cost Rate (Table V-1)	3.51%
Employer Contribution Rate Available to Amortize UAAL	6.17%
Additional Sources of Amortization Funding	**% of Payroll**
TERI participants	16.18%
ORP participants	4.68%
Rehired Retiree participants	16.18%

* Reflects 0.145% increase effective July 1, 2011 and 0.145% increase effective July 1, 2012.
In addition, reflects Incidental Death Benefit Contribution Rate.

The System's amortization period or funding period is the calculated number of years necessary to fully amortize the UAAL with the available contribution amounts from all sources. The calculation assumes that the payroll of all sources, active members, TERI participants, ORP participants and rehired retirees, will increase at an annual rate of 4.0% each future year. The assumed rate of payroll growth reflects the System's assumption for long-term wage inflation and does not anticipate future increases in number of participants. Based upon this method, as of July 1, 2010 the calculated amortization period required to fully amortize UAAL (Table IV-3) with the expected amortization funding from all sources is 37.6 years.

If all actuarial assumptions were met exactly, the amortization period would be expected to have decreased by 1 year from the period calculated in the prior valuation. The actual experience of the latest valuation has increased the amortization period by 7.6 years. The sources and magnitude of changes to the calculated amortization period due to the actual experience over the plan year are provided in Table V-3 on the following page.

Table V-3: Reconciliation of Calculated Amortization Period

		Years
1. Amortization Period Calculated as of July 1, 2009 (reflecting employer rate increases July 1, 2011 and July 1, 2012)		30.0
2. Change in years due to:		
Expected Decrease	(1.0)	
COLA Experience	0.0	
Salary Experience	(1.7)	
Turnover Experience	0.8	
Addition of Incidental Death Benefit program	0.0	
Other Experience (e.g. Payroll Growth)	2.9	
Asset Experience	6.6	
Total	7.6	
3. Amortization Period Calculated as of July 1, 2010 (1 + 2)		37.6

If the calculated amortization period exceeds the statutory maximum, the Board may schedule an increase(s) in the employer contribution rate in order to re-establish a 30-year amortization period as of the valuation date. For the Board's consideration, in Table V-4 we have provided a schedule of increases to the employer contribution rate that will satisfy a 30-year amortization period as of July 1, 2010.

Table V-4: Alternative Employer Contribution Rate Increases

Alternative Description	Rate Increase
One-step Annual Employer Contribution Rate Increase beginning 7/1/2012	0.92%
Two-step Annual Employer Contribution Rate Increase	
Beginning July 1, 2012	0.48%
Beginning July 1, 2013	0.48%
Total Increase	0.96%
Rate Increases Reflecting Alternate Salary Increase Assumption:	
One-step Annual Employer Contribution Rate Increase beginning 7/1/2012	0.69%
Two-step Annual Employer Contribution Rate Increase	
Beginning July 1, 2012	0.36%
Beginning July 1, 2013	0.36%
Total Increase	0.72%

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

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

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

All dollar amounts are in thousands.

Table VI-2: Solvency Test

	Actuarial Accrued Liability for:						
Actuarial Valuation as of July 1	Active Member Contributions	Retirants & Beneficiaries	Employer Funded Portion of Active Members	Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets		
	(1)	(2)	(3)		(1)	(2)	(3)
2010	$6,222,854	$22,585,243	$9,965,932	$25,400,331	100%	84.9%	0.0%
2009	5,980,022	21,381,561	9,788,732	24,183,062	100%	89.8%	0.0%
2008	5,708,620	20,624,862	9,329,937	24,699,678	100%	92.1%	0.0%
2007	5,464,756	19,084,672	9,217,250	23,541,438	100%	94.7%	0.0%
2006	5,229,175	17,800,254	8,989,090	22,293,446	100%	95.9%	0.0%
2005	4,915,423	16,891,954	8,410,094	21,625,510	100%	98.9%	0.0%
2004	4,750,077	14,184,765	7,043,010	20,862,659	100%	100.0%	27.4%
2003	4,627,360	13,240,368	6,531,203	20,197,936	100%	100.0%	35.7%
2002	4,512,402	11,600,395	6,333,777	19,298,174	100%	100.0%	50.3%
2001	4,339,747	10,367,913	6,454,487	18,486,773	100%	100.0%	58.6%

All dollar amounts are in thousands.

