South Carolina
PUBLIC EMPLOYEE BENEFIT AUTHORITY
PEBA

South Carolina Public Employee Benefit Authority
Meeting Minutes (Adopted 3/20/2013)

Friday, February 1, 2013, 8:30 A.M.

2nd Floor Conference Room
202 Arbor Lake Drive
Columbia, South Carolina 29223

Board Members Present:
Mr. Art Bjontegard, Chairman (in person)
Ms. Peggy Boykin (in person)
Mr. Frank Fusco (in person)
Ms. Cynthia Harley (in person)
Ms. Stacy Kubu (in person)
Sheriff Leon Lott (in person)
Mr. Steve Matthews (in person)
Mr. Joe "Rocky" Pearce (in person)
Mr. Audie Penn (in person)
Mr. John Sowards (arrived in person at 9:08am)
Mr. David Tigges (arrived in person at 10:21am)

Others present for all or a portion of the meeting:
David Avant, Lil Hayes, Robbie Bell, Geneva McIntosh, Stephen Van Camp, and Justin Werner from the South Carolina Public Employee Benefit Authority (PEBA); Terry Mumford with Ice Miller; Joe Newton and Danny White from Gabriel, Roeder, Smith & Company (GRS), Hershal Harper and Sarah Corbett form the SC Retirement Investment Commission; Suzanne Bernard with Hewitt, Ennisknupp; Donald Tudor, Wayne Bell and Wayne Pruitt from the State Retirees Association,

I. CALL TO ORDER; ADOPTION OF PROPOSED AGENDA

Chairman Bjontegard called the meeting to order at 8:30 a.m. Steve Matthews gave the invocation. Ms. Hayes confirmed meeting notice compliance with the Freedom of Information Act. The Chairman asked for a motion to adopt the agenda which was made, seconded by Sheriff Lott and adopted unanimously. A motion was made by Ms. Hartley to adopt the minutes from the December 12, 2012 meeting, which was seconded by Mr. Matthews and adopted. The Chairman mentioned that the Past Action Report had been updated and posted for the members on their Extranet. He said after items had been completed, they would be removed from the list after one month.

II. Terry Mumford Ice Miller LLC – Fiduciary Responsibilities

Chairman Bjontegard introduced Terry Mumford, partner with Ice Miller, LLC. Ms. Mumford began by explaining that for the South Carolina Retirement Systems, the PEBA Board is one of four fiduciaries: PEBA, Budget and Control Board, Retirement System Investment Commission, and the State Treasurer. She explained that the legislature is considered the "settlor" and, as such, determined the scope of each fiduciary's responsibility. She then explained each fiduciary's role. The PEBA Board is responsible to administer the benefits in accordance with the plan, to engage experts, establish contribution rates, and establish rules and regulations.
Ms. Mumford continued by explaining that the Board must carry out its responsibilities in accordance with fiduciary principles. She explained that these principles are established by the Internal Revenue

Code, ERISA, the *Restatement of Third—Trusts*, *Uniform Management of Public Retirement Systems Act*, and South Carolina state law. She explained the exclusive benefit rule, which requires a fiduciary to discharge his duties solely in the interest of the participants and beneficiaries of the plan. She also stated that a fiduciary must not deal with plan assets in his own interest or in the interest of a "third party."

Ms. Mumford concluded by explaining that although the RSIC is granted investment responsibility by the legislature, the PEBA Board is a co-trustee of the trust assets and is responsible to act in the best interests of the trust—including with respect to investments. This means the PEBA Board has a duty to be informed about the actions of its co-trustees, to make reasonable effort to avoid a breach by a co-trustee, and to make reasonable effort to redress any breaches by co-trustees.

III. SCRS Investment Commission: Asset Liability Modeling (ALM) Study Overview, and Risk Assessment Update

Hershal Harper and Sarah Corbett from the SC Retirement Systems Investment Commission (RSIC) and Suzanne Bernard with Hewitt Ennisknupp conducted a presentation regarding the RSIC. Ms. Corbett began by explaining the RSIC's history and governing laws. She explained that until 1997, the Retirement Systems assets were only invested in domestic fixed income investments. In the 1990's, the Retirement Systems Investment Panel was created to advise the Budget and Control Board on the domestic equity portfolio. The RSIC was then created in 2005 and was constitutionally permitted to invest across all asset classes in 2007. Ms. Corbett went on to explain the makeup of the seven-member RSIC. There are four political appointees—one each from the Governor, the Chairman of the Senate Finance Committee, the Chairman of the House Ways and Means Committee, and the Comptroller General. The remaining three members include a retiree representative, the Executive Director of PEBA (non-voting member), and the State Treasurer (ex-officio). She then explained the RSIC's governing policies and compensation structure. She explained that, in an effort to recruit and keep top investment talent to serve at the RSIC agency, they initiated a Performance Incentive Compensation program to reward good performance in investments. Ms. Corbett also explained that the RSIC publishes an Annual Investment Plan each fiscal year to spell out the policies and objectives of the RSIC.

Ms. Corbett went on to describe the RSIC's Due Diligence Guidelines. She explained that a set of guidelines was adopted on November 8, 2012 to create a uniform method of conducting and recording due diligence on investment managers. Chairman Bjontegard asked about "allegations" being made that the RSIC had not conducted due diligence on some of its managers. Mr. Harper—after responding that was not aware that actual allegations had been made, but rather believed they were currently just suggestions—explained that due diligence was done on all managers, but that some had been recorded differently from others. Ms. Corbett added that this is the reason for the newly-adopted guidelines.

Ms. Corbett concluded by explaining that the RSIC was currently in process of trying to acquire new FTE positions for the agency. They are also seeking to improve their information technology resources. She emphasized the RSIC's desire to work with PEBA to pool resources and share IT systems to allow greater transparency between the two organizations and to alleviate any concern on the part of the PEBA Board members over the actions of the RSIC.

IV. COMMITTEE REPORTS

Retirement

Committee Chairman Sowards asked that the ORP Vendors item be struck from the agenda, which was agreed to by the Board. Mr. Tigges recused himself on any votes dealing with the ORP Vendors as he has a conflict of interest.

Mr Sowards introduced and requested Joe Newton and Danny White with GRS give information on the Actuarial Valuations of 6/30/2012 before the group for approval. After the presentation by GRS, Mr. Sowards moved to accept the GRS valuations for SCRS, PORS, JSRS, GARS, and National Guard Retirement System for FY2014. Ms. Hartley seconded. Mr. Matthews then voiced concern that the valuation given for SCRS did not appear to meet the statutory requirement to accept contribution increases that maintain no more than a thirty-year amortization period. Discussion ensued. Mr. Matthews and Mr. Sowards asked General Counsel to weigh in. Mr. Van Camp advised the Board that based upon the projected amortization period as described by GRS, the recommended contribution increase for FY2014 would, in fact, satisfy the statutory requirement. Mr. Matthews restated his concern. Mr. Sowards then withdrew his previous motion and amended it. He moved to accept the GRS valuations for the five retirement systems, contingent upon a written decision by PEBA General Counsel on the legality of accepting the GRS recommended contribution increases. Ms. Hartley seconded. The Board voted to accept the GRS valuations for the five retirement system for FY2014, contingent upon General Counsel's written decision. All Board members voted in favor of the motion, except Mr. Matthews, who voted against the motion.

Mr. Sowards then discussed the necessity of adopting a Group Trust Resolution, and further explained that on January 25th, PEBA received favorable Determination Letters from the IRS on the 4 contributory defined benefit plans (SCRS, PORS, GARS and JSRS). With these letters, we now have updated favorable determination letters or private letter rulings for all qualified plans including, SCRS, PORS, GARS, JSRS, ORP and the Deferred Comp plans (401k & 457). With no further discussion the Resolution was adopted.

FAAC

Committee Chairman Matthews gave an update that as of January 30, no legislation had been introduced concerning the Indemnification of the Board members. He mentioned a few other items that he also felt were of a technical nature that should be brought to the attention of the Legislature so they could be addressed.

Health

Committee Chair Hartley gave an update of what the Governor had recommended for the agency and the State Health Plan in her Executive Budget Recommendation. Ms. Hartley also gave a brief description of the budget hearing at the House of Representatives Budget Subcommittee hearing that was on January 22.

Lunch Break

V. Executive Session to Discuss Legal Matters Pursuant to S.C. Code of Laws § 30-4-70(a)(2)

Adjournment

Upon concluding executive session, Mr. Bjontegard requested a motion to adjourn the meeting. Mr. Sowards moved to adjourn and Mr. Fusco seconded. The Board then unanimously voted to adjourn at 3:15 pm.

South Carolina Public Employee Benefit Authority
Board of Directors Meeting

Friday, February 1, 2013

8:30 a.m. – 1:00 p.m.

Wampee Conference Center
1274 Chicora Dr, Pinopolis SC 29469

Agenda

I. **Call to Order, Adoption of Agenda, Adoption of Minutes from December 12, 2012 meeting**

II. **Terry Mumford (Ice Miller): Fiduciary Responsibilities**

III. **SCRS Investment Commission: Asset Liability Modeling** (ALM) Study Overview, and Risk Assessment Update

IV. **Break**

V. **Committee Reports:**

- Retirement: Approval of 6/30/2012 Actuarial Valuations; Group Trust Resolution; ORP vendors
- FAAC: Legislation status update: Indemnification Bill; Payment Voucher Resolution
- Health: Recap of Governor's Budget; presentation to House Ways & Means

VI. **Executive Session to Discuss Legal Matters Pursuant to S.C. Code of Laws § 30-4-70(a)(7)**

VII. **Adjourn**

South Carolina Retirement System

Actuarial Valuation as of July 1, 2012

Joe Newton and Danny White

January 31, 2013

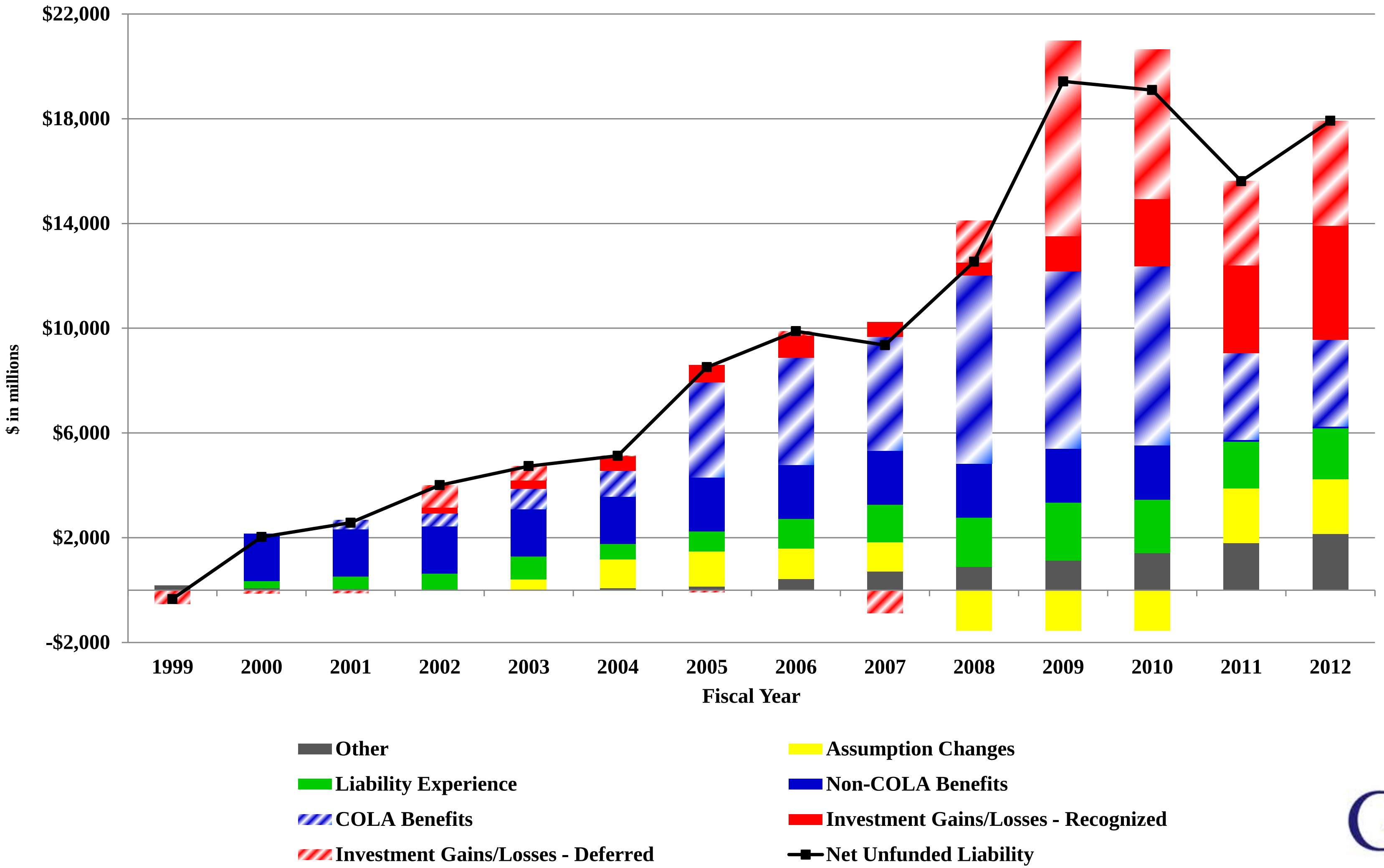
GRS
Gabriel Roeder Smith & Company
Consultants & Actuaries
www.gabrielroeder.com

Agenda

- Historical Experience
- 2012 Actuarial Valuation Results – SCRS & PORS
- SCRS
  - Expected Experience and Projected Cost
- PORS
  - Expected Experience and Projected Cost
- 2012 Actuarial Valuation Results – JSRS, GARS & NGRS

Historical Experience - SCRS

Change in Unfunded Actuarial Accrued Liability on a Market Value Basis



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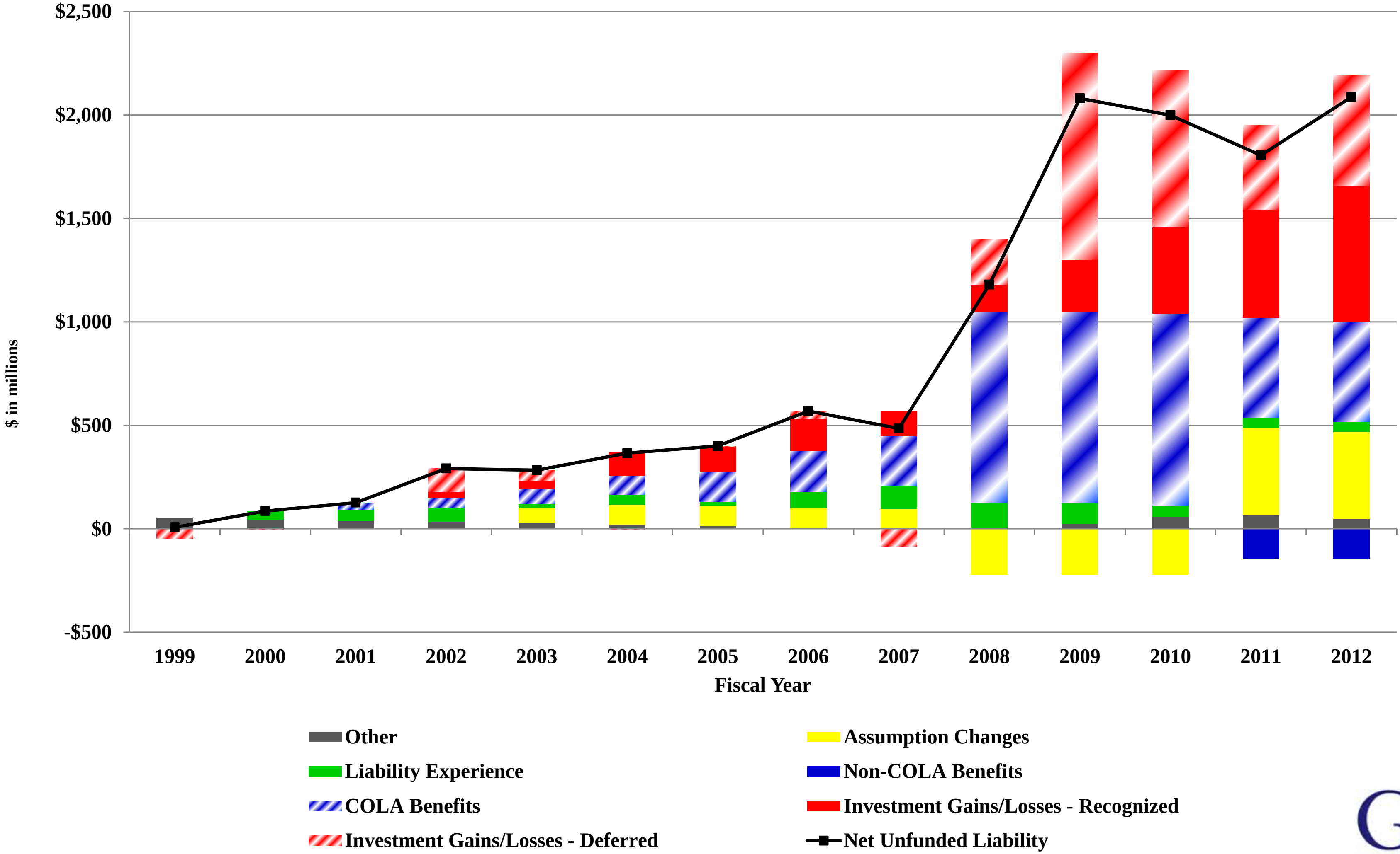
Historical Experience - PORS

Change in Unfunded Actuarial Accrued Liability on a Market Value Basis



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Actuarial Valuation as of June 30, 2012

- Purposes:
  - Measure the System's liabilities
  - Determine employer contribution rates for FY 2015
  - Provide other information for financial reporting
  - Explain changes in actuarial condition of the Retirement System
- Legislation and Other Changes
  - No changes in the benefit provisions since the prior valuation
    - Act 278 was reflected in the 2011 actuarial valuation
  - There were no assumption or method changes since the prior valuation

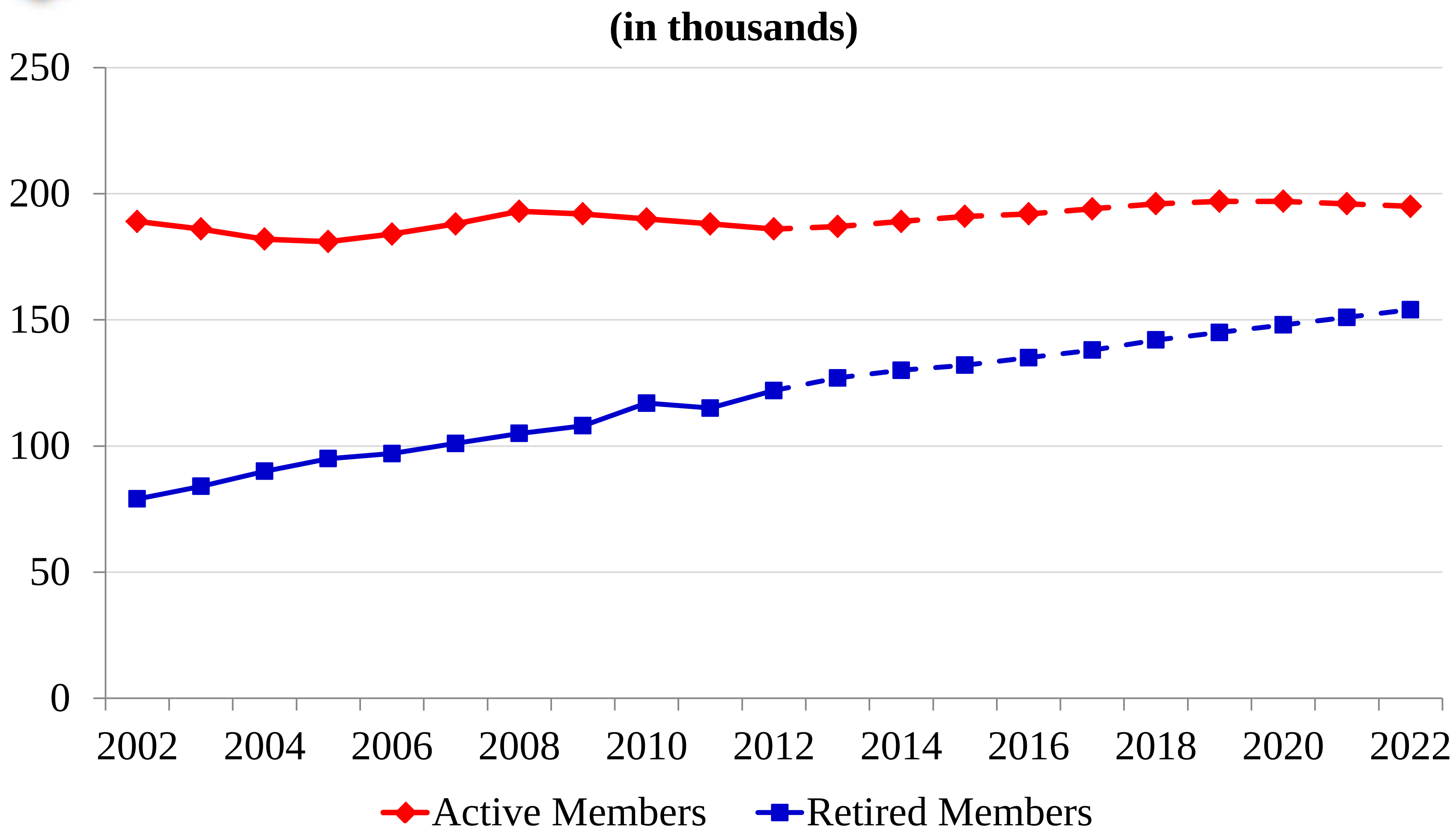
Summary of July 1, 2012 Valuation Results

Item	SCRS 2012	SCRS 2011	PORS 2012	PORS 2011
(1)	(2)	(3)	(4)	(5)
Actuarial accrued liability	$39,458	$38,012	$5,357	$5,123
Actuarial value assets	25,541	25,605	3,809	3,728
Unfunded liability (UAAL)	$13,917	$12,407	$1,548	$1,395
Funded ratio	65%	67%	71%	73%
Member contribution rate	8.00%	7.50%	8.41%	7.84%
Employer contribution rate	10.90%	10.60%	13.41%	12.84%
Total contribution rate (FY 2014)	18.90%	18.10%	21.82%	20.68%
Amortization period	29 Years	25 Years	30 Years	30 Years
Expected contributions				
Member	$696.4	$630.8	$100.2	$90.2
Employer	1,010.1	947.7	159.7	147.8
"New Money" Contributions				
Member	$43.5		$6.8	
Employer	29.2		$6.8	

$ in millions

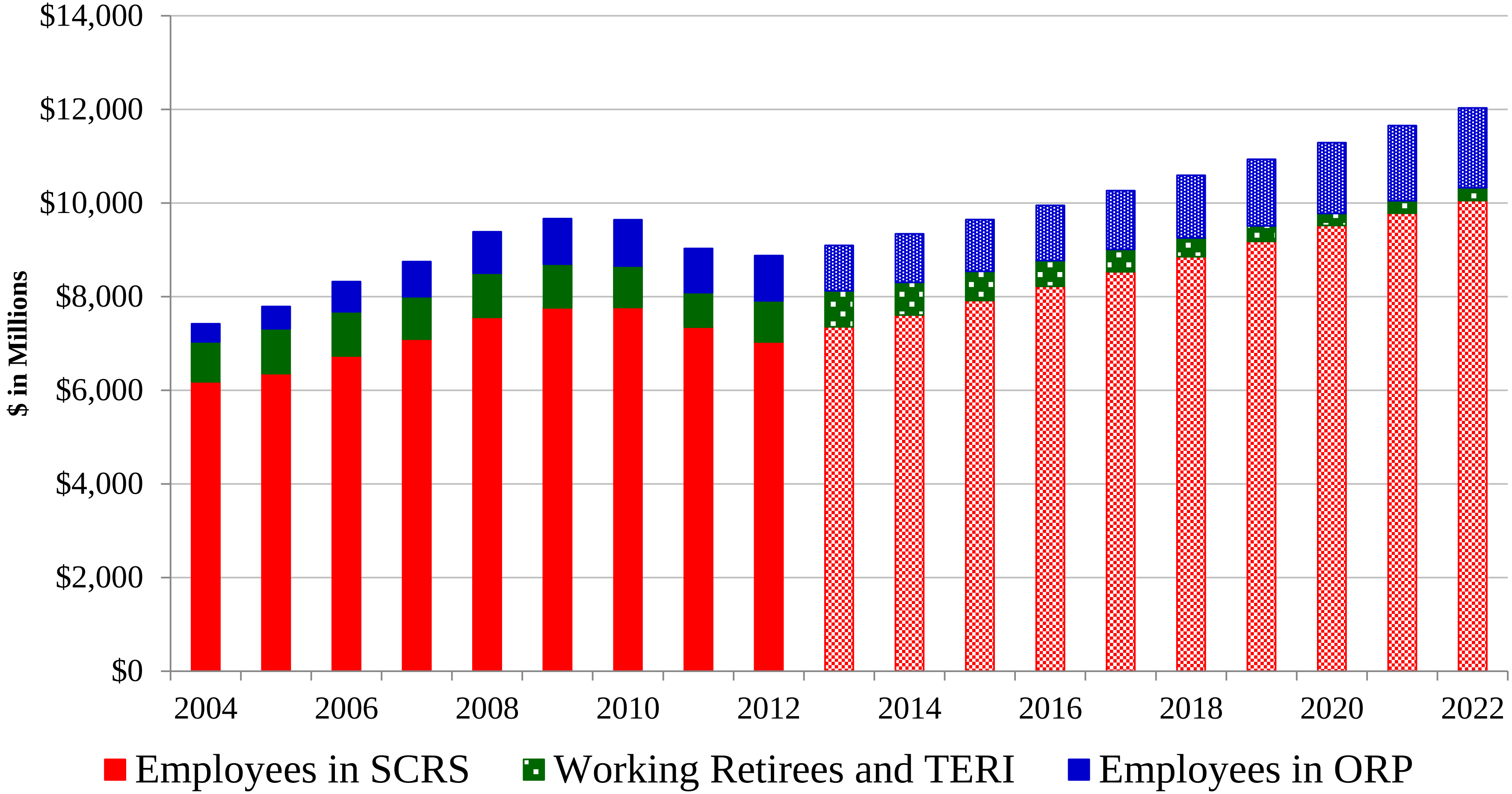
GRS

Active and Retired Members - SCRS



Note: Active membership count does not include working retirees and members in TERI and the ORP.