Table VI-3: Active Member and Payroll Information

Actuarial Valuation as of July 1	Number of Employers	Number of Active Members	Annual Payroll ($000's)	Annual Average Pay	Percentage Increase in Average Pay
2010	800	190,239	$7,769,820	$40,842	1.20%
2009	781	192,319	7,761,808	40,359	2.95%
2008	776	192,820	7,559,172	39,203	3.89%
2007	777	187,968	7,093,181	37,736	3.28%
2006	763	184,282	6,733,379	36,538	4.06%
2005	768	181,022	6,356,489	35,114	3.30%
2004	763	181,827	6,180,599	33,992	1.06%
2003	763	185,538	6,240,768	33,636	3.50%
2002	746	189,166	6,147,712	32,499	3.42%
2001	739	191,494	6,017,537	31,424	5.15%

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

	Added to Rolls		Removed from Rolls		Roll End of Year			
Year Ended July 1	Number	Annual Allowances ($000's)	Number	Annual Allowances ($000's)	Number	Annual Allowances ($000's)	% Increase in Annual Allowances	Average Annual Allowances
2010	6,596	$47,429	3,216	$44,049	111,394	$2,081,376	5.4%	$18,685
2009	6,190	101,813	2,698	36,834	108,014	1,974,077	3.4%	18,276
2008	6,021	132,856	2,396	30,178	104,522	1,909,098	5.7%	18,265
2007	5,944	130,286	2,252	28,455	100,897	1,806,420	6.0%	17,904
2006	4,621	118,271	2,083	24,099	97,205	1,704,589	5.8%	17,536
2005	7,203	167,748	2,143	23,537	94,667	1,610,417	9.8%	17,011
2004	7,319	151,477	2,132	22,656	89,607	1,466,206	9.6%	16,363
2003	7,866	163,867	2,510	27,662	84,420	1,337,385	11.3%	15,842
2002	7,344	140,077	2,334	24,531	79,064	1,201,180	10.6%	15,193
2001	12,523	284,739	2,474	23,735	74,054	1,085,634	31.7%	14,660

Table VI-5: Retired Members and Beneficiaries as of July 1, 2010		
Group	**Number**	**Annual Retirement Allowances**
Service Retirements		
Employees:		
Male	21,054	$492,848,382
Female	25,573	420,555,432
Total	46,627	$913,403,814
Teachers:		
Male	8,646	$213,802,838
Female	36,470	715,496,506
Total	45,116	$929,299,344
Disability Retirements		
Employees:		
Male	3,106	$41,395,547
Female	4,065	49,581,729
Total	7,171	$90,977,276
Teachers:		
Male	908	$12,738,987
Female	3,827	50,173,038
Total	4,735	$62,912,025
Beneficiaries of Deceased Retired and Active Members		
Male	1,683	$14,095,431
Female	6,062	70,687,743
Total	7,745	$84,783,174
Grand Total	**111,394**	**$2,081,375,633**

Table VI-6: Valuation Balance Sheet as of July 1, 2010 (Amounts expressed in thousands)	
Assets	
Current Assets (Actuarial Value)	
Employee Annuity Savings Fund	$6,222,854
Employer Annuity Accumulation Fund	19,177,477
Total Current Assets	$25,400,331
Present Value of Future Member Contributions	$3,709,689
Present Value of Future Employer Contributions	
Normal Contributions	$1,882,216
Accrued Liability Contributions	13,373,698
Total Future Employer Contributions	$15,255,914
Total Assets	$44,365,934
Liabilities	
Employee Annuity Savings Fund	
Past Member Contributions	$6,222,854
Present Value of Future Member Contributions	3,709,689
Total Contributions to Employee Annuity Savings Fund	$9,932,543
Employer Annuity Accumulation Fund	
Benefits Currently in Payment (including TERI)	$22,475,868
Benefits to be Paid to Current Active Members (including vested terminated members)	11,957,523
Total Benefits Payable from Employer Annuity Accumulation Fund	$34,433,391
Total Liabilities	$44,365,934