Contributing Payroll – SCRS



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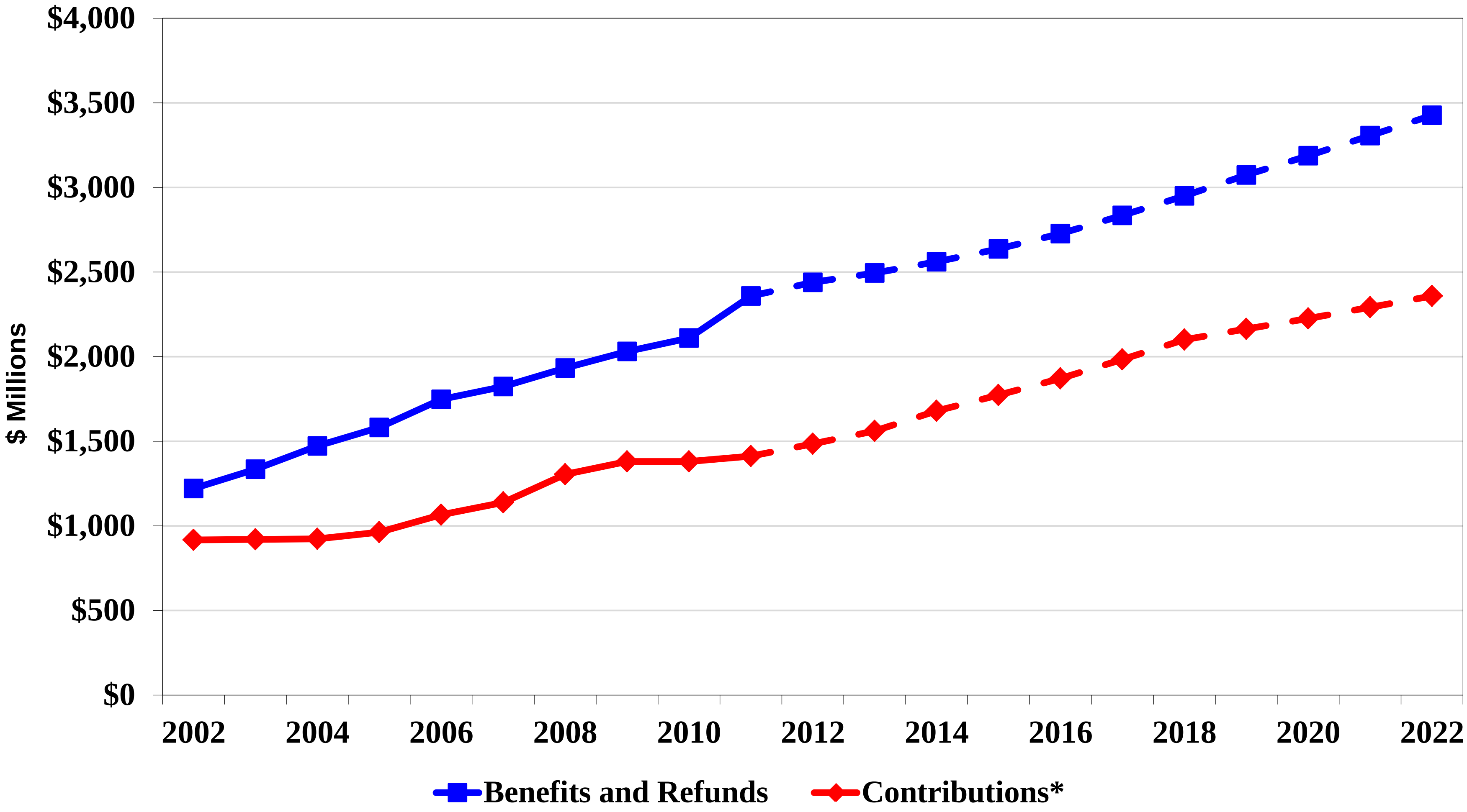
External Cash Flow - SCRS



* Includes member and employer contributions

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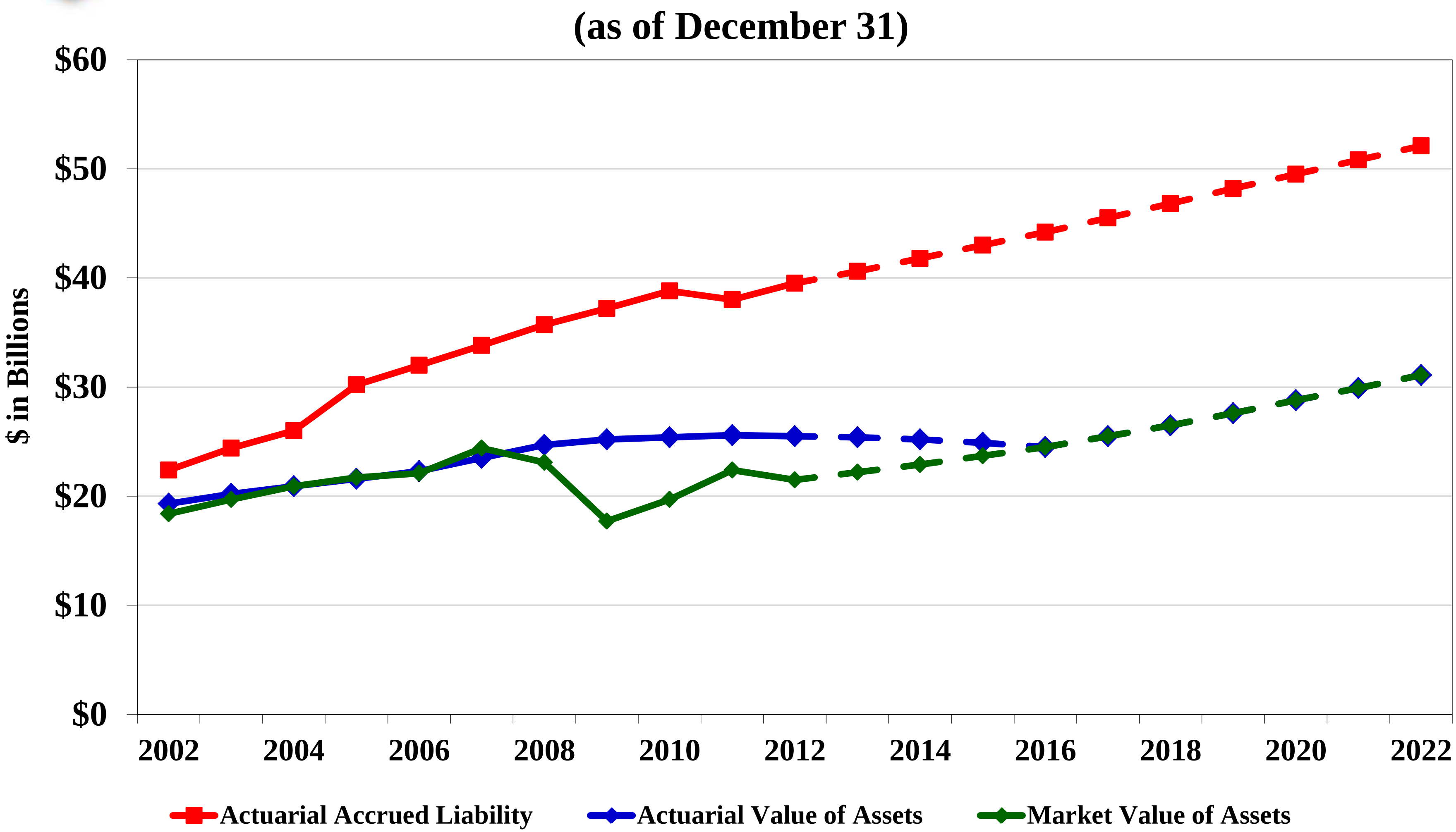
Liability and Assets - SCRS



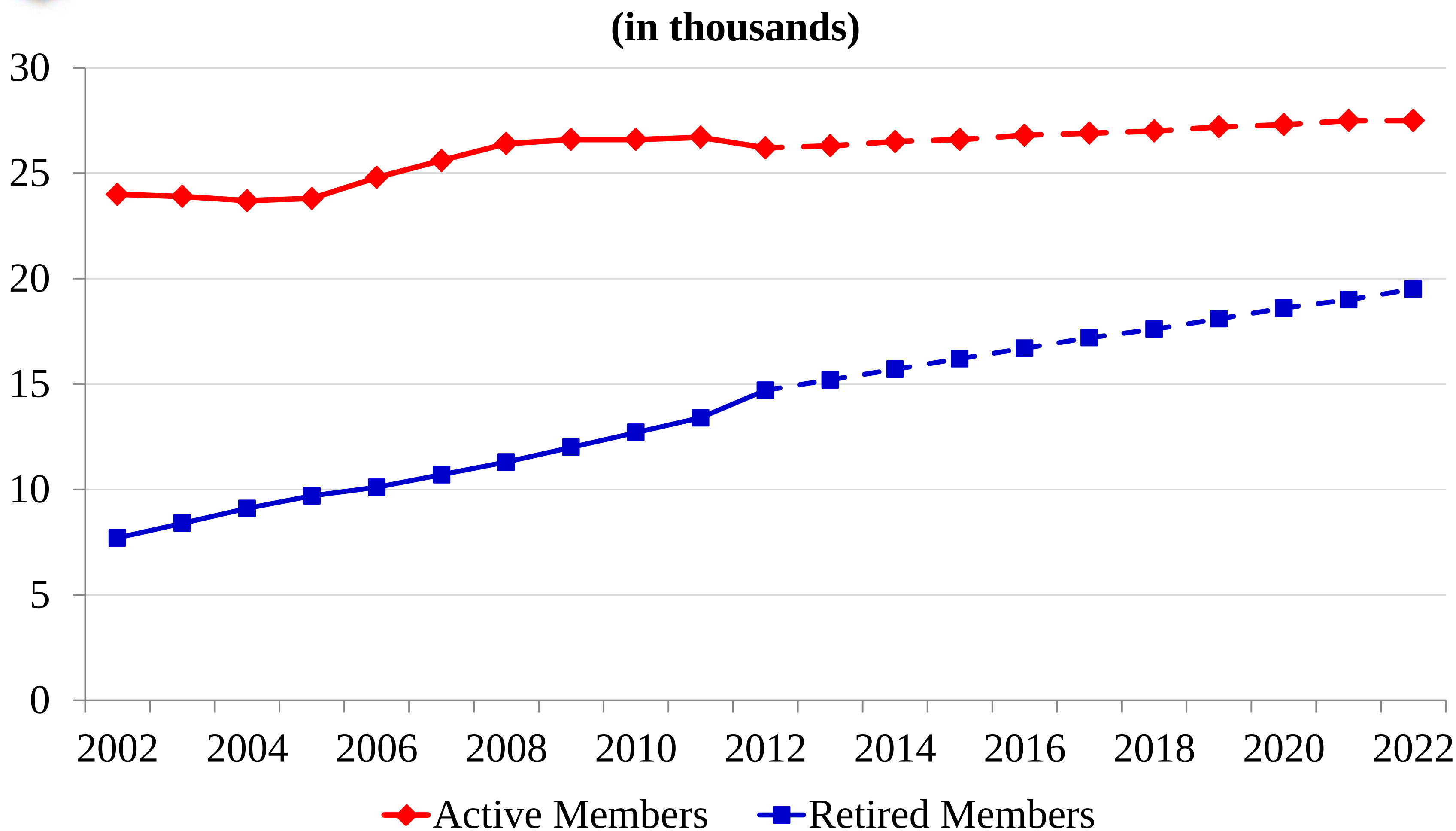
Note: Assumes a 7.50% annual return on the market value of assets for all future years.

Projected Cost - SCRS

July 1,	Covered Payroll	Contribution Rate Employer	Contribution Rate Member	Actuarial Accrued Liability	Actuarial Value Assets	Unfunded Liability	Funded Ratio	Funding Period
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2012	$ 7,356	10.60%	7.00%	$ 39,458	$ 25,541	$ 13,917	65%	29
2013	7,610	10.60%	7.50%	40,575	25,389	15,186	63%	30
2014	7,918	10.90%	8.00%	41,752	25,169	16,583	60%	30
2015	8,221	11.14%	8.24%	42,977	24,900	18,077	58%	30
2016	8,533	11.39%	8.49%	44,242	24,535	19,707	55%	30
2017	8,853	11.68%	8.78%	45,535	25,488	20,047	56%	30
2018	9,182	11.97%	9.07%	46,844	26,516	20,328	57%	29
2019	9,522	11.97%	9.07%	48,161	27,623	20,538	57%	28
2020	9,784	11.97%	9.07%	49,479	28,751	20,728	58%	27
2021	10,052	11.97%	9.07%	50,803	29,911	20,892	59%	26
2026	11,499	11.97%	9.07%	57,615	36,197	21,418	63%	21
2031	13,214	11.97%	9.07%	64,311	43,509	20,802	68%	16
2036	15,276	11.97%	9.07%	70,865	52,689	18,176	74%	11
2041	17,812	11.97%	9.07%	77,810	65,522	12,288	84%	5

Note: Assumes a 7.50% annual return on the market value of assets for all future years.

Active and Retired Members – PORS



Note: Active membership count does not include working retirees.

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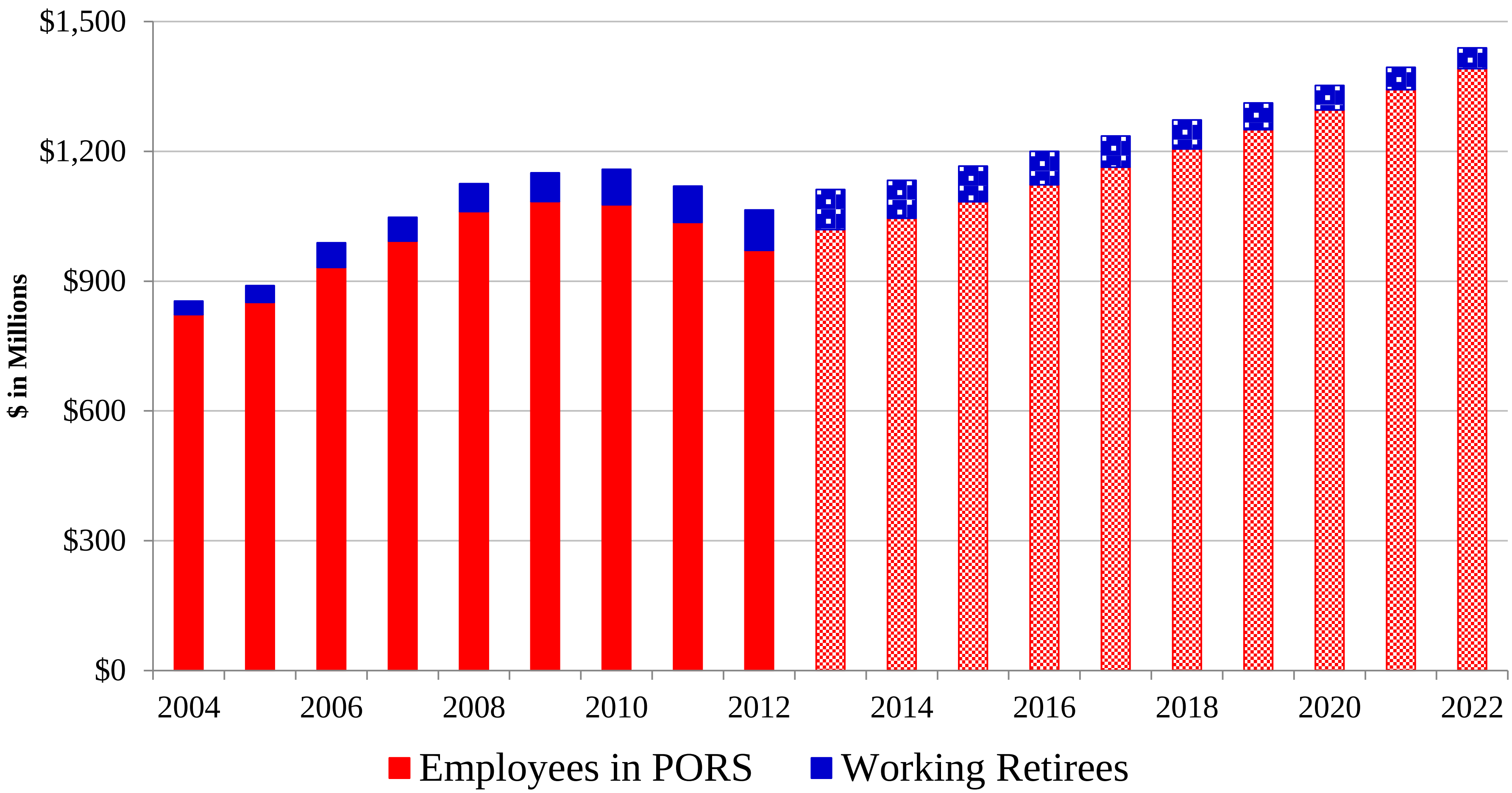
Contributing Payroll – PORS



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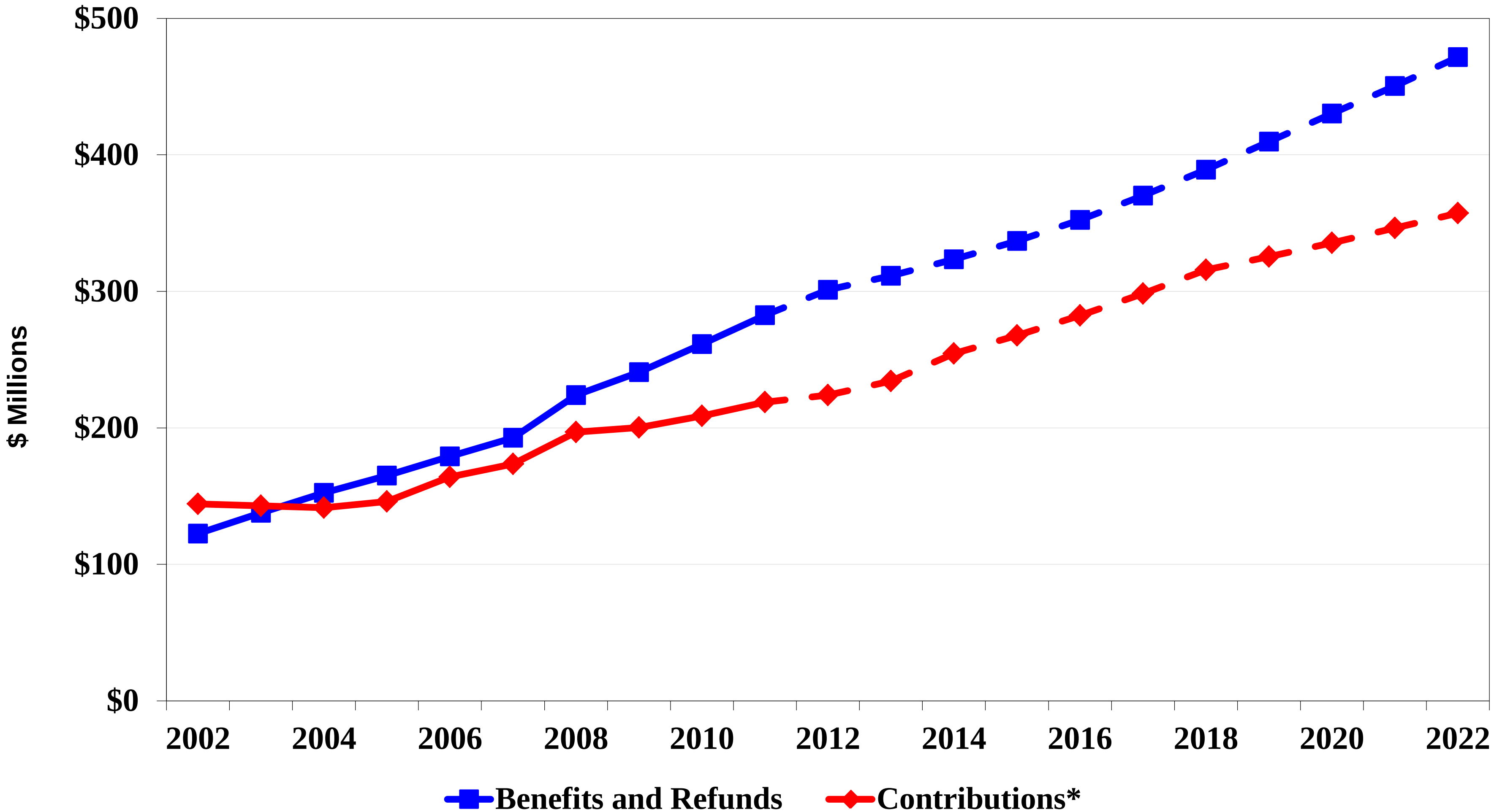
External Cash Flow - PORS



* Includes member and employer contributions

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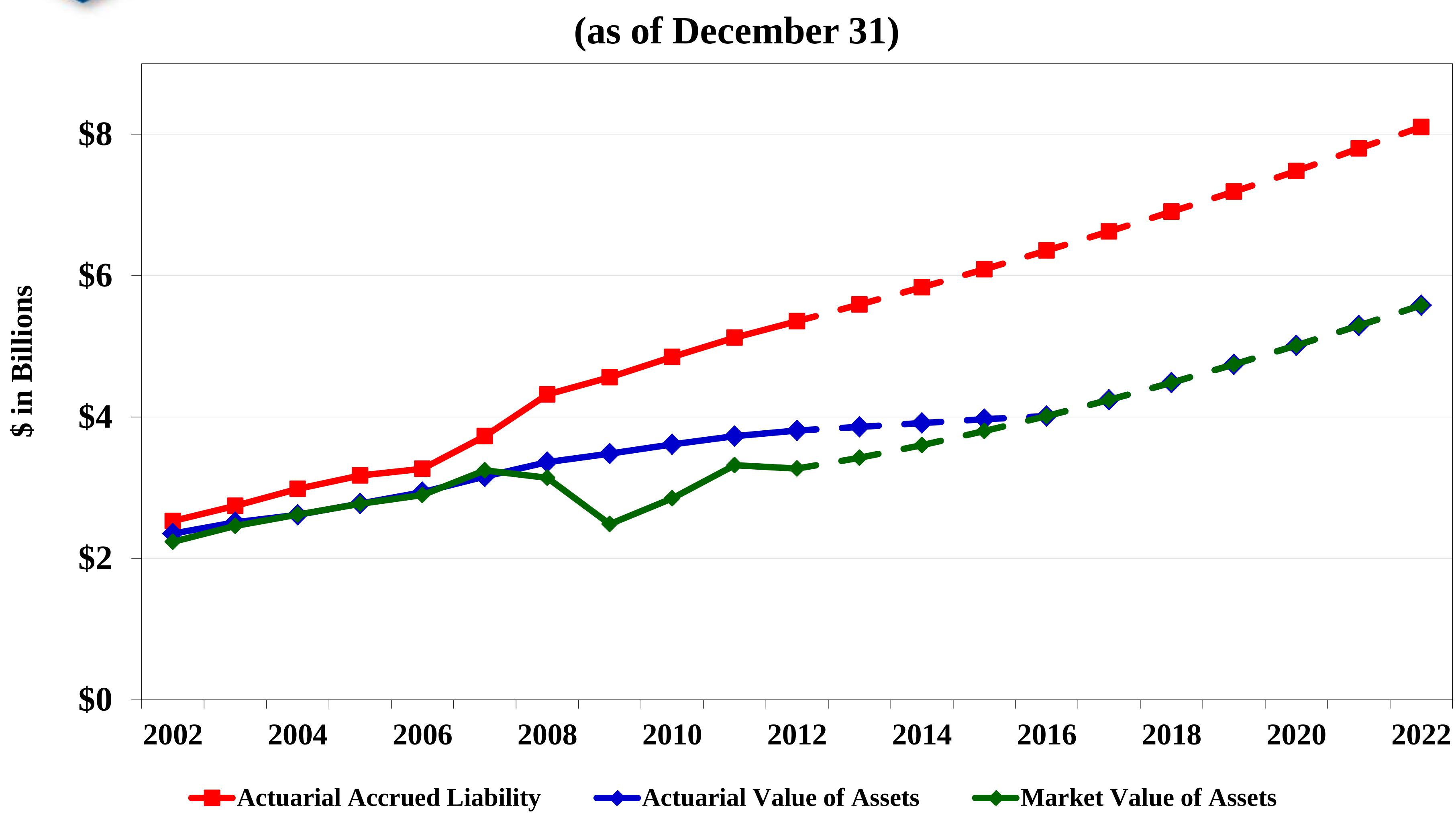
Liability and Assets - PORS



Note: Assumes a 7.50% annual return on the market value of assets for all future years.

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Projected Cost - PORS

July 1,	Covered Payroll	Contribution Rate Employer	Contribution Rate Member	Actuarial Accrued Liability	Actuarial Value Assets	Unfunded Liability	Funded Ratio	Funding Period
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2012	$ 1,019	12.30%	8.41%	$ 5,357	$ 3,809	$ 1,548	71%	30
2013	1,046	12.84%	8.65%	5,592	3,860	1,732	69%	30
2014	1,084	13.41%	8.93%	5,837	3,914	1,923	67%	30
2015	1,123	13.65%	9.22%	6,091	3,968	2,123	65%	30
2016	1,164	13.93%	9.53%	6,355	4,014	2,341	63%	30
2017	1,206	14.22%	9.53%	6,626	4,242	2,384	64%	29
2018	1,250	14.53%	9.53%	6,905	4,486	2,419	65%	27
2019	1,296	14.53%	9.53%	7,189	4,746	2,443	66%	26
2020	1,343	14.53%	9.53%	7,479	5,015	2,464	67%	25
2021	1,391	14.53%	9.53%	7,774	5,293	2,481	68%	24
2026	1,624	14.53%	9.53%	9,348	6,845	2,503	73%	18
2031	1,902	14.53%	9.53%	11,016	8,677	2,339	79%	13
2036	2,243	14.53%	9.53%	12,785	10,919	1,866	85%	8
2041	2,670	13.00%	8.00%	14,750	13,847	903	94%	3

Note: Assumes a 7.50% annual return on the market value of assets for all future years.

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Summary of July 1, 2012 Valuation Results – Other Systems in SCRS

	JSRS		GARS		NGRS	
Item	**2012**	**2011**	**2012**	**2011**	**2012**	**2011**
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Actuarial accrued liability	$252	$244	$74	$75	$61	$60
Actuarial value assets	146	145	39	41	21	20
Unfunded liability (UAAL)	$106	$99	$35	$34	$40	$40
Funded ratio	58%	60%	53%	56%	34%	33%
Member contribution rate	10.00%	10.00%	11.0%	10.0%	N/A	N/A
Employer contribution rate	47.97%	47.33%	N/A	N/A	N/A	N/A
Amortization period	30 Years	30 Years	15 Years	16 Years	20 Years	21 Years
Expected contributions						
Member	$2.0	$2.0	$0.4	$0.4	$0.0	$0.0
Employer	9.8	9.4	4.3	4.1	4.6	4.5
"New Money" contributions						
Member	$0.0		$0.0		$0.0	
Employer	0.1		$0.2		$0.1	

$ in millions

GRS

Closing Comments

- Member and employer contribution rates are expected to continue to increase in future years to maintain a 30-year funding period
  - Any adverse demographic or economic experience during next several years will put additional upward pressure on the future contribution requirements

SUMMARY OF 2012 VALUATION RESULTS

South Carolina Retirement System
(SCRS)

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.

Police Officers Retirement System (PORS)

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	26,179	26,650	26,650
- Retirees and beneficiaries	14,653	13,358	13,358
- Inactive members	11,840	11,980	11,980
- Total	52,672	51,988	51,988
• Projected payroll of active members	$1,019,241	$1,087,587	$1,087,587
• Projected payroll for all active members, including working retirees	$1,111,856	$1,173,772	$1,173,772
Contribution Rates[1]			
• Employer contribution rate	13.41%	12.84%	12.30%
• Member	8.41%	7.84%	6.50%
Assets			
• Market value	$3,269,990	$3,317,533	$3,317,533
• Actuarial value	3,808,934	3,728,241	3,728,241
• Return on market value	0.4%	18.3%	18.3%
• Return on actuarial value	3.9%	4.6%	4.6%
• Ratio - actuarial value to market value	116.5%	112.4%	112.4%
• External cash flow %	-1.9%	-1.6%	-1.6%
Actuarial Information			
• Normal cost %	14.33%	14.36%	13.39%
• Actuarial accrued liability (AAL)	$5,357,492	$5,122,501	$4,824,941
• Unfunded actuarial accrued liability (UAAL)	1,548,558	1,394,260	1,096,700
• Funded ratio	71.1%	72.8%	77.3%
• Funding period (years)	30	30	22
Reconciliation of UAAL			
• Beginning of Year UAAL	1,394,260	$1,237,757	$1,237,757
- Interest on UAAL	104,570	71,369	71,369
- Amortization payment with interest	(83,655)	(64,459)	(64,459)
- Assumption/method changes	0	(286,171)	(286,171)
- Asset experience	134,736	102,677	102,677
- COLA	0	40,124	40,124
- Salary experience	(35,038)	(41,879)	(41,879)
- Other liability experience	33,686	37,282	37,282
- Legislative Changes	0	297,560	0
• End of Year UAAL	$1,548,558	1,394,260	$1,096,700

[1] The contribution rates determined by the 2012 valuation are established by Section 9-11-225 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.

Retirement System for Judges and Solicitors (JSRS)

Executive Summary

(Dollar amounts expressed in thousands)

Valuation Date:	July 1, 2012	July 1, 2011
Membership		
• Number of		
- Active members[1]	144	144
- Retirees and beneficiaries	183	184
- DROP and Retired-in-Place members	17	14
- Inactive members	3	4
- Total	330	332
• Projected payroll of active members	$19,221	$18,661
Contribution Rates		
• Employer contribution rate	47.97% [2]	47.33%
• Member	10.00%	10.00%
Assets		
• Market value	$123,359	$127,152
• Actuarial value	145,604	144,927
• Return on market value	0.5%	18.3%
• Return on actuarial value	3.6%	4.3%
• Ratio of actuarial to market value of assets	118.0%	114.0%
• External cash flow %	-3.6%	-3.4%
Actuarial Information		
• Normal cost %	27.28%	27.90%
• Actuarial accrued liability (AAL)	$251,729	$243,514
• Unfunded actuarial accrued liability (UAAL)	106,125	98,587
• Funded ratio	57.8%	59.5%
• Funding period (years)	30	30
Reconciliation of UAAL		
• Beginning of Year UAAL	$98,587	$72,952
- Interest on UAAL	7,394	7,277
- Amortization payment with interest	(5,699)	(5,271)
- Assumption/method changes	0	24,079
- Asset experience	5,561	4,444
- COLA	0	(5,121)
- Salary experience	(2,216)	(2,141)
- Other liability experience	2,498	2,368
- Legislative Changes	0	0
• End of Year UAAL	$106,125	$98,587

[1] Active member counts include unfilled positions and members in DROP or Retired-in-Place.

[2] The contribution rate determined by the July 1, 2012 actuarial valuation is subject to approval and adoption by the Public Employee Benefit Authority before becoming effective for the fiscal year beginning July 1, 2014. The contribution rate includes the cost of incidental death benefits.

Retirement System for Members of the General Assembly of the State of South Carolina (GARS)

Executive Summary

(Dollar amounts expressed in thousands)

Valuation Date:	July 1, 2012	July 1, 2011
Membership		
• Number of		
- Active positions[1]	170	170
- Special contributors	18	26
- Retirees and beneficiaries	358	353
- Inactive members	33	40
- Total	579	589
• Projected payroll	$3,854	$3,854
Contribution Requirement		
• Member contribution rate[2]	11.00%	10.00%
• Employer contribution requirement[3]	$4,275	$4,063
Assets		
• Market value	$31,431	$34,669
• Actuarial value	39,233	41,484
• Return on market value	0.4%	17.6%
• Return on actuarial value	2.7%	3.5%
• Ratio - actuarial value to market value	124.8%	119.7%
• External cash flow %	-10.2%	-11.1%
Actuarial Information		
• Normal cost %	21.68%	21.67%
• Actuarial accrued liability (AAL)	$74,332	$74,604
• Unfunded actuarial accrued liability (UAAL)	35,099	33,120
• Funded ratio	52.8%	55.6%
• Funding period from the valuation date	15 years	16 years
Reconciliation of UAAL		
• Beginning of Year UAAL	$33,120	$24,959
- Interest on UAAL	2,484	2,296
- Amortization payment with interest	(2,400)	(2,241)
- Assumption change	0	5,715
- Asset experience	1,950	1,704
- Liability experience	(55)	687
- Legislative changes	0	0
• End of Year UAAL	$35,099	$33,120

[1] Includes filled and unfilled positions.

[2] The 11.00% member contribution rate is effective January 1, 2013.

[3] The contribution requirement determined by the July 1, 2012 actuarial valuation is subject to approval and adoption by the Public Employee Benefit Authority before becoming effective for the fiscal year beginning July 1, 2014.