Table VI-7: Results of the Valuation as of July 1, 2010
(Amounts expressed in thousands)

Actuarial Present Value of Future Benefits	
Present Retired Members and Beneficiaries	$22,475,868
Present Active and Inactive Members	21,890,066
Total Actuarial Present Value	$44,365,934
Present Value of Future Normal Contributions	
Employee	$3,709,689
Employer	1,882,216
Total Future Normal Contributions	$5,591,905
Actuarial Liability	$38,774,029
Current Actuarial Value of Assets	$25,400,331
Unfunded Actuarial Liability	$13,373,698
Unfunded Actuarial Liability Rate*	
Active Members	6.17%
TERI Members (including employee contributions)**	16.18%
ORP Members	4.68%
Re-employed Members (including employee contributions)	16.18%
Unfunded Actuarial Liability Liquidation Period**	30 years

* Reflects 0.145% increase effective July 1, 2011 and 0.145% increase effective July 1, 2012. In addition, reflects Incidental Death Benefit Contribution Rate.

** The total contribution rate is required to increase by 0.92% in FY12 or 0.48% in FY12 and 0.48% in FY13 in order to maintain a 30 year period.

Table A-1: Schedule of Active Participant Data as of July 1, 2010									
	Years of Service								
AGE	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up	Total
Under 25	5,142	56							5,198
Avg. Pay	26,049	27,348							26,063
25 to 29	12,982	2,934	56						15,972
Avg. Pay	33,169	37,859	34,403						34,035
30 to 34	9,187	7,020	2,351	14					18,572
Avg. Pay	34,625	41,574	45,008	42,044					38,572
35 to 39	8,066	5,571	6,772	1,700	29				22,138
Avg. Pay	34,254	40,547	48,769	53,056	48,280				41,740
40 to 44	7,914	5,163	5,404	4,808	1,823	50			25,162
Avg. Pay	33,105	39,070	45,418	53,392	52,491	49,806			42,287
45 to 49	7,489	5,406	5,199	3,805	4,790	2,079	27		28,795
Avg. Pay	32,929	37,076	41,806	48,905	55,415	56,756	48,978		42,897
50 to 54	6,490	4,863	5,292	3,897	4,041	3,786	668	5	29,042
Avg. Pay	32,387	36,887	40,623	46,049	51,089	59,783	58,755	54,577	43,259
55 to 59	5,403	4,197	4,564	3,670	3,609	2,347	787	107	24,684
Avg. Pay	33,738	38,430	41,217	44,868	49,205	57,524	62,458	60,927	43,130
60 to 64	3,119	2,967	2,725	2,246	2,129	1,334	325	121	14,966
Avg. Pay	33,032	36,868	41,771	45,870	48,982	55,108	69,153	69,196	42,624
65 & up	1,618	1,497	1,096	608	427	299	88	77	5,710
Avg. Pay	23,902	27,906	33,574	41,783	48,387	57,890	63,025	79,011	33,669
Total	67,410	39,674	33,458	20,749	16,848	9,895	1,895	310	190,239
Avg. Pay	32,661	38,421	43,471	48,492	51,727	57,873	62,135	68,544	40,842

Table A-2: Comparative Summary of Active Data		
	Prior Year	Current Year
Average Age	44.98 years	45.25 years
Average Service	9.94 years	10.19 years
Average Pay	$ 40,359	$ 40,842
Percent Female	69.6%	69.4%

Table A-3: Number of Annual Retirement Allowances Of Benefit Recipients as of July 1, 2010

SERVICE RETIREMENT

Payee Type	Number	Annual Retirement Allowances
a. Employees		
Maximum & DRO	30,595	$538,465,555
10 Year Certain & Life	365	6,448,806
100% J & S	1,105	24,704,116
100% Pop-up	6,451	140,639,913
50% J & S	711	21,565,673
50% Pop-up	4,684	128,112,685
Level Income	2,716	53,467,066
Total	46,627	$913,403,814
b. Teachers		
Maximum & DRO	31,984	$628,277,117
10 Year Certain & Life	399	7,542,008
100% J & S	378	7,005,673
100% Pop-up	4,026	85,732,736
50% J & S	278	7,657,711
50% Pop-up	3,232	82,421,134
Level Income	4,819	110,662,965
Total	45,116	$929,299,344
c. Total		
Maximum & DRO	62,579	$1,166,742,672
10 Year Certain & Life	764	13,990,814
100% J & S	1,483	31,709,789
100% Pop-up	10,477	226,372,649
50% J & S	989	29,223,384
50% Pop-up	7,916	210,533,819
Level Income	7,535	164,130,031
Total	91,743	$1,842,703,158