South Carolina National Guard Retirement System (NGRS)

Executive Summary

(Dollar amounts expressed in thousands)

Valuation Date:	July 1, 2012	July 1, 2011
Membership		
• Number of		
- Active Members	12,041	12,271
- Retirees and Beneficiaries	4,419	4,252
- Inactive Members	2,484	2,458
- Total	18,944	18,981
GASB No. 25 Annual Required Contribution		
• Member	$0	$0
• Employer contribution[1]	$4,586	$4,539
Assets		
• Market value	$17,417	$17,466
• Actuarial value	20,814	20,138
• Return on market value	0.4%	14.9%
• Return on actuarial value	4.4%	4.5%
• Ratio - actuarial value to market value	119.5%	115.3%
• External cash flow %	-0.7%	-0.7%
Actuarial Information		
• Normal cost	$686	$703
• Actuarial accrued liability (AAL)	60,942	60,388
• Unfunded actuarial accrued liability (UAAL)	40,128	40,250
• Funded ratio	34.2%	33.3%
• Amortization period (blended)	20	21
Reconciliation of UAAL		
• Beginning of Year UAAL	$40,250	$34,695
- Interest on UAAL	3,019	3,010
- Amortization payment with interest	(3,669)	(3,670)
- Assumption/method changes	0	5,441
- Asset experience	849	668
- Other liability experience	(321)	106
- Legislative changes	0	0
• End of Year UAAL	40,128	$40,250

[1] The contribution amount determined by the actuarial valuation is effective for the following fiscal year.

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.

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

Daniel J. White, FSA, MAAA, EA
Senior Consultant

TABLE OF CONTENTS

SECTION A

EXECUTIVE SUMMARY

Executive Summary

(Dollar amounts expressed in thousands)

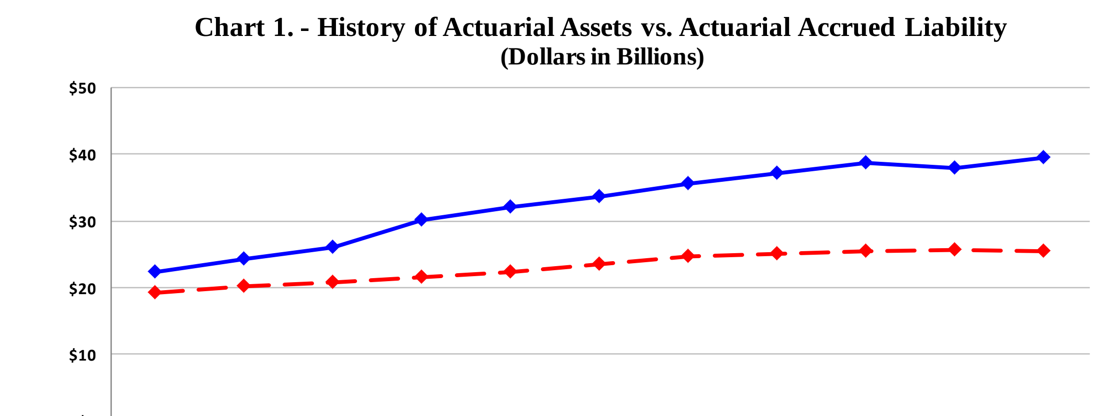
	Valuation Date:		
	July 1, 2012	July 1, 2011	
Membership	**Reflecting Act 278**	**Reflecting Act 278**	**Disclosed in Prior Year Report**
• Number of			
- Active Members	185,748	187,611	187,611
- TERI Members	6,785	5,254	5,254
- Retirees and Beneficiaries	115,142	110,296	110,296
- Inactive Members	154,073	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.



	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.

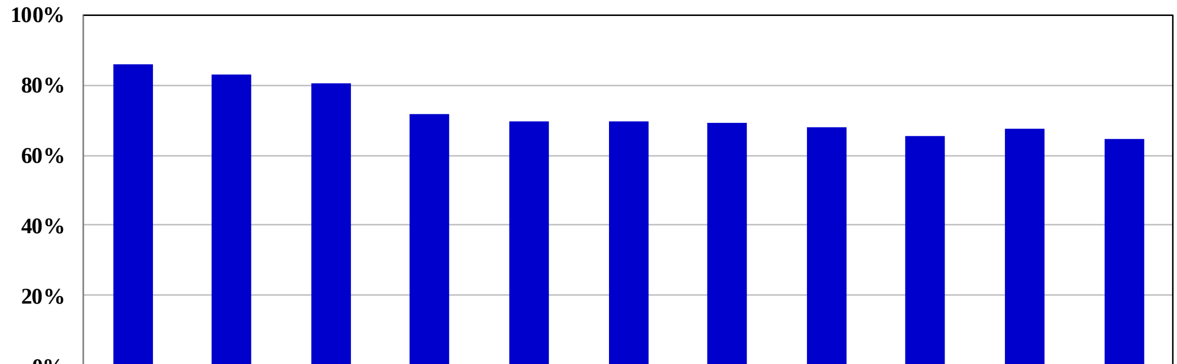
This section discusses the determination of the current funding requirements and the System's funded status, as well as changes in financial condition of the retirement system.

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%

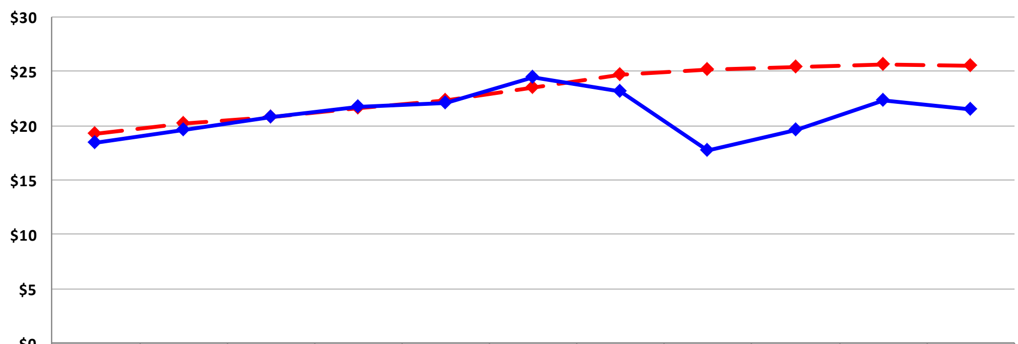
Asset Gains/ (Losses)

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 Reflecting Act 278 (1)	July 1, 2011 Reflecting Act 278 (2)	July 1, 2011 Disclosed in Prior Year Report (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	Reflecting Act 278	Disclosed in Prior Year Report
		(1)	(2)	(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 (1)		July 1, 2012 (2)	July 1, 2011 (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	July 1, 2011
		(1)	(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,	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL) (3) - (2)	Funded Ratio (2)/(3)	Annual Covered Payroll[1]	UAAL as % of Payroll (4)/(6)
(1)	(2)	(3)	(4)	(5)	(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,	Number of Employers	Number	Percent Increase /(Decrease)	Amount in Thousands	Percent Increase /(Decrease)	Amount	Percent Increase /(Decrease)	Average Age	Average Service
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(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	Number		Annual Benefits Amount		Average Monthly Benefit
(1)	(2)		(3)		(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	Number of Annuitants	Female	Male	Average Service
(1)	(2)	(3)	(4)	(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	Average
Year Ended	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits	in Annual Benefit	Annual Benefit
(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				
	General Employees		Teachers	
Years of Service	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**
	General Employees				**Teachers**				
Age	**Reduced**		**Normal***		**Reduced**		**Normal***		**Rule of**
	Male	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**90**
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.

Gabriel Roeder Smith & Company
Consultants & Actuaries

POLICE OFFICERS RETIREMENT SYSTEM (PORS)

ACTUARIAL VALUATION REPORT

AS OF JULY 1, 2012

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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 Police Officers Retirement System (PORS), determines the calculated employer contribution rate, and analyzes changes in this contribution rate. In addition, the report provides information required by the Retirement System in connection with Governmental Accounting Standards Board Statement No. 25 (GASB 25), and 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 PORS. This report was prepared at the request of the Public Employee Benefit Authority (Board) and is intended for use by the South Carolina Retirement System (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 9-11-225 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 5.00% differential between the employer and member contribution rates.

If new legislation is enacted between the valuation date and the date the contribution rate become 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 72.8% (after reflecting Act 278) to 71.1%. 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 actuarial (smoothed) value of assets, the funded ratio for the System would have been 61.0%, compared to 64.8% in the prior year (after reflecting Act 278). The decrease in the funded ratio on a market value basis is due to unfavorable investment experience during the last plan 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 disability incidence and retirement, 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 disability incidence and retirement were modified to more appropriately model the system's 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 reflects 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 rates 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 increase to 12.50% of pay beginning July 1, 2013, and to 13.00% of pay 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 5.00% 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 retirement system will no longer accrue future interest on their account balance attributable to their contributions.
- 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 57 at 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.
- Members who apply for a disability retirement benefit after December 31, 2013 must provide proof to the system that they are entitled to Social Security disability benefits after their third year of retirement in order to continue receiving their disability retirement allowance. The calculation of the disability allowance will be based on the member’s credited service projected to age 55, but subject to a maximum of 25 years.

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

- Class Three members must attain eight (8) years of earned service to be eligible for retirement benefits.
- Members will be eligible for an unreduced retirement benefit upon: (1) attaining age 55 with eight or more years of earned service or (2) attaining 27 years of credited service.

- 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 when calculating the amount of the member's 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 PORS 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.

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

Daniel J. White, FSA, MAAA, EA
Senior Consultant

TABLE OF CONTENTS

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	26,179	26,650	26,650
- Retirees and beneficiaries	14,653	13,358	13,358
- Inactive members	11,840	11,980	11,980
- Total	52,672	51,988	51,988
• Projected payroll of active members	$1,019,241	$1,087,587	$1,087,587
• Projected payroll for all active members, including working retirees	$1,111,856	$1,173,772	$1,173,772
Contribution Rates[1]			
• Employer contribution rate	13.41%	12.84%	12.30%
• Member	8.41%	7.84%	6.50%
Assets			
• Market value	$3,269,990	$3,317,533	$3,317,533
• Actuarial value	3,808,934	3,728,241	3,728,241
• Return on market value	0.4%	18.3%	18.3%
• Return on actuarial value	3.9%	4.6%	4.6%
• Ratio - actuarial value to market value	116.5%	112.4%	112.4%
• External cash flow %	-1.9%	-1.6%	-1.6%
Actuarial Information			
• Normal cost %	14.33%	14.36%	13.39%
• Actuarial accrued liability (AAL)	$5,357,492	$5,122,501	$4,824,941
• Unfunded actuarial accrued liability (UAAL)	1,548,558	1,394,260	1,096,700
• Funded ratio	71.1%	72.8%	77.3%
• Funding period (years)	30	30	22
Reconciliation of UAAL			
• Beginning of Year UAAL	1,394,260	$1,237,757	$1,237,757
- Interest on UAAL	104,570	71,369	71,369
- Amortization payment with interest	(83,655)	(64,459)	(64,459)
- Assumption/method changes	0	(286,171)	(286,171)
- Asset experience	134,736	102,677	102,677
- COLA	0	40,124	40,124
- Salary experience	(35,038)	(41,879)	(41,879)
- Other liability experience	33,686	37,282	37,282
- Legislative Changes	0	297,560	0
• End of Year UAAL	$1,548,558	1,394,260	$1,096,700

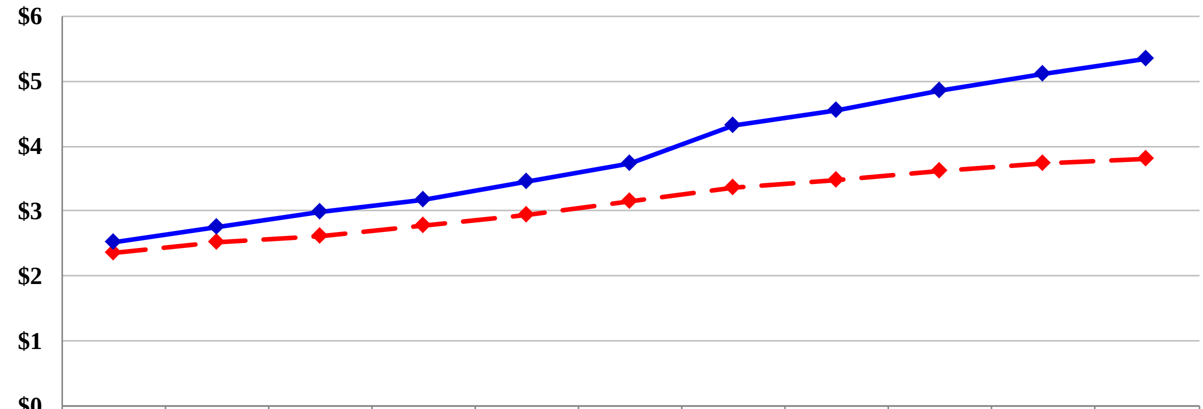
[1] The contribution rates determined by the 2012 valuation are established by Section 9-11-225 of the South Carolina Code and become effective for the fiscal year beginning July 1, 2014. The employer contribution rates shown above includes the cost for incidental death benefits.

EXECUTIVE SUMMARY (CONTINUED)

The unfunded actuarial accrued liability increased by $0.1 billion since the prior year's valuation to $1.5 billion. The single largest source of this increase is due to the continual recognition of deferred investment losses in the actuarial value of assets (i.e. $0.1 billion was recognized in the July 1, 2012 valuation). There is still $0.5 billion in deferred investment losses as of the valuation date. Absent favorable investment experience, those deferred losses will gradually be reflected in the actuarial value of assets over the next few years.

Below is a chart with the System's historical actuarial value of assets and actuarial accrued liability.

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



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
AVA	2.4	2.5	2.6	2.8	2.9	3.2	3.4	3.5	3.6	3.7	3.8
AAL	2.5	2.7	3.0	3.2	3.5	3.7	4.3	4.6	4.9	5.1	5.4

The employer and member contribution rates in effect for fiscal year 2014 are no longer sufficient to maintain a funding period under 30 years. Therefore, the employer and member contribution rates for fiscal year 2015 will need to increase to satisfy the 30-year funding requirement specified in Section 9-11-225 of the South Carolina Code. Specifically, the employer contribution rate will need to increase from 12.84% to 13.41% and the member contribution rate will increase from 7.84% to 8.41%. Absent legislative changes or significantly favorable experience, employer and member contributions rate will increase for the next several years as existing deferred investment losses become recognized in the actuarial value of assets.

SECTION B

DISCUSSION

DISCUSSION

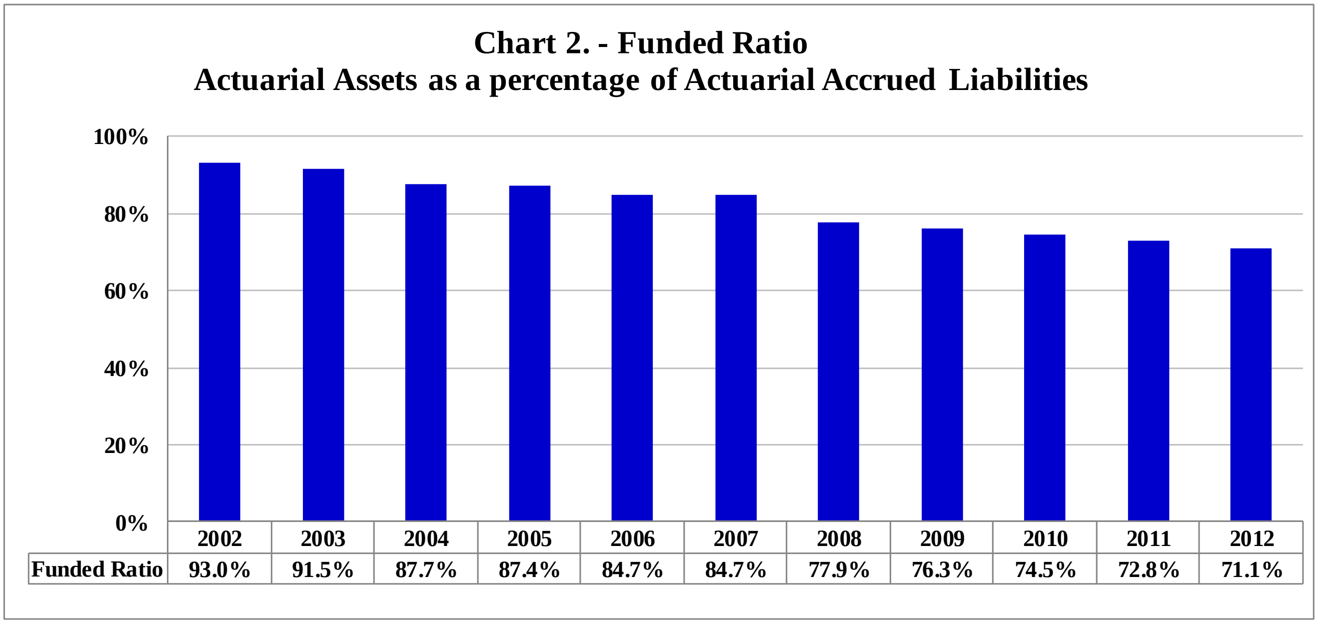
The results of the July 1, 2012 actuarial valuation of the Police Officers Retirement System are presented in this report. The primary purposes of the valuation report are to depict the current financial condition of the System, determine the annual required contribution, and analyze changes in the System's financial condition. In addition, the report provides information required by the Retirement System in connection with Governmental Accounting Standards Board Statement No. 25 (GASB 25), and it gives 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 status of the System is shown in Table 10, Schedule of Funding Progress. The funded ratio decreased from 72.8% (after reflecting Act 278) to 71.1%. This 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.



It is expected that the funded ratio (on an actuarial value of asset basis) will decline for the next several before it gradually improves, as deferred investment losses become recognized in the actuarial value of assets.

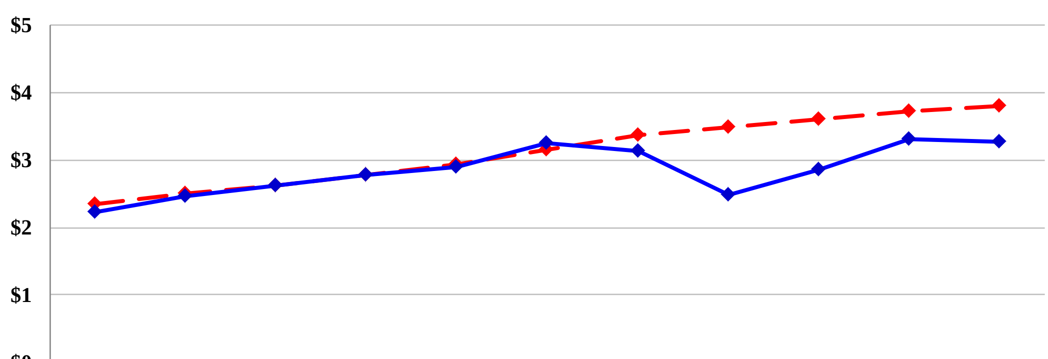
Asset Gains/ (Losses)

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. Table 8 shows the development of the actuarial value of assets. The actuarial value of assets increased from \$3.7 billion to \$3.8 billion since the prior valuation.

The rate of return on the mean market value of assets during the prior plan year was 0.4%; which is below the 7.50% expected annual return. The return on an actuarial (smoothed) asset value was 3.9%. 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	2.4	2.5	2.6	2.8	2.9	3.2	3.4	3.5	3.6	3.7	3.8
MVA	2.2	2.5	2.6	2.8	2.9	3.3	3.1	2.5	2.9	3.3	3.3

Assets as of July 1,

Tables 6 and 7 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 gain due to the liabilities (salary and other liability experience) of $1.4 million, which is less than a 0.1% gain when compared to a total actuarial accrued liability ("AAL") of $5.4 billion. 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	$1,394,260
- Interest on UAAL	104,570
- Amortization payment with interest	(83,655)
- Assumption/method changes	0
- Asset experience	134,736
- COLA	0
- Salary experience	(35,038)
- Other liability experience	33,686
- Legislative changes	0
• End of Year UAAL	$1,548,558

The employer and contribution rates in effect for fiscal year 2014 are no longer sufficient to satisfy the 30-year funding requirement in the State code. Below is a table reconciling the change in the funding period from the prior year's valuation based on the contribution rates that go into effect for fiscal year 2014.

Change in Funding Period (Years)
Based on the Employer and Member Contribution
Rates in Efffect for Fiscal Year 2014

• Prior Year (after reflecting Act 278)	30.0
- Expected experience	(1.0)
- Legislative changes	0.0
- Assumption and method changes	0.0
- Scheduled increase in the employer and member contribution rate	(1.6)
- Asset experience	5.3
- Demographic experience	4.2
- Total change	6.9
• Current Year Valuation (before reflecting the required increase in the contribution rate)	36.9

While the plan's liability experience resulted in a slight reduction in the unfunded actuarial accrued liability, it produced an increase in the system's funding period. 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, actual covered payroll decreased by 6.28% 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 PORS has a large unfunded liability as a percentage of the covered payroll.

Absent favorable investment experience, we expect the employer and member contribution rates will be required to increase in future years as remaining deferred investment losses become fully recognized in the actuarial value of assets.

GASB No. 25 and No. 27 Disclosures

Accounting requirements for the Retirement System 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 PORS. Act 278 became law in June 2012, which resulted in substantial changes to the benefit provisions in PORS. 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 twelve (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 is equal to 2.14% 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) 25 years of credited service or (ii) attained age 55 with 5 years of earned service.
- At each July 1 after their first full year of retirement, annuitants will receive an automatic post-retirement benefit 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 2.14% 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 their retirement benefit after they have (i) 27 years of credited service or (ii) attained age 55 with 8 years of earned service.
- At each July 1 after their first full year of retirement, annuitants will receive an automatic post-retirement benefit adjustment equal to the lesser of 1.00% of their retirement benefit or $500 per annum.

SECTION C

ACTUARIAL TABLES

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]	$ 1,019,241	$1,087,587	$1,087,587
2.	Present value of future pay[2]	$ 7,905,745	$ 8,362,408	$ 7,690,082
3.	Normal cost rate			
	a. Total normal cost rate	14.33%	14.36%	13.39%
	b. Less: member contribution rate	-8.41%	-7.84%	-6.50%
	c. Employer normal cost rate	5.92%	6.52%	6.89%
4.	Actuarial accrued liability for active members			
	a. Present value of future benefits	$ 3,202,568	$ 3,373,687	$ 3,165,467
	b. Less: present value of future normal costs	1,086,623	1,155,437	1,010,613
	c. Actuarial accrued liability	$ 2,115,945	$ 2,218,250	$ 2,154,854
5.	Total actuarial accrued liability for:			
	a. Retirees and beneficiaries	$ 3,118,016	$ 2,784,144	$ 2,558,128
	b. Inactive members	123,531	120,107	111,959
	c. Active members (Item 4.c.)	2,115,945	2,218,250	2,154,854
	d. Total	$ 5,357,492	$ 5,122,501	$ 4,824,941
6.	Actuarial value of assets	$ 3,808,934	$ 3,728,241	$ 3,728,241
7.	Unfunded actuarial accrued liability (UAAL) (Item 5.d. - Item 6.)	$ 1,548,558	$ 1,394,260	$ 1,096,700
8.	GASB No. 25 Annual Required Contribution Rate			
	a. Employer normal cost rate	5.92%	6.52%	6.89%
	b. Employer contribution rate available to amortize the UAAL	7.49%	6.32%	5.41%
	c. Total employer contribution rate	13.41%	12.84%	12.30%
9.	Funding period based on the required employer contribution rate (years)	30	30	22
10.	Applicable statuorily required contribution rates[2]			
	a. Employer contribution rate	13.41%	12.84%	Not Applicable
	b. Member contribution rate	8.41%	7.84%	Not Applicable

[1] The projected payroll does not include payroll for working retirees.

[2] The applicable employer and member contribution rates are determined in accordance with Section 9-11-225 of the South Carolina Code. 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	Reflecting Act 278	Disclosed in Prior Year Report
		(1)	(2)	(3)
1.	Active members			
	a. Service retirement	$ 2,614,816	$ 2,805,392	$ 2,643,729
	b. Deferred termination benefits and refunds	266,632	252,215	249,061
	c. Survivor benefits	107,106	93,001	37,073
	d. Disability benefits	214,014	223,079	235,604
	e. Total	$ 3,202,568	$ 3,373,687	$ 3,165,467
2.	Retired members			
	a. Service retirement	$ 2,479,232	$ 2,184,422	$ 2,008,093
	b. Disability retirement	479,278	441,890	402,956
	c. Beneficiaries	125,064	121,411	112,597
	d. Incidental and accidental death benefits	34,442	36,421	34,482
	e. Total	$ 3,118,016	$ 2,784,144	$ 2,558,128
3.	Inactive members			
	a. Vested terminations	$ 100,934	$ 98,221	$ 90,073
	b. Nonvested terminations	22,597	21,886	21,886
	c. Total	$ 123,531	$ 120,107	$ 111,959
4.	Total actuarial present value of future benefits	$ 6,444,115	$ 6,277,938	$ 5,835,554

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	8.77%	8.82%	8.53%
b. Deferred termination benefits and refunds	3.44%	3.44%	2.99%
c. Survivor benefits	0.50%	0.47%	0.19%
d. Disability benefits	1.62%	1.63%	1.68%
e. Total	14.33%	14.36%	13.39%
2. Less: member contribution rate	8.41%	7.50%	6.50%
3. Net employer normal cost rate	5.92%	6.86%	6.89%

Note: The normal cost includes the cost for incidental and accidental 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	$	3,118,016
	b. Present active and inactive members		3,326,099
	c. Total actuarial present value	$	6,444,115
2.	Present Value of Future Normal Contributions		
	a. Member	$	664,873
	b. Employer		421,750
	c. Total future normal contributions	$	1,086,623
3.	Actuarial Liability	$	5,357,492
4.	Current Actuarial Value of Assets	$	3,808,934
5.	Unfunded Actuarial Liability	$	1,548,558
6.	Unfunded Actuarial Liability Rate in Effect for FY 2015		7.49%
7.	Unfunded Actuarial Liability Liquidation Period[1]		30 years

[1] Funding period after reflecting the required increase in the contribution rates.