Table A-3 (Cont.): Number of Annual Retirement Allowances Of Benefit Recipients as of July 1, 2010

DISABILITY RETIREMENT

Payee Type	Number	Annual Retirement Allowances
a. Employees		
Maximum	5,742	$73,603,346
10 Year Certain & Life	121	1,499,539
100% J & S	253	2,403,202
100% Pop-up	541	5,631,712
50% J & S	85	1,266,383
50% Pop-up	429	6,573,094
Total	7,171	$90,977,276
b. Teachers		
Maximum	4,077	$54,576,571
10 Year Certain & Life	73	953,191
100% J & S	108	1,005,333
100% Pop-up	234	2,454,573
50% J & S	39	598,842
50% Pop-up	204	3,323,515
Total	4,735	$62,912,025
c. Total		
Maximum	9,819	$128,179,917
10 Year Certain & Life	194	2,452,730
100% J & S	361	3,408,535
100% Pop-up	775	8,086,285
50% J & S	124	1,865,225
50% Pop-up	633	9,896,609
Total	11,906	$153,889,301

BENEFICIARIES

Payee Type	Number	Annual Retirement Allowances
a. Employees	5,356	$60,557,519
b. Teachers	2,389	24,225,655
c. Total	7,745	$84,783,174

Table A-4: Distribution of Participants Receiving Benefits as of July 1, 2010

NUMBER OF RETIRED MEMBERS AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	419	$ 7,040,473	$ 16,803
50 – 54	4,013	102,863,779	25,632
55 – 59	11,375	310,005,717	27,253
60 – 64	19,338	458,471,253	23,708
65 – 69	18,653	354,106,705	18,983
70 – 74	13,637	233,449,598	17,118
75 – 79	10,346	167,139,151	16,155
80 & Over	13,962	209,626,482	15,014
Total	91,743	$ 1,842,703,158	$ 20,085

NUMBER OF DISABLED RETIREES AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	1,247	$ 15,267,526	$ 12,243
50 – 54	1,349	18,215,875	13,503
55 – 59	2,172	29,989,734	13,807
60 – 64	2,828	37,674,480	13,322
65 – 69	1,984	25,434,845	12,820
70 – 74	1,109	13,073,902	11,789
75 – 79	622	6,900,978	11,095
80 & Over	595	7,331,961	12,323
Total	11,906	$ 153,889,301	$ 12,925

NUMBER OF BENEFICIARIES AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	1,202	$ 8,220,520	$ 6,839
50 – 54	384	3,171,258	8,258
55 – 59	568	6,000,994	10,565
60 – 64	786	9,269,772	11,794
65 – 69	842	9,367,773	11,126
70 – 74	841	10,360,525	12,319
75 – 79	950	11,412,680	12,013
80 & Over	2,172	26,979,652	12,422
Total	7,745	$ 84,783,174	$ 10,947

Investment Rate of Return

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

Rates of Annual Salary Increase

Rates of annual salary increase are assumed to vary for the first 14 years of service due to expected merit and promotional increases which differs by employee group. Beginning with the 15th year of service, the assumed annual rate of increase is 4.00% for both groups and for all future years of service.

The 4.00% rate of increase is composed of a 3.00% inflation component and a 1.00% real rate of wage increase (productivity) component.

Rates of Annual Salary Increase Assumption

Years of Service	General Employees	Teachers
0	8.00%	8.00%
1	5.75%	8.00%
2	5.00%	5.50%
3	4.75%	5.25%
4	4.50%	5.00%
5	4.50%	5.00%
6	4.50%	5.00%
7	4.50%	4.75%
8	4.50%	4.75%
9	4.50%	4.75%
10	4.25%	4.75%
11	4.25%	4.50%
12	4.25%	4.40%
13	4.25%	4.40%
14	4.25%	4.40%
15+	4.00%	4.00%

We have also provided alternative results based upon a lower expectation of the rate salary increase for the short-term future. Under this alternative, the rates above for active member with 8 or more years of service are decreased by 2% for the fiscal year ending June 30, 2011 and 1% for the fiscal year ending June 30, 2012.

Active Member Decrement Rates

a. Assumed Rate of Service Retirement and TERI Entry are shown in the table below.

Annual Rates of Retirement and TERI Entry

Teachers

	Reduced Service (Early) Retirement		First Eligible Unreduced Service (Normal) Retirement		Subsequent Eligibility for Unreduced Service (Normal) Retirement	
Age	Male	Female	Male	Female	Male	Female
50	0%	0%	50%	55%	20%	25%
55	10%	11%	80%	70%	30%	30%
60	11%	14%	65%	70%	45%	40%
61	15%	16%	75%	70%	50%	45%
62	25%	21%	80%	85%	60%	50%
63	18%	20%	50%	65%	40%	40%
64	22%	15%	40%	50%	35%	30%
65	0%	0%	45%	50%	50%	50%
66	0%	0%	20%	20%	30%	30%
67	0%	0%	20%	20%	25%	30%
68	0%	0%	20%	20%	25%	25%
69	0%	0%	20%	20%	25%	25%
70	0%	0%	100%	100%	100%	100%

Employees

	Reduced Service (Early) Retirement		First Eligible Unreduced Service (Normal) Retirement		Subsequent Eligibility for Unreduced Service (Normal) Retirement	
Age	Male	Female	Male	Female	Male	Female
50	0%	0%	35%	45%	15%	15%
55	8%	10%	45%	55%	20%	25%
60	8%	13%	55%	60%	15%	20%
61	12%	14%	40%	65%	15%	20%
62	21%	21%	80%	70%	20%	35%
63	14%	18%	45%	60%	15%	25%
64	12%	15%	35%	45%	15%	20%
65	0%	0%	40%	45%	35%	35%
66	0%	0%	20%	20%	25%	25%
67	0%	0%	20%	20%	25%	25%
68	0%	0%	20%	20%	20%	25%
69	0%	0%	20%	20%	20%	25%
70	0%	0%	100%	100%	100%	100%

b. Election of Teachers and Employees Retention Incentive (TERI)

We assumed 37.5% of members electing to either retire or enter TERI before age 65 will elect to enter TERI and will remain in TERI for three years.

c. Active Member Mortality

Rates of active member mortality are based upon the RP 2000 Employee Mortality Table. Sample rates are shown in the table below.

Active Member Mortality Assumption				
	General Employees		**Teachers**	
Age	Male	Female	Male	Female
25	0.04%	0.01%	0.03%	0.01%
30	0.04%	0.02%	0.03%	0.01%
35	0.08%	0.03%	0.06%	0.03%
40	0.11%	0.05%	0.08%	0.04%
45	0.15%	0.07%	0.11%	0.06%
50	0.21%	0.11%	0.16%	0.09%
55	0.30%	0.16%	0.23%	0.14%
60	0.49%	0.26%	0.37%	0.22%
64	0.70%	0.35%	0.53%	0.30%

d. Rates of Disability Incidence

Rate of disability incidence for active members is based upon the 2002 – 2007 Experience Study. Sample rates are shown in the table below.

Active Member Disability Incidence				
	General Employees		**Teachers**	
Age	Male	Female	Male	Female
25	0.06%	0.06%	0.05%	0.06%
30	0.13%	0.08%	0.08%	0.08%
35	0.19%	0.16%	0.10%	0.08%
40	0.32%	0.21%	0.20%	0.13%
45	0.44%	0.30%	0.33%	0.28%
50	0.63%	0.51%	0.52%	0.44%
55	1.01%	0.81%	0.85%	0.72%
60	1.27%	1.24%	1.31%	1.10%
64	1.58%	1.72%	1.64%	1.38%

e. Rates of Withdrawal

Rate of withdrawal for active members prior to eligibility for retirement are based upon the 2002 – 2007 Experience Study. Rates are developed for each employee group and differ by gender and service. Sample rates are shown in the table below.