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	$ 773,710	$ 786,724
ii. Employer annuity accumulation fund	3,035,224	2,941,517
iii. Total current assets	$ 3,808,934	$ 3,728,241
b. Present value of future member contributions	$ 664,873	$ 655,613
c. Present value of future employer contributions		
i. Normal contributions	$ 421,750	$ 499,824
ii. Accrued liability contributions	1,548,558	1,394,260
iii. Total future employer contributions	$ 1,970,308	$ 1,894,084
d. Total assets	$ 6,444,115	$ 6,277,938
2. Liabilities		
a. Employee annuity savings fund		
i. Past member contributions	$ 773,710	$ 786,724
ii. Present value of future member contributions	664,873	655,613
iii. Total contributions to employee annuity savings fund	$ 1,438,583	$ 1,442,337
b. Employer annuity accumulation fund		
i. Benefits currently in payment	$ 3,118,016	$ 2,784,144
ii. Benefits to be provided to other members	1,887,516	2,051,457
iii. Total benefits payable from employer annuity accumulation fund	$ 5,005,532	$ 4,835,601
c. Total liabilities	$ 6,444,115	$ 6,277,938

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)	$ 281,409	$ 381,861
2. Receivables	116,550	121,715
3. Investments		
a. Short-term securities	$ 0	$ 1,471
b. Domestic fixed income	500,532	481,410
c. Global fixed income	195,477	404,422
d. Domestic equities	239,962	263,105
e. Global equities	223,741	156,482
f. Alternative investments	1,862,972	1,703,719
g. Total investments	$ 3,022,684	$ 3,010,609
4. Securities lending cash collateral invested	$ 23,683	$ 28,902
5. Prepaid administrative expenses	88	132
6. Capital assets, net of accumulated depreciation	275	286
7. Total assets	$ 3,444,689	$ 3,543,505
8. Liabilities		
a. Due to other Systems	$ 0	$ 92
b. Accounts payable	116,823	168,870
c. Investment fees payable	1,222	2,336
d. Obligations under securities lending	23,683	28,902
e. Deferred retirement benefits	0	0
f. Due to Employee Insurance Program	852	1,491
g. Benefit payable	250	459
h. Other liabilities	31,869	23,822
i. Total liabilities	$ 174,699	$ 225,972
9. Total market value of assets available for benefits (Item 7. - Item 8.i.)	$ 3,269,990	$ 3,317,533
10. Asset allocation (investments)		
a. Net invested cash	7.6%	9.3%
b. Domestic fixed income	15.3%	14.5%
c. Global fixed income	6.0%	12.2%
d. Domestic equities	7.3%	7.9%
e. Global equities	6.8%	4.7%
f. Alternative investments	57.0%	51.4%
g. Total investments	100.0%	100.0%

Reconciliation of System Net Assets
(Dollar amounts expressed in thousands)

	Year Ending	
	July 1, 2012	July 1, 2011
	(1)	(2)
1. Value of assets at beginning of year	$ 3,317,533	$ 2,851,474
2. Revenue for the year		
a. Contributions		
i. Member contributions	$ 84,470	$ 79,334
ii. Employer contributions	134,333	129,351
iii. Total	$ 218,803	$ 208,685
b. Income		
i. Interest, dividends, and other income	$ 31,359	$ 30,881
ii. Investment expenses	(7,044)	(8,945)
iii. Net	$ 24,315	$ 21,936
c. Net realized and unrealized gains (losses)	(7,117)	497,595
d. Total revenue	$ 236,001	$ 728,216
3. Expenditures for the year		
a. Disbursements		
i. Refunds	$ 15,162	$ 14,902
ii. Regular annuity benefits	263,997	242,872
iii. Other benefit payments	3,436	3,555
iv. Transfers to other Systems	(1,923)	(1,815)
v. Total	$ 280,672	$ 259,514
b. Administrative expenses and depreciation	2,872	2,643
c. Total expenditures	$ 283,544	$ 262,157
4. Increase in net assets (Item 2.d.- Item 3.c.)	$ (47,543)	$ 466,059
5. Value of assets at end of year (Item 1. + Item 4.)	$ 3,269,990	$ 3,317,533
6. Net External Cash Flow		
a. Dollar amount	$ (61,869)	$ (50,829)
b. Percentage of market value	-1.9%	-1.6%

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	$	3,728,241
2.	Market value of assets at the prior valuation date	$	3,317,533
3.	Net external cash flow during the year		
	a. Contributions	$	218,803
	b. Disbursements		(280,672)
	c. Subtotal	$	(61,869)
4.	Expected net investment income at 7.50% earned on		
	a. Actuarial value of assets at the prior valuation date	$	279,618
	b. Contributions		8,205
	c. Disbursements		(10,525)
	d. Subtotal	$	277,298
5.	Expected actuarial value of assets, end of year (Item 1. + Item 3.c. + Item 4.d.)	$	3,943,670
6.	Market value of assets as of the current valuation date	$	3,269,990
7.	Difference between expected actuarial assets and market value of assets (Item 6. - Item 5.)	$	(673,680)
8.	Excess/(shortfall) recognized (20% of Item 7.)	$	(134,736)
9.	Actuarial value of plan assets, end of year (Item 5. + Item 8.)	$	3,808,934
10.	Asset gain (loss) for year (Item 9. - Item 5.)	$	(134,736)
11.	Asset gain (loss) as % of the actuarial value of assets		(3.54%)
12.	Ratio of AVA to MVA		116.5%

Estimation of Yields
(Dollar amounts expressed in thousands)

		Year Ending	
		July 1, 2012	July 1, 2011
		(1)	(2)
1.	Market value yield		
	a. Beginning of year market assets	$ 3,317,533	$ 2,851,474
	b. Contributions to fund during the year	218,803	208,685
	c. Disbursements	(280,672)	(259,514)
	d. Investment income (net of investment and administrative expenses)	14,326	516,888
	e. End of year market assets	$ 3,269,990	$ 3,317,533
	f. Estimated dollar weighted market value yield	0.4%	18.3%
2.	Actuarial value yield		
	a. Beginning of year actuarial assets	$ 3,728,241	$ 3,612,700
	b. Contributions to fund during the year	218,803	208,685
	c. Disbursements	(280,672)	(259,514)
	d. Investment income (net of investment and administrative expenses)	142,562	166,370
	e. End of year actuarial assets	$ 3,808,934	$ 3,728,241
	f. Estimated actuarial value yield	3.9%	4.6%

Schedule of Funding Progress
(Dollar amounts expressed in thousands)

July 1,	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL) (3) - (2)	Funded Ratio (2)/(3)	Annual Covered Payroll[1]	UAAL as % of Payroll (4)/(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2001	$ 2,197,982	$ 2,324,257	$ 126,275	94.6%	$ 757,335	16.7%
2002	2,351,100	2,527,876	176,776	93.0%	757,393	23.3%
2003	2,511,369	2,744,849	233,480	91.5%	800,394	29.2%
2004	2,616,835	2,984,584	367,749	87.7%	822,448	44.7%
2005	2,774,606	3,173,930	399,324	87.4%	850,610	46.9%
2006	2,935,841	3,466,281	530,440	84.7%	931,815	56.9%
2007	3,160,240	3,730,544	570,304	84.7%	992,849	57.4%
2008	3,363,136	4,318,955	955,819	77.9%	1,060,747	90.1%
2009	3,482,220	4,564,111	1,081,891	76.3%	1,084,154	99.8%
2010	3,612,700	4,850,457	1,237,757	74.5%	1,076,467	115.0%
2011	3,728,241	5,122,501	1,394,260	72.8%	1,087,587	128.2%
2012	3,808,934	5,357,492	1,548,558	71.1%	1,019,241	151.9%

[1] Covered payroll does not include payroll attributable to 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:	30-year open period [1]
Asset valuation method:	5-year smoothed market
Actuarial assumptions:	
Investment rate of return[2]	7.50%
Projected salary increases[2]	4.00% to 10.00% (varies by service)
Inflation	2.75%
Cost-of-living adjustments	0.00%

[1] The employer and member contribution rates are determined in accordance with Section 9-11-225 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	$ 464,217	$ 977,769	$ 882,271	$ 2,197,982	100.0%	100.0%	85.7%
2002	492,178	1,136,998	898,700	2,351,100	100.0%	100.0%	80.3%
2003	516,313	1,265,173	963,363	2,511,369	100.0%	100.0%	75.8%
2004	548,699	1,415,627	1,020,258	2,616,835	100.0%	100.0%	64.0%
2005	585,701	1,530,199	1,058,030	2,774,606	100.0%	100.0%	62.0%
2006	622,008	1,668,449	1,175,824	2,935,841	100.0%	100.0%	54.9%
2007	658,023	1,818,914	1,253,607	3,160,240	100.0%	100.0%	54.5%
2008	697,423	2,183,645	1,437,887	3,363,136	100.0%	100.0%	33.5%
2009	726,214	2,348,685	1,489,212	3,482,220	100.0%	100.0%	27.4%
2010	758,695	2,577,772	1,513,990	3,612,700	100.0%	100.0%	18.2%
2011	786,724	2,784,144	1,551,633	3,728,241	100.0%	100.0%	10.1%
2012	773,710	3,118,016	1,465,766	3,808,934	100.0%	97.3%	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	19,676	20,079
	b. Females	6,503	6,571
	c. Total members	26,179	26,650
	d. Total annualized prior year pay	$ 971,100,758	$ 1,035,908,201
	e. Average pay	$ 37,095	$ 38,871
	f. Average age	39.6	39.8
	g. Average service	9.5	9.6
	h. Member contributions with interest	$ 690,680,439	$ 706,506,136
	i. Average contributions with interest	$ 26,383	$ 26,511
2.	Vested inactive members		
	a. Number	1,931	1,932
	b. Total annual deferred benefits	$ 14,320,349	$ 13,904,792
	c. Average annual deferred benefit	$ 7,416	$ 7,197
3.	Nonvested inactive members		
	a. Number	9,909	10,048
	b. Member contributions with interest	$ 22,597,197	$ 21,885,917
	c. Average refund due	$ 2,280	$ 2,178
4.	Service retirees		
	a. Number	11,328	10,206
	b. Total annual benefits	$ 227,747,206	$ 201,651,947
	c. Average annual benefit	$ 20,105	$ 19,758
	d. Average age at the valuation date	63.8	64.1
5.	Disabled retirees		
	a. Number	2,151	2,006
	b. Total annual benefits	$ 42,234,375	$ 38,839,921
	c. Average annual benefit	$ 19,635	$ 19,362
	d. Average age at the valuation date	53.6	53.4
6.	Beneficiaries		
	a. Number	1,174	1,146
	b. Total annual benefits	$ 13,947,504	$ 13,494,593
	c. Average annual benefit	$ 11,880	$ 11,775
	d. Average age at the valuation date	67.9	67.9

Summary of Contributing Membership Data
(Dollar amounts expressed in thousands)

		July 1, 2012 (1)		July 1, 2011 (2)
1. Active Members				
a. Number of State Employees		9,486		9,767
Total Annual Compensation	$	323,072	$	350,386
b. Number of Public School Employees		4		5
Total Annual Compensation	$	193	$	313
c. Number of Other Agency Employees		16,689		16,878
Total Annual Compensation	$	647,642	$	685,210
Total Number of Active Members		26,179		26,650
Total Annual Compensation	$	971,101	$	1,035,909
2. Rehired Retired Participants				
a. Number of State Employees		588		561
Total Annual Compensation	$	17,684	$	19,729
b. Number of Public School Employees		126		172
Total Annual Compensation	$	2,393	$	4,616
c. Number of Other Agency Employees		1,881		1,464
Total Annual Compensation	$	73,264	$	59,546
Number of Rehired Retired Members		2,595		2,197
Total Annual Compensation	$	93,341	$	83,891

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,	Number of Employers	Number	Percent Increase /(Decrease)	Amount in Thousands	Percent Increase /(Decrease)	Amount	Percent Increase /(Decrease)	Average Age	Average Service
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2001	296	24,821	N/A	$ 757,335	N/A	$ 30,512	5.50%	N/A	N/A
2002	302	23,963	-3.5%	757,393	0.0%	31,607	3.59%	N/A	N/A
2003	314	23,871	-0.4%	800,394	5.7%	33,530	6.08%	N/A	N/A
2004	314	23,734	-0.6%	822,448	2.8%	34,653	3.35%	N/A	N/A
2005	314	23,795	0.3%	850,610	3.4%	35,747	3.16%	N/A	N/A
2006	314	24,813	4.3%	931,815	9.5%	37,554	5.05%	N/A	N/A
2007	313	25,645	3.4%	992,849	6.6%	38,715	3.09%	N/A	N/A
2008	313	26,427	3.0%	1,060,747	6.8%	40,139	3.68%	N/A	N/A
2009	318	26,598	0.6%	1,084,154	2.2%	40,761	1.55%	39.6	8.4
2010	322	26,568	-0.1%	1,076,467	-0.7%	40,517	-0.60%	39.8	8.7
2011	356	26,650	0.3%	1,087,587	1.0%	40,810	0.72%	39.8	9.6
2012	325	26,179	-1.8%	1,019,241	-6.3%	38,934	-4.60%	39.6	9.5

[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	16	0	0	0	0	0	0	0	0	0	0	0	16
	$7,812	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7,812
20-24	634	421	209	96	64	36	0	0	0	0	0	0	1,460
	$13,096	$28,911	$31,102	$30,652	$32,592	$32,547	$0	$0	$0	$0	$0	$0	$22,723
25-29	631	588	561	531	547	1,058	23	0	0	0	0	0	3,939
	$14,602	$30,132	$33,406	$34,095	$34,920	$36,203	$37,917	$0	$0	$0	$0	$0	$30,986
30-34	344	317	290	315	408	1,792	579	14	0	0	0	0	4,059
	$14,220	$31,398	$33,338	$34,295	$35,520	$37,685	$41,488	$43,254	$0	$0	$0	$0	$34,976
35-39	218	226	195	193	220	947	1,412	530	16	0	0	0	3,957
	$14,533	$31,558	$32,568	$34,297	$35,097	$37,223	$42,575	$45,285	$46,622	$0	$0	$0	$38,187
40-44	197	175	170	178	192	794	900	1,243	509	14	0	0	4,372
	$16,068	$30,709	$32,804	$33,988	$34,344	$37,315	$41,404	$46,945	$50,783	$51,483	$0	$0	$40,845
45-49	131	127	132	139	138	525	502	614	799	222	7	0	3,336
	$14,923	$31,615	$34,868	$33,404	$34,368	$35,899	$40,027	$45,257	$50,363	$56,099	$53,301	$0	$41,893
50-54	101	88	95	100	104	404	414	416	419	259	58	3	2,461
	$15,203	$32,517	$32,615	$36,022	$33,255	$36,084	$40,480	$42,115	$46,431	$53,500	$64,396	$35,282	$40,863
55-59	76	48	48	48	76	267	263	266	214	134	59	22	1,521
	$15,690	$31,738	$33,559	$34,233	$33,636	$36,490	$38,296	$42,638	$45,613	$48,788	$59,013	$57,109	$39,921
60-64	26	37	32	44	43	164	106	135	114	49	14	26	790
	$13,897	$34,162	$35,972	$34,163	$35,310	$38,124	$40,596	$43,787	$44,726	$45,263	$51,030	$59,976	$40,323
65 & Over	7	9	10	8	21	57	45	38	32	21	12	8	268
	$7,977	$40,326	$33,816	$46,070	$39,329	$33,508	$37,004	$45,196	$47,431	$51,846	$67,991	$67,651	$41,820
Total	2,381	2,036	1,742	1,652	1,813	6,044	4,244	3,256	2,103	699	150	59	26,179
	$14,266	$30,636	$33,087	$34,067	$34,802	$36,932	$41,274	$45,220	$48,819	$52,755	$60,801	$58,692	$37,095

Schedule of Annuitants by Type of Benefit

Type of Benefit/ Form of Payment	Number		Annual Benefits Amount		Average Monthly Benefit
(1)	(2)		(3)		(4)
Service :					
Maximum & QDRO	6,781	$	133,347,381	$	1,639
100% J&S	2,011		37,376,358		1,549
50% J&S	1,448		36,012,750		2,073
Level Income	1,088		21,010,717		1,609
Subtotal:	11,328	$	227,747,206		1,675
Disability:					
Maximum	1,733	$	35,270,069	$	1,696
100% J&S	226		3,074,363		1,134
50% J&S	192		3,889,943		1,688
Subtotal:	2,151	$	42,234,375		1,636
Beneficiaries:	1,174	$	13,947,504	$	990
Total:	14,653	$	283,929,085	$	1,615

Distribution of Annuitants by Monthly Benefit

Monthly Benefit Amount (1)	Number of Annuitants (2)	Female (3)	Male (4)	Average Service (5)
Under $200	744	330	414	2.52
$ 200 - 399	1,072	436	636	7.37
400 - 599	1,142	469	673	9.52
600 - 799	1,101	463	638	11.99
800 - 999	1,090	405	685	13.82
1,000 - 1,199	944	315	629	15.62
1,200 - 1,399	907	259	648	17.80
1,400 - 1,599	944	272	672	19.96
1,600 - 1,799	954	204	750	21.26
1,800 - 1,999	903	165	738	22.31
2,000 - 2,199	869	154	715	23.26
2,200 - 2,399	766	121	645	23.80
2,400 - 2,599	676	82	594	24.82
2,600 - 2,799	564	65	499	25.13
2,800 - 2,999	439	48	391	26.60
3,000 - 3,199	328	43	285	26.97
3,200 - 3,399	260	26	234	27.44
3,400 - 3,599	201	17	184	28.24
3,600 - 3,799	161	12	149	28.75
3,800 - 3,999	123	13	110	29.12
4,000 & Over	465	37	428	32.10
Total	14,653	3,936	10,717	18.08

Schedule of Retirants Added to And Removed from Rolls

(Dollar amounts except average allowance expressed in thousands)

Year Ending June 30,	Added to Rolls Number	Added to Rolls Annual Benefits	Removed from Rolls Number	Removed from Rolls Annual Benefits	Rolls End of the Year Number	Rolls End of the Year Annual Benefits	% Increase in Annual Benefit	Average Annual Benefit
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2001	989	$ 17,235	341	$ 3,986	6,970	$ 102,395	14.9%	$ 14,691
2002	956	17,378	220	2,639	7,706	117,134	14.4%	15,200
2003	947	18,614	226	2,733	8,427	133,015	13.6%	15,784
2004	894	16,256	265	2,923	9,056	146,348	10.0%	16,114
2005	778	12,576	173	2,147	9,661	160,756	9.8%	16,640
2006	678	16,880	205	2,691	10,134	174,945	8.8%	17,263
2007	772	16,474	205	2,745	10,701	188,674	7.8%	17,631
2008	779	17,458	194	2,691	11,286	203,441	7.8%	18,026
2009	931	17,937	267	3,879	11,950	217,499	6.9%	18,201
2010	943	21,877	327	5,000	12,566	234,376	7.8%	18,652
2011	1,042	22,580	250	2,970	13,358	253,986	8.4%	19,014
2012	1,566	34,086	271	4,143	14,653	283,929	11.8%	19,377

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 Police Officers 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 11 years of service to include anticipated merit and promotional increases. The assumed annual rate of increase is 4.00% for all members with 12 or more years of service.

The 4.00% rate of increase is composed of a 2.75% inflation component and a 1.25% real rate of wage increase (productivity) component.

Active Male & Female Salary Increase Rate		
	PORS	
Years of Service	Annual Promotional/Longevity Rates of Increase	Total Annual Rate of Increase Including 4.00% Wage Inflation
0	6.00%	10.00%
1	5.00%	9.00%
2	2.00%	6.00%
3	1.00%	5.00%
4	0.75%	4.75%
5	0.50%	4.50%
6	0.25%	4.25%
7	0.25%	4.25%
8	0.25%	4.25%
9	0.25%	4.25%
10	0.25%	4.25%
11	0.25%	4.25%
12	0.00%	4.00%
13	0.00%	4.00%
14	0.00%	4.00%
15	0.00%	4.00%
16	0.00%	4.00%
17	0.00%	4.00%
18	0.00%	4.00%
19	0.00%	4.00%
20+	0.00%	4.00%

Active Member Decrement Rates

a. Assumed rates of Service Retirement are shown in the following tables. The first table is for members who attain age 55 before attaining 25 years of service (27 years of service for Class Three. The second table is based on service and is for members who attain 25 years of service before age 55.

Annual Age Based Retirement Rates		
Age	PORS	
	Male	Female
55	20%	20%
56	14%	14%
57*	50%	50%
58	12%	12%
59	12%	12%
60	12%	12%
61	12%	12%
62	35%	35%
63	25%	25%
64	25%	25%
65	30%	30%
66	30%	30%
67	30%	30%
68	30%	30%
69	30%	30%
70	100%	100%
71	100%	100%
72	100%	100%
73	100%	100%
74	100%	100%
75	100%	100%

* Age first eligible to concurrently commence benefits and continue employment.

Annual Service Based Retirement Rates*			
Years of Service		PORS	
Class Two	Class Three	Male	Female
25	27	18%	18%
26	28	13%	13%
27	29	11%	11%
28	30	11%	11%
29	31	11%	11%
30	32	11%	11%
31	33	11%	11%
32	34	11%	11%
33	35	11%	11%
34	36	11%	11%
35	37	11%	11%
36	38	11%	11%
37	39	11%	11%
38	40	11%	11%
39	41	11%	11%
40	42	100%	100%

* Retirement rate is 50% at age 57, 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. 25% of disabilities are assumed to be duty-related.

Disability Rates		
Age	PORS	
	Males	Females
25	0.1101%	0.1101%
30	0.1468%	0.1468%
35	0.2753%	0.2753%
40	0.3670%	0.3670%
45	0.5506%	0.5506%
50	0.6882%	0.6882%
55	0.0000%	0.0000%
60	0.0000%	0.0000%
64	0.0000%	0.0000%

*Rates reduced by 75% for service under 5 years

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	PORS	
	Males	Females
25	0.0338%	0.0186%
30	0.0653%	0.0264%
35	0.0978%	0.0467%
40	0.1234%	0.0790%
45	0.1614%	0.1248%
50	0.2171%	0.1767%
55	0.3776%	0.2516%
60	0.7443%	0.4454%
64	1.2430%	0.8222%
Multiplier	90%	90%

d. Rates of Withdrawal

Rate of withdrawal for active members prior to eligibility for retirement are based upon actual experience from 2002 through 2010. Rates are developed for each employee group and differ by gender and service. Sample rates are shown in the tables below.

Annual Withdrawal Rate		
Years of Service	**PORS**	
	Male	**Female**
0	0.2500	0.2500
1	0.1800	0.1800
2	0.1400	0.1400
3	0.1200	0.1200
4	0.1070	0.1070
5	0.0954	0.0954
6	0.0850	0.0850
7	0.0758	0.0758
8	0.0675	0.0675
9	0.0602	0.0602
10	0.0537	0.0537
11	0.0478	0.0478
12	0.0426	0.0426
13	0.0380	0.0380
14	0.0339	0.0339
15	0.0302	0.0302
16	0.0269	0.0269
17	0.0240	0.0240
18	0.0214	0.0214
19	0.0191	0.0191
20	0.0170	0.0170
21	0.0151	0.0151
22	0.0135	0.0135
23	0.0120	0.0120

e. Post Retirement Mortality

Healthy retirees and beneficiaries – This valuation assumes fully generational mortality. The base mortality table is 115% of the RP-2000 Mortality Table with Blue Collar Adjustment. Future mortality improvements are assumed each year using Scale AA. The following are sample rates:

Nondisabled Annuitant Mortality Rates Before Projection (Multiplier Applied)		
Age	PORS	
	Males	Females
50	0.2774%	0.2257%
55	0.4825%	0.3214%
60	0.9511%	0.5691%
65	1.7870%	1.1958%
70	3.0772%	2.1429%
75	4.9601%	3.5521%
80	8.1129%	5.6296%
85	13.2339%	9.5565%
90	20.9021%	15.7189%
Multiplier	115%	115%

Life Expectancy for an Age 65 Retiree in Years				
	Year of Retirement			
Member	2015	2020	2025	2030
Male	17.8	18.2	18.6	19.0
Female	19.7	19.9	20.1	20.4

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	PORS	
	Males	Females
50	1.7385%	0.6921%
55	2.1265%	0.9926%
60	2.5225%	1.3103%
65	3.0104%	1.6816%
70	3.7550%	2.2581%
75	4.9240%	3.1338%
80	6.5623%	4.3387%
85	8.4962%	6.0122%
90	11.0045%	8.4029%
Multiplier	60%	60%

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 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 return to work retirees. These contributions are assumed to grow at the same payroll growth rate as for active 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 3.75% at their projected date of termination or 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 rehired retiree participants) is assumed to increase at an annual rate of 3.50%.

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 active employees and return to work employees by dividing the actual member contributions received during the prior fiscal year by the applicable member contribution rate for that fiscal 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 four 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. Vested members are assumed to take a deferred retirement benefit.
8. There will be no recoveries once disabled.
9. Decrement timing: Decrements of all types are assumed to occur mid-year.
10. 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.
11. Decrement relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
12. 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.
13. Benefit Service: All members are assumed to accrue 1 year of eligibility service each year.

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 POLICE OFFICERS RETIREMENT SYSTEM (PORS)

Effective Date: July 1, 1962.

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 police officers and firefighters employed by the state, and any participating political subdivision, agency, or department of the state. With the exception for magistrates and probate judges, eligible public safety employees must earn at least $2,000 per year and devote at least 1,600 hours per year, unless exempted by statute.

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 5.00% 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 active. Members do not earn interest on their employee contribution account balance while they are inactive.

Average Final Compensation (AFC): The monthly average of the member's highest twelve (12) consecutive quarters of earnable compensation (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, overtime, sick pay, and deferrals. The calculation of a member’s AFC 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:

a. Eligibility: A Class Two member may retire with an unreduced benefit at age 55 or after 25 years of creditable service, if earlier. The member must also have a minimum of 5 years of "earned" service to qualify for retirement. Class Three members may retire with an unreduced benefit at age 55 or after 27 years of creditable service, if earlier. Class Three members must also have a minimum of 8 years of "earned" service to qualify for retirement.

b. Monthly Benefit: 2.14% times Average Final Compensation (AFC) times years of creditable service. Class Two members will receive service credit for up to 90 days of unused sick leave where twenty days of sick leave constitutes one month of service credit.

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

Disability Retirement:

a. Eligibility: Member must be have five or more years of earned service (8 years for Class Three members), unless the disability is due to performing his or her job duties. Member who apply for a disability retirement benefit after December 31, 2013 must provide proof to the system that they are entitled to Social Security disability benefits after their third year of retirement in order to continue receiving their disability retirement allowance.

b. Monthly Benefit:

   The monthly benefit is equal to the member's service retirement benefit that would have been payable based on the member's AFC determined as of the date of his disability and a projected credited service amount that assumes the member continued employment to age 55, not to exceed their current service or 25 years. However, a member must receive a disability retirement allowance equal to at least 15% of his AFC.

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 years of earned service. Class Three members are vested after eight 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. Members do not earn interest on their employee contribution account balance while they are inactive.

Deferred Termination Benefit:

a. Eligibility: Member must be vested (5 years of earned service) 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) and survivor allowances under Options B and C.

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). In accordance with administrative policy, if the member met service eligibility requirements at their time of death, the beneficiary is eligible for a monthly survivor annuity benefit.

Death while an Active Member:

Members who die while actively employed will receive the regular death benefit described below. If the member was an employee of an employer participating in the Accidental Death Benefit Program and/or the Preretirement Death Benefit Program, then the beneficiary will receive additional death benefits.

Regular Death Benefit:

a. Refund: In the event of a death of an active member (duty or non-duty related), a refund of the member's accumulated contributions (with interest), subject to a minimum refund of $1,000, is paid to the beneficiary of a deceased member.

b. Beneficiary Annuity: If the deceased member (i) has 5 or more years of earned service and (b) attained age 55 or accumulated 15 or more years of creditable service, the beneficiary 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 55 is assumed to be 55 years of age.

Accidental Death Benefit Program:

The statutory beneficiary (i.e. surviving spouse, child, or parent of the member) of an active employee of an employer participating in the Accidental Death Benefit Program who dies as a result of a duty related event is entitled to the following beneficiary annuity.

a. Beneficiary Annuity: In the event a member dies as a result of a duty related event, a monthly benefit is provided for the duration of the beneficiary's lifetime equal to 50% of the member's compensation at the time of death.

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 beneficiary 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 a 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 full 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 determining eligibility for incidental death benefits, active employees include those members who are actively reemployed and contributing as a working retiree with a participating employer.

b. Post Employment: The beneficiary (or estate) of a retiree, both current and future retiree will receive a one-time payment upon the retiree's death if the employer was participating in the Preretirement Death Benefit Program at the time of the retired member'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 25	$4,000
25 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 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.

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.

Gabriel Roeder Smith & Company
Consultants & Actuaries

RETIREMENT SYSTEM FOR MEMBERS OF THE GENERAL ASSEMBLY OF THE STATE OF SOUTH CAROLINA (GARS)

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 Retirement System for Members of the General Assembly of the State of South Carolina (GARS), determines the calculated employer contribution requirement, and analyzes changes in this amount. In addition, the report provides information required by the Retirement System in connection with Governmental Accounting Standards Board Statement No. 25 (GASB 25), and 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 GARS. This report was prepared at the request of the State Budget and Control Board (Board) and is intended for use by the South Carolina Retirement System (SCRS) staff and those designated or approved by the Board.

Under SCRS statutes, the Board must certify the employer contribution annually. This amount is determined actuarially, based on the Board's funding policy. The contribution is determined by a given actuarial valuation and becomes effective twenty-four months after the valuation date. In other words, the contribution determined by this July 1, 2012 actuarial valuation will be used by the Board when certifying the employer contribution amount for the year beginning July 1, 2014. If new legislation is enacted between the valuation date and the date the contribution becomes effective, the Board may adjust the calculated amount before certifying them, in order to reflect this new legislation. Such adjustments are based on information supplied by the actuary.

FINANCING OBJECTIVES AND FUNDING POLICY

The principle objectives in the funding policy that is maintained by the Board include:

- Establish a contribution amount that remains relatively level over time.
- To set an amount so that the measures of the System's funding progress which include the unfunded actuarial accrued liability, funded ratio, and funding period will be maintained or improved.

- To set a contribution amount that will result in the unfunded actuarial accrued liability (UAAL) to be amortized over a period from the current valuation date that does not exceed 30 years.

For GARS, the Board's funding policy is to determine an employer contribution amount equal to the sum of the employer normal cost (which pays the current year's cost) and an amortization amount which will result in the UAAL to be funded by June 30, 2027.

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 retirement system decreased from 55.6% to 52.8%. 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 market value of assets had been used in the calculation instead of actuarial (smoothed) value of assets, the funded ratio for the System would have been 42.3%, compared to 46.5% in the prior year. The decrease in the funded ratio on a market value basis is due to unfavorable investment experience during the last plan year. In particular, the investment return for the year was 0.4% on a market value basis.

ASSUMPTIONS AND METHODS

The actuarial assumptions used to perform this valuation remain unchanged from the prior valuation, including the use of a 7.50% investment return assumption. 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 are those which were in effect on July 1, 2012. Act 278 became law in June 2012 and increases the member contribution rate from 10% of pay to 11% of pay effective January 1, 2013. Additionally, the legislation closed GARS to new members. As a result, newly elected members of the General Assembly on or after the general election of 2012 shall elect to become members of the South Carolina Retirement System (SCRS), the State Optional Retirement Program (State ORP), or non-membership in a retirement program.

However, since Act 278 did not materially impact the valuation results and plan financial information as of July 1, 2011, or the contribution requirement for the fiscal year ending June 30, 2014, the 2011 actuarial valuation was not updated to reflect the pension reform legislation.

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 GARS 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.

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

Daniel J. White, FSA, MAAA, EA
Senior Consultant

TABLE OF CONTENTS

SECTION A

EXECUTIVE SUMMARY

Executive Summary

(Dollar amounts expressed in thousands)

Valuation Date:	July 1, 2012	July 1, 2011
Membership		
• Number of		
- Active positions[1]	170	170
- Special contributors	18	26
- Retirees and beneficiaries	358	353
- Inactive members	33	40
- Total	579	589
• Projected payroll	$3,854	$3,854
Contribution Requirement		
• Member contribution rate[2]	11.00%	10.00%
• Employer contribution requirement[3]	$4,275	$4,063
Assets		
• Market value	$31,431	$34,669
• Actuarial value	39,233	41,484
• Return on market value	0.4%	17.6%
• Return on actuarial value	2.7%	3.5%
• Ratio - actuarial value to market value	124.8%	119.7%
• External cash flow %	-10.2%	-11.1%
Actuarial Information		
• Normal cost %	21.68%	21.67%
• Actuarial accrued liability (AAL)	$74,332	$74,604
• Unfunded actuarial accrued liability (UAAL)	35,099	33,120
• Funded ratio	52.8%	55.6%
• Funding period from the valuation date	15 years	16 years
Reconciliation of UAAL		
• Beginning of Year UAAL	$33,120	$24,959
- Interest on UAAL	2,484	2,296
- Amortization payment with interest	(2,400)	(2,241)
- Assumption change	0	5,715
- Asset experience	1,950	1,704
- Liability experience	(55)	687
- Legislative changes	0	0
• End of Year UAAL	$35,099	$33,120

[1] Includes filled and unfilled positions.

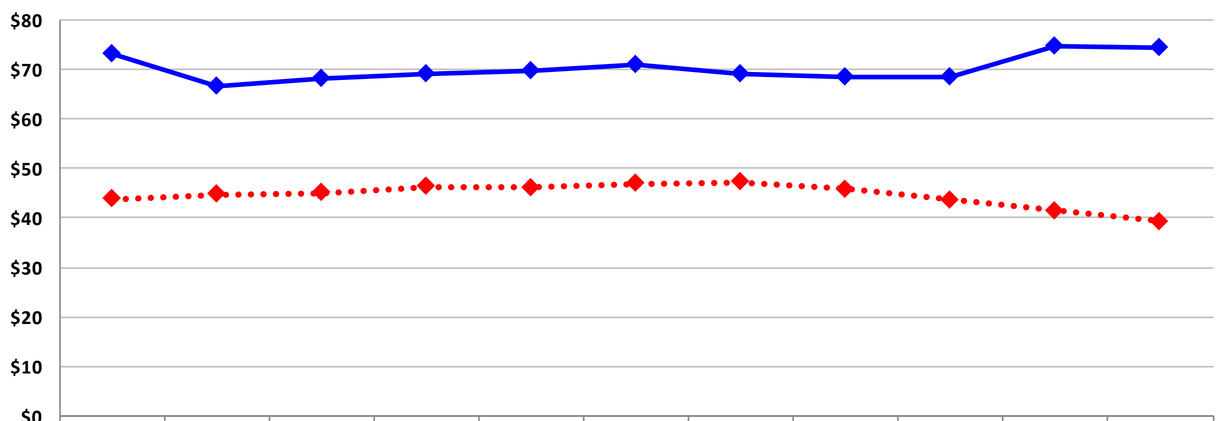
[2] The 11.00% member contribution rate is effective January 1, 2013.