PROBABILITY OF DECREMENT DUE TO WITHDRAWAL

Male Teachers by Years of Service

Age	0	1	2	3	4	5	6	7	8	9	10+
25	0.2964	0.2029	0.1384	0.0973	0.0721	0.0578	0.0513	0.0508	0.0518	0.0538	0.0560
30	0.2721	0.1922	0.1356	0.0990	0.0776	0.0662	0.0607	0.0577	0.0538	0.0477	0.0387
35	0.2531	0.1823	0.1316	0.0990	0.0805	0.0708	0.0657	0.0611	0.0540	0.0429	0.0273
40	0.2371	0.1730	0.1271	0.0979	0.0817	0.0730	0.0679	0.0619	0.0529	0.0390	0.0199
45	0.2239	0.1649	0.1228	0.0960	0.0811	0.0726	0.0669	0.0600	0.0503	0.0359	0.0167
50	0.2135	0.1587	0.1192	0.0936	0.0787	0.0698	0.0628	0.0553	0.0460	0.0335	0.0174
55	0.2063	0.1549	0.1168	0.0908	0.0742	0.0645	0.0557	0.0479	0.0401	0.0317	0.0222
60	0.1996	0.1518	0.1143	0.0865	0.0669	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Female Teachers by Years of Service

Age	0	1	2	3	4	5	6	7	8	9	10+
25	0.2299	0.1608	0.1209	0.1006	0.0892	0.0841	0.0827	0.0802	0.0731	0.0660	0.0601
30	0.2269	0.1664	0.1260	0.1015	0.0878	0.0802	0.0751	0.0696	0.0618	0.0527	0.0426
35	0.2171	0.1597	0.1208	0.0966	0.0830	0.0748	0.0682	0.0615	0.0536	0.0434	0.0303
40	0.2045	0.1477	0.1106	0.0885	0.0759	0.0683	0.0616	0.0551	0.0475	0.0368	0.0215
45	0.1930	0.1361	0.1001	0.0798	0.0685	0.0619	0.0561	0.0504	0.0435	0.0329	0.0163
50	0.1866	0.1296	0.0937	0.0738	0.0633	0.0570	0.0523	0.0478	0.0417	0.0317	0.0154
55	0.1879	0.1308	0.0935	0.0727	0.0626	0.0543	0.0509	0.0474	0.0420	0.0331	0.0190
60	0.1948	0.1379	0.0986	0.0758	0.0660	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Male Employees by Years of Service

Age	0	1	2	3	4	5	6	7	8	9	10+
25	0.3288	0.2466	0.1902	0.1554	0.1345	0.1166	0.0963	0.0783	0.0650	0.0595	0.0662
30	0.2939	0.2211	0.1726	0.1425	0.1236	0.1089	0.0951	0.0821	0.0704	0.0603	0.0530
35	0.2678	0.1997	0.1553	0.1285	0.1122	0.1010	0.0916	0.0822	0.0716	0.0586	0.0424
40	0.2456	0.1804	0.1384	0.1140	0.1002	0.0922	0.0861	0.0791	0.0695	0.0549	0.0335
45	0.2257	0.1636	0.1233	0.1003	0.0882	0.0825	0.0781	0.0727	0.0639	0.0493	0.0266
50	0.2082	0.1501	0.1115	0.0891	0.0774	0.0717	0.0675	0.0626	0.0547	0.0419	0.0224
55	0.1942	0.1410	0.1041	0.0814	0.0691	0.0600	0.0543	0.0488	0.0419	0.0328	0.0212
60	0.1827	0.1351	0.1002	0.0770	0.0632	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Female Employees by Years of Service