[3] The contribution requirement determined by the July 1, 2012 actuarial valuation is subject to approval and adoption by the Public Employee Benefit Authority before becoming effective for the fiscal year beginning July 1, 2014.

EXECUTIVE SUMMARY (CONTINUED)

The unfunded actuarial accrued liability increased by $1.9 million since the prior year's valuation to $35.0 million. The single largest source of this increase is due to the continual recognition of deferred investment losses in the actuarial value of assets (i.e. $2.0 million was recognized in the July 1, 2012 valuation). Below is a chart with the historical actuarial value of assets and actuarial accrued liability for GARS.

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



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
AAL	$73.0	$66.6	$68.3	$69.2	$69.7	$71.0	$69.1	$68.5	$68.7	$74.6	$74.3
AVA	$43.8	$44.7	$45.1	$46.3	$46.1	$46.9	$47.2	$45.9	$43.7	$41.5	$39.2

There is still $7.8 million 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. Therefore, we expect the unfunded actuarial liability for the System to increase for several years and the funded ratio (on an actuarial value of asset basis) to decline before these measures improve.

The recommended employer contribution requirement increased from $4.1 million in FY 2014 to $4.3 million in FY 2015. The plan's investment experience was the contributing factor to this increase in the recommended contribution. Absent legislative changes or significantly favorable investment experience, we expect the recommended contribution to continue to increase over the next several years as those deferred investment losses becomes recognized in the actuarial value of assets.

SECTION B

DISCUSSION

DISCUSSION

The results of the July 1, 2012 actuarial valuation of the Retirement System for Members of the General Assembly are presented in this report. The purposes of the valuation report is 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 various summaries of the members participating in the plan.

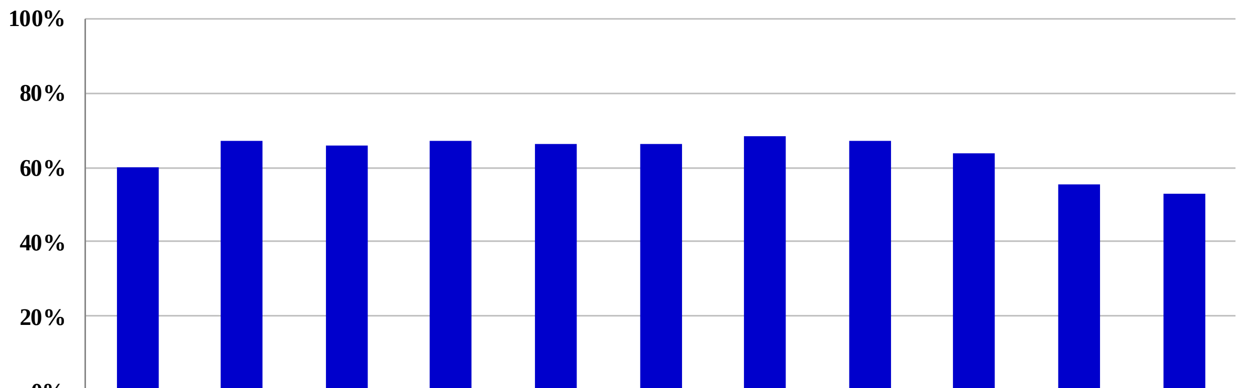
This section discusses the determination of the current funding requirements and the System's funded status, as well as changes in financial condition of the retirement system. The valuation results for the prior year are shown in this report for comparison purposes.

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 55.6% to 52.8% since the prior valuation. 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 Liabilities



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Funded Ratio	60.0%	67.1%	66.0%	67.0%	66.1%	66.1%	68.3%	67.0%	63.7%	55.6%	52.8%

The Board's funding policy for this plan is to fully amortize the unfunded actuarial accrued liability (UAAL) by June 30, 2027. Under this funding policy, there are 15 years remaining in the funding period from the valuation date.

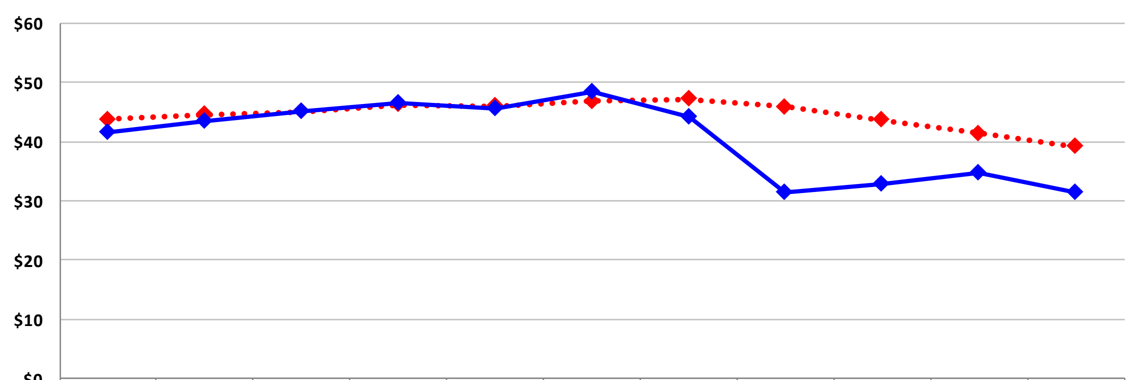
Asset Gains/ (Losses)

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 $41.5 million to $39.2 million 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 in 2012 was 0.4%; which is less than the 7.50% expected annual return. The return on an actuarial (smoothed) asset value was 2.7%. 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 Millions)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
AVA	43.8	44.7	45.1	46.3	46.1	46.9	47.2	45.9	43.7	41.5	39.2
MVA	41.5	43.5	45.3	46.7	45.7	48.5	44.2	31.5	32.8	34.7	31.4

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 Contribution Requirement

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 on average over many years. The demographic experience for the last year is briefly summarized in the chart below.

The unfunded actuarial accrued liability (UAAL) has increased from $33.1 million in 2011 to $35.0 million 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	$33,120
- Interest on UAAL	2,484
- Amortization payment with interest	(2,400)
- Assumption change	0
- Asset experience	1,950
- Liability experience	(55)
- Legislative changes	0
- Total change	1,979
• End of Year UAAL	$35,099

The following table provides a reconciliation of the change in the recommended contribution from 2011 to 2012 valuation. The plan's investment experience, on an actuarial asset basis, had the largest single impact on the change in the recommended contribution.

Change in Recommended Employer Contribution
(Dollars in thousands)

• Prior year valuation	$4,063
- Expected change	0
- Assumption change	0
- Asset experience	258
- Liability experience	(8)
- Legislative changes	(38)
- Total change	212
• Current year valuation	$4,275

This funding method and contribution policy is designed to result in relatively level contribution requirements from year to year. However, absent favorable investment experience, we expect that the contribution requirement will continue to increase over the next several years as existing deferred investment losses become fully recognized in the actuarial value of assets and calculation of the recommended contribution.

GASB No. 25 and No. 27 Disclosures

Accounting requirements for GARS 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, GARS treats the Board-established contribution requirement as the ARC.

Actuarial Assumptions and Methods

In determining costs and liabilities, actuaries use assumptions about the future, such as probabilities of retirement, termination, death and disability, and an annual investment return assumption. 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.

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

It is our opinion that the recommended assumptions are internally consistent and are 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 GARS. Act 278 became enacted law in June 2012 and increases the member contribution rate from 10% of pay to 11% of pay effective January 1, 2013. Additionally, this legislation closed GARS to new members. As a result, newly elected members of the General Assembly on or after the general election of 2012 shall become members of the South Carolina Retirement System (SCRS), State Optional Retirement Program (State ORP) or non-membership in a retirement program.

Summary of Retirement Provisions

- Earnable compensation is comprised of $10,400 annually plus 40 times the daily rate of remuneration (i.e. $22,400 in total earnable compensation annually). Certain line-item additional compensation for specified offices is also included. Monthly benefits are based on one-twelfth of this amount.
- The member contribution rate is 11% of earnable compensation.
- The retirement benefit amount is equal to the 4.82% of the member's earnable compensation times the member's credited service (years).
- Members are eligible for retirement after they have (i) attained age 60, or (ii) completed 30 years of creditable service. Members may commence their benefit before retiring from service upon the attainment of age 70 or after accruing 30 years of service.
- Members with eight (8) or more years of credited service that cease membership in the General Assembly may elect to continue earning future service in the system by contributing the required membership contributions (i.e. a special contributing member).

SECTION C

ACTUARIAL TABLES

ACTUARIAL TABLES

Summary of Cost Items

(Dollar amounts expressed in thousands)

		July 1, 2012 (1)	July 1, 2011 (2)
1.	Projected payroll of active members[1]	$ 3,854	$ 3,854
2.	Present value of future pay	$ 21,519	$ 23,402
3.	Normal cost		
	a. Total normal cost	$ 836	$ 835
	b. Less: member contribution	(424)	(385)
	c. Employer normal cost	$ 412	$ 450
4.	Actuarial accrued liability for active members		
	a. Present value of future benefits	$ 18,051	$ 18,212
	b. Less: present value of future normal costs	(4,219)	(4,529)
	c. Actuarial accrued liability	$ 13,832	$ 13,683
5.	Total actuarial accrued liability for:		
	a. Retirees and beneficiaries	$ 58,213	$ 58,291
	b. Inactive members	2,287	2,630
	c. Active members (Item 4c)	13,832	13,683
	d. Total	$ 74,332	$ 74,604
6.	Actuarial value of assets	$ 39,233	$ 41,484
7.	Unfunded actuarial accrued liability (UAAL) (Item 5d - Item 6)	$ 35,099	$ 33,120
8.	GASB No. 25 Annual Required Contribution		
	a. Employer normal cost	$ 412	$ 450
	b. Employer contribution to amortize the UAAL	3,863	3,613
	c. Total employer contribution	$ 4,275	$ 4,063

[1] The projected payroll is based on 170 filled positions.

Actuarial Present Value of Future Benefits

(Dollar amounts expressed in thousands)

		July 1, 2012 (1)	July 1, 2011 (2)
1.	Active members		
	a. Service retirment	$ 16,853	$ 16,973
	b. Disability retirement	620	636
	c. Survivors' benefits	578	603
	d. Total	$ 18,051	$ 18,212
2.	Retired members		
	a. Service retirement	$ 50,717	$ 50,225
	b. Disability retirement	0	94
	c. Beneficiaries	7,293	7,774
	d. Incidental death benefits	203	198
	e. Total	$ 58,213	$ 58,291
3.	Inactive members		
	a. Vested terminations	$ 2,096	$ 2,429
	b. Nonvested terminations	191	201
	c. Total	$ 2,287	$ 2,630
4.	Total actuarial present value of future benefits	$ 78,551	$ 79,133

Analysis of Normal Cost
(Dollar amounts expressed in thousands)

	July 1, 2012 (1)	July 1, 2011 (2)
1. Total normal cost rate		
a. Service retirement	19.32%	19.39%
c. Survivor benefits	1.04%	1.02%
d. Disability benefits	1.32%	1.26%
f. Total	21.68%	21.67%
2. Less: member contribution rate	11.00%	10.00%
3. Net employer normal cost rate	10.68%	11.67%
4. Projected valuation payroll[1]	$3,854	$3,854
5. Projected employer normal cost contribution	$412	$450

[1] The projected payroll is based on 170 filled positions.

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	$	58,213
	b. Present active and inactive members		20,337
	c. Total actuarial present value	$	78,551
2.	Present Value of Future Normal Contributions		
	a. Employee	$	2,367
	b. Employer		1,852
	c. Total future normal contributions	$	4,219
3.	Actuarial Liability	$	74,332
4.	Current Actuarial Value of Assets	$	39,233
5.	Unfunded Actuarial Liability	$	35,099
6.	Unfunded Actuarial Liability Liquidation Period from from the Valuation Date		15 years

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	$ 7,267	$ 7,100
ii. Employer annuity accumulation fund	31,966	34,384
iii. Total current assets	$ 39,233	$ 41,484
b. Present Value of Future Member Contributions[1]	$ 2,367	$ 2,340
c. Present Value of Future Employer Contributions		
i. Normal contributions	$ 1,852	$ 2,189
ii. Accrued liability contributions	35,098	33,120
iii. Total future employer contributions	$ 36,950	$ 35,309
d. Total Assets	$ 78,550	$ 79,133
2. Liabilities		
a. Employee Annuity Savings Fund		
i. Past member contributions	$ 7,267	$ 7,100
ii. Present value of future member contributions[1]	2,367	2,340
iii. Total contributions to employee annuity savings fund	$ 9,634	$ 9,440
b. Employer Annuity Accumulation Fund		
i. Benefits currently in payment	$ 58,213	$ 58,291
ii. Benefits to be provided to other members	10,703	11,402
iii. Total benefits payable from employer annuity accumulation fund	$ 68,916	$ 69,693
c. Total Liabilities	$ 78,550	$ 79,133

[1] Includes future special contributors

System Net Assets
Assets at Market or Fair Value
(Dollar amounts expressed in thousands)

Item (1)	July 1, 2012 (2)	July 1, 2011 (3)
1. Cash and cash equivalents (operating cash)	$ 3,970	$ 4,565
2. Receivables	924	1,117
3. Investments		
a. Short-term securities	$ 0	$ 16
b. Domestic fixed income	4,626	4,955
c. Global fixed income	1,806	4,163
d. Domestic equities	2,218	2,708
e. Global equities	2,068	1,611
f. Alternative investments	17,220	17,537
g. Total investments	$ 27,938	$ 30,990
4. Securities lending cash collateral invested	$ 219	$ 298
5. Prepaid administrative expenses	1	2
6. Capital assets, net of accumulated depreciation	8	8
7. Total assets	$ 33,060	$ 36,980
8. Liabilities		
a. Due to other systems	$ 0	$ 0
b. Accounts payable	1,080	1,738
c. Investment fees payable	12	24
d. Obligations under securities lending	219	298
e. Deferred retirement benefits	0	0
f. Due to employee insurance program	0	0
g. Benefit payable	2	0
h. Other liabilities	316	251
i. Total liabilities	$ 1,629	$ 2,311
9. Total market value of assets available for benefits (Item 7. - Item 8.i.)	$ 31,431	$ 34,669
10. Asset allocation (investments)		
a. Net Invested cash	11.1%	10.7%
b. Domestic fixed income	14.7%	14.3%
c. Global fixed income	5.7%	12.0%
d. Domestic equities	7.1%	7.8%
e. Global equities	6.6%	4.6%
f. Alternative investments	54.8%	50.6%
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	$ 34,669	$ 32,770
2. Revenue for the Year		
a. Contributions		
i. Member contributions	$ 724	$ 624
ii. Employer contributions	2,532	2,414
iii. Total	$ 3,256	$ 3,038
b. Income		
i. Interest, dividends, and other income	$ 313	$ 333
ii. Investment expenses	(71)	(98)
iii. Net	$ 242	$ 235
c. Net realized and unrealized gains (losses)	$ (70)	$ 5,447
d. Total revenue	$ 3,428	$ 8,720
3. Expenditures for the Year		
a. Disbursements		
i. Refunds	$ 31	$ 57
ii. Regular annuity benefits	6,570	6,528
iii. Other benefit payments	35	58
iv. Transfers to other Systems	0	146
v. Total	$ 6,636	$ 6,789
b. Administrative expenses and depreciation	30	32
c. Total expenditures	$ 6,666	$ 6,821
4. Increase in Net Assets (Item 2. - Item 3.)	$ (3,238)	$ 1,899
5. Value of Assets at End of Year (Item 1. + Item 4.)	$ 31,431	$ 34,669
6. Net External Cash Flow		
a. Dollar amount	$ (3,380)	$ (3,751)
b. Percentage of market value	-10.2%	-11.1%

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	$	41,484
2.	Market value of assets at the prior valuation date	$	34,669
3.	Net external cash flow during the year		
	a. Contributions	$	3,256
	b. Disbursements		(6,636)
	c. Subtotal	$	(3,380)
4.	Expected net investment income at 7.50% earned on		
	a. Actuarial value of assets at the prior valuation date	$	3,111
	b. Contributions		217
	c. Disbursements		(249)
	d. Subtotal	$	3,079
5.	Expected actuarial value of assets, end of year (Item 1. + Item 3.c. + Item 4.d.)	$	41,183
6.	Market value of assets as of the current valuation date	$	31,431
7.	Difference between expected actuarial assets and market value of assets (Item 6. - Item 5.)	$	(9,752)
8.	Excess/(shortfall) recognized (20% of Item 7.)	$	(1,950)
9.	Actuarial value of plan assets, end of year (Item 5. + Item 8.)	$	39,233
10.	Asset gain (loss) for year (Item 9. - Item 5.)	$	(1,950)
11.	Asset gain (loss) as % of actual actuarial assets		-5.0%
12.	Ratio of AVA to MVA		124.8%

Estimation of Yields
(Dollar amounts expressed in thousands)

		Year Ending July 1, 2012 (1)	Year Ending July 1, 2011 (2)
1.	Market Value Yield		
a.	Beginning of year market assets	$ 34,669	$ 32,770
b.	Contributions to fund during the year	3,256	3,038
c.	Disbursements	(6,636)	(6,789)
d.	Investment income (net of investment and administrative expenses)	142	5,650
e.	End of year market assets	$ 31,431	$ 34,669
f.	Estimated dollar weighted market value yield	0.4%	17.6%
2.	Actuarial Value Yield		
a.	Beginning of year actuarial assets	$ 41,484	$ 43,712
b.	Contributions to fund during the year	3,256	3,038
c.	Disbursements	(6,636)	(6,789)
d.	Investment income (net of investment and administrative expenses)	1,129	1,523
e.	End of year actuarial assets	$ 39,233	$ 41,484
f.	Estimated actuarial value yield	2.7%	3.5%

Schedule of Funding Progress
(Dollar amounts expressed in thousands)

July 1,	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL) (3) - (2)	Funded Ratio (2)/(3)	Annual Covered Payroll	UAAL as % of Payroll (4)/(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2001	$ 42,788	$ 68,291	$ 25,503	62.7%	$ 4,761	535.6%
2002	43,841	73,046	29,205	60.0%	4,515	646.9%
2003	44,682	66,619	21,937	67.1%	3,844	570.8%
2004	45,087	68,332	23,245	66.0%	3,839	605.5%
2005	46,316	69,161	22,845	67.0%	3,853	592.9%
2006	46,075	69,734	23,659	66.1%	3,854	613.9%
2007	46,925	71,014	24,089	66.1%	3,854	625.0%
2008	47,189	69,122	21,933	68.3%	3,854	569.1%
2009	45,891	68,491	22,600	67.0%	3,854	586.4%
2010	43,712	68,671	24,959	63.7%	3,854	647.6%
2011	41,484	74,604	33,120	55.6%	3,854	859.4%
2012	39,233	74,331	35,098	52.8%	3,854	910.7%

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 dollar
Amortization period for GASB 25 ARC	15-year closed period
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return[1]	7.50%
Projected salary increases	None.
Inflation	2.75%
Cost-of-living adjustments	0.00%

[1] 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	$ 9,329	$ 45,013	$ 13,949	$ 42,788	100.0%	74.3%	0.0%
2002	9,470	47,485	16,091	43,841	100.0%	72.4%	0.0%
2003	8,324	46,781	11,515	44,682	100.0%	77.7%	0.0%
2004	8,485	48,126	11,721	45,087	100.0%	76.1%	0.0%
2005	8,024	51,353	9,784	46,316	100.0%	74.6%	0.0%
2006	8,094	51,870	9,770	46,075	100.0%	73.2%	0.0%
2007	7,735	54,115	9,164	46,925	100.0%	72.4%	0.0%
2008	7,265	53,240	8,617	47,189	100.0%	75.0%	0.0%
2009	6,822	54,586	7,083	45,891	100.0%	71.6%	0.0%
2010	7,265	53,486	7,920	43,712	100.0%	68.1%	0.0%
2011	7,100	58,291	9,213	41,484	100.0%	59.0%	0.0%
2012	7,267	58,213	8,851	39,233	100.0%	54.9%	0.0%

SECTION D

MEMBERSHIP DATA

MEMBERSHIP TABLES

Summary of Membership Data

		July 1, 2012 (1)		July 1, 2011 (2)
1. Active Members				
a. Males		125		126
b. Females		15		16
c. Total members		140		142
d. Total annualized prior year pay	$	3,147,528	$	3,193,050
e. Average pay	$	22,482	$	22,486
f. Average age		53.3		52.7
g. Average service		10.8		9.8
h. Member contributions with interest	$	5,118,647	$	4,567,851
i. Average contributions with interest	$	36,562	$	32,168
2. Special Contributors				
a. Males		15		23
b. Females		3		3
c. Total members		18		26
d. Member contributions with interest	$	933,117	$	1,283,294
e. Average contributions with interest		51,840	$	49,357
3. Vested Inactive Members				
a. Number		15		18
b. Total annual deferred benefits	$	274,960	$	302,232
c. Average annual deferred benefit	$	18,331	$	16,791
4. Nonvested Inactive Members				
a. Number		18		22
b. Member contributions with interest	$	190,490	$	200,843
c. Average contributions with interest	$	10,583	$	9,129
5. Service Retirees				
a. Number		280		275
b. Total annual benefits	$	5,521,922	$	5,388,001
c. Average annual benefit	$	19,721	$	19,593
d. Average age at the valuation date		72.1		72.0
6. Disabled Retirees				
a. Number		0		1
b. Total annual benefits	$	0	$	15,432
c. Average annual benefit	$	0	$	15,432
d. Average age at the valuation date		N/A		74.1
7. Beneficiaries				
a. Number		78		77
b. Total annual benefits	$	1,140,649	$	1,138,899
c. Average annual benefit	$	14,624	$	14,791
d. Average age at the valuation date		77.1		76.0

Summary of Historical Active Membership

		Active Members		Covered Payroll		Average Annual Pay			
July 1,	Number of Employers	Number[1]	Percent Increase /(Decrease)	Amount in Thousands[1]	Percent Increase /(Decrease)	Amount	Percent Increase /(Decrease)	Average Age	Average Service
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2001	2	209	N/A	$ 4,761	N/A	22,781	-0.1%	N/A	N/A
2002	2	200	-4.3%	4,515	-5.2%	22,573	-0.9%	N/A	N/A
2003	2	170	-15.0%	3,844	-14.9%	22,612	0.2%	N/A	N/A
2004	2	170	0.0%	3,839	-0.1%	22,582	-0.1%	N/A	N/A
2005	2	170	0.0%	3,853	0.4%	22,668	0.4%	N/A	N/A
2006	2	170	0.0%	3,854	0.0%	22,671	0.0%	N/A	N/A
2007	2	170	0.0%	3,854	0.0%	22,671	0.0%	N/A	N/A
2008	2	170	0.0%	3,854	0.0%	22,671	0.0%	N/A	N/A
2009	2	170	0.0%	3,854	0.0%	22,671	0.0%	51.4	9.0
2010	2	170	0.0%	3,854	0.0%	22,671	0.0%	52.3	10.2
2011	2	170	0.0%	3,854	0.0%	22,671	0.0%	52.7	9.8
2012	2	170	0.0%	3,854	0.0%	22,671	0.0%	53.3	10.8

[1] Based on 170 filled positions.

Distribution of Active Members by Age and Service

Attained Age	Years of Credited Service												
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	Total
Under 20	-	-	-	-	-	-	-	-	-	-	-	-	-
20-24	-	1	1	-	-	-	-	-	-	-	-	-	2
25-29	-	-	1	-	1	1	-	-	-	-	-	-	3
30-34	-	-	1	-	-	-	1	-	-	-	-	-	2
35-39	-	-	-	-	3	2	-	-	1	-	-	-	6
40-44	-	-	3	-	3	7	3	1	-	-	-	-	17
45-49	-	-	2	-	4	6	2	4	3	-	-	-	21
50-54	-	1	5	-	1	5	8	1	2	1	-	-	24
55-59	-	-	2	-	3	4	4	4	2	2	-	-	21
60-64	-	-	-	1	2	1	5	4	2	2	1	1	19
65 & Over	-	1	4	-	-	3	9	2	4	2	-	-	25
Total	-	3	19	1	17	29	32	16	14	7	1	1	140

Schedule of Annuitants by Type of Benefit

Type of Benefit/ Form of Payment	Number	Annual Benefits Amount	Average Monthly Benefit
(1)	(2)	(3)	(4)
Service :			
Maximum & QDRO	135	$ 2,625,852	$ 1,621
100% J&S	52	1,111,422	1,781
100% Pop-up	45	869,620	1,610
50% J&S	27	545,617	1,684
50% Pop-up	21	369,411	1,466
Subtotal:	280	$ 5,521,922	1,643
Disability:			
Maximum	0	$ 0	$ 0
Beneficiaries:	78	$ 1,140,649	$ 1,219
Total:	358	$ 6,662,571	$ 1,551

Distribution of Annuitants by Monthly Benefit

Monthly Benefit Amount	Number of Annuitants	Female	Male	Average Service
(1)	(2)	(3)	(4)	(5)
Under $200	10	3	7	1.80
$ 200 - 399	16	8	8	9.00
400 - 599	16	7	9	6.94
600 - 799	22	8	14	13.86
800 - 999	40	15	25	13.93
1,000 - 1,199	28	12	16	15.61
1,200 - 1,399	24	6	18	19.71
1,400 - 1,599	32	11	21	19.88
1,600 - 1,799	43	6	37	20.91
1,800 - 1,999	38	6	32	22.55
2,000 - 2,199	25	9	16	28.72
2,200 - 2,399	14	3	11	30.14
2,400 - 2,599	14	2	12	30.57
2,600 - 2,799	13	2	11	33.08
2,800 - 2,999	5	0	5	32.40
3,000 - 3,199	6	1	5	33.17
3,200 - 3,399	4	3	1	45.00
3,400 - 3,599	1	0	1	41.00
3,600 - 3,799	1	0	1	30.00
3,800 - 3,999	2	0	2	29.50
4,000 & Over	4	1	3	40.00
Total	358	103	255	20.30

Schedule of Retirants Added to And Removed from Rolls

	Added to Rolls		Removed from Rolls		Rolls End of the Year		% Increase	Average
July 1,	Number	Annual Benefits($000)	Number	Annual Benefits($000)	Number	Annual Benefits($000)	in Annual Benefit	Annual Benefit
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2001	27	$ 609	11	$ 204	251	$ 4,381	10.2%	$ 17,454
2002	24	453	9	160	266	4,674	6.7%	17,571
2003	40	839	12	226	294	5,287	13.1%	17,983
2004	12	185	9	119	297	5,353	1.2%	18,024
2005	22	486	7	125	312	5,716	6.8%	18,321
2006	13	238	8	179	317	5,775	1.0%	18,218
2007	18	321	2	13	333	6,083	5.3%	18,267
2008	19	337	10	134	342	6,286	3.3%	18,380
2009	26	505	15	266	353	6,525	3.8%	18,484
2010	7	148	14	261	346	6,412	-1.7%	18,532
2011	12	238	5	108	353	6,542	2.0%	18,534
2012	16	251	11	130	358	6,663	1.8%	18,611

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 Retirement System for Members of the General Assembly of South Carolina.

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

No increases in salary are assumed.

Active Member Decrement Rates

a. Assumed rates of service retirement are shown in the following table. In addition to the rates in the table below, members with 30 years of service are assumed to immediately commence their retirement benefit. Special contributors are assumed to retire upon attaining age 60.

Age Based Retirement Rates	
Age	**Assumed Rate**
60 & Under	40.00%
61 - 64	7.00%
65 - 69	15.00%
70 & older	100.00%

b. An abbreviated table with the assumed rates of disability and mortality while employed is shown below. There is no active employment withdrawal assumption.

	Disability Rates		Pre-Retirement Mortality	
Age	**Males**	**Females**	**Males**	**Females**
25	0.0575%	0.0525%	0.0414%	0.0166%
30	0.1150%	0.0735%	0.0488%	0.0211%
35	0.1725%	0.1470%	0.0850%	0.0380%
40	0.2875%	0.1890%	0.1187%	0.0565%
45	0.4025%	0.2730%	0.1659%	0.0899%
50	0.5750%	0.4620%	0.2352%	0.1341%
55	0.9200%	0.7350%	0.3332%	0.2021%
60	1.1500%	1.1235%	0.5366%	0.3145%
Multiplier			110%	80%

Note: The multiplier has been applied to the decrement in the illustrative table.

Post Retirement Mortality

a. Healthy retirees and beneficiaries – The RP-2000 Mortality Table projected using the AA projection table with multipliers based on plan experience. The following are sample rates:

Healthy Annuitant Mortality Rates Before Projection		
Age	**Males**	**Females**
50	0.2138%	0.1508%
55	0.3624%	0.2445%
60	0.6747%	0.4550%
65	1.2737%	0.8735%
70	2.2206%	1.5068%
75	3.7834%	2.5295%
80	6.4368%	4.1291%
85	11.0757%	6.9701%
90	18.3408%	11.8514%
Multiplier	100%	90%

Note: The multiplier has been applied to the decrement in the illustrative table.