Age	0	1	2	3	4	5	6	7	8	9	10+
25	0.2981	0.2459	0.2060	0.1772	0.1560	0.1385	0.1248	0.1159	0.1094	0.1030	0.0940
30	0.2710	0.2236	0.1864	0.1591	0.1395	0.1253	0.1145	0.1059	0.0970	0.0853	0.0688
35	0.2506	0.2015	0.1657	0.1410	0.1244	0.1130	0.1042	0.0958	0.0857	0.0712	0.0505
40	0.2329	0.1803	0.1451	0.1233	0.1101	0.1010	0.0935	0.0854	0.0748	0.0592	0.0367
45	0.2172	0.1622	0.1275	0.1080	0.0972	0.0894	0.0825	0.0746	0.0644	0.0493	0.0276
50	0.2041	0.1493	0.1151	0.0966	0.0864	0.0787	0.0715	0.0637	0.0543	0.0414	0.0234
55	0.1946	0.1429	0.1091	0.0895	0.0778	0.0688	0.0605	0.0526	0.0445	0.0353	0.0240
60	0.1873	0.1412	0.1079	0.0855	0.0701	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Post-Retirement Mortality

a. Healthy retirees and beneficiaries - The UP-94 Mortality Table rates, with the male teachers and both employee groups' female rates set back one year. Sample rates are shown in the table below.

Healthy Post-Retirement Mortality Assumption				
	General Employees		**Teachers**	
Age	Male	Female	Male	Female
50	0.28%	0.14%	0.25%	0.14%
55	0.48%	0.22%	0.43%	0.22%
60	0.86%	0.42%	0.76%	0.42%
65	1.56%	0.82%	1.39%	0.82%
70	2.55%	1.37%	2.34%	1.37%
75	4.00%	2.19%	3.66%	2.19%
80	6.67%	3.80%	6.01%	3.80%
85	10.46%	6.56%	9.64%	6.56%

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

Disabled Post-Retirement Mortality Assumption				
	General Employees		**Teachers**	
Age	Male	Female	Male	Female
50	2.46%	1.27%	2.17%	1.27%
55	3.01%	1.82%	2.66%	1.82%
60	3.57%	2.40%	3.15%	2.40%
65	4.26%	3.08%	3.76%	3.08%
70	5.32%	4.14%	4.69%	4.14%
75	6.98%	5.75%	6.16%	5.75%
80	9.30%	7.95%	8.20%	7.95%
85	12.04%	11.02%	10.62%	11.02%

Marriage Assumption

100% of all active members are assumed to be married, with female spouses being 3 years younger than males.

Asset Valuation Method

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

Actuarial Cost Method

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

An unfunded accrued liability exists in the amount equal to the excess of accrued liability over valuation assets. The amortization period of the System is the 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 7/1/2005 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 on Annual Final Compensation, liabilities for active members are increased 2.14%

Unused Sick Leave

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

Future Cost-of-living Increases

Benefits are assumed to increase 2% annually beginning on the July 1st next following receipt of 12 monthly benefit payments.

Administrative and Investment Expenses

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

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 4.00%. This rate represents the underlying expected annual rate of wage inflation and does not anticipate increases in the number of members.

Changes from Prior Valuation

None.

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

Effective Date

July 1, 1945

Eligibility Requirements

All full-time, part-time, or temporary personnel who fill a permanent position as a public school employee, public higher education personnel, state employees, and city, county and other local public employees of participating employers must join as a condition of employment as of the effective date of employment, unless they elect to participate in one of the Optional Retirement Plans (ORP).

Employees in non-permanent positions may choose to join.

Creditable Service

The sum of “prior service” and “membership service.” Prior service means service rendered prior to membership for which credit is allowed. Membership service means service during which contributions have been made. This is counted in years, months, and days.

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

Average Final Compensation (AFC)

The total of the highest 12 consecutive quarters of compensation earned divided by 3. Compensation generally includes gross salary or wages, overtime, sick pay, wage deferrals, and termination pay for unused annual leave. The unused annual leave is added to the sum of the highest 12 consecutive quarters prior to dividing by 3. For members who joined the system on or after January 1, 1996, compensation for benefit and contribution purposes is limited in accordance with IRS Code Section 401(a)17.

Normal Retirement

Eligibility - Attainment of age 65 with 5 years of creditable service, or completion of 28 years of creditable service.

Benefit - 1.82% of AFC times creditable service.

Early Retirement

Eligibility - Attainment of age 60 with 5 years of creditable service, or attainment of age 55 with 25 years of creditable service.