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				
	Year of Retirement			
Gender	**2015**	**2020**	**2025**	**2030**
Male	19.6	20.0	20.4	20.7
Female	22.3	22.5	22.7	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		
Age	**Males**	**Females**
50	2.4629%	1.2689%
55	3.0126%	1.8198%
60	3.5736%	2.4023%
65	4.2648%	3.0829%
70	5.3196%	4.1398%
75	6.9757%	5.7453%
80	9.2966%	7.9543%
85	12.0363%	11.0223%
90	15.5897%	15.4054%
Multiplier	85%	110%

Note: The multiplier has been applied to the decrement in the illustrative table.

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 dollar amount 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.

Future Cost-of-living Increases

No increases are assumed.

Payroll Growth Rate

None assumed.

Other Assumptions

1. Percent married: 100% of active members are assumed to be married.

2. Age difference: Males are assumed to be four years older than their spouses.

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

4. 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 60, whichever is more valuable at the valuation date.

5. It is assumed there will be no recoveries once disabled.

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

7. 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.

8. Benefit Service: All active and special contributing members are assumed to accrue one year of eligibility service each year.

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 GENERAL ASSEMBLY RETIREMENT SYSTEM (GARS)

Effective Date: January 1, 1966.

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.

Eligibility: All members of the General Assembly who acquired office prior to the 2012 general election are required to participate, unless exempted by Statute. Members with eight (8) or more years of credited service that cease membership in the General Assembly may elect to continue earning future service in the system by contributing the required membership contributions (i.e. special contributing member).

Employee Contributions: Effective January 1, 2013, the active member contribution rate increases from 10% to 11% of compensation. Member contributions are credited with interest at the rate of 4.0% per annum. Retired members who are serving in office do not make employee contributions to the system.

Earnable Compensation: $10,400 annually plus 40 times the daily rate of remuneration (i.e. $22,400 in total earnable compensation annually). Certain line-item additional compensation for specified offices is also included.

Service Retirement:

a. Eligibility: A member may retire upon the attainment of age 60 or completing 30 years of credited service, if earlier. Members may commence their benefit before retiring from service upon the attainment of age 70 or after accruing 30 years of service.

b. Monthly Benefit: 4.82% of earnable compensation times credited service.

c. Payment Form: Standard annuity payment

Disability Retirement:

a. Eligibility: Members must have five or more years of credited service, unless the disability is due to performing his or her duties.

b. Monthly Benefit: The member will receive a service retirement benefit if they become disabled after attaining the age of 60 or completed at least 35 years of credited service. Otherwise the member will receive a benefit that is equal to the larger of 1. or 2. below.

1. 50% of the retirement benefit that would have been payable had he continued service to the earlier of age 60 or 35 years of credited service and his earnable compensation had remained unchanged.
2. 100% of the retirement benefit based on the member's service and earnable compensation at the time of his disability.

c. Payment Form: Standard annuity payment

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. Members are vested after eight (8) years of credited 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.

Deferred Termination Benefit:

a. Eligibility: Member must be vested (8 years of credited service) and must elect to leave his/her contributions on deposit.

b. Monthly Benefit: Same as the service retirement benefit, based on service and earnable compensation at termination, and commencing once the member is eligible. Note, special contributors continue to accrue benefits under the system until the earlier of 22 years of creditable service or age 60.

c. Payment Form: standard annuity payment

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).

Death while an Active 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 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.

Optional Forms of Benefit: The System permit members to elect certain optional forms of benefit at retirement. In each case the benefit amount is adjusted to be actuarially equivalent to the "Maximum Option" form. The optional forms of payment include:

a. Maximum Option: A life annuity. Upon the member's death, any remaining member contributions will be paid to the member's designated beneficiary.

b. Option 1 (100% Joint & Survivor): A reduced annuity payable as long as either the member or his/her beneficiary is living.

c. Option 1A (100% Joint & Survivor with a revert to Maximum Option feature): A reduced annuity payable as long as either the member or his/her beneficiary 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 option.

d. Option 2 (50% Joint & Survivor): 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.

e. Option 2B (50% Joint & Survivor with a revert to Maximum Option feature): 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 option.

Incidental Death Benefit:

a. Active Employees: The beneficiary (or estate) of an active employee 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 full 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.

b. Post Employment: The beneficiary (or estate) of a retiree, both current and future retiree, will receive a one-time payment upon the retiree's death. The amount of the one-time payment is based on the retiree's credited service.

Years of Service Credit	Death Benefit
10 or more, but less than 20	$1,000
20 or more, but less than 30	$2,000
30 or more	$3,000

Postretirement Benefit Increases: Retired members and beneficiaries will receive an adjustment to their benefit equal to the same percentage increase that the General Assembly approves in earnable compensation for active GARS members.

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 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. 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 employer contribution, 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.

Gabriel Roeder Smith & Company
Consultants & Actuaries

RETIREMENT SYSTEM FOR JUDGES AND SOLICITORS OF THE STATE OF SOUTH CAROLINA (JSRS)

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 Retirement System for Judges and Solicitors of the State of South Carolina (JSRS), determines the calculated employer contribution requirement, and analyzes changes in this amount. In addition, the report provides information required by the Retirement System in connection with Governmental Accounting Standards Board Statement No. 25 (GASB 25), and 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 JSRS. This report was prepared at the request of the Public Employee Benefit Authority (Board) and is intended for use by the South Carolina Retirement System (SCRS) staff and those designated or approved by the Board.

Under SCRS statutes, the Board must certify the employer contribution annually. This amount is determined actuarially, based on the Board's funding policy. The contribution rate is determined by a given actuarial valuation and 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 contribution rate for the year beginning July 1, 2014. If new legislation is enacted between the valuation date and the date the contribution rate becomes effective, the Board may adjust the calculated amount before certifying them, in order to reflect this new legislation. Such adjustments are based on information supplied by the actuary.

FINANCING OBJECTIVES AND FUNDING POLICY

The principle objectives in the funding policy that are maintained by the Board include:

- Establish a contribution rate that remains relatively level over time.
- To set a rate so that the measures of the System's funding progress which includes the unfunded actuarial accrued liability, funded ratio, and funding period will be maintained or improved.

- To set a contribution rate that will amortize the unfunded actuarial accrued liability (UAAL) over a period that does not exceed 30 years.

For JSRS, the Board's funding policy is to determine an employer contribution rate that is at least equal to the sum of the employer normal cost rate (which pays the current year's cost) and an amortization rate which results in the UAAL to be funded over a period that does not exceed 30 years in installments that increase at the assumed rate of growth in payroll for JSRS.

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 59.5% to 57.8%. This decrease was primarily due to the continual recognition of deferred investment losses 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 market value of assets had been used in the calculation instead of actuarial (smoothed) value of assets, the funded ratio for the System would have been 49.0%, compared to 52.2% in the prior year.

ASSUMPTIONS AND METHODS

The actuarial assumptions used to perform this valuation remain unchanged from the prior valuation, including the use of a 7.50% investment return assumption. 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 are those which were in effect on July 1, 2012. Act 278 impacted the retirement system in that it requires the member's cost of purchasing nonqualified service be no less than the true actuarial cost. There were no other changes to the benefit provisions since the last valuation.

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 JSRS as of July 1, 2012.

All of our work conforms with generally accepted actuarial principles and practices and 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.

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

Daniel J. White, FSA, MAAA, EA
Senior Consultant

TABLE OF CONTENTS

SECTION A

EXECUTIVE SUMMARY

Executive Summary

(Dollar amounts expressed in thousands)

Valuation Date:	July 1, 2012	July 1, 2011
Membership		
• Number of		
- Active members[1]	144	144
- Retirees and beneficiaries	183	184
- DROP and Retired-in-Place members	17	14
- Inactive members	3	4
- Total	330	332
• Projected payroll of active members	$19,221	$18,661
Contribution Rates		
• Employer contribution rate	47.97% [2]	47.33%
• Member	10.00%	10.00%
Assets		
• Market value	$123,359	$127,152
• Actuarial value	145,604	144,927
• Return on market value	0.5%	18.3%
• Return on actuarial value	3.6%	4.3%
• Ratio of actuarial to market value of assets	118.0%	114.0%
• External cash flow %	-3.6%	-3.4%
Actuarial Information		
• Normal cost %	27.28%	27.90%
• Actuarial accrued liability (AAL)	$251,729	$243,514
• Unfunded actuarial accrued liability (UAAL)	106,125	98,587
• Funded ratio	57.8%	59.5%
• Funding period (years)	30	30
Reconciliation of UAAL		
• Beginning of Year UAAL	$98,587	$72,952
- Interest on UAAL	7,394	7,277
- Amortization payment with interest	(5,699)	(5,271)
- Assumption/method changes	0	24,079
- Asset experience	5,561	4,444
- COLA	0	(5,121)
- Salary experience	(2,216)	(2,141)
- Other liability experience	2,498	2,368
- Legislative Changes	0	0
• End of Year UAAL	$106,125	$98,587

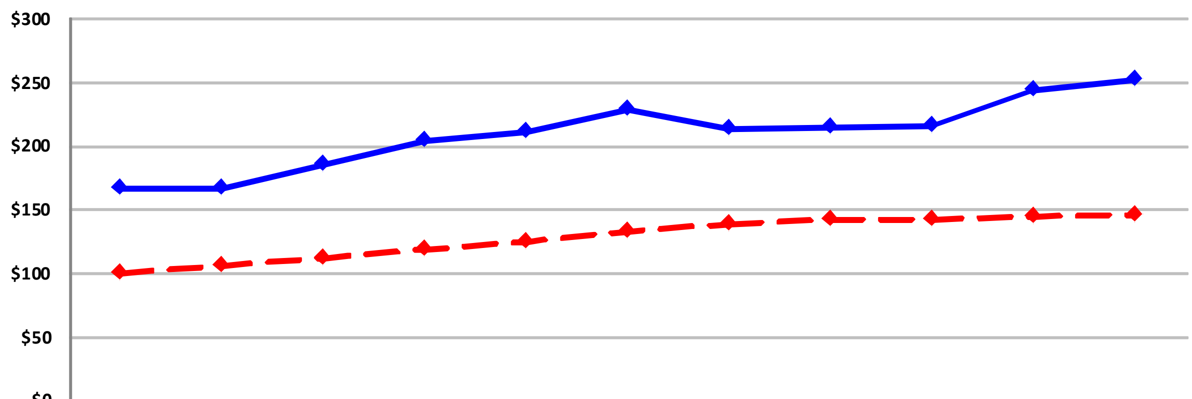
[1] Active member counts include unfilled positions and members in DROP or Retired-in-Place.

[2] The contribution rate determined by the July 1, 2012 actuarial valuation is subject to approval and adoption by the Public Employee Benefit Authority before becoming effective for the fiscal year beginning July 1, 2014. The contribution rate includes the cost of incidental death benefits.

EXECUTIVE SUMMARY (CONTINUED)

The unfunded actuarial accrued liability increased by $7.5 million since the prior year's valuation to $106.1 million. The single largest source of this increase is a result of continual recognition of deferred investment losses in the actuarial value of assets (an increase of $5.6 million). Below is a chart with the historical actuarial value of assets and actuarial accrued liability for JSRS.

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



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
AVA	$100	$106	$112	$119	$125	$133	$138	$142	$143	$145	$146
AAL	$166	$167	$185	$205	$211	$229	$213	$214	$216	$244	$252

There is still $22.2 million in deferred investment losses as of the valuation date (compared to $17.8 million in deferred investment losses in the prior year's valuation). Absent favorable investment experience, those deferred losses will be reflected in the actuarial value of assets over the next few years. Therefore, we expect the unfunded actuarial liability for the System to increase for several years and the funded ratio (on an actuarial value of asset basis) to decline before they improve.

The recommended employer contribution rate increased from 47.33% to 47.97% of pay. Absent legislative changes or significantly favorable investment experience, we also expect the contribution rate to increase as the $22.2 million deferred investment loss becomes recognized in the actuarial value of assets.

SECTION B

DISCUSSION

DISCUSSION

The results of the July 1, 2012 actuarial valuation of the Retirement System for Judges and Solicitors are presented in this report. The purposes of the valuation report are to depict the current financial condition of the System, determine the amortization period resulting from the current contribution rates, 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 various summaries of the members participating in the plan.

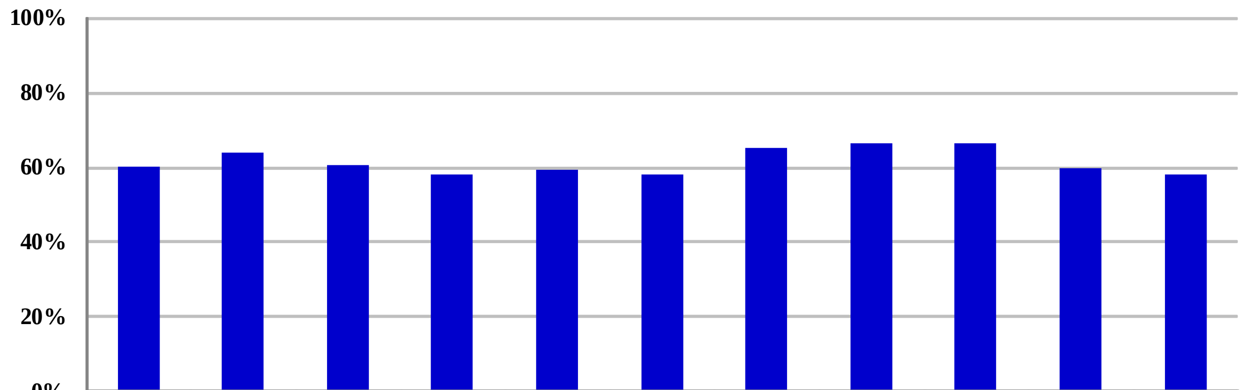
This section discusses the determination of the current funding requirements and the System's funded status, as well as changes in the financial condition of the retirement system.

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 59.5% to 57.8% since the prior valuation. As shown in the table below, the funding ratio has been relatively level over the past 10 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 Liabilities



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Funded Ratio	60.1%	63.7%	60.5%	58.0%	59.1%	58.0%	64.8%	66.1%	66.2%	59.5%	57.8%

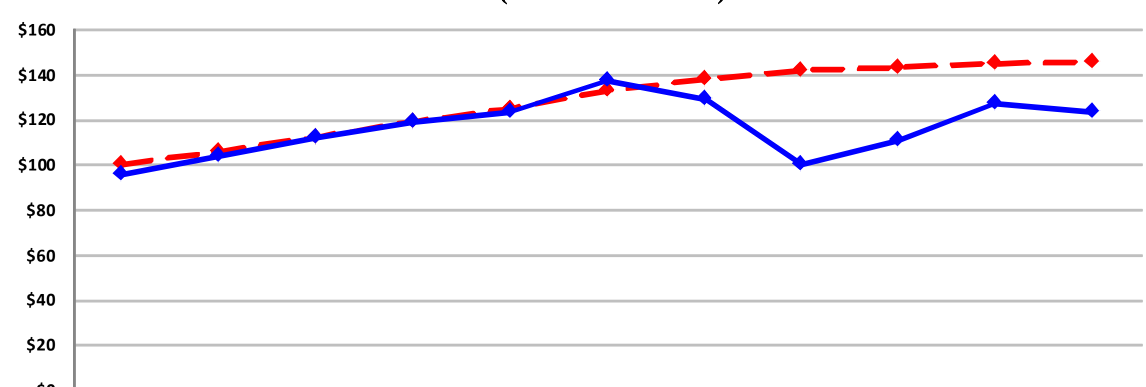
Asset Gains/(Losses)

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 increased from $144.9 million to $145.6 million 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 in 2012 was 0.5%; which is significantly below the expected annual return. Additionally, because of the recognition of prior investment experience, the actuarial (smoothed) asset value returned only 3.6%. 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 Millions)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
AVA	$100	$106	$112	$119	$125	$133	$138	$142	$143	$145	$146
MVA	$96	$104	$112	$119	$124	$137	$129	$100	$111	$127	$123

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 Contribution Requirement

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. The demographic experience for the last year is briefly summarized in the chart below.

The unfunded actuarial accrued liability (UAAL) has increased from $98.6 million in 2011 to $106.1 million 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	$98,587
- Interest on UAAL	7,394
- Amortization payment with interest	(5,699)
- Assumption/method changes	0
- Asset Experience	5,561
- COLA	0
- Salary Experience	(2,216)
- Other Liability Experience	2,498
- Legislative Changes	0
• End of Year UAAL	$106,125

The following table provides a reconciliation of the change in the funding period from 2011 to 2012 based on the current employer contribution rate of 47.33%. The asset experience, which includes the recognition of prior deferred losses, had the largest single impact on the change in the recommended contribution.

Change in Funding Period (Years)
Based on a 47.33% Contribution Rate

• Prior Year	30.0
- Expected Experience	(1.0)
- Assumption Change	0.0
- Asset Experience	4.0
- COLA Experience	0.0
- Salary Experience	(1.6)
- Other Demographic Experience	(0.1)
- Legislative Changes	0.0
- Total Change	1.3
• Current Year Valuation	31.3

This funding method and contribution policy is designed to result in relatively level contribution requirements from year to year. However, absent favorable investment experience, we expect that the contribution requirement will continue to increase over the next several years as existing deferred investment losses become fully recognized in the actuarial value of assets and the calculation of the recommended contribution rate.

GASB No. 25 and No. 27 Disclosures

Accounting requirements for JSRS 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, JSRS treats the Board-established contribution requirement as the ARC, as long as this produces an amortization period that does not exceed 30 years.

Actuarial Assumptions and Methods

In determining costs and liabilities, actuaries use assumptions about the future, such as probabilities of retirement, termination, death and disability, and an annual investment return assumption. 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.

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 and are 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 JSRS. Act 278 was enacted in 2012 and requires the cost of purchasing nonqualified service be no less than the true actuarial cost. There were no other changes to the benefit provisions since the last valuation.

Summary of Retirement Provisions

- A retirement benefit equal to 71.3% of the current active salary of the position from which the member retired plus an additional 2.67% of compensation for each year of service beyond 25 years for judges and 24 years for solicitors and public defenders (subject to a maximum retirement allowance that does not exceed 90% of salary).
- The normal form of payment for a married member is a 33 1/3 joint and survivor annuity.
- Active members contribute 10% of compensation.
- Members are eligible for retirement after they have (i) attained age 70 with 15 years of service, or (ii) attained age 65 with 20 years of service or (iii) completed 25 years of creditable service for judges and 24 years for solicitors and public defenders regardless of age.
- Members who have accrued a retirement allowance that is 90% of salary may elect to “retire in place” and begin to receive their accrued retirement benefits while remaining employed. Members who have retired in place but have not attained age 60 will have their retirement benefit paid into a deferred retirement option program (DROP) and receive the balance of their DROP account upon attaining age 60.
- The mandatory retirement age is 72.

SECTION C

ACTUARIAL TABLES

ACTUARIAL TABLES

Summary of Cost Items

(Dollar amounts expressed in thousands)

		July 1, 2012 (1)	July 1, 2011 (2)
1.	Projected payroll of active members[1]	$ 19,221	$18,661
2.	Present value of future pay	$ 134,272	$ 141,863
3.	Normal cost rate		
	a. Total normal cost rate	27.28%	27.90%
	b. Less: member contribution rate	-10.00%	-10.00%
	c. Employer normal cost rate	17.28%	17.90%
4.	Actuarial accrued liability for active members		
	a. Present value of future benefits	$ 108,895	$ 110,871
	b. Less: present value of future normal costs	(35,546)	(38,068)
	c. Actuarial accrued liability	$ 73,349	$ 72,803
5.	Total actuarial accrued liability for:		
	a. Retirees and beneficiaries	$ 177,483	$ 169,841
	b. Inactive members	897	870
	c. Active members (Item 4c)	73,349	72,803
	d. Total	$ 251,729	$ 243,514
6.	Actuarial value of assets	$ 145,604	$ 144,927
7.	Unfunded actuarial accrued liability (UAAL) (Item 5d - Item 6)	$ 106,125	$ 98,587
8.	GASB No. 25 Annual Required Contribution Rate		
	a. Employer normal cost rate	17.28%	17.90%
	b. Employer contribution rate available to amortize the UAAL	30.05%	27.19%
	c. Total employer contribution rate	47.33% [2]	45.09%
9.	Funding period based on the current employer contribution rate (years)	31	36
10.	Recommended 30-year contribution rate	47.97%	47.33%

[1] The projected payroll is based on all filled and unfilled positions.

[2] Contribution rate currently scheduled for FY 2015.

Actuarial Present Value of Future Benefits
(Dollar amounts expressed in thousands)

		July 1, 2012 (1)	July 1, 2011 (2)
1.	Active members		
	a. Service retirement	$ 98,907	$ 100,426
	b. Survivor benefits	3,073	3,269
	c. Disability benefits	6,915	7,176
	d. Total	$ 108,895	$ 110,871
2.	Retired members		
	a. Service retirement	$ 160,435	$ 152,985
	b. Disability retirement	785	787
	c. Beneficiaries	16,263	16,069
	d. Total	$ 177,483	$ 169,841
3.	Inactive members		
	a. Vested terminations	$ 838	$ 780
	b. Nonvested terminations	59	90
	c. Total	$ 897	$ 870
4.	Total actuarial present value of future benefits	$ 287,275	$ 281,582

Analysis of Normal Cost

		July 1, 2012 (1)	July 1, 2011 (2)
1.	Total normal cost rate		
	a. Service retirement	21.98%	22.55%
	b. Survivor benefits	1.66%	1.72%
	c. Disability benefits	3.64%	3.63%
	d. Total	27.28%	27.90%
2.	Less: member contribution rate	10.00%	10.00%
3.	Net employer normal cost rate	17.28%	17.90%

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	$	177,483
	b. Present active and inactive members		109,792
	c. Total actuarial present value	$	287,275
2.	Present Value of Future Normal Contributions		
	a. Employee	$	13,427
	b. Employer		22,119
	c. Total future normal contributions	$	35,546
3.	Actuarial Liability	$	251,729
4.	Current Actuarial Value of Assets	$	145,604
5.	Unfunded Actuarial Liability	$	106,125
6.	UAAL Amortization rates based on a 47.97% employer contribution rate		
	a. Active members		30.69%
	b. DROP and Retired-in-Place Members (including employee contributions)		57.97%
7.	Unfunded Actuarial Liability Liquidation Period		30 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	$ 20,005	$ 18,864
ii. Employer annuity accumulation fund	125,599	126,063
iii. Total current assets	$ 145,604	$ 144,927
b. Present value of future member contributions	$ 13,427	$ 14,186
c. Present value of future employer contributions		
i. Normal contributions	$ 22,119	$ 23,882
ii. Accrued liability contributions	106,125	98,587
iii. Total future employer contributions	$ 128,244	$ 122,469
d. Total assets	$ 287,275	$ 281,582
2. Liabilities		
a. Employee annuity savings fund		
i. Past member contributions	$ 20,005	$ 18,864
ii. Present value of future member contributions	13,427	14,186
iii. Total contributions to employee annuity savings fund	$ 33,432	$ 33,050
b. Employer annuity accumulation fund		
i. Benefits currently in payment	$ 177,483	$ 169,841
ii. Benefits to be provided to other members	76,360	78,691
iii. Total benefits payable from employer annuity accumulation fund	$ 253,843	$ 248,532
c. Total liabilities	$ 287,275	$ 281,582

System Net Assets
Assets at Market or Fair Value
(Dollar amounts expressed in thousands)

Item		July 1, 2012	July 1, 2011
(1)		(1)	(2)
1.	Cash and cash equivalents (operating cash)	$ 11,538	$ 15,118
2.	Receivables	4,247	4,777
3.	Investments		
	a. Short-term securities	$ 0	$ 56
	b. Domestic fixed income	18,850	18,445
	c. Global fixed income	7,362	15,495
	d. Domestic equities	9,037	10,080
	e. Global equities	8,426	5,996
	f. Alternative investments	70,159	65,277
	g. Total investments	$ 113,834	$ 115,349
4.	Securities lending cash collateral invested	$ 892	$ 1,107
5.	Prepaid administrative expenses	3	4
6.	Capital assets, net of accumulated depreciation	13	14
7.	Total assets	$ 130,527	$ 136,369
8.	Liabilities		
	a. Due to other systems	$ 59	$ 0
	b. Accounts payable	4,399	6,470
	c. Investment fees payable	46	91
	d. Obligations under securities lending	892	1,107
	e. Deferred retirement benefits	586	632
	f. Due to employee insurance program	0	0
	g. Benefit payable	0	0
	h. Other liabilities	1,186	917
	i. Total liabilities	$ 7,168	$ 9,217
9.	Total market value of assets available for benefits (Item 7 - Item 8.i.)	$ 123,359	$ 127,152
10.	Asset allocation (investments)		
	a. Net invested cash	7.7%	9.3%
	b. Domestic fixed income	15.3%	14.5%
	c. Global fixed income	6.0%	12.2%
	d. Domestic equities	7.3%	7.9%
	e. Global equities	6.8%	4.7%
	f. Alternative investments	56.9%	51.4%
	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	$ 127,152	$ 111,226
2. Revenue for the year		
a. Contributions		
i. Member contributions	$ 2,299	$ 2,209
ii. Employer contributions	8,414	8,414
iii. Total	$ 10,713	$ 10,623
b. Income		
i. Interest, dividends, and other income	$ 1,233	$ 1,222
ii. Investment expenses	(269)	(346)
iii. Net	$ 964	$ 876
c. Net realized and unrealized gains (losses)	(181)	19,216
d. Total revenue	$ 11,496	$ 30,715
3. Expenditures for the year		
a. Disbursements		
i. Refunds	$ 134	$ 0
ii. Regular annuity benefits[1]	15,171	14,750
iii. Other benefit payments	134	128
iv. Transfers to other systems	(261)	(193)
v. Total	$ 15,178	$ 14,685
b. Administrative expenses and depreciation	111	104
c. Total expenditures	$ 15,289	$ 14,789
4. Increase in net assets (Item 2. - Item 3.)	$ (3,793)	$ 15,926
5. Value of assets at end of year (Item 1. + Item 4.)	$ 123,359	$ 127,152
6. Net external cash flow		
a. Dollar amount	$ (4,465)	$ (4,062)
b. Percentage of market value	-3.6%	-3.4%

[1] Includes deferred retirement benefit payments.

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	$	144,927
2.	Market value of assets at the prior valuation date	$	127,152
3.	Net external cash flow during the year		
	a. Contributions	$	10,713
	b. Disbursements		(15,178)
	c. Subtotal	$	(4,465)
4.	Expected net investment income at 7.50% earned on		
	a. Actuarial value of assets at the prior valuation date	$	10,870
	b. Contributions		402
	c. Disbursements		(569)
	d. Subtotal	$	10,703
5.	Expected actuarial value of assets, end of year (Item 1. + Item 3.c. + Item 4.d.)	$	151,165
6.	Market value of assets as of the current valuation date	$	123,359
7.	Difference between expected actuarial assets and market value of assets (Item 6. - Item 5.)	$	(27,806)
8.	Excess/(shortfall) recognized (20% of Item 7.)	$	(5,561)
9.	Actuarial value of plan assets, end of year (Item 5. + Item 8.)	$	145,604
10.	Asset gain (loss) for year (Item 9. - Item 5.)	$	(5,561)
11.	Asset gain (loss) as % of the actuarial value of assets		(3.82%)
12.	Ratio of AVA to MVA		118.0%

Estimation of Yields
(Dollar amounts expressed in thousands)

		Year Ending	
		July 1, 2012	July 1, 2011
		(1)	(2)
1.	Market value yield		
	a. Beginning of year market assets	$ 127,152	$ 111,226
	b. Contributions to fund during the year	10,713	10,623
	c. Disbursements	(15,178)	(14,685)
	d. Investment income (net of investment and administrative expenses)	672	19,988
	e. End of year market assets	$ 123,359	$ 127,152
	f. Estimated dollar weighted market value yield	0.5%	18.3%
2.	Actuarial value yield		
	a. Beginning of year actuarial assets	$ 144,927	$ 142,871
	b. Contributions to fund during the year	10,713	10,623
	c. Disbursements	(15,178)	(14,685)
	d. Investment income (net of investment and administrative expenses)	5,142	6,118
	e. End of year actuarial assets	$ 145,604	$ 144,927
	f. Estimated actuarial value yield	3.6%	4.3%

Schedule of Funding Progress
(Dollar amounts expressed in thousands)

July 1,	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL) (3) - (2)	Funded Ratio (2)/(3)	Annual Covered Payroll	UAAL as % of Payroll (4)/(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2001	$ 94,795	$ 159,246	$ 64,451	59.5%	$ 14,109	456.8%
2002	100,074	166,440	66,366	60.1%	14,211	467.0%
2003	106,114	166,655	60,541	63.7%	14,437	419.3%
2004	112,016	185,052	73,036	60.5%	14,870	491.2%
2005	118,888	204,847	85,959	58.0%	15,465	555.8%
2006	124,837	211,384	86,547	59.1%	15,929	543.3%
2007	132,990	229,388	96,398	58.0%	16,407	587.5%
2008	138,323	213,406	75,083	64.8%	18,661	402.4%
2009	141,797	214,363	72,566	66.1%	18,661	388.9%
2010	142,871	215,823	72,952	66.2%	18,661	390.9%
2011	144,927	243,514	98,587	59.5%	18,661	528.3%
2012	145,604	251,729	106,125	57.8%	19,221	552.1%

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:	30-year open period[1]
Asset valuation method:	5-year smoothed market
Actuarial assumptions:	
Investment rate of return[2]	7.50%
Projected salary increases[2]	3.00%
Inflation	2.75%
Cost-of-living adjustments	3.00%

[1] The Board will maintain the prior year's contribution rate to the extent the amortization period does not exceed 30 years.

[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	$ 15,254	$ 97,512	$ 46,480	$ 94,795	100.0%	81.6%	0.0%
2002	16,162	101,716	48,562	100,074	100.0%	82.5%	0.0%
2003	16,545	96,409	53,701	106,114	100.0%	92.9%	0.0%
2004	17,640	106,159	61,253	112,016	100.0%	88.9%	0.0%
2005	20,005	110,876	73,966	118,888	100.0%	89.2%	0.0%
2006	21,857	112,823	76,704	124,837	100.0%	91.3%	0.0%
2007	18,999	149,435	60,954	132,990	100.0%	76.3%	0.0%
2008	17,367	141,510	54,529	138,323	100.0%	85.5%	0.0%
2009	18,431	144,464	51,468	141,797	100.0%	85.4%	0.0%
2010	17,816	150,696	47,311	142,871	100.0%	83.0%	0.0%
2011	18,864	169,841	54,809	144,927	100.0%	74.2%	0.0%
2012	20,005	177,483	54,241	145,604	100.0%	70.8%	0.0%

SECTION D

MEMBERSHIP DATA

MEMBERSHIP TABLES

Summary of Membership Data

		July 1, 2012 (1)	July 1, 2011 (2)
1.	Active members		
a.	Males	110	113
b.	Females	33	31
c.	Total members[1]	143	144
d.	Total annualized pay[2]	$ 19,220,513	$ 18,661,000
e.	Average pay[2]	$ 133,476	$ 129,590
f.	Average age	55.6	55.1
g.	Average credited service	15.1	14.3
h.	Member contributions with interest	$ 20,005,000	$ 18,864,000
i.	Average contributions with interest	$ 139,895	$ 131,000
2.	Vested inactive members		
a.	Number	1	1
b.	Total annual deferred benefits	$ 50,062	$ 48,604
c.	Average annual deferred benefit	$ 50,062	$ 48,604
3.	Nonvested inactive members		
a.	Number	2	3
b.	Member contributions with interest	$ 59,482	$ 89,511
c.	Average contributions with interest	$ 29,741	$ 29,837
4.	Service retirees		
a.	Number[1]	143	140
b.	Total annual benefits	$ 13,991,064	$ 13,289,551
c.	Average annual benefit	$ 97,840	$ 94,925
d.	Average age at the valuation date	69.7	69.5
5.	Disabled retirees		
a.	Number	1	1
b.	Total annual benefits	$ 95,702	$ 92,914
c.	Average annual benefit	$ 95,702	$ 92,914
d.	Average age at the valuation date	77.7	76.7
6.	Beneficiaries		
a.	Number	56	57
b.	Total annual benefits	$ 1,633,601	$ 1,609,516
c.	Average annual benefit	$ 29,171	$ 28,237
d.	Average age at the valuation date	70.6	70.4

[1] Includes members in DROP and Retired-in-Place. It does not include unfilled positions.

[2] Based on filled and unfilled positions.

Summary of Historical Active Membership

	Active Members		Covered Payroll	Average Annual Pay			
July 1,	Number of Employers	Number[1]	Amount in Thousands[1]	Amount	Percent Increase /(Decrease)	Average Age	Average Service
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2001	2	128	$ 14,109	$ 110,223	4.26%	N/A	N/A
2002	2	128	14,211	111,026	0.73%	53	16
2003	2	128	14,437	112,789	1.59%	54	17
2004	2	128	14,870	116,172	3.00%	54	18
2005	2	128	15,465	120,820	4.00%	55	19
2006	2	128	15,929	124,445	3.00%	55	20
2007	2	128	16,407	128,176	3.00%	55	19
2008	3	144	18,661	129,590	1.10%	54	15
2009	3	144	18,661	129,590	0.00%	55.0	15.4
2010	3	144	18,661	129,590	0.00%	54.9	15.0
2011	3	144	18,661	129,590	0.00%	55.1	14.3
2012	3	144	19,221	133,476	3.00%	55.6	15.1

[1] Includes filled and unfilled positions and members in DROP or Retired-in-Place.

Distribution of Active Members by Age and by Years of Service

	Years of Credited Service												
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	Total
Attained Age	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
20-24	0	0	0	0	0	0	0	0	0	0	0	0	0
	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
25-29	0	0	0	0	0	0	0	0	0	0	0	0	0
	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
30-34	0	0	0	0	0	0	0	0	0	0	0	0	0
	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
35-39	0	1	0	0	0	0	0	0	0	0	0	0	1
	$0	$130,312	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$130,312
40-44	2	3	1	2	2	1	2	1	0	0	0	0	14
	$128,712	$129,779	$126,883	$130,312	$128,597	$130,312	$130,312	$130,312	$0	$0	$0	$0	$129,479
45-49	1	4	1	4	0	3	2	6	2	0	0	0	23
	$128,712	$126,298	$130,312	$130,312	$0	$129,169	$131,341	$129,169	$130,312	$0	$0	$0	$129,187
50-54	1	1	3	0	2	2	3	7	6	2	0	0	27
	$128,712	$126,883	$128,026	$0	$130,312	$130,312	$129,169	$128,353	$130,312	$130,312	$0	$0	$129,237
55-59	0	2	0	1	3	0	4	5	4	4	1	0	24
	$0	$128,597	$0	$126,883	$129,169	$0	$129,455	$128,940	$131,169	$131,169	$130,516	$0	$129,749
60-64	0	0	0	2	5	2	2	2	4	4	9	0	30
	$0	$0	$0	$128,597	$128,940	$128,597	$126,883	$126,883	$128,597	$133,741	$129,575	$0	$129,405
65 & Over	0	0	0	1	3	1	2	3	2	2	10	0	24
	$0	$0	$0	$130,312	$128,026	$130,312	$130,312	$129,169	$128,597	$132,026	$131,072	$0	$130,200
Total	4	11	5	10	15	9	15	24	18	12	20	0	143
	$128,712	$128,083	$128,255	$129,626	$128,940	$129,550	$129,535	$128,740	$129,931	$132,026	$130,371	$0	$129,543

Membership information includes active and retired-in-place. It does not include unfilled positions.

Distribution of Annuitants by Monthly Benefit

Monthly Benefit Amount	Number of Annuitants	Female	Male	Average Service
(1)	(2)	(3)	(4)	(5)
Under $500	0	0	0	0.00
$ 500 - 999	10	4	6	25.37
1,000 - 1,499	0	0	0	0.00
1,500 - 1,999	2	2	0	9.67
2,000 - 2,499	2	2	0	20.13
2,500 - 2,999	34	33	1	23.00
3,000 - 3,499	12	12	0	31.06
3,500 - 3,999	2	1	1	22.00
4,000 - 4,499	3	1	2	13.00
4,500 - 4,999	3	0	3	18.00
5,000 - 5,499	2	1	1	16.50
5,500 - 5,999	3	1	2	22.53
6,000 - 6,499	5	0	5	19.45
6,500 - 6,999	4	0	4	23.79
7,000 - 7,499	1	0	1	22.33
7,500 - 7,999	46	2	44	21.83
8,000 - 8,499	19	1	18	27.78
8,500 - 8,999	5	1	4	27.77
9,000 - 9,499	10	0	10	30.20
9,500 - 9,999	30	1	29	31.90
10,000 & Over	7	1	6	32.02
Total	200	63	137	25.37

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	Average
July 1,	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits	in Annual Benefit	Annual Benefit
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2001	9	$ 685	6	$ 442	118	$ 7,594	3.3%	$ 64,356
2002	13	706	5	248	126	8,052	6.0%	63,905
2003	11	716	7	493	130	8,275	2.8%	63,654
2004	11	925	2	139	139	9,061	9.5%	65,190
2005	3	581	1	27	141	9,615	6.1%	68,191
2006	4	464	1	28	144	10,051	4.5%	69,799
2007	32	2,690	1	30	175	12,711	26.5%	72,634
2008	6	545	3	156	178	13,100	3.1%	73,596
2009	10	903	4	259	184	13,744	4.9%	74,696
2010	18	1,210	8	593	194	14,361	4.5%	74,025
2011	9	827	5	196	198	14,992	4.4%	75,717
2012	6	912	4	184	200	15,720	4.9%	78,600

Beginning July 1, 2007, includes participants who have retired in place.
Annual benefits added to rolls includes COLAs for continuing retirees.
The removed from rolls count does not include members who are replaced by beneficiaries.

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 Retirement System for Judges and Solicitors of South Carolina.

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 salary are assumed to increase at an annual rate of 3.00%.

Active Member Decrement Rates

a. Assumed rates of service retirement are shown in the following table. In addition to the rates in the table below, all participants are assumed to retire upon reaching the mandatory retirement age of 72.

Assumed Rates of Retirement

Solicitors and Public Defenders				Judges			
Age	**Service**	**RIP Eligible**	**Not RIP Eligible**	**Age**	**Service**	**RIP Eligible**	**Not RIP Eligible**
70 to 72	15 to 23	12%	12%	70 to 72	15 to 24	12%	12%
65 to 69	20 to 23	40%	40%	65 to 69	20 to 24	40%	40%
Any	24	20%	40%	Any	25	15%	25%
Any	25	15%	25%	Any	26	10%	15%
Any	26	10%	12%	Any	27	10%	15%
Any	27	10%	12%	Any	28	10%	15%
Any	28	10%	12%	Any	29	10%	15%
Any	29	5%	12%	Any	30	5%	15%
Any	30	5%	12%	Any	31	5%	15%
Any	31+	100%	N/A	Any	32+	100%	N/A

b. An abbreviated table with the assumed rates of disability and mortality while employed is shown below. There is no active employment withdrawal assumption.

	Disability Rates		Pre-Retirement Mortality	
Age	**Males**	**Females**	**Males**	**Females**
25	0.04%	0.05%	0.0432%	0.0145%
30	0.06%	0.07%	0.0511%	0.0185%
35	0.08%	0.07%	0.0889%	0.0333%
40	0.15%	0.12%	0.1241%	0.0494%
45	0.25%	0.25%	0.1734%	0.0787%
50	0.40%	0.40%	0.2459%	0.1173%
55	0.65%	0.65%	0.3483%	0.1768%
60	1.00%	1.00%	0.5610%	0.2752%
65	1.25%	1.25%	0.8082%	0.3800%
Multiplier	N/A	N/A	115%	70%

Note: The multiplier has been applied to the decrement in the illustrative table.

Post Retirement Mortality

a. Healthy retirees and beneficiaries – The RP-2000 Mortality Table with White Collar adjustment projected using the AA projection table with multipliers based on plan experience. The following are sample rates:

Healthy Annuitant Mortality Rates Before Projection		
Age	**Males**	**Females**
50	0.2176%	0.1510%
55	0.3632%	0.2457%
60	0.6141%	0.4443%
65	1.2167%	0.8218%
70	2.1203%	1.4426%
75	3.6997%	2.4431%
80	6.5353%	4.0926%
85	11.5132%	7.0483%
90	19.6100%	11.9843%
Multiplier	110%	95%

Note: The multiplier has been applied to the decrement in the illustrative table.

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				
	Year of Retirement			
Gender	**2015**	**2020**	**2025**	**2030**
Male	19.5	19.9	20.3	20.6
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		
Age	**Males**	**Females**
50	2.173%	1.269%
55	2.658%	1.820%
60	3.153%	2.402%
65	3.763%	3.083%
70	4.694%	4.140%
75	6.155%	5.745%
80	8.203%	7.954%
85	10.620%	11.022%
90	13.756%	15.405%
Multiplier	75%	110%

Note: The multiplier has been applied to the decrement in the illustrative table.

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 members in DROP and who are retired-in-place. These contributions are assumed to grow at the same payroll growth rate as for active employees. It is assumed that amortization payments are made monthly at the end of the month.

Future Cost-of-living Increases

Future benefits are assumed to increase at an annual rate of 3.00%.

Payroll Growth Rate

The total annual payroll of active members (including DROP and RIP participants) is assumed to increase at an annual rate of 3.00%. This rate represents the underlying expected annual rate of wage inflation and does not anticipate increases in the number of members.

Other Assumptions

1. Percent married: 95% of male and female employees are assumed to be married.
2. Age difference: Males are assumed to be four years older than their spouses.
3. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an immediate life annuity.
4. Inactive Population: All non-vested members are assumed to take an immediate refund. Members with a vested benefit are assumed to elect a deferred benefit commencing at their earliest commencement possible age.
5. There will be no recoveries once disabled.
6. Decrement timing: Decrements of all types are assumed to occur mid-year.
7. 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.
8. Benefit Service: All active and members are assumed to accrue one year of eligibility service each year.

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 RETIREMENT SYSTEM FOR JUDGES AND SOLICITORS FOR THE STATE OF SOUTH CAROLINA RETIREMENT SYSTEM (JSRS)

Effective Date: July 1, 1979.

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.

Eligibility: This System covers all solicitors, circuit public defenders, judges of a Circuit or Family Court, and justices of the Court of Appeals and Supreme Court who take office prior to age 72 are required to participate upon taking office unless exempted by statute.

Employee Contributions: Members contribute 10.00% of compensation per year. Contributions are credited with interest at the rate of 4.0% per annum.

Service Retirement:

a. Eligibility: There is a mandatory retirement age of 72. Members may retire if they have met one of the following eligibility conditions:
   i. Age 65 with 20 years of credited service.
   ii. Age 70 with 15 years of credited service.
   iii. Completed 25 years of credited service as a judge or 24 years as a solicitor or public defender.

b. Monthly Benefit: The monthly benefit is equal to one-twelfth ($1/12^{th}$) of the member's current salary, times 71.3% plus 2.67% of pay for each year of credited service beyond 25 for judges and 24 for solicitors and public defenders. The monthly benefit may not exceed one-twelfth of 90% of the member's current salary.

c. Payment Form: Standard Annuity Payment.

A JSRS member whose annuity as calculated at retirement exceeds the 90 percent maximum annuity will receive an additional lump sum benefit at retirement. The additional benefit is equal to the member's contributions and interest paid in to the system after the member attained sufficient service credit to be eligible to receive the maximum annuity of 90 percent of the current active salary. The 90 percent maximum annuity amount is generally reached when the following JSRS service credit is obtained: 32 years for justices and judges; and 31 years for solicitors and circuit public defenders.

Disability Retirement:

a. Eligibility: Member must have five or more years of earned service.

b. Monthly Benefit: The monthly disability benefit payable is determined the same as a service retirement benefit and payable immediately.

c. Payment Form: Standard Annuity Payment.

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: Judges are vested in the system after attaining ten (10) years of earned service. Solicitors and public defenders are vested in the system after attaining 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.

Deferred Termination Benefit:

a. Eligibility: Member must be vested and must elect to leave his/her contributions on deposit. Members who began service before July 1, 2004 are eligible for a monthly benefit beginning at age 55. Members hired after July 1, 2004 are eligible to commence their deferred monthly benefit at age 65.

b. Monthly Benefit: The member’s benefit is determined by multiplying the base benefit by a fraction, in which the numerator is the member’s total credited service and twenty-four is the denominator.

c. Payment Form: Standard Annuity Payment.

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). A beneficiary of an inactive member who was eligible to commence his retirement annuity at the time of his death may elect a monthly survivor annuity equal to one-third the annuity that would have been payable to the deceased member.

Death while an Active 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 was married and eligible to commence his retirement annuity at the time of his death, then his beneficiary may elect a monthly survivor annuity equal to one-third the annuity that would have been payable to the deceased member.

Standard Annuity Payment: The monthly retirement benefit will be paid as follows. Other, reduced optional forms of payment are also available to a member to elect at retirement.

a. Unmarried Retiree: A life annuity. Upon the member's death, any remaining member contributions plus interest will be paid to the member's designated beneficiary.

b. Married Retiree (One-third Joint & Survivor): An unreduced annuity is payable during the member's life, and continues after the member's death at one-third of the rate paid to the member for the life of the surviving spouse, unless a contingent non-spousal beneficiary is named.

c. Optional Allowance: A reduced lifetime annuity is payable during the member's life, and continues after the member's death at one-third of the rate paid to the member for the life of the non-spousal beneficiary (or in equal shares to multiple beneficiaries).

Incidental Death Benefit:

a. Active Employees: The beneficiary (or estate) of an active employee 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 full 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.

b. Post Employment: The beneficiary (or estate) of a retiree, both current and future retiree, will receive a one-time payment upon the retiree's death. The amount of the one-time payment is based on the retiree's credited service.

Years of Service Credit	Death Benefit
10 or more, but less than 20	$1,000
20 or more, but less than 30	$2,000
30 or more	$3,000

Retire in Place: Members who have accrued their maximum monthly benefit (i.e. 90% of salary) may elect to "retire in place". These members will receive their monthly retirement benefit while they remain employed. Members who retire in plan under the age of 60 will have his retirement benefit accumulated into a deferred retirement option program (DROP). These members will receive a distribution of their DROP balance upon reaching the age of 60 or retirement (if earlier).

Postretirement Benefit Increases: Benefits paid to retired members or surviving spouses are increased annually by an amount equal to the percentage increase in the current salary paid to the respective position from which the member retired. The cost of living adjustment for non-spousal beneficiaries is based on the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W), and said beneficiaries will receive a 4.00% increase in their benefit in years the annual increase in CPI-W exceeds 3.00%.

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, non-retired 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 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 involving 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 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.

Gabriel Roeder Smith & Company
Consultants & Actuaries

SOUTH CAROLINA NATIONAL GUARD RETIREMENT SYSTEM (NGRS)

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 National Guard Retirement System (NGRS), determines the calculated employer contribution requirement, and analyzes changes in this amount. In addition, the report provides information required by the Retirement System 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 NGRS. This report was prepared at the request of the Public Employee Benefit Authority (Board) and is intended for use by the South Carolina Retirement System (SCRS) staff and those designated or approved by the Board.

Under SCRS statutes, the Board must certify the employer contribution annually. This amount is determined actuarially, based on the Board's funding policy. The contribution is determined by a given actuarial valuation and becomes effective twelve months after the valuation date. In other words, the contribution amount determined by this July 1, 2012 actuarial valuation will be used by the Board when certifying the employer contribution amount for the year beginning July 1, 2013. If new legislation is enacted between the valuation date and the date the contribution becomes effective, the Board may adjust the calculated amount before certifying them, in order to reflect this new legislation. Such adjustments are based on information supplied by the actuary.

FINANCING OBJECTIVES AND FUNDING POLICY

The principle objectives in the funding policy that is maintained by the Board include:

- Establish a contribution amount that remains relatively level over time.
- To set an amount so that the measures of the System's funding progress which include the unfunded actuarial accrued liability, funded ratio, and funding period will be maintained or improved.

- To set a contribution amount that will result in the unfunded actuarial accrued liability (UAAL) to be amortized over a period from the current valuation date that does not exceed 30 years.

The contribution amounts are based on the Board's current funding policy, which is expected to completely amortize the unfunded actuarial accrued liability by June 30, 2036.

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 increased from 33.3% to 34.2%. If market value of assets had been used in the calculation instead of actuarial (smoothed) value of assets, the funded ratio for the System would have been 28.6%, compared to 28.9% in the prior year.

ASSUMPTIONS AND METHODS

The actuarial assumptions used to perform this valuation remain unchanged from the prior valuation, including the use of a 7.50% investment return assumption. 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 are those which were in effect on July 1, 2012. There have been no changes in plan provisions since the preceding actuarial valuation.

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 NGRS as of July 1, 2012.

All of our work conforms with generally accepted actuarial principles and practices and complies 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.

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

Daniel J. White, FSA, MAAA, EA
Senior Consultant

TABLE OF CONTENTS

SECTION A

EXECUTIVE SUMMARY

Executive Summary

(Dollar amounts expressed in thousands)

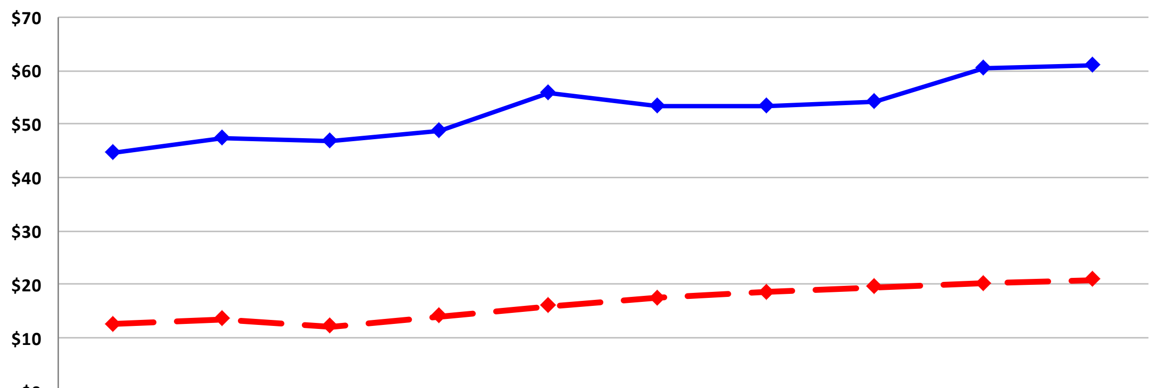
Valuation Date:	July 1, 2012	July 1, 2011
Membership		
• Number of		
- Active Members	12,041	12,271
- Retirees and Beneficiaries	4,419	4,252
- Inactive Members	2,484	2,458
- Total	18,944	18,981
GASB No. 25 Annual Required Contribution		
• Member	$0	$0
• Employer contribution[1]	$4,586	$4,539
Assets		
• Market value	$17,417	$17,466
• Actuarial value	20,814	20,138
• Return on market value	0.4%	14.9%
• Return on actuarial value	4.4%	4.5%
• Ratio - actuarial value to market value	119.5%	115.3%
• External cash flow %	-0.7%	-0.7%
Actuarial Information		
• Normal cost	$686	$703
• Actuarial accrued liability (AAL)	60,942	60,388
• Unfunded actuarial accrued liability (UAAL)	40,128	40,250
• Funded ratio	34.2%	33.3%
• Amortization period (blended)	20	21
Reconciliation of UAAL		
• Beginning of Year UAAL	$40,250	$34,695
- Interest on UAAL	3,019	3,010
- Amortization payment with interest	(3,669)	(3,670)
- Assumption/method changes	0	5,441
- Asset experience	849	668
- Other liability experience	(321)	106
- Legislative changes	0	0
• End of Year UAAL	40,128	$40,250

[1] The contribution amount determined by the actuarial valuation is effective for the following fiscal year.

EXECUTIVE SUMMARY (CONTINUED)

The unfunded actuarial accrued liability decreased by $122 thousand since the prior year's valuation to $40.1 million. Below is a chart with the historical actuarial value of assets and actuarial accrued liability for NGRS.

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



	2002	2004	2005	2006	2007	2008	2009	2010	2011	2012
AVA	12.6	13.6	12.2	14.0	15.9	17.4	18.6	19.5	20.1	20.8
AAL	44.7	47.3	47.0	48.8	55.9	53.5	53.4	54.2	60.4	60.9

There is still $3.4 million 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. Therefore, we expect the unfunded actuarial liability for the System and the funded ratio to remain relatively constant for the next few years as those deferred investment losses become recognized in the actuarial value of assets.

The recommended employer contribution requirement slightly increased from $4.5 million in FY 2013 to $4.6 million in FY 2014. Absent legislative changes or significantly favorable investment experience, we expect the contribution rate to gradually increase over the next several years as existing deferred investment losses becomes recognized in the actuarial value of assets.

SECTION B

DISCUSSION

DISCUSSION

The results of the July 1, 2012 actuarial valuation of the South Carolina National Guard Retirement System are presented in this report. The purposes of the valuation report is 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 various summaries of the members participating in the plan.

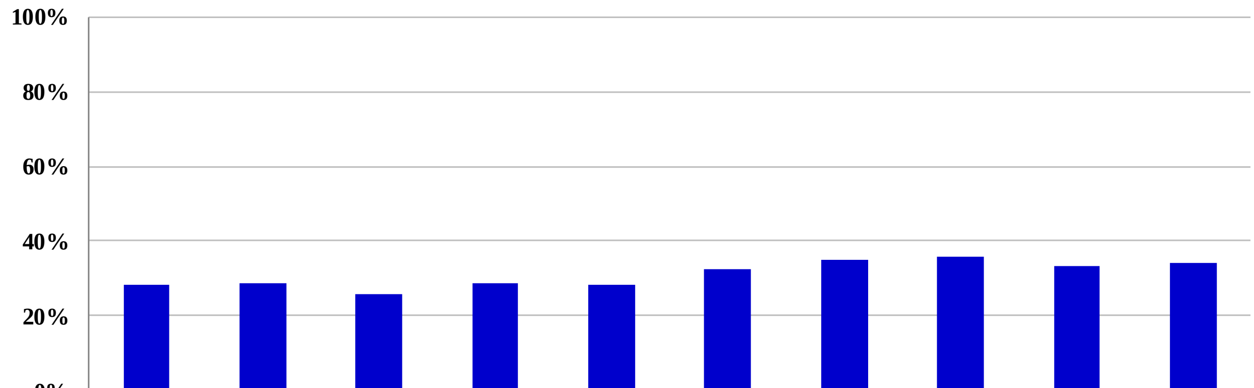
This section discusses the determination of the current funding requirements and the System's funded status, as well as changes in financial condition of the retirement system.

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 increased from 33.3% to 34.2% since the prior valuation and has generally trended slightly upward since 2002 as shown in the graph below. 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 Liabilities



	2002	2004	2005	2006	2007	2008	2009	2010	2011	2012
Funded Ratio	28.2%	28.7%	25.9%	28.8%	28.5%	32.6%	34.8%	35.9%	33.3%	34.2%

The contribution policy established by the Board is to fully amortize the unfunded actuarial accrued liability (UAAL) over a 30 year period from July 1, 2006. Under this funding policy, there are 24 years remaining in the funding period from the valuation date.

The State appropriation (i.e. employer contribution) is the dollar amount necessary to fund the annual normal cost and systematically amortize the UAAL. There is an amortization cost of $587,062 to amortize the remaining balance of $3,744,807 that was established at July 1, 2006 due to a legislation change that allowed guardsmen who became members of the National Guard after June 30, 1993 to become eligible for membership in the System effective January 1, 2007. The remaining amortization period for this amount as of July 1, 2012 is nine years. The UAAL from other sources of $36,383,592 is funded over a 30 year period beginning July 1, 2006. The remaining amortization period for this balance as of July 1, 2012 is 24 years. Therefore, the total State appropriation to be made for FY 2014 is $4,585,560.

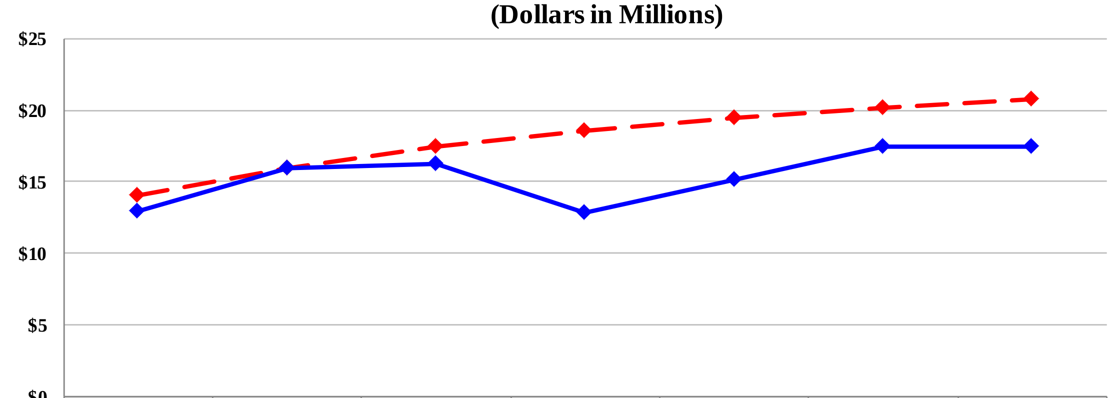
Asset Gains/ (Losses)

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 increased from $20.1 million to $20.8 million 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 in 2012 was 0.4%, which is significantly below the expected annual return. However, because of the recognition of prior investment experience, the actuarial (smoothed) asset value returned only 4.4%. 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 State's contribution requirement.

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



	2006	2007	2008	2009	2010	2011	2012
AVA	$14.0	$15.9	$17.4	$18.6	$19.5	$20.1	$20.8
MVA	$12.9	$15.9	$16.2	$12.8	$15.1	$17.5	$17.4

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 Contribution Requirement

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 on average over many years. The demographic experience for the last year is briefly summarized in the chart below.

The unfunded actuarial accrued liability (UAAL) has decreased from $40.250 million in 2011 to $40.128 million 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	$40,250
- Interest on UAAL	3,019
- Amortization payment with interest	(3,669)
- Assumption change	0
- Asset experience	849
- Liability experience	(321)
- Legislative changes	0
- Total change	($122)
• End of Year UAAL	$40,128

The following table provides a reconciliation of the change in the recommended contribution from 2011 to 2012. The asset experience, which includes the recognition of prior deferred losses, had the largest single impact on the change in the recommended contribution.

Change in Recommended Contribution

• Prior year valuation	$4,539
- Expected change	0
- Assumption change	0
- Asset experience	93
- Liability experience	(46)
- Legislative changes	0
- Total change	$47
• Current year valuation	$4,586

This funding method and contribution policy is designed to result in relatively level contribution requirements from year to year. However, absent favorable investment experience, we expect that the contribution requirement will continue to increase over the next several years as existing deferred investment losses become fully recognized in the actuarial value of assets and calculation of the recommended contribution.

GASB No. 25 and No. 27 Disclosures

Accounting requirements for NGRS 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, NGRS treats the Board-established contribution requirement as the ARC.

Actuarial Assumptions and Methods

In determining costs and liabilities, actuaries use assumptions about the future, such as probabilities of retirement, termination, death and disability, and an annual investment return assumption. 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.

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 and are 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 NGRS. There have been no changes in the benefit provisions since the prior valuation.

Summary of Retirement Provisions

- All members of the South Carolina National Guard are covered by the System.
- The retirement benefit amount is equal to $50 per month for 20 years' creditable service with an additional $5 per month for each additional year of service. The total pension is limited to $100 per month.
- Members with 20 years of military service are eligible for retirement after they have (i) attained age 60, or (ii) completed 30 years of creditable service. Eligible member may commence benefits at age 60.
- Member contributions are not required or permitted.