Benefit - Benefit accrued to date of retirement, reduced 5% for each year prior to 65 (for age 60 eligibility), or 4% for each year prior to 28 years (for age 55 with 25 years eligibility).

Teachers and Employees Retention Incentive (TERI)

Upon meeting retirement eligibility, a member can elect to enter the TERI for a maximum of five (5) years, after which employment will cease. The retirement benefits will be accumulated in TERI accounts and will be paid to the members upon the earlier of actual retirement or the end of participation period. The amount credited to the TERI account is based upon the calculation and form of benefit selected by the member at TERI entry. COLAs are credited to the TERI account. No interest is credited to the TERI account. Employee contributions (for those entering TERI on and after 7/1/2005) and employer contributions continue during TERI participation.

Disability Retirement

Eligibility - Disability prior to normal retirement age with at least 5 years of creditable service. The service requirement is waived for job related disability.

Benefit - Benefit equal to the amount that would have been payable at age 65 assuming continued employment and AFC at date of disability, less the equivalent benefit that would have been provided by the employee contributions that would have been made until age 65.

Death Benefits

Death prior to age 60 or 15 years of creditable service

Refund of employee contributions with interest plus Incidental Death Benefit in a lump sum equal to annual earnable compensation at time of death. Incidental Death Benefit payable only to members whose employer participates and with at least 1 year of creditable service, unless death is job related.

Death after age 60 or with 15 years of creditable service

Same as above. However, instead of the refund of employee contributions with interest, the beneficiary may elect to receive an annuity equal to the amount that would have been payable had the employee retired the day before death under Option B described below.

Incidental Death Benefit

Pre-Retirement

Eligibility – Upon the death of a current contributing member of SCRS who had completed at least one full year of membership in the system or upon the death of member as a result of an injury arising out of and in the course of the performance of his duties regardless of length of membership, whose employer had elected coverage under the Incidental Death Benefit program.

Benefit – Upon the death of an eligible pre-retirement member, a payment equal to the annual earnable compensation of the member at the time of death is made to the member's beneficiary or, if none, the member's estate.

Post-Retirement

Eligibility – Eligible current and future retirees and those not considered contributing members of SCRS and whose employer at the date of retirement had elected coverage under the Incidental Death Benefit program.

Benefit – Upon the death of an eligible retiree, an one-time payment is made to the retiree's beneficiary or, if none, the retiree's estate. The payment amount is based upon the retiree's years of service credits as provided in the table below.

Death Benefit Payment Amount	
Years of Credited Service at Retirement	**Lump Sum Death Benefit**
At least 10 years but less than 20 years	$2,000
At least 20 years but less than 28 years	$4,000
28 or more years	$6,000

Employee Contributions

The member contribution rate is 6.50% of earnable compensation. Accumulated member contributions are credited with interest at the rate of 4% per year.

Vested Benefit Upon Termination

Eligibility - 100% vesting upon completion of 5 years of creditable service.

Benefit - Accrued benefit as of date of termination payable as of age 60.

Termination Benefit

Eligibility - Elect return of accumulated employee contributions.

Benefit - Return of employee contributions plus interest.

Optional Forms of Retirement Income

Option A Monthly life annuity with guaranteed return of employee contributions plus interest. (This is the normal form of payment).

Option B Monthly life annuity with 100% of reduced benefit continued to beneficiary upon death, reverting to maximum option if beneficiary predeceases retiree.

Option C Monthly life annuity with 50% of reduced benefit continued to beneficiary upon death, reverting to maximum option if beneficiary predeceases retiree.

Cost of Living Adjustment

Beginning the July 1st following one year of receiving benefits, the monthly benefit amount will increase by the calendar year change in CPI but not to exceed 2%. Additional ad hoc COLAs may be paid as approved by the State Budget and Control Board and based upon the financial condition of the System and the requirements of Act 311 (amortization period less than 25 years, amortization period decrease by at least one-year after granting ad hoc COLA, etc.).

Changes from Prior Valuation

Reflects changes dictated by an amendment to death benefits provided by the plan as a result of the passage of Act 176 of 2010.