SECTION C

ACTUARIAL TABLES

ACTUARIAL TABLES

Summary of Cost Items

(Dollar amounts expressed in thousands)

		July 1, 2012 (1)	July 1, 2011 (2)
1.	Normal cost		
	a. Total normal cost	$ 686	$ 703
	b. Less: member contribution	0	0
	c. Employer normal cost	$ 686	$ 703
2.	Actuarial accrued liability for active members		
	a. Present value of future benefits	$ 21,550	$ 22,263
	b. Less: present value of future normal costs	6,222	6,365
	c. Actuarial accrued liability	$ 15,328	$ 15,898
3.	Total actuarial accrued liability for:		
	a. Retirees and beneficiaries	$ 32,989	$ 32,038
	b. Inactive members	12,625	12,452
	c. Active members (Item 2.c.)	15,328	15,898
	d. Total	$ 60,942	$ 60,388
4.	Actuarial value of assets	$ 20,814	$ 20,138
5.	Unfunded actuarial accrued liability (UAAL) (Item 3.d. - Item 4.)	$ 40,128	$ 40,250
6.	GASB No. 25 Annual Required Contribution		
	a. Employer normal cost	$ 686	$ 703
	b. Employer contribution available to amortize the UAAL	3,900	3,836
	c. Total employer contribution	$ 4,586	$ 4,539

Actuarial Present Value of Future Benefits
(Dollar amounts expressed in thousands)

			July 1, 2012 (1)		July 1, 2011 (2)
1.	Active members				
	a. Service retirement	$	2,642	$	2,830
	b. Deferred termination benefits[1]		18,908		19,433
	c. Survivor benefits		0		0
	d. Disability benefits		0		0
	e. Total	$	21,550	$	22,263
2.	Retired and Inactive members				
	a. Members in payment status	$	32,989	$	32,038
	b. Inactive Vested members		12,625		12,452
	c. Total	$	45,614	$	44,490
3.	Total actuarial present value of future benefits	$	67,164	$	66,753

[1] Attributable to members who terminate after attaining 20 years of service and prior to age 60, the age when retirement benefits commence.

Analysis of Normal Cost
(Dollar amounts expressed in thousands)

		July 1, 2012 (1)	July 1, 2011 (2)
1.	Total normal cost		
	a. Retirement benefits	$ 83	$ 91
	b. Deferred termination benefits	603	612
	c. Survivor benefits	0	0
	d. Disability benefits	0	0
	e. Total	686	703
2.	Less: member contributions	$ 0	$ 0
3.	Net employer normal cost	$ 686	$ 703

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	$	32,989
	b. Present Active and Inactive Members		34,175
	c. Total Actuarial Present Value	$	67,164
2.	Present Value of Future Normal Contributions		
	a. Employee	$	0
	b. Employer		6,222
	c. Total Future Normal Contributions	$	6,222
3.	Actuarial Liability	$	60,942
4.	Current Actuarial Value of Assets	$	20,814
5.	Unfunded Actuarial Liability	$	40,128
6.	Unfunded Actuarial Liability Liquidation Period (blended)		20 years

Actuarial Balance Sheet

(Dollar amounts expressed in thousands)

		July 1, 2012 (1)	July 1, 2011 (2)
1.	Assets		
	a. Current assets (actuarial value)	$ 20,814	$ 20,138
	b. Present value of future member contributions	0	0
	c. Present value of future employer contributions		
	i. Normal contributions	$ 6,222	$ 6,365
	ii. Accrued liability contributions	40,128	40,250
	iii. Total future employer contributions	$ 46,350	$ 46,615
	d. Total assets	$ 67,164	$ 66,753
2.	Liabilities		
	a. Benefits to be paid to retired members	$ 32,989	$ 32,038
	b. Benefits to be paid to former members entitled to deferred pensions	12,625	12,452
	c. Benefits to be paid to current active members	21,550	22,263
	d. Total liabilities	$ 67,164	$ 66,753

System Net Assets
Assets at Market or Fair Value
(Dollar amounts expressed in thousands)

Item (1)	July 1, 2012 (2)	July 1, 2011 (3)
1. Cash and cash equivalents (operating cash)	$ 2,473	$ 3,020
2. Receivables	499	532
3. Investments		
a. Short-term securities	$ 0	$ 7
b. Domestic fixed income	2,522	2,380
c. Global fixed income	985	1,999
d. Domestic equities	1,209	1,301
e. Global equities	1,127	773
f. Alternative investments	9,385	8,422
g. Total investments	$ 15,228	$ 14,882
4. Securities lending cash collateral invested	$ 119	$ 143
5. Prepaid administrative expenses	1	1
6. Capital assets, net of accumulated depreciation	0	0
7. Total assets	$ 18,320	$ 18,578
8. Liabilities		
a. Due to other systems	$ 0	$ 0
b. Accounts payable	589	835
c. Investment fees payable	6	11
d. Obligations under securities lending	119	143
e. Deferred retirement benefits	0	0
f. Due to employee insurance program	0	0
g. Benefit payable	31	4
h. Other liabilities	158	119
i. Total liabilities	$ 903	$ 1,112
9. Total market value of assets available for benefits (Item 7. - Item 8.i.)	$ 17,417	$ 17,466
10. Asset allocation (investments)		
a. Net Invested cash	12.6%	14.8%
b. Domestic fixed income	14.5%	13.6%
c. Global fixed income	5.7%	11.5%
d. Domestic equities	6.9%	7.5%
e. Global equities	6.5%	4.4%
f. Alternative investments	53.8%	48.2%
g. Total investments	100.0%	100.0%

Reconciliation of System Net Assets

(Dollar amounts expressed in thousands)

		Year Ending	
		July 1, 2012	July 1, 2011
		(1)	(2)
1.	Value of assets at beginning of year	$ 17,466	$ 15,053
2.	Revenue for the year		
	a. Contributions		
	i. Member contributions	$ 0	$ 0
	ii. Employer contributions	3,937	3,904
	iii. Total	$ 3,937	$ 3,904
	b. Income		
	i. Interest, dividends, and other income	$ 155	$ 152
	ii. Investment expenses	(33)	(43)
	iii. Net	$ 122	$ 109
	c. Net realized and unrealized gains (losses)	(28)	2,424
	d. Total revenue	$ 4,031	$ 6,437
3.	Expenditures for the year		
	a. Disbursements		
	i. Refunds	$ 0	$ 0
	ii. Regular annuity benefits	4,065	4,011
	iii. Other benefit payments	0	0
	iv. Transfers to other Systems	0	0
	v. Total	$ 4,065	$ 4,011
	b. Administrative expenses and depreciation	15	13
	c. Total expenditures	$ 4,080	$ 4,024
4.	Increase in net assets (Item 2.d.- Item 3.c.)	$ (49)	$ 2,413
5.	Value of assets at end of year (Item 1. + Item 4.)	$ 17,417	$ 17,466
6.	Net external cash flow		
	a. Dollar amount	$ (128)	$ (107)
	b. Percentage of market value	-0.7%	-0.7%

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	$	20,138
2.	Market value of assets at the prior valuation date	$	17,466
3.	Net external cash flow during the year		
	a. Contributions	$	3,937
	b. Disbursements		(4,065)
	c. Subtotal	$	(128)
4.	Expected net investment income at 7.50% earned on		
	a. Actuarial value of assets at the prior valuation date	$	1,510
	b. Contributions		295
	c. Disbursements		(152)
	d. Subtotal	$	1,653
5.	Expected actuarial value of assets, end of year (Item 1. + Item 3.c. + Item 4.d.)	$	21,663
6.	Market value of assets as of the current valuation date	$	17,417
7.	Difference between expected actuarial assets and market value of assets (Item 6. - Item 5.)	$	(4,246)
8.	Excess/(shortfall) recognized (20% of Item 7.)	$	(849)
9.	Actuarial value of plan assets, end of year (Item 5. + Item 8.)	$	20,814
10.	Asset gain (loss) for year (Item 9. - Item 5.)	$	(849)
11.	Asset gain (loss) as % of actual actuarial assets		-4.1%
12.	Ratio of AVA to MVA		119.5%

Estimation of Yields
(Dollar amounts expressed in thousands)

	Year Ending July 1, 2012 (1)	Year Ending July 1, 2011 (2)
1. Market value yield		
a. Beginning of year market assets	$ 17,466	$ 15,053
b. Contributions to fund during the year	3,937	3,904
c. Disbursements	(4,065)	(4,011)
d. Investment income (net of investment and administrative expenses)	79	2,520
e. End of year market assets	$ 17,417	$ 17,466
f. Estimated dollar weighted market value yield	0.4%	14.9%
2. Actuarial value yield		
a. Beginning of year actuarial assets	$ 20,138	$ 19,458
b. Contributions to fund during the year	3,937	3,904
c. Disbursements	(4,065)	(4,011)
d. Investment income (net of investment and administrative expenses)	804	787
e. End of year actuarial assets	$ 20,814	$ 20,138
f. Estimated actuarial value yield	4.4%	4.5%

Schedule of Funding Progress

(Dollar amounts expressed in thousands)

July 1,	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL) (3) - (2)	Funded Ratio (2)/(3)	Annual Covered Payroll	UAAL as % of Payroll (4)/(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1998	$ 8,640	$ 41,478	$ 32,838	20.8%	N/A	N/A
2000*	11,089	43,427	32,338	25.5%	N/A	N/A
2002	12,608	44,678	32,069	28.2%	N/A	N/A
2004	13,567	47,281	33,714	28.7%	N/A	N/A
2005	12,151	46,985	34,835	25.9%	N/A	N/A
2006	14,046	48,755	34,709	28.8%	N/A	N/A
2007	15,937	55,917	39,980	28.5%	N/A	N/A
2008	17,426	53,534	36,108	32.6%	N/A	N/A
2009	18,600	53,421	34,821	34.8%	N/A	N/A
2010	19,458	54,153	34,695	35.9%	N/A	N/A
2011	20,138	60,388	40,250	33.3%	N/A	N/A
2012	20,814	60,942	40,128	34.2%	N/A	N/A

*As of April 30, 2000.

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 dollar
Amortization period for GASB 25 ARC	20-year closed period[1]
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return[2]	7.50%
Projected salary increases	None
Inflation	2.75%
Cost-of-living adjustments	0.00%

[1] The blended amortization period as of the valuation date.

[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)
1998	$ 0	$ 14,651	$ 26,827	$ 8,640	N/A	59.0%	0.0%
2000	0	16,186	27,241	11,089	N/A	68.5%	0.0%
2002	0	17,597	27,081	12,608	N/A	71.6%	0.0%
2004	0	19,704	27,577	13,567	N/A	68.9%	0.0%
2005	0	20,804	26,181	12,151	N/A	58.4%	0.0%
2006	0	22,366	26,389	14,046	N/A	62.8%	0.0%
2007	0	24,627	31,290	15,937	N/A	64.7%	0.0%
2008	0	25,554	27,980	17,426	N/A	68.2%	0.0%
2009	0	27,558	25,863	18,600	N/A	67.5%	0.0%
2010	0	28,492	25,661	19,458	N/A	68.3%	0.0%
2011	0	32,038	28,350	20,138	N/A	62.9%	0.0%
2012	0	32,989	27,953	20,814	N/A	63.1%	0.0%

SECTION D

MEMBERSHIP DATA

MEMBERSHIP TABLES

Summary of Membership Data

		July 1, 2012 (1)	July 1, 2011 (2)
1.	Active members		
	a. Males	10,090	10,356
	b. Females	1,951	1,915
	c. Total members	12,041	12,271
	d. Average age	31.8	32.0
	e. Average service	9.2	9.3
2.	Vested inactive members		
	a. Number	2,484	2,458
	b. Total annual deferred benefits	$ 1,951,320	$ 1,910,760
	c. Average annual deferred benefit	$ 786	$ 777
3.	Service retirees		
	a. Number	4,419	4,252
	b. Total annual benefits	$ 4,072,980	$ 3,932,340
	c. Average annual benefit	$ 922	$ 925
	d. Average age	69.0	68.7

Summary of Historical Active Membership

July 1,	Number of Employers	Number of Members	Annual Payroll	Average Pay	Percentage Increase in Average Pay	Average Age	Average Service
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1998	1	9,604	N/A	N/A	N/A	N/A	N/A
2000	1	5,289	N/A	N/A	N/A	N/A	N/A
2002	1	4,010	N/A	N/A	N/A	N/A	N/A
2004	1	3,425	N/A	N/A	N/A	N/A	N/A
2005	1	2,864	N/A	N/A	N/A	45	23
2006	1	2,502	N/A	N/A	N/A	45	23
2007	1	11,076	N/A	N/A	N/A	45	23
2008	1	12,559	N/A	N/A	N/A	31	8
2009	1	12,599	N/A	N/A	N/A	31.7	8.7
2010	1	12,445	N/A	N/A	N/A	31.9	9.0
2011	1	12,271	N/A	N/A	N/A	32.0	9.3
2012	1	12,041	N/A	N/A	N/A	31.8	9.2

Distribution of Active Members by Age and by Years of Service

Attained	Years of Credited Service											
Age	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	Total
Under 20	462	153	5	0	0	0	0	0	0	0	0	0	620
20-24	689	649	616	655	411	333	0	0	0	0	0	0	3,353
25-29	139	138	188	261	264	1,118	161	0	0	0	0	0	2,269
30-34	41	42	51	102	47	427	713	98	0	0	0	0	1,521
35-39	18	25	23	30	23	183	332	460	58	0	0	0	1,152
40-44	4	12	13	19	17	143	223	324	524	55	0	0	1,334
45-49	0	5	2	4	12	49	132	128	231	338	53	0	954
50-54	1	0	0	0	0	15	41	76	105	152	183	8	581
55-59	1	0	0	1	0	3	9	23	38	52	62	46	235
60-64	0	0	0	0	0	0	0	4	3	1	1	13	22
65 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1,355	1,024	898	1,072	774	2,271	1,611	1,113	959	598	299	67	12,041

Distribution of Annuitants by Age
as of July 1, 2012

Age	Number of Annuitants	Total Annual Benefits	Average Annual Benefits
(1)	(2)	(3)	(4)
Under 50	0	$ 0	N/A
50 - 54	0	0	N/A
55 - 59	0	0	N/A
60 - 64	1,550	$ 1,380	$ 890
65 - 69	1,325	1,199	905
70 - 74	629	579	921
75 - 79	538	516	959
80 & Over	377	399	1,058
Total	4,419	$ 4,073	$ 922

Dollar amounts, except averages, are expressed in thousands.

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	Average
July 1,	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits	in Annual Benefit	Annual Benefit
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1998	N/A	N/A	N/A	N/A	1,801	$ 1,808	13.6%	$ 1,004
2000	N/A	N/A	N/A	N/A	1,962	1,947	7.7%	992
2002	N/A	N/A	N/A	N/A	2,213	2,160	10.9%	976
2004	N/A	N/A	N/A	N/A	2,535	2,439	12.9%	962
2005	244	$ 214	89	$ 81	2,690	2,572	5.5%	956
2006	303	276	90	91	2,903	2,757	7.2%	950
2007	362	329	61	58	3,204	3,028	9.8%	945
2008	364	331	76	75	3,492	3,284	8.5%	940
2009	378	335	85	83	3,785	3,536	7.7%	934
2010	267	237	101	99	3,951	3,674	3.9%	930
2011	399	351	98	93	4,252	3,932	7.0%	925
2012	259	228	92	87	4,419	4,073	3.6%	922

APPENDIX A

ACTUARIAL ASSUMPTIONS AND METHODS

Summary of Actuarial Assumptions and Methods

The following presents a summary of the actuarial assumptions and methods used in the valuation of the South Carolina National Guard 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

No increases in salary are assumed. Benefit is not pay related.

Active Member Decrement Rates

a. Assumed rates of service retirement are shown in the following table. Members who retire prior to age 60 are assumed to defer retirement benefits until age 60.

Age Based Retirement Rates		
Age	**Rate with 20 or more years of service**	**Rate with 30 or more years of service**
39 & Under	10.00%	100.00%
40-49	10.00%	100.00%
50-59	10.00%	100.00%
60 & older	100.00%	100.00%

b. An abbreviated table with the assumed rates of disability and mortality while employed is shown below. There is no active employment withdrawal assumption.

	Disability Rates		**Pre-Retirement Mortality**	
Age	**Males**	**Females**	**Males**	**Females**
25	0.0854%	0.0854%	0.0338%	0.0186%
30	0.1100%	0.1100%	0.0653%	0.0264%
35	0.1474%	0.1474%	0.0978%	0.0467%
40	0.2201%	0.2201%	0.1234%	0.0790%
45	0.3595%	0.3595%	0.1614%	0.1248%
50	0.6059%	0.6059%	0.2171%	0.1767%
55	1.0089%	1.0089%	0.3776%	0.2516%
60	1.6269%	1.6269%	0.7443%	0.4454%
Multiplier			90.0%	90.0%

Note: The multiplier has been applied to the decrement in the illustrative table.

Post Retirement Mortality

Retirees and beneficiaries – The RP-2000 Mortality Table projected using the AA projection table with multipliers based on plan experience. The following are sample rates:

Annuitant Mortality Rates Before Projection (Multiplier Applied)		
Age	**Males**	**Females**
50	0.2774%	0.2257%
55	0.4825%	0.3214%
60	0.9511%	0.5691%
65	1.7870%	1.1958%
70	3.0772%	2.1429%
75	4.9601%	3.5521%
80	8.1129%	5.6296%
85	13.2339%	9.5565%
90	20.9021%	15.7189%
Multiplier	115%	115%

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				
	Year of Retirement			
Gender	**2015**	**2020**	**2025**	**2030**
Male	17.8	18.2	18.6	19.0
Female	19.7	19.9	20.1	20.4

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 dollar amount 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.

Future Cost-of-Living Increases

No increases are assumed.

Payroll Growth Rate

None assumed.

Other Assumptions

1. There is not a marriage assumption.

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

2. 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.

Participant Data

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

The data for active members included birth date, gender, total military service and total South Carolina National Guard service. 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.

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 NATIONAL GUARD RETIREMENT SYSTEM (NGRS)

Effective Date: July 1, 1975

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.

Eligibility: All members of the South Carolina National Guard who became members on or before June 30, 1993 are covered by the System. Effective January 1, 2007, eligibility for membership has been extended to those guardsmen who became members of the South Carolina National Guard after June 30, 1993.

Employee Contributions: Contributions from members are not permitted.

Service Retirement:

a. Eligibility: Members who are honorably discharged after attaining age 60 with at least 20 years of creditable military service, which include at least 15 years, 10 of which immediately preceding retirement, with the National Guard of South Carolina.

b. Monthly Benefit: $50 per month for 20 years of creditable service with an additional $5 per month for each additional year of service, subject to a maximum monthly benefit of $100 per month.

c. Payment Form: Life annuity.

Disability Retirement: None

Deferred Termination Benefit:

a. Eligibility: Members who are honorably discharged prior to attaining age 60 with at least 20 years of creditable military service, which include at least 15 years, 10 of which immediately preceding retirement, with the National Guard of South Carolina.

b. Monthly Benefit: Upon attaining age 60, the member will receive $50 per month for 20 years of creditable service with an additional $5 per month for each additional year of service, subject to a maximum monthly benefit of $100 per month.

c. Payment Form: Life annuity.

Active Member Death Benefit: None.

Postretirement Benefit Increases: None.

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 sufficient 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 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.

RESOLUTION FOR DECLARATION OF THE SOUTH CAROLINA RETIREMENT SYSTEMS GROUP TRUST

WHEREAS, the South Carolina Public Employee Benefit Authority ("PEBA") administers, and the PEBA Board of Directors ("PEBA Board" or "Trustee") serve as trustees, of the retirement system as "retirement system" is defined in Section 9-16-10(8) of the South Carolina Code of Laws;

WHEREAS, Section 9-16-10(8) of the South Carolina Code of Laws defines "retirement system" as the South Carolina Retirement System, the Retirement System for Judges and Solicitors of the State of South Carolina, the Retirement System for Members of the General Assembly of the State of South Carolina, the National Guard Retirement System, and the South Carolina Police Officers' Retirement System, which are qualified governmental defined benefit pension plans established pursuant to Chapters 1, 8, 9, 10, and 11 of Title 9 of the South Carolina Code of Laws, respectively;

WHEREAS, Sections 9-1-1310(C) and 9-16-20(A) of the South Carolina Code of Laws provide that all funds and assets of the retirement system are held in trust, and Article X, Section 16 of the South Carolina Constitution provides that these funds and assets shall not be diverted or used for any other purpose than paying obligations to members of the retirement system;

WHEREAS, pursuant to Section 9-16-20(C) of the South Carolina Code of Laws, the General Assembly of the State of South Carolina directed that the PEBA Board hold the assets of the retirement system in a group trust ("Group Trust") under Section 401(a)(24) of the Internal Revenue Code of 1986, as amended ("IRC"), to be operated and maintained exclusively for the commingling and collective investment of funds of the retirement system that are held in the Group Trust;

WHEREAS, Sections 9-1-1310(A), 9-16-20(A), and 9-16-315(G) of the South Carolina Code of Laws provide that the South Carolina Retirement System Investment Commission ("Investment Commission") has the exclusive authority to invest and manage the assets, including all funds, investments, and similar property, of the retirement system;

WHEREAS, this Group Trust is intended to qualify as a group trust under IRC Sections 401(a) (including Section 401(a)(24)) and 501(a), and all provisions of this Group Trust must be so construed; and,

WHEREAS, the Group Trust is a governmental entity or instrumentality and therefore is not subject to state or federal taxes, the Employee Retirement Income Security Act of 1974, as amended, or the Investment Company Act of 1940, as amended;

NOW, THEREFORE, the Trustee declares that:

1. As provided in Chapter 16 of Title 9 of the South Carolina Code of Laws, the PEBA Board of Directors is the Trustee of this Group Trust established pursuant to Section 9-16-20(C) of the Code of Laws.

2. The name of this Group Trust established pursuant to Section 9-16-20(C) of the Code of Laws shall be the "South Carolina Retirement Systems Group Trust," and by this name all of its business must be transacted, all of its funds and assets invested hereafter, and all of its cash, securities, and other property held. PEBA has obtained a federal tax identification number in the name of this Group Trust, which shall be used for all investments of the Group Trust.

3. The assets of this Group Trust will consist exclusively of assets of plans qualified under IRC Section 401(a), and shall consist exclusively of the assets (as defined by Section 9-16-10(1) of the South Carolina Code of Laws) of the South Carolina Retirement System, the Retirement System for Judges and Solicitors of the State of South Carolina, the Retirement System for Members of the General Assembly of the State of South Carolina, the National Guard Retirement System, and the South Carolina Police Officers' Retirement System, as established pursuant to Chapters 1, 8, 9, 10, and 11 of Title 9 of the South Carolina Code of Laws (hereafter, the "Participating Trusts"). While assets of any Participating Trust are held in this Group Trust, all provisions of this Group Trust are part of that Participating Trust's retirement plan. Each Participating Trust must maintain its status as a qualified trust under IRC Section 401(a) while participating in the Group Trust.

As required by the IRC, any trust participating in the Group Trust must be a qualified trust. The term "qualified trust" means a plan qualified under IRC Section 401(a) that is exempt under IRC Section 501(a), a governmental retiree benefit plan under IRC Section 401(a)(24) that is not subject to federal income taxation, a retirement income account under IRC Section 403(b)(9), an individual retirement account under IRC Section 408(e), an eligible governmental plan trust or custodial account under IRC Section 457(b) that is exempt under IRC Section 457(g), and a custodial account under IRC Section 403(b)(7) (but only provided all assets of the group trust, including the 403(b)(7) custodial accounts, are solely permitted to be invested in stock of regulated investment companies). For these purposes, a trust includes a custodial account that is treated as a trust under IRC Sections 401(f), 403(b)(7), 408(h) or 457(g)(3). However, as reflected in the preceding paragraph, the only assets held and invested in this Group Trust are assets of the retirement system as those terms are defined in Section 9-16-10 of the South Carolina Code of Laws.

4. Pursuant to Section 9-16-20(C) of the South Carolina Code of Laws, the PEBA Board shall hold the assets of the Participating Trusts in this Group Trust, which shall meet the requirements of IRC Section 401(a)(24) and the requirements of Revenue Ruling 81-100, 1981-1 C.B. 326, as amended by Revenue Ruling 2004-67, 2004-2 C.B. 28, and as modified by Revenue Ruling 2011-1, 2011-2 I.R.B. 251. This Group Trust is intended to qualify as a group trust under IRC Sections 401(a) and 501(a), and all provisions of this Resolution must be so construed.

5. Pursuant to Section 9-16-20(C) of the South Carolina Code of Laws, this Group Trust shall be operated and maintained exclusively for the commingling and collective investment of assets from the Participating Trusts that it holds, which shall be jointly invested.

6. The assets of this Group Trust shall be invested and managed exclusively by the Investment Commission in accordance with the provisions of Sections 9-1-1310 and 9-16-10 et seq. of the South Carolina Code of Laws, as amended.

7. No part of this Group Trust that equitably belongs to a Participating Trust, other than that portion required for reasonable fees, taxes (if applicable), and expenses applicable to the Participating Trust, may be used or diverted for any purpose other than the exclusive benefit of the Participating Trust's participants or their beneficiaries who are entitled to benefits under the Participating Trust in accordance with the applicable provisions of Chapters 1, 8, 9, 10, and 11 of Title 9 of the South Carolina Code of Laws.

8. The Trustee and the Investment Commission each have no duties with respect to this Group Trust other than those duties imposed on each as set forth in the South Carolina Code of Laws, and each have responsibility only for money and property actually received by the Trustee, and then only to the extent applicable to either the Trustee or the Investment Commission and the respective retirement plan and trust of a Participating Trust. The Trustee of this Group Trust and the Investment Commission each have no liability for the acts or omissions of any Participating Trust.

9. A separate accounting for the undivided interest of each Participating Trust will be maintained to reflect the interest of each Participating Trust. All transfers to, withdrawals from, and other transactions regarding this Group Trust shall be separately accounted for with respect to each Participating Trust. Whenever the assets of more than one Participating Trust are commingled in this Group Trust, the undivided interest therein of that Participating Trust shall be debited or credited (as the case may be) (i) for the entire amount of every contribution received on behalf of that Participating Trust, every benefit payment or other expense attributable solely to that Participating Trust, and every other transaction relating only to the Participating Trust, and (ii) for its proportionate share of every item of collected or accrued income, gain or loss, every general expense, and every other transaction attributable to the Group Trust as a whole. No Participating Trust may assign or transfer all or any portion of its interest in the Group Trust, except transfers in accordance with this Section 9.

10. The Trustee, or its delegate, (i) will keep all records the Trustee deems necessary or appropriate, in its sole discretion, to record the assets and income to account for the proportionate interest of each Participating Trust, and (ii) will maintain these records in accordance with reasonable and appropriate record retention policies established by the Trustee in accordance with South Carolina law.

11. The Trustee, or its delegate, may deduct from and charge against the Group Trust any taxes or other charges imposed upon the Group Trust or the income of the Group Trust, or which the Trustee is required to pay with respect to the interest of any Participating Trust by any present or future laws of any jurisdiction or taxing authority. Notwithstanding the foregoing, this

Group Trust is established as a governmental entity and the Trustee and the Investment Commission, as applicable, will assert that no taxes may be assessed by any state, federal, or foreign jurisdiction that participates in a tax treaty with the United States of America.

12. The Trustee may amend this Resolution to the extent required or deemed necessary by the Trustee in order to (i) qualify as a group trust under IRC Section 401(a) and to be exempt from taxation under IRC Section 50l(a), or (ii) comply with the provisions of South Carolina law.

13. This Group Trust will be administered in accordance with the provisions of the South Carolina Code of Laws relating to the Participating Trusts and the provisions of Sections 9-1-1310 and 9-16-10 et seq. of the Code of Laws.

14. This Group Trust is intended to be a valid trust and shall be governed by, and must be construed according to, the laws of the State of South Carolina.

15. This Group Trust is organized in the United States and will be maintained at all times as a domestic trust in the United States.

ADOPTED by the South Carolina Public Employee Benefit Authority Board of Directors this ________ day of __________________, 2013.

____

Arthur M. Bjontegard, Jr.
Chairman
South Carolina Public Employee Benefit Authority
Board of Directors

RESOLUTION

WHEREAS, the South Carolina Public Employee Benefit Authority ("PEBA") is responsible for the administration of the South Carolina Retirement System, the Retirement System for Judges and Solicitors of the State of South Carolina, the Retirement System for Members of the General Assembly of the State of South Carolina, the National Guard Retirement System, and the South Carolina Police Officers' Retirement System (hereafter "Retirement Systems"); and,

WHEREAS, pursuant to Sections 9-1-1320, 9-8-170, 9-9-160, 9-10-80, and 9-11-250 of the South Carolina Code of Laws, the State Treasurer is the custodian of the funds of the Retirement Systems and payments from those funds may be made by the Treasurer only upon vouchers signed by two persons designated by PEBA; and,

WHEREAS, by this Resolution, the PEBA Board of Directors intends to designate and authorize certain PEBA employees to sign requisitions for the payment of benefits from the Retirement Systems;

NOW, THEREFORE, the PEBA Board of Directors hereby designates and authorizes the employees listed on the attached Memorandum to the State Treasurer dated February 1, 2013, as the PEBA employees who are authorized to sign requisitions which are processed through the State Treasurer's Office for the purpose of transferring funds from the custodial bank account to the appropriate disbursement account to fund benefits paid from the Retirement Systems administered by PEBA.

ADOPTED by the South Carolina Public Employee Benefit Authority Board of Directors this ________ day of ___________________, 2013.

____

Arthur M. Bjontegard, Jr.
Chairman
South Carolina Public Employee Benefit Authority
Board of Directors

MEMORANDUM

To: The Honorable Curtis M. Loftis, Jr., State Treasurer
Bill Leidinger, Chief of Staff, State Treasurer's Office

Date: February 1, 2013

From: David K. Avant, Interim Executive Director
South Carolina Public Employee Benefit Authority

Subject: Authorized Signatures for Retirement Benefit Requisitions

Effective immediately and pursuant to the authorization in the attached Resolution of the South Carolina Public Employee Benefits Authority Board of Directors, please modify the list of employees authorized to sign requisitions which are processed through the State Treasurer's Office for the purpose of transferring funds from the custodial bank account to the appropriate disbursement account to fund benefits paid from the state retirement systems administered by PEBA:

- David Avant
- Tammy Nichols
- Travis Turner
- Stephen Van Camp
- Kimberly Brown
- Sharon Hammond